



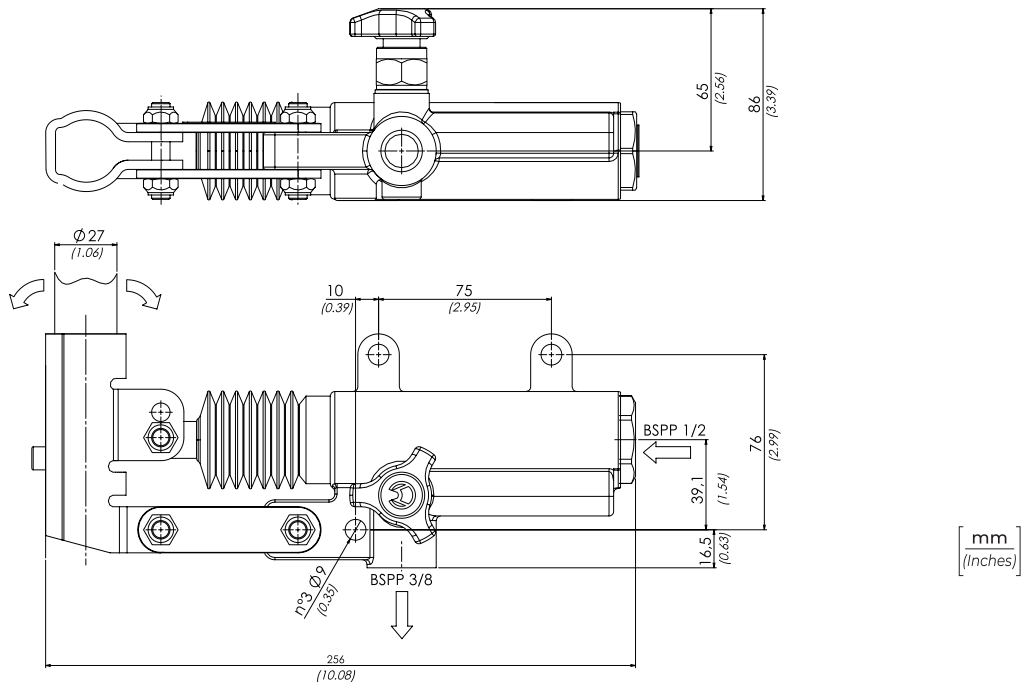
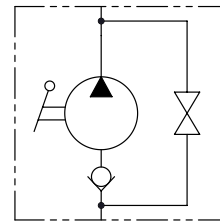
**CODICE ORDINAZIONE**  
ORDERING CODE

01	02	03
<b>PM20</b>		

<b>01</b>	POMPA A MANO SEMPLICE EFFETTO DOUBLE PUMPING HAND PUMP FOR SINGLE ACTING CYLINDER	<b>PM20</b>	
<b>02</b>	OPTIONAL	Senza soffiETTO - Without rubber protection	
		Con soffiETTO - With rubber protection	<b>P</b>
<b>03</b>	OPTIONAL	Senza rubinetto di scarico con valvola di massima Without unloading valve With relief valves	<b>WRV</b>
		Senza rubinetto di scarico - Without unloading valve	<b>W</b>
		Con joystick - With joystick	<b>J</b>
		Con leva di scarico Ø 27 mm With unloading lever Ø 1.06 inch	<b>L</b>
		Con rubinetto di scarico e valvola di massima With drain valve and relief valve	<b>RRV</b>

LA POMPA VIENE FORNITA CON LEVA DI AZIONAMENTO L=600 mm  
THE PUMP IS SUPPLIED WITH ACTING LEVER 23,6 inch LONG

**SCHEMA IDRAULICO / HYDRAULIC CIRCUIT**



**DATI TECNICI / TECHNICAL DATA**

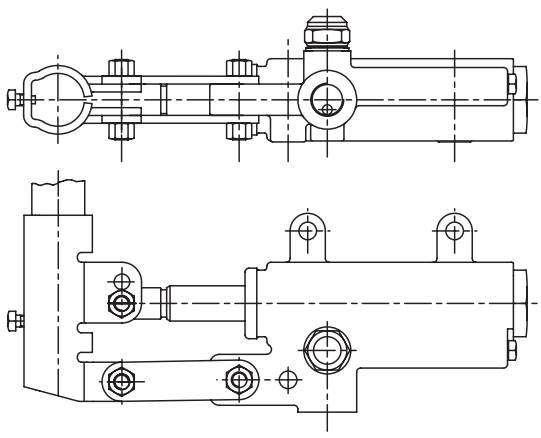
Olio idraulico - Mineral oil	ISO 6743/4 (DIN 51524)
Viscosità olio - Oil viscosity	15-250 mm <sup>2</sup> /s (15 to 250 cSt)
Classe di contaminazione max Max contamination index	ISO 4406:1999 Classe 19/17/14
Temperatura dell'olio - Oil temperature	-20°C +80°C -4°F +176°F
Temperatura ambiente - Environment temperature	-20°C +50°C -4°F +122°F

È indispensabile la presenza di un filtro nel circuito idraulico per proteggere la valvola (filtrazione consigliata 15 µm)  
A filter into the hydraulic circuit necessary to protect the valve (advised filtration 15 µm)

**CARATTERISTICHE TECNICHE / TECHNICAL CHARACTERISTICS**

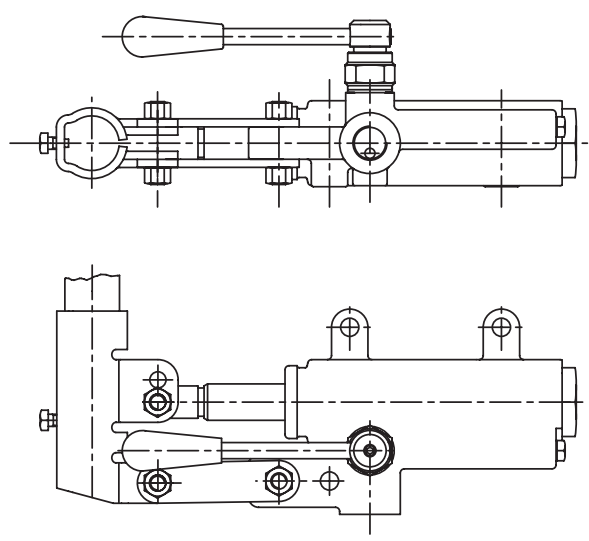
TIPO TYPE	CILINDRATA (cm <sup>3</sup> ) DISPLACEMENT (in <sup>3</sup> )	PRESSIONE OTTIMALE OPTIMAL PRESSURE bar-PSI	PRESSIONE MAX MAX PRESSURE bar-PSI	PESO APPROX APPROX WEIGHT kg-lbt
<b>PM20</b>	<b>20 (1.22)</b>	<b>150 (2175)</b>	<b>350 (5075)</b>	<b>3,4 (7.5)</b>

## WRV

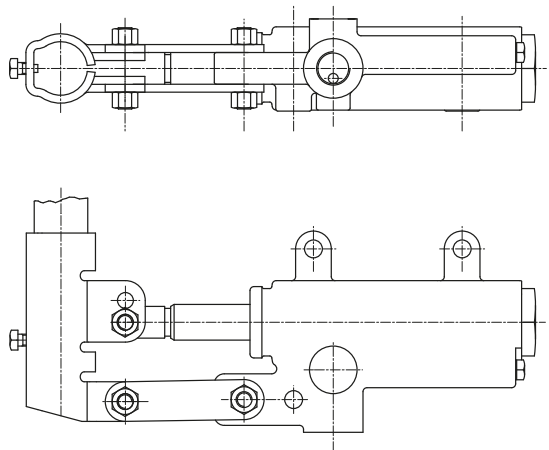


**Valvola di massima**      **Molla 40/350 bar**      **Taratura Standard 100 bar**  
 Relief valve                  Spring 580/5075 PSI      Standard Setting 1500 PSI

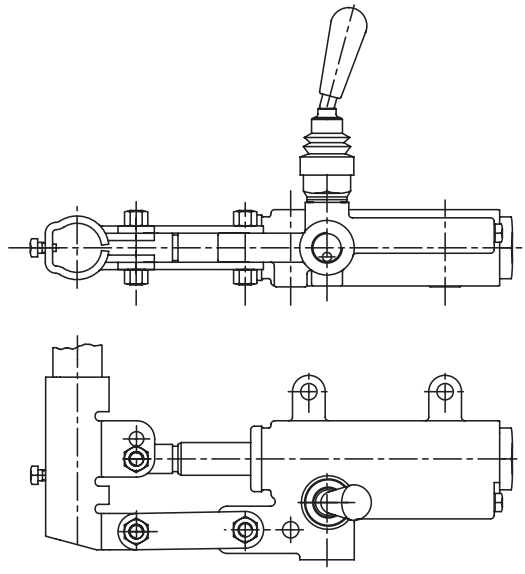
## L



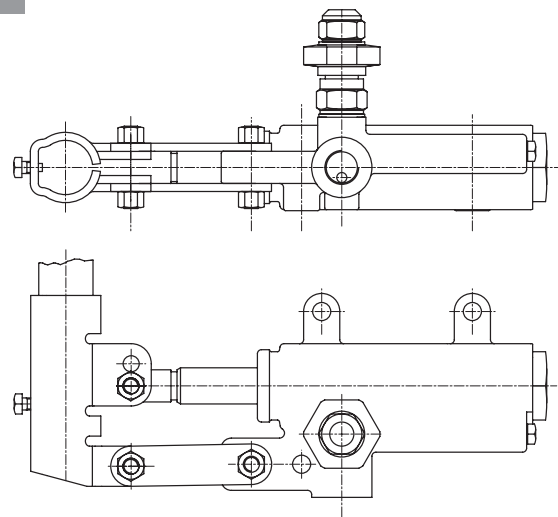
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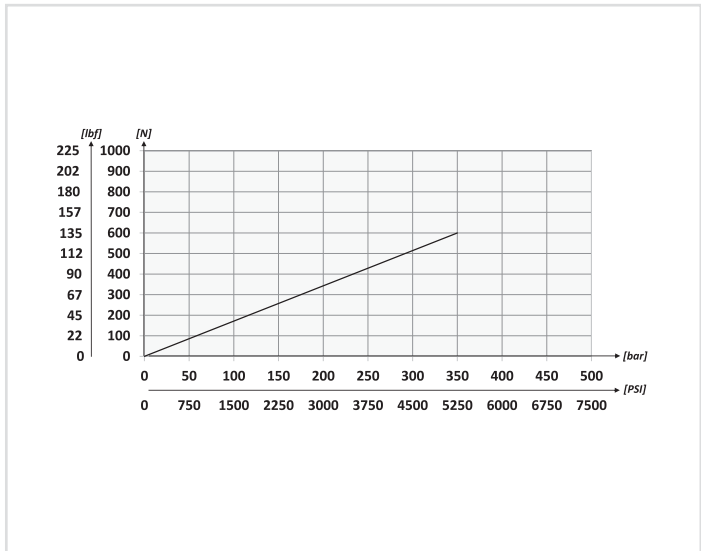
## J



## RRV



**SFORZO ESERCITATO ALL'ESTREMITÀ DELLA LEVA**  
**EFFORT OPERATING AT THE END OF THE LEVER**





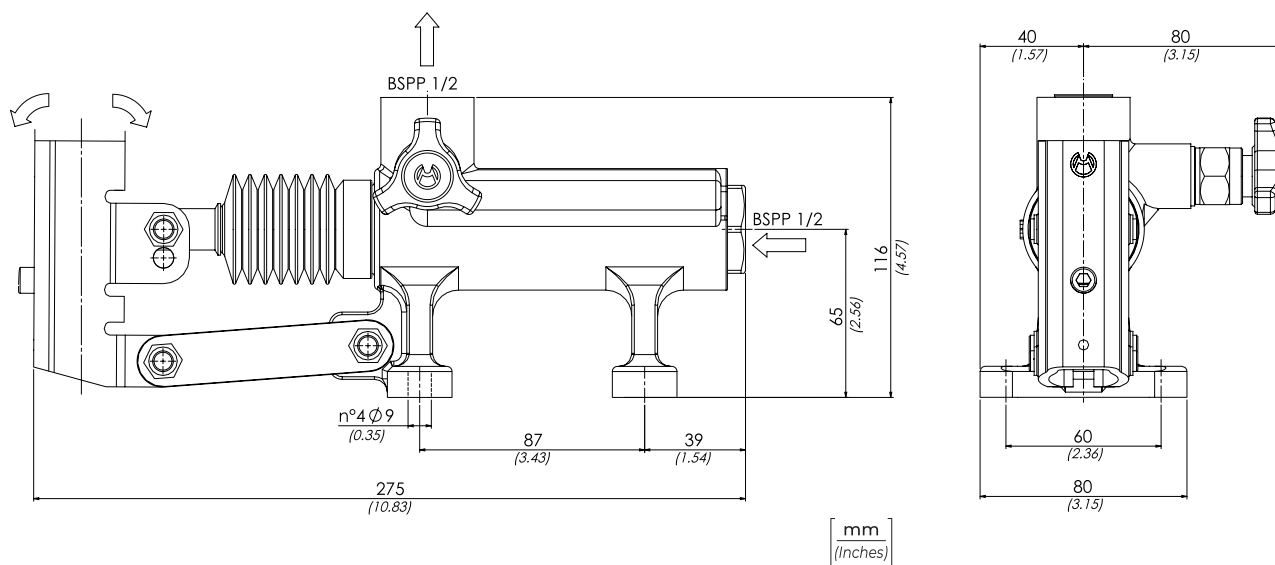
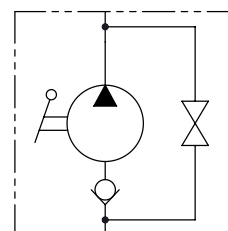
**CODICE ORDINAZIONE**  
ORDERING CODE

01	02	03
<b>PM50</b>		

<b>01</b>	POMPA A MANO DOPPIO POMPAGGIO PER CILINDRO A SEMPLICE EFFETTO DOUBLE PUMPING FOR SINGLE ACTING CYLINDER	<b>PM50</b>
<b>02</b>	OPTIONAL	
	Senza soffietto Without rubber protection	
<b>03</b>	OPTIONAL	
	Con soffietto With rubber protection	<b>P</b>
	Senza rubinetto di scarico con valvola di massima Without unloading valve With relief valves	<b>WRV</b>
	Senza rubinetto di scarico Without unloading valve	<b>W</b>
	Con joystick With joystick	<b>J</b>
	Con leva di scarico Ø 27 mm With unloading lever Ø 1.06 inch	<b>L</b>
	Con rubinetto di scarico e valvola di massima With drain valve and relief valve	<b>RRV</b>

LA POMPA VIENE FORNITA CON LEVA DI AZIONAMENTO L=600 mm  
THE PUMP IS SUPPLIED WITH ACTING LEVER 23,6 inch LONG

**SCHEMA IDRAULICO / HYDRAULIC CIRCUIT**



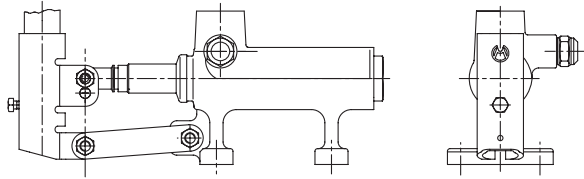
**DATI TECNICI / TECHNICAL DATA**

Olio idraulico - Mineral oil	ISO 6743/4 (DIN 51524)
Viscosità olio - Oil viscosity	15-250 mm <sup>2</sup> /s (15 to 250 cSt)
Classe di contaminazione max Max contamination index	ISO 4406:1999 Classe 19/17/14
Temperatura dell'olio - Oil temperature	-20°C +80°C -4°F +176°F
Temperatura ambiente - Environment temperature	-20°C +50°C -4°F +122°F
È indispensabile la presenza di un filtro nel circuito idraulico per proteggere la valvola (filtrazione consigliata 15 µm) A filter into the hydraulic circuit necessary to protect the valve (advised filtration 15 µm)	

