SAUER DANFOSS

SAMT HYDRAULICS

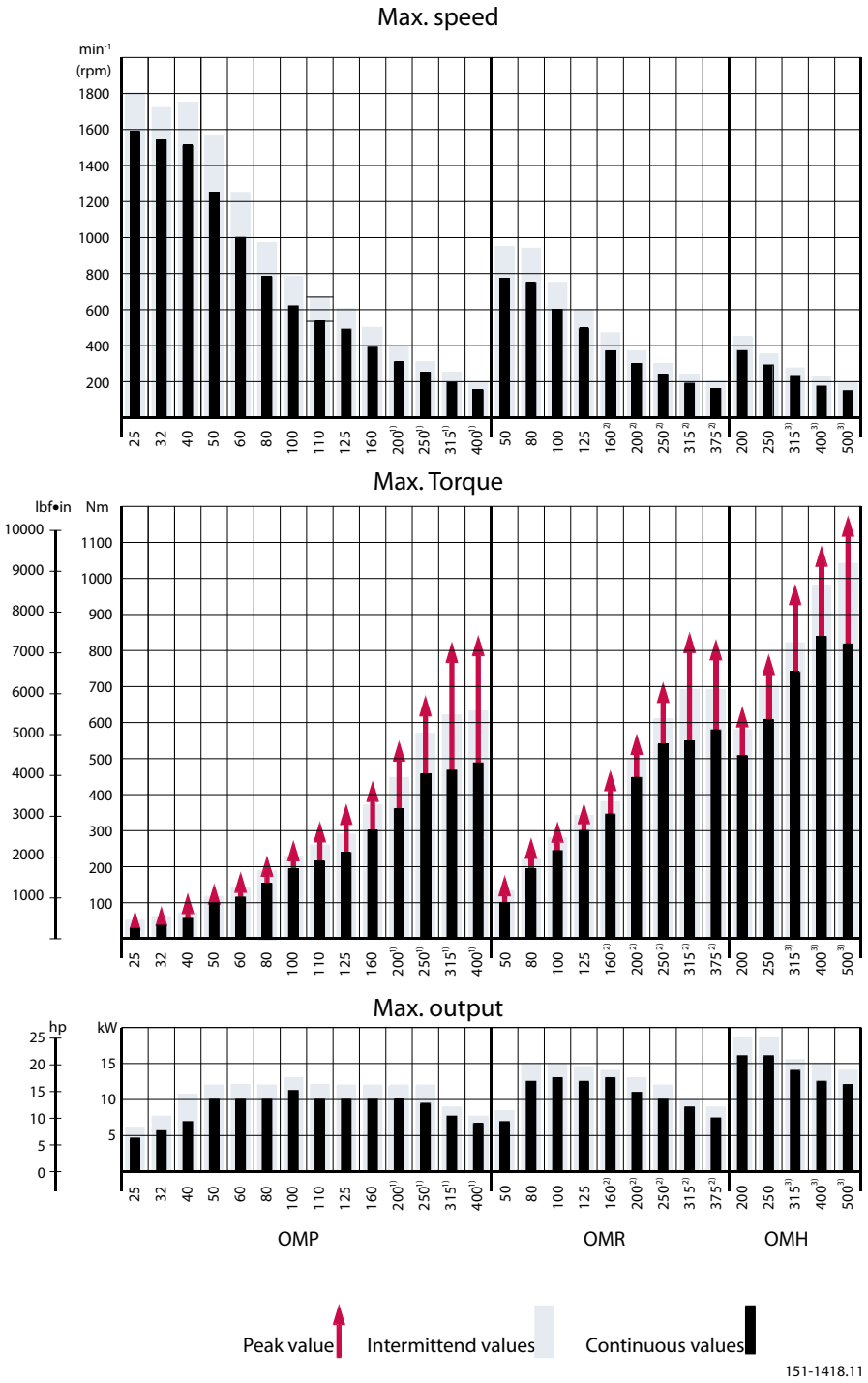
Orbital Motors
Type OMP

Technical Information





Speed, Torque and Output



1) 1 1/4 in shaft
2) 1 1/4 in or 1 1/4 in tapered shaft
3) 1 1/4 in splined shaft

Versions

Mounting flange	Spigot diam,eter (front /rear end)	Bolt circle diameter (BC)	Shaft	Port size	European version	US version	Side port version	End port version	Flange port version	Standard shaft seal	High pressure shaft seal	Drain connection	Check valve	Main type designation
2 hole oval flange (A2-flange)	∅ 82.5 mm [3.25 in]	∅ 106.4 mm [4.20 in]	Cyl. 25 mm	G ½	●		●				●	No	No	OMP
				G ½	●		●				●	Yes	No	OMP
				G ½	●			●		●		Yes	Yes	OMP
			Cyl. 1 inch	G ½	●		●				●	No	No	OMP
				G ½	●		●				●	Yes	No	OMP
				7/8-14 UNF		●	●			●		Yes	Yes	OMP
			Splined 1 inch	G ½	●		●				●	No	No	OMP
				G ½	●		●				●	Yes	No	OMP
4 hole oval flange (A4-flange)	∅ 82.5 mm [3.25 in]	∅ 106.4 mm [4.20 in]	Cyl. 32 mm	G ½	●		●			●		Yes	Yes	OMP
Square flange (C-flange)	∅ 44.4 mm [1.75 in]	∅ 82.5 mm [3.25 in]	Cyl. 25 mm	G ½	●			●		●		Yes	Yes	OMP
			Cyl. 1 inch	7/8-14 UNF		●	●			●		Yes	Yes	OMP
				1/2-14 NPTF		●	●			●		Yes	Yes	OMP
Wheel	∅ 80 mm [3.15 in]	∅ 103 mm [4.06 in]	Cyl. 25 mm	G ½	●				●	●		Yes	Yes	OMPW
OMP motors with corrosion resistant parts														
2 hole oval flange (A2-flange)	∅ 82.5 mm [3.25 in]	∅ 106.4 mm [4.20 in]	Cyl. 25 mm	G ½	●		●			●		Yes	Yes	OMP C
OMP motors with needle bearings														
2 hole oval flange (A2-flange)	∅ 82.5 mm [3.25 in]	∅ 106.4 mm [4.20 in]	Cyl. 25 mm	G ½	●		●			●		Yes	Yes	OMP N
Wheel	∅ 80 mm [3.15 in]	∅103 [4.06]	Tap. 28.5 mm	G ½	●				●	●		Yes	Yes	OMPW N
OMP motors with free running gerotor														
2 hole oval flange (A2-flange)	∅ 82.5 mm [3.25 in]	∅ 106.4 mm [4.20 in]	Cyl. 25 mm	G ½	●		●				●	Yes	No	OMP

Functions diagram - see page: →

Features available (options) :
Low leakage (low speed valve)
Speed sensor
Viton shaft seal
Reverse rotation
Painted

Code Numbers

Code numbers	Displacement [cm³]														Technical data - Page	Dimensions - Page
	25	32	40	50	60	80	100	110	125	160	200	250	315	400		
151-	0340	0341	0342	0310	0319	0311	0312	-	0313	0314	0315	0316	0317	0318	10	30
151-	0640	0641	0642	0610	-	0611	0612	0646	0613	0614	0615	0616	0617	0618	10	31
151-	-	-	-	5191	-	5192	5193	-	5194	5195	5196	5197	5198	5199	10	33
→ **151-**	-	-	-	0300	-	0301	0302	-	0303	0304	0305	0306	0307	0308	10	30
151-	-	-	-	0600	-	0601	0602	-	0603	0604	0605	0606	0607	0608	10	31
151-	7080	7081	7082	7041	-	7042	7043	-	7044*	7045	7046	7047	7048	7049	10	34
151-	-	-	-	0330	-	0331	0332	-	0333	0334	0335	0336	0337	0338	12	30
151-	-	-	-	0630	-	0631	0632	-	0633	0634	0635	0636	0637	0638	12	31
151-	-	5010	-	5001	-	5002	5003	-	5004	5005	5006	5007	5008	5009	13	35
151-	-	-	-	5211	-	5212	5213	-	5214	5215	5216	5217	5218	5219	10	36
151-	-	-	-	7061	-	7062	7063	-	5174	7065	7066	7067	7068	7069	10	37
151-	-	-	-	7021	-	7022	7023	-	7024	7025	7026	7027	7028	7029	10	37
→ **151-**	-	-	-	7101	-	7102	7103	-	7104	7105	7106	7107	7108	7109	10	38
OMP motors with corrosion resistant parts																
151-	-	-	-	1208	-	1209	1210	-	1217	1211	1212	1213	1214	1215	10	32
OMP motors with needle bearings																
151-	-	-	-	5311	-	5312	5313	-	-	5315	5316	-	5318	-	10	32
151-	-	-	-	5301	-	5302	5303	-	5304	5305	5306	5307	5308	5309	12	38
OMP motors with free running gerotor																
151-	-	-	-	-	-	-	0622	-	-	0624	0625	-	0627	-	10	31
	20	20	21	21	22	22	23	23	24	24	25	25	26	26		

* Motor painted black

Ordering
Add the four digit prefix "151-" to the four digit numbers from the chart for complete code number.

