

PLUMETT **ULTIMAZ**TM
+EVOLUTION

E25

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1. Safety instructions

1.1 Information about this manual

1.1.1 Meaning of Symbols

To draw attention to the safety instructions, the following symbols are used in this manual:

DANGER!
This symbol indicates danger.
To avoid accidents that may lead to serious physical injury or cause death, the instructions signaled by this symbol must be imperatively and strictly adhered to.

IMPORTANT!
This symbol indicates a warning, an alert.
To avoid all mechanical incidents, malfunction or damage of the device, the instructions signaled by this symbol must be followed.

NOTE
This symbol indicates a note or advice concerning the utilization of the device.

1.1.2 Storage of this manual

This operating and maintenance manual and the supplied supports:

- must be considered as a permanent part of the device and must be kept close to the device so that they are accessible at all times to the various users;
- must be retained for the entire service life of the device;
- must be passed on to any subsequent owner or user of the device.

1.2 Obligations of the owner

Provide users with a device in perfect working order.

Ensure that users are trained, instructed and familiar with the contents of this manual and the supports provided.

Provide users with the necessary personal protective equipment in perfect condition.

Never allow minors to use the device.

1.3 Obligations of the operators

NOTE
Operator refers to both user and maintenance personnel.

Read this Operation and Maintenance Manual and the supplied supports carefully before using or working on the device.

Make sure you have understood the content, especially the safety instructions.

Ensure that all persons working around the device are familiar with the safety instructions in this manual.

Be aware of the device's features. The operator is responsible for supervising situations and conditions that could affect the normal operation of the device and safety within the work area.







Do not use the device in case of fatigue, illness or under the influence of a substance that could impair the operator's abilities or judgments. This is a potential safety risk in the workplace.

1.3.1 Compliance with the requirements

When using or working on the device, comply with the legal regulations and local health and safety and environmental protection regulations in force.

1.3.2 Personal protective equipment

For any use or maintenance on the device, subject to locally applicable regulations, always wear the following personal protective equipment:

Personal protective equipment	Potential hazard
Protective glasses 	Splashing of dust particles, splashing of hot oil or pressurized air, battery acid.
Hearing protection 	Noise too high over too long a period of time
Protective gloves 	Burns on hot surfaces, hot oil or battery acid splashes, scratches, soiling.
Safety footwear 	Slipping, falling objects.
Hard hat 	Fall of an object, impact, splashing hot oil or battery acid.
Protective clothing 	Splashing acid from batteries, soiling.

Before each use, check that the personal protective equipment is in a perfect condition.

1.3.3 Safety at the workplace

Ensure that there is sufficient clearance around the device to prevent falls or other potential causes of accidents.

Before working with or on the device, make sure that no outsider or animal can interfere with the work, or that they are at a sufficient distance to avoid any risk of accident.

Do not pass by or stand in front of the tube outlet when it is under pressure.

Communications between the different workstations must be tested and safety signals / messages such as "OFF" and "ON" must be fully understood by the operators. Always inform downstream operators when the cable is to be set in motion.

1.4 Device safety

Before each use, inspect the appearance of the device and its accessories for damage. Be sure to correct any defects before use.

Ensure that all safety and protection devices are in good condition and properly installed.

Never modify or deactivate a safety device for normal device operation.

In the event of defects, damage or other circumstances that may affect safety, immediately stop work by following the normal stopping procedure, or if necessary the emergency procedure and notify the person in charge or the manufacturer of the device.

All surfaces in contact with hands or feet must be kept clean, dry and free of oil and grease.

Only one operator is required to operate the device. He must be permanently at the control panel for the entire period of operation of the device.

Never leave a device unattended.

1.4.1 Battery

DANGER!

Risk of serious injury (burning, electrocution) or damage to important equipment due to improper use and handling of the batteries.

For further details, carefully read the safety instructions for the use and handling of batteries (separate document 298.386).

1.4.2 Pneumatic

DANGER!

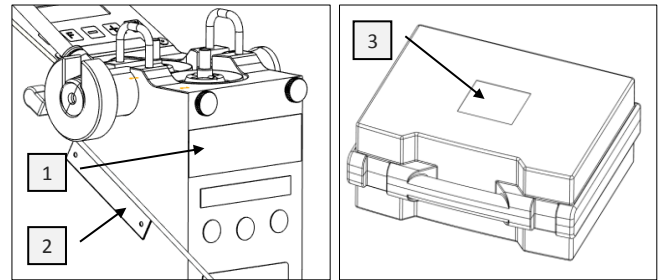
Injury hazard from air pressure

Ensure that all pneumatic hoses are in good condition and properly attached.

The Ultimaz-E25 is supplied with compressed air at an operating pressure of a maximum of 16 bar (232 psi). Before any connection or disconnection, the pressure in the supply and exhaust ducts must be reduced to atmospheric pressure level.

1.5 Warning signs placed on the device

The various warning labels affixed to the device will always be perfectly readable and understandable. If not, they must be replaced.



1. Lock before use
2. Must be connect to earth
3. Lithium Battery

IMPORTANT!

Customers outside Europe will receive the box without a battery or battery charger. The "Lithium Battery" label inside the box must be affixed to the cover of the box once the battery is purchased.

1.6 Disclaimer of manufacturer's liability

The manufacturer disclaims all liability for personal injury or material damage resulting from:

- non-compliance with the content of this manual and its supports,
- failure to comply with applicable legal or local safety and accident prevention regulations,
- operation of the device for purposes other than the intended use
- operation of the device by untrained or unauthorized personnel
- modifications or interventions not authorized by the manufacturer,
- use of spare parts that are not original or not compatible with the device,
- repair not carried out by qualified technical personnel
- failure to comply with the maintenance program.

