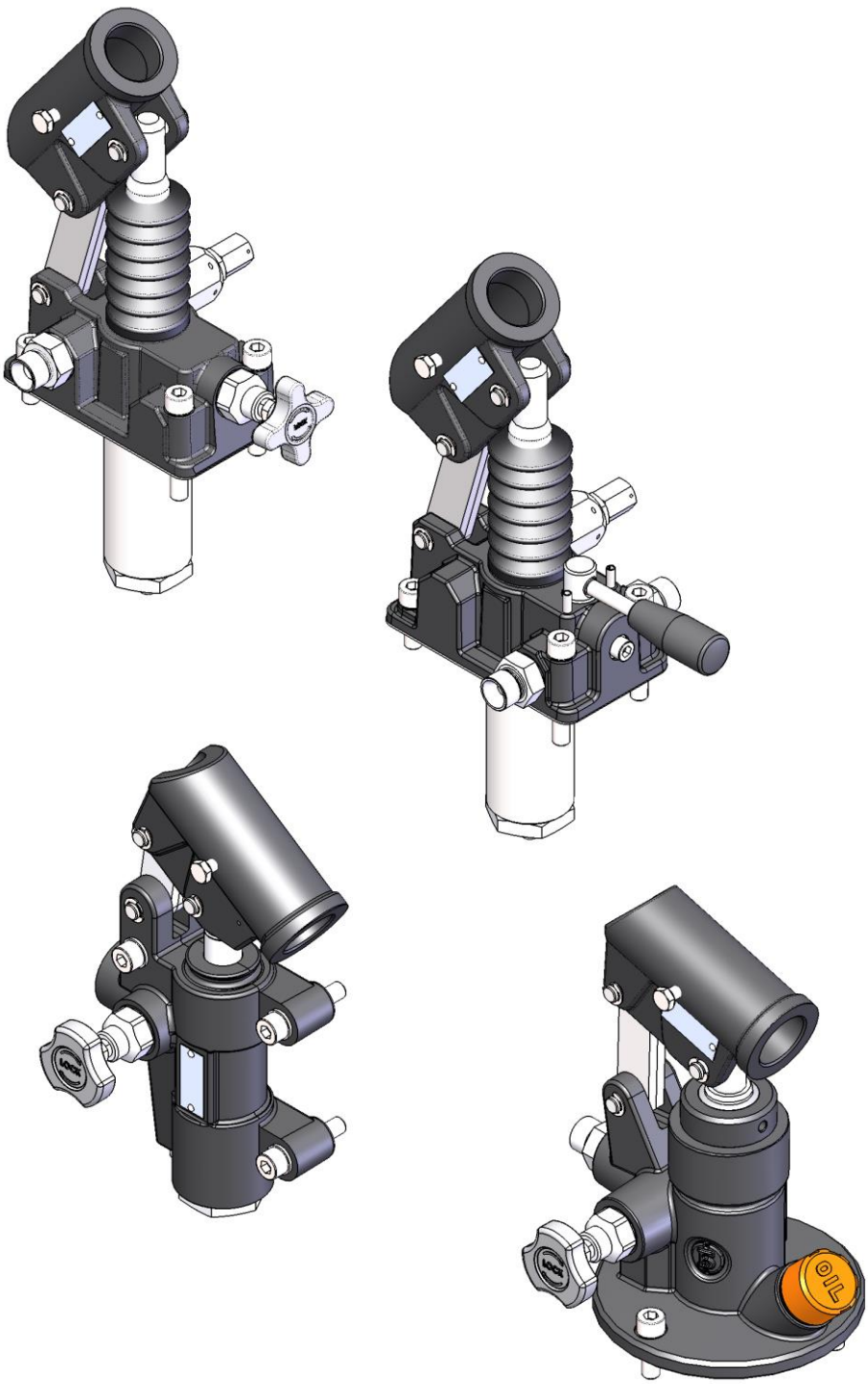
# Piston type hand pumps




Badestnost
hydraulic components

ТОВ "Промислова Гідравліка": https://promhydraulic.com.ua/ua/
Телефонуйте: +380 (95) 670-15-32, +380 (98) 533-91-67, +380 (96) 244-48-42

Hand pumps are generally employed for intermittent or emergency applications. The wide range for integrated applications with auxiliary valves allow the solution of any requirement. The cast-iron body, high resistance lapped and chrome plated steel rod. They are available in wall bracket and flangeable on tank versions with various types of pumping single acting (PRP) and double-acting (PRB/D).
They can be supplied with steel tanks with alkyd paint from 1 to 10 lt.

PRB – double acting pumps for single acting cylinders
PRBD – double acting pumps for double acting cylinders
PRBC – double acting pump for single acting cylinders
PRP – single acting pump for single acting cylinders

Read this instructions carefully before installation. All operations must be carried out by qualified personnel following the instructions. The user must periodically inspect, based on the conditions of use and the substances used, the presence of corrosion, dirt, the state of wear and correct function of the valves.

**All pumps include 550 mm handle, unless WoL code is used. The pump assembly includes suction filter and suction tube. If pump is bought without a tank – suction tube of 176 mm is included in the package.**

**Additional information**
This catalogue shows the product in the most standard configuration. For special requests please contact sales.

**WARNING!**
All specifications of this catalogue refer to the standard product at this date. Badestnost, oriented in continuous improvement, reserves the right to discontinue, modify or revise specifications, without notice.