**CARATTERISTICHE TECNICHE / TECHNICAL CHARACTERISTICS**

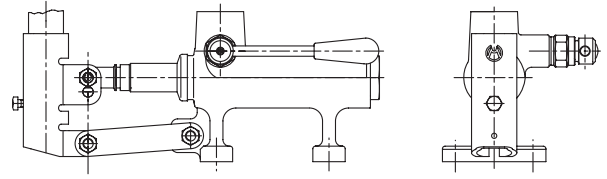
TIPO TYPE	CILINDRATA (cm <sup>3</sup> ) DISPLACEMENT (in <sup>3</sup> )	PRESSIONE OTTIMALE OPTIMAL PRESSURE bar-PSI	PRESSIONE MAX MAX PRESSURE bar-PSI	PESO APPROX APPROX WEIGHT kg-lbt
PM50	50 (3.05)	80 (1160)	280 (4060)	4,2 (9.25)

**WRV**

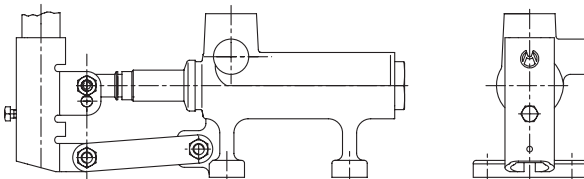


**Valvola di massima**    **Molla 40/350 bar**    **Taratura Standard 100 bar**  
 Relief valve            Spring 580/5075 PSI    Standard Setting 1450 PSI

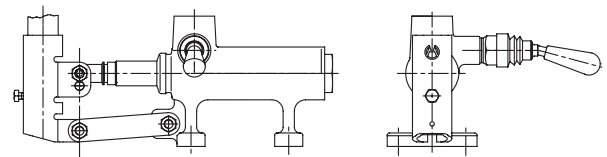
**L**



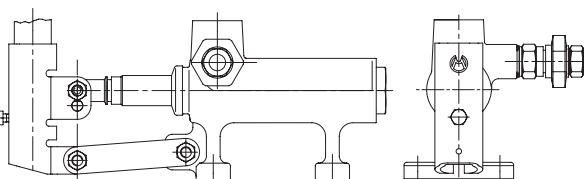
**W**



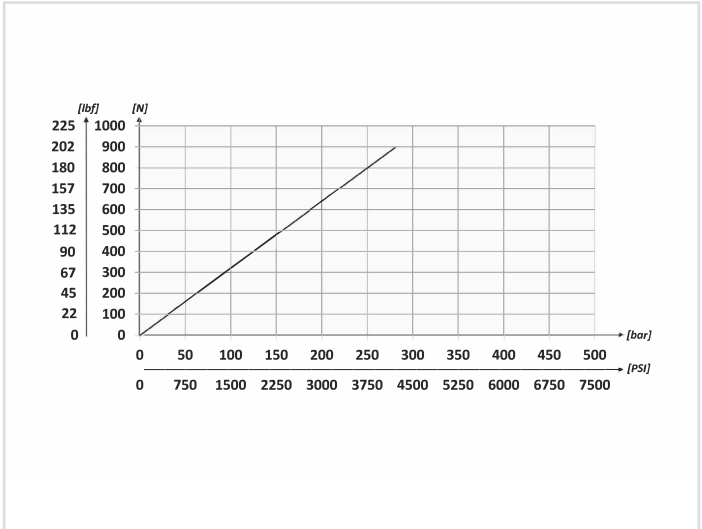
**J**



**RRV**



**SFORZO ESERCITATO ALL'ESTREMITÀ DELLA LEVA**  
**EFFORT OPERATING AT THE END OF THE LEVER**





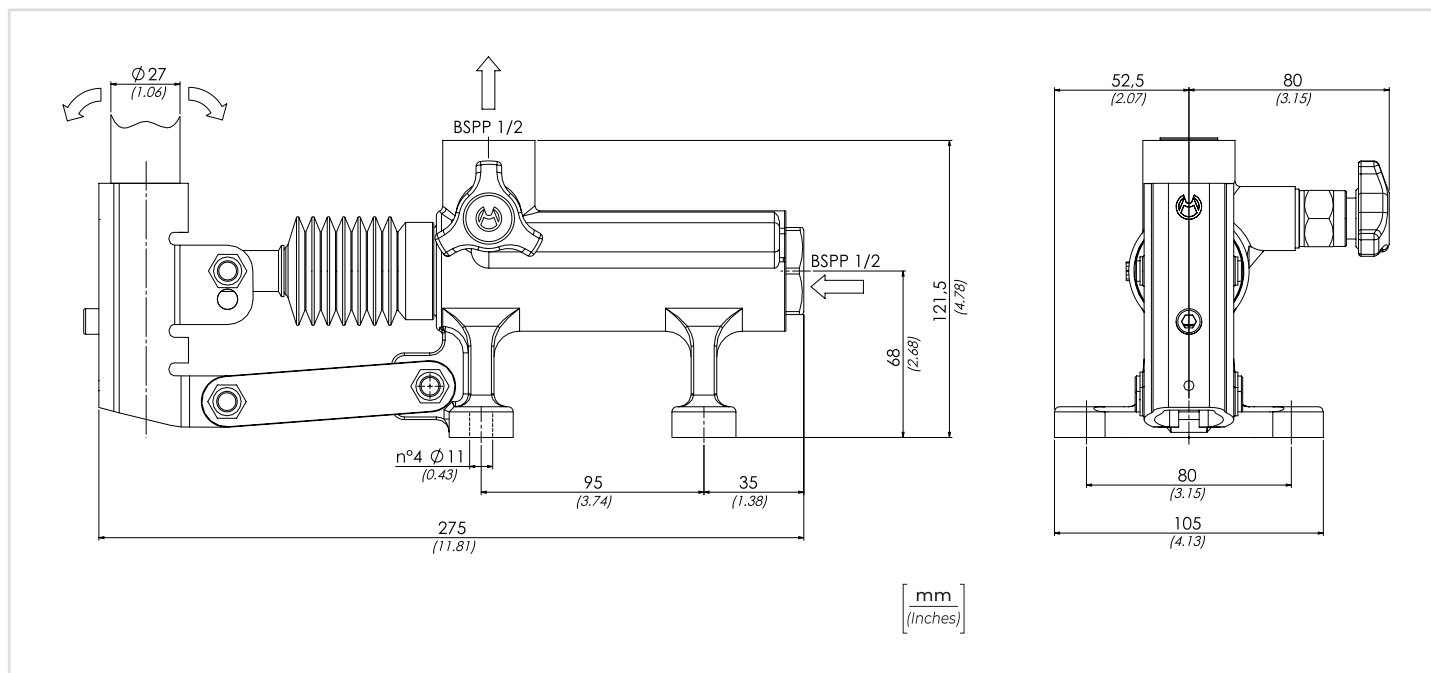
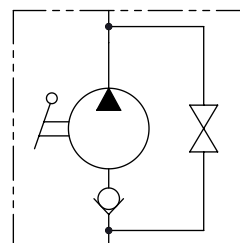
**CODICE ORDINAZIONE**  
ORDERING CODE

01	02	03
<b>PM70</b>		

<b>01</b>	POMPA A MANO DOPPIO POMPAGGIO PER CILINDRO A SEMPLICE EFFETTO DOUBLE PUMPING HAND PUMPFOR SINGLE ACTING CYLINDER	<b>PM70</b>
<b>02</b>	OPTIONAL Senza soffierto - Without rubber protection	
	Con soffierto - With rubber protection	<b>P</b>
<b>03</b>	OPTIONAL Senza rubinetto di scarico con valvola di massima Without unloading valve With relief valves	<b>WRV</b>
	Senza rubinetto di scarico - Without unloading valve	<b>W</b>
	Con joystick - With joystick	<b>J</b>
	Con leva di scarico Ø 27 mm With unloading lever Ø 1.06 inch	<b>L</b>
	Con rubinetto di scarico e valvola di massima With drain valve and relief valve	<b>RRV</b>

LA POMPA VIENE FORNITA CON LEVA DI AZIONAMENTO L=600 mm  
THE PUMP IS SUPPLIED WITH ACTING LEVER 23,6 inch LONG

**SCHEMA IDRAULICO / HYDRAULIC CIRCUIT**



**DATI TECNICI / TECHNICAL DATA**

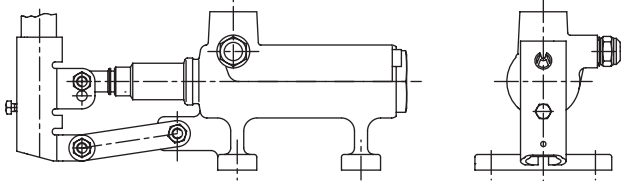
Olio idraulico - Mineral oil	ISO 6743/4 (DIN 51524)
Viscosità olio - Oil viscosity	15-250 mm <sup>2</sup> /s (15 to 250 cSt)
Classe di contaminazione max Max contamination index	ISO 4406:1999 Classe 19/17/14
Temperatura dell'olio - Oil temperature	-20°C +80°C -4°F +176°F
Temperatura ambiente - Environment temperature	-20°C +50°C -4°F +122°F

È indispensabile la presenza di un filtro nel circuito idraulico per proteggere la valvola (filtrazione consigliata 15 µm)  
A filter into the hydraulic circuit necessary to protect the valve (advised filtration 15 µm)

**CARATTERISTICHE TECNICHE / TECHNICAL CHARACTERISTICS**

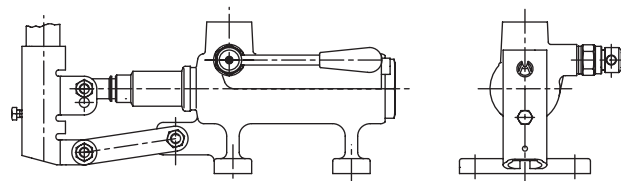
TIPO TYPE	CILINDRATA (cm <sup>3</sup> ) DISPLACEMENT (in <sup>3</sup> )	PRESSIONE OTTIMALE OPTIMAL PRESSURE bar-PSI	PRESSIONE MAX MAX PRESSURE bar-PSI	PESO APPROX APPROX WEIGHT kg-lbt
<b>PM70</b>	<b>70</b> (4.27)	<b>50</b> (725)	<b>200</b> (2900)	<b>5,6</b> (12.34)

**WRV**

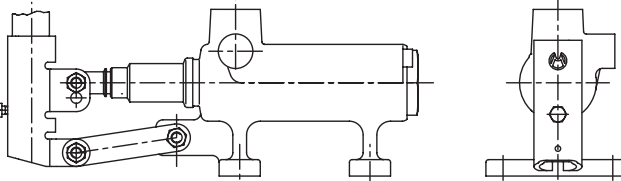


**Valvola di massima**    **Molla 40/350 bar**    **Taratura Standard 100 bar**  
 Relief valve                      Spring 580/5075 PSI                      Standard Setting 1450 PSI

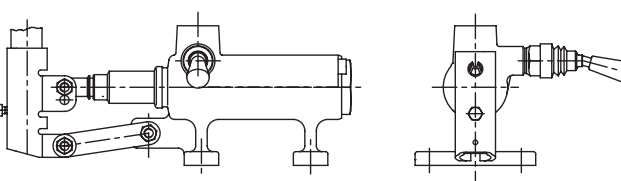
**L**



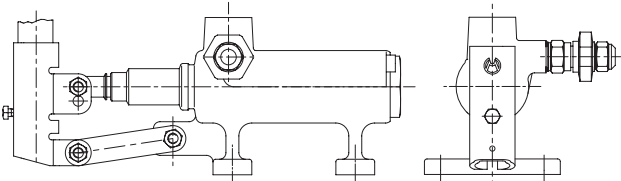
**W**



**J**



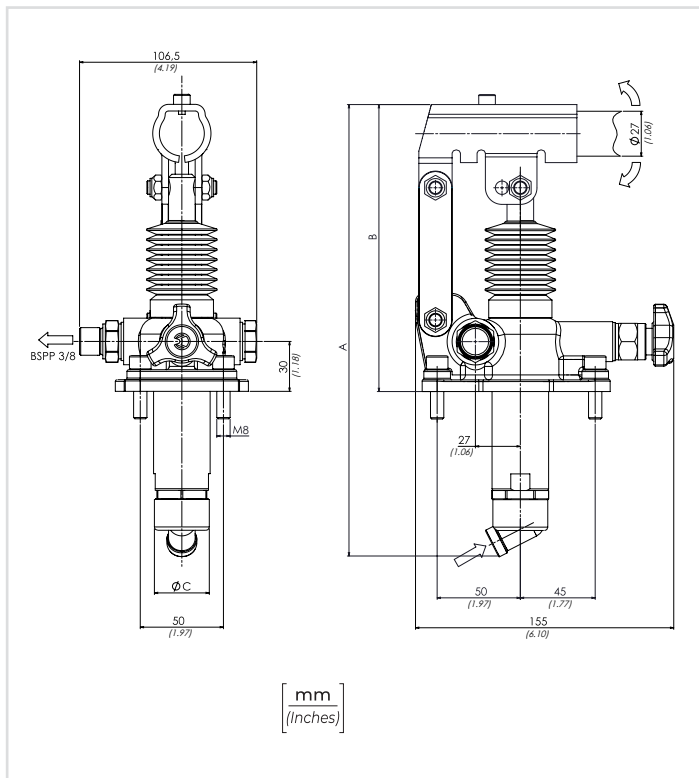
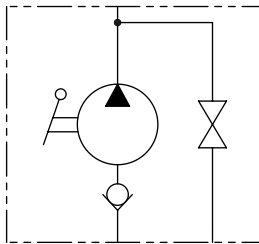
**RRV**






**LA POMPA VIENE FORNITA CON GUARNIZIONE SAGOMATA  
+ VITI DI FISSAGGIO + LEVA DI AZIONAMENTO L=600 mm**  
**THE PUMP IS SUPPLIED WITH SHAPED SEAL, FIXING SCREWS  
AND ACTING LEVER 23.6 inch LONG**

**SCHEMA IDRAULICO / HYDRAULIC CIRCUIT**



[ mm ]  
[ inches ]

