

OMP versions and code numbers

This section shows the different versions/configuration codes and the ordering numbers.

- Section [OMP technical data](#) on page 14, specify the technical data for OMP for each shaft type.
- In section [OMP function diagrams](#), the diagram for each motor size is shown.
- See [OMP dimensions](#) on page 33 for outer main dimensions for the different OMP motor types.

OMP versions and code numbers
OMP standard motors

Mounting flange: 2 hole oval flange (A2)

Spigot diamer		Ø82.5 mm [3.25 in]						
Bolt circle diameter		Ø106.4 mm [4.20 in]						
Shaft	Main port size	Port style	Drain port size	Standard shaft seal	High pressure shaft seal	Check valve	Main type designation	Conf. code
Cyl. Ø25 mm	G 1/2	Side port	-	-	Yes	-	OMP	A1
Cyl. Ø25 mm	G 1/2	Side port	G 1/4	-	Yes	-	OMP	A2
Cyl. Ø25 mm	G 1/2	End port	G 1/4	Yes	-	Yes	OMP	A3
Cyl. 1 in	G 1/2	Side port	-	-	Yes	-	OMP	A4
Cyl. 1 in	G 1/2	Side port	G 1/4	-	Yes	-	OMP	A5
Cyl. 1 in	7/8-14 UNF	Side port	7/16-20 UNF	Yes	-	Yes	OMP	A6
Splined 1 in	G 1/2	Side port	-	-	Yes	-	OMP	A7
Splined 1 in	G 1/2	Side port	G 1/4	-	Yes	-	OMP	A8

Code numbers

Conf. code	Displacement											
	25	32	40	50	80	100	125	160	200	250	315	400
A1	151-0340	151-0341	151-0342	151-0310	151-0311	151-0312	151-0313	151-0314	151-0315	151-0316	151-0317	151-0318
A2	151-0640	151-0641	151-0652	151-0610	151-0611	151-0612	151-0613	151-0614	151-0615	151-0616	151-0617	151-0618
A3	-	-	-	151-5191	151-5192	151-5193	151-5194	151-5195	151-5196	151-5197	151-5198	151-5199
A4	-	-	11090903	151-0300	151-0301	151-0302	151-0303	151-0304	151-0305	151-0306	151-0307	151-0308
A5	-	-	-	151-0600	151-0601	151-0602	151-0603	151-0604	151-0605	151-0606	151-0607	151-0608
A6	151-7080	151-7081	151-7082	151-7041	151-7042	151-7043	151-7044*	151-7045	151-7046	-	151-7048	151-7049
A7	-	-	-	151-0330	151-0331	151-0332	151-0333	151-0334	151-0335	151-0336	151-0337	151-0338
A8	-	-	-	151-0630	151-0631	151-0632	151-0633	151-0634	151-0635	151-0636	151-0637	151-0638

* Motor painted black

Mounting flange: 4 hole oval flange (A4)

Spigot diamer		Ø82.5 mm [3.25 in]						
Bolt circle diameter		Ø106.4 mm [4.20 in]						
Shaft	Main port size	Port style	Drain port size	Standard shaft seal	High pressure shaft seal	Check valve	Main type designation	Conf. code
Cyl. Ø32 mm	G 1/2	Side port	G 1/4	Yes	-	Yes	OMP	B1

OMP versions and code numbers

Code numbers

Conf. code	Displacement											
	25	32	40	50	80	100	125	160	200	250	315	400
B1	-	-	-	-	-	-	151-5004	151-5005	151-5006	151-5007	151-5008	151-5009

Mounting flange: Square flange (C)

Spigot diamer	Ø44.4 mm [1.75 in]											
Bolt circle diameter	Ø82.5 mm [3.25 in]											
Shaft	Main port size	Port style	Drain port size	Standard shaft seal	High pressure shaft seal	Check valve	Main type designation	Conf. code				
Cyl. Ø25 mm	G 1/2	End port	G 1/4	Yes	-	Yes	OMP	C1				
Cyl. 1 in	7/8-14 UNF	Side port	7/16-20 UNF	Yes	-	Yes	OMP	C2				
Cyl. 1 in	1/2-14 NPTF	Side port	7/16-20 UNF	Yes	-	Yes	OMP	C3				

Code numbers

Conf. code	Displacement											
	25	32	40	50	80	100	125	160	200	250	315	400
C1	-	-	-	151-5211	151-5212	-	-	-	151-5216	-	-	-
C2	-	-	11130216	151-7061	151-7062	151-7063	-	151-7065	151-7066	151-7067	151-7068	151-7069
C3	-	-	-	-	-	151-7023	-	-	151-7026	-	151-7028	-

Mounting flange: Wheel

Spigot diamer	Ø80 mm [3.15 in]											
Bolt circle diameter	Ø103 mm [4.06 in]											
Shaft	Main port size	Port style	Drain port size	Standard shaft seal	High pressure shaft seal	Check valve	Main type designation	Conf. code				
Cyl. Ø25 mm	G 1/2	Side port	Yes	Yes	-	Yes	OMPW	D1				

Code numbers

Conf. code	Displacement											
	25	32	40	50	80	100	125	160	200	250	315	400
D1	-	-	11036135	151-7101	151-7102	151-7103	151-7104	151-7105	151-7106	151-7107	151-7108	151-7109

OMP motors with corrosion resistant parts

Mounting flange: 2 hole oval flange (A2)

Spigot diamer	Ø82.5 mm [3.25 in]											
Bolt circle diameter	Ø106.4 mm [4.20 in]											
Shaft	Main port size	Port style	Drain port size	Standard shaft seal	High pressure shaft seal	Check valve	Main type designation	Conf. code				
Cyl. Ø25 mm	G 1/2	Side port	G1/4	Yes	-	Yes	OMP C	E1				

OMP versions and code numbers

Code numbers

Conf. code	Displacement											
	25	32	40	50	80	100	125	160	200	250	315	400
E1	151-5376	-	-	151-1208	151-1209	151-1210	-	151-1211	151-1212	151-1213	151-1214	-

OMP motors with needle bearings

Mounting flange: 2 hole oval flange (A2)

Spigot diamer	Ø82.5 mm [3.25 in]											
Bolt circle diameter	Ø106.4 mm [4.20 in]											
Shaft	Main port size	Port style	Drain port size	Standard shaft seal	High pressure shaft seal	Check valve	Main type designation	Conf. code				
Cyl. Ø25 mm	G 1/2	Side port	G1/4	Yes	-	Yes	OMP N	F1				

Code numbers

Conf. code	Displacement											
	25	32	40	50	80	100	125	160	200	250	315	400
F1	-	-	11071283	151-5311	-	151-5313	-	-	151-5316	-	151-5318	-

OMPW motors with needle bearings

Mounting flange: Wheel

Spigot diamer	Ø80 mm [3.15 in]											
Bolt circle diameter	Ø103 mm [4.06 in]											
Shaft	Main port size	Port style	Drain port size	Standard shaft seal	High pressure shaft seal	Check valve	Main type designation	Conf. code				
Tap. Ø28.5 mm	G 1/2	Side port	G 1/4	Yes	-	Yes	OMPW N	F2				

Code numbers

Conf. code	Displacement											
	25	32	40	50	80	100	125	160	200	250	315	400
F2	-	-	151-5324	151-5301	151-5302	151-5303	151-5304	151-5305	151-5306	151-5307	151-5308	151-5309

OMP motors with free running gerotor

Mounting flange: 2 hole oval flange (A2)

Spigot diamer	Ø82.5 mm [3.25 in]											
Bolt circle diameter	Ø106.4 mm [4.20 in]											
Shaft	Main port size	Port style	Drain port size	Standard shaft seal	High pressure shaft seal	Check valve	Main type designation	Conf. code				
Cyl. Ø25 mm	G 1/2	Side port	G1/4	Yes	-	-	OMP	G1				

OMP versions and code numbers

Code numbers

Conf. code	Displacement											
	25	32	40	50	80	100	125	160	200	250	315	400
G1	-	-	-	-	-	151-0622	151-0623	151-0624	151-0625	-	151-0627	-

Features available (options)

Low leakage (low speed valve)

Speed sensor

Viton shaft seal

Reverse rotation

Painted

OMP technical data

OMP with 25 mm and 1 in cylindrical shaft

OMP 25 cm³ - 100 cm³

Type			OMP	OMP	OMP	OMP	OMP	OMP
Motor size			25	32	40	50	80	100
Geometric displacement	cm ³ [inch]		25.0 [1.53]	32.0 [1.96]	40.0 [2.45]	48.6 [2.97]	77.8 [4.76]	97.3 [5.95]
Max. speed	min ⁻¹ [rpm]	cont.	1600	1560	1500	1230	770	615
		int. ¹⁾	1800	1720	1750	1540	960	770
Max. torque	N·m [lbf·in]	cont.	33 [290]	43 [380]	52 [460]	93 [820]	150 [1330]	190 [1680]
		int. ¹⁾	47 [420]	61 [540]	74 [660]	120 [1060]	190 [1680]	230 [2040]
Max. output	kW [hp]	cont.	4.5 [6.0]	5.8 [7.8]	7.0 [9.4]	10.0 [13.4]	10.0 [13.4]	11.0 [14.8]
		int. ¹⁾	6.1 [8.2]	7.8 [10.5]	10.6 [14.2]	12.0 [16.1]	12.0 [16.1]	13.0 [17.4]
Max. pressure drop	bar [psi]	cont.	100 [1450]	100 [1450]	100 [1450]	140 [2030]	140 [2030]	140 [2030]
		int. ¹⁾	140 [2030]	140 [2030]	140 [2030]	175 [2540]	175 [2540]	175 [2540]
		peak ²⁾	225 [3260]	225 [3260]	225 [3260]	225 [3260]	225 [3260]	225 [3260]
Max. oil flow	l/min [US gal/min]	cont.	40 [10.6]	50 [13.2]	60 [15.9]	60 [15.9]	60 [15.9]	60 [15.9]
		int. ¹⁾	45 [11.9]	55 [14.5]	70 [18.5]	75 [19.8]	75 [19.8]	75 [19.8]
Max. starting pressure with unloaded shaft	bar [psi]	standard	10 [145]	10 [145]	10 [145]	10 [145]	10 [145]	10 [145]
		free running gerotor	-	-	-	-	-	2 [29]
Min starting torque	at max. press drop cont. N·m [lbf·in]		30 [270]	40 [350]	45 [400]	80 [710]	135 [1200]	170 [1510]
	at max. press.drop int. ¹⁾ N·m [lbf·in]		40 [350]	55 [490]	63 [560]	100 [890]	170 [1510]	210 [1860]

¹⁾ Intermittent operation: the permissible values may occur for max. 10% of every minute.

²⁾ Peak load: the permissible values may occur for max. 1% of every minute.

OMP 125 cm³ - 400 cm³

Type			OMP	OMP	OMP	OMP	OMP	OMP
Motor size			125	160	200	250	315	400
Geometric displacement	cm ³ [inch]		125.0 [7.65]	155.7 [9.53]	194.6 [11.91]	242.3 [14.83]	306.1 [18.73]	389.2 [23.82]
Max. speed	min ⁻¹ [rpm]	cont.	480	385	310	250	195	155
		int. ¹⁾	600	480	385	310	245	190
Max. torque	N·m [lbf·in]	cont.	240 [2120]	300 [2660]	300 [2660]	300 [2660]	300 [2660]	300 [2660]
		int. ¹⁾	290 [2570]	370 [3280]	380 [3360]	410 [3630]	390 [3450]	420 [3720]

OMP technical data

OMP 125 cm³ - 400 cm³ (continued)

Type			OMP	OMP	OMP	OMP	OMP	OMP
Motor size			125	160	200	250	315	400
Max. output	kW [hp]	cont.	10 [13.4]	10 [13.4]	8.0 [10.7]	6.0 [8.1]	5.0 [6.7]	4.0 [5.4]
		int. ¹⁾	12.0 [16.1]	12.0 [16.1]	11.0 [14.8]	9.0 [12.1]	7.0 [9.4]	6.0 [8.1]
Max. pressure drop	bar [psi]	cont.	140 [2030]	140 [2030]	115 [1670]	90 [1310]	75 [1090]	60 [870]
		int. ¹⁾	175 [2540]	175 [2540]	150 [2180]	125 [1810]	100 [1450]	80 [1160]
		peak ²⁾	225 [3260]	225 [3260]	225 [3260]	180 [2610]	160 [2320]	130 [1890]
Max. oil flow	l/min [US gal/min]	cont.	60 [15.9]	60 [15.9]	60 [15.9]	60 [15.9]	60 [15.9]	60 [15.9]
		int. ¹⁾	75 [19.8]	75 [19.8]	75 [19.8]	75 [19.8]	75 [19.8]	75 [19.8]
Max. starting pressure with unloaded shaft	bar [psi]	standard	9 [130]	7 [100]	5 [75]	5 [75]	5 [75]	5 [75]
		free running gerotor	2 [29]	2 [29]	2 [29]	-	-	-
Min starting torque	at max. press drop cont. N·m [lbf·in]		210 [1860]	280 [2480]	270 [2390]	280 [2480]	280 [2480]	280 [2480]
	at max. press.drop int. ¹⁾ N·m [lbf·in]		270 [2390]	350 [3100]	360 [3190]	390 [3450]	370 [3280]	400 [3540]

¹⁾ Intermittent operation: the permissible values may occur for max. 10% of every minute.

