Catalogue

# WOW!

## World of Weller®

GENUINE Weller Approved tip quality

www.labem.pl

# Weller®

Soldering, Microtools, Desoldering, Hot Air, Rework, Fume Extraction, Electronic Screwdrivers, Dispensing Systems, Accessories, etc.

**Page 06 – Page 229**

# Erem®

Tweezers, Cutters, Pliers, EROP, Stripping Tools, Kits, etc.

**Page 230 – Page 333**

# Xcelite®

Knives, Cutters, Screwdrivers, Kits, etc.

**Page 334 – Page 351**

Subject to technical change without notice.
Liability for errors, misprints and omissions excluded.
www.labem.pl

# Content

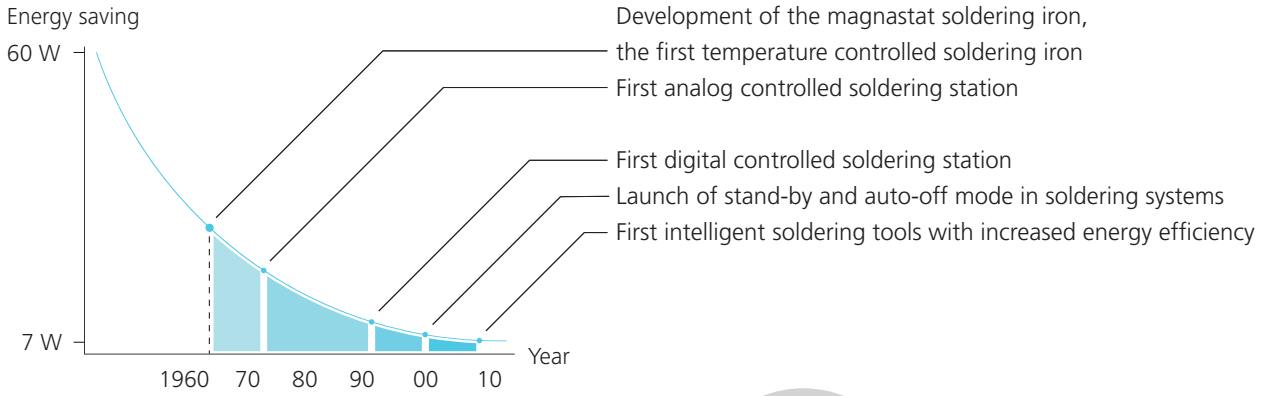

| | | |
|---|---|---|
| | **General Information** | **6 – 11** |
| | Weller - Trusted Technology | 6 – 7 |
| | Heating Element Technology | 8 – 9 |
| | Selection Tool for Soldering irons | 10 – 11 |
| | Why Fume Extraction ? | 98 – 99 |
| | Solutions for Fume Extraction – For clean air | 100 – 101 |
| | Recommended treatment of Soldering Tips | 160 – 161 |
| **Soldering** | **Soldering Stations** | **12 – 43** |
| | WX Soldering Stations (Overview page 12 – 14) | 12 – 19 |
| | Soldering Station (Overview page 20 – 22) | 20 – 31 |
| | Special Applications | |
| | - For use with solder robots | 32 – 35 |
| | - For use with inert gas | 36 – 37 |
| | - Solder Feeder Systems | 38 – 39 |
| | - Mobile Soldering | 40 – 43 |
| **Rework** | **Rework** | **44 – 53** |
| | Soldering, Desoldering and Hot Air (Overview page 44 – 47) | |
| **Desoldering** | **Soldering and Desoldering Stations (Overview page 54 – 57)** | **54 – 61** |
| **Hot Air** | **Hot Air Stations (Overview page 62 – 65)** | **62 – 73** |
| **Repair** | **BGA/QFP Repair** | **74 – 83** |
| **Accessories** | **Accessories** | **84 – 97** |
| | Temperature Measuring and Calibration | 84 – 85 |
| | Preheating Plates | 86 – 87 |
| | PCB Board Holders | 88 – 89 |
| | Soldering Bathes | 90 |
| | Thermal Stripping Tools | 91 |
| | Manual Desoldering Pumps | 92 |
| | Vacuum Pen / Solder Dispenser | 93 |
| | Accessories Cleaning Tools | 94 – 97 |
| | Weller Overview Safety Rests | 138 – 139 |
| **Fume Extraction** | **Fume Extraction (General Information page 98 – 101)** | **98 – 137** |
| | Volume Extraction (Overview page 102 – 103) | 104 – 111 |
| | Accessories | 112 – 117 |
| | Accessories Installation | 118 – 121 |
| | Accessories Filter | 122 – 124 |
| | Pipe System 75 | 125 |
| | Tip Extraction (Overview page 126–127) | 126 – 137 |
| | Accessories | 130 – 137 |


www.labem.pl

| | | |
|---|---|---|
| **Fume Extraction** | Accessories Filter | 132 – 133 |
| | Pipe System 50 | 133 |
| | Accessories Installation | 134 – 135 |
| | Safety Rests | 136 – 137 |
| **Soldering Irons** | **Soldering / Desoldering / Hot Air Irons** | **138 – 159** |
| | Soldering iron with different heating technologies | |
| | Active Tip | 140 – 141 |
| | Fast Response | 142 – 145 |
| | Silver Line | 146 – 149 |
| | Magnastat Soldering Irons | 150 – 151 |
| | Unregulated Line Voltage Soldering Irons | 152 – 153 |
| | Desoldering Irons and Tweezers | 154 – 157 |
| | Hot Air Irons | 158 – 159 |
| **Soldering Tips** | **Soldering Tips** | **160 – 205** |
| | Soldering Tips (Overview page 162 – 163) | 164 – 193 |
| | Nozzles (Overview page 162 – 163) | 194 – 197 |
| | Hot Air Nozzles (Overview page 162 – 163) | 198 – 204 |
| **Electric Screwdrivers** | **Electric Screwdrivers (Overview page 208 – 209)** | **206 – 221** |
| | Control Unit | 210 |
| | Electric Screwdriver | 211 |
| | Accessories | 212 – 213 |
| | Bits and Knives | 214 – 220 |
| **Dispensing Systems** | **Dispensers (Overview page 212 – 213)** | **222 – 229** |
| | Dispensers | 222 – 224 |
| | Wands | 225 |
| | Accessories / Needles | 226 – 299 |
| **EREM** | **Erem (Index page 220)** | **230 – 333** |
| **Xcelite** | **Xcelite** | **334 – 351** |
| | **Exploded Drawings** | **352 – 385** |
| | **Index** | |
| | Numerical Index | 386 – 391 |
| | Alpha Numerical Index | 392 – 396 |


www.labem.pl

# Energy Efficient, Professional Soldering Stations



## Quality Built to Guarantee Quality

- Cutting edge mechanical & electronic parts
- Fast reaction & recovery time
- Automatic tool recognition & downloading of parameters
- Micro processor controlled PID control
- Exact temperature settings per one degree
- No calibration needed for Weller soldering units

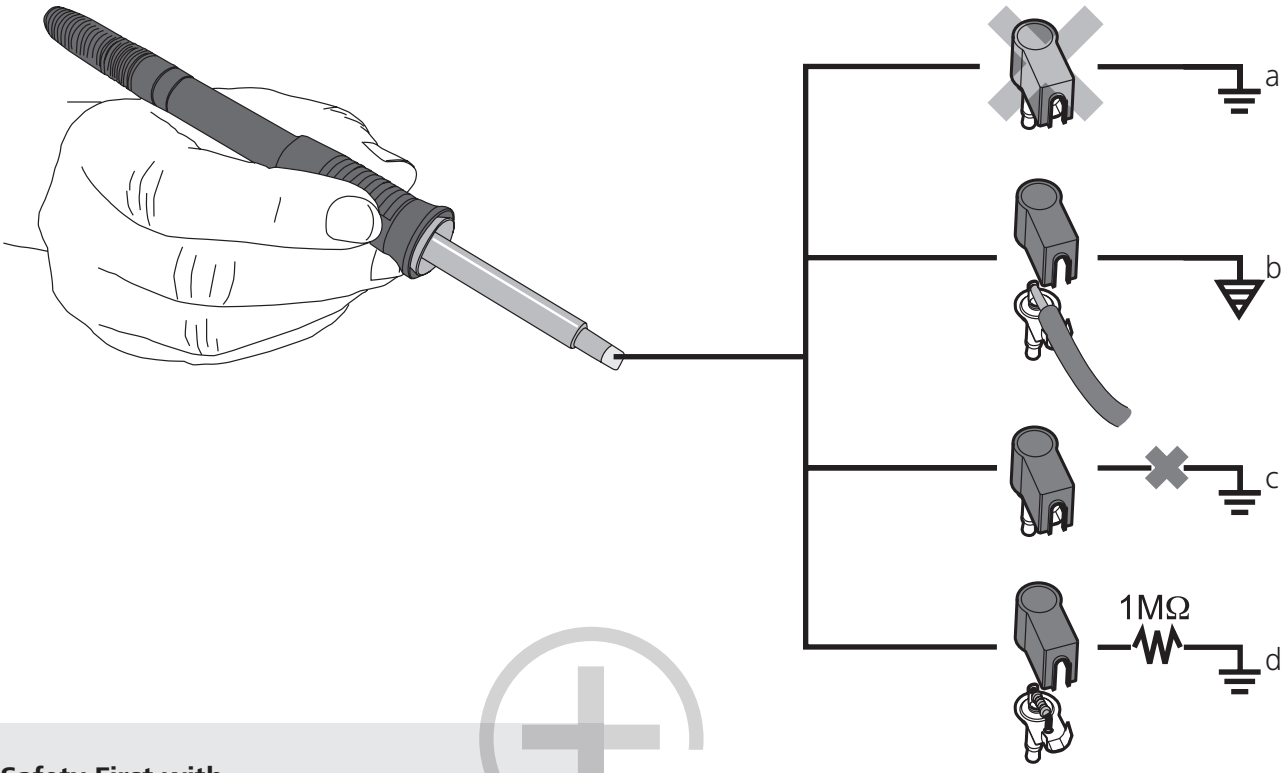
ESD

## High Productivity - No Calibration Required

- Weller soldering stations do not need to be calibrated: the parts of the Weller heating element which determine the temperature have the same physical material characteristics and do not change over time or during use.
- Electronic control units do not wear out. Closed loop temperature regulation & high quality sensor & control technology assure temperature stability of the soldering tool during its lifetime. Built according to IPC J-STD001 D and DIN EN 61191-1.
- If higher accuracy than these standards is required, fine adjustment is possible.
- All indsutry and military ESD standards are met.

www.labem.pl

# Weller® - In a League of Their Own

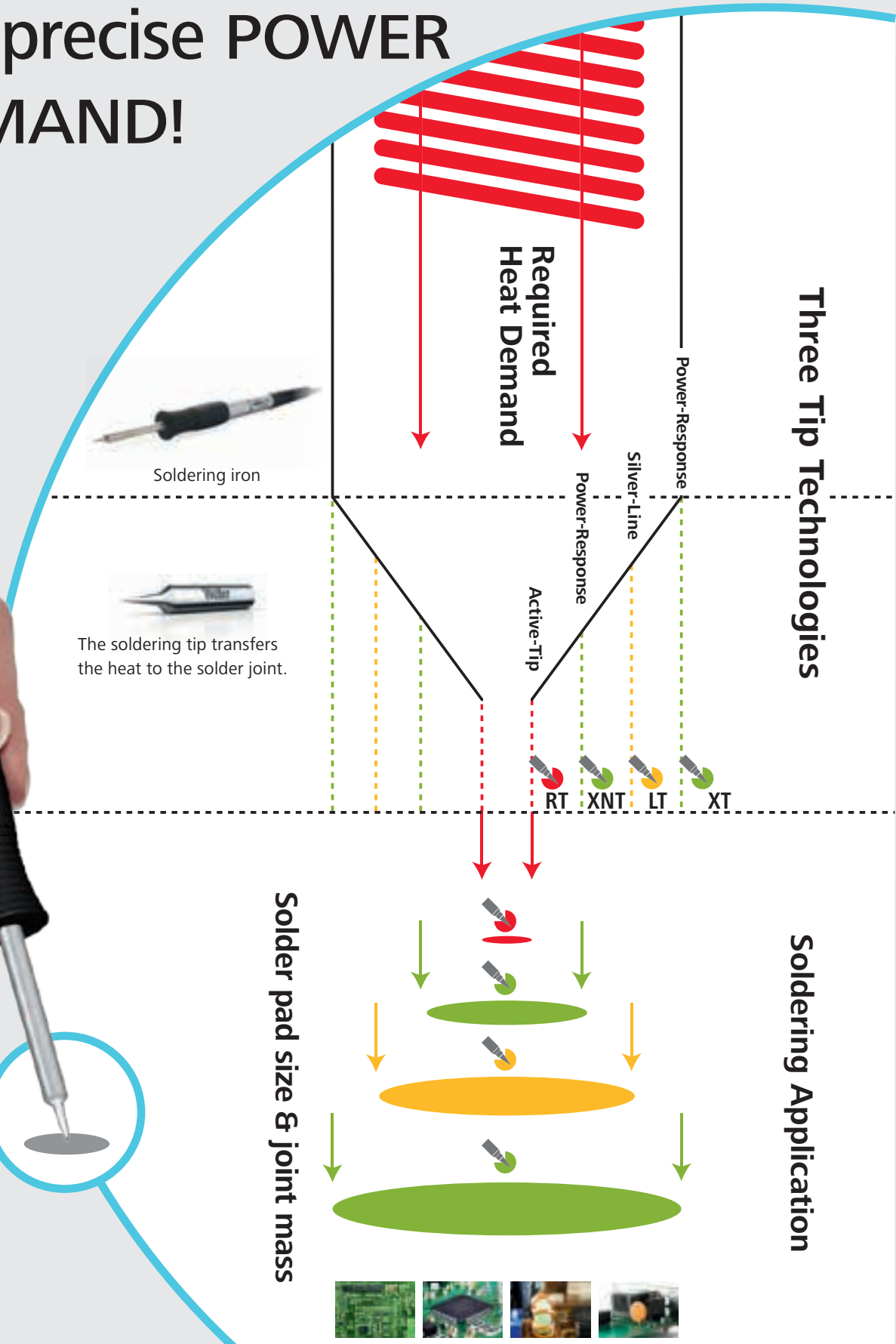



## Safety First with Maximum Flexibility

All Weller soldering stations are equipped with various possibilities for potential equalization:

a) Hard ground without plug (original delivery)
b) Potential equalization with plug - equalization line on center contact
c) Potential free - with plug
d) Soft ground - with plug and resistor soldered in: Grounding according to selected resistor

# Weller® Heating Technologies deliver precise POWER on DEMAND!




www.labem.pl

# Three Tip Technologies designed to master ALL soldering jobs - from the most delicate to the most diffcult!

## RT / RTW — Active-Tip Technology

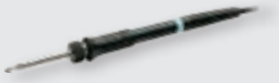
Most delicate & temp- sensitive applications; for use under microscope; ultra fine tips with fastest heat response & best temp-control; cartridge tips

## XNT — Power-Response Technology

SMDs & THTs with very small solder pads & increased heat demand; perfect choice where Active-Tip above lacks sufficient power; lower cost, non-cartridge tips.

## LT — Silver-Line Technology

Universal SMD & THT applications both small & large; low mass silver tips offer absolute best heat transfer at lowest price in entire tip range; non-cartridge tips



## XT/XHT — Power-Response Technology

Most difficult, high mass soldering jobs; maximum power with ergonomic iron handle; choose when WXP/ WP 65 lack sufficient power; lower cost, non-cartridge tips.

# Weller heating & tip technologies are designed for specific applications guaranteeing maximum flexibility!

## RT Soldering tips

**WXMP**
**WMRP**

40 W (55 W with RT 11), 12 V

Ultra slim soldering iron;
Ideal for microscope work.

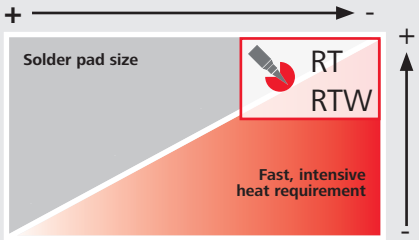
## RTW Soldering tips

**WXMT**
**WMRT**

2 x 40 W, 12 V

Slim tweezers. Ideal for soldering and desoldering of very small SMD components.

**Active-Tip**



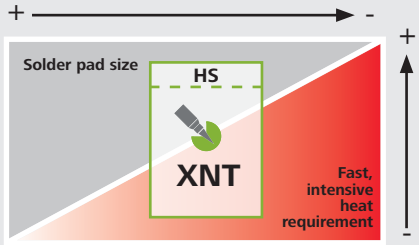

## XNT Soldering tips

**WXP 65**
**WP 65**

65 W, 24 V

SMDs & THTs with very small solder pads & increased heat demand.

**Power-Response**



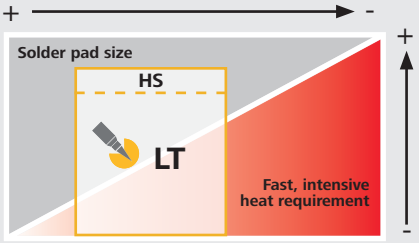

## LT Soldering tips

**WSP 80**
**WP 80**

80 W, 24 V

Universal SMD & THT applications both small & large heat demand..

**Silver-Line**




## XT Soldering tips

**WXP 120**
**WP 120**

120 W, 24 V

All-rounder with great heating power; soldering applications from small to large components with higher heat demand required.

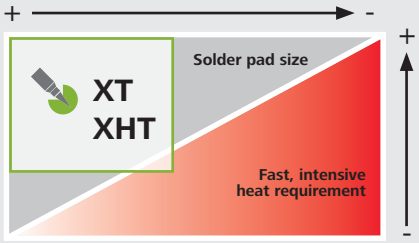
## XHT Soldering tips

**WXP 200**
**WP 200**

200 W, 24 V

Highest Power soldering iron; ideal for applications with highest mass applications e.g. LED back-panels or RF shieldings.

**Power-Response**

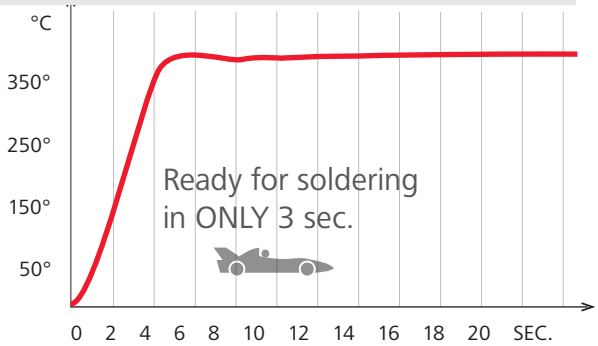



www.labem.pl

## Active-Tip Technology

This highly innovative technology offers ultra precise heating & temperature control specifically designed for micro-soldering applications. The fully integrated tip cartridge (40W ) delivers the fastest recovery on the market for fine tips at just a slightly higher tip price. Temperature sensitive and miniature applications are mastered with precision & safety.

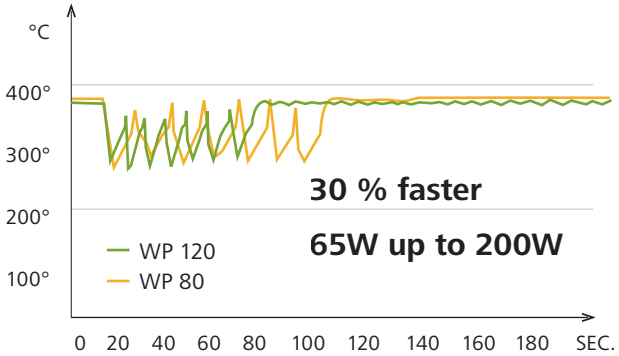
- Fastest heat up & recovery on the market
- Excellent reaction time with finest tips
- Optimal for soldering under microscope
- Rapid hot tip-change; no tool required




## Power-Response Technology

The newly improved technology maximizes soldering performance on the smallest to the largest joints. A perfect balance between power (65W, 120W & 200W), response, temperature control and lower tip costs makes this unique technology the most attractive solution - Top quality professional soldering designed to meet the highest industry standards.

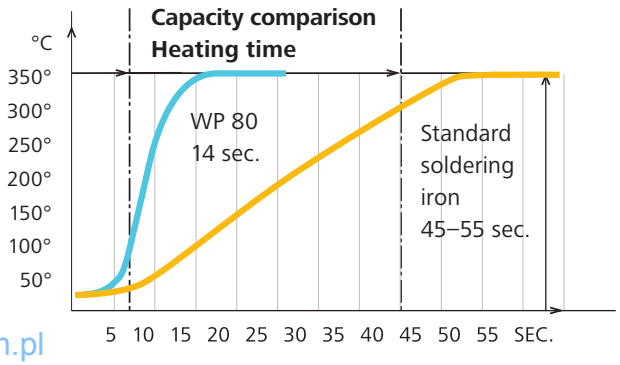
- Maximum power & rapid response
- Optimized sensor position
- Meeting highest industry standards
- Widest tip range with low price point




## Silver-Line Technology

The low mass silver tips offer the absolute best heat transfer at the lowest price in our entire range of tips. The 80W ergonomically designed heating element and pencil type grip make this technology the top performer for universal soldering applications where tip price is a deciding factor.

- Effective heat transfer via silver core
- Fast ramp up & recovery
- Designed for universal applications
- Low mass tips with lowest price point




**The Manufacturer Warranty can ONLY be guaranteed when using original Weller parts.**

www.labem.pl

# Highly Efficient Benchtop Soldering Solutions

## Hard to believe, but TRUE: This Weller workbench solution will save as much power as a single-person household uses in a whole year!

The all-in-one professional soldering and energy-saving solution includes the new WX 2 dual-channel soldering station complete with WXP 65 intelligent soldering iron, the Zero Smog 4V solder fume extractor and a WHP series preheating plate. Compared to a conventional repair workstation, it is possible to save up to ***1800 kWh per year**.

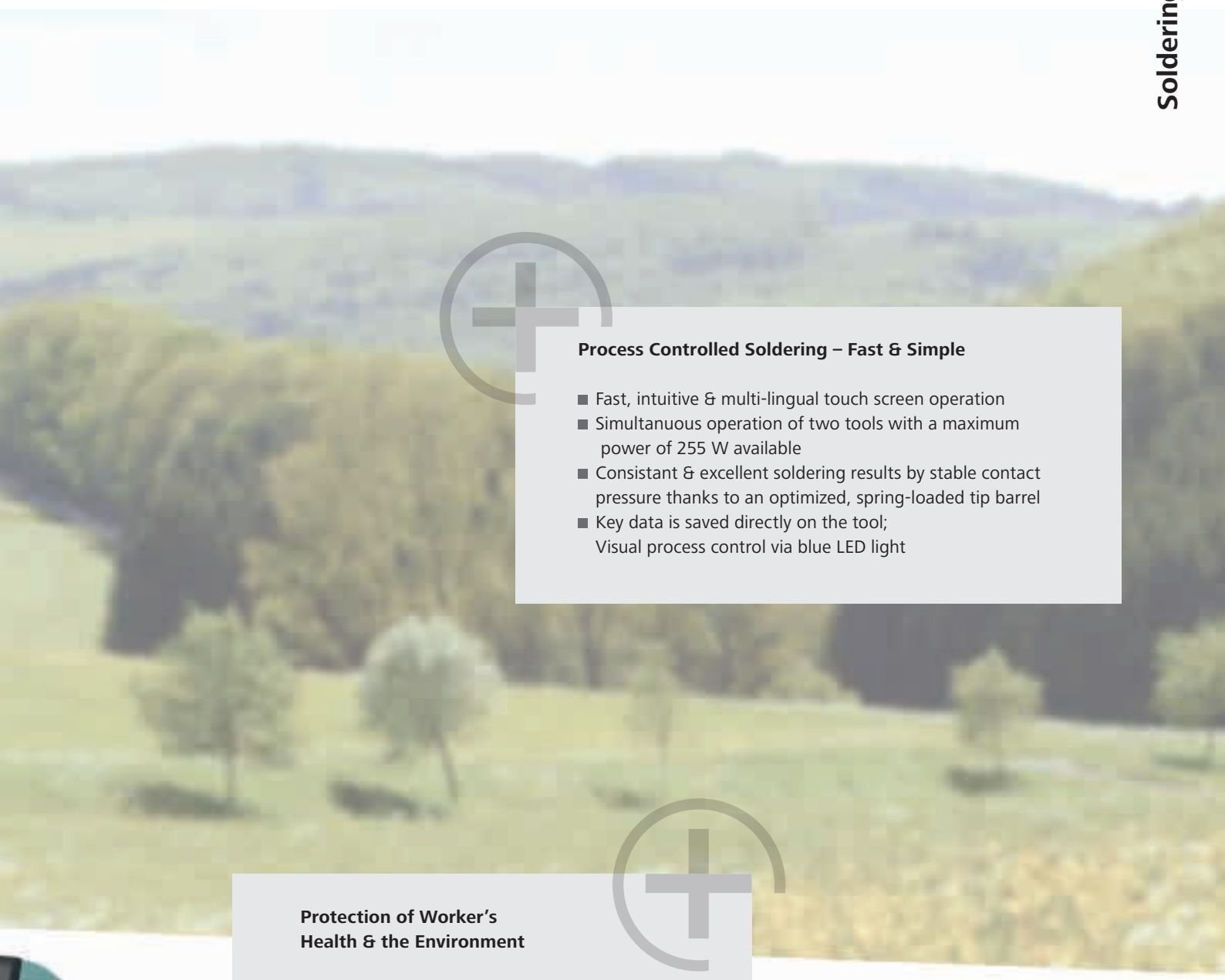
The WX 2 acts as a central control unit for the entire benchtop: the intelligent soldering irons, solder fume extractor and the preheating plate. When the soldering iron is not in use, the WX 2 switches all connected devices to Stand-by or Auto-off mode thereby significantly reducing energy costs.

*Savings based on customer experience with a Weller soldering system is in use on average for one hour per day for 220 workdays per year.

**Only 1 Controll Unit per Workbench**

- Easy monitoring of entire workplace - WX station acts as the digital controller for all units
- RS232 connection cable for controlling the pre-heating plate and the fume extraction units
- Digital and optical decoupled interface for SPS (e.g. robot applications)
- USB interface

www.labem.pl



**Process Controlled Soldering – Fast & Simple**

- Fast, intuitive & multi-lingual touch screen operation
- Simultanuous operation of two tools with a maximum power of 255 W available
- Consistant & excellent soldering results by stable contact pressure thanks to an optimized, spring-loaded tip barrel
- Key data is saved directly on the tool; Visual process control via blue LED light

**Protection of Worker's Health & the Environment**

- Weller Fume Extraction Systems protect operators from unhealthy fine particles and gases
- Auto-stand-by mode of soldering units increases energy efficiency and extends lifetime of products

**Running Cost & Energy savings**

- Increased soldering efficiency & lowered tip prices reduce running costs
- Auto-stand-by mode & Auto-off mode result in significant energy savings

www.labem.pl

# Soldering Stations

## WX 1

- max. power supply 200 W

## WX 2

- max. power supply 200 W (255 W)

## Power-Response

WX compatible

WXP 65
XNT Soldering tips

WXP 120
XT Soldering tips

WX compatible

WXP 200
XHT Soldering tips

## Active Tip

WX compatible

WXMP
RT Soldering tips

WX compatible

WXMT
RTW Desoldering tips

## Fume extraction

WX compatible

- Zero Smog 4V
- Zero Smog 6V
- Zero Smog 20T

## Solder bath

WX compatible

WXSB 200
Available September 2013

## Preheating plates

WX compatible

- WHP 1000
- WHP 3000 600 W
- WHP 3000 1200 W
- WXHP 120 120 W

Available September 2013

## WX Adapter

WX compatible

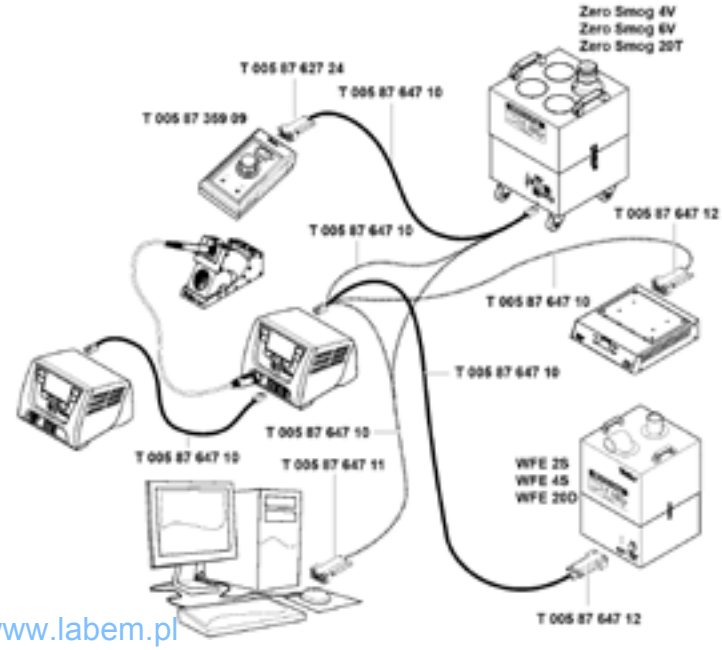
WX Adapter
for PC
T005 87 647 11

WX Adapter
for Zero Smog
T005 87 647 12

Adapter
for Remote control
T005 87 627 24

WX
connection cable
T005 87 647 10

WX HUB
T005 87 647 26




www.labem.pl

# Technical Data

WX 1

WX 2

| | | |
|---|---|---|
| Dimension L x B x H | 170 x 151 x 130 mm (6,69 x 5,94 x 5,12 inch) | |
| Weight | ca. 3,2 kg | |
| Channels | 1 | 2 |
| Power supply | 230 V \| 50 Hz | |
| Power consumption | 200 W | 200 W (255 W) |
| Protection class | I | |
| Temperature range | Adjustable 50–550 °C (150–999 °F); adjustable temperature range varies among tools | |
| Temperature accuracy | ± 9 °C (± 17 °F) | |
| Temperature stability | ± 2 °C (± 4 °F) | |
| Equipotentional bonding | Via 3,5 mm pawl socket on back of device | |
| Material touch panel | Made of antistatic coated material (glas) | |
| Dimensions touch panel | 74 x 38 mm | |
| Resolution | 255 x 127 (128) dots | |
| Display backlighting | yes | |
| Equipotentional bonding | The 3.5 mm switch box offers four different options:<br>a) Hard grounded without plug (original delivery)<br>b) Equipotential bonding: with plug, compensationg line on center contact<br>c) Potential free: with plug<br>d) Soft grounded: with plug and soldered resistor grounded via selected resistor | |
| USB-interface | USB interface in front for firmware updates, parameterization and monitoring<br>USB interface supports all standard USB flash drive types | |
| | 2 further interfaces to connect Weller accessories | |
| ESD safe | yes | yes |
| Order-no. | T005 34 176 99 | T005 34 206 99 |

www.labem.pl

- Cost savings because only one power unit is needed for different applications
- Use as benchtop controller saves energy
- Lowering the running costs by enlarged tip lifetimes
- Reduction of rework due to optimized tool use and correct working temperature
- ESD safe

ESD

**The Weller multi tool principle different tools can be connected to the power unit. The intelligent WX tools can be parameterized by means that the parameters are saved individually to the soldering tool. So these tools are connectable to every WX power unit. This saves a lot of time at the workplace.**
**Intelligent power management allows a max. power of 200 W (255 W). A simultanuous use of different tools is possible. For your overview, all active tools can be seen in the display and a LED ringlight show the working status.**

## WX 2020 Set

- Power unit WX 2 with 2 channels, 2 soldering irons WXP 120

**XT Soldering tip series page 172/173**

| | Order-no. | Model | Description |
|---|---|---|---|
| | **T005 34 216 99** | **WX 2020 Set** | **Power unit with 2 channels 200 W / 230 V** |
| | Scope of supply: | | |
| 1 | T005 34 206 99 | WX 2 | Power unit, 200 W (255 W) |
| 2 | T005 29 201 99 | 2 x WXP 120 | Soldering iron 120 W, 24 V with Power-Response Technolgy |
| 3 | T005 44 704 99 | 2 x XT B | Standard tip XT B, Chisel 2,4 x 0,8 mm |
| 4 | T005 15 121 99 | 2 x WDH 10 | Safety rest with dry cleaner |

www.labem.pl

# WX 2021 Set

- Power unit WX 2 with 2 channels, soldering irons WXMP and tweezers WMRT

**RT Soldering tip series page 164/165**

| Order-no. | Model | Description |
|---|---|---|
| **T005 34 226 99** | **WX 2021 Set** | **Power unit with 2 channels 200 W / 230 V** |

Scope of supply:

| | | | |
|---|---|---|---|
| 1 | T005 34 206 99 | WX 2 | Power unit, 200 W (255 W) |
| 2 | T005 29 203 99 | WXMP | Micro soldering iron 55 W, 12 V with Active–Tip Technology |
| 3 | T005 44 603 99 | RT 3 | Standard tip RT 3, Chisel 1,3 x 0,4 mm |
| 4 | T005 15 171 99 | WDH 51 | Safety rest with dry cleaner |
| 5 | T005 13 177 99 | WXMT | Micro tweezers 2 x 40 W, 12 V with Active–Tip Technology |
| 6 | T005 44 652 99 | RTW 2 | Standard tip RTW 2, 0,7 x 0,4 mm, 45° |
| 7 | T005 15 169 99 | WDH 60 | Safety rest with dry cleaner |

# Power Unit WX 2

- Innovative operation concept
- Robust touch screen with ESD safe glas
- Intuitive use with turn-click-wheel with enter key and finger guide.
- Blue LED backlighting
- Multilingual menu navigation
- High functionality
- No safety rest with Stop & Go function needed thanks to integrated acceleration sensor
- Optimized precision, better stability by sensor in the soldering iron
- Specific parameterization of tool by storgage medium in hand piec.
- Visual process control via blue LED ring light
- All WX tools connectable

| Order-no. | Model |
|---|---|
| **T005 34 206 99** | **Power unit WX 2 with 2 channels, 200 W (255 W)** |

www.labem.pl

## WX 1010 Set

- Power unit WX 1 with 1 channel, soldering irons WXP 120

**XT Soldering tip series page 172/173**

| Order-no. | Model | Description |
|---|---|---|
| **T005 34 186 99** | **WX 1010** | **Power unit with 1 channel, 200 W / 230 V** |

Scope of supply:

| | | | |
|---|---|---|---|
| 1 | T005 34 176 99 | WX 1 | Power unit, 200 W |
| 2 | T005 29 201 99 | WXP 120 | Soldering iron 120 W, 24 V with Power-Response Technology |
| 3 | T005 44 704 99 | XT B | Standard tip XT B, Chisel 2,4 x 0,8 mm |
| 4 | T005 15 121 99 | WDH 10 | Safety rest with dry cleaner |

## WX 1011 Set

- Power unit WX 1 with 1 channel, micro soldering irons WXMP

**RT Soldering tip series page 164/165**

| Order-no. | Model | Description |
|---|---|---|
| **T005 34 196 99** | **WX 1011** | **Power unit with 1 channel, 200 W / 230 V** |

Scope of supply:

| | | | |
|---|---|---|---|
| 1 | T005 34 176 99 | WX 1 | Power unit, 200 W |
| 2 | T005 29 203 99 | WXMP | Soldering iron 55 W, 12 V with Active–Tip Technology |
| 3 | T005 44 603 99 | RT 3 | Standard tip RT 3, Chisel 1,3 x 0,4 mm |
| 4 | T005 15 171 99 | WDH 51 | Safety rest with dry cleaner |

www.labem.pl

## WX 1012 Set

- Power unit WX 1 with 1 channel, soldering irons WXP 65

**XNT Soldering tip series page 168/169**

| Order-no. | Model | Description |
|---|---|---|
| **T005 34 276 99** | **WX 1012** | **Power unit with 1 channel, 200 W / 230 V** |

Scope of supply:

| | | | |
|---|---|---|---|
| 1 | T005 34 176 99 | WX 1 | Power unit, 200 W |
| 2 | T005 29 211 99 | WXP 65 | Soldering iron 65 W with Power-Response Technology |
| 3 | T005 44 851 99 | XNT A | Standard tip XNT A, Chisel 1,6 mm |
| 4 | T005 15 121 99 | WDH 10 | Safety rest with dry cleaner |

## Power Unit WX 1

- Innovative operation concept
- Robust touch screen with ESD safe glas
- Intuitive use with turn-click-wheel with enter key and finger guide.
- Blue LED backlighting
- Multilingual menu navigation
- High functionality
- No safety rest with Stop & Go function needed thanks to integrated acceleration sensor
- Optimized precision, better stability by sensor in the soldering iron
- Specific parameterization of tool by storgage medium in hand piec.
- Visual process control via blue LED ring light
- All WX tools connectable

| Order-no. | Model |
|---|---|
| **T005 34 176 99** | **1-Channel-Power Unit WX 1 200 W / 230 V** |

Available adapter for WX stations see page 14.

www.labem.pl

## Take your mark, get set, GO - with SPEED & SAFETY!

**Systematic Soldering**

- Control units accept wide range of different soldering tools
- Power ranges from 80 W up to 150 W for micro-fine as well as for robot soldering applications
- Extensive accessories available: mirco-tweezers, soldering irons and solder baths
- Easy monitoring via Automatic tool recognition and fast temperature setting via buttons and large LC display

**Reliablity & Longlife**

- Robust design for continuous operation
- Small and compact soldering stations with easy-to-read display
- ESD safe unit with different functions: potential equalization, temp. set-back, stand-by and lock function

ESD

www.labem.pl

**Cost-Effective, Industrial Soldering Station**

- For different applications with a power range from 80 W up to 150 W
- Fast temperature setting and easy monitoring
- Easy to use buttons or potentiometer and LED signal

**Low running costs**

- Industrial housing: easy to clean, robust design
- High cost saving of consumables; Cost efficient & long life Silver-Line soldering tips reduce running costs

# Soldering Stations

## WD 1

- max. power supply 80 W

## WD 1M

- max. power supply 150 W

Photo similar

## PUD 81i

Available from January 2014

- max. power supply 80 W

## PUD 81

- max. power supply 80 W

## PUD 151

- max. power supply 150 W

## PU 81

- max. power supply 80 W

### Silver-Line

WP 80
LT Soldering tips

WSP 80
LT Soldering tips

WSP 150
LHT Soldering tips

MPR 80
LT Soldering tips

### Power-Response

WP 120
XT soldering tips

WMP
NT Soldering tips

WP 65
XNT Soldering tips

### Standard-Line

LR 21
LT Soldering tips

WTA 50
WTA Tips

### Active Tip

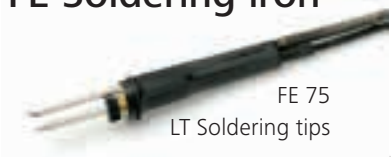
WMRP
RT Soldering tips

WMRT
RTW Tips

### Preheating plate

WHP 80

### FE-Soldering iron

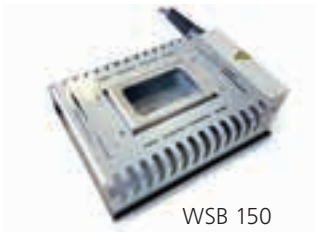


FE 75
LT Soldering tips

FE 80
HT Soldering tips

### Solder bath

WSB 80



WSB 150

www.labem.pl

# Technical Data

Photo similar

| | WD 1 | WD 1M | PUD 81i<br>Available from January 2014 | PUD 81 | PUD 151 | PU 81 |
|---|---|---|---|---|---|---|
| Dimension L x B x H | 34 x 108 x 147 mm | 134 x 108 x 147 mm | 166 x 140 x 103 mm | 166 x 115 x 101 mm | 166 x 115 x 101 mm | 166 x 115 x 101 mm |
| Channels | 1 | 1 | 1 | 1 | 1 | 1 |
| Power supply | 230 V | 230 V | 230 V | 230 V | 230 V | 230 V |
| Power consumption | 95 W | 150 W | 95 W | 95 W | 150 W | 95 W |
| Protection class | I | I | I | I | I | I |
| Temperature range | 50°C – 450°C | 50°C – 450°C | 50°C – 450°C | 50°C – 450°C | 50°C – 550°C | 150°C – 450°C |
| Temperature accuracy | ± 9°C | ± 9°C | ± 9°C | ± 9°C | ± 11°C bei 550°C | ± 9°C |
| Temperature stability | ± 5°C | ± 5°C | ± 5°C | ± 5°C | ± 5°C | ± 5°C |
| Display | LCD | LCD | LED | LED | LED | no |
| Setting | Tasten | Tasten | Tasten | Tasten | Tasten | Drehpotentiometer |
| ESD safe | yes | yes | yes | yes | yes | yes |
| Equipotentional bonding | Via 3,5 mm pawl socket on back of device (normal state hard grounded) | | | | | |
| USB interface | yes* | yes* | no | no | no | no |
| Order-no. | T005 34 006 99 | T005 34 156 99 | T005 32 956 99 | T005 32 626 99 | T005 32 786 99 | T005 32 526 99 |

*optional (see page 25)

www.labem.pl

- Cost reduction - longer tip lifetime due to temperature reduction
- Automatic tool recognition
- Easy tip exchange without tools
- ESD safe

ESD

**Ready, set, go - with perfect accuracy!**
**1 channel WD soldering station is userfriendly due to the large LC display. 2 special menues for individual settings, e.g. stand-by mode, lock function and many more.**

## WD 1000 Set

- Power unit 80 W, 1 channel with soldering iron
- For small sensible components

**LT Soldering tip series page 177-180**

| | Order-no. | Model | Description |
|---|---|---|---|
| | **T005 34 026 99** | **WD 1000 Set** | **Soldering station, 1 channel, 80 W / 230 V** |
| | Scope of supply: | | |
| 1 | T005 34 006 99 | WD 1 | Power unit, 80 W |
| 2 | T005 29 180 99 | WP 80 | Soldering iron 80 W, 24 V with Silver-Line Technology |
| 3 | T005 44 405 99 | LT B | Standard tip LT B, Chisel 2,4 x 0,8 mm |
| 4 | T005 15 121 99 | WDH 10 | Safety rest with dry cleaner |

## WD 1000 T Set

- Power unit 80 W, 1 channel as WD 1000 Set but with safety rest WDH 10T with Stop & Go function

**LT Soldering tip series page 177-180**

| Order-no. | Model | Description |
|---|---|---|
| **T005 34 026 70** | **WD 1000 T Set** | **Soldering station, 1 channel, 80 W / 230 V** |
| Scope of supply: | | |
| T005 34 006 99 | WD 1 | Power unit, 80 W |
| T005 29 180 99 | WP 80 | Soldering iron 80 W, 24 V with Silver-Line Technolgy |
| T005 44 405 99 | LT B | Standard tip LT B, Chisel 2,4 x 0,8 mm |
| T005 15 161 99 | WDH 10T | Safety rest with Stop & Go function and with dry cleaner |

www.labem.pl

## WD 1M
## Power Unit

- Power unit, 1 channel, digital 150 W / 230 V
- For micro soldering iron WMRP and micro tweezers WMRT

| Order-no. | Model | Description |
|---|---|---|
| **T 005 34 156 99** | **WD 1M** | **Power Unit 150 W, 230 V** |

## WD 1
## Power Unit

- Power unit, 1 channel, digital 80 W / 230 V
- For all soldering tools up to 80 W

| Order-no. | Model | Description |
|---|---|---|
| **T005 34 006 99** | **WD 1** | **Power Unit 80 W / 230 V** |

| Order-no. | Description |
|---|---|
| **T005 31 185 99** | **USB Interface for ISO applications** |

www.labem.pl

- Easy handling
- Very good cost / performance ratio
- ESD safe

ESD

**Digital soldering stations WSD (Optical set and read temperature display) and WS (set-temperature display) stations**
**Weller WSD and WS stations are cost effective, digital soldering stations with an easy handling.**

## WSD 81i Set

- Power unit 80 W, 1 channel with soldering iron WSP 80
- Many parameter are available with this unit

**LT Soldering tip series page 172**

Available from January 2014

| Order-no. | Model | Description |
|---|---|---|
| **T005 32 976 99** | **WSD 81i Set** | **Soldering station, 1 channel 80 W / 230 V** |

Scope of supply:

| | | | |
|---|---|---|---|
| 1 | T005 32 956 99 | PUD 81i | Power unit, 80 W |
| 2 | T005 29 161 99 | WSP 80 | Soldering iron 80 W, 24 V with Silver-Line Technology |
| 3 | T005 44 405 99 | LT B | Standard tip LT B,chisel 2,4 x 0,8 mm |
| 4 | T005 15 121 99 | WDH 10 | Safety rest with cleaning sponge |

## WSD 81i SE Set

- Power unit 80 W, 1 channel with soldering iron WP 65
- Many parameter are available with this unit

**XNT Soldering tip series page 172**

Available from January 2014

| Order-no. | Model | Description |
|---|---|---|
| **T005 32 966 99** | **WSD 81i SE Set** | **Soldering station, 1 channel 80 W / 230 V** |

Scope of supply:

| | | | |
|---|---|---|---|
| 1 | T005 32 956 99 | PUD 81i | Power unit, 80 W |
| 2 | T005 29 215 99 | WP 65 | Soldering iron 65 W, 24 V with Power-Response Technology |
| 3 | T005 44 851 99 | XNT A | Standard tip XNT A, chisel 1,6 x 0,4 mm |
| 4 | T005 15 121 99 | WDH 10 | Safety rest with cleaning sponge |

www.labem.pl

## PUD 81i

- Power unit, 1 channel 80 W, 230 V
- Many parameter are available with this unit

Available from January 2014

| Order-no. | Model | Description |
|---|---|---|
| **T005 32 956 99** | **PUD 81i** | **Soldering station, 1 channel 80 W / 230 V** |

## WSD 121 Set

- Power unit 120 W, 1 channel with soldering iron WP 120
- Further parameter with an external calibration unit. WCB 2 possible. See page 84

**XT Soldering tip series page 172/173**

| Order-no. | Model | Description |
|---|---|---|
| **T005 32 776 70** | **WSD 121** | **Soldering station, 1 channel 80 W / 230 V** |

Scope of supply:

| | | | |
|---|---|---|---|
| 1 | | WSD 121 | Power unit, 120 W / 230 V |
| 2 | T005 29 193 99 | WP 120 | Soldering iron 120 W, 24 V with Power-Response Technology |
| 3 | T005 44 704 99 | XT B | Standard tip LTB, chisel 2,4 x 0,8 mm |
| 4 | T005 15 170 99 | KH 18 | Safety rest with dry cleaner |
| | T005 15 125 99 | WDC 2 | Dry cleaner |

www.labem.pl

## WSD 151 Set

- Power unit, 1 channel with soldering iron WSP 150
- Further parameter with an external calibration unit. WCB 2 possible. See page 84

**LHT Soldering tip series page 183**

| Order-no. | Model | Description |
|---|---|---|
| **T005 32 766 99** | **WSD 151 Set** | **Soldering station, 1 channel, 150 W / 230 V** |

Scope of supply:

| | | | |
|---|---|---|---|
| 1 | T005 32 786 99 | PUD 151 | Power unit, 150 W |
| 2 | T005 29 170 99 | WSP 150 | Soldering iron 150 W, 24 V with Silver-Line Technology |
| 3 | T005 44 450 99 | LHT F | Standard tip LHT F, Chisel 9,3 mm |
| 4 | T005 15 027 99 | KH 27 | Safety rest with cleaning sponge |

## WSD 151 Power Unit

- Power unit 150 W, 1 channel
- Further parameter with an external calibration unit. WCB 2 possible. See page 84

| Order-no. | Model | Description |
|---|---|---|
| **T005 32 786 99** | **WSD 151** | **Power unit 150 W, 240 V** |

## WSD 81 Set

- Power unit 80 W, 1 channel with soldering iron WSP 80
- Further parameter with an external calibration unit. WCB 2 possible. See page 84

**LT Soldering tip series page 177-180**

| Order-no. | Model | Description |
|---|---|---|
| **T005 32 606 99** | **WSD 81 Set** | **Soldering station, 1 channel, 80 W / 230 V** |

Scope of supply:

| | | | |
|---|---|---|---|
| 1 | T005 32 626 99 | PUD 81 | Power unit, 150 W |
| 2 | T005 29 161 99 | WSP 80 | Soldering iron 80 W, 24 V with Silver-Line Technology |
| 3 | T005 44 405 99 | LT B | Standard tip LT B, Chisel 0,8 mm |
| 4 | T005 15 140 99 | WPH 80 | Safety rest with cleaning sponge |

www.labem.pl

## WS 81 Set

- Power unit, 1 channel with soldering iron WSP 80

**LT Soldering tip series page 177-180**

| Order-no. | Model | Description |
|---|---|---|
| **T005 32 506 99** | **WS 81 Set** | **Soldering station, 1 channel, 80 W / 230 V, analog** |

Scope of supply:

| | | | |
|---|---|---|---|
| 1 | T005 32 526 99 | PU 81 | Power unit, 80 W, analog |
| 2 | T005 29 161 99 | WSP 80 | Soldering iron 80 W, 24 V with Silver-Line Technolgy |
| 3 | T005 44 405 99 | LT B | Standard tip LT B, Chisel 2,4 x 0,8 mm |
| 4 | T005 15 170 99 | KH 18 | Safety rest with cleaning sponge |

## PU 81 Power Unit

- Power unit 80 W
- Further parameter with an external calibration unit. WCB 2 possible

| Order-no. | Model | Description |
|---|---|---|
| **T005 32 524 99** | **PU 81** | **Power unit switchable, 80 W, 120 V / 240 V with US plug, analog** |

Accessory:

| | |
|---|---|
| T005 87 489 90 | Key switch with control panel |

www.labem.pl

- Easy handling
- Good cost / performance ratio

ESD

**Ferro Magnetic Controlled Soldering Station (Magnastat)**
**The Weller Magnastat system operates through a ferro-magnetic device which changes its characteristics when specific temperatures are reached. This causes it to either attract or repel a permanent magnet which operates a power supply switch. In this way power to the heating element can be quickly switched on or off to either provide extra power for soldering operations or reduced power when idling. Various preselected tip temperatures (260°C, 310°C, 370°C, 425°C, 480°C) are available for different soldering tasks. The unit is not suitable for ESD application because the iron is not antistatic.**

## Technical Data

## WTCP 51

| | |
|---|---|
| Dimension L x B x H: | 166 x 115 x 101 |
| Channels: | 1 |
| Power supply: | 230 V (240 V, 120 V), 50 (60) Hz |
| Power consumption | 55 W |
| Heating voltage: | 24V, 50 (60) Hz |
| Soldering iron: | max. 50 W at 24 V |
| Display: | no |
| Temperature control: | two-level controller |
| Equipotentional bonding: | yes |
| USB interface: | no |
| Control: | two-level controller with temperature sensor |
| Order-no. | T0053220699 |

www.labem.pl

# WTCP 51 Set

- Power unit, 1 channel with soldering iron TCPS

**LT Soldering tip series page 177-180**

| | Order-no. | Model | Description |
|---|---|---|---|
| | **T005 32 206 99** | **WTCP 51 Set** | **Soldering station, 1 channel, 50 W / 230 V** |
| | Scope of supply: | | |
| 1 | T005 32 226 99 | P 51 | Power unit, 50 W |
| 2 | T005 32 105 99 | TCPS | Soldering iron 50 W, 24 V with Silver-Line Technolgy |
| 3 | T005 44 415 99 | LT M | Standard tip LT M, Chisel 2,0 x 0,8 mm and PT-LT adapter |
| 4 | T005 15 020 99 | KH 20 | Safety rest with cleaning sponge |

# P 51 Power Unit

- Power unit switchable, 50 W, 120 V / 240 V with US plug
- For all tools upto 50 W except WMRP and WMRT

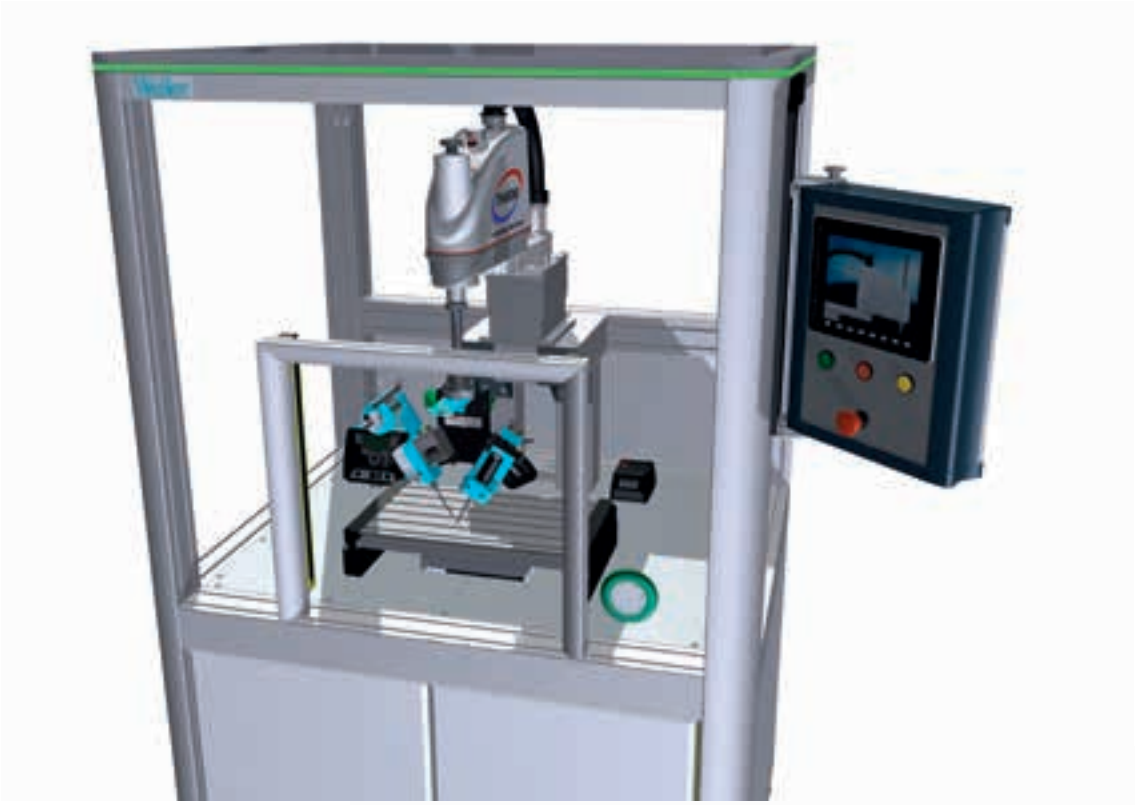
| Order-no. | Model | Description |
|---|---|---|
| **T005 32 224 99** | **P 51** | **Power unit switchable, 50 W, 120 V / 240 V with US plug** |

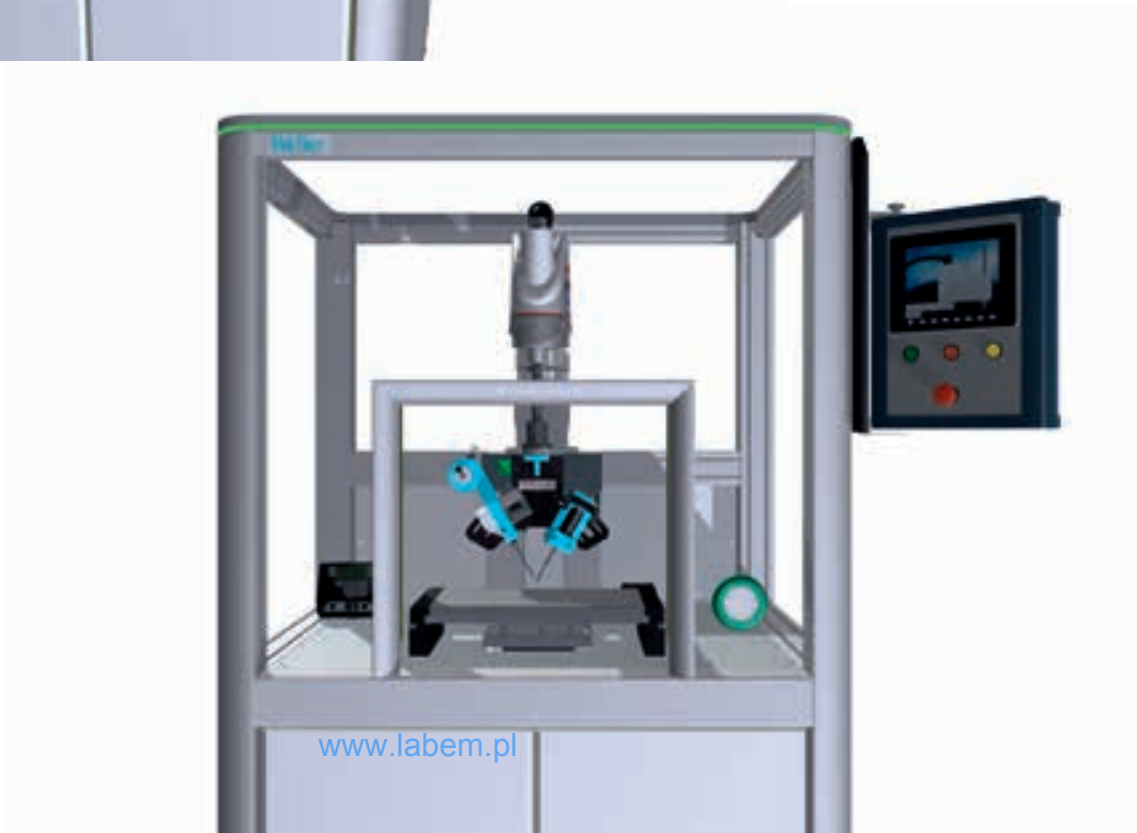
www.labem.pl

# Special application for use in solder robots

**The soldering station PUD 151R is suitable for soldering tasks in industrial manufacturing in which the soldering process is to be automated. For this purpose the unit is equipped with a monitoring circuit. As function of an adjustable temperature window (tolerance band) an un-powered contact is reduced to a low impedance. Straight forward, easy operation is made possible with the usage of a micro processor. Digital control electronics ensure optimal regulation behaviour with different soldering irons upto 150 W. The soldering irons are automatically recognized by the soldering station and assigned the apropriate control parameter.**

ESD





www.labem.pl

# Technical Data

| | WX 1 | WX 2 | PUD 151R |
|---|---|---|---|
| Dimension L x B x H | 170 x 151 x 130 mm (6,69 x 5,94 x 5,12 inch) | | 166 x 115 x 101 mm |
| Weight | ca. 3,2 kg | | |
| Channels | 1 | 2 | 1 |
| Power supply | 230 V \| 50 Hz | | 230 V |
| Power consumption | 200 W (255 W) | | 150 W |
| Protection class | I | | 1 |
| Temperature range | Adjustable 50–550 °C (150–999 °F);<br>adjustable temperature range varies among tools | | 150°C – 550°C |
| | | | |
| Temperature accuracy | ± 9 °C (± 17 °F) | | ± 9°C (± 11°C bei 550°C) |
| Temperature stability | ± 2 °C (± 4 °F) | | ± 5°C (± 9 °F) |
| Equipotentional bonding | Via 3.5 mm pawl socket on back of device (normal state hard grounded) | | |
| Material touch panel | Made of antistatic coated material (glas) | | – |
| Dimensions touch panel | 74 x 38 mm | | – |
| Resolution | 255 x 127 (128) dots | | – |
| Display backlighting | yes | | LED |
| Equipotentional bonding | The 3.5 mm switch box offers four different options:<br>a) Hard grounded without plug (original delivery)<br>b) Equipotential bonding: with plug, compensationg line on center contact<br>c) Potential free: with plug<br>d) Soft grounded: with plug and soldered resistor grounded via selected resistor | | |
| USB-interface | USB interface in front for firmware updates,<br>parameterization and monitoring<br>USB interface supports all standard USB flash drive types | | No |
| | 2 further interfaces to connect Weller accessories | | – |
| ESD safe | yes | yes | yes |
| Order-no. | T005 34 176 99 | T005 34 206 99 | T005 32 786 70 |

www.labem.pl

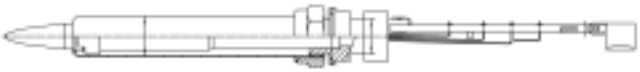
# Special application for use in solder robots

## PUD 151R

- Temperature window adjustable ± 99°C
- Temperatur control via buttons
- 3-position digital display
- Calibration unit WCB 2 connectable (see page 84)
- Automatic tool recognition
- Digitally controlled electronic for soldering tools upto 150 W

| Order-no. | Model | Description |
|---|---|---|
| **T00 32 786 70** | **PUD 151R** | **Power unit, 1 channel, 150 W** |

www.labem.pl



## HER 80 Heating element

| Order-no. | Model | Description |
|---|---|---|
| T005 87 447 38 | HER 80 | Heating element 80 W<br>for solder robots applications with PUD 151R |

## LT Soldering tips for HER 80

| Order-no. | Model | Description | Width | Thickness | Length |
|---|---|---|---|---|---|
| | | Soldering tips for HER 80 with twist lock | | | |
| T005 44 441 99 | LTR A | Chisel tip | 1,6 mm | 0,8 mm | 17 mm |
| T005 44 422 99 | LTR B | Chisel tip 1,5 mm wettable | 2,4 mm | 0,8 mm | 17 mm |
| T005 44 422 71 | LTR B | Chisel tip 6,0 mm wettable | 2,4 mm | 0,8 mm | 17 mm |
| T005 44 433 99 | LTR C | Chisel tip | 3,2 mm | 0,8 mm | 17 mm |

Special tips on request

## HER 120 Heating element

| Order-no. | Model | Description |
|---|---|---|
| T005 87 637 30 | HER 120 | Heating element 120 W<br>for solder robot application with PUD 151R |

## HERX 120 Heating element

| Order-no. | Model | Description |
|---|---|---|
| T005 87 657 40 | HERX 120 | Heating element 120 W<br>for solder robot application with WX 1 / WX 2 |

## XTR Soldering tips for HER 120 and HERX 120

| Order-no. | Model | Description | Width | Thickness | Length |
|---|---|---|---|---|---|
| | | Soldering tips for HER 120 with twist lock | | | |
| T005 44 723 99 | XTR A | Chisel tip | 1,6 mm | 0,7 mm | 36,0 mm |
| T005 44 724 99 | XTR B | Chisel tip | 2,4 mm | 0,8 mm | 35,0 mm |
| T005 44 725 99 | XTR C | Chisel tip | 3,2 mm | 0,8 mm | 35,0 mm |
| T005 44 726 99 | XTR D | Chisel tip | 4,6 mm | 0,8 mm | 34,5 mm |
| T005 44 727 99 | XTR E | Chisel tip | 5,9 mm | 1,2 mm | 34,5 mm |
| T005 44 728 99 | XTR M | Chisel tip | 3,2 mm | 1,2 mm | 39,0 mm |

## Cord for HER 80 / 120 and HERX 120

| Order-no. | Model | Description |
|---|---|---|
| T005 87 447 13 | | Cord for HER 80 / 120, 1,6 m |
| T005 87 657 15 | | Cord for für HERX 120, 1,6 m |

www.labem.pl

# Special Application Inert Gas Soldering

Ideal solution for soldering application under an atmosphere of inert gas

Advantages of inert gas soldering

- Oxygen will be blocked out from solder joint and soldering tip
  - less oxidation on solder joint and soldering tip
  - less surface tension of solder
  - better flow characteristics of solder
- Preheating of solder joints
- ESD safe
- Better and consistant activation of flux

ESD

**The inert gas soldering irons WP 80IG and WP 120IG achive all ESD requirements and enables soldering jobs with inert gas in used way. Inert gas is fed through openings in the heating element to envelop the solder joint. Inert gas and temperature control via power unit WAD 101IG. The set is complete with the Stop & Go safety rest WDH 10P.**

## Technical Data

## WAD 101IG

| | |
|---|---|
| Dimension L x B x H: | 166 x 115 x 101 |
| Weight | 3,335 kg |
| Channels | 1 |
| Power supply | 230 V / 120 V (50/60 Hz) |
| Power consumption | 150 W |
| Protection class | 1 Power unit, 3 Soldering irons, |
| Temperature range | Soldering and desoldering irons adjustable 50°C – 550°C (150°F – 999°F) |
| Adjustable Temperature range | depends on tool |
| Temperature accuracy | ± 2°C |
| Temperature stability | ± 5°C |
| Potential free contact | Optocoupler (transistor output) max. 24 V / 20mA; Pin 1 (+), Pin 2 (-) |
| Display | |
| Temperature control | Via buttons |
| ESD safe | yes |
| Equipotentional bonding | Via 3.5 mm pawl socket on back of device |
| USB interface | no |
| Order-no. | T005 32 666 71 |

www.labem.pl

# WAD 101IG

| Order-no. | Model | Description |
|---|---|---|
| T005 32 666 71 | WAD 101IG | Power unit, 1 channel 150 W for soldering with inert gas |

**Perfect solution for lead free soldering applications under an atmosphere of inert gas**
With the WSP 80 inert gas safety rest set the WSP 80 soldering iron can be switched to an inert gas soldering iron. The safety rest WDH 10P can be used with the WSP 80IG and WP 120IG. Inert gas is fed through openings in the heating element to envelop the solder joint.

**Accessory**

| Order-no. | Model | Description |
|---|---|---|
| T005 29 197 99 | WP 80IG | Soldering iron 80 W for soldering with inert gas 50 °C - 450 °C |
| T005 29 198 99 | WP 120IG | Soldering iron 80 W for soldering with inert gas 50 °C - 450 °C |
| T005 15 161 99 | WDH 10T | Safety rest with Stop & Go function with dry cleaner |
| T005 87 637 32 | | Barrel WP120IG |

# WDH 10P Set

- Safety rest WDH 10P with inert gas barrel set for soldering iron WSP 80
- 80 W, 24 V
- Lead free soldering

**LT Soldering tip series page 177-180**

| Order-no. | Model | Description |
|---|---|---|
| T005 15 147 99 | WDH 10P Set | Inert gas safety rest set 80 W, 24 V |

Scope of supply:

| | |
|---|---|
| WDH 10P | Safety rest for use with inert gas, ball valve, compressed air hose, 4 mm |
| | Inert gas barrel for WSP 80 |

www.labem.pl

# Special application solder feeder

- Smooth proportion of solder by automatical solder feeder system
- „3.hand“ for easy handling

ESD

**The WSF 81D is a soldering station with an automatic solder feeder system. There are 2 suitable solder diameter. The WSF 81D8 is qualified for solder diameter from 0,8 mm - 1,5 mm, the WSF 81D5 fits from 0,5 mm - 0,8 mm. The adjustment to the exact diameter is automatically with both stations. The operator can switch between automatic and continuous solder supply. The power unit is fitted with digital electronics for regulation the soldering iron temperature and solder feed operation. In the feeder unit a solder reel holder can host coils upto max. 1 kg.**

| Technical Data | WSF 81D8 | WSF 81D5 |
|---|---|---|
| Dimension L x B x H | 120 x 217 x 199 mm | |
| Channels | 1 | |
| Solder | ø 0,8 - 1,5 mm | ø 0,5 - 0,8 mm |
| Power supply | 230 V / 120 V (50/60 Hz) | |
| Power consumption | 95 W | |
| Protection class | 1 Power unit, 3 Soldering irons | |
| Temperature range | 150°C – 450°C | |
| Adjustable Temperature range | digital control | |
| Tools recognition | automatically | |
| Display | 3 position digital display | |
| Temperature control | Via buttons | |
| ESD safe | yes | |
| Equipotentional bonding | normal state hard grounded | |
| USB interface | no | |
| Order-no. | T005 28 226 99 | T005 28 206 99 |

www.labem.pl

# WSF 81D5
# Solder Feeder System

- For solder wire from Ø 0,5 mm upto 0,8 mm

**LT Soldering tip series page 177-180**

| Order-no. | Model | Description |
|---|---|---|
| **T005 28 206 99** | **WSF 81D5** | **Solder feeder system 80 W for wire from Ø 0,5 mm upto 0,8 mm** |

Scope of supply:

| | | | |
|---|---|---|---|
| 1 | | | Power Unit |
| 2 | T005 28 116 99 | WSF 2 | Feeding unit |
| 3 | T005 28 121 99 | WSFP 5 | Soldering iron 80 W, 24 V with soldering tip LT HX |
| 4 | T005 15 028 99 | AK S | Safety rest with cleaning sponge |

Accessory:

| | |
|---|---|
| T005 13 120 99 | Foot switch 1-step |
| T005 87 328 48 | Soldering nozzle straight ø 0,5 x 52LG F. WSF P5 |
| T005 87 328 50 | Soldering nozzle straight ø 0,8 x 52LG F. WSF P5 |
| T005 87 328 73 | Soldering nozzle straight ø 0,5 x 62LG F. WSF P5 |
| T005 87 328 74 | Soldering nozzle straight ø 0,8 x 62LG F. WSF P5 |

# WSF 81D8
# Solder Feeder System

- For solder wire from Ø 0,8 mm upto 1,5 mm

**LT Soldering tip series page 177-180**

| Order-no. | Model | Description |
|---|---|---|
| **T005 28 226 99** | **WSF 81D8** | **Solder feeder system 80 W for wire from Ø 0,8 mm upto 1,5 mm** |

Scope of supply:

| | | |
|---|---|---|
| | | Power Unit |
| T005 28 116 99 | WSF 2 | Feeding unit |
| T005 28 122 99 | WSFP 8 | Soldering iron 80 W, 24 V with soldering tip LT BX |
| T005 15 028 99 | AK S | Safety rest with cleaning sponge |

Accessory:

| | |
|---|---|
| T005 13 120 99 | Foot switch 1-step |
| T005 87 328 32 | Soldering nozzle straight ø 1,5 x 63LG F. WSF P/P8 |
| T005 87 328 34 | Soldering nozzle straight ø 1,5 x 52LG F. WSF P/P8 |
| T005 87 328 35 | Soldering nozzle straight ø 1,0 x 52,5LG F. WSF P/P8 |
| T005 87 328 36 | Soldering nozzle straight ø 1,0 x 63LG F. WSF P/P8 |

www.labem.pl

# Special Applications Mobile Soldering

- Heated uptime within 4 seconds only
- Cordless soldering capacity upto 1 hour
- Precise temperature control
- Easy use via touch sensor
- ESD safe

ESD

**Soldering without plug**

**WSM 1C: first professional rechargeable soldering station for mobile use. The WSM 1C from Weller is a perfect soldering station when a small mobile tool is required which works absolutey professional.**

## Technical Data

## WSM 1C

| | |
|---|---|
| Dimension L x B x H (inch / mm): | 5.24 x 4.33 x 2.17 \| 133 x 110 x 55 mm |
| Weight: | ca. 2,0 kg |
| Power supply: | 100 V to 240 V |
| | 50 Hz to 60 Hz |
| Power consumption: | 50 W |
| Safety class (with switching power supply) | II |
| (battery powered) | III |
| Temperature control | 100°C - 400°C (200°F - 750°F) |
| Temperature accuracy | ± 9°C (± 17°F) |
| Temperature stability | ± 5°C (± 9°F) |
| Acceleration sensor: | Efficient stand-by mode |
| Equipotentional bonding: | via 3,5 mm pawl socket on side of device |
| Display: | Touch-Sensor-Technology |
| Operating temperature: | 10°C - 35°C (50°F - 95°F) |
| Stock temperature: | 24°C - 45°C (75°F - 113°F) |
| Air humidity: | 0% - 90%, no condensation |
| | - Latest LiFePO4 battery technology<br>- Fixed micro soldering iron WMRP<br>- Stop & Go function: automatic switch-off of the soldering iron by motion sensor<br>- Temperature lock function<br>- Car adapter |

www.labem.pl

# WSM 1C Rechargeable soldering station

- Solution for service technician
- 50 W

RT Soldering tip series page 164/165

| Order-no. | Model | Description |
|---|---|---|
| **T005 32 936 99** | **WSM 1C** | **Rechargeable soldering station with mirco soldering iron WMRP and soldering tip RT 3, chisel 1,3 mm and safety rest with dry cleaner. Recharged in 20 minutes.** |

## Accessory

| Order-no. | Description |
|---|---|
| **T005 87 518 80** | **Car adapter for recharge via 12 V board net** |

www.labem.pl

- For small mobile soldering application
- Cost effective
- Easy to recharge via butane gas

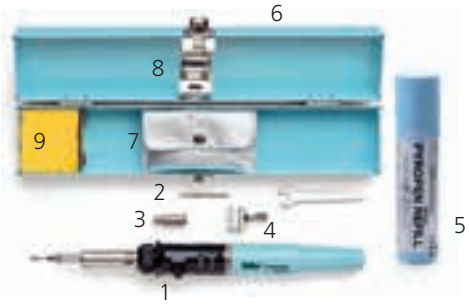
**Butane Gas Powered Soldering Irons**

**Powered by butane gas, the Pyropens offer soldering iron, hot air blow and blow torch operations. They have a short heat up time and are refilled in seconds from a refill cylinder. A small glass window shows the level of gas in the reservoir. The temperature variation is obtained by increasing or decreasing the gas flow. All Pyropen soldering irons need very clean refill for precise temperature regulation.**

## Pyropen Piezo

- With self ignition (Piezo)
- Set in metal box

**Soldering tip series 70 for Pyropen Piezo page 193**

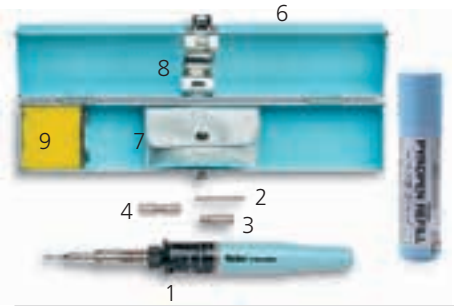



| | Order-no. | Model | Description |
|---|---|---|---|
| | **T005 16 059 99** | **Pyropen Piezo** | **Pyropen butane gas powered profi line soldering iron (self ignition)** |
| | Scope of supply: | | |
| 1 | | | Soldering iron Pyropen Piezo |
| 2 | T005 16 121 99 | 70-01-02 | Chisel tip 3,0 mm |
| 3 | T005 16 142 99 | 70-01-52 | Hot air nozzle Ø 4,9 mm |
| 4 | T005 16 159 99 | 70-01-55 | Reflector unit Ø 6,0 mm |
| 5 | T005 16 160 99 | RB-TS | Gas refill canister 75 ml |
| 6 | T005 16 156 99 | 7040U | Metal box |
| 7 | T005 16 281 99 | 7042 | Burn proof accessory pocket |
| 8 | | | Iron holder |
| 9 | | | Cleaning sponge |

## Pyropen

- Ignition via lighter
- Set in metal box

**Soldering tip series 70 for Pyropen Piezo page 193**




| | Order-no. | Model | Description |
|---|---|---|---|
| | **T005 16 060 99** | **Pyropen** | **Pyropen butane gas powered profi line soldering iron** |
| | Scope of supply: | | |
| 1 | | | Soldering iron Pyropen |
| 2 | T005 16 121 99 | 70-01-02 | Chisel tip 3,0 mm |
| 3 | T005 16 142 99 | 70-01-52 | Hot air nozzle Ø 4,9 mm |
| 4 | T005 16 151 99 | 70-07TU | Torch ejector |
| 5 | T005 16 160 99 | RB-TS | Gas refill canister 75 ml |
| 6 | T005 16 156 99 | 7040U | Metal box |
| 7 | T005 16 281 99 | 7042 | Burn proof accessory pocket |
| 8 | | | Iron holder |
| 9 | | | Cleaning sponge |

www.labem.pl

## Pyropen Jr.

- Manual ignition
- Pen shape

**Soldering tip series 71 for Pyropen Jr. page 192**

| Order-no. | Model | Description |
|---|---|---|
| **T005 16 075 99** | **Pyropen Jr.** | **Butane gas powered mini soldering iron** |

Scope of supply:

| | | | |
|---|---|---|---|
| 1 | | Pyropen Junior | Soldering iron |
| 2 | T005 16 165 99 | 70-01-01 | Needle tip Ø 1,0 mm |
| 3 | | | Aluminium protection cap |

## WP 60K

- Manual ignition
- Set with soldering tip, hot air nozzle and knife

**Soldering tip series 60 page 192**

| Order-no. | Model | Description |
|---|---|---|
| **T005 16 087 99** | **WP 60K** | **Butane gas powered soldering iron** |

Scope of supply:

| | | | |
|---|---|---|---|
| 1 | | WP 60 | Soldering iron |
| 2 | T005 16 134 99 | 60-01-05 | Needle tip Ø 0,5 mm |
| 3 | T005 16 447 99 | 60-01-52 | Hot air nozzle Ø 4,7 mm |
| 4 | T005 16 135 99 | 60-01-06 | Hot knife 5,0 mm, 45° |
| 5 | T005 16 450 99 | 60-02 | Protection cap |

## Refill Canister

| Order-no. | Model | Description |
|---|---|---|
| **T005 16 160 99** | **RB-TS** | **Butane gas refill canister** |

www.labem.pl

## The Repair Professionals with Multi-Channel Flexibility!

**Energy Savings & Environmental Protection**

- Low running costs with flexible use of tools & process controlled, stabile working temperatures
- Energy efficient repair processes with longer tip & nozzle lifetime
- Stand-by mode for desoldering tool
- Energy saving desoldering

Save Energy

**Low Investment Costs**

- Cost effective soldering process with Automatic tool recognition guarantees safe & simultaneous operation of up to 3 tools
- Fully integrated multi-channel unit saves investment costs & workbench space

**WR 3M**

www.labem.pl

WR 2M

**Flexible Solution for All Soldering & Desoldering Applications**

- One power unit for all rework applications: compact, multi-channel unit more cost effective compared to single units
- High flexibility with various connectable tools: Soldering and desoldering irons, hot air irons, preheating plates, wire strippers and solder baths

**Safe Soldering & Desoldering Operations**

- ESD safe in accordance with all industrial & military standards worldwide

ESD

## WR 3M

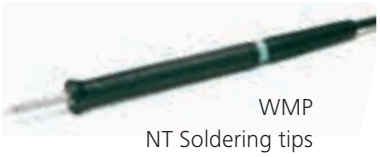
- max. power supply 360 W

## Active Tip

WMRP
RT Soldering tips

WMRT
RTW Tips

## Power-Response



WMP
NT Soldering tips

WP 65
XNT Soldering tips

WP 120
XT Soldering tips

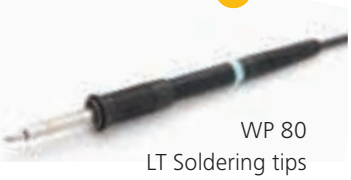
WP 200
XHT Soldering tips

## Standard-Line

LR 21
LT Soldering tips

WTA 50
WTA Tips

## Silver-Line



WP 80
LT Soldering tips

WSP 150
LHT Soldering tips

MPR 80
LT Soldering tips

## Accessory

WVP

## Accessory

WRK

## WR 2

- max.power supply 250 W

## Desoldering Iron

DXV 80
DX Nozzles

DSX 80
DX Nozzles

DSX 120
XDS Nozzles

## FE-Soldering Iron

FE 75
LT Soldering tips

FE 80
HT Soldering tips

## Hot Air Iron

HAP 200
Hot air nozzles

HAP 1
Hot air nozzles

## Preheating Plate

WHP 80

## Stripping Tool

WST 82

## Solder Bath

WSB 80

WSB 150

www.labem.pl

# Rework – Soldering, Desoldering and Hot Air

- One station meets the requirements of a rework workplace
- Unique connecting compatibility of all tools
- 3 respectively 2 independend tool channels with automatic tool recognition guarantee the simultanuous operation of 2 to 3 soldering tools.
- Tools are permanentely ready for use

ESD

www.labem.pl

# Technical Data

WR 3M

WR 2

| | | |
|---|---|---|
| Dimension L x B x H | 273 x 235 x 102 mm | |
| Weight: | ca. 6,7 kg | |
| Channels | 3 | 2 |
| Net supply | 230 V | 230 V |
| Power supply | 400 W | 300 W |
| Protection class | 1 Power unit, 3 Soldering irons | |
| Fuse | T500 mA (230 V / 50/60 Hz) | |
| Fuse: overcurrent release | 2 A | 1,6 A |
| Temperature control of channels | Soldering- and desoldering irons continuously 50°C - 550°C (150°F - 999°F)<br>Temperature control range depends on tool<br>Soldering iron WP 80 / WP 120: 50°C - 450°C (150°F - 850°F)<br>Soldering iron WP 200 / WSP 150: 50°C - 550°C (150°F - 950°F)<br>Soldering iron WMRT / WMRP (only WR 3M): 100°C - 450°C (200°F - 850°F)<br>Desoldering iron DSX 80 / DXV 80: 50°C - 450°C (150°F - 850°F)<br>Desoldering iron DSX 120: 50°C - 450°C (150°F - 850°C)<br>Hot air irons HAP 200 (only WR 3M) / HAP 1: 50°C - 550°C (150°F - 950°C) | |
| Temperature accuracy | ± 9°C | |
| Temperature stability | ± 2°C | |
| Bleeder | Soldering tip (Tip to ground) IPC-J-001 conform | |
| Bleeder voltage | Soldering tip (Tip to ground) IPC-J-001 conform | |
| Pump | (periodic duty 30/30 s) | |
| Max. vacuum | 0,7 bar | |
| Max. delivery rate | max. 18 l/min | max. 18 l/min |
| Hot Air | max. 15 l/min | max. 10 l/min |
| Display | LCD | |
| Temperature control | Buttons | |
| ESD safe | yes | yes |
| Equipotentional bonding | Via 3.5 mm pawl socket at the back of device (hard grounded normal state) | |
| USB interface | yes | no |
| Order-no. | T005 33 666 99 | T005 33 776 99 |

www.labem.pl

## WR 3000M Set

- Power unit, 3 channels with soldering iron WP 80, desoldering iron DSX 80 and hot air iron HAP 200
- Large allround set for all repair jobs
- Desoldering iron DSX 80 for horizontal applications

**LT Soldering tip series page 177-180**
**Hot air nozzles page 198-204**
**DX Nozzle page 194**

| Order-no. | Model | Description |
|---|---|---|
| **T005 33 686 99** | **WR 3000M Set** | **Rework station, 3 channels WR 3M** |

Scope of supply:

| | | | |
|---|---|---|---|
| 1 | T005 33 666 99 | WR 3M | Power unit, 360 W |
| 2 | T005 29 180 99 | WP 80 | Soldering iron, 80 W with Silver-Line Technolgy |
| 3 | T005 44 405 99 | LT B | Standard tip LT B, Chisel 2,4 x 0,8 mm |
| 4 | T005 15 161 99 | WDH 10T | Safety rest with Stop & Go function and dry cleaner |
| 5 | T005 13 190 99 | DSX 80 | Desoldering iron, 80 W |
| 6 | T005 13 150 00 | DX 113HM | Nozzle |
| 7 | T005 15 152 99 | WDH 30 | Safety rest for DSX 80 with dry cleaner |
| 8 | T005 27 116 99 | HAP 200 | Hot air iron, 200 W |
| 9 | T005 15 152 99 | WDH 30 | Safety rest for hot air iron HAP 200 with dry cleaner |
| 10 | T005 29 184 99 | WVP | Vacuum pick-up |
| | | | Software |

## WR 3000M Set for vertical applications

- Power unit, 3 channels with soldering iron WP 80, desoldering iron DXV 80 and hot air iron HAP 200.
- Desoldering iron DXV 80 for vertical applications

**LT Soldering tip series page 177-180**
**Hot air nozzles page 198-204**
**DX Nozzle page 194**

| Order-no. | Model | Description |
|---|---|---|
| **T005 33 683 99** | **WR 3000M Set** | **Rework station, 3 channels WR 3M** |

Scope of supply:

| | | | |
|---|---|---|---|
| 1 | T005 33 666 99 | WR 3M | Power unit, 360 W |
| 2 | T005 29 180 99 | WP 80 | Soldering iron, 80 W with Silver-Line Technolgy |
| 3 | T005 44 405 99 | LT B | Standard tip, Chisel 2,4 x 0,8 mm |
| 4 | T005 15 161 99 | WDH 10T | Safety rest with Stop & Go functions for WP 80 |
| 5 | T005 13 180 99 | DXV 80 | Inline desoldering iron, 80 W |
| 6 | T005 15 153 99 | WDH 40 | Safety rest for desoldering iron DXV 80 |
| 7 | T005 27 116 99 | HAP 200 | Hot Air Iron, 200 W |
| 8 | T005 15 152 99 | WDH 30 | Safety rest for hot air irons HAP 200 |
| 9 | T005 29 184 99 | WVP | Vacuum pick-up |
| 10 | T005 13 150 00 | DX 113HM | Desoldering tip |
| | | | Software |

www.labem.pl

# WR 3000MER

- Power unit, 3 channels with soldering iron WP 120, desoldering iron DSX 120 and hot air iron HAP 200
- Large allround set for all repair jobs
- Desoldering iron DSX 120 for horizontal applications

| Order-no. | Model | Description |
|---|---|---|
| **T005 33 688 11** | **WR 3000MER Set** | **Rework station, 3 channels WR 3M** |

**LT Soldering tip series page 172-173**
**Hot air nozzles page 198-204**
**XDX Nozzle page 197**

Scope of supply:

| | | | |
|---|---|---|---|
| 1 | T005 33 666 99 | WR 3M | Power unit, 360 W |
| 2 | T005 29 193 99 | WP 120 | Soldering iron, 120 W, 24 V with Power-Response Technolgy |
| 3 | T005 44 704 99 | XT B | Standard tip XT B, chisel 2,4 x 08 mm |
| 4 | T005 15 121 99 | WDH 10 | Safety rest with Stop & and dry cleaner |
| 5 | T005 13 198 99 | DSX 120 | Desoldering iron, 120 W, 24 V |
| 6 | T005 15 152 99 | WDH 30 | Safety rest with dry cleaner |
| 7 | T005 27 116 99 | HAP 200 | Hot air iron, 200 W |
| 8 | T005 15 152 99 | WDH 30 | Safety rest with dry cleaner |
| 9 | T005 87 658 01 | PDN | Pliers Desoldering Nozzle |

# Accessories for both WR 3000M sets

| Order-no. | Description |
|---|---|
| T005 87 388 50 | Adapter for foot switch |
| T005 13 120 99 | 1 step foot switch |
| T005 29 184 99 | WVP Vacuum pick-up |
| T005 87 658 01 | PDN Pliers Desoldering Nozzle |

www.labem.pl

## HAP 200 Set

- Temperature range from 50°C – 550°
- Hot air flow adjustable
- Activation of hot air flow via finger switch
- For WR 3M only

**Nozzles page 198-204**

| | Order-no. | Model | Description |
|---|---|---|---|
| | **T005 27 117 99** | **HAP 200 Set** | **Hot air iron set 200 W, 24 V** |
| | Scope of supply: | | |
| 1 | T005 27 116 99 | HAP 200 | Hot air iron 200 W / 24 V<br>with hot air nozzle R 06 round Ø 3,0 mm |
| 2 | T005 15 152 99 | WDH 30 | Safety rest |
| 3 | T005 87 278 21 | R 04 | Hot air nozzle round Ø 1,2 mm |
| | T005 87 617 28 | | Adapter M6 for HAP 200 |
| | T005 87 278 22 | R 06 | Hot air nozzle round Ø 3,0 mm |

www.labem.pl

# WR 2002 Set

- Power unit, 2 channels with soldering iron WP 80, desoldering iron DSX 80
- Small repair set for all rework applications
- Simultaneous operation of hot air and desoldering iron is not possible.

**DX Nozzles page 194**
**LT Soldering tip series page 177-180**

| | Order-no. | Model | Description |
|---|---|---|---|
| | **T005 33 806 99** | **WR 2002 Set** | **Rework station, 2 channels WR 2** |
| | Scope of supply: | | |
| 1 | T005 33 776 99 | WR 2 | Power unit |
| 2 | T005 29 180 99 | WP 80 | Soldering iron 80 W with Silver-Line Technolgy |
| 3 | T005 44 405 99 | LT B | Standard tip LT B, Chisel 2,4 x 0,8 mm |
| 4 | T005 15 121 99 | WDH 10 | Safety rest with dry cleaner |
| 5 | T005 13 150 00 | DX 113 HM | Nozzle inner-Ø 1,2 mm |
| 6 | T005 13 190 99 | DSX 80 | Desoldering iron 80 W / 24 V |
| 7 | T005 15 152 99 | WDH 30 | Safety rest with dry cleaner |
| | | | Power cable |
| | | | Equipotential bonding connector |

www.labem.pl

## The BEST of the very BEST!

### Two Channel, High Power Soldering & Desoldering

- High power soldering & desoldering tools Simultaneous running of two 120 W, intelligent WX tools
- Process parameters are stored directly on the soldering or desoldering tool
- Process controlled, stabile working temperatures
- Flexible & fast modification of workplace possible

Save Energy

ESD

### Less Maintenance

- Compressed air system for stable desoldering & high vacuum
- Fast and easy filter change

### Ergonomics & Safety

- Single-handed, easy & safe change of solder reservoir via bayonet & cardboard solder cartridge - not hot to handle!
- Fatigue-reduced, gentle work possible and safe handling by the latest ergonomic grip-design

### Cost Savings

- Extremely fast heat-up time of desoldering iron in only 40 sec. from 50°C up to 350°C!
- Stand-by mode of desoldering iron saves energy & tip life
- Easy and fast setting of tool parameters with WX technology via ESD safe touch screen

www.labem.pl

**Flexible Solutions for professional soldering & desoldering applications**

- One power unit for various rework applications; Compact set more cost effective compared to single units
- High flexibility with various connectable tools: Soldering and desoldering irons, hot air irons, preheating plates, wire strippers and solder baths.

**Low Investment Costs**

- Cost effective soldering process with automatic tool recognition guarantees safe operation of both irons
- Fast & safe soldering and desoldering
- Fully integrated multi-channel unit saves investment costs & workbench space

## WXD 2

## Power-Response

WX compatible

WXP 65
XNT Soldering tips

WXP 120
XT Soldering tips

WX compatible

WXP 200
XHT Soldering tips

## Active Tip

WX compatible

WXMP
RT Soldering tips

WX compatible

WXMT
RTW Tips

## Fume Extraction

WX compatible

- Zero Smog 4V
- Zero Smog 6V
- Zero Smog 20T

## Soldering bathes

WX compatible

WXSB 200
Available September 2013

## WX Adapter

WX compatible

WX Adapter
for PC
T005 87 647 11

WX Adapter
for Zero Smog
T005 87 647 12

WX
Connection cable
T005 87 647 10

Options for adapter connections
see page 14.

## Desoldering iron

WX compatible

WXDP 120
XDS Nozzles

WXDV 120
XDS Nozzles
Available September 2013

DXV 80
DX Desoldering nozzles

DSX 80
DX Desoldering nozzles

DSX 120
XDS Desoldering nozzles

## Preheating plates

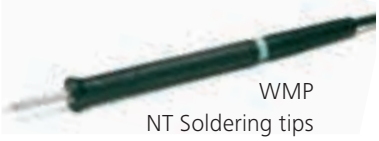
WX compatible

- WHP 1000
- WHP 3000 600 W
- WHP 3000 1200 W
- WXHP 120 120 W

Available September 2013

WR 2

## Power-Response



WMP
NT Soldering tips

WP 65
XNT Soldering tips

WP 120
XT Soldering tips

WP 200
XHT Soldering tips

## Silver-Line

WP 80
LT Soldering tips

WSP 150
LHT Soldering tips

MPR 80
LT Soldering tips

## Standard-Line

LR 21
LT Soldering tips

WTA 50
WTA Tips

## Hot air iron

HAP 1
Hot air nozzles

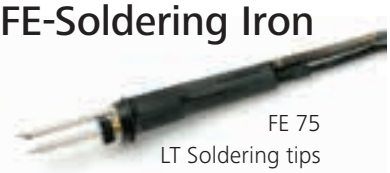
## Preheating plate

WHP 80

## Wire Stripper

WST 82

## FE-Soldering Iron

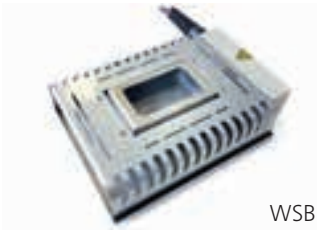


FE 75
LT Soldering tips

FE 80
HT Soldering tips

## Solder bathes

WSB 80



WSB 150

ESD

WXD 2

- Cost effective because only one station is needed
- Less rework by optimal use of tools and the correct working temperature. Reduction of running costs by longer tip lifetime
- Desoldering iron with stand-by mode
- ESD safe

ESD

WR 2

- Only one station that meets all rework requirements
- Unique compatibility
- Many tools are connectable (except WX tools)
- 2 independent channesl with automatic tool recognition guarantees simultanuous operation of 2 tools
- ESD safe

www.labem.pl

Weller®

# Technical Data

WXD 2

WR 2

| | | |
|---|---|---|
| Dimension L x B x H | 170 x 151 x 130 mm | 273 x 235 x 102 mm |
| Weight: | 3,8 kg | ca. 6,7 kg |
| Channels | 2 | 2 |
| Power supply | 230 V | 230 V |
| Power supply | 200 W (255 W) | 300 W |
| Protection class | 1 power unit, 3 Soldering irons | |
| Fuse | T2 A | |
| Fuse: overcurrent release | | 1,6 A |
| Temperature accuracy | ± 9°C | |
| Temperature stability | ± 2°C | |
| Bleeder | Soldering tip (Tip to ground) IPC-J-001 conform | |
| Bleeder voltage | Soldering tip (Tip to ground) IPC-J-001 conform | |
| Vacuum source via | Venturi<br>Air consumption 35l/min<br>max vacuum 55 kPal (8 psi) | Pump<br>max. pressure 0,7 bar<br>periodic duty 30/30 s |
| Hot Air | – | max. 15 l/min |
| Display | LCD | LCD |
| Temperature control | Touch | Keys |
| ESD safe | yes | yes |
| Equipotention bonding | Via 3.5 mm pawl socket (hard grounded normal state) | |
| USB interface | yes | no |
| Order-no. | T005 34 266 99 | T005 33 776 99 |

www.labem.pl

**New products enlarge the WX family. A new WXD 2 desoldering station and a new WXDP desoldering iron. These tools are ideal for professional rework applications of the latest electronic components in the industrial operation. Typically for the WX stations: soldering and desoldering parameters can be saved easily on the iron. The WXDP 120 heats up within 35 sec. only. With stand-by function.**

## WXD 2010

- Desoldering station, 2 channels digital and electronically controlled with desoldering iron WXDP 120
- Soldering- and desoldering tools with intelligent WX technology
- Connection to external compressed air supply for high vacuum
- Energy effective: automatic stand-by mode for tools
- Patented, ESD safe glass display. Simple and fast setting of soldering parameter.

| | Order-no. | Model | Description |
|---|---|---|---|
| | **T005 34 286 99** | **WXD 2010 Set** | **Solder- and Desoldering station, 2 channels 200 W (255 W)** |
| | Scope of supply: | | |
| 1 | T005 34 266 99 | WXD 2 | Power Unit |
| 2 | T005 13 201 99 | WXDP 120 | Desoldering iron 120 W, 24 V |
| 3 | T005 15 172 99 | WDH 70 | Safety rest with dry cleaner |
| 4 | T005 13 250 99 | XDS 1 | Nozzle |
| | T005 87 658 01 | PDN | Desoldering pliers |

**XDS Nozzle-series page 197**

## WXD 2020

- Soldering and desoldering station, 2 channels with WXDP 120 and soldering iron WXP 120

| | Order-no. | Model | Description |
|---|---|---|---|
| | **T005 34 296 99** | **WXD 2020 Set** | **Solder- and Desoldering station, 2 channels 200 W (255 W)** |
| | Scope of supply: | | |
| 1 | T005 34 266 99 | WXD 2 | Power Unit |
| 2 | T005 13 201 99 | WXDP 120 | Desoldering iron 120 W, 24 V |
| 3 | T005 13 250 99 | XDS 1 | Nozzle |
| 4 | T005 15 172 99 | WDH 70 | Safety rest with dry cleaner |
| 5 | T005 29 202 99 | WXP 120 | Soldering iron |
| 6 | T005 44 704 99 | XT B | Standard soldering tip, chisel 2,4 x 0,8 mm |
| 7 | T005 15 121 99 | WDH 10 | Safety rest with dry cleaner |
| | T005 87 658 01 | PDN | Desoldering pliers |

**XT Soldering tip series page 172–173**
**XDS Nozzle-series page 197**

www.labem.pl

## WR 2000D

- Power unit, 2 channels with desoldering iron DSX 80 and safety rest WDH 30.
- Repair kit for soldering and desoldering

**DX Soldering tip series page 194**

| Order-no. | Model | Description |
|---|---|---|
| **T005 33 796 99** | **WR 2000D** | **Desoldering station, 2 channels, 250 W** |

Scope of supply:

| | | | |
|---|---|---|---|
| 1 | T005 33 776 99 | WR 2 | Power unit |
| 2 | T005 13 190 99 | DSX 80 | Desoldering iron 80 W / 24 V |
| 3 | T005 13 150 00 | DX 113 HM | Nozzle inner-Ø 1,2 mm |
| 4 | T005 15 152 99 | WDH 30 | Safety rest with dry cleaner |
| | | | Power cable |
| | | | Equipotential bonding (normal state hard grounded) |

## WR 2000ER

- Power unit, 2 channels with desoldering iron DSX 80, soldering iron WP 65 and safety rests WDH 10 & WDH 30.
- Repair kit for soldering and desoldering

**XDS Nozzle Series page 197**
**XNT Soldering tip series page 168/169**

| Order-no. | Model | Description |
|---|---|---|
| **T005 33 808 99** | **WR 2000ER** | **Desoldering station 2 channels, 250 W** |

Scope of supply:

| | | | |
|---|---|---|---|
| 1 | T005 33 776 99 | WR 2 | Power unit |
| 2 | T005 13 198 99 | DSX 120 | Desoldering iron 120 W / 24 V |
| 3 | T005 13 250 99 | XDS 1 | Nozzle |
| 4 | T005 29 215 99 | WP 65 | Soldering iron 65 W, 24 V |
| 5 | T005 44 851 99 | XNT A | Soldering tip |
| 6 | T005 15 121 99 | WDH 10 | Safety rest with dry cleaner |
| 7 | T005 15 152 99 | WDH 30 | Safety rest with dry cleaner |
| | T005 87 658 01 | PDN | Desoldering pliers |
| | | | Power cable |
| | | | Equipotential bonding (normal state hard grounded) |

www.labem.pl

## More than just hot air...

**Small power unit**

- Small and compact housing

This station is easy to integrate to the workplace and supports the organization of soldering processes.

**Best soldering results**

- Electronically controlled hot air station. Best soldering results with inert gas or compressed air for component safe soldering
- Fix solder joints
  Easy handling of air volume and temperature parameters
- Automatic tool recognition

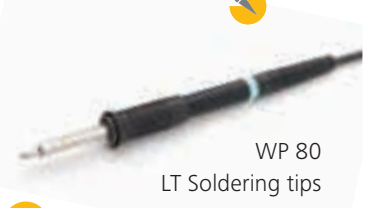
www.labem.pl

- Low running costs by safety rests
- Foot switch for activating the hot air
- Temperature sensor for process control
- Control via PC possible

## WR 2

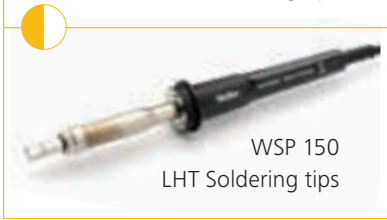
- max. power supply 250 W

## Silver-Line



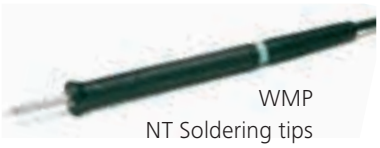
WP 80
LT Soldering tips

MPR 80
LT Soldering tips



WSP 150
LHT Soldering tips

## Power-Response



WMP
NT Soldering tips

WP 65
XNT Soldering tips

WP 120
XT Soldering tips

WP 200
XHT Soldering tips

## Standard-Line

LR 21
LT Soldering tips

WTA 50
WTA Nozzles

## FE-Soldering iron

FE 75
LT Soldering tips

FE 80
HT Soldering tips

## Hot air iron

HAP 1
Hot air nozzles

## Desoldering iron

DXV 80
DX Nozzles

DSX 80
DX Nozzles

DSX 120
XDS Nozzles

## Preheating plate

WHP 80

## Wire stripper

WST 82

www.labem.pl

## WXA

Available September 2013

## WAD 101

- max. power supply 100 W

## Power-Response

WX compatible

WXP 65
XNT Soldering tips

WX compatible

WXP 120
XT Soldering tips

WX compatible

WXP 200
XHT Soldering tips

WX compatible

WXHAP 200
XHT Hot air nozzles
Available September 2013

## Active Tip

WX compatible

WX compatible

## Preheating plate

WX compatible

- WHP 1000
- WHP 3000 600 W
- WHP 3000 1200 W
- WXHP 120 120 W

Available September 2013

## WX Adapter

WX compatible

WX Adapter
for PC
T005 87 647 11

WX Adapter
for Zero Smog
T005 87 647 12

WX Adapter
for Remote
control
T005 87 627 24

WX
Connection cable
T005 87 647 10

Options for adapter connections
see page 14.

## Fume Extraction

WX compatible

- Zero Smog 4V
- Zero Smog 6V
- Zero Smog 20T

www.labem.pl

- For every application we offer the optimal tool
- From to 100 to 700 W
- Wide nozzle program

ESD

## Technical Data

| | WXA 2<br>Available September 2013 | WR 2 | WAD 101 |
|---|---|---|---|
| Dimension (L x B x H) | 170 x 151 x 130 mm | 273 x 235 x 102 mm | 166 x 134 x 101 |
| Weight | ca. 3,3 kg | ca. 6,7 kg | |
| Channels | 1 | 2 | 1 |
| Power supply | 230 V | 230 V | 230 V |
| Power input | 200 W | 300 W | 150 W |
| Protection class | I | I | I |
| Fuse | T 2,0 A | Fuse: overcurrent release 1,6 A 230 V: T 630 mA / 120 V: T 1,0 A | |
| Temperature range | Adjustable<br>50 °C - 550 °C<br>(150 °F - 999 °F)<br>Temperature control range depends on tool | Soldering- and desoldering irons continuously °C Version:<br>50°C – 550°C (150°F – 999°F)<br>Temperature control range depends on tool<br>WP 80 / WP 120<br>50°C – 450°C (150°F – 850°F)<br>WP 200<br>50°C – 550°C (150°F – 950°F)<br>WSP 150<br>50°C – 550°C (150°F – 950°F)<br>DSX 80 / DXV 80 / DSX 120<br>50°C – 450°C (150°F – 850°F)<br>HAP 1<br>50°C – 550°C (150°F – 999°F) | Hot air 50°C – 550°C<br>Soldering iron 50°C – 550°C<br>°F Version:<br>Hot air 122°F – 999°F<br>Soldering iron 122°F – 842° |
| Temperature accuracy | Hot air ± 30°C (± 54°F)<br>Soldering iron ± 9°C (± 17°F) | ± 9°C (± 20°F) | |
| Temperature accuracy HAP 1 | ± 30°C (± 50°F) | | |
| Temperature stability | ± 2°C (± 5°F) | | |
| Air volume | 0 – 20 l/min. | | approx. 0 - 10 l/min |
| Pressure | Pressure input, 400 kPa (58 psi), oilfree, dry compressed air or inert gas N2 | | |
| Vacuum | | | max 15 l/min |
| Order-no. | T005 34 256 99 | T005 33 776 99 | T005 32 686 99 |

www.labem.pl

## WXA 2010 Set

- Power unit, 2 channels with Hot air iron WXHAP 200
- Best set for hot air tasks
- Simultaneous operation of 2 soldering tools
- All WX tools compatible

**Hot air nozzles page 198–204**

WX compatible

| Order-no. | Model | Description |
|---|---|---|
| **T005 34 306 99** | **WXA 2010** | **Power unit, 2 channels 200 W (255 W) / 230 V** |

Scope of supply:

| | | | |
|---|---|---|---|
| 1 | T005 34 256 99 | WXA 2 | Power unit, 2 channels 200 W (255 W) |
| 2 | T005 27 119 99 | WXHAP 200 | Hot air iron 200 W |
| 3 | T005 87 278 22 | R 06 | Hot air nozzle R 06 round ø 3,0 mm |
| 4 | T005 15 152 99 | WDH 30 | Safety rest with dry cleaner |
| | T005 87 278 21 | R 04 | Hot air nozzle R 04 round Ø 1,2 mm |
| | | | Power cable |
| | | | Equipotential bonding (normal state hard grounded) |

## WXA 2

- Power unit, 2 channels

**Hot air nozzle page 198–204**

WX compatible

| Order-no. | Model | Description |
|---|---|---|
| **T005 34 256 99** | **WXA 2** | **Power unit, 2 channels 200 W (255 W) / 230 V** |

Scope of supply:

| | | |
|---|---|---|
| T005 34 256 99 | WXA 2 | Power unit, 2 channels 200 W (255 W) / 230 V |

www.labem.pl

## WR 2000A Set

- Hot air station, 2 channels with hot air iron HAP 1
- Large hot air set
- Simultanuous operation of 2 soldering tools
- All soldering tools upto 200 W connectable

**Hot air nozzles page 198–204**

| Order-no. | Model | Description |
|---|---|---|
| **T005 33 786 99** | **WR 2000A** | **Hot air station, 2 channels 300 W / 230 V** |

Scope of supply:

| | | | |
|---|---|---|---|
| 1 | T005 33 776 99 | WR 2 | Power unit 300 W |
| 2 | T005 27 115 99 | HAP 1 | Hot air iron 100 W / 24 V |
| | T005 87 278 22 | R 06 | Hot air nozzle R 06 round ø 3,0 mm |
| 3 | T005 15 152 99 | WDH 30 | Safety rest with dry cleaner |
| | T005 87 278 21 | R 04 | Hot air nozzle R 04 round Ø 1,2 mm |
| | | | Power cable |
| | | | Equipotential bonding (normal state hard grounded) |

www.labem.pl

# WAD 101 Set

- Hot air station, 1 channel with HAP 1 soldering iron
- Small hot air set
- For hot air irons or soldering irons upto 100 W

**Hot air nozzles page 198–204**

| Order-no. | Model | Description |
|---|---|---|
| **T005 32 666 99** | **WAD 101** | **Hot air station, 1 channel 150 W / 230 V** |

Scope of supply:

| | | | |
|---|---|---|---|
| 1 | T005 32 686 99 | PU WAD101 | Power Unit 150 W |
| 2 | T005 27 115 99 | HAP 1 | Hot air iron 100 W / 24 V |
| | T005 87 278 22 | R 06 | Hot air nozzle R 06 round ø 3,0 mm |
| 3 | T005 15 027 99 | KH 27 | Safety rest with cleaning sponge |
| 4 | T005 87 278 21 | R 04 | Hot air nozzle round ø 1,2 mm |

# Accessories

| Order-no. | Description |
|---|---|
| T005 87 388 50 | Adapter for foot switch |
| T005 13 120 99 | Foot switch 1 step |

www.labem.pl

**The Weller WHA hot air stations are designed for soldering and desoldering sensitive SMD components with hot air. The station use temperature and volume controlled hot air with Weller patented nozzle technology. 3 stations are available: a digital hot air station with integrated turbine and vacuum (WHA 3000V and WHA 3000P) and an analog hot air station without vacuum for easy applications (WHA 900). A wide range of different nozzles for common SMD components are available.**

## WHA 3000V

- With integrated vacuum
- 700 W Hot air station
- For compressed air or inert gas.