	01	02	03	04
<b>CODICE ORDINAZIONE</b> ORDERING CODE	<b>PMS</b>			

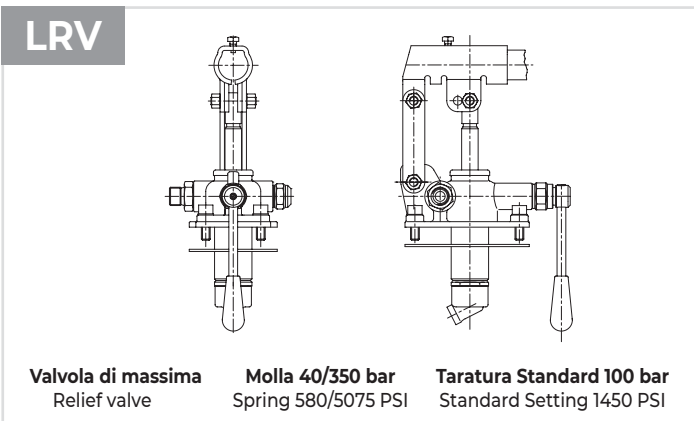
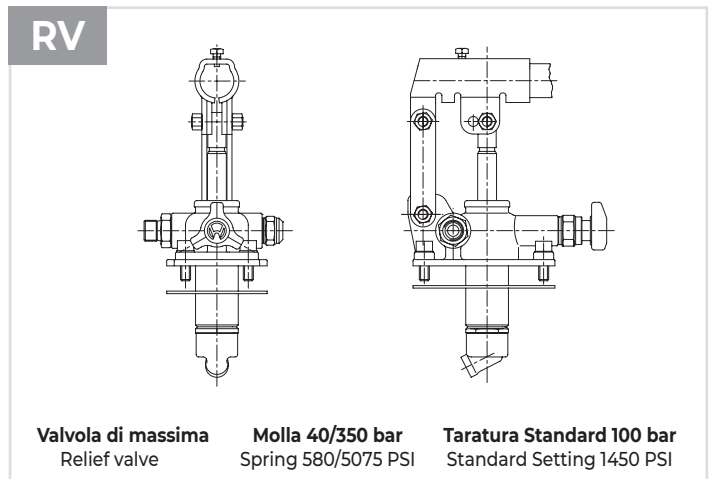
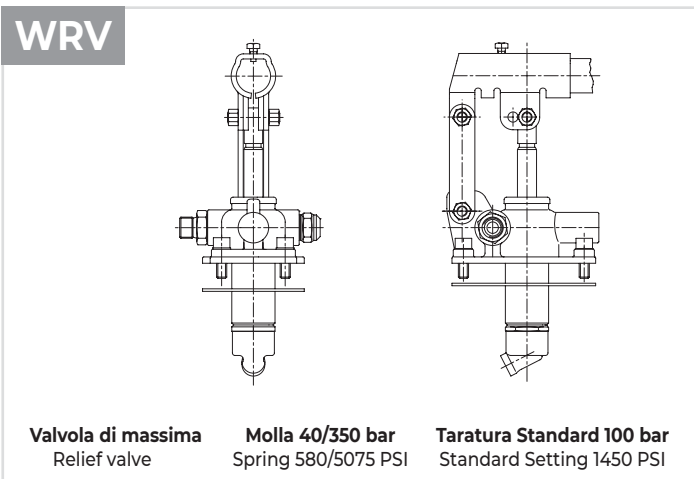
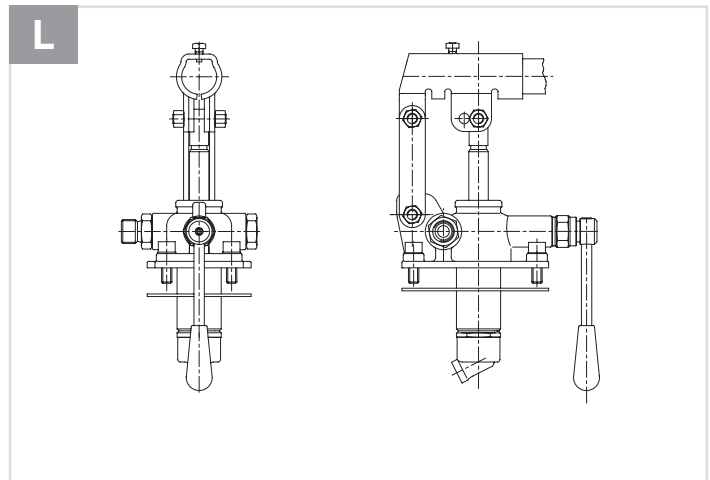
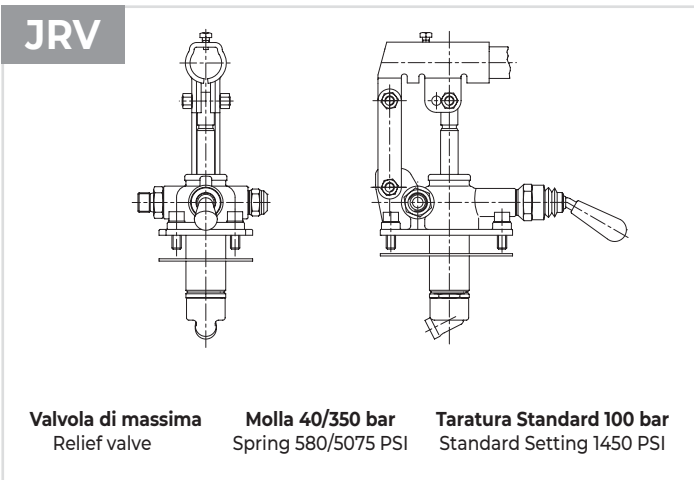
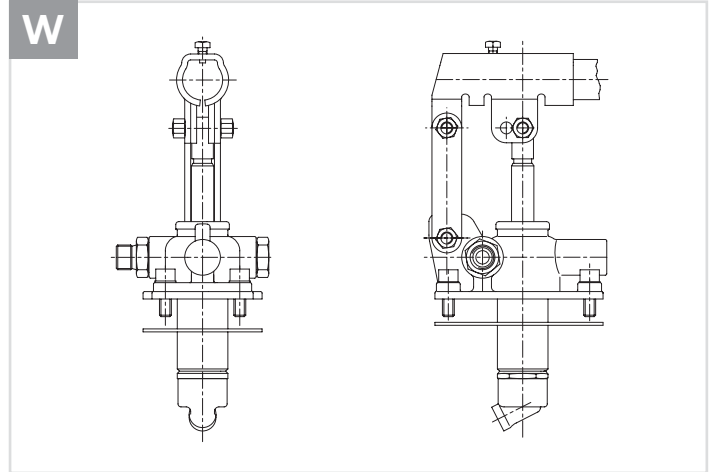
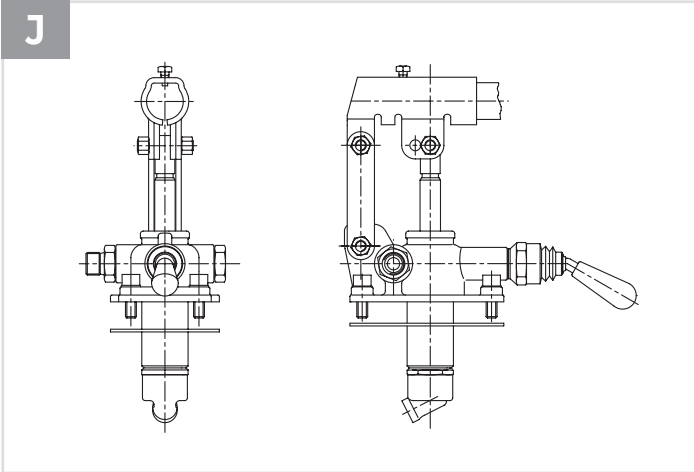
<b>01</b>	POMPA A MANO DOPPIO POMPAGGIO PER CILINDRO A SEMPLICE EFFETTO DOUBLE PUMPING HAND PUMP FOR SINGLE ACTING CYLINDER	<b>PMS</b>	
	CILINDRATA DISPLACEMENT	mm - inch	
		A B C	
	<b>6 cm<sup>3</sup></b> (0.37 in <sup>3</sup> )	<b>253</b> (9.96) <b>166</b> (6.54) <b>34</b> (1.34)	<b>6</b>
<b>02</b>	<b>12 cm<sup>3</sup></b> (0.73 in <sup>3</sup> )	<b>253</b> (9.96) <b>166</b> (6.54) <b>34</b> (1.34)	<b>12</b>
	<b>25 cm<sup>3</sup></b> (1.53 in <sup>3</sup> )	<b>273</b> (10.75) <b>172</b> (6.77) <b>34</b> (1.34)	<b>25</b>
	<b>45 cm<sup>3</sup></b> (2.75 in <sup>3</sup> )	<b>283</b> (11.14) <b>172</b> (6.77) <b>40</b> (1.57)	<b>45</b>
<b>03</b>	OPTIONAL	Senza soffietto - Without rubber protection Con soffietto - With rubber protection	<b>P</b>
<b>04</b>	OPTIONAL	Senza rubinetto di scarico con valvola di massima Without unloading valve With relief valves Senza rubinetto di scarico Without unloading valve Con joystick With joystick Con leva di scarico $\varnothing 27$ mm With unloading lever $\varnothing 1.06$ inch Con valvola di massima pressione With relief valves Con joystick e valvola di massima pressione With joystick and relief valve Con leva di scarico e valvola di massima pressione With unloading lever and relief valves	<b>WRV</b> <b>W</b> <b>J</b> <b>L</b> <b>RV</b> <b>JRV</b> <b>LRV</b>

**CARATTERISTICHE TECNICHE / TECHNICAL CHARACTERISTICS**

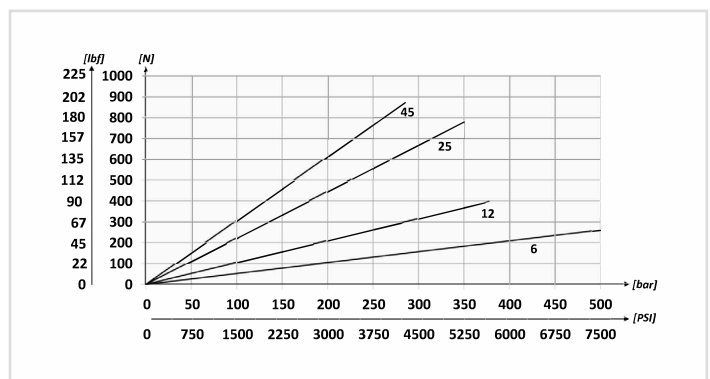
TIPO TYPE	PRESSIONE OTTIMALE OPTIMAL PRESSURE bar-PSI	PRESSIONE MAX MAX PRESSURE bar-PSI	PESO APPROX APPROX WEIGHT kg-lbt
PMS6	420 (6090)	500 (7250)	3,7 (8.15)
PMS12	220 (3190)	380 (5510)	
PMS25	120 (1740)	350 (5075)	
PMS45	80 (1160)	280 (4060)	

**DATI TECNICI / TECHNICAL DATA**

<b>Olio idraulico</b> - Mineral oil	<b>ISO 6743/4</b> (DIN 51524)
<b>Viscosità olio</b> - Oil viscosity	<b>15-250 mm<sup>2</sup>/s</b> (15 to 250 cSt)
<b>Classe di contaminazione max</b> Max contamination index	<b>ISO 4406:1999 Classe 19/17/14</b>
<b>Temperatura dell'olio</b> - Oil temperature	<b>-20°C +80°C</b> -4°F +176°F
<b>Temperatura ambiente</b> - Environment temperature	<b>-20°C +50°C</b> -4°F +122°F
<b>È indispensabile la presenza di un filtro nel circuito idraulico per proteggere la valvola (filtrazione consigliata 15 µm)</b>	
A filter into the hydraulic circuit necessary to protect the valve (advised filtration 15 µm)	



**SFORZO ESERCITATO ALL'ESTREMITÀ DELLA LEVA**  
**EFFORT OPERATING AT THE END OF THE LEVER**





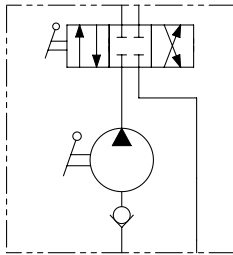
**CODICE ORDINAZIONE**  
ORDERING CODE

01	02	03	04
<b>PMI</b>			

<b>01</b>	POMPA A MANO DOPPIO POMPAGGIO PER CILINDRO A DOPPIO EFFETTO - CENTRO CHIUSO DOUBLE PUMPING HAND PUMP FOR DOUBLE ACTING CYLINDER - CLOSED CENTER			<b>PMI</b>
	CILINDRATA DISPLACEMENT	mm - inch		
		A	B	C
	<b>6 cm<sup>3</sup></b> (0.37 in <sup>3</sup> )	<b>253</b> (9.96)	<b>166</b> (6.54)	<b>34</b> (1.34)
<b>02</b>	<b>12 cm<sup>3</sup></b> (0.73 in <sup>3</sup> )	<b>253</b> (9.96)	<b>166</b> (6.54)	<b>34</b> (1.34)
	<b>25 cm<sup>3</sup></b> (1.53 in <sup>3</sup> )	<b>273</b> (10.75)	<b>172</b> (6.77)	<b>34</b> (1.34)
	<b>45 cm<sup>3</sup></b> (2.75 in <sup>3</sup> )	<b>283</b> (11.14)	<b>172</b> (6.77)	<b>40</b> (1.57)
<b>03</b>	OPTIONAL	Senza soffietto - Without rubber protection		
		Con soffietto - With rubber protection		
<b>04</b>	OPTIONAL	Con leva di scarico Ø 27 mm With unloading lever Ø 1.06 inch		
		Con valvola di massima pressione With relief valves		
		Con leva di scarico e valvola di massima pressione With unloading lever and relief valves		

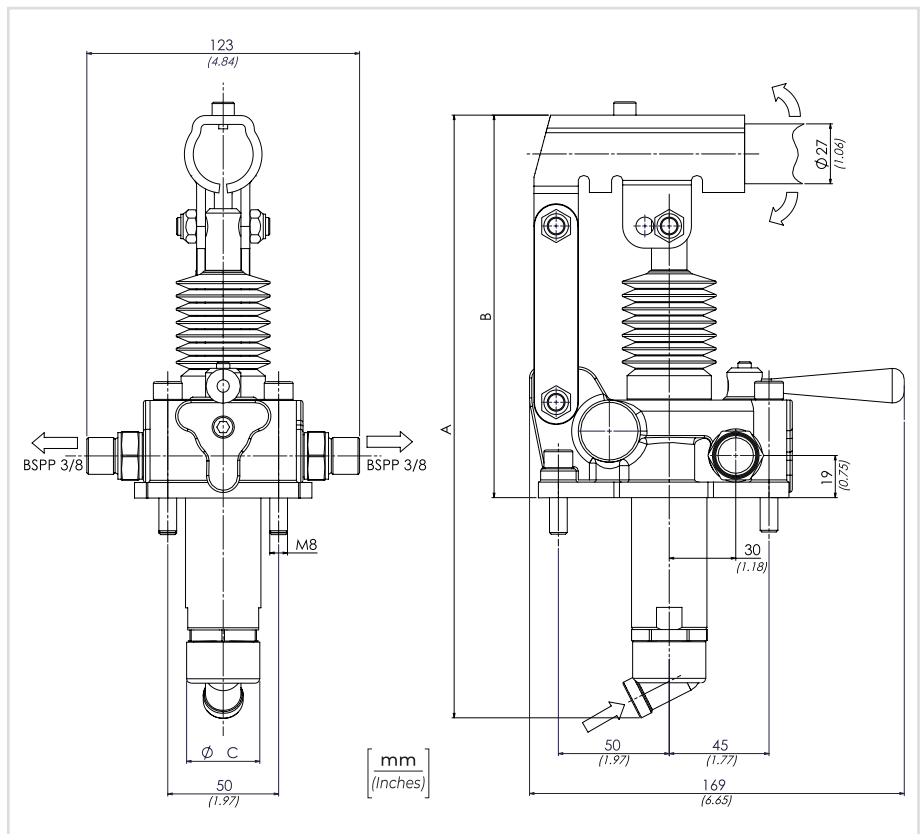
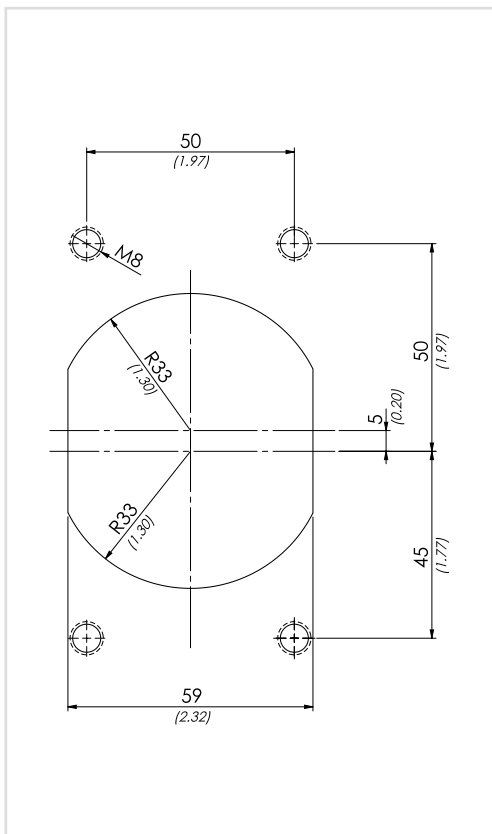
LA POMPA VIENE FORNITA CON GUARNIZIONE SAGOMATA + VITI DI FISSAGGIO + LEVA DI AZIONAMENTO L=600 mm  
THE PUMP IS SUPPLIED WITH SHAPED SEAL, FIXING SCREWS AND ACTING LEVER 23.6 inch LONG