Example:
151-0305 for an OMP 200 with A2 flange, cyl. 1 in shaft, port size G 1/2 and high pressure shaft seal.

Orders will not be accepted without the four digit prefix.

Technical data for OMP with 25 mm and 1 in cylindrical shaft

Type			OMP	OMP	OMP	OMP	OMP	OMP	OMP
Motor size			**25**	**32**	**40**	**50**	**60**	**80**	**100**
Geometric displacement	cm^3 [inch]		25.0 [1.53]	32.0 [1.96]	40.0 [2.45]	48.6 [2.97]	59.1 [3.61]	77.8 [4.76]	97.3 [5.95]
Max. speed	min^{-1} [rpm]	cont.	1600	1560	1500	1230	1000	770	615
		int.[1)]	1800	1720	1750	1540	1250	960	770
Max. torque	N•m [lbf•in]	cont.	33 [290]	43 [380]	52 [460]	93 [820]	115 [1020]	150 [1330]	190 [1680]
		int.[1)]	47 [420]	61 [540]	74 [660]	120 [1060]	140 [1240]	190 [1680]	230 [2040]
		peak[2)]	67 [590]	86 [760]	107 [950]	140 [1240]	180 [1590]	220 [1950]	270 [2390]
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]	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]	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]	140 [2030]
		int.[1)]	140 [2030]	140 [2030]	140 [2030]	175 [2540]	175 [2540]	175 [2540]	175 [2540]
		peak[2)]	225 [3260]	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]	60 [15.9]
		int.[1)]	45 [11.9]	55 [14.5]	70 [18.5]	75 [19.8]	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]	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]	100 [885]	135 [1200]	170 [1510]
		at max. press.drop int.[1)] N•m [lbf•in]	40 [350]	55 [490]	63 [560]	100 [890]	120 [1060]	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.

Technical data for OMP with 25 mm and 1 in cylindrical shaft (continued)

Type				OMP	OMP	OMP	OMP	OMP	OMP	OMP
Motor size				**110**	**125**	**160**	**200**	**250**	**315**	**400**
Geometric displacement	cm^3 [inch]			112.5 [6.87]	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.	535	480	385	310	250	195	155
			int[1])	670	600	480	385	310	245	190
Max. torque	N•m [lbf•in]		cont.	215 [1900]	240 [2120]	300 [2660]	300 [2660]	300 [2660]	300 [2660]	300 [2660]
			int.[1])	260 [2300]	290 [2570]	370 [3280]	380 [3360]	410 [3630]	390 [3450]	420 [3720]
			peak[2])	320 [2830]	370 [3280]	430 [3810]	540 [4780]	550 [4870]	600 [5310]	600 [5310]
Max. output	kW [hp]		cont.	10 [13.4]	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]	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]	140 [2030]	115 [1670]	90 [1310]	75 [1090]	60 [870]
			int[1])	175 [2540]	175 [2540]	175 [2540]	150 [2180]	125 [1810]	100 [1450]	80 [1160]
			peak[2])	225 [3260]	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]	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]
Max. starting pressure with unloaded shaft	bar [psi]	standard		10 [145]	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]		190 [1680]	210 [1860]	280 [2480]	270 [2390]	280 [2480]	280 [2480]	280 [2480]
		at max. press.drop int.[1]) N•m [lbf•in]		240 [2120]	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.

Technical data for OMP with 1 in splined and 28.5 mm tapered 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]
Max. 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
Max. 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]
		peak[2]	140 [1240]	220 [1950]	270 [2390]	370 [3280]	430 [3810]	540 [4780]	550 [4870]	540 [4780]	560 [4960]
Max. 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]
Max. pressure drop	bar [psi]	cont.	140 [2030]	140 [2030]	140 [2030]	140 [2030]	140 [2030]	140 [2030]	105 [1520]	90 [1310]	70 [1020]
		int1)	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]
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]	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]
Max. 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]
Min 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.

Technical data for 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]
Max. 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
Max. 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]
		peak[2]	140 [1240]	220 [1950]	270 [2390]	370 [3280]	430 [3810]	540 [4780]	670 [5930]	820 [7260]	840 [7440]
Max. 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]
Max. pressure drop	bar [psi]	cont.	140 [2030]	140 [2030]	140 [2030]	140 [2030]	140 [2030]	140 [2030]	140 [2030]	120 [1740]	95 [1380]
		int1)	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]	180 [2610]
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]	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]
Max. 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]
Min 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]

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]

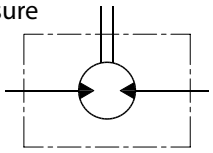
[1] Intermittent operation: the permissible values may occur for max. 10% of every minute.
[2] Peak load: the permissible values may occur for max. 1% of every minute.

Technical Data - Max. Permissible Shaft Seal Pressure

OMP with HIGH Pressure Shaft Seal (HPS)

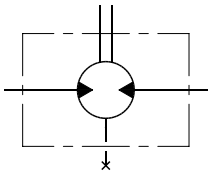
OMP with HPS and without drain connection:
The shaft seal pressure equals the average of input pressure and return pressure.

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



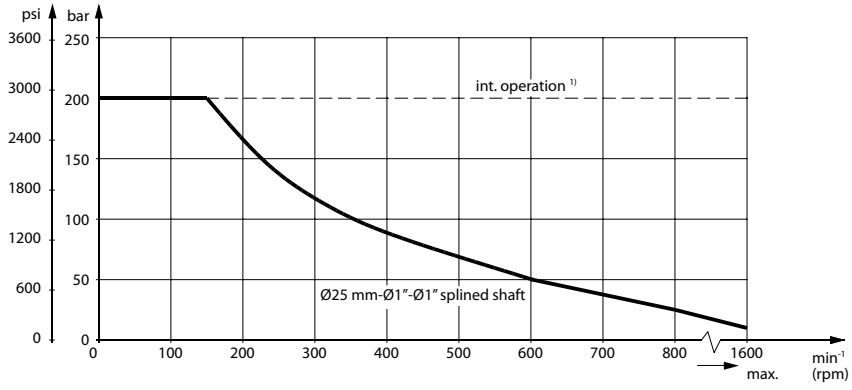
151-1743.10

OMP with HPS and drain connection:
The shaft seal pressure equals the pressure in the drain line.



151-1855.10

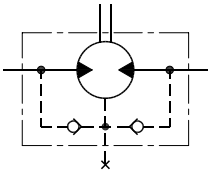
Max. permissible shaft seal pressure



151-1745.10

OMP with Standard Shaft Seal

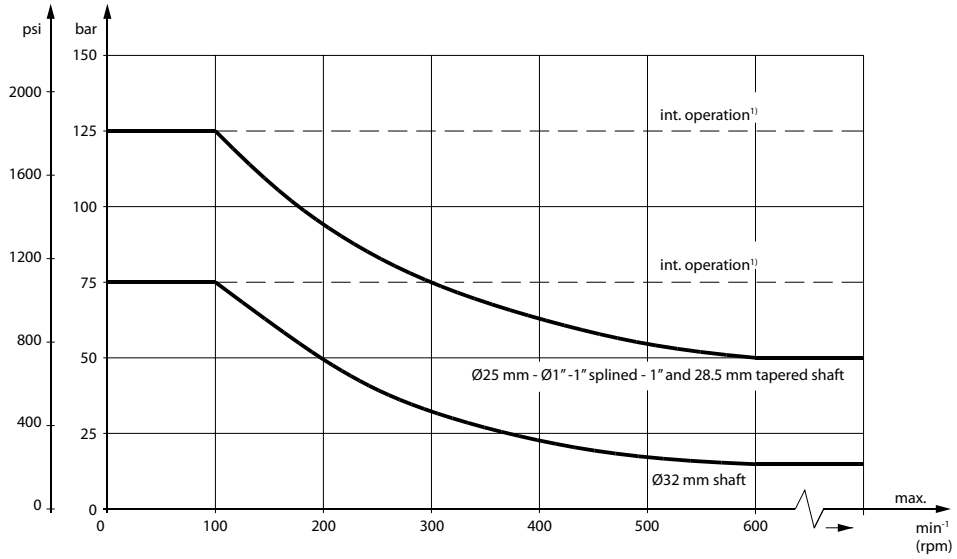
OMP with standard shaft seal, check valves and without use of drain connection:
The pressure on the shaft seal never exceeds the pressure in the return line



151-320.10

OMP with standard shaft seal, check valves and with drain connection:
The shaft seal pressure equals the pressure on the drain line.

