



ORVAL
HYDRAULIC



HAND PUMP
ORV-HP

DETAILED TECHNICAL CATALOGUE





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Additional Informations

Note:This catalog shows the product in the most standard configurations. For Other Configurations, more detailed information or special request, Please contact Customer Service Dept.

Warning! :All specifications of this catalog refer to the standard product at this date (03/2013) . ORVAL, oriented to a continuous improvement, reserves the right to discontinue, modify or revise the specifications, without notice.

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

Working Conditions

MODEL	TE - 25	CE - 25	KCE - 25
Nominal Flow Displacement - Totaly	25 cc/cycle - 0,007 U.S.G/cycle		
- Pull Direction	14,5 cc/cycle - 0,004 U.S.G/cycle		
- Push Direction	10,5 cc/cycle - 0,003 U.S.G/cycle		
Maximum Operating Pressure	300 Bar - 4400 PSI		
Weight	3,2 Kg-7,05lbs	3,2 Kg-7,05lbs	3,2 Kg-7,05lbs
Oil Temperature with NBR Seals	-20 to 80 C° (-4 to 176 F°)		
with FPM (Viton) Seals	-20 to 100 C° (-4 to 212 F°)		
Oil Viskosity – Operating Range	From 10 to 75 mm2/s - 10 / 400 mm2/s		
Minumum / Maximum	From 10 to 75 cSt - 10 / 400 cSt		
Oil Filtration	≤30 μ		
Ambiant Temperature Range	-35 to 60 C° - (-31 to 140 F°)		
Internal Leakage (at 100 bar (1450 PSI), 40C° - (110 F°), 46 cSt. A(B)-T	3 cm3/min 0,18 in3/min		
Max. Level Of Contamination	19/16 - ISO 4406		

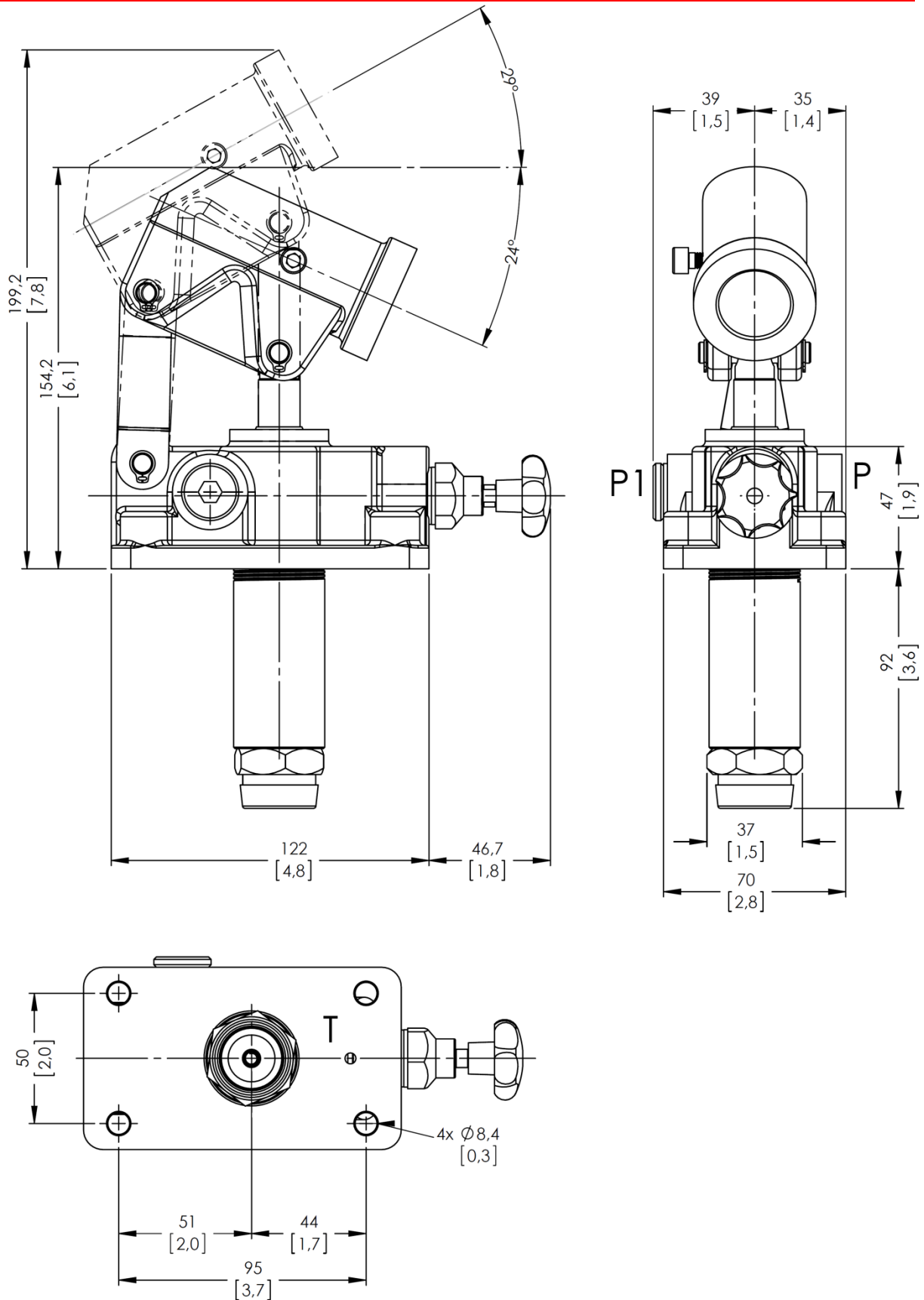
Not: This catalogue shows technical specifications measured with mineral oil of 46 mm2/s-46 cSt viscosity at 40 C° temperature.

