

M series motors

CHARACTERISTICS OF THE M SERIES MOTORS

Motor model	Displacement		Continuous max. speed (1)	Intermittent max. speed (1)	Max. flow absorbed		Torque		Torque at 350 bar (5100 psi)		Theoretical maximal power at 5800 psi 400 bar		Max. allowable pressure continuous / peak		Weight (kg)	
	cu.in/rev	cc/rev			gpm	l/mn	lbf.ft/psi	N.m/bar	lbf.ft	N.m	HP	kW	psi	bar	lbs	Kg
M 5_093840	0.31	5	8000	8800	10.6	40	0.0040	0.08	21	28	35.7	26.6	5800 / 6525	400 / 450	9.7	4.4
M 12	0.73	12	8000	8800	25.4	96	0.0097	0.19	49	67	85.7	64	5800 / 6525	400 / 450	12.1	5.5
M 18	1.10	18.0	8000	8800	38.0	144	0.0145	0.29	74	100	128.7	96	5800 / 6525	400 / 450	12.1	5.5
M 25	1.52	24.9	6300	6900	41.4	157	0.0201	0.40	102	139	140.1	104.5	5800 / 6525	400 / 450	25	11.5
M 28	1.69	27.7	6300	6900	46.1	175	0.0223	0.44	114	154	155.9	116.3	5800 / 6525	400 / 450	25	11.5
M 32	1.96	32.1	6300	6900	53.4	202	0.0259	0.51	132	179	180.7	134.8	5800 / 6525	400 / 450	25	11.5
M 41	2.51	41.1	5600	6200	60.8	230	0.0331	0.65	169	229	205.6	153.4	5800 / 6525	400 / 450	25	11.5
M 45	2.77	45.4	5000	5500	60.0	227	0.0366	0.72	187	253	202.8	151.3	5800 / 6525	400 / 450	40	18
M 50	3.07	50.3	5000	5500	66.4	252	0.0405	0.80	207	280	224.7	167.6	5800 / 6525	400 / 450	40	18
M 63	3.84	63	5000	5500	83.2	315	0.0508	1.00	259	351	281.5	210	5800 / 6525	400 / 450	40	18
M 80	4.91	80.4	4500	5000	95.6	362	0.0648	1.28	330	448	323.3	241.2	5800 / 6525	400 / 450	51	23
M 90	5.49	90	4500	5000	107.0	405	0.0725	1.43	370	501	361.9	270	5800 / 6525	400 / 450	51	23
M 108	6.61	108.3	4000	4400	114.4	433	0.0872	1.72	445	603	387	288.8	5800 / 6525	400 / 450	51	23
M 108 R (2)	6.61	108.3	3400	4500	97.3	368	0.0872	1.72	445	603	329	245.4	5800 / 6525	400 / 450	66	35
M 125	7.65	125.4	3400	4500	112.6	426	0.1010	2.00	515	699	381	284.2	5800 / 6525	400 / 450	66	36
M 160	9.76	160	3600	4000	152.2	576	0.1289	2.55	657	891	514.7	384	5800 / 6525	400 / 450	107	48.5
M 180	11.02	180.6	3600	4000	171.8	650	0.1455	2.87	742	1006	581	433.4	5800 / 6525	400 / 450	107	48.5

(1) For higher speeds, please contact us.

(2) The M 108 R motor is in the frame size of the M 125.

► Acceptable forces applied to motor shaft

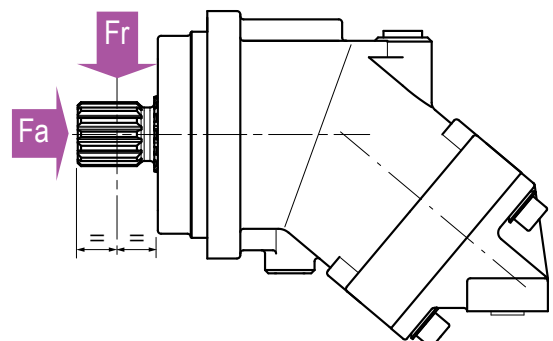
Motor model		5	12	18	25	28	32	41	45	50	63	80	90	108	108 R	125	160	180
Fr	lbf	160	630	900	1350	1394	1462.5	1574	1462.5	1686	2023	2360	2473	2585	2812	3262	4050	4500
	N	710	2800	4000	6000	6200	6500	7000	6500	7500	9000	10500	11000	11500	12500	14500	18000	20000
Fa	lbf/psi	0.15	0.23	0.31	0.42	0.44	0.46	0.62	0.62	0.62	0.77	0.93	1.03	1.24	1.24	1.33	1.32	1.47
	N/psi (N/bar) *	0.70 (10)	1.03 (15)	1.37 (20)	1.86 (27)	1.93 (28)	2.06 (30)	2.75 (40)	2.75 (40)	2.75 (40)	3.44 (50)	4.14 (60)	4.62 (67)	5.52 (80)	5.52 (80)	5.93 (86)	5.86 (85)	6.55 (95)

Fr: radial force measured at mid point of length of shaft.

Fa: axial force which tends to push the shaft inwards.

* Differential pressure between A and B.

For other forces, please contact us.



Order code system of M series motors

M	...	A	..	..	M2	.	.	..	..
01	02	03	04	05	06	07	08	09	10

To obtain the code for your motor, complete the different parameters 02, 04, 05, 07, 08, 09 and 10 in the table on the left according to the options you require (see table below).

Motor																		
01	Motor																	M

Displacement																		
02		5	12	18	25	28	32	41	45	50	63	80	90	108	108R	125	160	180

Mounting flange																		
03		CETOP 2 bolts	4 bolts ISO 3019-2															A

Shaft end																			
04	DIN 5480 splined	–	W25	W25	W25	W30	W30	W30	W30	W30	W30	W40	W40	W40	W45	W45	W50	W50	W1
		–	–	–	W30	W25	W25	–	W35	W35	W35	W35	–	–	W40	W40	–	–	W2
	DIN 6885 keyed	Ø 18	Ø 25	Ø 25	Ø 25	Ø 30	Ø 30	Ø 30	Ø 30	Ø 30	Ø 30	Ø 40	Ø 40	Ø 40	Ø 45	Ø 45	Ø 50	Ø 50	D1
		–	Ø 20	–	Ø 30	Ø 25	Ø 25	–	Ø 35	Ø 35	Ø 35	–	–	–	Ø 40	–	–	–	D2

Inlet ports A and B																					
05	SAE flange ports	Bottom	0	–	–	–	–	●	●	●	●	●	●	●	●	●	●	●	●	L0	
		Rear	0	–	–	–	●	●	●	●	●	●	●	●	●	●	●	●	●	M0	
		Side	0	–	–	–	●	●	●	●	●	●	●	●	●	●	●	●	●	N0	
			1	–	–	–	●	●	●	●	●	●	●	●	●	●	●	●	●	N1	
	Threaded	Side	0	–	●	●	●	●	●	●	●	●	●	●	●	●	–	–	–	–	Q0
			1	–	–	–	●	●	●	●	●	●	●	●	●	●	–	–	–	–	Q1
		Rear	0	●	●	●	●	●	●	●	●	●	●	●	●	●	–	–	–	–	P0

0 = Without suitability for valves
1 = Compatible with flushing valve

Drain ports T1 and T2																		
06		2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	M2

Suitable for use of speed sensor																			
07	Yes	–	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	1
	No	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	0

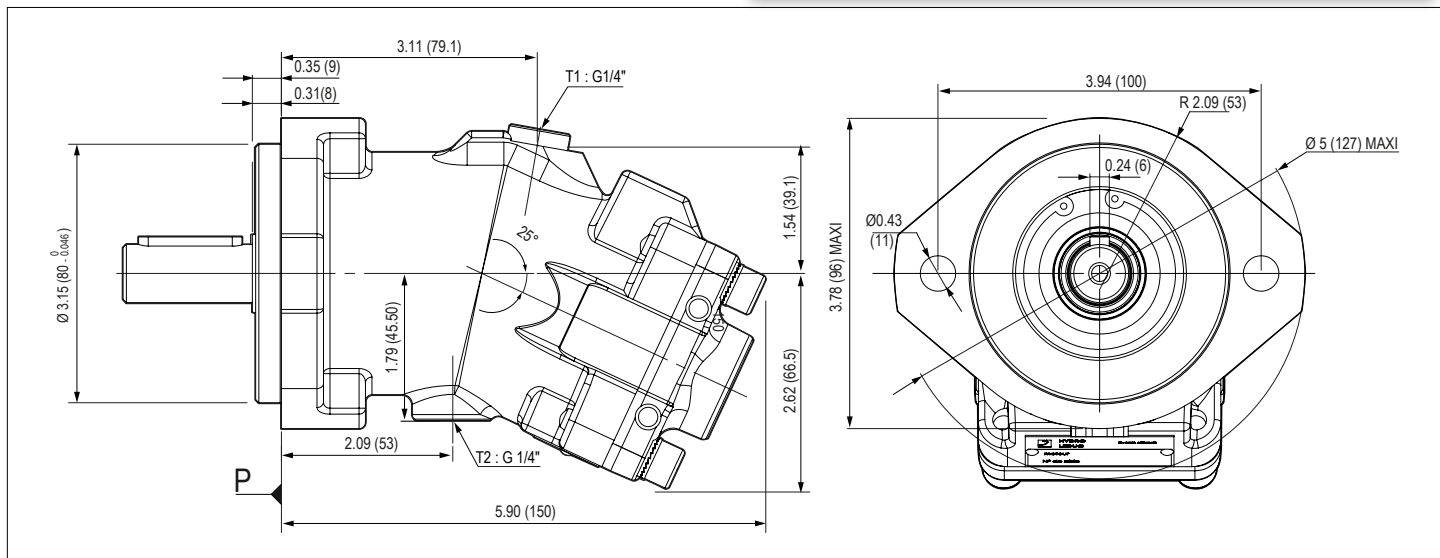
Speed sensor																		
08	Yes	–	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	1
	No	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	0

Valves																		
09	Without	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	SV
	with flushing valve	—	—	—	●	●	●	●	●	●	●	●	●	●	●	●	●	VB

Low temperature option																		
10	Yes (NBR)	–	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	N
	No (FKM)	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	F

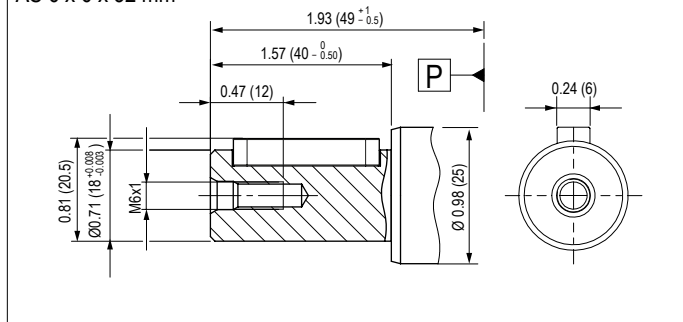
PLEASE NOTE: The M5 motor, reference 093840, only exists in one version (see next page).

