Fluidea

01.01

Gear pumps & motors

Series 1600

01.1600 - 0902

OPERATING PARAMETERS

Maximum outlet pressure:	See on the following pages
Inlet pressure:	See below*
Speed range:	See on the following pages
Fluid temperature:	Minimum at start up….....-40 °C Maximum continuous.....+80 °C Maximum intermittent .....+100 °C
Fluid viscosity:	Maximum at start up….....2000 mm2/sec Maximum continuous.....250 mm2/sec Minimum continuous.....10 mm2/sec Optimum. 15-25 mm2/sec
Fluid cleanliness class:	ISO4406.....21/16/13 NAS 1638.....9
Fluid velocity:	Maximum in inlet line….....2.5 m/sec Optimum in inlet line….....1.5 m/sec
Fluids:	Hydraulic mineral oils HL and HLP (DIN 51524)
Rotation:	Clockwise (C), anticlockwise (A) and reversibile (D) when applicable, view from shaft end

For characteristics diagrams (pressure - flow - efficiency - maximum power) and driving shaft's loads please consult the general tecnical data sheet available on our web site.

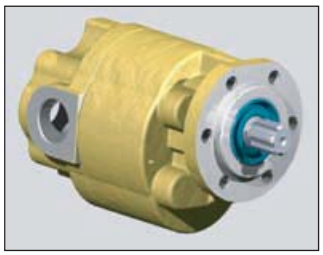
*** INLET CONDITIONS:**

It is extremely important that pumps are installed so that they can always fill with fluid in any working condition.

Pumps' inlet ports are designed to facilitate full volume fill, however it is important to obser-ve the following recommendations in order to optimize pump's performance and life:

- Use large diameter pipes and fittings and possibly avoid sharp bends and long lenghts in suction lines to minimize pressure losses; ensure that fluid velocity does not exceed above limits.
- Never run pumps dry; particolar care should be taken to open any shut-off valves.
- If necessary fill inlet line with fluid and ensure that inlet line is air tight.
- Particular care should be taken where high speeds and/or high fluid viscosities are involved. As a general rule pressure at the pump inlet port should not be less tha 0,8 bar absolute @ normal viscosity of 23 mm2/sec

Data, ordering key



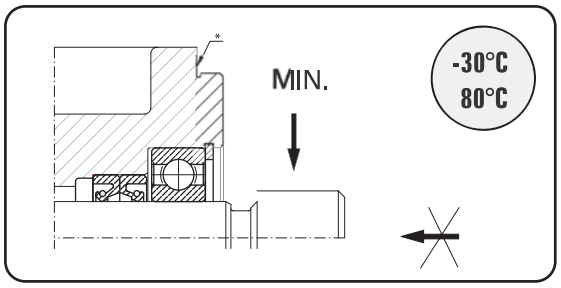
Model	1604	1606	1608	1610	1613	1617
Displacement [ccm/rev]	12,4	14,6	19,4	24,3	31,6	41,3
Rated pressure [MPa]	17	17	17	17	15,5	15,5
Max speed [rpm]	2700 pumps 3000 motors					
Max torque motors [Nm]	31	36	48	60	72	84

Seal design | Dimensions data | Drive shaft | Mounting flange | Ports

Ordering key

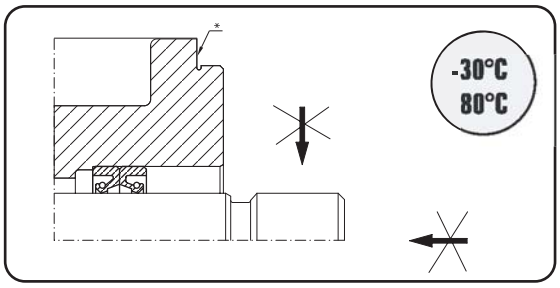
P- PUMP M- MOTOR	Design level 1- without 2 or 3	Seal design	Bearings roller - without	Size	Drive shaft	Flange	Ports	Rotation A- anticlockwise C- clockwise D- birotation
P	2	C		1604	B	8	C23	C
P M	2	A B C E A2P A2PV C2P C2PV	roller	1604 1606 1608 1610 1613 1617	A B V AD F	1 2 3 5 8	C21/E21 C23/E23 C5/E5 C9/E9 L 32	A C D

