BORALIT
plastic tank solutions

PUMPINGSTATIONS

USERSMANUAL

PP850/1/TOP 2
PP850/1/TOP 5
PP850/1/RXm 2/20
PP850/1/RXm 5/40
PP850/1/MCm 10/45
PP850/1/MCm 15/45

PP850/2/TOP 2
PP850/2/TOP 5
PP850/2/RXm 2/20
PP850/2/RXm 5/40
PP850/2/MCm 10/45
PP850/2/MCm 15/45

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2. General

2.1 Safety instructions

General safety features

During installation, operation, maintenance or repair of the system, the regulations for the prevention of accidents,
as well as the directives of the local power supply industry must be heeded.
Our installations may not be used in explosion areas.

Personnel qualification and training

The personnel used for operation, maintenance, inspection and assembly must possess the appropriate qualification for this type of work. The area of responsibility, the authority and the supervision of personnel must be exactly regulated by the operator. If personnel do not have the necessary knowledge, they must be trained and instructed.
In addition, the operator must ensure that the contents of the operating instructions have been completely understood by any personnel working with the system.

Danger of electric voltage

This system operated on electrical current and has rotating mechanical parts. Non-compliance with the operating instructions may result in considerable damage to property, personal injuries or even fatal accidents.

The system must be disconnected from the mains before any work is carried out on it. Main switch and fuses must be switched off i.e. made voltage-free. If only fuses are available, these must be switched off and secured by a sign so that third parties cannot switch the main fuse back on again.

The control unit and float switches / level controls are under power and must not be opened. Only qualified electricians may carry out work on electrical equipment.

It must be ensured that the electric cables as well as all other electrical system components are in perfect operating condition. In case of damage, the system may on no account be placed into operation or must be shut down immediately.

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2.2 Scope

The pumping stations transport non faecal water that is situated below the discharge level, fully automatically to the discharge level. They are used for household water, industry, hotels and restaurants, warehouses, hospitals, schools, ...

The installation is only to be used in applications without ATEX requirements. The installation comes under fire class f.

The pumping stations must be equipped with a second pump (stand by pump) in the case that the breakdown of a single pump is not allowable. With a twin pump system the second stand by pump will activate in the case that the other pump is not functioning or if wastewater levels entering the lifting station are too high for the single pump to handle.

Our pumping station has been designed for underground installation The systems are suitable for constant water temperatures up to 35°C. Installation inside buildings can only be recommended if the requirements on groundwater-resistant ground plates have been taken into consideration. In addition, care must be taken that the ceiling is high enough for the pump to be able to be removed.

2.3 Description of the installation

Our pumping stations consist of:

- A housing in HDPE of 850 litre.
- A welded, adjustable shaft in HDPE.
- A connection for the inlet of DN100.
- A connection for the outlet in pressure PVC of DN50/63.
- A ventilation of DN100.
- A connection for all the cables DN 30
- One ore two pumps.
- A one-way valve for each pump.
- 3 build-in floating switches.
- A sieve basket at the inlet.
- A control box for 1 or 2 pumps.

3. Technical information

Ref.	Diam	H.	Diam IN	Diam out	H In	H out	Manhole	Weight	N° pumps	Voltage	Power
PP850/1/TOP 2	930	1.680	110	50/63	1.100	1.350	600	56	1	230	0,460
PP850/2/TOP 2	930	1.680	110	50/63	1.100	1.350	600	62	2	230	0,920
PP850/1/TOP 5	930	1.680	110	50/63	1.100	1.350	600	62	1	230	1,500
PP850/2/TOP 5	930	1.680	110	50/63	1.100	1.350	600	74	2	230	3,000
PP850/1/RXm 2/20	930	1.680	110	50/63	1.100	1.350	600	57	1	230	0,600
PP850/2/RXm 2/20	930	1.680	110	50/63	1.100	1.350	600	64	2	230	1,200
PP850/1/RXM 5/40	930	1.680	110	50/63	1.100	1.350	600	65	1	230	1,500
PP850/2/RXm 5/40	930	1.680	110	50/63	1.100	1.350	600	80	2	230	3,00
PP850/1/MCm 10/45	930	1.680	110	50/63	1.100	1.350	600	70	1	230	0,750
PP850/2/MCm 10/45	930	1.680	110	50/63	1.100	1.350	600	90	2	230	1,500
PP850/1/MCm 15/45	930	1.680	110	50/63	1.100	1.350	600	71	1	230	1,100
PP850/2/MCm 15/45	930	1.680	110	50/63	1.100	1.350	600	92	2	230	2,200