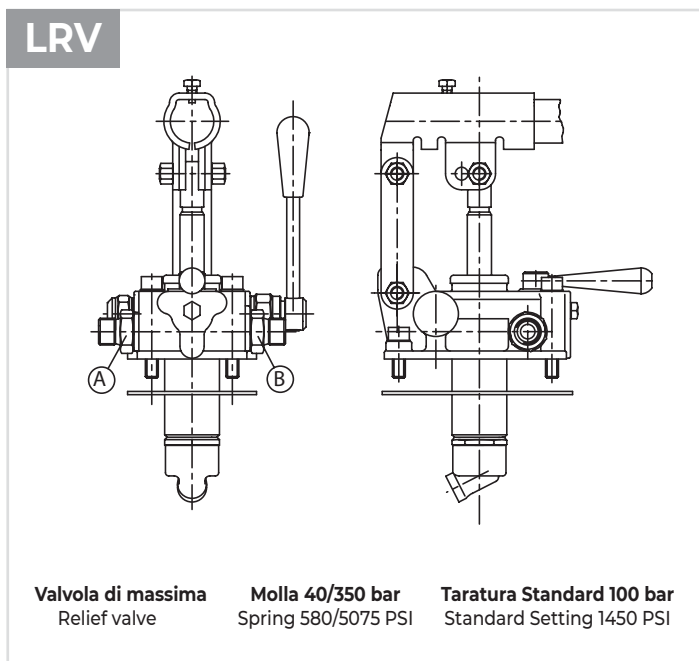
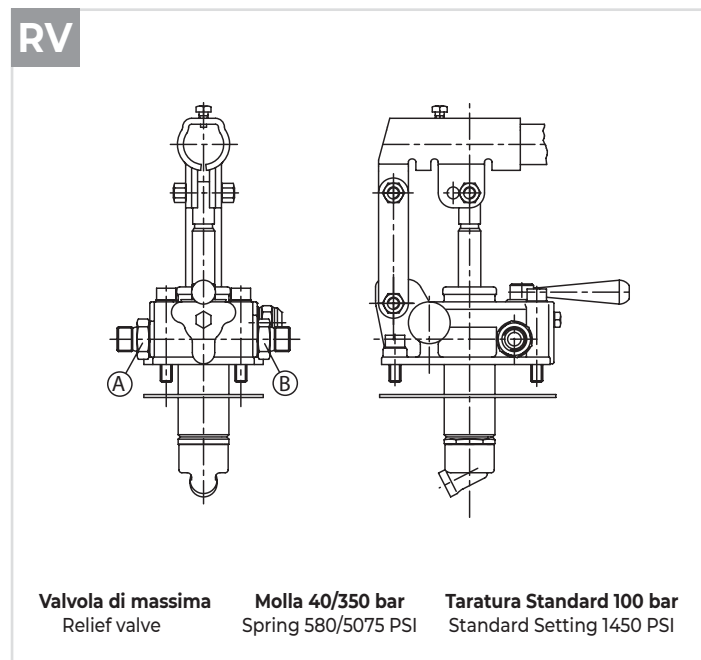
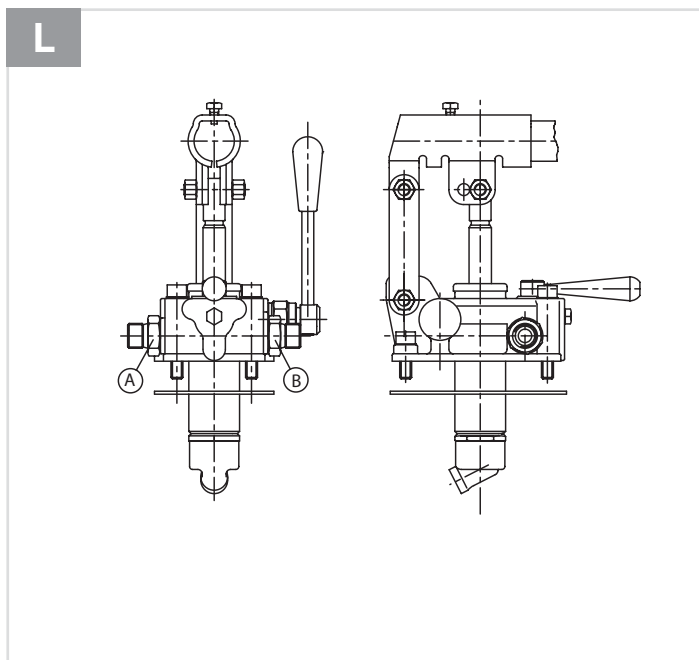
**SCHEMA IDRAULICO / HYDRAULIC CIRCUIT**



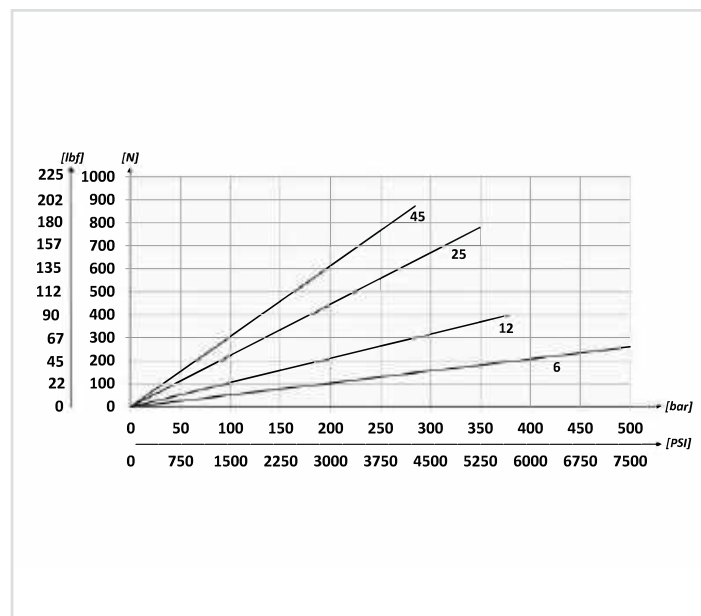
**DATI TECNICI / TECHNICAL DATA**

Olio idraulico - Mineral oil	ISO 6743/4 (DIN 51524)
Viscosità olio - Oil viscosity	15-250 mm <sup>2</sup> /s (15 to 250 cSt)
Classe di contaminazione max Max contamination index	ISO 4406:1999 Classe 19/17/14
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Temperatura ambiente - Environment temperature	-20°C +50°C -4°F +122°F
<b>È indispensabile la presenza di un filtro nel circuito idraulico per proteggere la valvola (filtrazione consigliata 15 µm)</b> A filter into the hydraulic circuit necessary to protect the valve (advised filtration 15 µm)	





**SFORZO ESERCITATO ALL'ESTREMITÀ DELLA LEVA**  
**EFFORT OPERATING AT THE END OF THE LEVER**



**CARATTERISTICHE TECNICHE / TECHNICAL CHARACTERISTICS**

TIPO TYPE	PRESSIONE OTTIMALE OPTIMAL PRESSURE bar-PSI	PRESSIONE MAX (bar) MAX PRESSURE (PSI)	PESO APPROX APPROX WEIGHT kg-lbt
PMI6	420 (6090)	500 (7250)	4,20 (9.25)
PMI12	220 (3190)	380 (5510)	
PMI25	120 (1740)	350 (5075)	
PMI45	80 (1160)	280 (4060)	



**LA POMPA VIENE FORNITA CON GUARNIZIONE SAGOMATA  
+ VITI DI FISSAGGIO + LEVA DI AZIONAMENTO Ø 27 MM L=600 mm**

**THE PUMP IS SUPPLIED WITH SHAPED SEAL, FIXING SCREWS  
AND ACTING LEVER Ø 1,06 INCH 23 inch LONG**

**CODICE ORDINAZIONE**  
ORDERING CODE

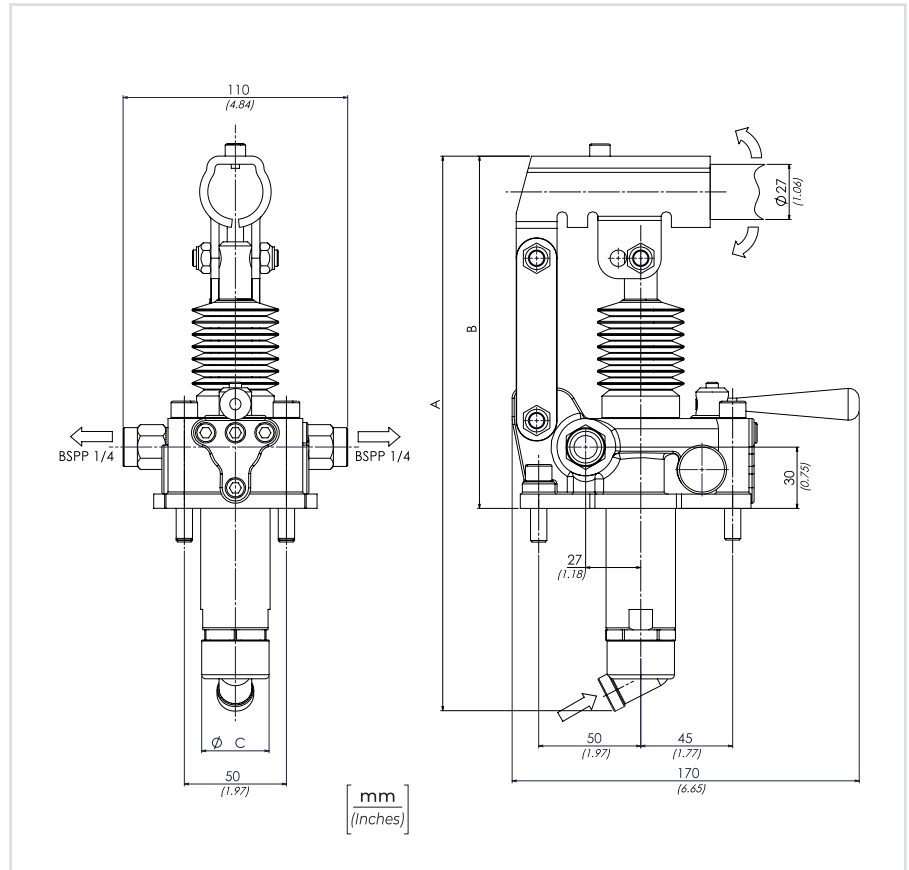
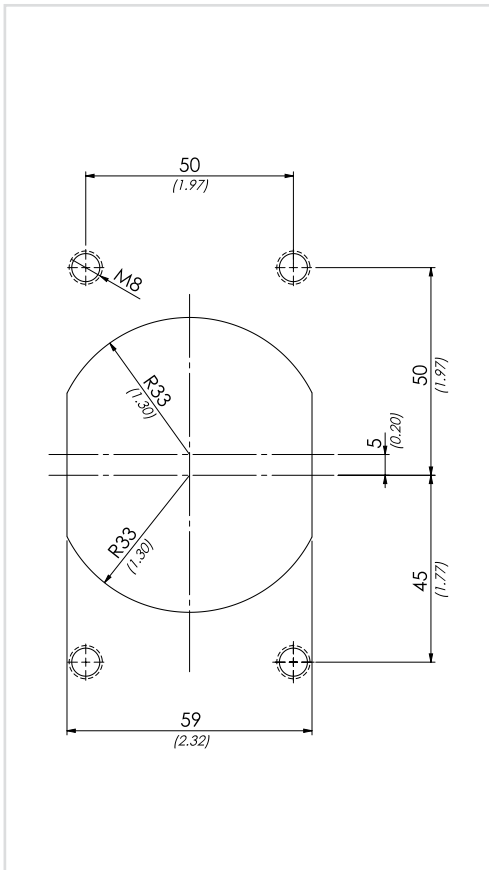
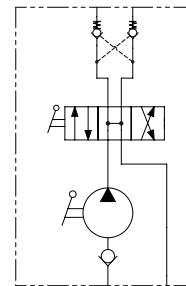
01	02	03	04
<b>PMT</b>			

<b>01</b>		POMPA A MANO DOPPIO POMPAGGIO PER CILINDRO A DOPPIO EFFETTO CON VALVOLE DI BLOCCO DOUBLE PUMPING HAND PUMP WITH CHECK VALVES FOR DOUBLE ACTING CYLINDER			<b>PMT</b>
<b>02</b>	CILINDRATA DISPLACEMENT	mm - inch			<b>6</b>
		A	B	C	
	6 cm <sup>3</sup> (0.37 in <sup>3</sup> )	253 (9.96)	166 (6.54)	34 (1.34)	<b>12</b>
	12 cm <sup>3</sup> (0.73 in <sup>3</sup> )	253 (9.96)	166 (6.54)	34 (1.34)	<b>25</b>
<b>03</b>	OPTIONAL	Senza soffiello - Without rubber protection			<b>P</b>
		Con soffiello - With rubber protection			
<b>04</b>	OPTIONAL	Con valvola di massima pressione su A e B With relief valves on A and B			<b>RVAB</b>
		Con valvola di massima pressione su B With relief valves on B			

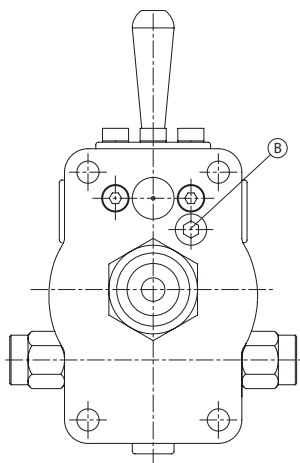
**DATI TECNICI / TECHNICAL DATA**

Olio idraulico - Mineral oil	ISO 6743/4 (DIN 51524)
Viscosità olio - Oil viscosity	15-250 mm <sup>2</sup> /s (15 to 250 cSt)
Classe di contaminazione max Max contamination index	ISO 4406:1999 Classe 19/17/14
Temperatura dell'olio - Oil temperature	-20°C +80°C -4°F +176°F
Temperatura ambiente - Environment temperature	-20°C +50°C -4°F +122°F
È indispensabile la presenza di un filtro nel circuito idraulico per proteggere la valvola (filtrazione consigliata 15 µm)	
A filter into the hydraulic circuit necessary to protect the valve (advised filtration 15 µm)	

**SCHEMA IDRAULICO / HYDRAULIC CIRCUIT**

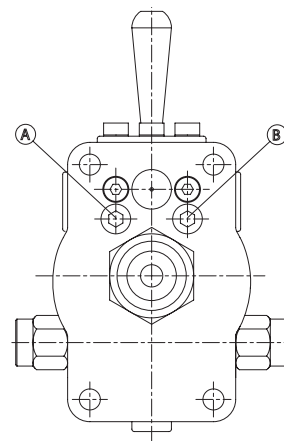


**RVB**



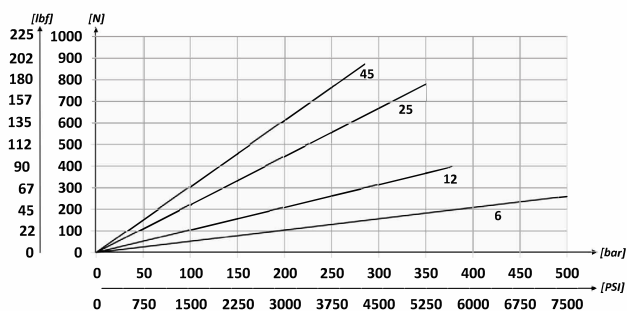
**Valvola di massima**      **Molla 40/350 bar**      **Taratura Standard 100 bar**  
 Relief valve              Spring 580/5075 PSI      Standard Setting 1450 PSI

**RVAB**



**Valvola di massima**      **Molla 40/350 bar**      **Taratura Standard 100 bar**  
 Relief valve              Spring 580/5075 PSI      Standard Setting 1450 PSI

**SFORZO ESERCITATO ALL'ESTREMITÀ DELLA LEVA**  
 EFFORT OPERATING AT THE END OF THE LEVER



**CARATTERISTICHE TECNICHE / TECHNICAL CHARACTERISTICS**

TIPO TYPE	PRESSIONE OTTIMALE OPTIMAL PRESSURE bar-PSI	PRESSIONE MAX MAX PRESSURE bar-PSI	PESO APPROX APPROX WEIGHT kg-lbt
PMT6	420 (6090)	500 (7250)	4,20 (9.25)
PMT12	220 (3190)	380 (5510)	
PMT25	120 (1740)	350 (5075)	
PMT45	80 (1160)	280 (4060)	



