

# 10-mm SOLENOID VALVES series "PLT-10"

PLT-10 solenoid valves are the latest development in modern pneumatic design, where the main trends focus on miniaturisation, enhanced performance, reduced power and reliability. Numerous versions are available, all with an ISO 15218 pneumatic interface. The power required to operate the PLT-10 has been greatly reduced, ranging from 0.3 to 0.8 Watts. It is available with a LED indicating when it is active. Monostable manual control is also possible. None of the versions will get damaged if the polarity is accidentally inverted.



## STURDY CONSTRUCTION

**NO!**

~~PIN AND ELECTRONIC BOARD SOLDERING~~

**NO!**

~~METAL CLIPS TO JOIN THE PARTS~~

**NO!**

~~TIN SOLDERING~~

**NO!**

~~PLASTIC SNAP FITTINGS~~

Our engineers have focused on sturdy, highly reliable solutions. The criticalities of conventional pilots have been avoided: pin and electronic board soldering; breakage due to vibration; tin soldering, which is difficult to control; snap clips and fittings between the body and coil, which can yield or alter the distance between the parts.

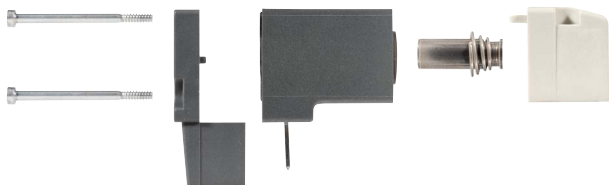
## COMPACTING SCREWS



The main components of the pilot - body, coil and cover - are anchored firmly together and compacted by means of two screws.



### LIMITED NUMBER OF COMPONENTS



To assemble a PLT-10 all you have to do is connect 5 ready-mounted subassemblies. Traditional solutions have 9 or 10 separate components. The stroke of the mobile core is influenced by the tolerance of 3 components only, compared to 5 or 6 in previous solutions.

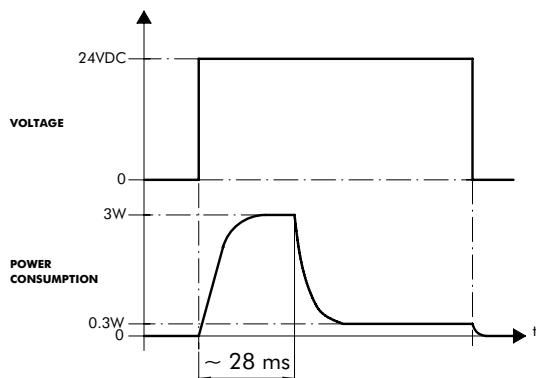
### HIGHLY COMPATIBLE

**FKM/FPM**



The gaskets in contact with the fluid are made of FKM/FPM, a material that is compatible with most oils and fluids. The fluid does not come into contact with any copper parts.

### SPEED-UP



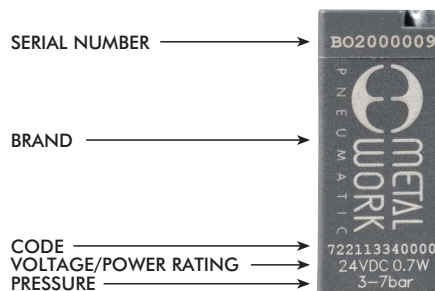
Speed-up valves have very high capacities and fast response times, despite very low power consumption. When a command is received, a high power is generated for a brief period of time so that the valve switches rapidly. Position maintenance power is then delivered, being about one tenth the former value. This solution also allows very low valve temperatures.

### HEAVY-DUTY

## 20 $\mu\text{m}$ FILTERING: OK!

The inside has been designed to allow operation even with unpurified air, within certain limits. The required degree air filtration is just 20  $\mu\text{m}$ . Lubricated air is not required.

### LASER MARKING



Despite its small size, each PLT-10 is laser-marked with the main data. The serial number incorporates the date of manufacture, the production lot and the test data. This allows full traceability of the valve and its components.

