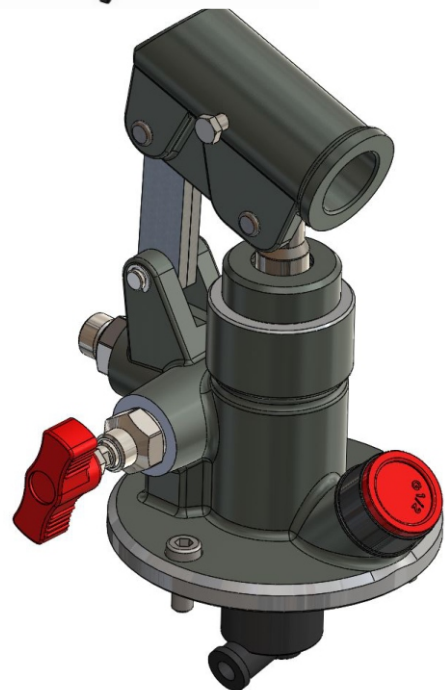
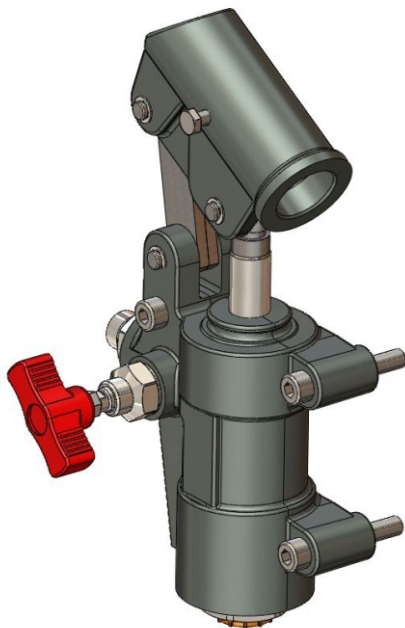
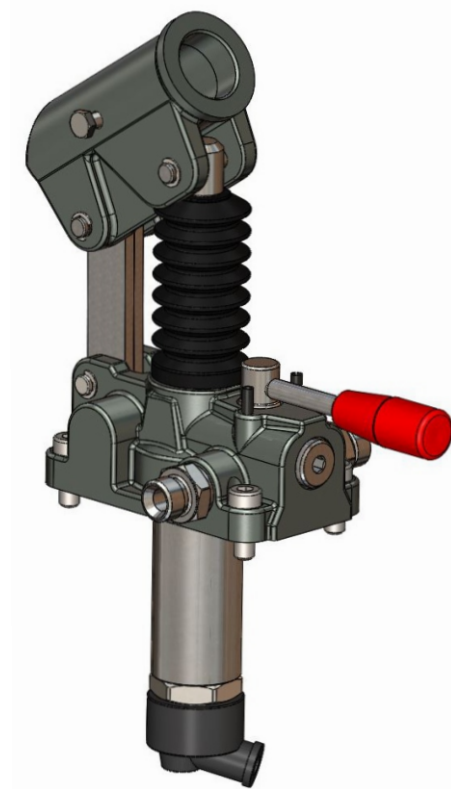
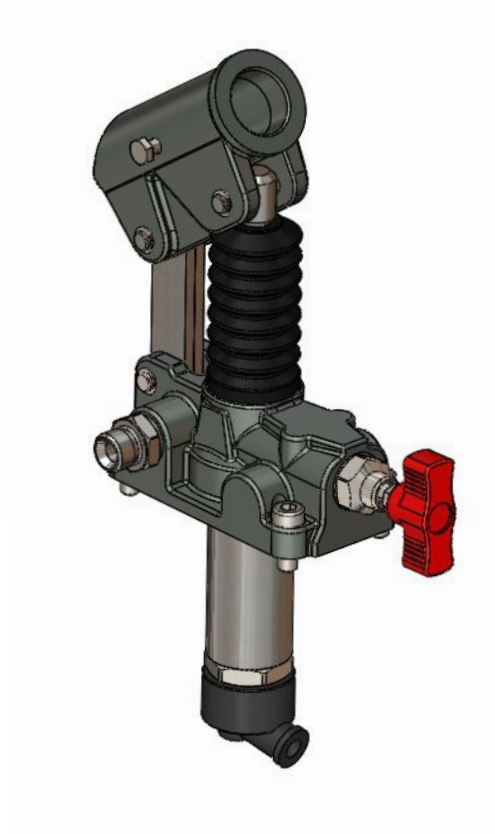


# Piston type hand pumps

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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 (PHS) and double-acting (PHS/D). They can be supplied with steel tanks with alkyd paint from 1 to 10 lt.

PHS – double acting pumps for single acting cylinders  
PHSD – 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.