**CODICE ORDINAZIONE**  
ORDERING CODE

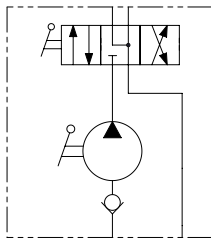
01	02	03	04
<b>PMA</b>			

<b>01</b>	POMPA A MANO DOPPIO POMPAGGIO PER CILINDRO A DOPPIO EFFETTO - CENTRO APERTO DOUBLE PUMPING HAND PUMP FOR DOUBLE ACTING CYLINDER - OPEN CENTER			<b>PMA</b>	
	CILINDRATA DISPLACEMENT	mm - inch			
		A	B	C	
	6 cm <sup>3</sup> (0.37 in <sup>3</sup> )	253 (9.96)	166 (6.54)	34 (1.34)	<b>6</b>
<b>02</b>	12 cm <sup>3</sup> (0.73 in <sup>3</sup> )	253 (9.96)	166 (6.54)	34 (1.34)	<b>12</b>
	25 cm <sup>3</sup> (1.53 in <sup>3</sup> )	273 (10.75)	172 (6.77)	34 (1.34)	<b>25</b>
	45 cm <sup>3</sup> (2.75 in <sup>3</sup> )	283 (11.14)	172 (6.77)	40 (1.57)	<b>45</b>
<b>03</b>	OPTIONAL	Senza soffiello - Without rubber protection			
		Con soffiello - With rubber protection			<b>P</b>
<b>04</b>	OPTIONAL	Con leva di scarico Ø 27 mm With unloading lever Ø 1.06 inch			<b>L</b>
		Con valvola di massima pressione su A e B With relief valves on A and B			<b>RV</b>
		Con leva di scarico e valvola di massima pressione With unloading lever and relief valves			<b>LRV</b>

LA POMPA VIENE FORNITA CON GUARNIZIONE SAGOMATA + VITI DI FISSAGGIO + LEVA DI AZIONAMENTO L=600 mm

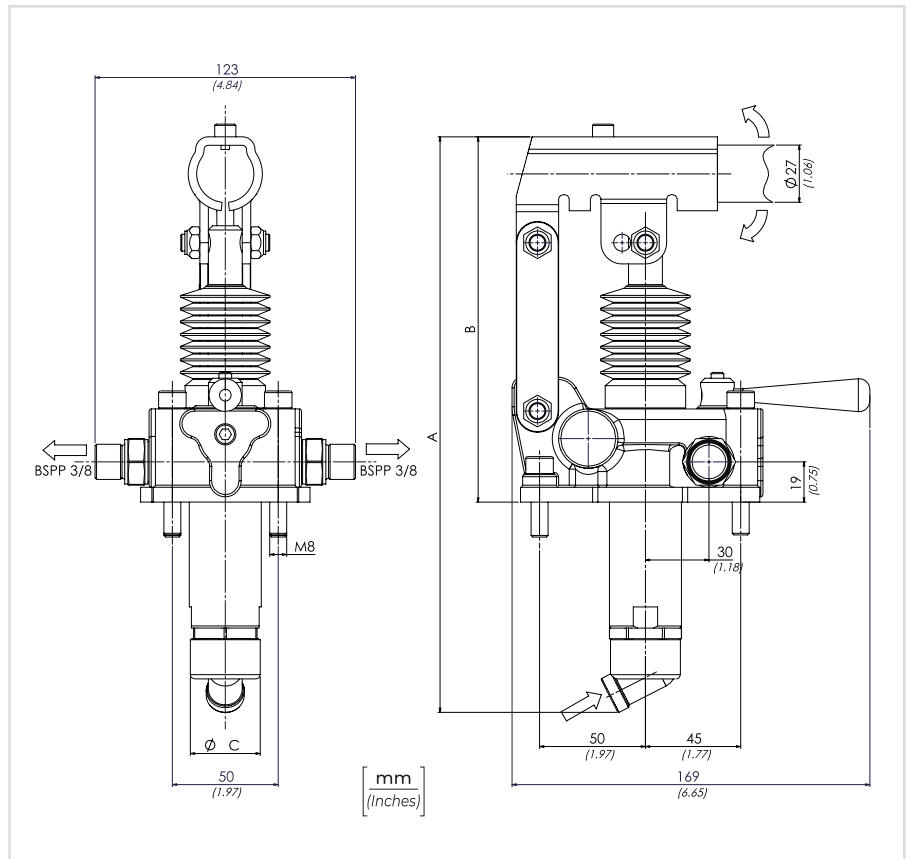
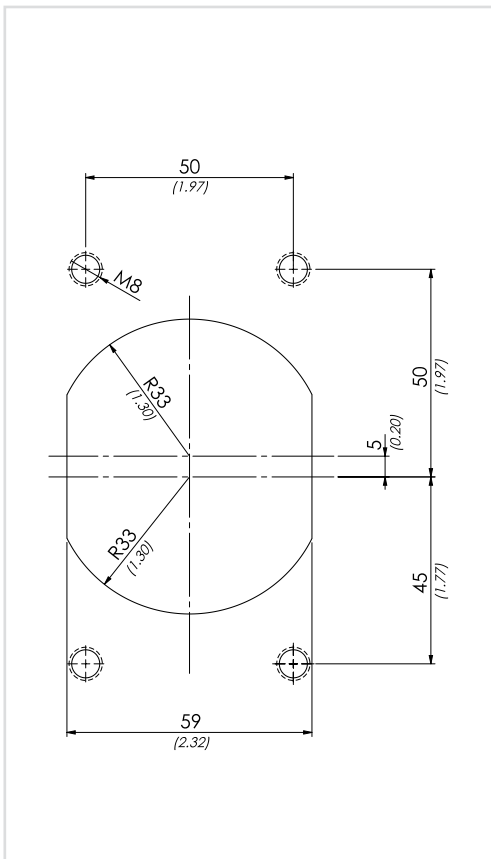
THE PUMP IS SUPPLIED WITH SHAPED SEAL, FIXING SCREWS AND ACTING LEVER 23.6 inch LONG

**SCHEMA IDRAULICO / HYDRAULIC CIRCUIT**

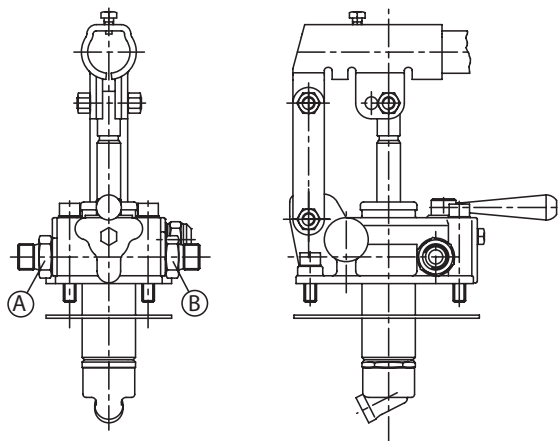


**DATI TECNICI / TECHNICAL DATA**

<b>Olio idraulico</b> - Mineral oil	<b>ISO 6743/4</b> (DIN 51524)
<b>Viscosità olio</b> - Oil viscosity	<b>15-250 mm<sup>2</sup>/s</b> (15 to 250 cSt)
<b>Classe di contaminazione max</b> Max contamination index	<b>ISO 4406:1999 Classe 19/17/14</b>
<b>Temperatura dell'olio</b> - Oil temperature	<b>-20°C +80°C</b> -4°F +176°F
<b>Temperatura ambiente</b> - Environment temperature	<b>-20°C +50°C</b> -4°F +122°F
<b>È indispensabile la presenza di un filtro nel circuito idraulico per proteggere la valvola (filtrazione consigliata 15 µm)</b> A filter into the hydraulic circuit necessary to protect the valve (advised filtration 15 µm)	

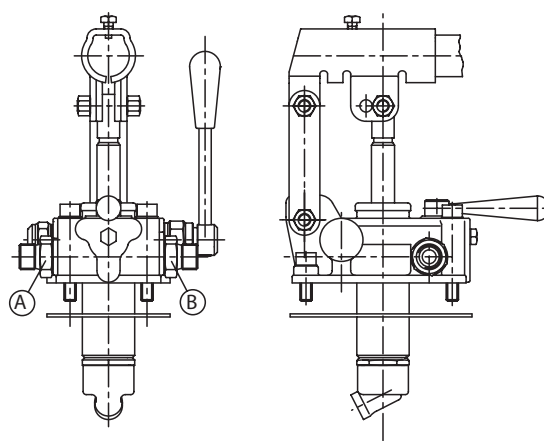


## RV



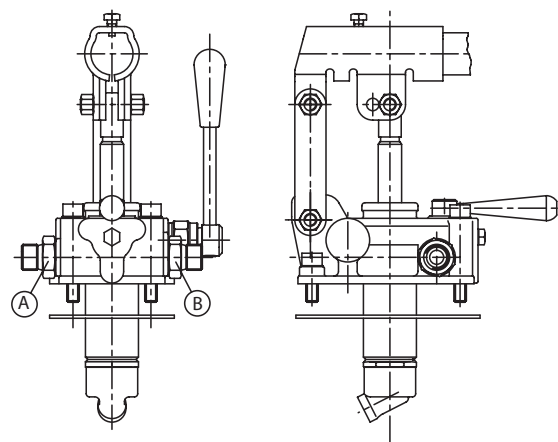
**Valvola di massima**    **Molla 40/350 bar**    **Taratura Standard 100 bar**  
 Relief valve    Spring 580/5075 PSI    Standard Setting 1450 PSI

## LRV

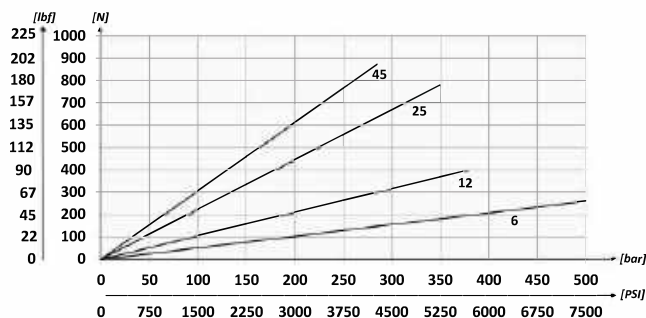


**Valvola di massima**    **Molla 40/350 bar**    **Taratura Standard 100 bar**  
 Relief valve    Spring 580/5075 PSI    Standard Setting 1450 PSI

## L



### **SFORZO ESERCITATO ALL'ESTREMITÀ DELLA LEVA** EFFORT OPERATING AT THE END OF THE LEVER



### CARATTERISTICHE TECNICHE / TECHNICAL CHARACTERISTICS

TIPO TYPE	PRESSIONE OTTIMALE OPTIMAL PRESSURE bar-PSI	PRESSIONE MAX (bar) MAX PRESSURE (PSI)	PESO APPROX (kg) APPROX WEIGHT (lbt)
PMA6	420 (6090)	500 (7250)	4,20 (9.25)
PMA12	220 (3190)	380 (5510)	
PMA25	120 (1740)	350 (5075)	
PMA45	80 (1160)	280 (4060)	



LA POMPA VIENE FORNITA CON GUARNIZIONE SAGOMATA  
+ VITI DI FISSAGGIO  
+ LEVA DI AZIONAMENTO Ø 20 MM L=500 mm

LA MANDATA LA SI OTTIENE SOLAMENTE  
AZIONANDO LA LEVA VERSO IL BASSO

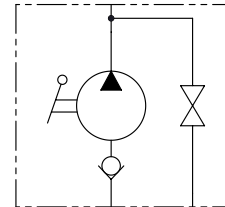
THE PUMP IS SUPPLIED WITH SHAPED SEAL,  
FIXING SCREWS AND ACTING LEVER Ø 0.79 17,7 inch LONG.  
OIL FLOW LEVER ACTION DOWNWARDS ONLY

**CODICE ORDINAZIONE**  
ORDERING CODE

01	02	03	04
<b>PME1</b>			

<b>01</b>	POMPA A MANO SINGOLO POMPAGGIO VERSO IL BASSO PER CILINDRO A SEMPLICE EFFETTO SINGLE DOWNWARD PUMPING HAND PUMP FOR SINGLE ACTING CYLINDER	<b>PME1</b>	
<b>02</b>	CILINDRATA DISPLACEMENT	8 cm <sup>3</sup> (0.49 in <sup>3</sup> )	<b>8</b>
		15 cm <sup>3</sup> (0.92 in <sup>3</sup> )	<b>15</b>
<b>03</b>	OPTIONAL	Senza soffietto - Without rubber protection	
		Con soffietto - With rubber protection	<b>P</b>
<b>04</b>	OPTIONAL	Senza rubinetto di scarico con valvola di massima Without unloading valve With relief valves	<b>WRV</b>
		Senza rubinetto di scarico - Without unloading valve	<b>W</b>
		Con valvola di massima pressione With relief valves	<b>RV</b>

**SCHEMA IDRAULICO / HYDRAULIC CIRCUIT**

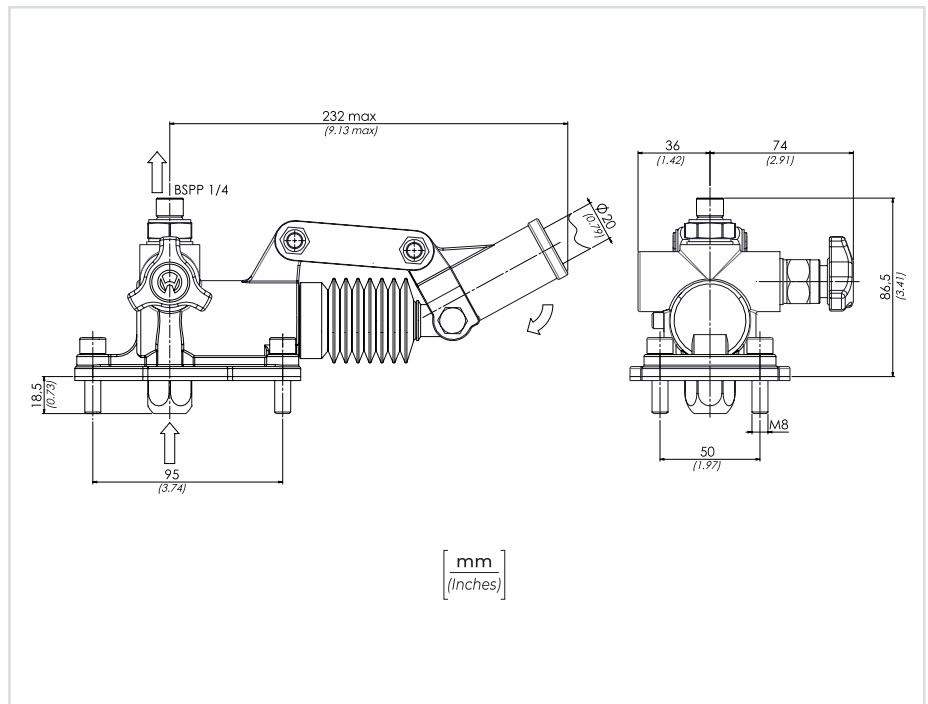
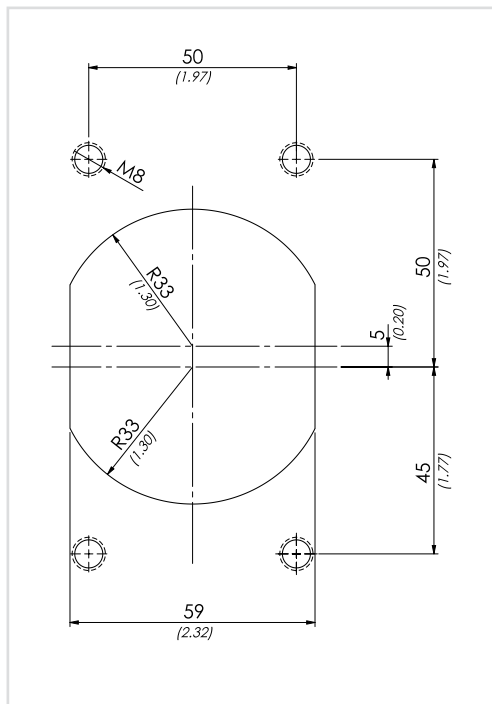