2. Declaration of conformity

Déclaration CE de conformité

CE declaration of conformity

CE Konformitätserklärung



Le fabricant:
The manufacture:
Der Hersteller:

PLUMETTAZ SA
Fabrique de machines
CH-1880 Bex (Switzerland)

déclare par la présente que les machines décrites ci-après,
thereby declares that the following described machinery,
expliert hiermit, dass unten beschriebene Maschinen,

Appareil pour la pose de câbles par "JETTING"
Machine for cable installation using the "JETTING" method
Gerät für die Kabelverlegung mit "JETTING"

Type: **ULTIMAZ - E25**

N° de série / Serial No. / Serien-Nr.:

Année/Year/Jahr:

satisfont à l'ensemble des dispositions pertinentes
des directives suivantes:

*fulfil all the relevant provisions of the following
directives:*

alle einschlägigen Bestimmungen der folgenden
Richtlinien erfüllen:

2006/42/CE Machines
2006/42/EC Machinery
2006/42/EG Maschinen

Normes harmonisées appliquées:

Harmonised standards used:

Angewandte harmonisierte Normen:

EN ISO 12100

Personne autorisée à constituer le dossier technique:

Person authorised to compile the technical file:

Person die bevollmächtigt ist, die technischen
Unterlagen zusammenzustellen:

Yvan Chappuis
PLUMETTAZ SA
CH-1880 Bex (Switzerland)

Bex, **23.10.2020**

Steve Crettenand
Quality System Manager

3. Identification

3.1 Headquarters

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1880 BEX
Switzerland
Phone +41 24 463 06 06
Fax +41 24 463 06 07
Website www.plumettaz.com

3.2 Distributors

Full list available at :
www.plumettaz.com

3.3 Subsidiaries

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PLUMETTAZ PROJECT EQUIPMENT
(SHANGHAI) CO. LTD.
No 1591 Jialuo Road
Jiading District
SHANGHAI 201818
China
Phone +86 21 3952 3206

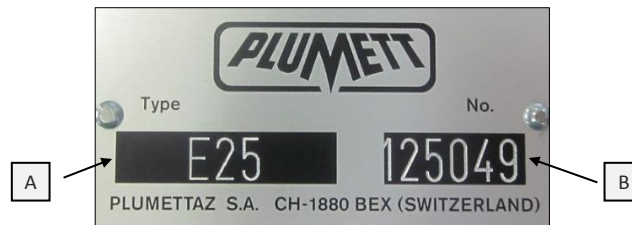
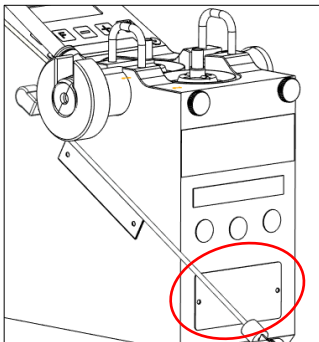
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Marconistraat 113
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Phone +31 182 69 6939
Website www.hms-machines.nl

3.4 Product description

Ultimaz-E25

3.5 Device identification plate



- A. Type of device
- B. Serial number

4. Specifications

4.1 Field of application

The Ultimaz-E25 is designed for the installation of FO microcables in preinstalled microducts using a pushing, or blowing method.

The pushing method consists in a mechanical push of the microcables over a short distance.

The "blowing" method consists in the combination of a mechanical pushing force and a high-speed air stream along the microcable surface. This method is the safest for the microcable and ensures the longest possible installation.

Any type of FOC or conventional microcable can be installed using the Ultimaz-E25.

The Ultimaz-E25 is mainly used for the installation of FTTH networks.

IMPORTANT!

Any usage of the device not corresponding to the purpose it was manufactured for is considered non-compliant to the intended use by Plumettaz SA, who thus refuses any kind of responsibility for accidents caused by this form of use.

4.2 Technical characteristics

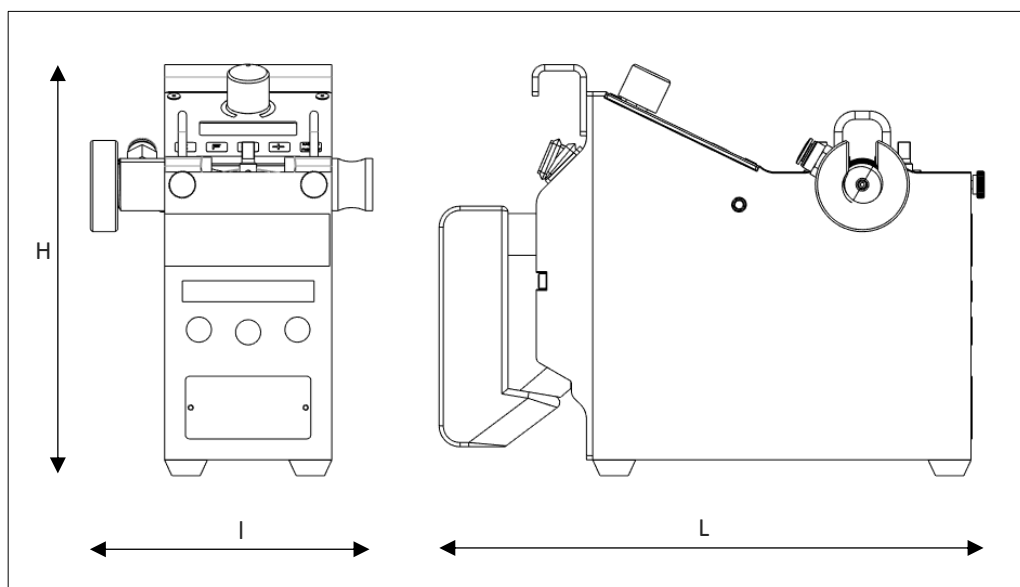
General								
Cable diameter	mm	0,8 - 4						
Outer duct diameter	mm	3 - 12						
Duct inserts available (others dimensions on request)	mm	3 - 4 - 5 - 6 - 7 - 8 - 10 - 12						
Pushing force (programmed)	N <i>lbf</i>	3 <i>0.67</i>	5 <i>1.12</i>	7 <i>1.57</i>	10 <i>2.25</i>	15 <i>3.37</i>	20 <i>4.50</i>	23 <i>5.17</i>
Max. speed	m/min <i>ft/min</i>	90 <i>295.3</i>	110 <i>360.9</i>	130 <i>426.5</i>	190 <i>623.4</i>	200 <i>656.2</i>		
Radial force on the cable	N <i>lbf</i>	0 – 65 <i>0 – 14.61</i>						
Ambient operating temperature	°C °F	-10 / +40 <i>14 / 104</i>						
Resistance to shocks and vibrations		According to EN 60068 2-6 et 2-32						
Weight								
Device only	Kg <i>lb</i>	4,3 <i>9.48</i>						
Device, including accessories and storage box (approx.)	Kg <i>lb</i>	8,0 <i>17.64</i>						
Power supply/Battery								
Type of battery		Makita BL1850B Li-ion						
Voltage	V	18						
Capacity	Ah	5,0 (90Wh)						
Runtime	h	4 at 70% of pushing force						
Recharge time	min	45						
Charger		Makita DC18RC						
Compressed air supply (compressor/air bottle)								
Air pressure	bar <i>psi</i>	0 – 16 <i>0 – 232</i>						
Nominal air flow for ducts with an ID $\varnothing \leq 4$ mm	m ³ /min <i>cfm</i>	0,1 – 0,2 <i>3.5 – 7.0</i>						