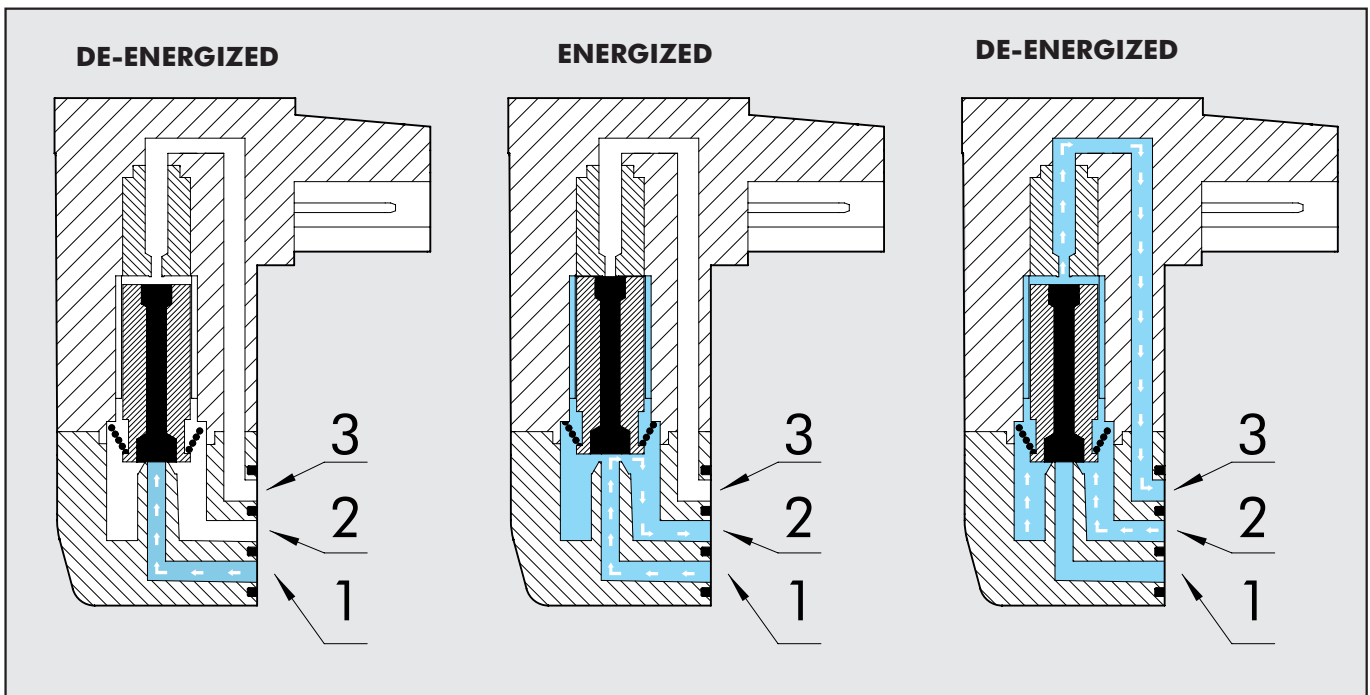
### ENVIRONMENT



Thanks to its reduced input power, even the little PLT-10 helps save energy. If we compare the 0.3 or 0.8W of the various PLT-10 with the 2.5 or 5W of conventional valves, and multiply the millions of items produced by the thousands of hours/year operation, we calculate that 200-400 tonnes of crude oil can be saved each year!

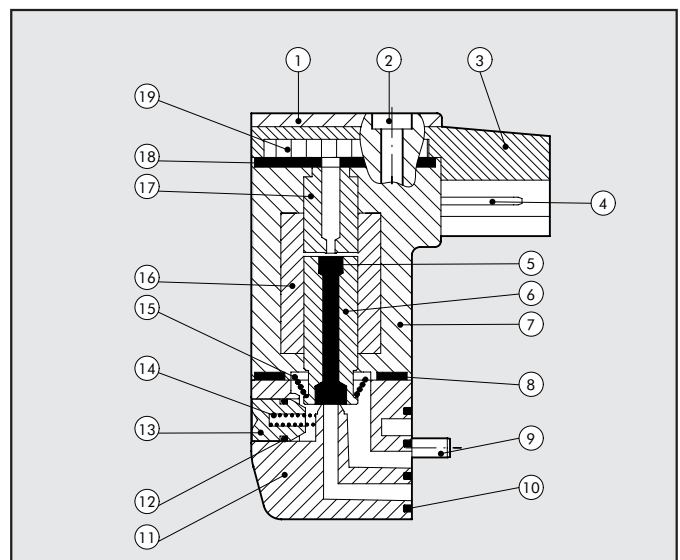
| TECHNICAL DATA              |                |  |
|-----------------------------|----------------|--|
| Type                        |                | 3/2 NC                                   |
| Operating temperature range | T <sub>e</sub> | 5° ÷ 50° C                               |
| Fluid temperature           | T <sub>g</sub> | 5° ÷ 50° C                               |
| Fluid                       |                | Filtered, lubricated or unlubricated air |
| Operating life              |                | Over 50 million cycles                   |
| Weight                      | g              | 12                                       |
| Voltage tolerance           | ΔV             | ± 10 %                                   |
| Max operating frequency     | f              | 30 Hz                                    |
| Switching factor            | ED             | 100 %                                    |
| Insulation class            |                | F155                                     |
| Index of protection         |                | IP51                                     |
| Power connection            |                | PLUG IN                                  |