CETOP flange, 2 bolts



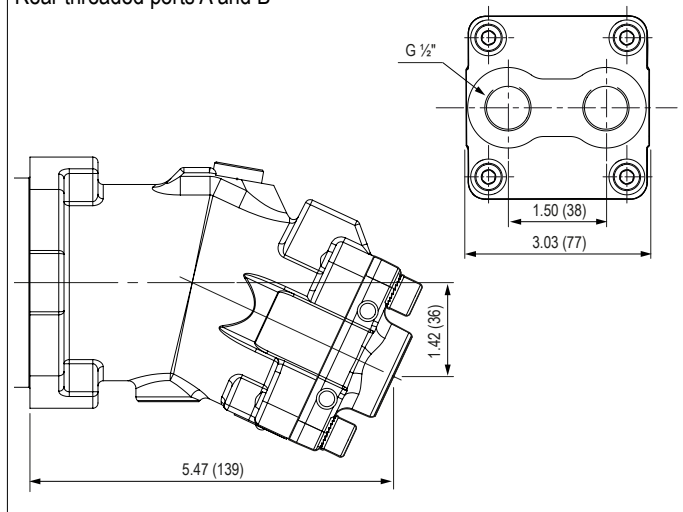
► Shaft end

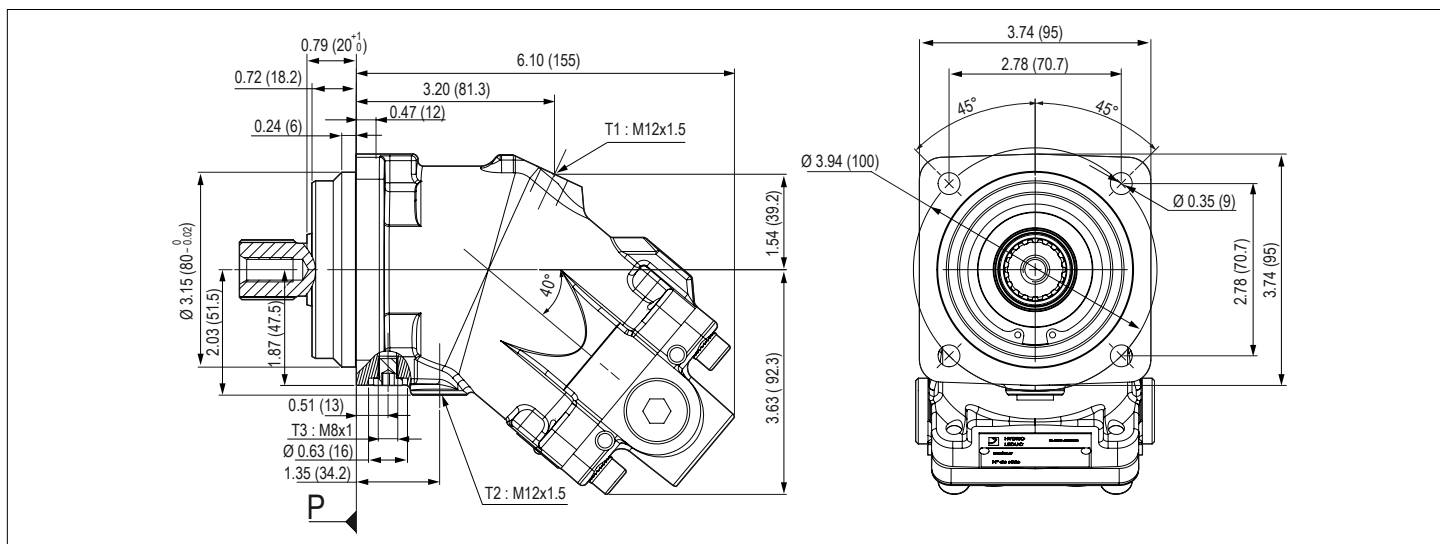
Cylindrical keyed shaft $\varnothing 18$ mm
AS 6 x 6 x 32 mm



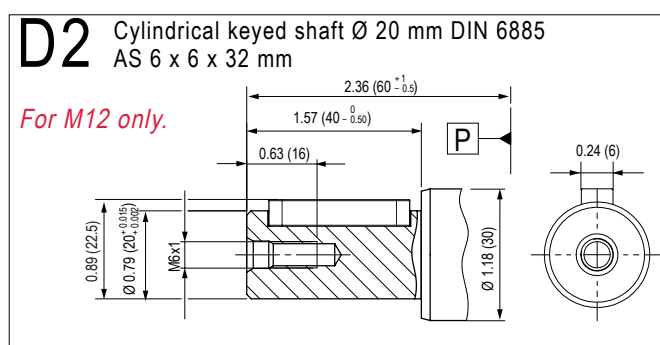
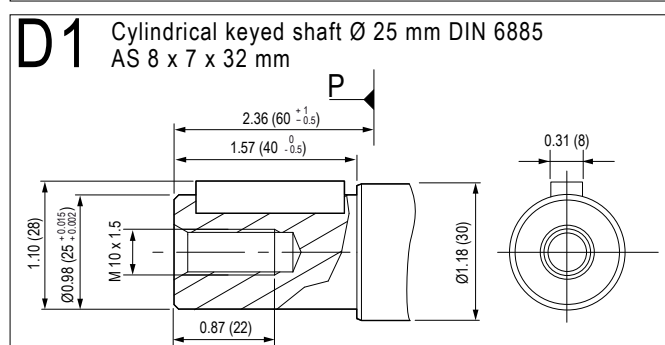
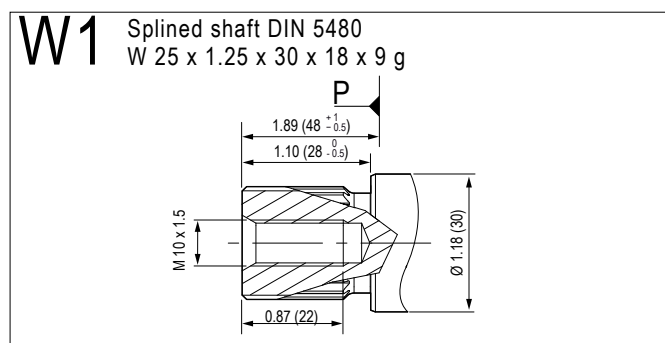
► Inlet ports

Rear threaded ports A and B

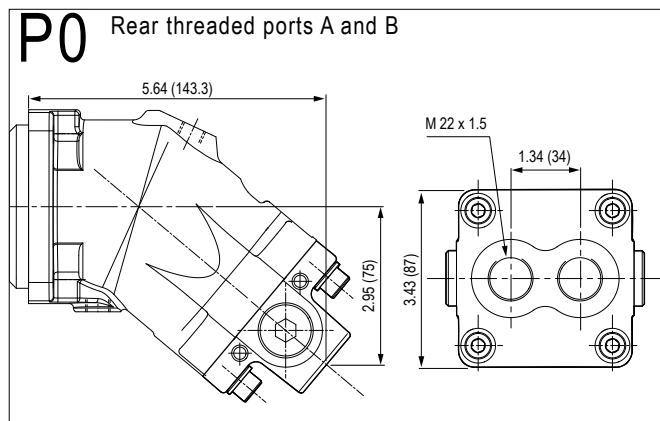
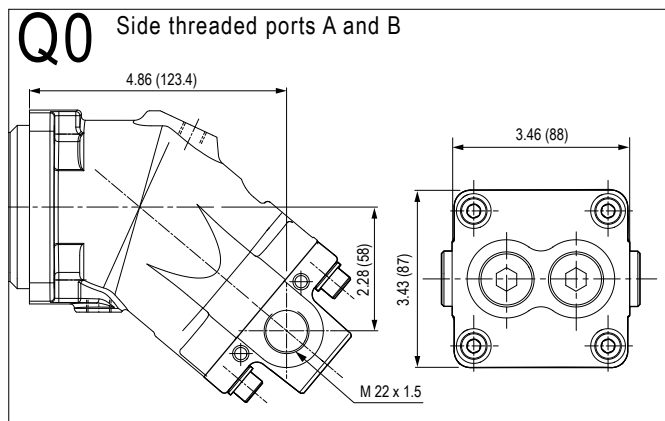