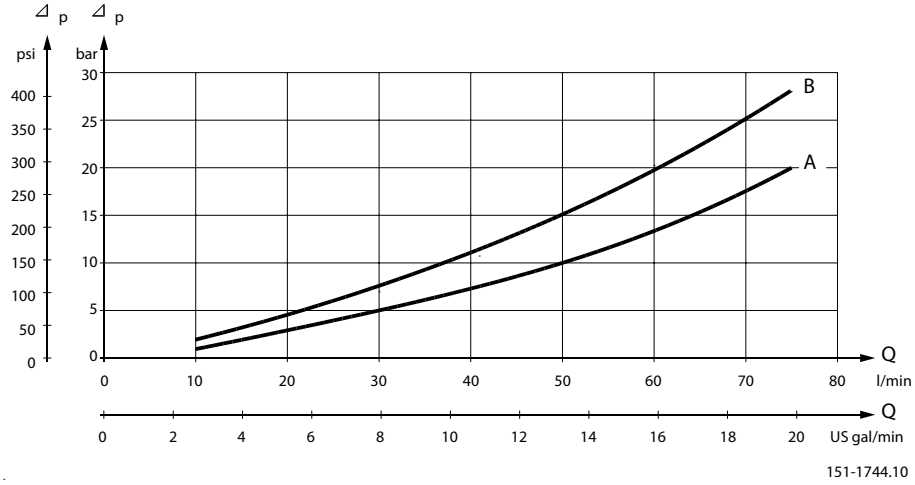
Max. return pressure without drain line or max. pressure in the drain line



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

151-1563.10

Pressure Drop in Motor



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

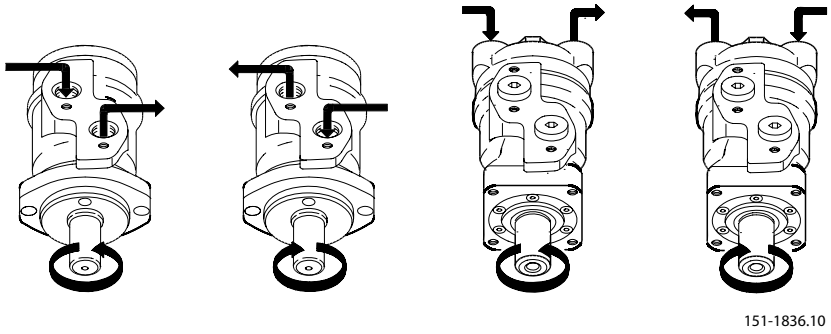
A: OMP 50 - 400
B: OMP 25 - 40 / OMPW

Oil Flow in Drain Line

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

Pressure drop bar [psi]	Viscosity mm²/s [SUS]	Oil flow in drain line 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]

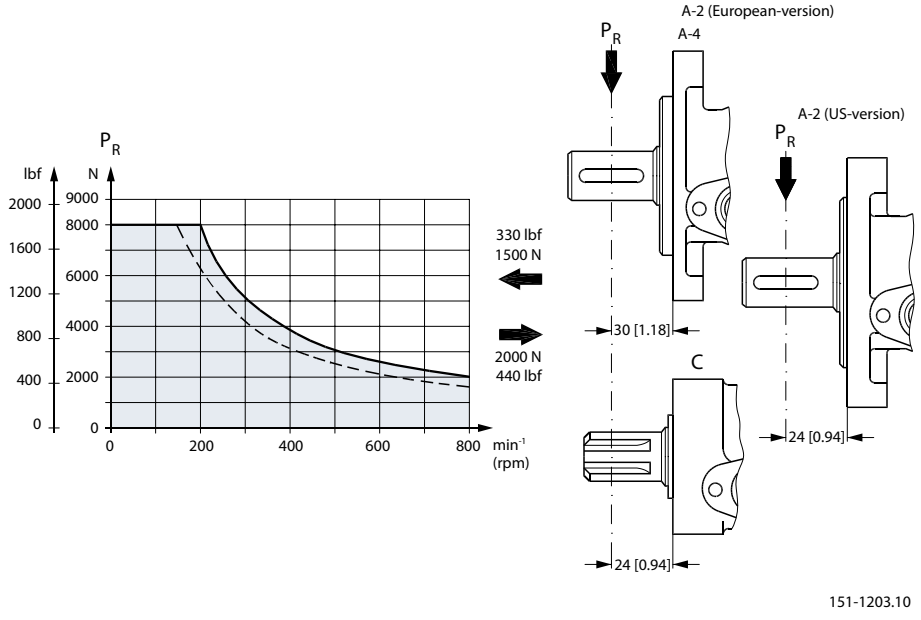
Direction of Shaft Rotation



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	$\frac{800}{n} \cdot \frac{250000\ N^*}{95 + L}$	$\frac{800}{n} \cdot \frac{187500\ N^*}{95 + L}$	$\frac{800}{n} \cdot \frac{250000\ N^*}{101 + L}$
Permissible shaft load (P_R) - l in inch	$\frac{800}{n} \cdot \frac{2215\ lbf^*}{3.74 + L}$	$\frac{800}{n} \cdot \frac{1660\ lbf^*}{3.74 + L}$	$\frac{800}{n} \cdot \frac{2215\ lbf^*}{3.98 + L}$

* $n \geq 200\ min^{-1}$ [rpm]; ≤ 55 mm [2.2 in]
$n < 200\ min^{-1}$ [rpm]; $=> P_{Rmax} = 8000$ N [1800 lbf]
** For both European and US-version

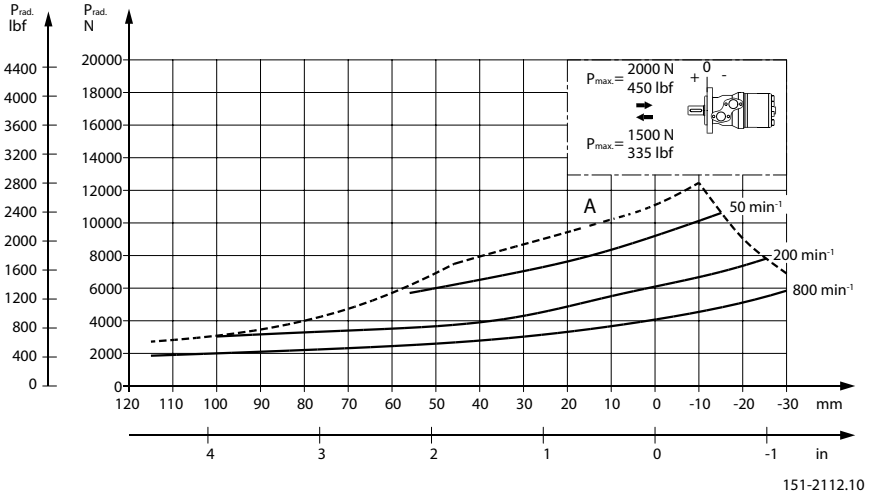


--------- *cylindrical shaft 32 mm [1.26 in]*
_____ *other shaft versions*

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 with the output shaft running in needle bearings.

Permissible Shaft Load for 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.

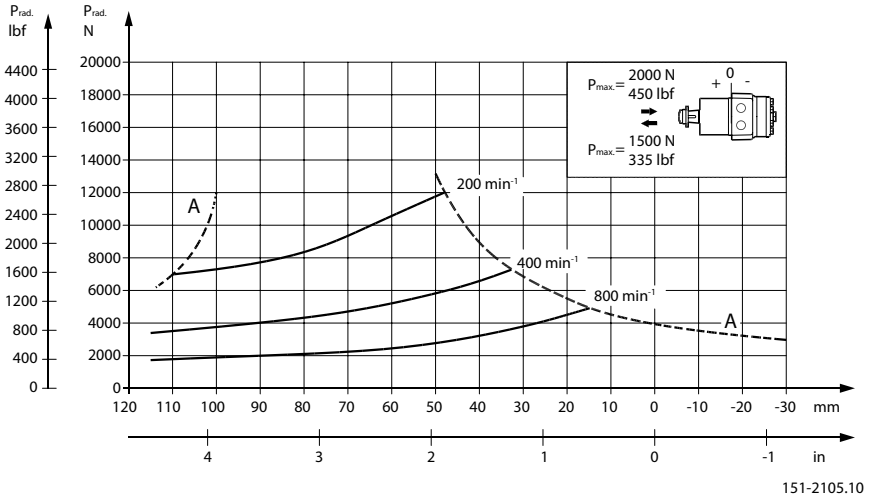
The permissible radial load on the shaft is shown for different speeds as a function of the distance from the mounting flange to the point of load application.

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 Rev. B.