**Hot air nozzles page 198–204**

| Order-no. | Model | Description |
|---|---|---|
| **T005 33 366 99** | **WHA 3000V** | **Hot air station 700 W / 230 V** |

Scope of supply:

| | | | |
|---|---|---|---|
| 1 | | WHA 3000V | Power unit 230 V for use with compressed air or inert gas |
| 2 | | HAP 3000 | Hot air iron |
| 3 | T005 15 043 99 | AKT 30 | Safety rest with Stop & Go function |
| | T005 87 577 70 | | Foot switch 2 steps |
| 4 | T005 15 049 99 | | Nozzle change tool |
| 5 | T005 87 507 21 | NQ 30 | Nozzle, 4 side heated, 17,5 x 23,5 mm |

## WHA 3000P

- 700 W Hot air station
- With integrated vacuum
- With integrated turbine

**Hot air nozzles page 198–204**

| Order-no. | Model | Description |
|---|---|---|
| **T005 33 346 99** | **WHA 3000P** | **Hot air station 700 W / 230 V** |

Scope of supply:

| | | | |
|---|---|---|---|
| 1 | | WHA 3000P | Power Unit 230 V with integrated turbine |
| 2 | | HAP 3000 | Hot air iron |
| 3 | T005 15 043 99 | AKT 30 | Safety rest with Stop & Go function |
| | T005 87 577 70 | | Foot switch 2 steps |
| 4 | T005 15 049 99 | | Nozzle change tool |
| 5 | T005 87 507 21 | NQ 30 | Nozzle, 4 side heated, 17,5 x 23,5 mm |

www.labem.pl

## WHA 900

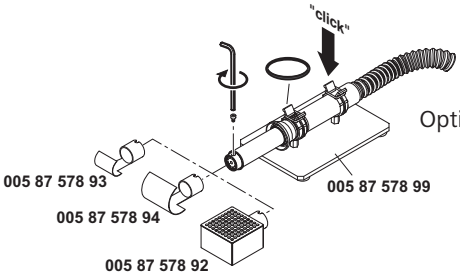
- 700 W hot air station for easy repair applications and heating processes as e.g. shrinking
- Brushless turbine for ideal hot air flow
- Hot air temperature is electronically controlled

Hot air nozzles page 198–204

| Order-no. | Model | Description |
|---|---|---|
| **T005 31 716 99** | **WHA 900** | **Hot air station 700 W / 230 V** |

| Scope of supply: | |
|---|---|
| T005 15 048 99 | Depositing rackNR, ND, NQ |
| T005 15 157 99 | Rest for WHA 900 |
| Optional: | |
| T005 87 578 98 | Horizontal rest for HAP 3 |

**Attention: Hot air nozzles are not included in the scope of supply (see page 198-204). Foot switch is not connectable to WHA 300 (T005 87 578 98)**




Optional horizontal rest for HAP 3

## WHA 900 with Foot switch

| Order-no. | Model | Description |
|---|---|---|
| **T005 31 716 70** | **WHA 900** | **as WHA 900 (see above) with foot switch for activating the hot air** |

| Scope of supply: | | |
|---|---|---|
| | WHA 900 | WHA 900 with connection for foot switch |
| | | Foot switch 1 step |

## 6966 EK Hot air heat gun

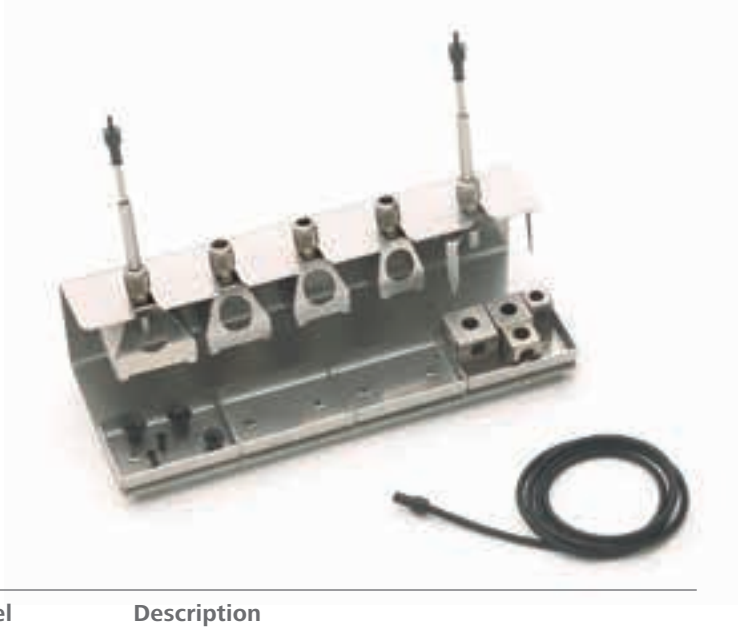
- For heat shrinking, drying or to detect faulty components on circuit boards.
- Cooling is possible because the air flow is independent of the heater.
- Temperature range ca. 400°C - 430°C

| Order-no. | Model | Description |
|---|---|---|
| **6966EK** | **6966EK** | **Hot air heat gun 210 W / 230 V** |

| Scope of supply: | |
|---|---|
| | Hot air heat gun 210 W |
| 6964 0,2“ | Reflector 0,2" |
| 6957 1,5“ | Reflector 1,5" |
| 6958 | Shrinking nozzle |

| Accessory: | |
|---|---|
| 6965A | Rest for gun |

www.labem.pl



## WRK Reflow system

- Reflow system with vacuum pick-up
- For desoldering of SMD components 30 X 30 mm

| Order-no. | Model | Description |
|---|---|---|
| **T005 15 155 99** | **WRK** | **Reflow system for SMD components with external hot air**<br>works with desoldering station WR 3M |

Scope of supply:

| |
|---|
| Reflow housing:<br>once each 33 x 33 mm, 27 x 27 mm, 24 x 24 mm, 20 x 20 mm, 15,5 x 15,5 mm, 12,5 x 12,5 mm, 10 x 10 mm |
| Vacuum Pick-up 4,5 mm |
| Vacuum Pick-up 10 mm |
| Tripod Pick-up |
| Depositing rack for nozzles |

## Accessories

| Order-no. | Description |
|---|---|
| T005 15 154 99 | Depositing rack for nozzles |
| T005 87 617 32 | Reflow housing Set<br>10 x 10 mm, 12,5 x 12,5 mm, 15,5 x 15,5 mm |
| T005 87 617 31 | Reflow housing Set 20 x 20 mm, 27 x 27 mm |
| T005 87 617 30 | Reflow housing Set 33 x 33 mm, 24 x 24 mm |
| T005 87 137 99 | Rubber insert Ø 4,5 mm, 10 pieces |
| T005 87 137 98 | Rubber insert Ø 10,0 mm, 10 pieces |

www.labem.pl

# WRK Sets

| Order-no. | Model | Description |
|---|---|---|
| **T005 87 617 30** | **WRK Set** | **Reflow Set 33 x 33 mm / 24 mm x 24 mm** |

Scope of supply:

- Rubber insert,10,0 CSF, 3 pieces
- Spring, 3 pieces
- Vacuum Pick up Ø 10,0 mm
- Reflow housing 33 x 33 mm
- Reflow housing 24 x 24 mm
- VAC-hose, WRK

| Order-no. | Model | Description |
|---|---|---|
| **T005 87 617 31** | **WRK Set** | **Reflow Set 27 x 27 mm / 20 mm x 20 m** |

Scope of supply:

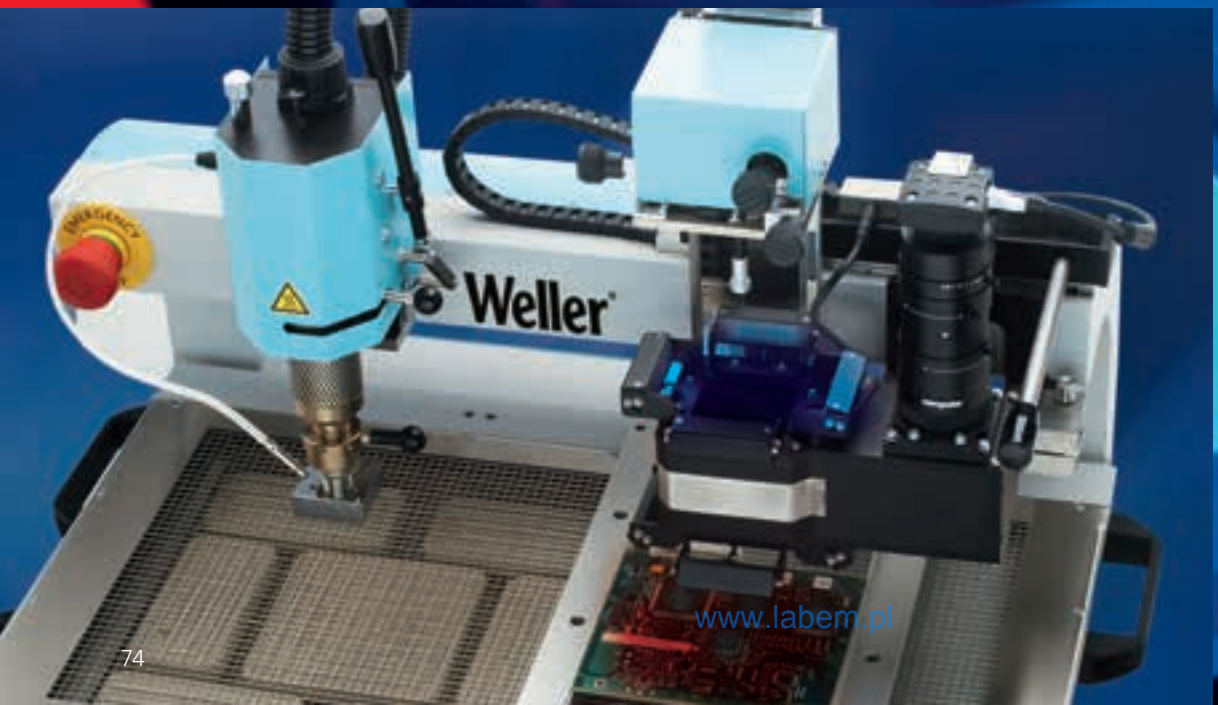
- Rubber insert,10,0 CSF, 4 pieces.
- Spring, 4 Stk.
- Vacuum Pick up Ø 10,0 mm
- Reflow housing 27 x 27 mm
- Reflow housing 20 x 20 mm
- VAC-hose, WVP-WRK

| Order-no. | Model | Description |
|---|---|---|
| **T005 87 617 32** | **WRK Set** | **Reflow Set 18 x 18 mm / 15,5 mm x 15,5 mm / 12,5 x 12,5 mm / 10 mm x 10 mm** |

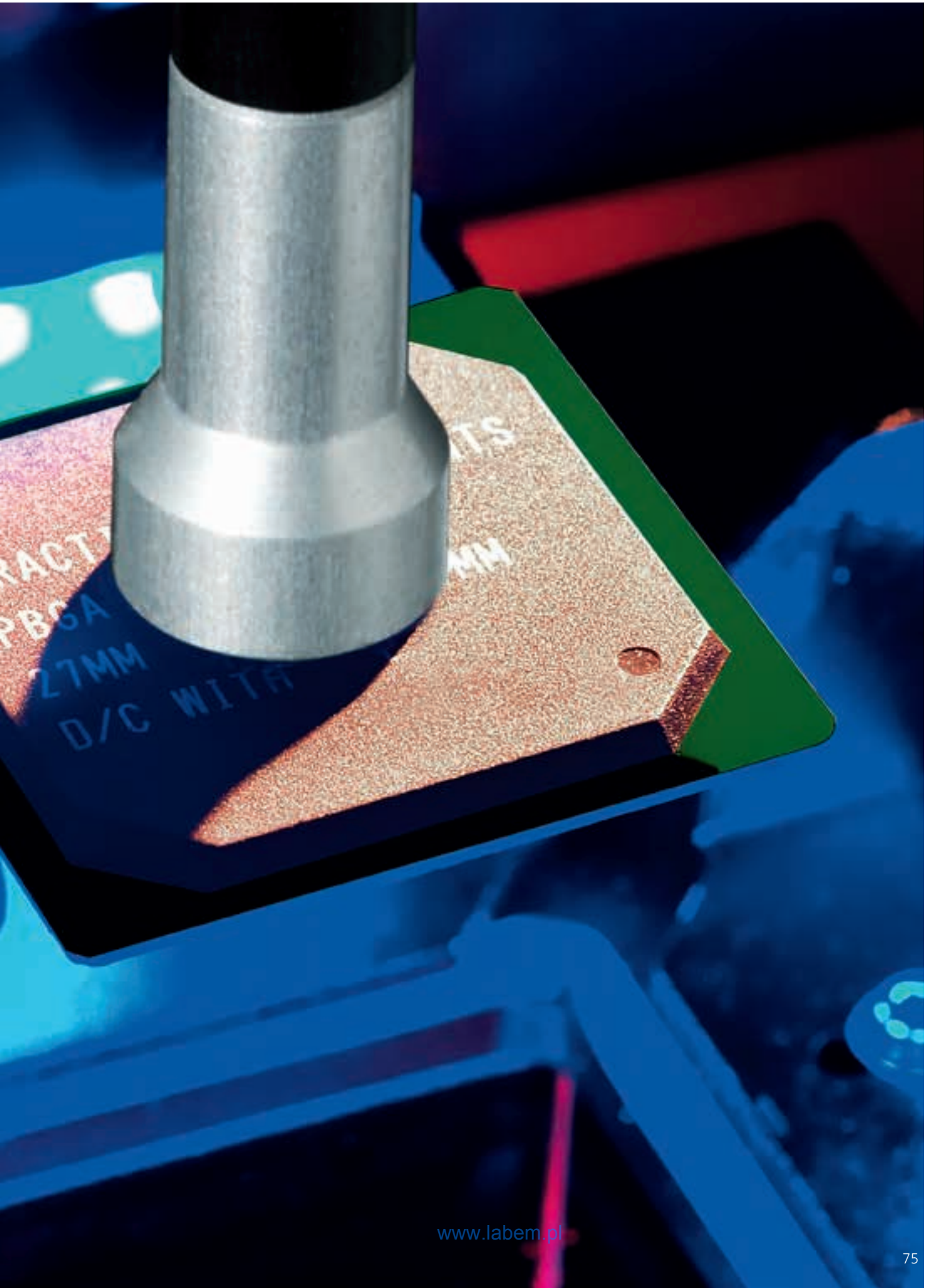
Scope of supply:

- Rubber insert, 4,5 CSF/WVP, 3 pieces
- Tripod
- Vacuum Pick up Ø 4,5 mm
- Reflow housing 18 x 18 mm
- Reflow housing 15,5 x 15,5 mm
- Reflow housing 12,5 x 12,5 mm
- Reflow housing 10 x 10 mm
- VAC-hose, WVP-WRK

www.labem.pl




www.labem.pl


PBGA
27MM
D/C WITH

## Technical Data

| ESD | WHA 3000P | WHA 3000V | WQB 4000SOPS |
|---|---|---|---|
| Dimensions (B x L x H) mm: | 240 x 270 x 170 | 240 x 270 x 101 | 692 x 580 x 680 |
| Dimensions (W x L x H) inch: | 9,44 x 10,63 x 6,69 | 9,44 x 10,63 x 3,97 | 248 x 248 x 256 |
| Mains supply voltage: | 230 V | 230 V | 230 V |
| Power Output: | 700 W | 700 W | 2300 W |
| Top heating: | | | 700 W |
| Heating plate: | | | large 1600 W (260 x 260 mm)<br>small 400 W (120 x 120 mm)<br>(switchable) |
| Compressed air supply: | – | 400 – 600 kPa<br>clean, dry compressed air | 400 – 600 kPa<br>clean, dry compressed air |
| Temperature accuracy: | 50°C – 550°C<br>+/ - 30°C (+ - 54°F) | 50°C – 550°C<br>+/ - 30°C (+ - 54°F) | continuously variable 50°C – 400°C<br>Control accuracy ±10°C |
| Air volume hot air: | | | continuously variable 5 – 50 l/min |
| Air consumption: | 5 – 50 l/min | 5 – 50 l/min | 60 – 100 l/min |
| Safety Class: | 1 (control unit and hand piece hard grounded) | 1 (control unit and hand piece hard grounded) | 1 |
| Order-no. | T005 33 346 99 | T005 33 366 99 | T005 33 706 99 |

www.labem.pl

**WHA 3000PS Set – The versatile system for repair and rework of fine pitch and BGA components**
**The WHA 3000P will perform demanding repair tasks on circuit boards with complex fine pitch surface mounted components. The advanced control technology coupled with user-friendly operation, guarantees precision of repair processes. While the sophisticated automatic operation mode guarantees repeatability of the process and increases productivity and quality. Extensive range accessories compliment the machine to promote flexibility.**
**Further Accessories see page 82.**
**Patented Weller nozzle technology for maximum process control and user friendly operation. The powerful variable speed controlled turbine generates an air volume of up to 50 litres/min. Hot Air Nozzle flows hot air at the component. Memory space to store up to 10 thermal profiles to ensure process repeatability.**
**Manual operation or operation via PC software.**

## WHA 3000PS Set

- 700 W Hot air station
- Integrated turbine
- Set with Infrared preheating plate and circuit board holder

**BGA Hot air nozzles page 198–204**

| Order-no. | Model | Description |
|---|---|---|
| **T005 33 556 99** | **WHA 3000PS Set** | **Hot air station** |

Scope of supply:

| | | | |
|---|---|---|---|
| 1 | T005 33 346 99 | WHA 3000P | 700 W Hot air station with integrated turbine |
| 2 | T005 33 165 99 | WBHS | Circuit board holder with pivoting stand |
| 3 | T005 33 386 99 | WHP 3000 | Infrared preheating plate, 600 W |

## WHA 3000P

- 700 W
- Hot air station with turbine

**BGA Hot air nozzles page 198–204**

| Order-no. | Model | Description |
|---|---|---|
| **T005 33 346 99** | **WHA 3000P** | **700 W Hot air station with turbine** |

www.labem.pl

**WBHS Circuit board holder with a pivoting stand for the HAP 3000 hot air pencil. Circuit boards upto 310 mm x 320 mm can be accommodated. The circuit board holder ensures that the hot air pencil is vertical to the printed circuit board under repair and the pivoting stand allows the HAP 3000 hot air pencil to be raised and lowered precisely onto the component being reworked.**

## WBHS

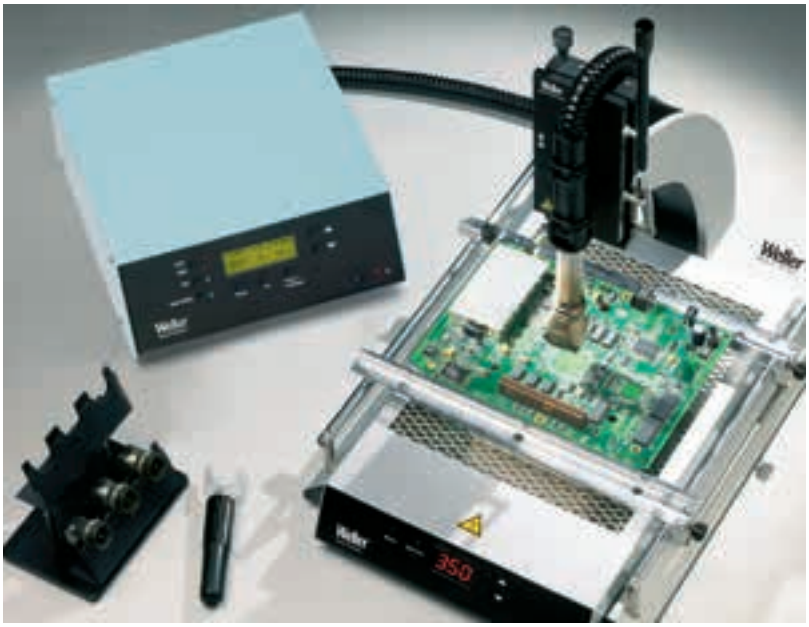
- Circuit board holder with a pivoting stand
- For boards upto 310 x 320 mm

| Order-no. | Model | Description |
|---|---|---|
| **T005 33 165 99** | **WBHS** | **Circuit board holder with a pivoting stand** |

## WHA 3000VS Set

- 700 W
- For use with inert gas

**Hot air nozzles page 198–204**



| Order-no. | Model | Description |
|---|---|---|
| **T005 33 596 99** | **WHA 3000VS Set** | **700 W Hot air station** |

Scope of supply:

| | | |
|---|---|---|
| T005 33 366 99 | WHA 3000V | Hot air station 700 W for use with inert gas |
| T005 33 165 99 | WBHS | Circuit board holder with pivoting stand |
| T005 33 386 99 | WHP 3000 | Infrared preheating plate, 600 W |

www.labem.pl

# WHP 3000
## Infrared preheating plate

- 600 W, 230 V
- Board size upto 120 x 190 mm
- Temperature range 50°C – 400°C
- Digital display for set and actual temperature
- Digitally controlled
- 3 Infrared high temperature ceramic elements for fast and efficient heat up
- 2 heated zones can be selected
- External sensor (accessory) connectable
- RS 232-Interface cable e.g. for connection to WHA 3000 hot air station
- Easy Fix board holder (as WHP 200 see page 87)
- K-type thermo couple socket for monitoring

ESD

| Order-no. | Model | Description |
|---|---|---|
| **T005 33 386 99** | **WHP 3000** | **Infrared preheating plate 600 W / 230 V with Easy Fix board holder** |

# WHP 3000
## Infrared preheating plate

- 1200 W, 230 V
- Board size upto 190 x 245 mm
- Temperature range 50°C – 400°C
- Digital display for set and actual temperature
- Digitally controlled
- 3 Infrared high temperature ceramic elements for fast and efficient heat up
- 2 Easy Fix board holder (as WHP 200 see page 87)
- K-type thermo couple socket for monitoring

ESD

| Order-no. | Model | Description |
|---|---|---|
| **T005 33 646 99** | **WHP 3000** | **Infrared preheating plate 1200 W / 230 V with Easy Fix board holder** |

Accessory:

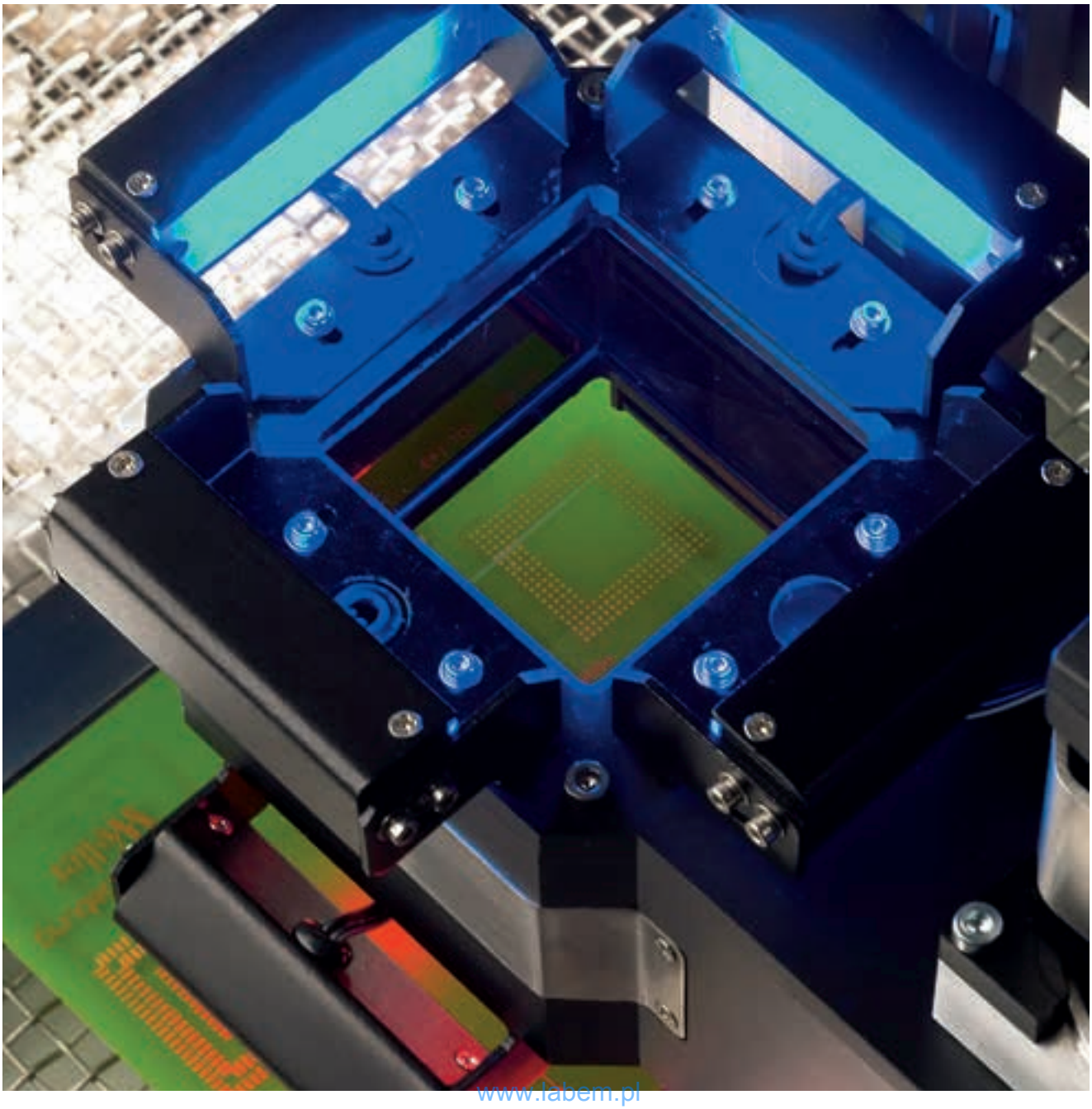
| | | |
|---|---|---|
| T005 31 191 99 | | RS 232 Interface cable |
| T005 31 190 99 | | K-Thermoelement 0,5 mm |
| T005 33 165 99 | WBHS | Circuit board holder with pivoting stand |
| T005 33 164 99 | WBH | Circuit board holder without pivoting stand |

www.labem.pl

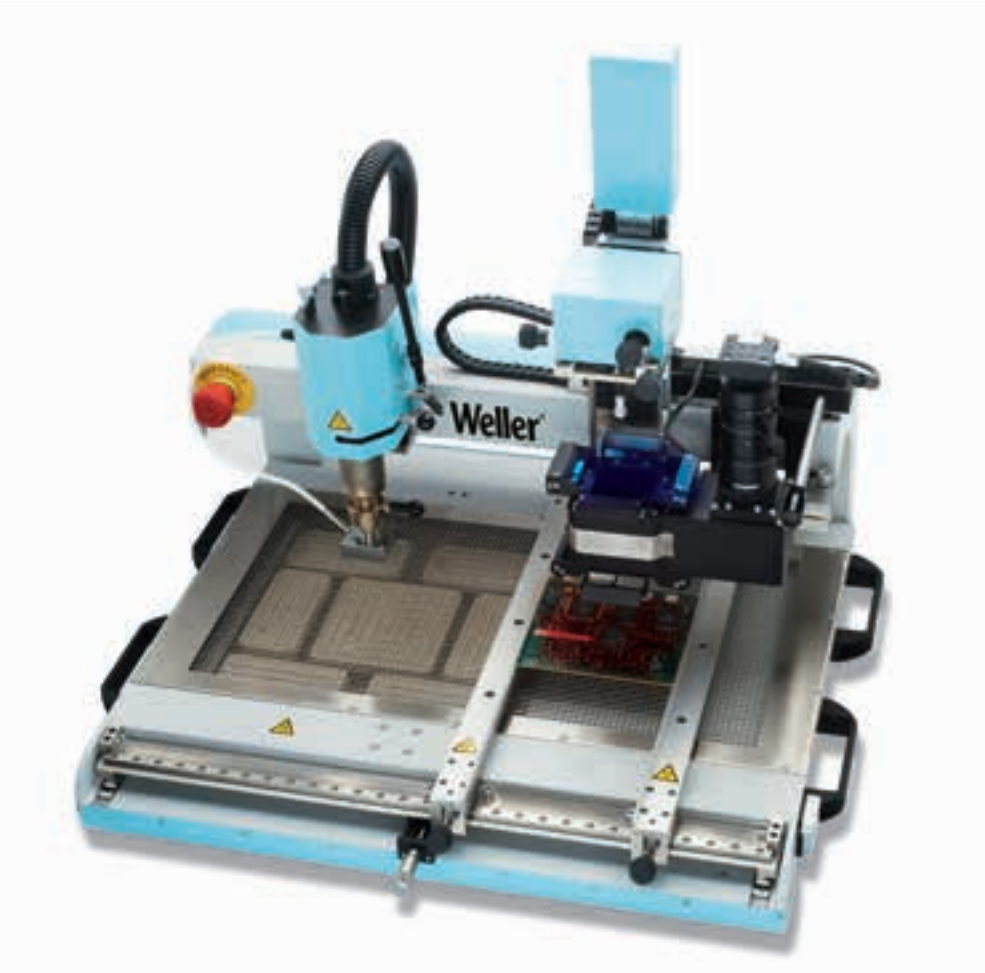
**Weller WQB Rework System**

**The WQB 4000SOPS rework system upgrades the Weller product range in the SMD tool sector. A well thought-out design concept combines reliability and maximum process control with ease of use and technicaly advanced solutions. Usefull accessories increase the possible uses of these repair work stations. For the universal circuit board repair of BGA, QFP and SMD components, it is necessary to preheat the circuit board effectively from below and from above to precisely heat the components to be repaired to the reflow temperature as well as to reliably control the process. On the WQB 4000 the temperature regulated 2-Zone infrared bottom heater provides rapid warm-up and homgeneous substrate temperatures. The hot air top heater, with digital control electronics for temperature monitoring and regulation of the air flow rate, facilitates the finely metered supply of heat to the components.**

**A temperature sensor placed directly in the hot air nozzle efficiently regulates the top heater and thus provides maximum process control. On the digital programming unit all process steps can be programmed, saved and if necessary protected against unauthorized use as required. The most important process parameters are optionally displayed on the LC display during operation. Camera with two-color lighting for exact positioning.**



www.labem.pl




# WQB 4000SOPS

- 2300 W / 230 V
- BGA/SMT Rework system
- For components placing with camera support placing system

**BGA Hot air nozzles page 204**

| Order-no. | Model | Description |
|---|---|---|
| **T005 33 706 99** | **WQB 4000SOPS** | **BGA/SMT Rework system 2300 W / 230 V** |

| Scope of supply: |
|---|
| Base unit with top heater, bottom heater, control electronics and pneumatic unit |
| Infrared radiation 1600 W |
| Positioning unit with digital camera and split optic |
| Circuit board holder with fine adjustment in X and Y direction |
| Temperature sensor PT 100 |
| Nozzle change tool |
| Thermoelement type K 0,1 mm |
| 5 pcs. Vacuum inserts Ø 4,5 mm |
| 5 pcs. Vacuum inserts Ø 10,0 mm |
| Software WQB 4000 CONTROL and WQB 4000 SOPS |
| USB cable |
| Calibration tool |
| Vacuum pick up with 2 changeable vacuum inserts |
| Mains cable |
| 2 m connecting tube for compressed air |
| Instruction manual |
| Max. PC board size 450 x 500 mm |

www.labem.pl

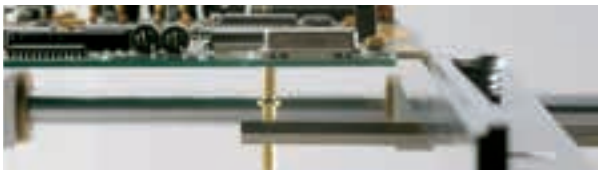
# Accessories for für WQB 4000SOPS, WQB 3000OPS, WQB 3000 and WHA 3000 PS / VS

## Clamping set

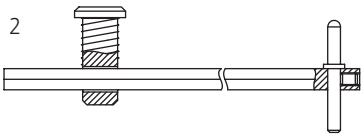
| Order-no. | Description |
|---|---|
| T005 87 549 24 | Clamping set for irregluar shaped circuit boards (e.g. mobilephones, video/digital camera boards, etc.) |

## Support

1



2



| | Order-no. | Description |
|---|---|---|
| 1 | T005 87 557 45 | Support for large circuit boards for WQB 3000, WQB 3000OPS, WQB 4000SOPS with iron angle |
| 2 | T005 87 667 29 | Support for circuit boards for WQB 4000 with aluminium angle |

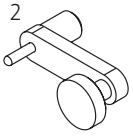
## Adjustable circuit board stop

| Order-no. | Description |
|---|---|
| T005 87 548 73 | WQB 3000 Adjustable circuit board stop for WQB 3000 and WQB 4000 |

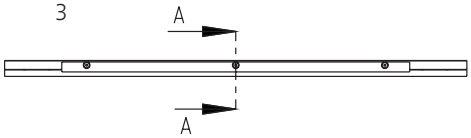
## Downholder

1

2



3




| | Order-no. | Description |
|---|---|---|
| 1 | T005 87 557 41 | Spring-loaded downholder with magnet stand for WQB 3000, WQB 3000SOPS, WBH, WBHS |
| 2 | T005 87 667 25 | Spring loaded downholder with magnet stand for WQB 4000 with aluminium angle. Angle downholder please order separately. |
| 3 | T005 87 667 26 | Angle downholder (for WQB 4000 with aluminium angle) |
| | T005 87 667 27 | Set consists of: 2 x T005 87 667 25 & 1 x T005 87 667 26 |

www.labem.pl

## Temperature sensor

| Order-no. | Description |
|---|---|
| T005 87 549 48 | Temperature sensor<br>for WQB 3000, WQB 3000OPS, WQB 4000SOPS |

## Thermoelement

| Order-no. | Description |
|---|---|
| T005 87 557 82 | Thermoelement type K, Ø 0,1 mm |
| T005 31 190 99 | Thermoelement type K, Ø 0,5 mm |

## NQ-Adapter

| Order-no. | Description |
|---|---|
| T005 87 549 70 | NQ adapter for WQB 2000/3000/4000 |

## Vacuum insert

| Order-no. | Description |
|---|---|
| T005 87 137 99 | Vacuum insert Ø 4,5 mm, 10 piece |
| T005 87 137 98 | Vacuum insert Ø 10,0 mm, 10 piece |

## WPK Print Kit

| Order-no. | Description |
|---|---|
| T005 13 847 99 | The right print kit for your component. On request |
| consits of: | Print station complete with squeegee blade 70 x 25 mm<br>Matching print templates for your device on request. |

www.lasem.pl

**WCB 2 Measuring and Calibration Box**

**The WCB 2 is an external input unit for programming additional functions. It works with every digital Weller station. The setting is fast and easy. Battery powered supply makes the box independent from any mains and easy to transport. The WCB 2 has an PC interface (RS 232) and an integrated temperature gauge for thermo couple type K (accessory). The functions are:**

## WCB 2
## Measuring and Calibration Box for WSD series

- OFFSET: Correction value for soldering tip temperature
- SETBACK: Reduction on set temperature after a specified period of time
- LOCK: Locking the set temperature
- °C/°F: Switching temperature display °C/°F
- WINDOW: Setting a set value window. If the actual temperature is within the set value window a potential-free contact is activated
- Temperature measuring tips are available for each soldering iron

| Order-no. | Model | Description |
|---|---|---|
| **T005 31 180 99** | **WCB 2** | **Calibration unit** |

Scope of supply:

| | |
|---|---|
| | Calibration unit |
| | Battery 4 x 1,5 V |

Accessories:

| | |
|---|---|
| T005 31 184 99 | Network adapter 230 V, 50 Hz |
| T005 31 190 99 | Thermoelement type K, ø 0,5 mm |
| T005 31 191 99 | Interface Cable RS 232 |

www.labem.pl

**WTT 1 Temperature Measuring Unit**

**The WTT 1 digital temperature measuring system has been specially designed for measuring the temperature of soldering iron tips. The probe has a double sensor system and an own internal heat source. The measured temperature is fed to a control system that records the flow of heat in the probe and stabilises it with the aid of the internal heat source. This design ensures that no heat is drawn by the probe from the object to be measured. Erroneous measurements due to the large thermal load of the probe are thus prevented.**
**The measured temperature is indicated on a three-digit LED display to a resolution of 1°C. A red dot in the display is used to indicate the measured value and simplifies the reading of the measured temperature. An adjustable preheat temperature ensures a rapid response even at high temperatures. Different methods of equipotentioal bonding and the ESD appropriate design of the control unit and probe supplement the quality of this measuring unit.**

ESD

## WTT 1
## Temperature measuring system

- Temperature range 50°C –500°C
- Tolerance +/- 5°C
- Dimensions 166 x 115 x 101 mm (L x W x H)

| Order-no. | Model | Description |
|---|---|---|
| **T005 31 246 99** | **WTT 1** | **Temperature measuring system** |

Scope of supply:

| | |
|---|---|
| | Power unit |
| T005 29 109 99 | Probe for WTT 1 |

## Temperature Measuring System

- Connection to WCB 2 calibration unit
- For measuring soldering tip temperature

| Order-no. | Model | Description |
|---|---|---|
| **T005 13 832 99** | | **For connection to unit WCB 2 or all other temperature measure instruments with type K sensor port.** |

www.labem.pl

**Preheating plates are used to preheat circuit boards under repair to reduce the possibility of thermal damages and to reduce the heat requirement of the soldering tool for speeding up the repair process.**

## WHP 80 Preheating plate

- 80 W, 24 V
- Heating surface 80 x 50 mm
- Temperature range 50°C – 200°C
- For all Weller stations with min. 80 W
- Size housing 150 x 120 x 65 mm (L x B x H)

ESD

| Order-no. | Model | Description |
|---|---|---|
| **T005 27 028 99** | **WHP 80** | **Preheating plate 80 W, 24 V, 80 x 50 mm** |

## WXHP 120 Preheating plate

- 120 W, 24 V
- Preheating Size 80 x 50 mm
- Temperature range 50°C – 200°C
- Platinum sensor
- Internal parameter storage (Zero Tolerance)
- Connectable to: WX 1, WX 2, WXD 2 WXA 2
- Size housing 150 x 120 x 65 mm (L x B x H)

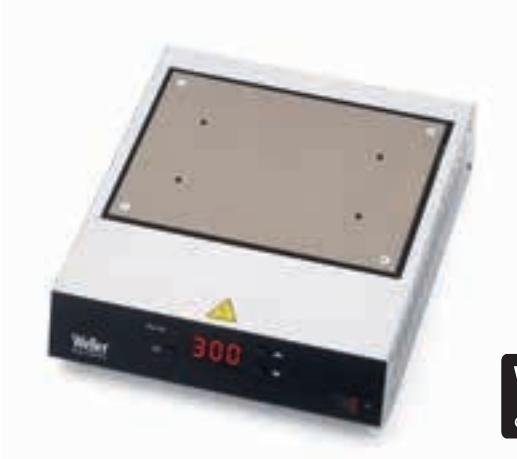
WX compatible

ESD

| Order-no. | Model | Description |
|---|---|---|
| **T005 27 029 99** | **WXHP 120** | **Preheating plate120 W, 24 V, 80 x 50 mm** |

## WHP 1000 Preheating plate

- 1000 W, 230 V
- Heating surface
- Temperature range
- RS 232 Interface e.g. for connection to Weller hot air stations WHA 3000
- Digital display for set and read temperature
- Element Type K (accessory) connectable




WX compatible

ESD

| Order-no. | Model | Description |
|---|---|---|
| **T005 33 648 99** | **WHP 1000** | **Preheating plate 1000 W, 230 V, 220 x 150 mm** |

www.labem.pl

## WHP 200
## Infrared preheating plate

- 200 W, 230 V
- Heating surface 120 x 60 mm
- Temperature range 50°C - 400°C
- Digital display for set and read temperature
- Electronic temperature control
- Infrared high temperature ceramic elements for fast and efficient heat up
- 2 Easy Fix board holder
- ESD safe

Easy Fix board holder

| Order-no. | Model | Description |
|---|---|---|
| **T005 33 716 99** | **WHP 200** | **Preheating plate 200 W, 230 V, 120 x 60 mm with easy fix board holder** |

## WHP 3000
## Infrared preheating plate

- 600 W, 230 V
- Heating surface 120 x 190 mm
- Temperature range 50°C - 400°C
- Digital display for set and read temperature
- Electronic temperature control
- 3 Infrared high temperature ceramic elements for fast and efficient heat up
- Two heated zones can be selected
- Element Type K (accessory) connectable
- RS 232 Interface e.g. for connection to Weller hot air stations WHA 3000
- 2 Easy Fix board holder (as WHP 200)

WX compatible

ESD

| Order-no. | Model | Description |
|---|---|---|
| **T005 33 386 99** | **WHP 3000** | **Infrared preheating plate 600 W / 230 V with Easy Fix board holder** |

## WHP 3000
## Infrared preheating plate

- 1200 W, 230 V
- Heating surface 190 x 245 mm
- Temperature range 50°C - 400°C
- Digital display for set and read temperature
- Electronic temperature control
- 6 Infrared high temperature ceramic elements for fast and efficient heat up
- 2 Easy Fix board holder (as WHP 200)

WX compatible

ESD

| Order-no. | Model | Description |
|---|---|---|
| **T005 33 646 99** | **WHP 3000** | **Infrared preheating plate 1200 W, 230 V with Easy Fix board holder** |

Accessories:

| | | |
|---|---|---|
| T005 31 191 99 | | RS 232 Interface Cable |
| T005 31 190 99 | | Thermoelement Type K 0,5 mm |
| T005 33 165 99 | WBHS | PC board holder with pivoting stand |
| T005 33 164 99 | WBH | PC board holder without stand |

www.labem.pl

## USB Microscope

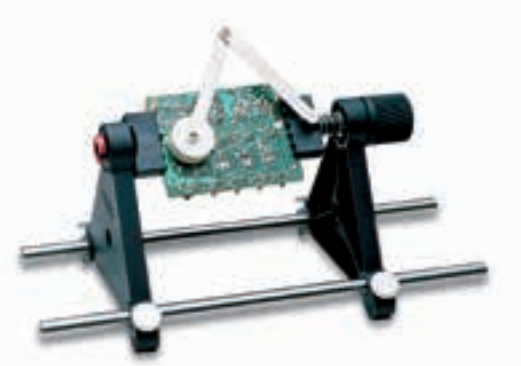
- Microscope with digital camera and USB interface
- Adjustable work stand
- Application software
- Resolution: 1280 x 1024 MP
- Interface: USB 2.0
- Magnification: 20X – 90X
- Sensor 1/3" Color CMOS
- Video frame rate: up to 30 Fps
- Illumination: 8 build-in Hightech LEDs
- LED on/off controlled by software
- Save file format: BMP, JPG, AVI
- Dimensions: 100 mm (L) x 32 mm (D)
- Cable length: approx. 1,8 m

ESD

| Order-no. | Model | Description |
|---|---|---|
| **T005 13 835 99** | | **USB Microscope with digital camera and adjustable work stand** |
| **T005 13 839 99** | | **USB Microscope with digital camera and adjustable work stand, with polarisation filter** |
| **T005 13 834 99** | | **Stand without arm** |

## ESF 120ESD PCB board holder

- Max. size 160 x 235 mm
- Rotates through 360° in increments of 15°
- Spring clamp
- Cushioned arm for component fixing



ESD

| Order-no. | Model | Description |
|---|---|---|
| **T005 15 026 99** | **ESF 120ESD** | **PCB board holder** |

## WBH 2 PCB board holder

- Max. size 310 x 320 mm

| Order-no. | Model | Description |
|---|---|---|
| **T005 33 167 99** | **WBH2** | **Board holder without stand** |

www.labem.pl

## WBHS PCB board holder with stand

- Max. size 310 x 320 mm
- Board positioning in X and Y directions
- For single and doublesided boards
- Stand to mount hot air pencil HAP 3000
- Preheating plate WHP 3000 could be fitted under the board holder

| Order-no. | Model | Description |
|---|---|---|
| **T005 33 165 99** | **WBHS** | **PCB board holder with stand for WHA 3000P + WHA 3000V** |

## Stand of WBHS

| Order-no. | Description |
|---|---|
| **T005 33 166 99** | **Stand of WBHS** |

## WBH PCB board holder without stand

- Same as WBHS but without stand

| Order-no. | Model | Description |
|---|---|---|
| **T005 33 164 99** | **WBH** | **PCB board holder without stand** |

## Accessories for WBHS, WBH, WQB

| Order-no. | Description |
|---|---|
| **T005 87 548 73** | **Adjustable circuit boarder stop** |
| **T005 87 557 45** | **Support for large dimensioned circuit boards** |
| **T005 87 557 41** | **Downholder for circuit boards** |
| **T005 87 549 24** | **Clamping set for irregular shaped circuit boards (e.g. mobile phones, video/digital camera boards, etc.)** |

www.labem.pl

**Rework preparation tool e.g. for tin coating of wire ends and cleaning of leads and wires from excess and dirt.**
**All soldering baths are suitable for leadfree solder.**

## W101 H Soldering Bath

- 100 W, 230 V
- Inside Ø 17,4 mm, depth 22 mm
- Different temperatures available
- Magnastat temperature control
- Horizontal stand
- For lead free solder

| Order-no. | Model | Description |
|---|---|---|
| **T005 61 093 99** | **W101 H** | **Miniature soldering bath 100 W, 230 V** |

Scope of supply:

| | |
|---|---|
| | Miniature soldering bath with 330°C insert and horizontal stand |

Accessories:

| | |
|---|---|
| T005 11 706 99 | Insert for temperature 285°C |
| T005 11 707 99 | Insert for temperature 330°C |
| T005 11 708 99 | Insert for temperature 380°C |
| T005 11 709 99 | Insert for temperature 450°C |

## WSB 80 Soldering Bath

- 80 W, 24 V
- Inside Ø 20 mm, depth 25 mm
- Temperature range 50°C – 450°C
- Connectable to all Weller 80 W digital stations
- V2A tray to guard against dripping solder residue
- Size housing: 150 x 120 x 65 mm (L x B x H)
- Heat-up time ~ 7 min (50°C – 350°C)
- For lead free solder

| Order-no. | Model | Description |
|---|---|---|
| **T005 27 040 99** | **WSB 80** | **Soldering bath 80 W, 24 V** |

## WSB 150 Soldering Bath

- 150 W, 24 V
- Soldering bath size: 58 x 33 x 19 mm (L x W x H)
- Temperature range 50°C – 550°C
- Connectable to all Weller 150 W digital stations
- V2A tray to guard against dripping solder residue
- Size housing: 150 x 120 x 65 mm (L x W x H)
- Heat-up time ~ 10 min (50°C – 350°C)
- For lead free solder

| Order-no. | Model | Description |
|---|---|---|
| **T005 27 042 99** | **WSB 150** | **WSB 150 Soldering bath 150 W, 24 V** |

## WXSB 200 Soldering Bath

- 200 W, 24 V
- Soldering bath size: 58 x 33 x 19 mm (L x W x H)
- Temperature range 100°C – 500°C
- Connectable to all WX tools
- Heat-up time ~ 10 min (50°C – 350°C)
- Size housing: 150 x 120 x 65 mm (L x W x H)

| Order-no. | Model | Description |
|---|---|---|
| **T005 27 043 99** | **WXSB 200** | **WXSB 200 Soldering bath 200 W, 24 V** |

www.labem.pl

**The Weller WST 82 temperature controlled thermal stripping tool is suitable for all 80 W Weller stations. It strips off thermoplastic insulation materials by using precisely shaped stripping blades. The stripping length is adjustable up to 30 mm. Optimal temperature control via power unit (accessory).**

## Thermal stripping tool WST 82 KIT1

- Suitable for all 80 W Weller stations
- For ribbon cable and round wire

3

7

| Order-no. | Model | Description |
|---|---|---|
| **T005 25 032 99** | **WST 82 KIT1** | **Thermal stripping tool 80 W, 24 V** |

Scope of supply:

| | | |
|---|---|---|
| | | Thermal stripping tool WST 82 |
| | T005 87 250 34 | Brush |
| 7 | T005 87 257 42 | Cutting knife set |
| 3 | T005 87 257 26 | Knife Set AWG 12, 16, 24 |
| | T005 15 032 98 | Safety rest |

## Thermal stripping tool WST 82 KIT2

- Suitable for all 80 W Weller stations
- Flex cord for 1,5 - 3,5 m working distance
- For ribbon cable and round wire

| Order-no. | Model | Description |
|---|---|---|
| **T005 25 031 99** | **WST 82 KIT2** | **Thermal stripping tool 80 W, 24 V with flexcord for wider operation range** |

Scope of supply:

| | | |
|---|---|---|
| | | Thermal stripping tool WST 82 |
| 1 | T005 87 250 34 | Brush |
| 6 | T005 87 257 36 | V-Knife Set 4,25 mm x 2 mm |
| 2 | T005 15 032 98 | Safety rest |

## Accessories WST 82

2

3

4

5

6

7

| | Order-no. | Description |
|---|---|---|
| 2 | **T005 87 257 22** | **Universal knife set 9 mm x 2 mm** |
| 3 | **T005 87 257 26** | **Knife set AWG AWG 12, 16, 24 (2,0, 1,3, 0,51 mm)** |
| 4 | **T005 87 257 29** | **Knife set AWGAWG 12, 14, 24, 26 (2,0, 1,6, 0,51, 0,4 mm)** |
| 5 | **T005 87 257 32** | **Knife set AWG AWG 14, 18, 22, 26 (1,6, 1,02, 0,64, 0,4 mm)** |
| 6 | **T005 87 257 36** | **V-Knife set AWG 4,25 mm x 2 mm** |
| 7 | **T005 87 257 42** | **Cutting knife set, width 23 mm 23 mm** |

www.labem.pl

**With the hand-held desoldering pumps a vacuum is produced by means of a piston, cylinder and spring force. The piston is tensioned manually and secured automatically. The piston is moved back suddenly by pressing the release button and a vacuum is created briefly so that the soldered joint is freed of liquid solder.**

## SA 21A
## Manual desoldering pump

- Length 200 mm
- Metal housing
- antistatic

| Order-no. | Model | Description |
|---|---|---|
| **SA21A** | **SA 21A** | **Manual desoldering pump** |

Accessories:

| | | |
|---|---|---|
| | SA 21A1 | Desoldering tip antistatic for SA 21A |

## PS 100A
## Manual desoldering pump

- Length 150 mm
- Strong vacuum, minimal rebound
- Metal housing
- antistatic (with tip PS 1001A)

| Order-no. | Model | Description |
|---|---|---|
| **PS100A** | **PS 100A** | **Manual desoldering pump** |

Accessories:

| | | |
|---|---|---|
| | PS 1001A | Desoldering tip antistatic for PS 100A |

## PS 200A
## Manual desoldering pump

- Length 200 mm
- Strong vacuum, minimal rebound
- Metal housing
- antistatic (with tip PS 2001A)

| Order-no. | Model | Description |
|---|---|---|
| **PS200A** | **PS 200A** | **Manual desoldering pump** |

Accessories:

| | | |
|---|---|---|
| | PS 2001A | Desoldering tip antistatic for PS 200A |

www.labem.pl

**Vacuum-Pen**

**For easy pick and place of delicate SMD components. The vacuum pen avoids stress and damage to the leads. The versatile compact sized pen is independent from compressed air or batteries.**

## WLSK 200 Vacuum-Pen

| Order-no. | Model | Description |
|---|---|---|
| **WLSK200** | **WLSK 200** | **Vacuum-Pen including Tip 3,2 mm x 9,5mm** |
| Accessories: | | |
| WLSK200T18 | WLSKT 18 | Replacement with tip, rubber 3,2 mm |
| WLSK200T38 | WLSKT 38 | Replacement with tip, rubber 9,5 mm |
| KDS260S | KDS 260S | Replacement rubber Ø 3,2 mm |
| KDS260M | KDS 260S | Replacement rubber Ø 6,3mm |
| KDS260L | KDS 260L | Replacement rubber Ø 9,5 mm |

## SD 1000 Solder Dispenser

- For use of coils up to 1000 g
- Length 95 mm, core Ø > 17 mm
- Length 70 mm, core Ø > 12 mm
- Length 84 mm, core Ø < 12 mm

| Order-no. | Model | Description |
|---|---|---|
| **T005 13 017 99** | **SD 1000** | **Solder Dispenser** |

## ABW 2 Extension for additional reel

- For use of coils up to 1000 g
- Length 95 mm, core Ø > 17 mm
- Length 70 mm, core Ø > 12 mm
- Length 84 mm core Ø < 12 mm

| Order-no. | Model | Description |
|---|---|---|
| **T005 13 013 99** | **ABW 2** | **Extension for additional reel, to be fixed on SD 1000** |

www.labem.pl

# Accessories Cleaning Tools

**The solution for cleaning lead free solder!**
**When using lead free you will be experienced an increased in oxidation in the wettable area of the tip. These oxides must be removed regularly otherwise it will make the tip completely unwettable and not usable anymore. When cleaning the tip by means of the Weller WDC Dry Cleaner a special brass wool is used. First the surplus solder is removed by tapping the tip on the soft edge of the collector box.The final cleaning is then done by pushing and turning the tip in the brass wool. After cleaning there is still a fine amount of solder on the tip avoiding fast oxidation of the iron layer which is an advantage versus the cleaning by the wet sponge. The brass wool can be soaked in flux which may improve the performance further. More informations for cleaning you can find on page 160/161.**

## WDC Dry cleaner

- Minimisation of the erosion
- Double soldering tip lifetime
- Superior wetting properties
- Reduced spring effect - less solder splashes

| Order-no. | Model | Description |
|---|---|---|
| **T005 15 124 99** | **WDC** | **Dry cleaner for soldering tips with brass cleaning wool** |

Accessories:

| | |
|---|---|
| T005 13 840 99 | Brass cleaning wool for WDC (2 pieces) |
| T005 13 824 99 | Metal wool for WDC (2 pieces) |

## WDC 2 Dry cleaner

| Order-no. | Model | Description |
|---|---|---|
| **T005 15 125 99** | **WDC 2** | **Dry Cleaner for WDH safety rests with brass cleaning wool** |

Accessories:

| | |
|---|---|
| T005 13 841 99 | Brass cleaning wool for WDC 2 (2 pieces) |
| T005 13 825 99 | Metal wool for WDC 2 (2 pieces) |

## Cleaning sponge

| Order-no. | Description |
|---|---|
| **T005 22 419 99** | **Cleaning sponge single-layer, 70 x 55 x 16 mm** |
| **T005 22 420 99** | **Cleaning sponge double-layer, 70 x 55 x 16 mm** |

## Stainless steel brush

| Order-no. | Model | Description |
|---|---|---|
| **T005 13 827 99** | | **Stainless steel brush (3 pieces)** |

www.labem.pl

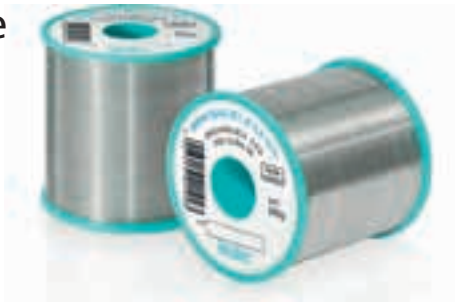
## WPB 1 Polishing Bar

- Cleaning only possible in cold state of the soldering tip.
- Further informations for cleaning you can find on page 160/161

| Order-no. | Model | Description |
|---|---|---|
| **WPB1** | **WPB 1** | **Polishing Bar for removal of compacted oxidised films on soldering tips.** |

## WSW Lead free soldering wire for longer tip lifetime

- Soldering wire with integrated flux core
- Superior wetting properties
- Cost reduction due to reduction in tip change frequency
- Not flux soaked - no process pollution
- Reduction of service costs for removing of oxidised layers
- No-clean flux
- Flux content 3,5 %
- Further informations for cleaning you can find on page 160–161.



Available September 2013

| Type | WSW SAC M1 | WSW SAC L0 | WSW SC L0 | WSW SC M1 |
|---|---|---|---|---|
| **Alloy** | Sn3.0Ag0.5Cu | Sn3.0Ag0.5Cu | Sn0.7Cu | Sn0.7Cu |
| **Temperature** | 217-221°C | 217-221°C | 227°C | 227°C |
| **Flux J-STD 004** | M1 | L0 | L0 | M1 |
| **Flux content** | 3.5% | 3.5% | 3.5% | 3.5% |
| **Weight** | 500 gr | 500 gr | 500 gr | 500 gr |
| **Diameter** | Art.-Nr. | Art.-Nr. | Art.-Nr. | Art.-Nr. |
| 0,3 mm | T005 13 865 99 | T005 13 872 99 | - | - |
| 0,5 mm | T005 13 864 99 | T005 13 870 99 | T005 13 880 99 | T005 13 876 99 |
| 0,8 mm | T005 13 863 99 | T005 13 869 99 | T005 13 879 99 | T005 13 875 99 |
| 1,0 mm | T005 13 862 99 | T005 13 868 99 | T005 13 878 99 | T005 13 874 99 |
| 1,2 mm | T005 13 861 99 | T005 13 867 99 | T005 13 877 99 | T005 13 873 99 |
| 1,6 mm | T005 13 860 99 | T005 13 866 99 | - | - |
| Gewicht | 250 gr | 250 gr | 250 gr | 250 gr |
| **Diameter** | Art.-Nr. | Art.-Nr. | Art.-Nr. | Art.-Nr. |
| 0,8 mm | T005 13 885 99 | T005 13 887 99 | - | - |
| 1,0 mm | T005 13 886 99 | T005 13 888 99 | - | - |
| **Weight** | 100 gr | 100 gr | 100 gr | 100 gr |
| **Diameter** | Art.-Nr. | Art.-Nr. | Art.-Nr. | Art.-Nr. |
| 0,3 mm | T005 13 881 99 | T005 13 883 99 | - | - |
| 0,5 mm | T005 13 882 99 | T005 13 884 99 | - | - |

## Tip-Activator

- Cleaning only possible in hot state of the soldering tip.
- Further informations for cleaning you can find on page 160–161.

| Order-no. | Model | Description |
|---|---|---|
| **T005 13 031 99** | **Tip-Activator** | **For regeneration of oxidized tips** |

www.labem.pl

## WDC Dry cleaner

- Further informations for cleaning you can find on page 160–161.

| Order-no. | Model | Description |
|---|---|---|
| **T005 15 126 99** | **WDC** | **Dry cleaner** |

Scope of supply:

| | | | |
|---|---|---|---|
| 1 | T005 15 124 99 | WDC | Weller Dry Cleaner |
| 2 | T005 13 031 99 | | Tip Activator |
| 3 | T005 13 827 99 | | Stainless steel brush |
| 4 | WPB 1 | | Polishing Bar |

## WDC 2 Dry cleaner

- Further informations for cleaning you can find on page 160–161.

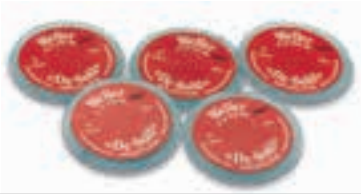
| Order-no. | Model | Description |
|---|---|---|
| **T005 15 127 99** | **WDC 2** | **Dry cleaner** |

Scope of supply:

| | | | |
|---|---|---|---|
| 1 | T005 15 124 99 | WDC 2 | Weller Dry Cleaner |
| 2 | T005 13 031 99 | | Tip Activator |
| 3 | T005 13 827 99 | | Stainless steel brush |
| 4 | WPB 1 | | Polishing Bar |

**The desoldering wires consists of a copper net with flux.**
**The special surface treatment allows efficient solder removal.**

## Desoldering Wires



| Order-no. | Model | Description |
|---|---|---|
| **T005 13 010 99** | **Desoldering wire** | **1,6 m coil, width 1,5 mm** |
| **T005 13 011 99** | **Desoldering wire** | **1,6 m coil, width 2 mm** |
| **T005 13 012 99** | **Desoldering wire** | **1,6 m coil, width 2,5 mm** |
| **T005 13 028 99** | **Desoldering wire** | **15 m coil, width 2,5 mm** |
| **T005 13 026 99** | **Desoldering wire** | **30 m coil, width 1,5 mm** |
| **T005 13 027 99** | **Desoldering wire** | **30 m coil, width 2 mm** |

www.labem.pl

## Liquid flux

- Without brush.
- Typ 1.1.3.AF-SW32, EN29 454
- Remaining flux is not corrosive
- DIN EN 61190 ROL0
- Flux on base of resin

| Order-no. | Description |
|---|---|
| T005 13 831 99 | Liquid flux (100 ml) for simple soldering applications with high temperature and long soldering times (for example wire and dip) |

## Liquid flux

- With brush
- Solvent content 73 %
- ROL1 related to IPC J-STD-004

| Order-no. | Description |
|---|---|
| T005 13 837 99 | Liquid flux RMA (15 ml) especially for BGA and SMT rework. Very reliable, avoids short cuts |

**The Spot-Mask is a material to protect connectors of PCBs from tinning during the reflow process. For manual rework the Spot-Mask is easily applied and removed. Mechanical fixture after 6 min, hardened after 2-3 hours by 20°C, 1 hour by 95°C.**

## Spot-Mask

- Storable 12 months.
- Suitable for lead free applications.

| Order-no. | Model | Description |
|---|---|---|
| SM15748BK | Spot-Mask | Suitable for lead free applications, 250 ml |

## Extension cord

| Order-no. | Description |
|---|---|
| T005 32 099 99 | Extension cord 2-wire, 4 m for,Soldering iron TCPS |
| T005 25 098 99 | Extension cord 5-wire, 4 m, up to 50 W for Soldering iron LR 21, MLR 21, WTA 50 |
| T005 26 098 99 | Extension cord 7-wire, 3 m, up to 80 W, for Soldering iron WMP, WP 80, WSP 80 |

www.labem.pl

# Why Fume Extraction ?

Many work environments today, including soldering, adhesives, welding and laser applications, create particles and gases that can be harmful to the work place and the environment. Most people thought that the move to leadfree soldering would be more nature friendly. In reality leadfree soldering smoke emissions contain more breathable fine dust particles.
More smaller particles are produced due to the higher working temperatures required and because more flux is used in the soldering process.

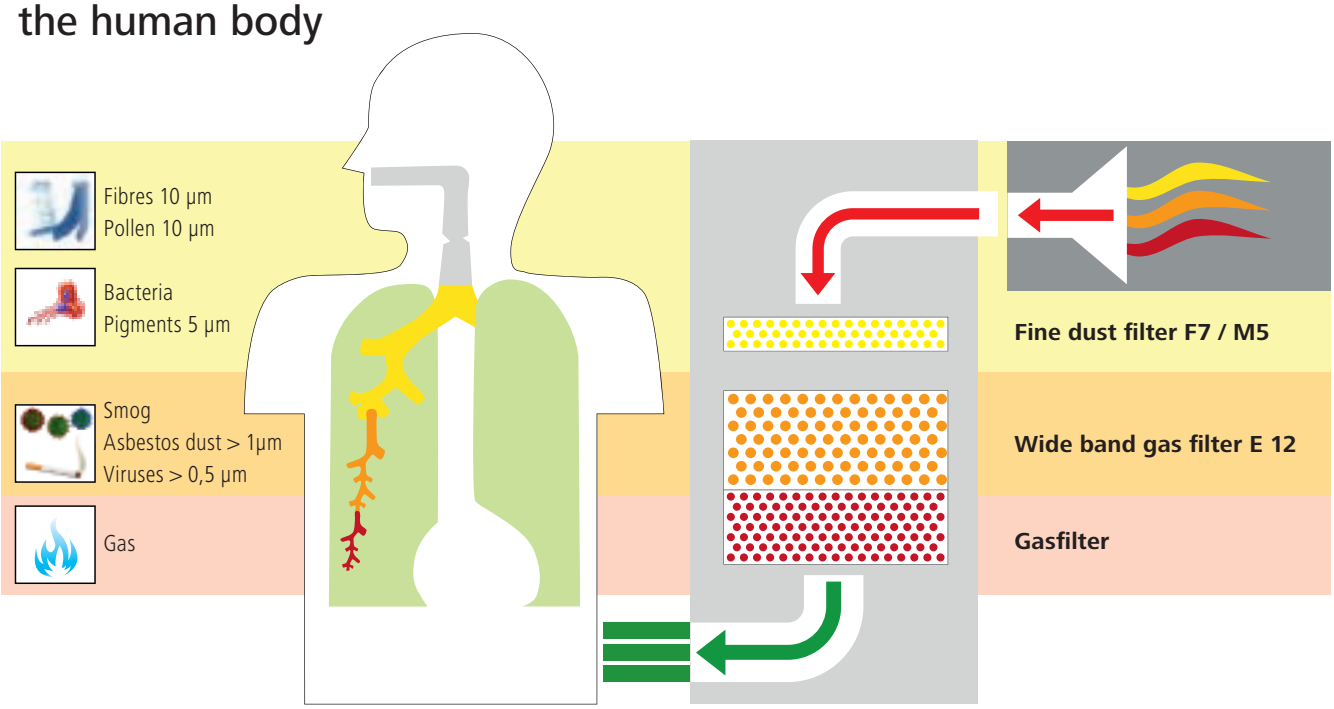
In many countries legal regulations governing clean air in the work place require that hazardous substances are removed from the air in order to avoid harmful effects on people and machines.

It is important to use the correct safety equipment to remove these hazardous substances. Fine particles are more dangerous to inhale than big particles as they get caught more easily and block the alveoli in the lungs.

To protect the operator it is important to use an extraction system that is able to separate these particles and gases and then re-circulates the cleaned air back into the work place. This saves energy and reduces energy costs.

- The smaller the particles are, the deeper they penetrate into the respiratory system
- The deeper the particles penetrate, the higher are the health risks
- The smallest particles travels via alveoli into the bloodstream

## Fine dust accumulation in the human body

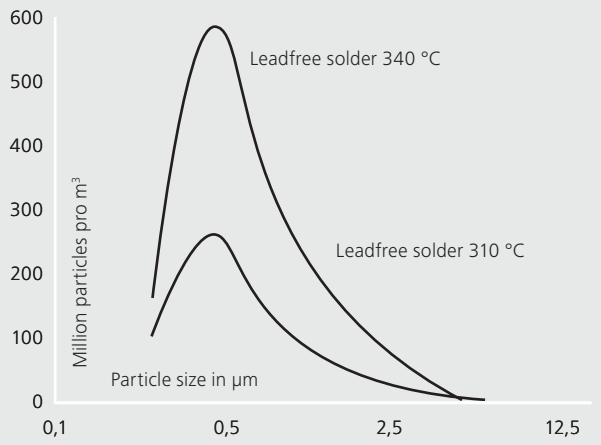



## 90 minutes soldering with leadfree solder wire

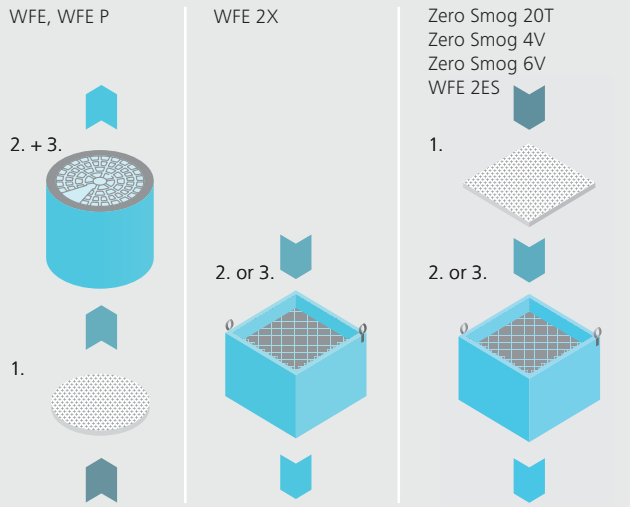
www.labem.pl

## Pollution concentration

**Increasing soldering temperature causes higher pollutant concentration of small particles!**




## Filter process




Filter drawings not true to original

## Filter classes and recommended applications

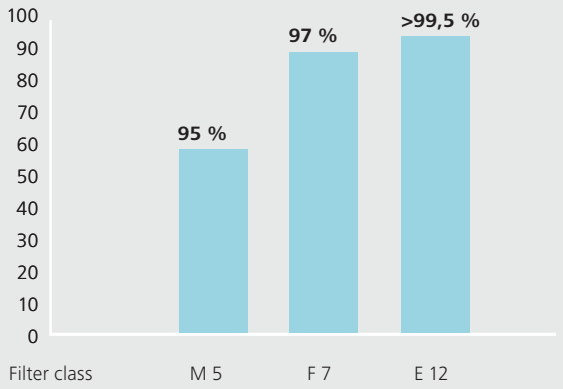
**1. Fine dust filter**
For standard applications with a small amount of flux and pollution gases with high solid content, Weller® FT offers filter classes M 5 or F 7.

**2. Compact filter consisting of:**
**EPA filter**
Filter particles up to 0,3 µm.
Weller® FT offers EPA (Efficiency Particulate Air) filters of class E 12, medium filtration efficiency 99,5%.

**Wide band gas filter**
Wide band gas filter
For cleaning harmful fumes and vapours. The Weller® FT wide band gas filter consists of 50% active carbon and 50% Puratex. Harmful gases with a high molecular weight are cleaned by the active carbon. Puratex it suitable for absorbing gases of lower molecular weight. Because of its composition, Puratex is able to convert a large number of chemical pollutants by means of molecular modification into non-polluting gases.

**3. Gas filter (option)**
The gas filter is used for extracting adhesive fumes and solvents. Experience has shown that filtering suspended particles is not so vital in this respect. The gas filter is filled with 50% active carbon and 50% Puratex. The EPA E 12 is omitted.

**Medium filtration efficiency Em % against particle size 0,12 µm**




www.labem.pl

# Solutions for Fume Extraction – For clean air

## Weller FT offers two extraction solutions:

### Volume Extraction

ESD

- Larger areas can be covered
- Low maintenance
- Mobile
- Quick & easy installation
- Economic for 1 to 8 work places
- Remote control

More suitable for applications involving, for example, solder baths, hot air soldering, micro solders and gluing work. Weller® FT offers various mobile systems that purify the air up to a maximum of 8 workplaces.

Weller® FT Easy-Click-60 Example for installation

Set up your volume extraction solution with our configurator
**www.weller.eu**

### Tip Extraction

ESD

- Less investment per work place
- Collect pollution direct at source
- Up to 20 collection points with one system (200 m apart)
- Ergonomic friendly with easy access to work piece
- No noise
- Minimal air movement

Weller® FT FE (Fume extraction) soldering irons have a smoke tube integrated into the handle. When soldering the tube is positioned directly above the joint and collects any fumes produced. Fume extraction attachments can be retro fitted to non fume extraction

www.labem.pl

- Volume extraction with extraction arms
- Low underpressure
- High volume flow rate

**For 1 extraction arm ø 60**
- Volume flow rate = 50 – 80 [m³/h]
- Underpressure = 300 – 700 [Pa]

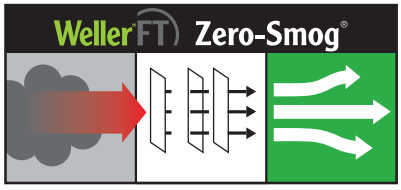
**For 6 extraction arms ø 60**
- Volume flow rate = 300 – 480 [m³/h]
- Underpressure = 300 – 700 [Pa]

Weller® FT Easy-Click-60 connection elements for quick and easy installation for volume extraction

- The tube is positioned directly above the joint and collects any fumes produced.
- High underpressure
- Low volume flow rate

**For 1 FE soldering iron**
- Volume flow rate = 1 – 1,5 [m³/h]
- Underpressure = 10.000 [Pa]

**For 25 soldering irons**
- Volume flow rate = 25 – 30 [m³/h]
- Underpressure = 10.000 [Pa]

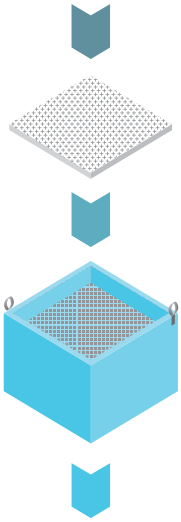



www.labem.pl

WFE 2ES

WFE 2X

## Spare filter



Fine dust filter M 5
T005 87 627 03

EPA Filter H12
and active carbon
T005 87 627 01

Set (M 5 + H 12)

## Sloped nozzle

Sloped nozzle

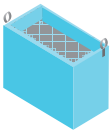
Funnel nozzle

Exhaust hood

## Accessory

Pre filter box

Pocket filter
for pre filter box



Filter for WFE 2X
T005 36 590 99

Trolley
with wheels

Hanging deviar

Remote control

## Extraction arms Sets

KIT 1 WF Nozzle
sloped 60 mm

KIT 1 S WF

KIT 1 WF
Funnel

KIT 1 WF 32

KIT 1 WF 60

## Accessories Installation

Extraction arm

Extraction arm 32
mm incl. nozzle

Adapter Kit
50-60 mm

WFV Stop valve

Extraction hose
1 m, 3 m, 5 m

Adapter
40/60

www.labem.pl

## Zero Smog 4V

WX compatible

## Zero Smog 6V

WX compatible

## Remote control

WX compatible

WX Adapter for Remote control
T005 87 627 24

WX Connection cable
T005 87 647 10

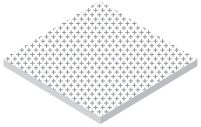
## Adapter

ø 75 mm on Easy-Click 60

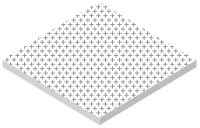
## End cap

Easy-Click 60, 60 mm

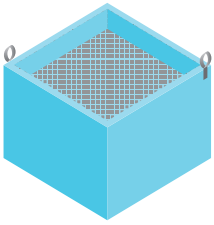
## Spare filter



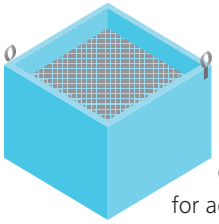
Fine dust filter M 5
T005 87 359 37 (2S, 4V)
T005 87 358 37 (4S, 6V)



Fine dust filter F 7
T005 87 359 38 (2S, 4V)
T005 87 358 36 (4S, 6V)



Compact filter
T005 87 359 36 (2S, 4V)
T005 87 358 38 (4S, 6V)



Compact filter for adhesive fumes
T005 87 358 95 (2S, 4V)
T005 87 358 35 (4S, 6V)

## Filter

Pre filter box

Pocket filter F7

Filtering for sticky particles

Female adapter

Male adapter

T-piece with 2 male and 1 female adapter

Hose connector, angle

Hose connector, straight

www.labem.pl

## Technical data

WFE 2ES

WFE 2X

| | | |
|---|---|---|
| Dimensions L x B x H (mm): | 320 x 320 x 395 | 460 x 610 x 210 |
| Weight | 9 kg | 15 kg |
| Voltage | 230V, 50Hz / 120 V, 60 Hz | 100-240 V, 60 Hz |
| Sound level in 1m | 55 dB (A) | 54 dB (A) |
| Electrical power | 115 VA | 175 VA |
| Max. vacuum | 1800 Pa | 2.300 Pa |
| Max. capacity | 180 $m^3/h$ | 100 $m^3/h$ |
| Fine dust filter | Fine dust filter M 5 | Fine dust filter F 7 |
| Filter | EPA Filter E 12 and active carbon (*Set incl. filter M 5) | Compact filter EPA filter E 12 and 50% active carbon, 50% Puratex |

www.labem.pl

Zero Smog 4V

Zero Smog 6V

| | | |
|---|---|---|
| Dimensions L x B x H (mm): | 320 x 320 x 395 | 450 x 450 x 650 |
| Weight | 19 kg | 40 kg |
| Voltage | 230 V / 50 Hz (120 V / 60 Hz) | 230 V / 50 Hz |
| Sound level in 1m | 48 dB (A) | 51 dB (A) |
| Electrical power | 275 VA | 460 VA |
| Max. vacuum | 2700 Pa | 2800 Pa |
| Max. capacity | 230 $m^3/h$ | 615 $m^3/h$ |
| Fine dust filter | Fine dust filter F 7 | Fine dust filter F 7 |
| Filter | Compact filter EPA filter E 12 (50% active carbon, 50% Puratex) | Compact filter EPA filter E 12 (50% active carbon, 50% Puratex) |

# Volume Extraction

- Low maintenance
- Flexible
- Quick and easy installation
- For different applications

ESD

**For applications where volume extraction is more suitable, e.g. solder baths, hot air soldering, micro solders and gluing work, Weller offers the mobile systems Zero Smog 4V and Zero Smog 6V. The units purify the air upto 8 workplaces. A wide range of accessory is available for each system.**

## Zero Smog 4V

- For upto 4 workplaces

- Constant flow control (CFC)
- Efficiency test via USB port
- Acoustical and optical filter alarm

| Order-no. | Model | Description |
|---|---|---|
| **T005 36 606 99** | **Zero Smog 4V** | **Mobile fume extraction unit 230 V / 50 Hz, for volume extraction with built in turbine** |

Scope of supply:

| |
|---|
| Fume extraction unit 230 V / 50 Hz |
| Filter (EPA filter E 12 and wide band gas filter 50% active carbon / 50% Puratex) |
| Fine dust filter F 7 |

## Zero Smog 4V

- Includes adhesive fume filter
- For upto 4 workplaces

- Constant flow control (CFC)
- Efficiency test via USB port
- Acoustical and optical filter alarm

| Order-no. | Model | Description |
|---|---|---|
| **T005 36 616 99** | **Zero Smog 4V** | **Mobile fume extraction unit 230 V / 50 Hz for volume extraction with built in turbine with adhesive fume filter** |

Scope of supply:

| |
|---|
| Fume extraction unit 230 V / 50 Hz |
| Filter for adhesive fumes (wide band gas filter 50% active carbon / 50% Puratex) |
| Fine dust filter F 7 |

www.labem.pl

# Zero Smog 4V Kit 1 sloped nozzle

- For upto 4 workplaces
- Set with 1 Extraction arm and Sloped nozzle

| Order-no. | Model | Description |
|---|---|---|
| **T005 36 636 99** | **Zero Smog 4V Kit 1 sloped nozzle** | **Mobile fume extraction kit 230 V / 50 Hz for 1 workplace - upgrading to 4 workplaces possible with further accessories** |

Scope of supply:

| | | |
|---|---|---|
| T005 36 606 99 | Zero Smog 4V | Fume extraction unit 230 V / 50 Hz |
| | | Compact filter (EPA filter E 12 and wide band gas filter 50% active carbon / 50% Puratex) |
| | | Fine dust filter F 7 |
| T005 36 572 99 | | Kit 1 WF Sloped 60 for volume extraction (50% Active carbon , 50% Puratex) |

Consists of:

| | | |
|---|---|---|
| T005 36 578 99 | | Extraction arm |
| T005 36 577 99 | | Sloped nozzle |
| T005 36 574 99 | WFV 60 | Stop valve incl. bench mounting brackets |
| T005 36 575 99 | | Bench mounting bracket |
| T005 36 576 99 | | Extraction hose |

# Zero Smog 4V Kit 2 sloped nozzle

- For upto 4 workplaces
- Set with 2 Extraction arms and Sloped nozzle

| Order-no. | Model | Description |
|---|---|---|
| **T005 36 656 99** | **Zero Smog 4V Kit 2 sloped nozzle** | **Mobile fume extraction kit 230 V / 50 Hz for 2 workplaces - upgrading to 4 workplaces possible with further accessories** |

Scope of supply:

| | | |
|---|---|---|
| T005 36 606 99 | Zero Smog 4V | Fume extraction unit 230 V / 50 Hz |
| | | Compact filter (EPA filter E 12 and wide band gas filter 50% active carbon / 50% Puratex) |
| | | Fine dust filter F 7 |
| 2 x T005 36 572 99 | | KIT 1 WF Sloped 60 for volume extraction |

Consists of:

| | | |
|---|---|---|
| 2 x T005 36 578 99 | | Extraction arm |
| 2 x T005 36 577 99 | | Sloped nozzle |
| 2 x T005 36 574 99 | WFV 60 | Stop valve incl. bench mounting brackets |
| 2 x T005 36 575 99 | | Bench mounting bracket |
| 2 x T005 36 576 99 | | Extraction hose |

www.labem.pl

## Zero Smog 4V Kit 1 Funnel nozzle

- For upto 4 workplaces
- Set with 1 Extraction arm and funnel nozzle

| Order-no. | Model | Description |
|---|---|---|
| **T005 36 626 99** | **Zero Smog 4V Kit 1 Funnel nozzle** | **Mobile fume extraction kit 230 V / 50 Hz for 1 workplace - upgrading to 4 workplaces possible with further accessories** |
| Scope of supply: | | |
| T005 36 606 99 | Zero Smog 4V | Fume extraction unit 230 V / 50 Hz |
| | | Compact filter (EPA filter E 12 and wide band gas filter 50% active carbon / 50% Puratex) |
| | | Fine dust filter F 7 |
| T005 36 571 99 | | Kit 1 WF Funnel 60 for volume extraction |
| Consists of: | | |
| T005 36 578 99 | | Extraction arm |
| T005 36 573 99 | | Funnel nozzle |
| T005 36 574 99 | WFV 60 | Stop valve incl. bench mounting brackets |
| T005 36 575 99 | | Bench mounting bracket |
| T005 36 576 99 | | Extraction hose |

## Zero Smog 4V Kit 2 Funnel nozzle

- For upto 4 workplaces
- Set with 2 Extraction arm and funnel nozzle

| Order-no. | Model | Description |
|---|---|---|
| **T005 36 646 99** | **Zero Smog 4V Kit 2 Funnel nozzle** | **Mobile fume extraction kit 230 V / 50 Hz for 2 workplace - upgrading to 4 workplaces possible with further accessories** |
| Scope of supply: | | |
| T005 36 606 99 | Zero Smog 4V | Fume extraction unit 230 V / 50 Hz |
| | | Compact filter (EPA filter E 12 and wide band gas filter 50% active carbon / 50% Puratex) |
| | | Fine dust filter F 7 |
| 2 x T005 36 571 99 | | KIT 1 WF Funnel 60 for volume extraction |
| Consists of: | | |
| 2 x T005 36 578 99 | | Extraction arm |
| 2 x T005 36 573 99 | | Funnel nozzle |
| 2 x T005 36 574 99 | WFV 60 | Stop valve incl. bench mounting brackets |
| 2 x T005 36 575 99 | | Bench mounting bracket |
| 2 x T005 36 576 99 | | Extraction hose |

www.labem.pl

## WFE 2ES Set

- For max. 2 workplaces
- Set with 1 Extraction arm and Funnel nozzle
- Economy solution

| Order-no. | Model | Description |
|---|---|---|
| **T005 36 516 89** | **WFE 2ES Set** | **Mobile solution for volume extraction for max. 2 workplaces, quick and easy to install for 1 workplace** |

Scope of supply:

| | | |
|---|---|---|
| T005 36 506 99 | WFE 2ES | Fume extraction unit - Compact filter, consists of: |
| | | EPA filter E 12, active carbonate foam, Fine dust filter M 5 |
| T005 36 571 99 | | KIT 1 WF Funnel 60 for volume extraction |

Consists of:

| | | |
|---|---|---|
| T005 36 578 99 | | Extraction arm |
| T005 36 573 99 | | Funnel nozzle |
| T005 36 574 99 | WFV 60 | Stop valve incl. bench mounting brackets |
| T005 36 575 99 | | Bench mounting bracket |
| T005 36 576 99 | | Extraction hose |

## WFE 2ES

- For max. 2 workplaces
- Economy solution

| Order-no. | Model | Description |
|---|---|---|
| **T005 36 506 99** | **WFE 2ES** | **Fume extraction unit 230 V with EPA filter E 12 active filter, fine dust filter M 5** |
| **T005 36 506 70** | **WFE 2ES** | **WFE 2ES with wide band gas filter for adhesive fumes** |

www.labem.pl

## WFE 2X Kit

- For max. 2 workplaces
- Set with 1 Extraction arm and Sloped nozzle

| Order-no. | Model | Description |
|---|---|---|
| **T005 36 587 99** | **WFE 2X Kit 1S** | **Mobile fume extraction unit 100-240 V with Sloped stativ extraction arm for 1 workplace** |
| Scope of supply: | | |
| T005 36 588 99 | WFE 2X | Fume extraction unit 100-240 V / 50/60 Hz |
| T005 36 579 99 | | Easy-Click-60 2 joint aluminium arm with sloped nozzle, length 1,2 m |
| Consists of: | | |
| T005 36 598 99 | | Stativ extraction arm without valve |
| T005 36 575 99 | | Bench mounting bracket |
| T005 36 576 99 | | Extraction hose |
| T005 36 577 99 | | Sloped nozzle |
| | | Extraction arm 70 cm |

## WFE 2X Kit 1

- For max. 2 workplaces
- Set with 1 extraction arm

| Order-no. | Model | Description |
|---|---|---|
| **T005 36 589 99** | **WFE 2X Kit 1** | **Mobile fume extraction unit 100-240 V with Sloped stativ extraction arm for 1 workplace** |
| Scope of supply: | | |
| T005 36 588 99 | WFE 2X | Fume extraction unit 100-240 V / 50/60 Hz |
| T005 36 719 99 | | in the scope of supply |
| Consists of: | | |
| | | Stop valve |
| | | Bench mounting bracket |
| | | Extraction hose flexible 3 m |
| | | Extraction arm ø 60 mm with funnel |
| | | Funnel nozzle |

## WFE 2X

- For max. 2 workplaces

| Order-no. | Model | Description |
|---|---|---|
| **T005 36 588 99** | **WFE 2X** | **Fume Extraction Unit 230 V / 50 Hz for volume extraction** |
| Scope of supply: | | |
| | | WFE 2X Fume extraction unit 100-240 V / 50/60 Hz |
| | | Active carbon (EPA Filter E 12, wide band gas filter (50% Active carbon / 50% Puratex) |

www.labem.pl

- Constant flow control (CFC)
- Efficiency test via USB port
- Acoustical and optical filter alarm

## Zero Smog 6V

- For upto 6 workplaces
- 1 connection included
- Further connections must be ordered separately

| Order-no. | Model | Description |
|---|---|---|
| **T005 36 666 99** | **Zero Smog 6V** | **Mobile fume extraction unit 230 V / 50 Hz, for volume extraction with built in turbine** |

Scope of supply:

| | |
|---|---|
| | Fume extraction unit 230 V / 50 Hz |
| T005 87 358 38 | Compact filter, consists of EPA filter E 12 and wide band gas filter (50% Active carbon, 50% Puratex) |
| T005 87 358 37 | Fine dust filter F 7 |

- Constant flow control (CFC)
- Efficiency test via USB port
- Acoustical and optical filter alarm

## Zero Smog 6V

- Fume extraction with adhesive fume filter
- For upto 6 workplaces
- 1 connection included
- Further connections must be ordered separately

| Order-no. | Model | Description |
|---|---|---|
| **T005 36 667 99** | **Zero Smog 6V** | **Mobile fume extraction unit 230 V / 50 Hz, for volume extraction with built in turbine and adhesive fume filter** |

Scope of supply:

| | |
|---|---|
| | Fume extraction unit 230 V / 50 Hz |
| T005 87 358 35 | Compact filter for adhesive fumes (wide band gas filter 50% active carbon / 50% Puratex) |
| T005 87 358 37 | Fine dust filter F 7 |

www.labem.pl

ESD

## Easy Click 60 Kit 1 WF 32

- Microscope extraction arm
- With sloped nozzle

| Order-no. | Model | Description |
|---|---|---|
| **T005 87 627 70** | **Kit 1 WF 32** | **Easy-Click-60 Microscope Extraction arm Ø 32 mm, Set flexible, length 1 m** |
| Consists of: | | |
| T005 36 574 99 | | Stop valve with bench mounting brackets |
| T005 36 576 99 | | Extraction hose flexible 3 m |
| T005 36 580 99 | | Extraction arm ø 32 mm |

## Easy Click 60 Kit 1 WF Funnel

- With funnel

| Order-no. | Model | Description |
|---|---|---|
| **T005 36 571 99** | **Kit 1 WF** | **Easy-Click-60 Extraction arm with funnel, width 230 mm, height 100 mm, Set flexible, Ø 60 mm, length 1 m** |
| Consists of: | | |
| T005 36 574 99 | | Stop valve with bench mounting brackets |
| T005 36 576 99 | | Extraction hose flexible 3 m |
| T005 36 578 99 | | Extraction arm ø 60 mm |
| T005 36 573 99 | | Funnel nozzle |

## Easy Click 60 Kit 1 WF Nozzle

- With sloped nozzle

| Order-no. | Model | Description |
|---|---|---|
| **T005 36 572 99** | **Kit 1 WF** | **Easy-Click-60 Extraction arm with sloped nozzle, 60 mm, length 1 m** |
| Consists of: | | |
| T005 36 574 99 | | Stop valve with bench mounting brackets |
| T005 36 576 99 | | Extraction hose flexible 3 m |
| T005 36 578 99 | | Extraction arm ø 60 mm |
| T005 36 577 99 | | Sloped nozzle |

www.labem.pl

## Easy Click 60 Kit 1S WF Nozzle

- With sloped nozzle
- With 2 joint arms

| Order-no. | Model | Description |
|---|---|---|
| **T005 36 579 99** | **Kit 1S WF sloped nozzle** | **Easy-Click-60 2 joint aluminium arm with sloped nozzle, length 1,5 m** |
| Consists of: | | |
| T005 36 598 99 | | 2 joint arms |
| T005 36 575 99 | | Bench mounting brackets |
| T005 36 576 99 | | Extraction hose flexible 3 m |
| | | Extraction arm ø 60 mm, 0,7 m |
| T005 36 577 99 | | Sloped nozzle |

## Easy Click 60 Kit 1S WF Funnel

- With funnel nozzle
- With 1 joint arms

| Order-no. | Model | Description |
|---|---|---|
| **T005 87 627 63** | **Kit 1S WF funnel nozzle** | **Easy-Click-60 Extraction arm with funnel nozzle with stop valve, length 1,20 m** |
| Consists of: | | |
| T005 87 627 47 | | 1 joint arm with stop valve and bench mounting brackets |
| T005 36 576 99 | | Extraction hose flexible 3 m |
| | | Extraction arm ø 60 mm, 0,7 m |
| T005 36 573 99 | | Funnel nozzle |

www.labem.pl

## Easy Click 60 Extraction arm

| Order-no. | Description |
|---|---|
| T005 36 578 99 | Extraction arm, flexible, Ø 60 mm for sloped and funnel nozzles, length 1 m |
| T005 87 627 77 | Extraction arm, flexible, Ø 60 mm for sloped und and funnel nozzles, length 1,5 m. |
| on request | Extraction arm, flexible, Ø 60 mm for sloped and funnel nozzles, length 0,7 m |

## Easy Click 60 WF 32

- Ø 32 mm

| Order-no. | Description |
|---|---|
| T005 36 580 99 | ESD microscope extraction arm, flexible, Ø 32 mm |

## Easy Click 60 Joint extraction arm

- With single pivot arm

ESD

| Order-no. | Description |
|---|---|
| T005 87 627 47 | Aluminium stativ extraction arm ESD safe. |

## Easy Click 60 Joint extraction arm

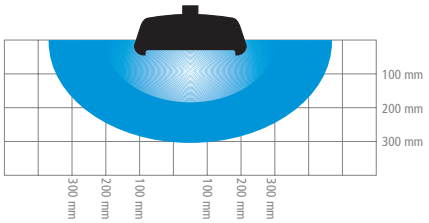
- With dual pivot arm

ESD

| Order-no. | Description |
|---|---|
| T005 36 598 99 | Aluminium stativ extraction arm, ESD safe |

www.labem.pl

## Easy Click 60 Funnel nozzle




| Order-no. | Model | Description |
|---|---|---|
| T005 36 573 99 | WF 60 | Funnel nozzle for flexible extraction arm, width 230 mm, high 100 mm |

## Easy Click 60 Sloped nozzle

| Order-no. | Model | Description |
|---|---|---|
| T005 36 577 99 | WF 60 | Sloped nozzle for flexible extraction arm |

## Exhaust hood

| Bestell-Nr. | Beschreibung |
|---|---|
| T005 87 358 45 | Exhaust hood, 200 x 100 mm (7.87 x 3.93 in), recommended for use with hot air soldering operations uses extraction hose 60. Metal black. |

## Remote control

| | Order-no. | Description |
|---|---|---|
| 1 | T005 87 359 09 | For WFE 2S, WFE 4S, Zero Smog 4V, WFE 20D, Zero Smog 20T |
| 2 | T005 36 593 99 | For WFE 2X |

## RS 232 Interface cable

| Order-no. | Description |
|---|---|
| T005 31 191 99 | Interface cable RS 232, 2 m (78.74 in) for remote control or monitoring by PC (type 1:1) (T005 87 359 09) |

| Order-no. | Description |
|---|---|
| T005 87 627 24 | Adapter Remote control Zero Smog 4V |

| Order-no. | Description |
|---|---|
| T005 87 647 10 | Cable WX |

Connection table see page 103

www.labem.pl

## Pre filter box

■ For WFE 2X

| Order-no. | Description |
|---|---|
| **T005 87 627 57** | **Pre filter box for WFE 2X,<br>Pre filter for large fine dust quantities** |
| **T005 87 627 58** | **Pocket filtering F 7 for Pre filter box (5 pieces)** |

## Hanging Bracket for WFE 2X

| Order-no. | Description |
|---|---|
| **T005 36 591 99** | **Hanging Bracket for WFE 2X.<br>For fixing WFE 2X on the work table.** |

www.labem.pl

## Trolley with wheels

- For WFE 2X
- For mobile use

| Order-no. | Description |
|---|---|
| **T005 36 592 99** | **Trolley with wheels for WFE 2X** |

## Exhaust connector

- For Zero Smog 6V

| Order-no. | Description |
|---|---|
| **T005 87 358 40** | **Exhaust connector DN 100 for Zero Smog 6V and WFE 4S** |

## Exhaust connector

- For Zero Smog 4V
  Zero Smog 6V

| Order-no. | Description |
|---|---|
| **T005 87 359 15** | **Exhaust connector DN 75 for WFE 2S, Zero Smog 4V, Zero Smog 6V and WFE 4S** |

www.labem.pl

## Easy Click 60 Extension hose 1 m, 3 m, 5 m

ESD

| Order-no. | Description |
|---|---|
| T005 87 354 27 | Extension hose 1 m |
| T005 36 576 99 | Extension hose 3 m |
| T005 87 627 56 | Extension hose 5 m |

## Extension hose 60 Sold by metre

| Order-no. | Description |
|---|---|
| T005 87 620 36 | Extension hose, heavy construction, sold by metre (max. length 15 m) |

## Hose connection 60 mm

| Order-no. | Description |
|---|---|
| T005 87 627 68 | Hose connection 60 mm for flexible hose, sold by the metre T005 87 620 36. |

## Easy Click 60 Female adapter

| Order-no. | Description |
|---|---|
| T005 87 627 72 | Female adapter for installation e.g. stop valve on fume extraction units |

## Easy Click 60 Male adapter

| Order-no. | Description |
|---|---|
| T005 87 627 55 | Male adapter for hose extension, Ø 60 mm |

www.labem.pl

## Easy Click 60 Hose connector, straight

| Order-no. | Description |
|---|---|
| T005 87 627 67 | Hose connector, straight for WFE 2S / WFE 4S, Zero Smog 4V / Zero Smog 6V and pre filter box |

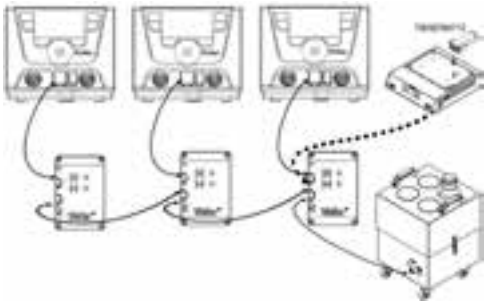
## Easy Click 60 Hose connector, angle 90°

| Order-no. | Description |
|---|---|
| T005 87 627 69 | Hose connector, angle 90° for WFE 2S / WFE 4S, Zero Smog 4V / Zero Smog 6V and pre filter box |

## Easy Click 60 WFV 60 Stop valve

| Order-no. | Description |
|---|---|
| T005 36 574 99 | WFV 60 Stop valve incl. bench mounting brackets |

## Easy Click 60 WFV 60 A



| Order-no. | Description |
|---|---|
| T005 87 627 46 | WFV 60 A Stop valve 230 V |

## Easy Click 60 WFV 60 Stop valve

| Order-no. | Description |
|---|---|
| T005 87 627 65 | WFV 60 Stop valve for extraction arm |

## Easy Click 60 Butterfly valve Spare

| Order-no. | Description |
|---|---|
| T005 87 628 08 | Butterfly valve for WFV 60 stop valve |

www.labem.pl

## Easy Click 60 T-piece

| Order-no. | Description |
|---|---|
| T005 87 627 66 | T-piece with 2 male connections and 1 female connection |

## Easy Click 60 End Cap

| Order-no. | Description |
|---|---|
| T005 87 627 74 | End Cap 60 mm click connections |

## Hose adapter ø 50 mm

| Order-no. | Description |
|---|---|
| T005 87 627 53 | Hose adapter for WFE 2ES –with Silicon O-Ring, Ø 50 mm |

## Bench mounting brackets

| Order-no. | Description |
|---|---|
| T005 36 575 99 | Bench mounting brackets (2 clamp) |

www.labem.pl

## Adapter ø 75 mm

| Order-no. | Description |
|---|---|
| T005 87 627 71 | Adapter ø 75 mm for Easy-Click 60 |

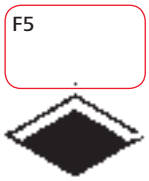
## Adapter 40/60

| Order-no. | Description |
|---|---|
| T005 87 627 50 | 40/60 Adapter for Easy Click 60 Extraction arms on 50 mm WFEMP50 power socket |

## Hose clamp 50 – 70 mm

| Order-no. | Description |
|---|---|
| T005 87 358 79 | Hose clamps 50 – 70 mm, 2 pieces, for securing extraction hose 50 mm |

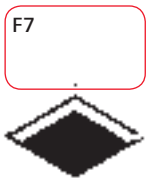
www.labem.pl




## Fine dust filter M 5

- For WFE 2S, Zero Smog 4V
- 10 pieces

| Order-no. | Description |
|---|---|
| **T005 87 359 37** | **Fine dust filter for WFE 2S, Zero Smog 4V** |




## Fine dust filter F 7

- For WFE 2S, Zero Smog 4V
- 10 pieces

| Order-no. | Description |
|---|---|
| **T005 87 359 38** | **Fine dust filter for WFE 2S, Zero Smog 4V** |

## Compact filter

- For WFE 2S, Zero Smog 4V

| Order-no. | Description |
|---|---|
| **T005 87 359 36** | **Compact filter for WFE 2S, Zero Smog 4V, EPA filter E 12 EN 1822 and 50% active carbon, 50% Puratex** |

## Wide band gas filter

- For WFE 2S, Zero Smog 4V
- From October 2013 supplied in cardboard housing

| Order-no. | Description |
|---|---|
| **T005 87 358 95** | **Compact filter for adhesive fume, wide band gas filter (50% active carbon, 50% Puratex)** |

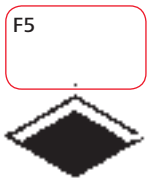
## Filterset E 12

- For WFE 2ES, WFE 2CS

| Order-no. | Description |
|---|---|
| **T005 87 627 01** | **Filterset E 12 with 10 Prefilter M 5, EPA Filter E 12, wide band gas filter (10% active carbon)** |

www.labem.pl

## Fine dust filter M 5




- For WFE 2ES / CS
- 10 pieces

| Order-no. | Description |
|---|---|
| **T005 87 627 03** | **Fine dust filter M 5** |

## Compact filter

- For WFE 2X

| Order-no. | Description |
|---|---|
| **T005 36 590 99** | **EPA Filter E 12, wide band gas filter (50% active carbon / 50% Puratex)** |

## Pocket filter F 7 for WFE 2X

- For Pre filter box WFE 2X

| Order-no. | Description |
|---|---|
| **T005 87 627 58** | **Pocket filter for Pre filter box for WFE 2X** |

## Pocket filter F 7

- For WFE 2S / WFE 4S, Zero Smog 4V / Zero Smog 6V

| Order-no. | Description |
|---|---|
| **T005 87 358 60** | **Pocket filter F 7. For applications with a high fine dust rate.** |

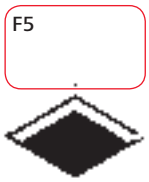
## Filtring ash

- For Pre filter box
- For WFE 2S / WFE 4S, Zero Smog 4V / Zero Smog 6V

| Order-no. | Description |
|---|---|
| **T005 87 359 24** | **Filtering fine dust for sticky particles (e.g. large quantities of liquid flux)** |

www.labem.pl

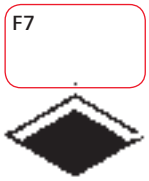
## Fine dust filter M 5




- For Zero Smog 20T / WFE 20D and Zero Smog 6V / WFE 4S
- 10 pieces

| Order-no. | Description |
|---|---|
| **T005 87 358 37** | **Fine dust filter M 5** |

## Fine dust filter F 7




- For Zero Smog 20T / WFE 20D and Zero Smog 6V / WFE 4S
- 10 pieces

| Order-no. | Description |
|---|---|
| **T005 87 358 36** | **Fine dust filter F 7** |

## Compact filter

- For Zero Smog 20T / WFE 20D and Zero Smog 6V / WFE 4S

| Order-no. | Description |
|---|---|
| **T005 87 358 38** | **Compact filter**<br>**EPA filter E 12, wide band gas filter**<br>**(50% active carbon, 50% Puratex)** |

## Adhesive fume filter

- For Zero Smog 6V / WFE 4S
- For adhesive fumes

| Order-no. | Description |
|---|---|
| **T005 87 358 35** | **Compact filter for adhesive fumes,**<br>**wide band gas filter**<br>**(50% active carbon, 50% Puratex)** |

www.labem.pl

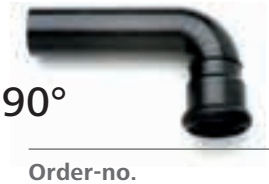
# Pipe System 75 Volume Extraction

**Volume extraction systems require a large volume of air to be extracted and the level of vacuum is of lesser importance. This means that a relatively large diameter pipe system is required. If the pipe diameter was too small the flow resistance would increase and extraction capacity reduced. The pipe system 75 allows installations up to 30 m with the WFE 4S uses in a stand alone system. The pipe sections are designed to stick together and have internal sealing bushes. *PEHD = Polyethylen high density, PE = Polyethylen.**

## Pipe 2 m

| Order-no. | Description |
|---|---|
| T005 87 358 70 | Pipe 2 m, with seal at one end, plastic, PEHD black |

## Right angle pipe 90°



| Order-no. | Description |
|---|---|
| T005 87 358 69 | Right angle pipe, 90°, 0,2 m, with seal at one end, plastic, PEHD black |

## T-piece 2 x 90°

| Order-no. | Description |
|---|---|
| T005 87 358 71 | T-piece, 2 x 90°, 0,5 m, with 3 seals, plastic, PEHD black |

## End seal

| Order-no. | Description |
|---|---|
| T005 87 358 55 | End seal, PE, transparent |

## Pipe clamps

| Order-no. | Description |
|---|---|
| T005 87 358 64 | Pipe clamps, PE, grey |

## Adapter

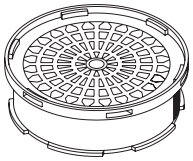
| Order-no. | Description |
|---|---|
| T005 87 358 63 | Adapter PEHD pipe system 75 to pipe system 50, with seals 2 seals |
| T005 87 358 56 | Adapter PEHD pipe system 75 to pipe system 50, without seals |

www.labem.pl

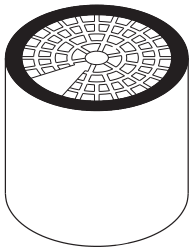
WFE

WFE P

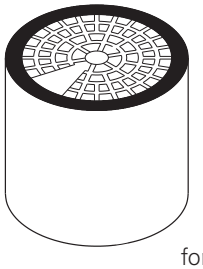
## Spare filter



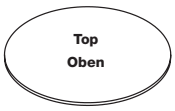
Compressed air cleaning filter



Compact filter



Compact filter for adhesive fumes




Fine dust filter F 7

## Safety rests

KHP 81

KHE 81

KHE / KHP 81 Additional safety rest

## FE Soldering Irons

FE 75
LT Soldering tips

FE 80
HT Soldering tips

## Attachments and Accessories

FE-Attachment

Extraction hose 5 mm

Locking clip

FE-Attachment

FE-Clip-Set Pipe Ø 6mm

FE-Clip-Set Pipe Ø 4,5 mm

## Pipe system 50 and Accessories

Pipe 2 m

Right angle pipe 0°, 0,2 m

T-piece 2 x 90°, 0,5 m

Branch 2 x 45°, 0,3 m

Double socket

End seal

Pipe clamps

www.labem.pl

Weller FT FILTER SYSTEMS

WX compatible

# Zero Smog 20T

## Interface cable

WX compatible

WX Adapter for Zero Smog 20T with remote control
T005 87 627 24

WX Connection cable
T005 87 647 10

## Remote control

## Exhaust connector

DN 100

## Accessories

Extraction hose 40, 1 m complete with 2 connecting elements

Extension hose 5,0 m, DN 17

Extraction hose 40, sold by metre

Connection nipple DN 17 + Nut G 3/8" for connection nipple

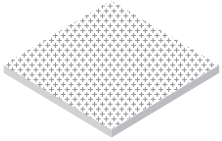
Connetion element

Adapter DN 17 for connection extension hose 17 with 5 mm hose of FE iron

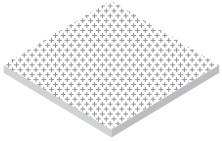
End cap

Connection nipple for 5 mm hose of FE iron for direct connection to pipe system

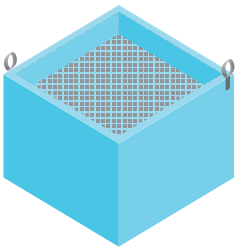
## Spare filter



Fine dust filter M 5



Fine dust filter F 7



Compact filter

www.labem.pl

**The Weller FT Zero Smog Systems put an end to air pollution caused by soldering, adhesives and laser work. In all of these applications fumes or fine particles are released into the work place atmosphere which are hazardous to the staff exposed to them. The Weller Zero Smog Systems' combination of pumps, electronic controls and filters removes this hazard.**

**Tip Extraction**

**Weller FT FE soldering irons have an integral smoke tube mounted in the handle. It is positioned directly above the joint during the soldering process to collect any fumes generated. Fume extraction irons can be connected to Weller Zero Smog Systems WFE and WFE P bench mounted units driving up to 2 irons or Zero Smog 20T mobile unit driving up to 20 irons. Fume extraction attachments can be retro fitted to non fume extraction Weller soldering irons.**

ESD

## WFE

- For 2 soldering irons
- Compressed air operated

low sound level

| Order-no. | Model | Description |
|---|---|---|
| **T005 36 402 99** | **WFE** | **Portable fume extraction unit for tip suction, compressed air operated** |

Scope of supply:

| |
|---|
| Fume extraction unit |
| Compressed air cleaning filter |
| Compact filter (EPA filter E 12 and wide band gas filter 50% active carbon / 50% Puratex) |
| Fine dust filter F 7 |

## WFE P

- For 2 soldering irons
- With built in pump

low sound level

| Order-no. | Model | Description |
|---|---|---|
| **T005 36 386 99** | **WFE P** | **Portable fume extraction unit for tip suction with built in pump (do not use for 24 h continuous operation)** |

Scope of supply:

| |
|---|
| Fume extraction unit 230 V / 50 Hz |
| Compact filter (EPA filter E 12 and wide band gas filter 50% active carbon / 50% Puratex) |
| Fine dust filter F 7 |

www.labem.pl

WX compatible

# Zero Smog 20T

- For 20 soldering irons

low sound level

| Order-no. | Model | Description |
|---|---|---|
| **T005 36 4706 99** | **Zero Smog 20T** | **Fume extraction unit 230 V / 50 Hz, for tip suction with built in turbine** |

Scope of supply:

| |
|---|
| Fume extraction unit 230 V / 50 Hz |
| Compact filter (EPA filter E12 and wide band gas filter 50% active carbon / 50% Puratex) |
| Fine dust filter F 7 |

Specifications Zero Smog 20T

| | |
|---|---|
| Dimensions L x B x H | 450 x 450 x 695 mm |
| Weight | 45 kg |
| Mains supply voltage | T005 36 706 99: 230 V / 50 Hz |
| | T005 36 702 99: 120 V / 60 Hz |
| Electrical power rating | 530 VA |
| Fuse | T 3, 15 A |
| Maximum vacuum | 10.000 Pa |
| Maximum quantity supplied | 100 $m^3$/h |
| Noise emission level | 51 dB(A) |
| Pre filter Stage 1 | Pre filter mat class F7 |
| Combined filter Stage 2,3 | Combined E12 high efficiency submicron filter (99.95 % particle separation upto 0.12 µm) and wide band gas filter (50 % activated carbon, 50 % Puratex) |
| RS232 port | All system functions can be operated and remotely monitored via the RS232 port. |
| USB port | The USB port can be used to load firmware updates, run efficiency tests and log data. Do not leave the USB medium inserted for longer than 2 minutes. After this time expires, the USB module will switch off automatically. |

www.labem.pl

## FE 75 Set

| Order-no. | Model | Description |
|---|---|---|
| **T005 33 151 99** | **FE 75 Set** | **FE-Soldering iron Set 80 W / 24 V** |

Scope of supply:

| | | |
|---|---|---|
| T005 29 166 99 | FE 75 | FE-Soldering iron 80 W / 24 V with soldering tip LT B |
| T005 15 020 99 | KH 20 | Safety rest |
| T005 87 447 28 | | Funnel for FE 75 |
| T005 25 409 99 | | Cleaning brush for FE tube |

## FE 80

| Order-no. | Model | Description |
|---|---|---|
| **T005 26 162 99** | **FE 80** | **FE-Soldering iron 80 W / 24 V** |

Scope of supply:

| | | |
|---|---|---|
| | FE 80 | FE-Soldering iron 80 W / 24 V with soldering tip HT B |
| T005 87 337 59 | | Funnel for FE 80 |
| T005 25 409 99 | | Cleaning brush for FE tube |

Please order related safety rest KH 20 separately!