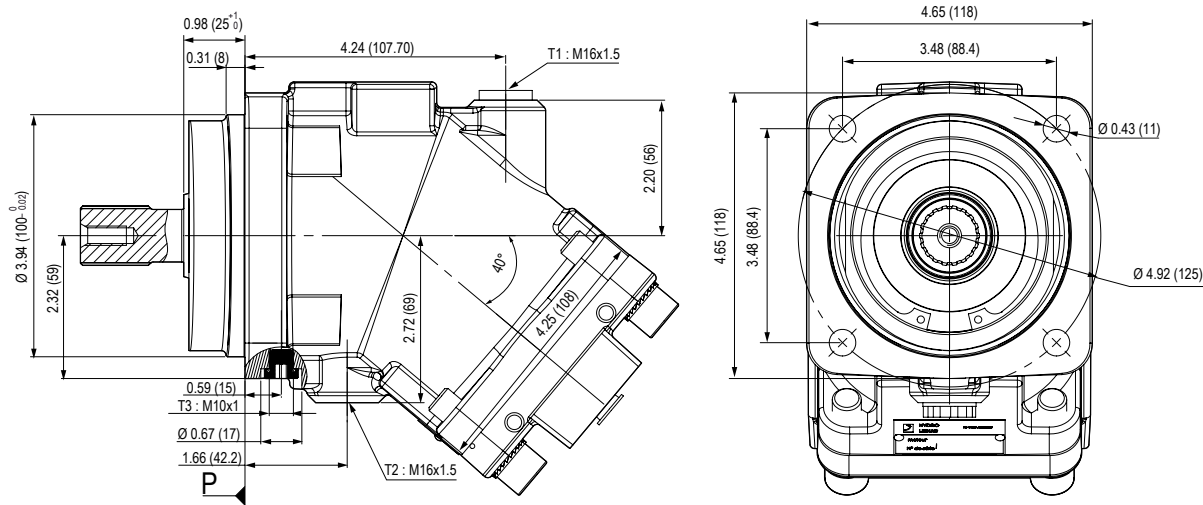


► Shaft end

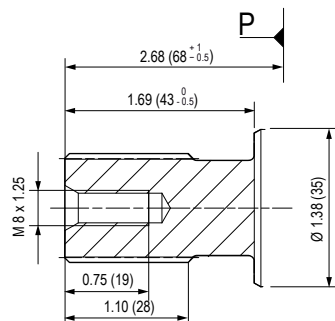
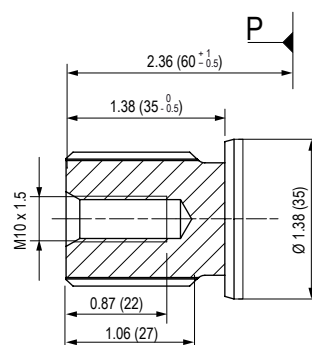
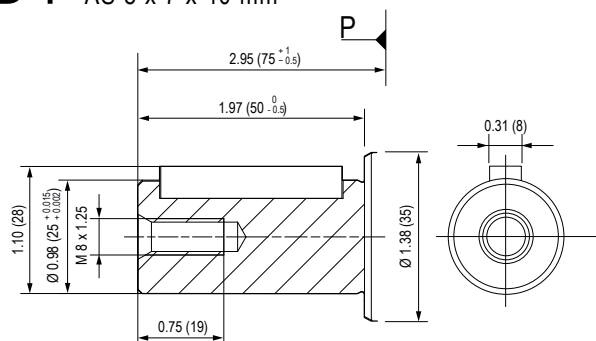
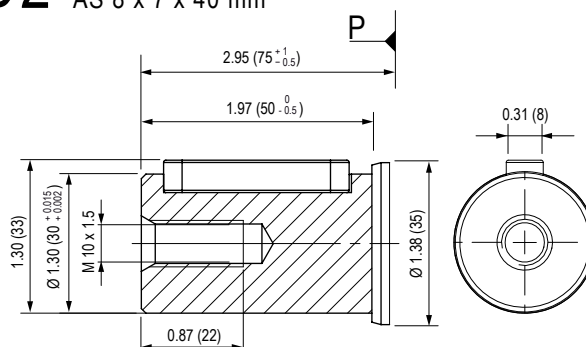


► Inlet ports

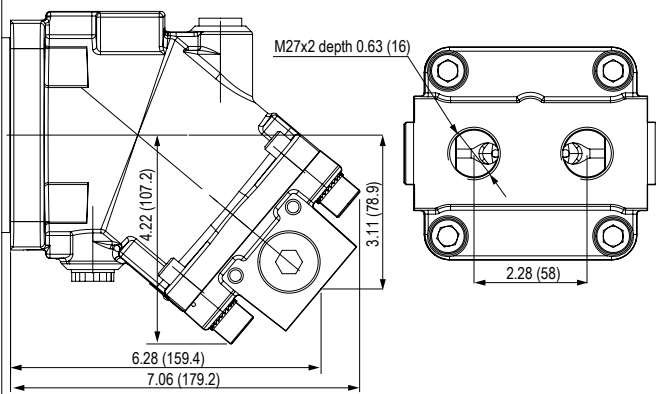
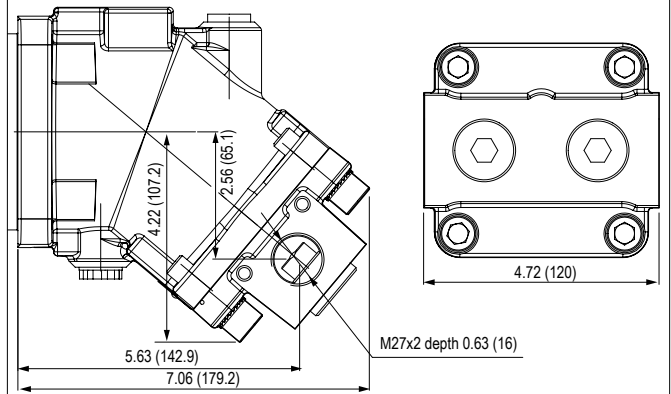
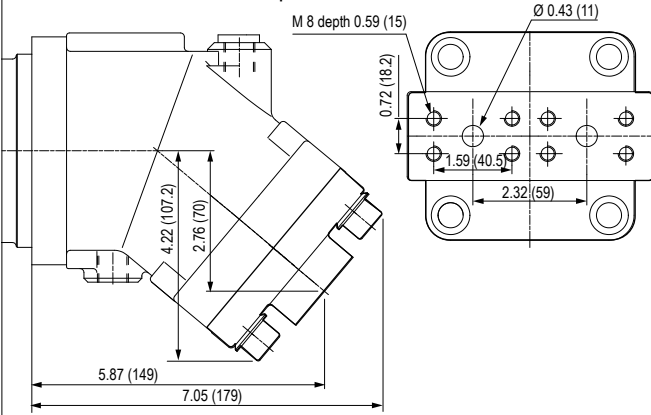
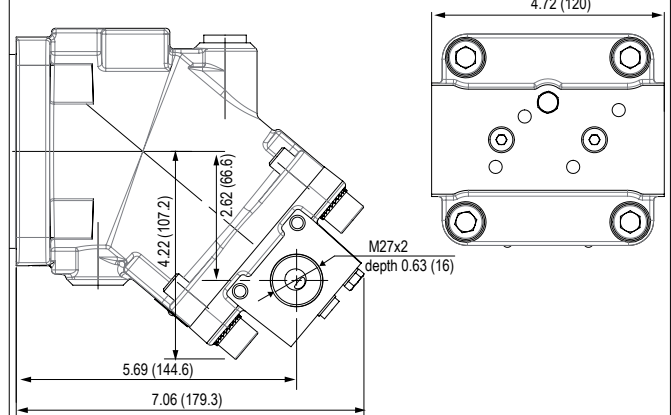
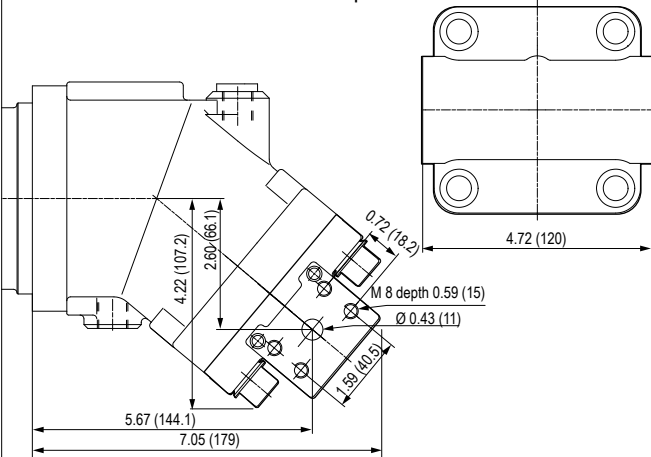