**CARATTERISTICHE TECNICHE / TECHNICAL CHARACTERISTICS**

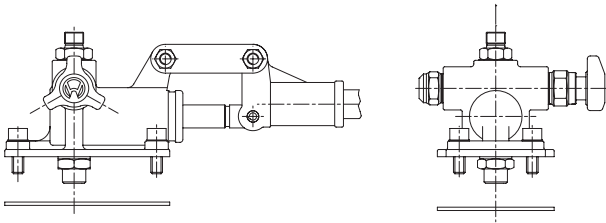
TIPO TYPE	PRESSIONE OTTIMALE OPTIMAL PRESSURE bar-PSI	PRESSIONE MAX MAX PRESSURE bar-PSI	PESO APPROX APPROX WEIGHT kg-lbt
PME18	180 (2610)	380 (5510)	2,9 (6.39)
PME15	110 (1595)	350 (5075)	

**DATI TECNICI / TECHNICAL DATA**

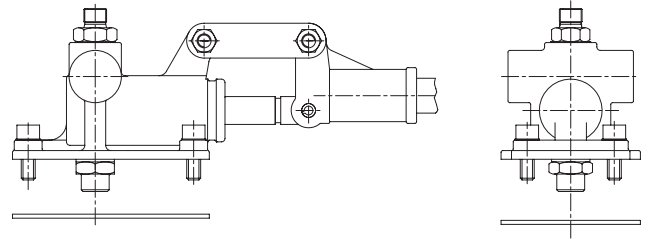
Olio idraulico - Mineral oil	<b>ISO 6743/4 (DIN 51524)</b>
Viscosità olio - Oil viscosity	<b>15-250 mm<sup>2</sup>/s (15 to 250 cSt)</b>
Classe di contaminazione max Max contamination index	<b>ISO 4406:1999 Classe 19/17/14</b>
Temperatura dell'olio - Oil temperature	<b>-20°C +80°C -4°F +176°F</b>
Temperatura ambiente - Environment temperature	<b>-20°C +50°C -4°F +122°F</b>
<b>È indispensabile la presenza di un filtro nel circuito idraulico per proteggere la valvola (filtrazione consigliata 15 µm)</b> A filter into the hydraulic circuit necessary to protect the valve (advised filtration 15 µm)	



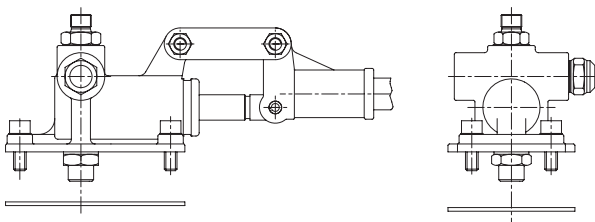
**RW**



**W**

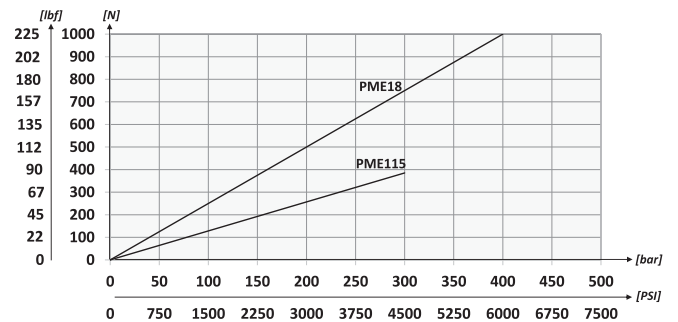


**WRV**



**Valvola di massima**      **Molla 40/350 bar**      **Taratura Standard 100 bar**  
 Relief valve              Spring 580/5075 PSI      Standard Setting 1450 PSI

**SFORZO ESERCITATO ALL'ESTREMITÀ DELLA LEVA**  
**EFFORT OPERATING AT THE END OF THE LEVER**

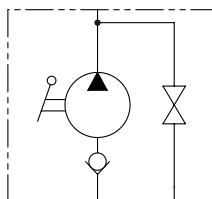




LA POMPA VIENE FORNITA CON GUARNIZIONE SAGOMATA  
+ VITI DI FISSAGGIO + LEVA DI AZIONAMENTO L=600 mm  
LA MANDATA LA SI OTTIENE SOLAMENTE AZIONANDO LA LEVA VERSO IL BASSO

THE PUMP IS SUPPLIED WITH SHAPED SEAL,  
FIXING SCREWS AND ACTING LEVER 23,6 inch LONG.  
OIL FLOW LEVER ACTION DOWNWARDS ONLY

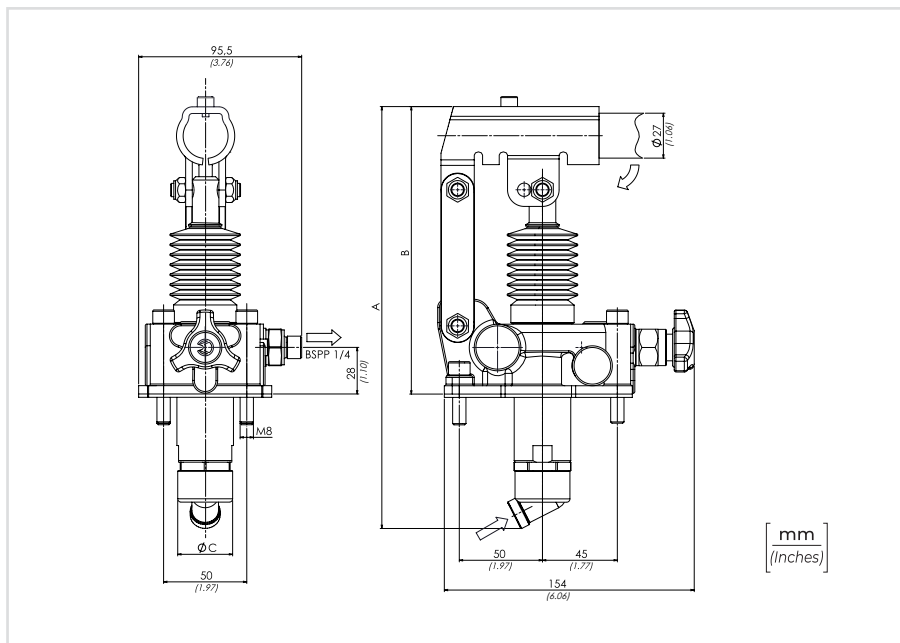
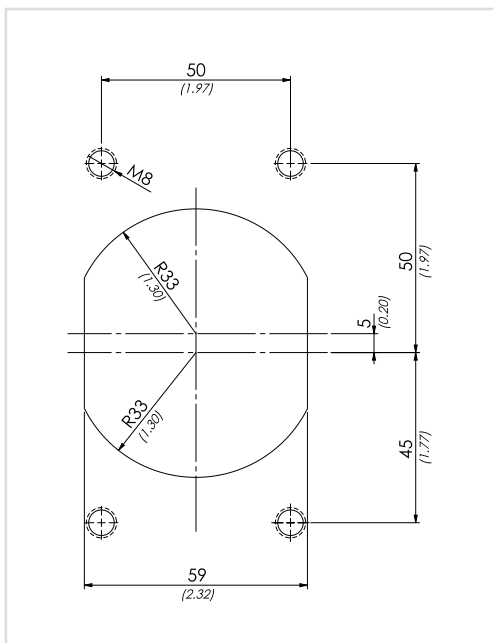
SCHEMA IDRAULICO / HYDRAULIC CIRCUIT



CODICE ORDINAZIONE  
ORDERING CODE

01	02	03	04
<b>PME2</b>			

<b>01</b>		POMPA A MANO SINGOLO POMPAGGIO VERSO IL BASSO PER CILINDRO A SEMPLICE EFFETTO SINGLE DOWNWARD PUMPING HAND PUMP FOR SINGLE ACTING CYLINDER			<b>PME2</b>
<b>02</b>	CILINDRATA DISPLACEMENT	mm - inch			
		A	B	C	
	20 cm <sup>3</sup> (1.22 in <sup>3</sup> )	249 (9.80)	167 (6.57)	34 (1.33)	20
	30 cm <sup>3</sup> (1.83 in <sup>3</sup> )	252 (9.92)	167 (6.57)	34 (1.33)	30
	40 cm <sup>3</sup> (2.44 in <sup>3</sup> )	252 (9.92)	167 (6.57)	40 (1.57)	40
<b>03</b>	OPTIONAL	Senza soffietto - Without rubber protection			
		Con soffietto - With rubber protection			<b>P</b>
<b>04</b>	OPTIONAL	Senza rubinetto di scarico con valvola di massima Without unloading valve With relief valves			<b>WRV</b>
		Senza rubinetto di scarico Without unloading valve			<b>W</b>
		Con leva di scarico - With unloading lever			<b>L</b>
		Con valvola di massima pressione With relief valves			<b>RV</b>
		Con leva di scarico e valvola di massima pressione With unloading lever and relief valves			<b>LRV</b>



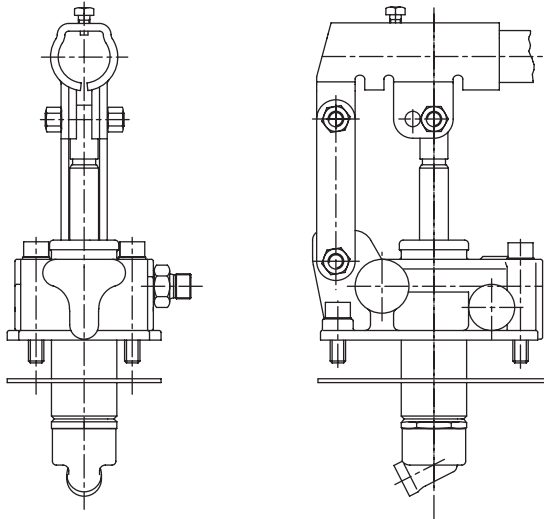
DATI TECNICI / TECHNICAL DATA

Olio idraulico - Mineral oil	ISO 6743/4 (DIN 51524)
Viscosità olio - Oil viscosity	15-250 mm <sup>2</sup> /s (15 to 250 cSt)
Classe di contaminazione max Max contamination index	ISO 4406:1999 Classe 19/17/14
Temperatura dell'olio - Oil temperature	-20°C +80°C -4°F +176°F
Temperatura ambiente - Environment temperature	-20°C +50°C -4°F +122°F
È indispensabile la presenza di un filtro nel circuito idraulico per proteggere la valvola (filtrazione consigliata 15 µm) A filter into the hydraulic circuit necessary to protect the valve (advised filtration 15 µm)	

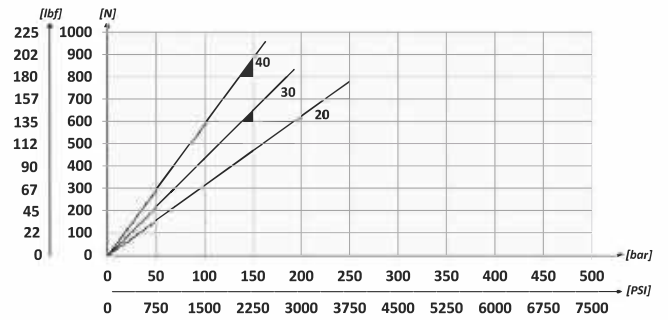
CARATTERISTICHE TECNICHE / TECHNICAL CHARACTERISTICS

TIPO TYPE	PRESSIONE OTTIMALE OPTIMAL PRESSURE bar-PSI	PRESSIONE MAX MAX PRESSURE bar-PSI	PESO APPROX APPROX WEIGHT kg-lbt
PME220	80 (1160)	240 (3480)	4,2 (9.2)
PME230	60 (870)	185 (2683)	
PME240	40 (580)	160 (2320)	

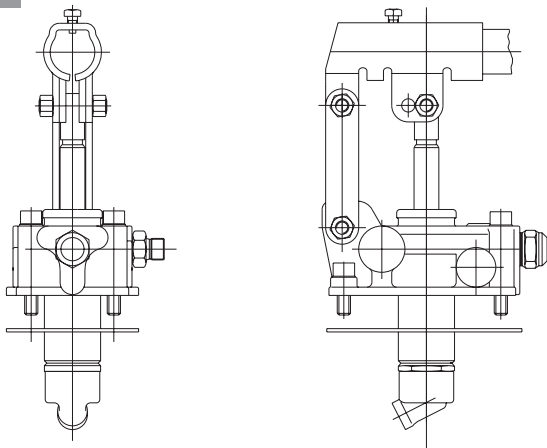
**W**



**SFORZO ESERCITATO ALL'ESTREMITÀ DELLA LEVA**  
EFFORT OPERATING AT THE END OF THE LEVER

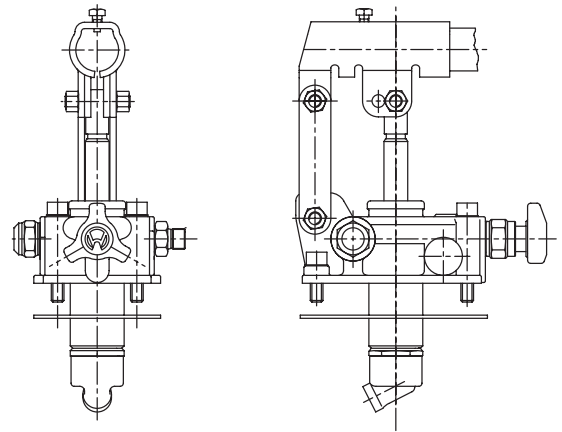


**WRV**



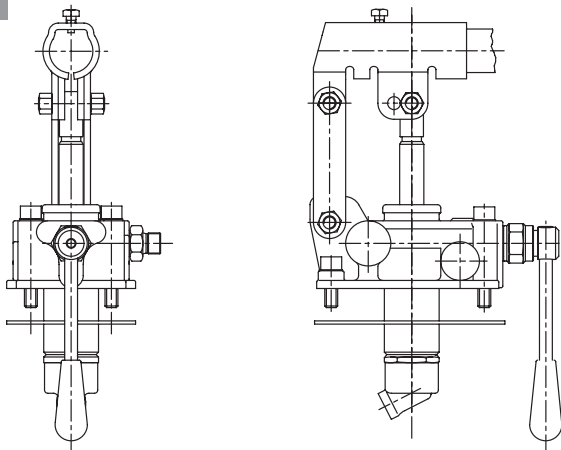
**Valvola di massima** Relief valve  
**Molla 40/350 bar** Spring 580/5075 PSI  
**Taratura Standard 100 bar** Standard Setting 1450 PSI

**RV**

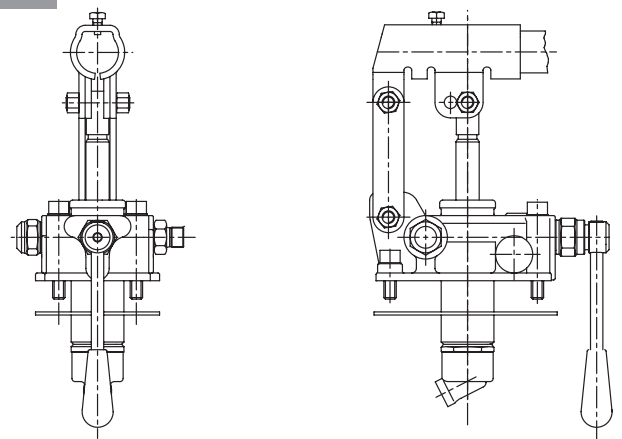


**Valvola di massima** Relief valve  
**Molla 40/350 bar** Spring 580/5075 PSI  
**Taratura Standard 100 bar** Standard Setting 1450 PSI

**L**



**LRV**



**Valvola di massima** Relief valve  
**Molla 40/350 bar** Spring 580/5075 PSI  
**Taratura Standard 100 bar** Standard Setting 1450 PSI