DANGER!

Injury hazard from air pressure

For safety reasons, compressors with a nominal pressure exceeding 16 bar (232 psi) must be equipped with a device limiting this pressure to 16 bar (232 psi).

4.3 Sizes

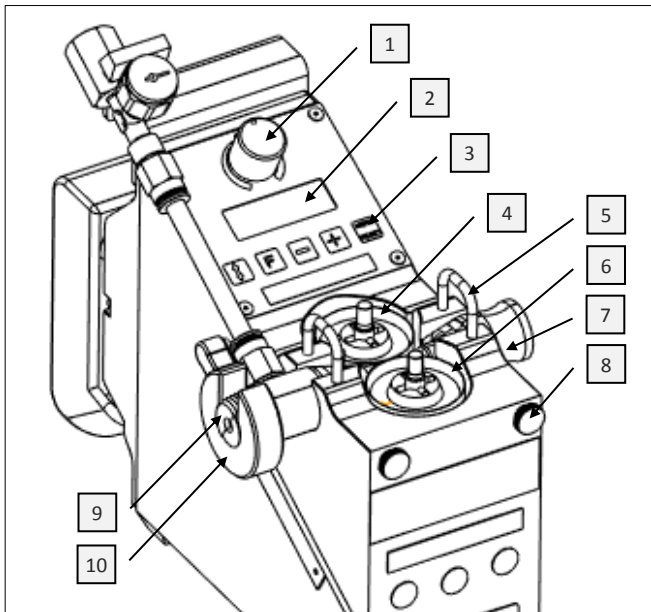


		L	W	H
Ultimaz-E25	mm	255	80	195
	<i>in</i>	<i>8.85</i>	<i>3.15</i>	<i>7.68</i>
Storage box	mm	500	420	225
	<i>in</i>	<i>19.69</i>	<i>16.54</i>	<i>8.85</i>

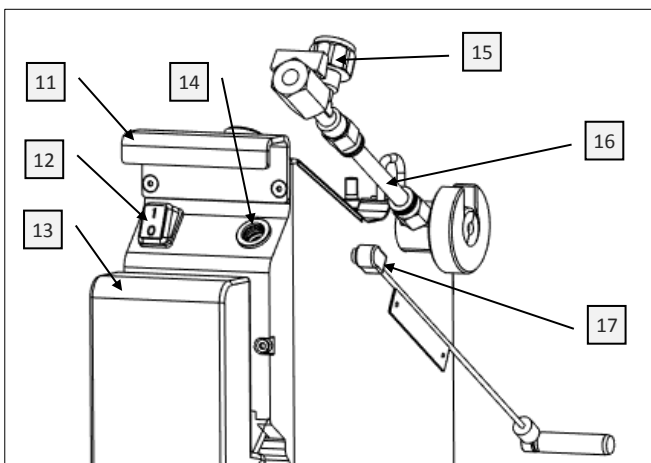
5. Description

5.1 Ultimaz-E25

The Ultimaz-E25 is a modular device. By combining accessories, it is possible to adapt the device for specific needs in installing fiber bundles, microcables, flat cables and EPFU, without having to buy a new device.

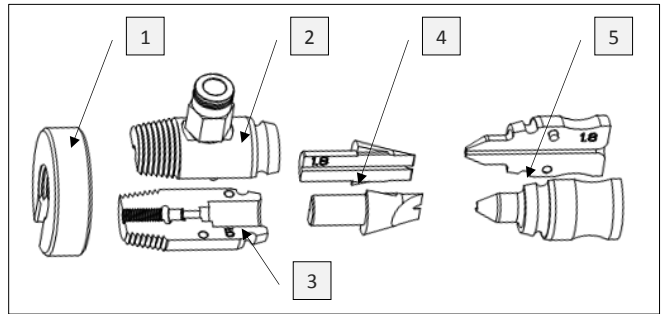


1. Speed adjusting knob
2. Information display
3. Control buttons
4. Pressure wheel
5. Lock forks for inserts and guides
6. Drive wheel
7. Cable guide
8. Retaining bolt for lock forks
9. Duct insert
10. Lock nut for duct insert