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

First edition 03-2024

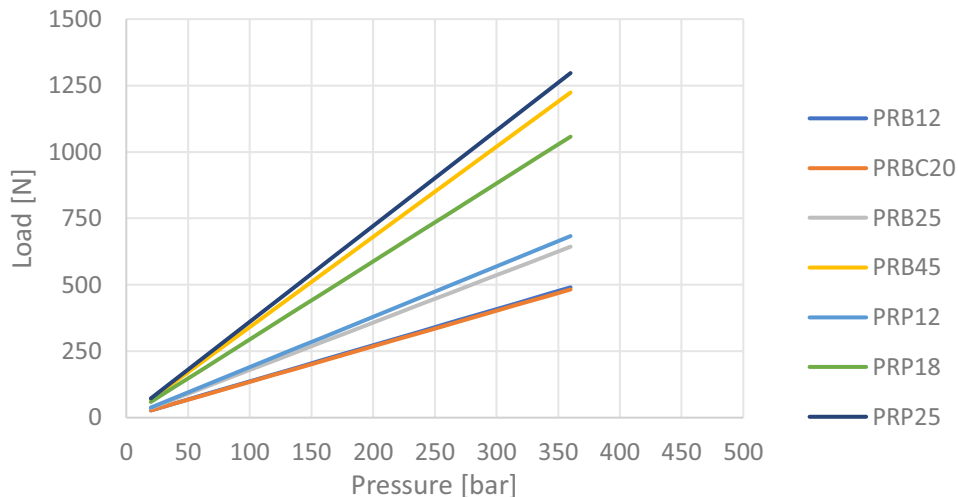
## Working conditions

Pump type	PHS(D)12	PHS(D)25	PHS(D)45	PRBC20	PRP12	PRP18	PRP25
Type	Double acting				Single acting		
Displacement	12 cm <sup>3</sup> 0.7 in <sup>3</sup>	25 cm <sup>3</sup> 1.5 in <sup>3</sup>	45 cm <sup>3</sup> 2.7 in <sup>3</sup>	20 cm <sup>3</sup> 1.2 in <sup>3</sup>	12 cm <sup>3</sup> 0.7 in <sup>3</sup>	18 cm <sup>3</sup> 1.1 in <sup>3</sup>	25 cm <sup>3</sup> 1.5 in <sup>3</sup>
Max. pressure	380 bar 5500 psi	350 bar 5100 psi	280 bar 4100 psi	350 bar 4100 psi	300 bar 4400 psi	200 bar 2900 psi	160 bar 2300 psi
Optimal pressure	220 bar 3200 psi	120 bar 1700 psi	80 bar 1200 psi	225 bar 1200 psi	160 bar 2300 psi	120 bar 1700 psi	80 bar 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 <sup>2</sup> /s				10 cSt		
Viscosity (max.)	500 mm <sup>2</sup> /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.							

## Reference standard

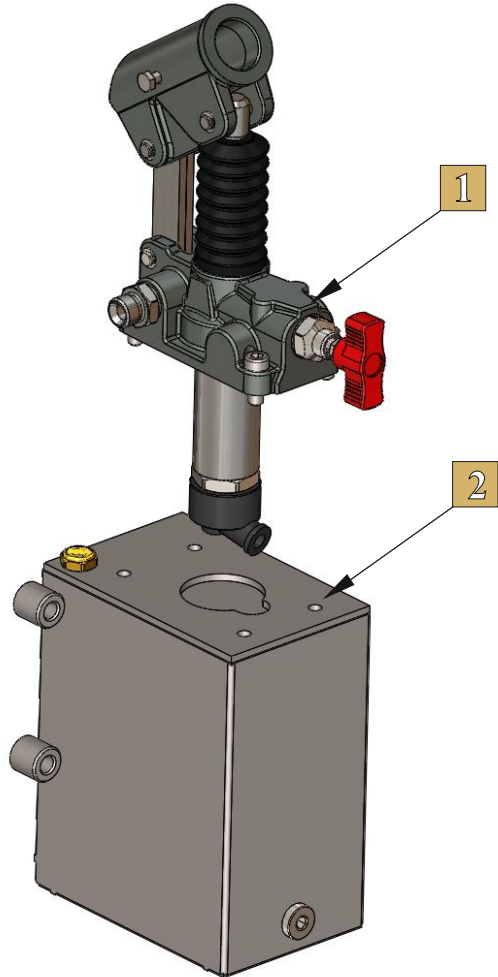
	BSP	UN-UNF	Metric	NPTF
Thread	ISO 228/1	ISO 263	ISO 262	Ansi B1.20.3
according to	BS 2779	ANSI B1.1 unified		
Cavity dimension	ISO 1179	11926	9974-1	
according to	SAE	J1926	J2244	J476a
	DIN 3852-2 (Shape X or Y)		3852-1 (Shape X or Y)	