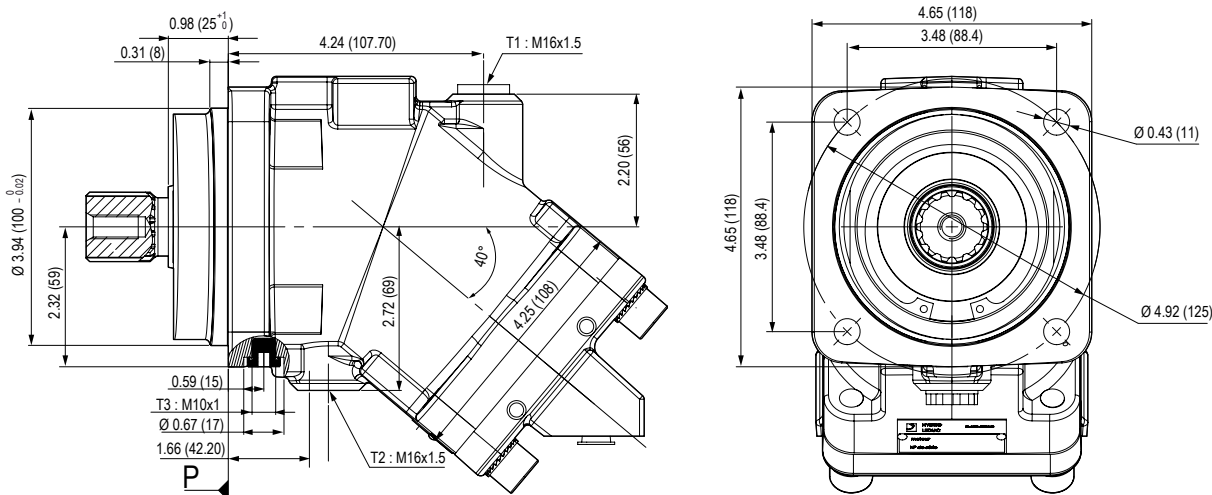


► Shaft end

W1 Splined shaft DIN 5480
W 25 x 1.25 x 30 x 18 x 9 g**W2** Splined shaft DIN 5480
W 30 x 2 x 30 x 14 x 9 g**D1** Cylindrical keyed shaft Ø 25 mm DIN 6885
AS 8 x 7 x 40 mm**D2** Cylindrical keyed shaft Ø 30 mm DIN 6885
AS 8 x 7 x 40 mm

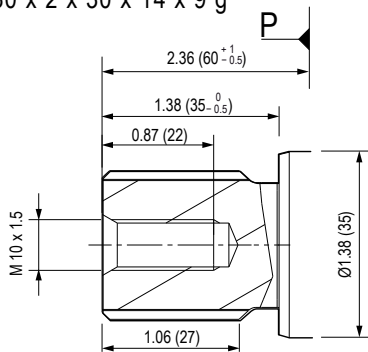
► Inlet ports

P0 Rear threaded ports A and B**Q0** Side threaded ports**M0** Rear flange ports A and B
SAE 1/2" 6000 psi**Q1** Side threaded ports**N0 or N1** Side flange ports A and B
SAE 1/2" 6000 psi

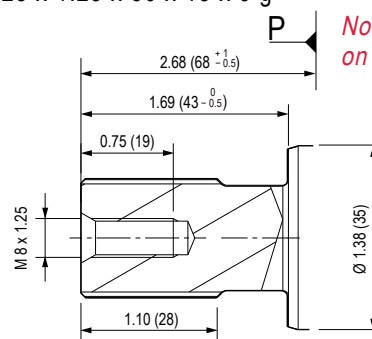


► Shaft end

W1 Splined shaft DIN 5480 W 30 x 2 x 30 x 14 x 9 g

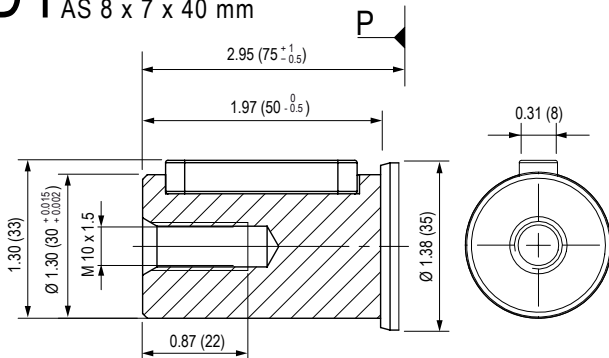


W2 Splined shaft DIN 5480 W 25 x 1.25 x 30 x 18 x 9 g

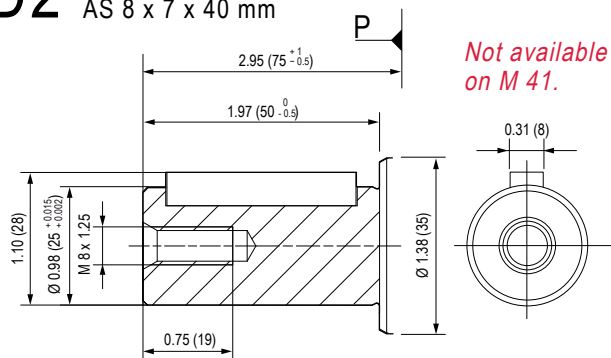


*Not available
on M 41.*

D1 Cylindrical keyed shaft $\varnothing 30$ mm DIN 6885 AS 8 x 7 x 40 mm



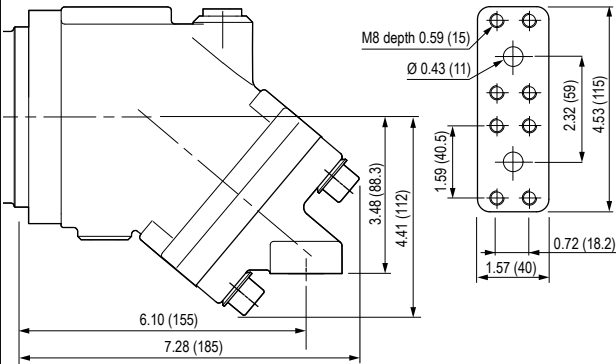
D2 Cylindrical keyed shaft $\varnothing 25$ mm DIN 6885 AS 8 x 7 x 40 mm



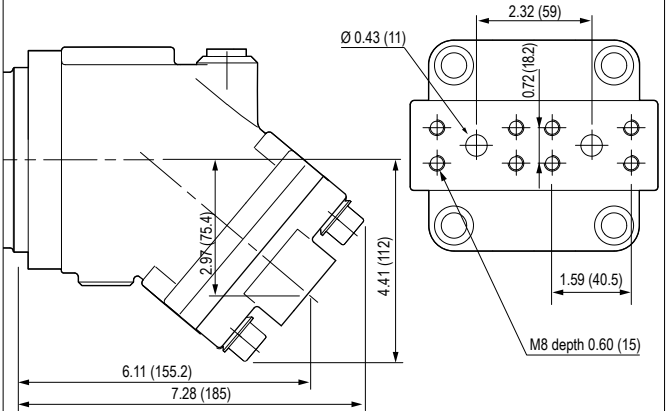
*Not available
on M 41.*

► Inlet ports

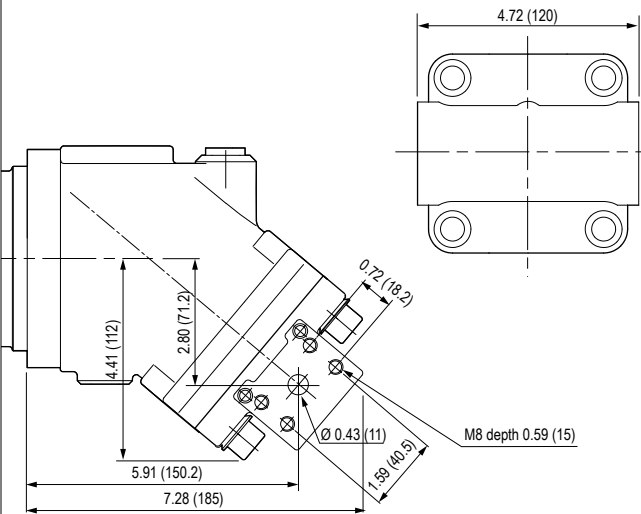
L0 SAE flange ports, bottom
SAE 1/2" 6000 psi



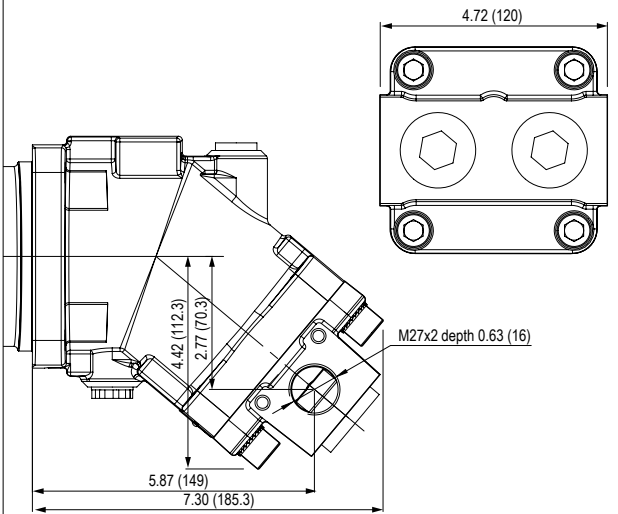
M0 Rear flange ports
SAE 1/2" 6000 psi



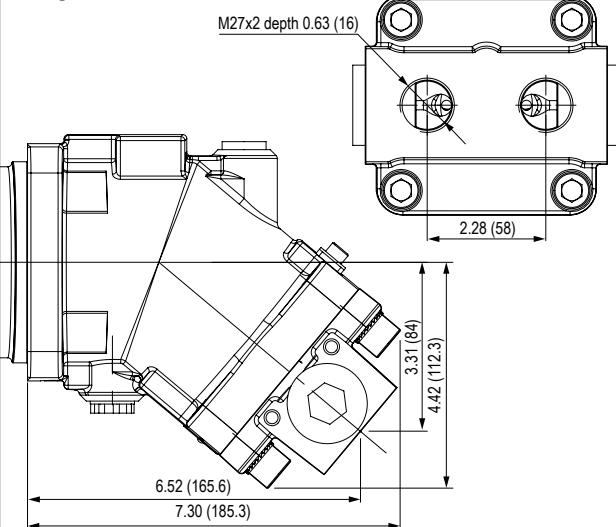
N0 or N1 Side flange ports A and B
SAE 1/2" 6000 psi