# Accessories for FE-soldering irons

## Safety rest KH 20

| Order-no. | Description |
|---|---|
| **T005 15 020 99** | **KH 20 Safety rest** |

## Locking clip

| Order-no. | Description |
|---|---|
| **T005 36 352 99** | **Locking clip for extraction hose** |

## Extraction hose

| Order-no. | Description |
|---|---|
| **T005 25 410 00** | **Extraction hose (spare), by metre, 5 mm** |

www.labem.pl

# FE attachments

A range of FE attachments is available to fit to Weller soldering and desoldering irons to convert standard products to fume extraction versions. The attachments are supplied with all necessary fittings and hoses. The performance of the retro fitted tools is not affected.

| Order-no. | Description |
|---|---|
| T005 25 125 99 | FE-attachment for LR 21, LR 82, TCPS, W 61, W 101, WP 200, WXP 200 WSP 150 |
| T005 28 126 99 | FE-attachment for WSF 80D5/D8 for AKS safety rest |
| T005 13 125 99 | FE-attachment for DS 22, DS 80 and DSX 80 desoldering iron |

# Universal FE attachments

For Weller soldering irons WP 80, WSP 80, WMP, WMRP, MLR 21 or soldering irons with handle diameter Ø 10-13 mm. Clip will be fasten with an O-ring to the soldering iron.

| Order-no. | Description |
|---|---|
| T005 29 186 99 | FE-attachment with tube Ø 6 mm for WSP 80, WP 80, MLR 21, WMP, WP 120 |
| T005 29 214 99 | FE-attachment with tube, Ø 6 mm for WP 65 and WP 120 |

| | |
|---|---|
| T005 29 185 99 | FE-attachment with tube Ø 4,5 mm, for WMRP and WSP 80, WP 80, MLR 21, MLR 80, WMP, for fine soldering applications |

| | |
|---|---|
| T005 87 448 75 | FE-Clip-Set for FE-attachment, tube Ø 4,5 mm |
| T005 87 448 76 | FE-Clip-Set for FE-attachment, tube Ø 6,0 mm |

WX compatible

| | |
|---|---|
| T005 87 657 98 | FE-Add-on kit, attachment tube Ø 6 mm WXP 120 |
| T005 87 657 99 | FE-Add-on kit, attachment tube Ø 6 mm WXP 65 |

# Safety rest WDH 50

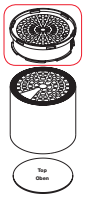
- With Stop+Go function

| Order-no. | Model | Description |
|---|---|---|
| T005 15 156 99 | WDH 50 | Safety rest with Stop+Go function for WMRP iron with FE-attachment |

www.labem.pl

## Compressed air cleaning filter

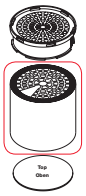
- For WFE and WFE P



| Order-no. | Description |
|---|---|
| **T005 87 357 57** | **Compressed air cleaning filter (active carbon)** |

## Compact filter

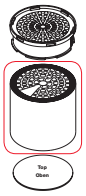
- For WFE and WFE P



| Order-no. | Description |
|---|---|
| **T005 36 410 99** | **Compact filter (EPA filter E 12 and wide band gas filter 50% active carbon / 50% Puratex)** |

## Compact filter

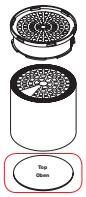
- For adhesive fumes
- For WFE and WFE P



| Order-no. | Description |
|---|---|
| **T005 36 407 99** | **Compact filter (EPA filter E 12 and wide band gas filter 100% active carbon** |

## Fine dust filter F 7

- For WFE and WFE P
- 3 pieces



| Order-no. | Description |
|---|---|
| **T005 36 421 99** | **Fine dust filter F7** |

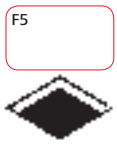
## Compact filter

- For Zero Smog 20T / WFE 20D

| Order-no. | Description |
|---|---|
| **T005 87 358 38** | **Compact filter (EPA filter E 12 and wide band gas filter 50% active carbon / 50% Puratex)** |

www.labem.pl

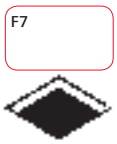
## Fine dust filter M 5




- For Zero Smog 20T / WFE 20D
- 10 pieces

| Order-no. | Description |
|---|---|
| T005 87 358 37 | Fine dust filter M 5 for Zero Smog 20T / WFD 20D |

## Fine dust filter F 7




- ForZero Smog 20T / WFE 20D
- 10 pieces

| Order-no. | Description |
|---|---|
| T005 87 358 36 | Fine dust filter F 7 for Zero Smog 20T / WFD 20D |

## Pipe System 50

**Tip extraction systems demand a high value and constant level of vacuum across the installation, the volume of air extracted is of lesser importance. To achieve this it is necessary to use a pipe system with Zero Smog 20T small diameter. The Weller FT pipe system 50 allows extraction installations of up to 200 m when used with the WFE 20D unit in a stand alone system. The pipe sections are designed to stick together and have internal sealing bushes.**
**In a central system, the FE irons are connected directly to the fume extraction units.**
***PEHD = Polyethylen high density**

## Pipe 50, 2 m

| Order-no. | Description |
|---|---|
| T005 36 323 99 | Pipe 2 m, with seal at one end, plastic, PEHD black |

## Right angle pipe 50, 90°

| Order-no. | Description |
|---|---|
| T005 36 322 99 | Right angle pipe 90°, 0,2 m, with seal at one end, PEHD black |

## T-piece 50 2 x 90°

| Order-no. | Description |
|---|---|
| T005 36 344 99 | T-piece 2 x 90°, 0,5 m, with 3 seals, plastic, PEHD black |

## Branch 50 2 x 45°

| Order-no. | Description |
|---|---|
| T005 36 321 99 | Branch 2 x 45°, 0,3 m, with 2 seals, plastic, PEHD black |

www.labem.pl

## Pipe clamps 50

| Order-no. | Description |
|---|---|
| T005 36 329 99 | Pipe clamps for 50 pipe system, grey |

## End seal 50

| Order-no. | Description |
|---|---|
| T005 36 324 99 | End seal, PE, transparent |

## Double socket 50

| Order-no. | Description |
|---|---|
| T005 36 319 99 | Double socket for pipe system 50, PEHD black |

## Extraction hose 40

| Order-no. | Description |
|---|---|
| T005 36 316 99 | Extraction hose 40, 1 m, Ø 40 mm, complete with 2 connecting elements |

## Extraction hose 40

| Order-no. | Description |
|---|---|
| T005 36 414 00 | Extraction hose 40, Ø 40 mm, without connecting elements, sold by metre |

www.labem.pl

## Connection element 40-50

| Order-no. | Description |
|---|---|
| T005 36 415 99 | Connection element 40-50 |

## Extension hose DN 17

| Order-no. | Description |
|---|---|
| T005 36 326 99 | Extension hose DN 17, 5 m |

| Order-no. | Description |
|---|---|
| T005 36 338 99 | Connection nipple for extraction hose 5 mm (T005 25 410 00) |

## End cap

| Order-no. | Description |
|---|---|
| T005 87 350 50 | End cap for connection nipple (T005 36 338 99) |

## Adapter

| Order-no. | Description |
|---|---|
| T005 36 343 99 | Adapter for connection extension hose 17 with 5 mm extraction hose (T005 36 326 99), 5 mm |

## Connection nipple

| Order-no. | Description |
|---|---|
| T005 87 358 65 | Connection nipple on extension hose DN 17 (T005 36 326 99) |

## Nut G 3/8“

| Order-no. | Description |
|---|---|
| T005 87 358 66 | Nut G 3/8“ for connection nipple (T005 87 358 99), 3 pieces |

## Connection adapter

| Order-no. | Description |
|---|---|
| T005 87 628 10 | Connection adapter for Zero Smog 20 T |

www.labem.pl

## Safety Rests with Stop+Go function for FE Irons with WFE or WFE P

**The Weller safety rests with Stop+Go function are recommended accessories for FE irons using the WFE or WFE P extraction units. A fibre optic sensor switches the extraction unit on when the FE iron is removed from the safety rest and when the FE iron is replaced in the safety rest, after a short delay to gather the fumes from any solder on the tip it switches the unit off. This reduces running costs.**

Save Energy

ESD

### KHP

| Order-no. | Model | Description |
|---|---|---|
| T005 15 086 99 | KHP | Basic unit pneumatic (for WFE) safety rest with Stop+Go function with fibre optic sensor for FE 75 and FE 80 |

### KHE

| Order-no. | Model | Description |
|---|---|---|
| T005 15 076 99 | KHE | Basic unit electric (for WFE P) safety rest with Stop+Go function with fibre optic sensor for FE 75 and FE 80 |

### KHE/P

| Order-no. | Model | Description |
|---|---|---|
| T005 15 080 99 | KHE/P | Second safety rest with fibre optic sensor for extending to 2 workplaces |

### KHP 81

| Order-no. | Model | Description |
|---|---|---|
| T005 15 168 99 | KHP 81 | Basic unit electric (for WFE) safety rest with Stop+Go function with fibre optic sensor for WSP 80, WP 80, WP 120 |

www.labem.pl

## KHE 81

| Order-no. | Model | Description |
|---|---|---|
| T005 15 167 99 | KHE 81 | Basic unit electric (for WFE P) safety rest with Stop+Go function for soldering irons WSP 80, WP 80, WP 120 with fibre optic sensor |

## KHE / KHP 81

| Order-no. | Model | Description |
|---|---|---|
| T005 15 161 72 | WDH 10T OPTO | Second safety rest for KHE / KHP with fibre optic sensor for extending to 2 workplaces |

## KH 6

| Order-no. | Model | Description |
|---|---|---|
| T005 15 006 99 | KH 6 | Safety rest for FE 75, FE 80 |

## WDH 30

| Order-no. | Model | Description |
|---|---|---|
| T005 15 152 99 | WDH 30 | Safety rest for FE 75, FE 80 and LR 21, LR 82 and TCPS with FE attachment |

www.labem.pl

# Weller Safety Rests – Overview

| Tools | AK 51 | AKT 30 | KH 4 | KH 6 | KH 18 | KH 20 | KH 20 + FE 75 funnel | KH 20 + FE 80 funnel | KH 25P | KH 27 | KHE/KHP | KHE 81/ KHP 81 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Power-Response** | | | | | | | | | | | | |
| WP 65 page 142 | | | | | | | | | | | | Safety rest with Stop & Go function |
| WP 120 page 144 | | | | | | | | | | | | Safety rest with Stop & Go function |
| WP 200 page 145 | | | | | | | | | | | | |
| WXP 65 page 142 | | | | | | | | | | | | |
| WXP 120 page 143 | | | | | | | | | | | | |
| WXP 200 page 145 | | | | | | | | | | | | |
| **Silver-Line** | | | | | | | | | | | | |
| FE 75 page 126 / 130 / 148 | | | | | | | Standard safety rest | | | | Safety rest with Stop & Go function | |
| FE 80 page 126 / 130 / 149 | | | | | | | | Standard safety rest | | | Safety rest with Stop & Go function | |
| MPR 80 page 147 | | | | | | | | | Standard safety rest | | | |
| WP 80 page 146 | | | | | | | | | | | | Safety rest with Stop & Go function |
| WSP 80 page 146 | | | | | Standard safety rest | | | | | | | Safety rest with Stop & Go function |
| WSP 150 page 147 | | | | | | | | | | | | |
| **Active Tip** | | | | | | | | | | | | |
| WMRP page 140 | | | | | | | | | | | | |
| WMRT page 141 | | | | | | | | | | | | |
| WXMP page 140 | | | | | | | | | | | | |
| WXMT page 141 | | | | | | | | | | | | |
| **Standard-Line** | | | | | | | | | | | | |
| LR 21 page 149 | | | | | | | | | | | Safety rest with Stop & Go function | |
| WTA 50 page 158 | Standard safety rest | | | | | | | | | | | |
| **Magnastat controlled low voltage soldering irons** | | | | | | | | | | | | |
| TCPS page 150 | | | | | | Standard safety rest | | | | | | |
| W 61 page 151 | | | Standard safety rest | | | | | | | | | |
| W 101 page 151 | | | | Standard safety rest | | Standard safety rest | | | | | | |
| **Desoldering irons** | | | | | | | | | | | | |
| DSX 80 page 154 | | | | | | | | | | | | |
| DXV 80 page 155 | | | | | | | | | | | | |
| WXDP 120 page 157 | | | | | | | | | | | | |
| DSX 120 page 157 | | | | | | | | | | | | |
| WXDV 120 page 155 | | | | | | | | | | | | |
| **Hot air irons** | | | | | | | | | | | | |
| HAP 1 page 158 | | | | | | | | | | Alternative safety rest | | |
| HAP 200 page 159 | | | | | | | | | | | | |
| HAP 3000 page 70 | | Standard safety rest | | | | | | | | | | |
| WXHAP 200 page 159 | | | | | | | | | | | | |
| **Inert gas soldering irons** | | | | | | | | | | | | |
| WP 80IG/120IG page 37 | | | | | | | | | | | | |
| **Solder feeder system** | | | | | | | | | | | | |
| WSFP 5/8 page 39 | | | | | | | | | | | | |

Standard safety rest

Safety rest with Stop & Go function

Alternative safety rest

www.labem.pl

| WDH 10 | WDH 10T | WDH 10P | WDH 20 | WDH20T | WDH 30 | WDH 30T | WDH 31 | WDH 40 | WDH 50 | WDH 51 | WDH 60 | WDH 70 | WPH 80 | WMRTH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | | |

# Active–Tip Heating Technology

- Quick tip exchange without any tools
- Extremely short heating time 100°C/sec
- Energy saving by standby function
- Optimal reaction time

ESD

**Optimum for soldering applications**

**Optimal tool where heating element and sensor are integrated in the soldering tip. By lowering the soldering joint temperature a faster reaction time is possible. With this tool the performance is exactly at the solder joint.**

## WXMP Set

- 40 W (55 W with RT 11), 12 V
- For WX stations
- Fine slim soldering iron. Ideal for microscope work.
- High performance by integrated active soldering tip.

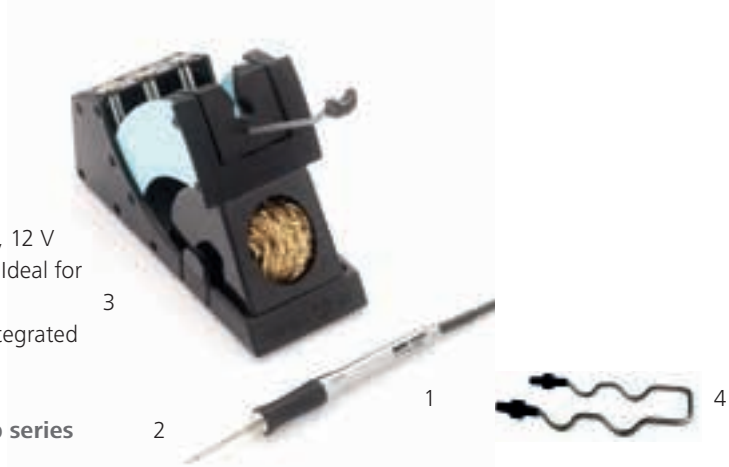
WX compatible

**RT Soldering tip series page 164/165**

| | Order-no. | Model | Description |
|---|---|---|---|
| | **T005 29 204 99** | **WXMP Set** | **Micro soldering iron WXMP with safety rest** |
| | Scope of supply | | |
| 1 | T005 29 203 99 | WXMP | Micro soldering iron WXMP 40 W, 12 V with Active–Tip Heating Technology |
| 2 | T005 44 603 99 | RT 3 | Standard soldering tip, chisel 1,3 x 0,4 mm |
| 3 | T005 15 171 99 | WDH 51 | Safety rest with dry cleaner |

## WMRP Set

- 40 W (55 W with RT 11), 12 V
- Fine slim soldering iron. Ideal for microscope work.
- High performance by integrated active soldering tip.




**RT Soldering tip series page 164/165**

| | Order-no. | Model | Description |
|---|---|---|---|
| | **T005 29 190 99** | **WMRP Set** | **Micro soldering iron WMRP with safety rest** |
| | Scope of supply | | |
| 1 | T005 29 171 99 | WMRP | Micro soldering iron WMRP 40 W, 12 V mit with Active–Tip Heating Technology |
| 2 | T005 44 603 99 | RT 3 | Standard soldering tip, chisel 1,3 x 0,4 mm |
| 3 | T005 15 156 99 | WDH 50 | Safety rest with dry cleaner |
| | **Accessory** | | |
| 4 | T005 87 518 16 | | Bracket can be plugged sidewards into the rest and hold 2 RT tips |

www.labem.pl

## WXMT Set

- 2 x 40 W, 12 V
- For WX stations
- Slim tweezers. Ideal for soldering and desoldering of very small SMD components.

RTW Soldering tip series page 166/167

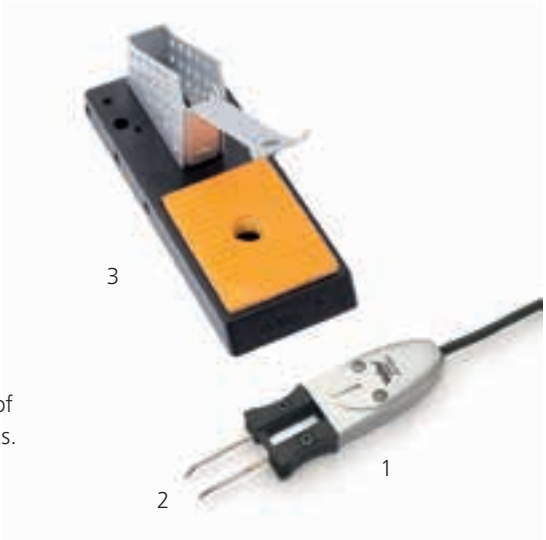
WX compatible

| | Order-no. | Model | Description |
|---|---|---|---|
| | **T005 13 178 99** | **WXMT Set** | **Micro desoldering tweezers WXMT with safety rest** |
| | Scope of supply | | |
| 1 | T005 13 177 99 | WXMT | Micro desoldering tweezers 2 x 40 W, 12 V (hand piece without tips) with Active–Tip Heating Technology |
| 2 | T005 44 652 99 | RTW 2 | Soldering tiplet, 0,7 x 0,4 mm, 45° |
| 3 | T005 15 169 99 | WDH 60 | Safety rest with dry cleaner |

## WMRT Set

- 2 x 40 W, 12 V
- For rework stations WR 3M
- Slim tweezers. Ideal for soldering and desoldering of very small SMD components.

RTW Soldering tip series page 166/167




| | Order-no. | Model | Description |
|---|---|---|---|
| | **T005 13 173 99** | **WMRT Set** | **Micro desoldering tweezers WMRT with safety rest** |
| | Scope of supply | | |
| 1 | T005 13 174 99 | WMRT | Micro desoldering tweezers 2 x 40 W, 12 V (hand piece without tips) with Active–Tip Heating Technology |
| 2 | T005 44 652 99 | RTW 2 | Soldering tiplet, 0,7 mm x 0,4 mm, 45° |
| 3 | T005 15 146 99 | WMRTH | Safety rest |

www.labem.pl

# Power-Heating Technology

- Beneficial soldering tip prices
- Max. heating transfer
- Soldering tip in optimized sensor position
- Fast reaction time

ESD

**Power-Response Heating Technology**

**Due to an optimized sensor position a high perfomance is given. With a wide range of beneficial soldering tips these tools are an alternative to the micro soldering irons.**

## WXP 65 Set

- 65 W, 24 V
- Small fast soldering iron with 65 W for for WX stations. Qualified for fine solder jobs with high heating demand.

**XNT Soldering tip series page 168/169**

WX compatible

| Order-no. | Model | Description |
|---|---|---|
| **T005 29 212 99** | **WXP 65 Set** | **Soldering iron WXP 65 with safety rest** |

Scope of supply

| | | | |
|---|---|---|---|
| 1 | T005 29 211 99 | WXP 65 | Soldering iron 65 W, 24 V with Power-Response Heating Technology |
| 2 | T005 44 851 99 | XNT A | Standard soldering tip, Chisel, 1,6 x 0,4 mm |
| 3 | T005 15 121 99 | WDH 10 | Safety rest with dry cleaner |
| | **Optional:** | | |
| | T005 29 211 70 | WXP 65 Set | WXP 65 Set with cable 2,5 m |

## WP 65 Set

- 65 W, 24 V
- Small fast soldering iron with 65 W. Qualified for fine solder jobs with high heating demand.

**XNT Soldering tip series page 168/169**

| Order-no. | Model | Description |
|---|---|---|
| **T005 29 216 99** | **WP 65 Set** | **Set Soldering iron WP 65 with safety rest** |

Scope of supply

| | | | |
|---|---|---|---|
| 1 | T005 29 215 99 | WP 65 | Soldering iron 65 W, 24 V with Power-Response Heating Technology |
| 2 | T005 44 851 99 | XNT A | Standard soldering tip, Chisel, 1,6 x 0,4 mm |
| 3 | T005 15 121 99 | WDH 10 | Safety rest with dry cleaner |

**Accessory for both sets:**

| | |
|---|---|
| T005 87 657 58 | Barrel |

www.labem.pl

## WXP 120 Set

- 120 W, 24 V
- Allrounder with 120 watts. For soldering applications from small to large components with high temperature demand.

WX compatible

**XT Soldering tip series page 172/173**

| | Order-no. | Model | Description |
|---|---|---|---|
| | **T005 29 202 99** | **WXP 120 Set** | **Soldering iron WXP 120 with safety rest** |
| | Scope of supply | | |
| 1 | T005 29 201 99 | WXP 120 | Soldering iron 120 W, 24 V with Power-Response Heating Technology |
| 2 | T005 44 704 99 | XT B | Standard soldering tip, XT B, Chisel 2,4 x 0,8 mm |
| 3 | T005 15 121 99 | WDH 10 | Safety rest with dry cleaner |
| | **Accessory** | | |
| | T005 87 657 11 | | Barrel |

## WXP 120 Solar

- 120 W, 24 V
- For solar modules
- 2,5 m connection cable

**XT Soldering tip series page 172/173**

| | Order-no. | Model | Description |
|---|---|---|---|
| | **T005 29 210 99** | **WXP 120 Solar** | **Soldering iron WXP 120** |
| | Scope of supply | | |
| 1 | T005 29 201 99 | WXP 120 | Soldering iron 120 W, 24 V with Power-Response Heating Technology |
| 2 | T005 44 730 99 | XTDDH 45° | Soldering tip 4 mm slopped |
| | **Accessory:** | | |
| | T005 87 657 11 | | Barrel |

www.labem.pl

## WP 120 Set

- 120 W, 24 V
- Allrounder with 120 watts. For soldering applications from small to large components with high temperature demand.

**XT Soldering tip series page 172/173**

| | Order-no. | Model | Description |
|---|---|---|---|
| | **T005 29 194 99** | **WP 120 Set** | **Soldering iron WP 120 with safety rest** |
| | Scope of supply | | |
| 1 | T005 29 193 99 | WP 120 | Soldering iron 120 W, 24 V with Power-Response Heating Technology |
| 2 | T005 44 704 99 | XT B | Standard soldering tip, XT B, Chisel 2,4 x 0,8 mm |
| 3 | T005 15 161 99 | WDH 10T | Safety rest with Stop & Go function with dry cleaner |

| Accessory | |
|---|---|
| T005 87 657 09 | Spare barrel |

## WP 120 Solar

- 120 W, 24 V
- For solar modules
- 2,5 m connection cable

**XT Soldering tip series page 172/173**

| | Order-no. | Model | Description |
|---|---|---|---|
| | **T005 29 207 99** | **WP 120 Solar** | **Soldering iron WP 120 with safety rest, with 2,5 m connection cable** |
| | Scope of supply | | |
| 1 | T005 29 207 99 | WP 120 Solar | Soldering iron 120 W, 24 V with Power-Response Heating Technology |
| 2 | T005 44 730 99 | XTDDH 45° | XTDDH 45° 4 mm slopped |

| Accessory | |
|---|---|
| T005 87 637 43 | Spare barrel |

www.labem.pl

## WXP 200 Set

- 200 W, 24 V
- High Power soldering iron compatible to the WX stations. Ideal for applications with a high temperature demand e.g. LED backpanels or HF shieldings

XHT Soldering tip series page 176

WX compatible

| | Order-no. | Model | Description |
|---|---|---|---|
| | **T005 29 206 99** | **WXP 200 Set** | **Soldering iron WXP 200 with safety rest** |
| | Scope of supply | | |
| 1 | T005 29 205 99 | WXP 200 | Soldering iron 200 W, 24 V with Power-Response Heating Technology |
| 2 | T005 44 801 99 | XHT D | Standard soldering tip, 5,0 x 1,2 mm |
| 3 | T005 15 158 99 | WDH 31 | Safety rest with dry cleaner |

| Accessory | |
|---|---|
| T005 87 637 25 | Barrel |

## WP 200 Set

- 200 W, 24 V
- High Power soldering iron. Ideal for applications with a high temperature demand e.g. LED backpanels or HF shieldings

XHT Soldering tip series page 176

| | Order-no. | Model | Description |
|---|---|---|---|
| | **T005 29 200 99** | **WP 200 Set** | **Soldering iron WP 200 with safety rest** |
| | Scope of supply | | |
| 1 | T005 29 199 99 | WP 200 | Soldering iron 200 W, 24 V with Power-Response Heating Technology |
| 2 | T005 44 801 99 | XHT D | Standard soldering tip, 5,0 x 1,2 mm |
| 3 | T005 15 158 99 | WDH 31 | Safety rest with dry cleaner |

| Accessory | |
|---|---|
| T005 87 637 25 | Barrel |

www.labem.pl

# Silver-Line Heating Technology

- Effective heat transfer
- Wide soldering tip range
- Universal use

ESD

**Silver-Line Heating Technology**
**Approved heating technology with effective heat transfer. For all purpose industrial applications.**
**A wide range of soldering tips are available.**

## WSP 80 Set

- 80 W, 24 V
- Fast and precise reach of soldering temperature.
- Slim iron design
- For all purpose soldering jobs

**LT Soldering tip series page 177-180**

| | Order-no. | Model | Description |
|---|---|---|---|
| | **T005 33 125 99** | **WSP 80 Set** | **Soldering iron WSP 80 with safety rest** |
| | Scope of supply | | |
| 1 | T005 29 161 99 | WSP 80 | Soldering iron 80 W, 24 V with Silver-Line Heating Technology |
| 2 | T005 44 405 99 | LT B | Soldering tip chisel 2,4 x 0,8 mm |
| 3 | T005 15 170 99 | KH 18 | Safety rest with sponge |
| | **Accessory** | | |
| | T005 87 447 10 | | Barrel for WSP 80 (spare) |

## WP 80 Set

- 80 W, 24 V
- Soldering iron WP 80 with short tip-to-grip design.
- Comfortable safety rest with 4 step varying inclination

**LT Soldering tip series page 177-180**

| | Order-no. | Model | Description |
|---|---|---|---|
| | **T005 29 181 99** | **WP 80 Set** | **Soldering iron WP 80 with safety rest** |
| | Scope of supply | | |
| 1 | T005 29 180 99 | WP 80 | Soldering iron 80 W, 24 V with Silver-Line Heating Technology |
| 2 | T005 44 405 99 | LT B | Soldering tip chisel 2,4 x 0,8 mm |
| 3 | T005 15 121 99 | WDH 10 | Safety rest with dry cleaner |
| | **Accessory** | | |
| | T005 87 448 46 | | Barrel long, 55 mm |
| | T005 87 448 45 | | Barrel short, 40 mm |

www.labem.pl

## WSP 150 Set

- 150 W, 24 V
- For soldering applications with high temperature demand

**LHT Soldering tip series page 183**

| | Order-no. | Model | Description |
|---|---|---|---|
| | **T005 29 189 99** | **WSP 150 Set** | **Soldering iron WSP 150 with safety rest** |
| | Scope of supply | | |
| 1 | T005 29 170 99 | WSP 150 | Soldering iron 150 W, 24 V with Silver-Line Heating Technology |
| 2 | T005 44 450 99 | LHT F | Soldering tip chisel 9,3 x 2,0 mm |
| 3 | T005 15 152 99 | WDH 30 | Safety rest with dry cleaner |

## MPR 80 Set

- 80 W, 24 V
- Soldering iron with an adjustable head up to 40°

**LT Soldering tip series page 177-180**

| | Order-no. | Model | Description |
|---|---|---|---|
| | **T005 33 131 99** | **MPR 80 Set** | **Soldering iron MPR 80 with safety rest** |
| | Scope of supply | | |
| 1 | T005 29 163 99 | MPR 80 | Soldering iron 80 W, 24 V, with Silver-Line Heating Technology |
| 2 | T005 44 405 99 | LT B | Soldering tip chisel 2,4 x 0,8 mm |
| 3 | T005 15 033 99 | KH 25P | Safety rest with sponge |

| **Accessory** | |
|---|---|
| T005 87 447 10 | Barrel for WSP 80 (spare) |

www.labem.pl

**Weller FE soldering irons are specifically designed for tip extraction applications (tip extraction see page 126). The fume extraction tube is integrated to the iron and positioned above the soldering tip. Regardless the iron is ergonomical and allows precise work. The FE soldering irons are controlled electronically and can be connected to all Weller soldering sations except WX stations. Different perfomances and the wide range of Weller soldering tips gives a multi-puropse applications to the FE irons. Weller FE soldering irons are delivered with a 5,0 mm heat resistant fume extraction hose (2,5 mm). Irons are ESD safe.**

ESD

## FE 75 Set

- 80 W, 24 V
- For tip extraction

**LT Soldering tip series page 177-180**

| | Order-no. | Model | Description |
|---|---|---|---|
| | **T005 33 151 99** | **FE 75 Set** | **Soldering iron FE 75 with safety rest** |
| | Scope of supply | | |
| 1 | T005 29 166 99 | FE 75 | FE-Soldering iron 80 W, 24 V with Silver-Line Heating Transfer |
| 2 | T005 44 405 99 | LT B | Soldering tip chisel 2,4 x 0,8 mm |
| 3 | T005 15 020 99 | KH 20 | Safety rest with sponge |
| | T005 87 447 28 | | Funnel for FE 75 |
| | T005 25 409 99 | | Cleaning brush for extraction tube |
| | **Accessory** | | |
| | T005 87 447 10 | | Barrel for FE 75 (spare) |

www.labem.pl

## FE 80

- 80 W, 24 V
- For tip extraction

HT Soldering tip series page 185

| Order-no. | Model | Description |
|---|---|---|
| **T005 26 162 99** | **FE 80** | **FE-Soldering iron** |

Scope of supply

| | | |
|---|---|---|
| T005 26 162 99 | FE 80 | FE-Soldering iron 80 W, 24 V with Silver-Line Heating Transfer |
| T005 44 261 99 | HT 2 | Soldering tip |
| T005 87 337 58 | | Funnel for FE 80 |
| T005 25 409 99 | | Cleaning brush for extraction tube |

**Accessory**

| | | |
|---|---|---|
| T005 15 152 99 | WDH 30 | Safety rest |

## LR 21 Set

- 50 W, 24 V
- For standard soldering applications

LT Soldering tip series page 177-180

| Order-no. | Model | Description |
|---|---|---|
| **T005 29 187 99** | **LR 21 Set** | **Soldering iron LR 21 with safety rest** |

Scope of supply

| | | | |
|---|---|---|---|
| 1 | T005 25 106 99 | LR 21 | Soldering iron 50 W, 24 V with LT-B soldering tip adapter |
| 2 | T005 44 415 99 | LT M | Standard soldering tip, LT M, 3,2 mm X 1,2 mm |
| 3 | T005 15 152 99 | WDH 30 | Safety rest with dry cleaner |

www.labem.pl

**The Magnastat system operates through a ferro-magnetic senor device which changes its characteristics whe specific temperatures are reached. This causes it to either attract or repel a permanant magnet which operates a power supply switch. In this way power to the heating element can be quickly switched on or off to either provide extra power.**

## Magnastat Controlled Low Voltage Soldering Iron

### TCPS

- 50 W, 24 V
- 3 wire silicone cord and plug for Weller WTCP 51 Magnastat soldering station.
- Hard grounded

LT Soldering tip series page 177-180

| Order-no. | Model | Description |
|---|---|---|
| T00 532 105 99 | TCPS | Magnastat Soldering iron 50 W, 24 V with adapter PT 7 (370°C) and soldering tip LT M |

### TCP 24

- 50 W, 24 V
- 2 wire silicone cord without plug
- No grounding possible

LT Soldering tip series page 177-180

| Order-no. | Model | Description |
|---|---|---|
| T005 10 001 99 | TCP 24 | Magnastat Soldering iron 50 W, 24 V, with adapter PT 7 (370°C) and soldering tip LT M |

### TCP 42

- 45 W, 24 V
- 2 wire cord (4 m) without plug

LT Soldering tip series page 177-180

| Order-no. | Model | Description |
|---|---|---|
| T005 10 055 71 | TCP 42 | Magnastat Soldering iron 45 W, 24 V, with adapter PT 7 (370°C) and soldering tip LT M |

### TCP 12

- 3 m cord with battery clamps e.g. for car battery

LT Soldering tip series page 177-180

| Order-no. | Model | Description |
|---|---|---|
| T005 10 053 99 | TCP 12 | Magnastat Soldering iron 30/40 W, 12/14 V, with adapter PT 7 (370°C) and soldering tip LT M |

www.labem.pl

# Magnastat controlled line voltage soldering irons

## W 61

- 60 W, 230 V

CT 5 Soldering tip series page 188

| Order-no. | Model | Description |
|---|---|---|
| T005 61 036 99 | W 61 | Line voltage soldering iron 60 W, 230 V, Magnastat controlled |

## W101

- 100 W, 230 V
- Complete with soldering tip CT6E7 and safety rest

CT 6 Soldering tip series page 189

| Order-no. | Model | Description |
|---|---|---|
| T005 61 046 99 | W 101 | Low voltage soldering iron 100 W, 230 V, Magnastat controlled |

## W 101SP

- 100 W, 230 V
- Complete with welding wedge Teflon coated 50 x 40 x 4 mm, twist lock and safety rest

Welding wedge spare page 189

| Order-no. | Model | Description |
|---|---|---|
| T005 61 096 99 | W 101SP | Line voltage soldering iron 100 W, 230 V, Magnastat controlled with welding wedge (260°C-295°C) |

## W 201

- 200 W, 230 V
- Complete with soldering tip CT2F7 and safety rest

CT 2 Soldering tip series page 190

| Order-no. | Model | Description |
|---|---|---|
| T005 61 056 99 | W 201 | Line voltage soldering iron 200 W, 230 V, Magnastat controlled |

www.labem.pl

# Unregulated Line Voltage Soldering Iron

**Robust heating elements of special steel between natural mica-leaves, embedded in cast ceramics and first-class material make the Weller SPI irons outstanding in technology and life-time. Ideal for professional applications in crafts and schools.**

## SPI 16

- 15 W, 230 V
- Heating up time approx. 180 sec.
- Tip temperature approx. 360°C

**SPI 16-Soldering tip series page 191**

| Order-no. | Model | Description |
|---|---|---|
| **T005 64 005 99** | **SPI 16** | **Line voltage soldering iron unregulated 15 W, 230 V** |

Scope of supply

Complete with soldering tip 4SPI15212 chisel tip 1,2 mm and safety rest

## SPI 27

- 25 W, 230 V
- Heating up time approx. 180 sec.
- Tip temperature approx. 410°C

**SPI 27-Soldering tip series page 191**

| Order-no. | Model | Description |
|---|---|---|
| **T005 64 021 99** | **SPI 27** | **Line voltage soldering iron unregulated 25 W, 230 V** |

Scope of supply

Complete with soldering tip 4SPI26206 chisel tip 1,2 mm and safety rest

www.labem.pl

## SPI 41

- 40 W, 230 V
- Heating up time approx. 180 sec.
- Tip temperature approx. 450°C

**SPI 41-Soldering tip series page 191**

| Order-no. | Model | Description |
|---|---|---|
| **T005 64 037 99** | **SPI 41** | **Line voltage soldering iron unregulated 40 W, 230 V** |

Scope of supply

Complete with soldering tip 4SPI402224 chisel tip 2,0 mm and safety rest

## SPI 81w

- 80 W, 230 V
- Heating up time approx. 180 sec.
- Tip temperature approx. 480°C

**SPI 81-Soldering tip series page 191**

| Order-no. | Model | Description |
|---|---|---|
| **T005 64 053 99** | **SPI 81** | **Line voltage soldering iron unregulated 80 W, 230 V** |

Scope of supply

Complete with soldering tip 4SPI80237 chisel tip 5,0 mm and safety rest

www.labem.pl

# Desoldering Iron

**The desoldering irons of the X-series feature a novel threadless desoldering nozzle fixture system whereby the nozzle is inserted into the head and locked into place by applying a 1/4 turn. This patented feature allows the desoldering nozzles to be quickly and easily exchanged and also improves the rate of thermal transfer from the desoldering head to the desoldering nozzle providing the tools with a faster heating up time and recovery rate. Together with a 80 watts heating element the desoldering iron is qualified for solder joints where a high temperature is required.**

**Desoldering iron with external solder collector (DSX 80) for SMD components. Same working position as usual soldering irons. Electronic temperature control. Micro finger switch for activating the vacuum pump.**
**Various desoldering nozzles as well as CSF desoldering heads are available.**

ESD

## DSX 80 Set

- 80 W, 24 V
- With external solder collector
- Same working position as usual soldering irons

**DX Desoldering nozzle series page 194**

| Order-no. | Model | Description |
|---|---|---|
| **T005 13 183 99** | **DSX 80 Set** | **Desoldering iron set 80 W, 24 V with threadless nozzle fixture system** |

| | Scope of supply | | |
|---|---|---|---|
| 1 | T005 13 190 99 | DSX 80 | Desoldering iron 80 W, 24 V |
| 2 | T005 15 152 99 | WDH 30 | Safety rest |
| 3 | T005 13 142 00 | DX 112 | Nozzle inner ø 1,0 mm |
| 4 | T005 13 143 00 | DX 113 | Nozzle inner ø 1,2 mm |
| | T005 13 500 99 | | Cleaning Set |
| | T005 13 603 99 | | Gaskets for glastube (10 pieces) |

## Accessory

| Order-no. | Description |
|---|---|
| **T005 13 604 99** | **Filter for glastube (10 pieces)** |

www.labem.pl

**Inline desoldering iron with internal solder reservoir for vertical handling. Electronic temperature control. Micro finger switch controls quick start of fast action vacuum pump. Different nozzles and CSF heads are available.**

## DXV 80 Set

- 80 W, 24 V
- Internal solder reservoir
- For vertical applications

**DX Nozzle series page 194**

| Order-no. | Model | Description |
|---|---|---|
| **T005 13 182 99** | **DXV 80 Set** | **Inline desoldering iron 80 W, 24 V with threadless nozzle fixture system** |

| | Scope of supply | | |
|---|---|---|---|
| 1 | T005 13 180 99 | DXV 80 | Inline desoldering iron 80 W, 24 V |
| 2 | T005 15 153 99 | WDH 40 | Safety rest |
| 3 | T005 13 142 00 | DX 112 | Nozzle inner ø 1,0 mm |
| 4 | T005 13 143 00 | DX 113 | Nozzle inner ø 1,2 mm |
| 5 | T005 13 500 99 | | Cleaning Set |
| 6 | T005 87 418 15 | | Filter cartridge for DXV 80 (5 pieces) |
| 7 | T005 87 418 23 | | Brush for heating element |
| 8 | T005 87 067 94 | | Cone cleaner |

## WXDV 120 Set

- 120 W, 24 V
- Temperature range 100°C - 350°C, 120 W, 24 V
- Heat-up time ca. 35 sec. (50°C - 350°C / 122° F- 662°F)
- Setback capable
- Blue LED indication light
- Integrated tin collector
- Internal parameter storage (Zero Tolerance)
- Connectable to WXD 2

**XDS Nozzle series page 197**

Available from September 2013

WX compatible

| Order-no. | Model | Description |
|---|---|---|
| **T005 13 205 99** | **WXDV 120** | **Desoldering iron 120 W, 24 V** |

| | Lieferumfang | | |
|---|---|---|---|
| 1 | T005 13 204 99 | WXDV 120 | Desoldering iron 120 W, 24 V |
| 2 | T005 15 153 99 | WDH 40 | Safety rest |
| | T005 87 658 01 | PDN | Pliers for desoldering nozzles |
| | T005 13 252 00 | | XDS 3 Nozzle |
| | T005 13 254 00 | | XDS 5 Nozzle |
| | T005 87 657 73 | | Cleaning Set |
| | T005 87 657 72 | | Cone cleaner |
| | T005 87 418 19 | | Filter cartridge (5 pieces) |

www.labem.pl

# Maintenance set for Desoldering Irons and nozzles

- For cleaning nozzles and for nozzle exchange

| Order-no. | Description |
|---|---|
| **T005 87 658 01** | **PDN Pliers for desoldering nozzles** |

| Order-no. | Description |
|---|---|
| **T005 87 637 73** | **Cleaning set for WXDP 120 and WSDV 120** |
| **T005 13 500 99** | **Cleaning set for DSX 80 und DXV 80** |

| Order-no. | Description |
|---|---|
| **T005 87 657 78** | **Glas tube for WXDP 120** |
| **T005 13 605 99** | **Glas tube for  DSX 120 and DSX 80 (4 pieces)** |

| Order-no. | Description |
|---|---|
| **T005 87 657 72** | **Cone cleaner for WXDP 120 / WXDV 120 / DSX 120** |
| **T005 87 067 94** | **Cone cleaner for DSX 80 and DXV 80** |

| Order-no. | Description |
|---|---|
| **T005 13 500 99** | **Cleaning set complete** |

Scope of supply

| | |
|---|---|
| T005 87 488 61 | Handle |
| T005 13 501 99 | Spare needle set, 0,6 mm / 0,9 mm / 1,4 mm / 1,9 mm |

Accessory

| | |
|---|---|
| T005 13 502 99 | Spare needle set, 1 x 1,9 mm, 3 x 0,9 mm |
| T005 13 503 99 | Spare needle set, 1 x 1,9 mm, 3 x 0,5 mm |
| T005 13 504 99 | Spare needle set, 1 x 1,9 mm, 3 x 1,4 mm |

www.labem.pl

**New products enlarge the WX family. A new WXD 2 desoldering station and a new WXDP desoldering iron. These tools are ideal for professional rework applications of the latest electronic components in the industrial operation. Typically for the WX stations: soldering and desoldering parameters can be saved easily on the iron. The WXDP 120 heats up within 35 sec. only. With stand-by function.**

## WXDP 120 Set

- 120 W, 24 V High power desoldering iron
- Heat up time 35 sec only Set-back function
- Push and pull technolgy: cartridge change with one hand possible
- Programmable, intelligent WX desoldering iron

**XDS-Nozzles page 197**

WX compatible

| | Order-no. | Model | Description |
|---|---|---|---|
| | **T005 13 202 99** | **WXDP 120 Set** | **Desoldering iron 120 W, 24 V with excenter fixture** |
| | Scope of supply | | |
| 1 | T005 13 201 99 | WXDP 120 | Desoldering iron 120 W, 24 V |
| 2 | T005 15 172 99 | WDH 70 | Safety rest with dry cleaner |
| 3 | T005 87 657 78 | | Glas tube with strap |
| | T005 87 657 72 | | Cone cleaner |
| | T005 87 657 73 | | Filter ø 17 für Glasrohr (10 pieces) |
| | T005 87 657 73 | | Cleaning set WXDP / DSX 120 |
| | T005 87 658 01 | PDN | Pliers desoldering nozzles |

## DSX 120

- 120 W, 24 V High power desoldering iron
- Heat up time 35 sec only, set-back function

**XDS-Nozzles page 197**

| | Order-no. | Model | Description |
|---|---|---|---|
| 1 | **T005 13 198 99** | **DSX 120** | **Desoldering iron 120 W, 24 V with excenter fixture, without safety rest. Safety rest must be ordered separately.** |
| 2 | Scope of supply | | |
| | T005 13 604 99 | XDS 1 | Nozzle |
| | Accessory | | |
| | T005 15 152 99 | WDH 30 | Safety rest with dry cleaner |

www.labem.pl

## WTA 50 Set

- Tweezers 50 W, 24 V
- For desoldering of SMD components

WTA tips page 185

| Order-no. | Model | Description |
|---|---|---|
| **T005 33 133 99** | **WTA 50 Set** | **Tweezers WTA 50 with safety rest** |

| | Scope of supply | | |
|---|---|---|---|
| 1 | T005 13 171 99 | WTA 50 | Tweezers 2 x 25 W, 24 V |
| 2 | T005 44 141 99 | WTA 1 | Tip set, bent 45°, 0,5 mm X 0,5 mm |
| 3 | T005 15 042 99 | AK 51 | Safety rest |

**The hot air irons HAP 1 and HAP 200 work with a temperature range from 50°-550°C. They provide a directional hot air flow that is adjustable. Finger switch controls adjustable pump. Different nozzles are available.**

ESD

## HAP 1 Set

- 100 W, 24 V
- Temperature range 50°C to 550°C
- Hot air flow ionic free
- Activated by finger switch

Hot air nozzles page 198–204

| Order-no. | Model | Description |
|---|---|---|
| **T005 27 118 99** | **HAP 1 Set** | **Hot air iron set 100 W, 24 V** |

| | Scope of supply | | |
|---|---|---|---|
| 1 | T005 27 115 99 | HAP 1 | Hot air iron 100 W / 24 V<br>with Hot air nozzle R 06 round ø 3,0 mm |
| 2 | T005 87 278 21 | R 04 | Hot air nozzle round ø 1,2 mm |
| 3 | T005 15 152 99 | WDH 30 | Safety rest with dry cleaner |

**The hot air iron HAP 200 works with the rework station WR 3M only.**

www.labem.pl

## HAP 200 Set

- 200 W, 24 V
- Temperature range 50°C to 550°C
- Activated by finger switch

Hot air nozzles page 198–204

| | Order-no. | Model | Description |
|---|---|---|---|
| | **T005 27 117 99** | **HAP 200 Set** | **Hot air iron set 200 W, 24 V** |
| | Scope of supply | | |
| 1 | T005 27 116 99 | HAP 200 | Hot air iron 200 W / 24 V |
| 2 | T005 87 278 21 | R 04 | Hot air nozzle round ø 1,2 mm |
| 3 | T005 15 152 99 | WDH 30 | Safety rest with dry cleaner |
| | T005 87 617 28 | | Adapter M6 for HAP 200 |
| 4 | T005 87 278 22 | R 06 | Hot air nozzle ø 3,0 mm |

## WXHAP 200 Set

- 200 W, 24 V
- Temperature range 50°C to 550°C
- Blue LED light
- Internal Parameter storage (zero tolerance)
- Hot air flow ionic free

Available from September 2013

ESD

WX compatible

Hot air nozzles page 198–204

| | Order-no. | Model | Description |
|---|---|---|---|
| | **T005 27 120 99** | **WXHAP 200 Set** | **Hot air soldering iron set 200 W, 24 V** |
| | Scope of supply | | |
| 1 | T005 27 119 99 | WXHAP 200 | Hot air iron 200 W / 24 V with hot air nozzle R 06 round ø 3,0 mm |
| 2 | T005 15 152 99 | WDH 30 | Safety rest with dry cleaner |
| 4 | T005 87 278 22 | R 06 | Hot air nozzle ø 3,0 mm |
| | T005 87 278 21 | R 04 | Hot air nozzle round ø 1,2 mm |
| | T005 87 617 28 | | Adapter M6 for WXHAP 200 |

www.labem.pl

## Solutions for cleaning challenges with lead free solder!

When using lead free it will be experienced an increased oxidation in the wettable area of the tip. These oxides must be removed regularly otherwise it will make the tip completely unwettable and not usable anymore. When cleaning the tip by means of the Weller WDC Dry Cleaner a special brass wool is used. First the surplus solder is removed by tapping the tip on the soft edge of the collector box.The final cleaning is then done by pushing and turning the tip in the brass wool. After cleaning there is still a fine layer of solder on the tip avoiding fast oxidation of the iron layer which is an advantage versus the cleaning by the wet sponge. The brass wool can be soaked in flux which may improve even the performance.

**Why dry cleaning?**

- Best cleaning effect
- Soldering tip will be cleaned but stays wetted
- Flux will be removed
- Safe from oxidation
- Less temperature shock

**Individual cleaning methods**

Wet cleaning with cleaning sponge

Dry cleaning with steel or brass wool

**To ensure continued pleasure of our products it is essential to use only genuine Weller parts.**

**Weller's soldering tip and heater form a unit and therefore a perfect heating system to produce high quality solder joints. Perfect interaction between the heater and soldering tip protects the soldering iron from irreparable damage. Other tips often damage the heating system. A manufacturer's warranty is given only if genuine Weller replacement parts are used.**
**Genuine Weller tips can be identified by the Weller marking on the shaft of the tip as well as the Genuine Weller seal on the packging.**

www.labem.pl

# Use all possiblities and accessories for lowering the soldering tip temperature

- Stand-by mode
- Auto-off mode
- Safety rests with Stop & Go function
- Tools with Acceleration sensor

**High power infra-red preheating plate**
Support for hand soldering processes without risking overheating

**Tip activator**
Regeneration of oxidized tips. Use when tip is hot.

**Polishing bar WPB 1**
Removes compact oxid films and regenerates tip surfaces when tip is cold.

**After use wet the soldering tip again - with Weller WSW**
Always use the lowest possible tip temperature and add sufficient solder to the tip before placing the iron back to the safety rest.

**Dry cleaning with WDC**
- Soldering tip will be cleaned but stays wetted. Flux will be removed.
- Best treatment for soldering tips.

www.labem.pl

# Weller Summary Soldering Tips

| Soldering Tools | | Soldering Tips | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | XT Page 172 / 173 | XTR Page 175 | LTR Page 182 | ET Page 184 | XHT Page 176 | XNT Page 168 / 169 | RT Page 164 / 165 | RTW Page 166 / 167 | LT Page 177/ 178/179/180 | NT Page 170 | LHT Page 183 | HT Page 185 | WTA Page 185 | PT Page 186 / 187 |
| **Fast response** | | | | | | | | | | | | | | | |
| WP 65 | Page 142 | | | | | | ■ | | | | | | | | |
| WP 120 | Page 144 | ■ | | | | | | | | | | | | | |
| WP 200 | Page 145 | | | | | ■ | | | | | | | | | |
| WXP 65 | Page 142 | | | | | | ■ | | | | | | | | |
| WXP 120 | Page 143 | ■ | | | | | | | | | | | | | |
| WXP 200 | Page 145 | | | | | ■ | | | | | | | | | |
| **Silver-Line** | | | | | | | | | | | | | | | |
| FE 75 | Page 130 /148 / 126 | | | | | | | | | ■ | | | | | |
| FE 80 | Page 130, 149, 126 | | | | | | | | | | | | ■ | | |
| MPR 80 | Page 147 | | | | | | | | | ■ | | | | | |
| WP 80 | Page 146 | | | | | | | | | ■ | | | | | |
| WSP 80 | Page 146 | | | | | | | | | ■ | | | | | |
| WSP 150 | Page 147 | | | | | | | | | | | ■ | | | |
| **Active-Tip** | | | | | | | | | | | | | | | |
| WMRP | Page 140 | | | | | | | ■ | | | | | | | |
| WMRT | Page 141 | | | | | | | | ■ | | | | | | |
| WXMP | Page 140 | | | | | | | ■ | | | | | | | |
| WXMT | Page 141 | | | | | | | | ■ | | | | | | |
| **Standard-Line** | | | | | | | | | | | | | | | |
| LR 21 | Page 149 | | | | ■ | | | | | with Ad. | | | | | |
| LR 82 | | | | | | | | | | | | | ■ | | |
| WTA 50 | Page 158 | | | | | | | | | | | | | ■ | |
| **Unregulated Line Voltage Soldering Irons** | | | | | | | | | | | | | | | |
| SPI 16,27,41,81 | Page 152, 153 | | | | | | | | | | | | | | |
| **Magnastat Controlled Line Voltage Soldering Irons** | | | | | | | | | | | | | | | |
| TCPS,TCP 12,TCP 24 | Page 150 | | | | | | | | | with Ad. | | | | | ■ |
| W 61,101,201 | Page 151 | | | | | | | | | | | | | | |
| **Desoldering Irons** | | | | | | | | | | | | | | | |
| DS 22,80,DSV 80 | | | | | | | | | | | | | | | |
| DSX 80 | Page 154 | | | | | | | | | | | | | | |
| DXV 80 | Page 155 | | | | | | | | | | | | | | |
| WXDP 120 | Page 157 | | | | | | | | | | | | | | |
| DSX 120 | Page 157 | | | | | | | | | | | | | | |
| WXDV 120 | Page 155 | | | | | | | | | | | | | | |
| **Hot Air Irons** | | | | | | | | | | | | | | | |
| HAP 1,HAP 200 | Page 158 / 159 | | | | | | | | | | | | | | |
| HAP 3000 | Page 70 | | | | | | | | | | | | | | |
| WXHAP 200 | Page 159 | | | | | | | | | | | | | | |
| **Gas Powered Soldering Irons** | | | | | | | | | | | | | | | |
| Pyropen Jr. | Page 43 | | | | | | | | | | | | | | |
| Pyropen and P. Piezo | Page 42 | | | | | | | | | | | | | | |
| WP 60 | Page 43 | | | | | | | | | | | | | | |
| **Inert Gas Soldering Irons** | | | | | | | | | | | | | | | |
| WSP 80IG | Page 37 | | | | | | | | | ■ | | | | | |
| WSP 120IG | Page 37 | ■ | | | | | | | | | | | | | |
| **Heating Elements** | | | | | | | | | | | | | | | |
| HER 120 | Page 35 | | ■ | | | | | | | | | | | | |
| HER 80 | Page 35 | | | ■ | | | | | | | | | | | |

www.labem.pl

| | CT Page 188 / 189 / 190 | SPI Page 191 | DS Page 195 | DX Page 194 | F Page 198 | R Page 198 | D Page 199 | Q Page 199 | NR Page 200 | ND Page 201 | NQ Page 202 | NQT Page 203 | XDS Page 197 | 60 Page 192 | 70 Page 193 | 71 Page 192 | XT soldering head Page 173 / 174 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | | | | | ▬ |
| | | | | | | | | | | | | | | | | | ▬ |
| ▬ | | | | | | | | | | | | | | | | | |
| | | ▬ | | | | | | | | | | | | | | | |
| | ▬ | | | | | | | | | | | | | | | | |
| | | | ▬ | | | | | | | | | | | | | | |
| | | | | ▬ | | | | | | | | | | | | | |
| | | | | ▬ | | | | | | | | | | | | | |
| | | | | | | | | | | | | | ▬ | | | | |
| | | | | | | | | | | | | | ▬ | | | | |
| | | | | | ▬ | ▬ | ▬ | ▬ | | | | | | | | | |
| | | | | | | | | | ▬ | ▬ | ▬ | ▬ | | | | | |
| | | | | | ▬ | ▬ | ▬ | ▬ | | | | | | | | | |
| | | | | | | | | | | | | | | | | ▬ | |
| | | | | | | | | | | | | | | | ▬ | | |
| | | | | | | | | | | | | | | ▬ | | | |

# RT Soldering Tip Series
# Soldering Tips for Soldering irons WMRP, WXMP

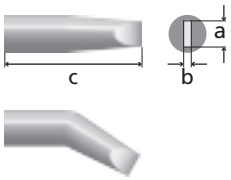
## WMRP / WXMP

Fine slim soldering iron. Ideal for microscope work.
High performance by integrated active soldering tip.

40 W (55 W with RT 11), 12 V

- Excellent heat transfer and sensors
- Soldering tips can be changed quickly and easily
- Excellent reaction time
- Extremely short heating time

### Chisel




| RT | Ø a mm | b mm | Order-no. |
|---|---|---|---|
| RT 1SC | 0,4 | 0,15 | T005 44 612 99 |
| RT 1SCNW* | 0,3 | 0,1 | T005 44 626 99 |
| RT 3 | 1,3 | 0,4 | T005 44 603 99 |
| RT 4 | 1,5 | 0,4 | T005 44 604 99 |
| RT 8 | 2,2 | 0,4 | T005 44 608 99 |
| RT 9 | 0,8 | 0,4 | T005 44 609 99 |
| RT 11 | 3,6 | 0,9 | T005 44 611 99 |
| RT 5 30° | 0,8 | 0,4 | T005 44 605 99 |

| Type | Ø a mm | b mm | Order-no. |
|---|---|---|---|
| RT 1SCMS | 0,4 | 0,15 | T005 44 615 99 |
| RT 1SCNWMS* | 0,3 | 0,1 | T005 44 626 71 |
| RT 3MS | 1,3 | 0,4 | T005 44 616 99 |
| RT 4MS | 1,5 | 0,4 | T005 44 618 99 |
| RT 8MS | 2,2 | 0,4 | T005 44 622 99 |
| RT 9MS | 0,8 | 0,4 | T005 44 623 99 |
| RT 11MS | 3,6 | 0,9 | T005 44 631 99 |
| RT 5MS 30° | 0,8 | 0,4 | T005 44 619 99 |
| RT 3XMS 30° | 1,3 | 0,5 | T005 44 603 73 |

### Sloped

| Type | a mm | Order-no. |
|---|---|---|
| RT 6 45° | 1,2 | T005 44 606 99 |

| Type | a mm | Order-no. |
|---|---|---|
| RT 6MS 45° | 1,2 | T005 44 620 99 |

* none wettable

MS tips: separate grounded

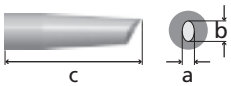
www.labem.pl

## Conical

| Type | Ø a mm | Order-no. |
|---|---|---|
| RT 1 | 0,2 | T005 44 601 99 |
| RT 1NW* | 0,1 | T005 44 625 99 |
| RT 2 | 0,8 | T005 44 602 99 |

| Type | Ø a mm | Order-no. |
|---|---|---|
| RT 1MS | 0,2 | T005 44 614 99 |
| RT 1NWMS* | 0,1 | T005 44 625 71 |
| RT 2MS | 0,8 | T005 44 617 99 |
| RT 12MS 25° | 0,5 | T005 44 632 99 |
| RT 13MS 30° | 0,4 | T005 44 633 99 |

## Gull Wing




| Type | Ø a mm | b mm | Order-no. |
|---|---|---|---|
| RT 10GW | 1,2 | 2,0 | T005 44 610 99 |

| Type | Ø a mm | b mm | Order-no. |
|---|---|---|---|
| RT 10GWMS | 1,2 | 2,0 | T005 44 624 99 |

## Knife

| Type | Ø a mm | Order-no. |
|---|---|---|
| RT 7 45° | 2,2 | T005 44 607 99 |

| Type | Ø a mm | Order-no. |
|---|---|---|
| RT 7MS 45° | 2,2 | T005 44 621 99 |

MS tips: separate grounded

## Measuring tip

| Type | | Order-no. |
|---|---|---|
| Measuring tip | | T005 44 613 99 |

* none wettable

MS handles and MS soldering tips have to be used together.
MS soldering tips are for use with MS handles only (WXMP MS / WMRP MS)

MS handles for RT MS soldering tips

| | |
|---|---|
| T005 29 213 99 | WXMP MS soldering iron handle packed |
| T005 29 217 99 | WXMP MS soldering iron with safety rest WDH 51 |
| T005 29 192 99 | WMRP MS soldering iron handle packed |

www.labem.pl

# RTW Soldering Tip Series

## Soldering tips for desoldering tweezers WMRT, WXMT

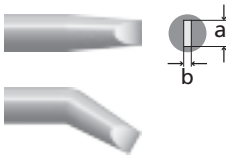
### WXMT / WMRT

Slim tweezers. Ideal for soldering and desoldering of very small SMD components.

2 x 40 W, 12 V

- Excellent heat transfer and sensors
- Solder tips can be changed quickly and easily
- Excellent reaction time
- Extremely short heating time

Chisel




RTW = tweezers

| RTW | Ø a mm | b mm | Order-no. |
|---|---|---|---|
| RTW 2 45° | 0,7 | 0,4 | T005 44 652 99 |
| RTW 3 45° | 3,0 | 1,0 | T005 44 653 99 |
| RTW 4 45° | 6,0 | 1,0 | T005 44 654 99 |
| RTW 9 | 3,0 | 1,0 | T005 44 666 99 |
| RTW 11 | 6,0 | 1,0 | T005 44 667 99 |
| RTW 10 | 10,0 | 1,0 | T005 44 668 99 |
| RTW 8 | 1,3 | 0,4 | T005 44 664 99 |

| Type | Ø a mm | b mm | Order-no. |
|---|---|---|---|
| RTW 2MS45° | 0,7 | 0,4 | T005 44 657 99 |
| RTW 3MS 45° | 3,0 | 1,0 | T005 44 658 99 |
| RTW 4MS 45° | 6,0 | 1,0 | T005 44 659 99 |
| RTW 9MS | 3,0 | 1,0 | T005 44 669 99 |
| RTW 11MS | 6,0 | 1,0 | T005 44 670 99 |
| RTW 10MS | 10,0 | 1,0 | T005 44 671 99 |
| RTW 8MS | 1,3 | 0,4 | T005 44 665 99 |
| RTW 7NWMS* | 0,8 | 0,4 | T005 44 663 71 |

www.labem.pl

Conical

| Type | Ø a mm | Order-no. |
|---|---|---|
| **RTW 1 45°** | 0,4 | T005 44 651 99 |
| **RTW 6NW* 45°** | 0,2 | T005 44 656 99 |

| Type | Ø a mm | Order-no. |
|---|---|---|
| **RTW 1MS 45°** | 0,4 | T005 44 655 99 |
| **RTW 6NWMS* 45°** | 0,2 | T005 44 656 71 |

* none wettable

MS tips: separate grounded

MS handles and MS soldering tips have to be used together.
MS soldering tips are for use with MS handles only (WXMT MS / WMRT MS)

MS handles for RTW MS soldering tips

| | |
|---|---|
| T005 29 213 99 | WXMT MS Micro tweezers handle packed |
| T005 29 217 99 | WXMT MS Micro tweezers with safety rest WDH 60 |
| T005 29 192 99 | WMRT MS Micro tweezers handle without tips |

www.labem.pl

# XNT Soldering Tip Series

## Soldering Tips for Soldering irons WXP 65, WP 65

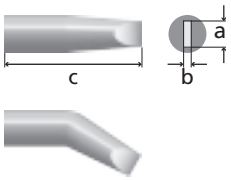
### WXP 65 / WP 65

Small fast soldering iron. Suitable for fine solder jobs with high heating demand.

65 W, 24 V

- Interchangeable soldering tips at low prices
- Maximum heat transfer
- Heater with improved sensor position
- Fast recovery time

### Chisel




| XNT | Ø a mm | b mm | c mm | Order-no. |
|---|---|---|---|---|
| XNT 1SCNW* | 0,3 | 0,1 | 27,0 | T005 44 881 99<br>T005 44 881 10 |
| XNT 1SC | 0,4 | 0,15 | 27,0 | T005 44 862 99<br>T005 44 862 10 |
| XNT H | 0,8 | 0,4 | 28,0 | T005 44 859 99<br>T005 44 859 10 |
| XNT K | 1,2 | 0,4 | 28,0 | T005 44 860 99<br>T005 44 860 10 |
| XNT A | 1,6 | 0,4 | 28,0 | T005 44 851 99<br>T005 44 851 10 |
| XNT 6 | 1,6 | 0,4 | 29,5 | T005 44 856 99<br>T005 44 856 10 |
| XNT B | 2,4 | 0,8 | 27,0 | T005 44 857 99<br>T005 44 857 10 |

| Type | Ø a mm | b mm | c mm | Order-no. |
|---|---|---|---|---|
| XNT C | 3,2 | 0,8 | 27,0 | T005 44 858 99<br>T005 44 858 10 |
| XNT D | 4,0 | 0,8 | 28,0 | T005 44 853 99<br>T005 44 853 10 |
| XNT HX 30° | 0,8 | 0,4 | 36,5 | T005 44 873 99<br>T005 44 873 10 |
| XNT 4X 45° | 1,2 | 0,4 | 34,6 | T005 44 874 99<br>T005 44 874 10 |
| XNT AX | 1,6 | 0,8 | 28,0 | T005 44 864 99<br>T005 44 864 10 |
| XNT BX | 2,4 | 0,8 | 36,5 | T005 44 882 99<br>T005 44 882 10 |
| XNT MX | 3,2 | 0,8 | 37,5 | T005 44 883 99<br>T005 44 883 10 |

### Sloped

| Type | a mm | Order-no. |
|---|---|---|
| XNT 4 | 1,2 | T005 44 855 99<br>T005 44 855 10 |
| XNT AA 45° | 1,6 | T005 44 884 99<br>T005 44 884 10 |
| XNT BB 45° | 2,4 | T005 44 885 99<br>T005 44 885 10 |

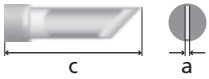
| Type | a mm | Order-no. |
|---|---|---|
| XNT CC 45° | 3,2 | T005 44 886 99<br>T005 44 886 10 |
| XNT F 45° | 1,2 | T005 44 887 99<br>T005 44 887 10 |

### Conical

| Typ | Ø a mm | c mm | Order-no. |
|---|---|---|---|
| XNT 1 | 0,5 | 27,0 | T005 44 850 99<br>T005 44 850 10 |

| Typ | Ø a mm | c mm | Order-no. |
|---|---|---|---|
| XNT S | 0,4 | 37,5 | T005 44 868 99<br>T005 44 868 10 |

### Knife



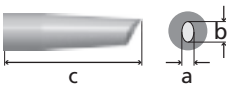

| Type | Ø a mm | c mm | Order-no. |
|---|---|---|---|
| XNT KN | 2,0 | 33,0 | T005 44 863 99<br>T005 44 863 10 |

- T005XXXXX99 = 1 Piece
- T005XXXXX10 = 10 Pieces
- T005XXXXX11 = 100 Pieces

* none wettable

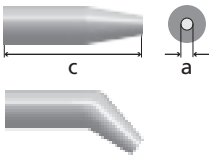
www.labem.pl

## Gull Wing




| XNT | b mm | c mm | Order-no. |
|---|---|---|---|
| XNT GW 1 | 2,0 | 33,0 | T005 44 854 99<br>T005 44 854 10 |
| XNT GW | 1,5 | 27,5 | T005 44 880 99<br>T005 44 880 10 |

## Round




| Type | Ø a mm | c mm | Order-no. |
|---|---|---|---|
| XNT 1S | 0,2 | 28,5 | T005 44 852 99<br>T005 44 852 10 |
| XNT 1LX | 0,2 | | T005 44 872 99<br>T005 44 872 10 |

| Type | Ø a mm | c mm | Order-no. |
|---|---|---|---|
| XNT 1X | 0,4 | 28,0 | T005 44 865 99<br>T005 44 865 10 |
| XNT 1SLX 45° | 0,4 | 39,5 | T005 44 875 99<br>T005 44 875 10 |

## SMT

| Type | Ø a mm | b mm | c mm | Order-no. |
|---|---|---|---|---|
| XNT SMT 01 | 10,4 | 0,6 | 7,1 | T005 44 876 99 |
| XNT SMT 02 | 16,8 | 0,6 | 7,1 | T005 44 877 99 |

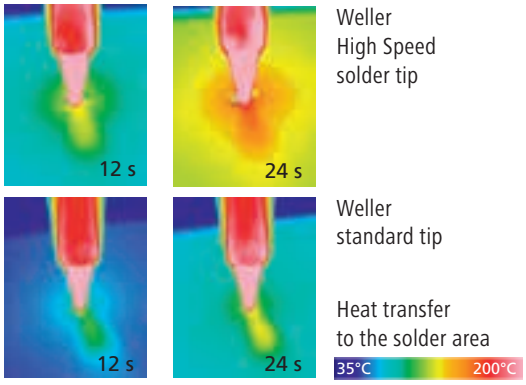
| Type | Ø a mm | b mm | c mm | Order-no. |
|---|---|---|---|---|
| XNT SMT 03 | 20,8 | 0,6 | 7,1 | T005 44 878 99 |

## High Speed

HS

## High Speed heat transfer

High Speed soldering tips provide enhanced heat transfer to the solder area.




Weller High Speed solder tip

Weller standard tip

Heat transfer to the solder area

## High Speed

HS

| Type | Ø a mm | b mm | c mm | Order-no. |
|---|---|---|---|---|
| XNT 1 HS | 0,5 | | 27,0 | T005 44 888 99<br>T005 44 888 10 |
| XNT 1S HS | 0,2 | | 28,5 | T005 44 889 99<br>T005 44 889 10 |
| XNT 4 HS | 1,2 | | | T005 44 890 99<br>T005 44 890 10 |
| XNT 6 HS | 1,6 | 0,4 | 29,5 | T005 44 891 99<br>T005 44 891 10 |
| XNT H HS | 0,8 | 0,4 | 28,0 | T005 44 892 99<br>T005 44 892 10 |
| XNT K HS | 1,2 | 0,4 | 28,0 | T005 44 893 99<br>T005 44 893 10 |
| XNT AX HS | 1,6 | 0,8 | 28,0 | T005 44 894 99<br>T005 44 894 10 |
| XNT 1X HS | 0,4 | | 28,0 | T005 44 895 99<br>T005 44 895 10 |

| Type | Ø a mm | b mm | c mm | Order-no. |
|---|---|---|---|---|
| XNT S HS | 0,4 | | | T005 44 896 99<br>T005 44 896 10 |
| XNT AS HS | 1,6 | | | T005 44 897 99<br>T005 44 897 10 |
| XNT 1L HS | 0,2 | | | T005 44 898 99<br>T005 44 898 10 |
| XNT 1LX HS | 0,2 | | | T005 44 8 99 99<br>T005 44 8 99 10 |
| XNT HX HS 30° | 0,8 | 0,4 | 36,5 | T005 44 900 99<br>T005 44 900 10 |
| XNT 4XHS 45° | 1,2 | 0,4 | 34,6 | T005 44 901 99<br>T005 44 901 10 |
| XNT 1SLX HS 45° | 0,4 | | 39,5 | T005 44 902 99<br>T005 44 902 10 |
| XNT F HS45° | 1,2 | | | T005 44 903 99<br>T005 44 903 10 |

## Accessories

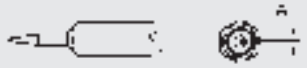
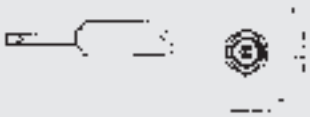
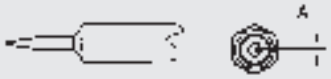
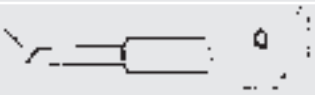
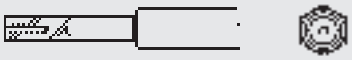
| Type | Ø a mm | c mm | Order-no. |
|---|---|---|---|
| Measuring tip | 0,6 | 31,3 | T005 44 861 99 |
| XNT Screw M4 | | 26,0 | T005 44 879 99 |

| Type | Order-no. |
|---|---|
| Barrel | T005 87 657 58 |
| Barrel for bent | T005 87 657 67 |

www.labem.pl

## NT Soldering Tip Series

## Soldering Tips for WMP

| Order-no. | Model | Description | Width A | Thickness B | Length L | |
|---|---|---|---|---|---|---|
| NT 1SC | **NT 1SC** | Chisel tip slim | 0,4 mm | 0,15 mm | 14 mm |  |
| NT H | **NT H** | Chisel tip | 0,8 mm | 0,4 mm | 8,4 mm |  |
| NT K | **NT K** | Chisel tip | 1,2 mm | 0,4 mm | 8,4 mm | |
| NT A | **NT A** | Chisel tip | 1,6 mm | 0,4 mm | 9,5 mm | |
| NT 6 | **NT 6** | Chisel tip | 1,6 mm | 0,7 mm | 7,4 mm | |
| NT B | **NT B** | Chisel tip | 2,4 mm | 0,8 mm | 7,8 mm | |
| NT C | **NT C** | Chisel tip | 3,2 mm | 0,8 mm | 8,2 mm | |
| NT D | **NT D** | Chisel tip | 4,0 mm | 0,8 mm | 8,6 mm | |
| NT AX | **NT AX** | Chisel tip bent | 1,6 mm | 0,4 mm | 8,2 mm | |
| NT 1S | **NT 1S** | Round tip slim | Ø 0,25 mm | | 8,5 mm |  |
| NT 1 | **NT 1** | Round tip | Ø 0,50 mm | | 7,4 mm | |
| NT 1X | **NT 1X** | Round tip bent 45° | Ø 0,4 mm | | 8,6 mm | |
| NT 4 | **NT 4** | Round tip sloped 45° | Ø 1,2 mm | | 9,9 mm | |
| NT GW | **NT GW** | Gullwing tip | 2,0 mm | 3,0 mm | 13,4 mm |  |
| NT MS | **NT MS** | NT Measuring tip for thermoelement | Ø 0,5 mm | | |  |

www.labem.pl

Continuation page 170, further soldering tips for WMP

| Order-no. | Description | |
|---|---|---|
| T005 87 517 17 | Silicon pad for changing bent NT tips | |
| T005 87 517 10 | Tip changing tool for changing straight NT tips | |

www.labem.pl

# XT Soldering Tip Series

## Soldering Tips for Soldering irons WP 120 and WXP 120

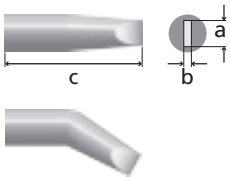
### WXP 120 / WP 120

All-rounder with 120 watts. For soldering applications from small to large components with higher heat demand.

120 W, 24 V

- Interchangeable soldering tips at low prices
- Maximum heat transfer
- Heater with improved sensor position
- Fast reaction time

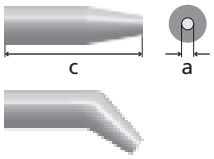
### Chisel




| XT | Ø a mm | b mm | c mm | Order-no. |
|---|---|---|---|---|
| XT H | 0,8 | 0,4 | 36,5 | T005 44 713 99<br>T005 44 713 10 |
| XT A | 1,6 | 0,7 | 36,5 | T005 44 703 99<br>T005 44 703 10 |
| XT AL | 1,6 | 1,0 | 39,5 | T005 44 701 99<br>T005 44 701 10 |
| XT ASL | 1,6 | 0,45 | 36,5 | T005 44 740 99<br>T005 44 740 10 |
| XT M | 3,2 | 1,2 | 39,5 | T005 44 702 99<br>T005 44 702 10 |
| XT B | 2,4 | 0,8 | 36,0 | T005 44 704 99<br>T005 44 704 10 |
| XT BSL | 2,4 | 0,45 | 36,0 | T005 44 741 99<br>T005 44 741 10 |
| XT B SL | 2,5 | 0,8 | 36,3 | T005 44 738 99<br>T005 44 738 10 |
| XT C | 3,2 | 0,8 | 36,0 | T005 44 705 99<br>T005 44 705 10 |

| Type | Ø a mm | b mm | c mm | Order-no. |
|---|---|---|---|---|
| XT D | 4,6 | 0,8 | 34,5 | T005 44 706 99<br>T005 44 706 10 |
| XT CSL | 3,2 | 0,45 | 36,0 | T005 44 742 99<br>T005 44 742 10 |
| XT E | 5,9 | 1,2 | 34,5 | T005 44 707 99<br>T005 44 707 10 |
| XT DL | 4,6 | 0,8 | 39,5 | T005 44 736 99 |
| XT MX | 3,2 | 0,8 | 53,5 | T005 44 745 99<br>T005 44 745 10 |
| XT HX | 0,8 | 0,4 | 51,5 | T005 44 737 99 |
| XT AX 30° | 1,6 | 0,7 | 51,5 | T005 44 743 99<br>T005 44 743 10 |
| XT BX 30° | 2,4 | 0,8 | 51,5 | T005 44 744 99<br>T005 44 744 10 |

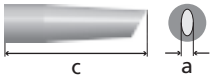
### Round




| Type | Ø a mm | c mm | Order-no. |
|---|---|---|---|
| XT BS | 2,4 | 36,5 | T005 44 715 99<br>T005 44 715 10 |
| XT CS | 3,2 | 36,5 | T005 44 716 99<br>T005 44 716 10 |

| Type | Ø a mm | c mm | Order-no. |
|---|---|---|---|
| XT DS | 5,0 | 34,5 | T005 44 717 99<br>T005 44 717 10 |

### Sloped

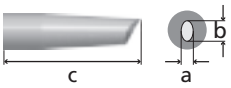



| Type | a mm | c mm | Order-no. |
|---|---|---|---|
| XT F 30° | 1,2 | 36,5 | T005 44 718 99<br>T005 44 718 10 |
| XT AA 60° | 1,6 | 36,5 | T005 44 708 99<br>T005 44 708 10 |
| XT BB 45° | 2,4 | 36,5 | T005 44 709 99<br>T005 44 709 10 |

| Type | a mm | c mm | Order-no. |
|---|---|---|---|
| XT CC 45° | 3,2 | 36,5 | T005 44 710 99<br>T005 44 710 10 |
| XT DDH 45 45° | 4,0 | 40,5 | T005 44 730 99<br>T005 44 730 10 |
| XT AA 60 ° | 1,6 | 36,5 | T005 44 708 99<br>T005 44 708 10 |

www.labem.pl

## Gull Wing



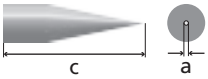

| XT | Ø a mm | b mm | c mm | Order-no. |
|---|---|---|---|---|
| XT GW1 | 2,3 | 3,2 | 36,5 | T005 44 712 99<br>T005 44 712 10 |
| XT GW2 | 3,5 | 4,8 | 36,5 | T005 44 735 99 |

| Type | Ø a mm | b mm | c mm | Order-no. |
|---|---|---|---|---|
| XT GW3 | 0,8 | 0,9 | 41,5 | T005 44 711 99<br>T005 44 711 10 |

## Knife

| Type | Ø a mm | c mm | Order-no. |
|---|---|---|---|
| XT KN 60 ° | 2,0 | 45,0 | T005 44 711 99<br>T005 44 714 10 |

## Conical




| Type | Ø a mm | c mm | Order-no. |
|---|---|---|---|
| XT O | 1,0 | 36,5 | T005 44 714 99<br>T005 44 714 10 |

## Soldering head

| Type | a mm | b mm | Order-no. |
|---|---|---|---|
| XT Soldering head + adapter | 10,0 | 4,0 | T005 44 731 99 |
| Soldering head | 10,0 | 4,0 | T005 44 731 90 |
| XT Soldering head + adapter | 20,0 | 4,0 | T005 44 732 99 |
| Soldering head | 20,0 | 4,0 | T005 44 732 90 |
| XT Soldering head + adapter | 33,0 | 4,0 | T005 44 733 99 |
| Soldering head | 33,0 | 4,0 | T005 44 733 90 |

- T005XXXXX99 = 1 Piece
- T005XXXXX10 = 10 Pieces
- T005XXXXX11 = 100 Pieces

www.labem.pl

# XT Soldering Tip Series

## Soldering Tips for Soldering irons WP 120 and WXP 120

**The XT soldering head is an ideal tool for tin coating, soldering and desoldering different components.**

**The additional required barrel must be ordered separately.**

Accessories

| Type | a mm | c mm | Order-no. |
|---|---|---|---|
| **Measuring tip** | 0,5 | 40,0 | T005 44 722 99 |
| **XT Adapter M4** | | 36,0 | T005 44 719 99 |
| **XT Adater M5** | | 36,0 | T005 44 720 99 |

| Type | | Order-no. |
|---|---|---|
| **Barrel** | WXP 120<br>WP 120 | T005 87 657 11<br>T005 87 637 09 |
| **Barrel for bent** | WXP 120<br>WP 120 | T005 87 657 66<br>T005 87 658 02 |

- T005XXXXX99 = 1 Piece
- T005XXXXX10 = 10 Pieces
- T005XXXXX11 = 100 Pieces

www.labem.pl

# XTR Soldering Tip Series

**Soldering tip with twist lock. For use with robot heating element HER 120 and HERX 120.**

| Order-no. | Model | Description | Width A | Thickness B | Length L |
|---|---|---|---|---|---|
| T005 44 723 99<br>T005 44 723 10 | **XTR A** | Chisel tip, (1 piece)<br>(10 pieces) | 1,6 mm | 0,7 mm | 36,0 mm |
| T005 44 724 99<br>T005 44 724 10 | **XTR B** | Chisel tip, (1 piece)<br>(10 pieces) | 2,4 mm | 0,8 mm | 35,0 mm |
| T005 44 725 99<br>T005 44 725 10 | **XTR C** | Chisel tip, (1 piece)<br>(10 pieces) | 3,2 mm | 0,8 mm | 35,0 mm |
| T005 44 726 99<br>T005 44 726 10 | **XTR D** | Chisel tip, ( 1 piece)<br>(10 pieces) | 4,6 mm | 0,8 mm | 34,5 mm |
| T005 44 727 99<br>T005 44 727 10 | **XTR E** | Chisel tip, (1 piece)<br>(10 pieces) | 5,9 mm | 1,2 mm | 34,5 mm |
| T005 44 728 99<br>T005 44 728 10 | **XTR M** | Chisel tip, (1 piece)<br>(10 pieces) | 3,2 mm | 1,2 mm | 39,0 mm |

www.labem.pl

# XHT Soldering Tip Series

## Soldering Tips for Soldering irons WP 200,WXP 200

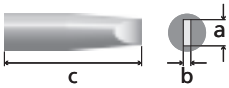
### WXP 200 / WP 200

High Power soldering iron. Ideal for applications with highest heat demand e.g. LED backpanels or RF shieldings.

200 W, 24 V

- Interchangeable soldering tips at low prices
- Maximum heat transfer
- Heater with improved sensor position
- Fast reaction time

### Chisel




| XHT | Ø a mm | b mm | c mm | Order-no. |
|---|---|---|---|---|
| XHT C | 3,2 | 1,2 | 48,0 | T005 44 804 99 |
| XHT D | 5,0 | 1,2 | 48,0 | T005 44 801 99 |

| Type | Ø a mm | b mm | c mm | Order-no. |
|---|---|---|---|---|
| XHT E | 7,6 | 1,5 | 48,0 | T005 44 802 99 |
| XHT F | 9,3 | 2,0 | 48,0 | T005 44 805 99 |

### Accessories

| Type | a mm | b mm | c mm | Order-no. |
|---|---|---|---|---|
| Measuring tip | 1,25 | 6,0 | 55,0 | T005 44 803 99 |
| Barrel | | | | T005 87 637 25 |

Further soldering tip dimensions on request.

www.labem.pl

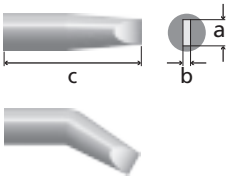
# LT Soldering Tip Series
# Soldering Tips for Soldering irons WP 80, WSP 80, MPR 80 and FE 75, TCP-Soldering irons , LR 21, MLR 21 with adapter

## WSP 80 / WP 80

Approved heating technology with effective heat transfer.
For all purpose industrial applications. A wide range of soldering tips are available.

- For universal applications
- Effective heat transfer
- Extensive range of soldering tips
- High quality heater core
- Soldering tip with low material use and therefore lower cost

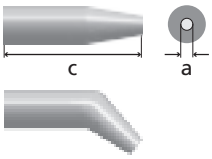
### Chisel




| LT | Ø a mm | b mm | c mm | Order-no. |
|---|---|---|---|---|
| LT 1SC | 0,4 | 0,15 | 15,0 | T005 44 494 99<br>T005 44 494 10 |
| LT 1SCNW* | 0,3 | 0,1 | 15,0 | T005 44 497 99 |
| LT A | 1,6 | 0,7 | 12,5 | T005 44 440 99<br>T005 44 440 10<br>T005 44 403 11 |
| LT ASL | 1,6 | 0,45 | 12,5 | T005 44 516 99<br>T005 44 516 11 |
| LT B | 2,4 | 0,8 | 12,5 | T005 44 405 99<br>T005 44 405 10<br>T005 44 405 11 |
| LT BSL | 2,4 | 0,45 | 12,5 | T005 44 517 99<br>T005 44 517 11 |
| LT H | 0,8 | 0,4 | 12,5 | T005 44 437 99<br>T005 44 437 10<br>T005 44 412 11 |
| LT HSL | 0,8 | 0,4 | 12,5 | T005 44 518 99<br>T005 44 518 11 |
| LT C | 3,2 | 0,8 | 12,5 | T005 44 407 99<br>T005 44 407 10<br>T005 44 407 11 |
| LT D | 4,6 | 0,8 | 12,5 | T005 44 409 99<br>T005 44 409 10<br>T005 44 409 11 |

| Type | Ø a mm | b mm | c mm | Order-no. |
|---|---|---|---|---|
| LT DLL | 4,6 | 1,2 | 12,5 | T005 44 448 99<br>T005 44 448 10 |
| LT K | 1,2 | 0,4 | 20,0 | T005 44 438 99<br>T005 44 438 10<br>T005 44 413 11 |
| LT L | 2,0 | 1,0 | 20,0 | T005 44 414 99<br>T005 44 414 10<br>T005 44 414 11 |
| LT M | 3,2 | 1,2 | 20,0 | T005 44 415 99<br>T005 44 415 10<br>T005 44 415 11 |
| LT HX 30° | 0,8 | 0,4 | 17,5 | T005 44 420 99<br>T005 44 420 11 |
| LT ALX 30° | 1,6 | 0,7 | 17,5 | T005 44 443 99<br>T005 44 443 10 |
| LT BX 30° | 2,4 | 0,8 | 17,5 | T005 44 442 99<br>T005 44 442 10 |
| LT AX 30° | 1,6 | 0,8 | 14,1 | T005 44 427 99<br>T005 44 427 10 |
| LT 4X 30° | 1,2 | 0,4 | 17,2 | T005 44 428 99<br>T005 44 428 10 |
| LT MX 30° | 3,2 | 1,2 | 20,0 | T005 44 469 99 |

### Round




| Type | Ø a mm | c mm | Order-no. |
|---|---|---|---|
| LT 1S | 0,2 | 15,0 | T005 44 436 99<br>T005 44 402 10 |
| LT 1SNW* | 0,1 | 15,0 | T005 44 496 99 |
| LT 1SA | 0,5 | 15,0 | T005 44 488 99 |
| LT 1 | 0,25 | 13,0 | T005 44 435 99<br>T005 44 435 10<br>T005 44 401 11 |
| LT 1LNW* | 0,1 | 25,4 | T005 44 498 99 |

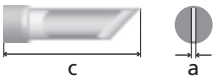
| Type | Ø a mm | c mm | Order-no. |
|---|---|---|---|
| LT 1A | 0,5 | 13,0 | T005 44 489 99<br>T005 44 489 10<br>T005 44 489 11 |
| LT AS | 1,6 | 12,5 | T005 44 404 99<br>T005 44 404 10<br>T005 44 404 11 |
| LT CS | 3,2 | 12,5 | T005 44 411 99<br>T005 44 411 10 |
| LT 1SLX 30° | 0,4 | 22,0 | T005 44 426 99<br>T005 44 426 10 |
| LT 1X 30° | 0,4 | 13,0 | T005 44 425 99<br>T005 44 425 10 |

* none wettable

www.labem.pl

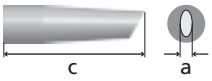
Continuation page 177, further soldering tips for WP 80, WSP 80, MPR 80, FE 75 and TCP irons

## Knife




| Type | Ø a mm | c mm | Order-no. |
|---|---|---|---|
| LT KN | 2,0 | 16,5 | T005 44 479 99<br>T005 44 479 10 |
| LT KNSL 45° | 2,0 | 16,5 | T005 44 519 99 |

## Sloped




| Type | a mm | c mm | Order-no. |
|---|---|---|---|
| LT 4 45° | 1,2 | 15,0 | T005 44 439 99<br>T005 44 439 10<br>T005 44 421 11 |
| LT F 45° | 1,2 | 12,5 | T005 44 408 99<br>T005 44 408 10<br>T005 44 408 11 |
| LT AA 60° | 1,6 | 12,5 | T005 44 487 99<br>T005 44 487 10 |
| LT BB 60° | 2,4 | 17,0 | T005 44 444 99<br>T005 44 444 10 |
| LT BB 45° | 2,4 | 17,0 | T005 44 484 99 |
| LT CC 60° | 3,2 | 17,0 | T005 44 445 99<br>T005 44 445 10 |
| LT CC 45° | 3,2 | 17,0 | T005 44 485 99 |

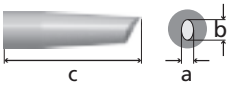
| Type | a mm | c mm | Order-no. |
|---|---|---|---|
| LT DD 45° | 4,0 | 20,0 | T005 44 478 99<br>T005 44 478 10 |
| LT DD 45° | 4,6 | 17,0 | T005 44 486 99<br>T005 44 486 10<br>T005 44 486 11 |
| LT 11CP 45° | 1,2 | 15,0 | T005 44 421 71 |
| LT 22CP 45° | 2,0 | 20,0 | T005 44 408 73 |
| LT 33CP 45° | 3,0 | 20,0 | T005 44 408 77 |
| LT 44CP 45° | 4,0 | 20,0 | T005 44 408 81 |

## Conical

| Type | Ø a mm | c mm | Order-no. |
|---|---|---|---|
| LT 1L | 0,2 | 25,4 | T005 44 423 99<br>T005 44 423 10<br>T005 44 423 11 |
| LT 1LNW* | 0,1 | 25,4 | T005 44 498 99 |
| LT S | 0,4 | 21,0 | T005 44 406 99<br>T005 44 406 10<br>T005 44 406 11 |

| Type | Ø a mm | c mm | Order-no. |
|---|---|---|---|
| LT T | 0,6 | 13,0 | T005 44 482 99<br>T005 44 482 10<br>T005 44 482 11 |
| LT O | 0,8 | 17,0 | T005 44 481 99<br>T005 44 515 10 |
| LT 1LX 35° | 0,2 | 25,4 | T005 44 424 99<br>T005 44 424 10<br>T005 44 424 11 |

## Gull Wing




| Type | Ø a mm | b mm | c mm | Order-no. |
|---|---|---|---|---|
| LT GW1 | 2,3 | 3,2 | 17,8 | T005 44 410 99<br>T005 44 410 10<br>T005 44 410 11 |
| LT GW2 | 3,5 | 4,8 | 17,8 | T005 44 511 99<br>T005 44 511 10 |

- T005XXXXX99 = 1 Piece
- T005XXXXX10 = 10 Pieces
- T005XXXXX11 = 100 Pieces

* none wettable

www.labem.pl

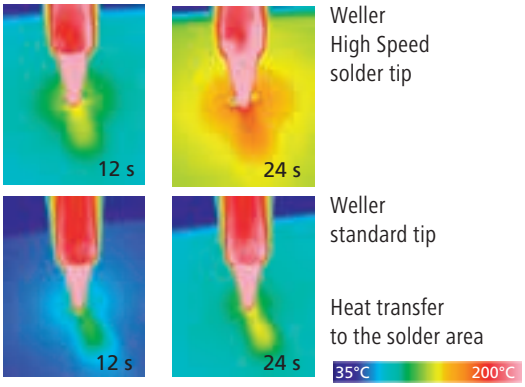
Continuation page 177/178, further soldering tips for WP 80, WSP 80, MPR 80, FE 75 and TCP irons

High Speed

HS

## High Speed heat transfer

High Speed soldering tips provide enhanced heat transfer to the solder area.




High Speed

HS

| LT | Ø a mm | b mm | c mm | Order-no. |
|---|---|---|---|---|
| LT 1 HS | 0,25 | | 13,0 | T005 44 520 99<br>T005 44 520 10<br>T005 44 520 11 |
| LT 1S HS | 0,2 | | 15,0 | T005 44 521 99<br>T005 44 521 10<br>T005 44 52 111 |
| LT AS HS | 1,6 | | 12,5 | T005 44 522 99<br>T005 44 522 10<br>T005 44 522 11 |
| LT S HS | 0,4 | | 21,0 | T005 44 523 99<br>T005 44 523 10<br>T005 44 523 11 |
| LT F HS 45° | 1,2 | | 12,5 | T005 44 524 99<br>T005 44 524 10<br>T005 44 524 11 |
| LT K HS | 1,2 | 0,4 | 20,0 | T005 44 525 99<br>T005 44 525 10<br>T005 44 525 11 |
| LT HX HS 30° | 0,8 | 0,4 | 17,5 | T005 44 526 99<br>T005 44 526 10<br>T005 44 526 11 |
| LT 4 HS 45° | 1,2 | | 15,0 | T005 44 527 99<br>T005 44 527 10<br>T005 44 527 11 |
| LT 1L HS | 0,2 | | 25,4 | T005 44 528 99<br>T005 44 528 10<br>T005 44 528 11 |
| LT 1LX HS 35° | 0,2 | | 25,4 | T005 44 529 99<br>T005 44 529 10<br>T005 44 529 11 |
| LT 1X HS 30° | 0,4 | 13,0 | | T005 44 530 99<br>T005 44 530 10 |

| Type | Ø a mm | b mm | c mm | Order-no. |
|---|---|---|---|---|
| LT 1SLX HS 30° | 0,4 | | 22,0 | T005 44 531 99<br>T005 44 531 10 |
| LT AX HS 30° | 1,6 | 0,8 | 14,1 | T005 44 532 99<br>T005 44 532 10 |
| LT 4X HS 30° | 1,2 | 0,4 | 17,2 | T005 44 533 99<br>T005 44 533 10 |
| LT O HS | 0,8 | | 17,0 | T005 44 534 99<br>T005 44 534 10 |
| LT T HS | 0,6 | | 13,0 | T005 44 535 99<br>T005 44 535 11 |
| LT 1SA HS | 0,5 | | 15,0 | T005 44 536 99 |
| LT 1A HS | 0,5 | | 14,0 | T005 44 537 99<br>T005 44 537 10<br>T005 44 537 11 |
| LT O HS | 1,4 | | 17,0 | T005 44 538 99 |
| LT ASL HS | 1,6 | 0,45 | 12,5 | T005 44 539 99<br>T005 44 539 11 |
| LT HSL HS | 0,8 | 0,4 | 12,5 | T005 44 540 99<br>T005 44 540 11 |

Accessories

| Type | a mm | c mm | Order-no. |
|---|---|---|---|
| Measuring tip MLR 80/ WSP 80 | 0,5 | 13,0 | T005 44 416 99 |
| Screw M4 external thread | 8,0 | | T005 44 449 99 |
| ET-LT Adapter | | | T005 87 207 81 |

- T005XXXXX99 = 1 Piece
- T005XXXXX10 = 10 Pieces
- T005XXXXX11 = 100 Pieces

* none wettable

www.labem.pl

## MT-LT Adapter

**All TCP, LR 21 soldering irons are delivered with adapter.**

| Order-no. | Description | |
|---|---|---|
| T005 44 121 99 | MT-LT Adapter for use with<br>LT soldering tip series (see page 87) | |
| T005 87 207 95 | Barrel for MT-LT Adapter | |

**Caution:** **Not qualified for lead free solder bath or other electronic solder.**

**Soldering tips for high melting solder for WP 80, WSP 80, MPR 80 and FE 75**

| Order-no. | Model | Description | Width A | Thickness B | Length L | |
|---|---|---|---|---|---|---|
| T005 44 430 99<br>T005 44 430 10 | **LT H HPB** | Chisel tip, (1 piece)<br>(10 pieces) | 0,8 mm | 0,4 mm | 13,5 mm | |
| T005 44 431 99<br>T005 44 431 10 | **LT A HPB** | Chisel tip, (1 piece)<br>(10 pieces) | 1,6 mm | 0,7 mm | 13,5 mm | |
| T005 44 432 99<br>T005 44 432 10 | **LT B HPB** | Chisel tip, (1 piece)<br>(10 pieces) | 2,4 mm | 0,8 mm | 13,5 mm | |
| T005 44 483 99 | **LT D HPB** | Chisel tip, (1 piece) | 4,6 mm | 0,8 mm | 13,5 mm | |

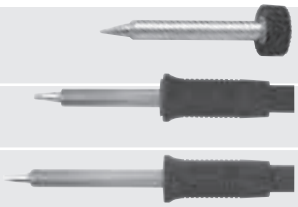
* for HPB solder = solder with high consumption of lead

www.labem.pl

- For quick change of hot soldering tips for soldering irons WP 80 / WSP 80.
- If not in use place soldering iron with barrel in the safety rest

## Barrel

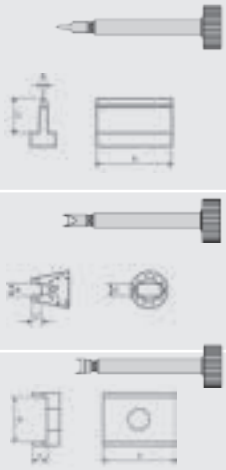
| Order-no. | Description |
|---|---|
| T005 87 447 10 | Barrel for WSP 80 spare part |
| T005 87 448 45 | Barrel short (40 mm) for WP 80, spare part, (standard for WP 80) |
| T005 87 448 46 | Barrel long (55 mm) for WP 80, spare part |



- For WSP 80, WSP 80IG and WP 80, WP 120, WP 120 IG, WXP 120, barrel and screw M4 has to be ordered separately.

