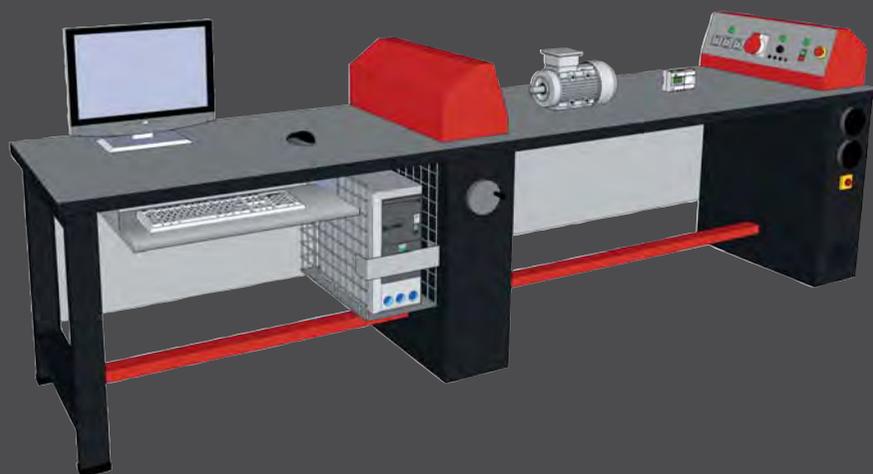
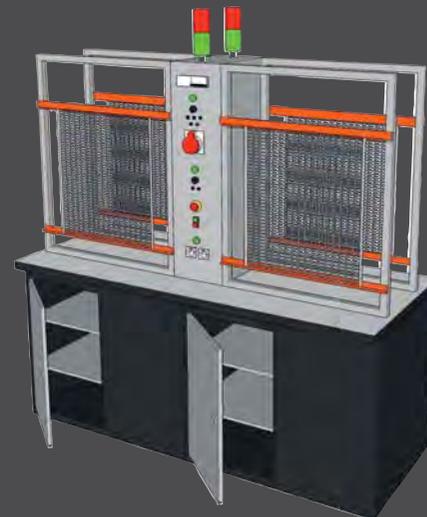
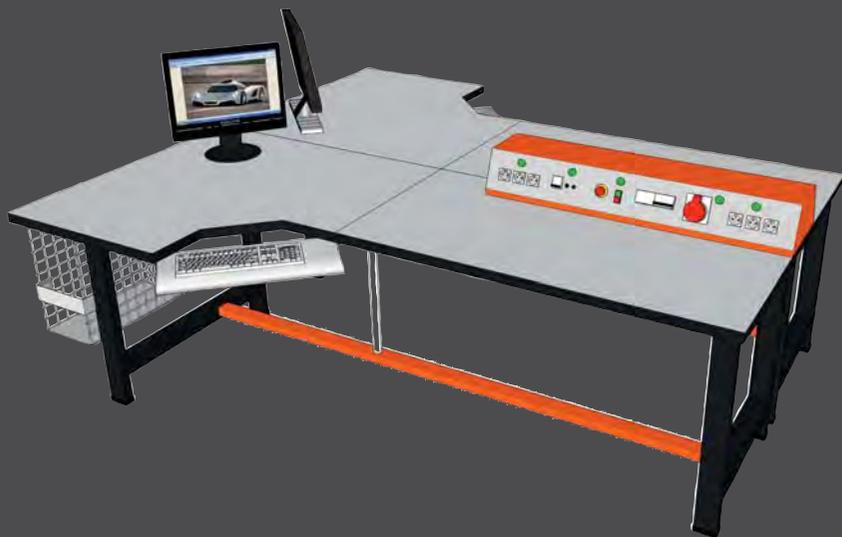


MADE TO MEASURE

EXAMPLES OF PRODUCTS MADE TO MEASURE
FOLLOWING CUSTOMERS NEEDS



Electropneumatic bench

HARD-WEARING LAMP (without maintenance)



Components mounted & Computer hardware not supplied.

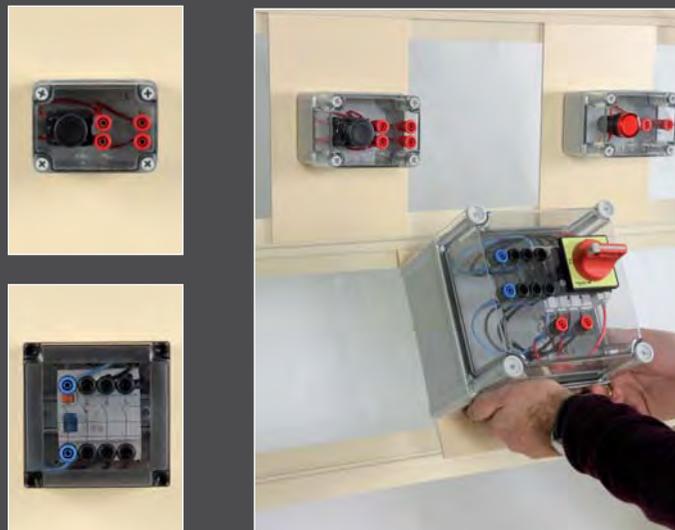
ref. LABO-FT

ref. LAO-FT

ref. LAV-FT

Industrial components with automatic functions mounted on plates compatible with IFTI stations

SEE PAGES 111 to 117



Supplied with:

- 1 1500 x 750mm stratified bench-top.
 - Workbench height: 840mm bench-top included. PVC base at the base of each leg.
 - 1 stand-alone vertical console for the electric power supply and the pneumatic feed system (see description given below)
 - 1 1200 x 1092mm frame with 4 pairs of rails for modules, height 250mm and thickness 4mm.
 - 1 sliding keyboard/mouse under the bench-top Lockable in the extended position. Dimensions: 620 x 320mm.
 - 1 CPU support, screwed under the table with lag screws. Anti-theft device. Height 500mm/Width 245mm/Depth 500mm
 - 1 support for a 15kg max flat screen 4 rotation points
- Attached to edge of table by locking pliers with a tightening screw. Cable guide. Supplied with 4 screws for the monitor.

STAND-ALONE VERTICAL CONSOLE.

Requires a simple three-phase mains power supply 400V + N + E and a compressed air inlet. It consists of:

- 1 three-phase output on terminals controlled by a key-operated switch
- 1 24V/5A – 50Hz output with circuit breaker
- 1 24V/1.8A auto-protected DC output
- 2 2P+E sockets in the front
- 2 2P+E sockets in the rear (for computers or other items)
- Circuit breaker and general 30mA differential mechanism 
- General Start/Stop control with key-operated emergency stop
- 1 complete pneumatic feed system with air inlet pipe, stop valve, adjustable pressure regulator, filter, pressure gauge and feeder tank with 4 quick-fit, ø4mm self-sealing connections. In accordance with safety in workplace regulations.

Marking of outputs by maintenance-free LED indicator lights.

The entire system is fully protected against improper operation.

This equipment is often encountered in individualized maintenance technical training courses (IFTI).

ITEMS SOLD SEPARATELY



1200 x 1092mm frame with 4 pairs of rails for modules, height 250mm and thickness 4mm.

ref. CADRE-FT

ref. PUP-FT

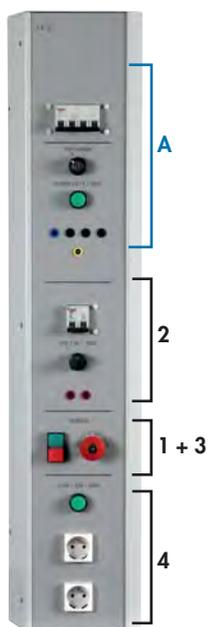
Set of 10 4mm thick blank PVC plates to attach your own components. 6 plates dim. 250 x 166mm + 4 plates dim. 250 x 285mm

ref. PLA10

Wiring benches

Choose and configure your own wiring bench (for 2 students)

3-PHASE VERTICAL CONSOLE



A. "THREE-PHASE SUPPLY"

A lamp indicating that the power is on.
Output via 4 safety terminals.
Protection by thermal magnetic circuit breaker (30mA residual current circuit breaker available as an option). Key-operated power-on switch

1. "EMERGENCY STOP"

This push button cuts off the power in the case of an emergency. Key-resettable (positive safety).

2. 24VAC INSULATED SUPPLY.

Output via 2 safety terminals. Primary winding of transformer protected by auto-protection and secondary wiring by circuit breaker and switch.

3. GENERAL "START/STOP".

- A lamp indicating that the power is on.
- Start/stop operated using a double push-button.

