

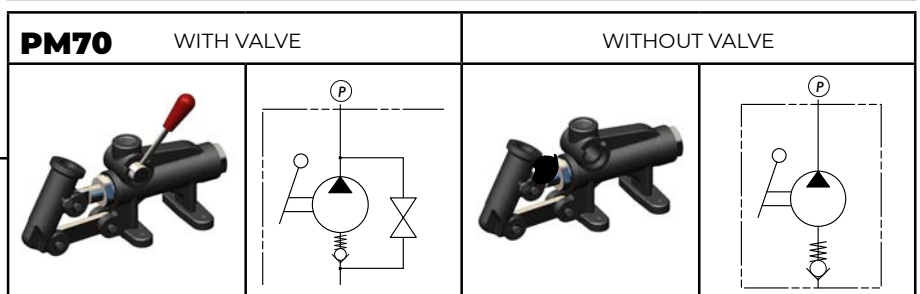
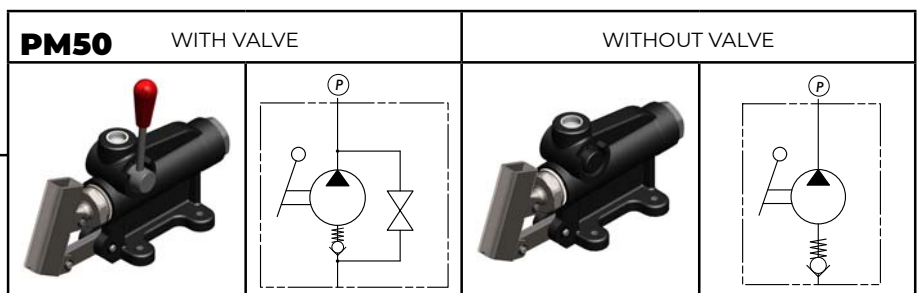
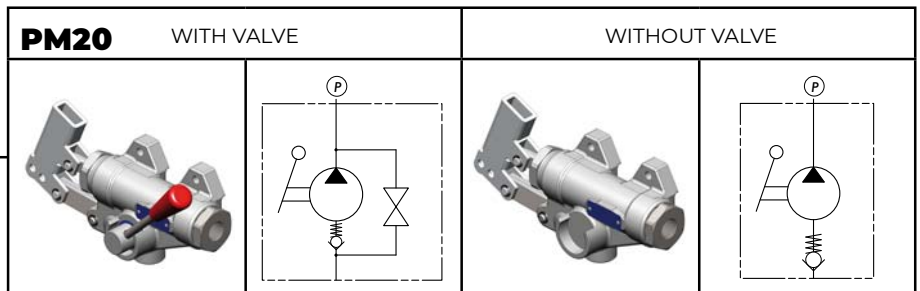
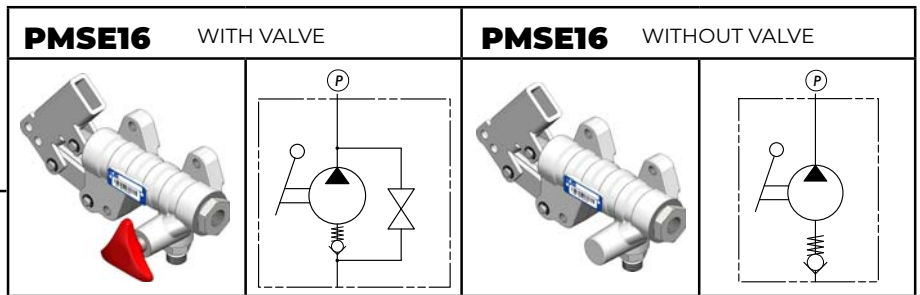
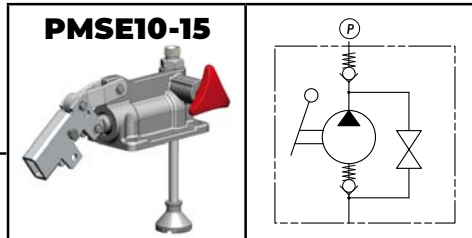
General Information

Hand pumps are available in various configurations and sizes in order to offer the most comprehensive solutions to the different applications.

PMSE

10-15-16 cm³/ciclo

Hand pumps with simple effect activation (the pump delivers oil only when you push the lever), whether with drainage tap for simple effect installations or without tap for emergency installations. Available in two different capacities to allow several applications and to limit the effort on the lever in any situation. The body is in cast-iron with white galvanization and the stem is in chromate steel.



PM

20-50-70 cm³/ciclo

Hand pumps with double effect activation (the pump delivers oil both pushing and pulling the lever) whether with drainage tap for simple effect installations or without tap for emergency installations.

Available in three different capacities to allow several applications and to limit the effort on the lever in any situation. The body is in cast-iron with white galvanization and the stem is in chromate steel.