## SMD Soldering Tip Series

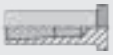
| Order-no. | Model | Description | Width A | Thickness B | Length L |
|---|---|---|---|---|---|
| T005 44 501 99 | **SMT01** | for PAD-Cleaning | 10,4 mm | 0,6 mm | 7,1 mm |
| T005 44 429 99 | **SMT** | for PAD-Cleaning | 10,5 mm | 0,6 mm | 7,5 mm |
| T005 44 502 99 | **SMT02** | for PAD-Cleaning | 16,8 mm | 0,6 mm | 7,1 mm |
| T005 44 503 99 | **SMT03** | for PAD-Cleaning | 20,8 mm | 0,6 mm | 7,1 mm |
| T005 44 467 89 | **SMT** | for PAD-Cleaning | 35,0 mm | 3,0 mm | 4,0 mm |
| T005 44 504 99 | **SMT04** | for Chip | 1,8 mm | 3,4 mm | 1,8 mm |
| T005 44 505 99 | **SMT05** | for Chip | 1,5 mm | 2,3 mm | 1,8 mm |
| T005 44 506 99 | **SMT06** | for Chip | 2,5 mm | 1,7 mm | 1,4 mm |
| T005 44 507 99 | **SMT07** | for Chip | 2,3 mm | 4,5 mm | 1,8 mm |
| T005 44 508 99 | **SMT08** | for DIP | 4,6 mm | 5,1 mm | 2,3 mm |
| T005 44 509 99 | **SMT09** | for DIP | 10,4 mm | 5,1 mm | 2,3 mm |
| T005 44 510 99 | **SMT10** | for DIP | 11,5 mm | 6,9 mm | 2,3 mm |



www.labem.pl

## SMT Adapter + Tips
## for LR 21, WP 80, WSP 80, WSP 80FE, WSP 80IG and MPR 80

| Order-no. | Model | Description |
|---|---|---|
| T005 44 417 99 | **SMT** | SMT Adapter for WSP 80 |
| SMTA | **SMTA** | SMT Adapter for LR 21 |
| SMT0504A | **SMT0504A** | A/1, for components 1,0 x 1,2 mm, 12 x 1,0 mm, 1,2 x 1,2 mm, 1,6 x 0,8 mm |
| SMT1206D | **SMT1206D** | D/1, for components 3,2 x 1,6 mm, 3,2 x 2,5 mm |
| SMT8K | **SMT8K** | K/2, for components 5,0 x 4,0 mm |



■ For use with soldering robot application with heating element HER 80

## LT Soldering Tips with twist lock

| Order-no. | Model | Description | Width A | Thickness B | Length L |
|---|---|---|---|---|---|
| T005 44 441 99<br>T005 44 441 10 | **LTR A** | Chisel tip (1 piece)<br>(10 pieces) | 1,6 mm | 0,8 mm | 17,0 mm |
| T005 44 422 99 | **LTR B** | Chisel tip 1,5 mm<br>wettable (1 piece) | 2,4 mm | 0,8 mm | 17,0 mm |
| T005 44 422 10 | | (10 pieces) | | | |
| T005 44 422 71 | | (1 piece) none wettable | 2,4 mm | 0,8 mm | 17,0 mm |
| T005 44 433 99 | **LTR C** | Chisel tip (1 piece) | 3,2 mm | 0,8 mm | 17,0 mm |
| T005 44 433 10 | | (10 pieces) | 3,2 mm | 0,8 mm | 17,0 mm |

Special tips on request

www.labem.pl

# LHT Soldering Tip Series

## Soldering Tips for Soldering irons WSP 150

| Order-no. | Model | Description | Width A | Thickness B | |
|---|---|---|---|---|---|
| T005 44 455 99 | **LHT C** | Chisel tip | 3,2 mm | 1,2 mm | |
| T005 44 452 99 | **LHT D** | Chisel tip | 4,7 mm | 1,8 mm | |
| T005 44 451 99 | **LHT E** | Chisel tip | 6,7 mm | 1,8 mm | |
| T005 44 450 99 | **LHT F** | Chisel tip | 9,3 mm | 1,8 mm | |
| T005 44 513 99 | **LHT CX** | Chisel tip bent | 3,2 mm | 1,2 mm | |
| T005 44 462 99 | **LHT DX** | Chisel tip bent | 5,0 mm | 2,0 mm | |
| T005 44 461 99 | **LHT EX** | Chisel tip bent | 7,0 mm | 2,0 mm | |
| T005 44 460 99 | **LHT FX** | Chisel tip bent | 9,2 mm | 2,0 mm | |
| T005 44 456 99 | **LHT D 45°** | Sloped 45° for solar cell production | | 1,8 mm | |
| T005 44 454 99 | | LHT Screw in tip with outside thread M6 | | | |
| T005 44 453 99 | | LHT Measuring tip for thermoelement Ø 0,5 mm | | | |
| T005 87 447 95 | | Box nut WSP 150 | | | |

www.labem.pl

## ET Soldering Tip Series

## Soldering Tips for Soldering irons LR 21

| Order-no. | Model | Description | Width A | Thickness B |
|---|---|---|---|---|
| 4ETS | **ET S** | Longform Conical | Ø 0,4 mm | |
| 4ETO | **ET O** | Longform Conical | Ø 0,8 mm | |
| 4ETR | **ET R** | Chisel tip slim | 1,6 mm | 0,7 mm |
| 4ETH | **ET H** | Chisel tip | 0,8 mm | 0,4 mm |
| 4ETA | **ET A** | Chisel tip | 1,6 mm | 0,7 mm |
| 4ETB | **ET B** | Chisel tip | 2,4 mm | 0,8 mm |
| 4ETC | **ET C** | Chisel tip | 3,2 mm | 0,8 mm |
| 4ETD | **ET D** | Chisel tip | 4,6 mm | 0,8 mm |
| 4ETE | **ET E** | Chisel tip | 5,6 mm | 1,2 mm |
| 4ETK | **ET K** | Chisel tip long | 1,2 mm | 0,4 mm |
| 4ETL | **ET L** | Chisel tip long | 2,0 mm | 1,0 mm |
| 4ETM | **ET M** | Chisel tip long | 3,2 mm | 1,2 mm |
| 4ETF | **ET F** | Round tip sloped 45° | Ø 1,2 mm | |
| 4ETBB | **ET BB** | Round tip sloped 45° | Ø 2,4 mm | |
| 4ETCC | **ET CC** | Round tip sloped 45° | Ø 3,2 mm | |
| 4ETP | **ET P** | Round tip blunt | Ø 0,8 mm | |
| 4ETBS | **ET BS** | Round tip blunt | Ø 2,4 mm | |
| 4ETCS | **ET CS** | Round tip blunt | Ø 3,2 mm | |
| T005 41 039 99 | **ET SMD** | Chip soldering / desoldering tip, component size 2,5 mm x 1,5 mm | | |
| T005 41 040 99 | **ET SMD** | Chip soldering / desoldering tip, component size 3,8 mm x 1,5 mm | | |
| T005 41 045 99 | **ET GW** | Gullwing tip | | |
| T005 41 703 99 | | Screw in tip with M5 outside thread | | |
| T005 24 750 99 | | ET Measuring tip for thermoelement Ø 0,5 mm | | |
| T005 10 311 99 | | Barrel | | |

## ET-LT Adapter

**Soldering tips of the LT series are used with an adapter in the soldering iron LR 21.**

| Order-no. | Model | Description |
|---|---|---|
| T005 87 207 81 | | ET-LT Adaptor with barrel for use with LT series tips with LR 21 and FE 50 soldering irons |
| T005 87 207 94 | | Spare barrel for ET-LT Adapter |

- T005XXXXX99 = 1 Piece
- T005XXXXX10 = 10 Pieces
- T005XXXXX11 = 100 Pieces

www.labem.pl

# HT Soldering Tip Series

## Soldering Tips for Soldering irons LR 82 and FE 80

| Order-no. | Model | Description | Width A | Thickness B |
|---|---|---|---|---|
| T005 44 260 99 | **HT 1** | Chisel tip | 3,2 mm | 1,0 mm |
| T005 44 261 99 | **HT 2** | Chisel tip | 5,2 mm | 1,2 mm |
| T005 44 262 99 | **HT 3** | Chisel tip | 7,0 mm | 1,2 mm |
| T005 44 267 99 | **HT C** | Chisel tip long | 3,2 mm | 1,0 mm |
| T005 44 268 99 | **HT D** | Chisel tip long | 4,6 mm | 1,0 mm |
| T005 44 269 99 | **HT E** | Chisel tip long | 5,6 mm | 1,0 mm |
| T005 44 264 99 | **HT BS** | Round tip | Ø 2,4 mm | |
| T005 44 265 99 | **HT CS** | Round tip | Ø 3,2 mm | |
| T005 44 266 99 | **HT DS** | Round tip | Ø 5,0 mm | |
| T005 44 270 99 | | HT Screw in tip with outside thread M8nde | | |
| T005 44 263 99 | | HT Measuring tip for thermoelement Ø 0,5 mm | | |
| T005 26 202 99 | | Barrel | | |

# WTA Soldering Tip Series

## Tweezer Tips for WTA 50

| Order-no. | Model | Description | Width A | Thickness B |
|---|---|---|---|---|
| T005 44 145 99 | **WTA 1S** | Tip set bent 45° | 0,5 mm | 0,5 mm |
| T005 44 141 99 | **WTA 1** | Tip set bent 45° | 1,0 mm | 0,5 mm |
| T005 44 146 99 | **WTA 2** | Tip set bent 45° | 3,0 mm | 0,5 mm |
| T005 44 147 99 | **WTA 3** | Tip set bent 45° | 6,0 mm | 0,5 mm |
| T005 44 143 99 | **WTA 4** | Tip set bent 45° | 12,5 mm | 0,5 mm |
| T005 44 144 99 | **WTA 5** | Tip set bent 45° | 18,5 mm | 0,5 mm |
| T005 44 152 99 | **WTA 11** | Tip set for vertical use | 1,0 mm | 0,5 mm |
| T005 44 153 99 | **WTA 12** | Tip set for vertical use | 3,0 mm | 0,5 mm |
| T005 44 149 99 | | WT Measuring tip for thermoelement Ø 0,5 mm | | |

www.labem.pl

## PT Soldering Tip Series

## Soldering Tips for TCPS, TCP 12, TCP 24

| Order-no. | Model | Description | Width A | Dicke B |
|---|---|---|---|---|
| 4PTR7 | **PT R7** | Chisel tip slim 370°C | 1,6 mm | 0,7 mm |
| 4PTR8 | **PT R8** | Chisel tip slim 425°C | 1,6 mm | 0,7 mm |
| 4PTH6 | **PT H6** | Chisel tip 310°C | 0,8 mm | 0,4 mm |
| 4PTH7 | **PT H7** | Chisel tip 370°C | 0,8 mm | 0,4 mm |
| 4PTH8 | **PT H8** | Chisel tip 425°C | 0,8 mm | 0,4 mm |
| 4PTA6 | **PT A6** | Chisel tip 310°C | 1,6 mm | 0,7 mm |
| 4PTA7 | **PT A7** | Chisel tip 370°C | 1,6 mm | 0,7 mm |
| 4PTA8 | **PT A8** | Chisel tip 425°C | 1,6 mm | 0,7 mm |
| 4PTB6 | **PT B6** | Chisel tip 310°C | 2,4 mm | 0,8 mm |
| 4PTB7 | **PT B7** | Chisel tip 370°C | 2,4 mm | 0,8 mm |
| 4PTB8 | **PT B8** | Chisel tip 425°C | 2,4 mm | 0,8 mm |
| 4PTB9 | **PT B9** | Chisel tip 480°C | 2,4 mm | 0,8 mm |
| 4PTC7 | **PT C7** | Chisel tip 370°C | 3,2 mm | 0,8 mm |
| 4PTC8 | **PT C8** | Chisel tip 425°C | 3,2 mm | 0,8 mm |
| 4PTC9 | **PT C9** | Chisel tip 480°C | 3,2 mm | 0,8 mm |
| 4PTD7 | **PT D7** | Chisel tip 370°C | 4,6 mm | 0,8 mm |
| 4PTD8 | **PT D8** | Chisel tip 425°C | 4,6 mm | 0,8 mm |
| 4PTD9 | **PT D9** | Chisel tip 480°C | 4,6 mm | 0,8 mm |
| 4PTE8 | **PT E8** | Chisel tip 425°C | 5,6 mm | 1,2 mm |
| 4PTE9 | **PT E9** | Chisel tip 480°C | 5,6 mm | 1,2 mm |
| 4PTK6 | **PT K6** | Chisel tip long 310°C | 1,2 mm | 0,4 mm |
| 4PTK7 | **PT K7** | Chisel tip long 370°C | 1,2 mm | 0,4 mm |
| 4PTK8 | **PT K8** | Chisel tip long 425°C | 1,2 mm | 0,4 mm |
| 4PTL6 | **PT L6** | Chisel tip long 310°C | 2,0 mm | 1,0 mm |
| 4PTL7 | **PT L7** | Chisel tip long 370°C | 2,0 mm | 1,0 mm |
| 4PTL8 | **PT L8** | Chisel tip long 425°C | 2,0 mm | 1,0 mm |
| 4PTM7 | **PT M7** | Chisel tip long 370°C | 3,2 mm | 1,2 mm |
| 4PTM8 | **PT M8** | Chisel tip long 425°C | 3,2 mm | 1,2 mm |
| 4PTM9 | **PT M9** | Chisel tip long 480°C | 3,2 mm | 1,2 mm |
| T005 41 307 99 | **PT MX7** | Chisel tip bent, 1 side wettable 370°C | 3,2 mm | 1,2 mm |
| 4PTCS7 | **PT CS7** | Round tip 370°C | Ø 3,2 mm | |
| 4PTDS7 | **PT DS7** | Round tip 370°C | Ø 5,0 mm | |
| 4PTS7 | **PT S7** | Round tip long 370°C | Ø 0,4 mm | |
| 4PTS8 | **PT S8** | Round tip long 425°C | Ø 0,4 mm | |
| 4PTO6 | **PT O6** | Round tip long 310°C | Ø 0,8 mm | |
| 4PTO7 | **PT O7** | Round tip long 370°C | Ø 0,8 mm | |
| 4PTO8 | **PT O8** | Round tip long 425°C | Ø 0,8 mm | |

www.labem.pl

Continuation page 186, further soldering tips for TCPS, TCP 12, TCP 24

| Order-no. | Model | Description | Width A | Thickness B |
|---|---|---|---|---|
| 4PTF7 | **PT F7** | Round tip sloped 370°C | Ø 1,2 mm | |
| 4PTF8 | **PT F8** | Round tip sloped 425°C | Ø 1,2 mm | |
| 4PTAA7 | **PT AA7** | Round tip sloped 370°C | Ø 1,6 mm | |
| 4PTAA8 | **PT AA8** | Round tip sloped 425°C | Ø 1,6 mm | |
| 4PTAA9 | **PT AA9** | Round tip sloped 480°C | Ø 1,6 mm | |
| 4PTBB7 | **PT BB7** | Round tip sloped 370°C | Ø 2,4 mm | |
| 4PTBB8 | **PT BB8** | Round tip sloped 425°C | Ø 2,4 mm | |
| 4PTBB9 | **PT BB9** | Round tip sloped 480°C | Ø 2,4 mm | |
| 4PTCC7 | **PT CC7** | Round tip sloped 370°C | Ø 3,2 mm | |
| 4PTCC8 | **PT CC8** | Round tip sloped 425°C | Ø 3,2 mm | |
| 4PTCC9 | **PT CC9** | Round tip sloped 480°C | Ø 3,2 mm | |
| 4PTDD7 | **PT DD7** | Round tip sloped 370°C | Ø 5,0 mm | |
| 4PTDD8 | **PT DD8** | Round tip sloped 425°C | Ø 5,0 mm | |
| 4PTDD9 | **PT DD9** | Round tip sloped 480°C | Ø 5,0 mm | |

If other soldering tip dimensions are required, please use LT tips with the PT/LT adapter.

- Soldering tips of LT soldering tip series are used with an adapter in soldering iron TCPS, TCP 12 and TCP 24.
- All TCP and LR 21 soldering irons are delivered with the adapter.

## PT-LT Adapter for TCPS, TCP 12,TCP 24

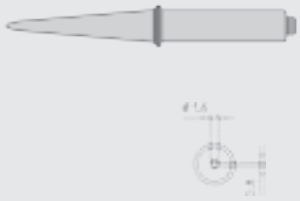
| Order-no. | Model | Description |
|---|---|---|
| T005 87 207 86 | **PT6-LT** | PT6-LT-adapter with barrel 310°C |
| T005 87 207 87 | **PT7-LT** | PT7-LT-adapter with barrel 370°C |
| T005 87 207 88 | **PT8-LT** | PT8-LT-adapter with barrel 425°C |
| T005 87 207 89 | **PT9-LT** | PT9-LT-adapter with barrel 480°C |
| T005 87 207 94 | | Spare barrel for PT/LT adapter |

www.labem.pl

## CT5 Soldering Tip Series

### Soldering Tips for W 61

| Order-no. | Model | Description | Width A |
|---|---|---|---|
| 4CT5A6 | **CT5 A6** | Chisel tip 310°C | 1,6 mm |
| 4CT5A7 | **CT5 A7** | Chisel tip 370°C | 1,6 mm |
| 4CT5A8 | **CT5 A8** | Chisel tip 425°C | 1,6 mm |
| 4CT5B7 | **CT5 B7** | Chisel tip 370°C | 2,4 mm |
| 4CT5B8 | **CT5 B8** | Chisel tip 425°C | 2,4 mm |
| 4CT5C6 | **CT5 C6** | Chisel tip 310°C | 3,2 mm |
| 4CT5C7 | **CT5 C7** | Chisel tip 370°C | 3,2 mm |
| 4CT5C8 | **CT5 C8** | Chisel tip 425°C | 3,2 mm |
| 4CT5D7 | **CT5 D7** | Chisel tip 370°C | 4,7 mm |
| 4CT5D8 | **CT5 D8** | Chisel tip 425°C | 4,7 mm |
| T005 42 107 99 | **CT5 AX7** | Chisel tip bent 370°C | 1,6 mm |
| T005 42 108 99 | **CT5 AX8** | Chisel tip bent 425°C | 1,6 mm |
| T005 42 117 99 | **CT5 BX7** | Chisel tip bent 370°C | 2,4 mm |
| T005 42 128 99 | **CT5 CX8** | Chisel tip bent 425°C | 3,2 mm |
| T005 42 138 99 | **CT5 DX8** | Chisel tip bent 425°C | 5,0 mm |



- T005XXXXX99 = 1 Piece
- T005XXXXX10 = 10 Pieces
- T005XXXXX11 = 100 Pieces

www.labem.pl

# CT6 Soldering Tip Series

## Soldering Tips for W 101

| Order-no. | Model | Description | Width A |
|---|---|---|---|
| 4CT6C7 | **CT6 C7** | Chisel tip 370°C | 3,2 mm |
| 4CT6C8 | **CT6 C8** | Chisel tip 425°C | 3,2 mm |
| 4CT6D7 | **CT6 D7** | Chisel tip 370°C | 5,0 mm |
| 4CT6D8 | **CT6 D8** | Chisel tip 425°C | 5,0 mm |
| 4CT6E7 | **CT6 E7** | Chisel tip 370°C | 7,0 mm |
| 4CT6E8 | **CT6 E8** | Chisel tip 425°C | 7,0 mm |
| T005 42 307 99 | **CT6 CX7** | Chisel tip bent 370°C | 3,2 mm |
| T005 42 318 99 | **CT6 DX8** | Chisel tip bent 425°C | 5,0 mm |

## Welding wedge

| Order-no. | Description |
|---|---|
| T005 11 767 99 | Welding wedge Teflon-coated,50 x 40 x 4 mm (260°C–295°C) for W 101SP with twist lock |
| T005 11 767 74 | Welding wedge PTFE-coated, 50 x 40 x 4 mm for W 201 (260°C – 295°C) |

## Adapter

**For use with LHT tips (page 183) and soldering iron W 101**

| Order-no. | Model | Description |
|---|---|---|
| T005 61 046 67 | **CT6-7** | Adapter for LHT tips, 370° |
| T005 61 046 68 | **CT6-8** | Adapter for LHT tips, 425° |
| T005 61 046 69 | **CT6-9** | Adapter for LHT tips, 480° |

www.labem.pl

## CT2 Soldering Tip Series

## Soldering Tips for W 201

| Order-no. | Model | Description | Width A |
|---|---|---|---|
| T005 42 407 99 | **CT2 E7** | Chisel tip 370°C | 7,0 mm |
| T005 42 408 99 | **CT2 E8** | Chisel tip 425°C | 7,0 mm |
| T005 42 417 99 | **CT2 F7** | Chisel tip 370°C | 10,0 mm |
| T005 42 418 99 | **CT2 F8** | Chisel tip 425°C | 10,0 mm |
| T005 42 428 99 | **CT2 G8** | Chisel tip 425°C | 11,0 mm |
| T005 42 507 99 | **CT2 EX7** | Chisel tip bent 370°C | 7,0 mm |
| T005 42 508 99 | **CT2 EX8** | Chisel tip bent 425°C | 7,0 mm |
| T005 42 517 99 | **CT2 FX7** | Chisel tip bent 370°C | 10,0 mm |
| T005 42 518 99 | **CT2 FX8** | Chisel tip bent 425°C | 10,0 mm |

- T005XXXXX99 = 1 Piece
- T005XXXXX10 = 10 Pieces
- T005XXXXX11 = 100 Pieces

www.labem.pl

# SPI Soldering Tip Series

## Soldering tips for soldering iron SPI 16

| Order-no. | Model | Description | Width A |
|---|---|---|---|
| 4SPI15 210 | **SPI15 210** | Needle tip | 0,4 mm |
| 4SPI15 213 | **SPI15 213** | Needle tip | 0,8 mm |
| 4SPI15 212 | **SPI15 212** | Chisel tip | 1,2 mm |
| 4SPI15 211 | **SPI15 211** | Chisel tip | 2,0 mm |

## Soldering tips for soldering iron SPI 27

| Order-no. | Model | Description | Width A |
|---|---|---|---|
| 4SPI26206 | **SPI26 206** | Chisel tip | 1,2 mm |
| 4SPI26200 | **SPI26 200** | Chisel tip | 2,0 mm |
| 4SPI26201 | **SPI26 201** | Chisel tip | 3,0 mm |

## Soldering tips for soldering iron SPI 41

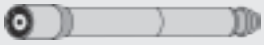
| Order-no. | Model | Description | Width A |
|---|---|---|---|
| 4SPI40224 | **SPI40 224** | Chisel tip | 2,0 mm |
| 4SPI40225 | **SPI40 225** | Chisel tip | 3,0 mm |
| 4SPI40220 | **SPI40 220** | Chisel tip | 5,0 mm |
| 4SPI40226 | **SPI40 226** | Chisel tip bent | 2,0 mm |

## Soldering tips for soldering iron SPI 81

| Order-no. | Model | Description | Width A |
|---|---|---|---|
| 4SPI80234 | **SPI80 234** | Chisel tip | 3,0 mm |
| 4SPI80235 | **SPI80 235** | Chisel tip | 5,0 mm |
| 4SPI80230 | **SPI80 230** | Chisel tip | 7,0 mm |
| 4SPI80231 | **SPI80 231** | Chisel tip | 9,5 mm |
| 4SPI80237 | **SPI80 237** | Chisel tip bent | 5,0 mm |
| 4SPI80232 | **SPI80 232** | Chisel tip bent | 7,0 mm |

www.labem.pl

## Soldering Tips for WP 60

| Order-no. | Model | Description | Width A | |
|---|---|---|---|---|
| T005 16 134 99<br>T005 16 443 99 | **60-01-05**<br>**60-01-01** | Needle tip<br>Needle tip | Ø 0,5 mm<br>Ø 1,0 mm | |
| T005 16 444 99<br>T005 16 446 99 | **60-01-02**<br>**60-01-04** | Chisel tip<br>Chisel tip | 2,4 mm<br>5,0 mm | |
| T005 16 445 99 | **60-01-03** | Round tip sloped 45° | Ø 2,0 mm | |
| T005 16 447 99 | **60-01-52** | Hot air nozzle | Ø 4,7 mm | |
| T005 16 135 99 | **60-01-06** | Knife 45° | 5,0 mm | |
| T005 16 448 99 | **60-07U** | Ejector unit | |  |
| T005 16 450 99 | **60-02** | Protective cap for WP 60 (spare part) | | |

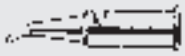
## Soldering Tips for Pyropen Jr.

| Order-no. | Model | Description | Width A | |
|---|---|---|---|---|
| T005 16 165 99 | **71-01-01** | Needle tip | Ø 1,0 mm | |
| T005 16 166 99<br>T005 16 161 99 | **71-01-02**<br>**71-01-04** | Chisel tip<br>Chisel tip | 2,0 mm<br>5,0 mm | |
| T005 16 167 99 | **71-01-03** | Round tip sloped 45° | Ø 2,0 mm | |
| T005 16 168 99<br>T005 16 169 99 | **71-01-50**<br>**71-01-52** | Hot air nozzle<br>Hot air nozzle | Ø 1,5 mm<br>Ø 4,7 mm | |
| T005 16 172 99 | **71-07U** | Ejector unit | | |

- T005XXXXX99 = 1 Piece
- T005XXXXX10 = 10 Pieces
- T005XXXXX11 = 100 Pieces

www.labem.pl

# Soldering Tips for Pyropen and Pyropen Piezo

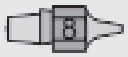
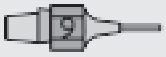
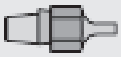
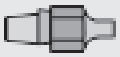
| Order-no. | Model | Description | Diameter Ø | Width A | |
|---|---|---|---|---|---|
| T005 16 120 99 | **70-01-01** | Needle tip | Ø 1,0 mm | | |
| T005 16 124 99 | **70-01-05** | Needle tip extra slim | Ø 0,5 mm | | |
| T005 16 129 99 | **70-01-10** | Needle tip bent 30° | Ø 1,0 mm | |  |
| T005 16 121 99 | **70-01-02** | Chisel tip | | 3,0 mm | |
| T005 16 132 99 | **70-01-13** | Chisel tip | | 5,0 mm | |
| T005 16 130 99 | **70-01-11** | Chisel tip | | 7,7 mm | |
| T005 16 122 99 | **70-01-03** | Round tip sloped | Ø 2,0 mm | | |
| T005 16 123 99 | **70-01-04** | Round tip sloped | Ø 3,0 mm | | |
| T005 16 125 99 | **70-01-06** | Round tip sloped, conical | Ø 2,0 mm | | |
| T005 16 127 99 | **70-01-08** | Round tip sloped 35° | Ø 2,0 mm | | |
| T005 16 140 99 | **70-01-50** | Hot air nozzle | Ø 1,7 mm | | |
| T005 16 141 99 | **70-01-51** | Hot air nozzle | Ø 3,3 mm | | |
| T005 16 142 99 | **70-01-52** | Hot air nozzle | Ø 4,9 mm | | |
| T005 16 143 99 | **70-01-53** | Hot air nozzle | Ø 7,0 mm | | |
| T005 16 151 99 | **70-07TU** | Ejector unit, not for Piezo | | | |
| T005 16 150 99 | **70-07SU** | Solder ejector, not for Piezo | | | |
| T005 16 159 99 | **70-01-55** | Reflector for heat shrinking | Ø 6,0 mm | 18,0 mm | |
| T005 16 158 99 | **70-01-54** | Reflector for heat shrinking | Ø 8,0 mm | 22,0 mm | |

www.labem.pl

## DX Desoldering Nozzle series

- The DX series tools feature a novel threadless desoldering nozzle fixture system whereby the nozzle is inserted into the head and locked into place by applying a 1/4 turn. This patented feature allows the desoldering nozzles to be quickly and easily exchanged and also improves the rate of thermal transfer from the desoldering head to the desoldering nozzle providing the tools with a faster heat up time and recovery rate. Additionally, because there are no threads in the head to block, maintenance and costs are reduced.

## Desoldering nozzles with threadless fixture system for DSX 80 and DXV 80

| Order-no. | Model | Description | Outer Ø | Inner Ø | Nozzle Length | |
|---|---|---|---|---|---|---|
| T005 13 140 00<br>T005 13 140 10 | **DX 110** | Nozzle (1 piece)<br>(10 pieces) | 1,9 mm | 0,7 mm | 25 mm | |
| T005 13 141 00<br>T005 13 141 10 | **DX 111** | Nozzle (1 piece)<br>(10 pieces) | 2,5 mm | 0,7 mm | 25 mm | |
| T005 13 142 00<br>T005 13 142 10 | **DX 112** | Nozzle (1 piece)<br>(10 pieces) | 2,3 mm | 1,0 mm | 25 mm | |
| T005 13 143 00<br>T005 13 143 10 | **DX 113** | Nozzle (1 piece)<br>(10 pieces) | 2,5 mm | 1,2 mm | 25 mm | |
| T005 13 150 00<br>T005 13 150 10 | **DX 113HM** | Nozzle (1 piece)<br>with improved thermal transfer<br>(10 pieces) | 2,5 mm | 1,2 mm | 25 mm | |
| T005 13 144 00<br>T005 13 144 10 | **DX 114** | Nozzle (1 piece)<br>(10 pieces) | 3,3 mm | 1,8 mm | 25 mm | |
| T005 13 145 00<br>T005 13 145 10 | **DX 115** | Nozzle (1 piece)<br>(10 pieces) | 1,9 mm | 0,7 mm | 29 mm | |
| T005 13 146 00<br>T005 13 146 10 | **DX 116** | Nozzle (1 piece)<br>(10 pieces) | 2,7 mm | 1,2 mm | 29 mm | |
| T005 13 147 00<br>T005 13 147 10 | **DX 117** | Nozzle (1 piece)<br>(10 pieces) | 2,9 mm | 1,5 mm | 25 mm | |
| T005 13 148 00<br>T005 13 148 10 | **DX 118** | Nozzle (1 piece)<br>(10 pieces) | 1,5 mm | 0,7 mm | 23 mm |  |
| T005 13 151 00<br>T005 13 151 10 | **DX 119** | Needle tiplet (1 piece) with unwettable stainless steel tube for removal of solder bridges in connection with hot air pencil<br>(10 pieces) | 1,1 mm | 0,7 mm | 33 mm |  |
| T005 13 152 00<br>T005 13 152 10 | **DX 120** | Nozzle (1 piece) without inside tube for cleaning SMD pads.<br>(10 pieces) | 2,5 mm | 1,1 mm | 22 mm |  |
| T005 13 153 99 | | Measuring nozzle | 3,3 mm | 0,55 mm | 21,5 mm |  |
| T005 87 067 94 | | Conus insert cleaning tool | | | | |
| T005 13 790 99 | | Nozzle -Set DX 110 - DX 115 | | | | |

www.labem.pl

# DS Desoldering nozzles

## Desoldering nozzles with thread for DS 22, DS 80 and DSV 80

| Order-no. | Model | Description | Outer Ø | Inner Ø | Nozzle Length | |
|---|---|---|---|---|---|---|
| T005 13 510 99* | **DS 110** | Nozzle | 1,9 mm | 0,7 mm | 18 mm | |
| T005 13 532 99* | **DS 110HM** | Nozzle<br>with improved heat transfer | 1,9 mm | 0,7 mm | 18 mm | |
| T005 13 511 99* | **DS 111** | Nozzle | 2,5 mm | 0,7 mm | 18 mm | |
| T005 13 512 99* | **DS 112** | Nozzle | 2,3 mm | 1,0 mm | 18 mm | |
| T005 13 533 99* | **DS 112HM** | Nozzle<br>with improved heat transfer | 1,9 mm | 0,9 mm | 18 mm | |
| T005 13 513 99* | **DS 113** | Nozzle | 2,5 mm | 1,2 mm | 18 mm | |
| T005 13 530 99* | **DS 113HM** | Nozzle<br>with improved heat transfer | 2,5 mm | 1,2 mm | 18 mm | |
| T005 13 514 99* | **DS 114** | Nozzle | 3,3 mm | 1,8 mm | 18 mm | |
| T005 13 515 99* | **DS 115** | Nozzle | 1,9 mm | 0,7 mm | 24,5 mm | |
| T005 13 516 99* | **DS 116** | Nozzle | 2,7 mm | 1,2 mm | 24,5 mm | |
| T005 13 550 99* | **DS 117** | Nozzle | 2,9 mm | 1,5 mm | 18 mm | |
| T005 13 551 99* | **DS 118** | Nozzle | 1,5 mm | 0,7 mm | 18 mm | |
| T005 13 527 99* | **DS 119** | Needle tiplet with unwettable stainless steel tube for removal of solder bridges in connection with hot air pencil | 1,9 mm | 0,7 mm | 26 mm | |
| T005 13 552 99* | **DS 120** | Nozzle without inside tube, for cleaning SMD pads | 2,5 mm | 1,1 mm | 15,5 mm | |
| T005 24 749 99* | | Measuring nozzle | 3,3 mm | 0,55 mm | 18 mm | |
| T005 13 770 99* | | Nozzle-Set DS 110 - DS 115 | | | | |

*Discontinuation

www.labem.pl

## Cleaning set for DS + DX nozzles

| Order-no. | Description |
|---|---|
| T005 13 500 99 | **Cleaning set complete**<br>for cleaning desoldering nozzles and for nozzle exchange |
| **consists of:**<br>T005 87 488 61<br>T005 13 501 99 | <br>Handle<br>Replacement needle set 0,6 mm / 0,9 mm / 1,4 mm / 1,9 mm |
| **consists of:**<br>T005 13 502 99<br>T005 13 503 99 | <br>Replacement needle set je 1 x 1,9 mm,3 x 0,9 mm<br>Replacement needle set ,je 1 x 1,9 mm,3 x 0,5 mm |
| **Cone Cleaner**<br>T005 87 067 94 | <br>Cone insert – Cleaning tool |

| Order-no. | Description |
|---|---|
| T005 87 658 01 | PDN **Pliers for changing nozzles** |

- For DX, XDS and XDSL nozzles
- Simple, safe and fast change of Weller desoldering nozzles.
- Especially designed grip for changing the nozzle without damaging the soldering tool.
- Ergonomic design for easy handling.
- ESD safe soft grip. For all ESD work places.
- Save and easy embracement for professional desoldering nozzle change.
  fachgerechten Wechsel der Entlötdüse
- Highest Weller product quality for long lifetime. Made in Germany.
- Fast cleaning process saves maintenance costs.

www.labem.pl

# XDS Desoldering nozzle series
# Desoldering nozzles for DSX 120, WXDP 120, WXDV 120

| Order-no. | Model | Description | Inner Ø | Outer Ø | Nozzle Length |
|---|---|---|---|---|---|
| T005 13 250 99<br>T005 13 250 10 | **XDS 1** | Nozzle (1 piece)<br>(10 pieces) | 1,4 mm | 2,5 mm | 10,5 mm |
| T005 13 251 99<br>T005 13 251 10 | **XDS 2** | Nozzle (1 piece)<br>(10 pieces) | 3,0 mm | 5,3 mm | 10,5 mm |
| T005 13 252 99<br>T005 13 252 10 | **XDS 3** | Nozzle (1 piece)<br>(10 pieces) | 1,0 mm | 2,3 mm | 10,5 mm |
| T005 13 253 99<br>T005 13 253 10 | **XDS 4** | Nozzle (1 piece)<br>(10 pieces) | 1,2 mm | 2,5 mm | 10,5 mm |
| T005 13 254 99<br>T005 13 254 10 | **XDS 5** | Nozzle (1 piece)<br>(10 pieces) | 1,8 mm | 3,3 mm | 10,5 mm |
| T005 13 255 99<br>T005 13 255 10 | **XDS 6** | Nozzle (1 piece)<br>(10 pieces) | 0,7 mm | 1,9 mm | 16,5 mm |
| T005 13 256 99<br>T005 13 256 10 | **XDS 7** | Nozzle (1 piece)<br>(10 pieces) | 1,2 mm | 2,7 mm | 16,5 mm |
| T005 13 257 99<br>T005 13 257 10 | **XDS 8** | Nozzle (1 piece)<br>(10 pieces) | 1,5 mm | 2,9 mm | 10,5 mm |
| T005 13 258 99 | **XDS 9** | Measuring tip (1 piece) | | | |
| T005 13 259 99<br>T005 13 259 10 | **XDSL 1** | Nozzle (1 Stück)<br>(10 Stück) | 1,4 mm | 2,5 mm | 10,5 mm |
| T005 13 260 99<br>T005 13 260 10 | **XDSL 2** | Nozzle (1 piece)<br>(10 piece) | 3,0 mm | 5,3 mm | 10,5 mm |
| T005 13 261 99<br>T005 13 261 10 | **XDSL 3** | Nozzle (1 Stück)<br>(10 Stück) | 1,0 mm | 2,3 mm | 10,5 mm |
| T005 13 262 99<br>T005 13 262 10 | **XDSL 4** | Nozzle (1 piece)<br>(10 Stück) | 1,2 mm | 2,5 mm | 10,5 mm |
| T005 13 263 99<br>T005 13 263 10 | **XDSL 5** | Nozzle (1 piece)<br>(10 Stück) | 1,8 mm | 3,3 mm | 10,5 mm |
| T005 13 264 99<br>T005 13 264 10 | **XDSL 6** | Nozzle (1 piece)<br>(10 piece) | 0,7 mm | 1,9 mm | 16,5 mm |
| T005 13 265 99<br>T005 13 265 10 | **XDSL 7** | Nozzle (1 Stück)<br>(10 piece) | 1,2 mm | 2,7 mm | 16,5 mm |
| T005 13 266 99<br>T005 13 266 10 | **XDSL 8** | Nozzle (1 piece)<br>(10 piece) | 1,5mm | 2,9 mm | 10,5 mm |

## Maintenance tool for XDS Nozzles

- T005XXXXX99 = 1 Piece
- T005XXXXX10 = 10 Pieces

| Order-no. | Description |
|---|---|
| T005 87 657 73 | **Cleaning Set complete** |
| T005 87 657 72 | Cone Cleaner |

www.labem.pl

## Hot air nozzles for HAP 1, HAP 200 and WXHAP 200

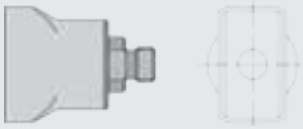
| Order-no. | Model | Description | Width A | Thickness B |
|---|---|---|---|---|
| T005 87 617 28 | | Adapter M6 for HAP 200 | | |
| T005 87 277 74 | **F02** | Flat nozzle | 8,0 mm | 1,5 mm |
| T005 87 277 73 | **F04** | Flat nozzle | 10,5 mm | 1,5 mm |
| T005 87 277 72 | **F06** | Flat nozzle | 12,0 mm | 1,5 mm |

## Hot air nozzles for HAP 1, HAP 200 and WXHAP 200

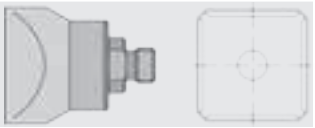
| Order-no. | Model | Description | Diameter D | Distance C | Length C |
|---|---|---|---|---|---|
| T005 87 278 23 | **R02** | Round nozzle | Ø 0,8 mm | | |
| T005 87 278 21 | **R04** | Round nozzle | Ø 1,2 mm | | |
| T005 87 278 22 | **R06** | Round nozzle | Ø 3,0 mm | | |
| T005 87 277 87 | **R10** | Round nozzle long | Ø 2,0 mm | | 50 mm |
| T005 87 277 86 | **R08** | Round nozzle long bent | Ø 2,0 mm | | 50 mm |
| T005 87 277 76 | **FD2** | Dual nozzle | Ø 1,5 mm | 8 mm | |
| T005 87 277 75 | **FD4** | Dual nozzle | Ø 1,5 mm | 10 mm | |

www.labem.pl

## Hot air nozzles for HAP 1, HAP 200 and WXHAP 200 2 sides heated (Type D, Length X =heated side)

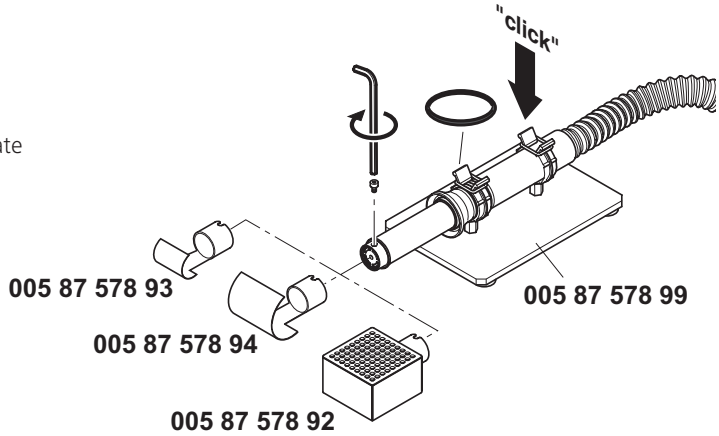
| Order-no. | Model | Description | Length X | Width Y | |
|---|---|---|---|---|---|
| T005 87 277 79 | **D04** | Hot air nozzle, 2 sides heated with pre-heating plate | 10,5 mm | 10,5 mm | |
| T005 87 277 82 | **D06** | Hot air nozzle, 2 sides heated with pre-heating plate | 13,0 mm | 10,0 mm | |
| T005 87 277 81 | **D08** | Hot air nozzle, 2 sides heated with pre-heating plate | 15,0 mm | 10,0 mm | |
| T005 87 277 84 | **D10** | Hot air nozzle, 2 sides heated with pre-heating plate | 18,0 mm | 10,0 mm |  |

## Hot air nozzles for HAP 1, HAP 200 and WXHAP 200 4 sides heated (Type Q)

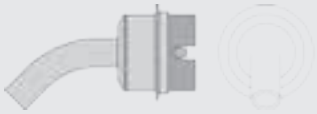
| Order-no. | Model | Description | Length X | Width Y | |
|---|---|---|---|---|---|
| T005 87 277 77 | **Q02** | Hot air nozzle, 4 sides heated | 6,0 mm | 6,5 mm | |
| T005 87 277 78 | **Q04** | Hot air nozzle, 4 sides heated | 6,0 mm | 9,0 mm | |
| T005 87 277 80 | **Q06** | Hot air nozzle, 4 sides heated with pre-heating plate | 15,0 mm | 10,0 mm | |
| T005 87 277 83 | **Q08** | Hot air nozzle, 4 sides heated with pre-heating plate | 12,5 mm | 15,0 mm | |
| T005 87 278 12 | **SK709** | Hot air nozzle, 4 sides heated with pre-heating plate | 12,0 mm | 12,0 mm | |
| T005 87 277 85 | **Q10** | Hot air nozzle, 4 sides heated with pre-heating plate | 18,0 mm | 18,0 mm |  |
| T005 87 278 08 | **R01** | Measuring nozzle for calibration | | | |

www.labem.pl

- The ND and NQ nozzles have an integrated pre-heating plate for pre-heating components by means of contact heat. Air outlet slots are located around the plate with a width of approx. 1 mm for the hot air.




## Hot air nozzles for HAP 3000 (WHA 3000P / V), HAP 2 (WHA 2000) and HAP 3 (WHA 700, WHA 300)

| Order-no. | Model | Description | Diameter Ø | |
|---|---|---|---|---|
| T005 87 368 81 | **NR04** | Round nozzle, without vacuum | Ø 2,5 mm | |
| T005 87 368 67 | **NR05** | Round nozzle, without vacuum | Ø 4,0 mm | |
| T005 87 368 70 | **NR10** | Round nozzle, without vacuum | Ø 7,0 mm | |
| T005 87 507 70 | **NRV07** | Hot air nozzle with vacuum for small components | Ø 7,0 mm | |
| T005 87 507 72 | **NRV10** | Hot air nozzle with vacuum for small components | Ø 10,0 mm | |
| T005 87 507 74 | **NRV12** | Hot air nozzle with vacuum for small components | Ø 12 mm | |
| T005 87 368 82 | **NR02** | Round nozzle, bent without vacuum | Ø 1,7 mm x 45° | |
| T005 87 507 65 | **NR06** | Round nozzle, bent without vacuum | Ø 6,0 mm x 45° |  |
| T005 87 368 83 | **DR05** | Dual nozzle round, without vacuum | 2 x Ø 2,5 mm | |

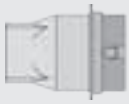
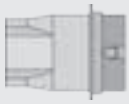
www.labem.pl

## 2 sides heated (Type ND, Width X = heated side)

| Order-no. | Model | Description | Length X | Width Y | |
|---|---|---|---|---|---|
| T005 87 368 43 | **ND05** | Hot air nozzle, 2 sides heated | 10,7 mm | 10,7 mm | |
| T005 87 368 42 | **ND 10** | Hot air nozzle, 2 sides heated | 14,0 mm | 10,0 mm | |
| T005 87 368 41 | **ND 15** | Hot air nozzle, 2 sides heated | 19,0 mm | 12,0 mm | |
| T005 87 368 40 | **ND 20** | Hot air nozzle, 2 sides heated | 21,5 mm | 14,8 mm | |
| T005 87 369 32 | **ND SK535/A** | Hot air nozzle, without edge for thin components | 8,5 mm | 20,0 mm | |
| T005 87 369 33 | **ND SK535/B** | Hot air nozzle, without edge for thin components | 10,5 mm | 20,0 mm | |
| T005 87 507 34 | **ND SK699** | Hot air nozzle, without edge for thin components | 12,5 mm | 20,0 mm | |
| T005 87 369 34 | **ND SK535/C** | Hot air nozzle, without edge for thin components | 14,0 mm | 20,0 mm | |

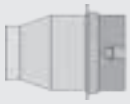
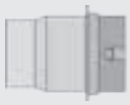
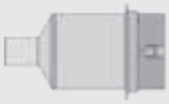
www.labem.pl

## Four sides heated (Type NQ)

| Order-no. | Model | Description | Length X | Width Y | |
|---|---|---|---|---|---|
| T005 87 368 39 | **NQ05** | Hot air nozzle, 4 sides heated | 10,7 mm | 10,7 mm | |
| T005 87 368 38 | **NQ15** | Hot air nozzle, 4 sides heated | 14,5 mm | 10,0 mm | |
| T005 87 368 18 | **NQ10** | Hot air nozzle, 4 sides heated | 14,8 mm | 14,8 mm | |
| T005 87 368 37 | **NQ20** | Hot air nozzle, 4 sides heated | 15,5 mm | 13,0 mm |  |
| T005 87 368 14 | **NQ25** | Hot air nozzle, 4 sides heated | 18,0 mm | 18,0 mm |  |
| T005 87 507 21 | **NQ30** | Hot air nozzle, 4 sides heated | 17,5 mm | 23,5 mm | |
| T005 87 368 07 | **NQ35** | Hot air nozzle, 4 sides heated | 20,5 mm | 20,5 mm | |
| T005 87 368 80 | **NQ** | Hot air nozzle, 4 sides heated | 24,0 mm | 12,0 mm | |
| T005 87 368 04 | **NQ40** | Hot air nozzle, 4 sides heated | 26,0 mm | 26,0 mm | |
| T005 87 368 33 | **NQ45** | Hot air nozzle, 4 sides heated | 31,3 mm | 31,3 mm | |
| T005 87 368 91 | **NQ50** | Hot air nozzle, 4 sides heated | 36,0 mm | 36,0 mm | |
| T005 87 368 90 | **NQ55** | Hot air nozzle, 4 sides heated | 43,0 mm | 43,0 mm | |

www.labem.pl

## 4 sides heated (Type NQ) continuation

| Order-no. | Model | Description | Length X | Width Y | |
|---|---|---|---|---|---|
| T005 87 507 41 | **NQT 10** | Hot air nozzle, 4 sides heated, without protruding edge for thin components | 14,8 mm | 14,8 mm |  |
| T005 87 507 42 | **NQT25** | Hot air nozzle, 4 sides heated, without protruding edge for thin components | 18,0 mm | 18,0 mm |  |
| T005 87 507 39 | **NQT** | Hot air nozzle, 4 sides heated, without protruding edge for thin components | 22,0 mm | 22,0 mm | |
| T005 87 368 75 | **NA 20** | Measuring nozzle for calibration | | |  |

Special tips on request

## Pre heating nozzle for HAP 3

| Order-no. | Description |
|---|---|
| T005 87 578 92 | Pre heating nozzle for HAP 3 |

## Multi rest

| Order-no. | Description |
|---|---|
| T005 15 048 99 | Multi rest for nozzle NR, ND NQ |

## Rubber insert for CSF heads (spare)

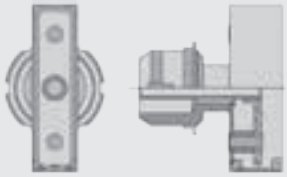
| Order-no. | Description | |
|---|---|---|
| T005 87 137 99<br>T005 87 137 98 | Ø 4,5 mm, 10 pieces<br>Ø 10,0 mm, 10 pieces | |

www.labem.pl

- The patented hot air nozzles of the WQB rework systems, coupled with digital control of the hot air temperature and its flow rate provide an even convective heating of the component. This in turn ensures reatability of the reflow process.

## Hot air nozzle for WQB 4000SOPS

| Order-no. | Nozzle housing inside | Nozzle housing outside |
|---|---|---|
| T005 87 479 47 | 7,6 x 7,99 mm | 8,6 x 8,9 mm |
| T005 87 479 43 | 6,5 x 6,5 mm | 7,5 x 7,5 mm |
| T005 87 479 45 | 8,5 x 8,5 mm | 9,5 x 9,5 mm |
| T005 87 479 61 | 8,5 x 10,6 mm | 9,5 x 11,6 mm |
| T005 87 549 67 | 10,0 x 10,0 mm | 11,0 x 11,0 mm |
| T005 87 478 48 | 12,0 x 12,0 mm | 13,0 x 13,0 mm |
| T005 87 479 04 | 13,5 x 13,5 mm | 14,3 x 14,3 mm |
| T005 87 479 35 | 15,5 x 15,5 mm | 16,5 x 16,5 mm |
| T005 87 478 93 | 15,0 x 11,0 mm | 16,0 x 12,0 mm |
| T005 87 548 36 | 18,5 x 10,0 mm | 19,5 x 11,0 mm |
| T005 87 479 77 | 15,5 x 23,5 mm | 16,5 x 24,5 mm |
| T005 87 478 33 | 18,0 x 18,0 mm | 20,0 x 20,0 mm |
| T005 87 547 70 | 21,0 x 21,0 mm | 23,0 x 23,0 mm |
| T005 87 548 20 | 22,0 x 22,0 mm | 24,0 x 24,0 mm |
| T005 87 477 64 | 25,0 x 25,0 mm | 27,0 x 27,0 mm |
| T005 87 479 93 | 27,0 x 23,0 mm | 29,0 x 25,0 mm |
| T005 87 478 50 | 27,0 x 27,0 mm | 29,0 x 29,0 mm |
| T005 87 479 27 | 29,0 x 29,0 mm | 31,0 x 31,0 mm |
| T005 87 479 99 | 28,0 x 32,0 mm | 30,0 x 34,0 mm |
| T005 87 479 06 | 33,0 x 33,0 mm | 35,0 x 35,0 mm |
| T005 87 548 87 | 35,0 x 35,0 mm | 37,0 x 37,0 mm |
| T005 87 477 53 | 37,0 x 37,0 mm | 39,0 x 39,0 mm |
| T005 87 478 71 | 39,5 x 39,5 mm | 41,5 x 41,5 mm |
| T005 87 478 74 | 42,0 x 42,0 mm | 44,0 x 44,0 mm |
| T005 87 549 03 | 45,0 x 11,0 mm | 47,0 x 13,0 mm |
| T005 87 477 63 | 46,0 x 46,0 mm | 48,0 x 48,0 mm |
| T005 87 479 16 | 47,0 x 47,0 mm | 49,0 x 49,0 mm |
| T005 87 479 41 | 49,0 x 49,0 mm | 51,0 x 51,0 mm |
| T005 87 479 85 | 57,0 x 18,5 mm | 59,0 x 20,0 mm |



Special sizes on request

www.labem.pl

www.labem.pl

“Power is nothing without control...“

**Flexible solutions**

- Wide accessory program - analog or digital power units, torque tester, tool connection cables as well as a large bit portfolio

www.labem.pl

**Operational safety and environment pollution**

- Noise level as of standard conversations (below emission level in hospitals during day duty)
- Ergonomic unit
- Light and compact
- ESD safe
- No emission
- No harmful carbon dust due to brushless motor

ESD

**Low running costs**

- Brushless, maintenance free motor
- Compatible units
- Analog and digital power units, clutch systems or electronic screwdrivers - all tools are compatible and for different applications

www.labem.pl

## WTS A

■ Digital Power Unit

## WTS D

■ Digital Power Unit

Photo similar

## WBTS12L

Photo similar

## WBTS35L

Photo similar

## WTBS35ECL

Photo similar

## WBTS12P

Photo similar

## WBTS35P

## Accessories

■ WAH12

■ WAH35

■ WBAL

■ WCAB5M

■ WCAB5MS

■ WTT5

# Technical data

WTS A

WTS D

| | | |
|---|---|---|
| Mains supply voltage | 100 - 240 VAC | |
| Speed control | from 60% to 100% of nominal speed | |
| Display | no | LED |
| Operation panel | Simply rotary dial adjustment | Text display |
| Torque range display | no | yes |
| Order-No. | T005 39 016 99 | T005 39 006 99 |

| | Photo similar WBTS12L | Photo similar WBTS35L | Photo similar WBTS35ECL | Photo similar WBTS12P | Photo similar WBTS35P |
|---|---|---|---|---|---|
| Rotational speed | 650 UpM | 800 UpM | 800 UpM | 650 UpM | 800 UpM |
| Start | Lever start | Lever start | Lever start | Push to start | Push to start |
| Torque range | 0,05 - 1,2Nm | 0,5 - 3,5 Nm | 0,5 - 3,5 Nm | 0,05 - 1,2Nm | 0,5 - 3,5Nm |
| For use with 1/4" bits | 1/4" | 1/4" | 1/4" | 1/4" | 1/4" |
| Brushless, maitenance free motor | yes | yes | yes | yes | yes |
| Right and left rotation | yes | yes | yes | yes | yes |
| Low noise | <55dBA | <55dBA | <55dBA | <55dBA | <55dBA |

www.labem.pl

## WTS A

- Simply rotary dial adjustment
- Soft start capability
  - ramp from 0 to 2 sec.
- ESD compliant housing

| Order-No. | Model | Description |
|---|---|---|
| T005 39 016 99 | **WTS A** | Analogue Power Unit |

## WTS D

- Easy operation with text display and simple programming, multiple languages
- Soft start capability - ramp from 0 to 2 sec.
- Suitable for complex tightening applications
- ESD compliant housing

| Order-No. | Model | Description |
|---|---|---|
| T005 39 006 99 | **WTS D** | Digital Power Unit, recommended ECL Electric Screwdriver |

www.labem.pl

## WBTS12L Electric Screwdriver

- Lever start
- Torque setting via clutch spring compression

Photo similar

| Order-No. | Model | Description |
|---|---|---|
| T005 39 091 99 | **WBTS12L** | Electric Screwdriver with lever start and 8-pin interface cable, connecting cable 2,5 m |

## WBTS35L Electric Screwdriver

- Lever start
- Torque setting via clutch spring compression

Photo similar

| Order-No. | Model | Description |
|---|---|---|
| T005 39 093 99 | **WBTS35L** | Electric Screwdriver with lever start and 8-pin interface cable, connecting cable 2,5 m |

## WBTS35ECL Electric Screwdriver

- Lever start
- Torque setting via digital controller

Photo similar

| Order-No. | Model | Description |
|---|---|---|
| T005 39 095 99 | **WBTS35ECL** | Electric Screwdriver with lever start and 8-pin interface cable, connecting cable 2,5 m |

## WBTS12P Electric Screwdriver

- Push to start
- Torque setting via clutch spring compression

Photo similar

| Order-No. | Model | Description |
|---|---|---|
| T005 39 092 99 | **WBTS12P** | Electric Screwdriver push to start and 8-pin interface cable, connecting cable 2,5 m |

## WBTS35P Electric Screwdriver

- Push to start
- Torque setting via clutch spring compression

Photo similar

| Order-No. | Model | Description |
|---|---|---|
| T005 39 094 99 | **WBTS35P** | Electric Screwdriver push to start and 8-pin interface cable, connecting cable 2,5 m |

www.labem.pl

## WAH12 Angle head

- Especially for tight work spaces

| Order-No. | Model | Description |
|---|---|---|
| T005 87 677 01 | **WAH12** | 90° Angle head for WBTS12L |

## WAH35 Angle head

- Especially for tight work spaces

| Order-No. | Model | Description |
|---|---|---|
| T005 87 677 02 | **WAH35** | 90° Angle head for WBTS35L |

## WBAL Balancer

- Working load limit from 0,4 to 1,0 kg

| Order-No. | Model | Description |
|---|---|---|
| T005 87 677 03 | **WBAL** | Balancer |

www.labem.pl

## WCAB5M Connecting cable

- Flexible connecting cable

| Order-No. | Model | Description |
|---|---|---|
| T005 87 677 04 | **WCAB5M** | Connecting cable 5 m, 8-pin |

## WCAB5MS Connecting cable

- Flexible connecting cable with twist

| Order-No. | Model | Description |
|---|---|---|
| T005 87 677 05 | **WCAB5MS** | Connecting cable with twist 5 m, 8-pin |

## WTT5 Torque tester

- Tester for screwdriver calibration
- 3 units of torque measurements
- Automatic shut down
- 2 Display mode selectable
- Battery powered or power supply

| Order-No. | Model | Description |
|---|---|---|
| T005 87 677 06 | **WTT5** | Torque tester from 0,2 until 5 Nm |

www.labem.pl

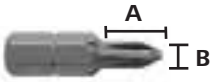
## Phillips®-Bits

■ 1/4" Hex Insert Bits - Limited Clearance

| Order-No. | Point Size | Overall Length Inch | Overall Length mm | Turned Length (A) Inch | Turned Length (A) mm | Turned OD (B) Inch | Turned OD (B) mm |
|---|---|---|---|---|---|---|---|
| 446-0X | 0 | 1 | 25 | 7/16 | 11 | 0,108 | 4,06 |
| 446-1X | 1 | 1 | 25 | 7/16 | 11 | 0,108 | 4,06 |
| 446-2X | 2 | 1 | 25 | 7/16 | 11 | 0,108 | 4,06 |

## Pozidriv® Bits

■ 1/4" Hex Insert Bits




| Order-No. | Point Size | Overall Length Inch | Overall Length mm | Turned Length (A) Inch | Turned Length (A) mm | Turned OD (B) Inch | Turned OD (B) mm |
|---|---|---|---|---|---|---|---|
| 440-1-PZDX | 1 | 1 | 25 | | | | |
| 440-2-PZDX | 2 | 1 | 25 | | | | |
| 440-215-PZDX | 2 | 11/2 | 38 | | | | |
| 440-22-PZDX | 2 | 2 | 51 | | | | |
| 440-3-PZDX | 3 | 1 | 25 | | | | |
| 440-4-PZDX | 4 | 11/4 | 32 | | | | |
| 446-1-PZDX * | 1 | 1 | 25 | 7/16 | 11 | 0,18 | 4,6 |
| 446-2-PZDX * | 2 | 1 | 25 | 7/16 | 11 | 0,18 | 4,6 |

www.labem.pl

## Slotted Bits

■ 1/4" Hex Insert Bits - Limited Clearance

| Order-No. | Screw Size | Length Inch | Length mm | Blade Thickness Inch | Blade Thickness mm | Blade Width Inch | Blade Width mm |
|---|---|---|---|---|---|---|---|
| 445-000X | 1F-2R | 1 | 25 | ,021 | ,53 | ,125 | 3,2 |
| 445-00X | 2F-3R | 1 | 25 | ,025 | ,64 | ,140 | 3,6 |
| 445-0X | 3F-4R | 1 | 25 | ,030 | ,76 | ,154 | 3,9 |
| 445-10X | 4F-5R | 1 | 25 | ,034 | ,86 | ,185 | 4,7 |
| 445-20X | 5F-6R | 1 | 25 | ,036 | ,91 | ,216 | 5,5 |
| 445-30X | 6F-7R | 1 | 25 | ,038 | ,97 | ,248 | 6,3 |

## Torx® Bits

■ 1/4" Hex Insert Bits

| Order-No. | Point Size | Overall Length Inch | Overall Length mm |
|---|---|---|---|
| 440-TX-05X | T-5 | 1 | 25 |
| 440-TX-06X | T-6 | 1 | 25 |
| 440-TX-07X | T-7 | 1 | 25 |
| 440-TX-08X | T-8 | 1 | 25 |
| 440-TX-09X | T-9 | 1 | 25 |
| 440-TX-10X | T-10 | 1 | 25 |
| 440-TX-15X | T-15 | 1 | 25 |
| 440-TX-20X | T-20 | 1 | 25 |
| 440-TX-25X | T-25 | 1 | 25 |
| 440-TX-27X | T-27 | 1 | 25 |
| 440-TX-30X | T-30 | 1 | 25 |
| 440-TX-40X | T-40 | 1 | 25 |

www.labem.pl

## Socket Head Bits

■ 1/4" Hex Insert Bits - Metric

| Order-No. | Point Size | Overall Length Inch | mm |
|---|---|---|---|
| 185-1.5MM | 1,5 mm | 1 | 25 |
| 185-2MM | 2,0 mm | 1 | 25 |
| 185-2.5MM | 2,5 mm | 1 | 25 |
| 185-3MM | 3,0 mm | 1 | 25 |
| 185-4MM | 4,0 mm | 1 5/16 | 33 |
| 185-5MM | 5,0 mm | 1 5/16 | 33 |
| 185-6MM | 6,0 mm | 1 5/16 | 33 |
| 185-7MM | 7,0 mm | 1 1/4 | 32 |
| 185-8MM | 8,0 mm | 1 1/4 | 32 |
| 185-9MM | 9,0 mm | 1 1/4 | 32 |
| 185-10MM | 10,0 mm | 1 1/4 | 32 |

## Bit Holder

■ Hex Drive for 1/4" Hex Inserts

| Order-No. | Size | Overall Length mm |
|---|---|---|
| M-490-2 | 2 | 51 Magnetic |
| M-490-NR | 2 31/32 | 75 Magnetic; No lock ring |
| M-490 | 2 31/32 | 75 Magnetic |
| M-497 | 3 3/32 | Magnetic; 3/8" (9,5 mm) reduced dia. |

www.labem.pl

# Slotted Drive

■ 1/4" Hex Power Drive

| Order-No. | Screw Size | Length | | Blade Thickness | | Blade Width / Body Ø | |
|---|---|---|---|---|---|---|---|
| | | Inch | mm | Inch | mm | Inch | mm |
| 320-000X | 1F-2R | 1 15/16 | 49 | ,022 | ,56 | ,122 | 3,10 |
| 326-000X | 1F-2R | 2 3/4 | 70 | ,022 | ,56 | ,122 | 3,10 |
| 320-00X | 2F-3R | 1 15/16 | 49 | ,026 | ,66 | ,134 | 3,40 |
| 326-00X | 2F-3R | 2 3/4 | 70 | ,026 | ,66 | ,134 | 3,40 |
| 320-0X | 3F-4R | 1 15/16 | 49 | ,030 | ,76 | ,151 | 3,84 |
| 326-0X | 3F-4R | 2 3/4 | 70 | ,030 | ,76 | ,151 | 3,84 |
| 320-1X | 4F 6R | 1 15/16 | 49 | ,034 | ,86 | ,187 | 4,75 |
| 326-1X | 4F-5R | 2 3/4 | 70 | ,034 | ,86 | ,187 | 4,75 |
| 320-20X | 5F-6R | 1 15/16 | 49 | ,036 | ,91 | ,215 | 5,46 |
| 326-20X | 5F-6R | 2 3/4 | 70 | ,036 | ,91 | ,215 | 5,46 |
| 320-2X | 5F-6R | 1 15/16 | 49 | ,036 | ,91 | ,250 | 6,35 |
| 326-2X | 5F-6R | 2 3/4 | 70 | ,036 | ,91 | ,250 | 6,35 |

www.labem.pl

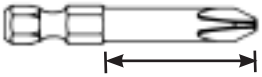
## Socket Head Drive

■ 1/4" Hex Power Drive - Metric

| Order-No. | Point Size | Overall Length Inch | Overall Length mm |
|---|---|---|---|
| AM-1.5MM | 1,5 mm | 1 15/16 | 49 |
| AM-2MM | 2,0 mm | 1 15/16 | 49 |
| AM-2.5MM | 2,5 mm | 1 15/16 | 49 |
| AM-3MM | 3,0 mm | 1 15/16 | 49 |
| AM-3MM-3 | 3,0 mm | 3 | 76 |
| AM-3MM-4 | 3,0 mm | 4 | 102 |
| AM-4MM | 4,0 mm | 1 15/16 | 49 |
| AM-5MM | 5,0 mm | 1 15/16 | 49 |
| AM-5MM-4 | 5,0 mm | 4 | 102 |
| AM-6MM | 6,0 mm | 1 15/16 | 49 |
| AM-6MM-4 | 6,0 mm | 4 | 102 |
| AM-7MM | 7,0 mm | 1 15/16 | 49 |
| AM-8MM | 8,0 mm | 1 15/16 | 49 |
| AM-10MM | 10,0 mm | 1 15/16 | 49 |

## Pozidriv®-Drive

■ 1/4" Hex Power Drive



| Order-No. | Size | Overall Length Inch | Overall Length mm | Body Ø Inch | Body Ø mm | Turned Length Inch | Turned Length mm |
|---|---|---|---|---|---|---|---|
| 491-PZDX | 1 | 1 15/10 | 49 | 3/10 | 4,6 | 1 1/4 | 32 |
| 491-A-PZDX | 1 | 2 3/4 | 70 | 3/16 | 48 | 2 | 51 |
| 492-PZDX | 2 | 1 15/16 | 49 | 1/4 | 6,4 | 1 1/4 | 32 |
| 492-A-PZDX | 2 | 2 3/4 | 70 | 1/4 | 6,4 | 2 | 51 |
| 493-PZDX | 3 | 1 15/16 | 49 | 5/16 | 7,9 | 1 | 25 |
| 493-A-PZDX | 3 | 2 3/4 | 70 | 5/16 | 7,9 | 1 3/4 | 44 |

www.labem.pl

# Torx® Drive

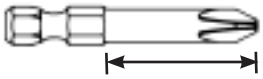
■ 1/4" Hex Power Drive

| Order-No. | Driver Size | Body Ø mm | Overall Length Inch | Overall Length mm |
|---|---|---|---|---|
| 49-TX-05 | T5 | 3,0 | 1 15/16 | 49 |
| 49-A-TX-05 | T-5 | 3,0 | 2 3/4 | 70 |
| 49-TX-06 | T-6 | 3,0 | 1 15/16 | 49 |
| 49-A-TX-06 | T-6 | 3,0 | 2 3/4 | 70 |
| 49-TX-07 | T-7 | 3,0 | 1 15/16 | 49 |
| 49-A-TX-07 | T-7 | 3,0 | 2 3/4 | 70 |
| 49-A-TX-08 | T-8 | 3,0 | 2 3/4 | 70 |
| 49-TX-09 | T-9 | 3,0 | 1 15/16 | 49 |
| 49-A-TX-09 | T-9 | 3,0 | 2 3/4 | 70 |
| 49-TX-10 | T-10 | 3,8 | 1 15/16 | 49 |
| 49-A-TX-10 | T-10 | 3,8 | 2 3/4 | 70 |
| 49-TX-15 | T-15 | 3,8 | 1 15/16 | 49 |
| 49-A-TX-15 | T-15 | 3,8 | 2 3/4 | 70 |
| 49-TX-20 | T-20 | 4,3 | 1 15/16 | 49 |
| 49-A-TX-20 | T-20 | 4,3 | 2 3/4 | 70 |
| 49-TX-25 | T 25 | 4,0 | 1 15/16 | 49 |
| 49-B-TX-25 | T-25 | 4,9 | 3 1/2 | 89 |
| 49-TX-27 | T-27 | 5,5 | 1 15/16 | 49 |
| 49-B-TX-27 | T 27 | 5,5 | 3 1/2 | 89 |
| 49-TX-30 | T-30 | 6,0 | 1 15/16 | 49 |
| 49-B-TX-30 | T-30 | 6,0 | 3 1/2 | 89 |
| 49-TX-40 | T 40 | 7,8 | 1 15/16 | 49 |
| 49-B-TX-40 | T-40 | 7,8 | 3 1/2 | 89 |

www.labem.pl

## Phillips® Drive

■ 1/4" Hex Power Drive



| Order-No. | Point Size | Overall Length | | Body Ø | | Turned Length | |
|---|---|---|---|---|---|---|---|
| | | Inch | mm | Inch | mm | Inch | mm |
| 4910X | 0 | 1 15/16 | 49 | 1/8 | 3,2 | 1 1/4 | 32 |
| 4910-AX | 0 | 2 3/4 | 70 | 1/8 | 3,2 | 2 | 51 |
| 491X | 1 | 1 15/16 | 49 | 3/16 | 4,8 | 1 1/4 | 32 |
| 491-AX | 1 | 2 3/4 | 70 | 3/16 | 4,8 | 2 | 51 |
| 492X | 2 | 1 15/16 | 49 | 1/4 | 6,4 | 1 1/4 | 32 |
| 492-AX | 2 | 2 3/4 | 70 | 1/4 | 6,4 | 2 | 51 |
| 493X | 3 | 1 15/16 | 49 | 5/16 | 7,9 | 1 | 25 |
| 493-AX | 3 | 2 3/4 | 70 | 5/16 | 7,9 | 1 3/4 | 44 |

www.labem.pl

380 350
°C
Weller
LÖTSTATION
SOLDERING STATION
STATION DE SOUDAGE
STAZIONE DI SALDATURA
ESTACIÓN DE SOLDAR

www.labem.pl

Less is more ...

TIMER
1 1 0 6
X X . X X
INCREASE
VACUUM
KDS 824A Deluxe Shot Meter
ON
MANUAL
OFF
TIMED
ACCESSORY REGULATOR
Weller
TIMED REGULATOR
ACCESSORY AIR
TIMED AIR

**Easy handling**

- reduced sources of errors due to manual control
- dispensing time via potentiometer
- protection against pollution
- vacuum technology for drop stop

**Easy equipment selection**

- the adequate dispenser for every application
- 2 versions of dispenser, 1 or 2 channel
- tremendous economy of consumables
- quick overview and selection of accessories

www.labem.pl

## KDS824A

- Shot time duration adjustable from 0,01 to 99,99 seconds
- Vacuum feature prevents dripping
- Electrically actuated foot pedal
- One channel without time controlled air

| Order No. | Model | Description |
|---|---|---|
| T0053163699 | **KDS824A** | Deluxe Shot Meter 230V/120V |

## KDS834A

- Hot time duration adjustable from 0,01 to 99,99 seconds
- Vacuum feature prevent dripping
- Electrically actuated foot pedal

| Order No. | Model | Description |
|---|---|---|
| T0053165699 | **KDS834A** | Economy Shot Meter 230V/120V |

## KDS806V

- Basic ON-OFF function
- Foot actuated for excellent ergonomics
- Works on compressed air input only, no electricity required
- 0-100 PSI regulator and gauge
- Vacuum feature prevents dripping

| Order No. | Model | Description |
|---|---|---|
| KDS806V | **KDS806V** | Foot Valve with Vacuum |

www.labem.pl

# Vacuum Pick-up wand

## KDS301

- Attaches to the air accessory port of the KDS824A
- A finger control on the wand allows an easily pick up of small components
- Comes with three sizes of conductive suction cups KDS260S (3,2 mm), KDS260M (6,3 mm), KDS260L (9,5 mm)

| Order No. | Model | Description |
|---|---|---|
| KDS301 | **KDS301** | Vacuum Pick-up Wand |

## Spare Parts Suction Cups KDS301

| Order No. | Model | Description |
|---|---|---|
| KDS260S | **KDS260S** | Suction Cup Small 3,2 mm for KDS301 |
| KDS260M | **KDS260M** | Suction Cup Medium 6,3 mm for KDS301 |
| KDS260L | **KDS260L** | Suction Cup Large 9,5 mm for KDS301 |

www.labem.pl

- Unique design works with all manufacturer´s syringes
- 360° swivel on adapter head for ease of motion
- Use with single component, two part, self-leveling and non-self-leveling materials

## Syringe Adapters

## Metal Adapters Assemblies (universal)

- Metal syringe adapter with 6" (2 m) air line and fitting
- Plugs directly into any shot meters
- Fittes all syringes usual in trade

| Order No. | Size | Airline Diameter Inch | mm | Pack quantity |
|---|---|---|---|---|
| KDS805S6 | 5CC | 3/32" | 2,4 | 1 |
| KDS810S6 | 10CC | 3/32" | 2,4 | 1 |

## Miscellaneous Accessories

| Order No. | Description |
|---|---|
| KDS816 | Syringe Holder Stand |

www.labem.pl

# Needles

## Stainless Steel Plastic Hub Dispensing Needles

| Order No. | Description | Gauge | Inside Ø Inch | Inside Ø mm | Outside Ø Inch | Outside Ø mm | Length Inch | Length mm | Colour | Pack quantity |
|---|---|---|---|---|---|---|---|---|---|---|
| KDS1412P | Threaded Hub Needle | 14 | 0,067 | 1,70 | 0,083 | 2,11 | 1/2 | 12,70 | dark green | 50 |
| KDS141P | Threaded Hub Needle | 14 | 0,067 | 1,70 | 0,083 | 2,11 | 1 | 25,40 | dark green | 50 |
| KDS1512P | Threaded Hub Needle | 15 | 0,060 | 1,52 | 0,072 | 1,83 | 1/2 | 12,70 | orange | 50 |
| KDS1612P | Threaded Hub Needle | 16 | 0,053 | 1,35 | 0,064 | 1,63 | 1/2 | 12,70 | purple | 50 |
| KDS161P | Threaded Hub Needle | 16 | 0,053 | 1,35 | 0,064 | 1,63 | 1 | 25,40 | purple | 50 |
| KDS16112P | Threaded Hub Needle | 16 | 0,053 | 1,35 | 0,064 | 1,63 | 1 1/2 | 38,10 | purple | 50 |
| KDS1712P | Threaded Hub Needle | 17 | 0,045 | 1,14 | 0,060 | 1,52 | 1/2 | 12,70 | white | 50 |
| KDS1812P | Threaded Hub Needle | 18 | 0,038 | 0,97 | 0,050 | 1,27 | 1/2 | 12,70 | pink | 50 |
| KDS181P | Threaded Hub Needle | 18 | 0,038 | 0,97 | 0,050 | 1,27 | 1 | 25,40 | pink | 50 |
| KDS1912P | Threaded Hub Needle | 19 | 0,032 | 0,81 | 0,042 | 1,07 | 1/2 | 12,70 | brown | 50 |
| KDS191P | Threaded Hub Needle | 19 | 0,032 | 0,81 | 0,042 | 1,07 | 1 | 25,40 | brown | 50 |
| KDS2012P | Threaded Hub Needle | 20 | 0,026 | 0,66 | 0,035 | 0,89 | 1/2 | 12,70 | yellow | 50 |
| KDS201P | Threaded Hub Needle | 20 | 0,026 | 0,66 | 0,035 | 0,89 | 1 | 25,40 | yellow | 50 |
| KDS2112P | Threaded Hub Needle | 21 | 0,023 | 0,58 | 0,032 | 0,89 | 1/2 | 12,70 | green | 50 |
| KDS2212P | Threaded Hub Needle | 22 | 0,019 | 0,48 | 0,028 | 0,71 | 1/2 | 12,70 | black | 50 |
| KDS221P | Threaded Hub Needle | 22 | 0,019 | 0,48 | 0,028 | 0,71 | 1 | 25,40 | black | 50 |
| KDS2312P | Threaded Hub Needle | 23 | 0,017 | 0,43 | 0,025 | 0,64 | 1/2 | 12,70 | light blue | 50 |
| KDS2512P | Threaded Hub Needle | 25 | 0,012 | 0,30 | 0,020 | 0,51 | 1/2 | 12,70 | blue | 50 |
| KDS3012P | Threaded Hub Needle | 30 | 0,006 | 0,15 | 0,012 | 0,30 | 1/2 | 12,70 | lavender | 50 |
| KDS660 | Pieces Needle Kit | | | | | | | | | 500 |
| KDSSAMPLEPACK | Needle Sample Pack | | | | | | | | | 5 |

Packages 1.000 pcs. on request

www.labem.pl

## Tapered Tip Needles

| Order No. | Description | Gauge | Inside Ø Inch | Inside Ø mm | Colour | Pack quantity |
|---|---|---|---|---|---|---|
| KDS14TNP | Taper Tip Needle | 14 | 0,063 | 1,60 | salmon | 50 |
| KDS16TNP | Taper Tip Needle | 16 | 0,048 | 1,22 | grey | 50 |
| KDS18TNP | Taper Tip Needle | 18 | 0,034 | 0,86 | green | 50 |
| KDS20TNP | Taper Tip Needle | 20 | 0,024 | 0,61 | pink | 50 |
| KDS22TNP | Taper Tip Needle | 22 | 0,017 | 0,43 | blue | 50 |

www.labem.pl

## Miscellaneous Accessories

| Order No. | Description | Pack quantity |
|---|---|---|
| KDS825 | Panel Mount Coupler | 1 |
| KDS900 | Male Connector large Barb | 5 |
| KDS901 | Female Connector for KDS301 | 1 |
| TAL332CH | Air-line for syring adapter | 1 |
| APC5132CM | Air-line for KDS301 | 1 |

# Contents


| | |
|---|---|
| **Erem Tools Precision Made in Switzerland** | **232 – 233** |

| | |
|---|---|
| **Tweezers** | **234 – 257** |
| Erem impresses | 236 – 237 |
| Special applications | 238 – 239 |
| Tweezers with pointed tips | 240 – 247 |
| Tweezers with flat round tips | 248 |
| Tweezers with ergonomic handles | 249 |
| SMD tweezers | 250 – 252 |
| Locking gripping tweezers | 253 |
| Wafer tweezers | 254 – 255 |
| Cutting tweezers | 255 |
| Stripping tweezers | 256 |
| Extraction tweezers | 257 |

| | |
|---|---|
| **Cutters** | **258 – 299** |
| Erem impresses | 262 – 263 |
| Choosing the right tool | 264 – 269 |
| Special applications | 270 – 271 |
| Series 600 Micro cutters | 272 – 275 |
| Series 2400 MagicSense cutters | 276 – 279 |
| Series 500 Medium cutters | 280 – 285 |
| Series 800 Maxi cutters | 286 – 289 |
| Tungsten-carbide cutters | 290 – 293 |
| Special applications | 294 – 295 |
| Pneumatic side cutters and tip cutters | 296 – 297 |
| Distance cutters | 298 – 299 |


www.labem.pl

| | |
|---|---|
| **Pliers** | **300 – 313** |
| Erem pliers | 302 – 307 |
| Stripping pliers | 308 – 309 |
| Forming pliers | 310 – 313 |

| | |
|---|---|
| **Special tools** | **314 – 323** |
| IC and SMD tools | 316 – 317 |
| Fibre optic tools | 318 – 319 |
| Vacuum micromanipulator | 320 – 323 |

| | |
|---|---|
| **Kits** | **324 – 332** |

## Precision Made in Switzerland

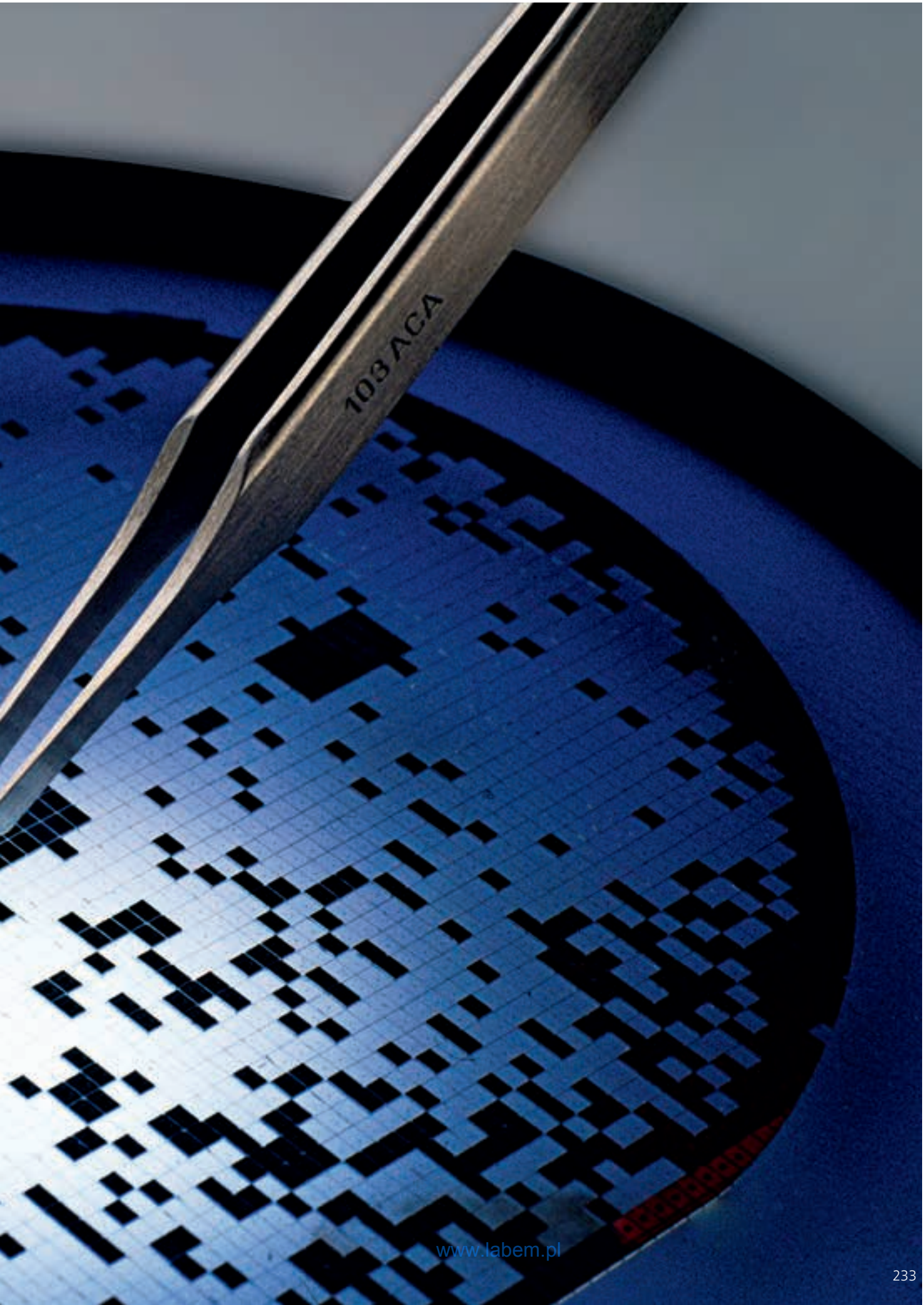
The quality and performance of our Erem precision tools are the product of more than 40 years of development and know-how. Made in Switzerland, Erem tools are the result of constant product development and innovation to meet customer demands and the requirements of modern manufacturing techniques.

Constantly changing market developments encourage Erem to design and manufacture forward looking tools for applications in the fields of electronics, aviation / aero-space, biology, medical accessories, the watch industry and telecommunications.

Erem tools enjoy the deserved high reputation of Swiss precision manufacture and our expertise, combined with ease of use and operator comfort make them an ideal partner in global manufacturing processes.

Since 1963 Erem®
The genuine Swiss pliers & tweezers

www.labem.pl


103 ACA

# Tweezers

## Erem manufacture a wide range of tweezers.

The combination of expert manufacture, symmetry and balance give Erem tweezers their renowned reputation for precision and the highest quality.

- Pointed tips for precision work
- Ergonomically shaped handles prevent hand fatigue
- Large selection of matching SMD tweezers and cutting tweezers for individual applications

www.labem.pl

EREM
SWISS
EREM
SWISS
2aSA-SL

# Erem impresses

Erem manufactures a wide range of precision tweezers. The range covers tweezers made from hardened steel, stainless steel, non-magnetic acid resistant stainless steel, titanium, brass, nickel silver and nickel-plated tweezers. Tweezer tips can be serrated or smooth metal, or made from synthetic ESD safe material to prevent damage to fragile surfaces.

In addition to SMD and stripping tweezers, the range includes special gripping tweezers, which enable particularly fine wires or insulated optical fibres to be held and manipulated.

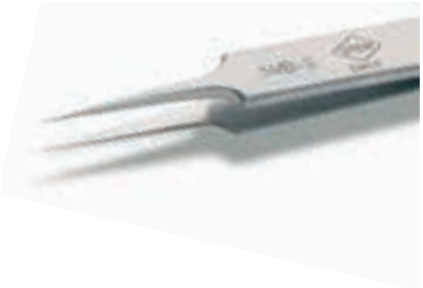
Erem can make to order tweezers for specialised applications. The combination of precision-manufactured, symmetrical tips and perfect balance make Erem tweezers outstanding high-precision tools of the highest quality.

## Material

The choice of which tweezers to use will depend as much on the material it is made from as the function it carries out:

**Hardened steel**

Tweezers made from hardened steel are typified by their particularly hard tips, which ensure great durability. The tweezers are magnetic and the material is not non-rusting.



**Stainless steel**

Tweezers made from stainless steel have robust tips and are non-rusting. The material is less hard than hardened steel.

Stainless-steel tweezers have the identification letter „S“ in their order numbers.

**Erem special stainless steel**

This alloy is non-magnetic. The tweezers are non-rusting, acid-proof and heat-resistant up to 300°C (512°F).

Tweezers made from special stainless steel tweezers have the identification letter „SA“ in their order numbers.

**Titanium**

Titanium tweezers are light weight and resistant to high temperatures.

www.labem.pl

## Coating

Only Erem offers tweezers with a special Pyroplast coating.

**Advantages**:

- Heat-resistant up to 500°C (932°F), almost twice as high as Teflon® or Cralon
- No capillary effect on tips, e.g. while soldering (non-stick property)
- No contamination caused by positive or negative charge
- Water-resistant
- Radiation-resistant
- Thickness of coating 60-80 µ

The Pyroplast coating is not available on all Erem tweezers.

It is made to order and requires a minimum order quantity.

Please contact your nearest sales office for more information.

## Ergonomic

Erem has developed a series of tweezers with ergonomic handles to reduce the risk of Repetitive Strain Injuries (RSI) to the hands.

The identification letter in the order number is „E".

**Erem also offers two further innovative tweezers with ergonomically shaped handles:**

- E15AGW cutting tweezers with hardened cutting edges for increased service life
- EOODSA precision tweezers with straight strong tips which are inside-serrated for secure handling

**Advantages:**

- Ergonomically shaped handles reduce Carpal Tunnel Syndrome (CTS) and early hand fatigue
- Two-color, thermally insulated soft-grip handles made from soft foam material ensure high user comfort
- Manufactured from non-magnetic, acid-proof and stainless steel alloy
- ESD-safe

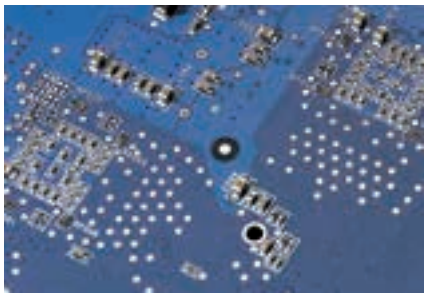
Teflon® is a registered Trademark of E.I. Dupont de Nemours and Company

www.labem.pl

# Special applications

The quality and performance of Erem precision tweezers are the result of more than 40 years of development and know-how.

Erem is one of the leaders in the development of high-precision tools for a wide variety of applications in electronics, aeronautical engineering, light engineering, telecommunications, laboratory technology, medicine and the jewelry, watchmaking and goldsmith industries.



## Tweezers for biology and laboratory applications

Erem micro-tweezers are suitable for use in biology (e.g. model 5MBS, 5FSA or M5S).

These tweezers with very pointed tips enable confined spaces to be accessed and offer excellent visibility when performing precision work and when working under a microscope.

High precision tweezers are particularly suitable for analysis applications and the handling of tissues, fine threads and other very small objects.

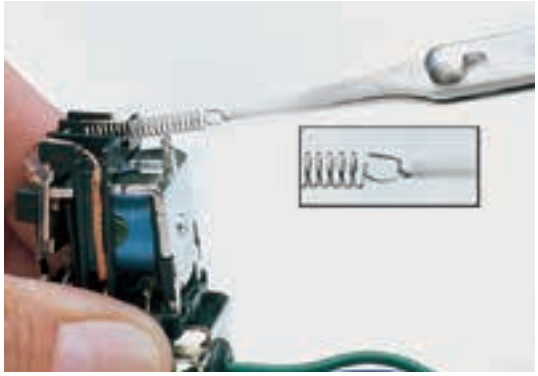
www.labem.pl

## Tweezers for use in the jewelry industry

These stainless steel tweezers with Teflon® coated tips (e.g. type 2ASASLT) are particularly suited for use in the jewelry industry. They are robust and the Teflon® coated tips are non stick.

Titanium tweezers type like 3CTA are also ideal for this application. Their lightweight maintains fingertip control over extended working periods and their resistance to high temperatures allows them to be used where gas flames might be encountered.

## Tweezers for use in light engineering and dental applications



Erem offers special gripping pliers for appli-cations in light engineering. The lockable gripping tweezers type 940AS can withstand a tensile force of 5 kg and can securely hold small wires.

The stainless steel construction allows the tweezers to be sterilised in an autoclave.

www.labem.pl

## Precision tweezers: Pointed tips straight

- For applications in microelectronics, jewelry-making, watchmaking, medicine and laboratory technology
- Suitable for delicate standard applications and precision work on small components or wires
- For all models with the suffix SA or SASL in the order number: Special stainless steel, non-magnetic, non-rusting, acid-proof, heat-resistant
- For all models with the suffix S in the order number: Stainless steel, robust tips, non-rusting, non-reflecting surface

**80 mm/3.150 Inch**

| Model | | Description |
|---|---|---|
| **M5S** | 6 g<br>0.21 oz. | Micro-tweezers, very pointed tips, e.g. for precision work under a microscope. |

**108 mm/4.252 Inch**

| Model | | Description |
|---|---|---|
| **ACSA** | 16 g<br>0.56 oz. | Precision tweezers with serrated finger grips for secure handling. For precise bending and holding of components or wires. |
| **20AS** | 12 g<br>0.42 oz. | Precision tweezers with serrated finger grips and inside-serrated tips for secure handling. Guide pin to avoid overlapping of tips. For precise bending and holding of components or wires. |

www.labem.pl

# Precision tweezers: Pointed tips straight

**110 mm/4.331 Inch**

| Model | | Description |
|---|---|---|
| **3CS** | 11 g<br>0.39 oz. | Precision tweezers with long tips for precision work on printed-circuit boards. |
| **3CSA** | 11 g<br>0.39 oz. | Precision tweezers, standard model for delicate work. |
| **3CSASL** | 11 g<br>0.39 oz. | Same as 3CSA, but economy model. |
| **3CTA** | 8 g<br>0.28 oz. | Model same as 3CSA, but made from titanium: non-magnetic, very heat-resistant and very light. |
| **53CSA** | 11 g<br>0.39 oz. | Precision tweezers with anti-crush feature. Prevents damage to sensitive components. Tweezers relieved at front for secure handling. |

**120 mm/4.724 Inch**

| Model | | Description |
|---|---|---|
| **3SA** | 14 g<br>0.49 oz. | Precision tweezers with pointed tips for work in microelectronics. |
| **3SASL** | 14 g<br>0.49 oz. | Same as 3SA, but economy model. |
| **1SA** | 14 g<br>0.49 oz. | Precision tweezers with pointed tips for standard applications.. |
| **1SASL** | 14 g<br>0.49 oz. | Same as 1SA, but economy model. |
| **OOSA** | 20 g<br>0.71 oz. | Precision tweezers with pointed tips. Very robust. Suitable for standard applications, e.g. for assembly in electronics. |

www.labem.pl

## Precision tweezers: Pointed tips straight

**120 mm/4.724 Inch**

| Model | | Description |
|---|---|---|
| **OOSASL*** | 20 g<br>0.71 oz. | Same as OOSA, but economy model. |
| **OOCSA** | 18 g<br>0.64 oz. | Model same as 00SA, but with shorter tips. |
| **OOBSA** | 20 g<br>0.71 oz. | Model same as 00SA, but with serrated finger grips for secure handling. |
| **OODSA** | 20 g<br>0.71 oz. | Model same as 00SA, but with serrated finger grips and inside-serrated tips for secure handling. |
| **64SA** | 17 g<br>0.60 oz. | Precision tweezers with pointed tips and serrated finger grips for secure handling. |
| **11N** | 17 g<br>0.60 oz. | Precision tweezers with medium-pointed tips for use on soft components. Nickel-silver, non-magnetic. |
| **AAZ*** | 16 g<br>0.56 oz. | Precision tweezers with medium-pointed tips, nickel-plated. Suitable for electronic assembly tasks. |

**125 mm/4.921 Inch**

| Model | | Description |
|---|---|---|
| **AAS** | 16 g<br>0.56 oz. | Precision tweezers with fine but robust tips. |
| **AASA** | 16 g<br>0.56 oz. | Precision tweezers with fine but robust tips for standard applications. |
| **AASASL*** | 16 g<br>0.56 oz. | Same as AASA, but economy model. |

*Not available in North America

www.labem.pl

# Precision tweezers: Pointed tips straight

## 125 mm/4.921 Inch

| Model | | Description |
|---|---|---|
| **AM** | 17 g<br>0.60 oz. | Precision tweezers made from brass. The soft metal protects sensitive components against damage. No sparks. |

## 130 mm/5.118 Inch

| Model | | Description |
|---|---|---|
| **249SA** | 20 g<br>0.71 oz. | Precision tweezers with pointed synthetic tips (PPS) and serrated finger grips for secure handling. Volume resistance 16 Ω/cm. Heat-resistant up to 250°C (480°F). Resistant to acids and molten soldering tin. Water-repellent. |
| **249CER*** | 24 g<br>0.84 oz. | Same as 249SA, but with ceramic tips. Heat-resistant up to 900°C (1500°F). |

## 140 mm/5.512 Inch

| Model | | Description |
|---|---|---|
| **RRS** | 30 g<br>1.05 oz. | Precision tweezers with strong tips for heavy-duty applications. |
| **SSSA** | 11 g<br>0.39 oz. | Precision tweezers with long, narrow grips and low tension, responds to minimal pressure. The long grips allow precision work close to heat sources. |

## 150 mm/5.906 Inch

| Model | | Description |
|---|---|---|
| **29SA** | 26 g<br>0.92 oz. | Reverse-action tweezers with wide, rounded tips. For holding parts by reverse clamping action. Insulated handles, e.g. for protecting against heat. |

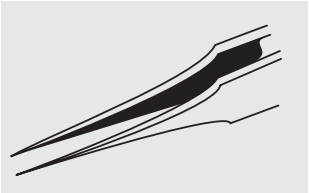
## 160 mm/6.299 Inch

| Model | | Description |
|---|---|---|
| **21SA** | 23 g<br>0.81 oz. | Precision tweezers with medium-pointed tips and serrated finger grips and inside-serrated tips for secure handling. Very robust. The long grips allow precision work close to heat sources. |

www.labem.pl

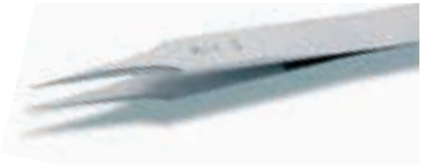
*Not available in North America

## Precision tweezers: Pointed tips straight relieved



- For precision work e.g. under a microscope
- Relieved shape facilitates excellent access to the most confined spaces
- For all models with the suffix SA or SASL in the order number: Special stainless steel, non-magnetic, non-rusting, acid-proof, heat-resistant
- For all models with the suffix S in the order number: Stainless steel, robust tips, non-rusting, non-reflecting surface

**90 mm/3.543 Inch**



| Model | | Description |
|---|---|---|
| **M4AS*** | 9 g<br>0.32 oz. | Micro-tweezers, very pointed tips, e.g. for working under a microscope. |

**110 mm/4.331 Inch**

| Model | | Description |
|---|---|---|
| **4SA** | 13 g<br>0.46 oz. | Precision tweezers with very pointed tips. |
| **4SASL** | 13 g<br>0.46 oz. | Same as 4SA, but economy model. |

*Not available in North America

www.labem.pl

# Precision tweezers: Pointed tips straight relieved

**115 mm/4.528 Inch**

| Model | | Description |
|---|---|---|
| **5MBS*** | 12 g<br>0.42 oz. | Precision tweezers with extremely pointed tips (~ 0.03 x 0.07 mm/.002 Inch) for use in dissection procedures and working under a microscope. For use on soft materials only. |
| **5FSA*** | 12 g<br>0.42 oz. | Precision tweezers with extremely pointed tips (~ 0.05 x 0.1 mm/.003 Inch) for use in dissection procedures and working under a microscope. For use on soft materials only. |
| **5SA** | 12 g<br>0.42 oz. | Precision tweezers with very pointed tips, suitable for very fine wires. |
| **5SASL** | 12 g<br>0.42 oz. | Same as 5SA, but economy model. |
| **2SA** | 16 g<br>0.56 oz. | Precision tweezers with medium-pointed tips. |
| **2SASL** | 16 g<br>0.56 oz. | Same as 2SA, but economy model. |

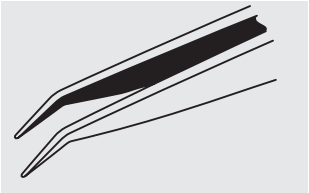
**120 mm/4.724 Inch**

| Model | | Description |
|---|---|---|
| **258SA** | 15 g<br>0.53 oz. | Precision tweezers with pointed synthetic tips (PPS) and serrated finger grips for secure handling. Volume resistance 16 Ω/cm. Heat-resistant up to 250°C (480°F). Resistant to acids and molten soldering tin. Water-repellent. |

*Not available in North America

www.labem.pl

## Precision tweezers: Pointed tips bent



- For applications in biology, medicine, laboratory technology and microelectronics
- Bent shape facilitates access to confined spaces
- For all models with the suffix SA or SASL in the order number: Special stainless steel, non-magnetic, non-rusting, acid-proof, heat-resistant
- For all models with the suffix S in the order number: Stainless steel, robust tips, non-rusting, non-reflecting surface

**110 mm/4.331 Inch**

| Model | | Description |
|---|---|---|
| **3CBS** | 15 g<br>0.53 oz. | Precision tweezers, curved 40°, with pointed tips, for precision work such as assembly on printed-circuit boards. |

**115 mm/4.528 Inch**

| Model | | Description |
|---|---|---|
| **5CSA** | 12 g<br>0.42 oz. | Precision tweezers, curved 30°, relieved. Pointed tips. Relieved shape at front of handle provides excellent visibility of the area to be worked on. |
| **5BSA** | 12 g<br>0.42 oz. | Precision tweezers, curved 30°, relieved. Pointed tips. Relieved shape at front of handle provides excellent visibility of the area to be worked on. |
| **51SA** | 12 g<br>0.42 oz. | Precision tweezers, curved 30°, relieved. Very pointed tips. Relieved shape at front of handle provides excellent visibility of the area to be worked on. |

www.labem.pl

# Precision tweezers: Pointed tips bent

## 115 mm/4.528 Inch

| Model | | Description |
|---|---|---|
| **51SASL** | 12 g<br>0.42 oz. | Same as 51SA, but economy model. |
| **5ASA** | 12 g<br>0.42 oz. | Precision tweezers, lightly curved 15°, relieved.<br>Very pointed tips, e.g. for installing small components. |
| **5ASASL** | 12 g<br>0.42 oz. | Same as 5ASA, but economy model. |

## 120 mm/4.724 Inch

| Model | | Description |
|---|---|---|
| **7SA** | 15 g<br>0.53 oz. | Precision tweezers, curved, relieved, with pointed tips.<br>Excellent handling in confined spaces. |
| **7SASL** | 15 g<br>0.53 oz. | Same as 7SA, but economy model. |

## 140 mm/5.512 Inch

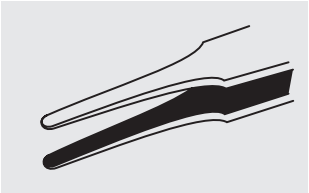
| Model | | Description |
|---|---|---|
| **65ASA** | 11 g<br>0.39 oz. | Precision tweezers, curved 50°. Very pointed tips.<br>For working with extra-small chips and other miniature components. |

## 150 mm/5.906 Inch

| Model | | Description |
|---|---|---|
| **24SA** | 22 g<br>0.78 oz. | Precision tweezers, curved 40°, with robust pointed tips.<br>Serrated finger grips and inside-serrated tips for secure handling. Guide pin to avoid overlapping of tips. Ideally suitable for soldering and assembly jobs. |
| **30SA** | 26 g<br>0.92 oz. | Reverse-action tweezers, curved 30°, with robust pointed tips. Fibreglass handles for protection against heat.<br>Reverse clamping action for comfortably holding parts.<br>Particularly suitable for soldering and assembly jobs. |

www.labem.pl

## Precision tweezers: Flat round tips straight



- Suitable for all standard gripping applications and assembly jobs on printed-circuit boards, e.g. in the goldsmith and jewelry industries
- For all models with the suffix SA or SASL in the order number: Special stainless steel, non-magnetic, non-rusting, acid-proof, heat-resistant

**120 mm/4.724 Inch**

| Model | | Description |
|---|---|---|
| **2ASA** | 15 g<br>0.53 oz. | Precision tweezers with flat rounded tips for gripping small components. Tip width 2 mm/.078 Inch. |
| **2ASASL** | 15 g<br>0.53 oz. | Same as 2ASA, but economy model. |
| **2ASASLT*** | 16 g<br>0.56 oz. | Same as 2ASA, but with Teflon®-coated tips for non-stick holding of self-adhesive parts. |
| **2ASARU** | 16 g<br>0.56 oz. | Same as 2ASA, but with coated tips for non-stick holding of self-adhesive parts. |
| **25SA** | 15 g<br>0.53 oz. | Precision tweezers with flat, round tips slightly wider than the 2ASARU model. Serrated finger grips for secure handling. For standard gripping jobs. |
| **52ASA** | 15 g<br>0.53 oz. | Precision tweezers with pointed, rounded and flexibly movable tips. Prevents damage to sensitive components. |

*Not available in North America

www.labem.pl

# Precision tweezers with ergonomic handles

- This series offers models with thin shaped tips to suit every application
- Ergonomically shaped handles reduce hand fatigue and facilitates comfortable working
- Thermally insulated, soft foam handles, ESD-safe
- For all models with the suffix SA in the order number: Special stainless steel, non-magnetic, non-rusting, acid-proof, heat-resistant

**120 mm/4.724 Inch**

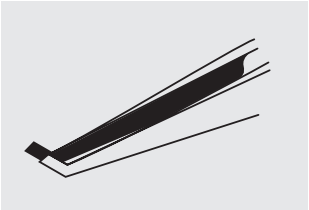
| Model | | Description |
|---|---|---|
| **E5SA** | 25 g<br>0.88 oz. | Ergonomic precision tweezers with straight, very pointed tips for gripping fine wires. |
| **E3CSA** | 25 g<br>0.88 oz. | Ergonomic precision tweezers with long, straight and pointed tips, e.g. for assembly jobs on printed-circuit boards. |
| **EOOSA** | 30 g<br>1.05 oz. | Ergonomic precision tweezers with straight, strong tips for standard applications. Very robust. |
| **EOODSA** | 30 g<br>1.05 oz. | Model same as EOOSA, but with inside-serrated tips. |
| **E7SA** | 28 g<br>0.99 oz. | Ergonomic precision tweezers with curved strong tips, e.g. for working in confined spaces. |
| **E2ASA** | 28 g<br>0.99 oz. | Ergonomic precision tweezers with straight, flat and rounded tips for simple gripping jobs. Tip width 2 mm/.078 Inch. |
| **E15AGW** | 30 g<br>1.05 oz. | Cutting tweezers, carbon-steel tips. |

www.labem.pl

## SMD tweezers

- High-quality precision tweezers for SMD jobs with different designs (chip, MELFs, mini MELFs)
- Blunted edges prevent damage to printed-circuit boards

## SMD tweezers – Angled tips



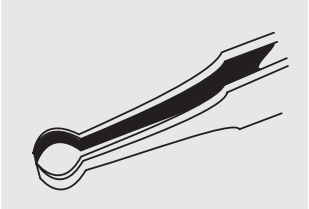
- Suitable for perfect handling of chips and miniature components
- Suitable for assembling SMD printed-circuit boards or ceramic substrates
- Bent shape facilitates optimum access to confined spaces and provides excellent visibility of the area to be worked on
- For all models with the suffix CA in the order number: Special stainless steel, non-magnetic, non-rusting, acid-proof, heat-resistant

**115 mm/4.528 Inch**

| Model | | Description |
|---|---|---|
| **102ACA** | 15 g<br>0.53 oz. | SMD tweezers, angled 45°, with pointed tips for vertical application. |
| **102ACAX** | 14 g<br>0.49 oz. | Model same as 102ACA, but reverse clamping action for easy holding. |
| **103ACA** | 15 g<br>0.53 oz. | SMD tweezers, angled 45°, with slightly wider tips for vertical application. |

www.labem.pl

# SMD tweezers – Round tips straight



- Suitable for gripping and holding round components and wires
- Blunted edges prevent damage to printed-circuit boards
- For all models with the suffix SA in the order number: Special stainless steel, non-magnetic, non-rusting, acid-proof, heat-resistant

## 110 mm/4.331 Inch

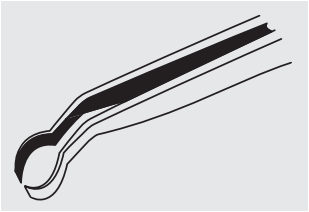
| Model | | Description |
|---|---|---|
| **39SA** | 15 g<br>0.53 oz. | SMD tweezers with round tips, dia. 0.3 mm/.011 Inch. Serrated finger grips for secure handling. For gripping small wires and cylindrical components. |
| **40SA** | 15 g<br>0.53 oz. | SMD tweezers with round tips, dia. 0.4 mm/.015 Inch. Serrated finger grips for secure handling. For gripping small wires and cylindrical components. |

## 120 mm/4.724 Inch

| Model | | Description |
|---|---|---|
| **150SAMF** | 13 g<br>0.46 oz. | SMD tweezers with round, very narrow tips, dia. 1.2 – 2.5 mm/ .047 – .098 Inch. Serrated finger grips for secure handling. For gripping cylindrical components, mini MELFs, etc. |
| **150SAD** | 13 g<br>0.46 oz. | SMD tweezers with round tips, dia. 1.5 – 3 mm/ .059 –.118 Inch.Serrated finger grips for secure handling. For gripping cylindrical components, mini MELFs, etc. |
| **150SA** | 13 g<br>0.46 oz. | SMD tweezers with round tips, dia. 1.5 – 3 mm/ .059 –.118 Inch. Serrated finger grips for secure handling. For gripping cylindrical components. |
| **151SA** | 13 g<br>0.46 oz. | SMD tweezers with round tips, dia. 3 – 6 mm/ .118 –.236 Inch. Serrated finger grips for secure handling. For gripping cylindrical components. |

www.labem.pl

## SMD tweezers – Round tips bent



- Suitable for gripping fine wires and cylindrical components
- Blunted edges prevent damage to printed-circuit boards
- For all models with the suffix SA in the order number: Special stainless steel, non-magnetic, non-rusting, acid-proof, heat-resistant

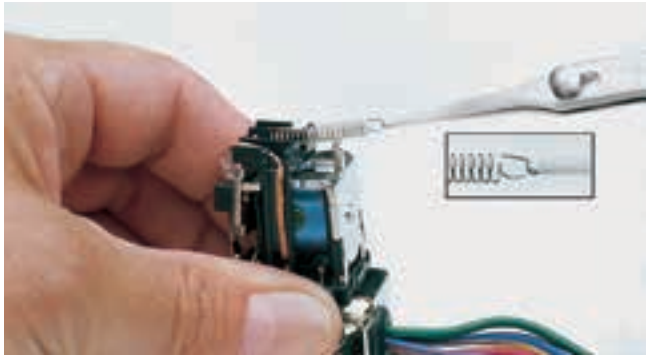
**115 mm/4.528 Inch**

| Model | | Description |
|---|---|---|
| **32BSA** | 17 g<br>0.60 oz. | SMD tweezers, angled 45°, with round tips, dia. 5 mm/.197 Inch. |
| **32BSA20*** | 17 g<br>0.60 oz. | SMD tweezers, angled 45°, with round tips, dia. 2 mm/.078 |
| **32BSA25** | 17 g<br>0.60 oz. | MD tweezers, angled 45°, with round tips, dia. 2.5 mm/.098 Inch. |
| **150SAMB** | 13 g<br>0.46 oz. | MD tweezers, angled 40°, with round tips, dia. 1.2 – 2.5 mm/ .047 – .098 Inch. Serrated finger grips for secure handling. |

*Not available in North America

www.labem.pl

# Locking Gripping Tweezers



- Gripping tweezers enable the user to hold and manipulate particularly fine wires with a diameter from 0.3 mm/.011 Inch or insulated optical fibres with a diameter of between 1.5 mm/.059 Inch and 5 mm/.197 Inch
- Suitable as a ligature clamp in dentistry
- Can be disinfected and sterilized

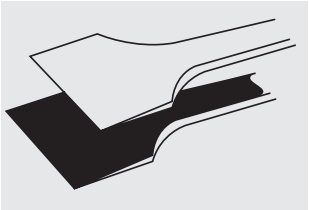
**120 mm/4.724 Inch**

| Model | | Description |
|---|---|---|
| **940AS*** | 17 g<br>0.60 oz. | Gripping tweezers with locking mechanism.<br>The ring-shaped tip provides for secure handling up to a tensile force of 5 kg. |

*Not available in North America

www.labem.pl

## Wafer tweezers



- Suitable for 3" to 6" wafers
- Serrated finger grips for secure handling
- Wafer tweezers are available to order in various sizes and coatings
- For all models with the suffix SA in the order number: Special stainless steel, non-magnetic, non-rusting, acid-proof, heat-resistant

A = Paddle width
B = Paddle depth

**125 mm/4.921 Inch**

| Model | | Dimensions in mm/Inch A | B | Description |
|---|---|---|---|---|
| **91SA** | 15 g<br>0.53 oz. | 12<br>.472 | 7<br>.276 | Standard wafer tweezers for 3" and 4" wafers. |

**130 mm/5.118 Inch**

| Model | | Dimensions in mm/Inch A | B | Description |
|---|---|---|---|---|
| **600ASA** | 23 g<br>0.81 oz. | 19,5<br>.768 | 8<br>.315 | Wafer tweezers with flat lower paddle and 6 upper fingers for protecting wafers against damage. For 6" wafers. |
| **608ASA** | 23 g<br>0.81 oz. | 30<br>1.181 | 8,5<br>.276 | Model same as 600ASA, but 30 mm/1.181 Inch wide. |
| **600JSA** | 24 g<br>0.84 oz. | 20<br>.787 | 8<br>.315 | Wafer tweezers with free-floating Teflon® upper paddle for secure, damage-free gripping. For 4" – 6" wafers. |

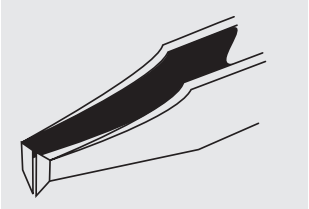
www.labem.pl

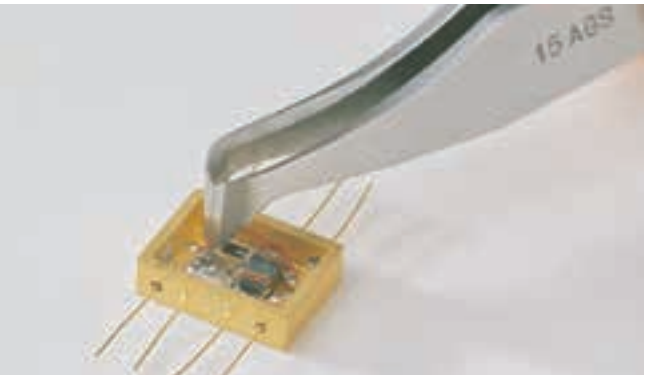
# Wafer tweezers

**150 mm/5.906 Inch**

| Model | | Dimensions in mm/Inch A | B | Description |
|---|---|---|---|---|
| **141SAP** | 30 g<br>1.05 oz. | 30<br>1.181 | 8<br>.315 | Wafer tweezers with polyester tips for protecting Si, GaAs or Ti wafers against damage. For 4" – 6" wafers. |

# Cutting tweezers





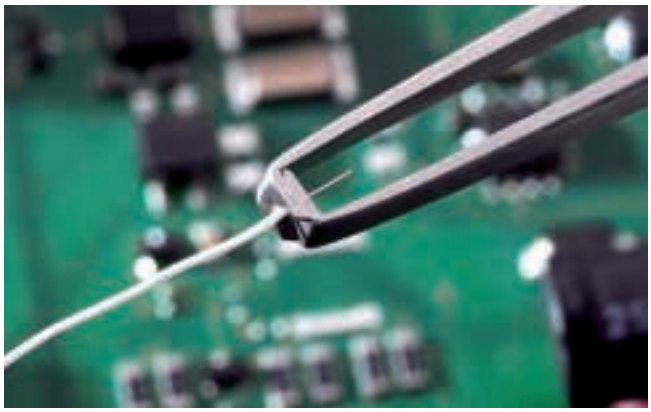

- Suitable for cutting fine, soft wires and small components
- Delivers high-precision cuts
- Hardened cutting edges for long service life
- For all models with the suffix S in the order number: Stainless steel, robust tips, non-rusting, non-reflecting surface

**115 mm/4.528 Inch**

| Model | | Description |
|---|---|---|
| **15AGS** | 21 g<br>0.74 oz. | Cutting tweezers with narrow oblique head.<br>For soft wires up to dia. 0.25 mm/.010 Inch. |
| **15AGW** | 26 g<br>0.92 oz. | SCutting tweezers with narrow oblique head.<br>For soft wires up to dia. 0.25 mm/.010 Inch. |

www.labem.pl

## Stripping tweezers



- Suitable for stripping fine wires with PVC or Teflon® insulation
- Non-reflecting surface
- Please send a wire sample when ordering

**120 mm/4.724 Inch**

| Model | | Description |
|---|---|---|
| **29Y30*** | 22 g<br>0.78 oz. | Miniature stripping tweezers, dia. 0.25 mm/.010 Inch (AWG 30). Stainless steel. Serrated finger grips for secure handling. |
| **29Y32*** | 22 g<br>0.78 oz. | Miniature stripping tweezers, dia. 0.2 mm/.007 Inch (AWG 32). Stainless steel. Serrated finger grips for secure handling. |
| **29Y34*** | 22 g<br>0.78 oz. | Miniature stripping tweezers, dia. 0.16 mm/.006 Inch (AWG 34). Stainless steel. Serrated finger grips for secure handling. |
| **29Y36*** | 22 g<br>0.78 oz. | Miniature stripping tweezers, dia. 0.13 mm/.005 Inch (AWG 36). Stainless steel. Serrated finger grips for secure handling. |
| **29Y40*** | 22 g<br>0.78 oz. | Miniature stripping tweezers, dia. 0.08 mm/.003 Inch (AWG 40). Stainless steel. Serrated finger grips for secure handling. |

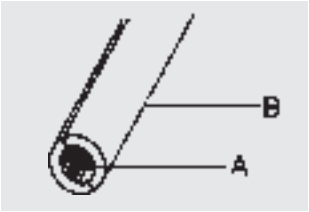
**120 mm/4.724 Inch**

| Model | | Description |
|---|---|---|
| **29W30** | 28 g<br>0.99 oz. | Stripping tweezers with synthetic fibre handle. For wires of dia. 0.25 – 0.3 mm/.010 – .011 Inch (AWG 30 – 28). For standard and Teflon® insulation. |
| **XB29W301** | | Spare blade for 29W30 |

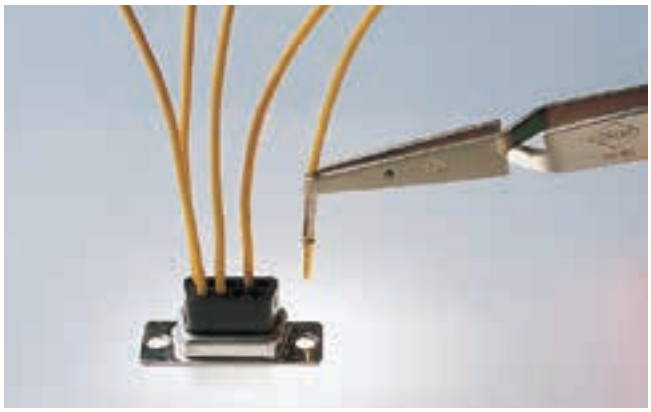
*Not available in North America

www.labem.pl

# Extraction tweezers




A = Outside diameter of pin
B = Inside diameter of pin



- Suitable for extracting contacts from the rear of a plug connector

**120 mm/4.724 Inch**

| | Dimensions in mm/Inch | | | |
|---|---|---|---|---|
| **Model** | | **Ø A** | **Ø B** | **Description** |
| **024C** | 15 g<br>0.53 oz. | 12<br>.472 | 7<br>.276 | Extraction tweezers for Sub-D connectors.<br>Stainless steel. |

www.labem.pl

# Side Cutters and Tip Cutters

## Erem offers a wide range of precision side and tip cutters for almost every application

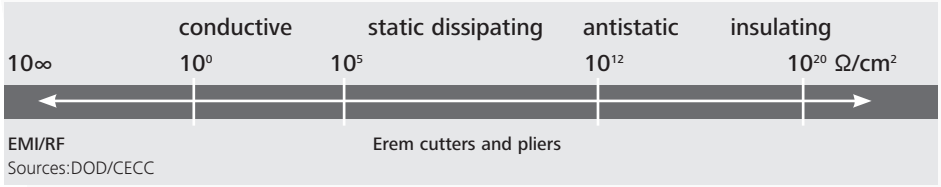
- Special tool steel is hardened with an unique Swiss technology
- This particular hardening process guarantees high durability

www.labem.pl

www.labem.pl

## ESD-safe

The interchangeable foam-cushion handles are ESD-safe and are fitted as standard on all Erem cutters and pliers.




