

## ED-BENCH – Electrical device maintenance and test bench



Workstation Frames		
<b>ETABTL19B</b>	ESD TL table frame 1880x750 mm with perforated back panel	1 x
<b>ESDSET1</b>	ESD grounding set for workstation	1 x
Equipment Panels		
<b>PANTL19</b>	TowerLine device panel, 1.9 m	1 x
<b>PANSOCKETLEU</b>	Schuko sockets under device panel, 4 pcs	1 x

Power Supply Units		
(S1) SU1	1-phase supply unit	1 x
Modules		
(1) ELPSL3	1-phase schuko socket outlets, 3 pcs	1 x
(2) PILT	Compressed air connection	1 x
(3) ACF2304	Isolated 1-phase AC connection, 230 V, 4 A, 1000 VA	1 x
(4) TLP603	Programmable DC power supply, 0-30 V, 0-5 A; 30-60 V, 0-3 A	1 x
(5) TISECUTESTPRO	Test instrument for electrical safety	1 x
Z745A	CEE adapter	1 x
Z751A	Barcode reader	1 x
USB1BT	USB-interface back side of the panel	1 x
(6) TBS1102B	Digital oscilloscope, 100 MHz, 2 GS/s, 2 channels, industrial model	1 x
USB1BT	USB-interface back side of the panel	1 x
(7) DMMHPRO	Digital multimeter, 12 000 digits, TRMS	1 x
(8) SDWR2002	Soldering / desoldering station, 250 W	1 x
SDHGSET	Hot air pencil for SDWR2002 soldering station	1 x
SDDXSRJ	Desoldering nozzle set for SDWR2002 soldering station	1 x
SDWTSRJ	Tip set for desoldering tweezers, 4 pairs	1 x
LT_KIT	Soldering tip set, 5 pcs	1 x
WTA_50	Desoldering tweezers	1 x
(9) ELPSL3	1-phase schuko socket outlets, 3 pcs	1 x
Accessories		
FT91015699_	Fume extractor	1 x
WHR855001	Hook set, 20 pcs	1 x
WTL854482	Steel shelf, M1800, 1773 x 300 mm	1 x
WTL839086	Suspension rail + pick-up boxes (WEL806211), fixed to perforated back panel	1 x
WEV60635022	Drawer trolley, drawers 2 x 100, 2 x 150 mm, ESD	1 x

<b>WSK91835008</b>	Light rail, 2 x M900	1 x
<b>WSK861956</b>	LED light	1 x
<b>WSK861960</b>	Task light	1 x
<b>C20PU_ESD</b>	Chair, black, polyurethane, ESD	1 x
<b>ELTOOLSET</b>	Electronics tool set, 30 parts, ESD	1 x
<b>JTESTSET1</b>	Test lead set, 10 pcs, 4 mm safety connectors	1 x

## ETABTL19B TowerLine workstation frame

- ESD powder painted steel frame
- L-shaped ergonomic legs, height 1920 mm
- Legs equipped with perforated uprights for placing accessories to different heights
- Versatile and adjustable accessories enable ergonomic and practical working environment
- Perforated back panel for accessories
- Vertical cable channels inside legs
- Horizontal cable channel below the table top at rear part
- Spacer bar between legs for stable construction
- Load capacity: 300 kg, evenly loaded
- Adjustment screws under legs to eliminate the roughness of the floor
- Table top with laminate surface, durable rounded plastic edges, colour light speckled grey, ESD protected
- Table top dimensions: 1880(W) x 750(D) mm



## ESDSET1 ESD grounding set for workstation

- ESD connection box including 1 Mohm series resistor
- ESD grounding set for the workstation frame
- ESD grounding set for wrist straps
- ESD wrist strap, 2 pcs



## PANTL19 TowerLine device panel

- Panel for integrated electrical equipment
- Structure of the panel made of ESD powder painted steel
- Panel equipped with modular device system: devices can be easily added and removed
- Integrated modules are covered with polyester film to ensure long lifetime for the markings in the front panel
- Energy saving LED lighting integrated at the bottom of the panel
- Panel top can be opened
- Height from the table top can be freely chosen
- All connectors are located at the bottom of the panel which enables placing the panel against a wall
- Width: 1880 mm, max. 7 ¼ modules