Double acting hand pumps suitable to operate single acting applications. They can be fitted also onto tank and are equipped with tapered lowering valve. They are available with nodular cast-iron body and nickel-plated spool.

Model	PORTS THREADS And STANDART THREADS		
	BSP (Iso 228)	UN-UNF (Iso 11926-1)	Metric (Iso 262)
TE – 25	G 3/8"	3/4 - 16 UNF	M22x1.5
CE – 25	G 1/4"	3/4 - 16 UNF	M22x1.5
KCE – 25	G 3/8"	3/4 - 16 UNF	M22x1.5

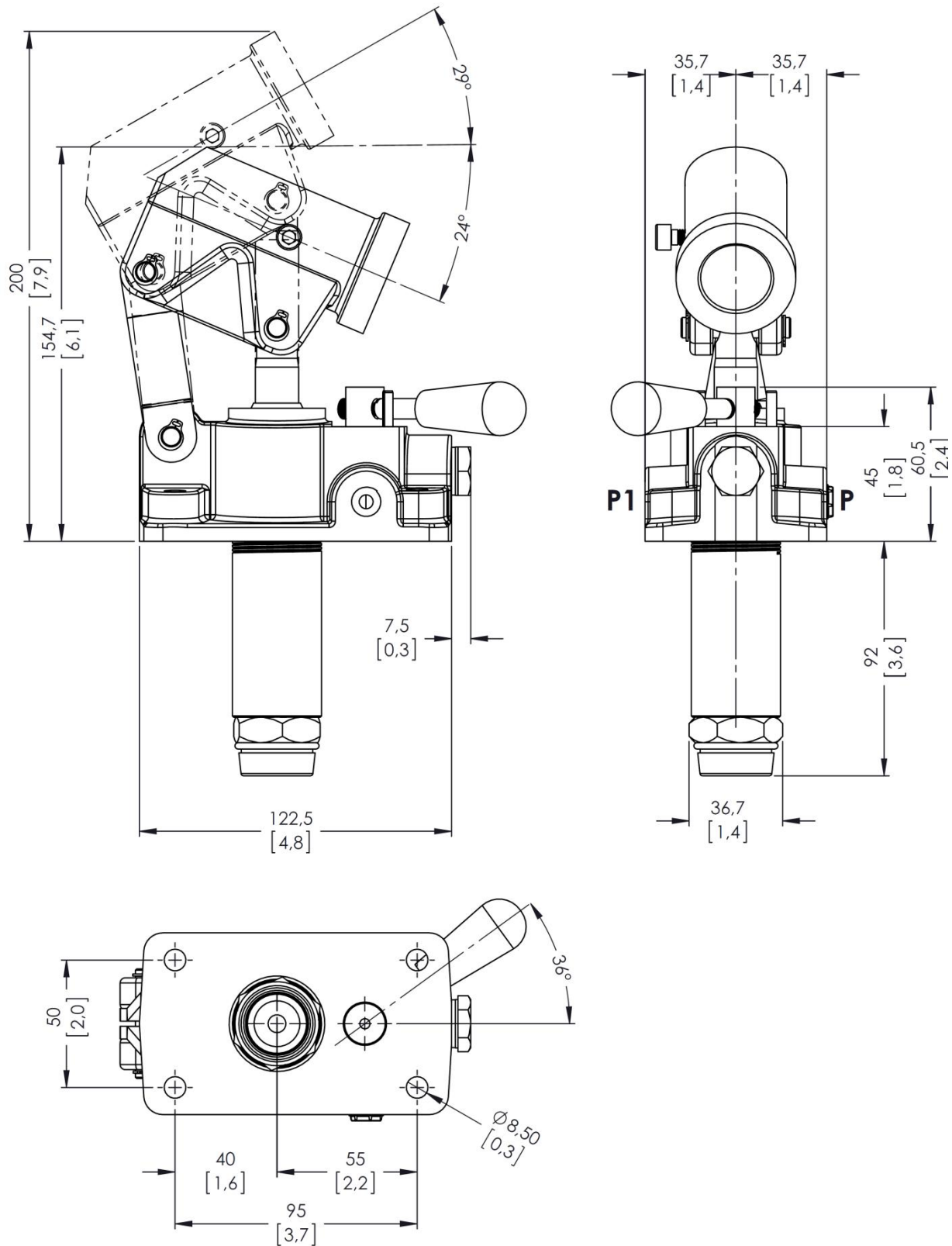