Permissible Shaft Load for OMPW with Slide Bearings



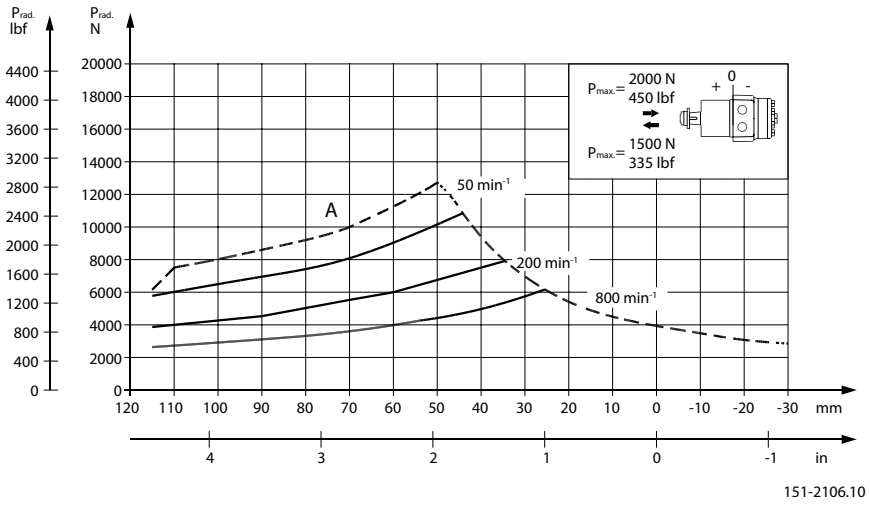
The output shaft on OMPW can be offered in slide bearings similar to the other OMP-motors. The permissible higher radial load is therefore due to the recessed mounting flange moving the point of load closer to the motor bearings.

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.

Permissible Shaft Load for OMPW N with Needle Bearing



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.

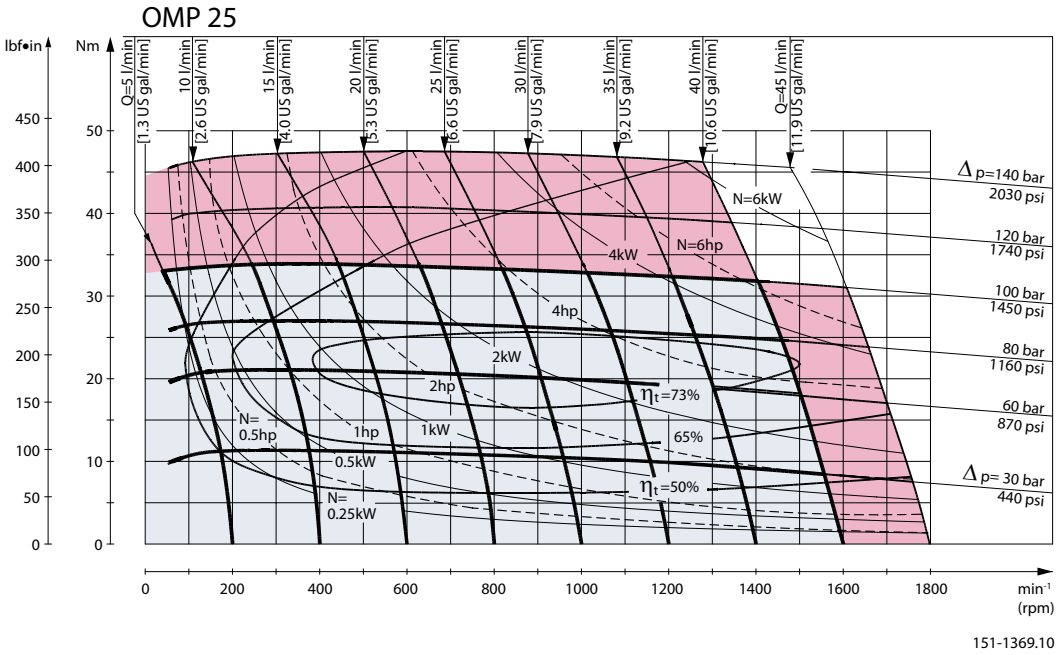
The permissible radial load on the shaft is shown for different speeds as a function of the distance from the mounting flange to the point of load application.

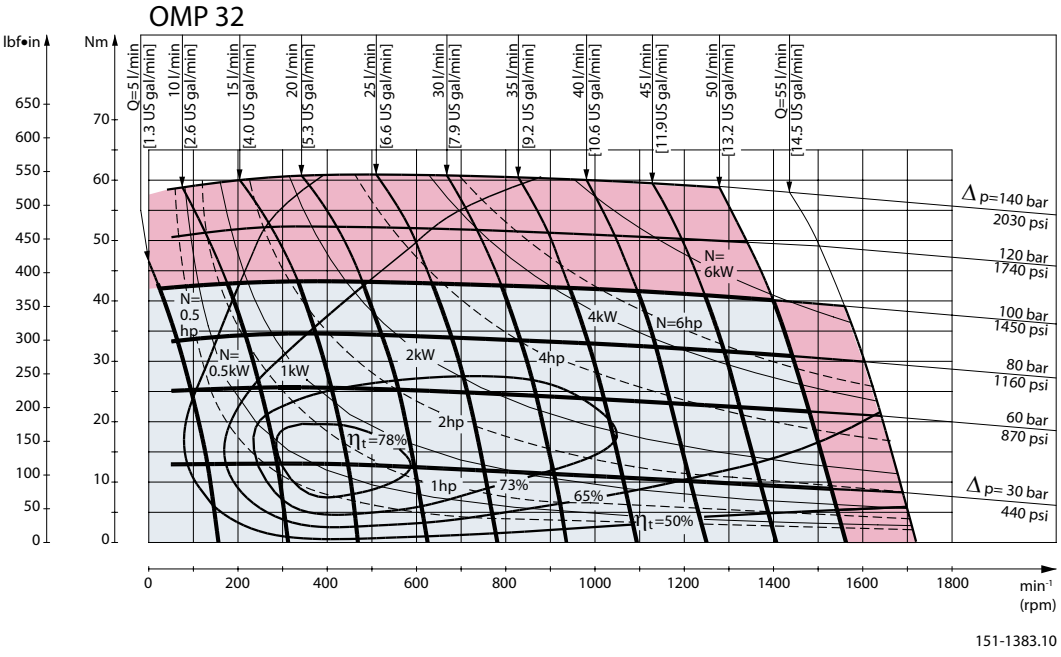
Curve A indicates the max. radial shaft load. Any shaft load exceeding the values quoted in curve A will involve risk of breakage.

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 Rev. B.

Function Diagrams





Explanation of function diagram use, basis and conditions can be found on page 7.

Continuous range

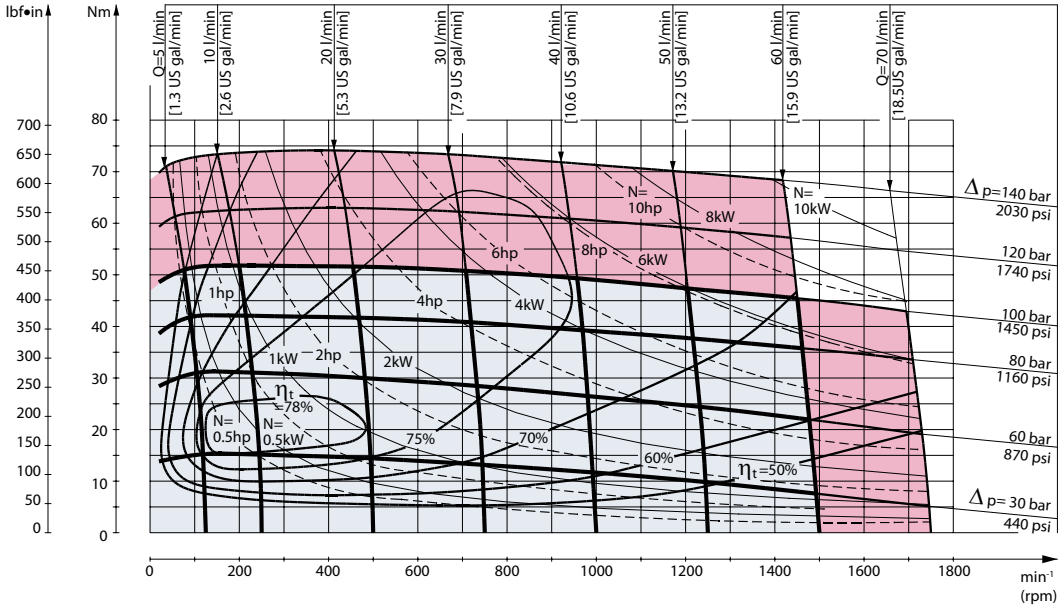
Intermittent range (max. 10% operation every minute)

Max. permissible continuous/intermittent pressure drop for the actual shaft version can be found on page 10-13.

Intermittent pressure drop and oil flow must not occur simultaneously.