²⁾ Peak load: the permissible values may occur for max. 1% of every minute.

OMP with 1 in splined and 28.5 mm tapered shaft

Type			OMP	OMP	OMP	OMP	OMP	OMP	OMP	OMP	
Motor size			50	80	100	125	160	200	250	315	400
Geometric displacement	cm ³ [inch]		48.6 [2.97]	77.8 [4.76]	97.3 [5.95]	125.0 [7.65]	155.7 [9.53]	194.6 [11.91]	242.3 [14.83]	306.1 [18.73]	389.2 [23.82]
Maximum speed	min ⁻¹ [rpm]	cont.	1230	770	615	480	385	310	250	195	155
		int. ¹⁾	1540	960	770	600	480	385	310	245	190
Maximum torque	N·m [lbf·in]	cont.	93 [820]	150 [1330]	190 [1680]	240 [2120]	300 [2660]	360 [3190]	360 [3190]	360 [3190]	360 [3190]
		int. ¹⁾	120 [1060]	190 [1680]	230 [2040]	290 [2570]	370 [3280]	450 [3980]	460 [4070]	470 [4160]	460 [4070]
Maximum output	kW [hp]	cont.	10.0 [13.4]	10.0 [13.4]	11.0 [14.8]	10.0 [13.4]	10.0 [13.4]	10.0 [13.4]	8.0 [10.7]	6.0 [8.0]	5.0 [6.7]
		int. ¹⁾	12.0 [16.1]	12.0 [16.1]	13 [17.4]	12.0 [16.1]	12.0 [16.1]	12.0 [16.1]	10.5 [14.1]	7.5 [10.1]	6.0 [8.0]
Maximum pressure drop	bar [psi]	cont.	140 [2030]	140 [2030]	140 [2030]	140 [2030]	140 [2030]	140 [2030]	105 [1520]	90 [1310]	70 [1020]
		int. ¹⁾	175 [2540]	175 [2540]	175 [2540]	175 [2540]	175 [2540]	175 [2540]	140 [2030]	120 [1740]	90 [1310]
		peak ²⁾	225 [3260]	225 [3260]	225 [3260]	225 [3260]	225 [3260]	225 [3260]	180 [2610]	160 [2320]	130 [1890]

OMP technical data

Type			OMP	OMP	OMP	OMP	OMP	OMP	OMP	OMP	OMP
Motor size			50	80	100	125	160	200	250	315	400
Maximum oil flow	l/min [US gal/min]	cont.	60 [15.9]	60 [15.9]	60 [15.9]	60 [15.9]	60 [15.9]	60 [15.9]	60 [15.9]	60 [15.9]	60 [15.9]
		int. ¹⁾	75 [19.8]	75 [19.8]	75 [19.8]	75 [19.8]	75 [19.8]	75 [19.8]	75 [19.8]	75 [19.8]	75 [19.8]
Maximum starting pressure with unloaded shaft	bar [psi]		10 [145]	10 [145]	10 [145]	9 [130]	7 [100]	5 [75]	5 [75]	5 [75]	5 [75]
Minimum starting torque	at max. press drop cont. N•m [lbf•in]		80 [710]	135 [1200]	170 [1510]	210 [1860]	280 [2480]	340 [3010]	330 [2920]	340 [3010]	345 [3050]
		at max. press.drop int. ¹⁾ N•m [lbf•in]	100 [890]	170 [1510]	210 [1860]	270 [2390]	350 [3100]	420 [3720]	440 [3890]	450 [3980]	425 [3760]

¹⁾ Intermittent operation: the permissible values may occur for max. 10% of every minute.

²⁾ Peak load: the permissible values may occur for max. 1% of every minute.

OMP with 32 mm cylindrical shaft

Type			OMP	OMP	OMP	OMP	OMP	OMP	OMP	OMP	OMP
Motor size			50	80	100	125	160	200	250	315	400
Geometric displacement	cm ³ [inch]		48.6 [2.97]	77.8 [4.76]	97.3 [5.95]	125.0 [7.65]	155.7 [9.53]	194.6 [11.91]	242.3 [14.83]	306.1 [18.73]	389.2 [23.82]
Maximum speed	min ⁻¹ [rpm]	cont.	1230	770	615	480	385	310	250	195	155
		int. ¹⁾	1540	960	770	600	480	385	310	245	190
Maximum torque	N•m [lbf•in]	cont.	93 [820]	150 [1330]	190 [1680]	240 [2120]	300 [2660]	360 [3190]	460 [4070]	470 [4160]	490 [4340]
		int. ¹⁾	120 [1060]	190 [1680]	230 [2040]	290 [2570]	370 [3280]	450 [3980]	570 [5050]	620 [5490]	630 [580]
Maximum output	kW [hp]	cont.	10.0 [13.4]	10.0 [13.4]	11.0 [14.8]	10.0 [13.4]	10.0 [13.4]	10.0 [13.4]	9.5 [12.7]	7.5 [10.1]	6.5 [8.7]
		int. ¹⁾	12.0 [16.1]	12.0 [16.1]	13.0 [17.4]	12.0 [16.1]	12.0 [16.1]	12.0 [16.1]	12.0 [16.1]	9.0 [12.1]	7.5 [10.1]
Maximum pressure drop	bar [psi]	cont.	140 [2030]	140 [2030]	140 [2030]	140 [2030]	140 [2030]	140 [2030]	140 [2030]	120 [1740]	95 [1380]
		int. ¹⁾	175 [2540]	175 [2540]	175 [2540]	175 [2540]	175 [2540]	175 [2540]	175 [2540]	160 [2320]	125 [1810]
		peak ²⁾	225 [3260]	225 [3260]	225 [3260]	225 [3260]	225 [3260]	225 [3260]	225 [3260]	225 [3260]	225 [3260]
Maximum oil flow	l/min [US gal/min]	cont.	60 [15.9]	60 [15.9]	60 [15.9]	60 [15.9]	60 [15.9]	60 [15.9]	60 [15.9]	60 [15.9]	60 [15.9]
		int. ¹⁾	75 [19.8]	75 [19.8]	75 [19.8]	75 [19.8]	75 [19.8]	75 [19.8]	75 [19.8]	75 [19.8]	75 [19.8]
Maximum starting pressure with unloaded shaft	bar [psi]		10 [145]	10 [145]	10 [145]	9 [130]	7 [100]	5 [75]	5 [75]	5 [75]	5 [75]
Minimum starting torque	at max. press drop cont. N•m [lbf•in]		80 [710]	135 [1200]	170 [1510]	210 [1860]	280 [2480]	340 [3010]	420 [3720]	460 [4070]	460 [4070]
		at max. press.drop int. ¹⁾ N•m [lbf•in]	100 [890]	170 [1510]	210 [1860]	270 [2390]	350 [3100]	420 [3720]	530 [4690]	600 [5310]	600 [5310]

¹⁾ Intermittent operation: the permissible values may occur for max. 10% of every minute.

²⁾ Peak load: the permissible values may occur for max. 1% of every minute.

OMP technical data

Type			Max. inlet pressure	Max. return pressure with drain line
OMP 25 - 400	bar [psi]	cont.	175 [2540]	175 [2540]
	bar [psi]	int. ¹⁾	200 [2900]	200 [2900]
	bar [psi]	peak ²⁾	225 [3260]	225 [3260]

¹⁾ Intermittent operation: the permissible values may occur for max. 10% of every minute.

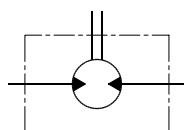
²⁾ Peak load: the permissible values may occur for max. 1% of every minute.

Maximum permissible shaft seal pressure

OMP with High Pressure Shaft Seal (HPS)

OMP with HPS and without drain connection:

The shaft seal pressure equals the average of input pressure and return pressure.

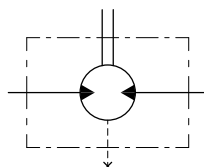


151-1743.10

$$P_{\text{seal}} = \frac{P_{\text{in}} + P_{\text{return}}}{2}$$

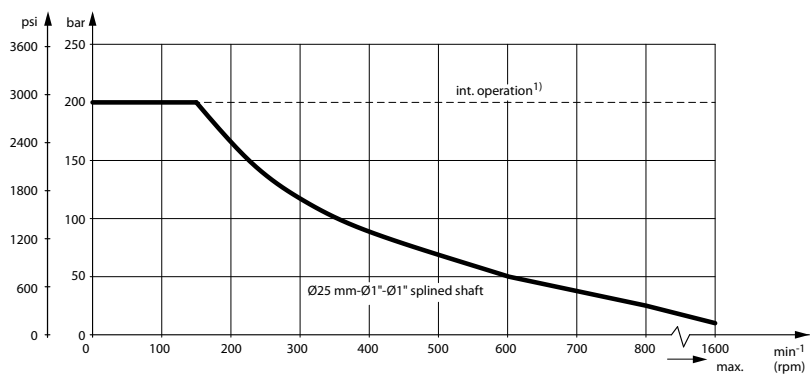
OMP with HPS and drain connection:

The shaft seal pressure equals the pressure in the drain line.



151-1855.10

Maximum permissible shaft seal pressure



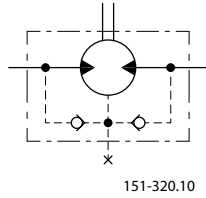
151-1745.10

OMP with Standard Shaft Seal

OMP with standard shaft seal, check valves and without use of drain connection:

The pressure on the shaft seal never exceeds the pressure in the return line

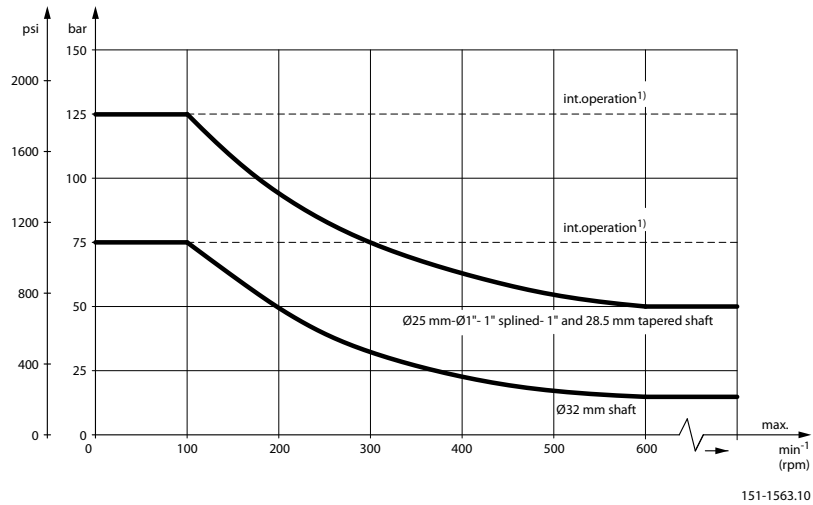
OMP technical data



OMP with standard shaft seal, check valves and with drain connection:

The shaft seal pressure equals the pressure on the drain line.