11. Handle
12. On/Off switch
13. Battery
14. Plug for external device
15. Air pressure manometer
16. Pneumatic connecting set
17. Grounding cable

5.2 Cable guides and duct inserts



1. Lock nut for duct insert
2. Lower duct insert
3. Upper duct insert
4. Cable insert
5. Cable guide

5.3 Standard Equipment

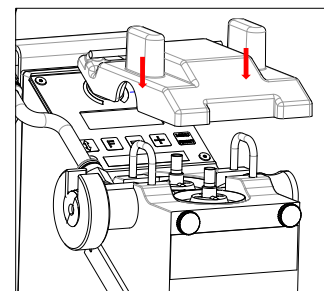
- 1 box for the Ultimaz-E25 and accessories
- 1 set of tools
- 1 battery charger *
- 2 batteries *
- 1 round nut \varnothing 45 mm (1.77 in) for set of splittable inserts
- 1 bottle of Micro Jetting Lube lubricant
- 1 operating and maintenance manual

* Customers outside Europe will receive the box without a battery or battery charger.

5.4 Accessories to be ordered

- Set of duct inserts
- Set of cable inserts
- Set of cable guides
- Set of lip seals
- Set of O-rings
- Drive and pressure wheels
- Rain cover
- "Jet Planner" software

5.4.1 Rain cover



A rain cover with waterproof seals has been designed.

Place the cover on the lock forks for inserts. It is held in place by magnets.

6. Preparation before utilization

6.1 Cable installing route

Before preparing for cable installation, the operator must enquire about the characteristics of the duct route, including the length, location and dimensions of bends and obstacles such as duct connectors, differences in height, duct material and the state of cleanliness. The characteristics of the cable to be installed must also be known, e.g. the dimensions, rigidity and quality of the cable coating.

Make sure that the length of the route does not exceed the capacity of the Ultimaz-E25.

NOTE



To assist in the preparatory work, the optional "Jet Planner" software enables maximum section lengths to be determined according to the characteristics of the soil, duct, cable, etc.

6.1.1 Condition of the duct

Check the duct, ensuring that:

- it is calibrated
- it is clean
- it is airtight
- it is not blocked, bent or crushed

NOTE

The duct can be lubricated and blowing performance thus improved using the Micro Jetting Lube product, which is supplied with the device (see instructions 298.238).

NOTE

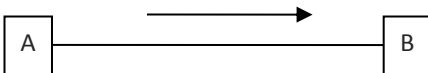
To eliminate any potential water in the duct, blow first air through and then foam plugs.

Lubricate the duct again.

6.2 Cable installation mode

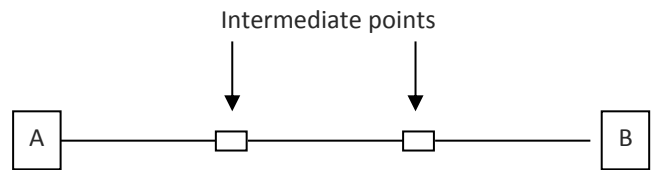
The Ultimaz-E25 allows to choose between 2 installation modes:

From A to B



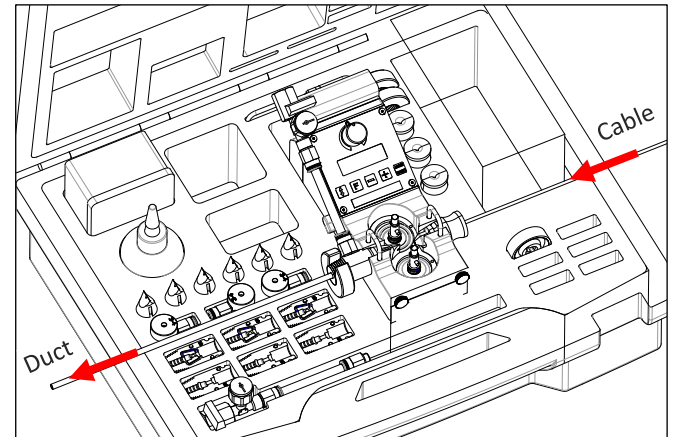
With this mode you can install a cable directly from point A to point B. Non splittable inserts will be used.

In multiple stages



With this mode you can install a cable in multiple stages through intermediate points. Splittable inserts will be used.

6.3 Setting up the Ultimaz-E25



The box containing the Ultimaz-E25 was designed so that you can use the device without taking it out depending on the work site layout.

After the cable installation you can leave the inserts used on the Ultimaz-E25 and still close the box.

NOTE

A dirty or wet cable will soil the wheels and may cause the cable to slip. Clean the cable before it enters the Ultimaz-E25. In such circumstances it will be better to take the Ultimaz-E25 out of the box to work so as not to soil the box and accessories.

NOTE

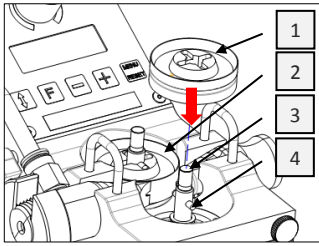
To change the direction of cable laying, reverse the mounting of the cable insert and duct insert on the Ultimaz-E25.

IMPORTANT!

Position the Ultimaz-E25 and the cable reel so that the cable unwinds easily and with no damage.

6.4 Preparing the Ultimaz-E25

6.4.1 Installing the pressure and drive wheels



1. Drive wheel
2. Pressure wheel
3. Wheel shaft
4. Wheel shaft pins

DANGER!

Risk of injuries due to entanglement in the wheels

Loose clothing, hair, cleaning brushes, rags or other materials can become entangled in moving parts of the device. Always turn off the power before changing or cleaning the wheels.