Dimensional Data

TE 25 – Single action hand pump



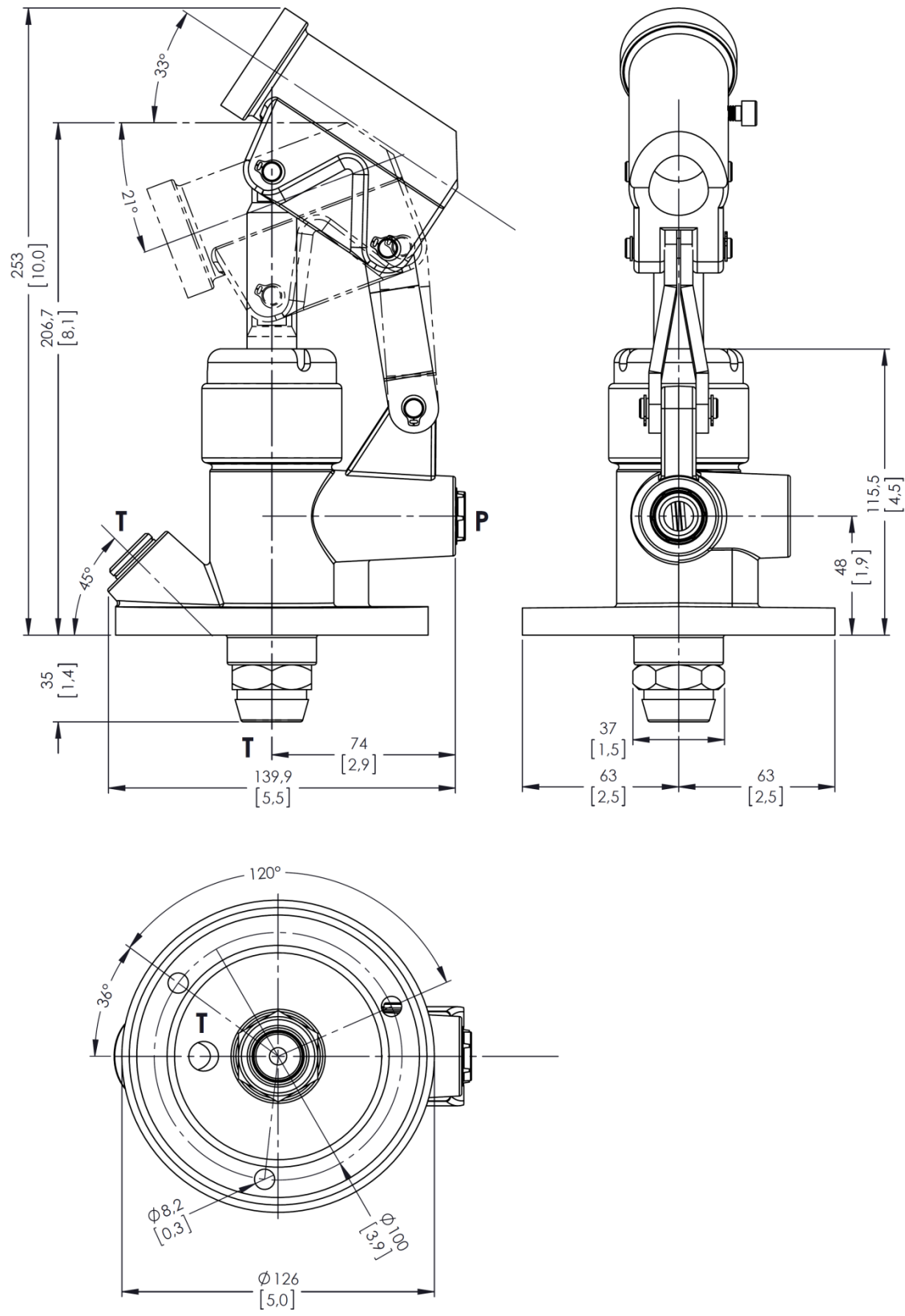
Dimensional Data

CE 25 – Double action hand pump



Dimensional Data

KCE 25 – Double action hand pump with circle type



Hydraulic Circuit