**BADESTNOST IS NOT RESPONSIBLE FOR ANY DAMAGE CAUSED BY AN INCORRECT USE OF THE PRODUCT**

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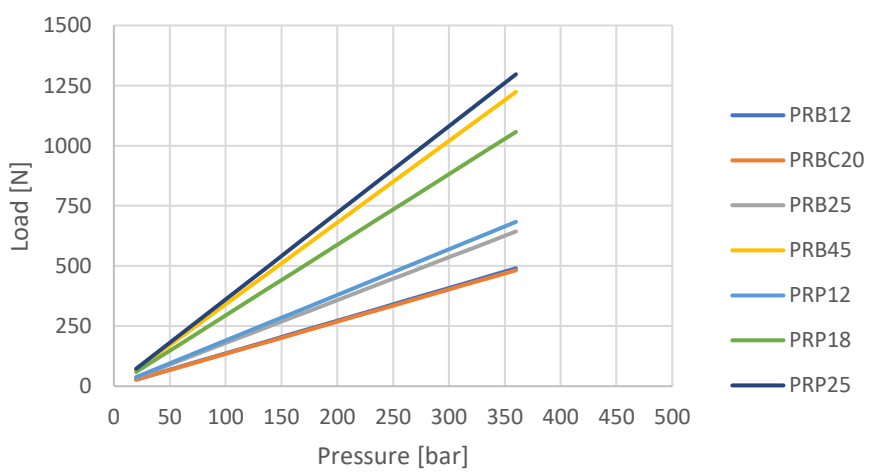
## Working conditions

| Pump type | PRB(D)12 | PRB(D)25 | PRB(D)45 | PRBC20 | PRP12 | PRP18 | PRP25 |
|---|---|---|---|---|---|---|---|
| Type | Double acting | | | | Single acting | | |
| Displacement | 12 $cm^3$ | 25 $cm^3$ | 45 $cm^3$ | 20 $cm^3$ | 12 $cm^3$ | 18 $cm^3$ | 25 $cm^3$ |
| | 0.7 $in^3$ | 1.5 $in^3$ | 2.7 $in^3$ | 1.2 $in^3$ | 0.7 $in^3$ | 1.1 $in^3$ | 1.5 $in^3$ |
| Max. pressure | 380 bar | 350 bar | 280 bar | 350 bar | 300 bar | 200 bar | 160 bar |
| | 5500 psi | 5100 psi | 4100 psi | 4100 psi | 4400 psi | 2900 psi | 2300 psi |
| Optimal pressure | 220 bar | 120 bar | 80 bar | 225 bar | 160 bar | 120 bar | 80 bar |
| | 3200 psi | 1700 psi | 1200 psi | 1200 psi | 2300 psi | 1700 psi | 1200 psi |
| Fluid | Mineral based oil (DIN51524) | | | | | | |
| Fluid temperature (NBR seals) | from -25 °C to 70 °C | | | | *from -13 °F to 158 °F* | | |
| Viscosity (min.) | 10 $mm^2/s$ | | | | *10 cSt* | | |
| Viscosity (max.) | 500 $mm^2/s$ | | | | *500 cSt* | | |
| Max. level of contamination | 20/18/15 - ISO 4406 | | | | *NAS 1683 - class 10* | | |
| Ambient temperature | from -20 °C to 60 °C | | | | *from -4 °F to 140 °F* | | |
| Note - for different working conditions contact sales dept. | | | | | | | |

| Refernce standard | | | | | |
|---|---|---|---|---|---|
| | | BSP | UN-UNF | Metric | NPTF |
| Thread according to | | ISO 228/1 | ISO 263 | ISO 262 | Ansi B1.20.3 |
| | | BS 2779 | ANSI B1.1 unified | | |
| Cavity dimension according to | ISO | 1179 | 11926 | 9974-1 | |
| | SAE | | J1926 | J2244 | J476a |
| | DIN | 3852-2 (Shape X or Y) | | 3852-1 (Shape X or Y) | |

Load effort for 550 mm handle



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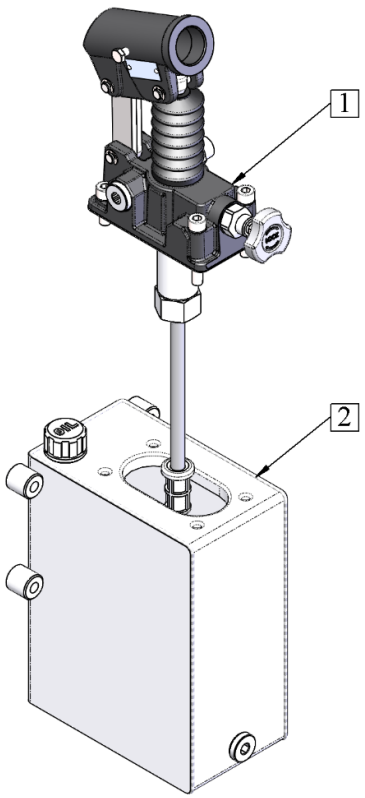
**Full order code (pump and tank)**

**PRB12 + RP3**

1 2




| | |
|---|---|
| 1. Pump (page 5) | |
| 2. Prismatic tanks (page 8) | |
| RP1 | 1L tank |
| RP2 | 2L tank |
| RP3 | 3L tank |
| RP5 | 5L tank |
| RP7 | 7L tank |
| RP10 | 10L tank |
| 3. Pump location with respect to the tank | |
| (180) | Pump rotated 180 deg |