Select the appropriate wheels depending on the cable type and dimensions, in accordance with the information below.

∅ cable (mm)	Pressure wheels*		Drive wheels
0,8 – 1,3	NBR ** flat	Alu	NBR **
1,3 – 1,6			NBR **
1,6 – 2			Wheel 2
2,1 – 2,5	Alu		Wheel 2.5
2,6 – 3,0			Wheel 3
3,1 – 3,5			Wheel 3.5
3,6 – 4,0			Wheel 4

* Wheels selection may vary depending on cable type or construction.

** NBR = rubber

Other wheel dimensions on request.

No tools are needed to install the drive and pressure wheels. Install the wheel onto the shaft, ensuring that it is positioned correctly (drive wheel on the fixed shaft, pressure wheel on mobile shaft).

Press on the wheel to engage it onto the pins.

Hold the wheel or the shaft so that it does not move.

Rotate the wheel or the shaft, by 90°.

Release the wheel. The pin must come in the wheel's groove.

For removal, press with 2 fingers on the edges of the wheel and turn the shaft at an angle of 90°.

6.4.2 Selecting the duct inserts

Select the appropriate duct insert depending on the duct outer diameter.

NOTE

The ducts diameters are engraved on the inserts

6.4.3 Selecting the cable inserts and cable guides

Select the appropriate cable insert and cable guide depending on the cable diameter.

NOTE

Cables diameters are engraved on the inserts and guides

6.4.4 Selecting the O-ring for the duct

Select the appropriate O-ring depending on the duct outer ∅.

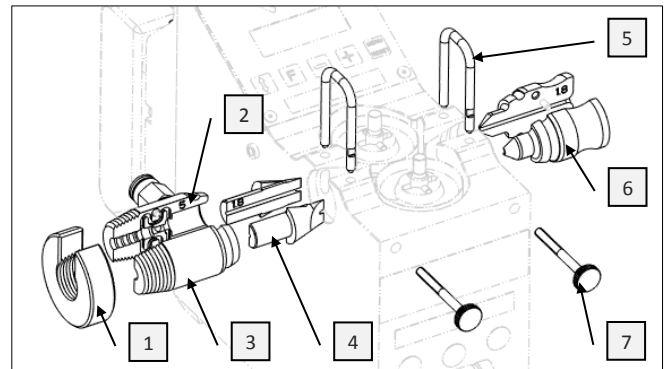
O-rings are available from ∅ 3mm to ∅ 12mm.

6.4.5 Selecting the lip seal

Select the appropriate cable lip seal depending on the ∅ of the cable

Cable seals are available from ∅ 0.8mm to ∅ 4mm.

6.4.6 Installing splittable duct inserts, cable inserts and cable guides



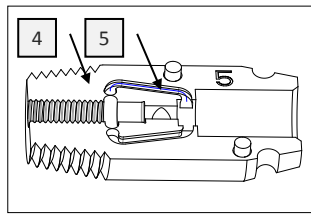
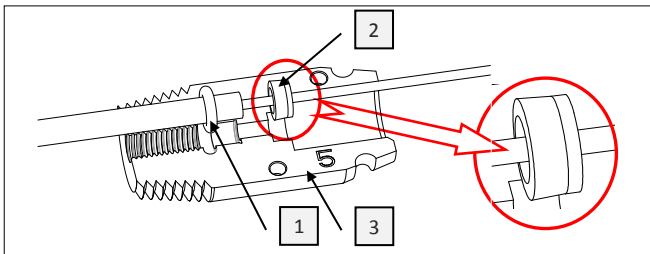
1. Lock nut for duct insert
2. Lower duct insert
3. Upper duct insert
4. Cable insert
5. Lock fork
6. Cable guide
7. Retaining bolt for lock forks

NOTE

Duct inserts and cable guides can be fitted to either side of the Ultimaz-E25 body.

IMPORTANT!

Before mounting, check that the lip seal and the O-ring are in good condition. Replace if necessary. Likewise, check that the seals surfaces are free of all impurities and deposits. Clean them using a soft cloth, if necessary.



1. O-ring
2. Lip seal
3. Upper duct insert
4. Lower duct insert
5. Sealing cord

Install an O-ring around the duct.
 Install a cable lip seal around the cable (check the lip seal's direction)
 Install about 20cm (8 in) of cable into the duct.
 Install the duct into the upper duct insert.
 Install the O-ring in its housing
 Install the lip seal in its housing.
 Close with the lower duct insert. The pins will center the 2 inserts
 Tighten the inserts with the lock nut.

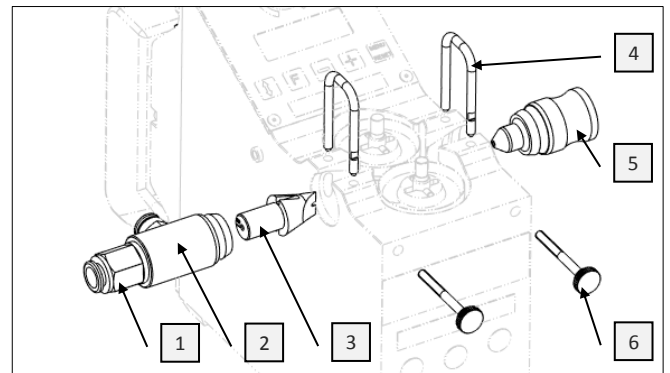
NOTE
 Only the lower duct inserts have a groove for the sealing cord.

NOTE
 When installing "point-to-point" lip seal and O-ring can be used in as-is condition, but for flexibility and safety it is advised to always use cut O-ring and lip seal.
 For intermediate installation both O-ring and lip seal must be cut before starting installation to avoid any risk of damaging the microcable when cutting/removing un-cut lip seal from microcable.