4. 230VAC MAINS DISTRIBUTION

Two power sockets 230V with lamp.

ref. LAG-PT



BENCH WITH STRATIFIED TOP

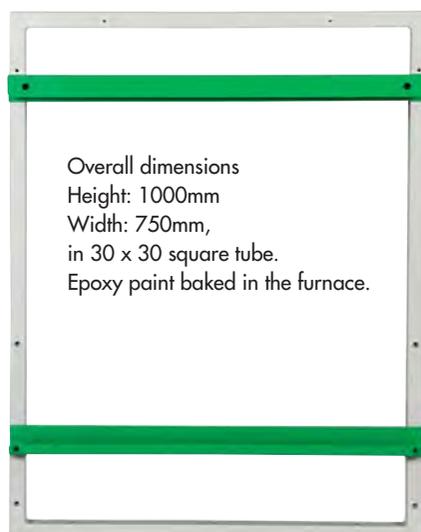


Highly-resistant and high-temperature stratified top.
Dim. 1500 x 750mm
Height of table top: 840mm

ref. ASO-157

ref. ASV-157

GRID HOLDER FRAME (BARE WITHOUT GRID)



Overall dimensions
Height: 1000mm
Width: 750mm,
in 30 x 30 square tube.
Epoxy paint baked in the furnace.

This frame can accommodate any type of grid up to a size of 800 x 750mm.

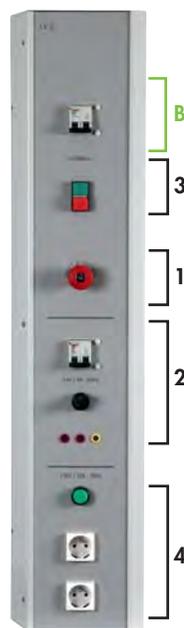
It is fitted with a lower rail, which can be adjusted in steps, and an upper rail, which slides up and down the vertical shafts.

The system has been designed in such a way that you can remove the wired grids without moving the rails.

ref. CSO-10

ref. CSV-10

SINGLE-PHASE VERTICAL CONSOLE



B. GENERAL PROTECTION

Protection by magneto-thermal circuit breaker (30mA residual current circuit breaker available as an option)

1. "EMERGENCY STOP".

This push button cuts off the power in the case of an emergency. Key-resettable (positive safety).

2. 24VAC INSULATED SUPPLY.

Output via 2 safety terminals. Primary winding of transformer protected by auto-protection and secondary wiring by circuit breaker and switch.

3. "START/STOP".

- A lamp indicating that the power is on.
- Start/stop operated using a double push-button.

4. 230VAC MAINS DISTRIBUTION.

Two power sockets 230V with lamp.

ref. LAG-PM



ECONOMICAL SINGLE-PHASE CONSOLE



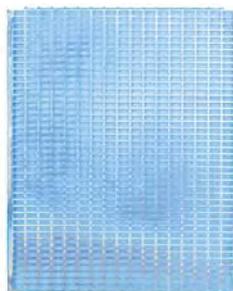
Horizontal console (wired), ready to be connected to the mains with:

- A 24VAC output insulated from the mains with LED indicator lamp, 100VA, protected by its own circuit breaker and start/stop button
- Two power sockets 230V with LED indicator lamp
- An emergency stop with key + an On/Off button
- Total length 750mm
- Drilling on the back side for fastening on grid holder frame (ref. CSO/CSV)
- Only available in grey colour
- Steel sheet case, PVC front panel

ref. PUG-1



REMOVABLE GRIDS



REF	PA6040	PA6050	PA7050
Height	660	660	765
width	434	534	534

EXAMPLES OF WIRING BENCHES

CHARACTERISTICS	REF.	QTY	QTY	QTY	QTY
Bench	ASO-157 or ASV-157	1	1	1	1
Vertical 3-phase console	LAG-PT	2			
Vertical single-phase console	LAG-PM		2		
Horizontal single-phase console	PUG-1			2	
Universal bare frame	CSO-10 or CSV-10	2	2	2	2
ref.		LAO-3T	LAO-2M	LAO-ECO	LAO-N
ref.		LAV-3T	LAV-2M	LAV-ECO	LAV-N



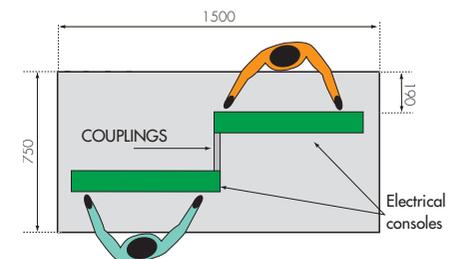
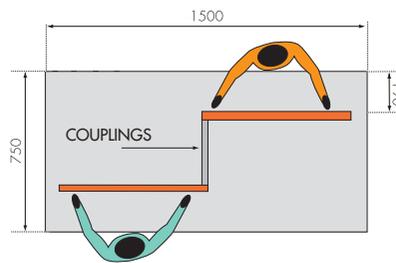
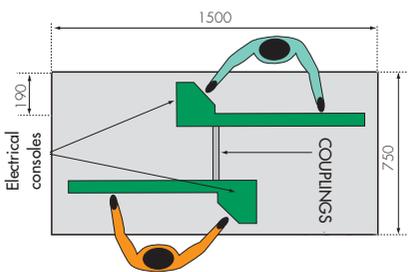
ref. LAV-3T



ref. LAO-N



ref. LAV-ECO



Options
SEE PAGES 40-41

ELECTROPNEUMATIC BENCH
SEE PAGE 35

Wiring benches

Workstations for 4 users

WIRING BENCH



SUPPLIED WITH
4 fixed grids and
4 removable grids

● ● 3-phase models

● ● Single-phase models

ref. LAO-42T

ref. LAO-42M

ref. LAV-42T

ref. LAV-42M

SUPPLIED WITH 4 fixed grids and 4 removable grids

Workstation for 4 users. It is delivered with:

- 2 vertical electrical consoles with various outputs (see below)
- 4 grid frames
- 4 fixed grids 800 x 150mm
- 4 removable grids 600 x 500mm (useful area)
- 1 stratified bench of dimensions 2000 x 750mm
- 2 storage areas for 4 removable grids each

WIRING BENCH



SUPPLIED WITHOUT GRID

● ● 3-phase models

● ● Single-phase models

ref. LAO-22T

ref. LAO-22M

ref. LAV-22T

ref. LAV-22M

3-phase models with 4 consoles

ref. LAO-22C

ref. LAV-22C

Workstation for 4 users (see below drawing) :

- 2 vertical electrical consoles with various outputs (see below)
- 4 x 1000x750mm frames for 800 x 750mm grids (maximum size). These grid frames have horizontal and adjustable rails to receive all grids up to 800mm height and 750mm width (maximum).
- 1 stratified bench of dimensions 1800 x 750mm
- Delivered without grid.

ELECTRICAL FEATURES OF THE VERTICAL CONSOLES (2 sides)



EMERGENCY STOP

- The push-button cuts off the power in the case of an emergency. Key-resettable (positive safety).

24VAC SUPPLY (insulated from mains)

- Used via 2 safety terminals. Primary winding of transformer protected by auto-protection and secondary wiring by circuit breaker.

GENERAL START/STOP

- A lamp indicating that the power is on.
- Start/stop operated using a double push-button.

230V MAINS DISTRIBUTION

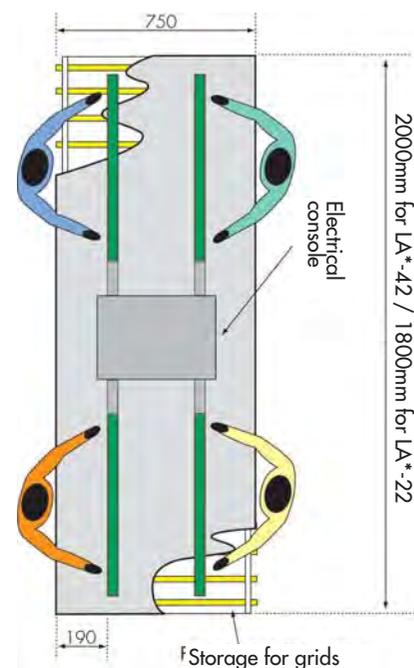
- Two mains sockets 230V with lamp.

GENERAL PROTECTION

- Protection by thermal magnetic circuit breaker (30mA residual circuit breaker available as an option).

3-PHASE SUPPLY (3 X 400V + N+ E) (only for LA*-42T / LA*-22T / LA*-4C)

- A lamp indicating that the power is on.
- Output via 4 safety terminals.
- Key-operated power-on switch.