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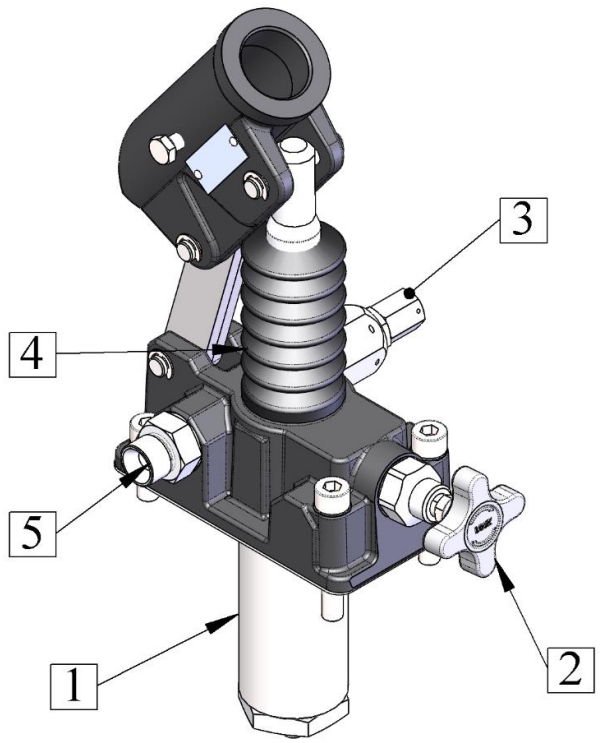
## Order code

**PRB12 / A - R - M - BP**

1 2 3 4 6




| 1. Pump type | |
|---|---|
| PRB12/25/45 | Double acting pump for single acting cylinders |
| PRBD12/25/45 | Double acting pump for double acting cylinders |

| 2. Release valve | |
|---|---|
| | 3S handle of the release valve |
| A | 4S handle of the release valve |
| E | without release valve |

| 3. Relief valve (PRB/PRBD) | |
|---|---|
| | without relief valve |
| R | with relief valve (right side by default) |
| RL | with relief valve left side |

| 4. Other | |
|---|---|
| M | Dust-proof flexible bellow |

| 5. Stud connectors and reducers | |
|---|---|
| | Outlet stud G3/8 (60 deg cone) |
| 12L | Outlet stud 12L (M18x1,5) |
| ad3/8NPTF | Outlet reducer 3/8NPTF |
| G1/4B | G1/4 Banjo |
| xA | no connector on pos. 2 (PRBD) |
| xB | no connector on pos. 1(PRBD) |
| 12S | Outlet stud 12S (M20x1,5) |

| 6. Additional options | |
|---|---|
| WoL | without 550 mm lever |
| WoF | without suction filter |
| BP | Black paint RAL9005 |



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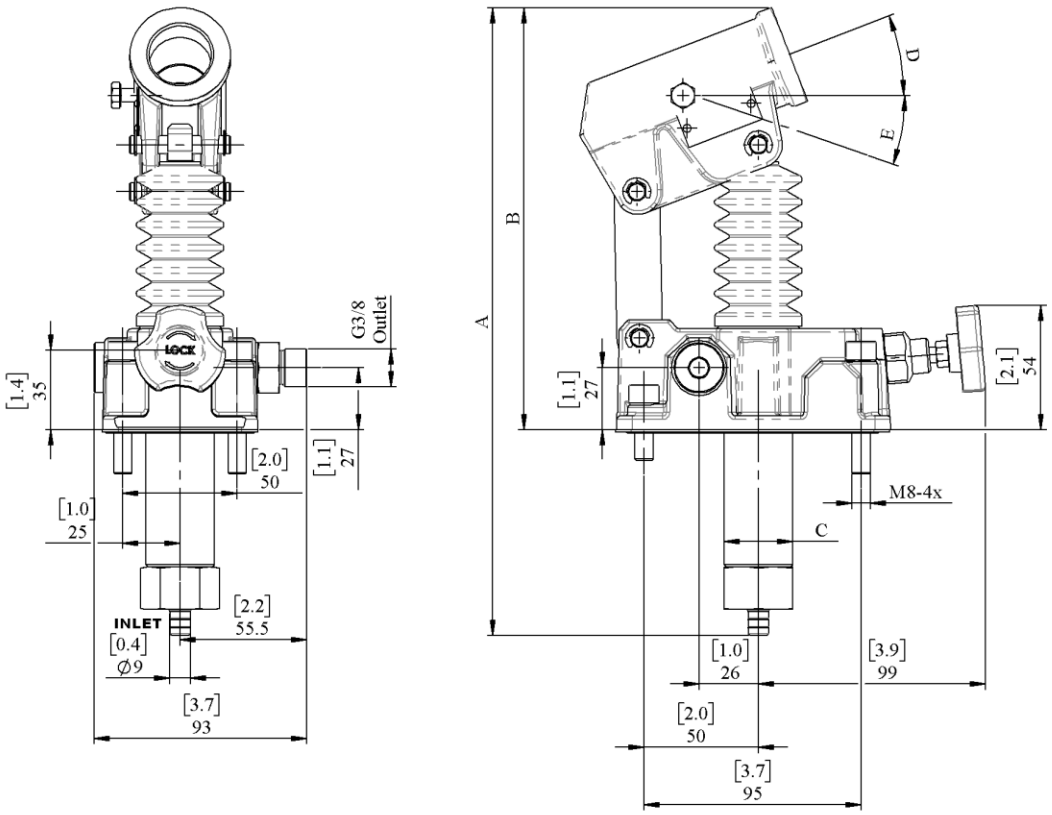
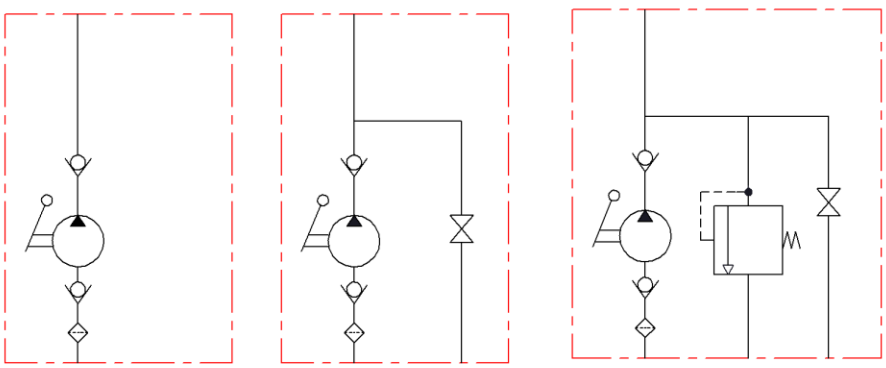
## Dimensional data