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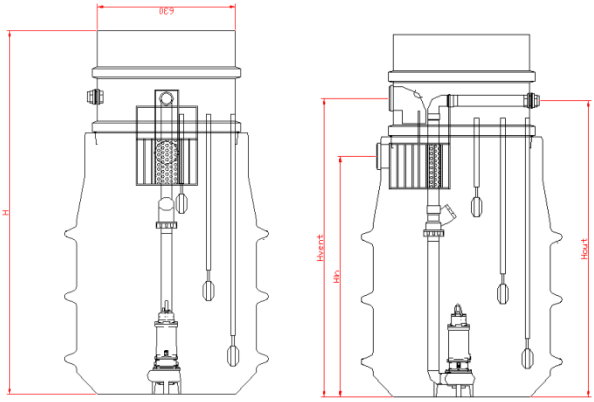
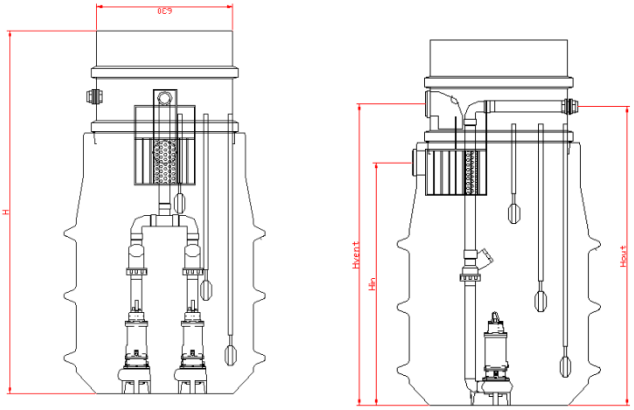


1 pump



2 pumps

4. Characteristics

4.1 Characteristics of the pumping station

Implementation 1:
They are available in tanks of 850 litre.
Equipped with 1and 2 pumps Pedrollo TOP 2 or TOP 5.
Including an alarm..
Including one-way valve.
Equipped with a sieve basket at the inlet.
Standard with a PVC pressure 50/63 outlet. As an option is a connection possible of 50 or 63 mm PE reinforced tube.
Equipped with a ventilation of DN100
These pumps are suitable for rainwater without pollution, such as emptying sellers, pools, ...

Implementation 2:
They are available in tanks of 850 litre.
Equipped with 1and 2 pumps Pedrollo RMx 2/20, RMx 5/40, MCm 10/45 and MCm 15/45.
Including an alarm..
Including one-way valve.
Equipped with a sieve basket at the inlet.
Standard with a PVC pressure 50/63 outlet. As an option is a connection possible of 50 or 63 mm PE reinforced tube.
Equipped with a ventilation of DN100
These pumps are suitable for rainwater with small pollution, such as mud in emptying building sellers, water after a water treatment plant, ...

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4.2 Characteristics of the pumps