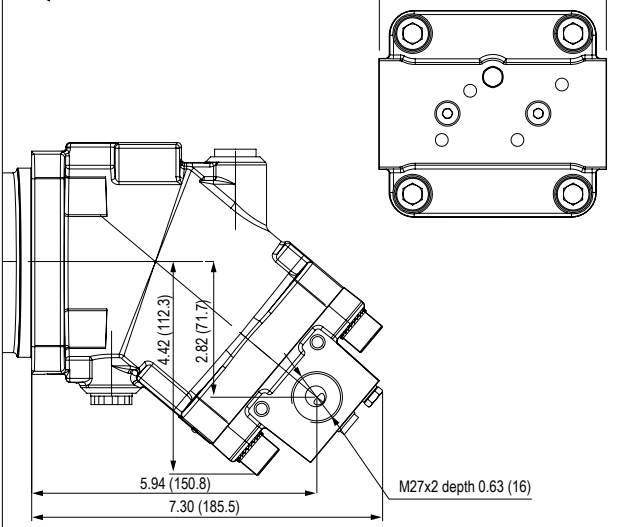
Q0 Side threaded ports A and B

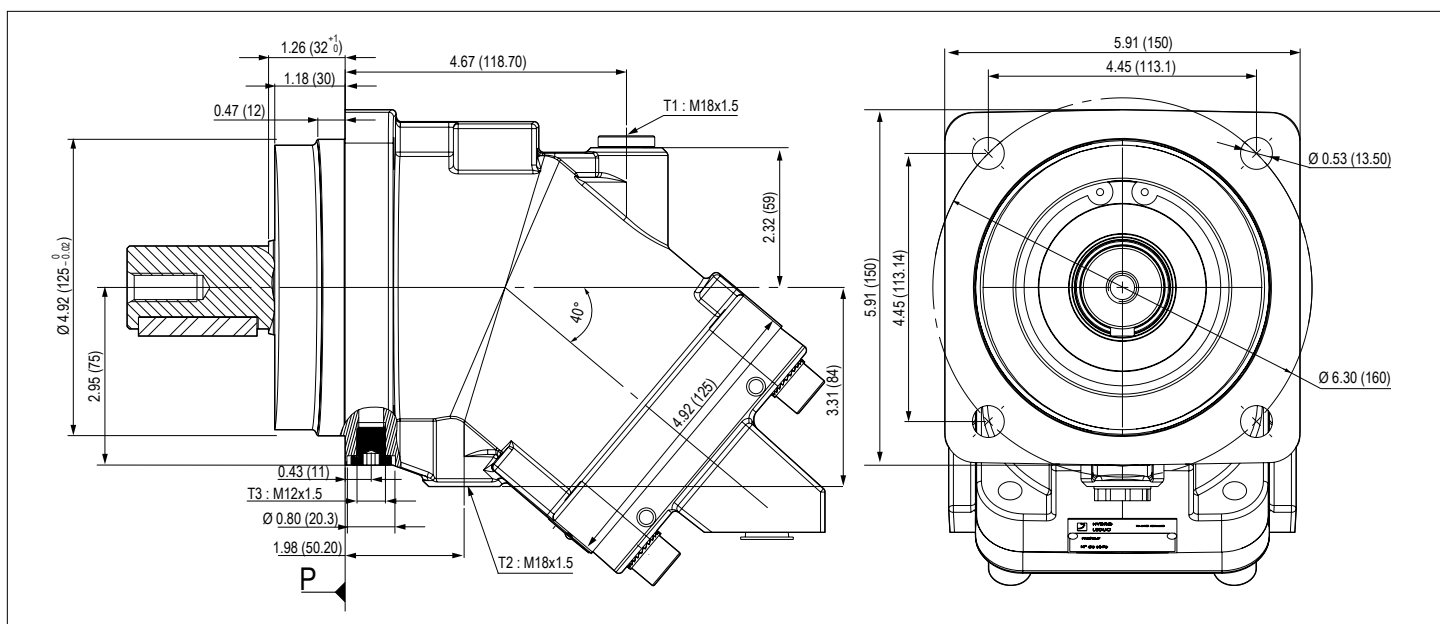


P0 Rear threaded ports

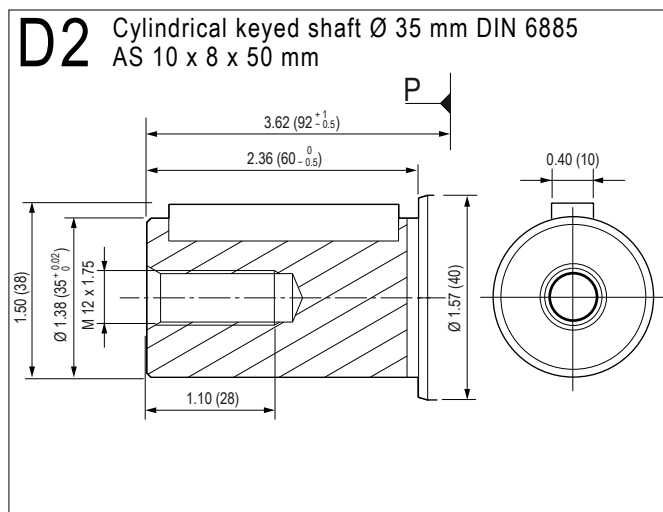
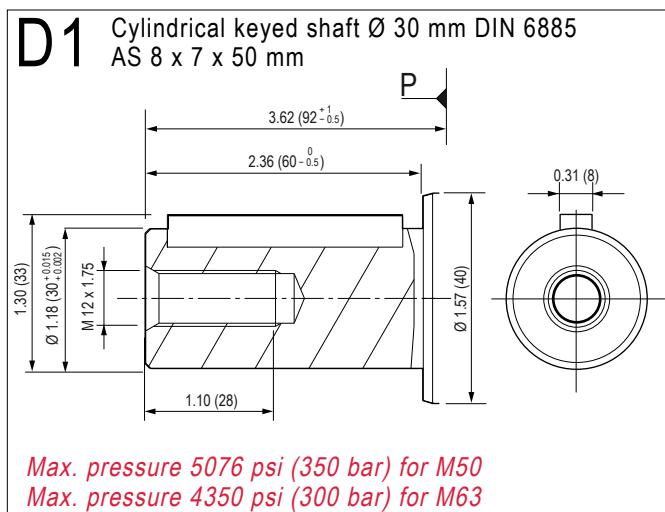
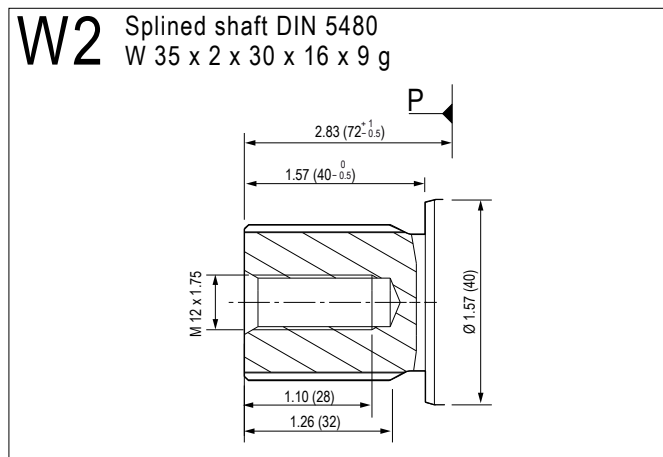
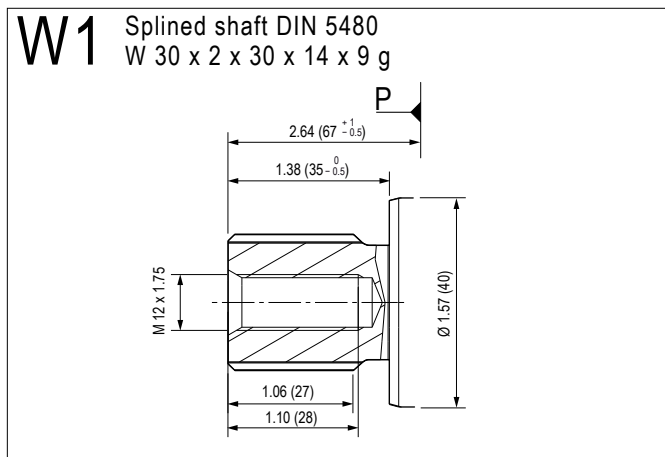