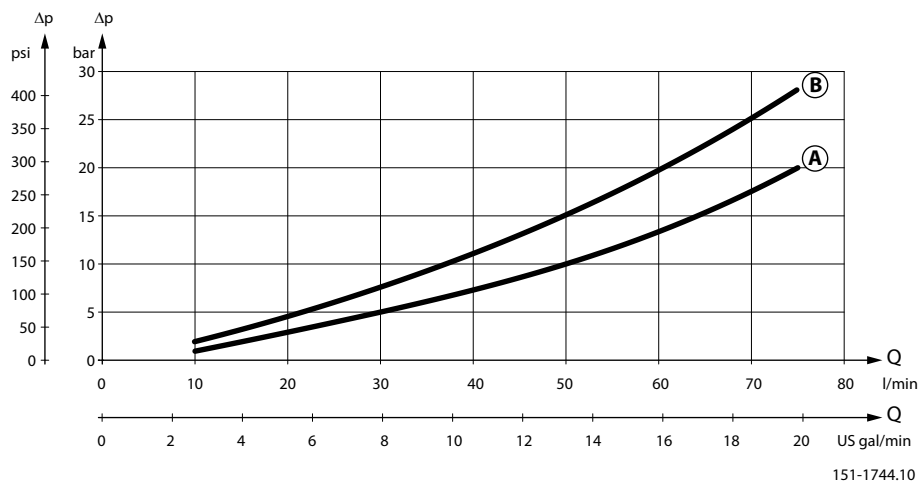
Maximum return pressure without drain line or max. pressure in the drain line



1. Intermittent operation: the permissible values may occur for max. 10% of every minute.

Pressure drop in OMP motor

The curve applies to an unloaded motor shaft and an oil viscosity of 35 mm²/s [165 SUS]



A: OMP 50 - 400

B: OMP 25 - 40 / OMPW

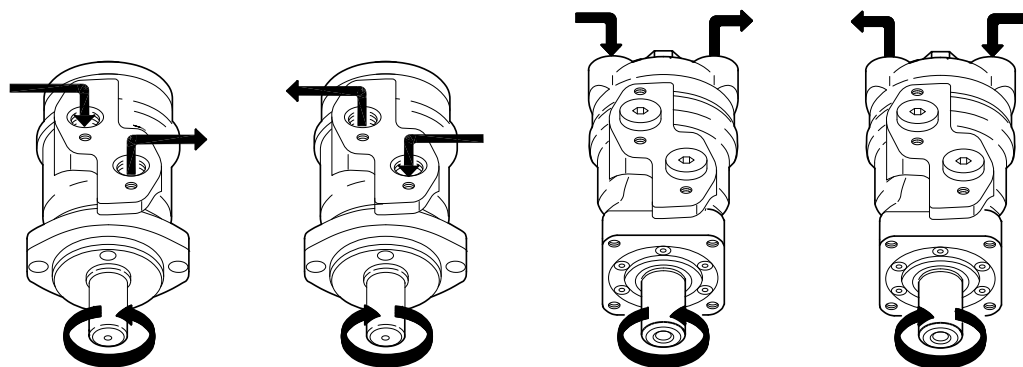
OMP technical data

Oil flow in drain line

The table shows the maximum oil flow in the drain line at a return pressure less than 5-10 bar [75-150 psi].

Pressure drop		Viscosity		Oil flow in drain line	
bar	[psi]	mm ² /s	[SUS]	l/min	[US gal/min]
100	[1450]	20	[100]	2.5	[0.66]
		35	[165]	1.8	[0.78]
140	[2030]	20	[100]	3.5	[0.93]
		35	[165]	2.8	[0.74]

Direction of shaft rotation



151-1836.10

Permissible shaft loads

OMP and OMR

The permissible radial shaft load (P_R) depends on:

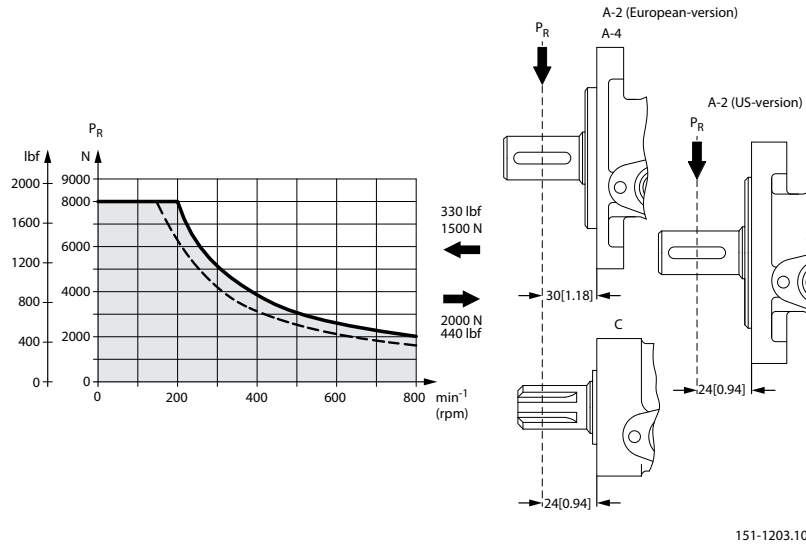
- Speed (n)
- Distance (L) from the point of load to the mounting flange
- Mounting flange version
- Shaft version

Mounting flange	4-oval flange** 2-hole oval flange (European version)	4-hole oval flange	Square flange** 2-hole oval flange (US-version)
Shaft version	25 mm cylindrical shaft 1 in cylindrical shaft 1 in splined shaft	32 mm cylindrical shaft	25 mm cylindrical shaft
Permissible shaft load (P_R) - l in mm	$\frac{800}{n} \cdot \frac{250000 \text{ N}^*}{95 + L}$	$\frac{800}{n} \cdot \frac{187500 \text{ N}^*}{95 + L}$	$\frac{800}{n} \cdot \frac{250000 \text{ N}^*}{101 + L}$
Permissible shaft load (P_R) - l in inch	$\frac{800}{n} \cdot \frac{2215 \text{ lbf}^*}{3.74 + L}$	$\frac{800}{n} \cdot \frac{1660 \text{ lbf}^*}{3.74 + L}$	$\frac{800}{n} \cdot \frac{2215 \text{ lbf}^*}{3.98 + L}$

** For both European and US-version

* $n \geq 200 \text{ min}^{-1}$ [rpm]; $\leq 55 \text{ mm}$ [2.2 in]. $n < 200 \text{ min}^{-1}$ [rpm]; $= > P_{Rmax} = 8000 \text{ N}$ [1800 lbf]

OMP technical data



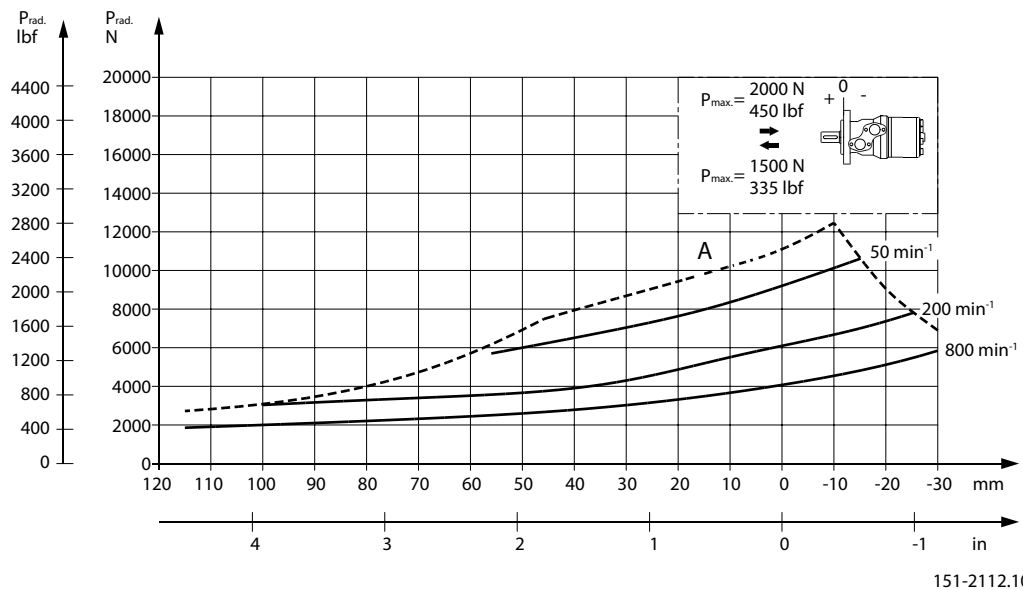
----- cylindrical shaft 32 mm [1.26 in]
 _____ other shaft versions

The curve shows the relation between P_R and n

- when $l = 30$ mm [1.18 in] for motors with A2 (European version) and A4 oval mounting flange
- when $l = 24$ mm [0.94 in] for motors with square mounting flange and A2 (US version)

For applications with special performance requirements we recommend OMP and OMR with the output shaft running in needle bearings.

OMP N



The output shaft on OMP N can be offered in needle bearings. These bearings and the recessed mounting flange allow a higher permissible radial load in comparison to OMP motors.

The permissible radial load on the shaft is shown for different speeds as a function of the distance from the mounting flange to the point of load application.

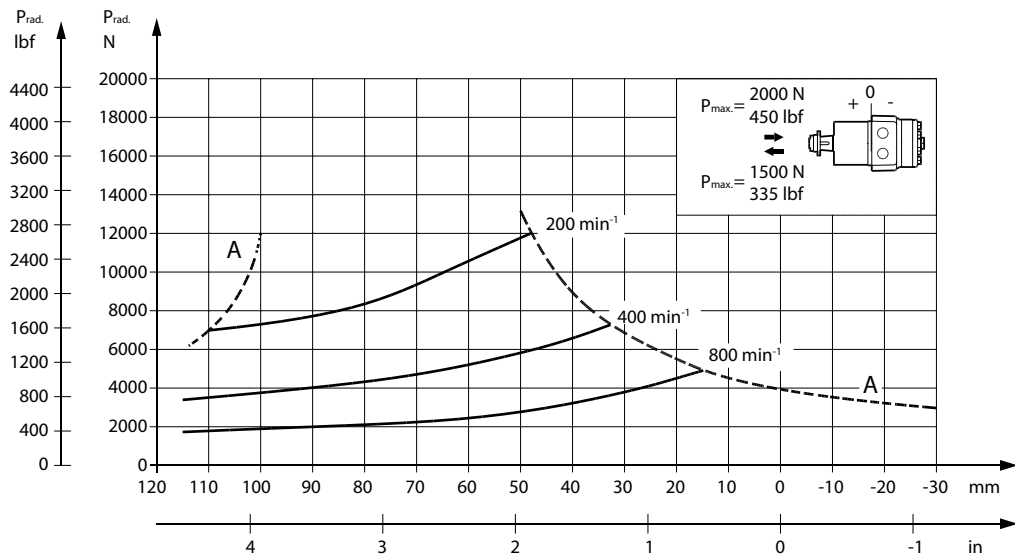
OMP technical data

Curve A indicates the max. radial shaft load. Any shaft load exceeding the values quoted in curve A will involve risk of breakage.

The other curves apply to a B10 bearing life of 2000 hours at the number of revolutions indicated by the curve letter. Mineral based hydraulic oil with a sufficient content of anti-wear additives must be used.

Bearing life calculations can be made using the explanation and formula provided in the chapter "Bearing dimensioning" in the technical information *General Orbital Motors 520L0232*.

OMPW with slide bearings



151-2105.10

The output shaft on OMPW can be offered in slide bearings similar to the other OMP-motors. The permissible higher radial load is therefore due to the recessed mounting flange moving the point of load closer to the motor bearings.

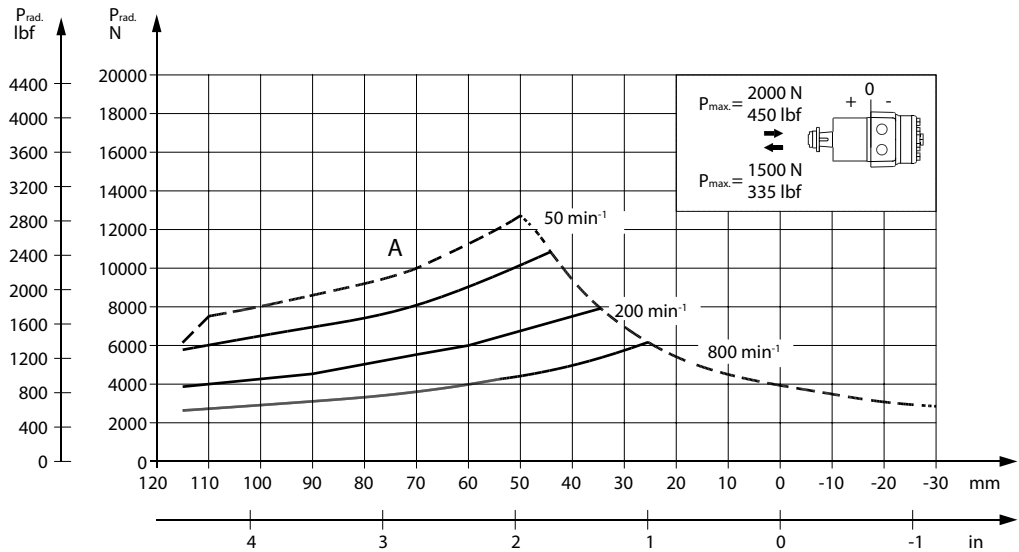
The permissible radial load on the shaft is shown for different speeds as a function of the distance from the mounting flange to the point of load application.