## PANSOCKETLEU Schuko sockets under device panel

- 4 pcs schuko sockets under device panel, 2 pcs at both ends

## SU1 1-phase supply unit

- Main switch for the workstation with START position
- Green indicator light
- Integrated emergency switch, reset from the main switch
- Automatic restart prevention system e.g. after power failure
- 16 A thermal overload protector
- Fault current protection 0.03 A for all devices connected to the supply unit
- Earth terminal screw
- Outlets for the device modules
- Dimensions: ½-module, 125(W) x 200(H) mm



## ELPSL3 1-phase socket outlets

- 3 pcs earthed schuko socket outlets
- Dimensions: ¼-module, 62.5(W) x 200(H) mm



## PILT Compressed air connection

- 2 pcs 1/2" snap-on connectors
- Dimensions, ¼-module, 62.5(W) x 200(H) mm



## ACF2304 Isolated 1-phase AC outlet

- Galvanically isolated AC outlet
- Output: 230 V, 4 A, max. 1000 VA
- Overload protectors for primary / secondary circuits
- Electronic attenuator for restricting switching current
- Dimensions: ½-module, 125(W) x 200(H) mm



## TLP603 Programmable DC power supply

- Output values: 0-30 V, 0-5 A; 30-60 V, 0-3 A
- Ripple: < 8 mVpp
- Output ON/OFF button
- Current limit and voltage settings showed on the display
- MAX and MIN display (current and voltage)
- Output voltage adjustment accuracy: 0.01 V
- Current limitation adjustment accuracy: 0.001 A
- Voltage measurement accuracy: ± 0.03 V
- Current measurement accuracy: ± 0.006 A
- Short-circuit protected
- Self test
- Test for leads / mohm-measuring
- Voltage compensation when using long leads
- Standard languages: Finnish, English, Swedish
- Graphic backlight LCD-display
- Adjustable LCD contrast
- Firmware-update possibility
- Output from 4 mm safety terminals
- Dimensions: ½-module, 125(W) x 200(H) mm



## TISECUTESTPRO Test instrument for electrical safety

- Test instruments for measuring electrical safety of devices per VDE 0701-0702, IEC 62353 and IEC 60974-43
- Measurements
  - Protective conductor resistance
  - Insulation resistance
  - Protective conductor current, RMS value
  - Touch current, RMS value



- Device leakage current, RMS value
- Leakage current from the application part, RMS value
- Patient leakage current, RMS value
- PRCD time to trip for 30 mA PRCDs
- Current, voltage, frequency, active power, apparent power, power factor
- 8 reconfigured test sequences for quickly testing simple operating equipment
- One universal, adjustable test sequence
- One test sequence executed with individual measurements
- Enormous data maintenance and storage concept for automated test sequences and measurements for up to 50,000 data records
- Fast access to measurement and test functions with double rotary switch, direct selection keys and softkeys
- High-resolution, brilliant 4.3" TFT color display
- Unique multiple measurement allows convenient recording of several measuring points
- Comprehensive, legally secure preparation of test reports
- Modern interfaces: for data entry two USBs in the front panel and for data exchange one USB in the panel as option
- Remote control via PC software possible
- Standard accessories: Test probe (2 m, not coiled), USB cable, plug-on alligator clip, cable set for voltage measuring inputs, calibration certificate, condensed operating instructions, ETC report software available on the Internet
- Dimensions: 1 ½ module, 375(W) x 200(H) mm