TE 25 – Single action hand pump

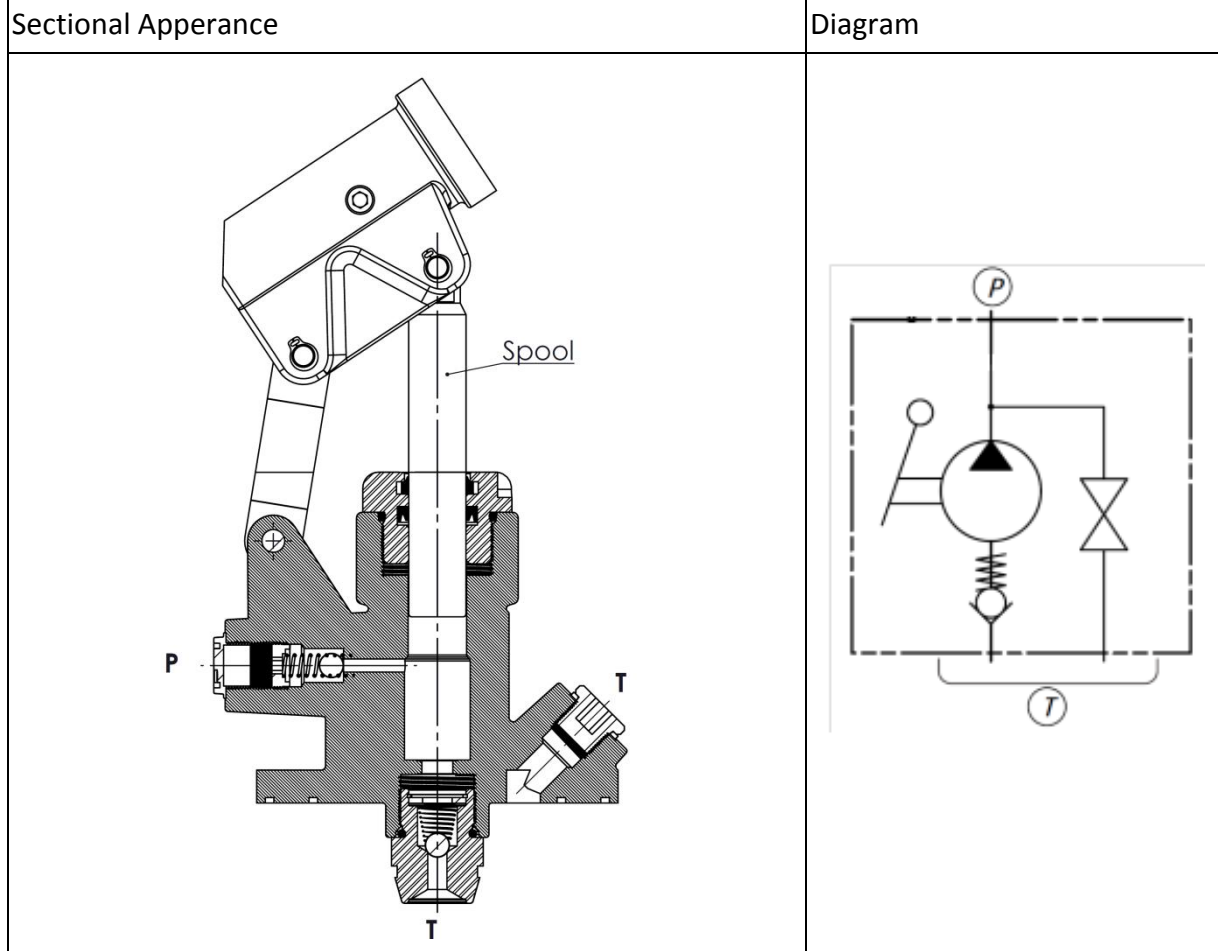
Sectional Apperance	Diagram

CE 25 – Double action hand pump

Sectional Apperance	Diagram

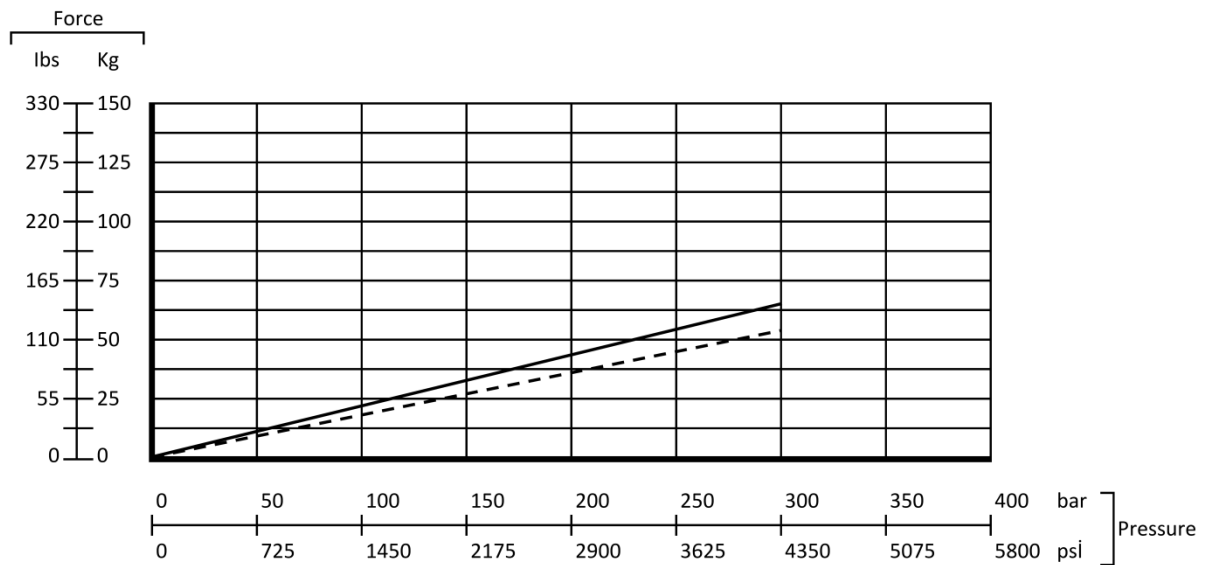
Hydraulic Circuit