The curves are not based on calculations of B10 bearing life. They represent absolute limits that must not be exceeded.

Curve A indicates the max. radial shaft load. Any shaft load exceeding the values quoted in curve A will involve risk of breakage.

OMP technical data

OMPW N with needle bearing



151-2106.10

The output shaft on OMPW N can be offered in needle bearings. These bearings and the recessed mounting flange allow a higher permissible radial load in comparison to OMP motors.

The permissible radial load on the shaft is shown for different speeds as a function of the distance from the mounting flange to the point of load application.

Curve A indicates the max. radial shaft load. Any shaft load exceeding the values quoted in curve A will involve risk of breakage.

The other curves apply to a B10 bearing life of 2000 hours at the number of revolutions indicated by the curve letter. Mineral based hydraulic oil with a sufficient content of anti-wear additives must be used.

Bearing life calculations can be made using the explanation and formula provided in the chapter "Bearing dimensioning" in the technical information *General Orbital Motors 520L0232*.

OMP function diagrams

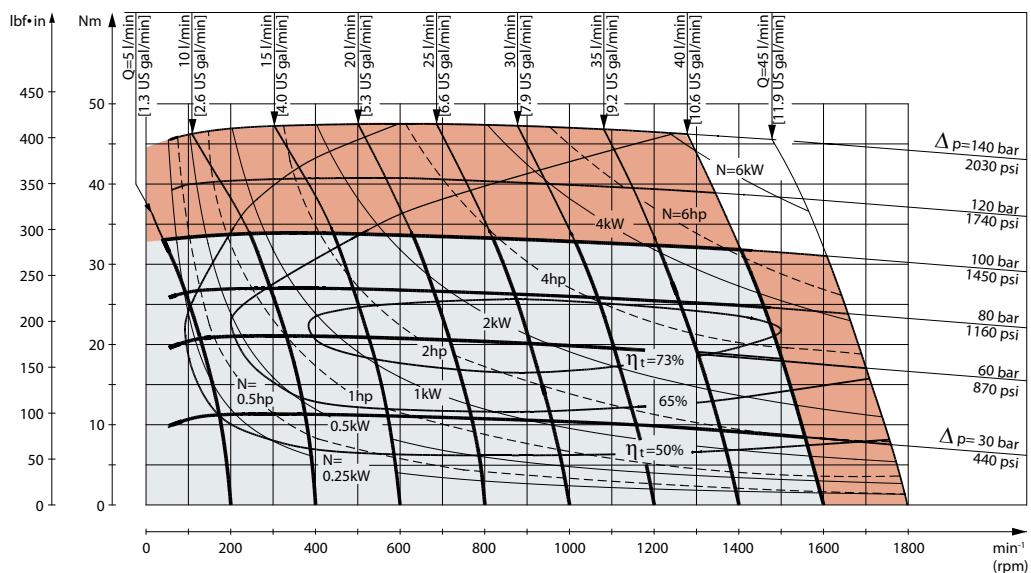
Explanation of function diagram use, basis and conditions can be found in [Speed, torque and output](#) on page 8.

- Continuous range
- Intermittent range (max. 10% operation every minute)

Max. permissible continuous/intermittent pressure drop for the actual shaft version can be found in [OMP technical data](#) on page 14.

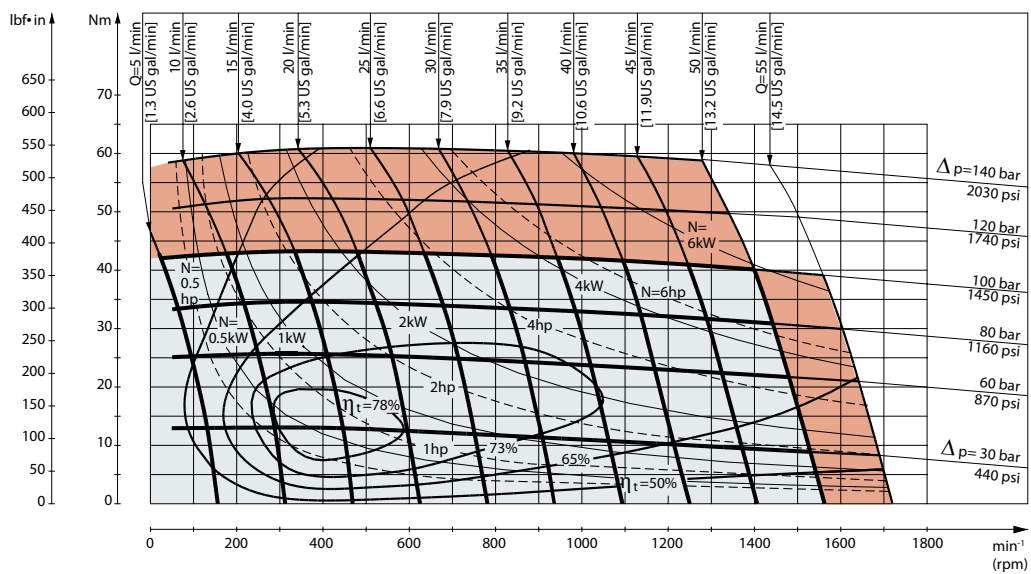
Intermittent pressure drop and oil flow must not occur simultaneously.