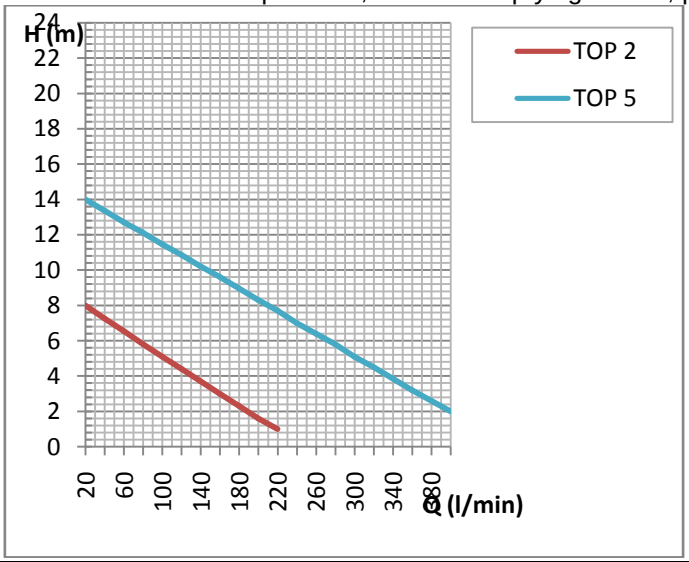
Model PEDROLLO TOP 2

For pumping very slightly polluted water.
Free opening max: 10 mm.
Minimum vacuum height: 14 mm.
Enclosure, filter and impeller in techno polymer.
Motor mono 230V (50hz), 2900 tr/min, IPX8, class F.
Double housing, motor cooled by the pumped liquid.
Axis stainless steel EN 10088-3
internal motor housing stainless steel AISI 304.
Double seal and oil bath.
Float switch and thermal safety.
Delivered with 10 m cable.
Maximum liquid temperature: 40°C
Maximum head 8 meter
Maximum flow rate 220 l/min.
Equipped with control unit with alarm
Equipped with sieve basket at the inlet

Model PEDROLLO TOP 5

For pumping very slightly polluted water.
Free opening max: 10 mm.
Minimum vacuum height: 14 mm.
Enclosure, filter and impeller in techno polymer.
Motor mono 230V (50hz), 2900 tr/min, IPX8, class F.
Double housing, motor cooled by the pumped liquid.
Axis stainless steel EN 10088-3
internal motor housing stainless steel AISI 304.
Double seal and oil bath
Float switch and thermal safety
Delivered with 10 m cable
Maximum liquid temperature: 40°C
Maximum head 14 meter
Maximum flow rate 400 l/min.
Equipped with control unit with alarm
Equipped with sieve basket at the inlet

These pumps are suitable for rainwater without pollution, such as emptying sellers, pools, ...



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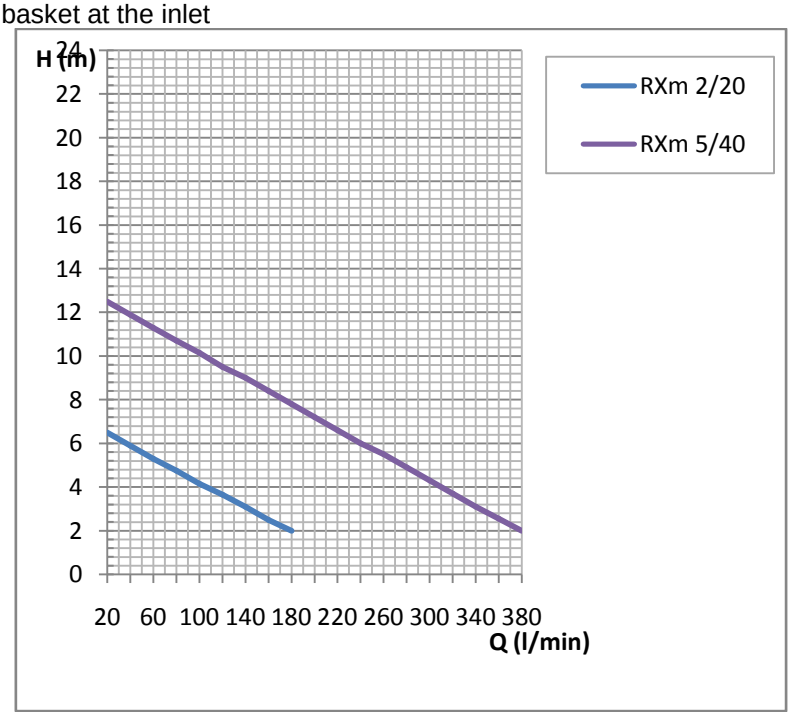
Model PEDROLLO RXm 2/20

For pumping very slightly polluted water.
Free opening max: 20 mm.
Minimum vacuum height: 14 mm.
Enclosure, filter and impeller in techno polymer.
Motor mono 230V (50hz), 2900 tr/min, IPX8, class F.
Double housing, motor cooled by the pumped liquid.
Axis stainless steel EN 10088-3
internal motor housing stainless steel AISI 304.
Double seal and oil bath.
Float switch and thermal safety.
Delivered with 5 m cable.
Maximum liquid temperature: 50°C
Maximum head 6 meter
Maximum flow rate 180 l/min.
Equipped with control unit with alarm
Equipped with sieve basket at the inlet