FULCRO

12-25-45 cm³/ciclo

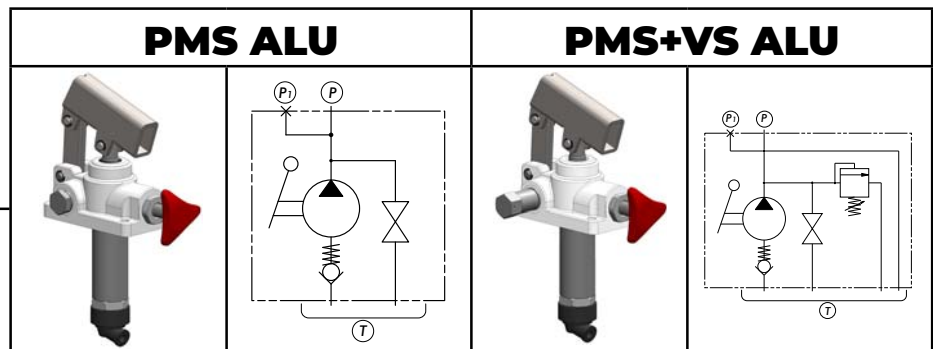
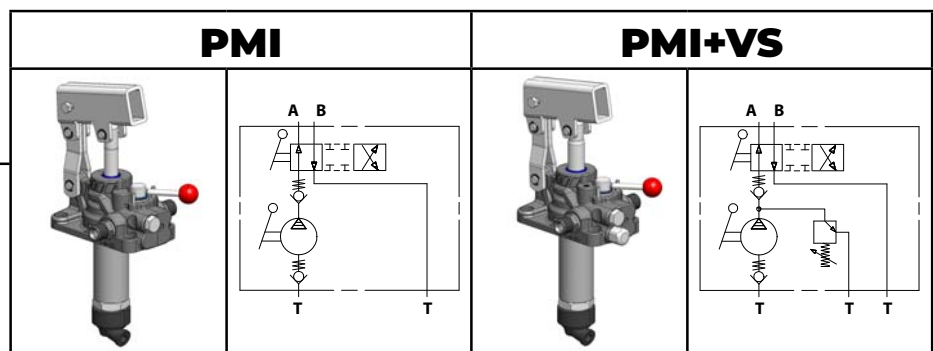
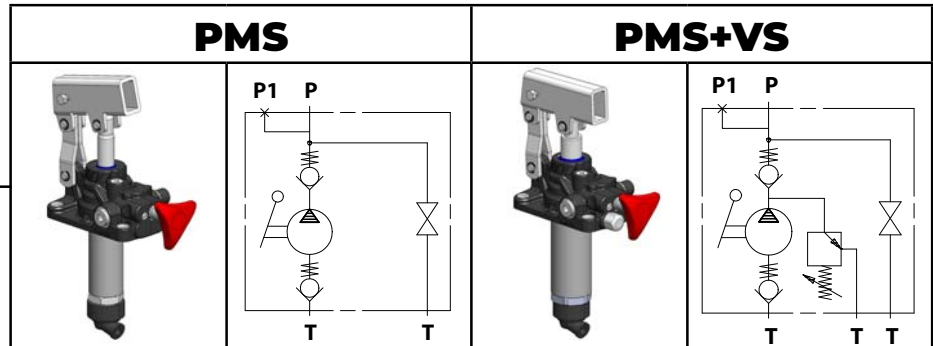
Double acting hand pumps (the pump delivers oil both pushing and pulling the lever) suitable to operate single acting applications. They can be fitted also onto tank and are equipped with tapered lowering valve.

These hand pumps can have 3 different sizes to perform various applications and to achieve smoother loads on the lever. They are available with nodular cast-iron body anti-corrosion treatment RAL 9004 and nickel-plated spool.

PMS ALU

12-25-45 cm³/ciclo

Double acting hand pumps (the pump delivers oil both pushing and pulling the lever) suitable to operate single acting applications. They can be fitted also onto tank and are equipped with tapered lowering valve. These hand pumps can have 3 different sizes to perform various applications and to achieve smoother loads on the lever. They are available with aluminium and nickel-plated spool.



SPECIAL VERSIONS AVAILABLE UPON REQUEST

- hand pumps series **OFFSHORE** with special treatment for high resistance to corrosion (700 hrs);
- hand pumps suitable for **low temperature** applications.



PRESSURES			
Pump type	Max. Pressure bar		
PMSE 10	350		
PMSE 15	300		
PMSE 16			
PM 20			
PM 50	250		
PM 70	200		
	12 cm³	25 cm³	45 cm³
FULCRO PMS	350	300	270
FULCRO PMS ALU			
FULCRO PMI			

SETTING AND ADJUSTMENT OF PRESSURE RELIEF VALVE OF VERSION “VS”

The hand pumps complete with pressure relief valves are supplied with a factory setting as standard shown in the attached chart:

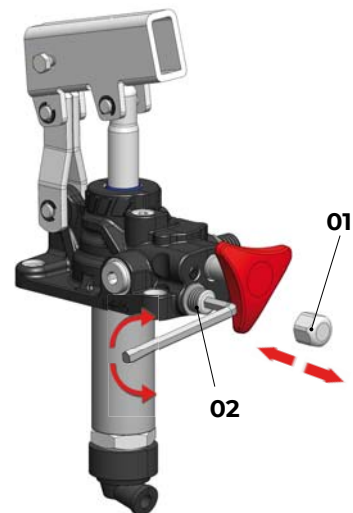
Technical data						
Pump type	Standard pressure setting			Max. pressure setting		
	12 cm ³ /ciclo	25 cm ³ /ciclo	45 cm ³ /ciclo	12 cm ³ /ciclo	25 cm ³ /ciclo	45 cm ³ /ciclo
PMS+VS	160 bar			300 bar	300 bar	270 bar
PMI+VS	160 bar			300 bar	300 bar	270 bar

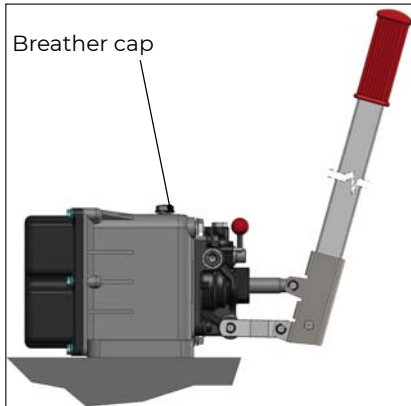
Pressure Relief Vale adjusting:

- 1 - Undo the protection cap (pos.01);
- 2 - Screw the setting grub to increase the pressure; unscrew it to decrease the pressure setting (Pos 02);
- 3 - Fit again the protection cap.

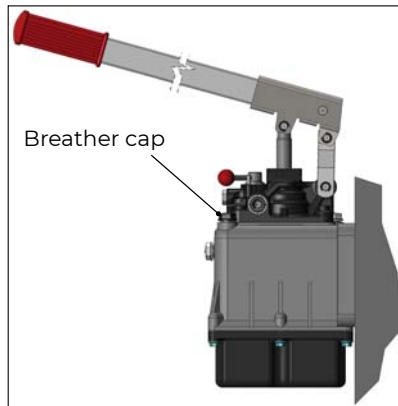


Use of pressure gauge is mandatory.

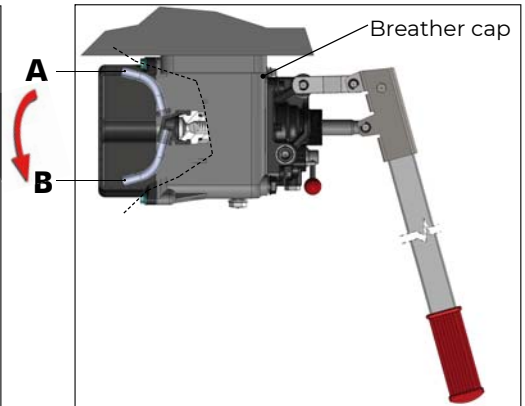




Application 1. The breather cap has to be in the position indicated in a picture.



Application 2. The breather cap has to be in the position indicated in a picture.



Application 3. In this application rotate the internal suction pipe from position **A** to **B**. The breather cap has to be placed as per position indicated in the picture.



For applications 1 and 3, especially for what concerns large reservoirs, it is advisable to use an "L" shape male/female G1/4" adaptor for the breather cap to avoid little oil leakage.

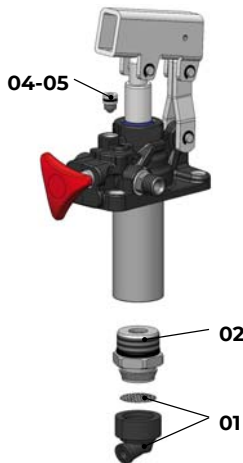
cod. 100-900-00231 optional - to be order separately

USE AND MAINTENANCE

In order to ensure a proper work of our hand pumps it is necessary to watch the guidelines shown into the chart:

Fluid	Mineral or synthetic compatible with the following seals: NBR, FKM, FPM, Nylon				
Kinematic viscosity suggested	Average ambient temp. (°C)	<-10	-10÷10	10÷35	>35
	VG (cSt = mm ² /s)	22	32	46	68
Working temperature			-15° +110°C		

ORDINARY MAINTENANCE



Few and easy operations are required to ensure a proper maintenance to the hand pump:

- 1 - Cleaning of suction filter:** remove the filter gasket and clean carefully the round steel filter (strainer) included inside - pos 01;
- 2 - Cleaning of suction valve:** clean all the parts of the check valve of the suction line (pos 02) and make sure the O-ring seal is in proper condition- pos 03;
- 3 - Cleaning of check valve on delivery line:** clean all the parts of the check valve of the delivery line (pos 04) and make sure the O-ring seal is in proper condition- pos 05

TANK MAINTENANCE

The maintenance of oil tank consists of a periodical check of the gasket (pos 01) to detect any potential oil leakage. If necessary replace the gasket.

Seal kits are also available to replace all the seals included in the hand pump according to the specific model. Please refer to the hand pump data sheet to get the correct information.