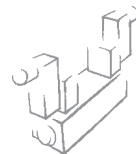
### OPERATING CHART



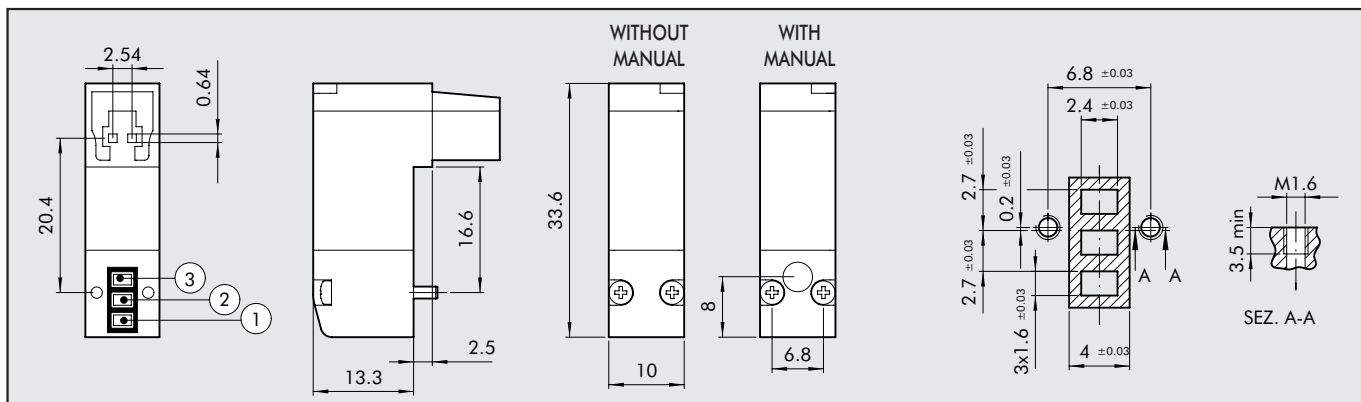
### COMPONENTS

- ① Transparent cover: PA612-transparent
- ② Assembly screws: galvanized steel
- ③ Cover: PA66
- ④ PIN
- ⑤ Mobile core over-stamping: FKM/FPM
- ⑥ Mobile core: AISI 403F
- ⑦ Coil over-stamping: PA66
- ⑧ Body-coil gasket: NBR70
- ⑨ Assembly screws: galvanized steel
- ⑩ Body gasket: NBR
- ⑪ Body: PA66
- ⑫ Manual gasket: NBR (only for version with manual operated)
- ⑬ Manual control: OT58 nickel-plated brass (only for version with manual operated)
- ⑭ Manual spring: AISI 302 (only for version with manual operated)
- ⑮ Spring: AISI 302
- ⑯ Winding: PPS - Copper wire
- ⑰ Fixed core: AISI 430F
- ⑱ Coil-cover gasket: NBR
- ⑲ Electronic board (only for version with electronic board)