## Internal patented Erem Magic Spring

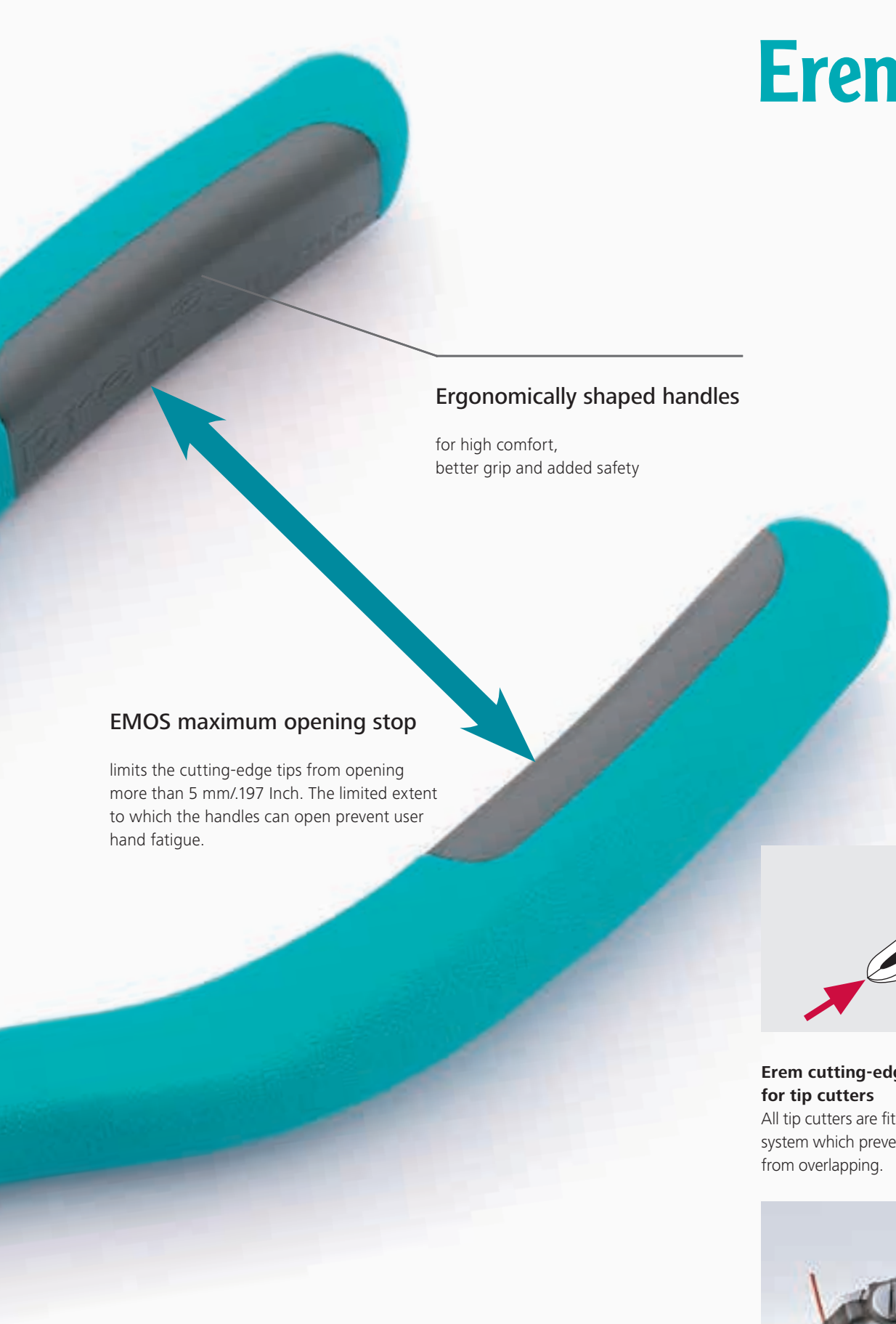
- Reduce costs by long life
- Constant spring force
- Guarantees more than 1 million operations

## High precision screw joint

- Smooth jaw action with no play
- Smooth cutting operation with no jaw overlapping

## Erem Cut: Options for semi flush, full flush or super flush cuts

www.labem.pl



## Ergonomically shaped handles

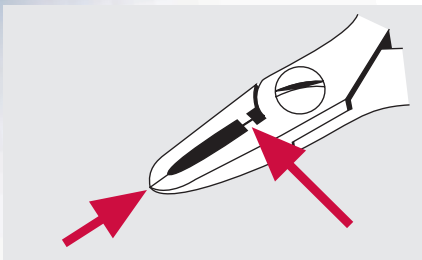
for high comfort,
better grip and added safety

## EMOS maximum opening stop

limits the cutting-edge tips from opening more than 5 mm/.197 Inch. The limited extent to which the handles can open prevent user hand fatigue.

## Induction-hardened cutting edges in Rockwell hardness 63 – 65 HR

for exceptionally long life



**Erem cutting-edge protection for tip cutters**
All tip cutters are fitted with a special stop system which prevents the cutting edges from overlapping.

**Safety device for holding wire scraps**
This safety device for side cutters holds wire scraps securely after cutting. Available on most Series 500, 600 and 2400 cutters (oval head). Order suffix „W“, e.g. 595EW.

www.labem.pl

# Erem impresses

## Erem Technology

**Special tool steel**

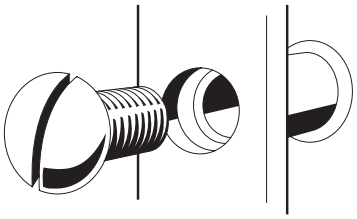
Erem electronics tools are made from bright steel. They are not drop forged. The special tool steel is made using an unique Swiss processing technique.

The bright tool steel gives additional strength and toughness to the tools pro-moting a long service life.

**The internal patented Erem Magic Spring**

The Magic Spring system used in Erem precision tools is unique. It is integral to the cutting head and provides a constant closing and re-opening force. It is guaranteed for 1 million operations.

The Magic Spring system is highly reliable, makes the tools easy to use and reduces operator fatigue.



**High precision screw joint**

This self locking screw joint system gives a smooth cutting and opening action and ensures that there is no blade overlap or play.

Precision cutting and reduced shock to components.

**EMOS maximum opening stop**

The unique EMOS (**E**rem **M**aximum **O**pening **S**top) system prevents the tips from opening more than 5 mm/.197 Inch. It reduces user fatigue by preventing excessive hand spread.

Comfortable and fatigue free working.

## Handle

**Erem cutters and pliers with ergonomic handles**

**W**ork **R**elated **U**pper **L**imb **D**isorder (WRULD) can be caused by positional fatigue or nerve damage brought about by the repeated use of non-ergonomic hand tools, otherwise known as **R**epetitive **S**train **I**njuries (RSI).

WRULDS is a direct consequence of insufficient ergonomics in manufacturing processes and working practices. To reduce the factors which cause WRULDS, Erem has developed a range of tools with ergonomic handles (Series 2400 Magic-Sense).

The handle shape and special materials ensure a soft feel, operating comfort and safety. The specially shaped handles ensure that the gripping pressure is evenly spread over the entire palm of the hand. The thumb and fingers automatically find their best position. The effort that has to be exerted by the user is reduced, thereby reducing hand fatigue.

The anti-slip surface provides excellent grip. The material is highly resistant to perspiration, water, oil and chemicals. The handles are ESD-safe and are easily interchangeable.

www.labem.pl

# Erem Cut

### Cut shape

There are three blade options, which determine the shape left on a lead after cutting. (see also P. 35)

1. Semi-flush

2. Flush

3. Super full flush

### Cutting edge

Erem cutters are noted for their ease of use, one of the reasons for this is the ability of the blade to cut equally well over its full length. This promotes operator comfort and reduces fatigue.

Semi-flush cutters offer the best performance and the longest service life. Super full flush cutters leave a flat wire end with minimal effort and prevent components from being subjected to load.

High level of user comfort thanks to special cutting edge.

### Rockwell hardness

The cutting blades of Erem cutters are hardened to Rockwell 63-65 HRc by an induction heating process. Continuous process control ensures that the blades achieve the correct level of hardening and are not embrittled.

This level of hardening plus the high-grade tool steel used in the manufacture of the tools and continuous process control promote an exceptionally long service life.

**Erem cut Super full flush: perfect flush cut**

Standard cut „Super full flush“

# Erem Service

### Re-sharpening

Erem is your service partner. All Erem side and tip cutters except those with carbide insert blades can be re-sharpened up-to three times.Carriage charges will apply.

The re-sharpened tool is as good as new, its life is extended and costs are reduced.

### Replacement parts

Erem cutters and pliers and their component parts are warranted against manufacturing defects. Magic springs, precision joint components are available as spare parts.

The warranty and availability of spares guarantee long service life.

**ESD-safe**
The ergonomic, interchangeable molded handles are ESD-safe and are fitted as standard on all Erem cutters and pliers.

www.labem.pl

# Choosing the right tool

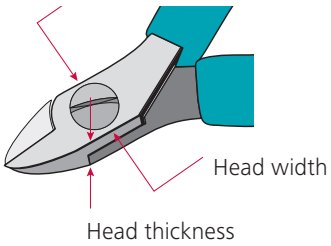
## Selection criteria

Erem offers a wide selection of precision side and tip cutters for virtually any application.

When choosing the right cutter, it is important to take
- Size
- Cut
- Head shape
- Cutting capacity

into consideration.

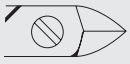
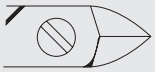
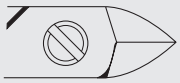
## Size




Erem offers the right head size to suit every application. There are three main sizes: **Micro, Medium and Maxi.**

Each head size is available in different head shapes.

**Classification of cutter heads**

| Micro | Medium | | Maxi |
|---|---|---|---|
|  |  | |  |
| **Series 600** | **Series 2400 MagicSense** | **Series 500** | **Series 800** |
| | | | |
| **Size**<br>Head width 9.0 mm/.354 Inch<br>Head thickness 6.0 mm/.236 Inch | Head width 11.0 mm/.433 Inch<br>Head thickness 6.0 mm/.236 Inch | Head width 11.0 mm/.433 Inch<br>Head thickness 6.5 mm/.256 Inch | Head width 13.5 mm/.531 Inch<br>Head thickness 7.5 mm/.295 Inch |
| Miniature cutter for applications in microelectronics and for fine wires. Offers a large variety of head shapes for very good access even to hard-to-reach areas. | Medium-size cutter. Combines robustness, visibility and accessibility. Large variety of head shapes for precision working in hard-to-reach areas. The Series 2400 MagicSense offers an optimised ergonomic shape and an improved grade of hardness. | | The strongest and most robust head size for general cutting applications in electronics, cuts large wire diameters. |

www.labem.pl

# Cut

There are three blade options, which determine the shape left on a lead after cutting.

**Erem cut Super full flush: perfect flush cut**

Standard cut „Super full flush“

**Semi-flush**

This cut leaves a pyramidal tip at the end of the wire. It is particularly suitable for standard jobs where the final shape does not play a significant role. Cutters with this cut are suitable for both soft copper wires and very hard wires such as stainless steel.

**Flush**

This cut leaves a much smaller tip at the end of the wire than the semi-flush cut – without reducing the cutting capacity. The cutting edges are finer than on semi-flush cutters. The effort exerted when cutting is less and the load on the component is reduced. Flush wire ends reduce the effort needed to fit components on printed-circuit boards. Erem guarantees precise cutting even after frequent use.

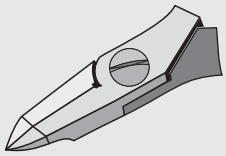
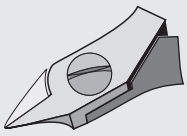
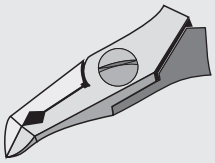
**Super full flush**

Only Erem offers you a super full flush cut. This cut provides absolutely flush wire ends. No rework is needed. Cutters with this cut are absolutely precision-ground and sharpened. The effort exerted when cutting is low, as is the load on the component caused by the cut. Soldering tags in soldering-bath procedures are prevented. Cutters of this type are used in microelectronics, space travel or medical technology. These cutters are suitable for soft wires.

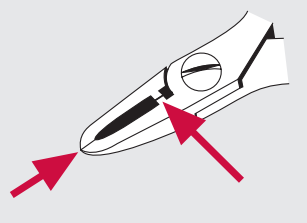
www.labem.pl

## Head shape

Erem offers the right head shape to suit your application. The head shapes differ in terms of shape and design. There are six basic shapes:

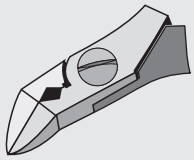
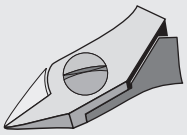
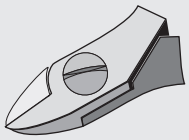
| **Shape** | **Tip cutter**<br>**Straight relieved head** | **Tip cutter**<br>**Pointed relieved head** | **Tip cutter**<br>**Angled narrow head** |
|---|---|---|---|
| |  |  |  |
| **Visibility and accessibility**<br>Cutting at the outermost tip of the cutter | This head is suitable for horizontal and vertical cuts. The long tips facilitate cutting in hard-to-reach areas. | This is the narrowest head shape. The underside is relieved and facilitates optimum access even to extremely hard-to-reach areas. | The angled head provides for precise cuts at different working angles. |
| **Series 600 Micro** | 670E*, 670EP*, 670EPF*<br>(P. 265) | 622NB, 632NCF, 676E, 776E<br>(P. 264) | |
| **Series 2400 MagicSense** | 2470E<br>(P. 269) | | 2475E, 2482E<br>(P. 269) |
| **Series 500 Medium** | 570E, 573E**<br>(P. 275) | 592E, 792E<br>(P. 274) | 555E, 572E, 582E (P. 53)<br>575E, 593AE (P. 273) |
| **Series 800 Maxi** | | 884E<br>(P. 278) | |

* Very short head
** Straight head for vertical working



**Erem cutting-edge protection for tip cutters**
Erem tip cutters are equipped with cutting-edge protection.A special stop system prevents the cutting edges from overlapping.

www.labem.pl

| Tip cutter<br>Angled wide head | Side cutter<br>Tapered head | Side cutter<br>Oval head |
|---|---|---|
|  |  |  |
| The angled head provides for precise cuts at different working angles. | The jaws of the cutter have straight edges and taper to a point. This head shape allows access to difficult to reach areas but reduces the cutting capacity in comparison to the same size oval head cutter. | This is the most widely used head shape, it is robust and size for size offers the highest cutting capacity. |
| 622NA<br>(P. 264) | 612N, 622N, 632N<br>(P. 263) | |
| 2403E, 2404E<br>(P. 48) | 2477E<br>(P. 268) | 2412E, 2422E, 2432E<br>(P. 267) |
| 503E, 504E<br>(P. 52) | 577E, 595E<br>(P. 272) | 512E, 512N, 522N,<br>532N, 599E (P. 271) |
| | 886E<br>(P. 278) | 812N, 822N, 896E<br>(P. 277) |

**High cutting capacity**
Cutting over the full length of the cutter

Erem offers carbide cutters (see P. 39) for cutting high-hardness wire (piano wire).

www.labem.pl

## Wire quality

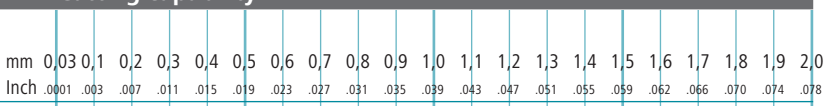
Piano wire, stainless spring steel wire, material 1.4310, tensile strength 2000–2400 MPa

Hard wire, stainless steel wire, material 1.4301, tensile strength 1800 MPa

Medium-hard wire, stainless steel wire, material 1.4301, tensile strength 800 MPa

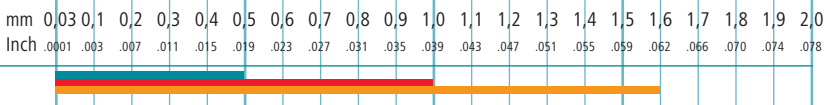
Soft wire, copper, aluminium, tensile strength 250 MPa

| Model | Cut | Cutting capability |
|---|---|---|
| 612N | Semi-flush | |
| 622N | Flush | |
| 632N | Super full flush | |
| 622NA | Flush | |
| 622NB | Flush | |
| 676E | Flush | |
| 776E | Super full flush | |
| 632NCF | Super full flush | **Only** for soft materials: silicone, rubber, etc. |
| 670E | Flush | |
| 670EP | Flush | For micro-package contacts |
| 670EPF | Flush | **Only** for micro pitches under 0.5 mm / .019 Inch |




### Series 2400 MagicSense

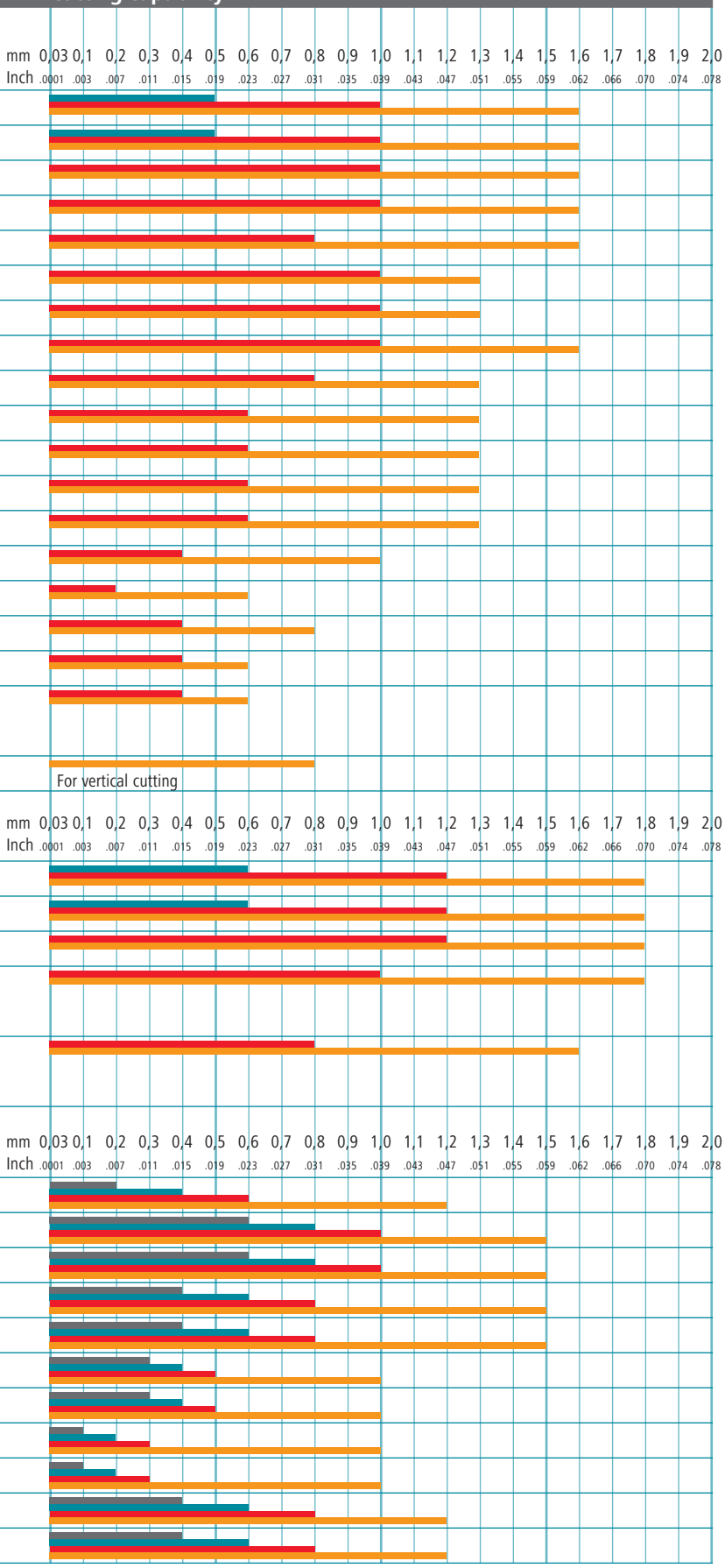
| | | |
|---|---|---|
| 2412E | Semi-flush | |
| 2422E | Flush | |
| 2432E | Super full flush | |
| 2477E | Flush | |
| 2403E 30° | Flush | |
| 2404E 30° | Flush | |
| 2482E 45° | Flush | |
| 2475E 45° | Flush | |
| 2470E | Flush | |




www.labem.pl

| Model | | Cut | |
|---|---|---|---|
| **Series 500 Medium** | | | |
| 512N | | | Semi-flush |
| 512E | | | Semi-flush |
| 522N | | | Flush |
| 599E | | | Flush |
| 532N | | | Super full flush |
| 595E | | | Flush |
| 577E | | | Flush |
| 503E | | | Flush |
| 504AE | | | Flush |
| 555E | 35° | | Flush |
| 572E | 40° | | Flush |
| 582E | 45° | | Flush |
| 582EW | | | Flush |
| 593AE | 30° | | Flush |
| 575E | 45° | | Flush |
| 592E | | | Flush |
| 792E | | | Super full flush |
| 570E | | | Flush |
| 573E | | | Flush |
| **Series 800 Maxi** | | | |
| 812N | | | Semi-flush |
| 896E | | | Semi-flush |
| 822N | | | Flush |
| 886E | | | Flush |
| 884E | | | Flush |
| **Tungsten-carbide cutters** | | | |
| 622TX | | | Flush |
| 599T | | | Semi-flush |
| 599TF | | | Flush |
| 595T | | | Semi-flush |
| 595TF | | | Flush |
| 2476TX1 | | | Flush |
| 576TX1 | | | Flush |
| 2476 TX | | | Flush |
| 576TX | | | Flush |
| 503ET | 30° | | Semi-flush |
| 503ETF | 30° | | Semi-flush |

**Cutting capability**



## Side cutters for use in medical device manufacturing

The 632NCF miniature side cutter is ideally suitable for soft material such as silicone tubes in medical device applications, precision connector seals or miniature rubber seals.

The miniature cutter is also the ideal tool for cutting soft synthetic parts, e.g. in the manufacture of hearing aids.

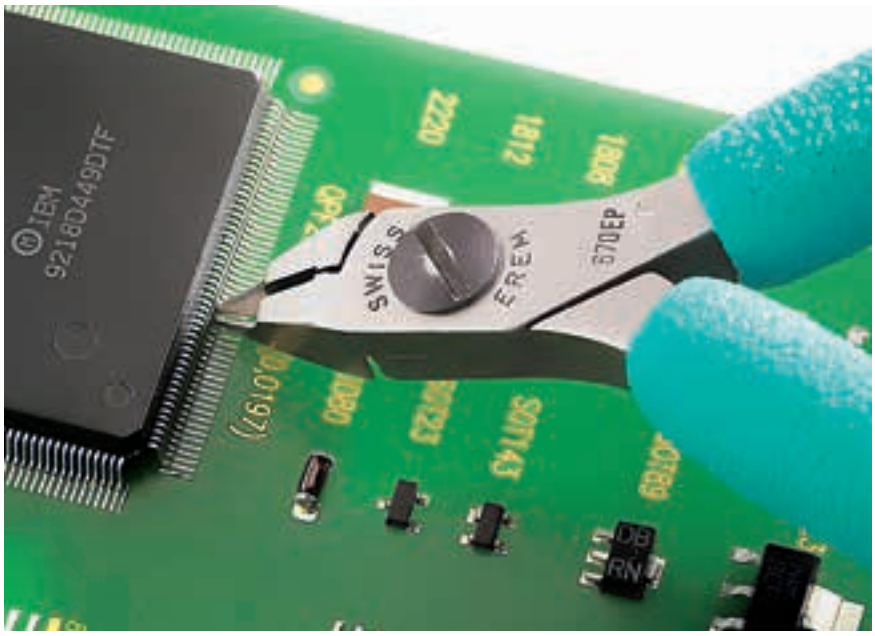
The cutting edges of the 632NCF side cutter are precision-ground to an extremely high level. This enables the cutter to deliver a razor-like full-flush cut.

## Tip cutters to remove fine pitch SMD ICs

A simple method to remove SMD ICs is to cut each of the individual leads to remove the device and then reflow the joint with a soldering iron and remove the component lead from the board.

The solder left on the board can then be removed with a desoldering tool or desolder braid and a new component fitted.

The 670EP and 670EPF have fine pointed tapered and relieved heads that are able to fit between individual leads and cut them without causing damage to the printed circuit.




www.labem.pl

## Tungsten-carbide cutter for the preparation of cardio-vascular stents

A stent is a vascular-wall prop. It is a lattice-shaped tube made of stainless steel or nickel-titanium. It serves to hold open constricted coronary blood vessels and improves the flow of blood through the vessels.

It is important in stent manufacture that the cut end of any wire in the lattice is as flat as possible, otherwise it will be necessary rework the stents.

These side cutters have fine polished carbide cutting blades to accurately cut the lattice and reduce the need for rework.

## High precision side cutter for cutting stainless wires

The 599TFO has wear resistant tungsten carbide cutting edges and all round capability. It is able to cut Vectran™ braided wires, fibre optics, Kevlar® and small stainless steel braids and wires.

A further application lies in telecommunications, i.e. working on fibre-optic cables, Kevlar® silks and piano wires.

Vectran™ is a Trademark of Kurary Co., Ltd.
Kevlar® is a registered Trademark of E.I. Dupont de Nemours and Company

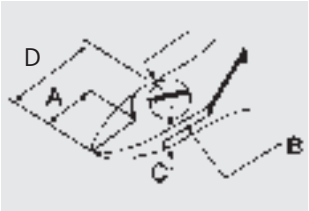
www.labem.pl

## Series 600 Micro

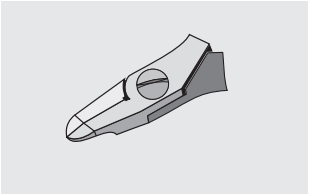
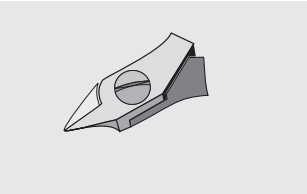
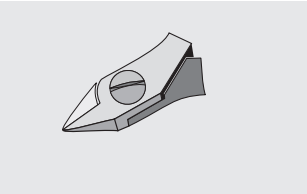
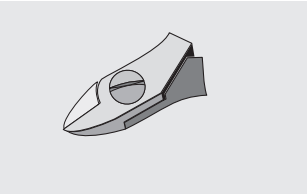
- Miniature cutters
- Offers a wide variety of head shapes for access in difficult to reach areas
- Suitable for SMD and leads (670EP, 670EPF)
- Made from high grade tool steel with cutting edges hardened to 63-65HRc
- Non reflecting surface, ESD safe, resharpenable

www.labem.pl

# Series 600 Micro




A = length of cutting edges
B = head width
C = head thickness
D = head length

| Tip cutter<br>Straight short<br>relieved head | Tip cutter<br>Pointed<br>relieved head | Side cutter<br>Tapered head | Side cutter<br>Oval head |
|---|---|---|---|
|  |  |  |  |

**Visibility and accessibility** — **Robustness, high cutting capacity**

## Side cutter – oval head

**110 mm/4.331 Inch**
**48 g/1.69 oz.**

- This is the most widely used head shape.
- Fits for all cutting applications where easy access is given
- It is robust and size for size offers the highest cutting capacity.

| Model | Cut | Dimensions in mm/Inch | | | | Max. cutting capability in mm/Inch Diameter | | |
|---|---|---|---|---|---|---|---|---|
| | | A | B | C | D | Hard wire | Medium hardness | Copper wire |
| **612N** | Semi-flush | 9<br>.354 | 9<br>.354 | 6<br>.236 | 15<br>.590 | 0.5<br>.019 | 0.8<br>.031 | 1.3<br>.051 |
| **622N** | Flush | 9<br>.354 | 9<br>.354 | 6<br>.236 | 15<br>.590 | – | 0.8<br>.031 | 1.3<br>.051 |
| **632N** | Super full flush | 9<br>.354 | 9<br>.354 | 6<br>.236 | 15<br>.590 | – | 0.7<br>.027 | 1.3<br>.051 |

Wire quality, see P. 38

www.labem.pl

# Series 600 Micro

## Side cutter – tapered head

**110 mm/4.331 Inch**
**48 g/1.69 oz**

- The jaws of the cutter have straight edges and taper to a point.
- This head shape allows access to difficult to reach areas but reduces the cutting capacity in comparison to the same size oval head cutter.

| Model | Cut | Dimensions in mm/Inch | | | | Max. cutting capability in mm/Inch Diameter | |
|---|---|---|---|---|---|---|---|
| | | A | B | C | D | Medium hardness | Copper wire |
| **622NA** | Flush | 9<br>.354 | 9<br>.354 | 6<br>.236 | 15<br>.590 | 0.7<br>.027 | 1.0<br>.039 |

## Tip cutter – pointed relieved head

**110 mm/4.331 Inch**
**48 g/1.69 oz.**

- This is the narrowest head shape.
- The underside is relieved and facilitates optimum access even to extremely hard-to-reach areas.

| Model | Cut | Dimensions in mm/Inch | | | | Max. cutting capability in mm/Inch Diameter | |
|---|---|---|---|---|---|---|---|
| | | A | B | C | D | Medium hardness | Copper wire |
| **622NB** | Flush | 9<br>.354 | 9<br>.354 | 6<br>.236 | 15<br>.590 | 0.6<br>.023 | 0.8<br>.031 |
| **676E** | Flush | 9<br>.354 | 9<br>.354 | 6<br>.236 | 15<br>.590 | Model same as 622NB, but with short, robust head | |
| **776E** | Super full flush | 9<br>.354 | 9<br>.354 | 6<br>.236 | 15<br>.590 | 0.6<br>.023 | 0.8<br>.031 |
| **632NCF** | Super full flush | 9<br>.354 | 9<br>.354 | 6<br>.236 | 15<br>.590 | For soft material such as small silicone tubes, miniature rubber seals or for cutting soft synthetic parts | |

www.labem.pl

# Series 600 Micro

## Tip cutter – straight short relieved head

**110 mm/4.331 Inch**
**48 g/1.69 oz.**

- Suitable for cutting SMD and micro-package contacts.

| Model | Cut | Dimensions in mm/Inch | | | | Max. cutting capability in mm/Inch Diameter | |
|---|---|---|---|---|---|---|---|
| | | A | B | C | D | Medium hardness | Copper wire |
| **670E** | Flush | 9<br>.354 | 9<br>.354 | 6<br>.236 | 18<br>.709 | 0.5<br>.019 | 0.8<br>.031 |
| **670EP** | Flush | 9<br>.354 | 9<br>.354 | 6<br>.236 | 18<br>.709 | 0.4<br>.015 | 0.6<br>.023 |
| | | High-precision working on SMD and micro-package contacts up to 0.25 mm/.010 Inch | | | | | |
| **670EPF*** | Flush | 9<br>.354 | 9<br>.354 | 6<br>.236 | 18<br>.709 | Model same as 670EP, but smaller version **only** for micro pitches under 0.5 mm/.019 Inch (see also P. 40) | |

*Not available in North America

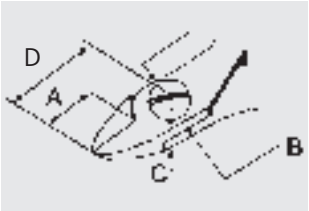
www.labem.pl

## Series 2400 MagicSense

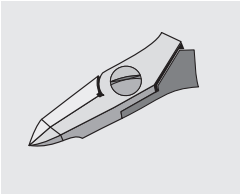
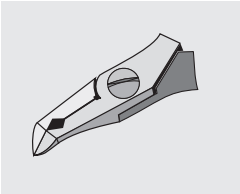
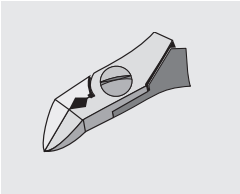
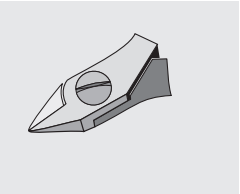
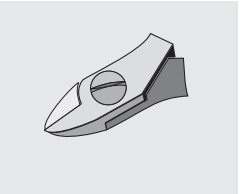
- Medium-size cutter
- Combines robustness, visibility and accessibility.
- Large variety of head shapes for precision working in hard-to-reach areas.
- The optimised ergonomic shape of the Series 2400 MagicSense prevents hand fatigue
- Improved induction-hardened cutting edges up to 64 – 65 HRc for an extremely long service life
- Cutting edges made from special tool steel
- Non-reflecting surface, ESD-safe nd resharpenable

www.labem.pl

# Series 2400 MagicSense




A = length of cutting edges
B = head width
C = head thickness
D = head length

| Tip cutter<br>Straight long<br>relieved head | Tip cutter<br>Angled<br>narrow head | Tip cutter<br>Angled<br>wide head | Side cutter<br>Tapered head | Side cutter<br>Oval head |
|---|---|---|---|---|
|  |  |  |  |  |

**Visibility and accessibility** — **Robustness, high cutting capacity**

## Side cutter – oval head

**130 mm/5.118 Inch**
**70 g/2.47 oz.**

- This is the most widely used head shape.
- Fits for all cutting applications where easy access is given
- It is robust and size for size offers the highest cutting capacity.

| Model | Cut | Dimensions in mm/Inch | | | | Max. cutting capability in mm/Inch Diameter | | |
|---|---|---|---|---|---|---|---|---|
| | | A | B | C | D | Hard wire | Medium hardness | Copper wire |
| **2412E** | Semi-flush | 12<br>.472 | 11<br>.433 | 6<br>.236 | 19<br>.748 | 0.5<br>.019 | 1.0<br>.039 | 1.6<br>.062 |
| **2422E** | Flush | 12<br>.472 | 11<br>.433 | 6<br>.236 | 19<br>.748 | – | 1.0<br>.039 | 1.6<br>.062 |
| **2432E** | Super full flush. | 12<br>472 | 11<br>.433 | 6<br>.236 | 19<br>.748 | – | 0.8<br>.039 | 1.6<br>.062 |

Wire quality, see P. 38
Optional: Safety device for wire scraps. Order suffix „W“, e.g. 2412W.

www.labem.pl

## Series 2400 MagicSense

### Side cutter – tapered head

**127 mm/5.999 Inch**
**70 g/2.47 oz.**

- The jaws of the cutter have straight edges and taper to a point.
- This head shape allows access to difficult to reach areas but reduces the cutting capacity in comparison to the same size oval head cutter.

| Model | Cut | Dimensions in mm/Inch | | | | Max. cutting capability in mm/Inch Diameter | |
|---|---|---|---|---|---|---|---|
| | | A | B | C | D | Medium hardness | Copper wire |
| **2477E** | Flush | 12<br>.472 | 11<br>.472 | 6<br>.433 | 19<br>.236 | 1.0<br>.039 | 1.3<br>.051 |

### Tip cutter – angled wide head

**127 mm/5.118 Inch**
**70 g/2.47 oz.**
**30°**

- The angled head provides for precise cuts at different working angles.

| Model | Cut | Dimensions in mm/Inch | | | | Max. cutting capability in mm/Inch Diameter | |
|---|---|---|---|---|---|---|---|
| | | A | B | C | D | Medium hardness | Copper wire |
| **2403E** | Flush | 9<br>.354 | 11<br>.433 | 6<br>.236 | 19<br>.748 | 1.0<br>.039<br>Wide, robust head, fine cut | 1.6<br>.062 |
| **2404E** | Flush | 9<br>.354 | 11<br>.433 | 6<br>.236 | 20<br>.787 | 0.8<br>.031<br>Model same as 2403E, but with pointed rounded head | 1.3<br>.051 |

www.labem.pl

# Series 2400 MagicSense

## Tip cutter – angled narrow head

**135 mm/5.315 Inch**
**72 g/2.54 oz.**
**45°**

- The angled head provides for precise cuts at different working angles.

| Model | Cut | Dimensions in mm/Inch | | | | Max. cutting capability in mm/Inch Diameter | |
|---|---|---|---|---|---|---|---|
| | | A | B | C | D | Medium hardness | Copper wire |
| **2482E** | Flush | 6<br>.236 | 11<br>.433 | 6<br>.236 | 26<br>1.024 | 0.6<br>.023 | 1.2<br>.047 |
| | | Suitable for working on printed-circuit boards, component connections, can be used in both 90° and 180° applications | | | | | |
| **2475E** | Flush | 4<br>.157 | 11<br>.433 | 6<br>.236 | 22<br>.866 | 0.4<br>.015 | 0.6<br>.023 |
| | | Suitable for fine cutting work on hybrid circuits of miniature components | | | | | |

## Tip cutter – straight long relieved head

**140 mm/5.512 Inch**
**72 g/2.54 oz.**

- This head is suitable for horizontal and vertical cuts.
- The long tips facilitate cutting in hard-to-reach areas.

| Model | Cut | Dimensions in mm/Inch | | | | Max. cutting capability in mm/Inch Diameter | |
|---|---|---|---|---|---|---|---|
| | | A | B | C | D | Medium hardness | Copper wire |
| **2470E** | Flush | 4<br>.157 | 11<br>.433 | 6<br>.236 | 29<br>1.142 | 0.4<br>.015 | 0.6<br>.023 |

Safety device for wire scraps **only** possible on 2412EW, 2422EW, 2432EW, 2477EW, 2482EW models.

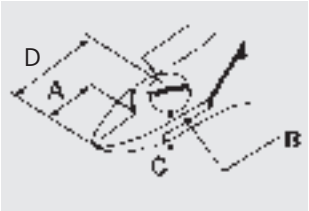
www.labem.pl

## Series 500 Medium

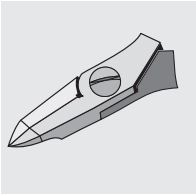
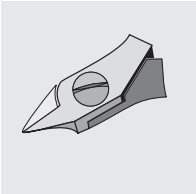
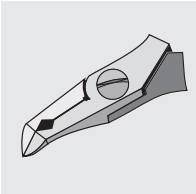
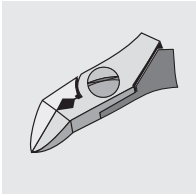
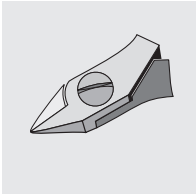
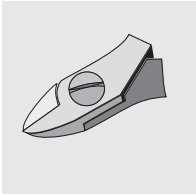
- Medium size, robust, precision cutters
- Wide range of head shapes
- Manufactured from high grade tool steel
- Cutting edges hardened to Rockwell 63-65 HRc
- Non reflecting surface, ESD safe and resharpenable

www.labem.pl

# Series 500 Medium




A = length of cutting edges
B = head width
C = head thickness
D = head length

| Tip cutter Straight long relieved head | Tip cutter Pointed relieved head | Tip cutter Angled narrow head | Tip cutter Angled wide head | Side cutter Tapered head | Side cutter Oval head |
|---|---|---|---|---|---|
|  |  |  |  |  |  |

**Visibility and accessibility** — **Robustness, high cutting capacity**

## Side cutter – oval head

**115 mm/4.527 Inch**
**67 g/2.36 oz.**

- This is the most widely used head shape.
- Fits for all cutting applications where easy access is given
- It is robust and size for size offers the highest cutting capacity.

| Model | Cut | Dimensions in mm/Inch | | | | Max. cutting capability in mm/Inch Diameter | | |
|---|---|---|---|---|---|---|---|---|
| | | A | B | C | D | Hard wire | Medium hardness | Copper wire |
| **512N** | Semi-flush | 12<br>.472 | 11<br>.433 | 6.5<br>.256 | 19<br>.748 | 0.5<br>.019 | 1.0<br>.039 | 1.6<br>.062 |
| **512E** | Semi-flush | 12<br>.472 | 11<br>.433 | 6.5<br>.256 | 19<br>.748 | Model same as 512N, but with burnished head | | |
| **522N** | Flush | 12<br>.472 | 11<br>.433 | 6.5<br>.256 | 19<br>.748 | – | 1.0<br>.039 | 1.6<br>.062 |
| **599E** | Flush | 10<br>.472 | 11<br>.433 | 6.5<br>.256 | 17<br>.669 | – | 1.0<br>.039 | 1.6<br>.062 |
| | | | | | | Short, robust head | | |
| **532N** | Super full flush | 12<br>.472 | 11<br>.433 | 6.5<br>.256 | 19<br>.748 | – | 0.8<br>.039 | 1.6<br>.062 |

Wire quality, see P. 38 Optional: Safety device for wire scraps. Order suffix „W“, e.g. 512NW.

www.labem.pl

## Series 500 Medium

### Side cutter – tapered head

**115 mm/4.527 Inch**
**67 g/2.36 oz.**

- The jaws of the cutter have straight edges and taper to a point.
- This head shape allows access to difficult to reach areas but reduces the cutting capacity in comparison to the same size oval head cutter.

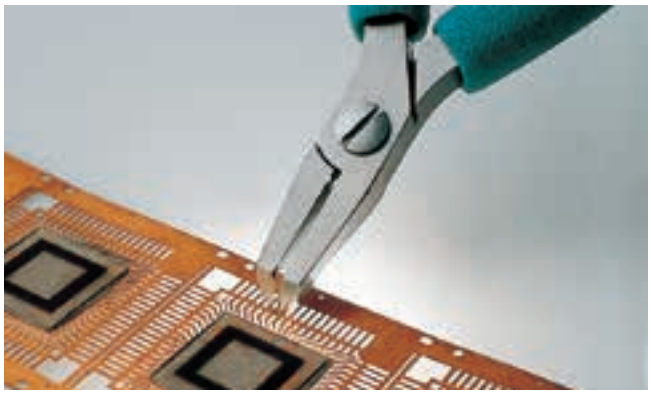
| Model | Cut | Dimensions in mm/Inch | | | | Max. cutting capability in mm/Inch Diameter | |
|---|---|---|---|---|---|---|---|
| | | A | B | C | D | Medium hardness | Copper wire |
| **595E** | Flush | 12<br>.472 | 11<br>.433 | 6.5<br>.256 | 19<br>.748 | 1.0<br>.039<br>Tapered head | 1.3<br>.051 |
| **577E** | Flush | 10<br>.472 | 11<br>.433 | 6.5<br>.256 | 17<br>.669 | 1.0<br>.039<br>Tapered, short head | 1.3<br>.051 |

### Tip cutter – angled wide head

**110 mm/4.331 Inch**
**67 g/2.36 oz.**
**30°**

- The angled head provides for precise cuts at different working angles.

| Model | Cut | Dimensions in mm/Inch | | | | Max. cutting capability in mm/Inch Diameter | |
|---|---|---|---|---|---|---|---|
| | | A | B | C | D | Medium hardness | Copper wire |
| **503E** | Flush | 9<br>.354 | 11<br>.433 | 6.5<br>.256 | 19<br>.748 | 1.0<br>.039<br>Wide, robust head | 1.6<br>.062 |
| **504AE** | Flush | 9<br>.354 | 11<br>.433 | 6.5<br>.256 | 19<br>.748 | 0.8<br>.031<br>Model same as 503E, but with pointed rounded head | 1.3<br>.051 |



www.labem.pl

# Series 500 Medium

## Tip cutter – angled narrow head

**120 mm/4.724 Inch**
**68 g/2.40 oz.**
**35°**

- The angled head provides for precise cuts at different working angles.
- Narrow, robust head, suitable for working with high cutting force in confined areas.

| Model | Cut | Dimensions in mm/Inch | | | | Max. cutting capability in mm/Inch Diameter | |
|---|---|---|---|---|---|---|---|
| | | A | B | C | D | Medium hardness | Copper wire |
| **555E** | Flush | 6<br>.236 | 11<br>.433 | 6.5<br>.256 | 24<br>.945 | 0.6<br>.023 | 1.3<br>.051 |

**115 mm/4.527 Inch**
**68 g/2.40 oz.**
**40°**

- Relieved cutting edge for easy access.

| Model | Cut | Dimensions in mm/Inch | | | | Max. cutting capability in mm/Inch Diameter | |
|---|---|---|---|---|---|---|---|
| | | A | B | C | D | Medium hardness | Copper wire |
| **572E** | Flush | 6<br>.236 | 11<br>.433 | 6.5<br>.256 | 21<br>.827 | 0.6<br>.023 | 1.3<br>.051 |

**115 mm/4.527 Inch**
**68 g/2.40 oz.**
**40°**

- Suitable for working on printed-circuit boards, component connections, can be used in both 90° and 180° applications.

| Model | Cut | Dimensions in mm/Inch | | | | Max. cutting capability in mm/Inch Diameter | |
|---|---|---|---|---|---|---|---|
| | | A | B | C | D | Medium hardness | Copper wire |
| **582E** | Flush | 6<br>.236 | 11<br>.433 | 6.5<br>.256 | 26<br>1.024 | 0.6<br>.023 | 1.3<br>.051 |

**115 mm/4.527 Inch**
**67 g/2.36 oz.**
**45°**

- Model same as 582E, but with safety device for wire scraps.

| Model | Cut | Dimensions in mm/Inch | | | | Max. cutting capability in mm/Inch Diameter | |
|---|---|---|---|---|---|---|---|
| | | A | B | C | D | Medium hardness | Copper wire |
| **582EW** | Flush | 6<br>.236 | 11<br>.433 | 6.5<br>.256 | 26<br>1.024 | 0.6<br>.023 | 1.3<br>.051 |

www.labem.pl

## Series 500 Medium

### Tip cutter – angled narrow head

**115 mm/4.527 Inch**
**68 g/2.40 oz.**
**30°**

- Ideal rework tool, suitable for cutting DIL contacts at front and rear and densely printed circuit boards.

| Model | Cut | Dimensions in mm/Inch | | | | Max. cutting capability in mm/Inch Diameter | |
|---|---|---|---|---|---|---|---|
| | | A | B | C | D | Medium hardness | Copper wire |
| **593AE** | Flush | 4<br>.157 | 11<br>.433 | 6.5<br>.256 | 26<br>1.024 | 0.4<br>.015 | 1.0<br>.039 |

**110 mm/4.331 Inch**
**67 g/2.36 oz.**
**45°**

- Suitable for fine cutting work on hybrid circuits or miniature components.

| Model | Cut | Dimensions in mm/Inch | | | | Max. cutting capability in mm/Inch Diameter | |
|---|---|---|---|---|---|---|---|
| | | A | B | C | D | Medium hardness | Copper wire |
| **575E** | Flush | 4<br>.157 | 11<br>.433 | 6.5<br>.256 | 22<br>.866 | 0.2<br>.007 | 0.6<br>.023 |

### Tip cutter – pointed relieved head

**115 mm/4.527 Inch**
**67 g/2.36 oz.**

- This is the narrowest head shape.
- The underside is relieved and facilitates optimum access even to extremely hard-to-reach areas.

| Model | Cut | Dimensions in mm/Inch | | | | Max. cutting capability in mm/Inch Diameter | |
|---|---|---|---|---|---|---|---|
| | | A | B | C | D | Medium hardness | Copper wire |
| **592E** | Flush | 12<br>.472 | 11<br>.433 | 6.5<br>.256 | 19<br>.748 | 0.4<br>.015 | 0.8<br>.031 |
| **792E** | Super full flush | 12<br>.472 | 11<br>.433 | 6.5<br>.256 | 19<br>.748 | 0.4<br>.015 | 0.6<br>.023 |

www.labem.pl

# Series 500 Medium

## Tip cutter – straight long relieved head

**120 mm/4.724 Inch**
**67 g/2.36 oz.**

- This head is suitable for horizontal and vertical cuts.
- The long tips facilitate cutting in hard-to-reach areas.

| Model | Cut | Dimensions in mm/Inch | | | | Max. cutting capability in mm/Inch Diameter | |
|---|---|---|---|---|---|---|---|
| | | A | B | C | D | Medium hardness | Copper wire |
| **570E** | Flush | 4<br>.157 | 11<br>.433 | 6.5<br>.256 | 29<br>1.142 | 0.6<br>.023<br>For cutting at extreme tips | 1.2<br>.047 |

## Tip cutter – straight head for vertical use

**120 mm/4.724 Inch**
**67 g/2.36 oz.**

| Model | Cut | Dimensions in mm/Inch | | | | Max. cutting capability in mm/Inch Diameter | |
|---|---|---|---|---|---|---|---|
| | | A | B | C | D | Medium hardness | Copper wire |
| **573E** | Flush | 4<br>.157 | 11<br>.433 | 6.5<br>.256 | 29<br>1.142 | 0.4<br>.015 | 0.6<br>.023 |

www.labem.pl

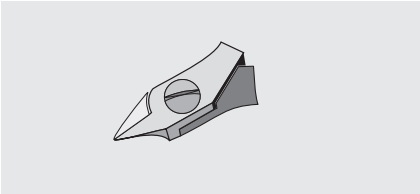
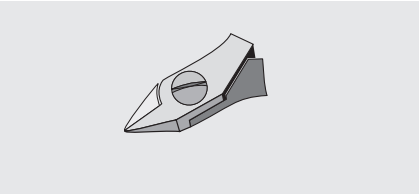
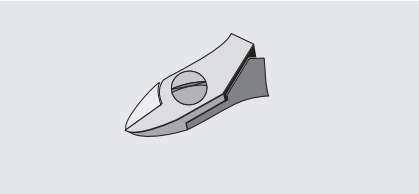
## Series 800 Maxi

- Maxi-sized cutter for general cutting applications in electronics
- Made from high grade tool steel, cutting edges hardened to Rockwell 63-65 HRc
- Cuts large wire diameters
- Non-reflecting surface, ESD-safe and resharpenable

www.labem.pl

# Series 800 Maxi

A = length of cutting edges
B = head width
C = head thickness
D = head length

| Tip cutter<br>Pointed<br>relieved head | Side cutter<br>Tapered head | Side cutter<br>Oval head |
|---|---|---|
|  |  |  |

**Visibility and accessibility** — **Robustness, high cutting capacity**

## Side cutter – oval head

**120 mm/4.724 Inch**
**67 g /2.36 oz.**

- This is the most widely used head shape.
- Fits for all cutting applications where easy access is given
- It is robust and size for size offers the highest cutting capacity.

| Model | Cut | Dimensions in mm/Inch | | | | Max. cutting capability in mm/Inch Diameter | | |
|---|---|---|---|---|---|---|---|---|
| | | A | B | C | D | Hard wire | Medium hardness | Copper wire |
| 812N | Semi-flush | 15<br>.590 | 13.5<br>.531 | 7.5<br>.295 | 21<br>.827 | 0.6<br>.023 | 1.2<br>.047 | 1.8<br>.070 |
| 896E | Semi-flush | 15<br>.590 | 13,5<br>.531 | 7,5<br>.295 | 21<br>.827 | ø 0,6<br>.023 | ø 1,2<br>.047 | ø 1,8<br>.070 |
| | | Suitable for cutting hard wires, Kovar, connector pins | | | | | | |
| 822N | Flush | 15<br>.590 | 13.5<br>.531 | 7.5<br>.295 | 21<br>.827 | – | 1.2<br>.047 | 1.8<br>.070 |

Wire quality, see P. 38

www.labem.pl

## Series 800 Maxi

### Side cutter – tapered head

**120 mm/4.724 Inch**
**83 g/2.93 oz.**

- The jaws of the cutter have straight edges and taper to a point.
- This head shape allows access to difficult to reach areas but reduces the cutting capacity in comparison to the same size oval head cutter.

| Model | Cut | Dimensions in mm/Inch | | | | Max. cutting capability in mm/Inch Diameter | |
|---|---|---|---|---|---|---|---|
| | | A | B | C | D | Medium hardness | Copper wire |
| **886E** | Flush | 15<br>.590 | 13.5<br>.531 | 7.5<br>.295 | 21<br>.827 | 1.0<br>.039 | 1.8<br>.070 |

### Tip cutter – pointed relieved head

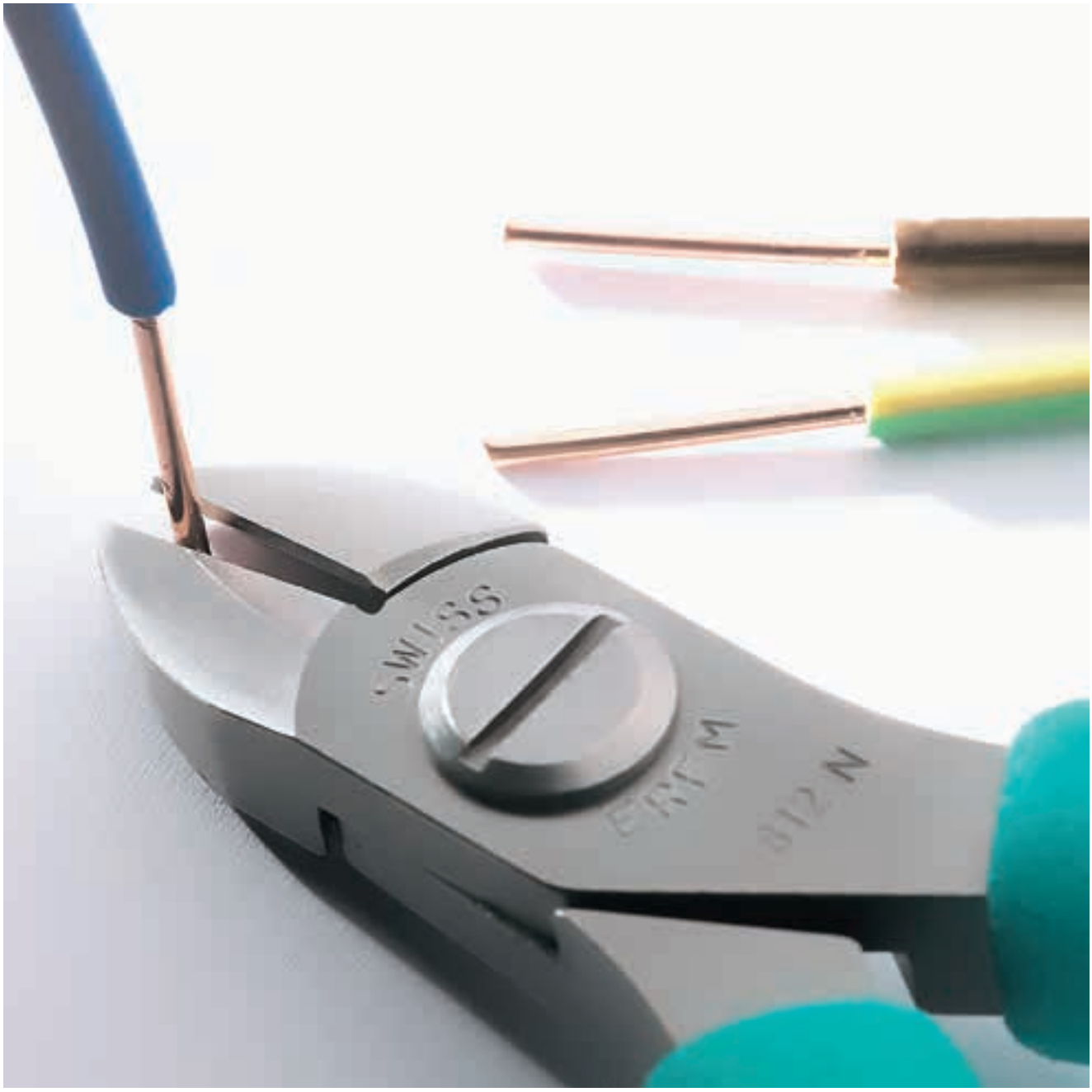
**120 mm/4.724 Inch**
**81 g/2.86 oz.**

- This is the narrowest head shape.
- The underside is relieved and facilitates optimum access even to extremely hard-to-reach areas.

| Model | Cut | Dimensions in mm/Inch | | | | Max. cutting capability in mm/Inch Diameter | |
|---|---|---|---|---|---|---|---|
| | | A | B | C | D | Medium hardness | Copper wire |
| **884E** | Flush | 15<br>.590 | 13.5<br>.531 | 7.5<br>.295 | 21<br>.827 | 0.8<br>.031 | 1.6<br>.062 |

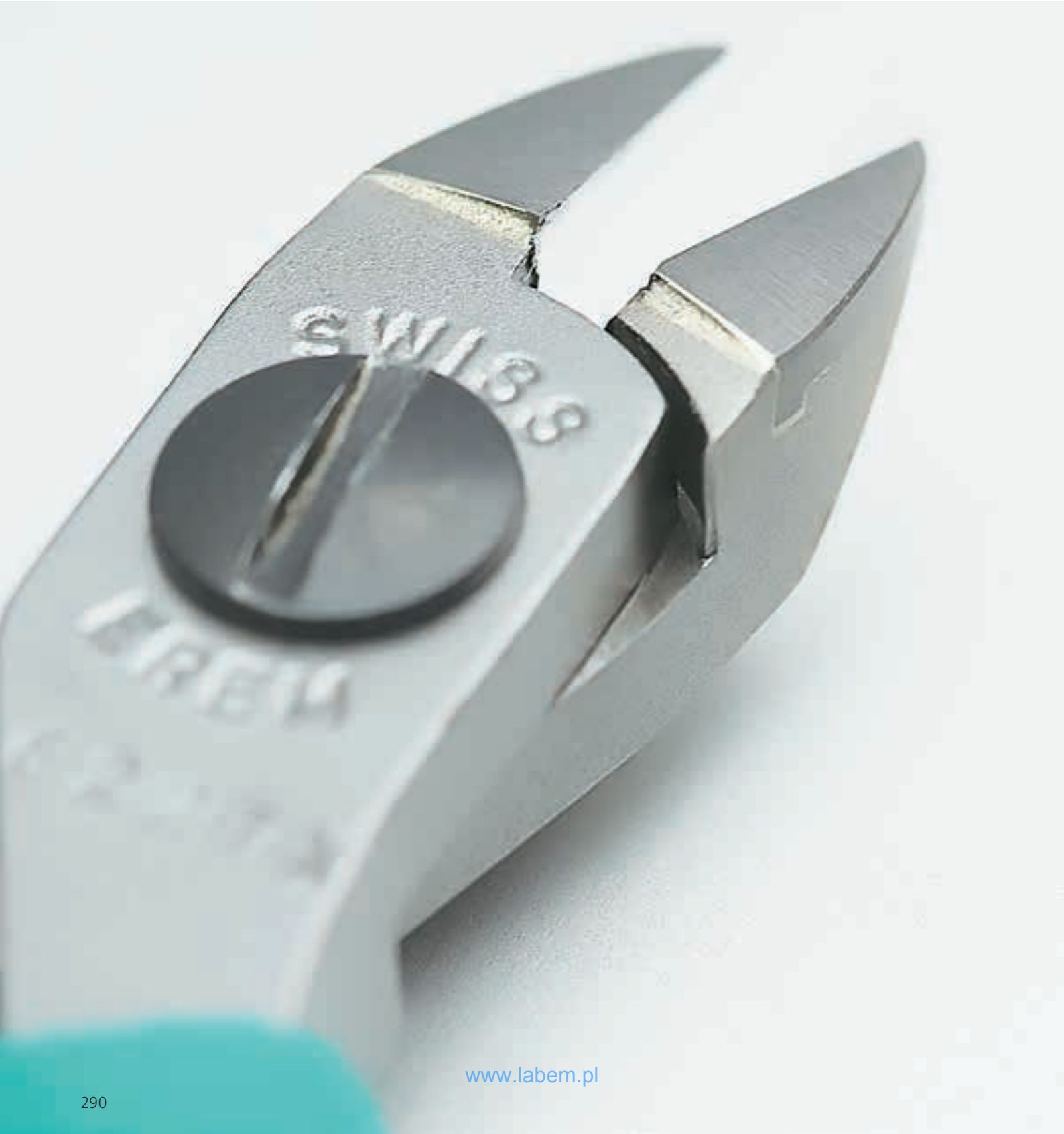
www.labem.pl

Series 800 Maxi



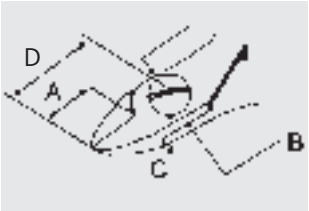
## Tungsten-carbide cutters

- Medium sized precision cutters
- Wear resistant tungsten carbide edged cutting blades
- Manufactured from high grade tool steel
- Suitable for cutting hard and tough wires e.g. piano wire, nickel and diode leads
- Non reflecting surface, ESD safe and resharpenable

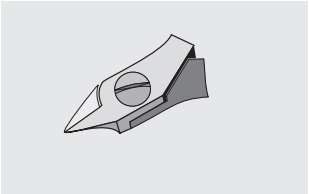
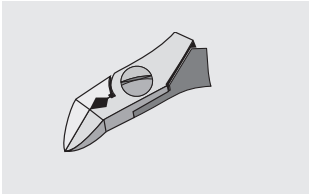
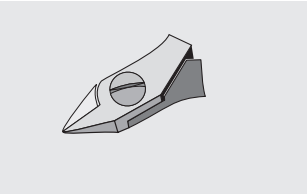
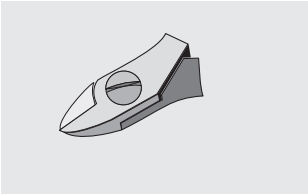



www.labem.pl

# Tungsten-carbide cutters




A = length of cutting edges
B = head width
C = head thickness
D = head length

| Tip cutter<br>Pointed<br>relieved head | Tip cutter<br>Angled<br>wide head | Side cutter<br>Tapered head | Side cutter<br>Oval head |
|---|---|---|---|
|  |  |  |  |

**Visibility and accessibility** ⟷ **Robustness, high cutting capacity**

## Side cutter – oval head

**115 mm/4.527 Inch**
**67 g/2.36 oz.**

- This is the most widely used head shape.
- Fits for all cutting applications where easy access is given
- It is robust and size for size offers the highest cutting capacity.

| Model | Cut | Dimensions in mm/Inch | | | | Max. cutting capability in mm/Inch Diameter | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | A | B | C | D | Piano wire | Hard wire | Medium hardness | Copper wire |
| **622TX** | Flush | 8<br>.315 | 9<br>.354 | 6<br>.236 | 15<br>.590 | 0.2<br>.007<br>Miniature cutter | 0.4<br>.015 | 0.6<br>.023 | 1.2<br>.047 |
| **599T** | Semi-flush | 12<br>.472 | 11<br>.433 | 6.5<br>.256 | 19<br>.748 | 0.6<br>.023 | 0.8<br>.031 | 1.0<br>.039 | 1.5<br>.059 |
| **599TF** | Flush | 12<br>.472 | 11<br>.433 | 6.5<br>.256 | 19<br>.748 | 0.6<br>.023 | 0.8<br>.031 | 1.0<br>.039 | 1.5<br>.059 |

Wire quality, see P. 38

www.labem.pl

## Tungsten-carbide cutters

### Side cutter – tapered head

**115 mm/4.527 Inch**
**67 g/2.36 oz.**

- The jaws of the cutter have straight edges and taper to a point.
- This head shape allows access to difficult to reach areas but reduces the cutting capacity in comparison to the same size oval head cutter.

| Model | Cut | Dimensions in mm/Inch | | | | Max. cutting capability in mm/Inch Diameter | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | A | B | C | D | Piano wire | Hard wire | Medium hardness | Copper wire |
| **595T** | Semi-flush | 12<br>.472 | 11<br>.433 | 6.5<br>.256 | 19<br>.748 | 0.4<br>.015 | 0.6<br>.023 | 0.8<br>.031 | 1.5<br>.059 |
| **595TF** | Flush | 12<br>.472 | 11<br>.433 | 6.5<br>.256 | 19<br>.748 | 0.4<br>.015 | 0.6<br>.023 | 0.8<br>.031 | 1.5<br>.059 |
| **2476TX1** | Flush | 11<br>.433 | 11<br>.433 | 6<br>.236 | 19<br>.748 | 0.3<br>.011 | 0.4<br>.015 | 0.5<br>.019 | 1.0<br>.039 |
| | | | | | | Series 2400 MagicSense model (Length: 130 mm / 5.118 Inch) | | | |
| **576TX1** | Flush | 11<br>.433 | 11<br>.433 | 6.5<br>.256 | 19<br>.748 | 0.3<br>.011 | 0.4<br>.015 | 0.5<br>.019 | 1.0<br>.039 |

www.labem.pl

# Tungsten-carbide cutters

## Tip cutter – pointed relieved head

**115 mm/4.527 Inch**
**67 g/2.36 oz.**

- This is the narrowest head shape.
- The underside is relieved and facilitates optimum access even to extremely hard-to-reach areas.

| Model | Cut | Dimensions in mm/Inch | | | | Max. cutting capability in mm/Inch Diameter | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | A | B | C | D | Piano wire | Hard wire | Medium hardness | Copper wire |
| **2476TX** | Flush | 11<br>.433 | 11<br>.433 | 6<br>.236 | 19<br>.748 | 0.1<br>.003 | 0.2<br>.007<br>Series 2400 MagicSense model | 0.3<br>.011 | 1.0<br>.039 |
| **576TX** | Flush | 11<br>.433 | 11<br>.433 | 6.5<br>.256 | 19<br>.748 | 0.1<br>.003 | 0.2<br>.007 | 0.3<br>.011 | 1.0<br>.039 |

## Tip cutter – angled wide head

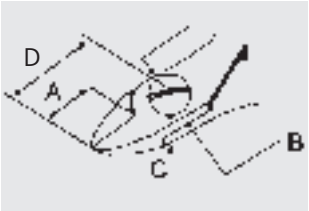
**110 mm/4.331 Inch**
**67 g/2.36 oz.**
**30°**

- The angled head provides for precise cuts at different working angles.

| Model | Cut | Dimensions in mm/Inch | | | | Max. cutting capability in mm/Inch Diameter | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | A | B | C | D | Piano wire | Hard wire | Medium hardness | Copper wire |
| **503ET** | Semi-flush | 9<br>.354 | 11<br>.433 | 6.5<br>.256 | 19<br>.748 | 0.4<br>.015 | 0.6<br>.023 | 0.8<br>.031 | 1.2<br>.047 |
| **503ETF** | Flush | 9<br>.354 | 11<br>.433 | 6.5<br>.256 | 20<br>.787 | 0.4<br>.015 | 0.6<br>.023 | 0.8<br>.031 | 1.2<br>.047 |

www.labem.pl

## Special applications




A = length of cutting edges
B = head width
C = head thickness
D = head length

### Special applications – Special tool steel, ESD-safe

**120 mm/4.724 Inch**
**100 g/3.53 oz.**

- Side cutter with compound action.

| Model | Cut | Dimensions in mm/Inch | | | Max. cutting capability in mm/Inch Diameter | |
|---|---|---|---|---|---|---|
| | | A | B | C | Copper wire | |
| **147A** | Semi-flush | 12<br>.472 | 10.5<br>.413 | 7.5<br>.295 | 1.8<br>.070 | For cutting hard wires with minimal effort |
| **147AT** | Semi-flush | 12<br>.472 | 10.5<br>.413 | 7.5<br>.295 | 1.8<br>.070 | Model same as 147A, but with cutting edges made from tungsten carbide, model on request |

**115 mm/4.527 Inch**
**79 g/2.79 oz.**

- Side cutter, suitable for cutting printed-circuit boards.

| Model | Cut | Max. cutting capability in mm/Inch | | |
|---|---|---|---|---|
| | | Max. D | Max. B | |
| **1884EPCM** | Flush | 1.5<br>.059 | 2.0<br>.078 | |

*Not available in North America

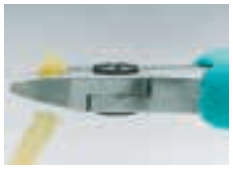
www.labem.pl

# Special applications

**110 mm/4.331 Inch**
**48 g/1.69 oz.**

- Side cutter, suitable for precision cuts on soft materials, e.g. small silicone tubes in medical applications, precision connector seals, miniature rubber seals, soft synthetic parts.

| Model | Cut | Dimensions in mm/Inch | | |
|---|---|---|---|---|
| | | A | B | C |
| **632NCF** | Super full flush | 9<br>.354 | 9<br>.354 | 6<br>.236 |



**115 mm/4.527 Inch**
**67 g/2.36 oz.**

- Side cutter, suitable for cutting Kevlar® silks.

| Model | Dimensions in mm/Inch | | | |
|---|---|---|---|---|
| | A | B | C | D |
| **599FO** | 12<br>.472 | 11<br>.433 | 6.5<br>.256 | 19<br>.748 |

**115 mm/4.527 Inch**
**67 g/2.36 oz.**

- Side cutter with cutting edges made from tungsten carbide.

| Model | Cut | Dimensions in mm/Inch | | | | |
|---|---|---|---|---|---|---|
| | | A | B | C | D | |
| **599TFO** | Semi-flush | 12<br>.472 | 10.5<br>.413 | 6.5<br>.256 | 19<br>.748 | Model same as 599FO, but with cutting edges made from tungsten carbide. Suitable for cutting Kevlar® silks, Vectran™-sheathed wires, optical fibres and small stainless wires |

www.labem.pl

## Pneumatic side cutters and tip cutters

- Pneumatic cutter
- Handy, light and precise
- Extremely versatile thanks to a selection of different cutting heads
- Easily interchangeable cutting heads
- Suitable for cutting conventional components, soft metals or small plastic parts

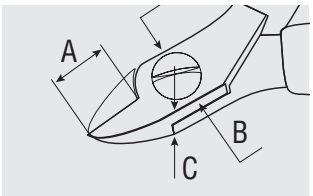
### Pneumatic side cutters and tip cutters

**130 mm/5.118 Inch**
**130 g/4.59 oz.**

- Pneumatic-cutter housing

| Model | Dimensions in mm/Inch Diameter | |
|---|---|---|
| | D | |
| **1500 BSF** | 28 | Requires 4 – 6 bar oil-free clean compressed air |

### Cutting heads for 1500BSF




A = length of cutting edges
B = head width
C = head thickness

### Side cutter – oval head

**35 g/1.16 oz.**

- This is the standard head shape.
- It is used for all cutting jobs in easy-to-reach areas.
- The oval head provides for a high cutting capacity and is characterised by its robustness.

| Model | Cut | Dimensions in mm/Inch | | | Max. cutting capability in mm/Inch Diameter |
|---|---|---|---|---|---|
| | | A | B | C | Copper wire |
| **1512N** | Semi-flush | 10<br>.394 | 10.5<br>.413 | 6.5<br>.256 | 1.6<br>.062 |
| **1522N** | Flush | 10<br>.394 | 10.5<br>.413 | 6.5<br>.256 | 1.6<br>.062 |

Wire quality, see P. 38

www.labem.pl

# Pneumatic side cutters and tip cutters

## Side cutter – tapered head

**35 g/1.16 oz.**

- The edges of the cutter head are straight and taper to a point, allowing access to hard to reach areas.

| Model | Cut | Dimensions in mm/Inch | | | Max. cutting capability in mm/Inch Diameter |
|---|---|---|---|---|---|
| | | A | B | C | Copper wire |
| **1522NA** | Flush | 9<br>.354 | 10.5<br>.413 | 6.5<br>.256 | 1.4<br>.055 |

## Side cutter – pointed relieved head

**32 g/1.12 oz.**

- This is the narrowest head shape.
- The underside is relieved and facilitates optimum access even to extremely hard-to-reach areas.

| Model | Cut | Dimensions in mm/Inch | | | Max. cutting capability in mm/Inch Diameter |
|---|---|---|---|---|---|
| | | A | B | C | Copper wire |
| **1522NB** | Flush | 9<br>.354 | 10.5<br>.413 | 6.5<br>.256 | 1.2<br>.047 |

## Tip cutter – angled head

**38 g/1.34 oz.**
**30°**

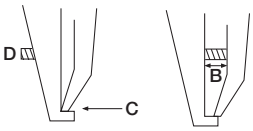
- The angled head provides for precise cuts at different working angles.

| Model | Cut | Dimensions in mm/Inch | | | Max. cutting capability in mm/Inch Diameter |
|---|---|---|---|---|---|
| | | A | B | C | Copper wire |
| **1503E** | Flush | 12<br>.472 | 10.5<br>.413 | 6.5<br>.256 | 1.2<br>.047 |

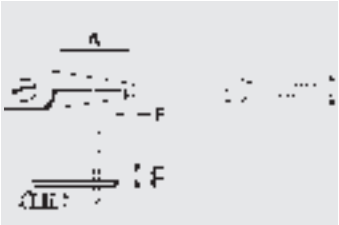
www.labem.pl

## Distance cutters

- Erem distance cutters are available with fixed and variable cutting lengths
- The tips are polished so as to prevent board damage
- For cutting wires to the right length and for fixing components




The protective stop screw D improves the performance of Erem distance cutters:
– Clearance B larger than the wire diameter = cut wire is ejected.
– Clearance B smaller than the wire diameter = cut wire is held.
Adjust protective stop screw D so that cutting edge C does not hit the opposite side.
This increases the lifetime of the cutting edge.




A = jaw length
E = width of tips
F = cutting length

### Fixed cutting length (F)

**120 mm/4.724 Inch**
**67 g/2.36 oz.**

- Special tool steel
- ESD-safe
- Fixed cutting length (= F)
- Reduces mechanical shock on components

| Model | Cut | Dimensions in mm/Inch | | | Max. cutting capability in mm/Inch Diameter | |
|---|---|---|---|---|---|---|
| | | A | E | F | Copper wire | |
| **530E06**** | Flush | 20<br>.787 | 3<br>.118 | 0.6<br>.023 | 1.2<br>.047 | Cuts copper wire to a length of 0.6 mm/.023 Inch |
| **530E08** | Flush | 20<br>.787 | 3<br>.118 | 0.8<br>.031 | 1.2<br>.047 | Cuts copper wire to a length of 0.8 mm/.031 Inch |
| **530E10** | Flush | 20<br>.787 | 3<br>.118 | 1.0<br>.039 | 1.2<br>.047 | Cuts copper wire to a length of 1.0 mm/.039 Inch |
| **530E12*** | Flush | 20<br>.787 | 3<br>.118 | 1.2<br>.047 | 1.2<br>.047 | Cuts copper wire to a length of 1.2 mm/.047 Inch |
| **530E13*** | Flush | 20<br>.787 | 3<br>.118 | 1.3<br>.051 | 1.2<br>.047 | Cuts copper wire to a length of 1.3 mm/.051 Inch |
| **530E15** | Flush | 20<br>.787 | 3<br>.118 | 1.5<br>.059 | 1.2<br>.047 | Cuts copper wire to a length of 1.5 mm/.059 Inch |

Wire quality, see P. 38
*Not available in North America **Order as 539E060 in North America

www.labem.pl

# Distance cutters

| Model | Cut | Dimensions in mm/Inch A | E | F | Max. cutting capability in mm/Inch Diameter Copper wire | |
|---|---|---|---|---|---|---|
| **530E18*** | Flush | 20<br>.787 | 3<br>.118 | 1.8<br>.070 | 1.2<br>.047 | Cuts copper wire to a length of 1.8 mm/.070 Inc |
| **530E20*** | Flush | 20<br>.787 | 3<br>.118 | 2.0<br>.078 | 1.2<br>.047 | Cuts copper wire to a length of 2.0 mm/.078 Inch |

**120 mm/4.724 Inch**
**67 g/2.36 oz.**
**45°**

- Special tool steel
- ESD-safe
- Fixed length distance cutter
- Tapered 45°

| Model | Cut | Dimensions in mm/Inch A | E | F | Max. cutting capability in mm/Inch Diameter Copper wire | |
|---|---|---|---|---|---|---|
| **549E** | Flush | 20<br>.787 | 3<br>.118 | 1.5<br>.059 | 1.2<br>.047 | Cuts wire to a length of 1.5 mm/.059 Inch |
| **549E10*** | Flush | 20<br>.787 | 3<br>.118 | 1.0<br>.039 | 1.2<br>.047 | Cuts wire to a length of 1.0 mm/.039 Inch |
| **549E12*** | Flush | 20<br>.787 | 3<br>.118 | 1.2<br>.047 | 1.2<br>.047 | Cuts wire to a length of 1.2 mm/.047 Inch |

## Variable cutting length (V)

**120 mm/4.724 Inch**
**70 g/2.47 oz.**

- Special tool steel
- ESD-safe
- Variable cutting length (= V)
- With protective stop screw

| Model | Cut | Dimensions in mm/Inch A | E | V | Max. cutting capability in mm/Inch Diameter Copper wire | |
|---|---|---|---|---|---|---|
| **530E15A*** | Flush | 20<br>.787 | 4.5<br>.177 | 1.2 – 6<br>.047 – .236 | 1.2<br>.047 | Variable cutting length from<br>1.2 mm to 6 mm/ 047 to .236 Inch |

**115 mm/4.527 Inch**
**70 g/2.47 oz.**

- Special tool steel
- ESD-safe
- Variable cutting length (= V)
- With protective stop screw
- Interchangeable plastic stop protects the printed-circuit board against damage

| Model | Cut | Dimensions in mm/Inch A | E | V | Max. cutting capability in mm/Inch Diameter Copper wire | |
|---|---|---|---|---|---|---|
| **573EB** | Flush | 20<br>.787 | 4.5<br>.177 | 0 – 5<br>0 – .197 | 0.8<br>.031 | Variable cutting length from<br>0 mm to 5 mm/ 0 to .197 Inch |

*Not available in North America

www.labem.pl

## Good grip due to precise produced tips even at the thinnest part

- The choice of materials used for production of the pliers and a special hardening process is very important.

www.labem.pl

## Erem pliers, stripping pliers, forming pliers

- Gripping and bending pliers with standard and ergonomic handles
- MagicSense – moulded handle for increase comfort
- Wide variety of head shapes
- Special tool steel, non-reflecting surface, ESD-safe

### Internal patented Erem Magic Spring

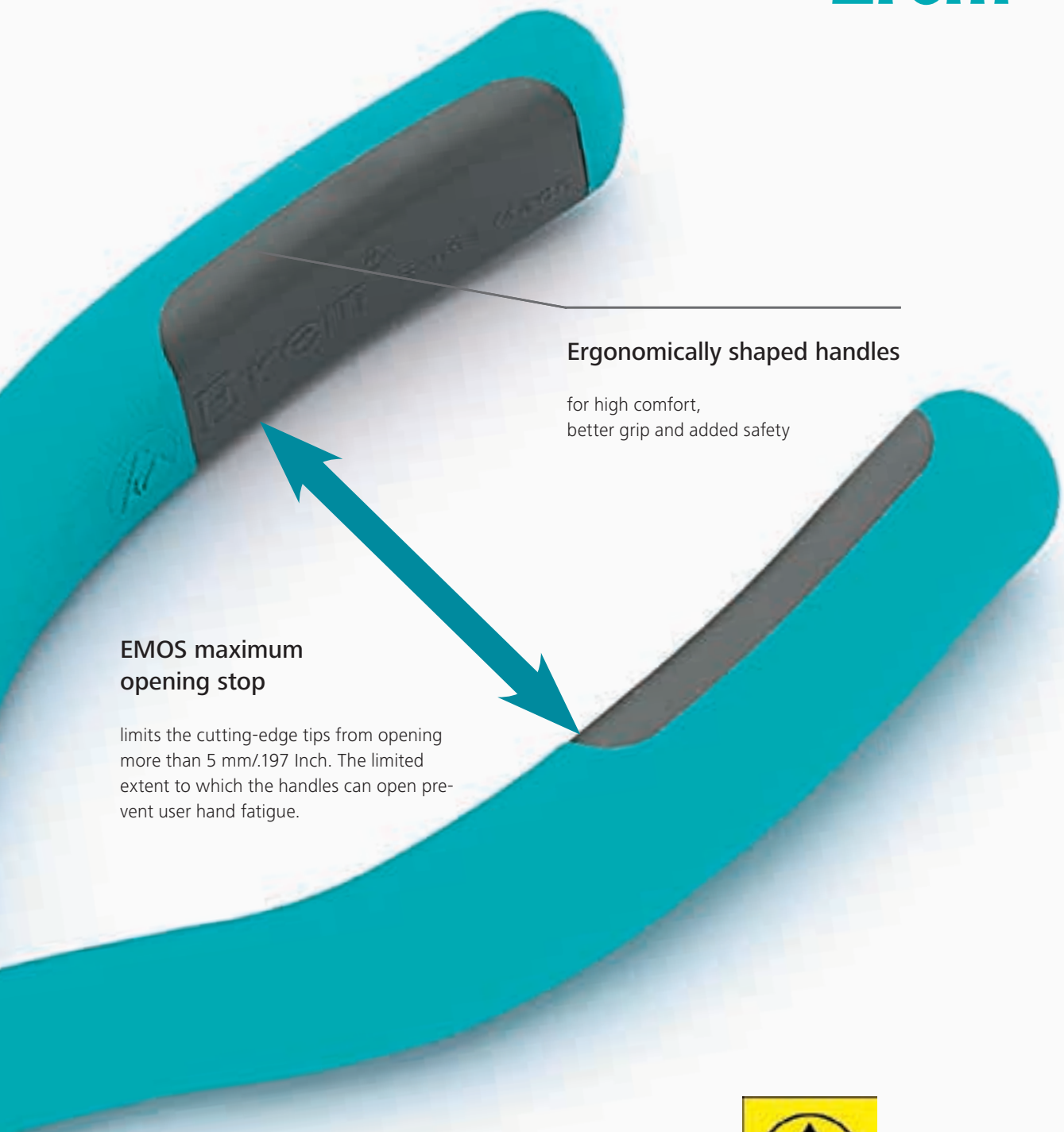
- lange Lebensdauer
- Constant spring force
- Guarantees more than 1 million operations

### High precision screw joint

- Smooth jaw action with no play
- Smooth cutting operation with no jaw overlapping

### Precision ground jaws

www.labem.pl



## Ergonomically shaped handles

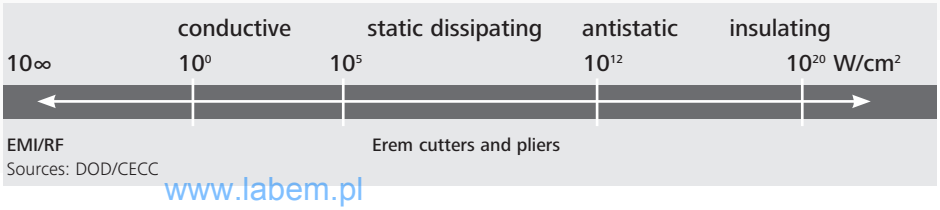
for high comfort,
better grip and added safety

## EMOS maximum opening stop

limits the cutting-edge tips from opening more than 5 mm/.197 Inch. The limited extent to which the handles can open prevent user hand fatigue.

## ESD-safe

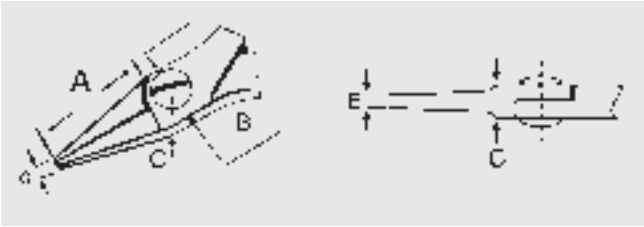
The interchangeable foam-cushion handles are ESD-safe and are fitted as standard on all Erem cutters and pliers.




www.labem.pl

# Erem Pliers

- Pliers for miniature and standard electronics
- Special tool steel, non-reflecting surface, ESD-safe
- High grade tool steel




A = jaw length
B = head width
C = head thickness
E = width of tips
G = total height of both tips

## Round nose pliers

**120 mm/4.724 Inch**
**62 g/2.18 oz.**

- Round nose pliers with very precise, smooth jaws.
- Suitable for forming, bending, laying and feeding in wires.

| Model | Shape | Dimensions in mm/Inch | | | | |
|---|---|---|---|---|---|---|
| | | A | B | C | E ø | G |
| **543E*** | | 23<br>.905 | 9<br>.354 | 6.5<br>.256 | 0.8<br>.031 | 1.6<br>.062 |

*Order as 543 in North America

## Needle nose pliers

**120 mm/4.724 Inch**
**62 g/2.18 oz.**

- Needle nose pliers with very precise, smooth and rounded jaws.
- Suitable for forming, bending, laying and feeding in wires.

| Model | Shape | Dimensions in mm/Inch | | | | |
|---|---|---|---|---|---|---|
| | | A | B | C | E | G |
| **547** | | 23<br>.905 | 9<br>.354 | 6.5<br>.256 | 0.9<br>.035 | 1.2<br>.047 |

www.labem.pl

# Erem pliers

## Flat nose pliers

**120 mm/4.724 Inch**
**67 g/2.36 oz.**

- Flat nose pliers with smooth jaws and precision-machined edges.
- Suitable for gripping flat workpieces.

| Model | Shape | Dimensions in mm/Inch | | | | |
|---|---|---|---|---|---|---|
| | | A | B | C | E | G |
| **542E*** | | 23<br>.905 | 9<br>.354 | 6.5<br>.256 | 2.4<br>.094 | 1.4<br>.055 |

*Order as 542 in North America

**125 mm/4.921 Inch**
**67 g/2.36 oz.**

- Flat nose pliers with replaceable nylon jaws.
- Nylon jaws prevent nicking and scratching.
- Suitable for forming precious metals and component connections.

| Model | Shape | Dimensions in mm/Inch | | | | |
|---|---|---|---|---|---|---|
| | | A | B | C | E | G |
| **531E*** | | 23<br>.905 | 9<br>.354 | 6.5<br>.256 | 5<br>.197 | 3<br>.118 |

*Order as 531 in North America

## Chain nose pliers

**120 mm/4.724 Inch**
**67 g/2.36 oz.**

- Chain nose pliers with narrow half-round jaws.
- For securely handling components.

| Model | Shape | Dimensions in mm/Inch | | | | |
|---|---|---|---|---|---|---|
| | | A | B | C | E | G |
| **544E*** | | 23<br>.905 | 9<br>.354 | 6.5<br>.256 | 1<br>.039 | 1.4<br>.055 |

*Order as 544 in North America

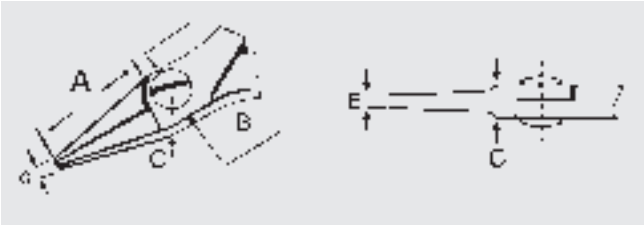
**120 mm/4.724 Inch**
**67 g/2.36 oz.**

| Model | Shape | Dimensions in mm/Inch | | | | | |
|---|---|---|---|---|---|---|---|
| | | A | B | C | E | G | |
| **544D** | | 23<br>.905 | 9<br>.354 | 6.5<br>.256 | 1<br>.039 | 1.4<br>.055 | Inside-serrated jaws for secure handling |

www.labem.pl

## Series 2400 MagicSense pliers

- Pliers for miniature and standard electronics
- Optimized ergonomically shaped handles for increased comfort
- Special tool steel, non-reflecting surface, ESD-safe




A = jaw length
B = head width
C = head thickness
E = width of tips
G = total height of both tips

### Needle nose pliers

**146 mm/5.748 Inch**
**72 g/2.54 oz.**

- Needle nose pliers with very precise, smooth and rounded jaws.

| Model | Shape | Dimensions in mm/Inch | | | | | |
|---|---|---|---|---|---|---|---|
| | | A | B | C | E | G | |
| **2411P** | | 33.5<br>1.319 | 11<br>.433 | 6<br>.236 | 1<br>.039 | 1.2<br>.047 | |
| **2411PD** | | 35.5<br>1.319 | 11<br>.433 | 6<br>.236 | 1<br>.039 | 1.2<br>.047 | Model same as 2411P, but with inside-serrated jaws for secure handling |

www.labem.pl

# Series 2400 MagicSense pliers

## Flat nose pliers

**146 mm/5.748 Inch**
**72 g/2.54 oz.**

- Flat nose pliers with smooth jaws and precision-machined edges.
- Suitable for gripping flat workpieces.

| Model | Shape | Dimensions in mm/Inch | | | | |
|---|---|---|---|---|---|---|
| | | A | B | C | E | G |
| **2442P** | | 33.5<br>1.319 | 11<br>.433 | 6<br>.236 | 3.4<br>.139 | 1.2<br>.047 |

## Round nose pliers

**146 mm/5.748 Inch**
**72 g/2.54 oz.**

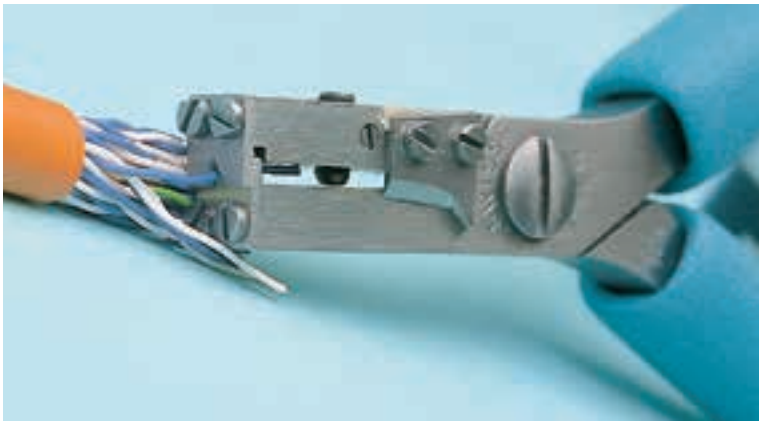
- Round nose pliers with very precise, smooth jaws.
- Suitable for bending wires.

| Model | Shape | Dimensions in mm/Inch | | | | |
|---|---|---|---|---|---|---|
| | | A | B | C | E ø | G |
| **2443P** | | 33.5<br>1.319 | 11<br>.433 | 6<br>.236 | 0.8<br>.031 | 1.6<br>.062 |

www.labem.pl

## High precision stripping pliers

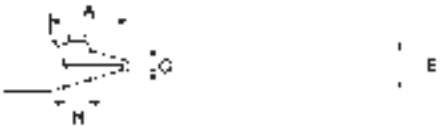
- Robust, high-precision tools for use in electronics and aeronautical engineering
- The required diameter is set by means of screws
- Screwdriver and key are included
- Interchangeable blades
- ESD-safe
- Special designs also available on request



### Front stripping

**120 mm/4.724 Inch**
**75 g/2.65 oz.**

- Suitable for all types of insulation and optical fibres.
- Integral side cutting blade.




A = jaw length
E = width of tips
G = total height of both tips
H = length of cutting blade

| Model | Dimensions in mm/Inch | | | | |
|---|---|---|---|---|---|
| | A | E | G | H | Wire diameter |
| **510AE** | 21<br>.827 | 5<br>.197 | 4<br>.157 | 7<br>.276 | 0.25 mm – 1.02 mm (AWG 30 – 18)<br>.010 Inch – .040 Inch |

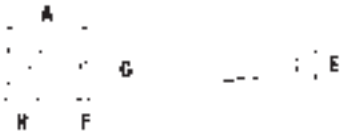
www.labem.pl

# High precision stripping pliers

## Front stripping

**120 mm /4.724 Inch**
**80 g/2.82 oz**

- Unique precision for damage-free stripping of fine wires.
- Suitable for all types of insulation, Teflon®, Tefzel and optical fibres.




A = jaw length
E = width of tips
F = depth of interchangeable blade
G = total height of both tips
H = length of cutting blade

| Model | Dimensions in mm/Inch | | | | | |
|---|---|---|---|---|---|---|
| | A | E | F | G | H | Wire diameter |
| **552E** | 23<br>.905 | 6.5<br>.256 | 1<br>.039 | 11<br>.433 | 9<br>.354 | 0.06 mm – 0.6 mm (AWG 42 – 24)<br>.002 Inch – .023 Inch |

## Side stripping

**120 mm /4.724 Inch**
**80 g/2.82 oz**

- Unique precision for damage-free stripping of fine wires.
- Suitable for all types of insulation, Teflon®, Tefzel and optical fibres.

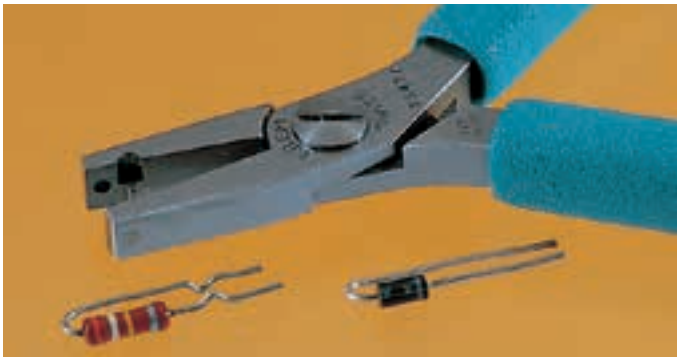
A = jaw length
E = width of tips
F = depth of interchangeable blade
G = total height of both tips
H = length of cutting blade

| Model | Dimensions in mm/Inch | | | | | |
|---|---|---|---|---|---|---|
| | A | E | F | G | H | Wire diameter |
| **552S** | 21<br>.827 | 6.5<br>.256 | 6.7<br>.264 | 11<br>.433 | 9<br>.354 | 0.06 mm – 0.6 mm (AWG 42 – 24)<br>.002 Inch – .023 Inch |

www.labem.pl

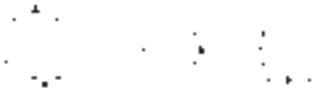
## Forming pliers for passive components

- Safe bending, forming and preparation of component connections
- High grade tool steel
- Non-reflecting surface
- ESD-safe

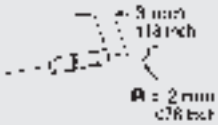


**120 mm/4.724 Inch**
**70 g/2.47 oz.**

- Suitable for component connections, U-shape.



A = jaw length
D = height of tips
E = width of tips
F = length of forming tool

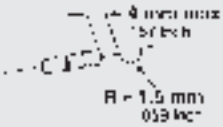
| Model | | Dimensions in mm/Inch | | | | Max. connection diameter | | |
|---|---|---|---|---|---|---|---|---|
| | | A | D | E | F | Diodes | Capacitors | Resistors |
| **554E*** |  | 13<br>.512 | 10<br>.394 | 10<br>.394 | 10<br>.394 | 0.65 mm<br>.025 Inch | 0.7 mm<br>.027 Inch | 1/2 W |

*Order as 554 in North America

**120 mm/4.724 Inch**
**70 g/2.47 oz.**

- Suitable for component connections, U-shape, axial forming.
- Narrow head shape.

A = jaw length
D = height of tips
E = width of tips
F = length of forming tool

| Model | | Dimensions in mm/Inch | | | | Max. connection diameter | | |
|---|---|---|---|---|---|---|---|---|
| | | A | D | E | F | Diodes | Capacitors | Resistors |
| **554A** |  | 23<br>.905 | 5.6<br>.220 | 2.5<br>.098 | 4.5<br>.177 | 0.65 mm<br>.025 Inch | 0.7 mm<br>.027 Inch | 1/2 W |

www.labem.pl

# Forming pliers for passive components

**120 mm/4.724 Inch**
**70 g/2.47 oz.**

- Suitable for secure assembly.
- Forms the two opposing Us in one operation.

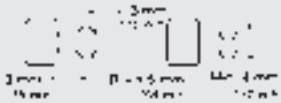
A = jaw length
D = height of tips
E = width of tips
F = length of forming tool

| Model | | Dimensions in mm/Inch | | | | Max. connection diameter | | |
|---|---|---|---|---|---|---|---|---|
| | | A | D | E | F | Diodes | Capacitors | Resistors |
| **554TX** | | 20 | 6.5 | 6.5 | 4 | 0.65 mm | 0.7 mm | 1/2 W |
| | | .787 | .256 | .256 | .157 | .025 Inch | .027 Inch | |

**120 mm/4.724 Inch**
**67 g/2.36 oz.**

- For cutting and bending components into two operations to a predefined length.

A = jaw length
D = height of tips
E = width of tips
F = length of forming tool

| Model | | Dimensions in mm/Inch | | | | Max. connection diameter | | |
|---|---|---|---|---|---|---|---|---|
| | | A | D | E | F | Diodes | Capacitors | Resistors |
| **50788** |  | 23 | 4 | 3 | | 0.65 mm | 0.7 mm | 1/2 W |
| | | .905 | .157 | .118 | | .025 Inch | .027 Inch | |

**120 mm/4.724 Inch**
**67 g/2.36 oz.**

- For cutting and bending different types of components with two outputs.

A = jaw length
D = height of tips
E = width of tips
F = length of forming tool

| Model | | Dimensions in mm/Inch | | | | Max. connection diameter | | |
|---|---|---|---|---|---|---|---|---|
| | | A | D | E | F | Diodes | Capacitors | Resistors |
| **50789Z** | | 23 | 3.3 | 3.5 | | 0.65 mm | 0.7 mm | 1/2 W |
| | | .905 | .130 | .138 | | .025 Inch | .027 Inch | |

www.labem.pl

# Forming pliers

## High precision forming tools for active components

- Safe bending, forming and preparation of component connections, specially for integrated components and power transistors
- High grade tool steel
- Non-reflecting surface
- ESD-safe

**120 mm/4.724 Inch**
**85 g/3.00 oz.**

- Suitable for bending flat components, contacts, power transistors, Triac connections to a right angle.

| Model | | Dimensions in mm/Inch | |
|---|---|---|---|
| | | K max. | M |
| **500103A*** | | 15<br>.590 | 3 – 12<br>.118 – .472 |

**120 mm/4.724 Inch**
**85 g/3.00 oz.**

- Suitable for cutting and bending Series TO components, diodes and mechanical parts to a right angle.
- Easily adjustable with interchangeable cutting edges.

| Model | | Dimensions in mm/Inch | |
|---|---|---|---|
| | | K max. | M |
| **500210E** | | 11<br>.433 | 3.8 – 15<br>.149 – .590 |

*Not available in North America

www.labem.pl

## High precision forming tools for active components

**120 mm/4.724 Inch**
**85 g/3.00 oz.**

- 3 connections, suitable for bending components of Series TO 126, 218, 220 and power transistors through 90° in two rows.
- Adjusted by means of a screw.

| Model | | Dimensions in mm/Inch | | |
|---|---|---|---|---|
| | | K max. | M | I |
| **500104A** | | 13<br>.512 | 3.5 – 15<br>.138 – .590 | 2.54<br>.100 |

## High precision forming pliers for Flat Packs, Quads

**120 mm /4.724 Inch**
**100 g/3.53 oz.**

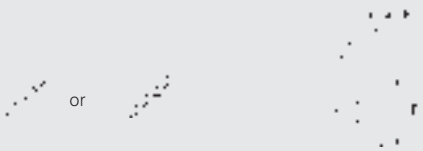
- Suitable for bending flat components, contacts, power transistors, Triac connections to a right angle.

| Model | | Dimensions in mm/Inch | | |
|---|---|---|---|---|
| | | A | K max. | M |
| **80013C** | | 17<br>.669 | 13<br>.512 | 2.8<br>.110 |

## High precision forming pliers for DIL pins

**120 mm/4.724 Inch**
**98 g/3.46 oz.**

- Suitable for cutting and bending DIL pins through 90° in one operation.
- Up to max. 20 DIL pins.

| Model | | Dimensions in mm/Inch | |
|---|---|---|---|
| | | E | F |
| **809IC** |  | 25<br>.984 | 0.9<br>.035 |

www.labem.pl

## IC and SMD tools, Fibre optic tools, Vacuum micromanipulator

- IC and SMD tools with precise fine adjustment for inserting, extracting, straightening and cutting IC and SMD components
- High-precision tools for optical fibres for professional stripping, suitable for cutting Kevlar® silks, Vectran™-sheathed wires, etc.
- Vacuum system for precise handling of tiny SMD components and silicon wafers, suitable for assembly and laboratory work

www.labem.pl

www.labem.pl

# IC and SMD tools

- IC and SMD tools for inserting, extracting, straightening and cutting IC and SMD components
- Non-reflecting surface
- ESD-safer

## Inserting and extracting

**120 mm/4.724 Inch**

- One screwdriver included for fine adjustments.

| Model | | Dimensions in mm/Inch | | | | |
|---|---|---|---|---|---|---|
| | | E | | 505C | 505BGC | 505BG |
| **505C** | | 20 | Pins: | 14 - 6 | 28 | 28 |
| | | .787 | | | | |
| **505BGC** | | 36 | | | | |
| | | 1.417 | | | | |
| **505BG** | | 36 | | | | |
| | | 1.417 | Width: | 300 | 300 | .EEE |

## Straightening

**130 mm/5.118 Inch**
**120 g/4.24 oz.**

- Practical straightening tool, suitable for straightening contacts, DIL/IC connections.
- Up to 16 connections possible.

| Model | | Dimensions in mm/Inch | | |
|---|---|---|---|---|
| | | A | E | G |
| **808G** | | 23 | 42 | 1 |
| | | .905 | 1.653 | .039 |

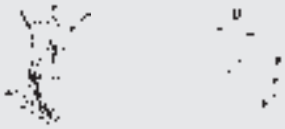
www.labem.pl

# IC and SMD tools

## Cutting

**110 mm/4.331 Inch**
**48 g/1.69 oz.**

- High-precision tip cutter.
- For connections of SMD micro-packages up to 0.25 mm/ .010 Inch, also for pitches smaller than 1/20".
- For µ pitches below 0.5 mm/.019 Inch, you will need the 670EPF model.
- Please send component when ordering.

| Model | Cut | Dimensions in mm/Inch | | |
|---|---|---|---|---|
| | | A | D | E |
| **670EP** | Flush  | 10<br>.394 | 3<br>.118 | 2<br>.079 |

**115 mm/4.527 Inch**
**67 g/2.36 oz.**

- High-precision tip cutter, bent.
- Practical rework tool.
- For cutting DIL contacts directly on the component.
- Ideal for densely printed boards.

| Model | Cut | Dimensions in mm/Inch | |
|---|---|---|---|
| | | A | D |
| **593AE** | Flush | 20<br>.787 | 4<br>.157 |

## Kit for SMD work

- For SMD assembly and repair applications.
- 6-piece tool kit with monitored discharging ESD handles.
- Special tool steel, non-reflecting surface, resharpenable (cutter).
- High-quality precision tweezers, non-magnetic.
- In an ESD-safe plastic case.

| Model | Description |
|---|---|
| **3900KC** | Kit for SMD work |
| **contents:** | |
| **51SA** | Precision tweezers with very pointed tips, bent 30°, relieved; length 115 mm/4.527 Inch |
| **102ACA** | SMD tweezers with angled tips and blunted edges, suitable for vertical working with small components; length 115 mm/4.527 Inch |
| **103ACA** | SMD tweezers with angled tips and blunted edges for vertical working with small components; length 115 mm/4.527 Inch |
| **150SAMB** | SMD tweezers with bent tips 40°, serrated finger grips for gripping small cylindrical parts, dia. 1.2 – 2.5 mm/.047 – .108 Inch; length 120 mm/4.724 Inch |
| **150SAMF** | SMD tweezers with straight tips and serrated finger grips for gripping small cylindrical parts, dia. 1.2 – 2.5 mm/.047 – .108 Inch; length 120 mm/4.724 Inch |
| **670EP** | High-precision tip cutter for connections of SMD micro-packages up to 0.25 mm/.010 Inch |

www.labem.pl

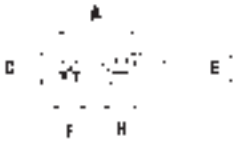
# High precision tools for optical fibres

- Suitable for simple and precise stripping of optical fibres
- High grade tool steel
- Non-reflecting surface
- ESD-safe

## Side stripping

**120 mm /4.724 Inch**
**80 g/2.82 oz.**

- Suitable for all types of insulation, Teflon®, Tefzel and optical fibres.
- Unlimited stripping length thanks to side stripping.
- Diameter is set by means of two screws.
- Replaceable cutting blade.