Q1 Side threaded ports A and B

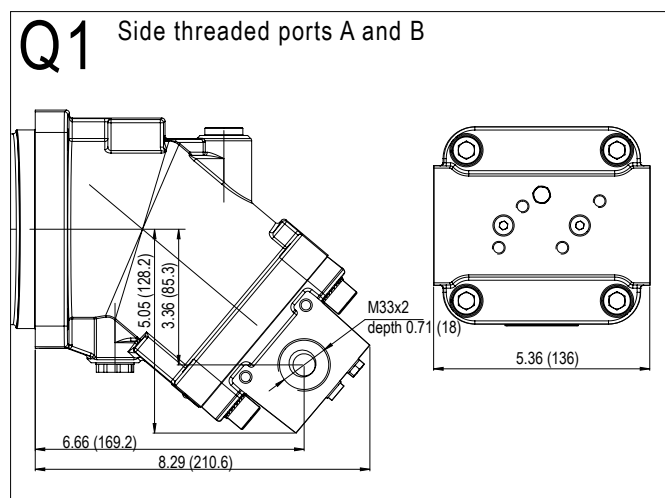
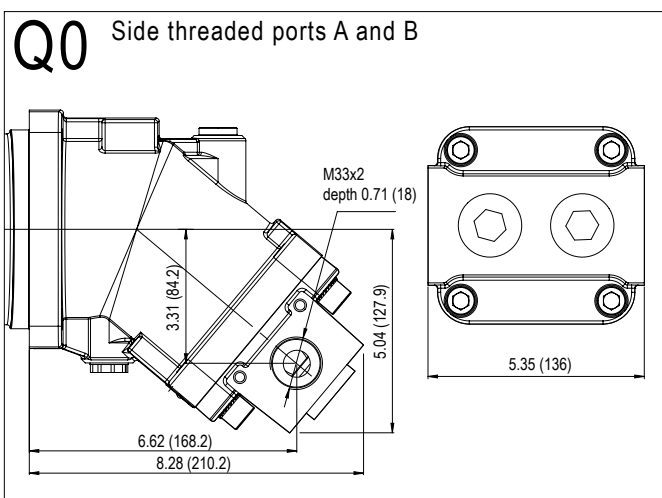
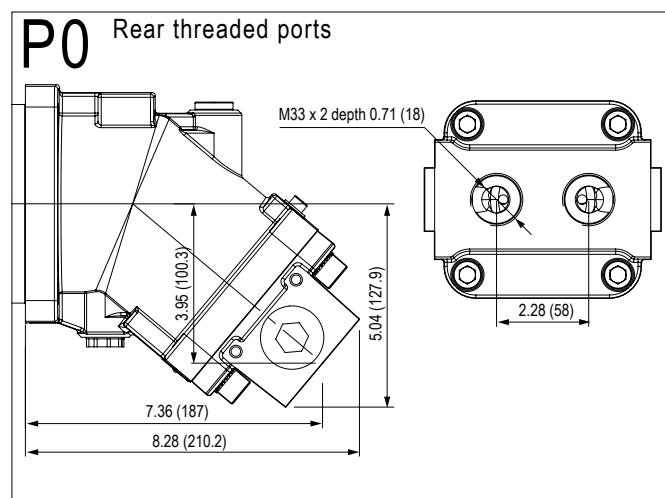
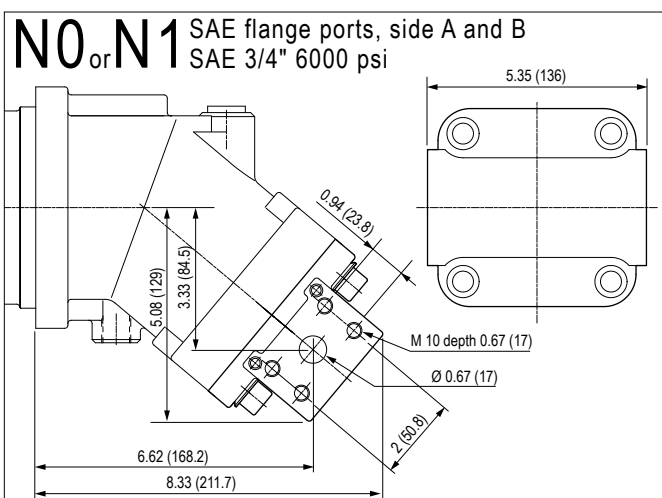
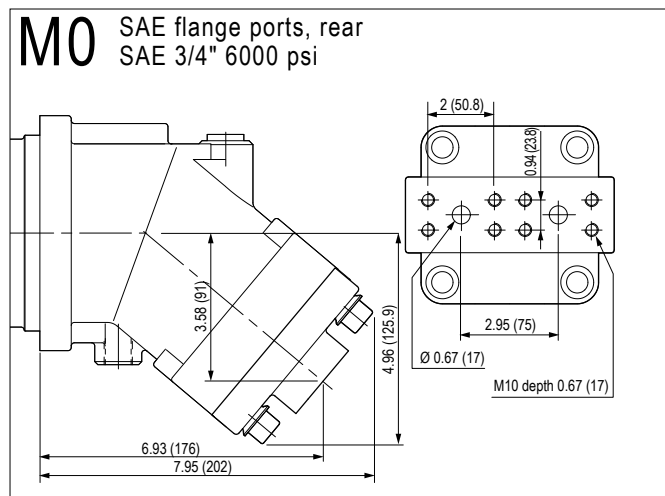
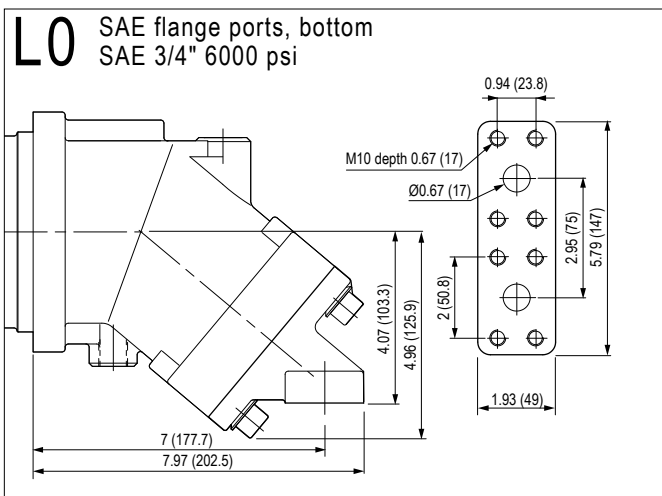


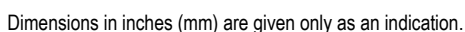
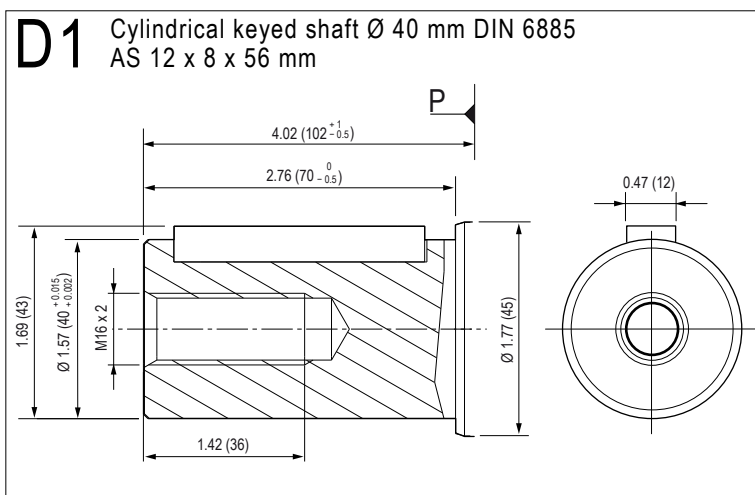


► Shaft end



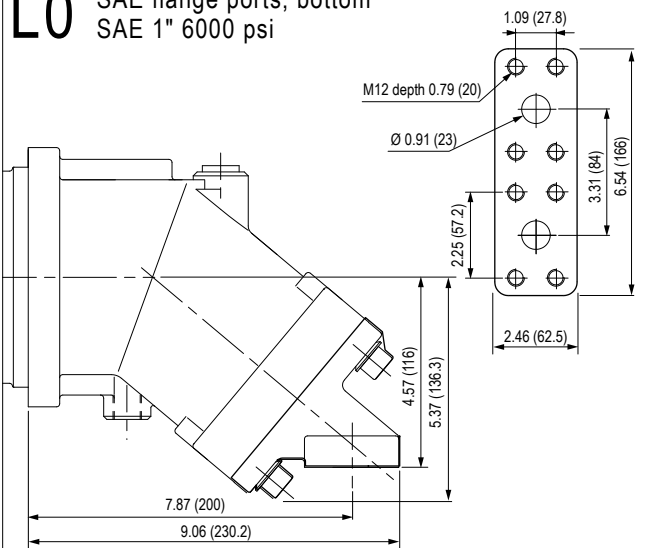
Inlet ports



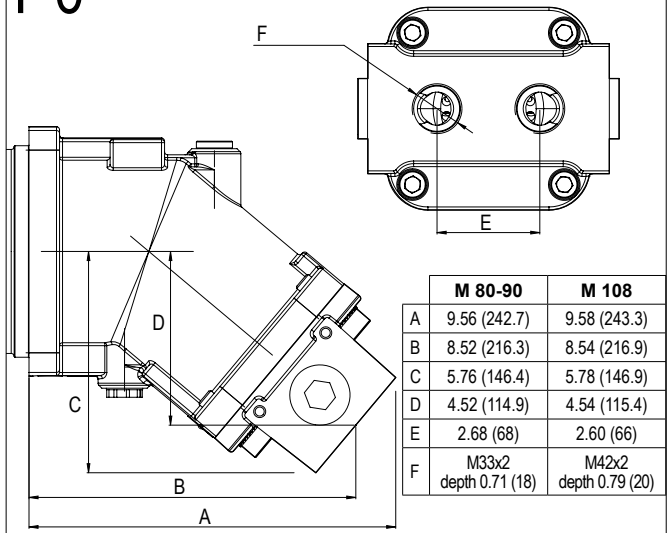


► Inlet ports

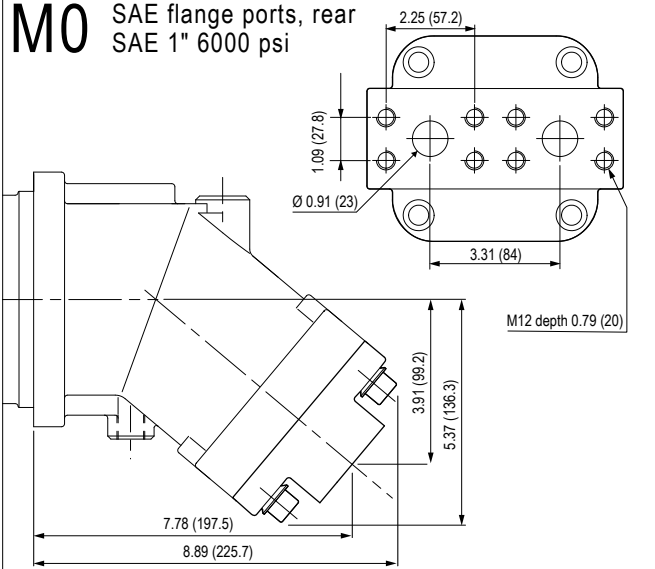
L0 SAE flange ports, bottom SAE 1" 6000 psi