Load effort for 550 mm handle



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

**PHS12 + RP3**



**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**

**PHS12 / A - R - M - BP**

1

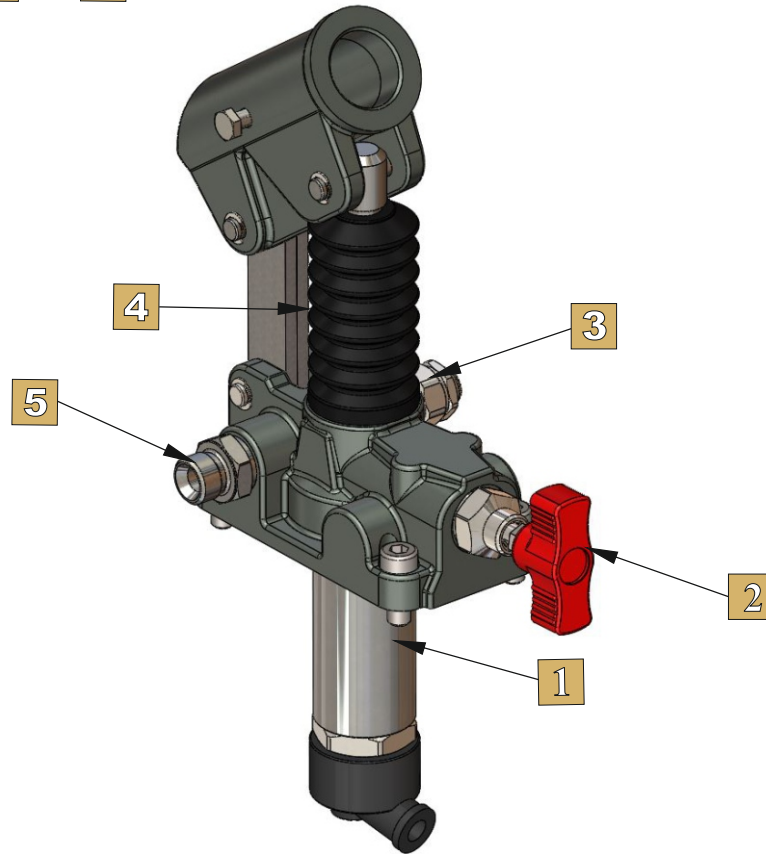
2

3

4

5

Piston type hand pump



**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
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**5. Stud connectors and reducers**

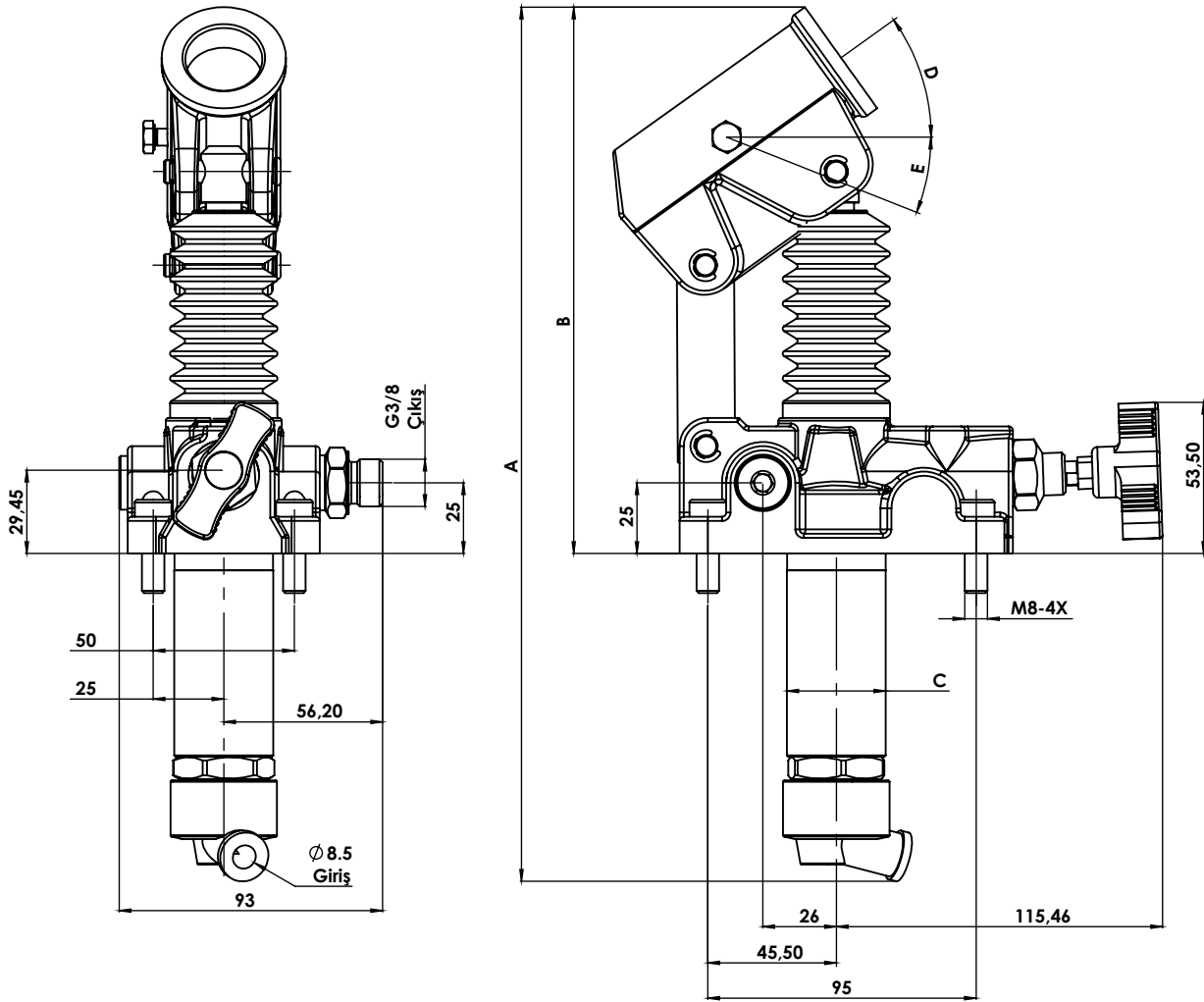
	Outlet stud G3/8 (60 deg cone)
12L	Outlet stud 12L (M18x1,5)
ad3/8NPTF	Outlet reducer 3/8NPTF
G1/4B	G1/4 Banjo
xA	no connector on pos. 2 (PRBD)
xB	no connector on pos. 1 (PRBD)
12S	Outlet stud 12S (M20x1,5)