CROSS-SHAPED WIRING BENCH



SUPPLIED WITH
4 fixed grids and
4 removable grids

ref. LAO-4C

ref. LAV-4C

SUPPLIED WITH 4 fixed grids and 4 removable grids

Workstation for 4 users. Supplied with:

- 4 vertical electrical consoles with various outputs (see previous page).
- 4 grid frames
- 4 fixed grids 800 x 150mm
- 4 removable grids 600 x 500mm (useful area)
- 1 stratified bench 2000 x 750mm and 2 small ones 750 x 670mm.
- 2 storage areas for 4 removable grids each

WIRING BENCH WITHOUT ELECTRICAL CONSOLE



ref. LAO-44N

ref. LAV-44N

SUPPLIED WITHOUT GRID

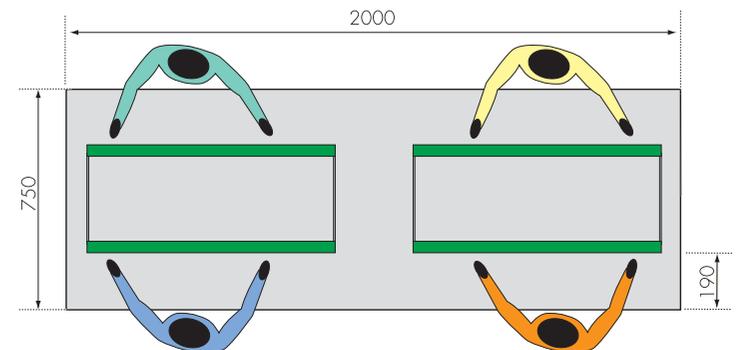
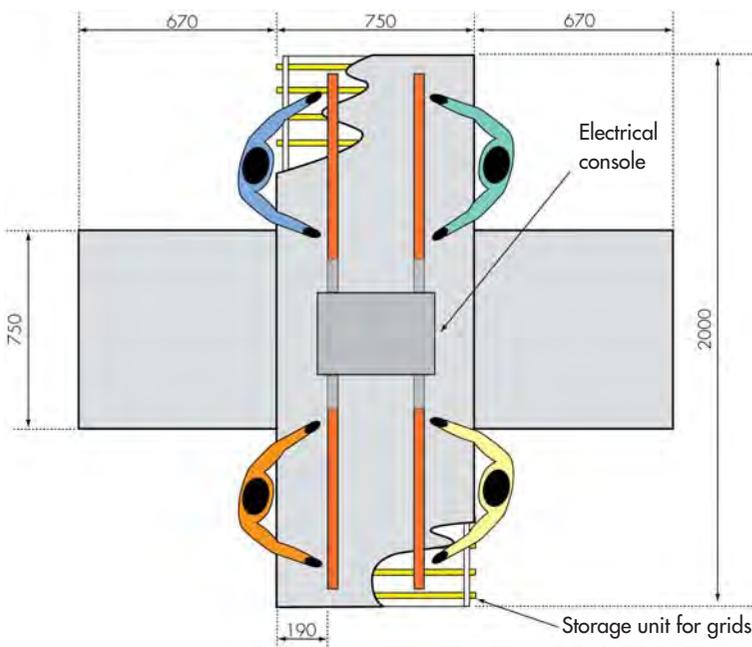
This bench enables users to wire up movable grids without testing possibility (bench without power supply).

Wiring bench for 4 users.

Dim. 2000 x 750mm.

High temperature stratified top.

The 4 frames (ref CSO-10 or CSV-10) can accommodate grids up to 800x750mm max.



Options SEE PAGES 40-41

Wiring benches

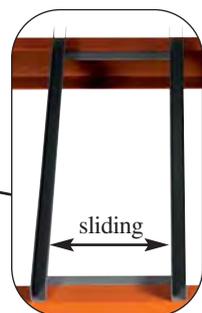
Options for wiring benches of pages 36 to 39

STORAGE UNIT FOR 2 GRIDS

Standard model



High and low guidance.
Compatible with grids
660 x 534mm (PA6050)



ref. GLS-2

Economical model



Compatible with grids up to
580 x 750mm max.
(tilted 15° compared to
the vertical)



ref. RALECO

PNEUMATICS KIT FOR 4mm OUTPUT



A pneumatic distribution can be fitted on the wiring benches. This option is delivered complete with air entry pipe, stop valve, regulator with filter and manometer, feeder tank with 4 quick-fit junctions, means of fixing and screws.

ref. DISLAB

24VDC - 1.8A OUTPUT

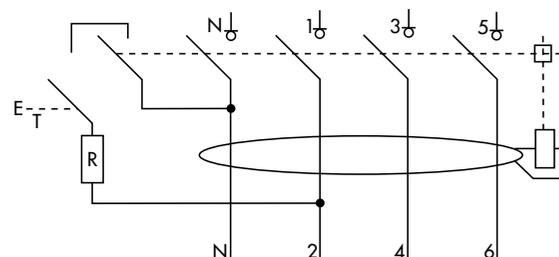


Electronic auto-protection.
Safety terminals 4mm
On/off switch
LED indicator light.

ref. CC24L

30mA RESIDUAL CURRENT CIRCUIT BREAKER

A Type



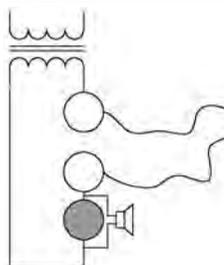
30mA residual current circuit-breaker. Single-phase bench.

ref. DIF30-2L

30mA residual current circuit-breaker. 3-phase bench.

ref. DIF30-4L

CIRCUIT CONTINUITY TEST



An optional circuit "Continuity test" is available. This option allows to do some acoustic and visual tests under 24VAC.

ref. CAV

360° LED LAMP



Replace your old lamps by some new hard-wearing LED lamps

- LED lamp with ten electroluminescent LED diodes without maintenance.
- Bulb with a bayonet fitting (B15D type), 2 contact terminals
- Available in 2 voltages: 230VAC and 24VAC

ref. T15-230

230V

ref. T15-24

24V



VERTICAL CABLE RACEWAY



For the wiring of the power cable from the aerial wiring system to the top of upright supply console

ref. LABO-CANNE

360° LIGHT SIGNAL TOWERS



ref. VOY61



ref. VOY121



ref. VOY181

THEY CAN BE SEEN THROUGH 360°. CAN BE PLACED EITHER ON THE CONSOLE OR ON A VERTICAL CABLE RACEWAY. STANDARD COLOURS: RED, GREEN, YELLOW. OTHER COLOURS: WHITE AND BLUE

COLOURS AVAILABLE UPON REQUEST

HARD WEARING LED LAMP

white - orange - red - green - blue



HANGING DRAWERS (300 SERIES) WITH LOCK AND KEY

For top in depth 750 mm or 1000 mm - Height: 400 mm - Width: 450 mm

REF	Drawer H=100mm	Drawer H=200mm	Drawer H=300mm
TIG-30	3	/	/
TIG-32	1	1	/
TIG-33	/	/	1



Ref. TIG-30



Ref. TIG-32

HANGING DRAWERS (400 SERIES) WITH LOCK AND KEY

For top in depth 750 mm or 1000 mm - Height: 400 mm - Width: 450 mm

REF	Drawer H=100mm	Drawer H=200mm	Drawer H=300mm
TIG-40	4	/	/
TIG-41	2	1	/
TIG-42	/	2	/
TIG-43	1	/	1



Ref. TIG-41



Ref. TIG-42

HANGING DRAWER WITH LOCK AND KEY

For top in depth 750 mm or 1000 mm
Height: 100 mm - Width: 400 mm

ref. TIG-10



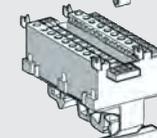
FAST CONNECTIONS

These items are sold separately. They allow the quick connection/disconnection of 10 contact points. The female base can be fastened on rail, the male connector is movable.



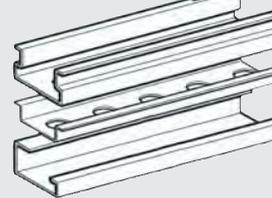
Male connector
10 points, movable

ref. AB1-M



Female base
10 points, for rail

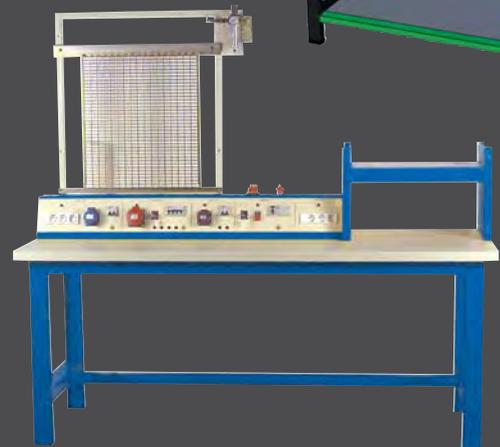
ref. AB1-F



Maximum section: 2.5 mm²
Maximum current: 10A
Maximum voltage between contacts:
380 V AC

MADE TO MEASURE

EXAMPLES OF PRODUCTS MADE TO MEASURE
FOLLOWING THE CUSTOMERS NEEDS

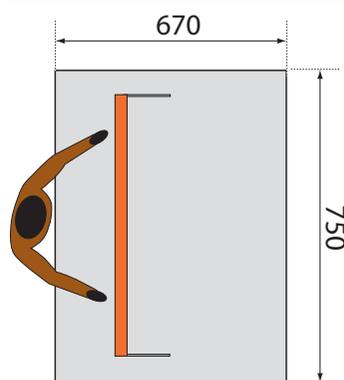


Mobile wiring benches



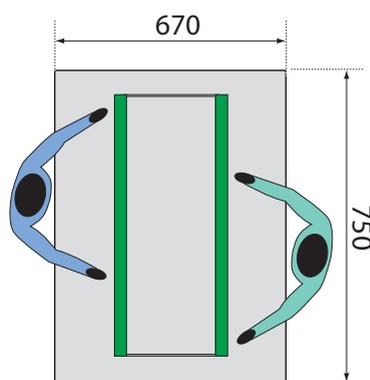
ref. MBO-1

ref. MBV-1



ref. MBO-2

ref. MBV-2



MBO-1 & MBV-1 enables you to wire up detachable grids without a testing option. It can be moved around thanks to its 4 wheels, 2 of them are fitted with brakes. The frame can accommodate grids or any other items with dimensions of up to 800 x 750mm maximum. 750 x 670mm high-temperature laminated top
Height of wiring unit = 1970mm.