Model PEDROLLO RXm 5/40

For pumping very slightly polluted water.
Free opening max: 40 mm.
Minimum vacuum height: 14 mm.
Enclosure, filter and impeller in techno polymer.
Motor mono 230V (50hz), 2900 tr/min, IPX8, class F.
Double housing, motor cooled by the pumped liquid.
Axis stainless steel EN 10088-3
internal motor housing stainless steel AISI 304.
Double seal and oil bath
Float switch and thermal safety.
Delivered with 10 m cable.
Maximum liquid temperature: 50°C
Maximum head 12 meter
Maximum flow rate 380 l/min.
Equipped with control unit with alarm
Equipped with sieve basket at the inlet



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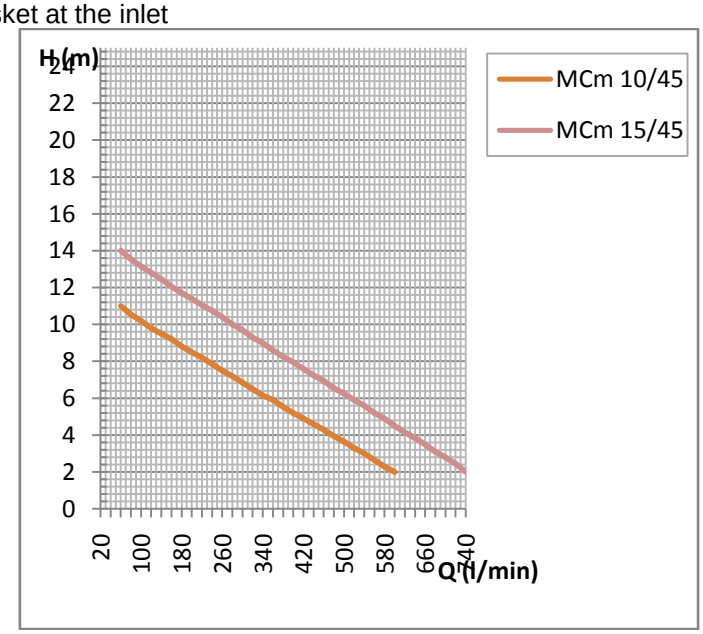
Model PEDROLLO MCm 10/45

For pumping very slightly polluted water.
Free opening max: 50 mm.
Minimum vacuum height: 14 mm.
Enclosure, filter and impeller in techno polymer.
Motor mono 230V (50hz), 2900 tr/min, IPX8, class F.
Double housing, motor cooled by the pumped liquid.
Axis stainless steel EN 10088-3
internal motor housing stainless steel AISI 304.
Double seal and oil bath.
Float switch and thermal safety.
Delivered with 10 m cable.
Maximum liquid temperature: 40°C
Maximum head 11 meter
Maximum flow rate 600 l/min.
Equipped with control unit with alarm
Equipped with sieve basket at the inlet

Model PEDROLLO MCm 15/45

For pumping very slightly polluted water.
Free opening max: 50 mm.
Minimum vacuum height: 14 mm.
Enclosure, filter and impeller in techno polymer.
Motor mono 230V (50hz), 2900 tr/min, IPX8, class F.
Double housing, motor cooled by the pumped liquid.
Axis stainless steel EN 10088-3
internal motor housing stainless steel AISI 304.
Double seal and oil bath
Float switch and thermal safety.
Delivered with 10 m cable.
Maximum liquid temperature: 40°C
Maximum head 14 meter
Maximum flow rate 750 l/min.
Equipped with control unit with alarm
Equipped with sieve basket at the inlet



These pumps are suitable for rainwater with small pollution, such as mud in emptying building sellers, water after a water treatment plant, ...

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5. Installation requirements

5.1 Installation requirements of the tank in consolidated sand.

The pre-installation (laying the cables between the pumping station and the control box, and between the control box and the power Board) shall be executed by the client.

Prepare a pit that is at least:

- 15 to 20 cm broader than the tank
- 15 to 20 cm deeper than the distance between the height of the inlet and the bottom of the tank.

See to it that all groundwater or rainwater that might be present in the pit is pumped out before pouring consolidated sand into the pit. The bottom of the pit must be covered by at least 15 cm of consolidated sand of 150 Kg/m³ (*). Level (with a builder's level) the grease trap in the pit so the inlet is at the proper height to connect to the house drainpipe. Fill the installation with water.