**6. Additional options**

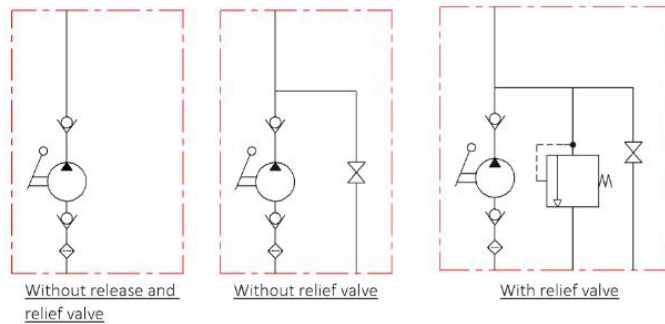
WoL	without 550 mm lever
WoF	without suction filter
BP	Black paint RAL9005

PHS

Hand pump with release knob



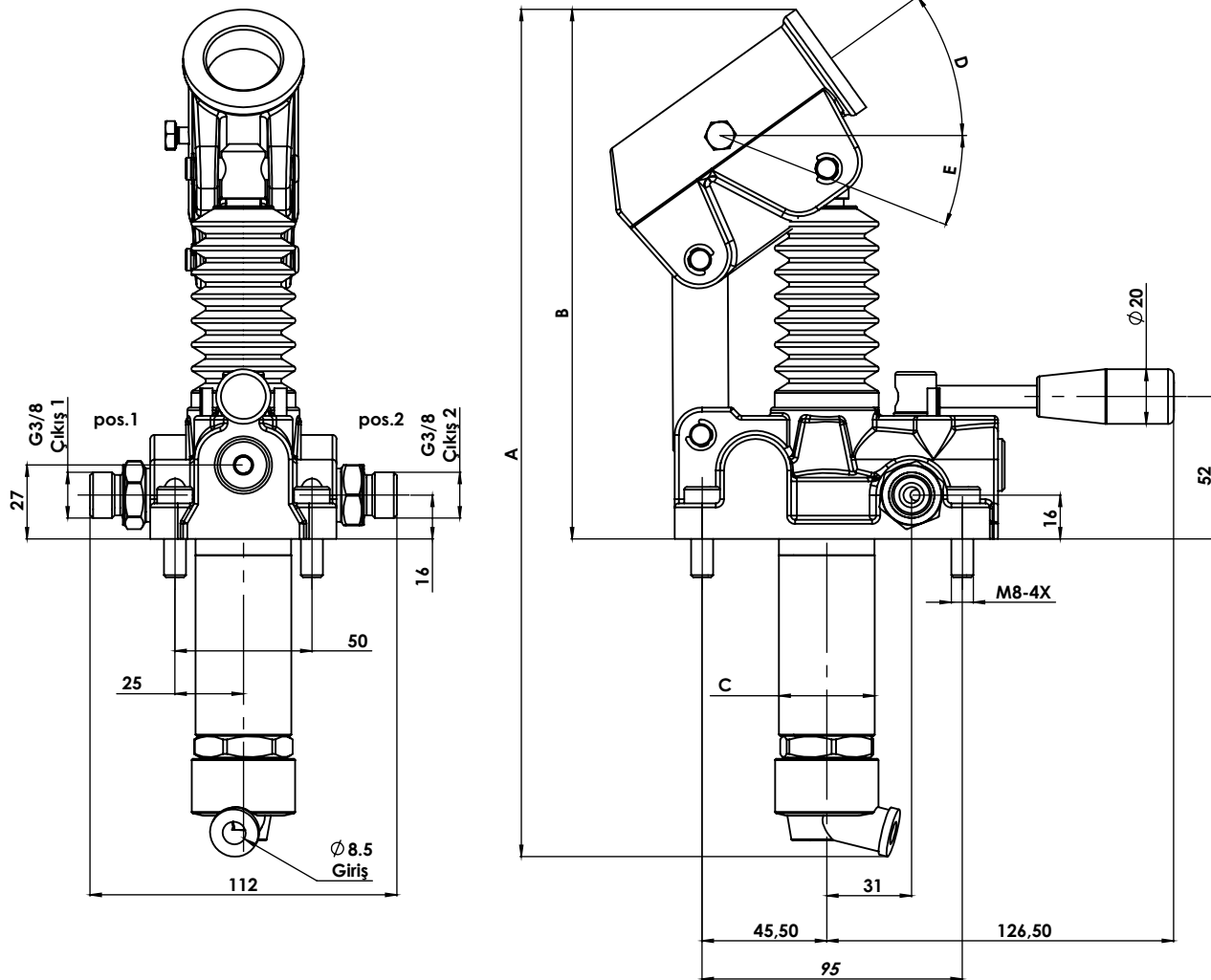
Hydraulic schemes



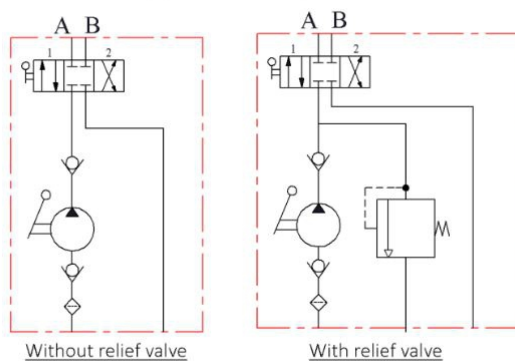
Type	A		B		C		D		E		mass	
	mm	in*	mm	in*	mm	in*	°	mm	in*	kg*	lbs*	
PHS 12	298	11.7	183	7.28	30	1.2	23	17	3.25	7.22		