MBO-2 & MBV-2 as the same features as **MBO-1 & MBV-1**, except that it has two frames and therefore enables two users to work at the same time.

Storage unit for grids

This lockable piece of furniture is divided into 4 compartments, enabling users to securely store 4 wiring grids. These storage units with key offer a complete protection against vandalism.

- Can be adapted through overlaying or juxtaposition
- Furniture dimensions: H=800 x L=950 x D=900mm
- Dimensions of each grid space: H=700 x L=210 x D=880mm
- Materials: zinc-plated steel sheet. Paintwork: furnace-baked epoxy paint
- Supplied unmounted with a leaflet of assembly.

1 STORAGE UNIT - 4 COMPARTMENTS



ref. MILABO50

2 STORAGE UNITS - 1 TOP - 8 COMPARTMENTS



Stratified top 40mm. Dimensions 2000 x 1000mm.

ref. MILABO80

2 STORAGE UNITS - 8 COMPARTMENTS



ref. MILABO90

Wall grid support



Supplied without grid

ref. MURECO-O

ref. MURECO-V

- Cabling grid support, with wall fixing. (Supplied without grid)
- Adjustable horizontal and vertical rails for using several grid sizes.
- This system also takes wood panels 12mm thick or BA13 plaster panel.
- Overall dimensions of the main frame: 1000 x 750mm
- Maximum dimensions of the work area: 800 x 750mm (panels or grid)
- The bottom bracket extends 150mm to hold hand tools. (Angled corners)
- Screws supplied (except for wall fixing).



Angled corners for safety

Mobile grid support



Supplied without grid



ref. FREE-SUP-O

ref. FREE-SUP-V

- Mobile easy-to-store cabling support. (Supplied without grid)
- On a bench, the work area (grids or panels) can be angled by the cabler simply by using the screw handles on the sides.
- The ball joints in contact with the table adjust automatically according to the work angle.
- The holding bars make the assembly very rigid for comfortable working.
- Adjustable horizontal and vertical rails for using grids with varied dimensions.
- This system also takes wood panels 12mm thick and BA13 plaster panel.
- Overall dimensions of the main frame: 1000 x 750mm
- Maximum dimensions of the work area: 800 x 750mm (panels or grids)
- Footprint on table in maximum open position: 750 x 530 mm



The console ref. PUG-1 page 36 can be fixed on the top

Training housing units

T SHAPED PRODUCTION AREA



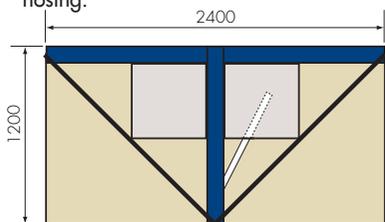
Height 262cm - Height 235cm on request

ref. HT1-ANS

(BA13 plaster plates not supplied)

Completely stand-alone and self-supporting structure which can accommodate standard-format plaster plates without any drilling being required. A single screwdriver will be sufficient for fitting or replacing the plaster panels. Each wing of the structure measures approximately 1200mm and can accommodate standard plaster panels.

- The suspended ceiling comprises 2 detachable BA13 panels (supplied), measuring 600 x 600mm.
- 8 wooden designed floor assembly tiles 600x600mm (supplied).
- 1 door (supplied)
- 6 BA13 plaster panels 2500 x 1200mm x 13mm are necessary (no supplied)
- In the vertical section, posts spaced every 600mm, corner beads and divider nosing.



CROSS-SHAPED PRODUCTION AREA



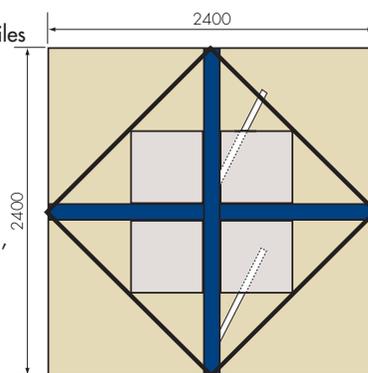
Height 262cm - Height 235cm on request

ref. HT2-BNS

(BA13 plaster plates not supplied)

Completely stand-alone and self-supporting structure which can accommodate standard-format BA13 plaster panels without any drilling being required. A single screwdriver will be sufficient for fitting or replacing the plaster panels. Each wing of the structure measures approximately 1200mm and can accommodate standard plaster panels.

- The suspended ceiling comprises 4 detachable BA13 panels (supplied), measuring 600 x 600mm.
- 16 wooden designed floor assembly tiles 600x600mm (supplied).
- 2 doors (supplied)
- 8 BA13 plaster panels 2500 x 1200mm x 13mm are necessary (no supplied)
- In the vertical section, the structure comprises posts spaced every 600mm, corner beads and divider nosing.



Industrial power unit

This 460 x 480 x 120mm plastic electrical unit is placed on the ground. It delivers various voltage sources, protected by thermal magnetic circuit breakers.

Connection to the 3x400V+N+E electric network via a 5 meters cable and 2P+E connector.

Supplied with plugs for connection to the mains.

ref. DK3



Voltage	Sockets
3-phase 3 x 400V+N+E	1 x 16A 3P+N+E IP44
Single-phase 220V+E	1 x 16A 2P+E IP44
Single-phase 220V+E	3 x 10/16A 2P+E IP55

Production area for 4 students



ref. BX-4F (with 4 3-phase consoles)

ref. BX-4F-MONO (with 4 single-phase consoles)



Panel with melamine agglomerate dimension 1700 x 800mm.

Mobile work island on wheels for four students with four independent spaces. An advantage of this solution is that students can work by switching quickly from the front to the back of each panel simply by rotating it. Mobility/stability: The four wide-diameter wheels ensure that the island is easy to move around, yet it remains extremely stable when the four brakes are applied and locked in place.



3-phase console

Features of each space

- Panel with melamine agglomerate on the front and back (12mm), 1700 x 800mm of usable space.
- Rotation of panel around its central vertical axis
- Lock for locking the anti-rotation system
- Independent console
- Tool holder

Dimensions of island

- 1120 x 1120mm Height: 1994mm

Electrical features

• Emergency stop

This push button cuts off the power in the case of an emergency. Key-resettable (positive safety).

• 24VAC/5A ISOLATED SUPPLY

Used via two safety terminals. Primary winding of transformer protected by auto-protection, secondary wiring by circuit breaker with light.

• General Start/Stop

- A lamp indicating that the power is on.
- Start/stop operated using a double push-button.

• 230VAC mains distribution.

- 2 power sockets with lamp.

• Mains three-phase (only on BX4F)

A lamp indicating that the power is on.

Output via 4 safety terminals.

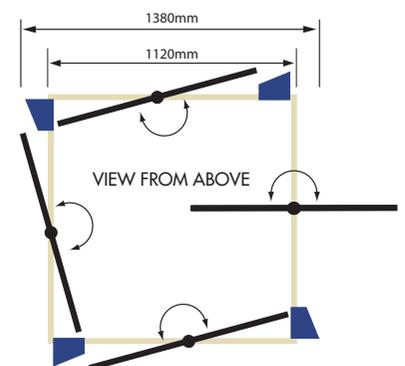
Protection via a magneto-thermal circuit breaker (30mA residual current circuit breaker as an option).

Key-operated power-on switch.



Tool holder (tools not supplied)

Removable part which is perfectly tailored to the screwdriver holder on the upper part and the pliers on the lower part.