Install the cable between the 2 cable inserts.
 Install the cable inserts into the duct insert.
 Install the duct insert in the Ultimaz-E25. Align the groove in the cable inserts with the pin on the body of the Ultimaz-E25.
 Lock the duct insert with the lock fork.
 Secure the fork with the retaining bolt for lock forks.
 Install the cable between the 2 cable guides.
 Install the cable guides in the Ultimaz-E25.
 Lock the cable guides with the lock fork.
 Secure the fork with the retaining bolt for lock forks.
 Check that the cable slides smoothly.

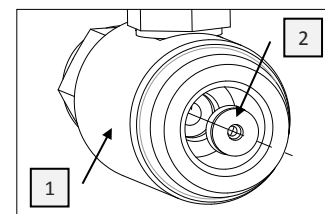
DANGER!
 Secure the lock forks before applying pressure.

6.4.7 Installing non splittable duct insert and cable guide



1. Quick coupling for duct
2. Duct insert
3. Cable insert
4. Lock forks
5. Cable guide
6. Retaining bolt for lock forks

Introduce the cable into the cable guide.
 Introduce the cable into the cable insert.



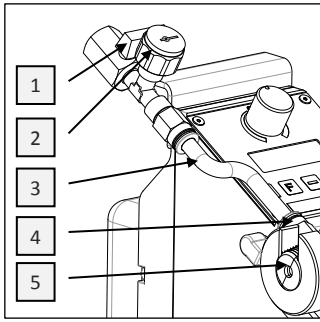
1. Duct insert
2. Lip seal

Install the cable seal into its housing, using a pen, pencil or something similar.
 Install the cable insert into the duct insert.
 Introduce the cable until it comes out of the duct insert.
 Install the cable guide and the duct insert into the Ultimaz-E25. Align the groove on the cable insert with the pins on the Ultimaz-E25.
 Lock the cable guide and the duct insert with the lock forks.
 Secure the forks with the retaining bolts for lock forks.
 Check that the cable slides smoothly.

DANGER!
 Secure the lock forks before applying pressure.

Install about 20cm (8 in) of cable into the duct.
 Connect the duct and the duct insert using the quick coupling.

6.4.8 Compressed air connection



1. Air inlet valve
2. Manometer
3. Tube
4. Quick coupling
5. Duct insert

IMPORTANT!

When connecting to a compressor, a water separator must be used to avoid the build-up of water.

The connection kit connects the Ultimaz-E25 to the compressed air system. The maximum allowed operating pressure is 16 bar (232 psi).

The connection kit is fitted with a G1/8" connector.

The air inlet is controlled by a manual valve, which enables the operator to adjust the pressure. A pressure gauge indicates the pressure in the Ultimaz-E25.

Screw the quick coupling into the duct insert.

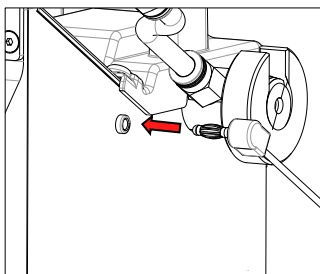
Connect the tube to the duct insert.

Connect the other end of the tube to the air inlet valve.

Turn the valve towards the compressed air supply by rotating the duct insert.

Connect the air inlet valve to the compressor or air bottle.

6.4.9 Connecting the grounding cable



To prevent static electricity generated by the friction of the cable in the duct, use the grounding cable supplied with the device.

IMPORTANT!

The dowel pin at the end of the cable must touch the ground for the system to work.

6.5 Mounting of the battery

The Ultimaz-E25 is powered by a rechargeable battery.



Press the button on the battery to know how much power you have left.



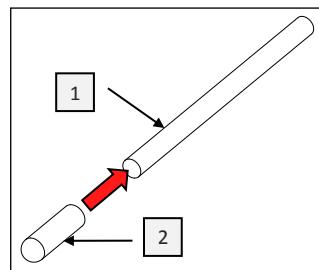
To install the battery on the Ultimaz-E25, just slide it from bottom to top at the back of the device.

To remove the battery, press the grey button and pull downward.

NOTE

When operating outdoors protect the device from rain.

6.6 Preparing the cable



1. Cable
2. Cable cap

In order to prevent the tip of the cable from getting blocked in the duct connectors, it is recommended that a cable cap or bead is used. The outer diameter of a cable cap should not exceed the diameter of the cable by more than 0.5mm.

6.7 Determining the pushing force: Crash test

Each fiber optic cable has its own mechanical characteristics. It is therefore recommended that a "CRASH TEST" is carried out before installing any fiber cables in order to check that the pushing force and the radial force on the cable are adequate.

IMPORTANT !

The best results during installation are achieved with the lowest possible radial force. In order to obtain the most precise result possible, use the same microduct that you are going to install, for the crash test.

Prepare a length of one to two meters of duct with one end blocked. Place the unblocked end into the insert corresponding to the outer diameter of the duct.

Install the lip seal on the cable and place it in the insert.

Install and lock the inserts in the Ultimaz-E25.

Check by hand that the cable is free from friction and insert a few centimeters of it into the duct.

Lower the pressure wheel onto the cable.

Select the pushing force according to the type of cable. Keep the default %.

Turn the speed adjusting knob fully to run the Ultimaz-E25 at maximum speed and feed the cable through until the blockage in the duct.

If the drive wheel slips when the cable reaches the blockage, repeat the crash test with a higher radial force. If the drive wheel stops when the cable reaches the blockage, repeat the crash test with a higher pushing force.

Continue to run crash tests until the torque with the "maximum admissible pushing force / minimum radial force" is achieved. In this case, when the micro-cable reaches the stop, the drive wheel of the Ultimaz-E25 stops without slipping and without causing damage to the coating of the cable.