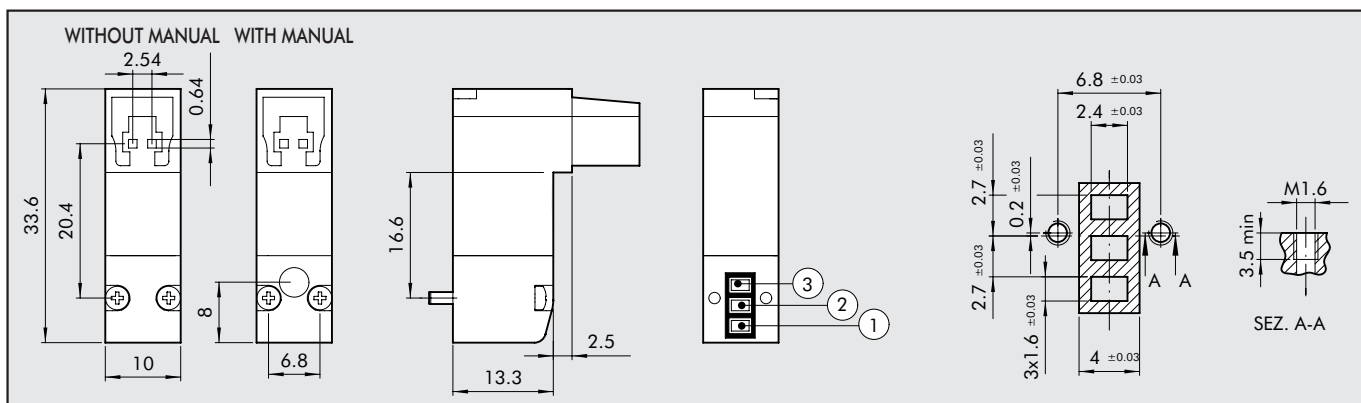


### PLT-10 WITH BASE AND CONNECTION ON THE SAME SIDE



|                | VERSION (3/2 NC) | Code         | Manual  | Voltage [Volt] | Power [Watt] | Through Ø mm | Operating pressure bar | Flow rate at 6 ΔP=1 bar [NI/min] | TMax coil T at 24VDC Te 20°C at ED100% [°C] | Weight [g] |
|----------------|------------------|--------------|---------|----------------|--------------|--------------|------------------------|----------------------------------|---|------------|
| SENZA LED      |                  | 722113340000 | without | 24VDC          | 0.7 W        | 0.6          | 3÷7                    | 9                                | 93  | 12         |
|                |                  | 722113340100 | with    | 24VDC          | 0.7 W        | 0.6          | 3÷7                    | 9                                | 93  | 12         |
| CON LED        |                  | 722113541000 | without | 24VDC          | 0.9 W        | 0.6          | 3÷7                    | 9                                | 93  | 12         |
|                |                  | 722113541100 | with    | 24VDC          | 0.9 W        | 0.6          | 3÷7                    | 9                                | 93  | 12         |
| SPEED-UP E LED |                  | 722116841000 | without | 24VDC          | 3/0.3 W      | 1.2          | 2÷7                    | 16                               | 51  | 12         |
|                |                  | 722116841100 | with    | 24VDC          | 3/0.3 W      | 1.2          | 2÷7                    | 16                               | 51  | 12         |

### PLT-10 WITH TIMER BASE AND CONNECTION ON OPPOSITE SIDES



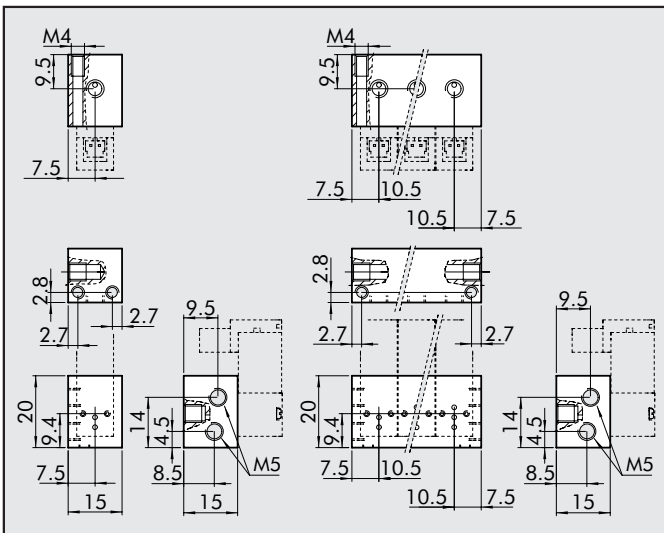
|                | VERSION (3/2 NC) | Code         | Manual  | Voltage [Volt] | Power [Watt] | Through Ø mm | Operating pressure bar | Flow rate at 6 ΔP=1 bar [NI/min] | TMax coil T at 24VDC Te 20°C at ED100% [°C] | Weight [g] |
|----------------|------------------|--------------|---------|----------------|--------------|--------------|------------------------|----------------------------------|---|------------|
| SENZA LED      |                  | 722213340000 | without | 24VDC          | 0.7 W        | 0.6          | 3÷7                    | 9                                | 93  | 12         |
|                |                  | 722213340100 | with    | 24VDC          | 0.7 W        | 0.6          | 3÷7                    | 9                                | 93  | 12         |
| CON LED        |                  | 722213541000 | without | 24VDC          | 0.9 W        | 0.6          | 3÷7                    | 9                                | 93  | 12         |
|                |                  | 722213541100 | with    | 24VDC          | 0.9 W        | 0.6          | 3÷7                    | 9                                | 93  | 12         |
| SPEED-UP E LED |                  | 722216841000 | without | 24VDC          | 3/0.3 W      | 1.2          | 2÷7                    | 16                               | 51  | 12         |
|                |                  | 722216841100 | with    | 24VDC          | 3/0.3 W      | 1.2          | 2÷7                    | 16                               | 51  | 12         |