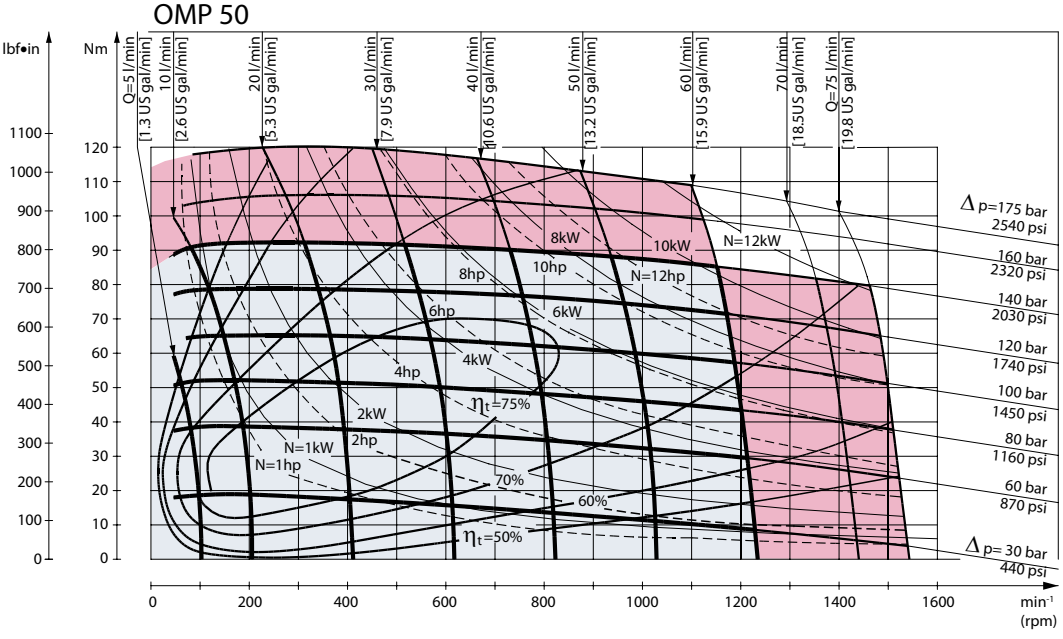
Function Diagrams

OMP 40



151-1384.10

OMP 50



151-177.10

Explanation of function diagram use, basis and conditions can be found on page 7.

Continuous range

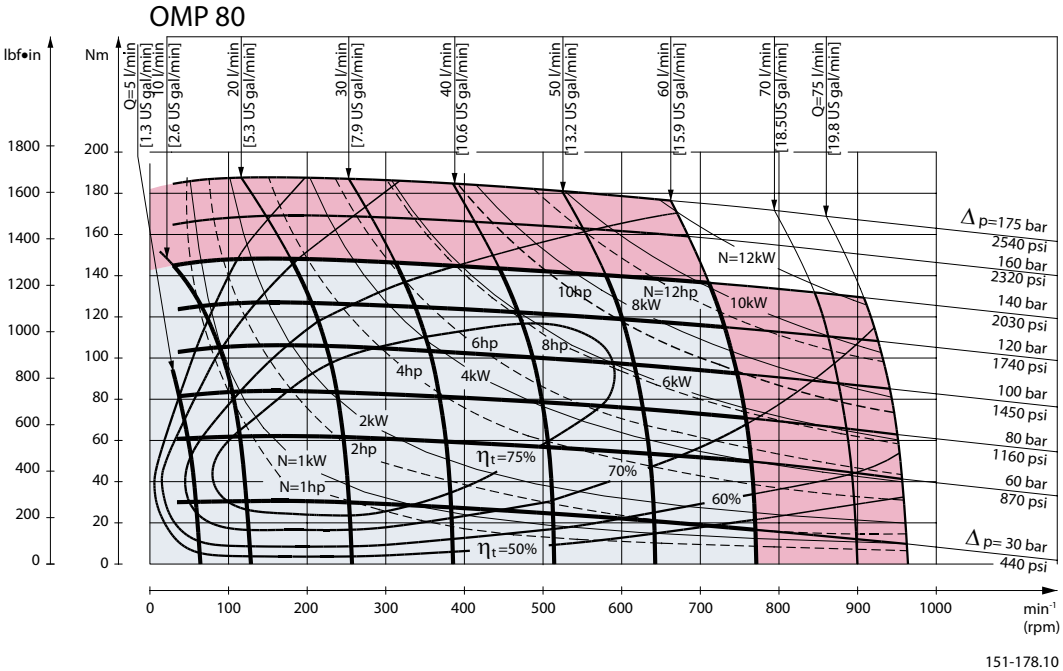
Intermittent range (max. 10% operation every minute)

Max. permissible continuous/intermittent pressure drop for the actual shaft version can be found on page 10-13.

Intermittent pressure drop and oil flow must not occur simultaneously.

Function Diagrams

OMP 60
under preparation



Explanation of function diagram use, basis and conditions can be found on page 7.

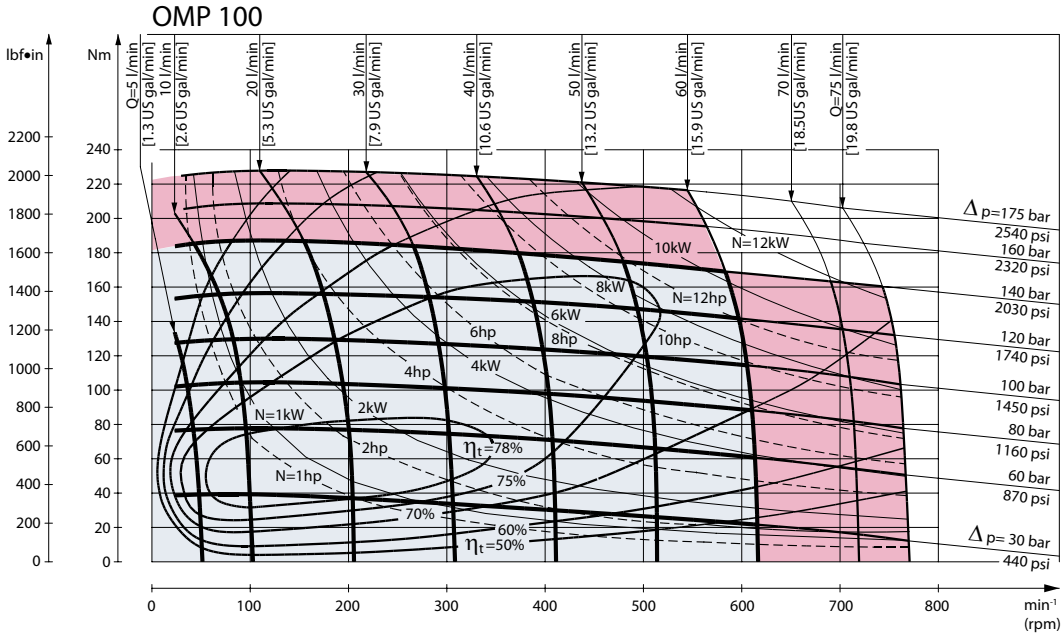
Continuous range

Intermittent range (max. 10% operation every minute)

Max. permissible continuous/intermittent pressure drop for the actual shaft version can be found on page 10-13.

Intermittent pressure drop and oil flow must not occur simultaneously.

Function Diagrams



OMP 110
under preparation

Explanation of function diagram use, basis and conditions can be found on page 7.

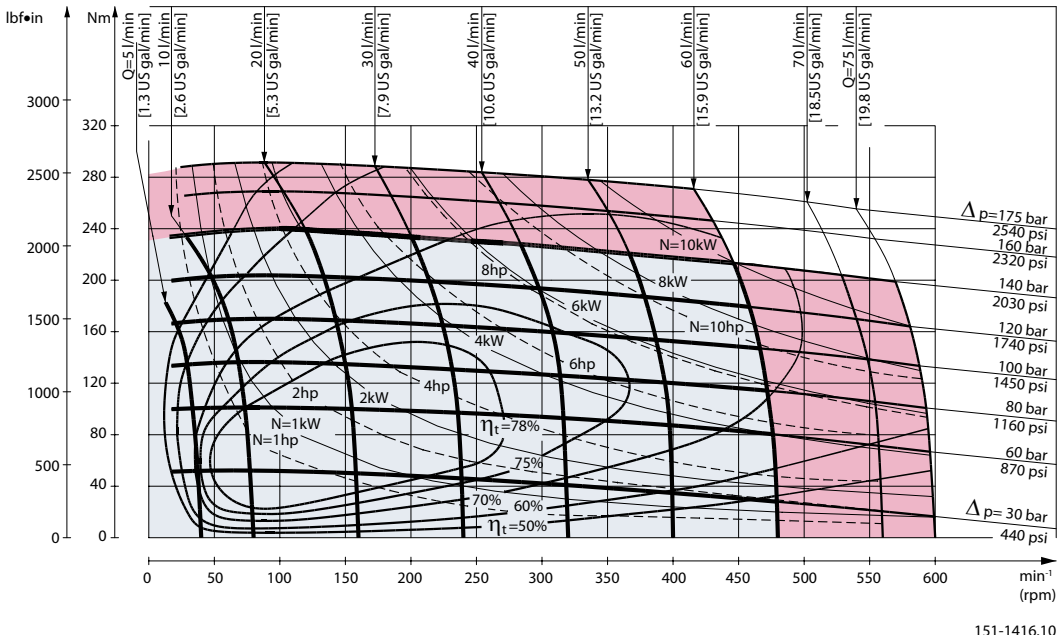
Continuous range

Intermittent range (max. 10% operation every minute)
Max. permissible continuous/intermittent pressure drop for the actual shaft version can be found on page 10-13