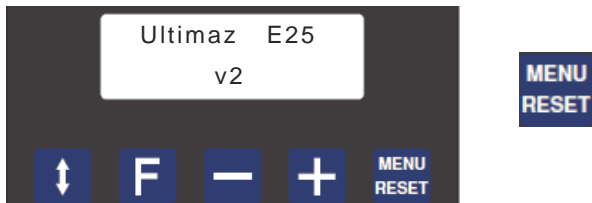
IMPORTANT!

Do not pressurize the duct during this test.

7. Operating instructions

7.1 Control panel

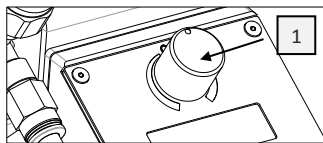
7.1.1 Name of device and software version



When the device is turned on, it displays briefly the name of the device and the version of the software.

To see the software version again, press several times on "MENU-RESET" until the information appears.

7.1.2 Selecting the direction and speed of cable

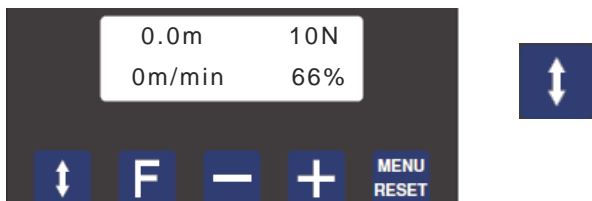


1. Speed adjusting knob

Turn the speed adjusting knob to select the speed of the cable installation.

The device is bi-directional. To reverse the direction, stop the speed adjusting knob on zero for at least 1 second before turning on the other side.

7.1.3 Selecting the radial force on the cable

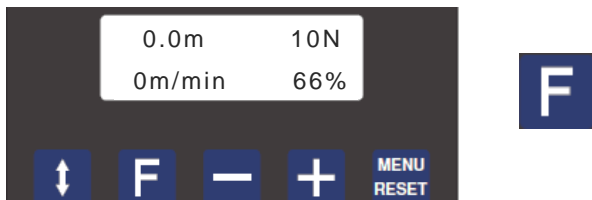


Press \updownarrow button to tighten or release the pressure wheel.

NOTE

The radial force is related to the pushing force selected.

7.1.4 Selecting the pushing force (N)

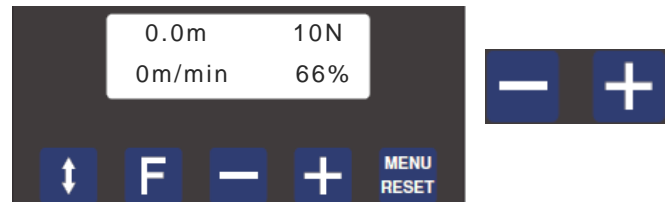


Press the "F" button to select the pushing force (here 10N).

NOTE

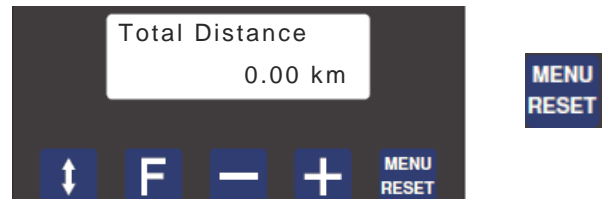
When the device is turned on, it will display the last pushing force used.

7.1.5 Adjusting the radial force on the cable



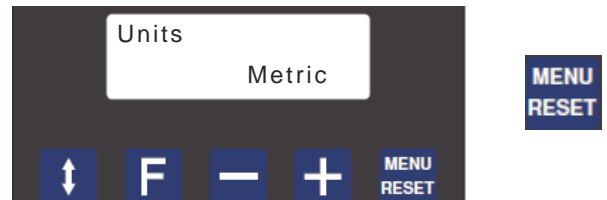
Once the pressure wheel is shut and the pushing force is selected you can increase or decrease the radial force using the "+" or "-" buttons

7.1.6 Total distance



Press repeatedly on the "MENU-RESET" button to display the total distance.

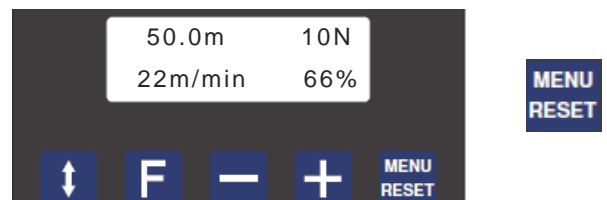
7.1.7 Selecting the measuring units



Press repeatedly on the "MENU-RESET" button to access Units.

Press on "+" or "-" to select "Metric" or "Imperial".

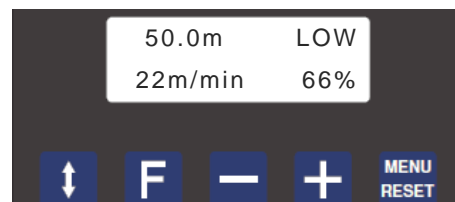
7.1.8 Cable installation data



During the cable installation, the distance, the pushing force, and the cable speed are displayed.

Press 3-4 seconds the "MENU-RESET" button to reset the distance.

7.1.9 Battery information



"LOW" on the top right corner of the screen means the battery is low.

The Ultimaz-E25 motor will stop.

Recharge the battery.

7.2 Installing the cable

Turn the Ultimaz-E25 on.

Make sure the speed adjusting knob is on the "0" position.

Check that the distance indicator is set to zero.

Select the pushing force.

Close the pressure wheel.

Note the distance written on the cable. This enables any installation problems to be localized.

Start the installation at a reduced speed and gradually increase the speed until an average speed of 25 to 40 m/min (82 to 131 ft/min) is reached.

Once the speed has stabilized, slightly open the air inlet valve so that a maximum pressure of 2 to 3 bar (29 to 43 psi) is displayed on the manometer.