# 10-mm SOLENOID VALVES series "PLT-10"

## KEY TO CODES

| 7                               | 2   | 2                | 1                                  | 1  | 3              | 3                          | 4  | 0                  | 1 | 00 |
|---------------------------------|---|------------------|------------------------------------|--|----------------|----------------------------|--|--------------------|---|----|
| FAMILY                          | POSITIONING   | POWER CONNECTION | Through Ø                          | POWER  | VOLTAGE        | LED                        | MANUAL CONTROL                           | VERSION            |   |    |
| Solenoid valves series "PLT-10" | <b>1</b> Base and Connection on same side<br><br><b>2</b> Base and Connection on opposite sides | <b>1</b> Plug-in | <b>3</b> 0.6 mm<br><b>6</b> 1.2 mm | <b>3</b> 0.7 W<br><b>5</b> 0.9 W<br><b>8</b> 3/0.3 W | <b>4</b> 24VDC | <b>0</b> -<br><b>1</b> LED | <b>0</b> -<br><b>1</b> manual monostable | <b>00</b> Standard |   |    |

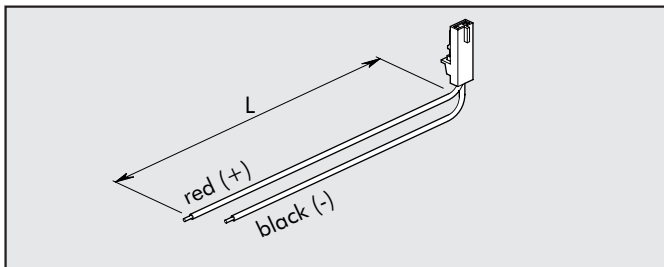
## DIMENSIONS OF BASES FOR PLT-10



| Code        | Description                   |
|-------------|-------------------------------|
| W0400100101 | ACC. BASE 1 POSN. FOR PLT-10  |
| W0400100102 | ACC. BASE 2 POSN. FOR PLT-10  |
| W0400100103 | ACC. BASE 3 POSN. FOR PLT-10  |
| W0400100104 | ACC. BASE 4 POSN. FOR PLT-10  |
| W0400100105 | ACC. BASE 5 POSN. FOR PLT-10  |
| W0400100106 | ACC. BASE 6 POSN. FOR PLT-10  |
| W0400100107 | ACC. BASE 7 POSN. FOR PLT-10  |
| W0400100108 | ACC. BASE 8 POSN. FOR PLT-10  |
| W0400100109 | ACC. BASE 9 POSN. FOR PLT-10  |
| W0400100110 | ACC. BASE 10 POSN. FOR PLT-10 |

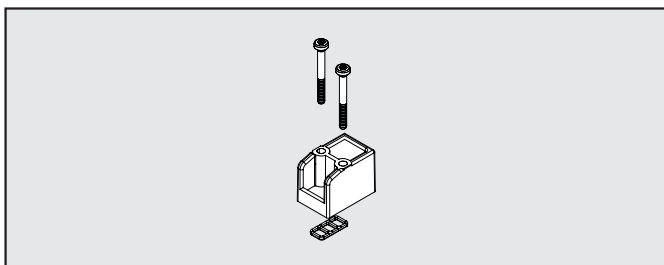
## ACCESSORIES

### PLUG-IN CONNECTOR

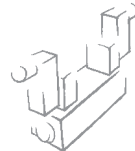


| Code        | Description                     |
|-------------|---------------------------------|
| W0970512000 | MACH 11 PLUG-IN CONNECTOR L=300 |