Seal design



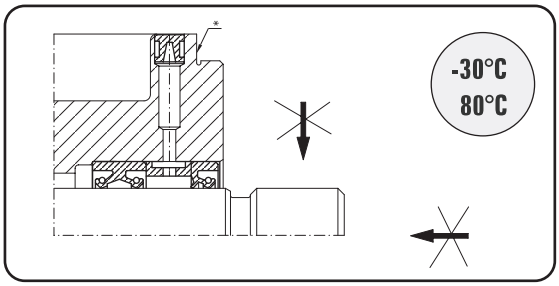
code A

Suitable for drives with limited radial load



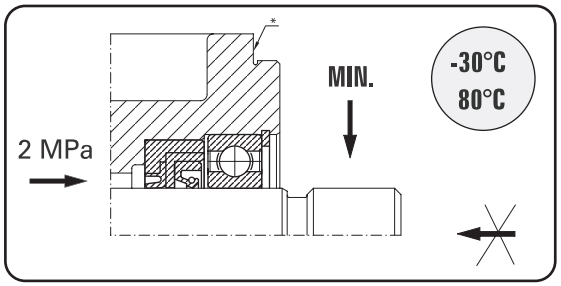
code B

Suitable for drives with no load



code C

Visible-bleed drilling suitable for drives with no load for direct mounting on torque converters and gear boxes

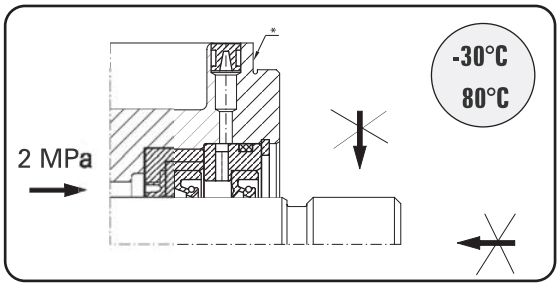


code A2P, A2PV

Options of high pressure shaft seal suitable for drives with limited radial load

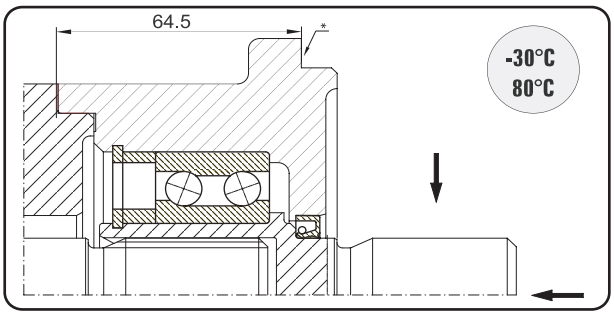
2P-bi-rotation no check valves with external drain.

2PV-bi-rotation with check valves.



code C2P, C2PV

Options of high pressure shaft seal suitable for drives with no load visible-bleed driling

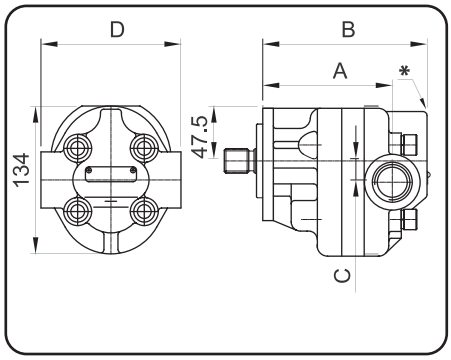


code E

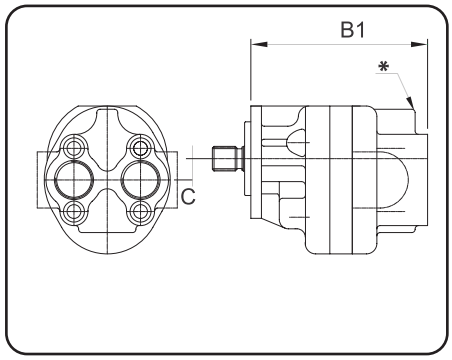
Suitable for drives with heavy axial load and some radial on to drive shaft