KCE 25 – Double action hand pump with circle type



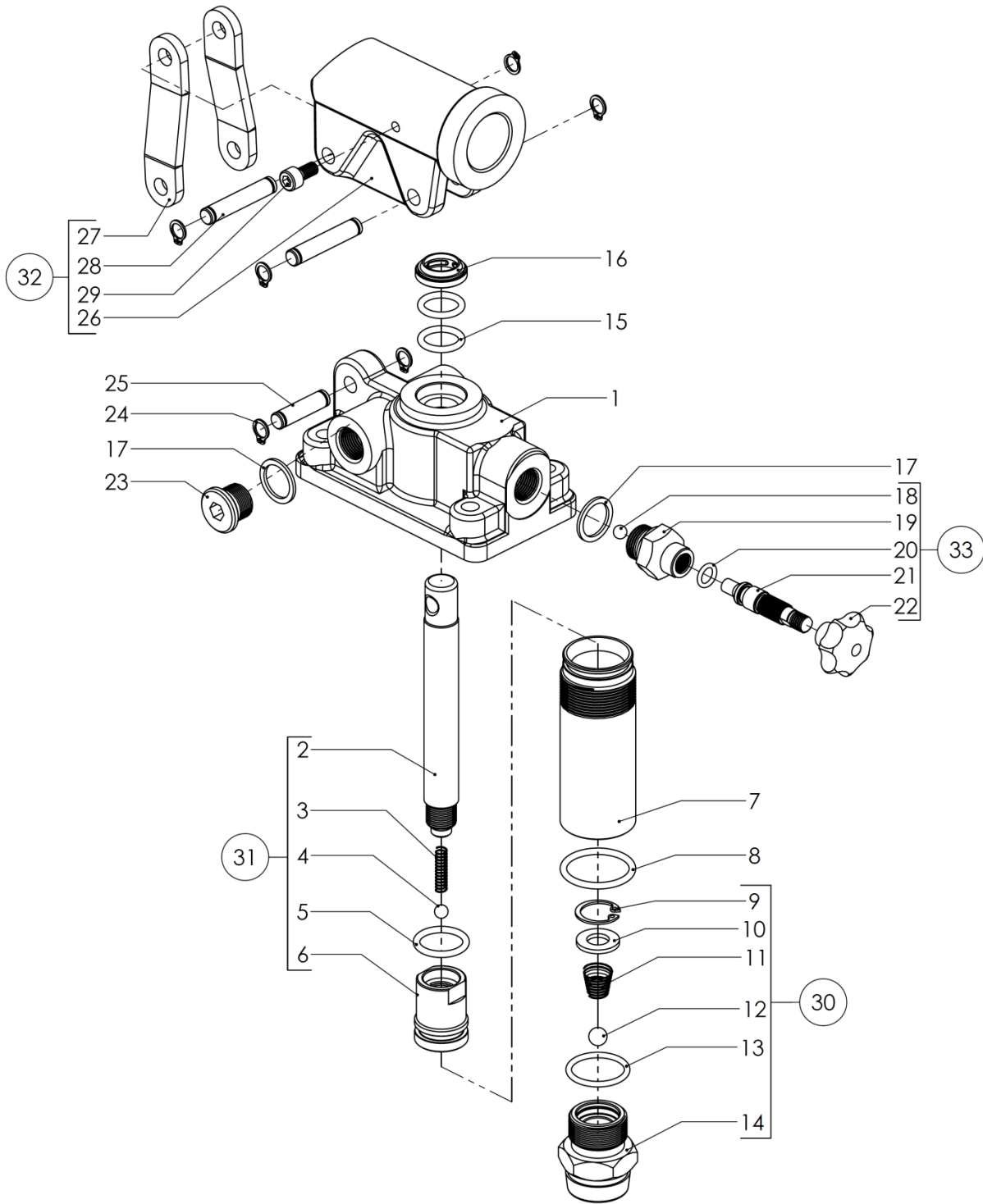
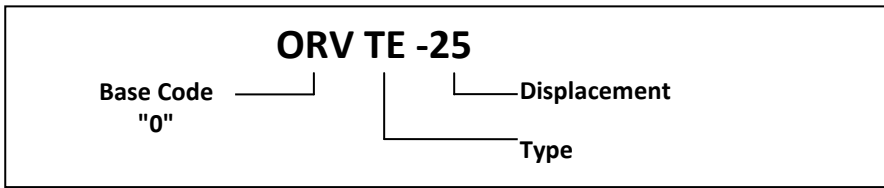
Performance Data And Curve

-Force while pumping with standard lever (600 mm); Force and pressure table.