OMP 25 function diagram



151-1369.10

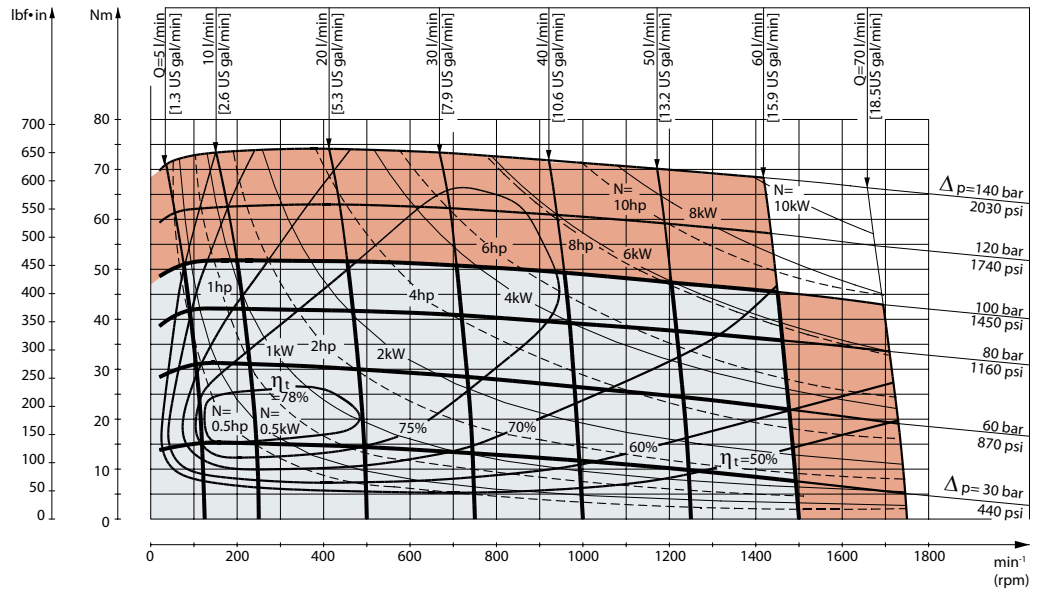
OMP 32 function diagram



151-1383.10

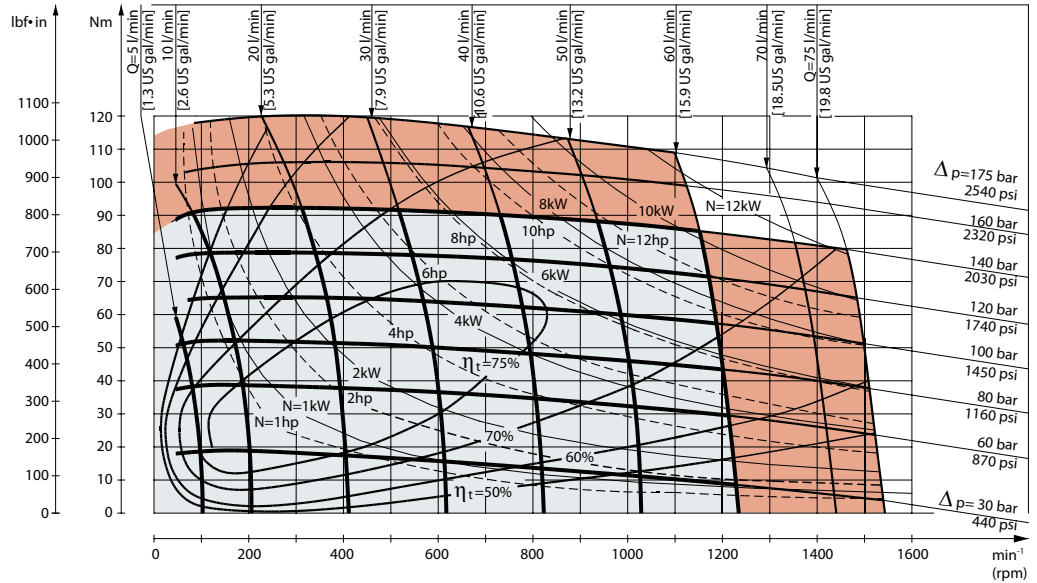
OMP function diagrams

OMP 40 function diagram



151-1384.10

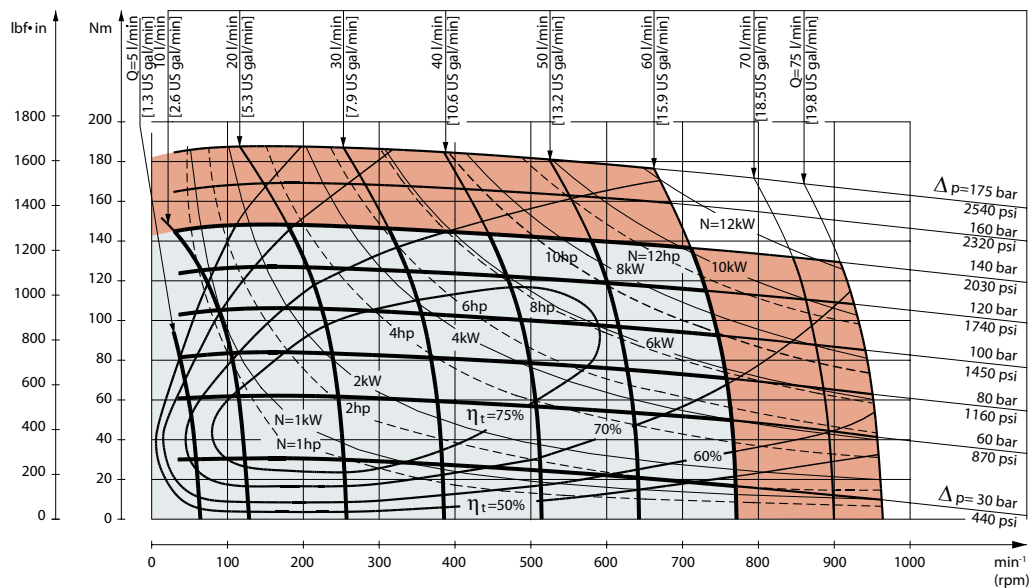
OMP 50 function diagram



151-177.10

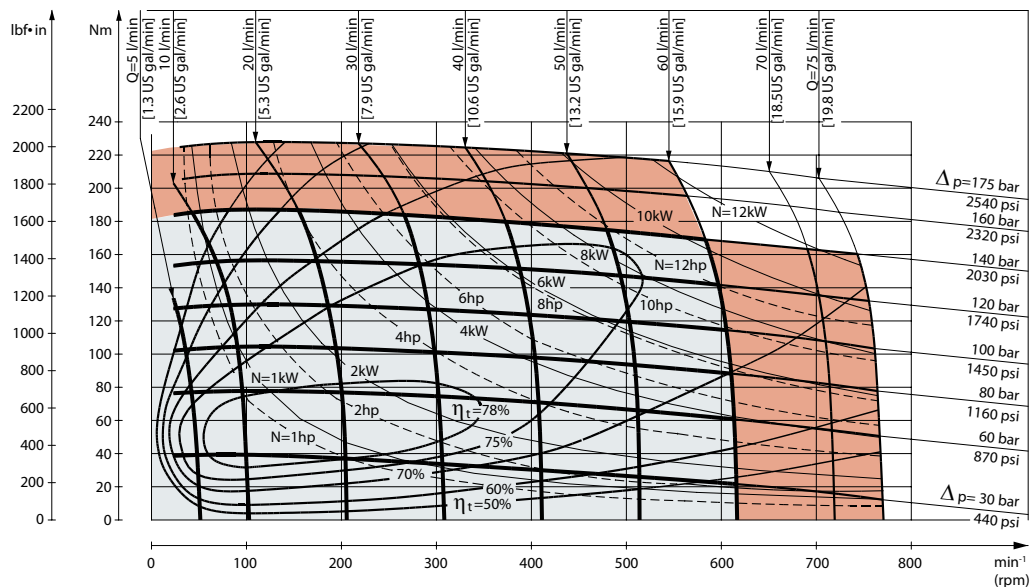
OMP function diagrams

OMP 80 function diagram



151-178.10

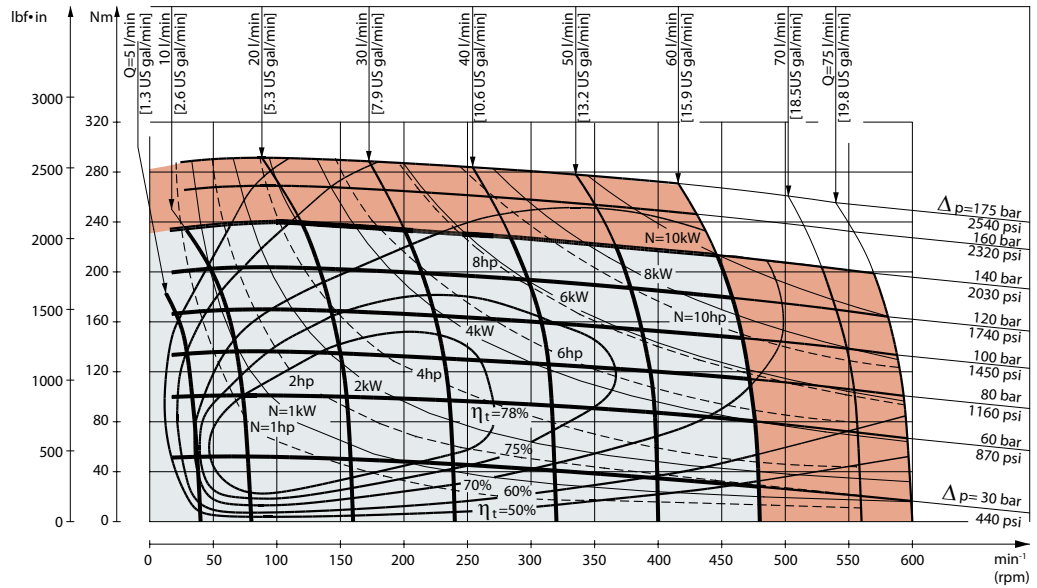
OMP 100 function diagram



151-179.10

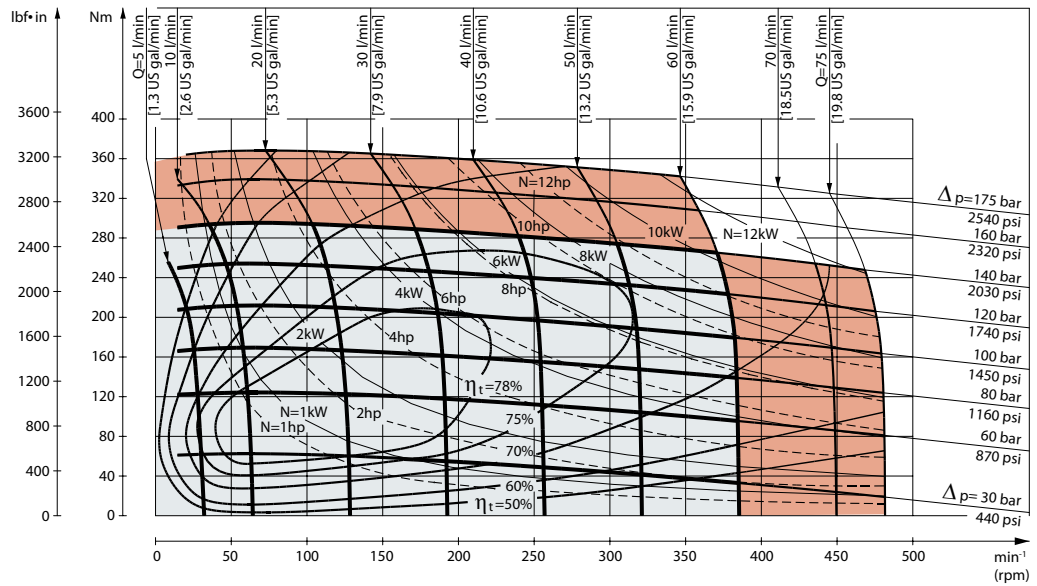
OMP function diagrams

OMP 125 function diagram



151-1416.10

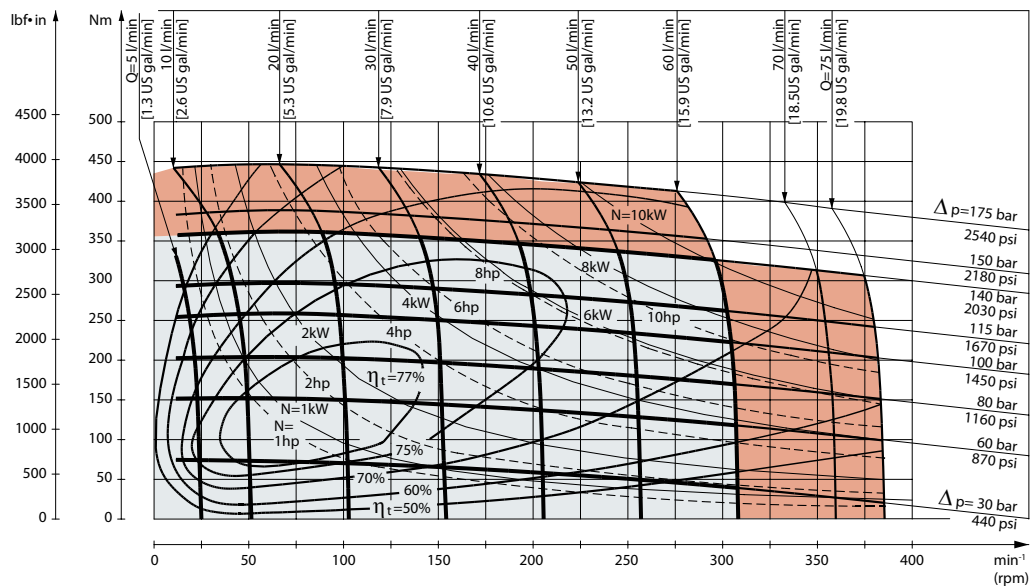
OMP 160 function diagram



151-180.10

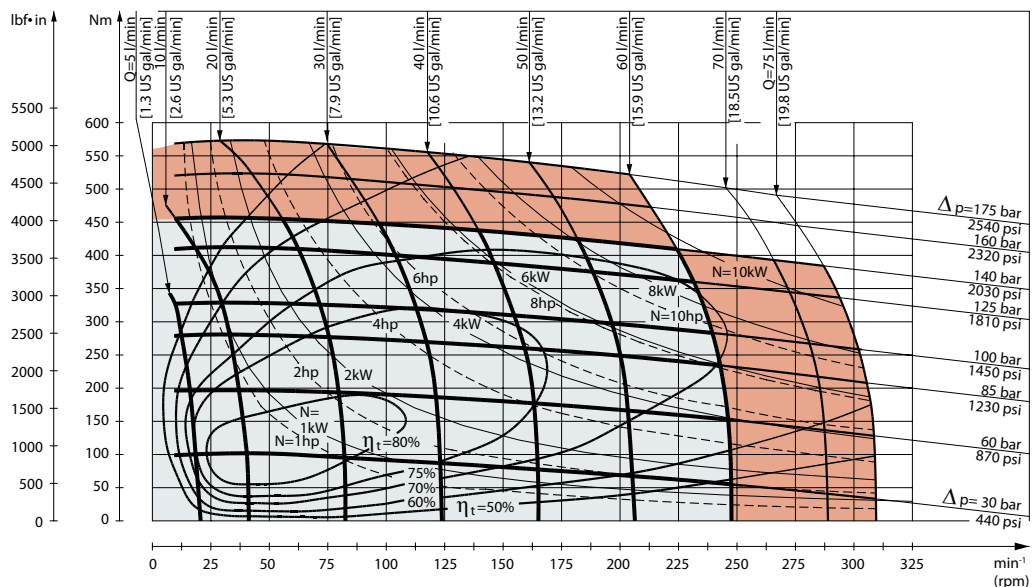
OMP function diagrams

OMP 200 function diagram



151-181.10

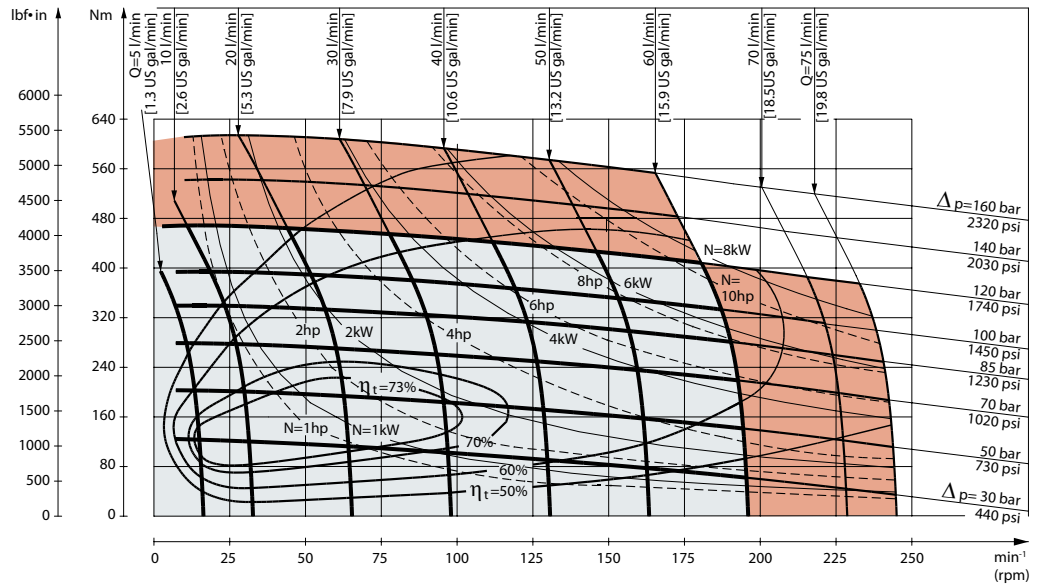
OMP 250 function diagram



151-1244.10

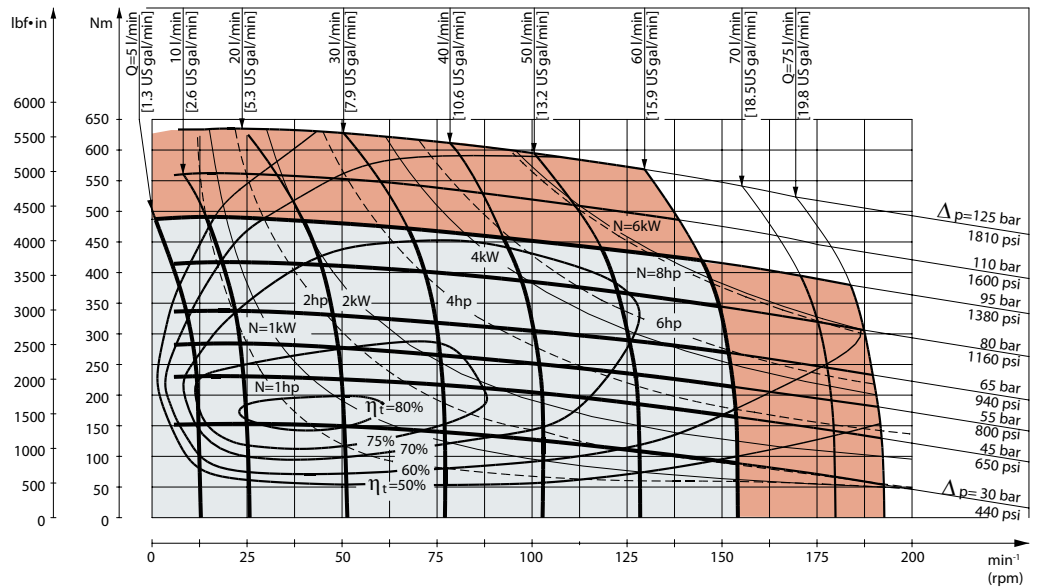
OMP function diagrams

OMP 315 function diagram



151-182.10

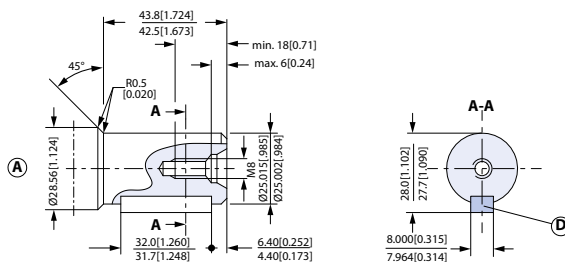
OMP 400 function diagram



151-1161.10

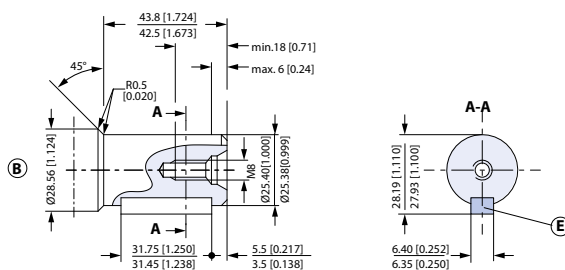
OMP shaft version

Shaft version



- A:** Cylindrical shaft 25 mm
- D:** Parallel key A8 • 7 • 32 DIN 6885

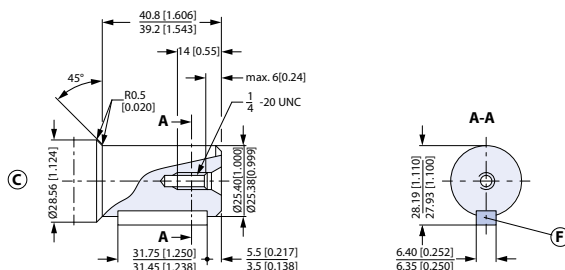
151-1842.12_A



- B:** Cylindrical shaft 1 in
- E:** Parallel key 1/4 • 1/4 • 11/4 in B.S. 46

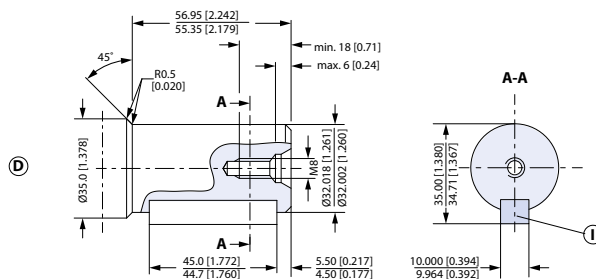
151-1842.12_B

US version



- C:** Cylindrical shaft 1 in
- F:** Parallel key 1/4 • 1/4 • 11/4 in B.S. 46

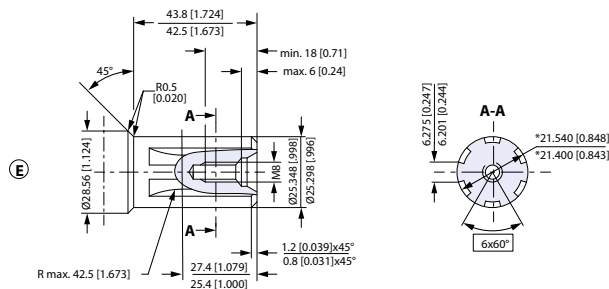
151-1842.12



- D:** Cylindrical shaft 32 mm
- I:** Parallel key A10 8 45 DIN 6885

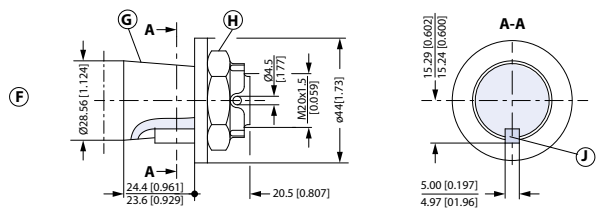