VERSION WITHOUT CONSOLES AND TOOL HOLDERS



- Panels with melamine agglomerate on the front and back (12mm).
Dim: 1700 x 800mm
- Dim: 940 x 940mm. Height: 1994mm

ref. BX-4F-ECO

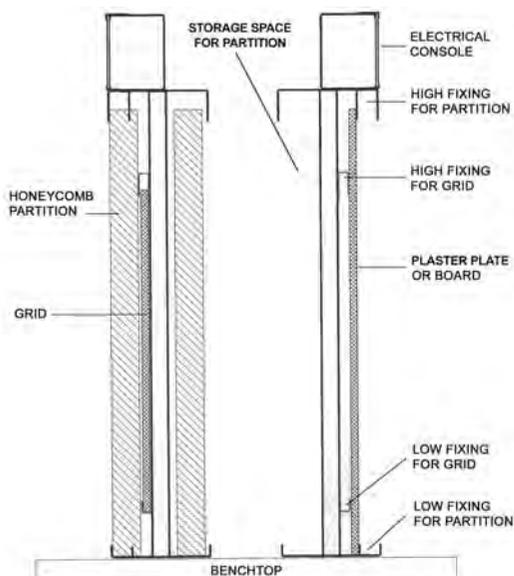
Industrial and tertiary workstation



ref. P1-LGS (2 single-phase consoles)



ref. P1-TGS (2 3-phase consoles)



The P1 workstation is a wiring bench for two users, with a free area for storing the necessary tools and diagrams. The station can take any of the following: perforated grids, plaster partitions (13mm) and honeycomb partitions. Grids and partitions are fixed instantly to the upright holder. A horizontal console placed above each upright holder distributes the sources. There are two versions of the electrical power distribution console: single-phase and three-phase.

DESCRIPTION OF THE P1 STATION (SINGLE-PHASE OR 3-PHASE)

EACH STATION IS SUPPLIED WITH:

- 2 stand-alone power consoles (description appears below)
- 2 frames with instant hooking system for grids and honeycomb partitions
- 1 40mm-thick 1500 x 750mm high-temperature stratified bench-top

Maximum dimensions

- Wiring grids: 960 x 734mm. Plaster panels: 1200 x 800mm
- Honeycomb partitions: 50mm-thick 1200 x 800mm

Other characteristics

- Sturdy metal leg covered with furnace-baked epoxy paintwork.
- Front face of power distribution strips made from PVC.

DESCRIPTION OF THE STAND-ALONE POWER CONSOLE

- General circuit-breaker with padlock
- General circuit breaker with 30mA residual current circuit breaker 
- On/Off push-buttons
- Key-operated emergency stop
- Hardwearing and maintenance-free double "presence" & "on" indicator light
- 24VAC/5A output with circuit breaker and hardwearing LAMP
- 3 power sockets 230VAC with circuit breaker and LAMP
- 3-phase 3x400VAC mains output on safety terminals with key-operated switch and lamp (only for three-phase version)

360° LIGHT SIGNAL TOWERS

THEY CAN BE SEEN THROUGH 360°. PLAN ONE SIGNAL TOWER BY USER.
STANDARD COLOURS: RED, GREEN, YELLOW. OTHER COLOURS: WHITE AND BLUE



ref. VOY61



ref. VOY121



ref. VOY181

GRID (OPTION)

Large grid 960 x 734mm

ref. PA9070

Wiring kits for housing units



BASIC KIT

ref. KX-A2

- 4 two-way switches
- 2 push-buttons
- 2 16A circuit breakers
- 1 32A circuit breaker
- 1 analogue timer switch
- 2 cable outputs
- 1 230V remote control switch
- 1 wall-mounted spotlight
- 2 viewing ports + lamps
- 1 fluorescent tube
- 5 branch boxes with connections
- 1 residual current switch - A class - 40A bipolar - 30mA
- 1 residual current switch - AC class - 25A bipolar - 30mA
- 100 meters of 20mm protective, insulating, pliable sheathing
- 100 meters of cable 1.5mm² Red / blue / green-yellow / purple
- 100 meters of cable 2.5mm² Red / blue / green-yellow
- 10 meters of cable 3 x 6mm²
- 20 boxes of flush fittings for hollow wall (16Ø65; 4Ø40)
- 1 10m nylon needle.
- 2.5m of raceway + end fitting + partition + connection
- Detailed assembly instructions with diagrams.
- 1 one-way switch
- 1 double push-button
- 1 20A circuit breaker
- 1 timer (1 to 7 mins)
- 6 sockets
- 2 10A thermal magnetic circuit breakers
- 1 distribution box
- 1 ceiling light
- 1 built-in 12V spotlight
- 1 wall fitting + lamp



LIVING ROOM

ref. KX-B

- 1 TV socket
- 1 push-button
- 10m TV cable
- 10m phone cable
- 1 telephone socket
- 1 set of door bell
- 1 2A thermal magnetic circuit breaker



CMV WIRING

ref. KX-C

- 1 220V controlled mechanical ventilation (CMV) unit
- 2 80mm diameter suction slots
- 1 2-position switch
- 6 metres of 80mm-diameter PVC sheathing
- 1 2A thermal magnetic circuit breaker
- 1 Ø65 box to be flush-fitted



DOOR OPENER

ref. KX-H

- 1 electric door opener to be flush-fitted
- 1 bell transformer
- 1 1P+N / 2 C trip circuit breaker
- 1 push-button
- 1 box of flush fittings for hollow wall

Other kits for housing units



HEATING POWER MANAGEMENT KIT



ref. KX-R

- 1 power controller
 - weekly programming of 8 heating areas with pilot wire
 - adjustment to the nearest minute
 - copy/paste function for simpler programming
 - programmable absences of between 1 and 99 days
 - Optional control based on external temperature
 - Single-phase load shedding
 - Control of 2 relay outputs
 - 220V power supply
- 2 radio break contacts designed to switch off the convectors
- 1 external temperature probe
- 1 telephone transmitter associated with a telephone and an automatic switchboard unit:
 - communicates with the controller
 - voice assistance & interphone dialogue.
 - indicates the temperature of the part
 - allows the roller-blind, heating and lighting to be controlled via the telephone.
- 2 500W convectors with pilot wire
- 1 1200 x 800mm electric roller-blind
- 1 external light
- 1 modular table
- A set of circuit breakers, including a 30mA residual current unit
- Control switches for the roller-blind and lighting
- Rolls of cables, 100m of 20mm-diameter protective, pliable insulating sheathing and branch boxes, required for wiring the assembly
- Supplied with instructions & diagrams

CUT-OFF DEVICE + CONVECTOR KIT



ref. KX-D

- 2 750W wall convectors
- 2 16A thermal magnetic circuit breakers
- 1 cut-off device 2 outputs
- 3 cable outputs
- 100 meters of 20mm protective, insulating, pliable sheathing
- 100 meters of 1.5mm² cable Red / blue / green-yellow
- 1 auxiliary heater 600W
- 3 boxes to be flush-fitted Ø65
- 1 branch box



Photovoltaic kit for energy injection

SEE PAGE 134

Photovoltaic kit for isolated site

SEE PAGE 135



CODE ACCESS CONTROL KIT



ref. KX-P

- 1 protruding case into which the code is programmed directly via the keypad. Relay outputs
- 1 power supply
- 1 electric door opener
- 1 2A thermal magnetic circuit breaker
- 1 8-module PVC box
- 1 branch box
- 1 10m Nylon needle
- 20m of multi-pair conductor
- 100m of 16mm-diameter ICO sheathing

SWIPE CARD ACCESS CONTROL KIT*



ref. KX-N

- 1 unit
- 1 vandal-proof swipe card reader to be flush-fitted
- 20 application swipe cards
- 1 power supply
- 1 2A thermal magnetic circuit breaker
- 1 8-module PVC unit
- 1 branch box
- 1 push-button
- 1 box of flush fittings
- 1 10m Nylon needle
- 100m of conductor 0.75mm²
- 100m of 16mm-diameter ICO sheathing

VIDEO KIT FOR ELECTRICAL DOOR OPENER*



ref. KX-M

- 1 IP54 protruding external entry phone terminal
- 1 internal black and white video entry phone
- 1 modular power transformer
- 1 2A thermal magnetic circuit breaker
- 1 13-module PVC unit
- 1 branch box
- 1 10m Nylon needle
- 100m of 16mm-diameter ICO sheathing
- 20m of multi-pair cable

AUDIO KIT FOR ELECTRICAL DOOR OPENER*



ref. KX-L

- 1 IP54 protruding external entry phone terminal
- 1 internal entry phone
- 1 modular power transformer
- 1 2A thermal magnetic circuit breaker
- 1 8-module PVC box
- 1 branch box
- 1 10m Nylon needle
- 100m of 16mm-diameter ICO sheathing
- 25m of multi-pair cable

* This kit requires a 24V AC electric door opener.
You will find this electric door opener in the KX-H kit.