## Z745A CEE adapter

- The CEE adapter allows for quick and efficient testing of devices equipped with a CEE plug
- The adapter is equipped with the following CEE flush-type socket outlets:
  - 5-pole 16 A
  - 5-pole 32 A
  - 3-pole 16 A
- Five 4 mm safety sockets to which 3-phase devices without permanently attached plug or conventional measurement cables can be connected, e.g. by means of quick clamp terminals (not included).
- The following tests can be performed on devices with CEE plugs with the help of the adapter:
  - Testing of protective conductor continuity
  - Insulation resistance, alternatively leakage current (equivalent leakage current)
  - Function test (3-pole CEE outlet only)



## Z751A Barcode reader

- For connection to the USB master port at the test instrument, and for reading in barcodes
- Barcode reader makes it possible to conveniently insert the ID numbers of DUTs into single measurements and test sequences
- This device is based upon the concept of an instinctive scanning distance and provides best possible reading performance
- Green Spot technology provides a “good-read” projection directly on the code
- The device is equipped with a USB port



## USB1BT USB connection

- Single USB-connection for connecting PC to a panel device
- Type B connector at the back of the device panel

## TBS1102B Digital storage oscilloscope

- Bandwidth: 100 MHz
- 2 channels
- Sample rate (each channel): 2 GS/s
- Record length (each channel) : 2500
- Vertical resolution : 8 bits
- Vertical sensitivity: 2 mV - 5 V / DIV
- Time base range (s/div): 2.5 ns - 50 s
- 7 inch WVGA (800X480) Active TFT Color Display
- 34 automated measurements
- Dual window FFT, simultaneously monitors both the time and frequency domains
- Built-in waveform limit and TrendPlot™ testing
- Automated, extended data logging feature
- Dual channel frequency counter
- Zoom Function
- Advanced triggers including pulse and line-selectable video triggers
- Autoset and signal auto-ranging
- USB 2.0 host port on the front panel for quick and easy data storage
- USB 2.0 device port on rear panel for easy connection to a PC
- Multiple language user interface
- Dimensions: 1 ¾ module, 437.5(W) x 200(H) mm
- Standard accessories: passive probes (one per channel), OpenChoice software, LabVIEW driver, Traceable certificate of calibration - NIM/NIST



## USB1BT USB connection

- Single USB-connection for connecting PC to a panel device
- Type B connector at the back of the device panel

## DMMHPRO Digital multimeter



- Resolution:  $\pm 12,000$  digits,  $4\frac{1}{2}$ -place
- 3 connector jacks with patented automatic blocking sockets
- TRMS AC and AC / DC function
- Automatic and manual measuring range selection
- Automatic storage of measured values: DATA / MIN / MAX
- Large, light-blue illuminated display with extra-large characters (15 mm) and an analog bar graph for dynamic processes
- Measuring categories: 1000 V CAT III and 600 V CAT IV
- 16 multimeter functions
- Additional filter function and voltage measurement with reduced input impedance for limiting interference, e.g. for measurements at frequency converters
- Battery Charging Status - Power Saving Circuit
- Multimeter integrated with a quick-release mechanism, it can be used also as a portable instrument
- Standard accessories: 1 pair of safety measurement cables (1.5 m) with 4 mm test probes, 2 batteries, condensed operating instructions, CD ROM (operating instructions in English and German), DAkkS calibration certificate
- Dimensions:  $\frac{1}{2}$ -module, 125(W) x 200(H) mm

### DC voltage

Range 100 mV...1000 V  
 Best resolution 10  $\mu$ V  
 Best accuracy  $\pm 0.05\%$  + 3 digits

### AC voltage

Range 100 mV...1000 V  
 Best resolution 10  $\mu$ V  
 Best accuracy  $\pm 0.5\%$  + 9 digits

### DC current

Range 1 A...10 A  
 Best resolution 100  $\mu$ A  
 Best accuracy  $\pm 0.9\%$  + 10 digits

### AC current

Range 1 A...10 A  
 Best resolution 1 mA  
 Best accuracy  $\pm 1.5\%$  + 10 digits

### Resistance



Range 100 Ω...40 MΩ  
Best resolution 10 mΩ  
Best accuracy ±0.2 % + 5 digit

### Frequency

Range 100 Hz...30 kHz  
Best resolution 0.01 Hz  
Best accuracy ±0.05 % + 3 digit