PHS 25	310	12.2	193	7.6	35	1.2	25	16	3.37	7.4		
PHS 45	327	12.9	196	7.7	40	1.6	42	19	3.61	7.95		

PHSD

Hand pump with 4/3 flow divider



Hydraulic schemes

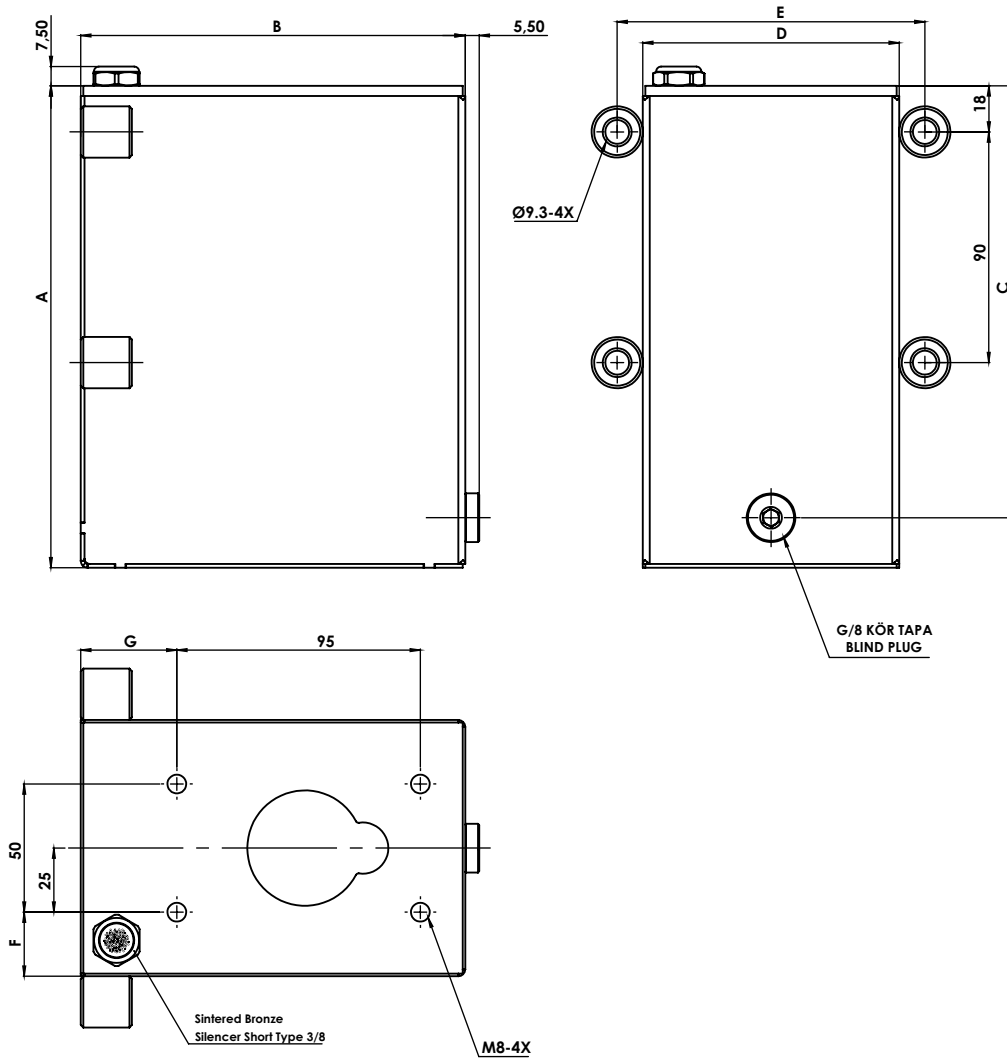


Type	A		B		C	D	E	mass	
	mm*	in*	mm*	in*				kg*	lbs*
PHS 12	298	11.7	183	7.28	30	1.2	23	17	3.25 7.22
PHS 25	310	12.2	193	7.6	35	1.2	25	16	3.37 7.4
PHS 45	327	12.9	196	7.7	40	1.6	42	19	3.61 7.95