151-1843.11_D

OMP shaft version



151-1843.11_E

- E:** Splined shaft B.S. 2059 (SAE 6 B)
 Straight-sided, bottom fitting, dep.
 Fit 2 Nom. size 1 in
 * Deviates from BS 2059 (SAE 6B)

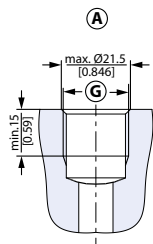


151-1843.11_F

- F:** Tapered shaft
- H:** DIN 937 NV 30. Tightening torque:
 $100 \pm 10 \text{ N}\cdot\text{m}$ [$885 \pm 88.50 \text{ lbf}\cdot\text{in}$]
- G:** Taper 1:10
- J:** Parallel key B5 5 14 DIN 6885

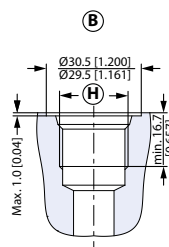
OMP port thread versions

Port thread versions



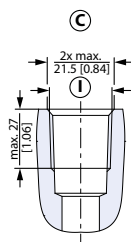
151-1844.11_A

- A:** G main ports
- G:** ISO 228/1 - G1/2



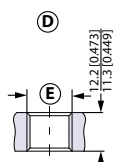
151-1844.11_B

- B:** UNF main ports
- H:** 7/8 - 14 UNF O-ring boss port



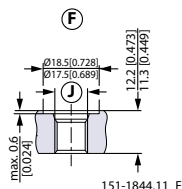
151-1844.11_C

- C:** NPTF main ports
- I:** 1/2 - 14 NPTF



151-1844.11_D

- D:** G drain port
- E:** ISO 228/1 - G1/4



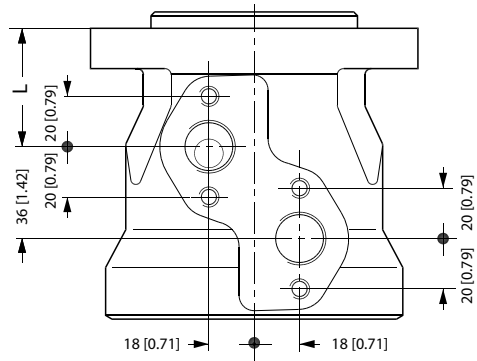
151-1844.11_F

- F:** UNF drain port
- J:** 7/16 - 20 UNF O-ring boss port

OMP port thread versions

OMP manifold mount

European version



151-2135.10

L: see dimensional drawing for given OMP motor:

[OMP dimensions - European version](#) on page 33

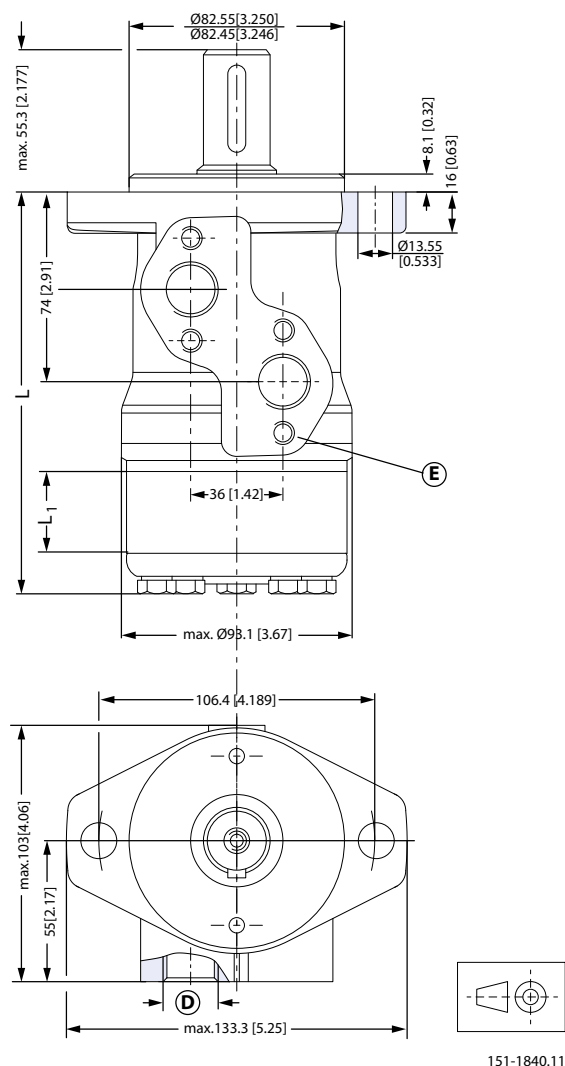
[OMP dimensions - US version](#) on page 40

OMP dimensions

OMP dimensions - European version

OMP Side port version with 2 hole oval mounting flange (A2-flange)

Side port - European version



Tolerance for basic dimensions = ± 1 mm [0.04 in]

D: G 1/2; 15 mm [0.59 in] deep

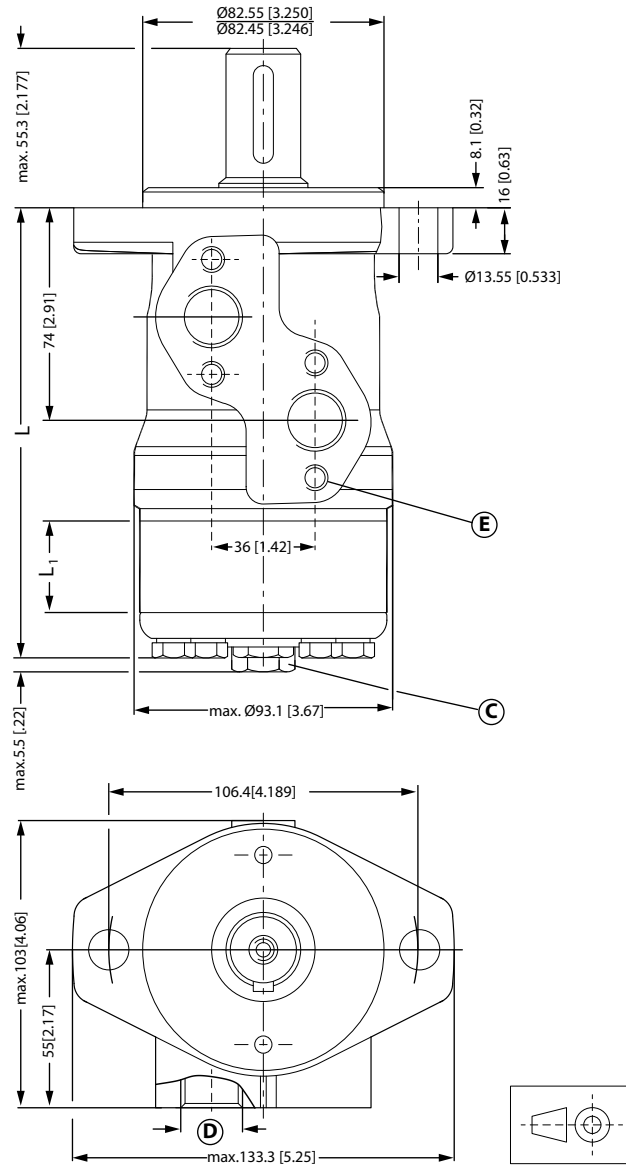
E: M8; 13 mm [0.51 in] deep (4 pcs.)