Other kits for housing units

COMPUTER WIRING KIT



ref. KX-F

- 4 230V inverter system sockets
- 4 ISDN RJ45 connectors
- 2 16A circuit breakers
- 1 mini switch
- 1 telephone socket
- 1 PVC box
- 1 UDI mosaic distributor
- 9 boxes of flush fittings
- 2 branch boxes
- 1 10m nylon needle
- 2 metres of raceway
- 4 red plastic polarising slots
- Assembly instructions
- 40m of multi-pair computer cable
- 10m of multi-pair telephone cable
- 100m of 20mm protective, pliable insulating sheathing
- 100m of cable 2.5mm² Red / blue / green-yellow
- 5 RJ45 leads (1.5m)

FIRE DOOR MANAGEMENT KIT WITH FIRE CENTRAL ALARM DAD



ref. KX-G

- | | |
|--|--|
| <ul style="list-style-type: none"> • 1 fire central alarm DAD • 1 automatic smoke detector • 2 manual triggers • 1 illuminated evacuation unit • 1 magnetic vacuum 12V/24V • 1 aerosol spray for the smoke detector test • 1 thermal magnetic circuit breaker | <ul style="list-style-type: none"> • 100m of 16mm-diameter ICO sheathing • 30m of MXE cable • 100m of cable 3x 0.75mm² • 2m of electrical distribution raceway • 1 branch box • Assembly instructions |
|--|--|

VIDEO SURVEILLANCE + RECORDER KIT



ref. KX-VID

- This kit contains everything needed to make the installation of CCTV. The color video recorder is equipped with a 160GB internal hard drive. 4 cameras with CCD 1/3" sensor and equipped with 18 infrared LEDs provide excellent video quality regardless of lighting conditions.
- Digital color video recorder with 4 channels, 160GB SATA HDD, dual MJPEG and MPEG4 compression, 4 alarm inputs and 1 relay output, mouse and remote control.
 - 15" TFT LCD with BNC connection
 - 4 color cameras with CCD 1/3". 18 Infrared LEDs for night vision integrated, high degree of protection IP68 for indoor and outdoor use, equipped with a protective visor and an adjustable mounting foot.
 - 4 220/240V power supply - 12VDC for camera
 - 4 cables of 20 meters for connecting the cameras to the recorder
 - 100 meters of 16mm duct ICA
 - 1 nylon needle (10 meters)
 - Detailed technical instructions

ANTI INTRUSION ALARM KIT



ref. KX-K

- | | |
|---|---|
| <ul style="list-style-type: none"> • 1 220V alarm unit • 1 coded lock • 2 IR motion sensors • 1 alarm contact under entrance mat • 2 sets of magnetic contacts for doors and windows • 1 flashing light 12V • 1 siren 12V • 1 spare battery | <ul style="list-style-type: none"> • 1 8-module box • 1 set of blanking pieces • 1 nylon needle 10m • 1 2A medium voltage circuit breaker • 50m of reinforced cable 5x0.6mm² • 100m of 16mm protective, pliable insulating sheathing • 2m of raceway • Assembly instructions |
|---|---|

WIRELESS ANTI-INTRUSION ALARM KIT



ref. KX-KSF

- 1 radio unit fitted with a siren which can be disabled. 4 programmable tones (intrusion, fire, technical and emergency).
- 1 radio keypad for receiving information and remote control, with LCD display: activation and deactivation. Fully on and partially on. 3 access codes: 1 master, 2 users. Log of the last 200 events. Information about the system status: activated and deactivated, open doors, etc. Siren test. System configuration. Allocation of sensors to partially on.
- 1 infrared sensor. 12m range (90°)
- 1 dual technology intrusion sensor: infrared + microwave frequency 12m range (90°).
- 2 break contacts for protecting access points (doors and windows, etc.)
- 1 optical smoke detector (Integrated buzzer)
- 1 telephone transmitter, which is associated with a telephone and an automatic switchboard unit, carries out all the alarm transmission and reception functions. Voice assistance and interphone dialogue. 4 programmable telephone numbers. Message which can be personalised. Built-in keypad for activating and deactivating monitoring and for programming telephone numbers.

All components are fitted with alkaline batteries ensuring an autonomy of several years. Supplied with detailed manufacturer's instructions.

ANTI-INTRUSION ALARM KIT



ref. KX-KFIL

- 1 3-area wired unit, with key control on the unit or remote control via the keypad for code entry.
- 1 2-output keypad for code entry with inverter, 2 free lamps, 1 master code, 1 duress code and 45 user codes. 12V DC power supply generated by the unit.
- 1 internal siren powered by the unit. Operates when a voltage is detected
- 1 passive infrared sensor with a 12m range. Pulse counter Single terminal
- 1 dual-technology intrusion sensor (infrared + microwave frequency), with 10m range
- 2 break contacts for protecting access points (doors and windows, etc.)
- 1 earth mat
- 1 telephone transmitter associated with a tel. and an automatic switchboard unit: carries out all the transmission and reception functions of the alarm, voice assistance and interphone dialogue - 4 programmable telephone numbers - message which can be personalised - built-in keypad for activating and deactivating monitoring and for programming telephone numbers.
- 1 optical smoke detector (Integrated buzzer)
- 50m of cable
- 1 10m nylon needle
- 100m of 16mm protective, pliable insulating sheathing
- Supplied with detailed manufacturer's instructions

BUS ANTI-INTRUSION ALARM KIT



ref. KX-KBUS

- 1 BUS unit with two monitored areas, with events log display and built-in keypad for activating and deactivating monitoring. 10 different codes: 1 master, 1 installer, 8 users.
- 1 radio keypad (information + controls) fitted with an LCD display. Displays the system status. Controls the activation and deactivation of monitoring. Customises the installation by clearly naming the system elements on an alphanumeric keypad. Keypad powered via the BUS
- 1 siren with four different tones (intrusion - fire - technical - emergency), powered by the BUS
- 1 passive infrared sensor 12m range (90°)
- 1 dual-technology intrusion sensor (infrared + microwave frequency). 12m range (90°)
- 2 break contacts for protecting access points (doors and windows, etc.)
- 1 BUS contact interface makes it possible to connect any type of sensor with a contact opening onto the BUS network (8 inputs).
- 1 optical smoke detector (Integrated buzzer)
- 50m of 1-pair cable
- 100m of 16mm protective, pliable insulating sheathing
- 1 10m nylon needle
- Supplied with detailed manufacturer's instructions

Other kits for housing units

KIT FOR THE VISIBLE WIRING OF A DOUBLE GARAGE WITH STOREROOM



ref. KX-S

- 36m of Ø16 and 20mm rigid insulating tube.
- 10 sleeves for Ø16 and 20mm rigid insulating tubes
- 20 elbows for Ø16 and 20mm rigid insulating tubes
- 6 T-fittings for Ø16 and 20mm rigid insulating tubes
- 100 clamps for Ø16 and 20mm rigid insulating tubes
- 100 pins for the clamps
- 1 sealed modular table
- 1 row of 13 modules
- 1 40A-30mA class A double pole differential circuit breaker
- 2 1P+N 10A – C circuit breakers
- 1 1P+N 16A – C circuit breaker
- 2 1P+N 20A – C circuit breakers
- 1 dusk-to-dawn switch
- 1 220V remote control switch
- 1 multi-function timer with switch off warning
- 2 surface-mounted two-way switches
- 1 surface-mounted double two-way switch
- 6 surface-mounted push-buttons
- 7 surface mounted 16A 2P+E sockets
- 3 36W fluorescent tubes
- 2 60W-E27 viewing ports
- 2 500W convectors
- 2 visible DCL packs + B22 sockets
- 2m of raceway
- 6 branch boxes
- 7 100m coils of 1.5mm² rigid cable in blue, red, violet, green yellow, and in blue, red, green yellow for 2.5mm² rigid cable.
- supplied with wiring diagram and instructions.

All electrical components in this kit are surface mounted and facing out.

ELECTRICAL EQUIPMENT WIRING KIT FOR AN APARTMENT WITH A SURFACE AREA OF LESS THAN 35M²



ref. KX-T

- 1 modular table with 2 rows of 13 modules
- 1 40A-30mA class A double pole differential circuit breaker
- 1 40A-30mA class AC double pole differential circuit breaker
- 2 1P+N 2A – C circuit breakers
- 1 1P+N 10A – C circuit breaker
- 4 1P+N 16A – C circuit breakers
- 4 1P+N 20A – C circuit breakers
- 1 1P+N 32A – C circuit breaker
- 1 220V remote control switch
- 1 contactor for off-peak hours
- 1 FIPO Timer for the convectors pilot wire
- 1 multi-function timer with switch off warning
- 3 switches
- 2 double two-way switches
- 3 cable outputs
- 3 push-buttons
- 6 16A 2P+E sockets
- 2 500W convectors
- 5 visible DCL packs + B22 sockets + bulbs
- 3m of raceway with connections
- 22 equipment boxes for dry partitions
- 7 100m coils of 1.5mm² rigid cable in blue, red, violet, green yellow, and in blue, red, green yellow for 2.5mm² rigid cable.
- 7 branch boxes
- 1 needle
- 1 100m coil of 20mm corrugated tube
- Supplied with wiring diagram and instructions.