### Temperature (with type K thermocouple, not included in delivery)

Range -250 °C...+1372 °C  
Best resolution 0.1 °C  
Best accuracy ±1 % + 5 digit

## SDWR2002 Soldering / desoldering station

- Combo unit with soldering and desoldering functions
- Integrated vacuum pump, no need for compressed air connection
- Power: 250 W
- Temperature range: 50-450 °C (soldering and desoldering)
- Temperature stability: ± 2 °C
- LCD display
- Automatic tool recognition for safe operation with different soldering tools
- 2 independent channels for simultaneous operation with different tools
- ESD safe
- Sleep mode when unit not used
- Includes soldering iron, desoldering iron, stands and cleaning sponges for soldering tools, cleaning tool series, soldering tip (2.4 mm), 3 pcs desoldering nozzles (1.0/2.3 mm, 1.2/2.5 mm, 1.2/2.5 mm thick)
- Dimensions: 1 ¼ module, 312.5(W) x 200(H) mm



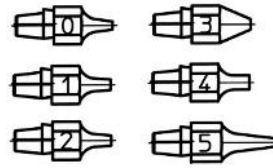
## SDHGPSET Hot air pencil

- Suitable for soldering and desoldering SMD components
- Compatible with SDWR2002 soldering station
- Provides a directional hot air flow that is adjustable
- Power: 100 W, voltage 24 V
- Temperature range: 50°C - 550°C
- Finger switch controls adjustable pump
- Different nozzles available as accessory
- Delivery contents: hot air pencil, stand for the pencil, cleaning sponge, standard tip (1.2 mm)
- Optional tip: SDR-06, (3.0 mm)



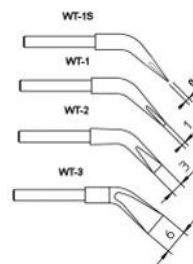
## SDDXSRJ Desoldering nozzle set

- Quality desoldering nozzle set for modern electronics works
- Compatible with SDWR2002 soldering stations
- 6 pcs soldering tips
  - 0.7/1.9 mm
  - 0.7/2.5 mm
  - 1.0/2.3 mm
  - 1.2/2.5 mm
  - 1.8/3.3 mm
  - 0.7/1.9 mm, long



## SDWTSRJ Tip set for desoldering tweezers

- Quality tip set for modern electronics works
- 4 pcs tip pairs:
  - 0.5 mm
  - 1 mm
  - 3 mm
  - 6 mm



## LT-KIT Soldering tip set

- Quality soldering tip set for modern electronics works
- Compatible with SSWT1012SET and SDWR2002 soldering stations
- 5 pcs soldering tips
  - 0.25 mm chisel
  - 0.8 mm chisel
  - 1.2 mm chisel
  - 1.6 mm chisel
  - 2.4 mm chisel



## WTA-50 Desoldering tweezers

- Desoldering tweezers for removing SMD components
- Compatible with SSWTxxxx and SDWR2002 soldering stations
- Two separate heating elements with individual sensors for accurate soldering tip temperature
- Changeable and adjustable soldering tips
- Temperature range: 150...+450°C
- Power: 2 x 25 W
- Delivery contents: desoldering tweezers, stand for tweezers, cleaning sponge, standard tip pair (1 mm)



## ELPSL3 1-phase socket outlets

- 3 pcs earthed schuko socket outlets
- Dimensions: ¼-module, 62.5(W) x 200(H) mm



## FT91015699 Fume extractor

- Fume extraction unit for 1 workplace
- Fine dust pre-filter can be separately changed without having to change the main filter
- Active carbon foam for effective gas filtration
- Portable fume extraction unit, for placement under or next to the bench
- Quick and easy filter replacement
- Longer service life due to exceptionally large filter surface of 2,4m<sup>2</sup>
- Variable speed setting
- Automated filter change notification system
- Exceptionally long service life due to maintenance free brushless EC turbine
- Quick, simple and user-friendly installation with Easy-Click System
- ESD safe
- Low noise level: max 50 dB(A) at 1 m
- Suction capacity: 190 m<sup>3</sup>/h
- Voltage: 220-240 V (50/60 Hz)
- Dimensions: 355(W) x 333(D) x 455(H) mm
- Includes filter unit, stop valve with bench mounting brackets, 3 m extraction hose (ø 60 mm), 1 m extraction arm (ø 60 mm), funnel nose