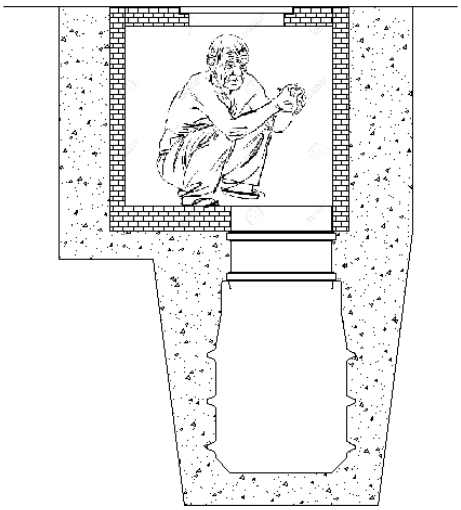
Connect the inlet (110 mm) and outlet (50/63). From the outlet to the discharge point your best use a PVC pressure pipe of 50 or 63 mm. If chosen to work with a reinforced PE socarex, you need a PP clamp fitting of 2 "F x 50 or 63 mm.

Connect the ventilation of 100 mm.

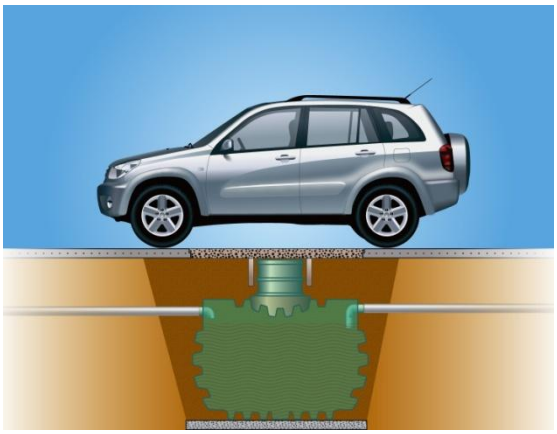
Install a PVC pipe DN50 from the pumping station to where the control box is installed, and pull the cables through. The length of the cables is standard 10 meters. If the distance is greater, they must be renewed extended waterproof by a craftsman, this according to the rules in force.

Backfill the pit round the unit with at least 15 cm of consolidated sand of 150 Kg/m³ (*). Always introduce small amounts of consolidated sand, slightly press the sand to prevent distortion of the unit. Put at least 10 cm of consolidated sand of 150 Kg/m³ (*) on top of the grease trap. Install the PE-risers, which can be obtained from Boralit, on the unit until ground level is reached, and put the cover on (the grease traps must remain easily accessible for inspection and cleaning).

If the installation is deeper than the riser, there is a wider shaft required, so that when a maintenance person can come at the height of the shaft.



In case vehicles might drive in the immediate surroundings of the installation, a sufficiently strong concrete slab must be installed. The concrete slab should not rest on the tank and should divert the pressure to the ground that has not been disturbed.



The PE covers are only temporarily. They do not have a safety lock and can not stand the weight of persons or vehicles who might pass by. Make sure you get Boralit covers, to increase the security of persons or vehicles who cross the installation.

5.2 Connecting the pumps and floating switches

Connect the cables of the pump(s) and floating switches according to the attached manual control box for 1 or 2 pump(s).

6.Commissioning

6.1 Preparation

After the complete and correct installation of the system and all additional parts including pipe and electrical installations, the system can be put into operation.

Commissioning of this system may only be carried out by a licensed professional. Do not put the system into operation if there is any damage to the motor, control unit or cables. Always follow the safety instructions. Do not use the pump for pumping media it is not resistant to.

Make sure before you put the system into operation that the nominal voltage and type of current specified for the system correspond to the nominal voltage and type of current on site. Check the system installation/cabling carefully before you put the system into operation.

6.2 Commissioning

Connect the control box to mains. The installation works automatically.