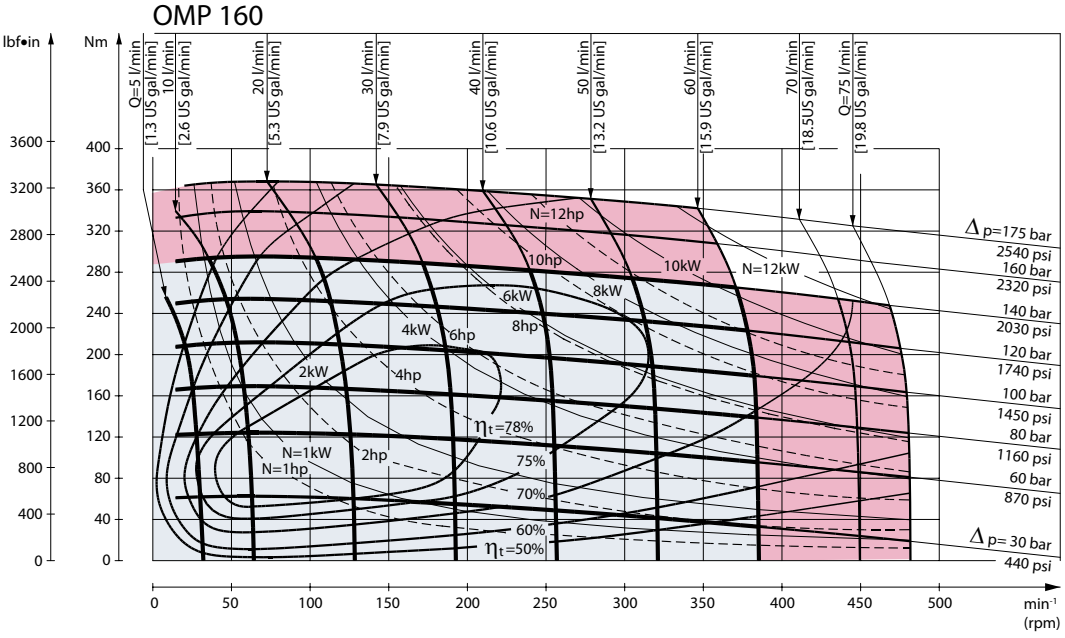
Intermittent pressure drop and oil flow must not occur simultaneously.

Function Diagrams

OMP 125



OMP 160



Explanation of function diagram use, basis and conditions can be found on page 7.

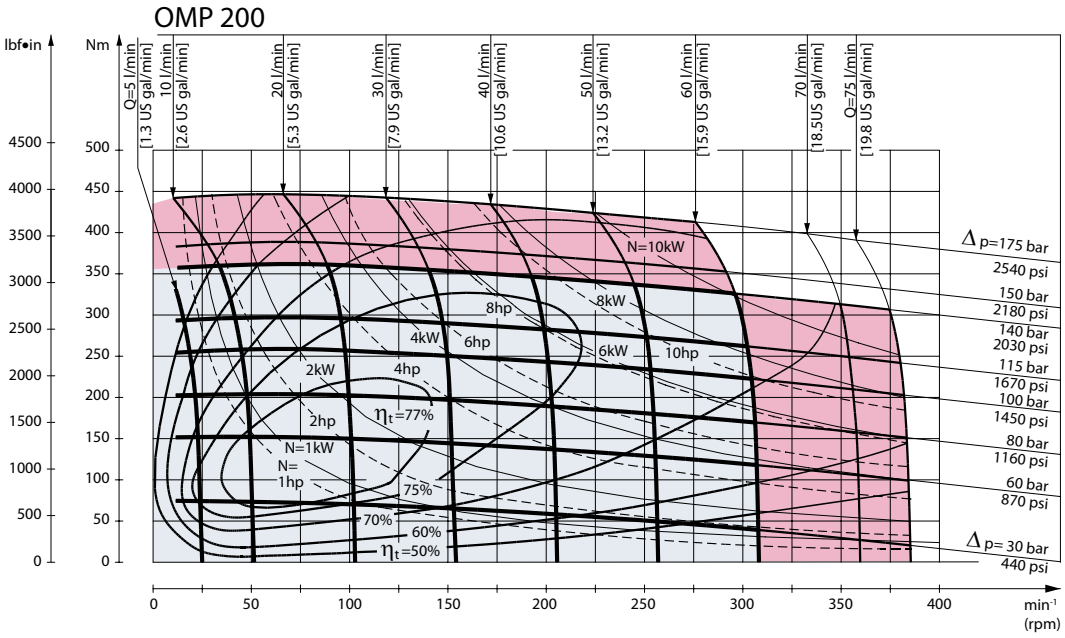
Continuous range

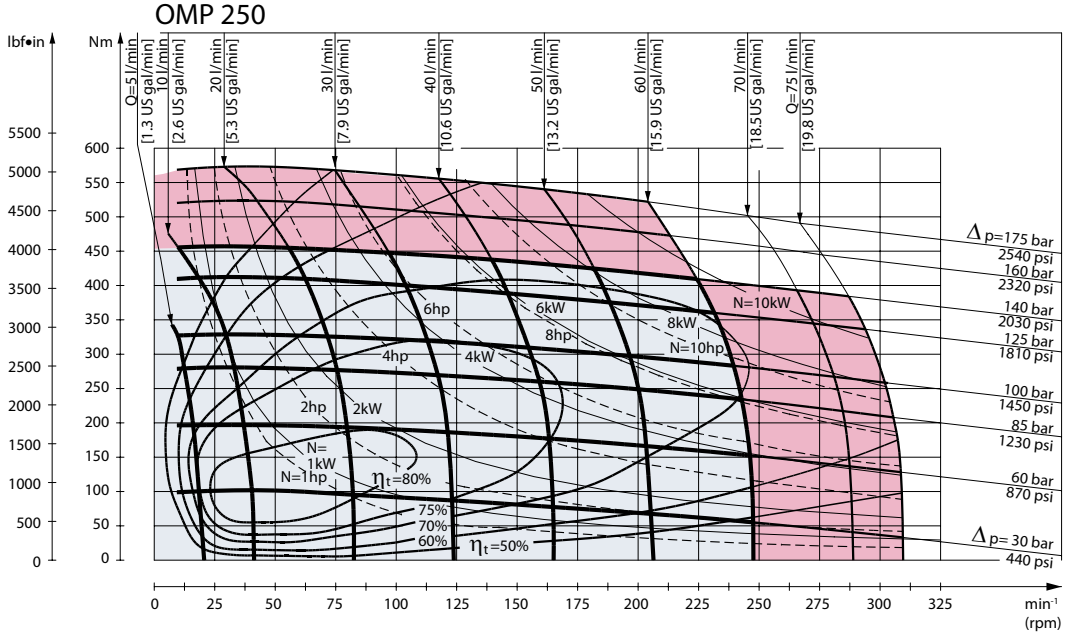
Intermittent range (max. 10% operation every minute)

Max. permissible continuous/intermittent pressure drop for the actual shaft version can be found on page 10-13.

Intermittent pressure drop and oil flow must not occur simultaneously.

Function Diagrams





Explanation of function diagram use, basis and conditions can be found on page 7.