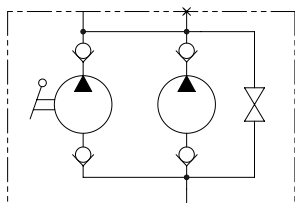
**CODICE ORDINAZIONE**  
ORDERING CODE

01	02	03
<b>PMD</b>		

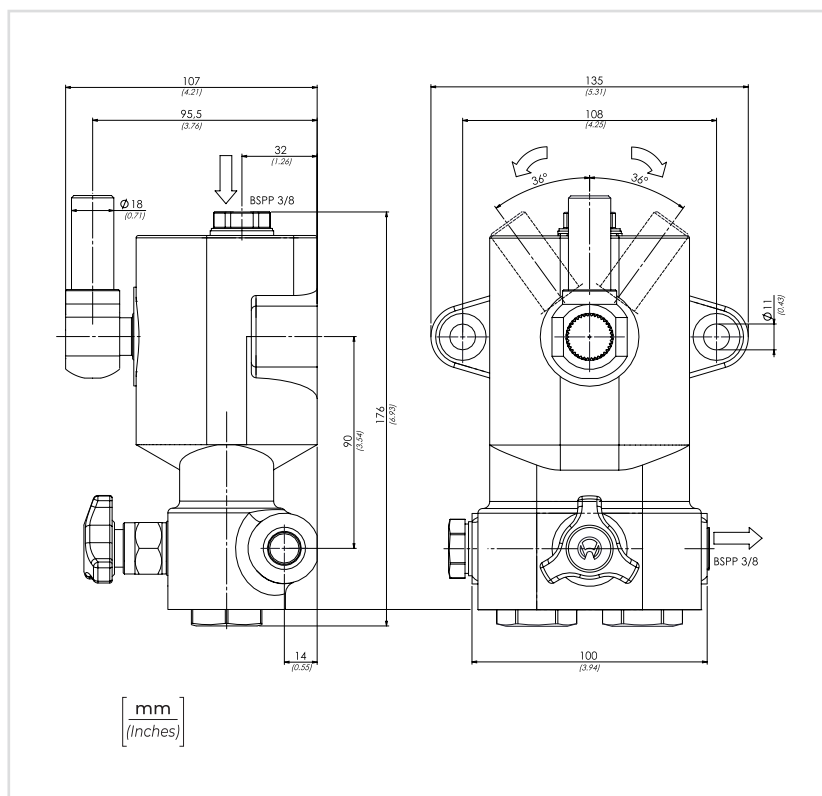
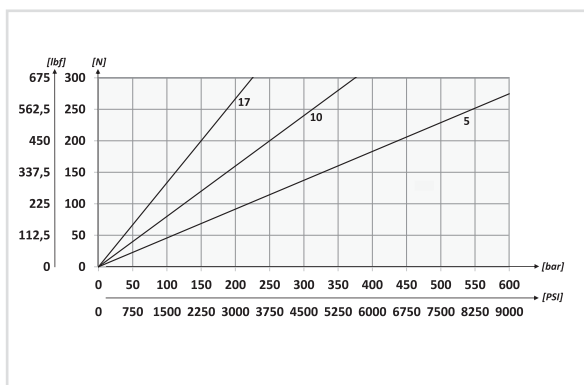
LA POMPA VIENE FORNITA CON GUARNIZIONE SAGOMATA  
+ VITI DI FISSAGGIO + LEVA DI AZIONAMENTO L=500 mm  
THE PUMP IS SUPPLIED WITH SHAPED SEAL, FIXING SCREWS  
AND ACTING LEVER 19.7 inch LONG

<b>01</b>	POMPA A MANO SEMPLICE EFFETTO DOPPIO POMPANTE (SINGLE ACTING HAND PUMP WITH DOUBLE CYLINDER)	<b>PMD</b>
<b>02</b>	CILINDRATA (DISPLACEMENT)	5 cm <sup>3</sup> (0.31 in <sup>3</sup> ) <b>5</b>
		10 cm <sup>3</sup> (0.61 in <sup>3</sup> ) <b>10</b>
		17 cm <sup>3</sup> (1.04 in <sup>3</sup> ) <b>17</b>
<b>03</b>	OPTIONAL	Senza rubinetto di scarico (Without unloading valve) <b>W</b>

**SCHEMA IDRAULICO / HYDRAULIC CIRCUIT**



**SFORZO ESERCITATO ALL'ESTREMITÀ DELLA LEVA**  
EFFORT OPERATING AT THE END OF THE LEVER



**DATI TECNICI / TECHNICAL DATA**

Olio idraulico - Mineral oil	ISO 6743/4 (DIN 51524)
Viscosità olio - Oil viscosity	15-250 mm <sup>2</sup> /s (15 to 250 cSt)
Classe di contaminazione max Max contamination index	ISO 4406:1999 Classe 19/17/14
Temperatura dell'olio - Oil temperature	-20°C +80°C -4°F +176°F
Temperatura ambiente - Environment temperature	-20°C +50°C -4°F +122°F
È indispensabile l'utilizzo di un filtro per proteggere la valvola (filtrazione consigliata 15 µm) It is necessary a filter use to protect the valve (advised filtration 15 µm)	

**CARATTERISTICHE TECNICHE / TECHNICAL CHARACTERISTICS**

TIPO TYPE	PRESSIONE OTTIMALE OPTIMAL PRESSURE bar-PSI	PRESSIONE MAX MAX PRESSURE bar-PSI	PESO APPROX APPROX WEIGHT kg-lbt	CILINDRATA (cm <sup>3</sup> ) DISPLACEMENT (in <sup>3</sup> )
PMD5	500 (7250)	500 (7250)	5,7 (12.56)	5 (0.31)
PMD10	250 (3625)	250 (3625)		10 (0.61)
PMD17	150 (2175)	150 (2175)		17 (1.04)

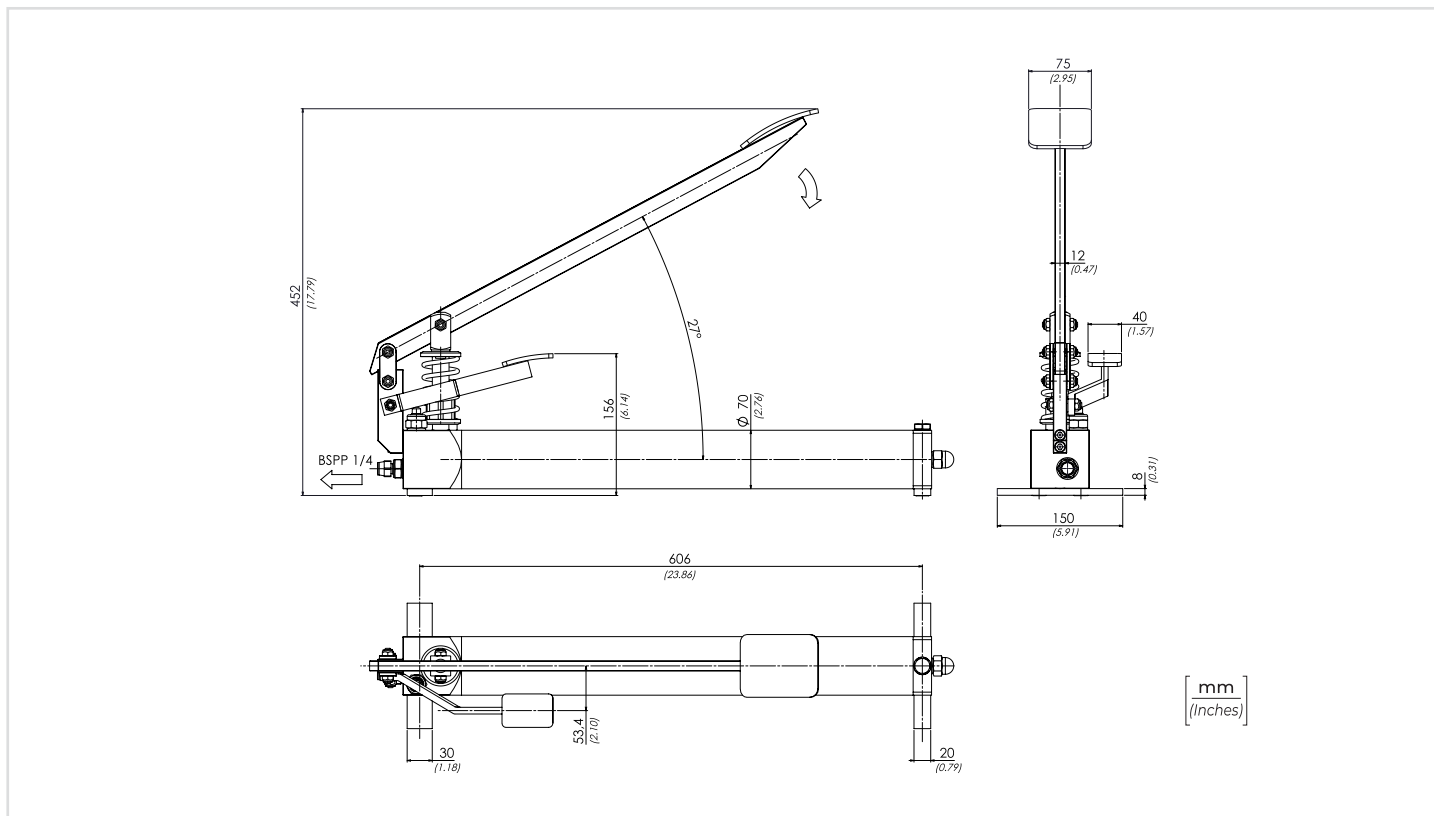
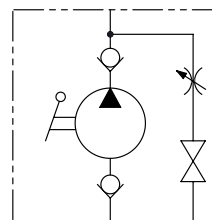
**CODICE ORDINAZIONE**  
ORDERING CODE

01  
**PME3**

<b>01</b>	POMPA A PEDALE (FOOT PUMP)	<b>PME3</b>
Serbatoio lt. 1,5 (Reservoir lt. 1.5)		



**SCHEMA IDRAULICO / HYDRAULIC CIRCUIT**



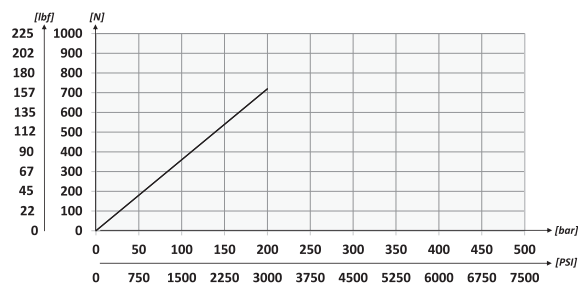
**DATI TECNICI / TECHNICAL DATA**

<b>Olio idraulico</b> - Mineral oil	<b>ISO 6743/4</b> (DIN 51524)
<b>Viscosità olio</b> - Oil viscosity	<b>15-250 mm<sup>2</sup>/s</b> (15 to 250 cSt)
<b>Classe di contaminazione max</b> Max contamination index	<b>ISO 4406:1999 Classe 19/17/14</b>
<b>Temperatura dell'olio</b> - Oil temperature	<b>-20°C +80°C</b> -4°F +176°F
<b>Temperatura ambiente</b> - Environment temperature	<b>-20°C +50°C</b> -4°F +122°F
È indispensabile l'utilizzo di un filtro per proteggere la valvola (filtrazione consigliata 15 µm) It is necessary a filter use to protect the valve (advised filtration 15 µm)	

**CARATTERISTICHE TECNICHE / TECHNICAL CHARACTERISTICS**

TIPO TYPE	PRESSIONE MAX MAX PRESSURE bar-PSI	PESO APPROX APPROX WEIGHT kg-lbt	CILINDRATA (cm <sup>3</sup> ) DISPLACEMENT (in <sup>3</sup> )
<b>PME3</b>	<b>220</b> (3190)	<b>10,40</b> (22.92)	<b>14</b> (0.85)

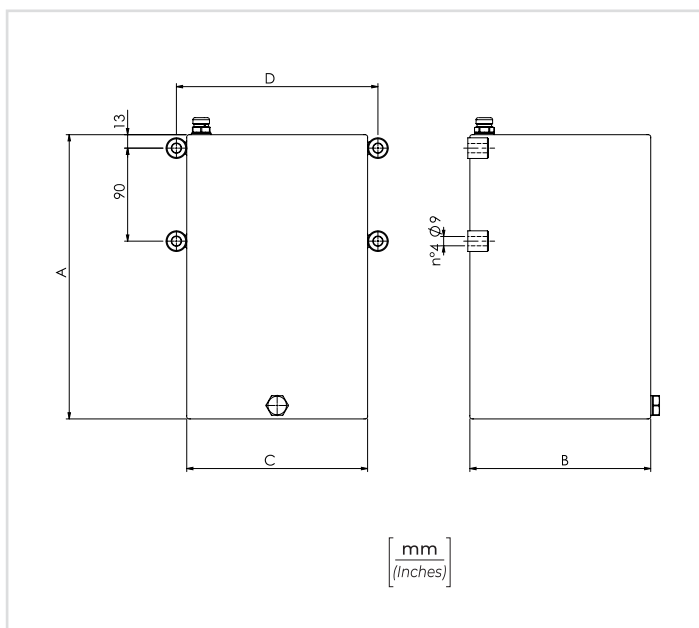
**SFORZO ESERCITATO ALL'ESTREMITÀ DELLA LEVA**  
EFFORT OPERATING AT THE END OF THE LEVER





SERBATOIO IN ACCIAIO, VERNICIATURA RAL9005 ANTIOLIO-NERO,  
IL SERBATOIO È COMPRESIVO DI TAPPO SFIATO,  
TAPPO SCARICO E TUBO PESCAGGIO

STEEL RESERVOIR, RAL9005 BLACK OIL PROOF PAINTING, THE  
RESERVOIR IS INCLUDING THE BREATHER PLUGS AND DRAFT TUBE



01

**CODICE ORDINAZIONE**  
ORDERING CODE

**CARATTERISTICHE TECNICHE / TECHNICAL CHARACTERISTICS**

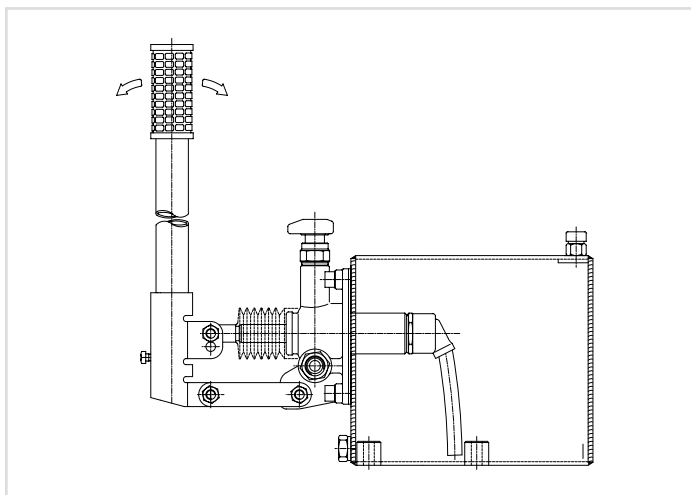
	TIPO TYPE	CAPACITÀ CAPACITY	A	B	C	D	PESO APPROX (kg) APPROX WEIGHT (lbt)
01	17900001	1 Lt. - 6l in. <sup>3</sup>	120 (4.72)	150 (5.91)	100 (3.94)	120 (4.72)	2,2 (5)
	17900002	2 Lt. - 122 in. <sup>3</sup>	185 (7.28)				2,7 (6)
	17900003	3 Lt. - 183 in. <sup>3</sup>	255 (10.04)				3,5 (7,71)
	17900006	5 Lt. - 305 in. <sup>3</sup>	200 (7.87)	175 (6.89)	195 (7.68)	5 (10.9)	
	17900004	7 Lt. - 427 in. <sup>3</sup>	275 (10.83)			5,5 (12.1)	
	17900005	10 Lt. - 610 in. <sup>3</sup>	380 (14.96)			7,1 (15.39)	
	17900014	13 Lt. - 793 in. <sup>3</sup>	485 (19.09)			10,75 (23.7)	
	17900015	15 Lt. - 915 in. <sup>3</sup>	600 (23.62)			12,10 (26.67)	
	17900016	20 Lt. - 1220 in. <sup>3</sup>	780 (30.71)			16 (35.26)	