A = jaw length
E = width of tips
F = depth of interchangeable blades
G = total height of both tips
H = length of cutting blade

| Model | Dimensions in mm/Inch | | | | | |
|---|---|---|---|---|---|---|
| | A | E | F | G | H | Wire diameter |
| **552S** | 21<br>.827 | 6.5<br>.256 | 6.7<br>.264 | 11<br>.433 | 9<br>.354 | 0.06 mm – 0.60 mm (AWG 42 – 24)<br>.002 Inch – .023 Inch |

## Holding / gripping

**120 mm/4.724 Inch**
**20 g/0.71 oz.**

- Stainless-steel tweezers with synthetic tips (PPS).
- Non-reflecting surface.
- Non-magnetic.

| Model | Description |
|---|---|
| **249SA** | Precision tweezers with pointed synthetic tips (PPS) to protect optical fibres and serrated finger grips for secure handling. Volume resistance 16 Ω/cm. Heat-resistant up to 250°C (480°F). Resistant to acids and molten soldering tin. Water-repellent. |

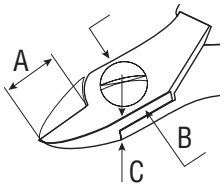
www.labem.pl

# High precision tools for optical fibres

## Cutting

**115 mm/4.527 Inch**
**67 g/2.36 oz.**

- Side cutter, suitable for cutting Kevlar® silks, Vectran™-sheathed wires, optical fibres and small stainless wires.




A = length of cutting edges
B = head width
C = head thickness

| Model | Dimensions in mm/Inch | | |
|---|---|---|---|
| | A | B | C |
| **599FO** | 15<br>.590 | 10.5<br>.413 | 6.5<br>.256 |

**115 mm/4.527 Inch**
**67 g/2.36 oz.**

- Side cutter, suitable for cutting Kevlar® silks, Vectran™-sheathed wires, optical fibres and small stainless wires.

| Model | Cut | Dimensions in mm/Inch | | |
|---|---|---|---|---|
| | | A | B | C |
| **599TFO** | Semi-flush | 15<br>.590 | 10.5<br>.413 | 6.5<br>.256 |

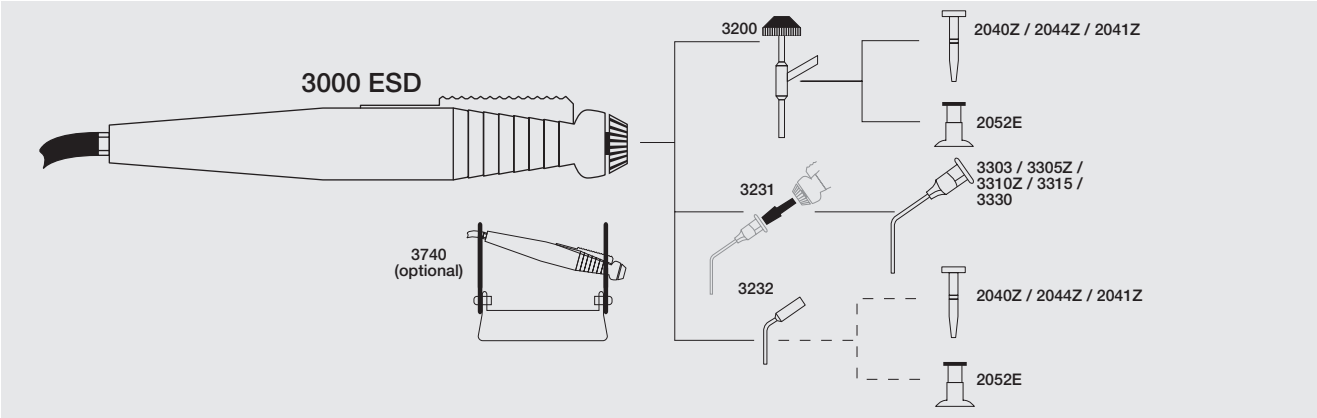
www.labem.pl

## Vacuum micromanipulator

- Professional vacuum system for precise handling of tiny SMD components and silicon wafers
- Suitable for assembly and laboratory work

**Advantages of the vacuum micromanipulator:**

- Easy picking up of components or silicone wafers
- Immediate set-down/release of parts
- Full 360° rotating system
- Direct axial switch for vacuum
- Ergonomic shape reduces hand and wrist fatigue
- ESD-safe




## Handle

**140 mm/5.512 Inch**
**35 g/1.23 oz.**

- Ergonomic handle with axial switch, serrated finger grip for secure handling.

| Model | Dimensions in mm/Inch | |
|---|---|---|
| **3000ESD*** | Dia. 10 mm<br>.394 Inch | Handle |

*Not available in North America

www.labem.pl

# Inserts for 3000ESD housing

## Adapters

| Model | | | | Description |
|---|---|---|---|---|
| **3200*** | | 25 mm<br>.984 Inch | 15 g<br>0.53 oz. | Stainless-steel adapter, rotatable through 360°, straight suction tip for direct working or as an adapter for suction tips or suction cups |
| **3231*** | | 5 mm<br>.197 Inch | 5 g<br>0.17 oz. | Adapter fix, for working with Series 3300 suction tips |
| **3232*** | | 15 mm total<br>.590 Inch | 3 g<br>0.10 oz. | Adapter fix, for direct working or as an adapter for suction tips 20442/20412 or suction cup 2052E |

## Suction tips, straight

- Polyethylene suction tip.
- For working with 3200 or 3232 adapter.

| Model | | Outside diameter | Inside diameter |
|---|---|---|---|
| **2044Z*** | | 1.3 mm<br>.051 Inch | 0.9 mm<br>.035 Inch |
| **2041Z*** | | 2.0 mm<br>.078 Inch | 1.4 mm<br>.015 Inch |

*Not available in North America

www.labem.pl

# Inserts for 3000ESD housing

## Suction needles

- Stainless-steel suction needle.
- Bent 45°.
- For working with 3200 or 3232 adapter.

| Model | | Outside diameter | Inside diameter |
|---|---|---|---|
| **3303*** | | 0.30 mm<br>.011 Inch | 0.16 mm<br>.006 Inch |
| **3305Z*** | | 0.50 mm<br>.020 Inch | 0.25 mm<br>.019 Inch |
| **3310Z*** | | 1.0 mm<br>.039 Inch | 0.65 mm<br>.025 Inch |

## Suction cups

- Silicone suction cup.
- For working with 3200 or 3232 adapter.

| Model | | Diameter |
|---|---|---|
| **2052E*** | | 4.5 mm<br>.177 Inch |

*Not available in North America

www.labem.pl

# Inserts for 3000ESD housing

## Accessories

| Model | Description |
|---|---|
| **3714Z*** | Diaphragm pump 230 V, 5 l/min, max. vacuum –250 mbar |
| **3008ESD*** | Tube, flexible, 1.8 m/70.866 Inch, ESD-safe |
| **3717*** | Filter for tube 3008ESD |
| **3740*** | Table holder for 3000ESD (without accessories) |

# Vacuum kit

- Complete accessories for easy pick-up and immediate set-down of components or silicon wafers.
- Set for laboratory work.
- In an ESD-safe plastic case.

| Model | Description | |
|---|---|---|
| **3000KCESD*** | Vacuum kit | |
| | **contents:** | |
| | **3000ESD** | Handle |
| | **3200** | Adapter, rotatable through 360° |
| | **3231** | Adapter fix |
| | **3305Z, 3310Z, 3315** | Suction needles |
| | **2052E** | Suction cup, dia. 4.5 mm / .177 Inch |
| | **KDS 260L** | Suction cup, dia. 9.5 mm / .374 Inch |
| | **3740** | Table holder |
| | **3714Z** | Diaphragm pump 230 V |
| | **3008ESD** | Tube, flexible |
| | **3717** | Filter |
| | **102ACA** | SMD tweezers, 115 mm / 4.527 Inch, with bent tips and blunted edges. For vertical working with small components. Stainless steel, non-reflecting surface, non-magnetic. |

*Not available in North America

www.labem.pl

## Swiss high precision tools in a kit

- Large selection of tool kits with high-quality precision tools
- Optimum combination of suitable precision tools for many applications, e.g. in microelectronics, medicine or biology
- Precision tools in an ESD-safe plastic case with padded foam inlay

www.labem.pl

www.labem.pl

# Swiss high precision tools in a kit

## Erem Toolset Universal

- For use in electronics assembly, the watchmaking industry, medicine or dentistry.
- 11-piece tool kit with monitored discharging ESD handles.
- Special tool steel, non-reflecting surface, resharpenable (cutter).
- High-quality precision tweezers, non-magnetic, for assembly work in electronics and light engineering.
- Precision screwdriver with hardened, durable tips, for precision working in confined areas.
- In an ESD-safe plastic case.

| Model | Description | |
|---|---|---|
| **3600KU*** | Erem Toolset Universal | |
| **contents:** | | |
| **XP600** | Precision-screwdriver set for electronics | 4 regular screwdrivers: 1.5 x 60 mm/.059 x 2.362 Inch, 2.0 x 60 mm/.078 x 2.362 Inch, 2.5 x 60 mm/.098 x 2.362 Inch, 3.0 x 60 mm/.118 x 2.362 Inch, 2 Phillips screwdrivers No. 0 and No. 00 |
| **2412E** | Series 2400 MagicSense side cutter, semi-flush, oval head | Robust head for universal use, hard wire 0.5 mm/.019 Inch, medium hardness 1.0 mm/.039 Inch, Cu 1.6 mm/.066 Inch |
| **2442P** | Series 2400 MagicSense flat nose pliers | With smooth jaws, precision-machined edges, e.g. for gripping flat workpieces |
| **622NB** | Tip cutter, flush, relieved, long, fine head | Miniature cutter for excellent access, flush, medium hardness 0.6 mm/.023 Inch, Cu 0.8 mm/.031 Inch |
| **AASA** | Precision tweezers | Pointed tips straight, special stainless steel, non-magnetic |
| **2ASASL** | Precision tweezers | With flat rounded tips, tip widths 2 mm/.078 Inch, special stainless steel, non-magnetic |

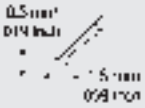
*Not available in North America

www.labem.pl

# Swiss high precision tools in a kit

## Erem Toolset SMD

- For SMD assembly and repair applications.
- 6-piece tool kit with monitored discharging ESD handles.
- Special tool steel, non-reflecting surface, resharpenable (cutter).
- High-quality precision tweezers, non-magnetic, for SMD work.
- In an ESD-safe plastic case.

| Model | Description | | |
|---|---|---|---|
| **3900KC** | Erem Toolset SMD | | |
| **contents:** | | | |
| **51SA** | Precision tweezers | | With very pointed tips, angled 30°, relieved |
| **102ACA** | SMD precision tweezers |  | Tip width 0.5 mm/.019 Inch, angled 45° |
| **103ACA** | SMD precision tweezers | | Tip width 1 mm/.039 Inch, angled 45° |
| **150SAMB** | SMD precision tweezers | | With round tips, dia. 1.2 mm – 2.5 mm/.047 Inch – .098 Inch, angled 40°, serrated finger grips for gripping cylindrical components |
| **150SAMF** | SMD precision tweezers | | With round, very narrow tips, dia. 1.2 mm – 2.5 mm/ .047 Inch – .098 Inch, serrated finger grips |
| **670EP** | Miniature tip cutter, flush, relieved head | | For SMD and micro-package contacts up to 0.25 mm/.010 Inch |

*Not available in North America

www.labem.pl

# Swiss high precision tools in a kit

## Erem 2400 MagicSense

- For use in electronics, PCB assembly, wire and connection handling.
- 3-piece tool kit.
- MagicSense moulded handle with soft touch for increased comfort and grip.
- Induction-hardened cutting edges in Rockwell hardness 64-65 HRc, high grade of hardness for exceptionally long life.
- High grade tool steel, non-reflecting surface, ESD-safe, resharpenable.
- In an ESD-safe plastic case.

| Model | Description | |
|---|---|---|
| **2400KMS*** | Erem 2400 MagicSense | |
| **contents:** | | |
| **2412E** | Series 2400 MagicSense side cutter, semi-flush, oval head | Robust head for universal use, hard wire 0.5 mm/.019 Inch, medium hardness 1.0 mm/.039 Inch, Cu 1.6 mm/.062 Inch |
| **2482E** | Series 2400 MagicSense tip cutter, flush, narrow head | Angled 45°, ideally suitable for working on printed-circuit boards, component connections, can be used in both 90° and 180° applications |
| **2411P** | Series 2400 MagicSense needle nose pliers | Smooth, rounded jaws |

*Not available in North America

www.labem.pl

# Swiss high precision tweezers in a kit

## Erem Tweezers Prime Selection

- High-quality precision tweezers for use in microelectronics, light engineering, laboratory work, biology and medicine.
- 3-piece tweezer kit.
- Special stainless steel, non-magnetic, non-rusting, acid-proof.
- In an ESD-safe plastic case.

| Model | Description | |
|---|---|---|
| **3300TPS*** | Erem Tweezers Prime Selection | |
| **contents:** | | |
| **3SA** | Precision tweezers | With pointed tips straight |
| **2ASA** | Precision tweezers | With flat rounded tips for gripping smaller components, tip width 2 mm/.078 Inch |
| **7SA** | Precision tweezers | Curved, relieved, with pointed tips |

*Not available in North America

www.labem.pl

# Swiss high precision tweezers in a kit

## Erem SMD Tweezers – Universal

- High-quality precision tweezers for SMD work with assorted shapes of chip, SOT, MELFs, mini MELFs, flatpacks.
- 4-piece tweezer kit.
- Blunted edges prevent PCB damage.
- Special stainless steel, non-magnetic, non-rusting, acid-proof.
- In an ESD-safe plastic case.

| Model | Description | |
|---|---|---|
| **3400TSMDU*** | Erem SMD Tweezers – Universal | |
| **contents:** | | |
| **103ACA** | SMD precision tweezers | Angled 45°, tip width 0.5 mm/.019 Inch |
| **150SAMF** | SMD precision tweezers | With round tips, angled 40°, serrated finger grips for secure handling, for gripping cylindrical components |
| **102ACAX** | SMD precision tweezers | With angled pointed tips for vertical use, reverse clamping action for easy handling |
| **7SA** | Precision tweezers | Curved, relieved, with pointed tips |

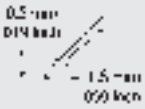
*Not available in North America

www.labem.pl

# Swiss high precision tweezers in a kit

## Erem Premium Tweezers

- High-quality precision tweezers for microelectronics, light engineering and SMD work.
- 5-piece tweezer kit.
- Blunted edges prevent PCB damage.
- Special stainless steel, non-magnetic, non-rusting, acid-proof.
- In an ESD-safe plastic case.

| Model | Description | | |
|---|---|---|---|
| **3500TP*** | Erem Premium Tweezers | | |
| **contents:** | | | |
| **3SA** | Precision tweezers | | With pointed tips straight |
| **2ASA** | Precision tweezers | | With flat rounded tips for gripping small components, tip width 2 mm/.078 Inch |
| **7SA** | Precision tweezers | | Curved, relieved, with pointed tips |
| **102ACA** | SMD precision tweezers |  | Tip width 0.5 mm/.019 Inch, angled 45° |
| **15AGW** | Cutting tweezers | | With narrow oblique head, for soft wires, hardened cutting edges for increased service life |

*Not available in North America

www.labem.pl

# Swiss high precision tools in a kit

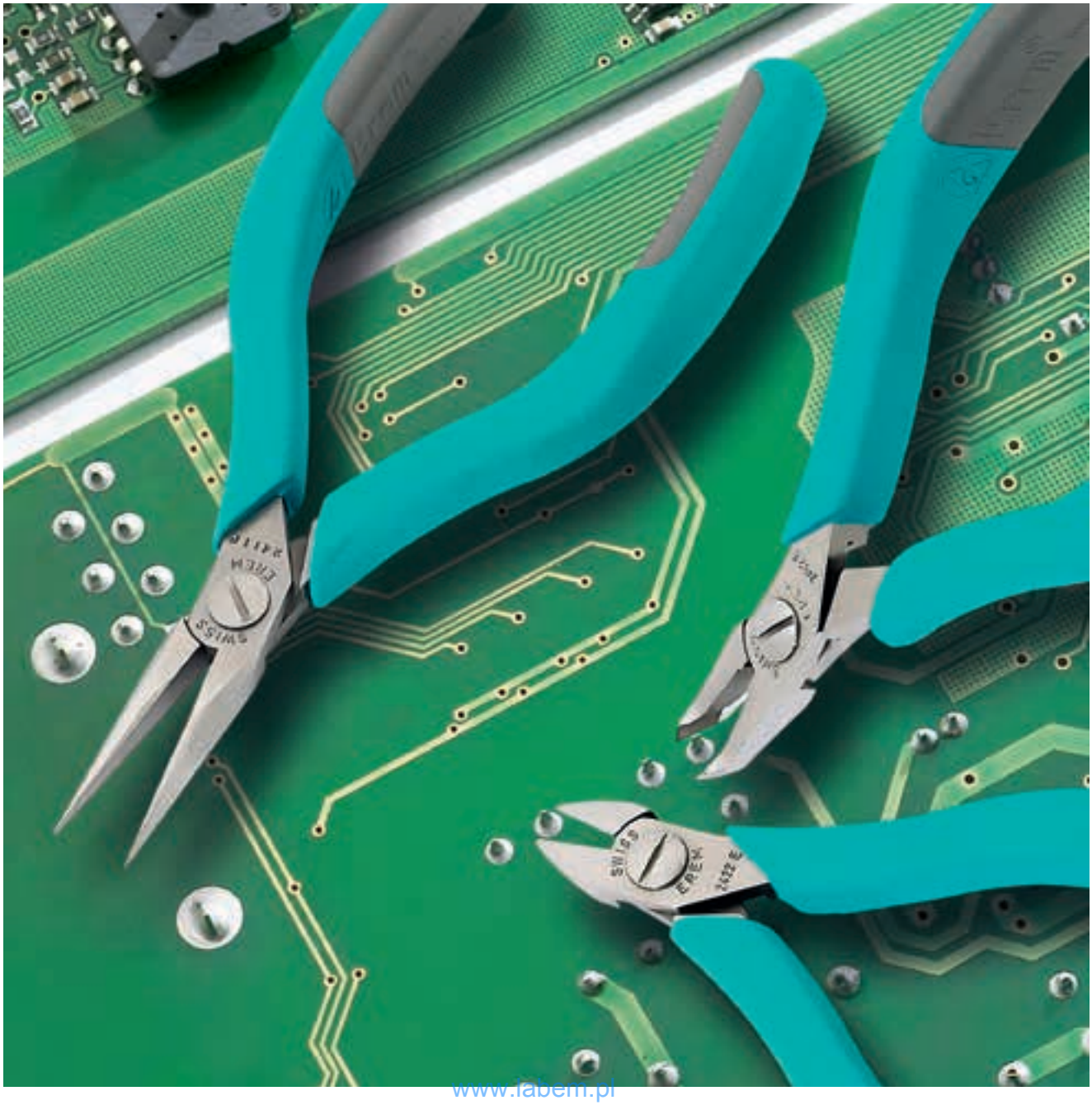
## Vacuum kit

- Complete accessories for easy pick-up and immediate set-down of components or silicon wafers.
- Set for laboratory work.
- In an ESD-safe plastic case.

| Model | Description | |
|---|---|---|
| **3000KCESD*** | Vacuum kit | |
| **contents:** | | |
| **3000ESD** | Handle | Size: 400 x 320 x 150 mm/15.748 x 12.598 x 5.905 Inch, 2.2 kg, with axial switch, ergonomic, serrated finger grip |
| **3200** | Adapter, rotatable through 360° | Stainless-steel adapter, rotatable through 360°, straight suction tip for direct working or as an adapter for section tips or suction cups |
| **3231** | Adapter fix | For working with 3300 suction tips |
| **3305Z, 3310Z, 3315** | | Suction needles, 45°, stainless steel<br>For working 3231 adapter |
| **2052E** | Suction cup,<br>dia. 4.5 mm/.177 Inch, silicone | For working with 3200 or 3232 adapter |
| **KDS 260L** | Suction cup, dia. 9.5 mm/.374 Inch | |
| **3740** | Table holder | |
| **3714Z** | Diaphragm pump | 230 V, 5 l/min, max. vacuum –250 mbar |
| **3008ESD** | Tube, flexible, | 1.8 m, ESD-safe |
| **3717** | Filter | for tube 3008ESD |
| **102ACA** | SMD tweezers | 115 mm/4.527 Inch, with curved tips and blunted edges, for vertical working with small components, stainless steel, non-reflecting surface, non-magnetic |

*Not available in North America

www.labem.pl




www.labem.pl

www.labem.pl

www.labem.pl

## Knives

| Order No. | Description | Size Inch | Size mm |
|---|---|---|---|
| **XN100** | Knife, Light duty for soft material | 5 $^{13}/_{16}$ | 148 |
| **XN200** | Knife, Medium duty for hard material | 5 $^{3}/_{4}$ | 146 |
| **XN210** | Knife, Heavy duty plastic handle for coars jobs | 5 $^{7}/_{16}$ | 137 |
| **XNS100** | Light and medium duty knife set<br>contains 10 assorted blades:<br>XN100, XN200, XNB103 (2 pcs.), XNB105 (2 pcs.),<br>XNB101, XNB203, XNB205 (2 pcs.), XNB201 | | |

## Blades for XN100

| Order No. | Description | Pack quantity |
|---|---|---|
| **XNB101** | Blade, Standard | 5 |
| **XNB103** | Blade, Fine pointed | 5 |
| **XNB103B** | Blade, Fine pointed | 100 |
| **XNB105** | Blade, Stencil | 5 |

## Blades for XN200 and XN210

| Order No. | Description | Pack quantity |
|---|---|---|
| **XNB201** | Blade, Chisel | 5 |
| **XNB203** | Blade, General purpose | 5 |
| **XNB205** | Blade, Pointed | 5 |

www.labem.pl

## Shearcutter – general purpose

- Cutting copper wire to 0,8 mm diameter

| Order No. | Description | Size Inch | Size mm |
|---|---|---|---|
| **170M** | Shearcutter, red handles | 5 | 127 |
| **175M** | Shearcutter with safety clips, red handles | 5 | 127 |

## Sheet metal Snip

| Order No. | Description | Size Inch | Size mm |
|---|---|---|---|
| **86NCG** | Snip, electronic | 6 $^{1}/_{2}$ | 165 |

## Wire Stripper & Cutters

| Order No. | Description | Size Inch | Size mm |
|---|---|---|---|
| **100XV** | Wire Stripper & Cutter, adjustable | 5 | 127 |
| **101SNV** | Wire Stripper & Cutter, spring-opening | 5 | 127 |

www.labem.pl

## Mini Screwdriver Set with Slotted/Phillips Screwdrivers

| Order No. | Description |
|---|---|
| **M60** | **Mini Screwdriver Set with Slotted/Phillips Screwdrivers (7 pcs.)** |

## Offset Ratches Screwdriver Set

| Order No. | Description |
|---|---|
| **XL75** | **Offset Ratches Screwdriver Set** |

www.labem.pl

# Screwdriver Set for slotted Screws – Inch Size

| Order No. | Description | Length Inch | Length mm | Colour |
|---|---|---|---|---|
| **PS88** | **Screwdriver Set for Slotted Screws – Inch Size** | | | |
| consists of: | | | | |
| P3321* | Screwdriver, Midget 3/32" (2,38 mm) | 3 1/2 | 89 | green |
| P181* | Screwdriver, Midget 1/8" (3,18 mm) | 3 1/2 | 89 | red |
| P5321* | Screwdriver, Midget 5/32" (3,97 mm) | 3 1/2 | 89 | black |
| P3161* | Screwdriver, Midget 3/16" (4,76 mm) | 3 1/2 | 89 | orange |
| P141 | Screwdriver, Midget 1/8" (3,18 mm) | 3 1/2 | 89 | amber |
| P0* | Screwdriver, Philips Nr. 0 | 3 1/2 | 89 | blue |
| P1* | Screwdriver, Philips Nr. 1 | 3 1/2 | 89 | brown |
| P2* | Screwdriver, Philips Nr. 2 | 3 1/2 | 89 | amber |
| TA2* | Torque amplifier handle | | | black |

# Screwdriver Set for Hex Socket Screws – Inch Size

| Order No. | Description | Length Inch | Length mm |
|---|---|---|---|
| **PS89** | **Screwdriver Set for Hex Socket Screws – Inch Size** | | |
| consists of: | | | |
| P18* | Screwdriver, Midget, Hex, 0,028" (0,71 mm) | 3 1/2 | 89 |
| P19* | Screwdriver, Midget, Hex, 0,035" (0,89 mm) | 3 1/2 | 89 |
| P20* | Screwdriver, Midget, Hex, 0,050" (1,27 mm) | 3 1/2 | 89 |
| P21* | Screwdriver, Midget, Hex, 1/16" (1,59 mm) | 3 1/2 | 89 |
| P22* | Screwdriver, Midget, Hex, 5/64" (1,98 mm) | 3 1/2 | 89 |
| P23* | Screwdriver, Midget, Hex, 3/32" (2,38 mm) | 3 1/2 | 89 |
| P764* | Screwdriver, Midget, Hex, 7/64" (2,78 mm) | 3 1/2 | 89 |
| P24* | Screwdriver, Midget, Hex, 1/8" (3,18 mm) | 3 1/2 | 89 |
| TA2* | Torque amplifier handle, black | | |

*Discontinued

www.labem.pl

## Compact Convertible Hex Socket Srewdriver Set – Metric Size

| Order No. | Description | Length Inch | Length mm |
|---|---|---|---|
| **PS90MM** consists of: | **Compact Convertible Hex Socket Srewdriver Set – Metric Size** | | |
| P71* | Screwdriver, Midget, Hex, 1,27 mm | 3 1/2 | 89 |
| P72* | Screwdriver, Midget, Hex, 1,5 mm | 3 1/2 | 89 |
| P73* | Screwdriver, Midget, Hex, 0,89 mm | 3 1/2 | 89 |
| P74* | Screwdriver, Midget, Hex, 2,5 mm | 3 1/2 | 89 |
| P75* | Screwdriver, Midget, Hex, 3 mm | 3 1/2 | 89 |
| P76* | Screwdriver, Midget, Hex, 4 mm | 3 1/2 | 89 |
| P77* | Screwdriver, Midget, Hex, 5 mm | 3 1/2 | 89 |
| P78* | Screwdriver, Midget, Hex, 0,89 mm | 3 1/2 | 89 |
| TA2* | Torque amplifier handle, black | | |

## Nutdriver Set – Inch Sizes

| Order No. | Description | Length Inch | Length mm | Colour |
|---|---|---|---|---|
| **PS120** consists of: | **Nutdriver Set – Inch Size** | | | |
| P3* | Nutdriver, Midget, 3/32" (2,38 mm) | 3 1/2 | 89 | blue |
| P4* | Nutdriver, Midget, 1/18" (3,18 mm) | 3 1/2 | 89 | red |
| P5* | Nutdriver, Midget, 5/32" (3,97 mm) | 3 1/2 | 89 | amber |
| P6* | Nutdriver, Midget, 3/16" (4,76 mm) | 3 1/2 | 89 | black |
| P7* | Nutdriver, Midget, 7/32" (5,56 mm) | 3 1/2 | 89 | brown |
| P8* | Nutdriver, Midget, 1/4" (6,35 mm) | 3 1/2 | 89 | rred |
| P9* | Nutdriver, Midget, 9/32" (7,14 mm) | 3 1/2 | 89 | orange |
| P10* | Nutdriver, Midget, 5/16" (7,94 mm) | 3 1/2 | 89 | amber |
| P11* | Nutdriver, Midget, 11/32" (8,73 mm) | 3 1/2 | 89 | green |
| P12* | Nutdriver, Midget, 3/8" (9,53 mm) | 3 1/2 | 89 | blue |
| TA2* | Torque amplifier handle | | | black |

*Discontinued

www.labem.pl

# Compact Convertible Nutdriver Set – Metric Sizes

| Order No. | Description | Length Inch | Length mm |
|---|---|---|---|
| **PS121MM** consists of: | **Compact Convertible Nutdriver Set – Metric Size** | | |
| P3MM* | Nutdriver, Midget, 3 mm (0,118") | 3 1/2 | 89 |
| P35MM* | Nutdriver, Midget, 3,5 mm (0,138") | 3 1/2 | 89 |
| P4MM* | Nutdriver, Midget, 4 mm (0,157") | 3 1/2 | 89 |
| P45MM* | Nutdriver, Midget, 4,5 mm (0,177") | 3 1/2 | 89 |
| P5MM* | Nutdriver, Midget, 5 mm (0,197") | 3 1/2 | 89 |
| P55MM* | Nutdriver, Midget, 5,5 mm (0,217") | 3 1/2 | 89 |
| P6MM* | Nutdriver, Midget, 6 mm (0,236") | 3 1/2 | 89 |
| P7MM* | Nutdriver, Midget, 7 mm (0,276") | 3 1/2 | 89 |
| P8MM | Nutdriver, Midget, 8 mm (0,315") | 3 1/2 | 89 |
| P10MM | Nutdriver, Midget, 10 mm (0,394") | 3 1/2 | 89 |
| TA2* | Torque amplifier handle, black | | |

*Discontinued

www.labem.pl

| Order No. | Description |
|---|---|
| **99MP** | **Multi-purpose Tool Kit, Roll Kit** |
| consists of: | |
| 991X | Regular Handle |
| 994 | T-Handle |
| 99X5 | Extension, 4" |
| 99820 | Blade, Screwdriver, Phillips No. 0 |
| 99821 | Blade, Screwdriver, Phillips No. 1 |
| 99822 | Blade, Screwdriver, Phillips No. 2 |
| 996 | Blade, Nutdriver, 3/16" |
| 997 | Blade, Nutdriver, 7/32" |
| 998 | Blade, Nutdriver, 1/4" |
| 998M | Blade, Nutdriver, magnetic, 1/4" |
| 999 | Blade, Nutdriver, 9/32" |
| 9910 | Blade, Nutdriver, 5/16" |
| 9911 | Blade, Nutdriver, 11/32" |
| 9912 | Blade, Nutdriver, 3/8" |
| 9914 | Blade, Nutdriver, 7/16" |
| 9916 | Blade, Nutdriver, 1/2" |
| 9920 | Blade, Screwdriver, Allen Hex Type, 0,050" |
| 9921 | Blade, Screwdriver, Allen Hex Type, 1/16" |
| 9922 | Blade, Screwdriver, Allen Hex Type, 5/64" |
| 9923 | Blade, Screwdriver, Allen Hex Type, 3/32" |
| 99764 | Blade, Screwdriver, Allen Hex Type, 7/64" |
| 9924 | Blade, Screwdriver, Allen Hex Type, 1/8" |
| 99964 | Blade, Screwdriver, Allen Hex Type, 9/64" |
| 9925 | Blade, Screwdriver, Allen Hex Type, 5/32" |
| 9926 | Blade, Screwdriver, Allen Hex Type, 3/16" |
| 9961 | Blade, Bristol 6-flute Multiple Spline, 0,048" |
| 9962 | Blade, Bristol 6-flute Multiple Spline, 0,060" |
| 9963 | Blade, Bristol 4-flute Multiple Spline, 0,069" |
| 9964 | Blade, Bristol 6-flute Multiple Spline, 0,072" |
| 9965 | Blade, Bristol 4-flute Multiple Spline, 0,076" |
| 9966 | Blade, Bristol 6-flute Multiple Spline, 0,096" |
| 9967 | Blade, Bristol 6-flute Multiple Spline, 0,111" |
| 9968 | Blade, Bristol 6-flute Multiple Spline, 0,145" |
| 9969 | Blade, Bristol 6-flute Multiple Spline, 0,183" |
| 99125 | Blade, Screwdriver, Slotted, 1/8" |
| 99811 | Blade, Screwdriver, Slotted, 3/16" |
| 99250 | Blade, Screwdriver, Slotted, 1/4" |
| 99312 | Blade, Screwdriver, Slotted, 5/16" |
| 9938 | Reamer, 1/8" x 3/8" |

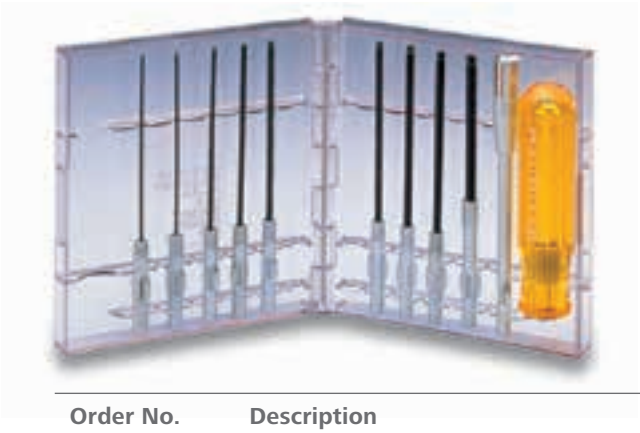
www.labem.pl

| Order No. | Description |
|---|---|
| **99SPC** | **Personal Computer Repair Kit** |
| consists of: | |
| E1 | IC-Inserter |
| X1 | IC-Extractor |
| T1 | Tweezer |
| R1 | Gripping Tool |
| 99820 | Blade, Screwdriver, Phillips No. 0 |
| 99821 | Blade, Screwdriver, Phillips No. 1 |
| 9910XTD | Torx Blade No. 10 |
| 9915XTD | Torx Blade No. 15 |
| 996 | Blade, Nutdriver, 3/16“ |
| 998 | Blade, Nutdriver, 1/4“ |
| 99811 | Blade, Screwdriver, Slotted, 3/16“ |

| Order No. | Description |
|---|---|
| **99PS40** | **Allen Hex Type Screwdriver Set – Inch Size** |
| consists of: | |
| 991X | Regular Handle |
| 99X5 | Extension 4“ |
| 9920 | Blade, Screwdriver, Allen Hex Type, 0,050“ |
| 9921 | Blade, Screwdriver, Allen Hex Type, 1/16“ |
| 9922 | Blade, Screwdriver, Allen Hex Type, 5/64“ |
| 9923 | Blade, Screwdriver, Allen Hex Type, 3/32“ |
| 99764 | Blade, Screwdriver, Allen Hex Type, 7/64“ |
| 9924 | Blade, Screwdriver, Allen Hex Type, 1/8“ |
| 99964 | Blade, Screwdriver, Allen Hex Type, 9/64“ |
| 9925 | Blade, Screwdriver, Allen Hex Type, 5/32“ |
| 9926 | Blade, Screwdriver, Allen Hex Type, 3/16“ |

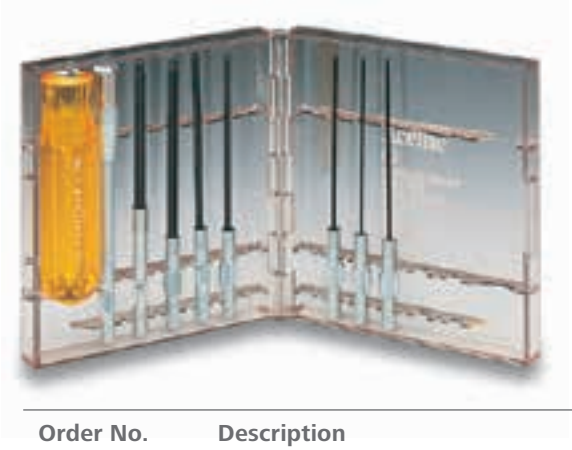
www.labem.pl

| Order No. | Description |
|---|---|
| **99PS41MM** | **Allen Hex Type Screwdriver Set – Metric Size** |
| consists of: | |
| 991X | Regular Handle |
| 99X5 | Extension 4" |
| 9971MM | Blade, Screwdriver, Allen Hex Type, 1,27 mm |
| 9972MM | Blade, Screwdriver, Allen Hex Type, 1,5 mm |
| 9973MM | Blade, Screwdriver, Allen Hex Type, 2 mm |
| 9974MM | Blade, Screwdriver, Allen Hex Type, 2,5 mm |
| 9975MM | Blade, Screwdriver, Allen Hex Type, 3 mm |
| 9976MM | Blade, Screwdriver, Allen Hex Type, 4 mm |
| 9977MM | Blade, Screwdriver, Allen Hex Type, 5 mm |

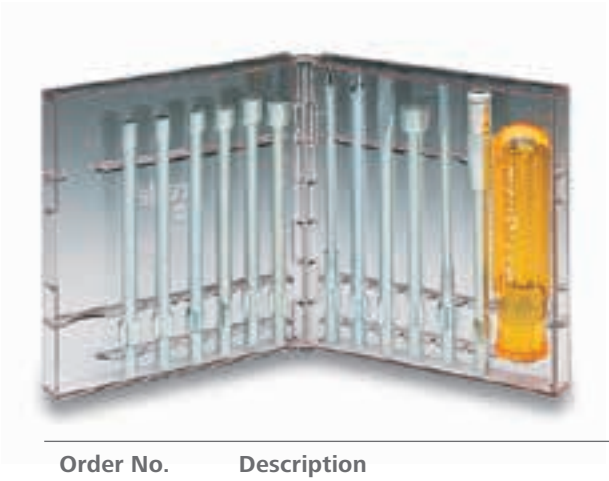


| Order No. | Description |
|---|---|
| **99PS40BP** | **Ballpoint Allen Hex Socket Type Screwdriver Set – Inch** |
| consists of: | |
| 991X | Extension 4" |
| 99X5 | Verlängerung, 102 mm |
| 9920BP | Blade, Screwdriver, Allen Hex Type, Ballpoint, 0,05" |
| 9921BP | Blade, Screwdriver, Allen Hex Type, Ballpoint, 1/16" |
| 9922BP | Blade, Screwdriver, Allen Hex Type, Ballpoint, 5/64" |
| 9923BP | Blade, Screwdriver, Allen Hex Type, Ballpoint, 3/32" |
| 99764BP | Blade, Screwdriver, Allen Hex Type, Ballpoint, 7/64" |
| 9924BP | Blade, Screwdriver, Allen Hex Type, Ballpoint, 1/8" |
| 99964BP | Blade, Screwdriver, Allen Hex Type, Ballpoint, 9/64" |
| 9925BP | Blade, Screwdriver, Allen Hex Type, Ballpoint, 5/32" |
| 9926BP | Blade, Screwdriver, Allen Hex Type, Ballpoint, 3/16" |

www.labem.pl



| Order No. | Description |
|---|---|
| **99PS41MMBP** | **Ballpoint Allen Hex Socket Type Screwdriver Set – Metric Size** |
| consists of: | |
| 991X | Regular Handle |
| 99X5 | Extension 4" |
| 9971MMBP | Blade, Screwdriver, Allen Hex Type, Ballpoint, 1,27 mm |
| 9972MMBP | Blade, Screwdriver, Allen Hex Type, Ballpoint, 1,5 mm |
| 9973MMBP | Blade, Screwdriver, Allen Hex Type, Ballpoint, 2 mm |
| 9974MMBP | Blade, Screwdriver, Allen Hex Type, Ballpoint, 2,5 mm |
| 9975MMBP | Blade, Screwdriver, Allen Hex Type, Ballpoint, 3 mm |
| 9976MMBP | Blade, Screwdriver, Allen Hex Type, Ballpoint, 4 mm |
| 9977MMBP | Blade, Screwdriver, Allen Hex Type, Ballpoint, 5 mm |



| Order No. | Description |
|---|---|
| **99PS50** | **Screwdriver & Nutdriver Set** |
| consists of: | |
| 991X | Regular Handle |
| 99X5 | Extension 4" |
| 99821 | Blade, Screwdriver, Phillips No. 0 |
| 99822 | Blade, Screwdriver, Phillips No. 1 |
| 996 | Blade, Nutdriver, 3/16" |
| 997 | Blade, Nutdriver, 7/32" |
| 998 | Blade, Nutdriver, 1/4" |
| 999 | Blade, Nutdriver, 9/32" |
| 9910 | Blade, Nutdriver, 5/16" |
| 9911 | Blade, Nutdriver, 11/32" |
| 9912 | Blade, Nutdriver, 3/8" |
| 99811 | Blade, Screwdriver, Slotted, 3/16" |
| 99250 | Blade, Screwdriver, Slotted, 1/4" |

www.labem.pl

| Order No. | Description |
|---|---|
| **99PS51MM** | **Interchangeable Shank, Nutdriver Set – Metric Size** |
| consists of: | |
| 991X | Regular Handle |
| 99X5 | Extension 4" |
| 994MM | Blade, Nutdriver, 4 mm |
| 9945MM | Blade, Nutdriver, 4,5 mm |
| 995MM | Blade, Nutdriver, 5 mm |
| 9955MM | Blade, Nutdriver, 5,5 mm |
| 996MM | Blade, Nutdriver, 6 mm |
| 997MM | Blade, Nutdriver, 7 mm |
| 998MM | Blade, Nutdriver, 8 mm |
| 999MM | Blade, Nutdriver, 9 mm |
| 9910MM | Blade, Nutdriver, 10 mm |
| 9911MM | Blade, Nutdriver, 11 mm |

| Order No. | Description |
|---|---|
| **99PS60** | **Bristol Multiple Spline Socket Screwdriver Set** |
| consists of: | |
| 991X | Regular Handle |
| 99X5 | Extension 4" |
| 9961 | Blade, Bristol 6-flute Multiple Spline, 0,048" |
| 9962 | Blade, Bristol 6-flute Multiple Spline, 0,060" |
| 9963 | Blade, Bristol 4-flute Multiple Spline, 0,069" |
| 9964 | Blade, Bristol 6-flute Multiple Spline, 0,072" |
| 9965 | Blade, Bristol 4-flute Multiple Spline, 0,076" |
| 9966 | Blade, Bristol 6-flute Multiple Spline, 0,096" |
| 9967 | Blade, Bristol 6-flute Multiple Spline, 0,111" |
| 9968 | Blade, Bristol 6-flute Multiple Spline, 0,145" |
| 9969 | Blade, Bristol 6-flute Multiple Spline, 0,183" |

www.labem.pl

| Order No. | Description |
|---|---|
| **99XTD7** consists of: | **Torx Screwdriver Tool Set** |
| 991X | Regular Handle |
| 9910XTD | Torx Blade No. 10 |
| 9915XTD | Torx Blade No. 15 |
| 9920XTD | Torx Blade No. 20 |
| 9925XTD | Torx Blade No. 25 |
| 9927XTD | Torx Blade No. 27 |
| 9930XTD | Torx Blade No. 30 |

**Single Tools for Service Kits and Set**

| Order No. | Description |
|---|---|
| 99831 | Screwdriver, Pozidriv No. 1 |
| 99832 | Screwdriver, Pozidriv No. 2 |
| 996XTD | Torx Blade No. 6 |
| 998XTD | Torx Blade No. 8 |

www.labem.pl

Final appearance may vary

| Order No. | Description |
|---|---|
| **T0044130000** | **TCE150ST Tool Case synthetic material with special tools out of Apex Tools product lines – Metric Size** |
| consists of: | |
| 991X | Regular Handle |
| 994R | T-Ratching Handle |
| 99X5 | Extension 4“ |
| 9971MM | Blade, Screwdriver, Allen Hex, 1,27 mm |
| 9972MM | Blade, Screwdriver, Allen Hex, 1,5 mm |
| 9973MM | Blade, Screwdriver, Allen Hex, 2 mm |
| 9974MM | Blade, Screwdriver, Allen Hex, 2,5 mm |
| 9975MM | Blade, Screwdriver, Allen Hex, 3 mm |
| 9976MM | Blade, Screwdriver, Allen Hex, 4 mm |
| 9977MM | Blade, Screwdriver, Allen Hex, 5 mm |
| 994MM | Blade, Nutdriver, 4 mm |
| 9945MM | Blade, Nutdriver, 4,5 mm |
| 995MM | Blade, Nutdriver, 5 mm |
| 9955MM | Blade, Nutdriver, 5,5 mm |
| 996MM | Blade, Nutdriver, 6 mm |
| 997MM | Blade, Nutdriver, 7 mm |
| 998MM | Blade, Nutdriver, 8 mm |
| 999MM | Blade, Nutdriver, 9 mm |
| 99820 | Blade, Screwdriver, Phillips No.0 |
| 99821 | Blade, Screwdriver, Phillips No.1 |
| 99822 | Blade, Screwdriver, Phillips No.2 |
| 99811 | Blade, Screwdriver, Slotted, 3/16“ |

| Order No. | Description |
|---|---|
| 99250 | Blade, Screwdriver, Slotted, 1/4“ |
| 99312 | Blade, Screwdriver Slotted, 5/16“ |
| 9938 | Reamer, 1/8“ x 3/8“ |
| Erop330 | Tip Cutter, 130 mm, 40° |
| 542E | Flat Nose Plier |
| 543E | Round Nose Plier |
| 2211P | Needle Nose Plier |
| 170M | Shearcutter, red handles |
| 812N | Side Cutter |
| 612N | Side Cutter |
| 86CG | Snip electronic |
| SX101 | Phillips Screwdriver, Stubby No.1 |
| SX102 | Phillips Screwdriver, Stubby No.2 |
| XST101 | Phillips Screwdriver, Super-tru-tip No.1 |
| 0056103699 | Soldering Iron W61, 60W |
| 0051304199 | DS7N Desoldering head for W 61 |
| XL75 | Offset Ratches, Screwdriver Set |
| 103S | Wire Stripper & Cutter, Cam Stop Adjustable |
| 0016100402 | Hand File Cut 2, 100 mm |
| AC16C | Wrench, 150 mm |
| 0054002599 | RL 60/40 - 100 solder |
| 0060403504 | Y35CM Ultralock, Measuring Tape 5 m |

www.labem.pl

| Order No. | Description |
|---|---|
| **TC100ST** | **Tool Case with USA Standard Assortment – Inch Size** |
| consists of: | |
| 991X | Regular Handle |
| 991R | Ratching Handle |
| 994R | T-Ratching Handle |
| 99X5 | Extension 4" |
| 99X10 | Extension 7" |
| 9961 | Blade, Bristol 6-flute Multiple Spline, 0,048" |
| 9962 | Blade, Bristol 6-flute Multiple Spline, 0,060" |
| 9963 | Blade, Bristol 4-flute Multiple Spline, 0,069" |
| 9964 | Blade, Bristol 6-flute Multiple Spline, 0,072" |
| 9965 | Blade, Bristol 4-flute Multiple Spline, 0,076" |
| 9966 | Blade, Bristol 6-flute Multiple Spline, 0,096" |
| 9967 | Blade, Bristol 6-flute Multiple Spline, 0,111" |
| 9968 | Blade, Bristol 6-flute Multiple Spline, 0,145" |
| 9969 | Blade, Bristol 6-flute Multiple Spline, 0,183" |
| 9920 | Blade, Screwdriver, Allen Hex Type, 0,050" |
| 9921 | Blade, Screwdriver, Allen Hex Type, 1/16" |
| 9922 | Blade, Screwdriver, Allen Hex Type, 5/64" |
| 9923 | Blade, Screwdriver, Allen Hex Type, 3/32" |
| 99764 | Blade, Screwdriver, Allen Hex Type, 7/64" |
| 9924 | Blade, Screwdriver, Allen Hex Type, 1/8" |
| 99964 | Blade, Screwdriver, Allen Hex Type, 9/64" |
| 9925 | Blade, Screwdriver, Allen Hex Type, 5/32" |
| 9926 | Blade, Screwdriver, Allen Hex Type, 3/16" |
| 99125 | Blade, Screwdriver, Slotted, 1/8" |
| 99811 | Blade, Screwdriver, Slotted, 3/16" |
| 99250 | Blade, Screwdriver, Slotted, 1/4" |
| 99312 | Blade, Screwdriver, Slotted, 5/16" |
| 99820 | Blade, Screwdriver, Phillips No.0 |
| 99821 | Blade, Screwdriver, Phillips No.1 |
| 99822 | Blade, Screwdriver, Phillips No.2 |
| 9938 | Reamer, 1/8" x 3/8" |
| 42H | Seizer, Straight Nose, Serrated jaw |
| 46CG | Wrench, adjustable, 6" |
| 50CG | Plier, adjustable, 6" |
| 51CG | Plier, Long Nose, 7" |
| 53CG | Plier, adjustable, 4" |
| 54CG | Plier, diagonal, 4" |
| 66CG | Plier, diagonal, 6" |

| Order No. | Description |
|---|---|
| 57CG | Plier, Needle Nose, 16" |
| 59CG | Plier, Special Purpose, 8" |
| 86CG | Electronic Snip, cushion grip, 6,5" |
| 103S | Wire Stripper & Cutter, Cam Stop Adjustable |
| M60 | Mini Screwdriver Set (7 pcs.) |
| XL75 | Offset Ratches, Screwdriver Set |
| 600 | 4-way Pocket Tool Screwdriver/Nutdriver |
| SB1 | Convertible Blade |
| R3323 | Screwdriver, Round Blade, Pocket Clip Style, 3/32" x 3" |
| R181 | Screwdriver, Round Blade, Pocket Clip Style, 1/8" x 2" |
| R184 | Screwdriver, Round Blade, Regular, 1/8" x 2" |
| R3164 | Screwdriver, Round Blade, Regular, 3/16" x 4" |
| R3166 | Screwdriver, Round Blade, Regular, 3/16" x 6" |
| R144 | Screwdriver, Round Blade, Regular, 1/4" x 4" |
| R146 | Screwdriver, Round Blade, Regular, 1/4" x 6" |
| SX101 | Screwdriver, Phillips, Stubby No.1 |
| XST100 | Screwdriver, Phillips, Super-tru-tip No.0 |
| XST101 | Screwdriver, Phillips, Super-tru-tip No.1 |
| XST102 | Screwdriver, Phillips, Super-tru-tip No.2 |
| S3161 | Screwdriver, Square Blade, Stubby, 3/8" |
| S5161 | Screwdriver, Square Blade, Stubby, 5/16" |
| S388 | Screwdriver, Square Blade, Regular, 3/8" |
| S5166 | Screwdriver, Square Blade, Regular, 5/16" |
| P18 | Screwdriver, Allen Hex Type, 0,028" |
| P19 | Screwdriver, Allen Hex Type, 0,035" |
| HS6 | Nutdriver, Hollow, 3/16" |
| HS8 | Nutdriver, Hollow, 1/4" |
| HS10 | Nutdriver, Hollow, 5/16" |
| HS11 | Nutdriver, Hollow, 11/32" |
| HS12 | Nutdriver, Hollow, 3/8" |
| HS14 | Nutdriver, Hollow, 7/16" |
| HS16 | Nutdriver, Hollow, 1/2" |
| HS18 | Nutdriver, Hollow, 9/16" |
| 998M | Blade, Nutdriver, 1/4", magnetic |
| 9910M | Blade, Nutdriver, 5/16", magnetic |
| PS120 | Nutdriver Set |

www.labem.pl

| Order No. | Description |
|---|---|
| **TCMB100ST** | **Tool Case with Tools – Inch Size** |
| consists of: | |
| 991X | Regular Handle |
| 991R | Ratching Handle |
| 994R | T-Ratching Handle |
| 99X5 | Extension 4" |
| 99X10 | Extension 7" |
| 9961 | Blade, Bristol 6-flute Multiple Spline, 0,048" |
| 9962 | Blade, Bristol 6-flute Multiple Spline, 0,060" |
| 9963 | Blade, Bristol 4-flute Multiple Spline, 0,069" |
| 9964 | Blade, Bristol 6-flute Multiple Spline, 0,072" |
| 9965 | Blade, Bristol 4-flute Multiple Spline, 0,076" |
| 9966 | Blade, Bristol 6-flute Multiple Spline, 0,096" |
| 9967 | Blade, Bristol 6-flute Multiple Spline, 0,111" |
| 9968 | Blade, Bristol 6-flute Multiple Spline, 0,145" |
| 9969 | Blade, Bristol 6-flute Multiple Spline, 0,183" |
| 9920 | Blade, Screwdriver, Allen Hex Type, 0,050" |
| 9921 | Blade, Screwdriver, Allen Hex Type, 1/16" |
| 9922 | Blade, Screwdriver, Allen Hex Type, 5/64" |
| 9923 | Blade, Screwdriver, Allen Hex Type, 3/32" |
| 99764 | Blade, Screwdriver, Allen Hex Type, 7/64" |
| 9924 | Blade, Screwdriver, Allen Hex Type, 1/8" |
| 99964 | Blade, Screwdriver, Allen Hex Type, 9/64" |
| 9925 | Blade, Screwdriver, Allen Hex Type, 5/32" |
| 9926 | Blade, Screwdriver, Allen Hex Type, 3/16" |
| 99125 | Blade, Screwdriver, Slotted, 1/8" |
| 99811 | Blade, Screwdriver, Slotted, 3/16" |
| 99250 | Blade, Screwdriver, Slotted, 1/4" |
| 99312 | Blade, Screwdriver, Slotted, 5/16" |
| 99820 | Blade, Screwdriver, Phillips No.0 |
| 99821 | Blade, Screwdriver, Phillips No.1 |
| 99822 | Blade, Screwdriver, Phillips No.2 |
| 9938 | Reamer 1/8" x 3/8" |
| 42H | Seizer, Straight Nose, Serrated jaw |
| 46CG | Wrench, adjustable, 6" |
| 50CG | Plier, adjustable, 6" |
| 51CG | Plier, Long Nose, 7" |
| 53CG | Plier, adjustable, 4" |
| 54CG | Plier, diagonal, 4" |
| 66CG | Plier, diagonal, 6" |
| 57CG | Plier, Needle-Nose, 16" |

| Order No. | Description |
|---|---|
| 59CG | Plier, Special Purpose, 8" |
| 86CG | Electronic Snip, cushion grip, 6,5" |
| 103S | Wire Stripper & Cutter, Cam Stop Adjustable |
| K22 | Electricians` knife |
| M60 | Mini Screwdriver Set (7 pcs.) |
| XL75 | Offset Ratches, Screwdriver Set |
| 600 | 4-way Pocket Tool Screwdriver/Nutdriver |
| SB1 | Convertible Blade |
| R3323 | Screwdriver, Round Blade, Pocket Clip Style, 3/32" x 3" |
| R181 | Screwdriver, Round Blade, Pocket Clip Style, 1/8" x 2" |
| R184 | Screwdriver, Round Blade, Regular, 1/8" x 2" |
| R5325 | Screwdriver, Round Blade, Regular, 5/32" |
| R3164 | Screwdriver, Round Blade, Regular, 3/16" x 4" |
| R3166 | Screwdriver, Round Blade, Regular, 3/16" x 6" |
| R144 | Screwdriver, Round Blade, Regular, 1/4" x 4" |
| R146 | Screwdriver, Round Blade, Regular, 1/4" x 6" |
| SX101 | Screwdriver, Phillips, Stubby No.1 |
| XST100 | Screwdriver, Phillips, Super-tru-tip No.0 |
| XST101 | Screwdriver, Phillips, Super-tru-tip No.1 |
| XST102 | Screwdriver, Phillips, Super-tru-tip No.2 |
| S3161 | Screwdriver, Square Blade, Stubby, 3/8" |
| S5161 | Screwdriver, Square Blade, Stubby, 5/16" |
| S388 | Screwdriver, Square Blade, Regular, 3/8" |
| S5166 | Screwdriver, Square Blade, Regular, 5/16" |
| P18 | Screwdriver, Allen Hex Type, 0,028" |
| P19 | Screwdriver, Allen Hex Type, 0,035" |
| HS6 | Nutdriver, Hollow, 3/16" |
| HS8 | Nutdriver, Hollow, 1/4" |
| HS10 | Nutdriver, Hollow, 5/16" |
| HS11 | Nutdriver, Hollow, 11/32" |
| HS12 | Nutdriver, Hollow, 3/8" |
| HS14 | Nutdriver, Hollow, 7/16" |
| HS16 | Nutdriver, Hollow, 1/2" |
| HS18 | Nutdriver, Hollow, 9/16" |
| 998M | Blade, Nutdriver, 1/4", magnetic |
| 9910M | Blade, Nutdriver, 5/16", magnetic |
| PS120 | Nutdriver Set |

www.labem.pl

# Offset Ratchet Screwdriver Set

| Order No. | Description |
|---|---|
| **XL70** consists of: | **Offset Ratchet Screwdriver Set** |
| XL3 | Allen Hex Screw Bit 0,050" (1,27 mm) |
| XL4 | Allen Hex Screw Bit 1/16" (1,54 mm) |
| XL5 | Allen Hex Screw Bit 5/64" (1,98 mm) |
| XL6 | Allen Hex Screw Bit 3/32" (2,38 mm) |
| XL7 | Allen Hex Screw Bit 7/64" (1,54 mm) |
| XL8 | Allen Hex Screw Bit 1/8" (3,17 mm) |
| XL9 | Allen Hex Screw Bit 9/64" (3,57 mm) |
| XL10 | Allen Hex Screw Bit 5/32" (3,97 mm) |
| XL12 | Allen Hex Screw Bit 3/16" (4,76 mm) |
| XL14 | Allen Hex Screw Bit 7/32" (5,56 mm) |
| XL16 | Allen Hex Screw Bit 1/4" (6 mm) |
| XL17 | Slotted Screw Bit 1/4" (6 mm) |
| XL18 | Allen Hex Screw Bit 5/16" (7,94 mm) |
| XL20 | Phillips Screw Bit No. 1 |
| XL21 | Phillips Screw Bit No. 2 |
| XL24 | Adapter bit |
| XL25 | Slotted Screw Bit 3/16" (4,76 mm) |
| XL27 | Offset Ratchet, reversible |
| XL50X | Screwdriver Extension |

www.labem.pl

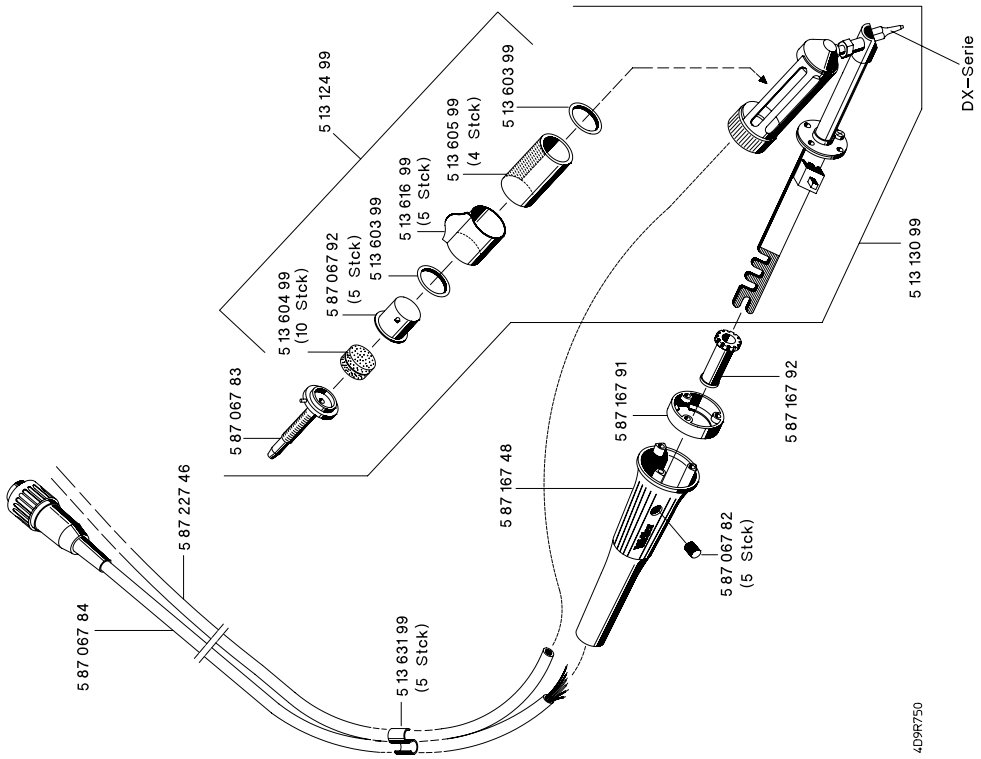
# Index Exploded Drawings


| Model | Page |
|---|---|
| DSX 80 | 353 |
| DSX 120 | 353 |
| DXV 80 | 354 |
| DSXV 80 | 354 |
| FE 25 | 355 |
| FE 50 | 355 |
| FE 50M | 356 |
| FE 75 | 356 |
| FE 80 | 357 |
| HAP 200 | 357 |
| LR 21 | 358 |
| MPR 80 | 358 |
| PUD 151R | 359 |
| Pyropen + Pyropen Piezo | 359 |
| Pyropen JR. | 360 |
| W 61 / W 101 | 360 |
| WD 1 / WD 1000 | 361 |
| WD 1M / WD 1000M | 361 |
| WD 2 / WD 2000 | 362 |
| WD 2M | 363 |
| WD 3M | 362 |
| WDD 161V | 363 |
| WDD 81V | 364 |
| WDH 10T / 20T | 364 |
| WFE | 365 |
| WFE 2ES | 366 |
| WFE 2S | 365 |
| WFE 4S | 367 |
| WFE P | 366 |
| WHA 900 | 367 |
| WHA 3000P | 368 |
| WHA 3000V | 368 |
| WHP 1000 | 369 |
| WHP 3000 | 369 |
| WMD 1S | 370 |
| WMD 3 / WMD 3K2 | 370 |
| WMRT | 371 |
| WP 65 | 371 |
| WP 80 | 372 |
| WP 120 | 372 |
| WP 200 | 373 |
| WR 2 | 372 |
| WR 3M | 374 |
| WS 51 | 374 |
| WS 81 | 375 |
| WSD 81 | 376 |
| WSD 81i | 377 |
| WSD 121 | 377 |
| WSD 151 | 378 |
| WSD 161 | 378 |
| WSF 81D | 379 |
| WSP 80 | 379 |
| WTA 50 | 380 |

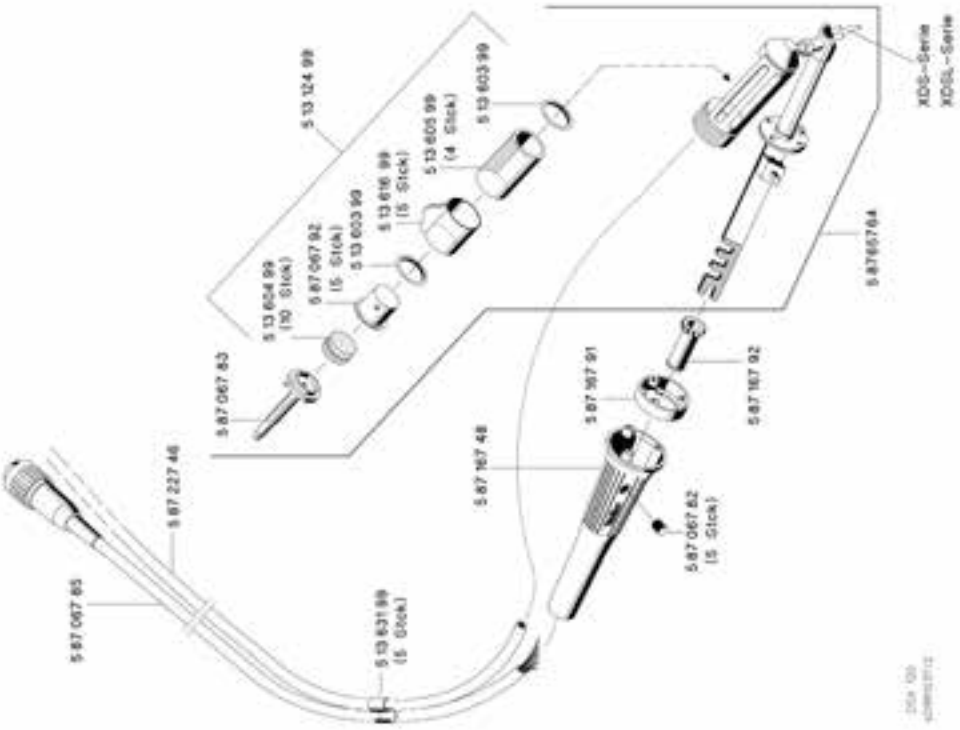
| Model | Page |
|---|---|
| WTCP 51 | 380 |
| WX 1 | 381 |
| WX 2 | 381 |
| WXA 2 | 382 |
| WXD 2 | 382 |
| WXDP 120 | 383 |
| WXDV 120 | 383 |
| WXP 65 | 384 |
| WXP 120 | 384 |
| WXP 200 | 385 |