Hydraulic schemes



Without release and relief valve

Without relief valve

With relief valve

| Type | A | | B | | C | | D | E | mass | |
|---|---|---|---|---|---|---|---|---|---|---|
| | mm* | *in** | | | | | | ° | kg* | *lbs** |
| PRB12 | 274 | *10.8* | 184 | *7.2* | 30.0 | *1.2* | 21 | 20 | 4.0 | *8.8* |
| PRB25 | 286 | *11.3* | 195 | *7.7* | 35.0 | *1.2* | 34 | 21 | 4.2 | *9.3* |
| PRB45 | 307 | *12.1* | 200 | *7.9* | 40 | *1.6* | 53.0 | 25 | 4.5 | *9.9* |



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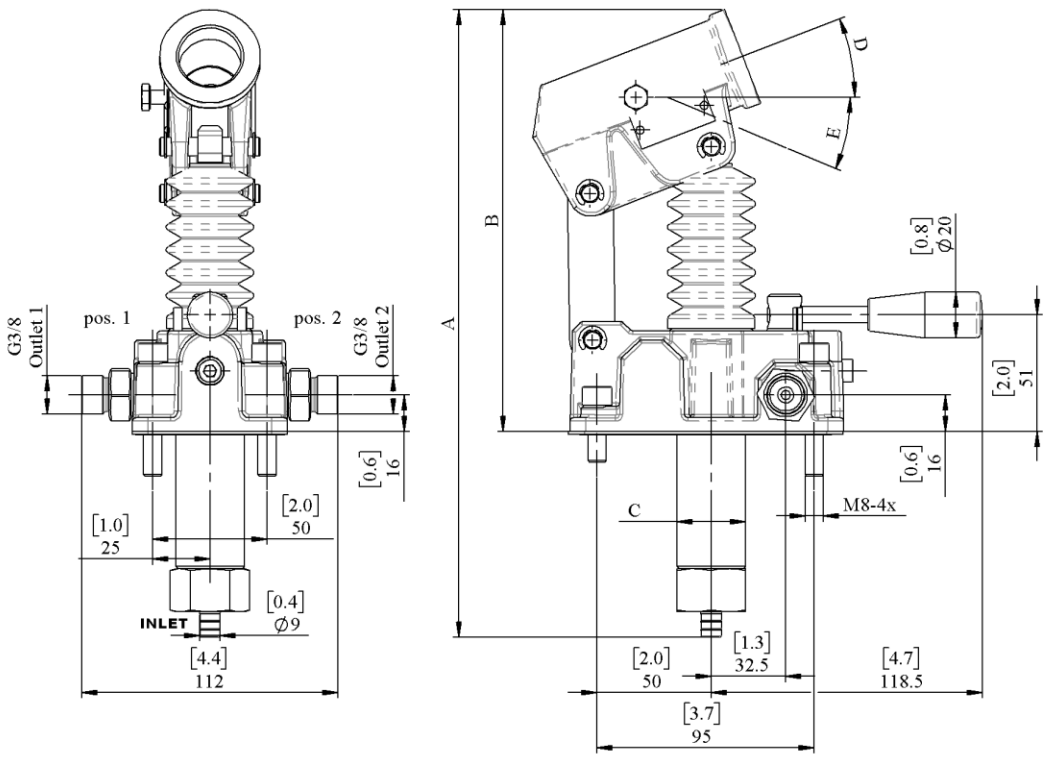
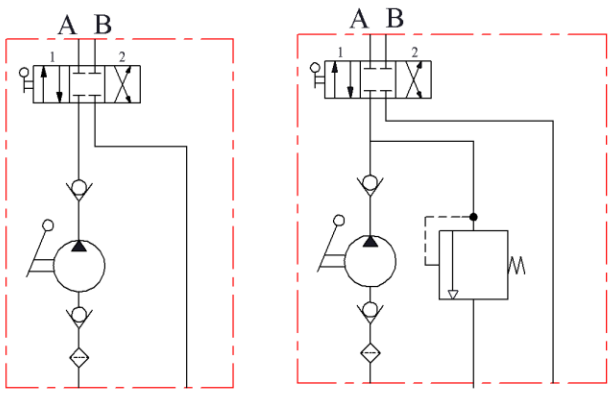
## Dimensional data:




Hydraulic schemes




Without relief valve

With relief valve

| Type | A | | B | | C | | D | E | mass | |
|---|---|---|---|---|---|---|---|---|---|---|
| | mm* | *in** | | | | | | ° | kg* | *lbs** |
| PRBD12 | 274 | *10.8* | 184 | *7.2* | 30.0 | *1.2* | 21 | 20 | 4.0 | *8.8* |
| PRBD25 | 286 | *11.3* | 195 | *7.7* | 35.0 | *1.2* | 34 | 21 | 4.2 | *9.3* |
| PRBD45 | 307 | *12.1* | 200 | *7.9* | 40 | *1.6* | 53.0 | 25 | 4.5 | *9.9* |