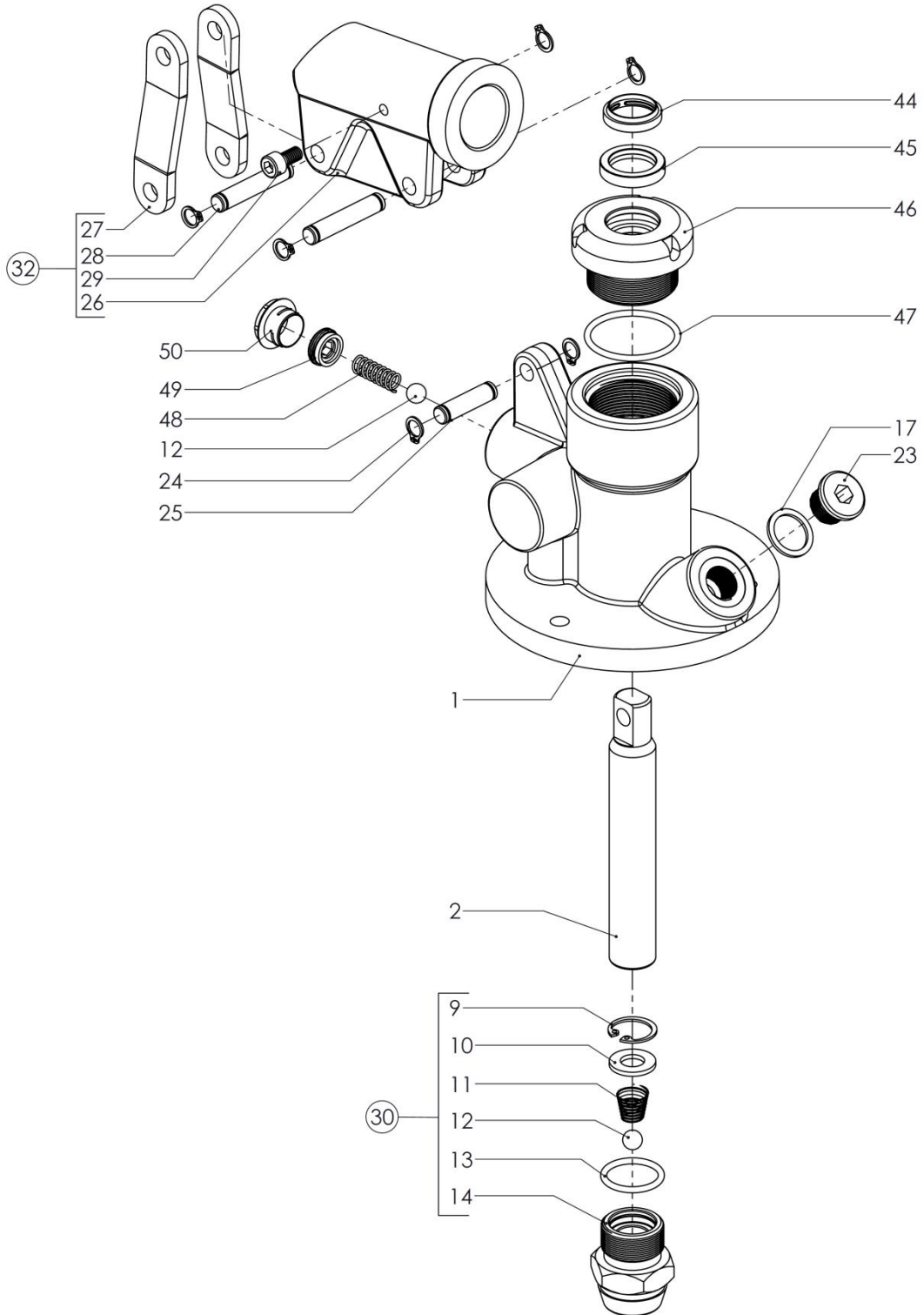
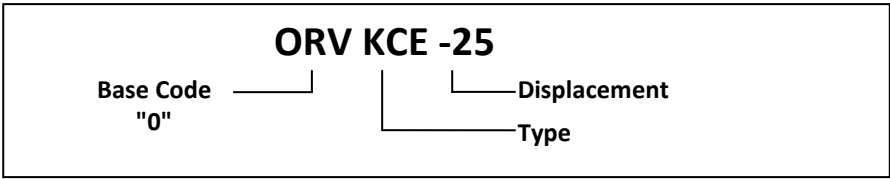
Ordering Codes TE Model