All electrical components in this kit are flush mounted.

HOME VDI KIT WITH COMMUNICATION UNIT



ref. KX-U

All components for the GRADE 3 wiring of a home VDI (voice, data, image) system. Satisfies new multimedia requirements for the home Based on the implementation of a star-wired wire network, and which carries computer, TV/SAT and telephone signals.

The RJ45 sockets, wired directly into the VDI unit, become universal. They can receive any of the 3 desired signals: Voice (telephone) Data (Computer) Image (terrestrial TV) Wiring possible with partial or complete unbundling.

- 1 communication unit with patch, GRADE3
- 1 internal termination device (DTI connexion box)
- 1 telephone distributor
- 1 kit to fasten equipment on the grid
- 1 modular Terrestrial/ satellite TV distributor
- 1 modular broadband filter
- 1 set of GRADE3 RJ45 leads in 50cm and 3m lengths
- 1 set of RJ11/RJ45 telephone leads and RJ45/Type 'F' TV leads
- 10 RJ45 wall sockets GRADE3
- 2 TV/SAT wall sockets
- 1 ETHERNET switch 5 ports
- 25 metres of 75 Ohms TV /SAT co-axial cable
- 50 metres of cable 4 pairs GRADE3 900MHz
- 1 set of equipment flush fittings for dry partitions.
- 1 100m coil of Ø20mm corrugated sheath

Industrials kits



SOURCE SWITCHING KIT



ref. KI-COMS

Despite the 125A current supported by the reversing switch, and in order to prevent damage to the attached components (terminals and fuse holders, etc), the charging current must not exceed 16A.

A pedagogical manual comprising diagrams, properties and instructions relating to each component is supplied with the kit.

This industrial kit comprises a motorised source switch and control accessories used for switching from one power source to another. One of them is deemed «NORMAL» and the other "EMERGENCY». The latter is used if the former experiences an outage. The main application is to provide an uninterrupted power supply in case of mains network fail. This switch (or reverser) is often built into the low-voltage master distribution board cabinets.

Switching from the normal source to the emergency source is performed either manually (using the palm switch) or automatically (using a control module). The control module detects the absence of the normal source and controls the switch which activates the emergency source. Lamps show the status of the switch.

COMPRISES

- 1 motorised reversing switch with three stable positions (I-0-II), in charge switching.
 - Sectioning by means of fully visible power cut-off
 - Electrical control of position by means of potential-free dry contacts
 - emergency manual control
 - with padlock
 - 4-pole, 125A, 400V network, 3P+N+E
- 1 automatic control module for source switch
 - DIN modular case
 - relay output for control of the reversing switch
 - display + keys on the front for programming
- 1 600 x 500mm detachable wiring grid
- 5 4-pole fuse holders
- 1 auto/manual switch
- 1 3-position switch (source1-0-emergency source)
- 3 220V lamps
- 2 plastic cases for the switches and lamps
- 1 set of connection terminals
- 1 set of HARTING® industrial connectors for connection to the control components, lamps and charge.

ASYNCHRONOUS MOTOR START-UP KIT



ref. KI-CABDEM

Male and female HARTING industrial rapid connectors, with mobile covers and fixed bases, are supplied with the KIT. They are used for connections between the following: wiring grid - push-buttons - switches - lamps - motor.

The KIT is supplied with detailed instructions, wiring diagrams, manufacturer's instructions and a parts list.

This industrial kit comprises actuators and control components which are used to study and create the main schematics for the start-up of asynchronous motors:

- direct start-up, with or without reversal of the direction of rotation
- star/delta start-up
- start-up by means of a STARTER/DECELERATOR module
- start-up by means of speed converter.

COMPRISES

- 1 25A-400V 4-pole circuit breaker
- 1 double-pole fuse holder
- 2 4-pole fuse holders
- 3 25A power contactors with 24V coil
- 2 auxiliary contactors with 24V coil
- 1 block of auxiliary contacts with time-delayed «work» from 1 to 30s
- 3 auxiliary contact blocks, 1 «NO» + 1 «NC»
- 1 0.63 to 1A thermal relay with its support
- 1 Telemecanique® Altivar-type 1.5kW speed controller
- 1 starter/decelerator
- 1 220V/24V-100VA single-phase transformer for the control circuit
- 1 grid measuring 600 x 500mm
- 1 set of 4mm connection terminals
- 1 set comprising push-buttons, emergency stop and lamps for controlling and viewing all features of the wired grid
- 1 set of HARTING® industrial connectors for connecting the control components and motor to the grid

Trolleys



ref. DES-16

- Trolley
- Tubular steel frame
- Removable upper shelf
- Melaminated shelves (beech surface)
- 2 swivelling wheels (diameter 125mm) with a brake
- 2 fixed wheels (diameter 125mm)
- Delivered unmounted. Easy to assemble.
- Length : 1030mm
- Width : 500mm
- Height : 1010mm
- Useful dimensions : 850x850mm
- Height of the shelf: 185/810mm
- Max load of the upper shelf : 80 kg
- Total max load (on both shelves) : 200 kg
- Net weight : 25 kg



ref. BR-T10-76

- Frame in electrogalvanised steel (20/10)
- Furnace-baked Epoxy paint
- 4 wheels of 100mm diameter. Two of them have a brake.
- Rubber rolling band
- 40mm Wooden top (beech multilayer)
- Maximum load : 500 kg
- Dimensions (top included):**
- Height : 970mm
- Width : 750mm
- Depth : 670mm
- Hanging drawer :
- H: 100mm / W: 750mm

* This model also exist with a high temperature stratified top - contact us



ref. DES-18

- Trolley
- Tubular steel frame
- The 2 upper shelves are removable
- Melaminated shelves (beech surface)
- 2 swivelling wheels (ø 125mm) with brake
- 2 fixed wheels (diameter 125mm)
- Delivered unmounted. Easy to assemble.
- Length : 1030mm
- Width : 500mm
- Height : 1010mm
- Useful dimensions : 850x850mm
- Height of the shelf: 185/810mm
- Max load of the upper shelf: 80 kg
- Max load of the middle shelf: 80 kg
- Total max load (the whole trolley) : 200kg
- Net weight : 34kg



ref. BR-76

- Frame in electrogalvanised steel (20/10)
- Furnace-baked Epoxy paint
- 4 wheels of 100mm diameter. Two of them have a brake.
- Rubber rolling band
- 40mm Wooden top (beech multilayer)
- Maximum load : 500 kg
- Dimensions (top included):**
- Height : 970mm
- Width : 750mm
- Depth : 670mm

* This model also exist with a high temperature stratified top - contact us



ref. DDG-90

- Trolley
- Electrogalvanised steel frame
- 3 fixed shelves with 30mm edge
- Protective grooved rubber mat on the upper shelf
- Handle
- 4 80mm diameter wheels. 2 of them have a brake
- Space between the shelves : 330mm
- Height : 850mm (wheels included)
- Width : 615mm
- Length : 900mm (handle included)
- Max load by shelf : 30 kg
- Max load (for the whole trolley) : 120 kg
- Net weight : 33 kg



ref. CSEP-R

- Cabinet with lockable swing door
- 2 shelves / 3 levels

Dimensions

- Height : 970mm (wheels included)
- Width : 500mm (top included)
- Depth : 750mm (top included)

Dimensions of the cabinet :

- Height : 800mm (without the top and the wheels)
- Width : 450mm
- Depth : 665mm

Chairs & Stools

5-pronged swivel stools and chairs for workbenches.
Swivels, height can be adjusted by using a pneumatic gas lift.
Height adjustable from 470 to 670mm maxi.



ref. TAB5 with footrest



ref. TAB6 without footrest



ref. C5BAR with footrest



ref. C5BSR without footrest



ref. C5-PRO with footrest

5-pronged swivel chair for workbenches.
Padded seat and back, with footrest.
Covered in black vinyl.
Height adjustable from 470 to 670mm

5-pronged comfortable chair in polyurethane for workbench. Seat and back in compact foam.
With footrest. Swivel model.
Height adjustable from 470mm to 670mm



ref. C5-POL with footrest

Ergonomic polyurethane sit-stand chair. Height can be adjusted by using the pneumatic gas lift.
Height adjustable from 620 to 870mm

SIT-STAND CHAIR



ref. ASS-D without footrest

Trolley with trays



2-sides trolley
ref. CH-C84R

- 4 swivel wheels for an easy moving. 2 wheels have a brake
- Steel frame with beige epoxy paint
- height: 1120mm / width: 500mm / length: 1040mm

84 blue plastic trays

- 42 trays of dims 105 x 115 x 70mm (21 front / 21 back)
- 42 trays of dims 175 x 105 x 95mm (21 front / 21 back)

Workshop cupboard



ref. HB58

Steel cupboard with swing doors, very sturdy, **delivered dismantled**.