* standard flange mounting surface

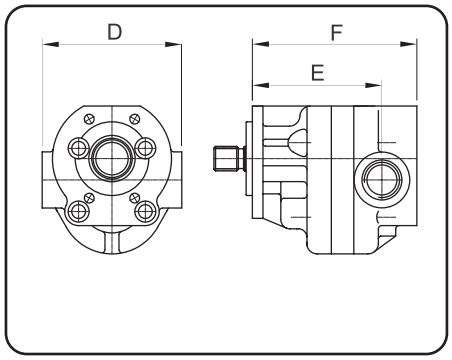
Installation dimensions



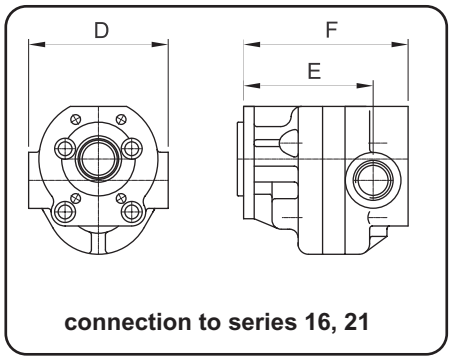
Single unit (side ports)



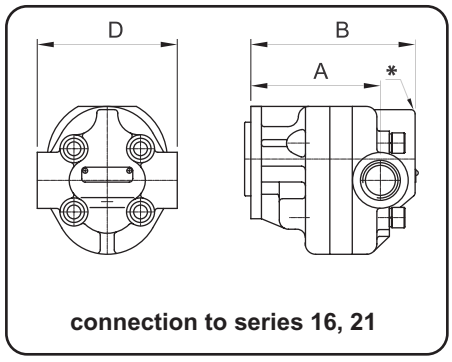
Single unit (end ports)



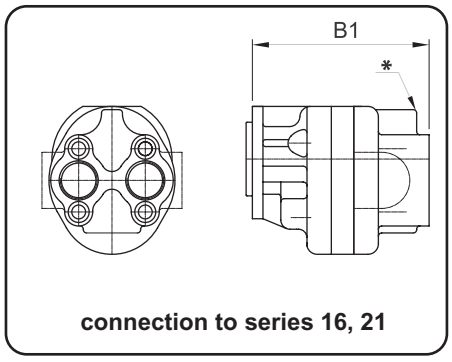
Front unit



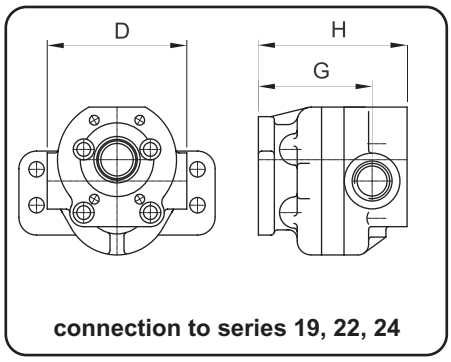
Intermediate unit



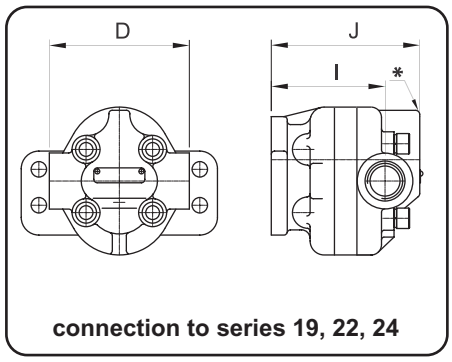
Rear unit (side ports)



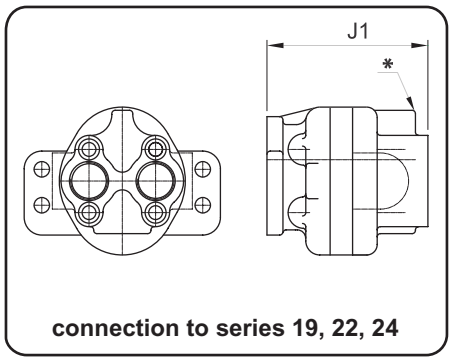
Rear unit (end ports)



Intermediate unit



Rear unit (side ports)



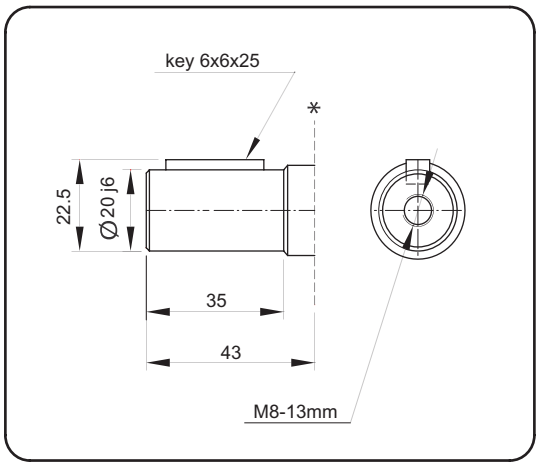
Rear unit (end ports)