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

RP

Prismatic tanks for hand pumps  
PHS/PHSD



Type	A		B		C		D		E		F		G		mass	
	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	kg	lbs
RP1	128	5	150	5.9	108	4.2	100	3.9	120	4.7	25	1	38	1.49	1.35	2.97
RP2	188	7.4	150	5.9	168	6.6	100	3.9	120	4.7	25	1	38	1.49	1.67	3.68
RP3	258	10.1	150	5.9	238	9.3	100	3.9	120	4.7	25	1	38	1.49	2.03	4.47
RP5	200	7.9	175	6.9	180	7	175	6.9	195	7.7	62.5	2.4	62	2.4	2.82	6.22
RP7	269	10.6	175	6.9	249	9.8	175	6.9	195	7.7	62.5	2.4	62	2.4	3.59	7.92
RP10	376	14.8	175	6.9	356	14	175	6.9	195	7.7	62.5	2.4	62	2.4	4.47	9.85

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

**PHS18/560**

**+**

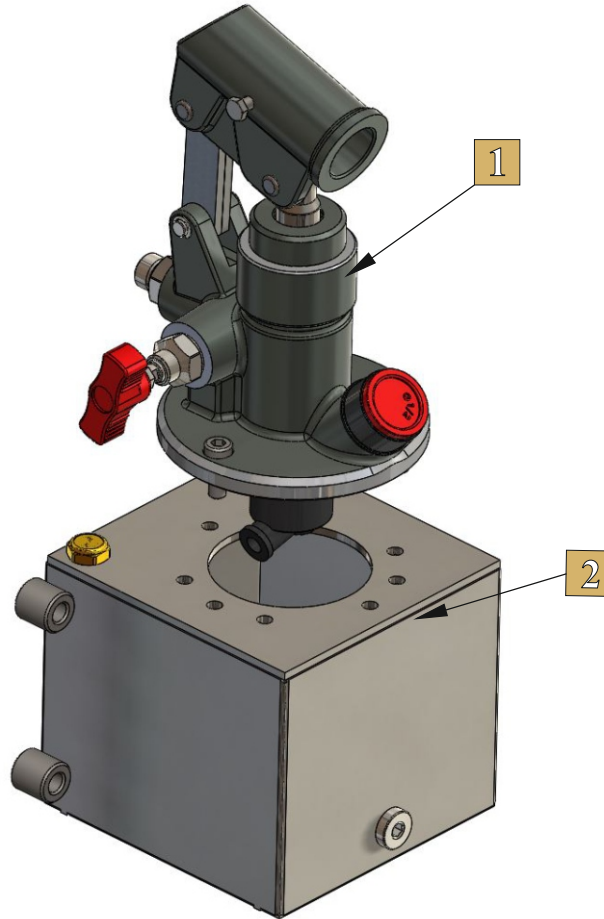
**R5**

1

2

3

Single acting hand pump (PRP) with



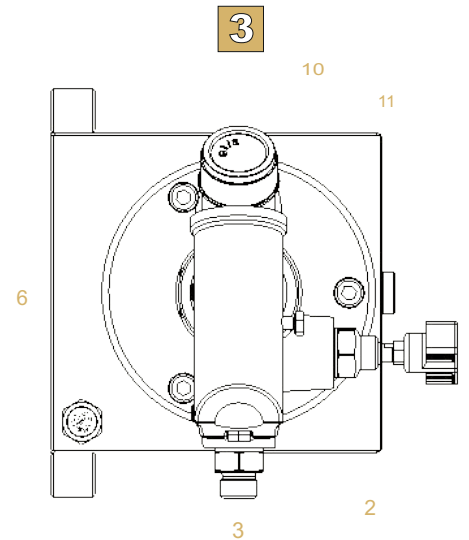