Type		OMP 25	OMP 32	OMP 40	OMP 50	OMP 80	OMP 100	OMP 125	OMP 160	OMP 200	OMP 250	OMP 315	OMP 400
L _{Max.}	mm	130.8	131.9	133.2	133.2	137.2	139.7	143.5	147.5	152.7	159.2	167.6	178.7
	[in]	[5.15]	[5.19]	[5.24]	[5.24]	[5.40]	[5.50]	[5.65]	[5.81]	[6.01]	[6.27]	[6.60]	[7.04]
L ₁	mm	4.1	5.2	6.5	6.5	10.4	13.0	16.7	20.8	26.0	32.5	40.9	52.0
	[in]	[0.16]	[0.20]	[0.26]	[0.26]	[0.41]	[0.51]	[0.66]	[0.82]	[1.02]	[1.28]	[1.61]	[2.05]

OMP dimensions

Side port version with 2 hole oval mounting flange (A2-flange). With drain connection

Side port - European version



151-1850.11

Tolerance for basic dimensions = ± 1 mm [0.04 in]

C: Drain connection G ¼; 12 mm [0.47 in] deep

D: G ½; 15 mm [0.59 in] deep

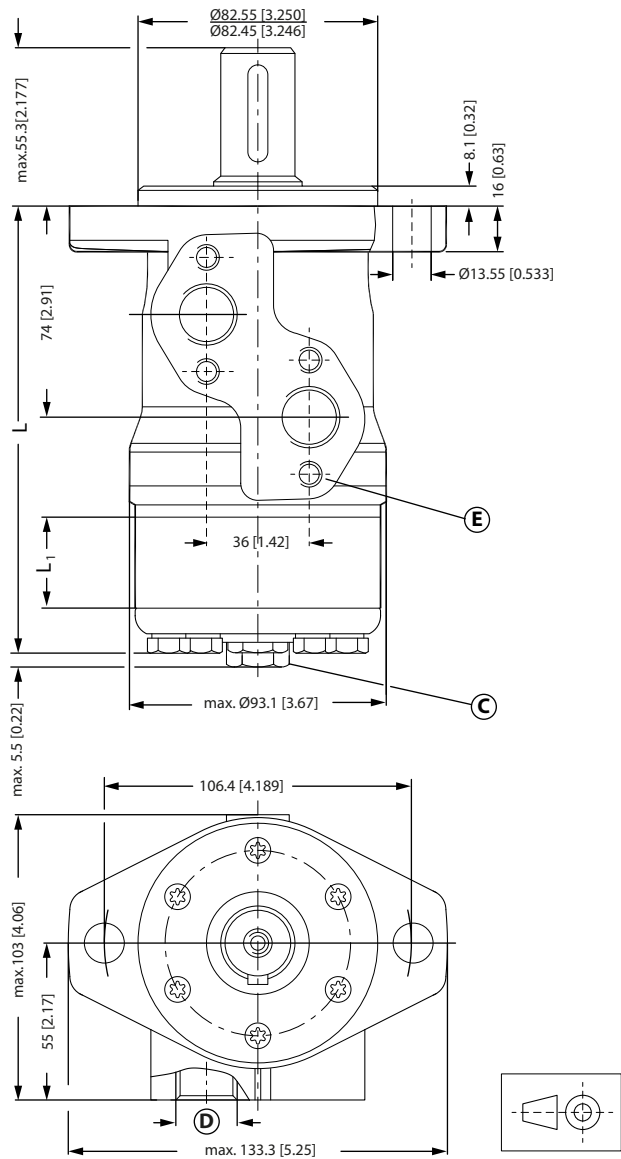
E: M8; 13 mm [0.51 in] deep (4 pcs.)

Type		OMP 25	OMP 32	OMP 40	OMP 50	OMP 80	OMP 100	OMP 125	OMP 160	OMP 200	OMP 250	OMP 315	OMP 400
L _{Max.}	mm	130.8	131.9	133.2	133.2	137.2	139.7	143.5	147.5	152.7	159.2	167.6	178.7
	[in]	[5.15]	[5.19]	[5.24]	[5.24]	[5.40]	[5.50]	[5.65]	[5.81]	[6.01]	[6.27]	[6.60]	[7.04]
L ₁	mm	4.1	5.2	6.5	6.5	10.4	13.0	16.7	20.8	26.0	32.5	40.9	52.0
	[in]	[0.16]	[0.20]	[0.26]	[0.26]	[0.41]	[0.51]	[0.66]	[0.82]	[1.02]	[1.28]	[1.61]	[2.05]

OMP dimensions

OMP C and OMP N-side port version with 2 hole oval mounting flange (A2-flange)

Side port - European version



151-1841.12

Tolerance for basic dimensions = ± 1 mm [0.04 in]

C: Drain connection G ¼; 12 mm [0.47 in] deep

D: G ½; 15 mm [0.59 in] deep

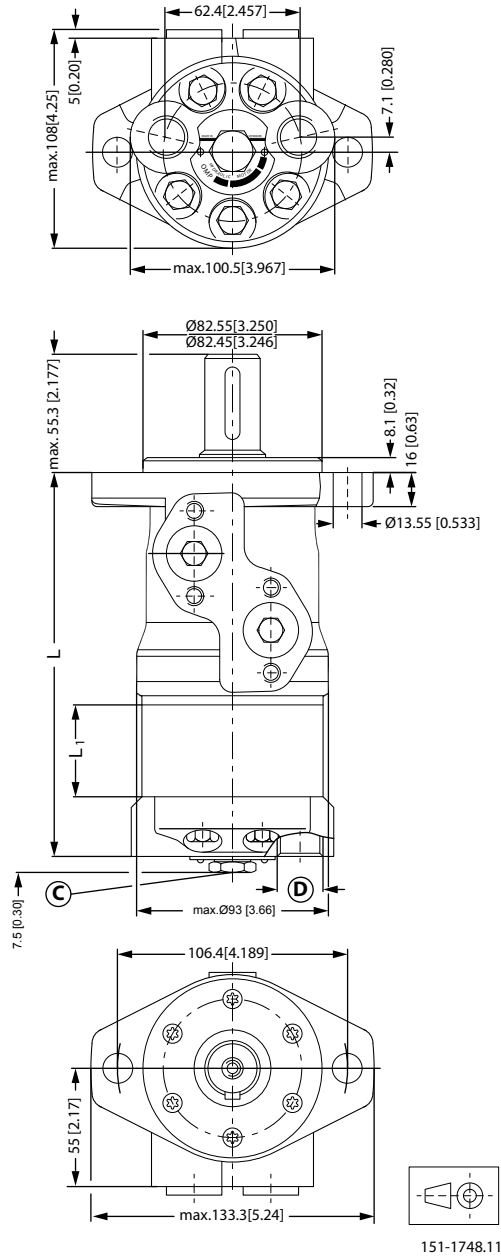
E: M8; 13 mm [0.51 in] deep (4 pcs.)

Type		OMP 25	OMP 32	OMP 40	OMP 50	OMP 80	OMP 100	OMP 125	OMP 160	OMP 200	OMP 250	OMP 315	OMP 400
L _{Max.}	mm	130.8	131.9	133.2	133.2	137.2	139.7	143.5	147.5	152.7	159.2	167.6	178.7
	[in]	[5.15]	[5.19]	[5.24]	[5.24]	[5.40]	[5.50]	[5.65]	[5.81]	[6.01]	[6.27]	[6.60]	[7.04]
L ₁	mm	4.1	5.2	6.5	6.5	10.4	13.0	16.7	20.8	26.0	32.5	40.9	52.0
	[in]	[0.16]	[0.20]	[0.26]	[0.26]	[0.41]	[0.51]	[0.66]	[0.82]	[1.02]	[1.28]	[1.61]	[2.05]

OMP dimensions

End port version with 2 hole oval mounting flange (A2-flange)

End port - European version



Tolerance for basic dimensions = ± 1 mm [0.04 in]

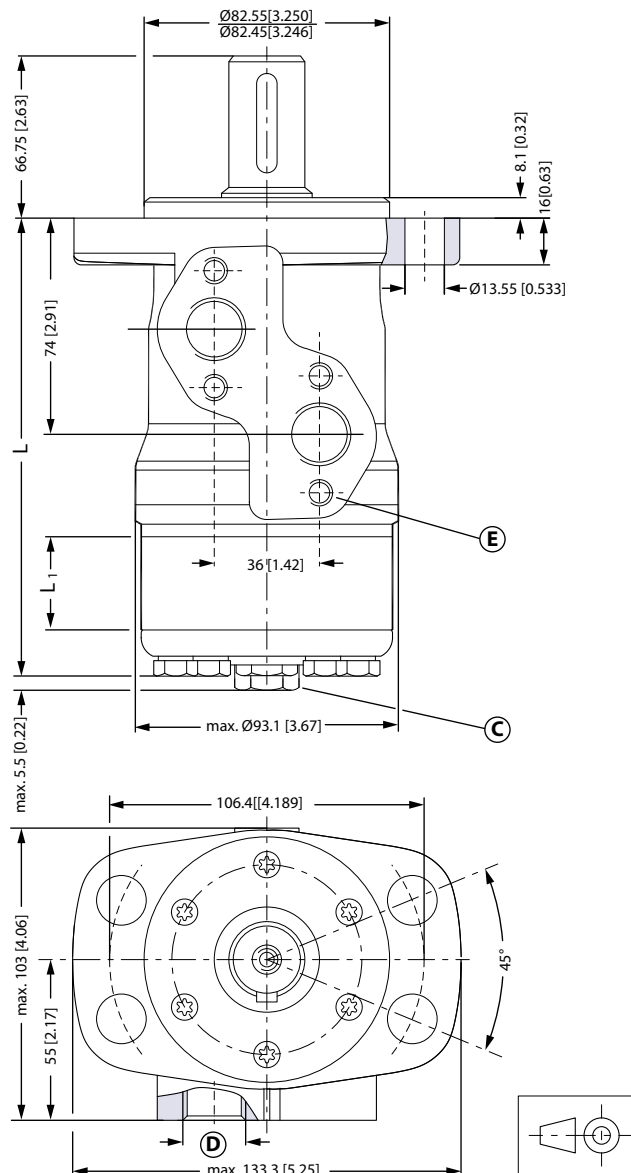
- C:** Drain connection G $\frac{1}{4}$; 12 mm [0.47 in] deep
- D:** G $\frac{1}{2}$; 15 mm [0.59 in] deep

Type		OMP 50	OMP 80	OMP 100	OMP 125	OMP 160	OMP 200	OMP 250	OMP 315	OMP 400
Max. L	mm [in]	146.7 [5.78]	150.6 [5.93]	153.2 [6.03]	157.0 [6.18]	161.0 [6.34]	166.2 [6.54]	172.7 [6.80]	181.1 [7.13]	192.2 [6.57]
L ₁	mm [in]	6.5 [0.26]	10.4 [0.41]	13.0 [0.51]	16.7 [0.66]	20.8 [0.82]	26.0 [1.02]	32.5 [1.28]	40.9 [1.61]	52.0 [2.05]

OMP dimensions

Side port version with 4 hole oval mounting flange (A4-flange)

Side port - European version



151-1747.13

Tolerance for basic dimensions = ± 1 mm [0.04 in]

C: Drain connection G $\frac{1}{4}$; 12 mm [0.47 in] deep

D: G $\frac{1}{2}$; 15 mm [0.59 in] deep

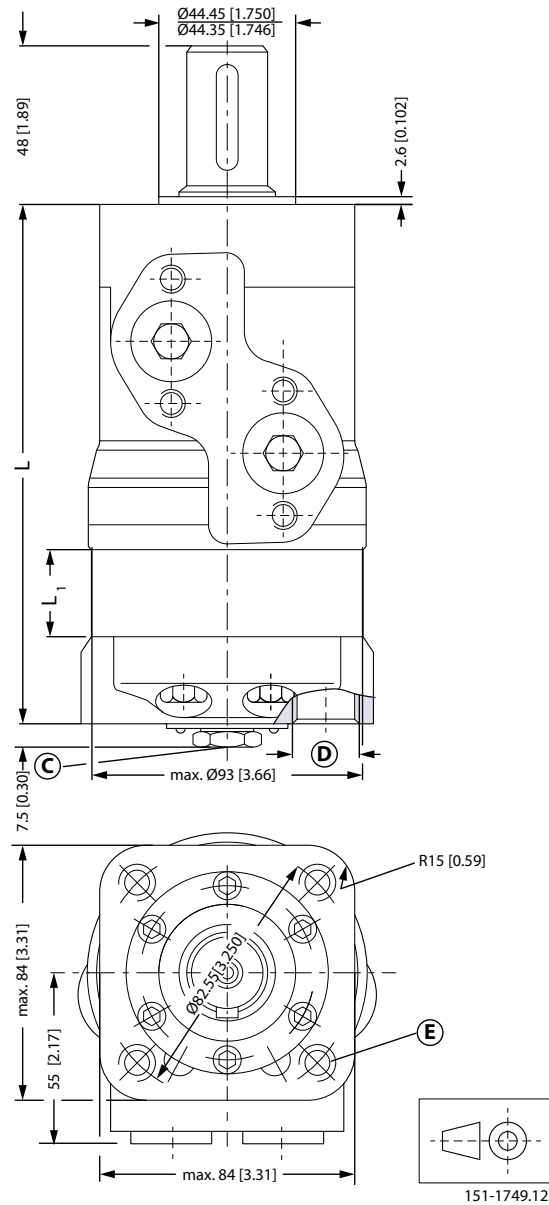
E: M8; 13 mm [0.51 in] deep (4 pcs.)