SIZE	A	B	B1	C	WEIGHT [kg]	E	F		G	H		I	J	J1		D
1604	112	144	155	19,3	7	112	144	7	98	130	7	98	130	141	7	127
1606	112	144	155	19,3	7	112	144	7	98	130	7	98	130	141	7	127
1608	117	149	160	19,3	8	117	149	8	103	135	8	103	135	146	8	127
1610	122	154	165	19,3	8	122	154	8	108	140	8	108	140	151	8	127
1613	130	162	173	19,3	9	130	162	9	116	148	9	116	148	159	9	127
1617	140	172	183	19,3	9	140	172	9	126	158	9	126	158	169	9	127

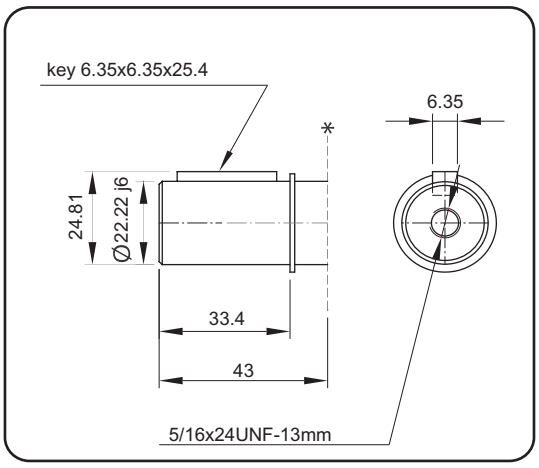
* drain port for motors

Drive shafts

Parallel keyed shafts

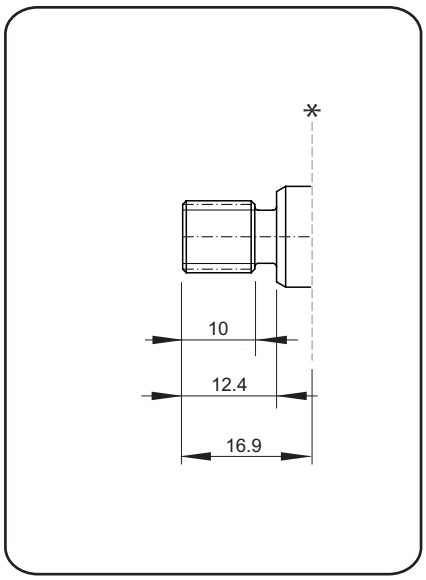


code AD

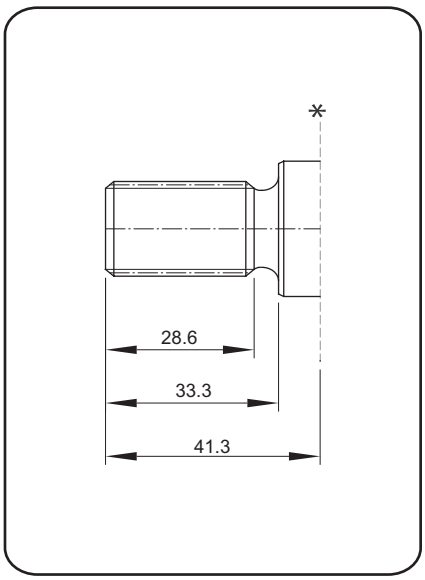


code F

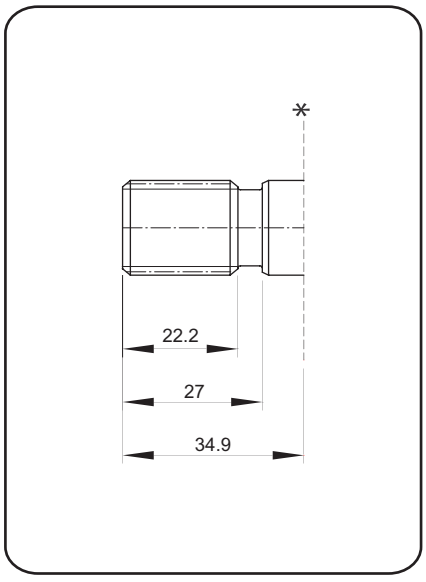
Involute splined shafts



code A



code B



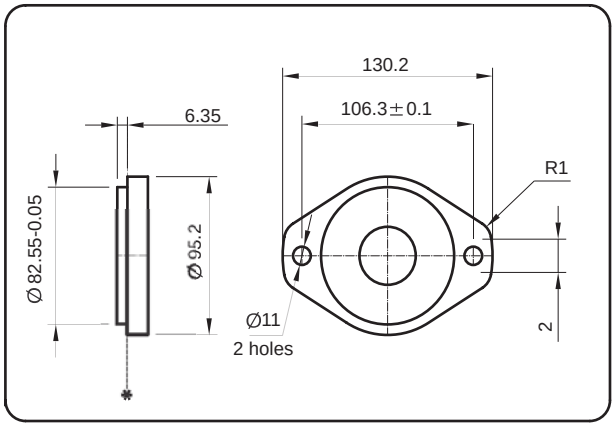
code V

* standard flange mounting surface

	size	side fit	diametral pitch	pressure angle	number of teeth	major diameter
code B,V	SAE B 7/8"	flat root	16/32	30 °	13	21,79/ 21,66
code A	SAE A 5/8"	flat root	16/32	30 °	9	15,44/ 15,30