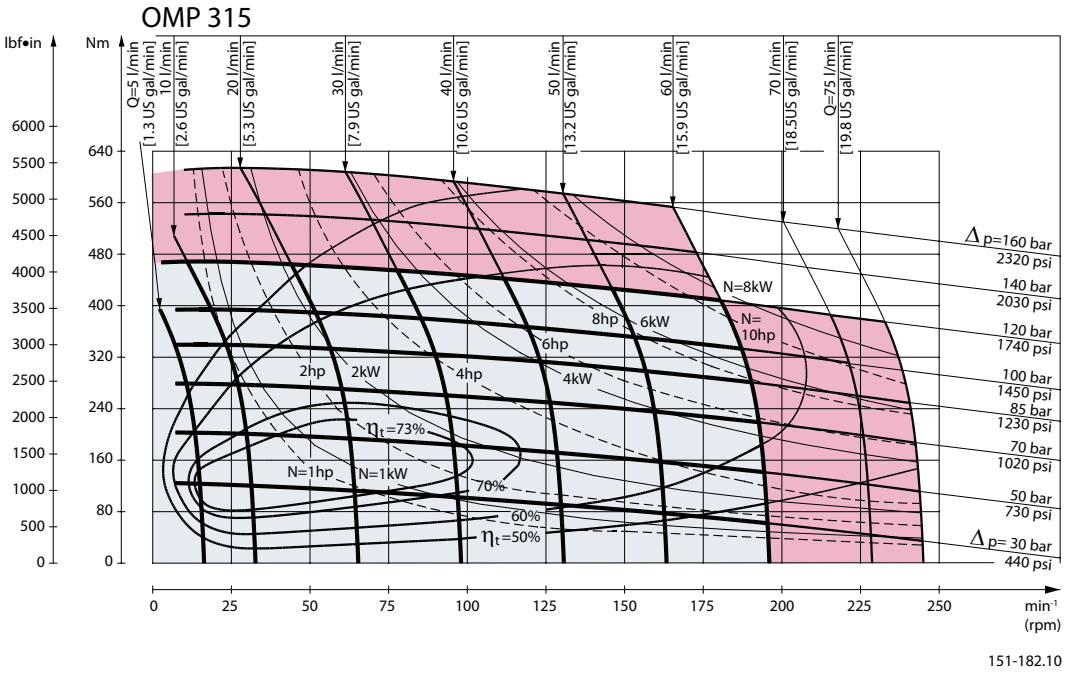
Continuous range

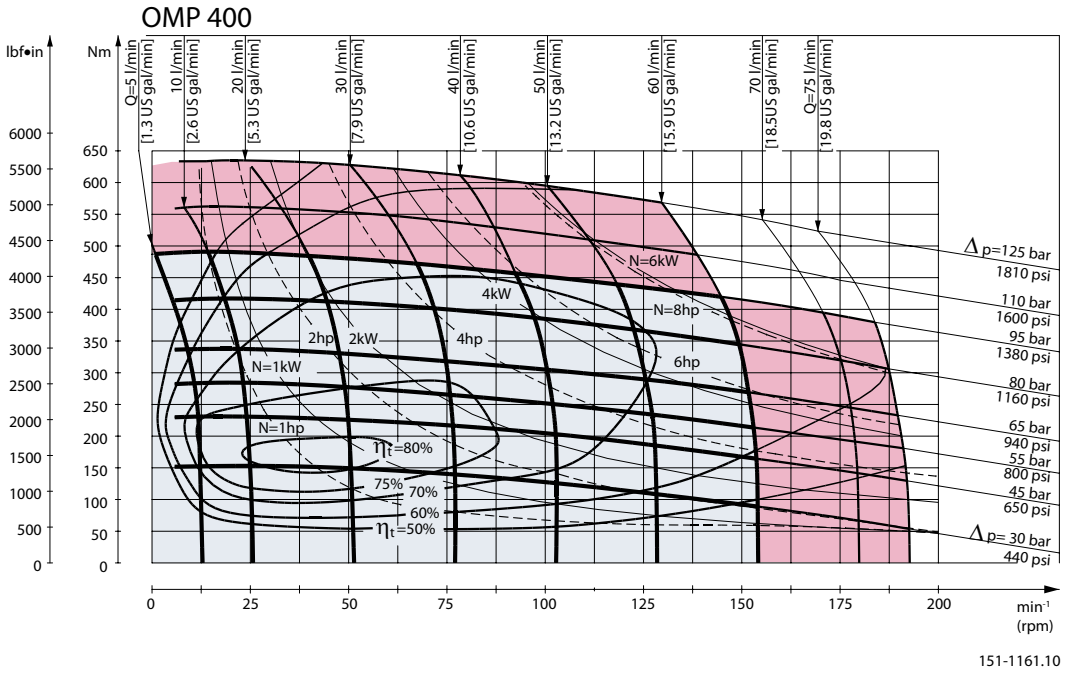
Intermittent range (max. 10% operation every minute)

Max. permissible continuous/intermittent pressure drop for the actual shaft version can be found on page 10-13.

Intermittent pressure drop and oil flow must not occur simultaneously.

Function Diagrams





Explanation of function diagram use, basis and conditions can be found on page 7.

Continuous range

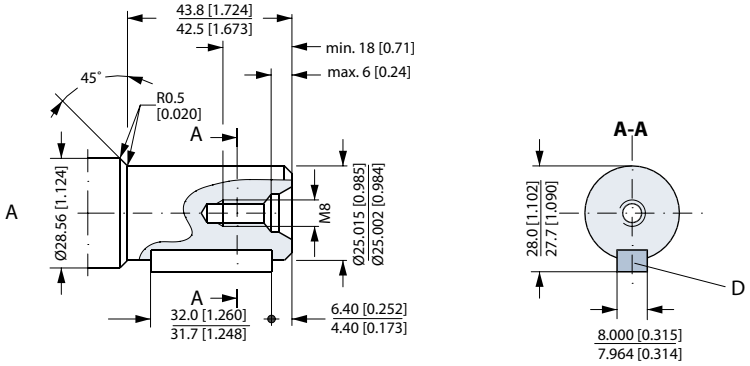
Intermittent range (max. 10% operation every minute)

Max. permissible continuous/intermittent pressure drop for the actual shaft version can be found on page 10-13.

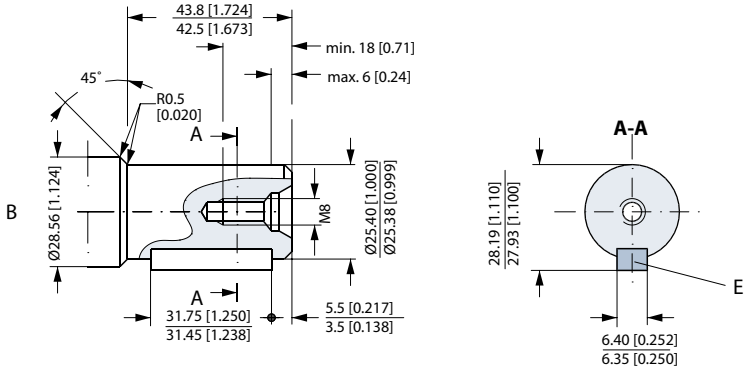
Intermittent pressure drop and oil flow must not occur simultaneously.

Shaft Version

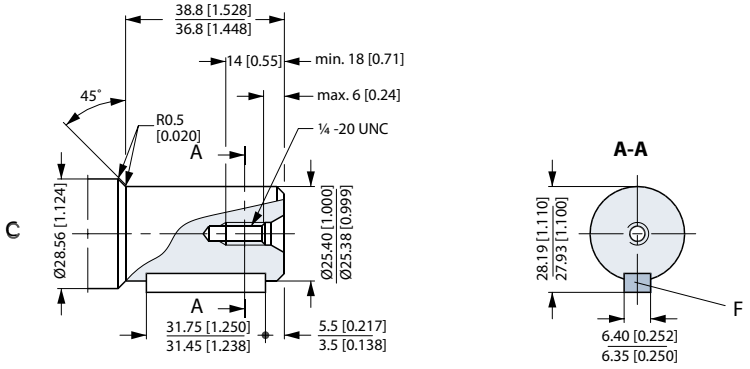
A: Cylindrical shaft
25 mm
D: Parallel key
A8 • 7 • 32
DIN 6885

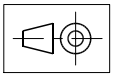


B: Cylindrical shaft
1 in
E: Parallel key
1/4 • 1/4 • 1 1/4 in
B.S. 46



US version
C: Cylindrical shaft
1 in
F: Parallel key
1/4 • 1/4 • 1 1/4 in
B.S. 46



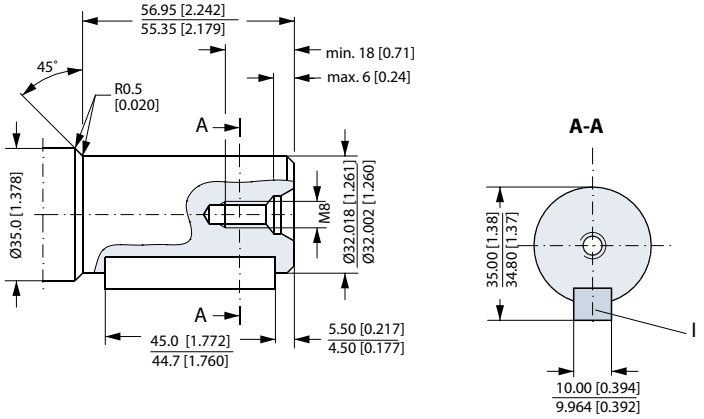


151-1842.12

Shaft Version

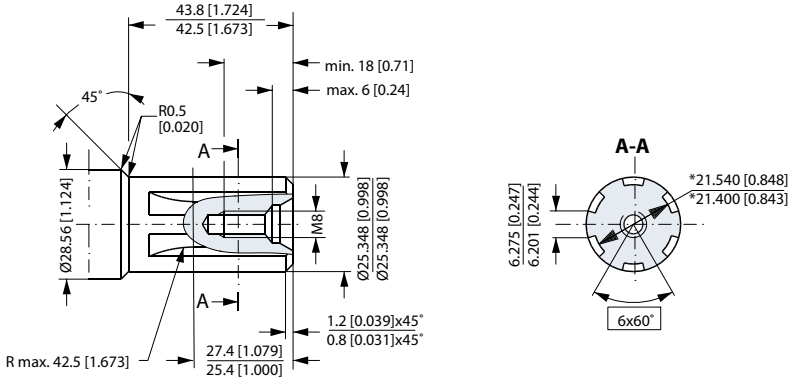
D: Cylindrical shaft 32 mm
I: Parallel key
A10 • 8 • 45
DIN 6885