Once the speed starts to decrease, gradually increase the air pressure by opening the air inlet valve bit by bit.

IMPORTANT!

In case of emergency, turn the speed adjusting knob to "0" and then close the air supply. Allow all air to escape from the duct.

NOTE

Using an air cooler/water separator will ensure an optimum result.

7.3 Stopping the cable installation

Turn the speed adjusting knob to "0".

Close the air inlet valve.

Allow all air to escape from the duct.

Open the pressure wheel.

Remove the cable and duct inserts.

If you are installing a cable in multiple stages, restart the preparation procedure.

8. Maintenance

8.1 Safety

Before performing any maintenance work, make yourself familiar with the general safety instructions (see § 1).

Maintenance work must be performed by qualified technical personnel.

For maintenance work not described in this manual, contact the manufacturer or your authorized distributor.

It is essential to observe the maintenance intervals.

DANGER!

All maintenance work must be performed with:

- the device stopped and cooled,
- the power is disconnected,
- no parts in motion,
- all plugs disconnected,
- the device secured against unintentional starting,
- the air pressure in the installation reduced to the atmospheric pressure level.

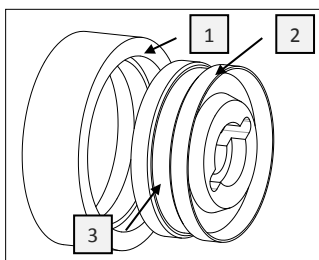
8.2 Cleaning

Clean the device and its accessories thoroughly before storing them in the storage box.

In order to guarantee the optimum functioning of the Ultimaz-E25 and of its accessories, it is recommended that the following maintenance plan is observed:

Description	Frequency	
	Every usage	Weekly
Clean using compressed air; remove dust from the drive wheels, the cable/duct inserts and cable guides.		
Remove the cable/duct inserts, cable guide, drive wheel and pressure wheel. Clean using compressed air in order to remove dust. Water can be used to clean the inserts. Use a dry cloth to thoroughly dry the components after washing them with water. If the seals of the inserts or the cable feeder are damaged, they must be replaced in order to prevent air leaks.		
Clean the rubber tires from ink deposits and dirt from the cables to prevent slippage of the wheel. Use a degreasing agent and after use "scotch-brite" or fine sand paper to roughen the rubber surface for optimum grip.		

8.3 Changing the rubber tire of the drive wheel



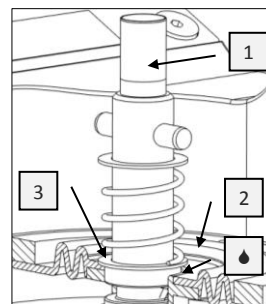
1. Rubber tire of the wheel
2. Wheel
3. Groove

When the tire of the drive wheel is worn out, you can change it easily and without tools.

Push it out with your fingers to remove it from the groove.

Install a new tire proceeding in the reverse way.

8.4 Wheel shaft lubrication



1. Wheel shaft
2. Bellows
3. Washer

In case of hissing noise during rotation, remove the wheels and put a drop of oil under the washer between the shafts and the bellows.

8.5 Battery

NOTE

For maintenance operations and safety instructions relating to the batteries refer to the manufacturer's operating and maintenance manual (separate document 298.386).

8.6 Storage

Storage temperature	-20°C - +70°C (-4 – 158 °F)
Level of humidity	0 - 100%

8.7 Product end of life

This product must not be disposed of with regular domestic waste. When the product arrives at the end of its life or is replaced, it must be recycled safely in accordance with applicable local legislation.

By separating waste into recyclable and non-recyclable components, you can help this product be recycled and protect the environment.

For more information about disposing of or recycling components from this device, please contact your local waste management facility or Plumettaz SA.

9. Troubleshooting

Problem	Probable cause	Solution Chapter N° Document
Pressure and drive wheels difficult to install	Wheel bores or shafts damaged or dirty	§ 8.2
Cable insert or cable guide difficult to install, remove or lock	Bores dirty	§ 8.2
	O-ring of duct or lip seal badly installed, worn or damaged	§ 6.4.6
	Cable / duct inserts badly installed or damaged	§ 6.4.6 - 6.4.7
	The duct is inserted incorrectly into the duct insert	§ 6.4.6 - 6.4.7
	The duct insert does not match the duct diameter	§ 6.4.2
The pressure wheel does not go back far enough	Wheel bores or shafts damaged or dirty	§ 8.2
The message "Low" appears on the display	The battery is low	§ 7.1.9
Microcable blocked	Blockage in the duct	§ 6.1.1
	Air pressure too low	§ 6.4.8
	Duct is too long	§ 6.1
The drive wheel slips on the cable	The radial force on the cable is badly adjusted	§ 7.1.5
	Pushing force too high	§ 7.1.4
	Wheel dirty	§ 8.2
Low cable installing speed	Pushing force too low	§ 7.1.4
	Air pressure too low	§ 6.4.8
	Air leak in the circuit or air pressure too low	§ 6.1.1 - 6.4.8
	Duct is too long	§ 6.1
Air pressure does not increase	Sealing cord of duct inserts damaged	§ 6.4.6
	Duct or cable O-ring seals have been fitted incorrectly, are worn or damaged	§ 6.4.6
	The duct is inserted incorrectly into the duct insert	§ 6.4.6 - 6.4.7
	Air leak in the circuit or air pressure too low	§ 6.1.1 - 6.4.8
Hissing noise during rotation	The wheel's shaft is dry	§ 8.4

NOTE

For other malfunctions, please contact the manufacturer or authorized distributor. Only the aforementioned are authorized to carry out repairs on the Ultimaz-E25.



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PUSH
THE
BOUNDARIES