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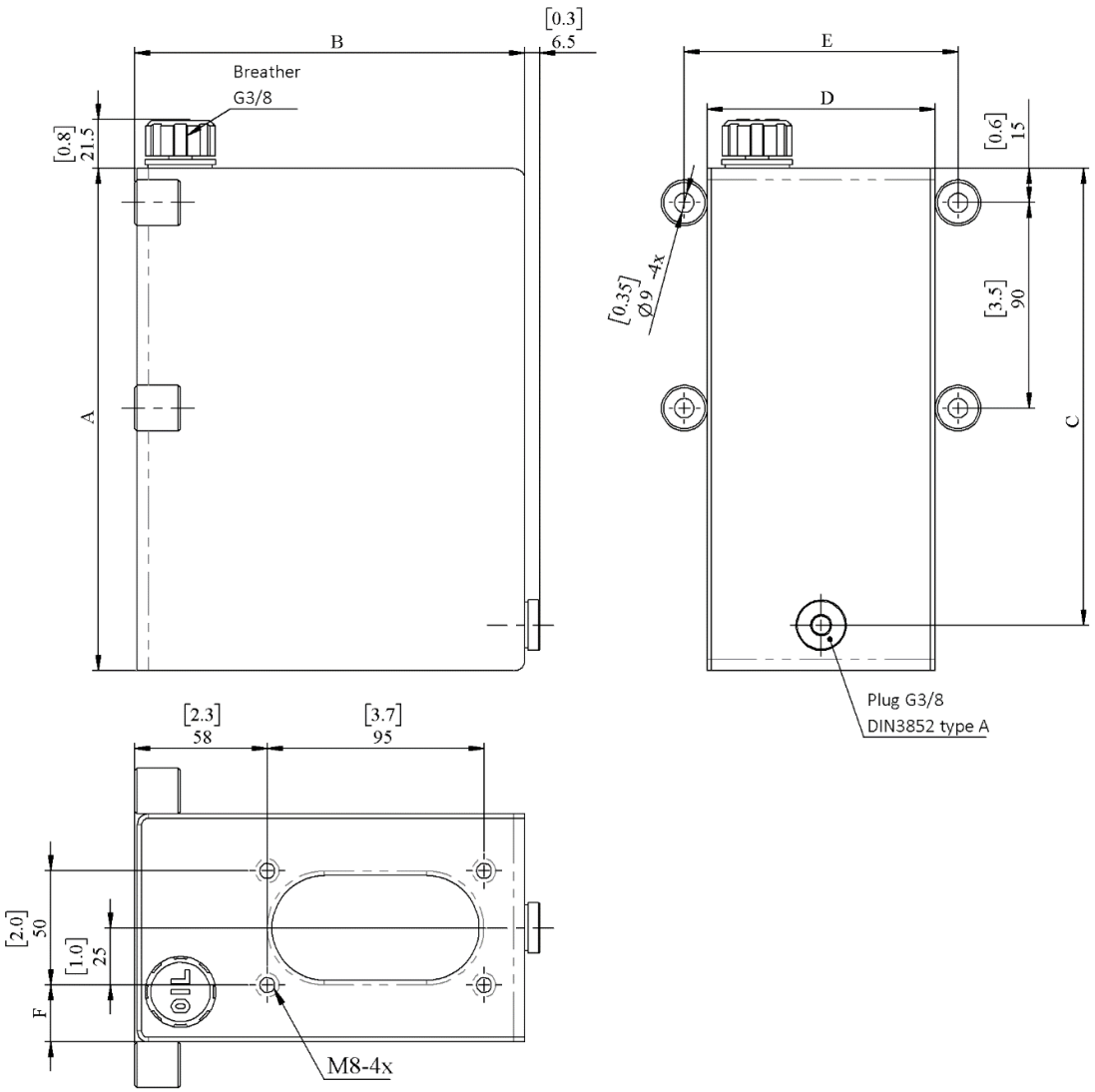
## Dimensional data:

Each tank is painted in RAL9005 and includes the corresponding suction tube and filter




| Type | A | | B | | C | | D | | E | | F | | mass | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | mm* *in** | | | | | | | | | | | | kg* *lbs** | |
| RP1 | 120 | *4.7* | 171 | *6.7* | 100 | *3.9* | 100 | *3.9* | 120 | *4.7* | 25 | *1.0* | 1.7 | *3.7* |
| RP2 | 170 | *4.7* | 171 | *6.7* | 150 | *3.9* | 100 | *3.9* | 120 | *4.7* | 25 | *1.0* | 2.2 | *4.9* |
| RP3 | 220 | *8.7* | 171 | *6.7* | 200 | *8* | 100 | *4* | 120 | *5* | 25 | *1* | 2.6 | *5.7* |
| RP5 | 200 | *7.9* | 176 | *6.9* | 180 | *7* | 175 | *7* | 195 | *8* | 62.5 | *2* | 3.3 | *7.3* |
| RP7 | 290 | *11.4* | 176 | *6.9* | 270 | *11* | 175 | *7* | 195 | *8* | 62.5 | *2* | 4.3 | *9.5* |
| RP10 | 380 | *15.0* | 176 | *6.9* | 360 | *14* | 175 | *7* | 195 | *8* | 62.5 | *2* | 5.3 | *11.7* |



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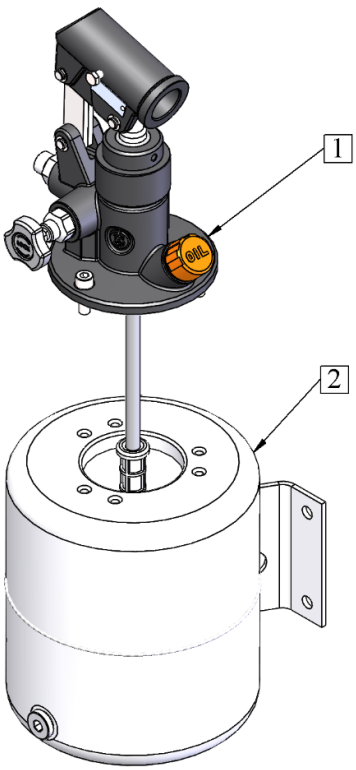
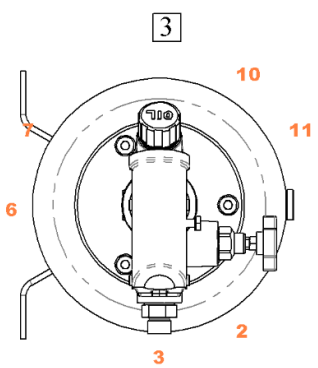
## Full order code (pump and tank)