### CAP FOR UNUSED POSITION

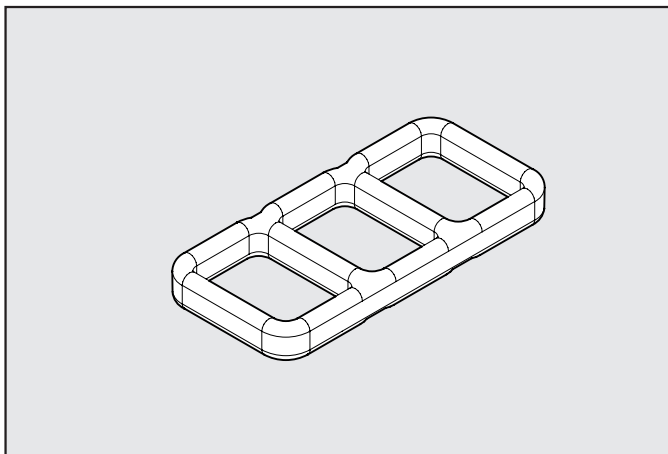


| Code        | Description    | Weight [g] |
|-------------|----------------|------------|
| W0400100200 | ACC. CAP 10 mm | 6          |



## SPARE PARTS

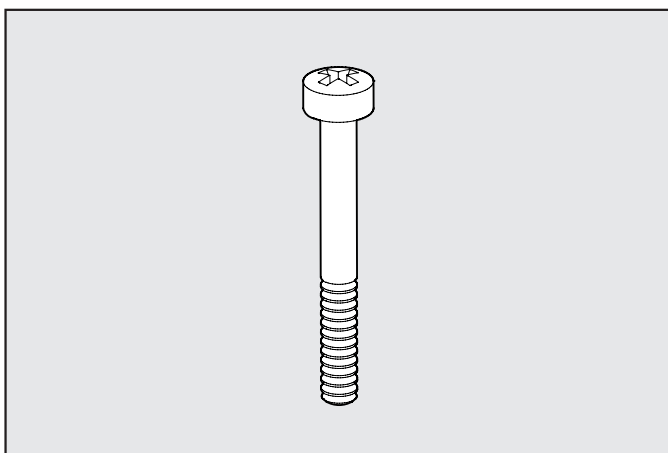
### INTERFACE GASKET



| Code       | Description   |
|------------|---------------|
| 0226009701 | PLT-10 GASKET |

N.B. 50 per pack

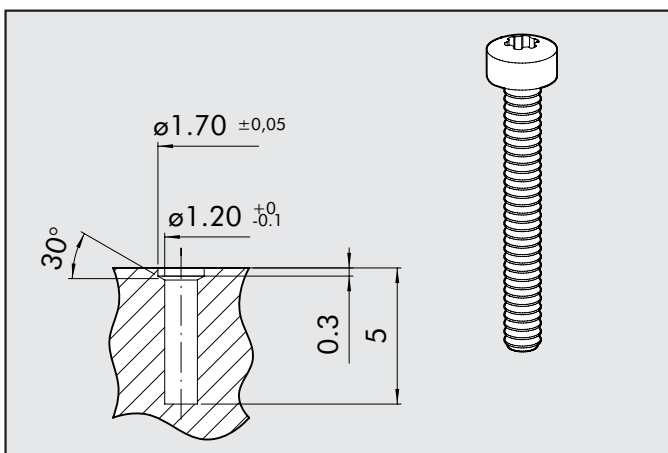
### STANDARD SECURING SCREW (FOR ALUMINIUM)



| Code       | Description                |
|------------|----------------------------|
| 0226009702 | PLT-10 SCREW FOR ALUMINIUM |

N.B. 100 per pack

### SECURING SCREWS FOR TECHNOPOLYMER



| Code       | Description                     |
|------------|---------------------------------|
| 0226009703 | PLT-10 SCREWS FOR TECHNOPOLYMER |

N.B. 100 per pack

When mounting on technopolymer bodies, use these screws instead of the ones supplied with the PLT-10.

**ATTENTION: approximative dimensions for not added glass plastic materials  
It's always advisable to effect assembling tests.**

METAL WORK S.p.A

Head office: Via Segni, 5-7-9 25062 - Concesio (Brescia) Italy - Tel. 030 21 87 11 - Fax 030 21 80 569  
www.metalwork.it - metalwork@metalwork.it

The dimensions shown in this catalogue are subject to variations at any time without prior notice