## WHR855001 Hook set

- Hook set, attached to perforated back panels
- 20 pcs hooks e.g. for tools



## WTL854482 Shelf

- Construction made of ESD powder painted steel
- Fixed to upright tubes
- Load capacity: 80 kg
- Dimensions: 1773(W) x 300(D) mm



## WTL839086 Suspension rail

- ESD powder painted steel construction
- Fixed to perforated back panel
- Load capacity 10 kg
- Width 634 mm



## WEL806211 Pick-up box

- Plastic pick-up box
- ESD protected
- Max. 6 pcs for WTL839086 suspension rail
- Dimensions: 99(W) x 160(D) x 70(H) mm

## WEV60635022 Drawer trolley

- Drawers 2 x 100, 2 x 150 mm
- Drawers equipped with ball-rails
- Load capacity 30 kg / drawer
- Drawers open 75 %
- Central locking
- ESD-painted steel frame, ESD mat on top
- Four swivel wheels, two with brakes, diameter 100 mm, ESD
- Dimensions: 450(W) x 520(D) x 560(H) mm



## WSK91835008 Light rail

- Rail can be used to attach light ergonomically above the workstation
- Structure made of ESD-painted steel
- Height and depth adjustment
- Width: 2 x M900



## WSK861956 LED light

- Excellent energy efficiency
- Long lifetime upto 50 000 hours
- Illuminance: 1800 lux, 1 meter
- Natural white colour, colour temperature 4000 K
- Dimmer 10-100 %



## WSK861960 Task light

- Task Light is the ideal desk-mounted lamp for precise work
- Together with a large built-in magnifying glass, six LED -bulbs and independent left/right dimming functionality, this light gives superb control
- It is easy to secure on any work surface of 70 mm or less, and infinitely adjustable
- 6 long-lasting dimmable power LEDs, 3 on each side
- Independent left/right dimming (10 settings)
- Last-setting memory
- Colour rendering index (CRI): 70
- Large, 127 mm 3-diopter magnifying glass
- Made of anodized aluminium, glass and UV-stable polycarbonate
- Adjustable table clamp included for worktops 18-70 mm thick
- Mains lead length of 2 meters makes positioning easy
- Max light intensity 2800 lux



## C20PU-ESD Chair

- ESD protected
- User-friendly and quick adjustability
- Large, ergonomically designed seat and backrest and lumbar support
- Black
- Polyurethane
- Height/backrest/tilt adjustment
- Castors with load-sensitive brakes
- Seat height: 440-620 mm



## ELTOOLSET Electronics tool set

- Professional electronics tool set
- 30 parts
- ESD protected design
- Tools included:
  - Side cutter - oval head
  - Needle nose pliers
  - Tip cutter - angled wide head
  - Ergonomic precision tweezers with straight, strong tips
  - Ergonomic precision tweezers with straight, very pointed tips for gripping fine wires
  - Ergonomic precision tweezers with straight, flat and rounded tips for simple gripping jobs
  - Screwdriver set, precision, ESD, slotted, Phillips, 6 pcs



- Screwdriver set, precision, ESD, hexagon, 6 pcs
- Screwdriver set, precision, ESD, hexagon nut driver, 6 pcs
- Screwdriver set, precision, ESD, TORX, 6 pcs

## JTESTSET1 Test lead set

- Double insulated test leads, 4 mm banana jacks, 20 A, 1000 V
- Leads:
  - 3 pcs 1.0 m, black
  - 3 pcs 1.0 m, red
  - 1 pcs 1.0 m, green/yellow
  - 3 pcs 0.25 m, black