Order example



Ordering Codes KCE Model

Order example

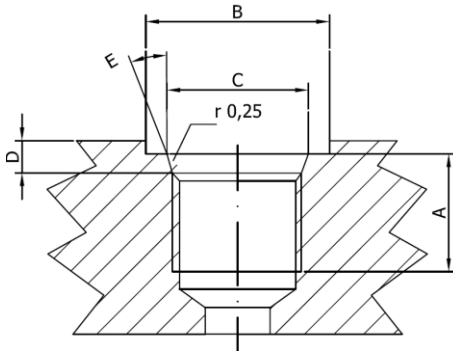


Part List

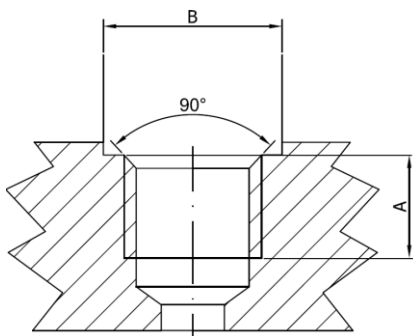
Item No	Type			Order Code	Part Name	Description	Quantity
	TE-25	CE-25	KCE-25				
1a	x			1TE025100	Hand Pump Body		1
1b		x		1CE025100	Hand Pump Body		1
1c			x	1KCE025100	Hand Pump Body		1
2a	x			1TE025101	Rod		1
2b		x		1CE025101	Rod		1
2c			x	1KCE025101	Rod		1
3	x	x	x	1TE025102	Piston Spring		1
4	x	x	x	1TE025103	Piston Ball		1
5	x	x	x	1TE025104	O-ring	20x3	1
6	x	x	x	1TE025105	Piston		1
7	x	x	x	1TE025106	Steel Pipe		1
8	x	x	x	1TE025107	O-ring	29x3	1
9	x	x	x	1TE025108	Circlip	DIN 472 - 20x1	1
10	x	x	x	1TE025109	Washer	M10	1
11	x	x	x	1TE025110	Suction Spring		1
12	x	x	x	1TE025111	Suction Ball		1
13	x	x	x	1TE025112	O-ring	24,5x2,58	1
14	x	x	x	1TE025113	Suction Valve Casing		1
15	x			1TE025114	O-ring	16x3	2
16	x			1TE025115	Wiper Seal	16x24x5/7	1
17	x		x	1TE025116	Washer	G 3/8"	2
18	x			1TE025117	Tank Ball		1
19	x			1TE025118	Tank Valve Casing		1
20	x			1TE025119	O-ring	8x2	1
21	x			1TE025120	Tank Pin		1
22	x			1TE025121	Knob		1
23	x		x	1TE025122	Plug	G 3/8"	1
24	x	x	x	1TE025123	Circlip	DIN 471 - 8x0,8	6
25	x	x	x	1TE025124	Short Pin		1
26	x	x	x	1TE025125	Lever Holder		1
27	x	x	x	1TE025126	Holder Bracket		2
28	x	x	x	1TE025127	Long Pin		2
29	x	X	x	1HP025101	Screw	DIN 912 - M6x12	1
30	X	X	X	1HP025102	Cylinder Group		
31	X	X	X	1HP025102	Piston Group		
32	X	X	X	1HP025103	Hinge Group		
33	x	X	X	1HP025104	Valve Group		
34		X		1CE025102	O-ring	23x2,5	1
35		X		1CE025103	O-ring	15,88x2,62	2
36		X		1CE025104	Wiper Seal	17x25x4x7	1
37		X		1CE025105	O-ring	11,3x2,4	2
38		X		1CE025106	Spool		1
39		X		1CE025107	Handle	M8	1
40		X		1CE025108	Spring Pin	ISO 8752-4x24	2
41		X		1CE025109	Washer	G1/4"	1
42		X		1CE025110	Plug		1
43		x		1CE025111	Plastig Plug	G1/4"	1
44			X	1KCE025102	Wiper Seal	20x25x4,3/6	1
45			X	1KCE025103	Rod Seal	20x28x5,5	1
46			X	1KCE025104	Rod Cover		1
47			X	1KCE025105	O-Ring	36,17x2,62	1
48			X	1KCE025106	Tank Spring		1
49			X	1KCE025107	Tank Cover		1
50			x	1KCE025108	Plastik Plug	G3/8"	1

Technical Data

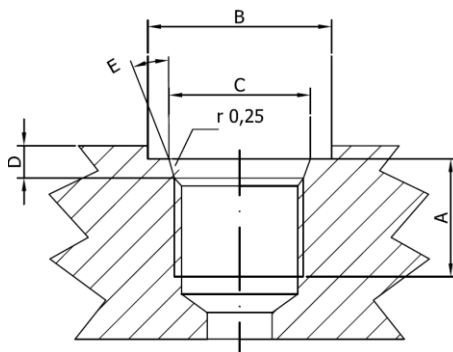
Ports Dimensional Data



SAE UN-UNF (ISO 725)							
Dimensions		7/8-14 UNF SAE10		1"1/16-12 UN SAE12		1"5/16-12 UN SAE16	
mm	in						
A		17	0,67	20	0,79	20	0,79
B		34	1,34	41	1,61	49	1,92
C		23,9	0,94	29,2	1,15	35,5	1,40
D		2,5	0,10	3,3	0,13	3,3	0,13
E		15°		15°		15°	



BSP (ISO 228)							
Dimensions		G 1/2"		G 3/4		G 1	
mm	in						
A		16	0,63	18	0,71	20	0,79
B		27	1,06	33	1,30	40	1,57



METRIC (ISO 262)							
Dimensions		M22x1,5 ISO 262		M27x2 ISO 262			
mm	in						
A		16	0,63	18	0,71		
B		31,5	1,24	37,7	1,48		