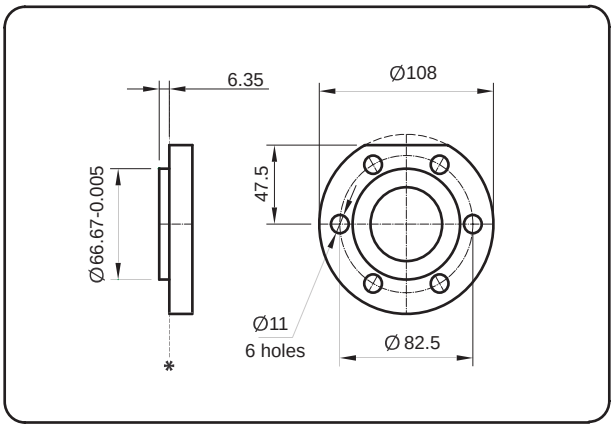
Mounting flanges

SAE A



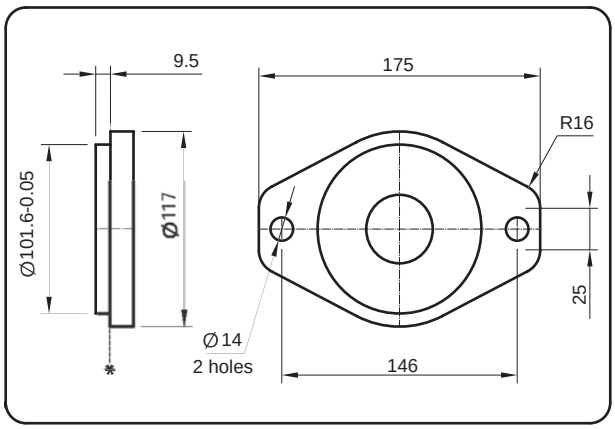
code 1

SAE B

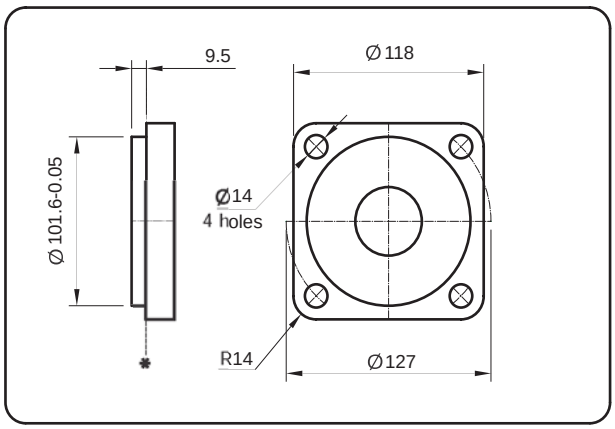


code 8

SAE B

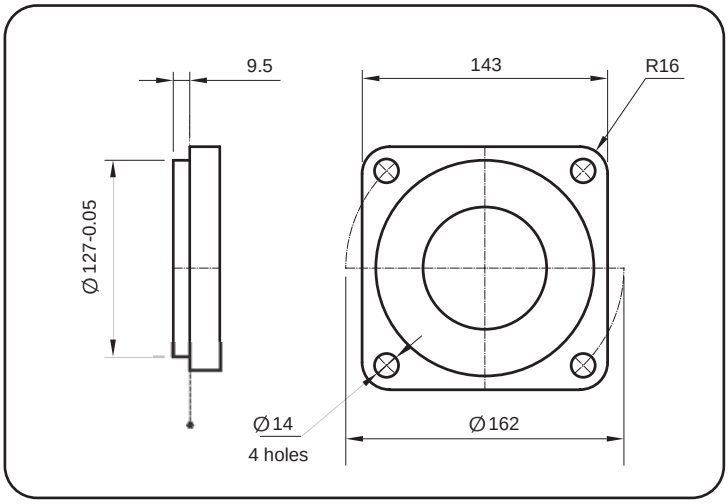


code 2



code 3

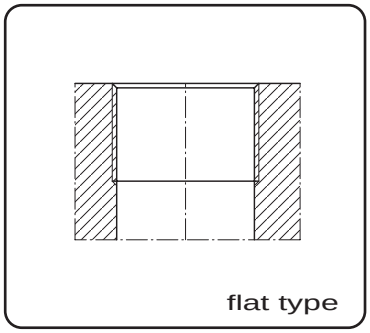
SAE C



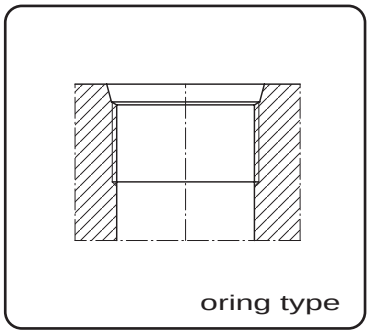
code 5

* standard flange mounting surface

Ports



C5, C21, E5, E21

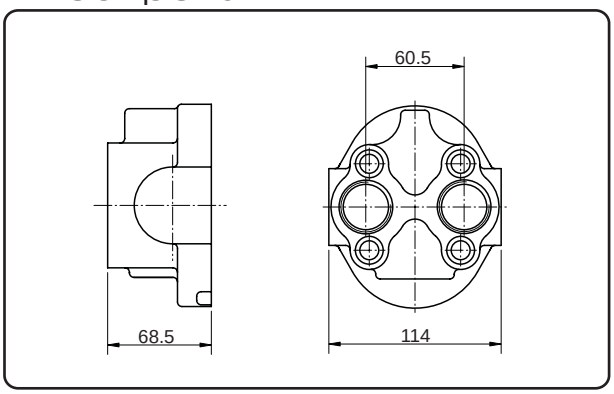