7. Possible error messages

Possible error messages 1 pump

	Error message	Cause	Control / action	ok/nok
1.1	Alarm "pump does not work"	Pump is not driven	Push black switch on 1, pump 1 works	see 1.2
1.2		Fuse burnt out	Open fuse holders and replace fuse	see 1.3
1.3		Check about flat cable between control unit and lid	Push the cable back into position	see 1.4
1.4		Pomp is broken	Notify supplier	

	Error message	Cause	Control / action	ok/nok
1.5	Alarm "very high water level"	Pump does not work	Point 1.1 and 1.2 and 1.3	
1.6		Automated control controller is not working	Turn on the pump with the black switch on the Steering and notify supplier	
1.7		Pump can also not be controlled manually (see 1.2)	Notify supplier	

	Error message	Cause	Control / action	ok/nok
1.8	No alarm but water level is to high	Float swith does not turn on	Tap float swith or move water	see 1.9
1.9		Float swith broken, after tapping no action	Notify supplier	

Possible error messages 2 pumps

	Error message	Cause	Control / action	ok/nok
1.1	Alarm "pump 1 or 2 does not work"	Pump is not driven	Push black switch on 1 (2), pump 1 (2) works	see 1.2
1.2		Fuse burnt out	Open fuse holders and replace fuse	see 1.3
1.3		Check about flat cable between control unit and lid	Push the cable back into position	see 1.4
1.4		Pomp is broken	Notify supplier	

	Error message	Cause	Control / action	ok/nok
1.5	Alarm "very high water level"	Pump does not work	Point 1.1 and 1.2 and 1.3	
1.6		Automated control controller is not working	Turn on the pump with the black switch on the Steering and notify supplier	
1.7		Pump can also not be controlled manually (see 1.2)	Notify supplier	

	Error message	Cause	Control / action	ok/nok
1.8	No alarm but water level is to high	Float swith does not turn on	Tap float swith or move water	see 1.9
1.9		Float swith broken, after tapping no action	Notify supplier	

8. Maintenance

Servicing work must be carried out by authorised qualified staff. The following tasks have to be carried out:

- Visual inspection of the pumps and fitting parts
- Check the pump for free movement, wear and deposits
- Check the connection pipes for mechanical damage
- Check the chamber system for heavy soiling, clean if necessary. Sharp cleaning tools are not suitable since they may damage the chamber.

According to EN 12056, maintenance must be carried out at the following intervals:

- Every three months for commercial applications.
- Every six months in multi-family homes.
- Every year in single family homes.

9. Warranty

We offer a 10-year warranty on all our tank products as far as evident manufacturing faults are concerned.
Failure to comply with installation procedures and guidelines voids warranty.
2-year warranty on all parts.

The general sales and warranty conditions of Boralit count.

10. Entry form for obtaining the CE certification

TO SEND BACK COMPLETED TO OBTAIN THE CE CERTIFICATE

This specific document has to be filled in carefully and completely by both parties. It needs to be signed and sent back to the following company: Boralit, Nijverheidslaan 12 - 9880 AALTER or by fax: 09/375.22.22

TO ENSURE ITS SMOOTH OPERATION, IT IS RECOMMENDED TO INSTALL THE INSTALLATION BY AN AUTHORIZED CONTRACTOR.

THE FINAL CERTIFICATE SHALL ONLY BE GRANTED AFTER RECEPTION OF THE QUESTIONNARY. IT NEEDS TO BE FILLED IN COMPLETELY AND SIGNED CORRECTLY.

WHEN THE INSTALLATION PROCEDURES ARE NOT FOLLOWED UP PROPERLY, THE WARRANTY IS NO LONGER VALID.

1. DATA OF THE INSTALLATION :

- ❑ PP850/1/TOP 2
- ❑ PP850/2/TOP 2
- ❑ PP850/1/TOP 5
- ❑ PP850/2/TOP 5
- ❑ PP850/1/RXm 2/20
- ❑ PP850/2/RXm 2/20
- ❑ PP850/1/RXm 5/40
- ❑ PP850/2/RXm 5/40
- ❑ PP850/1/MCm 10/45
- ❑ PP850/2/MCm 10/45
- ❑ PP850/1/MCm 15/45
- ❑ PP850/2/MCm 15/45

Fabrication number :

Signature :

2. ENDUSER :

Name :

Address :

Telephone :

Mobile phone :

E-mail: :

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3. FITTER :

Name :

Company :

Address :

Telephone : *Fax* :

Mobile phone :

E-mail :

Confirms that the installation mentioned above has been installed according to the installation procedures that were sent earlier.

Date of installation :

Signature :

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4. APPROVED TANK TECHNICIAN :

Name :

Company :

Address :

Telephone : *Fax* :

Mobile phone: : *E-mail:*

Date check up :

Signature :

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