www.labem.pl

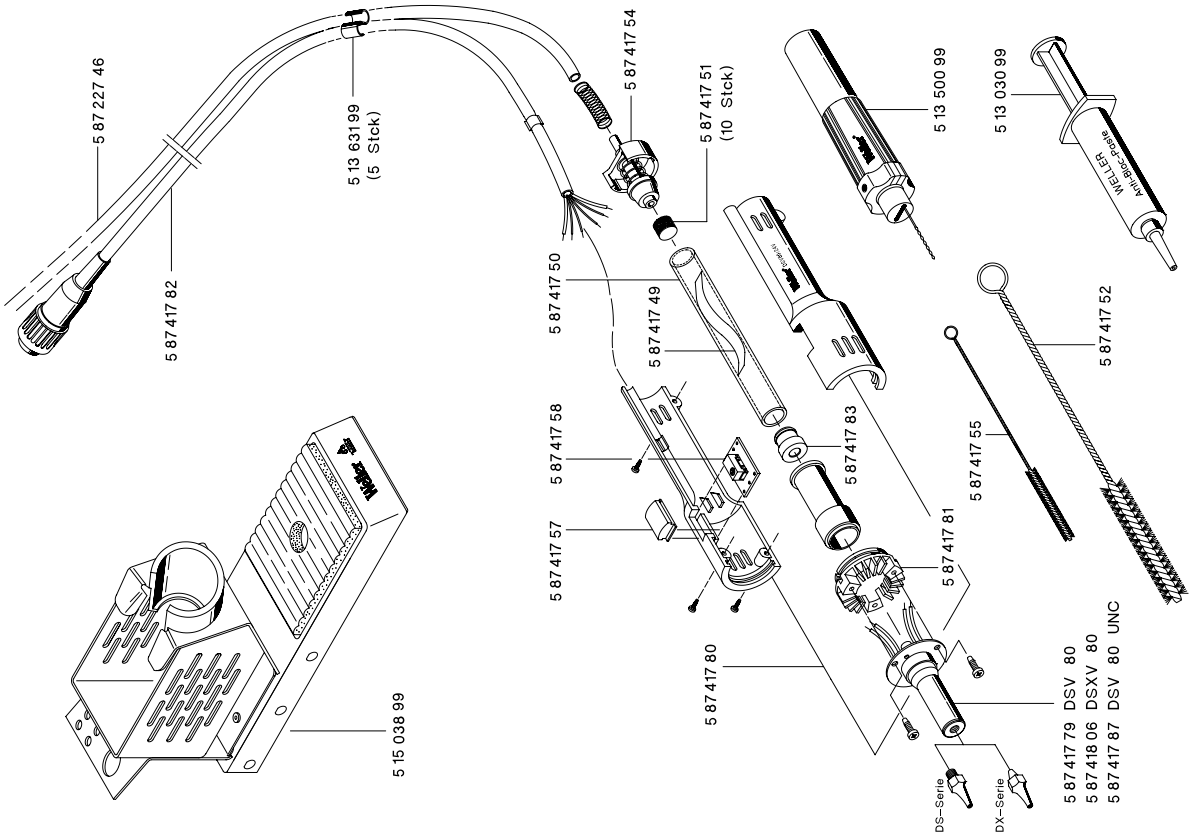
# DSX 80



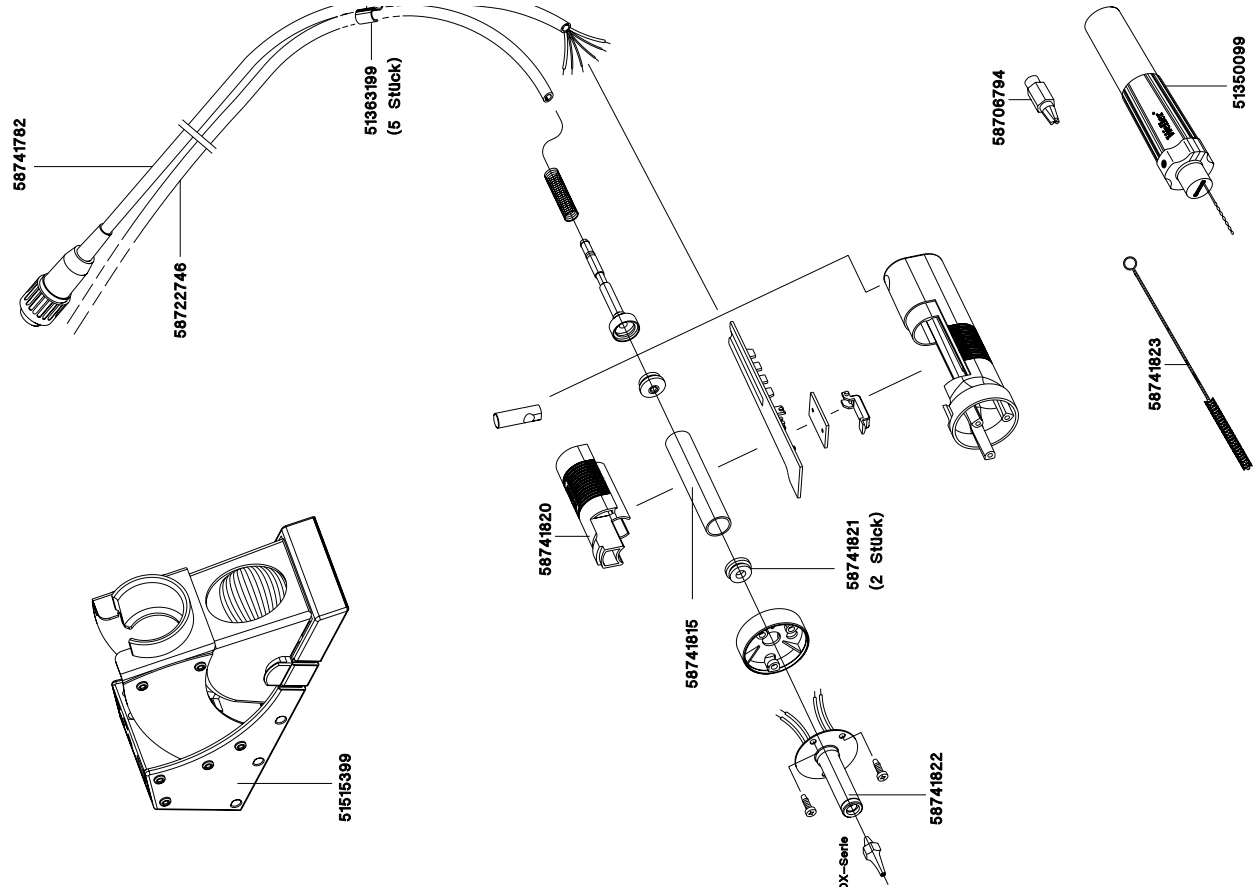

# DSX 120



## DSXV 80

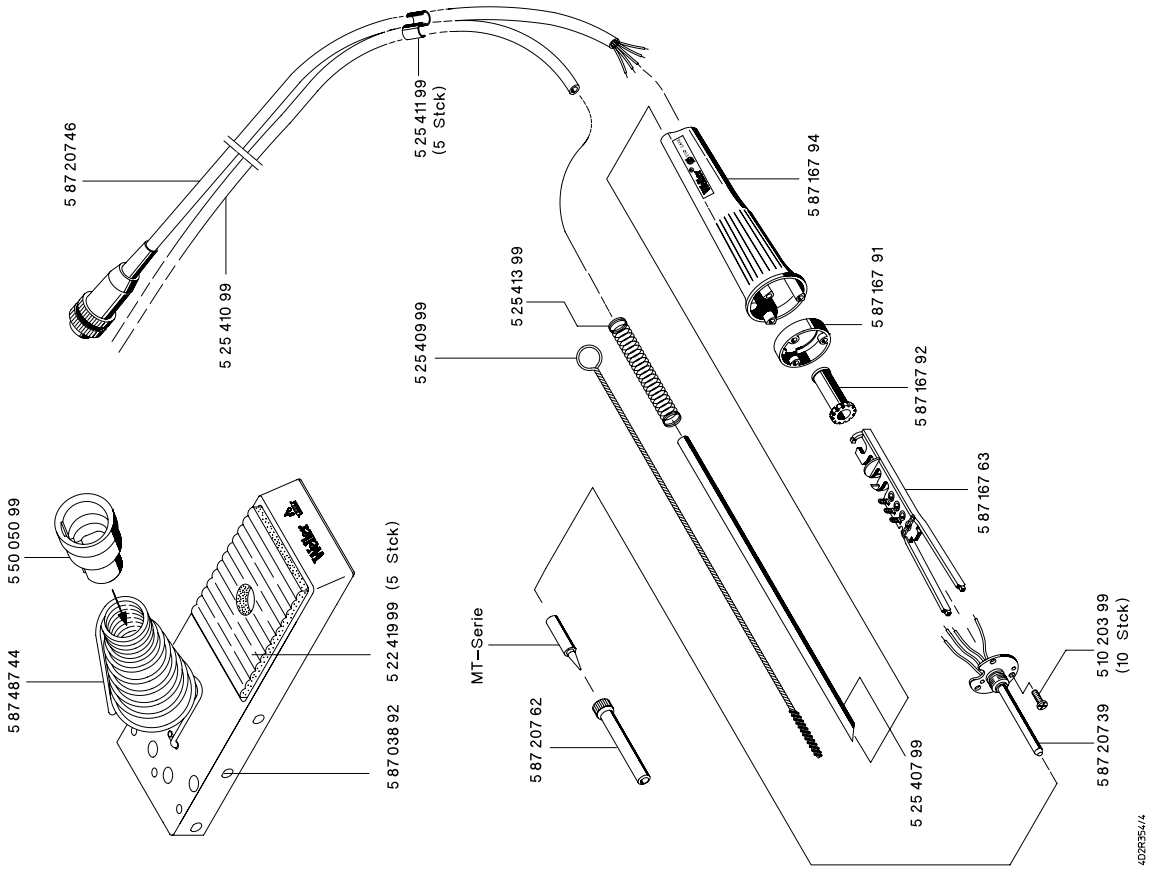



## DXV 80

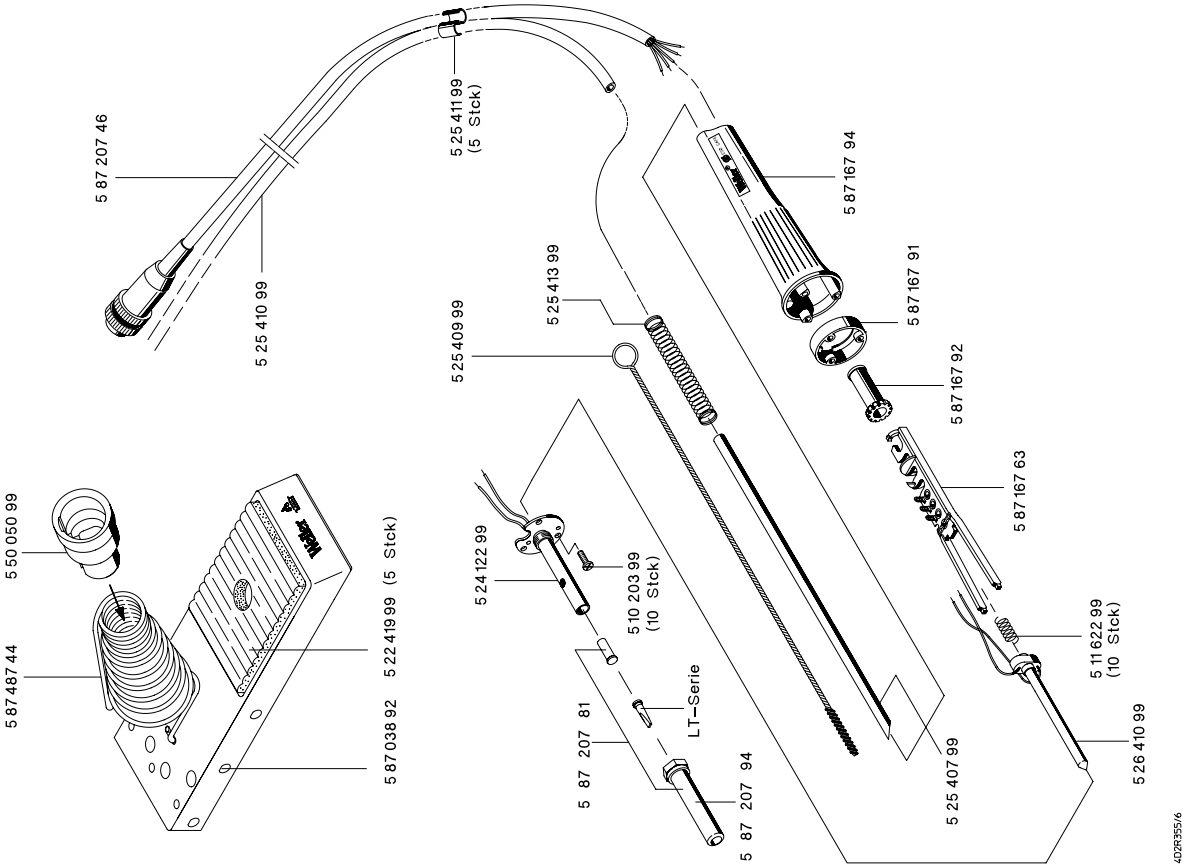



www.labem.pl

# FE 25

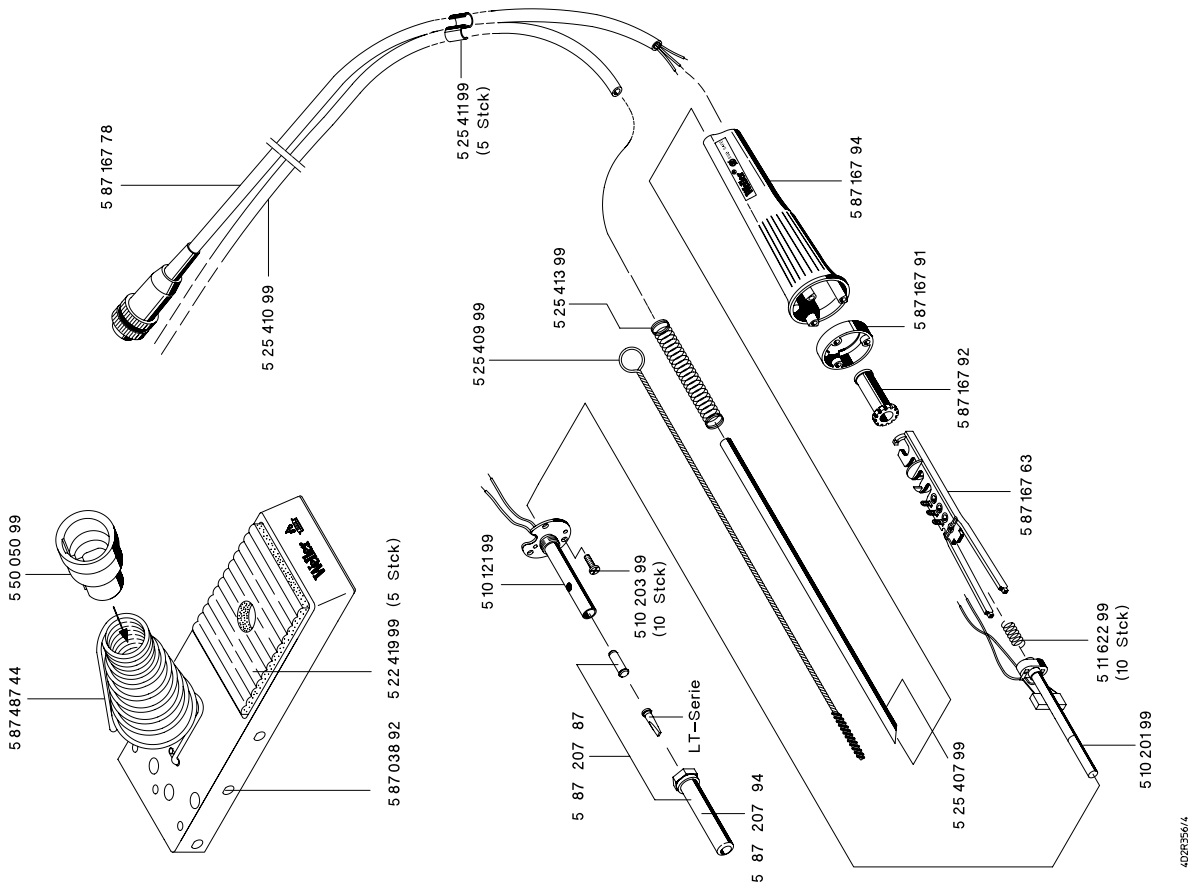



# FE 50

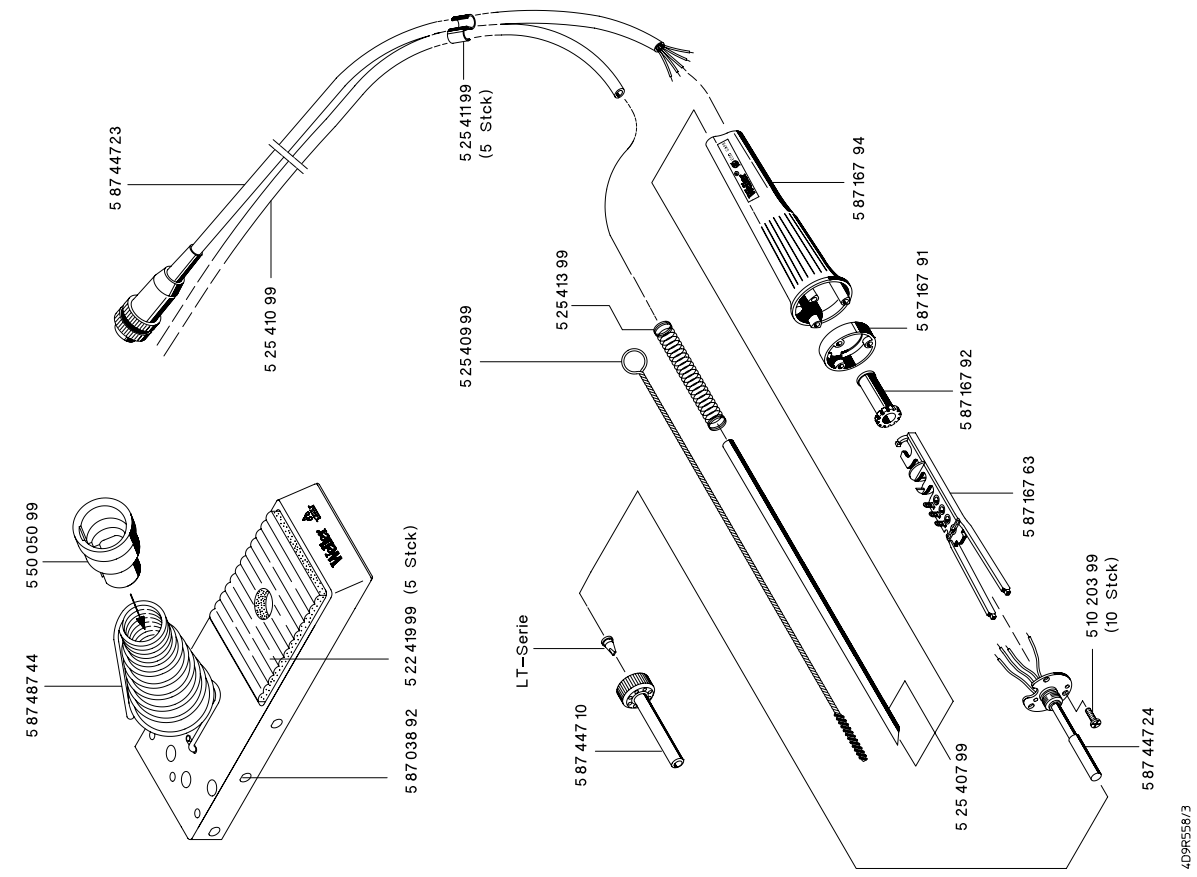



www.labem.pl

## FE 50M

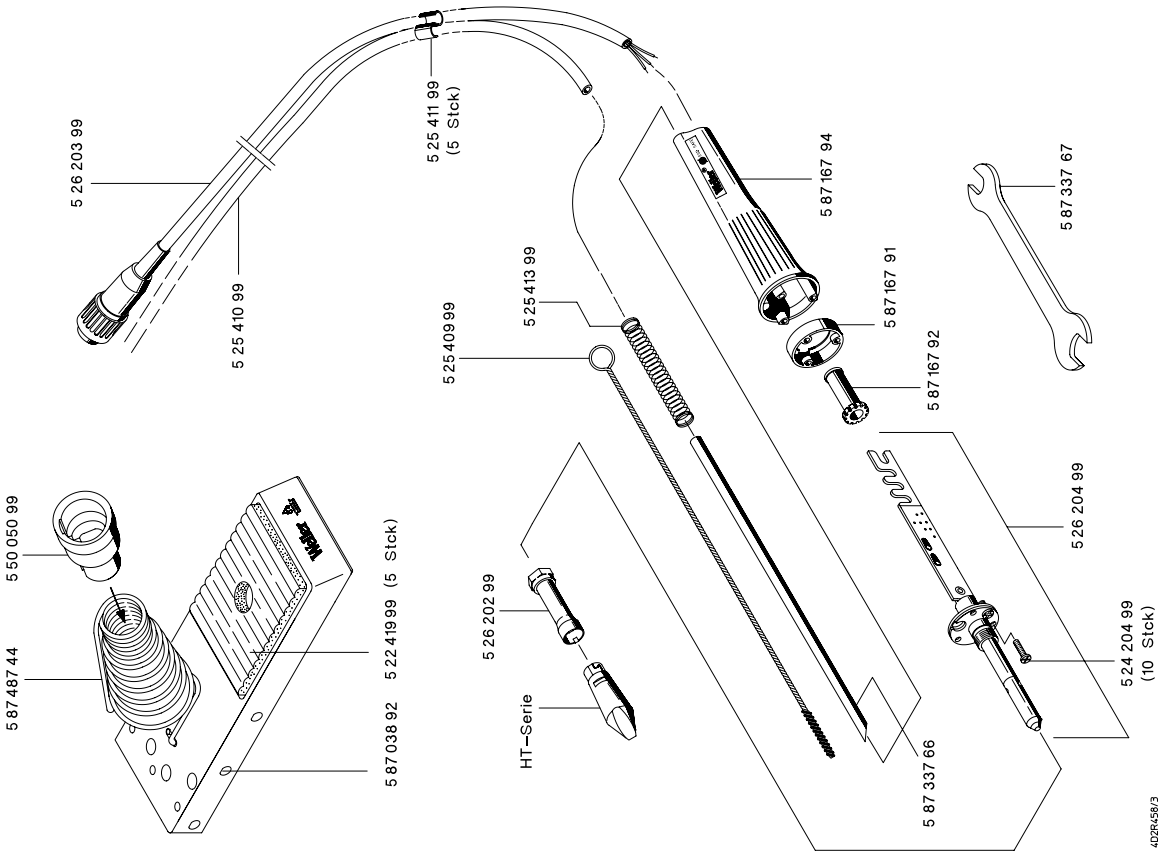



## FE 75

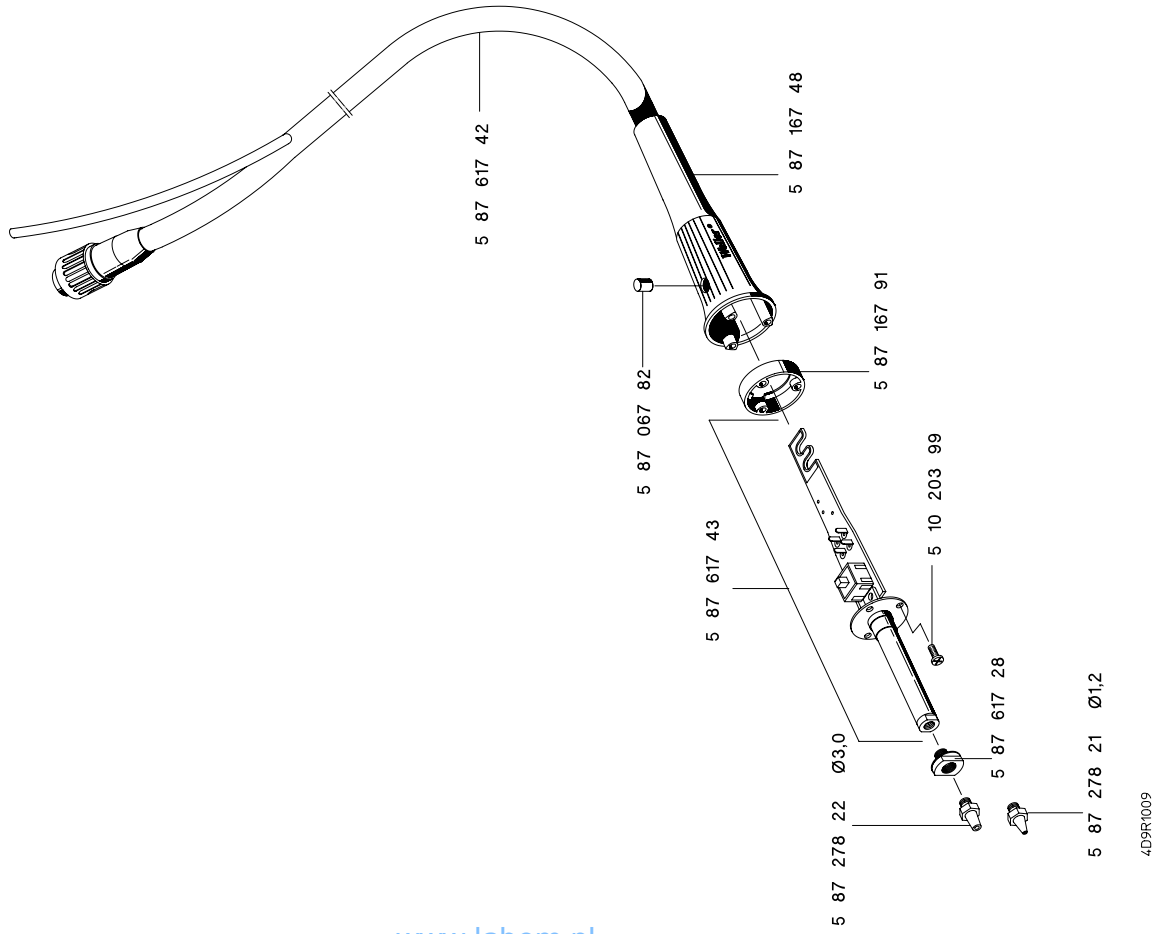



www.labem.pl

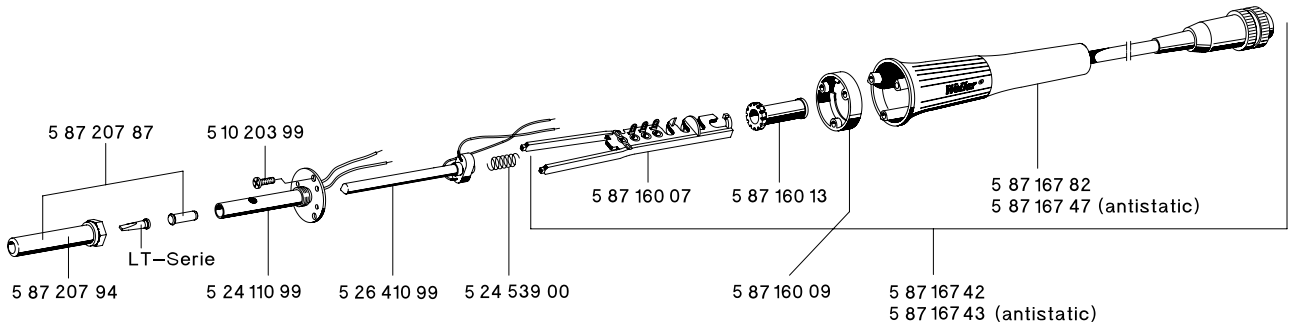
# FE 80



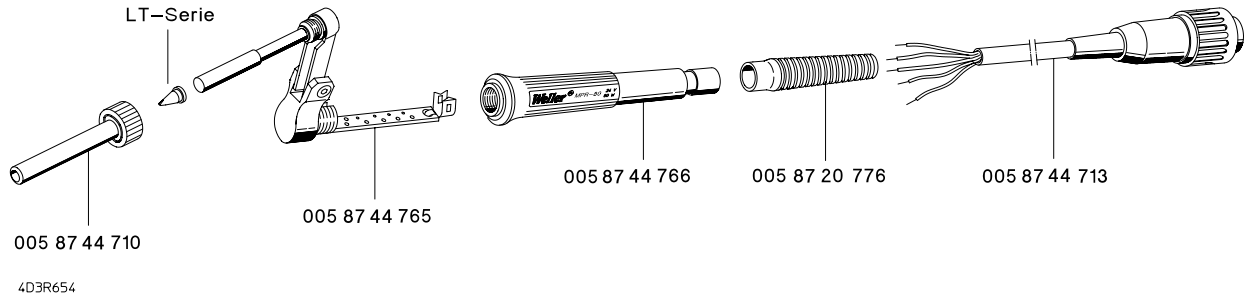

# HAP 200




www.labem.pl



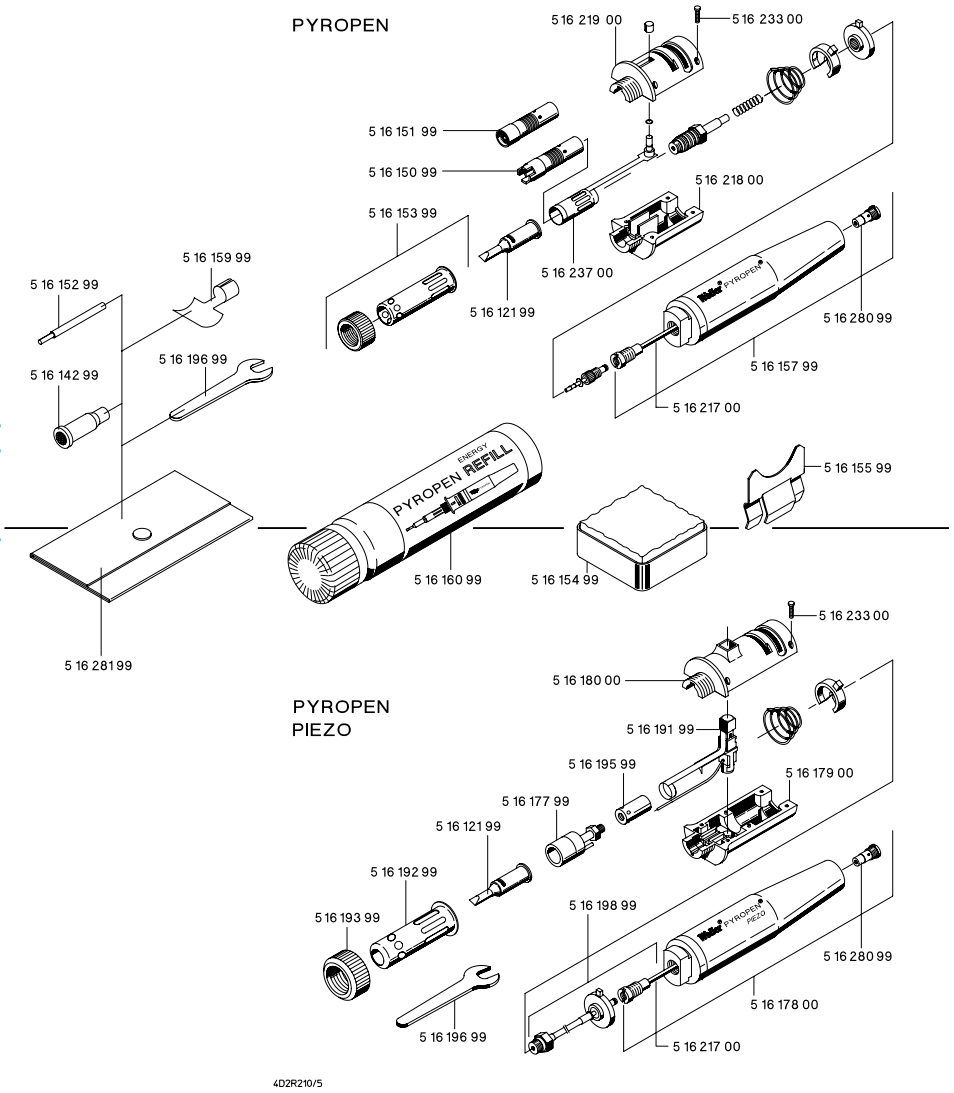

## LR 21



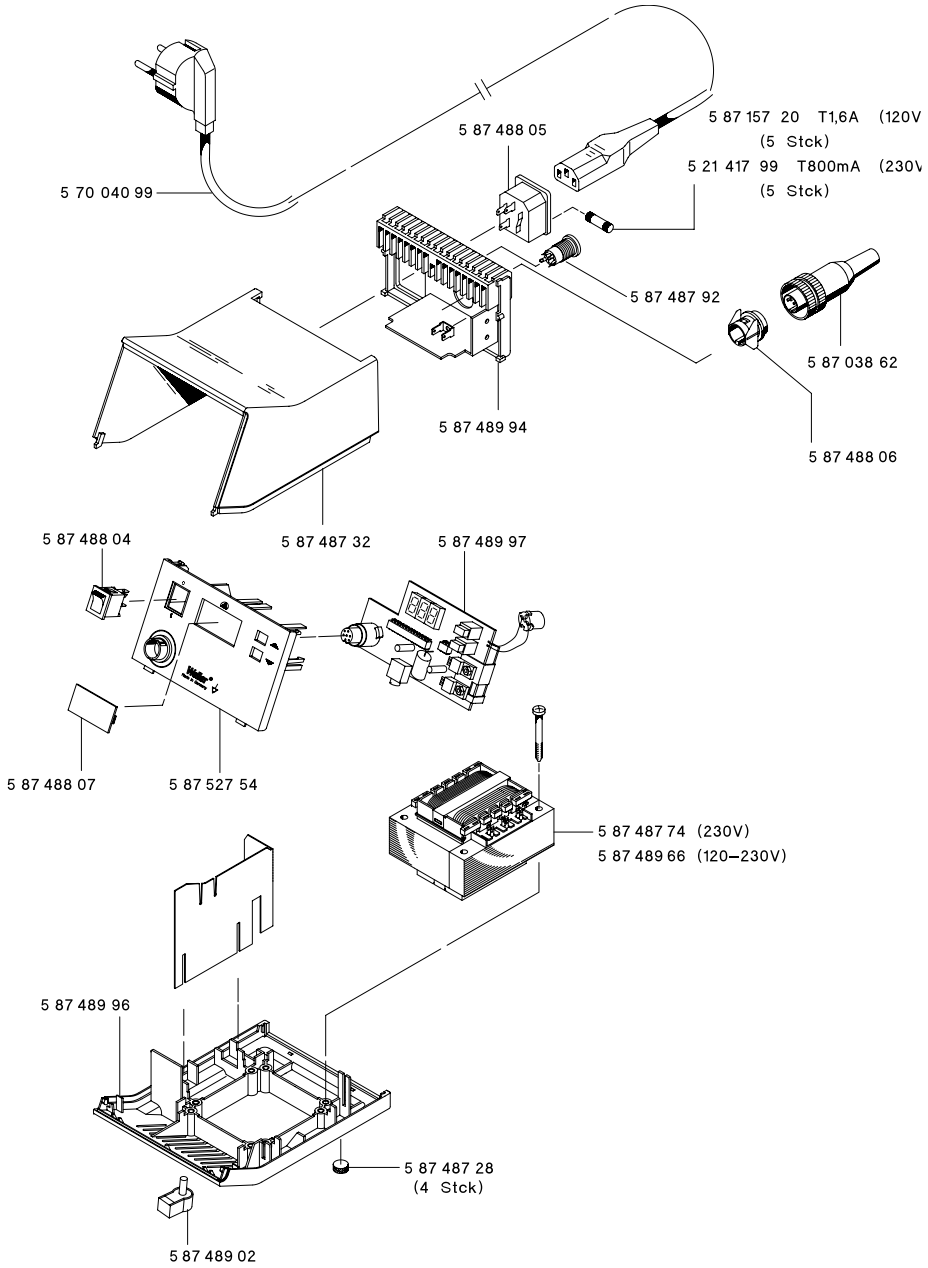

## MPR 80

www.labem.pl

# Pyropen + Pyropen Piezo

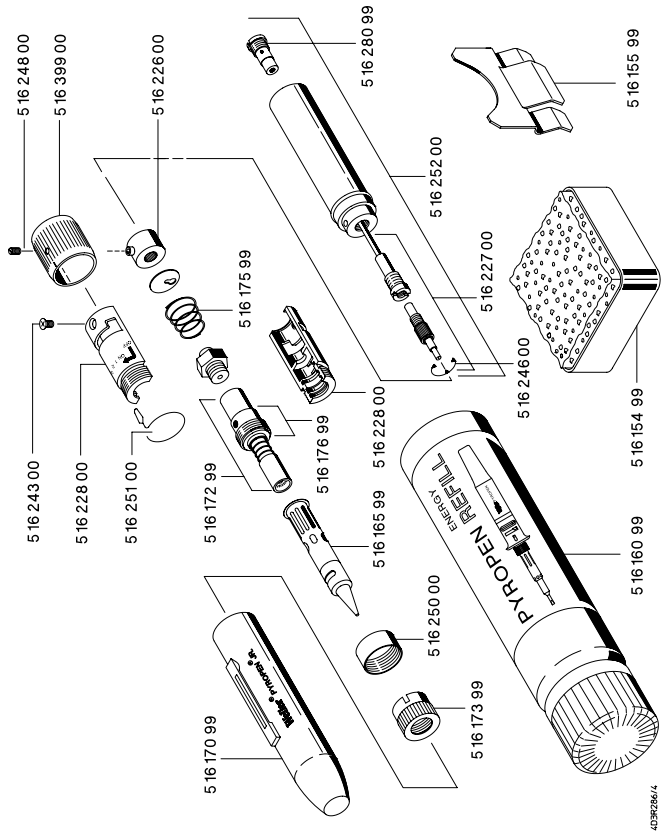



# PUD 151R

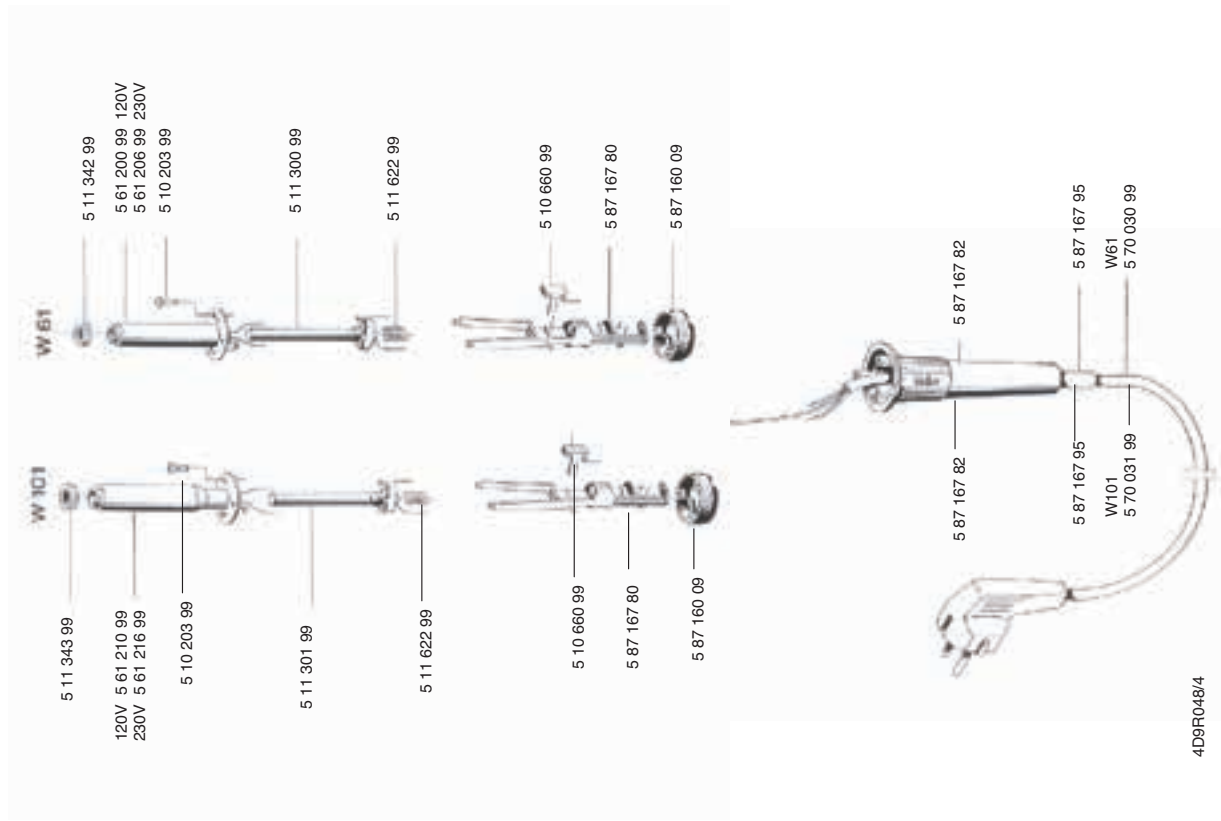



www.labem.pl

## Pyropen JR.



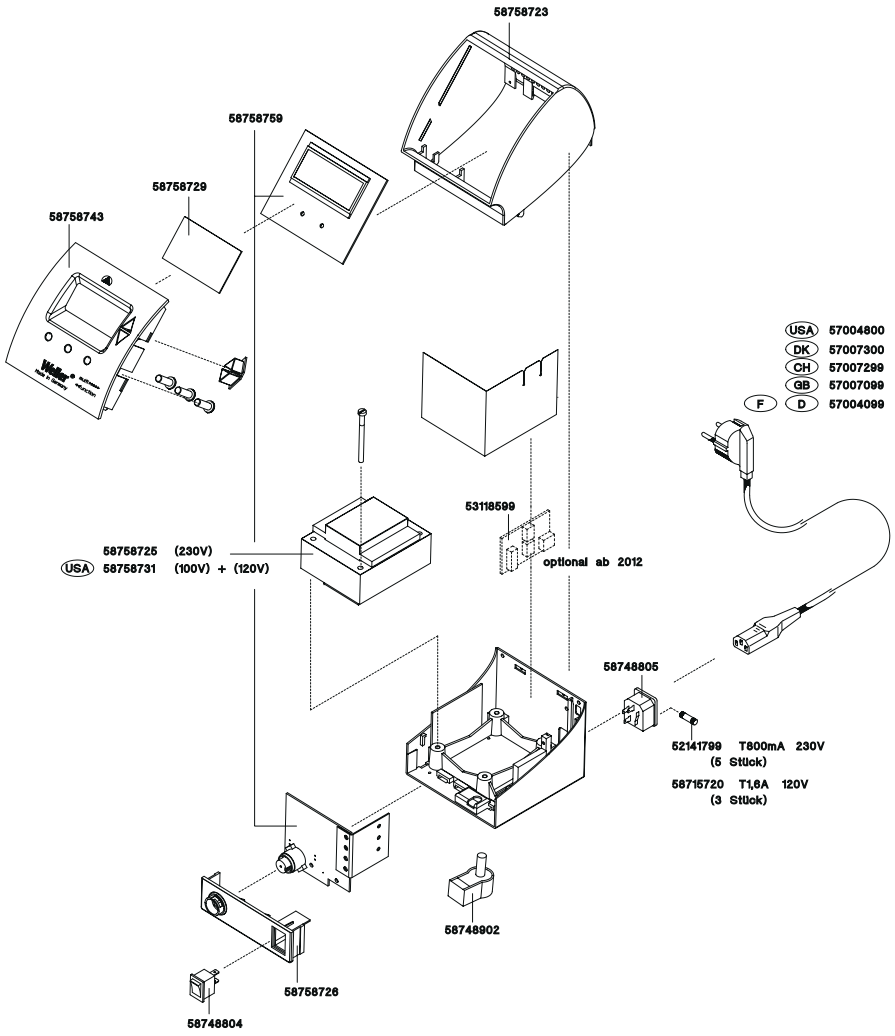

## W 61, W 101




www.labem.pl

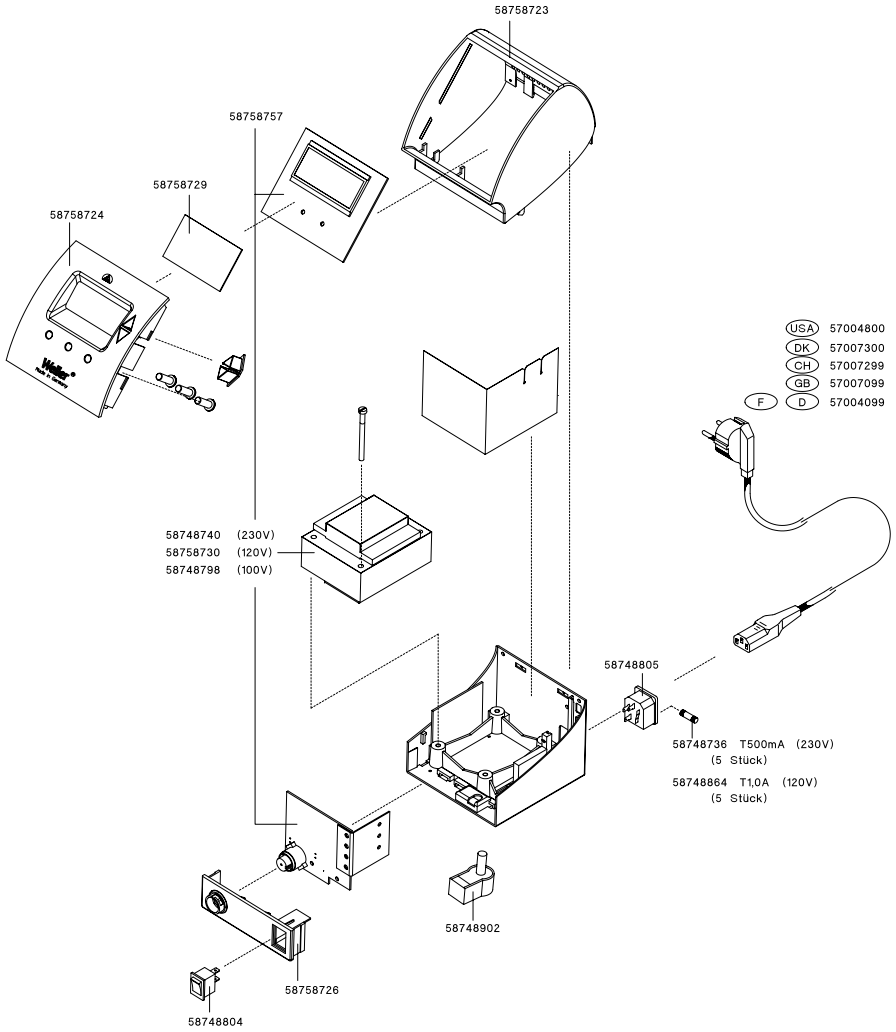
# WD 1M / WD 1000M

Since 3. Quarter 2007




# WD 1 / WD 1000

Since 3. Quarter 2007

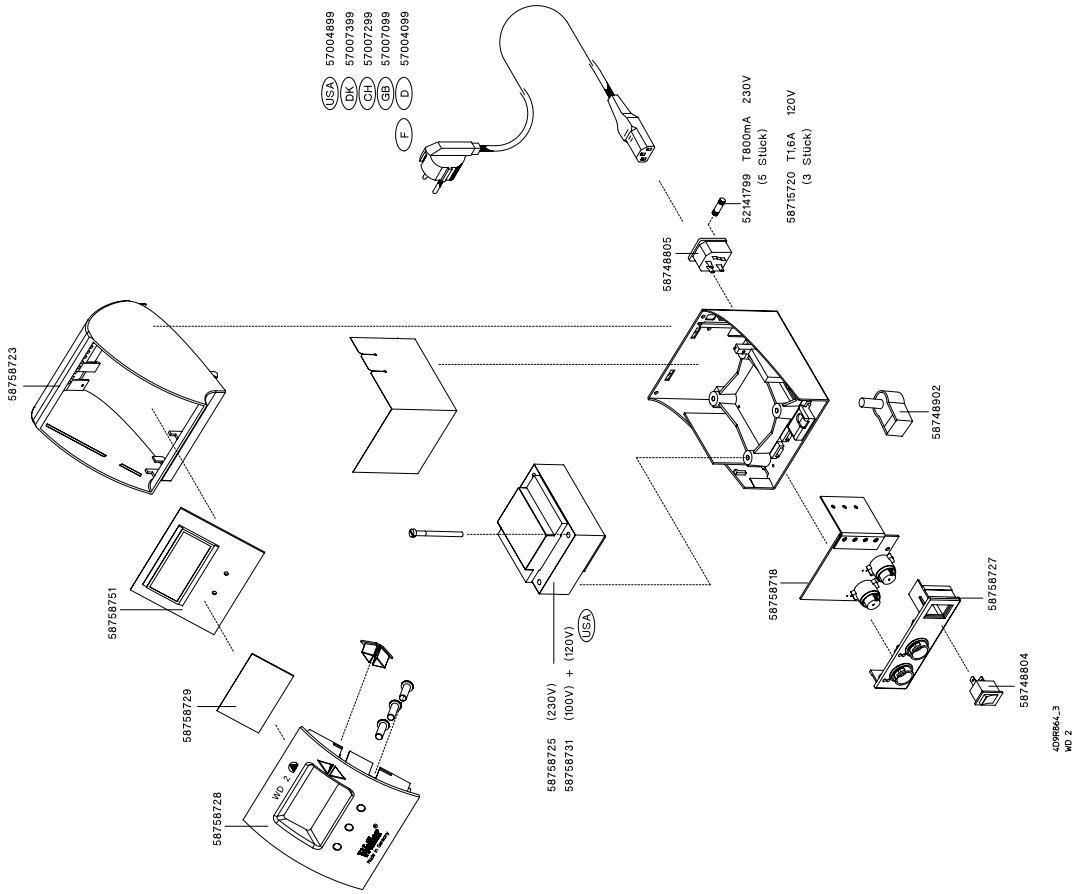



4D9R909/2
WD 1

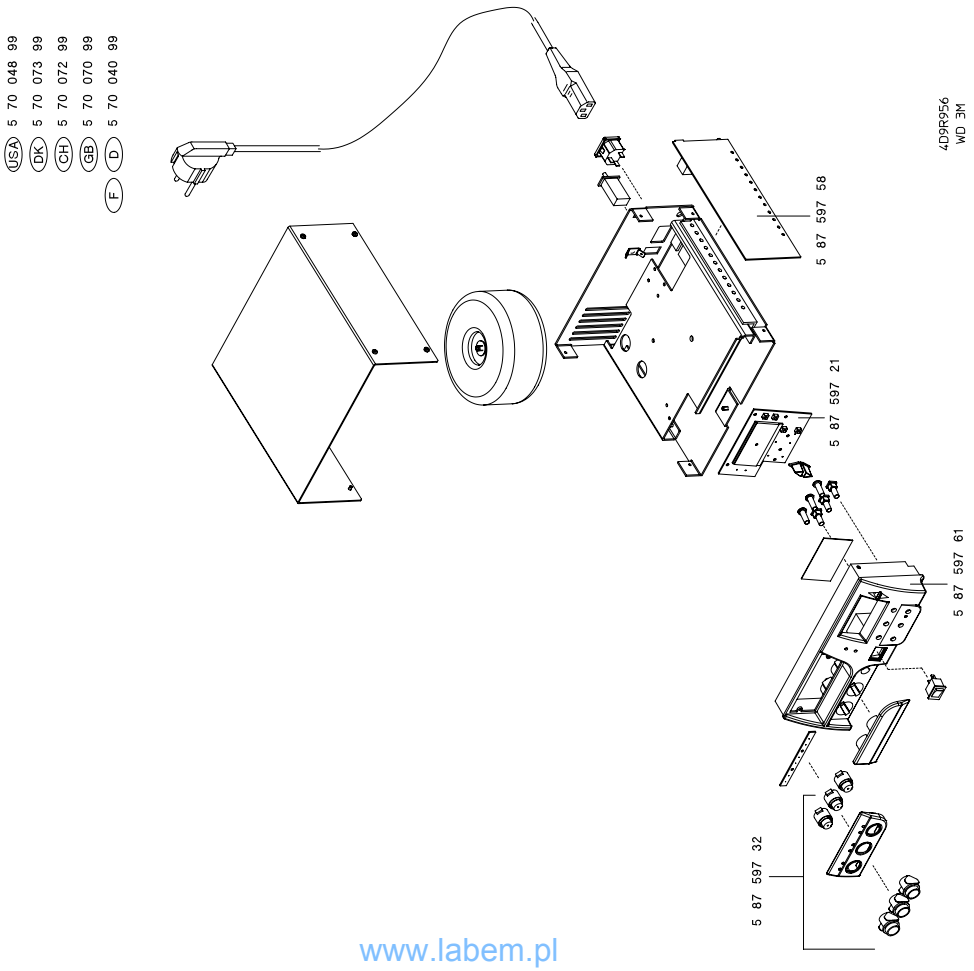
www.labem.pl

# WD 2 / WD 2000

Since 3. Quarter 2007

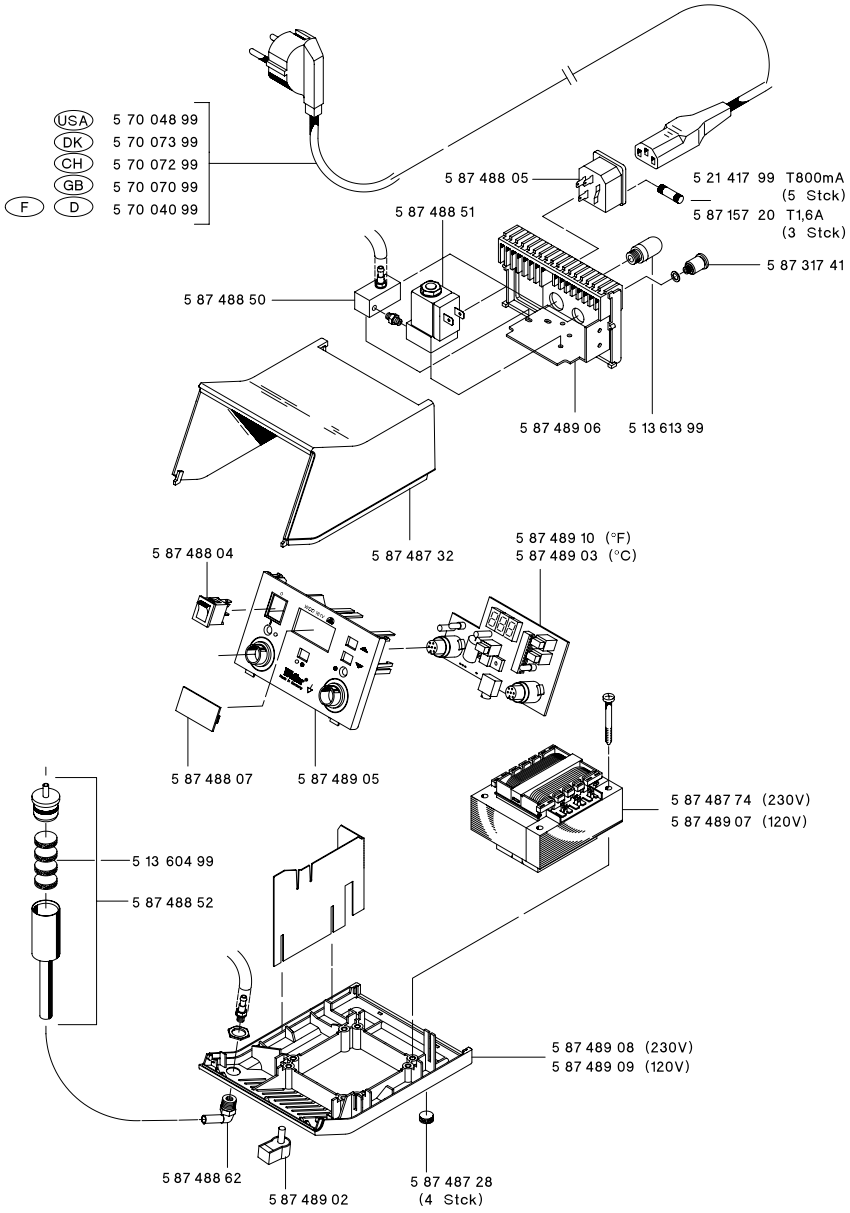



# WD 3M



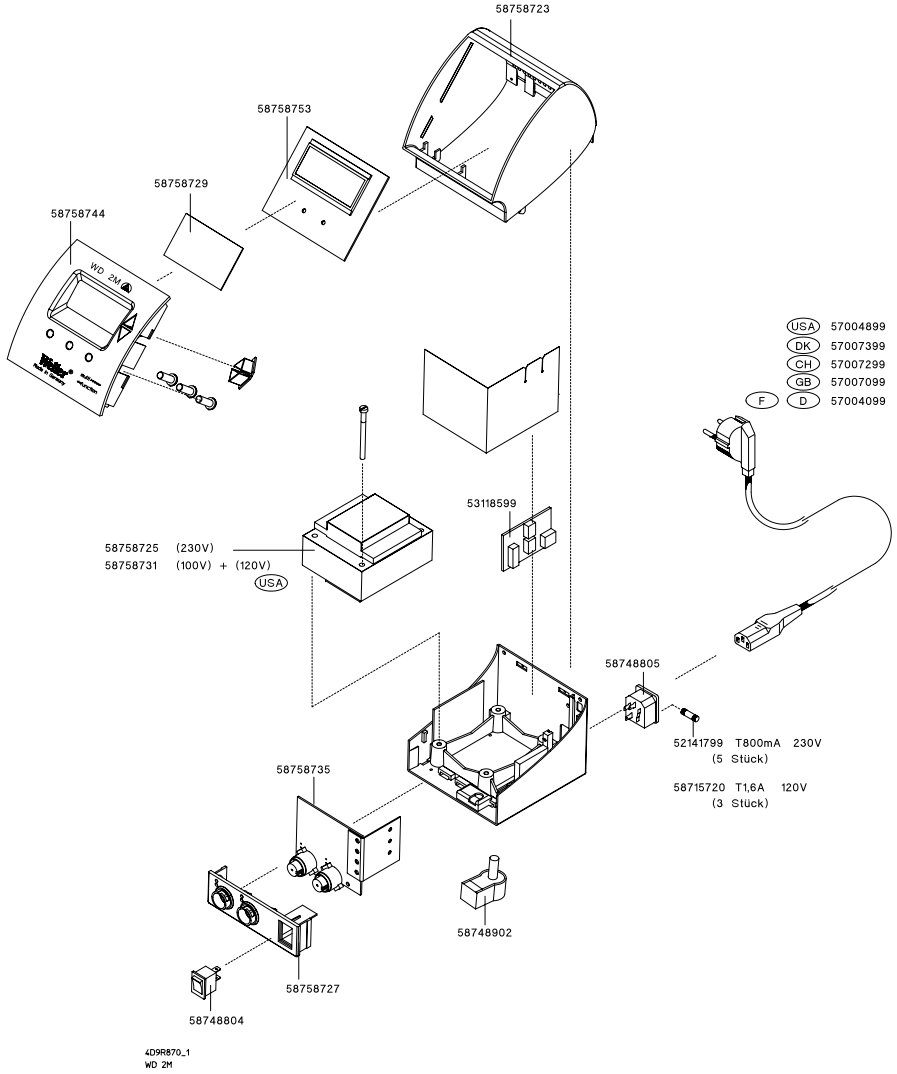

www.labem.pl

# WDD 161V



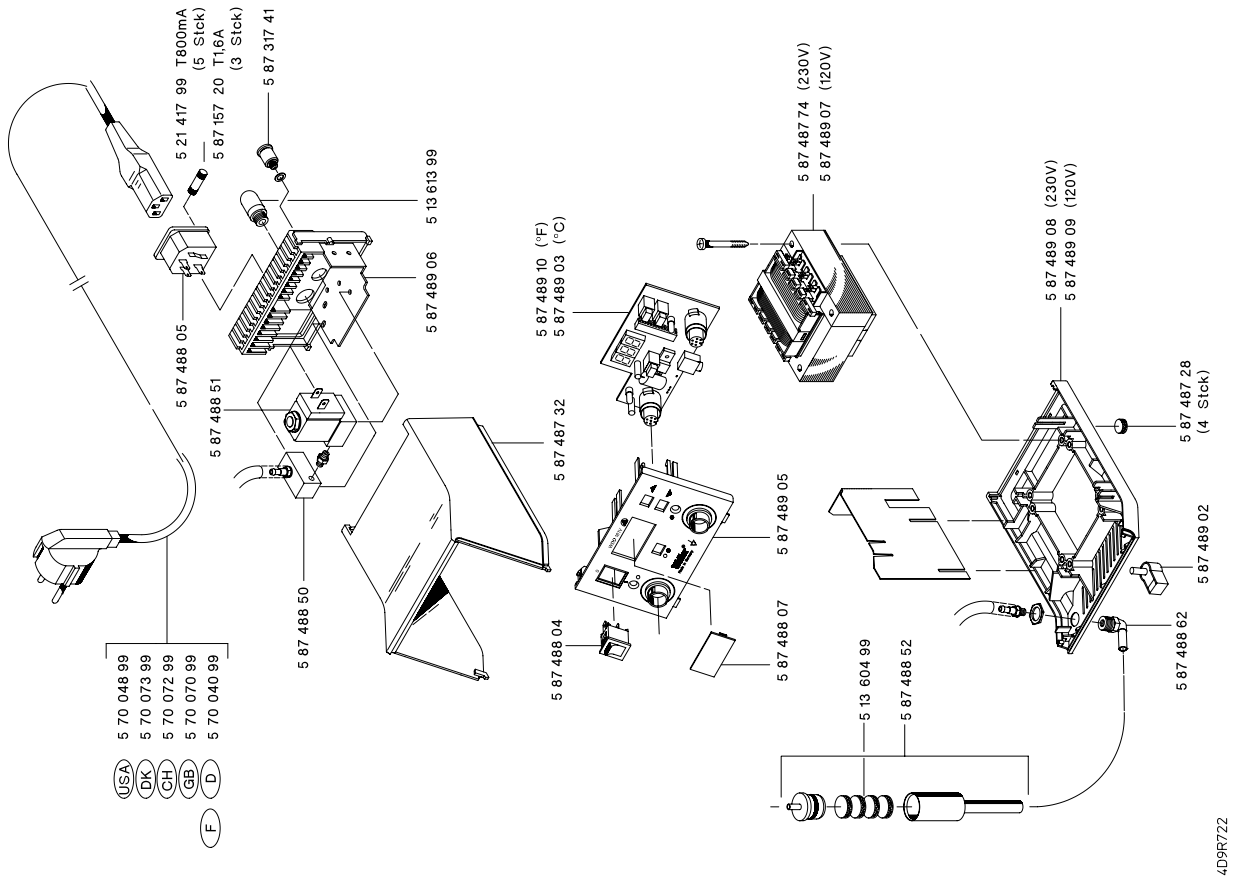

# WD 2M

Since 3. Quarter 2007

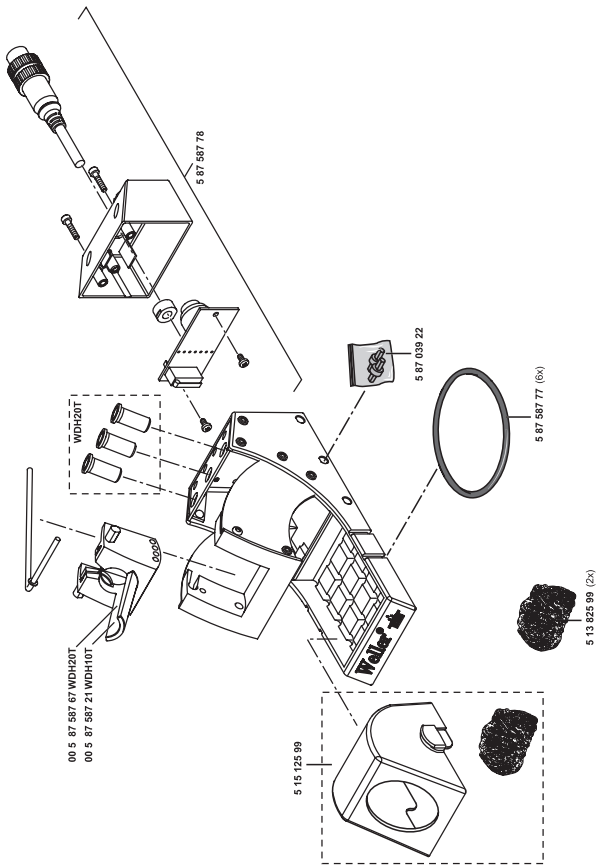



www.labem.pl

## WDD 81V

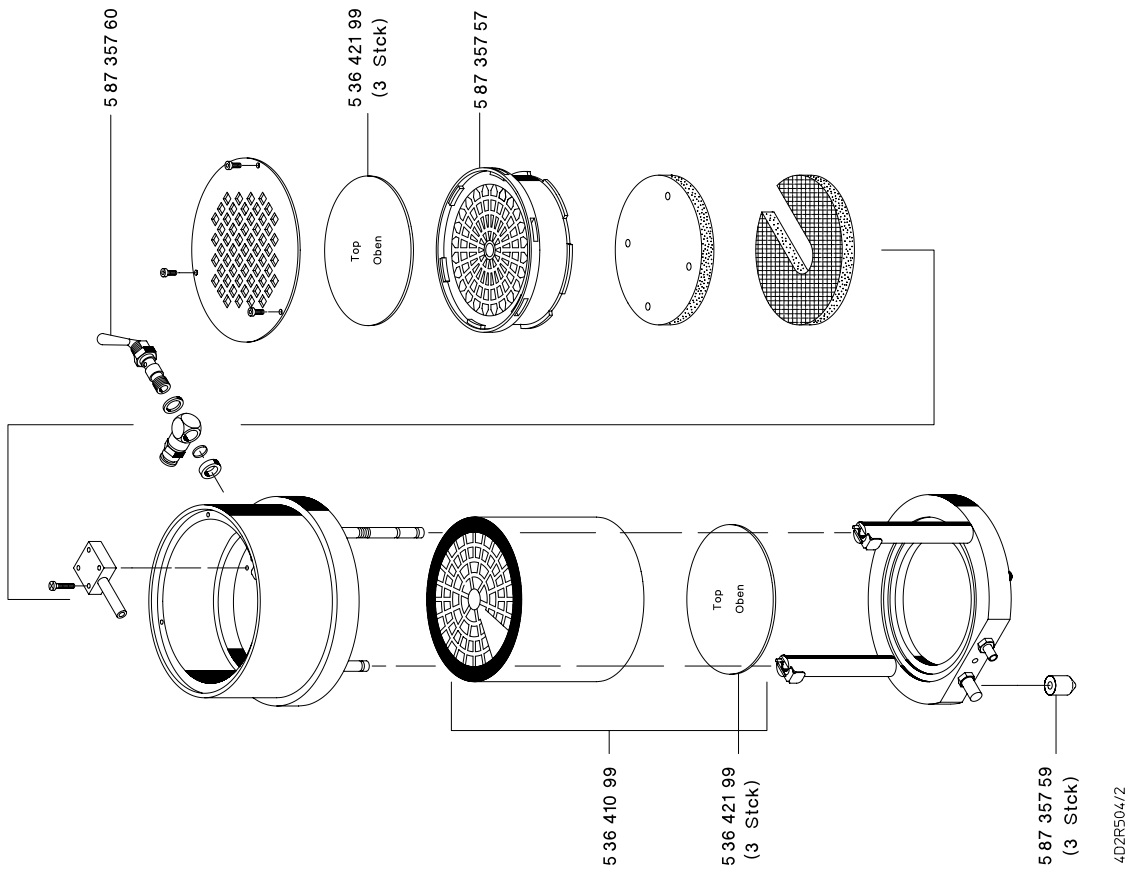



## WDH 10T / 20T

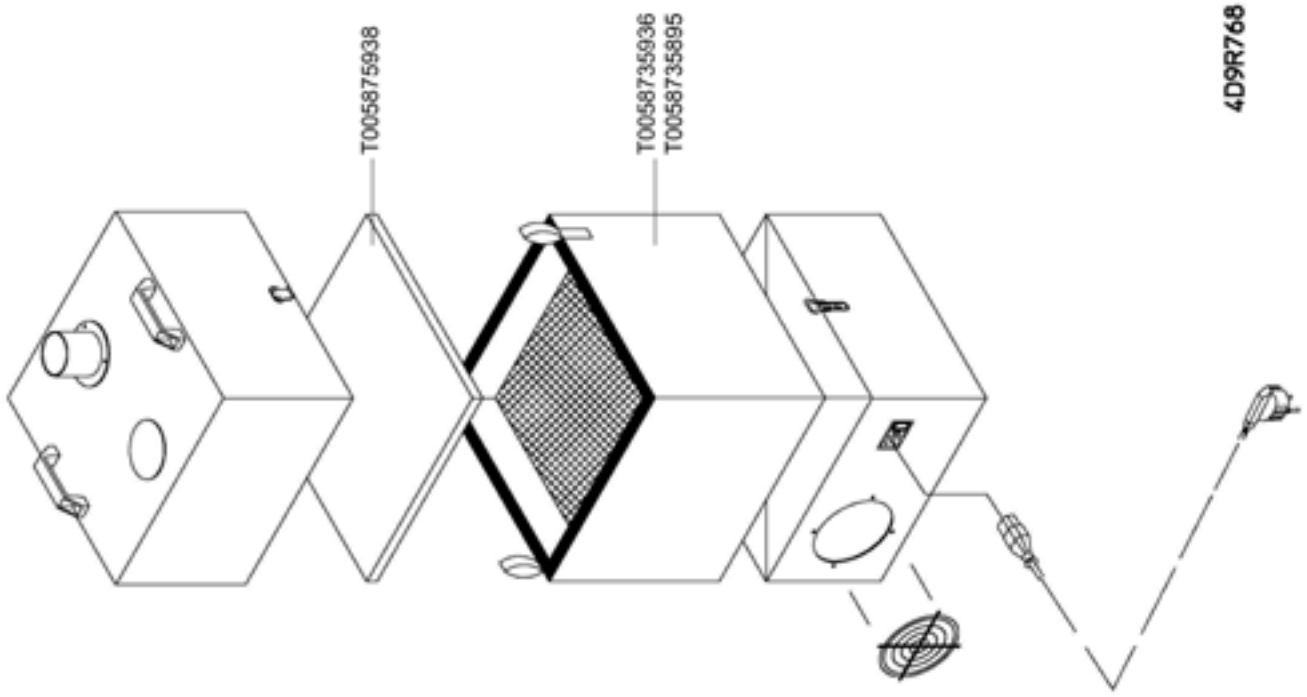



www.labem.pl

## WFE

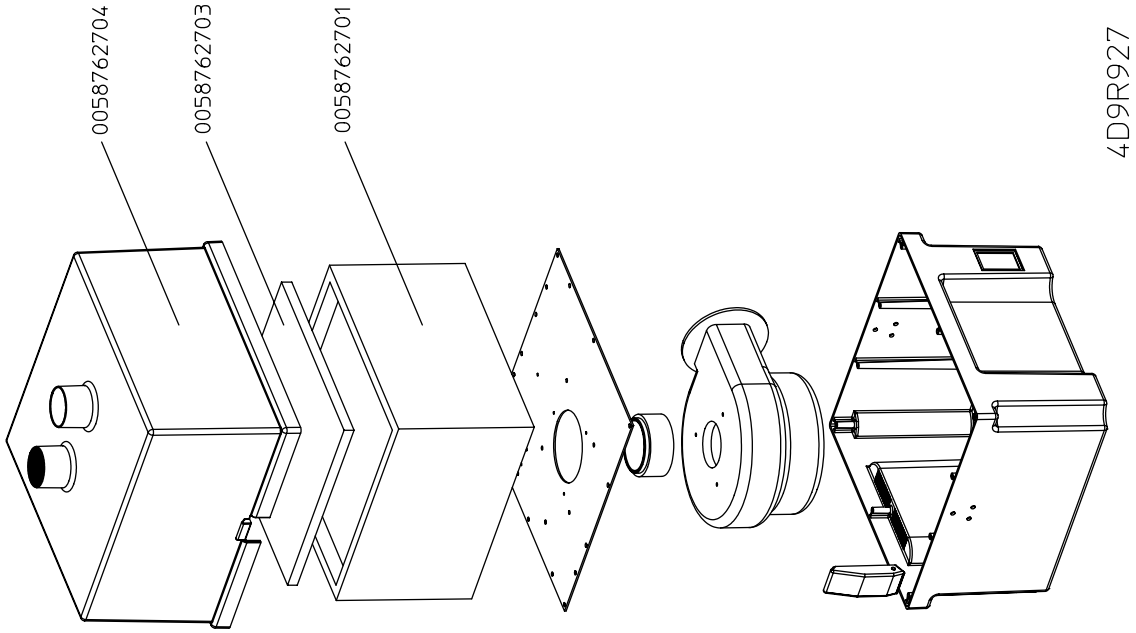



## WFE 2S

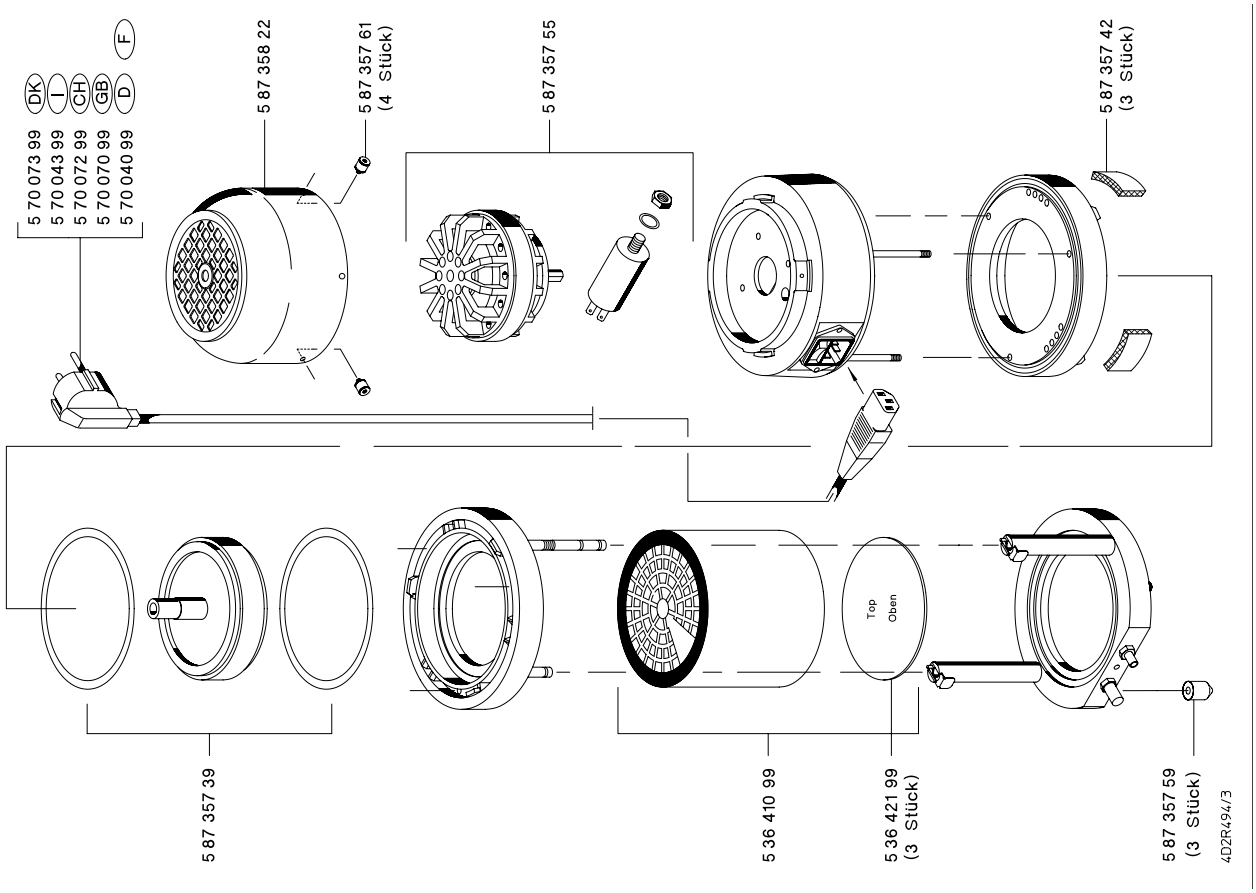



www.labem.pl

## WFE 2ES

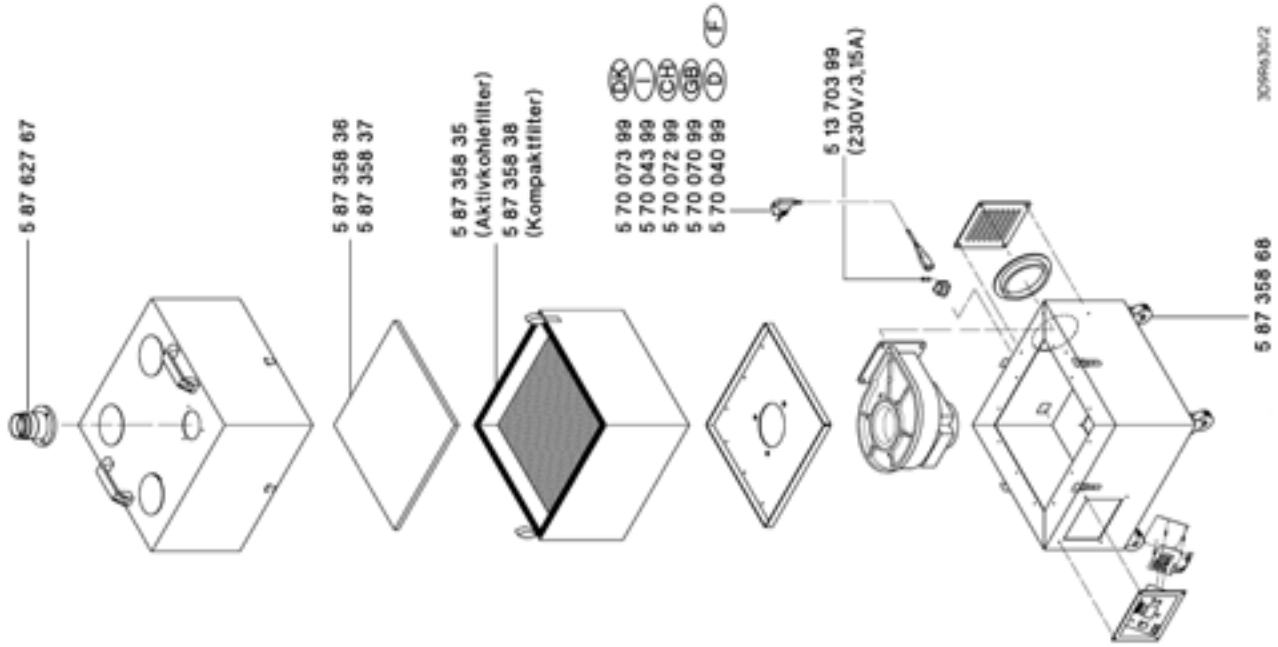



## WFE P

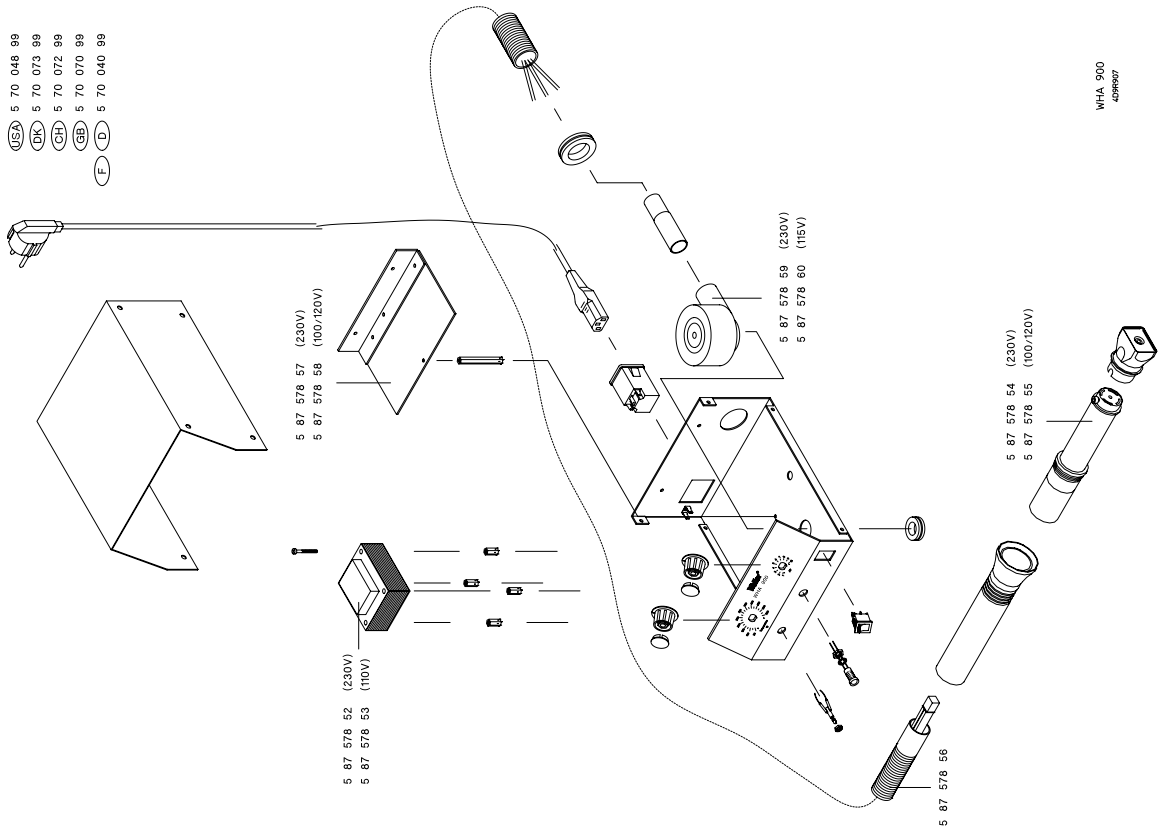



www.labem.pl

## WFE 4S

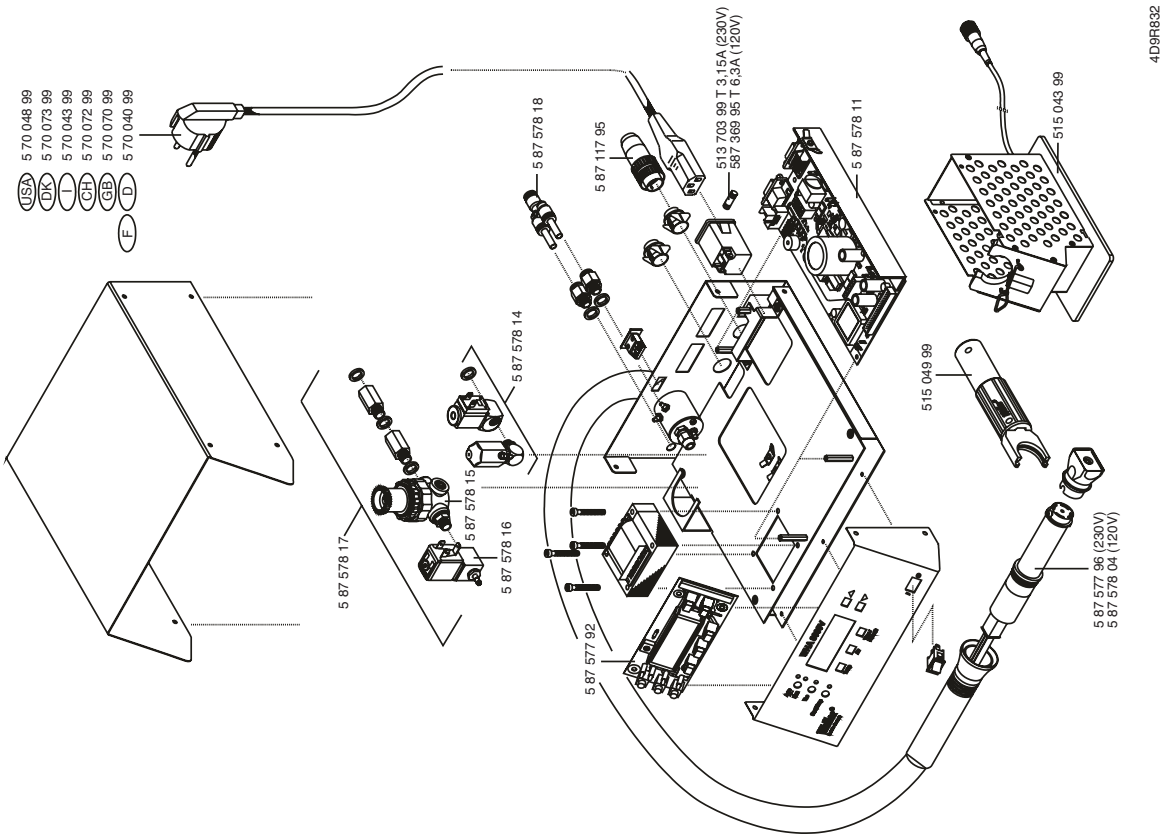



## WHA 900

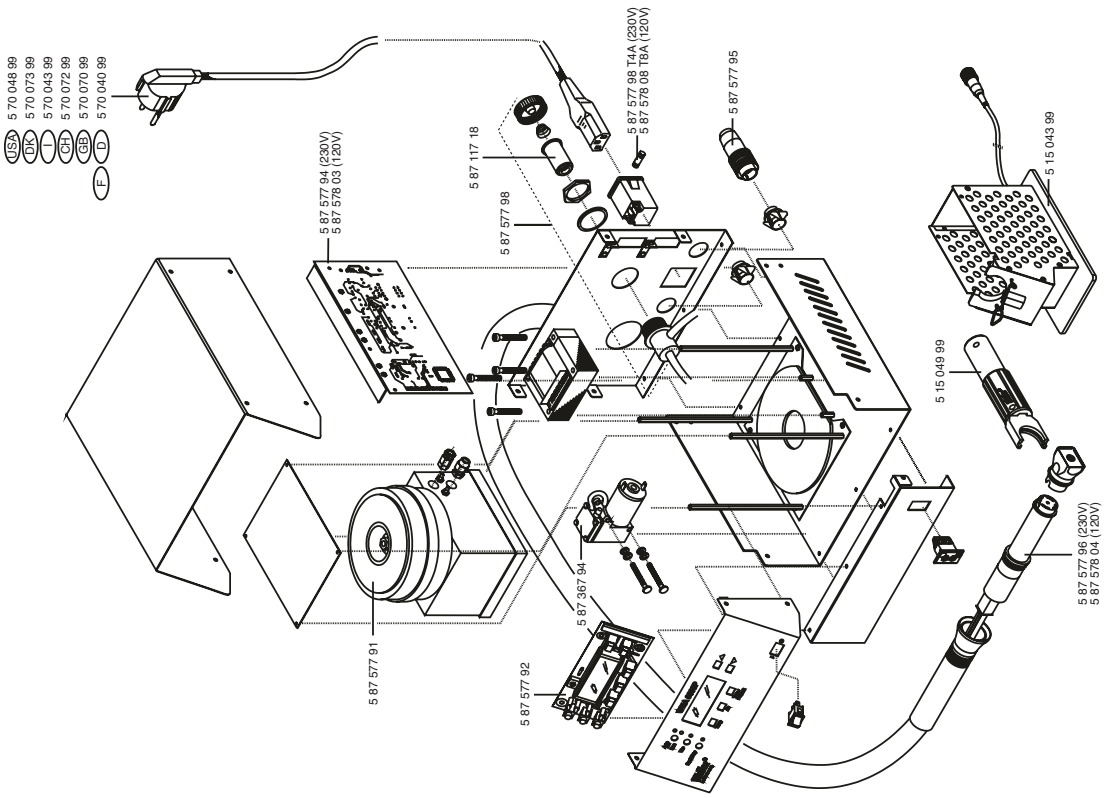



www.labem.pl

## WHA 3000V

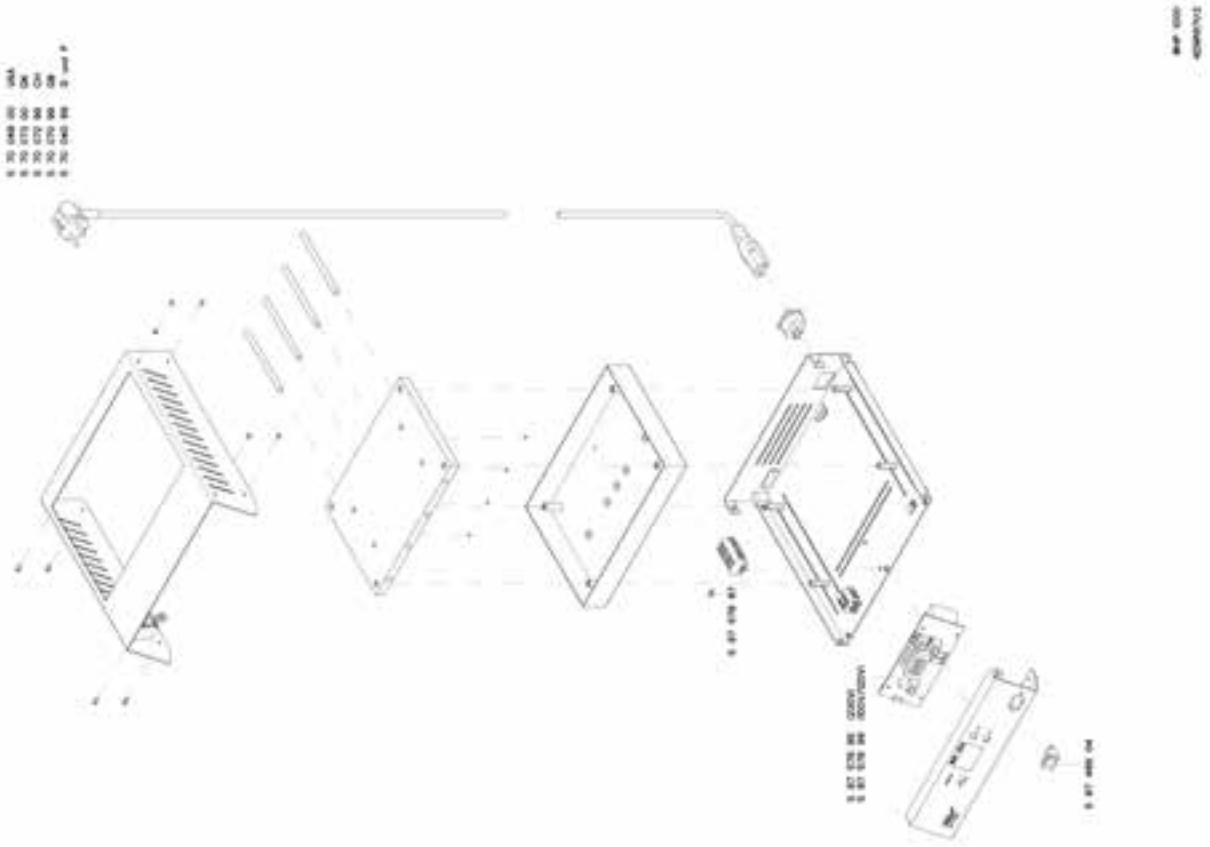



## WHA 3000P

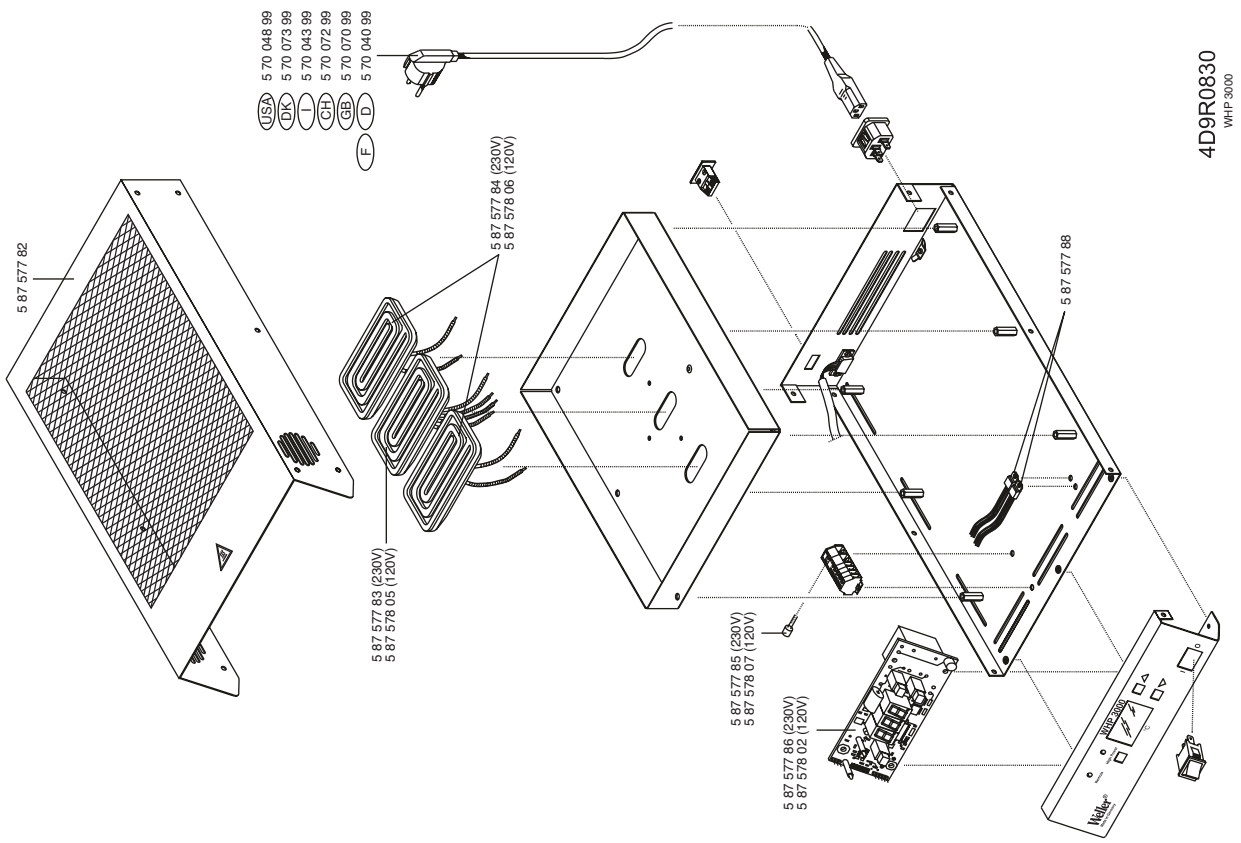



www.labem.pl

## WHP 1000

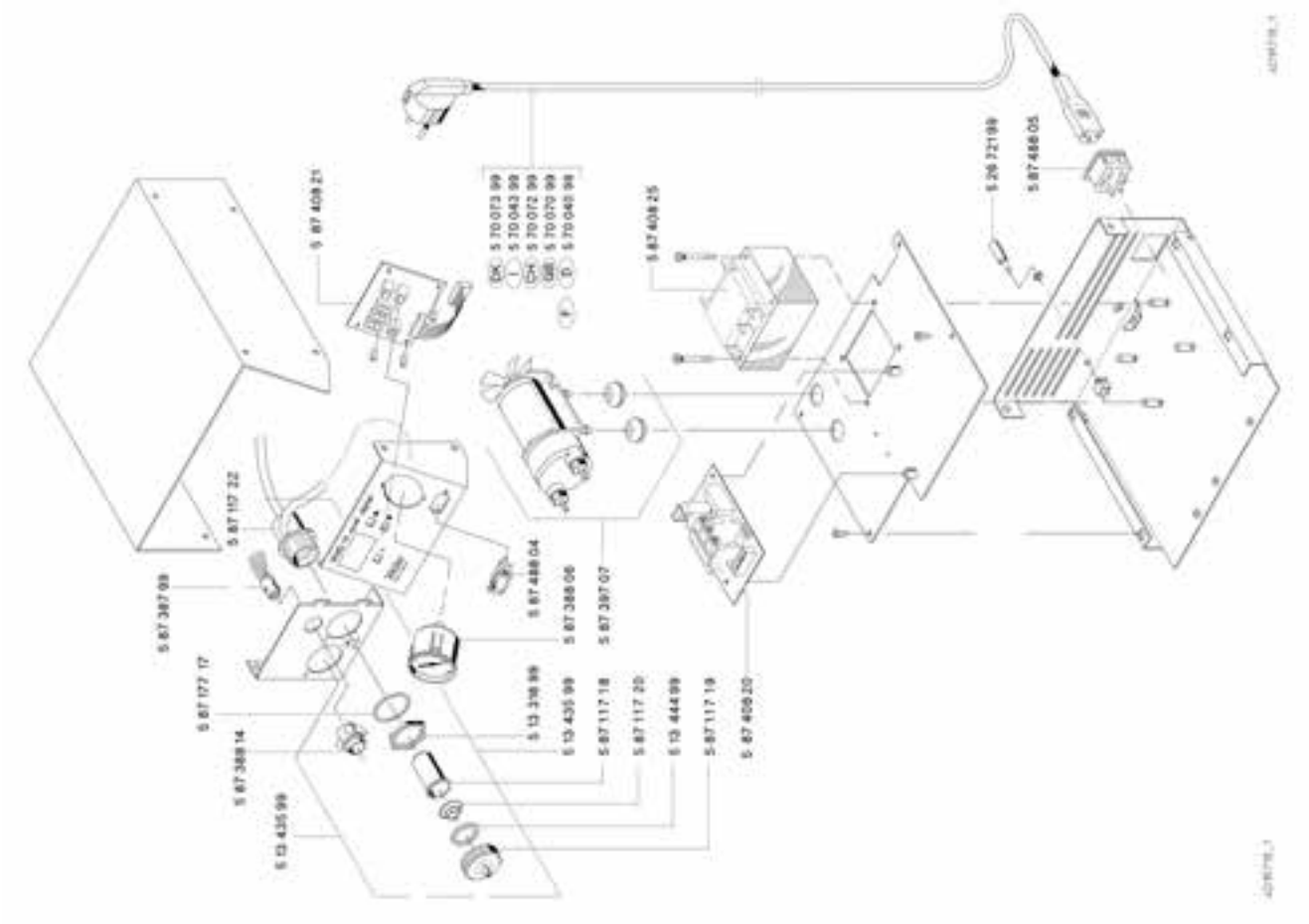


## WHP 3000

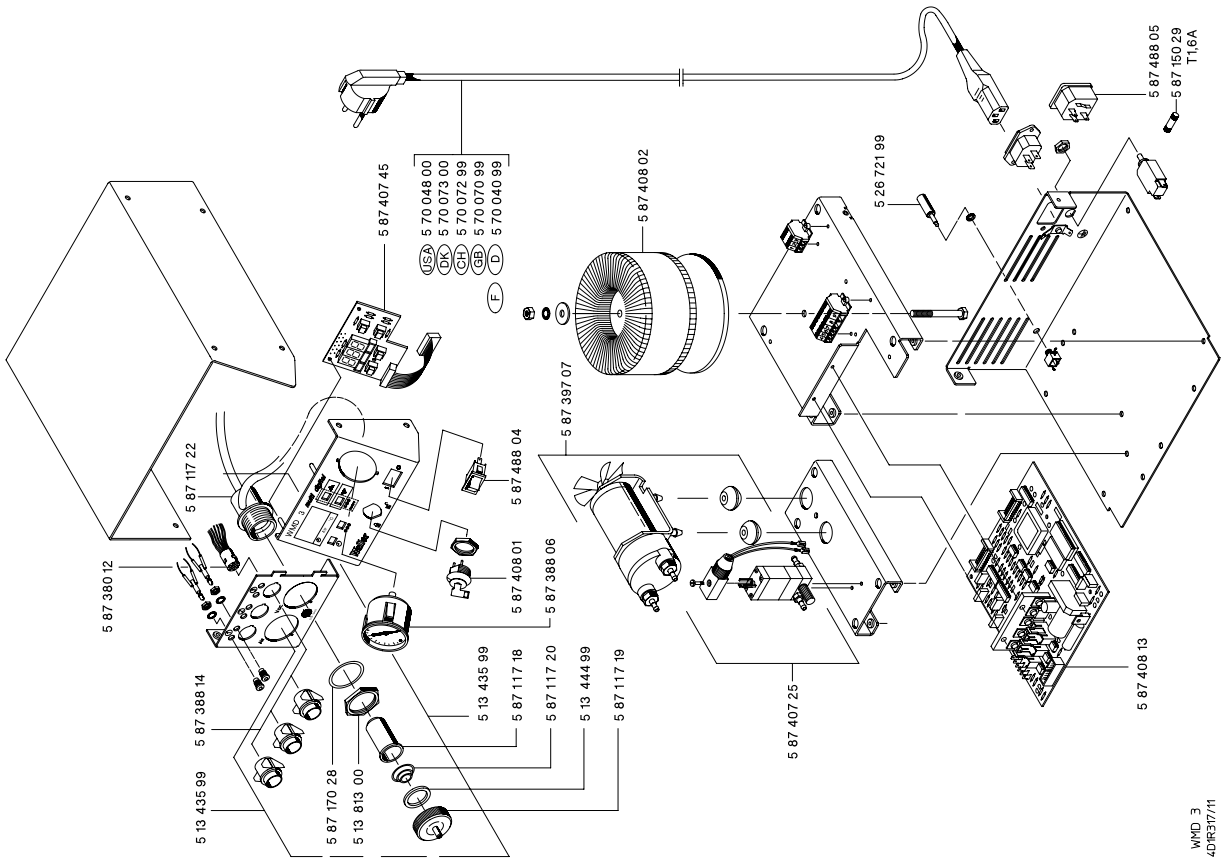



www.labem.pl

## WMD 1S

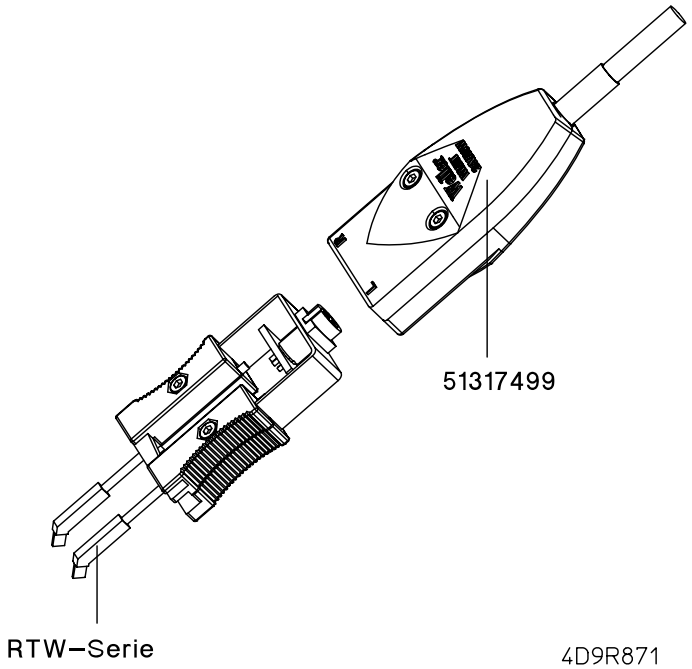



## WMD 3 / WMD 3K2

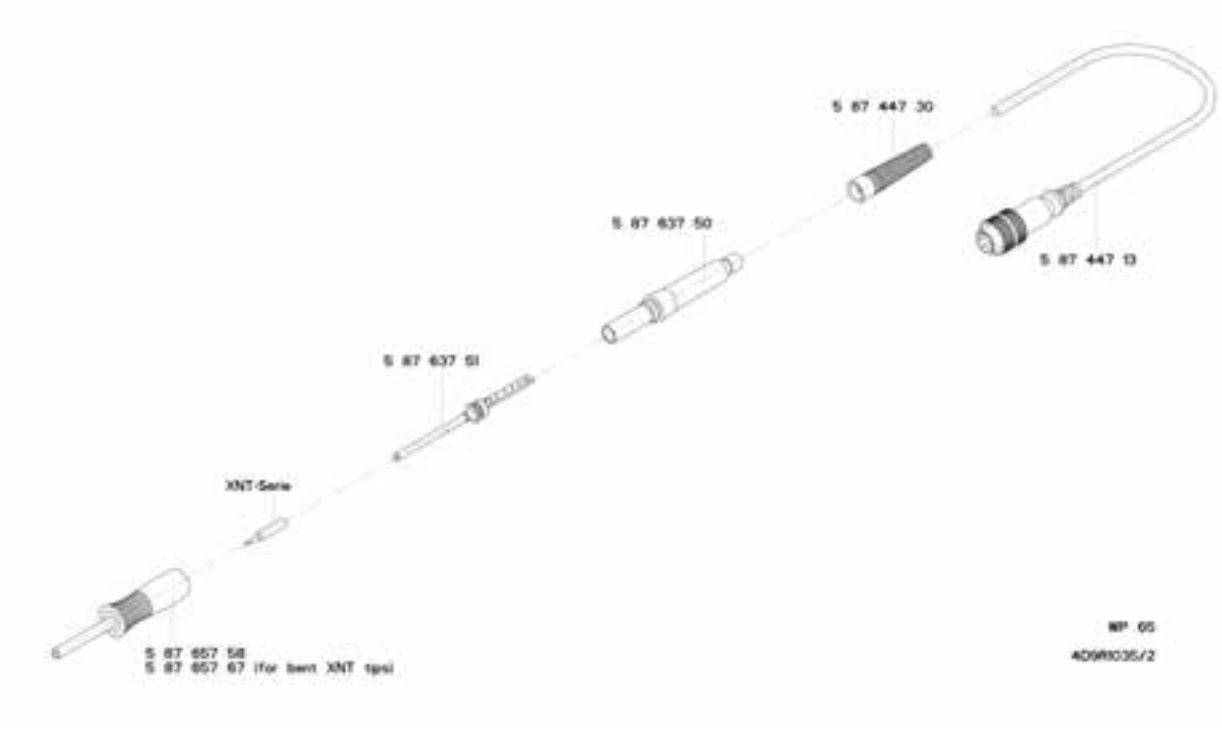



www.labem.pl

## WMRT

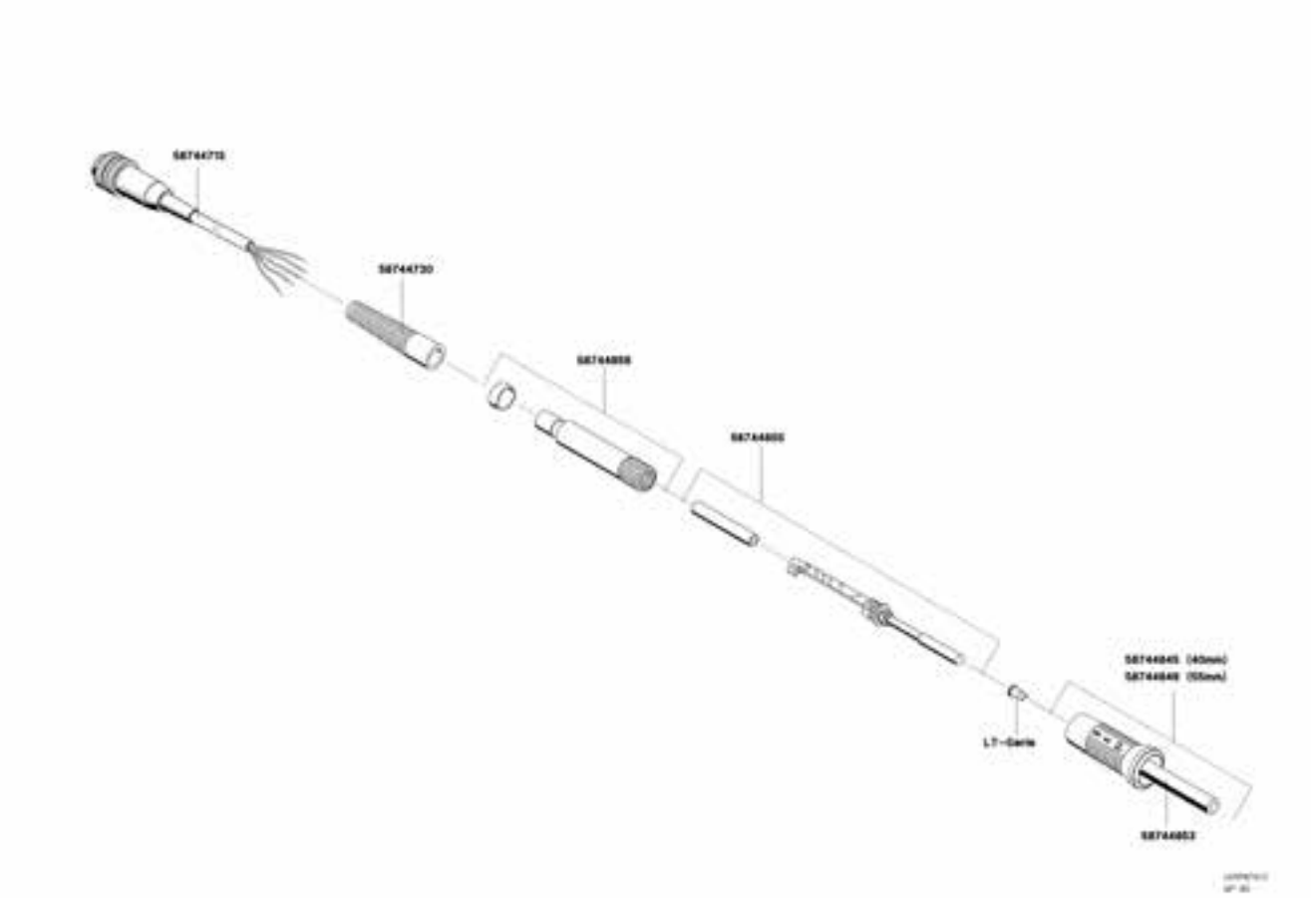



## WP 65

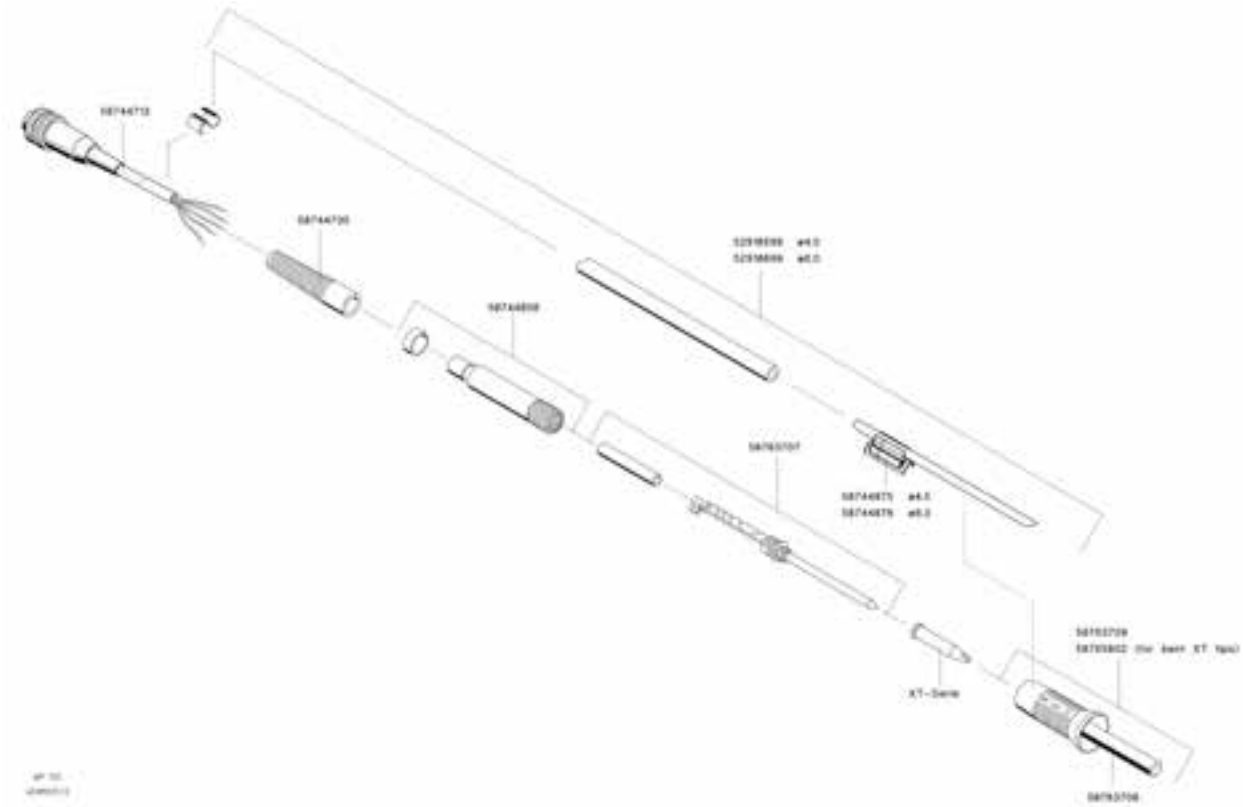



www.labem.pl

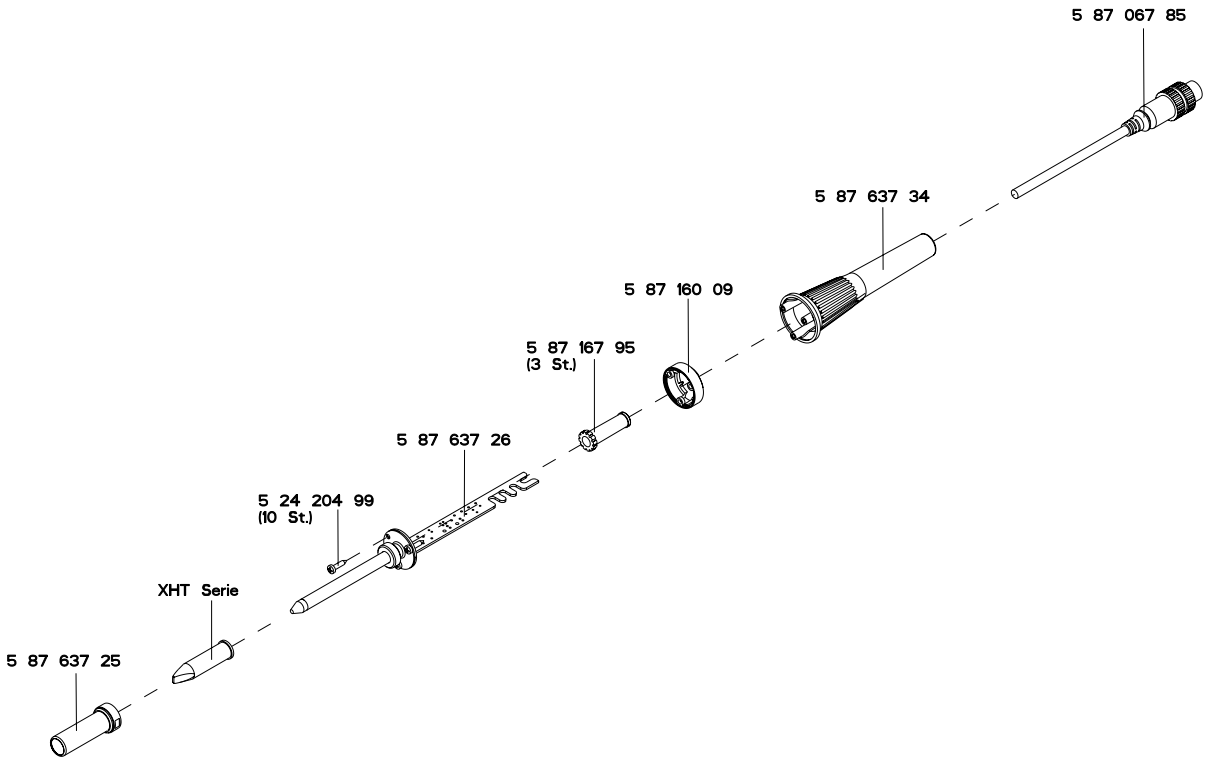
## WP 80



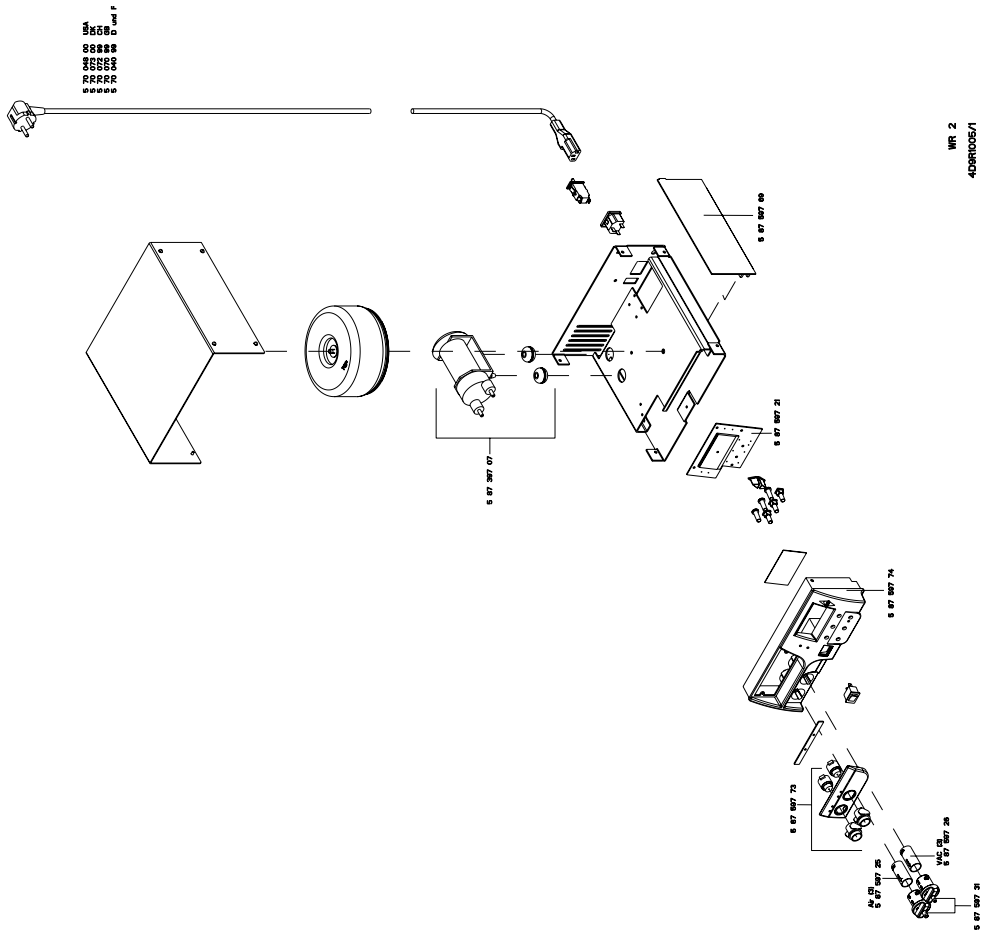

## WP 120



# WP 200

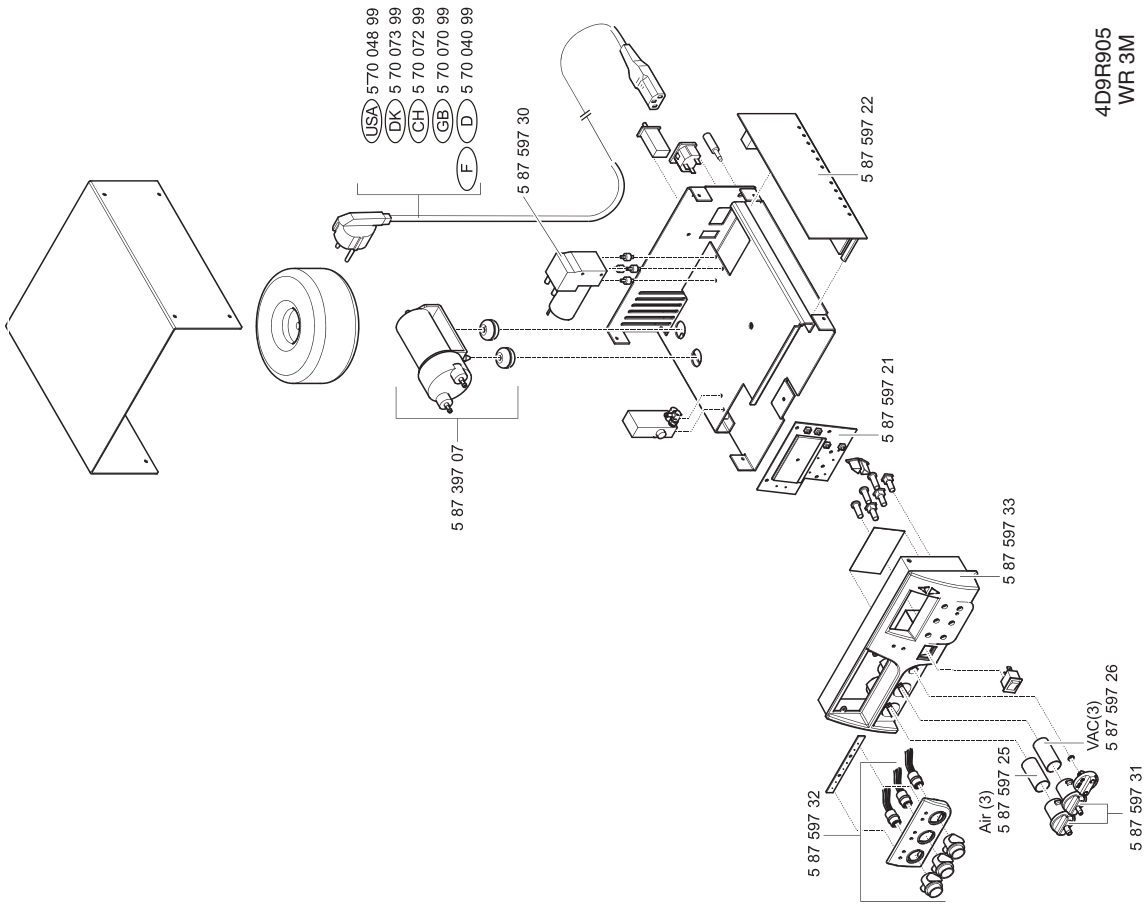



# WR 2



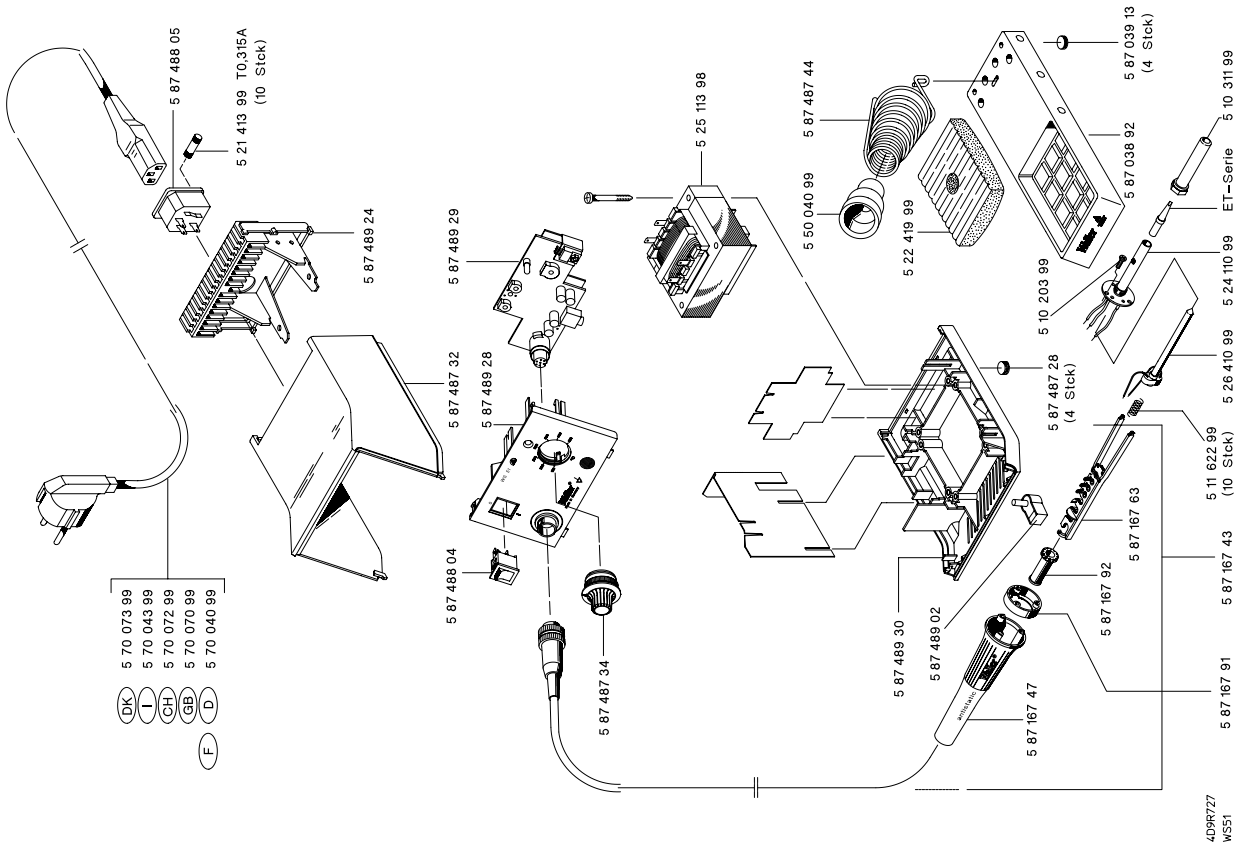

www.labem.pl

# WR 3M




# WS 51 consists of PU 81 and soldering iron

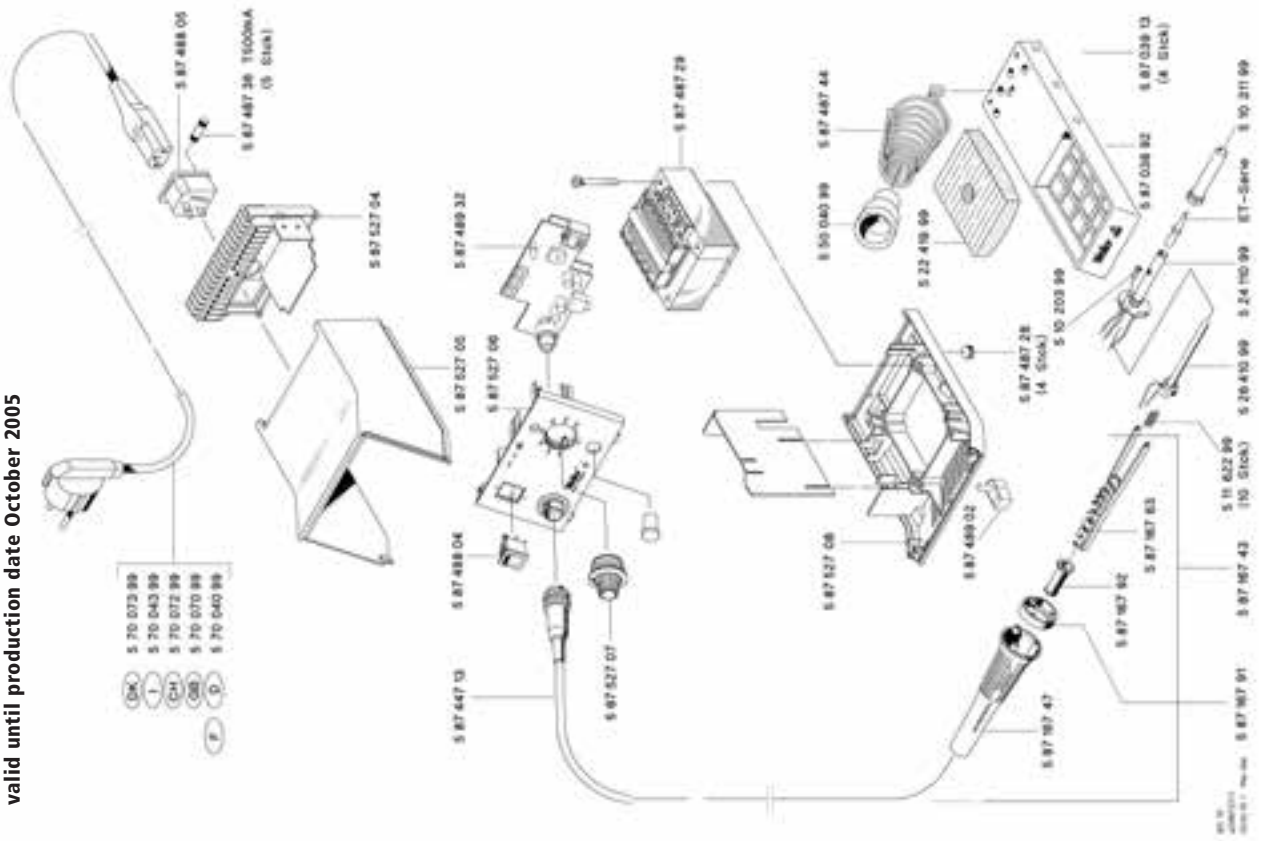
**valid from production date November 2005**




www.labem.pl

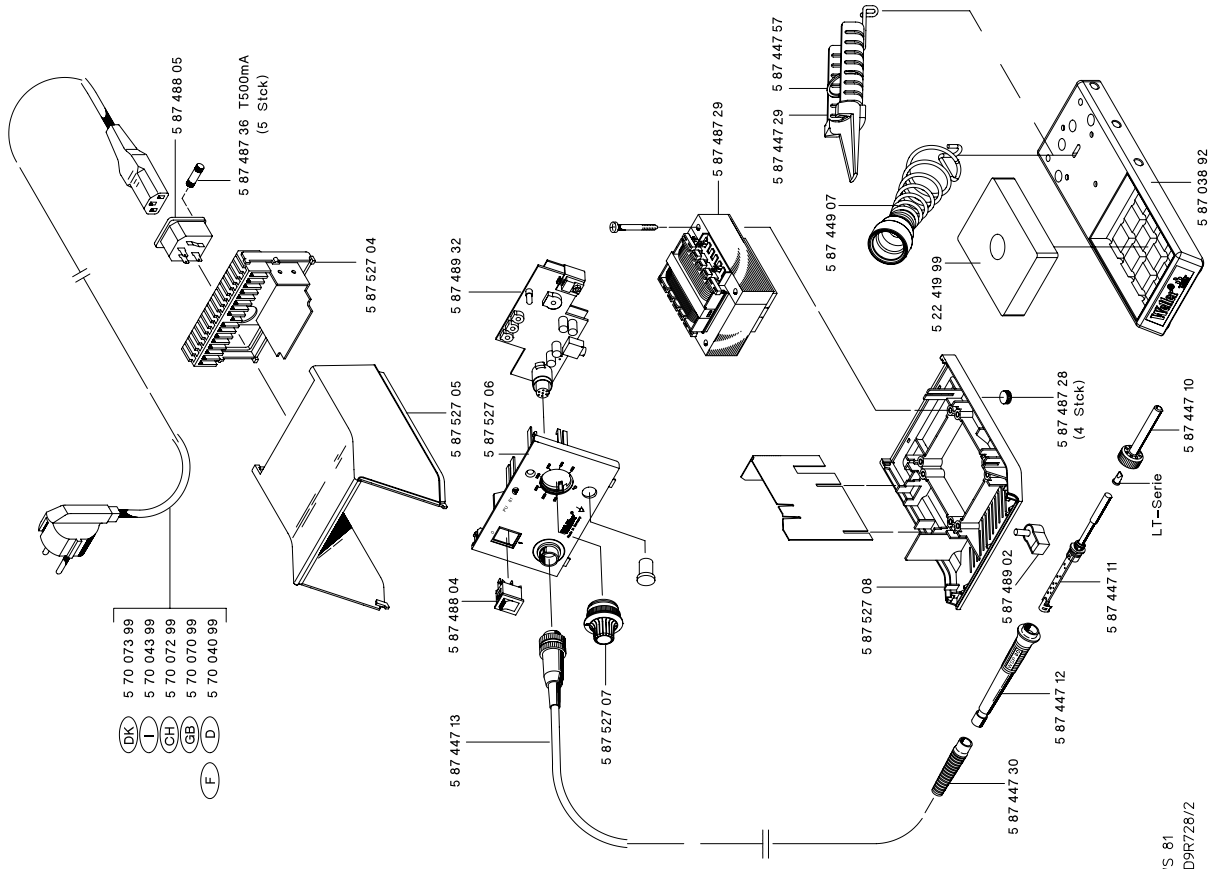
# WS 51

**valid until production date October 2005**




# WS 81

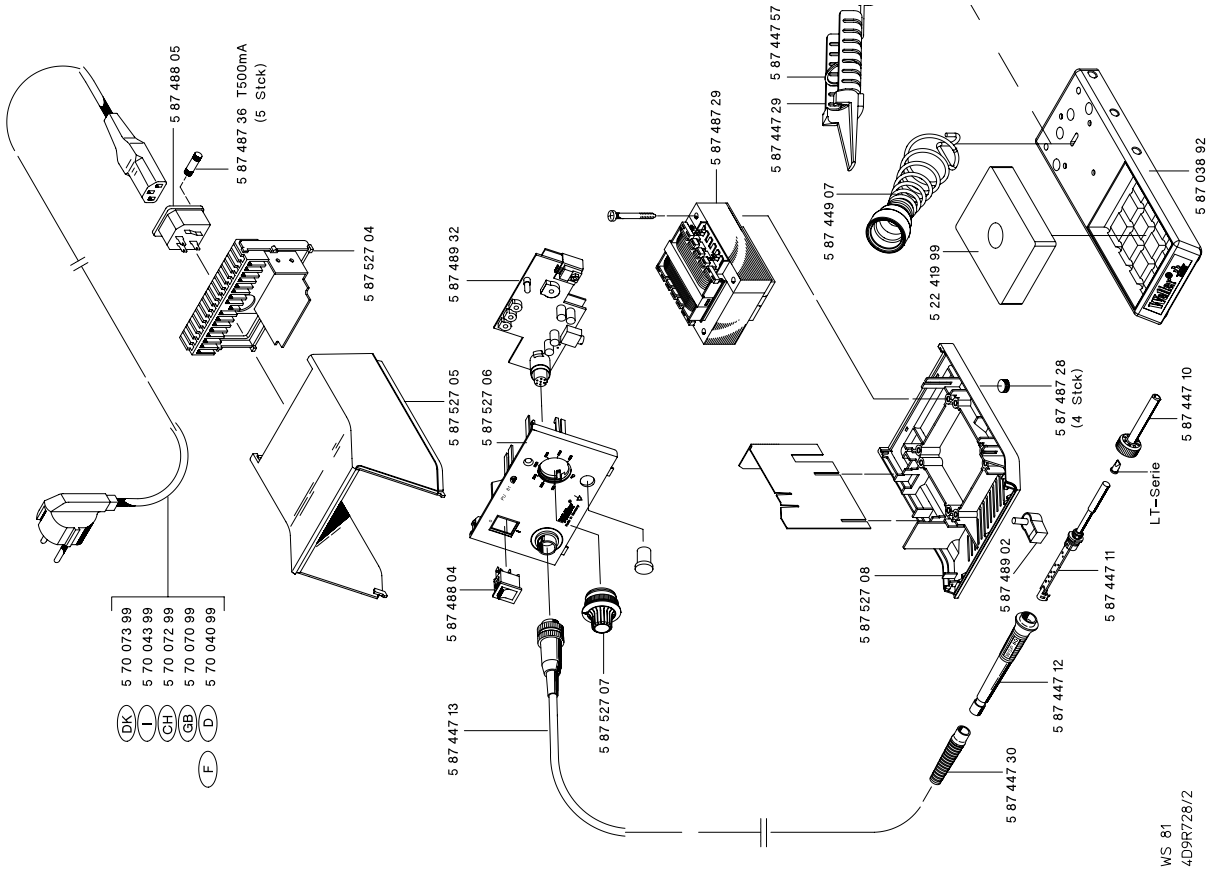
**valid until production date October 2005**