C9, C23, E9, E23

side ports	inlet	outlet	end ports
C5	1"B.S.P.P oring	1"B.S.P.P oring	E5
C9	$15/16$ UNF-SAE	$15/16$ UNF-SAE	E9
C21	M33x1.5	M33x1.5	E21
C23	M33x2 oring	M33x2 oring	E23

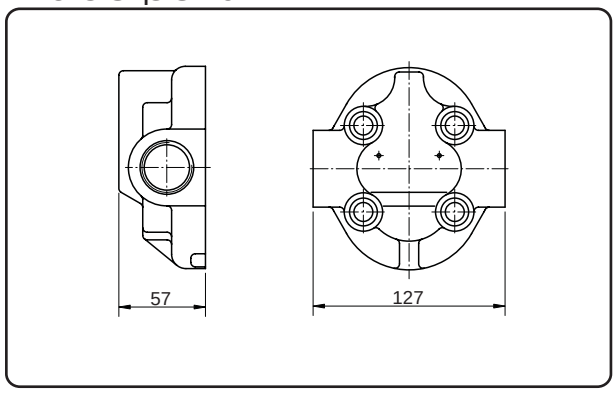
side ports	L32
inlet	1"B.S.P.P oring
outlet	1"B.S.P.P oring

Rear ports



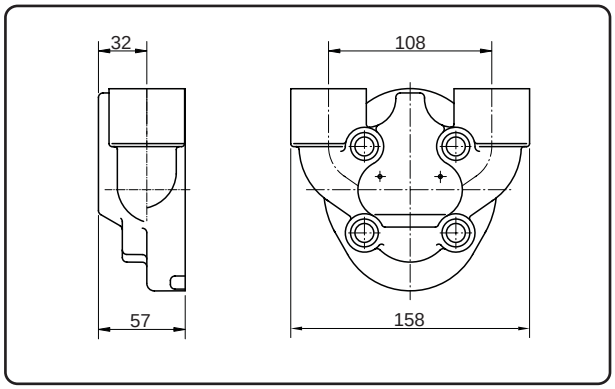
E5, E9, E21, E23

Side ports



C5, C9, C21, C23

Top ports



L32

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