**PRP18/S60 + R5**

1 2 3




| | |
|---|---|
| 1. Pump (page 10) | |
| 2. Cylindrical tanks (page 13-14) | |
| R2 | 2L tank |
| R3 | 3L tank |
| R5 | 5L tank |
| R7 | 7L tank |
| R4 | 4L tank, no breather (page 14) |
| 3. Outlet orientation (optional for cylindrical tanks) | |
| | outlet is oriented to pos. 3 |
| C2 | outlet is oriented to pos. 2 |
| C6 | outlet is oriented to pos. 6 |
| C7 | outlet is oriented to pos. 7 |
| C11 | outlet is oriented to pos. 11 |
| C10 | outlet is oriented to pos. 10 |



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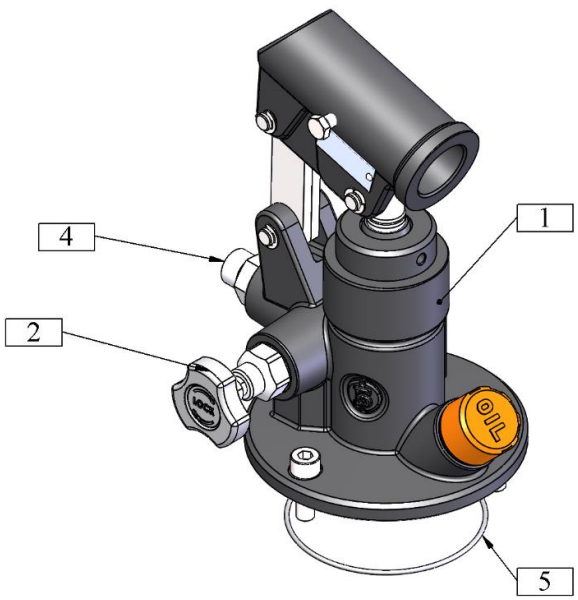
## Order code

**PRP12/ M-S60-V- BP**

1 3 4 5 5




| 1. Pump type | |
|---|---|
| PRP12/18/25 | Single acting pump for single acting cylinders |
| PRBC20 | Double acting pump for single acting cylinders |

| 2. Release valve | |
|---|---|
| | 3S handle of the release valve |
| A | 4S handle of the release valve |
| E | without release valve |

| 3. Other | |
|---|---|
| M | Dust-proof flexible bellow |

| 4. Stud connectors and reducers | |
|---|---|
| S60 | Outlet stud G3/8 (60 deg cone) |
| 12L | Outlet stud 12L (M18x1,5) |
| ad3/8NPTF | Outlet reducer 3/8NPTF |
| x | no connectors |
| 12S | Outlet stud 12S (M20x1,5) |

| 5. Additional options | |
|---|---|
| V | Sealing outside M8 area |
| DDM | Bonded seal washers for PRPs M8 screws |
| WoL | without 550 mm lever |
| WoF | without suction filter |
| O | Reverse lever arm (180 deg.) |



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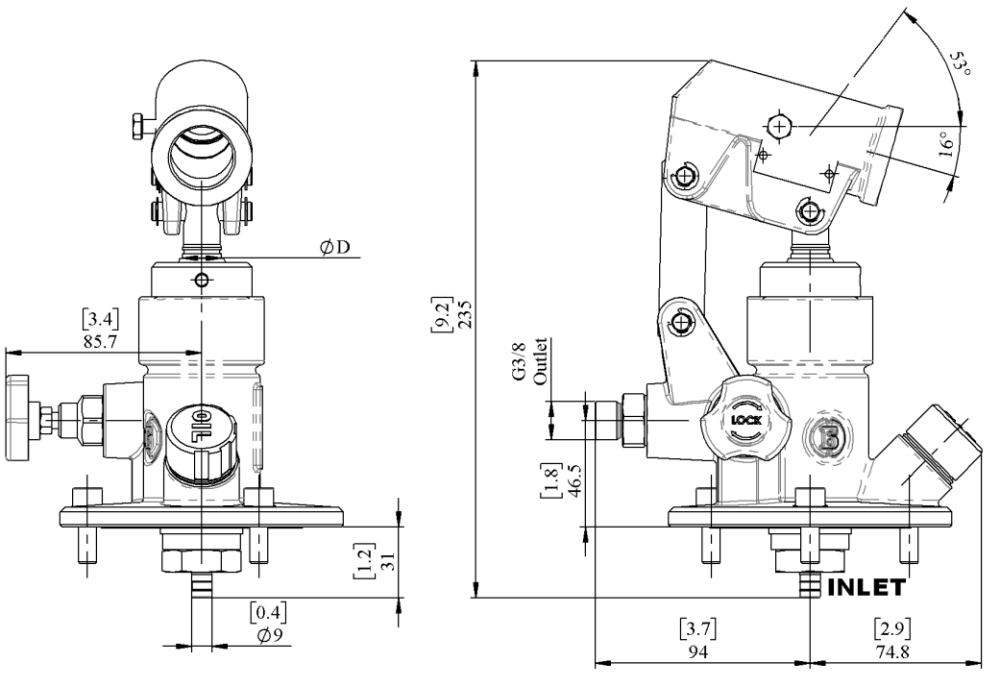
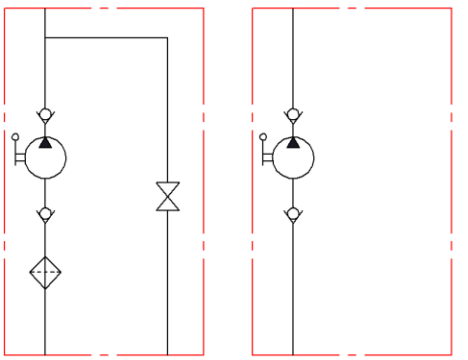
## Dimensional data