**1. Pump (page 10)**

**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)

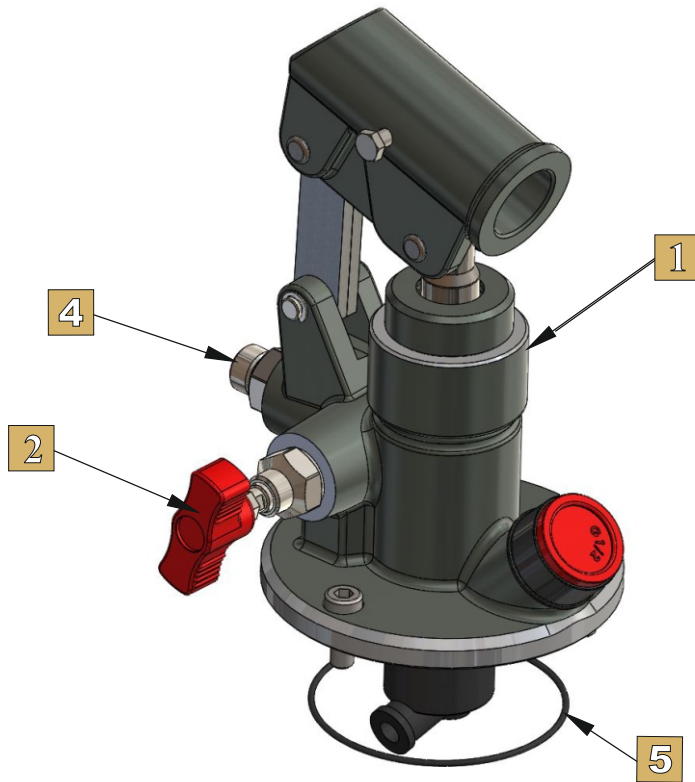
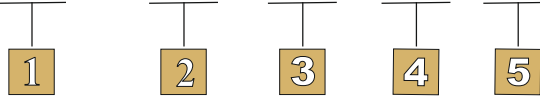
**3. Outlet orientation (optional for cylindrical tanks)**

	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



**Order code**

**PHS12 / M - S60 - V - BP**



**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
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**4. Stud connectors and reducers**

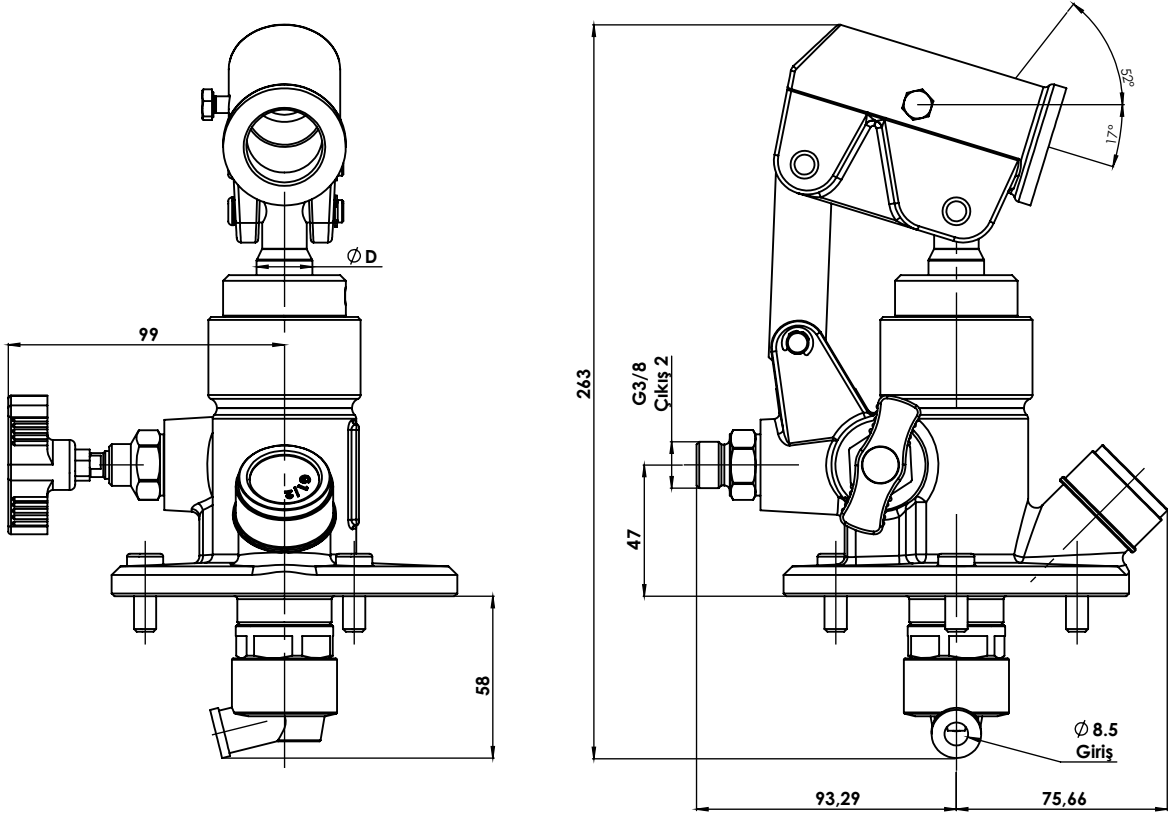
S60	Outlet stud G3/8 (60 deg cone)
12L	Outlet stud 12L (M18x1,5)
ad3/8NPTF	Outlet reducer 3/8NPTF
x	no connectors
12S	Outlet stud 12S (M20x1,5)

**5. Additional options**

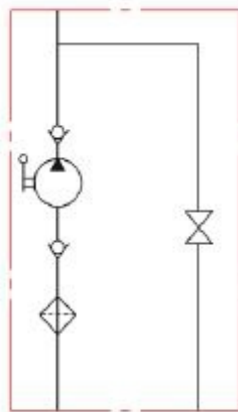
V	Sealing outside M8 area
DDM	Bonded seal washers for PRPs M8 screws
WoL	without 550 mm lever
WoF	without suction filter
O	Reverse lever arm (180 deg.)