- Equipped with 4 height adjustable shelves (5 storage levels in total)
- Maximum load by level : 100 kg
- Rotating handle with lock on the right door
- Single colour : pearl grey (furnace-baked epoxy paint)
- Width : 900mm
- Depth : 450mm
- Height : 1800mm



Cupboard delivered dismantled

Vertical panels for workbenches

These panels are fixed to the rear of any bench-top with a thickness between 20 and 60mm. The bench-top must overhang by at least 45mm to offer good grip. The bench-top attachment requires no tools, each vertical post is fitted with a screw tightening knob. The vertical panels for tool and tray holders can be easily and quickly hooked onto the posts using hooks in steps of 25mm. Total height with respect to the bench-top: 830mm. The shelves and overhang shelves hook-on in the same way and can be attached between or in front of the panels as an additional thickness.



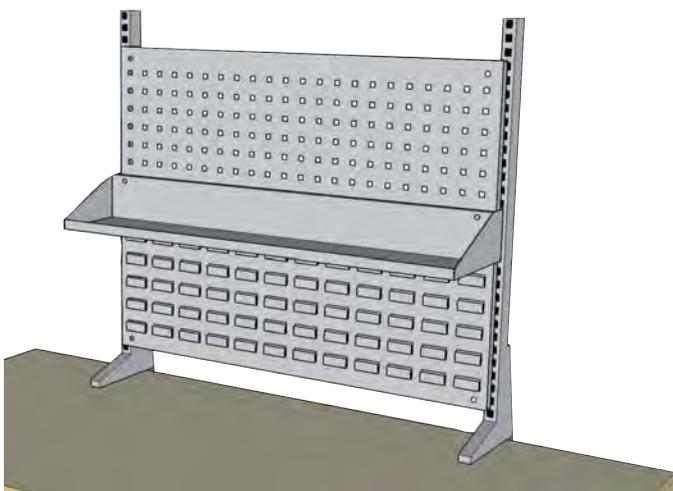
SET N°1 : LENGTH 750MM

Ref.	Panels	Post
PP01-11	1 tool holder + 1 trays holder	2
PP01-20	2 tool holders	2
PP01-02	2 trays holders	2



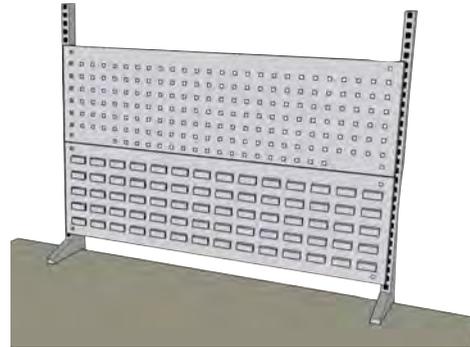
SET N°2 : LENGTH 890MM

Ref.	Panels	Post
PP02-11	1 tool holder + 1 trays holder	2
PP02-20	2 tool holders	2
PP02-02	2 trays holders	2
ETS-800	Optional shelf	



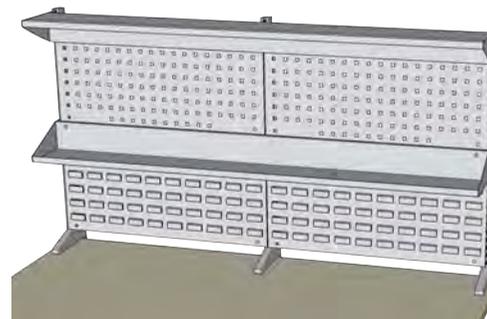
SET N°3 : LENGTH 1050MM

Ref.	Panels	Post
PP03-11	1 tool holder + 1 trays holder	2
PP03-20	2 tool holders	2
PP03-02	2 trays holders	2



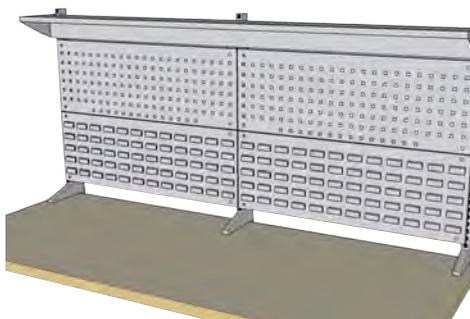
SET N°4 : LENGTH 1470MM

Ref.	Panels	Post
PP04-22	2 tool holder + 1 trays holder	3
PP04-40	4 tool holders	3
PP04-04	4 trays holders	3
ETS-1400	Optional shelf	
ETD-1400	Optional cap	
CONTACT US	Optional light	



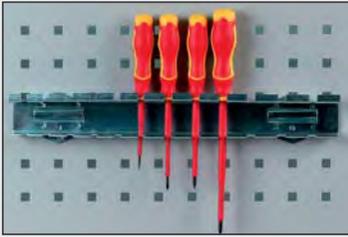
SET N°5 : LENGTH 1750MM

Ref.	Panels	Post
PP05-22	2 tool holder + 1 trays holder	3
PP05-40	4 tool holders	3
PP05-04	4 trays holders	3
ETD-1700	Optional shelf	
CONTACT US	Optional light	



Drawer cabinet

ACCESSORIES



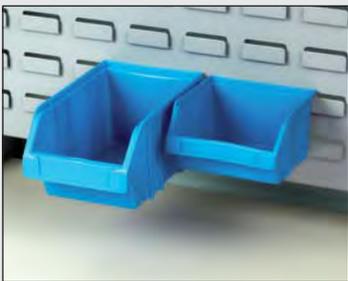
Support for screwdriver (not supplied)

ref. PTVIS



Tool holder hook (length 75mm)

ref. CPT



Trays

ref. BAB-2 (125x105mm)

ref. BAB-3 (125x175mm)



MAIN FEATURES

- Sturdy drawer cabinets in steel for an intensive use.
- Furnace-baked epoxy paint : grey housing, pearl grey drawers
- Width : 720mm / Depth : 645mm / Height : 1000mm
- Maximum load by drawer : 100 kg
- Total weight : between 150 and 160 kg according the model
- Handles with label holder

DESCRIPTION OF THE DRAWERS

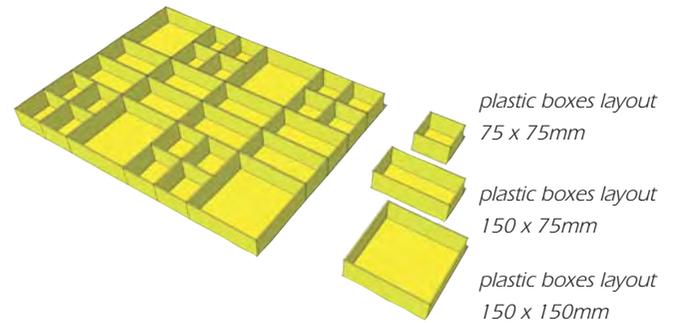
- Drawers with ball bearing slides. A safety device allows the opening of only one drawer at one time. This device prevents the risk of knocking over on the user. The lock jams all the drawers at one time. All the drawers are delivered already equipped.
- Inside dimensions of a drawer : 630 x 450 mm

STANDARD EQUIPMENT OF DRAWERS

Height	Drawer fittings
	28 plastic boxes among 3 sizes
75 mm	16 boxes 75 x 75mm 8 boxes 75 x 150mm 4 boxes 150 x 150mm
100 mm	4 metallic storages including - 28 removable dividers
150 mm	4 metallic storages including - 20 removable dividers
200 mm	4 metallic storages including - 12 removable dividers



metallic storage + dividers layout

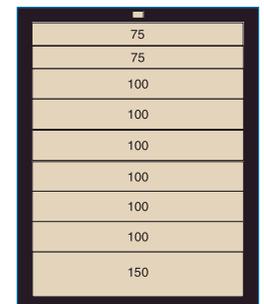
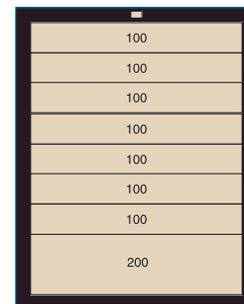
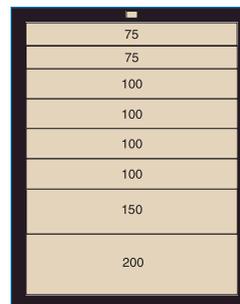


plastic boxes layout
75 x 75mm

plastic boxes layout
150 x 75mm

plastic boxes layout
150 x 150mm

Ref.	AAG-70	AAG-80	AAG-90
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drawer 75mm	2	/	2
drawer 100mm	4	7	6
drawer 150mm	1	/	1
drawer 200mm	1	1	/