Hydraulic schemes



With release valve

Without release valve



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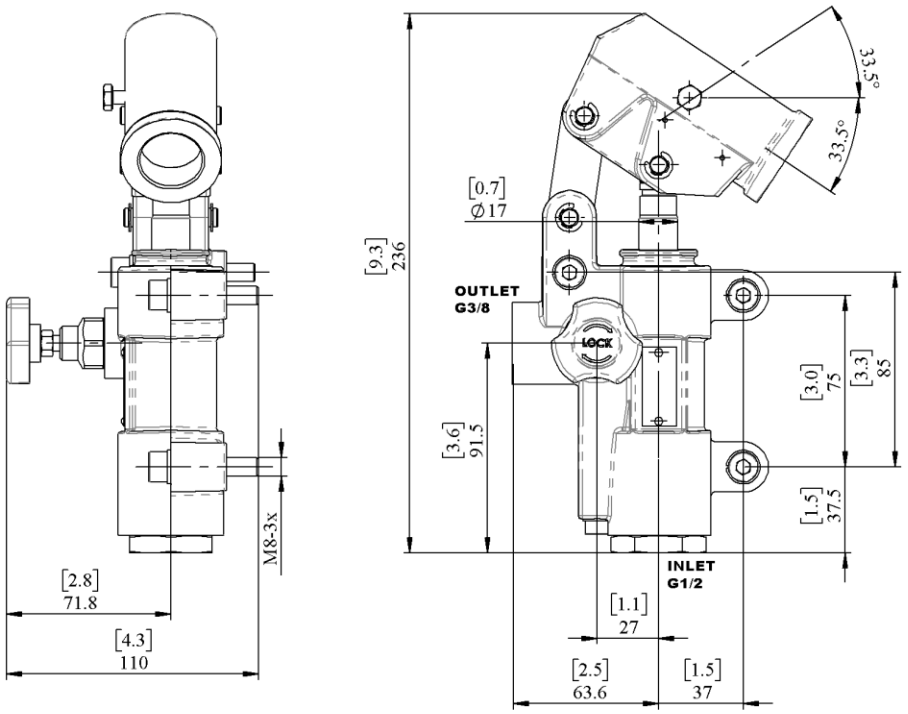
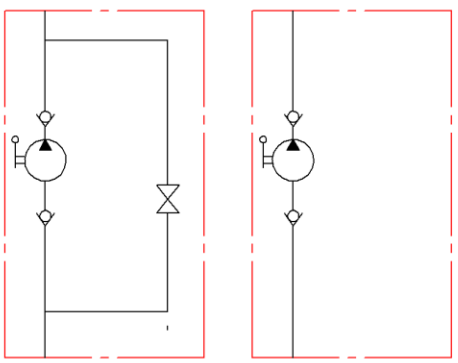



Hydraulic schemes



With release valve

Without release valve



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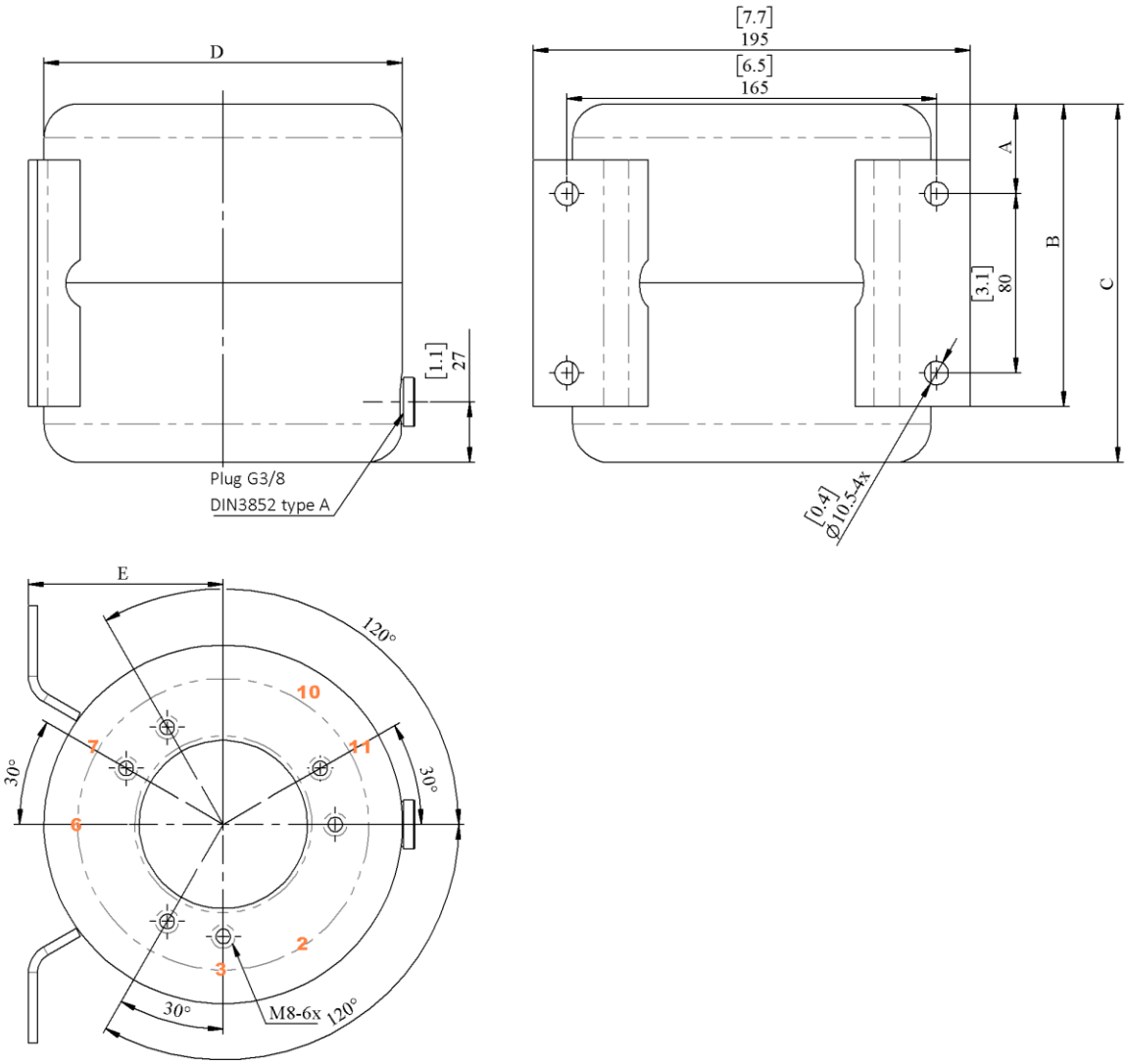
## Dimensional data:

Each tank is painted in RAL9005 and includes the corresponding suction tube and filter




| Type | A | | B | | C | | D | | E | | mass | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | mm* *in** | | | | | | | | | | kg**lbs** | |
| R2G | 30 | *1.2* | 125 | *4.9* | 130 | *5.1* | 160 | *6.3* | 87 | *3.4* | 1.9 | *4.2* |
| R3G | 40 | *1.2* | 135 | *4.9* | 160 | *5.1* | 160 | *6.3* | 87 | *3.4* | 2.1 | *4.6* |
| R5G | 53 | *2* | 148 | *5.8* | 214 | *8.4* | 185 | *7.3* | 101 | *4.0* | 3.0 | *6.6* |
| R7G | 53 | *2* | 148 | *5.8* | 240 | *9.4* | 205 | *8.1* | 113 | *4.4* | 3.7 | *8.2* |



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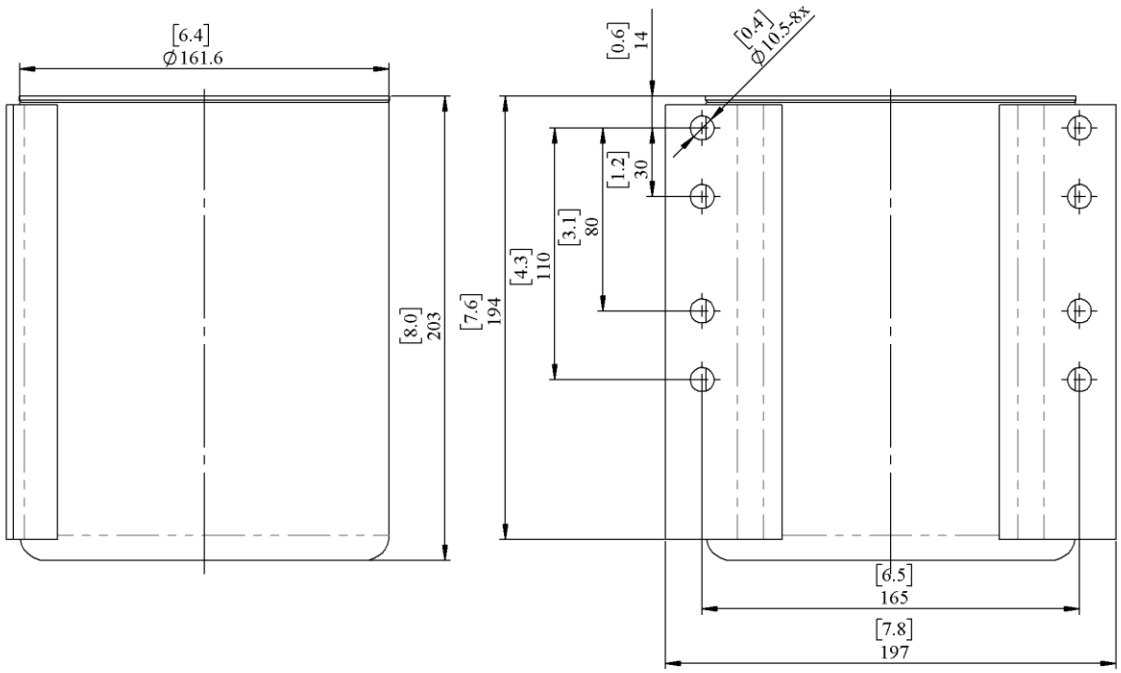


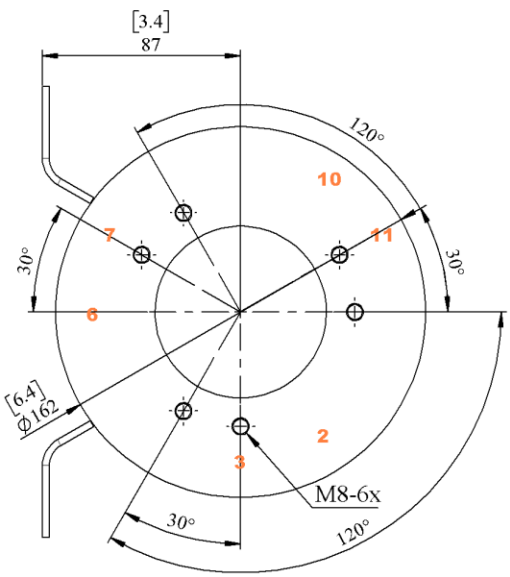




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