PHS

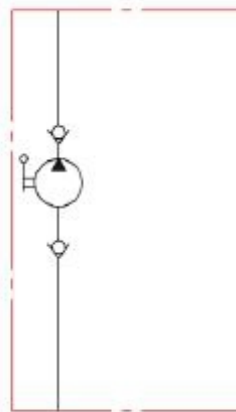
Hand pump with release knob



Hydraulic schemes



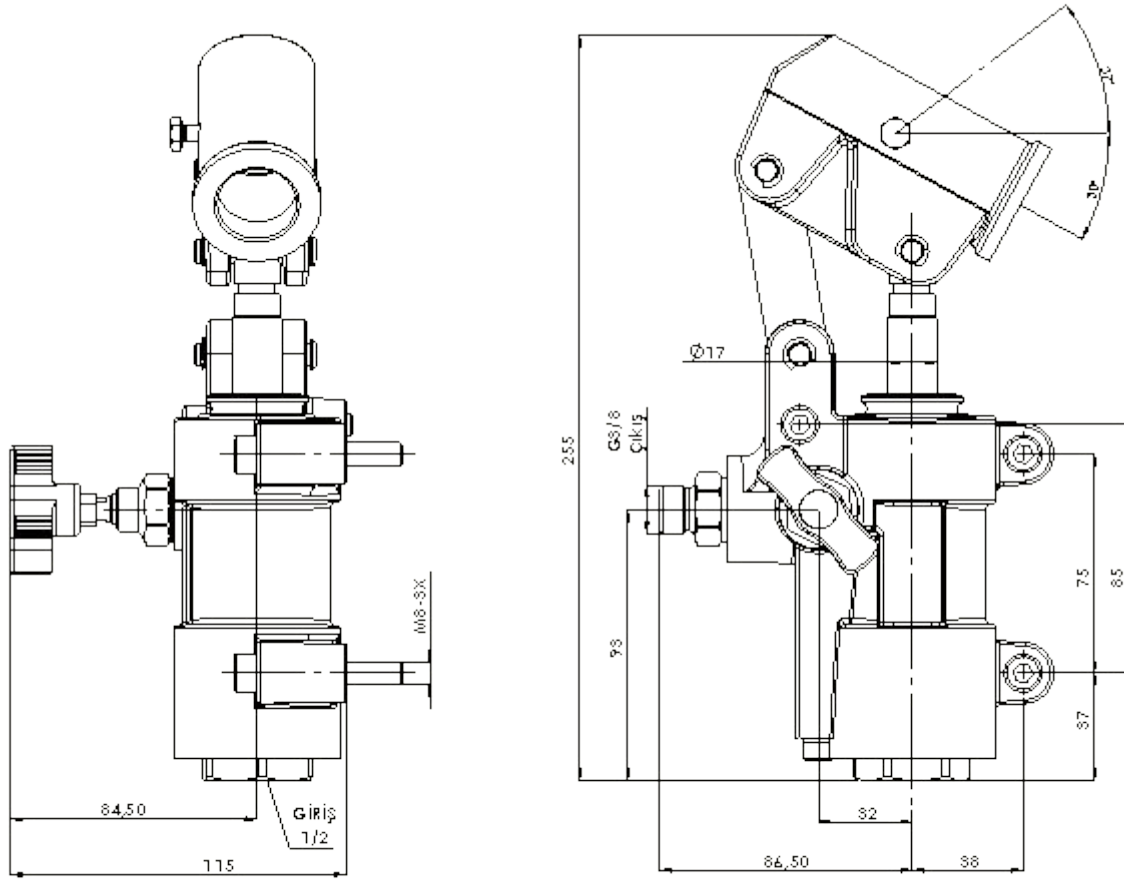
With release valve



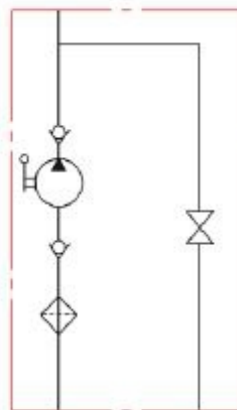
Without release valve

PRBC

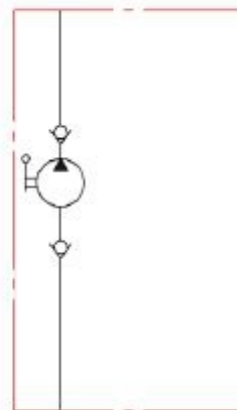
Hand pump with release knob



Hydraulic schemes



With release valve



Without release valve