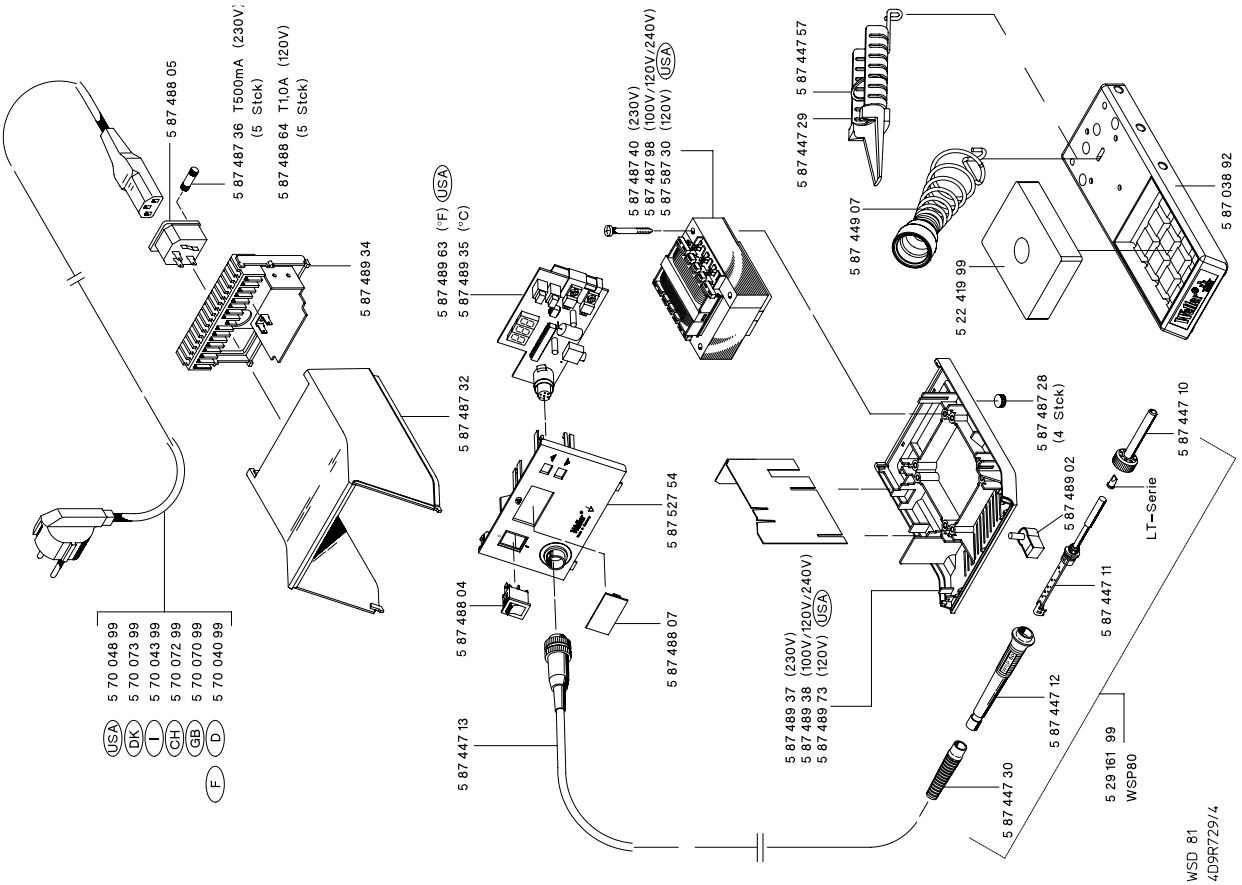

www.labem.pl

# WS 81 consists of PU 81 and soldering iron WSP 80

**valid from production date November 2005**

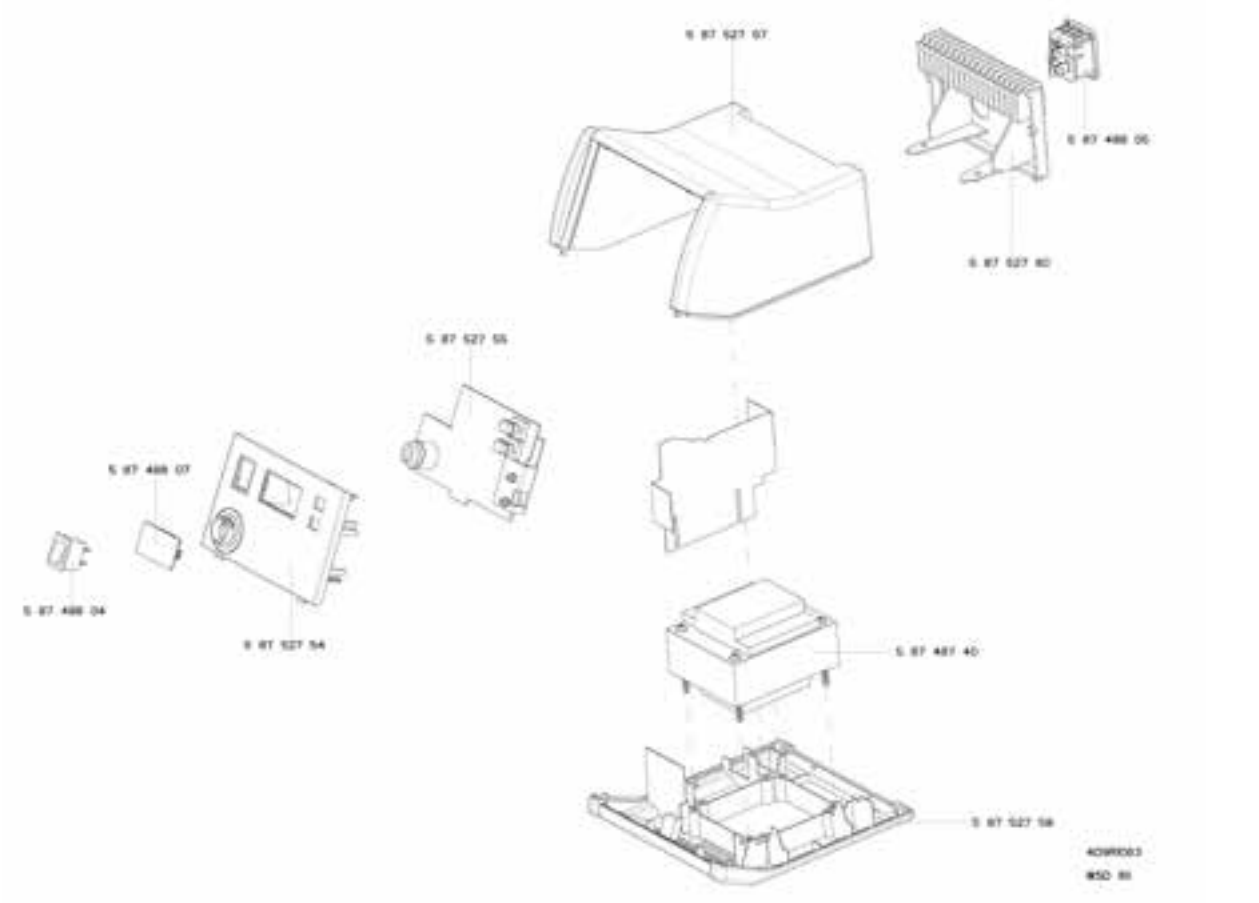



# WSD 81

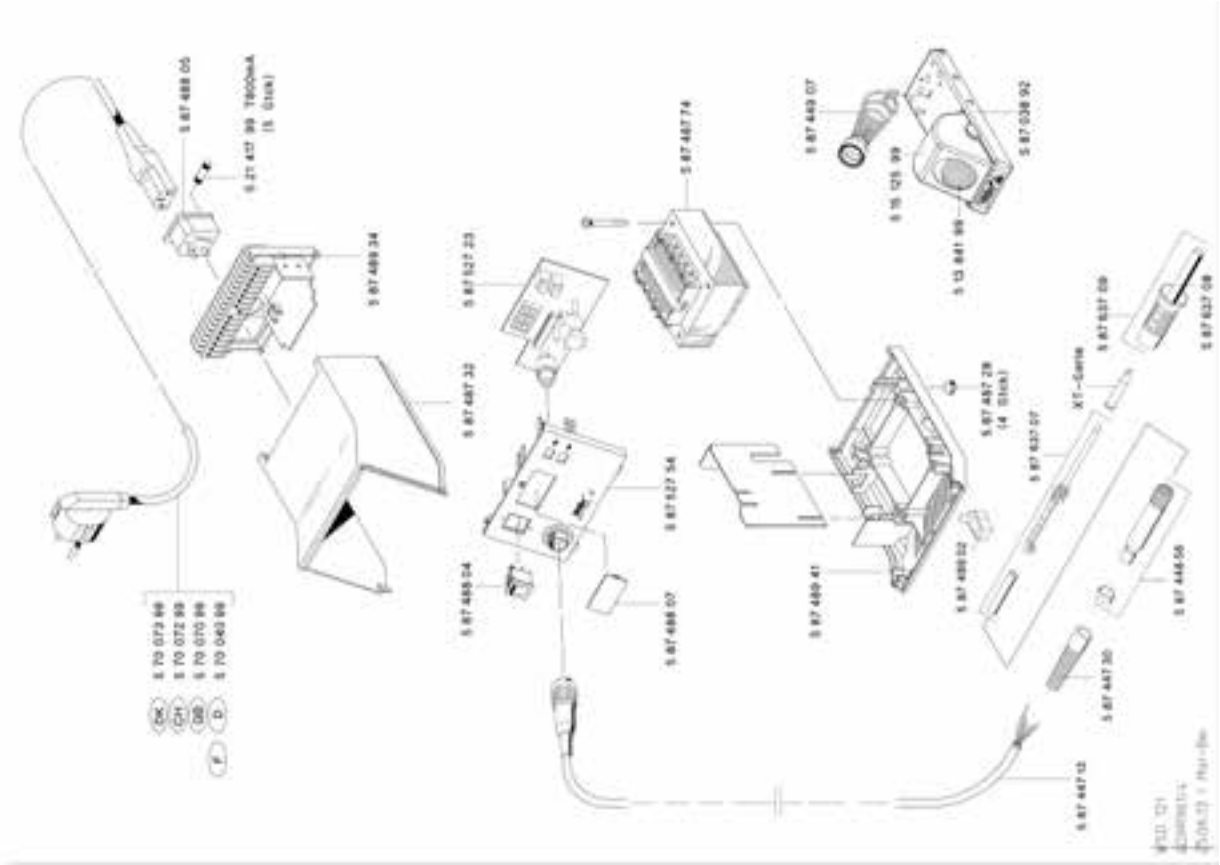



www.labem.pl

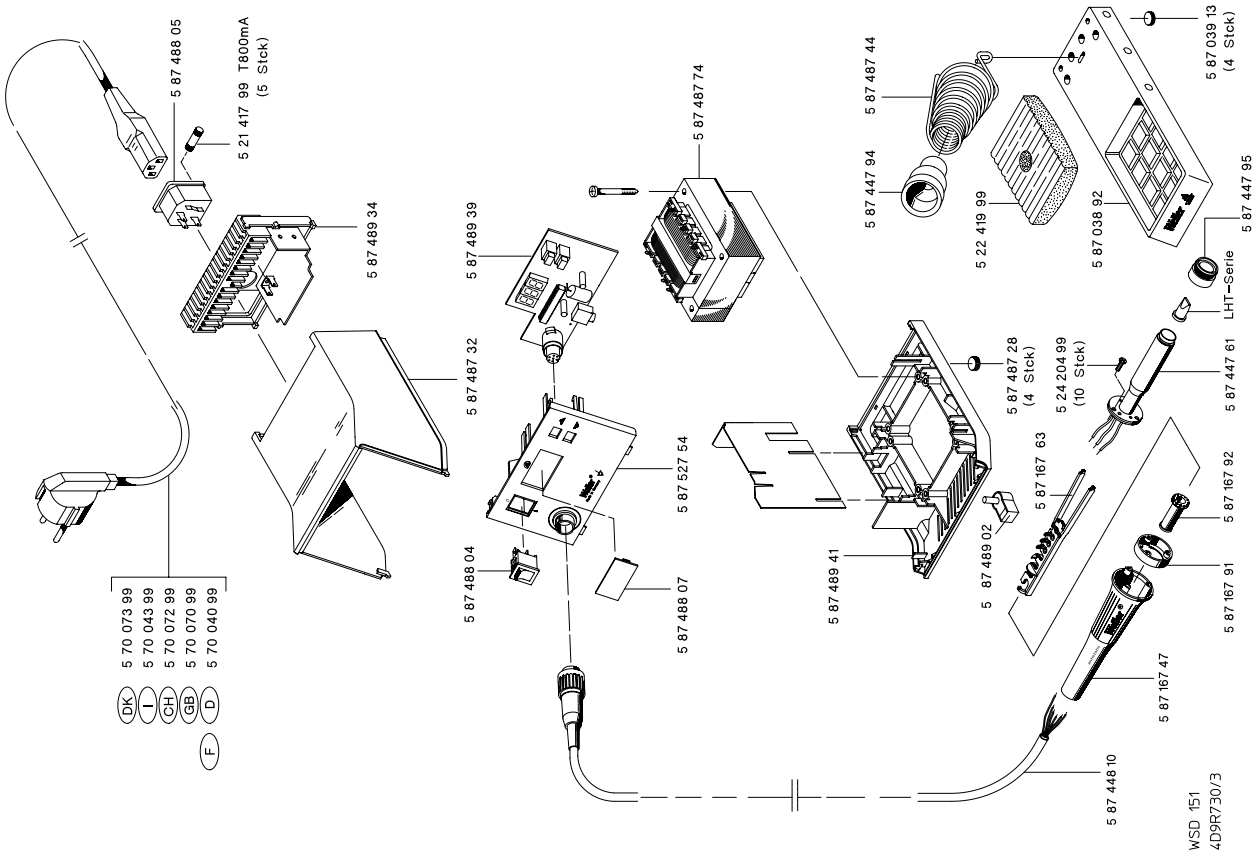
## WSD 81i



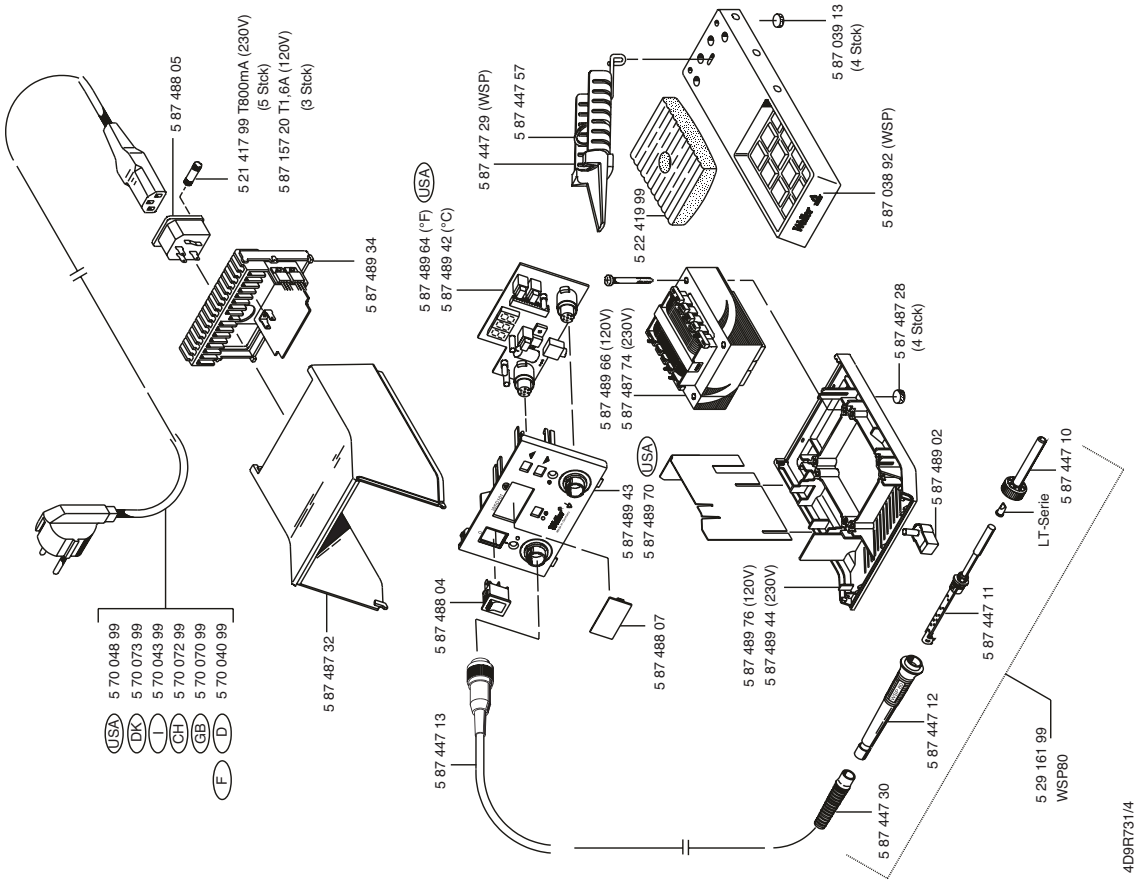

## WSD 121



## WSD 151

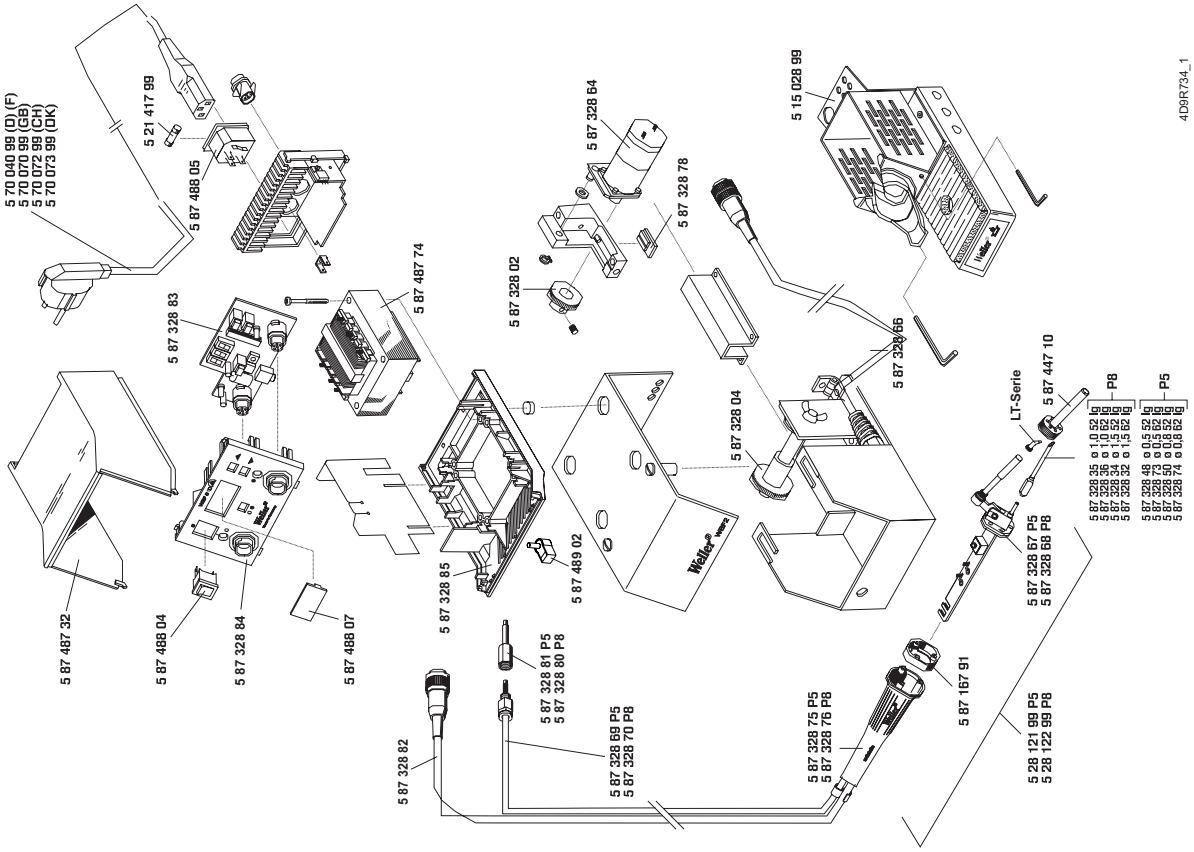



## WSD 161

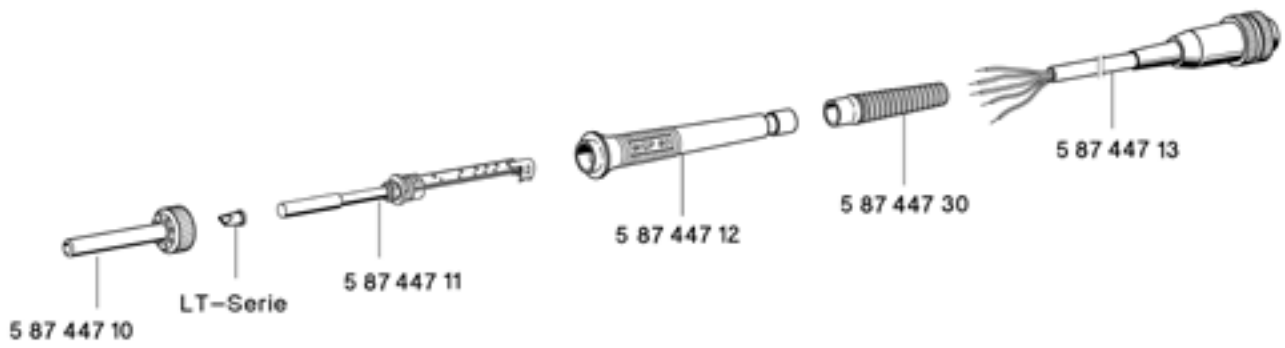



www.labem.pl

# WSF 81D

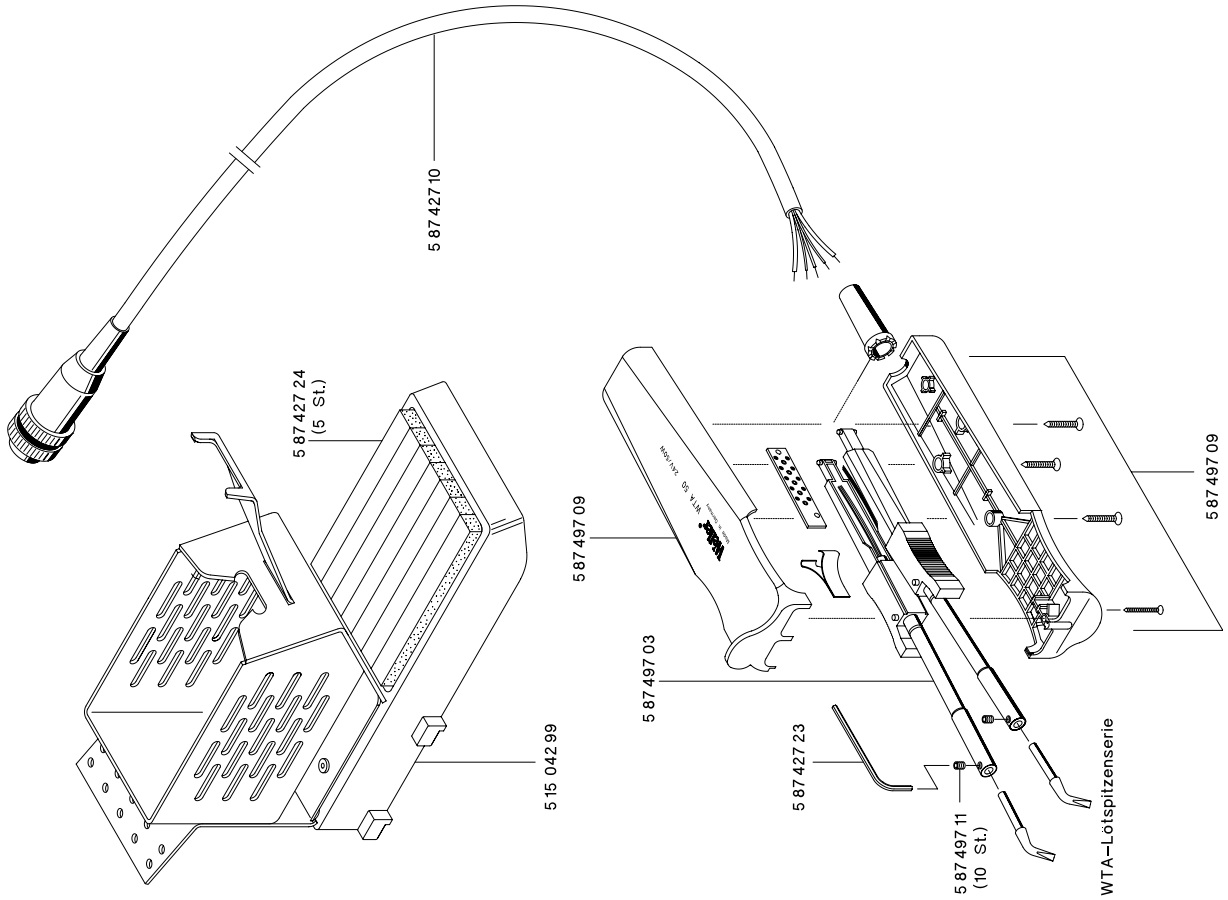



# WSP 80

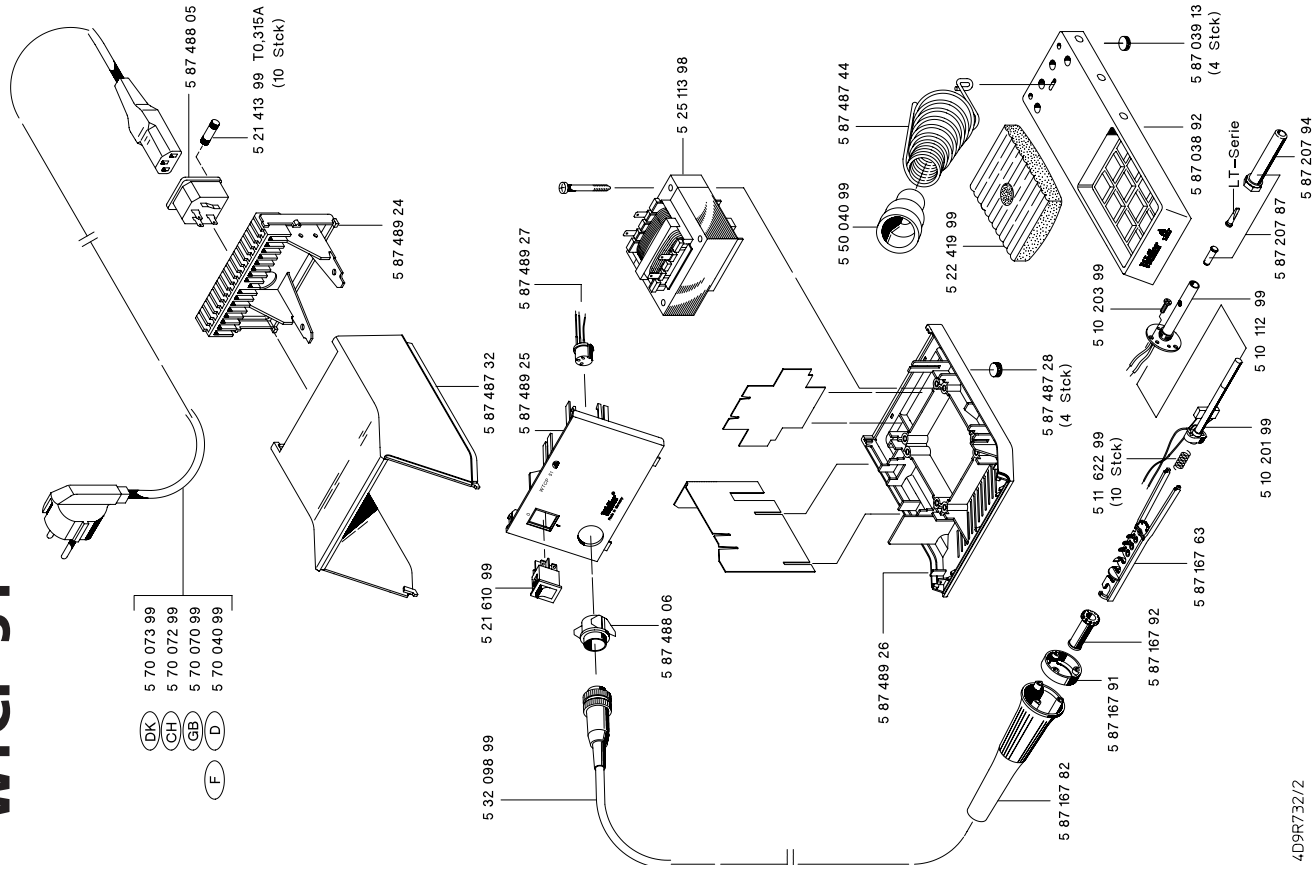



www.labem.pl

## WTA 50

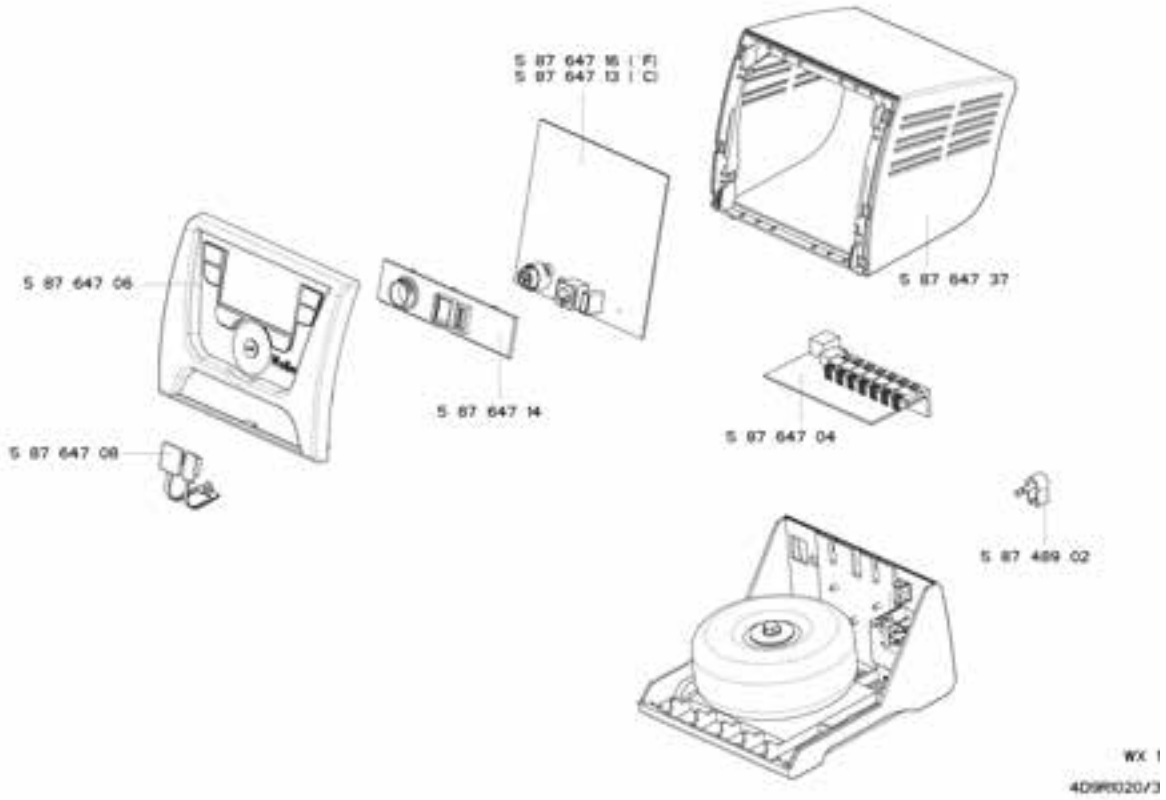



## WTCP 51

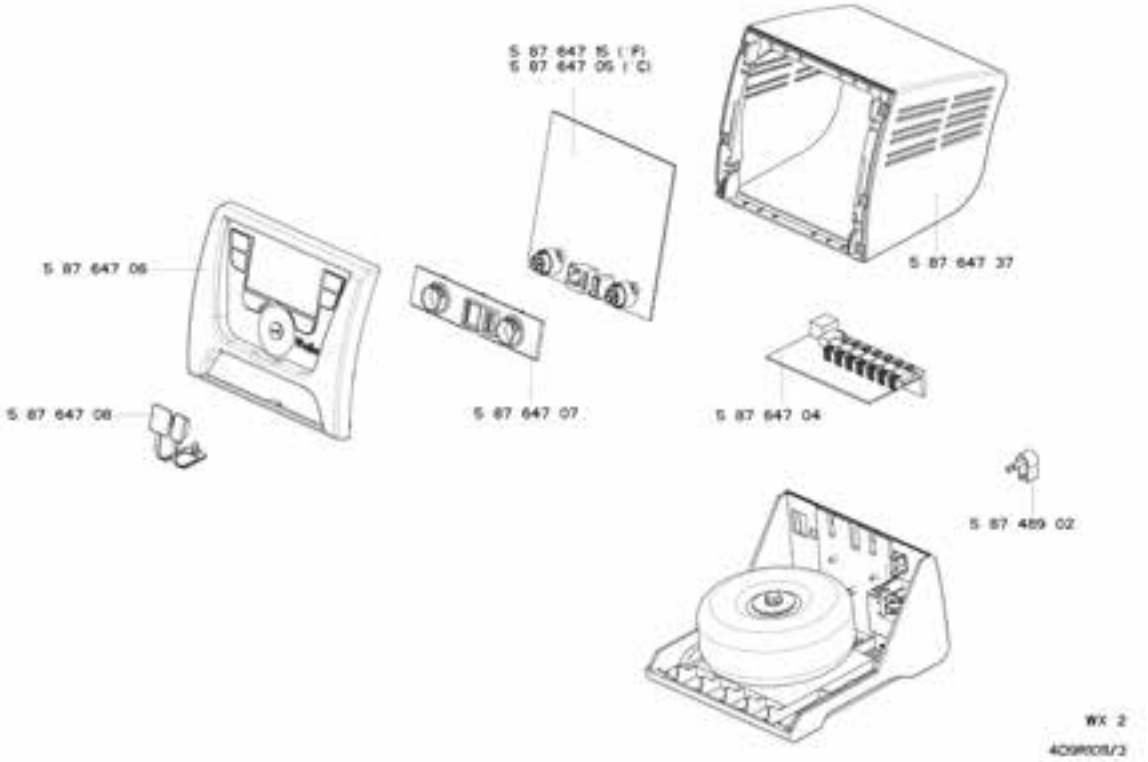



www.labem.pl

## WX 1

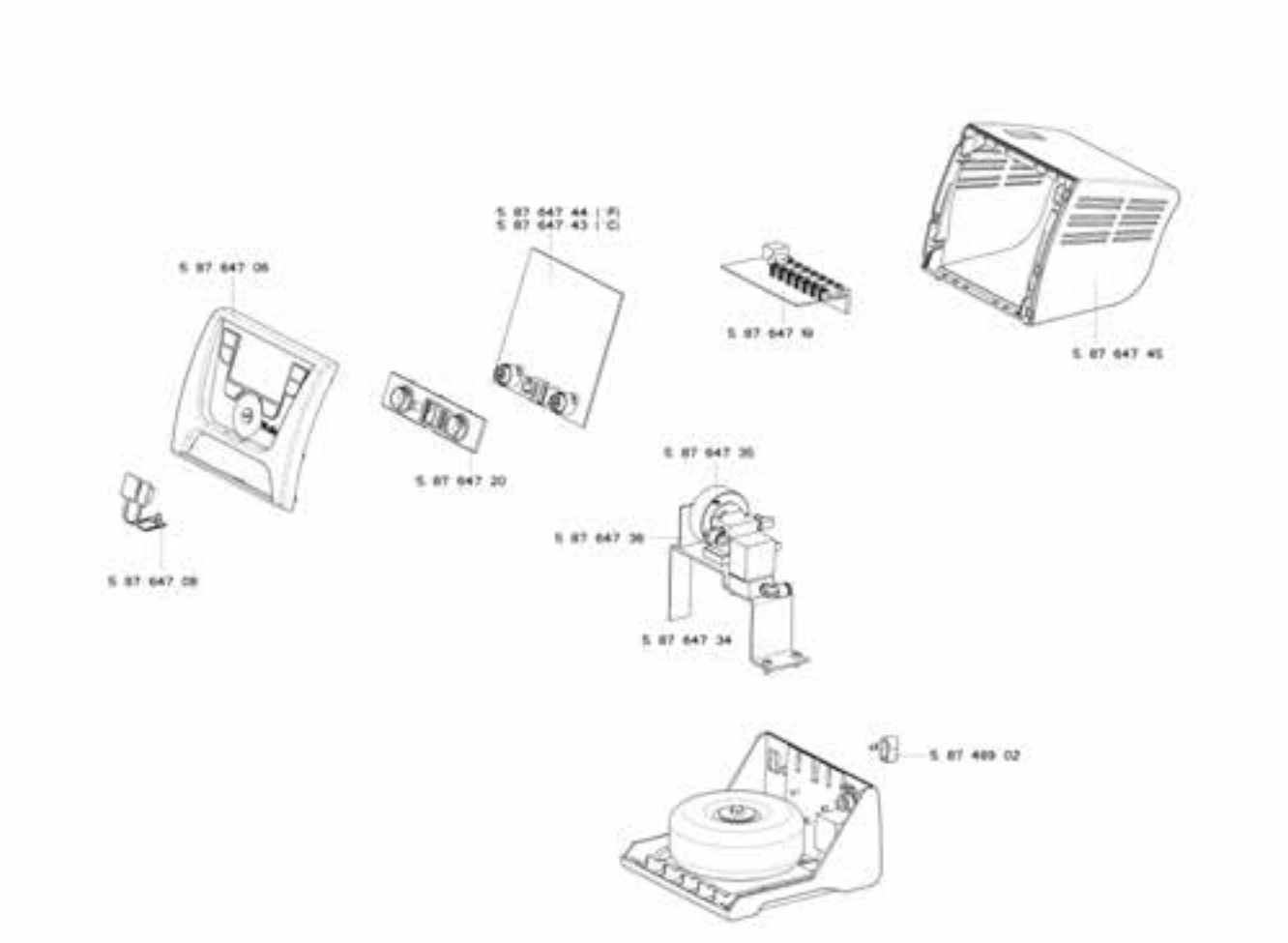



## WX 2

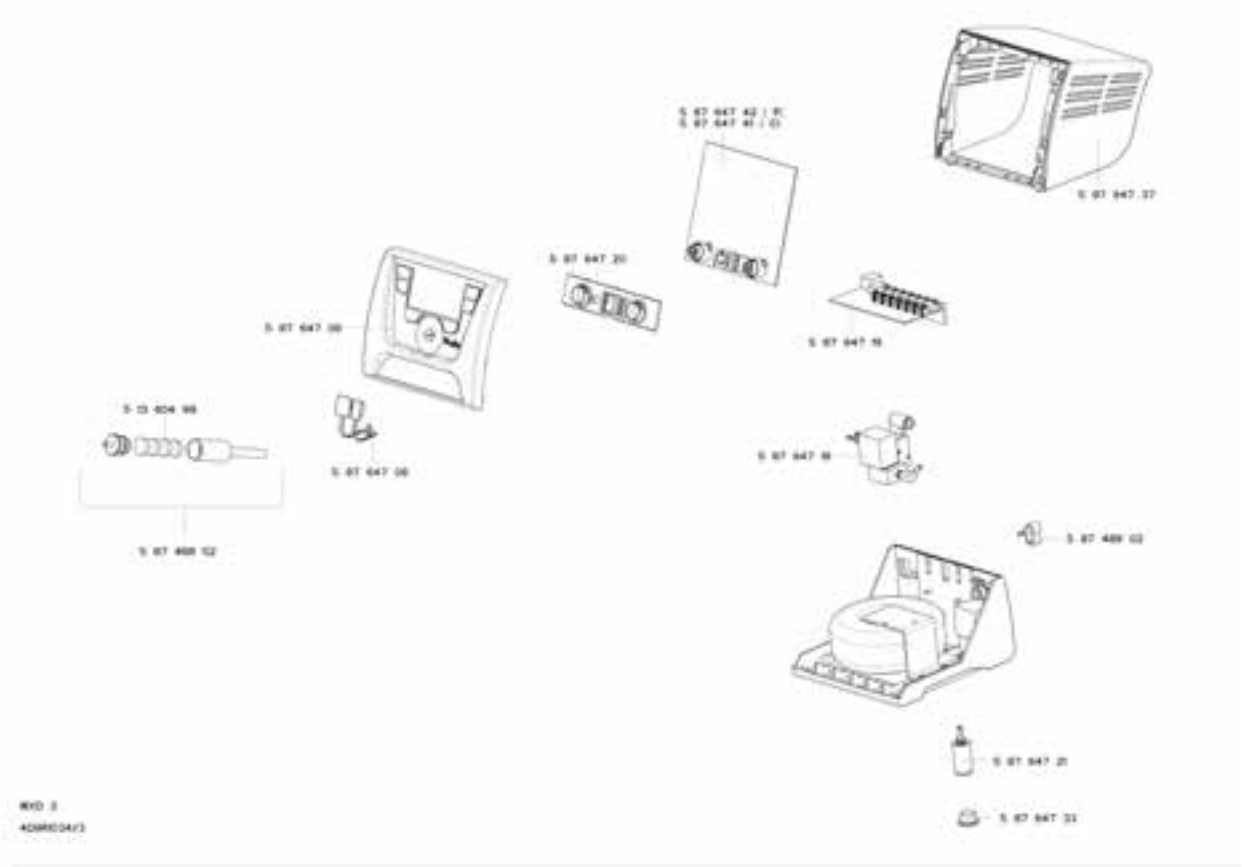



www.labem.pl

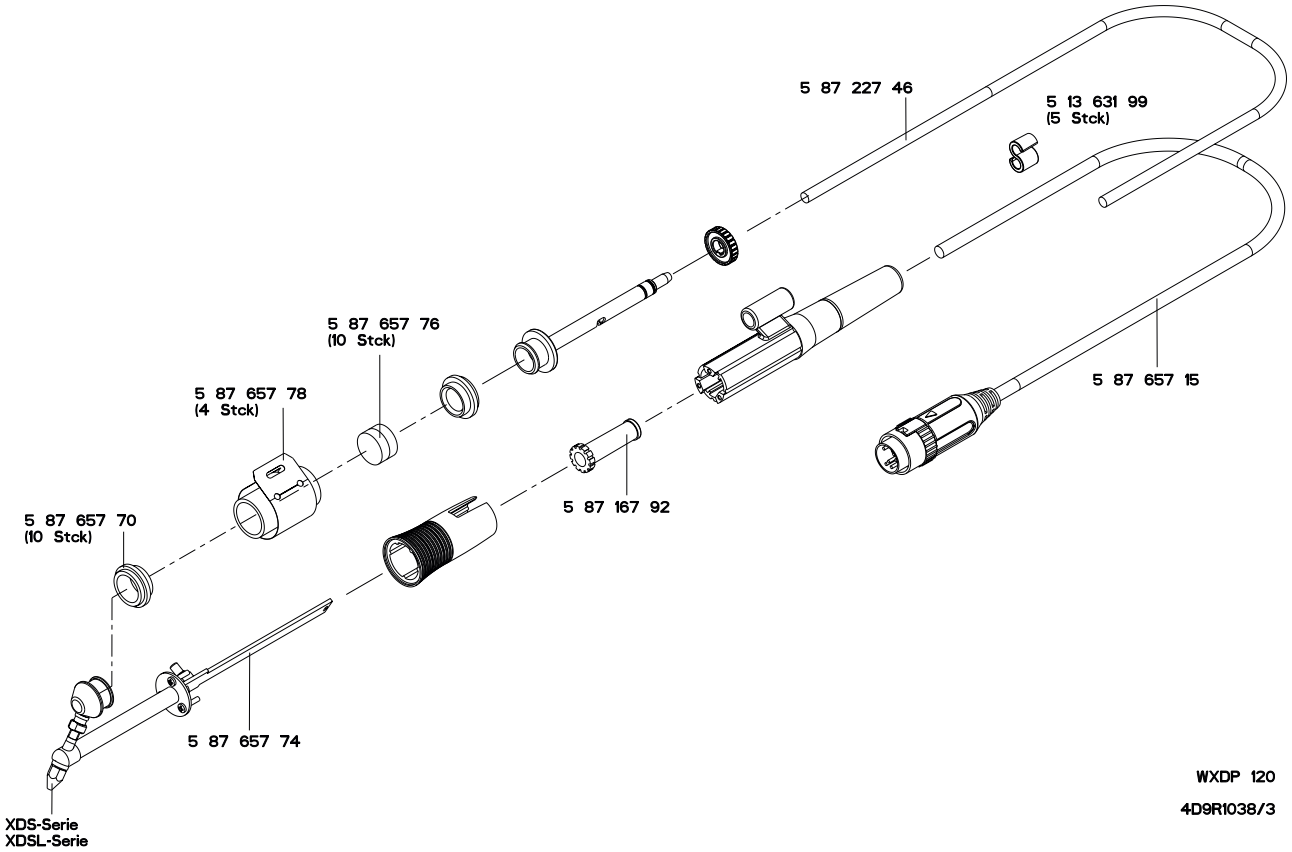
## WXA 2


S 87 647 06
S 87 647 44 | P
S 87 647 43 | C
S 87 647 19
S 87 647 45
S 87 647 20
S 87 647 35
S 87 647 36
S 87 647 08
S 87 647 34
S 87 469 02

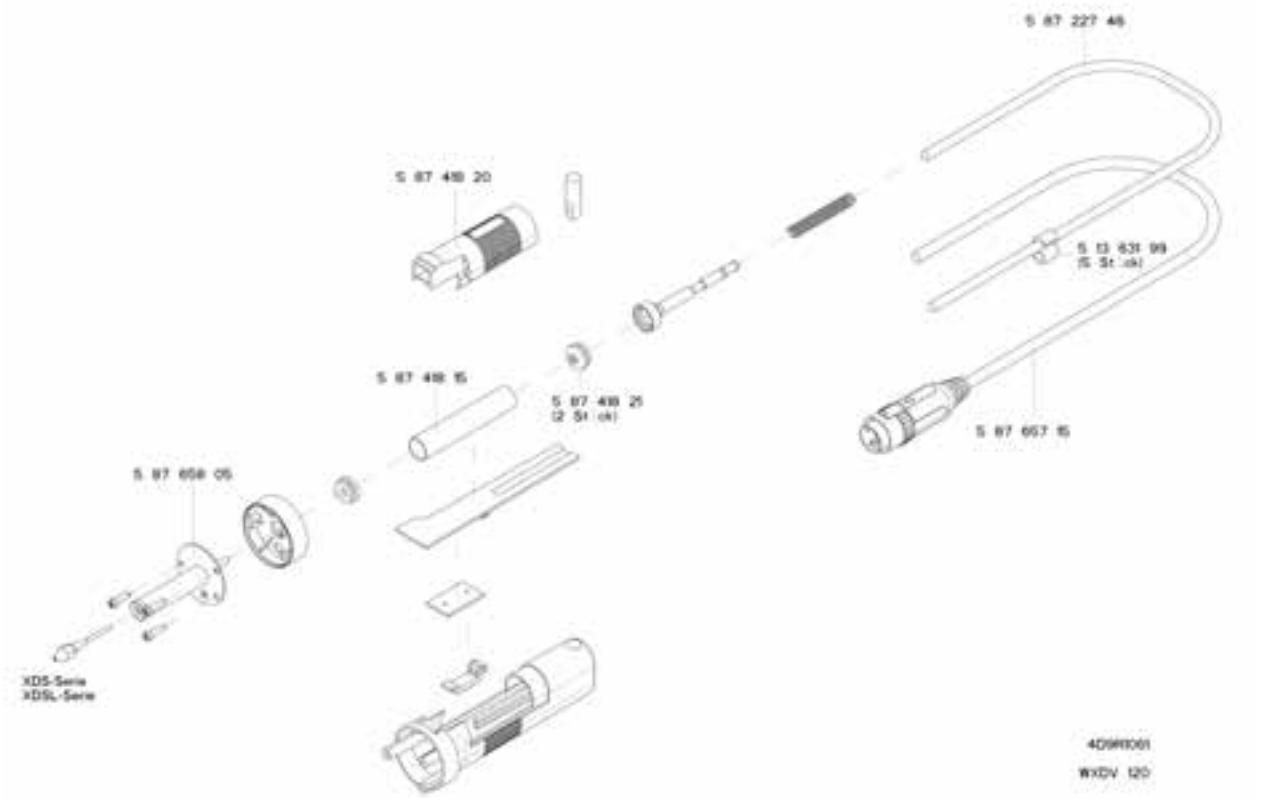
## WXD 2


S 87 647 37
S 87 647 20
S 87 647 19
S 87 469 02
S 87 647 21
S 87 647 31

# WXDP 120

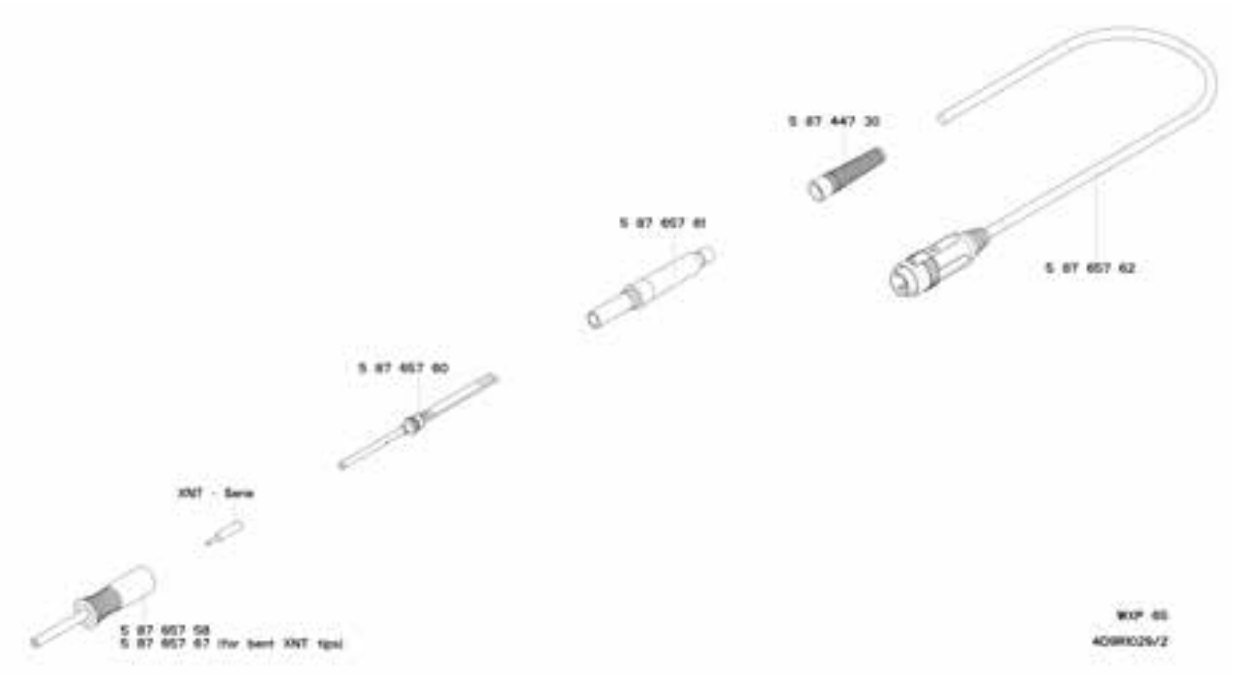



# WXDV 120

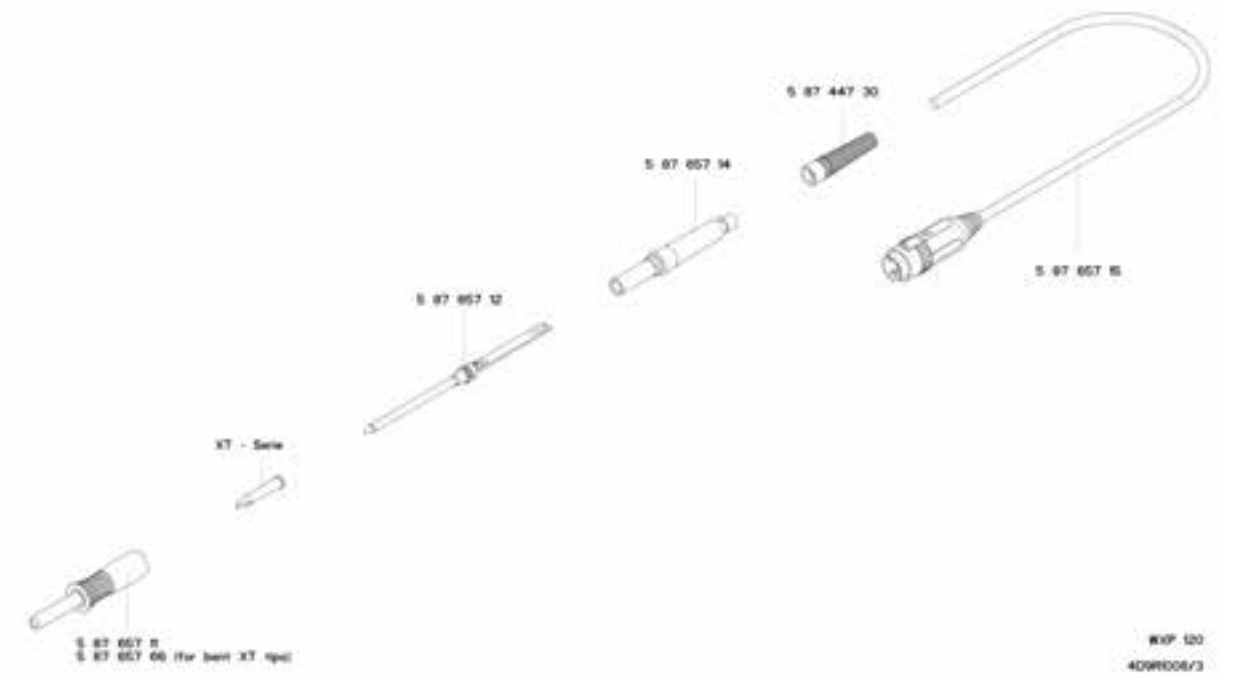



www.labem.pl

## WXP 65



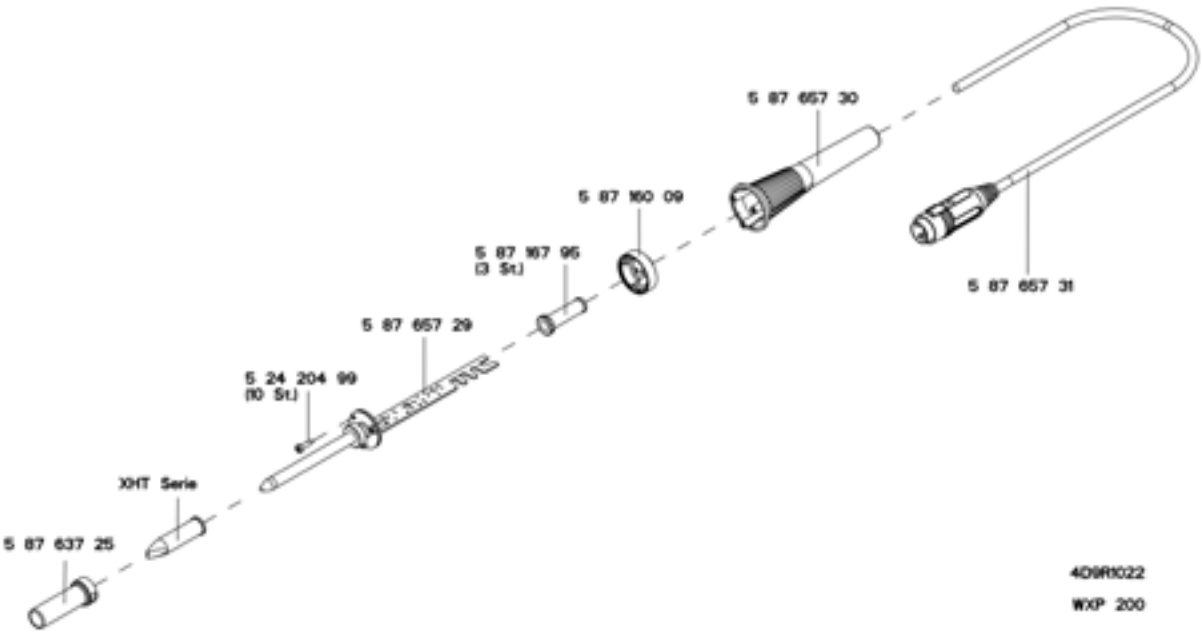

## WXP 120




www.labem.pl

Weller®

# WXP 200




www.labem.pl

# Numerical Index


| Order No. | Page |
|---|---|
| 185-1.5MM | 216 |
| 185-10MM | 216 |
| 185-10MM | 216 |
| 185-2.5MM | 216 |
| 185-2MM | 216 |
| 185-3MM | 216 |
| 185-4MM | 216 |
| 185-5MM | 216 |
| 185-6MM | 216 |
| 185-7MM | 216 |
| 185-8MM | 216 |
| 185-9MM | 216 |
| 320-000X | 217 |
| 320-00X | 217 |
| 320-0X | 217 |
| 320-1X | 217 |
| 320-20X | 217 |
| 320-2X | 217 |
| 326-000X | 217 |
| 326-00X | 217 |
| 326-0X | 217 |
| 326-1X | 217 |
| 326-20X | 217 |
| 326-2X | 217 |
| 440-1-PZDX | 217 |
| 440-215-PZDX | 217 |
| 440-22-PZDX | 217 |
| 440-2-PZDX | 217 |
| 440-3-PZDX | 217 |
| 440-4-PZDX | 217 |
| 440-TX-05X | 215 |
| 440-TX-06X | 215 |
| 440-TX-07X | 215 |
| 440-TX-08X | 215 |
| 440-TX-09X | 215 |
| 440-TX-10X | 215 |
| 440-TX-15X | 215 |
| 440-TX-20X | 215 |
| 440-TX-25X | 215 |
| 440-TX-27X | 215 |
| 440-TX-30X | 215 |
| 440-TX-40X | 215 |
| 445-000X | 215 |
| 445-00X | 215 |
| 445-0X | 215 |
| 445-10X | 215 |
| 445-20X | 215 |
| 445-30X | 215 |
| 446-0X | 214 |
| 446-1-PZDX | 214 |
| 446-1X | 214 |
| 446-2-PZDX | 214 |
| 446-2X | 214 |
| 4910-AX | 220 |
| 4910X | 220 |
| 491-A-PZDX | 218 |
| 491-AX | 220 |
| 491-PZDX | 218 |
| 491X | 220 |
| 492-A-PZDX | 218 |
| 492-AX | 220 |
| 492-PZDX | 218 |
| 492X | 220 |
| 493-A-PZDX | 218 |
| 493-AX | 220 |
| 493-PZDX | 218 |
| 493X | 220 |
| 49-A-TX-05 | 219 |
| 49-A-TX-06 | 219 |
| 49-A-TX-07 | 219 |
| 49-A-TX-08 | 219 |
| 49-A-TX-09 | 219 |
| 49-A-TX-10 | 219 |
| 49-A-TX-15 | 219 |
| 49-A-TX-20 | 219 |
| 49-B-TX-25 | 219 |
| 49-B-TX-27 | 219 |
| 49-B-TX-30 | 219 |
| 49-B-TX-40 | 219 |
| 49-TX-05 | 219 |
| 49-TX-06 | 219 |

| Order No. | Page |
|---|---|
| 49-TX-07 | 219 |
| 49-TX-08 | 219 |
| 49-TX-09 | 219 |
| 49-TX-10 | 219 |
| 49-TX-15 | 219 |
| 49-TX-20 | 219 |
| 49-TX-25 | 219 |
| 49-TX-27 | 219 |
| 49-TX-30 | 219 |
| 49-TX-40 | 219 |
| 4CT5A6 | 188 |
| 4CT5A7 | 188 |
| 4CT5A8 | 188 |
| 4CT5B7 | 188 |
| 4CT5B8 | 188 |
| 4CT5C6 | 188 |
| 4CT5C7 | 188 |
| 4CT5C8 | 188 |
| 4CT5D7 | 188 |
| 4CT5D8 | 188 |
| 4CT6C7 | 189 |
| 4CT6C8 | 189 |
| 4CT6D7 | 189 |
| 4CT6D8 | 189 |
| 4CT6D9 | 189 |
| 4CT6E7 | 189 |
| 4CT6E8 | 189 |
| 4ETA | 184 |
| 4ETB | 184 |
| 4ETBB | 184 |
| 4ETBS | 184 |
| 4ETC | 184 |
| 4ETCC | 184 |
| 4ETCS | 184 |
| 4ETD | 184 |
| 4ETDS | 184 |
| 4ETE | 184 |
| 4ETF | 184 |
| 4ETH | 184 |
| 4ETK | 184 |
| 4ETL | 184 |
| 4ETM | 184 |
| 4ETO | 184 |
| 4ETP | 184 |
| 4ETR | 184 |
| 4ETS | 184 |
| 4PTA6 | 186 |
| 4PTA7 | 186 |
| 4PTA8 | 186 |
| 4PTAA7 | 187 |
| 4PTAA8 | 187 |
| 4PTAA9 | 187 |
| 4PTB6 | 186 |
| 4PTB7 | 186 |
| 4PTB8 | 186 |
| 4PTB9 | 186 |
| 4PTBB7 | 187 |
| 4PTBB8 | 187 |
| 4PTBB9 | 187 |
| 4PTC7 | 186 |
| 4PTC8 | 186 |
| 4PTC9 | 186 |
| 4PTCC7 | 187 |
| 4PTCC8 | 187 |
| 4PTCC9 | 187 |
| 4PTCS7 | 186 |
| 4PTD7 | 186 |
| 4PTD8 | 186 |
| 4PTD9 | 186 |
| 4PTDD7 | 187 |
| 4PTDD8 | 187 |
| 4PTDD9 | 187 |
| 4PTDS7 | 186 |
| 4PTE8 | 186 |
| 4PTE9 | 186 |
| 4PTF7 | 187 |
| 4PTF8 | 187 |
| 4PTH6 | 186 |
| 4PTH7 | 186 |
| 4PTH8 | 186 |
| 4PTK6 | 186 |

| Order No. | Page |
|---|---|
| 4PTK7 | 186 |
| 4PTK8 | 186 |
| 4PTL6 | 186 |
| 4PTL7 | 186 |
| 4PTL8 | 186 |
| 4PTM7 | 186 |
| 4PTM8 | 186 |
| 4PTM9 | 186 |
| 4PTO6 | 186 |
| 4PTO7 | 186 |
| 4PTO8 | 186 |
| 4PTR7 | 186 |
| 4PTR8 | 186 |
| 4PTS7 | 186 |
| 4PTS8 | 186 |
| 4SPI15210 | 191 |
| 4SPI15211 | 191 |
| 4SPI15212 | 191 |
| 4SPI15213 | 191 |
| 4SPI26200 | 191 |
| 4SPI26201 | 191 |
| 4SPI26206 | 191 |
| 4SPI40220 | 191 |
| 4SPI40224 | 191 |
| 4SPI40225 | 191 |
| 4SPI40226 | 191 |
| 4SPI80230 | 191 |
| 4SPI80231 | 191 |
| 4SPI80232 | 191 |
| 4SPI80234 | 191 |
| 4SPI80235 | 191 |
| 4SPI80237 | 191 |
| 6966EK | 71 |
| AM-1.5MM | 218 |
| AM-10MM | 218 |
| AM-2.5MM | 218 |
| AM-2MM | 218 |
| AM-3MM | 218 |
| AM-3MM-3 | 218 |
| AM-3MM-4 | 218 |
| AM-4MM | 218 |
| AM-5MM | 218 |
| AM-5MM-4 | 218 |
| AM-6MM | 218 |
| AM-6MM-4 | 218 |
| AM-7MM | 218 |
| AM-8MM | 218 |
| APC5132CM | 229 |
| KDS1412P | 227 |
| KDS141P | 227 |
| KDS14TNP | 228 |
| KDS1512P | 227 |
| KDS16112P | 227 |
| KDS1612P | 227 |
| KDS161P | 227 |
| KDS16TNP | 228 |
| KDS1712P | 227 |
| KDS1812P | 227 |
| KDS181P | 227 |
| KDS18TNP | 228 |
| KDS1912P | 227 |
| KDS191P | 227 |
| KDS2012P | 227 |
| KDS201P | 227 |
| KDS20TNP | 228 |
| KDS2112P | 227 |
| KDS2212P | 227 |
| KDS221P | 227 |
| KDS22TNP | 228 |
| KDS2312P | 227 |
| KDS2512P | 227 |
| KDS260L | 225 |
| KDS260M | 225 |
| KDS260S | 225 |
| KDS301 | 225 |
| KDS3012P | 227 |
| KDS660 | 227 |
| KDS805S6 | 226 |
| KDS806V | 224 |
| KDS810S6 | 226 |
| KDS816 | 226 |

| Order No. | Page |
|---|---|
| KDS825 | 229 |
| KDS900 | 229 |
| KDS901 | 229 |
| KDSSAMPLEPACK | 227 |
| M-490 | 216 |
| M-490-2 | 216 |
| M-497 | 216 |
| NT1 | 170 |
| NT1S | 170 |
| NT1SC | 170 |
| NT1X | 170 |
| NT4 | 170 |
| NT6 | 170 |
| NTA | 170 |
| NTAX | 170 |
| NTB | 170 |
| NTC | 170 |
| NTD | 170 |
| NTGW | 170 |
| NTH | 170 |
| NTK | 170 |
| NTMS | 170 |
| PS100A | 92 |
| PS2001A | 92 |
| PS200A | 92 |
| SA21A | 92 |
| SA21A1 | 92 |
| SM15748BK | 97 |
| SMT0504A | 182 |
| SMT1206D | 182 |
| SMT8K | 182 |
| SMTA | 182 |
| T0051000199 | 150 |
| T0051005399 | 150 |
| T0051005571 | 150 |
| T0051031199 | 184 |
| T0051170699 | 90 |
| T0051170799 | 90 |
| T0051170899 | 90 |
| T0051170999 | 90 |
| T0051176799 | 189 |
| T0051301099 | 96 |
| T0051301199 | 96 |
| T0051301299 | 96 |
| T0051301399 | 93 |
| T0051301799 | 93 |
| T0051302699 | 96 |
| T0051302799 | 96 |
| T0051302899 | 96 |
| T0051303199 | 95, 96 |
| T0051312099 | 39, 51, 69 |
| T0051312599 | 131 |
| T0051314000 | 194 |
| T0051314100 | 194 |
| T0051314200 | 194 |
| T0051314300 | 194 |
| T0051314400 | 194 |
| T0051314500 | 194 |
| T0051314600 | 194 |
| T0051314700 | 194 |
| T0051314800 | 194 |
| T0051315000 | 194 |
| T0051315100 | 194 |
| T0051315200 | 194 |
| T0051315399 | 194 |
| T0051317199 | 158 |
| T0051317399 | 141 |
| T0051317499 | 141 |
| T0051317799 | 141 |
| T0051317899 | 141 |
| T0051318099 | 50, 155 |
| T0051318299 | 155 |
| T0051318399 | 154 |
| T0051319099 | 50, 53, 61, 154 |
| T0051319899 | 157 |
| T0051320199 | 60, 157 |
| T0051320299 | 157 |
| T0051320499 | 155 |
| T0051320599 | 155 |
| T0051325010 | 197 |
| T0051325099 | 197 |


www.labem.pl

| Order No. | Page |
|---|---|
| T0051325110 | 197 |
| T0051325199 | 197 |
| T0051325210 | 197 |
| T0051325299 | 197 |
| T0051325310 | 197 |
| T0051325399 | 197 |
| T0051325410 | 197 |
| T0051325499 | 197 |
| T0051325510 | 197 |
| T0051325599 | 197 |
| T0051325610 | 197 |
| T0051325699 | 197 |
| T0051325710 | 197 |
| T0051325799 | 197 |
| T0051325899 | 197 |
| T0051325910 | 197 |
| T0051325999 | 197 |
| T0051326010 | 197 |
| T0051326099 | 197 |
| T0051326110 | 197 |
| T0051326199 | 197 |
| T0051326210 | 197 |
| T0051326299 | 197 |
| T0051326310 | 197 |
| T0051326399 | 197 |
| T0051326410 | 197 |
| T0051326499 | 197 |
| T0051326510 | 197 |
| T0051326599 | 197 |
| T0051326610 | 197 |
| T0051326699 | 197 |
| T0051350099 | 196 |
| T0051350199 | 196 |
| T0051350299 | 196 |
| T0051350399 | 196 |
| T0051350499 | 156 |
| T0051351099 | 195 |
| T0051351199 | 195 |
| T0051351299 | 195 |
| T0051351399 | 195 |
| T0051351499 | 195 |
| T0051351599 | 195 |
| T0051351699 | 195 |
| T0051352799 | 195 |
| T0051353099 | 195 |
| T0051353299 | 195 |
| T0051353399 | 195 |
| T0051355099 | 195 |
| T0051355199 | 195 |
| T0051355299 | 195 |
| T0051360499 | 154 |
| T0051377099 | 195 |
| T0051379099 | 194 |
| T0051382499 | 94 |
| T0051382599 | 94 |
| T0051382799 | 94, 96 |
| T0051383299 | 85 |
| T0051383599 | 88 |
| T0051384099 | 94 |
| T0051384199 | 94 |
| T0051384799 | 83 |
| T0051386099 | 95 |
| T0051386199 | 95 |
| T0051386299 | 95 |
| T0051386399 | 95 |
| T0051386499 | 95 |
| T0051386599 | 95 |
| T0051386699 | 95 |
| T0051386799 | 95 |
| T0051386899 | 95 |
| T0051386999 | 95 |
| T0051387099 | 95 |
| T0051387299 | 95 |
| T0051387399 | 95 |
| T0051387499 | 95 |
| T0051387599 | 95 |
| T0051387699 | 95 |
| T0051387799 | 95 |
| T0051387899 | 95 |
| T0051387999 | 95 |
| T0051388099 | 95 |

| Order No. | Page |
|---|---|
| T0051388199 | 95 |
| T0051388299 | 95 |
| T0051388399 | 95 |
| T0051388499 | 95 |
| T0051388599 | 95 |
| T0051388699 | 95 |
| T0051388799 | 95 |
| T0051388899 | 95 |
| T0051500699 | 137 |
| T0051502099 | 130 |
| T0051502699 | 88 |
| T0051502799 | 28, 69 |
| T0051502899 | 39 |
| T0051507699 | 136 |
| T0051508099 | 136 |
| T0051508699 | 136 |
| T0051512199 | 16, 18, 19, 24, 26, 51, 53, 60, 61 |
| T0051512499 | 94, 96 |
| T0051512699 | 96 |
| T0051512799 | 96 |
| T0051514799 | 37 |
| T0051515299 | 137 |
| T0051515399 | 50, 155 |
| T0051515599 | 72 |
| T0051515699 | 131 |
| T0051516199 | 24, 37, 50, 144 |
| T0051516799 | 137 |
| T0051516899 | 136 |
| T0051516999 | 17, 141 |
| T0051517199 | 17, 18, 140 |
| T0051517299 | 60, 157 |
| T0051605999 | 42 |
| T0051606099 | 42 |
| T0051607599 | 43 |
| T0051608799 | 43 |
| T0051612099 | 193 |
| T0051612199 | 193, 42 |
| T0051612299 | 193 |
| T0051612399 | 193 |
| T0051612499 | 193 |
| T0051612599 | 193 |
| T0051612799 | 193 |
| T0051612999 | 193 |
| T0051613099 | 193 |
| T0051613299 | 193 |
| T0051613499 | 43, 192 |
| T0051613599 | 43, 193 |
| T0051614099 | 193 |
| T0051614199 | 193 |
| T0051614299 | 43, 193 |
| T0051614399 | 193 |
| T0051615099 | 193 |
| T0051615199 | 193 |
| T0051615699 | 42 |
| T0051615899 | 193 |
| T0051615999 | 42, 193 |
| T0051616099 | 42, 43 |
| T0051616199 | 192 |
| T0051616599 | 192 |
| T0051616699 | 192 |
| T0051616799 | 192 |
| T0051616899 | 192 |
| T0051616999 | 192 |
| T0051617299 | 192 |
| T0051644399 | 192 |
| T0051644499 | 192 |
| T0051644599 | 192 |
| T0051644699 | 192 |
| T0051644799 | 43, 192 |
| T0051644899 | 192 |
| T0051645099 | 43, 192 |
| T0052474999 | 195 |
| T0052475099 | 184 |
| T0052503199 | 91 |
| T0052503299 | 91 |
| T0052509899 | 97 |
| T0052510699 | 149 |
| T0052512599 | 131 |
| T0052541000 | 130 |
| T0052609899 | 97 |

| Order No. | Page |
|---|---|
| T0052616299 | 130, 149 |
| T0052620299 | 185 |
| T0052702899 | 86 |
| T0052702999 | 86 |
| T0052704099 | 90 |
| T0052704299 | 90 |
| T0052704399 | 90 |
| T0052711599 | 68, 69, 158 |
| T0052711699 | 159 |
| T0052711799 | 52, 159 |
| T0052711899 | 158 |
| T0052711999 | 159,67 |
| T0052712099 | 159 |
| T0052811699 | 39 |
| T0052812199 | 39 |
| T0052812299 | 39 |
| T0052812699 | 131 |
| T0052820699 | 38, 39 |
| T0052822699 | 38, 39 |
| T0052910999 | 85 |
| T0052916199 | 28, 29, 146 |
| T0052916399 | 147 |
| T0052916699 | 130, 148 |
| T0052917099 | 28, 147 |
| T0052917199 | 140 |
| T0052918099 | 24, 50, 53, 146 |
| T0052918199 | 146 |
| T0052918499 | 50, 51 |
| T0052918599 | 131 |
| T0052918699 | 131 |
| T0052918799 | 149 |
| T0052918999 | 147 |
| T0052919099 | 140 |
| T0052919399 | 27, 51, 144 |
| T0052919499 | 144 |
| T0052919799 | 37 |
| T0052919899 | 37 |
| T0052919999 | 145 |
| T0052920099 | 145 |
| T0052920199 | 16, 18, 143 |
| T0052920299 | 60, 143 |
| T0052920399 | 17, 18, 140 |
| T0052920499 | 140 |
| T0052920599 | 145 |
| T0052920699 | 145 |
| T0052920799 | 144 |
| T0052921199 | 19, 142 |
| T0052921299 | 142 |
| T0052921499 | 131 |
| T0052921599 | 26, 61, 142 |
| T0052921699 | 142 |
| T0053118099 | 84 |
| T0053118499 | 84 |
| T0053118599 | 25 |
| T0053119099 | 79, 83, 84, 87 |
| T0053119199 | 79, 84, 87, 115 |
| T0053124699 | 85 |
| T0053163699 | 224 |
| T0053165699 | 224 |
| T0053171670 | 71 |
| T0053171699 | 71 |
| T0053210599 | 31 |
| T0053220699 | 31 |
| T0053222499 | 31 |
| T0053222699 | 31 |
| T0053250699 | 29 |
| T0053252699 | 29 |
| T0053252699 | 29 |
| T0053260699 | 28 |
| T0053262699 | 28 |
| T0053266671 | 36, 37 |
| T0053266699 | 69 |
| T0053268699 | 69 |
| T0053276699 | 28 |
| T0053277670 | 27 |
| T0053278670 | 33 |
| T0053293699 | 41 |
| T0053295699 | 23, 26, 27 |
| T0053296699 | 26 |
| T0053297699 | 26 |
| T0053312599 | 146 |

| Order No. | Page |
|---|---|
| T0053313199 | 147 |
| T0053313399 | 158 |
| T0053315199 | 130, 148 |
| T0053316499 | 89 |
| T0053316599 | 89 |
| T0053316699 | 89 |
| T0053316799 | 88 |
| T0053334699 | 70, 76, 77 |
| T0053336699 | 70, 76, 78 |
| T0053338699 | 77, 78, 79, 87 |
| T0053355699 | 77 |
| T0053359699 | 78 |
| T0053364699 | 79, 87 |
| T0053364899 | 86 |
| T0053366699 | 49, 50, 51 |
| T0053368399 | 50 |
| T0053368699 | 50 |
| T0053370699 | 76,81 |
| T0053371699 | 87 |
| T0053377699 | 49, 53, 59, 61, 66, 68 |
| T0053378699 | 68 |
| T0053380699 | 53 |
| T0053400699 | 23, 24, 25 |
| T0053402670 | 24 |
| T0053402699 | 24 |
| T0053415699 | 23 |
| T0053417699 | 15, 18, 19, 33 |
| T0053418699 | 18 |
| T0053419699 | 18 |
| T0053420699 | 15, 16, 17, 33 |
| T0053425699 | 66, 67 |
| T0053426699 | 60, 59 |
| T0053427699 | 19 |
| T0053428699 | 60 |
| T0053429699 | 60 |
| T0053430699 | 67 |
| T0053631699 | 134 |
| T0053631999 | 134 |
| T0053632199 | 133 |
| T0053632299 | 133 |
| T0053632399 | 133 |
| T0053632499 | 134 |
| T0053632699 | 135 |
| T0053632999 | 134 |
| T0053633899 | 135 |
| T0053634399 | 135 |
| T0053634499 | 133 |
| T0053635299 | 130 |
| T0053638699 | 128 |
| T0053640299 | 128 |
| T0053640799 | 132 |
| T0053641099 | 132 |
| T0053641400 | 134 |
| T0053641599 | 135 |
| T0053642199 | 132 |
| T0053650699 | 109 |
| T0053651689 | 109 |
| T0053657199 | 108, 112 |
| T0053657299 | 107, 112 |
| T0053657399 | 108, 109, 112, 113, 115 |
| T0053657499 | 107, 108, 109, 112, 119 |
| T0053657599 | 120 |
| T0053657699 | 118 |
| T0053657799 | 115 |
| T0053657899 | 114 |
| T0053657999 | 113 |
| T0053658099 | 114 |
| T0053658899 | 110 |
| T0053658999 | 110 |
| T0053659099 | 123 |
| T0053659199 | 116 |
| T0053659299 | 117 |
| T0053659399 | 115 |
| T0053659899 | 114 |
| T0053660699 | 106 |
| T0053661699 | 106 |
| T0053663699 | 107 |
| T0053665699 | 107 |
| T0053666699 | 111 |


www.labem.pl

# Numerical Index


| Order No. | Page |
|---|---|
| T0053666799 | 111 |
| T0053670699 | 129 |
| T0053900699 | 210, 209 |
| T0053901699 | 209, 21 |
| T0053909199 | 211 |
| T0053909299 | 211 |
| T0053909399 | 211 |
| T0053909499 | 211 |
| T0053909599 | 211 |
| T0054103999 | 184 |
| T0054104099 | 184 |
| T0054104599 | 184 |
| T0054130799 | 186 |
| T0054170399 | 184 |
| T0054210799 | 188 |
| T0054210899 | 188 |
| T0054211799 | 188 |
| T0054212899 | 188 |
| T0054213899 | 188 |
| T0054230799 | 189 |
| T0054231899 | 189 |
| T0054240799 | 190 |
| T0054240899 | 190 |
| T0054241799 | 190 |
| T0054241899 | 190 |
| T0054242899 | 190 |
| T0054250799 | 190 |
| T0054250899 | 190 |
| T0054251799 | 190 |
| T0054251899 | 190 |
| T0054412199 | 180 |
| T0054414199 | 185 |
| T0054414399 | 185 |
| T0054414499 | 185 |
| T0054414599 | 185 |
| T0054414699 | 185 |
| T0054414799 | 185 |
| T0054414999 | 185 |
| T0054415299 | 185 |
| T0054415399 | 185 |
| T0054426099 | 185 |
| T0054426199 | 185 |
| T0054426299 | 185 |
| T0054426399 | 185 |
| T0054426499 | 185 |
| T0054426599 | 185 |
| T0054426699 | 185 |
| T0054426799 | 185 |
| T0054426899 | 185 |
| T0054426999 | 185 |
| T0054427099 | 185 |
| T0054440111 | 177 |
| T0054440311 | 177 |
| T0054440410 | 177 |
| T0054440411 | 177 |
| T0054440499 | 177 |
| T0054440510 | 177 |
| T0054440511 | 177 |
| T0054440599 | 177 |
| T0054440610 | 178 |
| T0054440611 | 178 |
| T0054440699 | 178 |
| T0054440710 | 177 |
| T0054440711 | 177 |
| T0054440799 | 177 |
| T0054440810 | 178 |
| T0054440811 | 178 |
| T0054440873 | 178 |
| T0054440877 | 178 |
| T0054440881 | 178 |
| T0054440899 | 178 |
| T0054440910 | 177 |
| T0054440911 | 177 |
| T0054440999 | 177 |
| T0054441010 | 178 |
| T0054441011 | 178 |
| T0054441099 | 178 |
| T0054441110 | 177 |
| T0054441199 | 177 |
| T0054441211 | 177 |
| T0054441311 | 177 |
| T0054441411 | 177 |
| T0054441499 | 177 |
| T0054441510 | 177 |
| T0054441511 | 177 |
| T0054441599 | 177 |
| T0054441699 | 179 |
| T0054441799 | 182 |
| T0054442011 | 177 |
| T0054442099 | 177 |
| T0054442171 | 178 |
| T0054442210 | 182 |
| T0054442271 | 182 |
| T0054442299 | 35, 182 |
| T0054442311 | 178 |
| T0054442399 | 178 |
| T0054442410 | 178 |
| T0054442499 | 178 |
| T0054442510 | 177 |
| T0054442599 | 177 |
| T0054442610 | 177 |
| T0054442699 | 177 |
| T0054442710 | 177 |
| T0054442799 | 177 |
| T0054442810 | 177 |
| T0054442899 | 177 |
| T0054443010 | 180 |
| T0054443099 | 180 |
| T0054443110 | 180 |
| T0054443199 | 180 |
| T0054443210 | 180 |
| T0054443299 | 180 |
| T0054443310 | 182 |
| T0054443399 | 35, 182 |
| T0054443510 | 177 |
| T0054443599 | 177 |
| T0054443699 | 177 |
| T0054443710 | 177 |
| T0054443799 | 177 |
| T0054443810 | 177 |
| T0054443899 | 177 |
| T0054443910 | 178 |
| T0054443999 | 178 |
| T0054444010 | 177 |
| T0054444099 | 177 |
| T0054444110 | 182 |
| T0054444199 | 35, 182 |
| T0054444210 | 177 |
| T0054444299 | 177 |
| T0054444310 | 177 |
| T0054444399 | 177 |
| T0054444410 | 178 |
| T0054444499 | 178 |
| T0054444510 | 178 |
| T0054444599 | 178 |
| T0054444810 | 177 |
| T0054444899 | 177 |
| T0054444999 | 179 |
| T0054445099 | 183 |
| T0054445199 | 183 |
| T0054445299 | 183 |
| T0054445399 | 183 |
| T0054445499 | 183 |
| T0054445599 | 183 |
| T0054445699 | 183 |
| T0054446099 | 183 |
| T0054446199 | 183 |
| T0054446299 | 183 |
| T0054446789 | 181 |
| T0054446999 | 177 |
| T0054447810 | 178 |
| T0054447899 | 178 |
| T0054447910 | 178 |
| T0054447999 | 178 |
| T0054448199 | 178 |
| T0054448210 | 178 |
| T0054448211 | 178 |
| T0054448299 | 178 |
| T0054448399 | 180 |
| T0054448499 | 178 |
| T0054448610 | 178 |
| T0054448699 | 178 |
| T0054448710 | 178 |
| T0054448799 | 178 |
| T0054448899 | 177 |
| T0054448910 | 177 |
| T0054448911 | 177 |
| T0054449410 | 177 |
| T0054449499 | 177 |
| T0054449699 | 177 |
| T0054449799 | 177 |
| T0054449899 | 177 |
| T0054450199 | 181 |
| T0054450299 | 181 |
| T0054450399 | 181 |
| T0054450499 | 181 |
| T0054450599 | 181 |
| T0054450699 | 181 |
| T0054450799 | 181 |
| T0054450899 | 181 |
| T0054450999 | 181 |
| T0054451099 | 181 |
| T0054451110 | 178 |
| T0054451199 | 178 |
| T0054451399 | 183 |
| T0054451611 | 177 |
| T0054451611 | 177 |
| T0054451699 | 177 |
| T0054451711 | 177 |
| T0054451711 | 177 |
| T0054451799 | 177 |
| T0054451811 | 177 |
| T0054451811 | 177 |
| T0054451899 | 177 |
| T0054451999 | 178 |
| T0054451999 | 178 |
| T0054452010 | 179 |
| T0054452011 | 179 |
| T0054452099 | 179 |
| T0054452110 | 179 |
| T0054452111 | 179 |
| T0054452199 | 179 |
| T0054452210 | 179 |
| T0054452211 | 179 |
| T0054452299 | 179 |
| T0054452310 | 179 |
| T0054452311 | 179 |
| T0054452399 | 179 |
| T0054452410 | 179 |
| T0054452411 | 179 |
| T0054452499 | 179 |
| T0054452510 | 179 |
| T0054452511 | 179 |
| T0054452599 | 179 |
| T0054452610 | 179 |
| T0054452611 | 179 |
| T0054452699 | 179 |
| T0054452710 | 179 |
| T0054452711 | 179 |
| T0054452799 | 179 |
| T0054452810 | 179 |
| T0054452811 | 179 |
| T0054452899 | 179 |
| T0054452910 | 179 |
| T0054452911 | 179 |
| T0054452999 | 179 |
| T0054453010 | 179 |
| T0054453099 | 179 |
| T0054453110 | 179 |
| T0054453199 | 179 |
| T0054453210 | 179 |
| T0054453299 | 179 |
| T0054453310 | 179 |
| T0054453399 | 179 |
| T0054453410 | 179 |
| T0054453499 | 179 |
| T0054453510 | 179 |
| T0054453511 | 179 |
| T0054453599 | 179 |
| T0054453699 | 179 |
| T0054453710 | 179 |
| T0054453711 | 179 |
| T0054453799 | 179 |
| T0054453899 | 179 |
| T0054453911 | 179 |
| T0054453999 | 179 |
| T0054454011 | 179 |
| T0054454099 | 179 |
| T0054460199 | 165 |
| T0054460299 | 165 |
| T0054460399 | 164 |
| T0054460499 | 164 |
| T0054460599 | 164 |
| T0054460699 | 164 |
| T0054460799 | 165 |
| T0054460899 | 164 |
| T0054460999 | 164 |
| T0054461099 | 165 |
| T0054461199 | 164 |
| T0054461299 | 164 |
| T0054461399 | 165 |
| T0054462499 | 165 |
| T0054462599 | 165 |
| T0054465199 | 167 |
| T0054465299 | 166 |
| T0054465399 | 166 |
| T0054465499 | 166 |
| T0054465699 | 167 |
| T0054466699 | 166 |
| T0054466799 | 166 |
| T0054466899 | 166 |
| T0054470110 | 172 |
| T0054470199 | 172 |
| T0054470210 | 172 |
| T0054470299 | 172 |
| T0054470310 | 172 |
| T0054470399 | 172 |
| T0054470410 | 172 |
| T0054470499 | 172 |
| T0054470510 | 172 |
| T0054470599 | 172 |
| T0054470610 | 172 |
| T0054470699 | 172 |
| T0054470710 | 172 |
| T0054470799 | 172 |
| T0054470810 | 172 |
| T0054470899 | 172 |
| T0054470910 | 172 |
| T0054470999 | 172 |
| T0054471010 | 172 |
| T0054471099 | 172 |
| T0054471110 | 173 |
| T0054471199 | 173 |
| T0054471210 | 173 |
| T0054471299 | 173 |
| T0054471310 | 172 |
| T0054471399 | 172 |
| T0054471410 | 173 |
| T0054471499 | 173 |
| T0054471510 | 172 |
| T0054471599 | 172 |
| T0054471610 | 172 |
| T0054471699 | 172 |
| T0054471710 | 172 |
| T0054471799 | 172 |
| T0054471810 | 172 |
| T0054471899 | 172 |
| T0054471999 | 174 |
| T0054472099 | 174 |
| T0054472299 | 174 |
| T0054472310 | 175 |
| T0054472399 | 175 |
| T0054472499 | 175 |
| T0054472599 | 175 |
| T0054472699 | 175 |
| T0054472799 | 175 |
| T0054472899 | 175 |
| T0054473010 | 172 |
| T0054473099 | 172 |
| T0054473190 | 173 |
| T0054473190 | 173 |
| T0054473199 | 173 |
| T0054473290 | 173 |
| T0054473299 | 173 |


www.labem.pl

| Order No. | Page |
|---|---|
| T0054473390 | 173 |
| T0054473399 | 173 |
| T0054474010 | 172 |
| T0054474099 | 172 |
| T0054474110 | 172 |
| T0054474199 | 172 |
| T0054474210 | 172 |
| T0054474299 | 172 |
| T0054474310 | 172 |
| T0054474399 | 172 |
| T0054474410 | 172 |
| T0054474499 | 172 |
| T0054474510 | 172 |
| T0054474599 | 172 |
| T0054480199 | 176 |
| T0054480299 | 176 |
| T0054480399 | 176 |
| T0054480499 | 176 |
| T0054480599 | 176 |
| T0054485010 | 168 |
| T0054485099 | 168 |
| T0054485110 | 168 |
| T0054485199 | 168 |
| T0054485210 | 169 |
| T0054485299 | 169 |
| T0054485310 | 168 |
| T0054485399 | 168 |
| T0054485410 | 169 |
| T0054485499 | 169 |
| T0054485510 | 168 |
| T0054485599 | 168 |
| T0054485610 | 168 |
| T0054485699 | 168 |
| T0054485710 | 168 |
| T0054485799 | 168 |
| T0054485810 | 168 |
| T0054485899 | 168 |
| T0054485910 | 168 |
| T0054485999 | 168 |
| T0054486010 | 168 |
| T0054486099 | 168 |
| T0054486199 | 169 |
| T0054486210 | 168 |
| T0054486299 | 168 |
| T0054486310 | 168 |
| T0054486399 | 168 |
| T0054486410 | 168 |
| T0054486499 | 168 |
| T0054487210 | 169 |
| T0054487299 | 169 |
| T0054487310 | 168 |
| T0054487399 | 168 |
| T0054487410 | 168 |
| T0054487499 | 168 |
| T0054487510 | 169 |
| T0054487599 | 169 |
| T0054488010 | 169 |
| T0054488099 | 169 |
| T0054488110 | 168 |
| T0054488199 | 168 |
| T0054488210 | 168 |
| T0054488299 | 168 |
| T0054488310 | 168 |
| T0054488399 | 168 |
| T0054488410 | 168 |
| T0054488499 | 168 |
| T0054488510 | 168 |
| T0054488599 | 168 |
| T0054488610 | 168 |
| T0054488699 | 168 |
| T0054488710 | 168 |
| T0054488799 | 168 |
| T0054488810 | 169 |
| T0054488899 | 169 |
| T0054488910 | 169 |
| T0054488999 | 169 |
| T0054489010 | 169 |
| T0054489099 | 169 |
| T0054489110 | 169 |
| T0054489199 | 169 |
| T0054489210 | 169 |

| Order No. | Page |
|---|---|
| T0054489299 | 169 |
| T0054489310 | 169 |
| T0054489399 | 169 |
| T0054489410 | 169 |
| T0054489499 | 169 |
| T0054489510 | 169 |
| T0054489599 | 169 |
| T0054489610 | 169 |
| T0054489699 | 169 |
| T0054489710 | 169 |
| T0054489799 | 169 |
| T0054489810 | 169 |
| T0054489899 | 169 |
| T0054489910 | 169 |
| T0054489999 | 169 |
| T0054490010 | 169 |
| T0054490099 | 169 |
| T0054490110 | 169 |
| T0054490199 | 169 |
| T0054490210 | 169 |
| T0054490299 | 169 |
| T0054490310 | 169 |
| T0054490399 | 169 |
| T0056103699 | 151 |
| T0056104667 | 189 |
| T0056104668 | 189 |
| T0056104669 | 189 |
| T0056104699 | 151 |
| T0056105699 | 151 |
| T0056109399 | 90 |
| T0056109699 | 151 |
| T0056400599 | 152 |
| T0056402199 | 152 |
| T0056403799 | 153 |
| T0056405399 | 153 |
| T0058706794 | 156, 194, 196 |
| T0058713798 | 72, 83, 203 |
| T0058713799 | 72, 83, 203 |
| T0058720781 | 179, 184 |
| T0058720786 | 187 |
| T0058720787 | 187 |
| T0058720788 | 187 |
| T0058720789 | 187 |
| T0058720794 | 184, 187 |
| T0058720795 | 180 |
| T0058725034 | 91 |
| T0058725722 | 91 |
| T0058725726 | 91 |
| T0058725729 | 91 |
| T0058725732 | 91 |
| T0058725736 | 91 |
| T0058725742 | 91 |
| T0058727772 | 198 |
| T0058727773 | 198 |
| T0058727774 | 198 |
| T0058727775 | 198 |
| T0058727776 | 198 |
| T0058727777 | 199 |
| T0058727778 | 199 |
| T0058727779 | 199 |
| T0058727780 | 199 |
| T0058727781 | 199 |
| T0058727782 | 199 |
| T0058727783 | 199 |
| T0058727784 | 199 |
| T0058727785 | 199 |
| T0058727786 | 198 |
| T0058727787 | 198 |
| T0058727808 | 199 |
| T0058727821 | 198 |
| T0058727822 | 198 |
| T0058727823 | 198 |
| T0058735050 | 135 |
| T0058735427 | 118 |
| T0058735757 | 132 |
| T0058735835 | 124 |
| T0058735836 | 124, 133 |
| T0058735837 | 124, 133 |
| T0058735838 | 124, 133 |
| T0058735840 | 117 |
| T0058735845 | 115 |

| Order No. | Page |
|---|---|
| T0058735855 | 125 |
| T0058735856 | 125 |
| T0058735860 | 123 |
| T0058735863 | 125 |
| T0058735864 | 125 |
| T0058735865 | 135 |
| T0058735866 | 135 |
| T0058735869 | 125 |
| T0058735870 | 125 |
| T0058735871 | 125 |
| T0058735879 | 121 |
| T0058735895 | 122 |
| T0058735909 | 115 |
| T0058735915 | 117 |
| T0058735924 | 123 |
| T0058735936 | 122 |
| T0058735937 | 122 |
| T0058735938 | 122 |
| T0058736804 | 202 |
| T0058736807 | 202 |
| T0058736814 | 202 |
| T0058736818 | 202 |
| T0058736833 | 202 |
| T0058736837 | 202 |
| T0058736838 | 202 |
| T0058736839 | 202 |
| T0058736840 | 201 |
| T0058736841 | 201 |
| T0058736842 | 201 |
| T0058736843 | 201 |
| T0058736867 | 200 |
| T0058736870 | 200 |
| T0058736875 | 203 |
| T0058736880 | 202 |
| T0058736881 | 200 |
| T0058736882 | 200 |
| T0058736883 | 200 |
| T0058736890 | 202 |
| T0058736891 | 202 |
| T0058738850 | 51, 69 |
| T0058744710 | 181 |
| T0058744713 | 35 |
| T0058744738 | 35 |
| T0058744795 | 183 |
| T0058744845 | 181 |
| T0058744846 | 181 |
| T0058744875 | 131 |
| T0058744876 | 131 |
| T0058747753 | 204 |
| T0058747763 | 204 |
| T0058747764 | 204 |
| T0058747833 | 204 |
| T0058747848 | 204 |
| T0058747850 | 204 |
| T0058747871 | 204 |
| T0058747874 | 204 |
| T0058747893 | 204 |
| T0058747904 | 204 |
| T0058747906 | 204 |
| T0058747916 | 204 |
| T0058747927 | 204 |
| T0058747935 | 204 |
| T0058747941 | 204 |
| T0058747943 | 204 |
| T0058747945 | 204 |
| T0058747947 | 204 |
| T0058747961 | 204 |
| T0058747977 | 204 |
| T0058747985 | 204 |
| T0058747993 | 204 |
| T0058747999 | 204 |
| T0058748861 | 196 |
| T0058748990 | 29 |
| T0058750721 | 202 |
| T0058750739 | 203 |
| T0058750741 | 203 |
| T0058750742 | 203 |
| T0058750765 | 200 |
| T0058750770 | 200 |
| T0058750772 | 200 |
| T0058750774 | 200 |

| Order No. | Page |
|---|---|
| T0058751710 | 171 |
| T0058751717 | 171 |
| T0058751880 | 41 |
| T0058754770 | 204 |
| T0058754820 | 204 |
| T0058754836 | 204 |
| T0058754873 | 82,89 |
| T0058754887 | 204 |
| T0058754903 | 204 |
| T0058754924 | 82,89 |
| T0058754948 | 83 |
| T0058754967 | 204 |
| T0058754970 | 83 |
| T0058755741 | 89 |
| T0058755745 | 89 |
| T0058755782 | 83 |
| T0058757898 | 71 |
| T0058761728 | 198 |
| T0058761730 | 73 |
| T0058761731 | 73 |
| T0058761732 | 72,73 |
| T0058762036 | 118 |
| T0058762701 | 122 |
| T0058762703 | 123 |
| T0058762724 | 14 |
| T0058762746 | 119 |
| T0058762747 | 114 |
| T0058762750 | 121 |
| T0058762753 | 120 |
| T0058762755 | 118 |
| T0058762756 | 118 |
| T0058762757 | 116 |
| T0058762758 | 116 |
| T0058762763 | 113 |
| T0058762765 | 119 |
| T0058762766 | 120 |
| T0058762767 | 119 |
| T0058762768 | 118 |
| T0058762769 | 119 |
| T0058762770 | 112 |
| T0058762771 | 121 |
| T0058762774 | 120 |
| T0058762808 | 119 |
| T0058762810 | 135 |
| T0058763709 | 174 |
| T0058763725 | 176 |
| T0058763730 | 35 |
| T0058763732 | 37 |
| T0058764726 | 14 |
| T0058765711 | 143,174 |
| T0058765740 | 35 |
| T0058765758 | 142,169 |
| T0058765798 | 131 |
| T0058765799 | 131 |
| T0058765801 | 51,156,196 |
| T0058767701 | 212 |
| T0058767702 | 212 |
| T0058767703 | 212 |
| T0058767704 | 213 |
| T0058767705 | 213 |
| T0058767706 | 213 |
| TAL332CH | 229 |
| WLSK200 | 93 |
| WLSK200T18 | 93 |
| WLSK200T38 | 93 |
| WPB1 | 95 |


www.labem.pl

Erem®


| Order No. | Page |
|---|---|
| 547 | 304 |
| 3200 | 321, 323, 332 |
| 3231 | 321, 323, 332 |
| 3232 | 321 |
| 3303 | 322 |
| 3315 | 323, 332 |
| 3717 | 323, 332 |
| 3740 | 323, 332 |
| 50788 | 311 |
| 024C | 257 |
| 102ACA | 317, 323, 327, 331, 332, 250 |
| 102ACAX | 250, 230, |
| 103ACA | 250, 317, 327, 330 |
| 11N | 242 |
| 141SAP | 255 |
| 147A | 294 |
| 147AT | 294 |
| 1500BSF | 296 |
| 1503E | 297 |
| 150SA | 251 |
| 150SAD | 251 |
| 150SAMB | 317, 327, 352 |
| 150SAMF | 251, 317, 327, 330 |
| 1512N | 296 |
| 151SA | 251 |
| 1522N | 296 |
| 1522NA | 297 |
| 1522NB | 297 |
| 15AGS | 255 |
| 15AGW | 255 |
| 1884EPCM | 294 |
| 1SA | 241 |
| 1SASL | 241 |
| 2041Z | 321 |
| 2044Z | 321 |
| 2052E | 322, 323, 332 |
| 20AS | 240 |
| 21SA | 243 |
| 2400KMS | 328 |
| 2403E | 278 |
| 2404E | 278 |
| 2411P | 306, 328 |
| 2411PD | 306 |
| 2412E | 326, 328, 377 |
| 2422E | 277 |
| 2432E | 277 |
| 2442P | 307, 326 |
| 2443P | 307 |
| 2470E | 279 |
| 2475E | 279 |
| 2476TX | 293 |
| 2476TX1 | 292 |
| 2477E | 278 |
| 2482E | 328, 279 |
| 249CER | 243 |
| 249SA | 243 |
| 24SA | 247 |
| 258SA | 245 |
| 25SA | 248 |
| 29W30 | 256 |
| 29Y30 | 256 |
| 29Y32 | 256 |
| 29Y34 | 256 |
| 29Y36 | 256 |
| 29Y40 | 256 |
| 2ASA | 329, 331 |
| 2ASARU | 248 |
| 2ASASL | 248, 326 |
| 2ASASLT | 248 |
| 2SA | 245 |
| 2SASL | 245 |
| 3000ESD | 320 |
| 3000KCESD | 323, 332 |
| 3008ESD | 323, 332 |
| 30SA | 247 |
| 32BSA | 252 |
| 32BSA20 | 252 |
| 32BSA25 | 252 |
| 3300TPS | 329 |
| 3305Z | 322, 323 |

| Order No. | Page |
|---|---|
| 3310Z | 322, 323, 332 |
| 3400TSMDU | 330 |
| 3500TP | 331 |
| 3600KU | 326 |
| 3714Z | 323, 332 |
| 3900KC | 317, 327 |
| 39SA | 251 |
| 3CBS | 246 |
| 3CS | 241 |
| 3CSA | 241 |
| 3CSASL | 241 |
| 3CTA | 241 |
| 3SA | 329, 331, 241 |
| 3SASL | 241 |
| 40SA | 251 |
| 4SA | 244 |
| 4SASL | 244 |
| 500103A | 312 |
| 500104A | 313 |
| 500210E | 312 |
| 503E | 282 |
| 503ET | 293 |
| 503ETF | 293 |
| 504AE | 282 |
| 505C | 316 |
| 50789Z | 311 |
| 510AE | 308 |
| 512E | 281 |
| 512N | 281 |
| 51SA | 246, 317, 327 |
| 51SASL | 247 |
| 522N | 281 |
| 52ASA | 248 |
| 530E06 | 298 |
| 530E08 | 298 |
| 530E10 | 298 |
| 530E12 | 298 |
| 530E13 | 298 |
| 530E15 | 298 |
| 530E15 | 298 |
| 530E18 | 298 |
| 530E20 | 298 |
| 531E | 305 |
| 532N | 281 |
| 53CSA | 241 |
| 542E | 305 |
| 543E | 304 |
| 544D | 305 |
| 544E | 305 |
| 549E | 299 |
| 549E10 | 299 |
| 549E12 | 299 |
| 552E | 309 |
| 552S | 309, 318 |
| 554A | 310 |
| 554E | 310 |
| 554TX | 311 |
| 555E | 283 |
| 570E | 285 |
| 572E | 283 |
| 573E | 285 |
| 573EB | 299 |
| 575E | 284 |
| 576TX | 293 |
| 576TX1 | 292 |
| 577E | 282 |
| 582E | 283 |
| 582EW | 283 |
| 592E | 284 |
| 593AE | 284 |
| 595E | 282 |
| 595T | 292 |
| 595TF | 292 |
| 599E | 281 |
| 599FO | 295, 319 |
| 599T | 291 |
| 599TF | 291 |
| 599TFO | 295, 319 |
| 5ASA | 247 |
| 5ASASL | 247 |
| 5BSA | 246 |

| Order No. | Page |
|---|---|
| 5CSA | 246 |
| 5FSA | 245 |
| 5MBS | 245 |
| 5SA | 245 |
| 5SASL | 245 |
| 600ASA | 254 |
| 600JSA | 254 |
| 608ASA | 254 |
| 612N | 273 |
| 622N | 273 |
| 622NA | 274 |
| 622NB | 274, 326 |
| 622TX | 291 |
| 632N | 273 |
| 632NCF | 274, 295 |
| 64SA | 242 |
| 65ASA | 247 |
| 670E | 275 |
| 670EP | 275, 317, 327 |
| 670EPF | 275 |
| 676E | 274 |
| 776E | 274 |
| 792E | 274 |
| 7SA | 247, 329, 330, 331 |
| 7SASL | 247 |
| 80013C | 313 |
| 808G | 316 |
| 809IC | 313 |
| 812N | 287 |
| 822N | 287 |
| 884E | 288 |
| 886E | 288 |
| 896E | 287 |
| 91SA | 254 |
| 940AS | 253 |
| AAS | 242 |
| AASA | 242, 326 |
| AASASL | 242 |
| AAZ | 242 |
| ACSA | 240 |
| AM | 243 |
| E15AGW | 249 |
| E2ASA | 249 |
| E3CSA | 249 |
| E5SA | 249 |
| E7SA | 249 |
| EOODSA | 249 |
| EOOSA | 249 |
| KDS260L | 225 |
| M4AS | 244 |
| M5S | 240 |
| OOBSA | 242 |
| OOCSA | 242 |
| OODSA | 242 |
| OOSA | 242 |
| OOSASL | 242 |
| RRS | 243 |
| SSSA | 243 |
| XB29W301 | 256 |
| XP600 | 326 |


www.labem.pl

Xcelite®


| Order No. | Page |
|---|---|
| 600 | 349, 350 |
| 994 | 342, 346, 348 |
| 996 | 342, 343, 345 |
| 997 | 342 |
| 998 | 345 |
| 999 | 342, 345 |
| 9910 | 342, 345 |
| 9911 | 342, 345 |
| 9912 | 342, 345 |
| 9914 | 342 |
| 9916 | 342 |
| 9920 | 342 |
| 9921 | 342, 343, 349, 350 |
| 9921 | 342, 343, 349, 350 |
| 9922 | 342, 343, 349, 350 |
| 9922 | 342, 343, 349, 350 |
| 9923 | 342, 343, 349, 350 |
| 9923 | 342, 343, 349, 350 |
| 9924 | 342, 343, 349, 350 |
| 9924 | 342, 343, 349, 350 |
| 9925 | 342, 343, 349, 350 |
| 9926 | 342, 343, 349, 350 |
| 9938 | 348, 349, 350 |
| 9961 | 342, 346.349.350 |
| 9962 | 346, 349, 350 |
| 9963 | 346, 349, 350 |
| 9964 | 346, 349, 350 |
| 9965 | 346, 349, 350 |
| 9966 | 346, 349, 350 |
| 9967 | 346, 349, 350 |
| 9968 | 346, 349, 350 |
| 9969 | 346, 349, 350 |
| 99125 | 349, 350 |
| 99250 | 345 |
| 99312 | 348, 349, 350 |
| 99312 | 348, 349, 350 |
| 99764 | 342, 343, 349, 350 |
| 99764 | 342, 343, 349, 350 |
| 99811 | 343, 345, 348, 349, 350 |
| 99820 | 342, 343, 348, 349, 350 |
| 99821 | 342, 343, 345, 348, 349, 350 |
| 99822 | 342, 345, 348, 349, 350 |
| 99831 | 347 |
| 99832 | 347 |
| 99964 | 342, 343, 349, 350 |
| 100XV | 337 |
| 101S | 337 |
| 101SNV | 337 |
| 103S | 348, 349, 350 |
| 170M | 337, 348 |
| 175M | 337 |
| 2211P | 348 |
| 42H | 349, 350 |
| 46CG | 349, 350 |
| 50CG | 349, 350 |
| 51CG | 349, 350 |
| 53CG | 349, 350 |
| 542E | 348, 305 |
| 543E | 348, 304 |
| 54CG | 349, 350 |
| 57CG | 349, 350 |
| 59CG | 349, 350 |
| 612N | 348, 273 |
| 66CG | 349, 350 |
| 812N | 348, 287 |
| 86CG | 348, 349, 350 |
| 86NCG | 337 |
| 9910M | 346, 349, 350 |
| 9910MM | 346 |
| 9910XTD | 343, 347 |
| 9911MM | 346 |
| 9915XTD | 343, 347 |
| 991R | 349, 350 |
| 991X | 342, 343, 344, 345, 346, 347, 348, 349, 350 |
| 9920BP | 344 |

| Order No. | Page |
|---|---|
| 9920XTD | 347 |
| 9921BP | 344 |
| 9922BP | 344 |
| 9923BP | 344 |
| 9924BP | 344 |
| 9925BP | 344 |
| 9925XTD | 347 |
| 9926BP | 344 |
| 9927XTD | 347 |
| 9930XTD | 347 |
| 9945MM | 346, 348 |
| 994MM | 346, 348 |
| 994R | 348, 349, 350 |
| 9955MM | 346, 348 |
| 995MM | 346, 348 |
| 996MM | 346, 348 |
| 996XTD | 347 |
| 9971MM | 344, 348 |
| 9971MMBP | 345 |
| 9972MM | 344, 348 |
| 9972MMBP | 345 |
| 9973MM | 344, 348 |
| 9973MMBP | 345 |
| 9973MMBP | 345 |
| 9974MM | 344, 348 |
| 9974MMBP | 345 |
| 9975MM | 344, 348 |
| 9975MMBP | 345 |
| 99764BP | 344 |
| 9976MM | 344, 348 |
| 9976MMBP | 345 |
| 9977MM | 344, 348 |
| 9977MMBP | 345 |
| 997MM | 346, 348 |
| 998M | 349 |
| 998MM | 346, 348 |
| 998XTD | 347 |
| 99964BP | 344 |
| 999MM | 346, 348 |
| 99MP | 342 |
| 99PS40 | 343 |
| 99PS40 | 343 |
| 99PS40BP | 344 |
| 99PS41MM | 344 |
| 99PS41MMBP | 345 |
| 99PS50 | 345 |
| 99PS51MM | 346 |
| 99PS60 | 346 |
| 99SPC | 343 |
| 99X10 | 349, 350 |
| 99X5 | 342, 343, 344, 345, 346, 348, 349, 350 |
| 99XTD7 | 347 |
| AC16C | 348 |
| E1 | 343 |
| Erop330 | 348 |
| HS10 | 349, 350 |
| HS11 | 349, 350 |
| HS12 | 349, 350 |
| HS14 | 349, 350 |
| HS16 | 349, 350 |
| HS18 | 349, 350 |
| HS6 | 349, 350 |
| HS8 | 349, 350 |
| M60 | 338, 349, 350 |
| P0 | 339 |
| P1 | 339 |
| P10 | 340 |
| P10MM | 341 |
| P11 | 340 |
| P12 | 340 |
| P141 | 339 |
| P18 | 339, 349, 350 |
| P181 | 339 |
| P19 | 339, 349, 350 |
| P2 | 339 |
| P20 | 339 |
| P21 | 339 |
| P22 | 339 |
| P23 | 339 |
| P24 | 339 |

| Order No. | Page |
|---|---|
| P3 | 340 |
| P3161 | 339 |
| P3321 | 339, 34 |
| P35MM | 341 |
| P3MM | 341 |
| P4 | 340 |
| P45MM | 341 |
| P4MM | 341 |
| P5 | 340 |
| P5321 | 339 |
| P55MM | 341 |
| P5MM | 341 |
| P6 | 340 |
| P6MM | 341 |
| P7 | 340 |
| P71 | 340 |
| P72 | 340 |
| P73 | 340 |
| P74 | 340 |
| P75 | 340 |
| P76 | 340 |
| P764 | 339 |
| P77 | 340 |
| P78 | 340 |
| P7MM | 341 |
| P8 | 340 |
| P8MM | 341 |
| P9 | 340 |
| PS120 | 340, 349, 350 |
| PS121MM | 341 |
| PS88 | 339 |
| PS89 | 339 |
| PS90MM | 340 |
| R1 | 343 |
| R144 | 349, 350 |
| R146 | 349, 350 |
| R181 | 349, 350 |
| R184 | 349, 350 |
| R3164 | 349, 350 |
| R3166 | 349, 350 |
| R3323 | 349, 350 |
| R5325 | 350 |
| S3161 | 349, 350 |
| S388 | 349, 350 |
| S5161 | 349, 350 |
| S5166 | 349, 350 |
| SB1 | 349, 350 |
| SX101 | 348, 349, 350 |
| SX102 | 348 |
| T0016100402 | 348 |
| T0044130000 | 348 |
| T0051304199 | 348 |
| T0054002599 | 348 |
| T0056103699 | 348 |
| T0060403504 | 348 |
| T1 | 343 |
| TA2 | 339, 340, 341 |
| TC100ST | 349 |
| TCMB100ST | 350 |
| X1 | 343 |
| XL10 | 351 |
| XL12 | 351 |
| XL14 | 351 |
| XL16 | 351 |
| XL17 | 351 |
| XL18 | 351 |
| XL20 | 351 |
| XL21 | 351 |
| XL24 | 351 |
| XL25 | 351 |
| XL27 | 351 |
| XL3 | 351 |
| XL4 | 351 |
| XL5 | 351 |
| XL50X | 351 |
| XL6 | 351 |
| XL7 | 351 |
| XL70 | 351 |
| XL75 | 338 |
| XL8 | 351 |
| XL9 | 351 |

| Order No. | Page |
|---|---|
| XN100 | 336 |
| XN200 | 336 |
| XN210 | 336 |
| XNB101 | 336 |
| XNB103 | 336 |
| XNB103B | 336 |
| XNB105 | 336 |
| XNB201 | 336 |
| XNB203 | 336 |
| XNB205 | 336 |
| XNS100 | 336 |
| XST100 | 349, 350 |
| XST101 | 348, 349, 350 |
| XST102 | 349, 350 |


www.labem.pl

# Notes

www.labem.pl

www.labem.pl

# Notes

www.labem.pl

**GERMANY**

Weller Tools GmbH
Carl-Benz-Straße 2
74354 Besigheim

Tel: +49 (0)7143 580-0
Fax: +49 (0)7143 580-108

**GREAT BRITAIN**

Apex Tool Group (UK Operations) Ltd
4th Floor Pennine House
Washington, Tyne & Wear
NE37 1LY

Tel: +44 (0) 191 419 7700
Fax: +44 (0) 191 417 9421

**FRANCE**

Apex Tool Group S.N.C.
25 Avenue Maurice Chevalier B.P. 46
77832 Ozoir-la-Ferrière Cedex

Tel: +33 (0) 1.64.43.22.00
Fax: +33 (0) 1.64.43.21.62

**ITALY**

Apex Tool S.r.l.
Viale Europa 80
20090 Cusago (MI)

Tel: +39 (02)9033101
Fax: +39 (02 )90394231

**SWITZERLAND**

Apex Tool Switzerland Sàrl
Rue de la Roselière 12
1400 Yverdon-les-Bains

Tel: +41 (0) 24 426 12 06
Fax: +41 (0) 24 425 09 77

**CHINA**

Apex Tool Group
A-8 Building
No. 38 Dongsheng Road
Heqing Industrial Park, Pudong
Shanghai 201201

Tel: +86 (21)60880288
Fax: +86 (21)60880289

**USA**

Apex Tool Group, LLC
1000 Lufkin Road
Apex, NC 27539-8160

Tel: +1 (800)476-3030 Ext.
Fax: +1 (800)387-2640

**CANADA**

Apex Tools – Canada
5925 McLaughlin Rd.
Mississauga, Ontario L5R 1B8

Tel: +1 (905) 501-4785
Fax: +1 (905) 501-4786

**AUSTRALIA**

Apex Tools Australia
P.O. Box 366
519 Nurigong Street
Albury, N.S.W. 2640

Tel: +61 (2)6058-0300
Fax: +61 (2)6021-7403

**SOUTH EAST ASIA**

Apex Power Tools India Pvt Ltd
Gala No. 1, Plot No. 5
S.No. 234, 235 & 245
India land Global Industrial Park.
(Next to Tata Johnson Control)
Taluka- Mulsi , Phase –I
Hinjawadi Pune (411057)
Maharashtra, India

toolsindia@apextoolgroup.com

Weller®

©2013, Weller-Tools GmbH
T005 57 265 01 / 08.13 HOL 3.0

www.weller-tools.com

www.labem.pl

# Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

Apex Tool Group:

WHA3000P TC204 TC205 WD1 WHA300 T0053657199 T0053657299 T0053657999 T0053659099 WD1000MS WSM1C WD1000M WHA900 WD1M 51504899 T0053276699 T0053268699 EC305 T0052919499N T0053316799 WD1000MSN T0053364699N T0051384099 T0051360599 WSD81 T0051301399 T0051301799 T0051360399 T0052919099 T0051516172N T0053276699N T0053427699N T0053402670N T0053400699N T0051312499N T0053420699N T0053421699N T0053278670N T0053366699N T0053418699N T0052812699N T0053378699N T0053334699N T0051504599N T0052609899N T0053250699N T0052919099N T0052921699N T0053220699N T0053417699N T0053419699N T0053377699N T0053171699N T0052918199N T0053364899N T0053422699N T0053426699N T0051312099N T0052918999N T0051515599 T0051517199 WD1000 T0051344499 T0058757898 T0051301799N T0052241999 WQB4000SOPS T0051361699 T0053426699 T0051303199 4084 T0053640799 T0058735845N T0058768765 T0051394999 T0058750786N T0058763730N T0050100499 T0050105099 T0050106699 T0050106899 T0053657599

ООО «ЛайфЭлектроникс» “LifeElectronics” LLC

ИНН 7805602321 КПП 780501001 Р/С 40702810122510004610 ФАКБ "АБСОЛЮТ БАНК" (ЗАО) в г.Санкт-Петербурге К/С 30101810900000000703 БИК 044030703

*Компания «Life Electronics» занимается поставками электронных компонентов импортного и отечественного производства от производителей и со складов крупных дистрибьюторов Европы, Америки и Азии.*

*С конца 2013 года компания активно расширяет линейку поставок компонентов по направлению коаксиальный кабель, кварцевые генераторы и конденсаторы (керамические, пленочные, электролитические), за счёт заключения дистрибьюторских договоров*

*Мы предлагаем:*

- *Конкурентоспособные цены и скидки постоянным клиентам.*
- *Специальные условия для постоянных клиентов.*
- *Подбор аналогов.*
- *Поставку компонентов в любых объемах, удовлетворяющих вашим потребностям.*

- *Приемлемые сроки поставки, возможна ускоренная поставка.*
- *Доставку товара в любую точку России и стран СНГ.*
- *Комплексную поставку.*
- *Работу по проектам и поставку образцов.*
- *Формирование склада под заказчика.*

- *Сертификаты соответствия на поставляемую продукцию (по желанию клиента).*
- *Тестирование поставляемой продукции.*
- *Поставку компонентов, требующих военную и космическую приемку.*
- *Входной контроль качества.*
- *Наличие сертификата ISO.*

*В составе нашей компании организован Конструкторский отдел, призванный помогать разработчикам, и инженерам.*

*Конструкторский отдел помогает осуществить:*

- *Регистрацию проекта у производителя компонентов.*
- *Техническую поддержку проекта.*
- *Защиту от снятия компонента с производства.*
- *Оценку стоимости проекта по компонентам.*
- *Изготовление тестовой платы монтаж и пусконаладочные работы.*

*Тел: +7 (812) 336 43 04 (многоканальный)*
*Email: org@lifeelectronics.ru*

***www.lifeelectronics.ru***