**DATI TECNICI / TECHNICAL DATA**

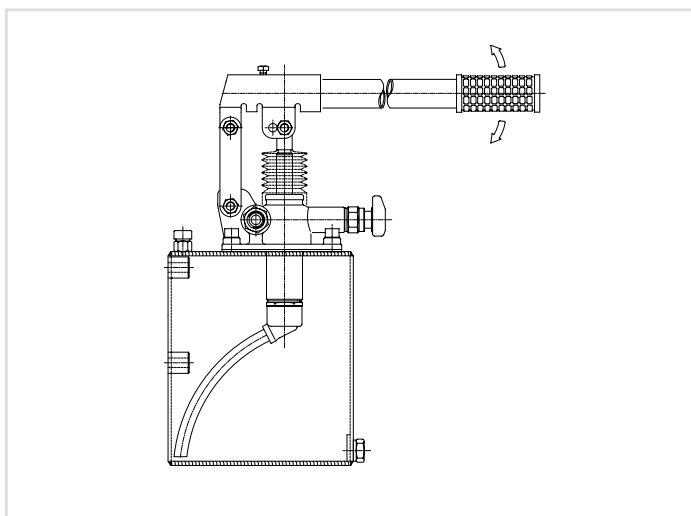
Olio idraulico - Mineral oil	ISO 6743/4 (DIN 51524)
Viscosità olio - Oil viscosity	15-250 mm <sup>2</sup> /s (15 to 250 cSt)
Classe di contaminazione max Max contamination index	ISO 4406:1999 Classe 19/17/14
Temperatura dell'olio - Oil temperature	-20°C +80°C -4°F +176°F
Temperatura ambiente - Environment temperature	-20°C +50°C -4°F +122°F

È indispensabile l'utilizzo di un filtro per proteggere la valvola (filtrazione consigliata 15 µm)  
It is necessary a filter use to protect the valve (advised filtration 15 µm)

**MONTAGGIO ORIZZONTALE / HORIZONTAL MOUNTING**



**MONTAGGIO VERTICALE / VERTICAL MOUNTING**





**TNA 1**



**TNA 2 - TNA 3 - TNA 5**

**SERBATOIO IN ALLUMINIO, IL SERBATOIO È COMPRESIVO DI TAPPO SFIATO, TAPPO SCARICO E TUBO PESCIAGGIO**

**ALUMINIUM RESERVOIR, THE RESERVOIR INCLUDES THE AIR BLEEDING PLUGS AND SUCTION TUBE**

	01	02
<b>CODICE ORDINAZIONE</b> ORDERING CODE	<b>TNA</b>	

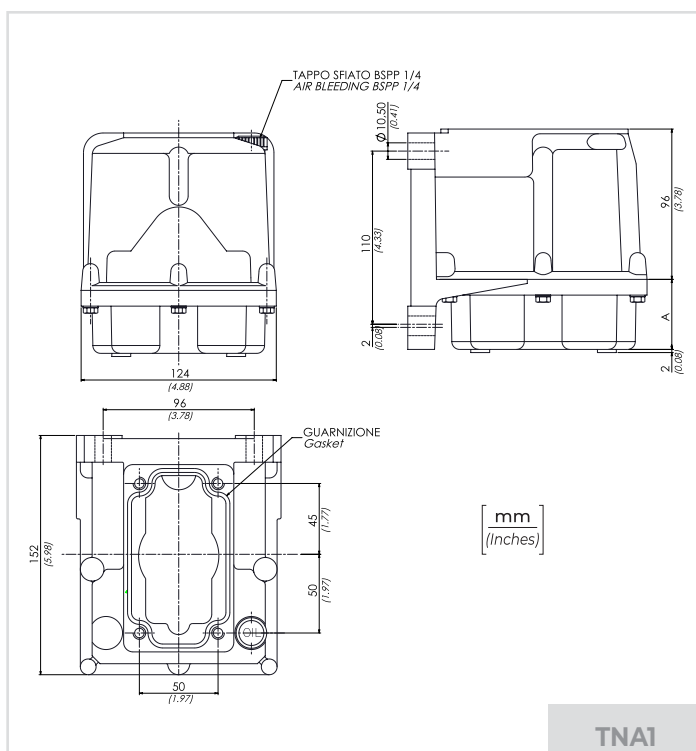
<b>01</b>	SERBATOI IN ALLUMINIO (ALUMINIUM RESERVOIRS)	<b>TNA</b>	
<b>02</b>	CAPACITÀ (CAPACITY)	<b>1 Lt. - 61 in.<sup>3</sup></b>	<b>1</b>
		<b>2 Lt. - 122 in.<sup>3</sup></b>	<b>2</b>
		<b>3 Lt. - 183 in.<sup>3</sup></b>	<b>3</b>
		<b>5 Lt. - 305 in.<sup>3</sup></b>	<b>5</b>

**CARATTERISTICHE TECNICHE / TECHNICAL CHARACTERISTICS**

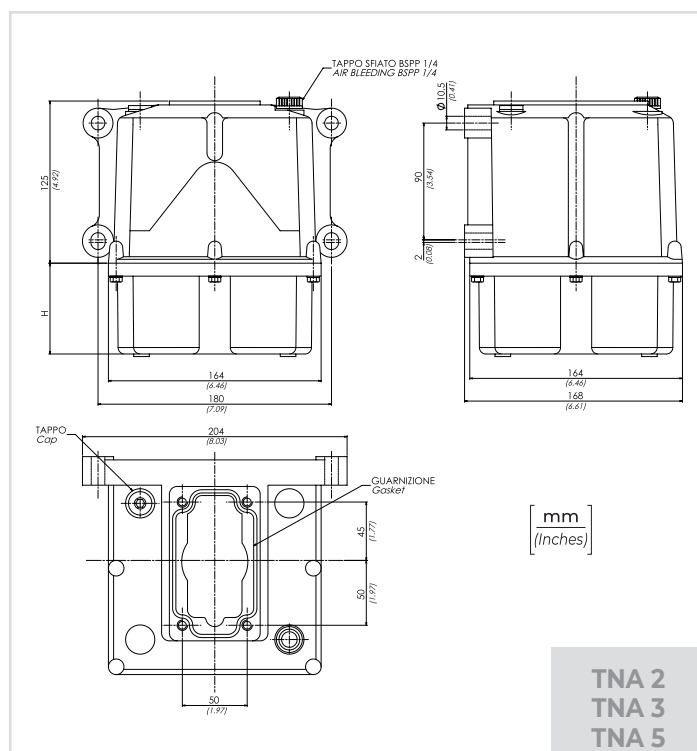
Tipo Type	Capacità Capacity Lt./in	A	H	Peso Approx (kg) Approx weight (lb)
<b>TNA 1</b>	<b>1 Lt. - 61 in.<sup>3</sup></b>	<b>40 (1.57)</b>	/	<b>1,1 (2.4)</b>
<b>TNA 2</b>	<b>2 Lt. - 122 in.<sup>3</sup></b>	/	<b>25 (0.98)</b>	<b>1,5 (3.3)</b>
<b>TNA 3</b>	<b>3 Lt. - 183 in.<sup>3</sup></b>	/	<b>70 (2.76)</b>	<b>1,6 (3.5)</b>
<b>TNA 5</b>	<b>5 Lt. - 305 in.<sup>3</sup></b>	/	<b>180 (7.09)</b>	<b>1,8 (4)</b>

**DATI TECNICI / TECHNICAL DATA**

<b>Olio idraulico - Mineral oil</b>	<b>ISO 6743/4 (DIN 51524)</b>
<b>Viscosità olio - Oil viscosity</b>	<b>15-250 mm<sup>2</sup>/s (15 to 250 cSt)</b>
<b>Classe di contaminazione max Max contamination index</b>	<b>ISO 4406:1999 Classe 19/17/14</b>
<b>Temperatura dell'olio - Oil temperature</b>	<b>-20°C +80°C -4°F +176°F</b>
<b>Temperatura ambiente - Environment temperature</b>	<b>-20°C +50°C -4°F +122°F</b>
<b>È indispensabile l'utilizzo di un filtro per proteggere la valvola (filtrazione consigliata 15 µm) It is necessary a filter use to protect the valve (advised filtration 15 µm)</b>	



**TNA1**

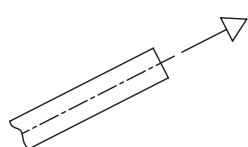


**TNA 2  
TNA 3  
TNA 5**

## MONTAGGIO POMPA NEL SERBATOIO

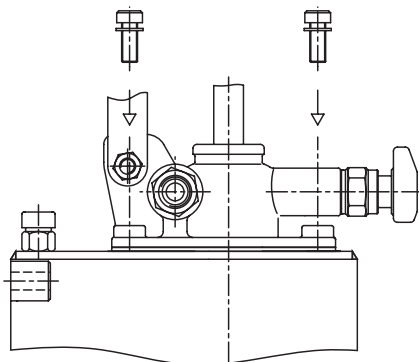
**1**

### Montaggio del tubo aspirazione



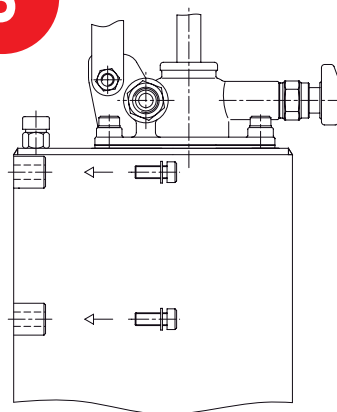
Introdurre il tubo di aspirazione nell'apposito raccordo.

**2**



Appoggiare la guarnizione in gomma sul serbatoio, posizionare la pompa, assemblare la pompa sul serbatoio mediante kit viti di fissaggio.

**3**

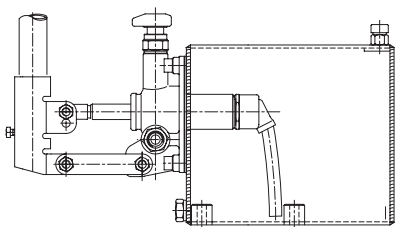


Collocare pompa e serbatoio nella posizione desiderata fissando con 4 viti.

Avvitare per minimo 20 mm.

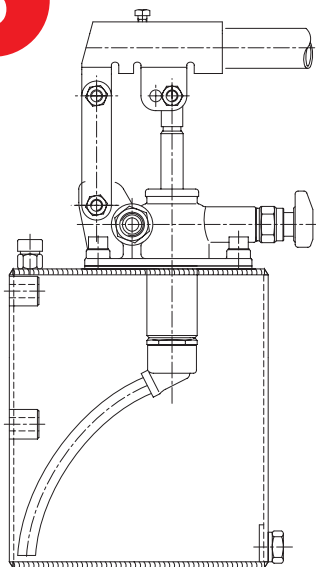
Collegare la mandata della pompa al circuito a semplice o doppio effetto.

**4**



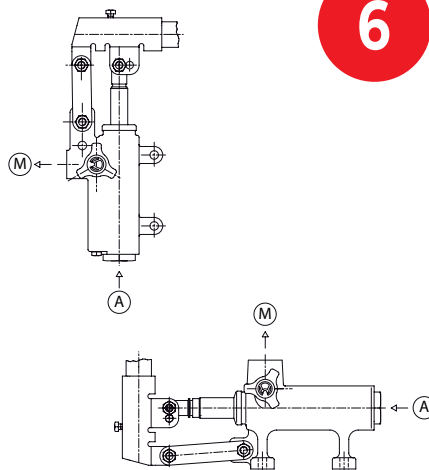
Montaggio orizzontale.

**5**



Montaggio verticale.

**6**



Posizionare la pompa in orizzontale o verticale fissandola con apposite viti. Collegare aspirazione (A) e mandata (M) della pompa al circuito.

## USO

Per un corretto funzionamento, dopo aver montato la pompa nel o sul serbatoio in modo appropriato, utilizzare esclusivamente olio idraulico a base minerale ISO6743/4 (DIN 51524), viscosità secondo i parametri ISO 3448 (DIN51519).

**Viscosità consigliata:** 46 mm<sup>2</sup>/s (cSt)

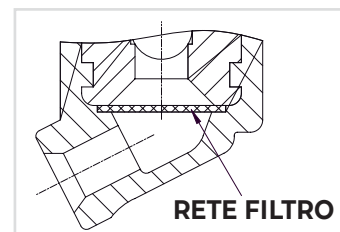
**Filtrazione consigliata:** 15 µm

**Classe di contaminazione:** 18/14 ISO4406 (9 NAS 1638)

## MANUTENZIONE

Per un corretto funzionamento, si consiglia di seguire le seguenti procedure periodiche:

- PULIZIA DELLA RETE FILTRO
- SOSTITUZIONE OLIO

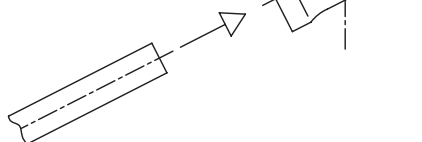


**RETE FILTRO**

## MOUNTING OF PUMP INSIDE THE TANK

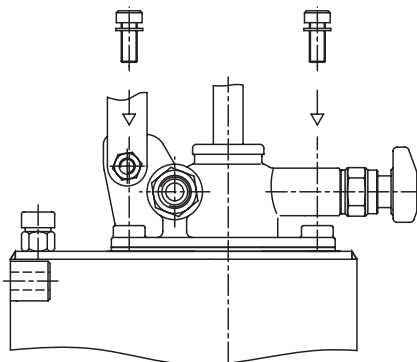
1

### Mounting the suction hose



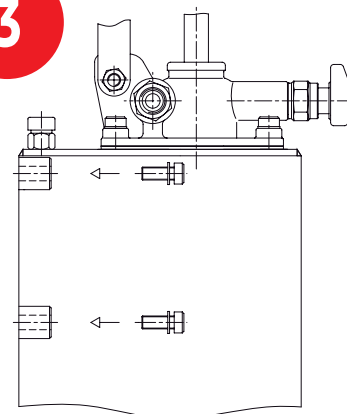
Insert the suction hose in the proper fitting.

2



Put the rubber seal on the tank, position the pump, assemble the pump to the tank by means of the fixing screws kit.

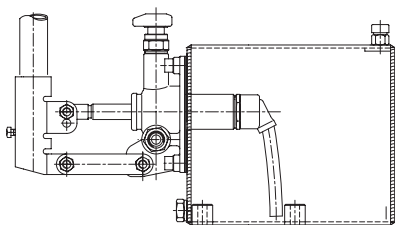
3



Place pump and tank in the position you need and fix them with nr.4 screws. You have to screw for at least 0.79 inch.

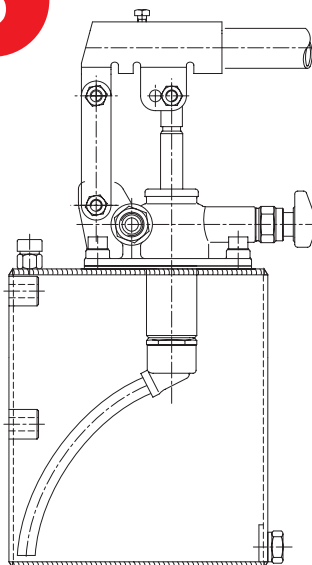
Connect pump delivery to the single or double acting circuit.

4



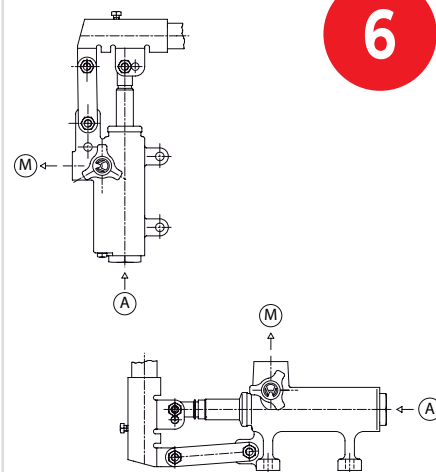
Horizontal mounting.

5



Vertical mounting.

6



Place pump horizontally or vertically and fix with proper screws.

Connect pump suction (A) and delivery (M) to the circuit.

## USE

For a good service of the pump, after having assembled the pump inside or on the tank in the proper way, please use only ISO6743/4 (DIN 51524), hydraulic mineral oil, viscosity according to ISO 3448 (DIN51519) standards.

**Advised viscosity:** 46 mm<sup>2</sup>/s (cSt)

**Advised filtration:** 15 μm

**Contamination class:** 18/14 ISO4406  
(9 NAS 1638)

## MAINTENANCE

For a good service, we advise following periodical operations:

- FILTER NET CLEANING
- OIL REPLACEMENT