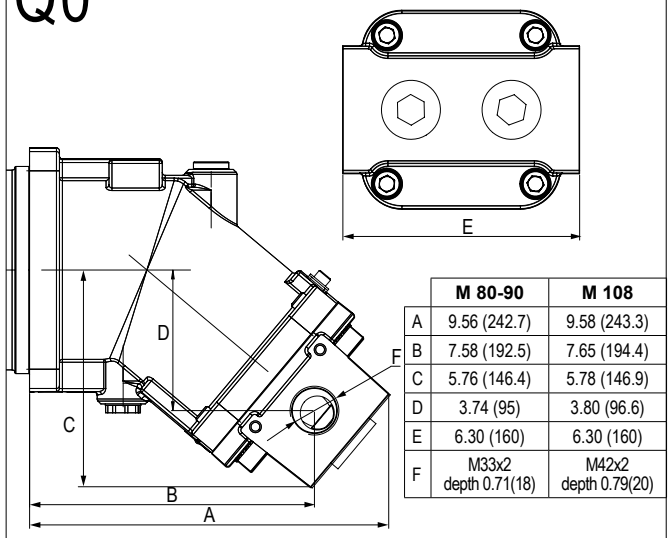
P0 Rear threaded ports



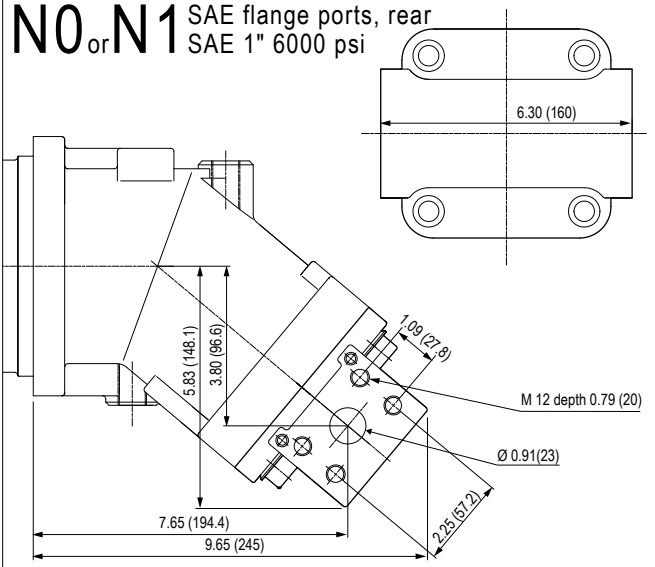
M0 SAE flange ports, rear SAE 1" 6000 psi



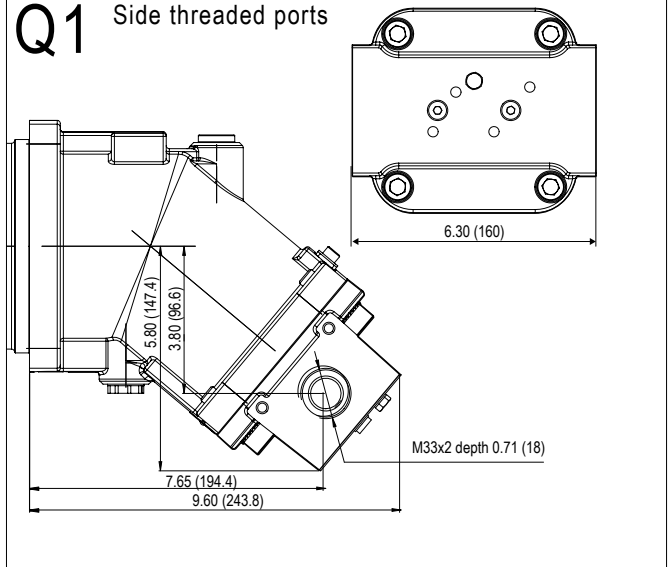
Q0 Side threaded ports

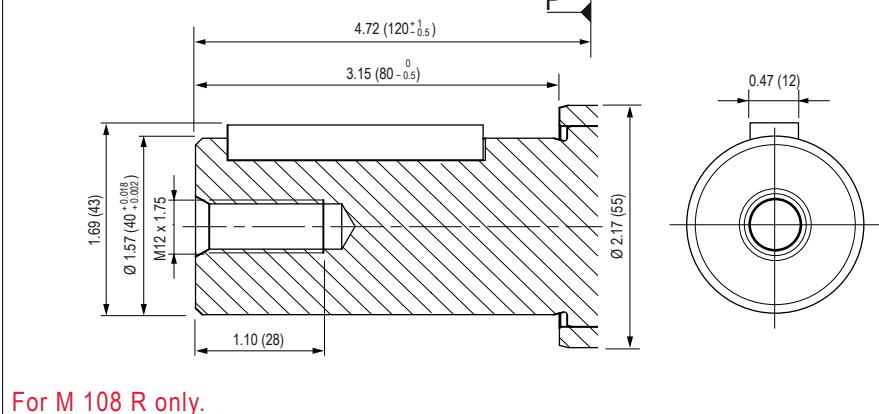
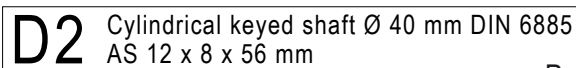
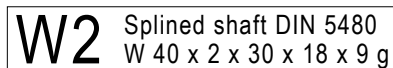
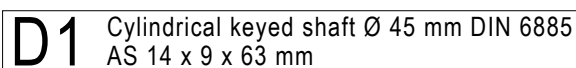