Type		OMP 50	OMP 80	OMP 100	OMP 125	OMP 160	OMP 200	OMP 250	OMP 315	OMP 400
Max. L	mm [in]	133.2 [5.24]	137.2 [5.40]	139.7 [5.50]	143.5 [5.65]	147.5 [5.81]	152.7 [6.01]	159.2 [6.27]	167.6 [6.60]	178.7 [7.04]
L ₁	mm [in]	6.5 [0.26]	10.4 [0.41]	13.0 [0.51]	16.7 [0.66]	20.8 [0.82]	26.0 [1.02]	32.5 [1.28]	40.9 [1.61]	52.0 [2.05]

OMP dimensions

End port version with square mounting flange (C-flange)

End port - European version



Tolerance for basic dimensions = ± 1 mm [0.04 in]

C: Drain connection G ¼; 12 mm [0.47 in] deep (4 pcs.)

D: G ½; 15 mm [0.59 in] deep

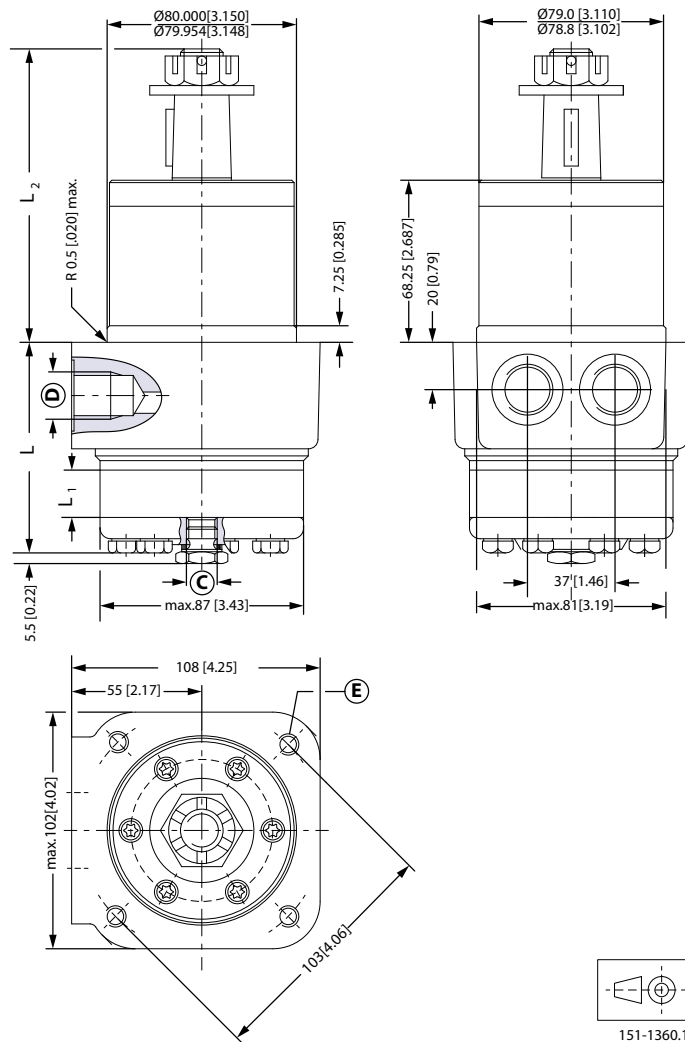
E: M10; 15 mm [0.59 in] deep

Type		OMP 50	OMP 80	OMP 100	OMP 125	OMP 160	OMP 200	OMP 250	OMP 315	OMP 400
Max. L	mm [in]	152.7 [6.01]	156.6 [6.17]	159.2 [6.27]	162.9 [6.41]	167.0 [6.57]	172.2 [6.78]	178.7 [7.04]	187.1 [7.37]	198.2 [7.80]
L ₁	mm [in]	6.5 [0.26]	10.4 [0.41]	13.0 [0.51]	16.7 [0.66]	20.8 [0.82]	26.0 [1.02]	32.5 [1.28]	40.9 [1.61]	52.0 [2.05]

OMP dimensions

OMPW and OMPW N wheel motor

Wheel motor -- European version



Tolerance for basic dimensions = ± 1 mm [0.04 in]

- C:** Drain connection G ¼; 12 mm [0.47 in] deep
- D:** G ½; 15 mm [0.59 in] deep
- E:** M10; 20 mm [0.79 in] deep (4 pcs.)

Output shaft. max.		L_2 mm [in]
Cylindrical shaft 25 mm [0.98 in]		max. 115 [4.53]
Tapered shaft 28.56 mm [1.12 in]		max. 117.8 [4.64]

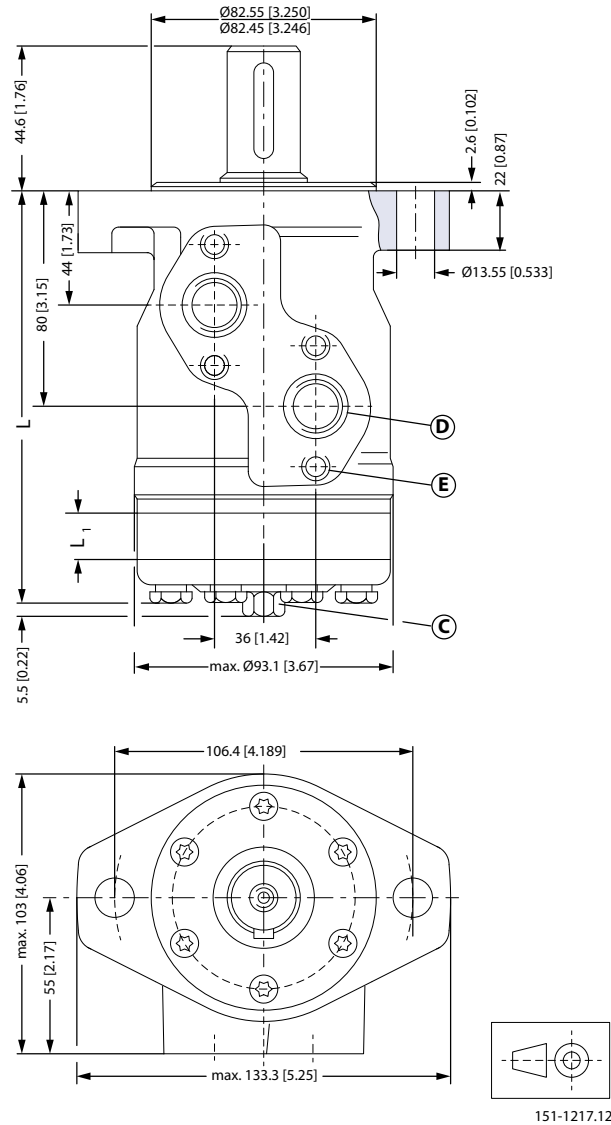
Type		OMP 40	OMP 50	OMP 80	OMP 100	OMP 125	OMP 160	OMP 200	OMP 250	OMP 315	OMP 400
Max. L	mm [in]	73.5 [2.89]	73.5 [2.89]	77.4 [3.05]	80.0 [3.15]	83.7 [3.30]	87.8 [3.46]	93.0 [3.66]	99.5 [3.92]	107.9 [4.25]	119.0 [4.69]
	mm [in]	6.5 [0.26]	6.5 [0.26]	10.4 [0.41]	13.0 [0.51]	16.7 [0.66]	20.8 [0.82]	26.0 [1.02]	32.5 [1.28]	40.9 [1.61]	52.0 [2.05]

OMP dimensions

OMP dimensions - US version

Side port version with 2 hole oval mounting flange (A2-flange)

Side port - US version



Tolerance for basic dimensions = ± 1 mm [0.04 in]

C: Drain connection 7/16 UNF; 12 mm [0.47 in] deep

D: 7/8 - 14 UNF; 16.7 mm [0.66 in] deep

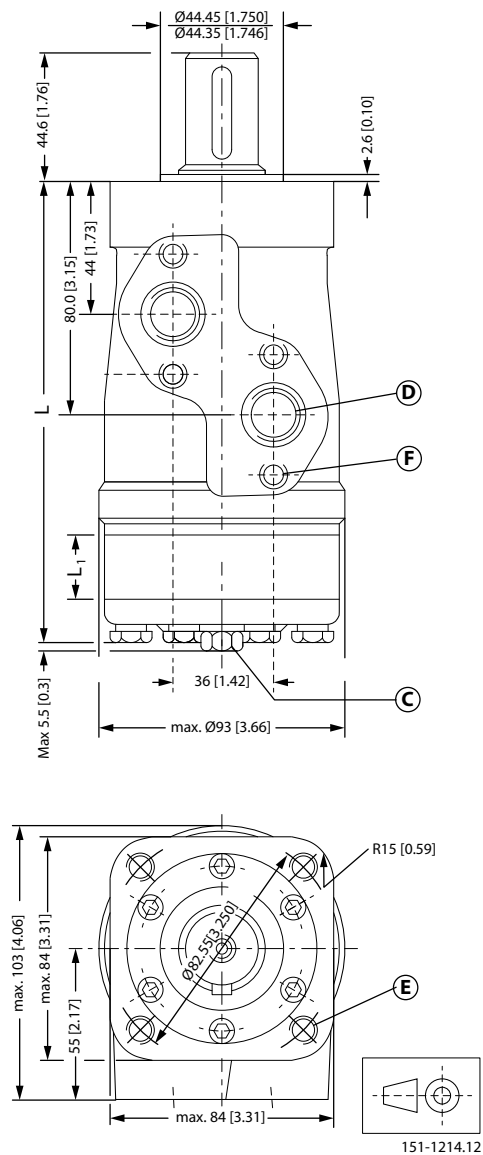
E: M8; 13 mm [0.51 in] deep (4 pcs.)

Type		OMP 25	OMP 32	OMP 40	OMP 50	OMP 80	OMP 100	OMP 125	OMP 160	OMP 200	OMP 250	OMP 315	OMP 400
L _{Max.}	mm	137.2	138.3	139.6	139.6	143.6	146.1	149.9	153.9	159.1	165.6	174.0	185.1
	[in]	[5.40]	[5.44]	[5.50]	[5.50]	[5.65]	[5.75]	[5.90]	[6.06]	[6.26]	[6.52]	[6.85]	[7.29]
L ₁	mm	4.1	5.2	6.5	6.5	10.4	13.0	16.7	20.8	26.0	32.5	40.9	52.0
	[in]	[0.16]	[0.20]	[0.26]	[0.26]	[0.41]	[0.51]	[0.66]	[0.82]	[1.02]	[1.28]	[1.61]	[2.05]

OMP dimensions

Side port version with square mounting flange (C-flange)

Side port - US version



Tolerance for basic dimensions = ± 1 mm [0.04 in]

- C:** Drain connection 7/16 - 20 UNF; 12 mm [0.47 in] deep
- D:** 7/8 - 14 UNF; 16.76 mm [0.66 in] deep or 1/2 - 14 NPTF
- E:** 3/8 - 16 UNC; 15 mm [0.59 in] deep (4 off)
- F:** M8; 13 mm [0.51 in] deep (4 pcs.)

Type		OMP 40	OMP 50	OMP 80	OMP 100	OMP 125	OMP 160	OMP 200	OMP 250	OMP 315	OMP 400
Max. L	mm [in]	139.6 [5.50]	139.6 [5.50]	143.5 [5.65]	146.1 [5.75]	149.8 [5.90]	153.9 [6.06]	159.1 [6.26]	165.6 [6.52]	174.0 [6.85]	185.1 [7.29]
L ₁	mm [in]	6.5 [0.26]	6.5 [0.26]	10.4 [0.41]	13.0 [0.51]	16.7 [0.66]	20.8 [0.82]	26.0 [1.02]	32.5 [1.28]	40.9 [1.61]	52.0 [2.05]