N0 or N1 SAE flange ports, rear SAE 1" 6000 psi



Q1 Side threaded ports

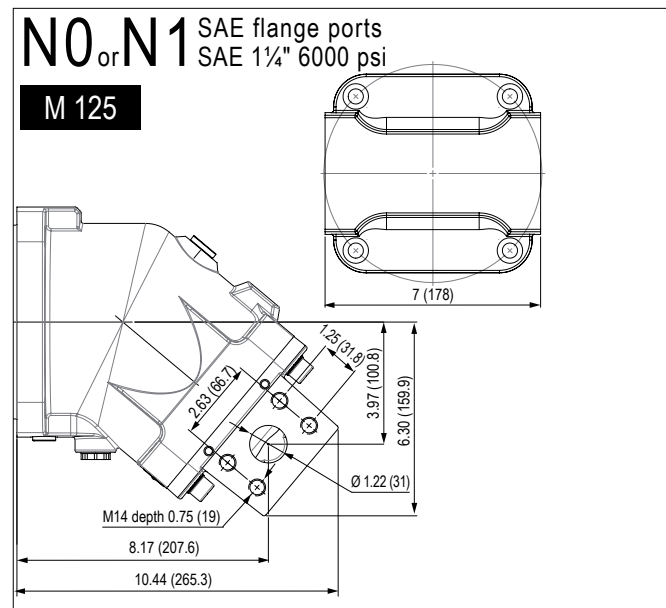
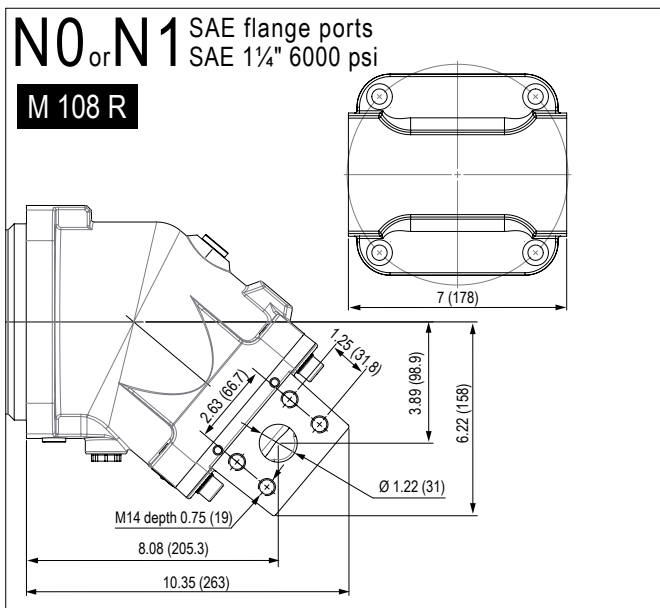
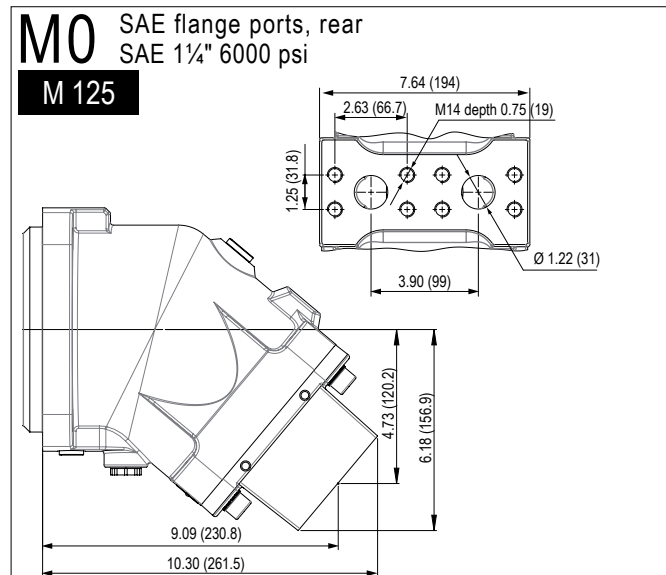
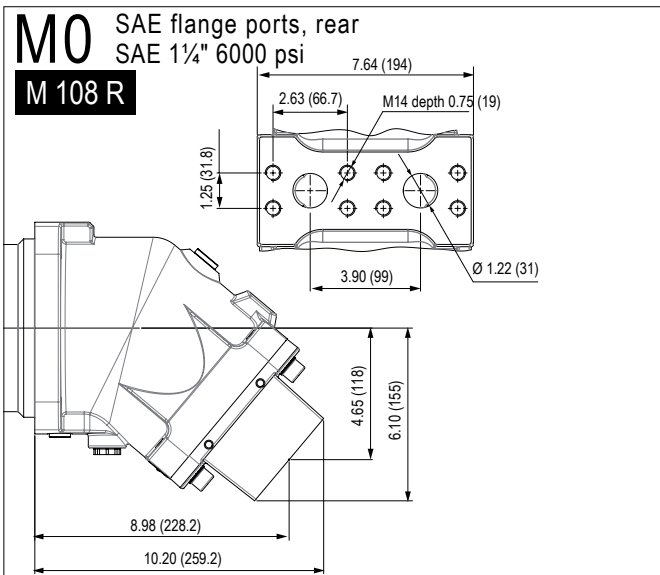
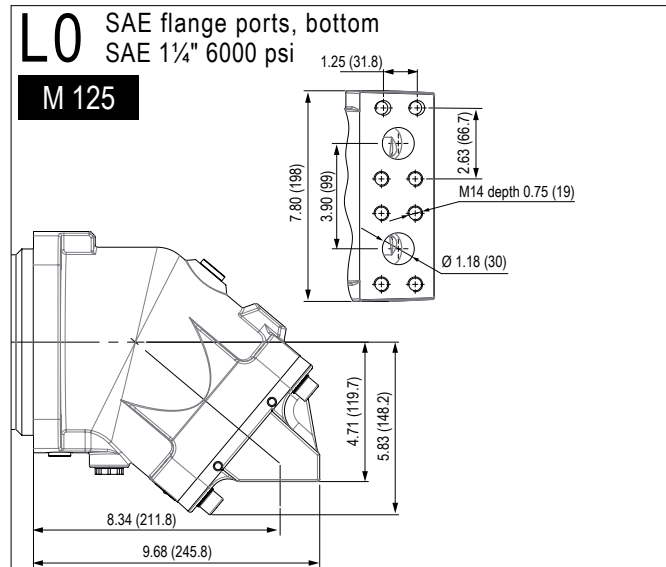
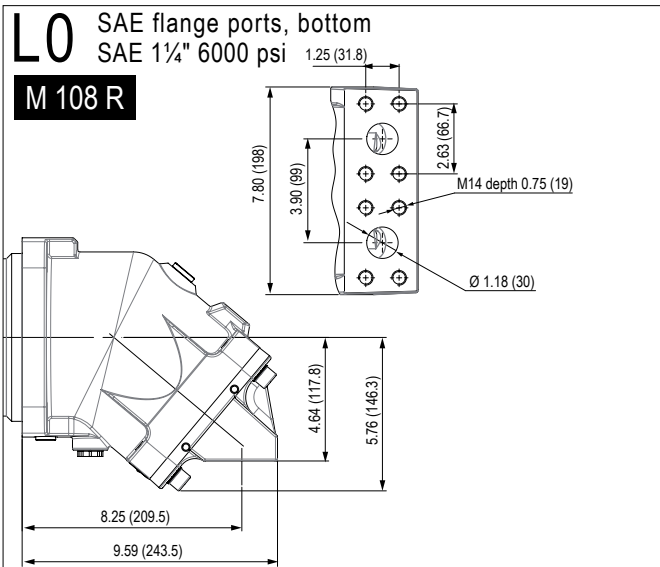


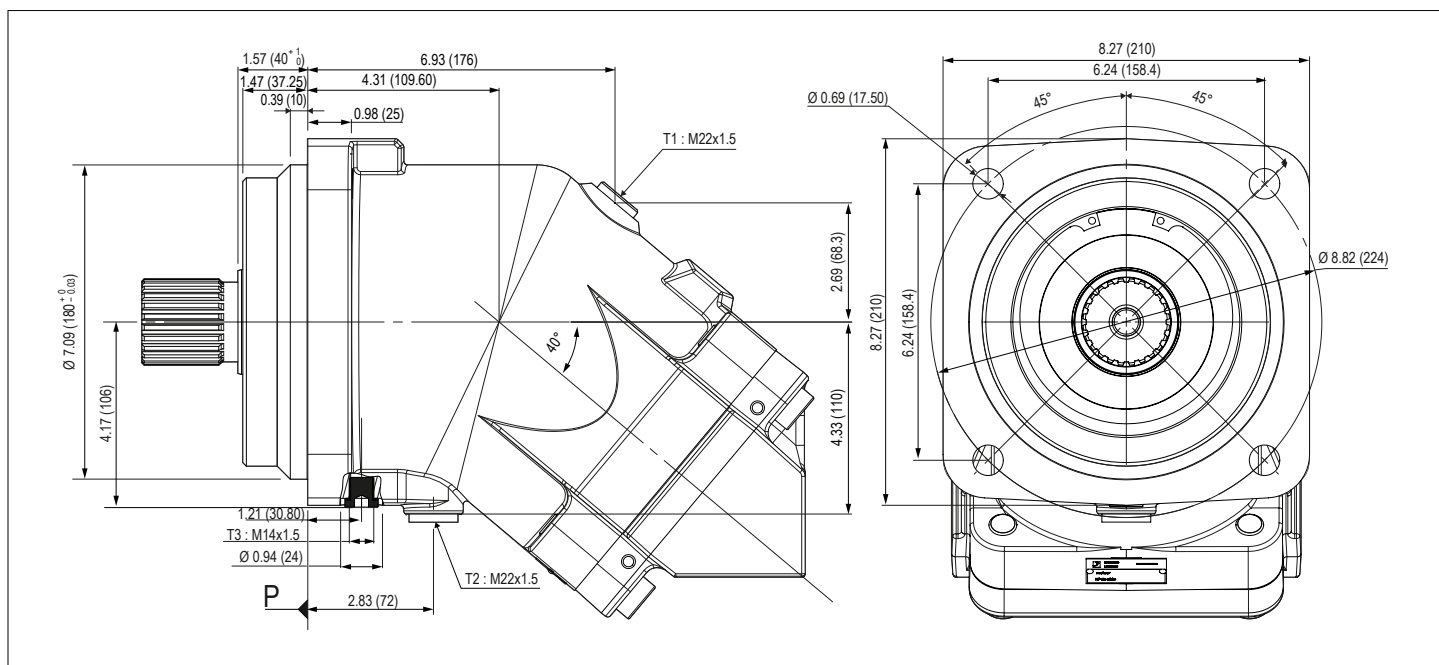


For M 108 R only.

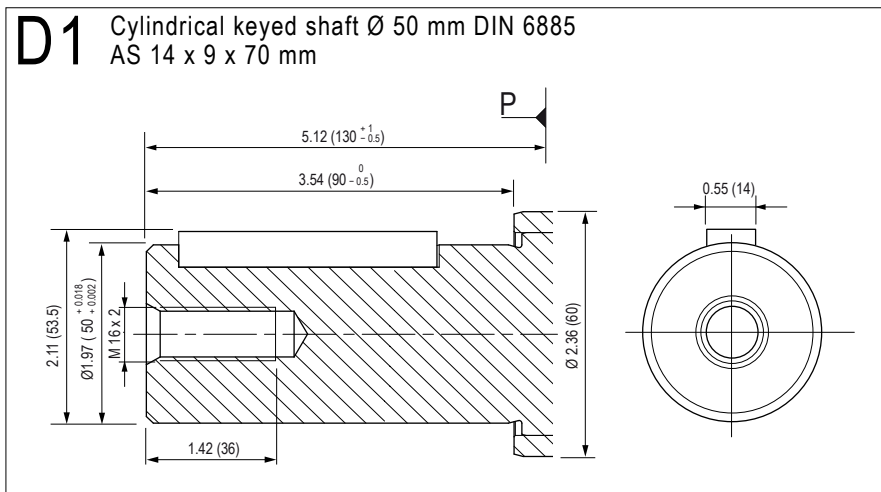
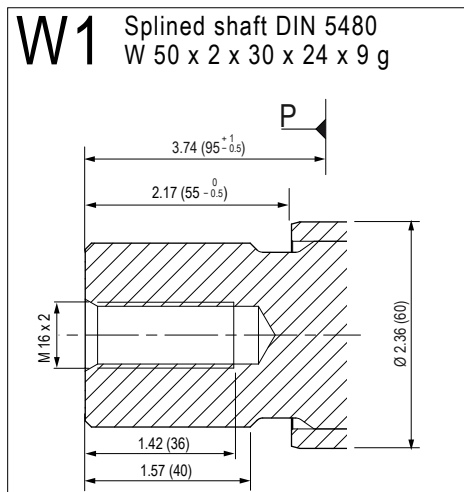
M 108 R - 125

► Inlet ports





► Shaft end



► Inlet ports