D



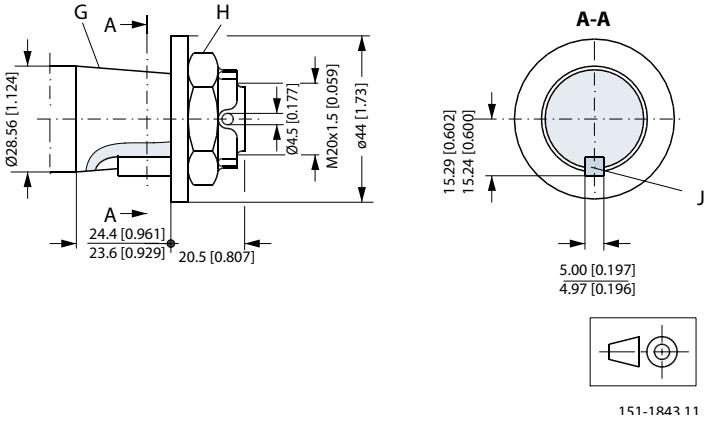
E: Splined shaft
B.S. 2059 (SAE 6 B)
Straight-sided,
bottom fitting, dep.
Fit 2
Nom. size 1 in
* Deviates from
BS 2059 (SAE 6B)

E

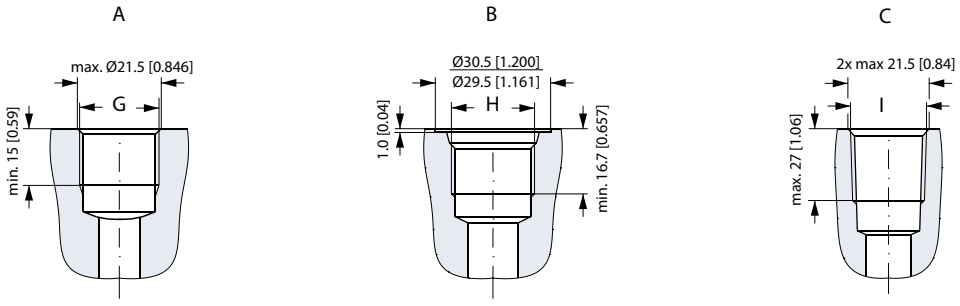


F: Tapered shaft
H: DIN 937
NV 30
Tightening torque:
100 ± 10 N•m [885 ± 88.50 lbf•in]
G: Taper 1:10
J: Parallel key
B5 • 5 • 14
DIN 6885

F



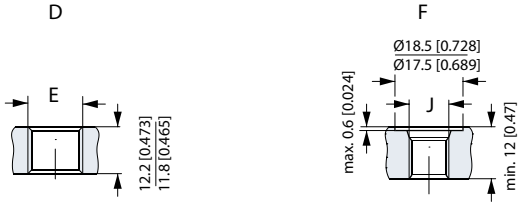
Port Thread Versions



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

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

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



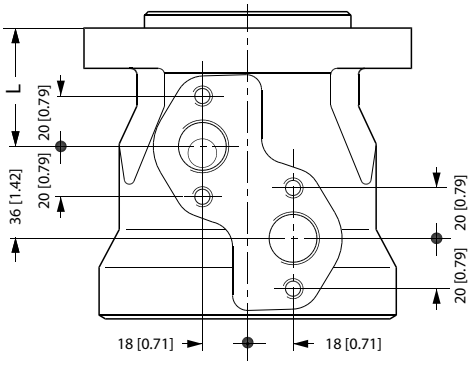
151-1844.11

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

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

Manifold Mount

European version



151-2135.10

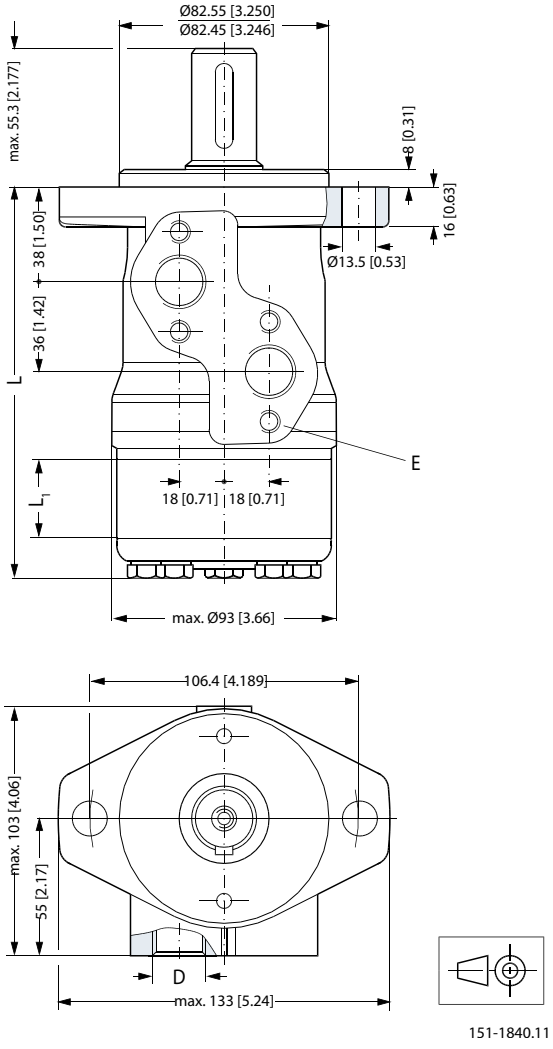
L: see dimensional drawing for given OMP motor on pages 30 - 38

Dimensions

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

Type	Max. L mm [in]	L_1 mm [in]
OMP 25	130.0 [5.12]	4.1 [0.16]
OMP 32	131.0 [5.16]	5.2 [0.20]
OMP 40	132.0 [5.20]	6.5 [0.26]
OMP 50	132.0 [5.20]	6.5 [0.26]
OMP 80	136.0 [5.35]	10.4 [0.41]
OMP 100	138.5 [5.45]	13.0 [0.51]
OMP 125	142.0 [5.59]	16.7 [0.66]
OMP 160	146.5 [5.77]	20.8 [0.82]
OMP 200	151.5 [5.96]	26.0 [1.02]
OMP 250	158.0 [6.22]	32.5 [1.28]
OMP 315	166.5 [6.56]	40.9 [1.61]
OMP 400	177.6 [6.99]	52.0 [2.05]

D: G ½; 15 mm [0.59 in] deep
E: M8; 13 mm [0.51 in] deep (4 pcs.)



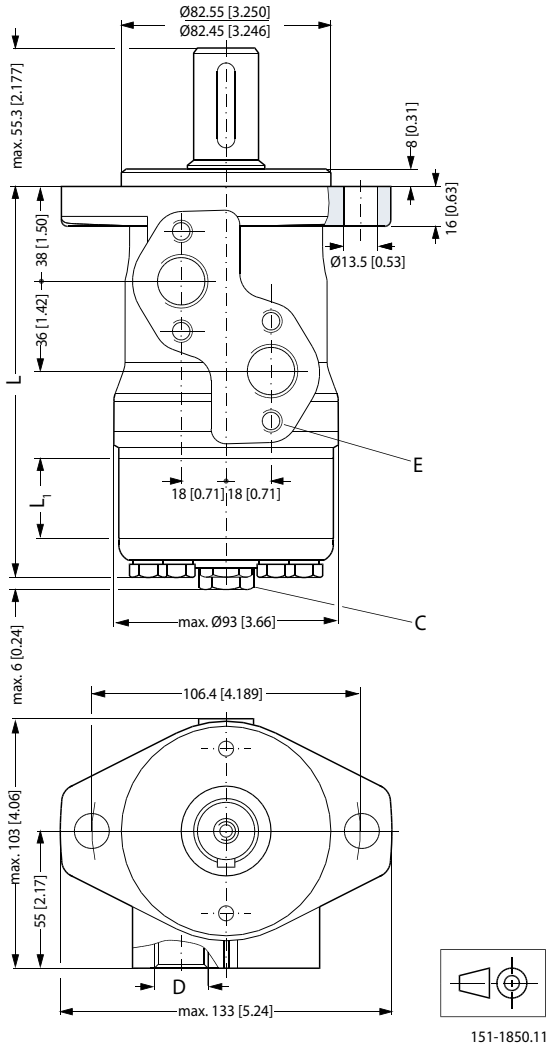
Dimensions - European Version

Dimensions

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

Type	Max. L mm [in]	L_1 mm [in]
OMP 25	130.0 [5.12]	4.1 [0.16]
OMP 32	131.0 [5.16]	5.2 [0.20]
OMP 40	132.0 [5.20]	6.5 [0.26]
OMP 50	132.0 [5.20]	6.5 [0.26]
OMP 80	136.0 [5.35]	10.4 [0.41]
OMP 100	138.5 [5.45]	13.0 [0.51]
OMP 125	142.0 [5.59]	16.7 [0.66]
OMP 160	146.5 [5.77]	20.8 [0.82]
OMP 200	151.5 [5.96]	26.0 [1.02]
OMP 250	158.0 [6.22]	32.5 [1.28]
OMP 315	166.5 [6.56]	40.9 [1.61]
OMP 400	177.6 [6.99]	52.0 [2.05]

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.)

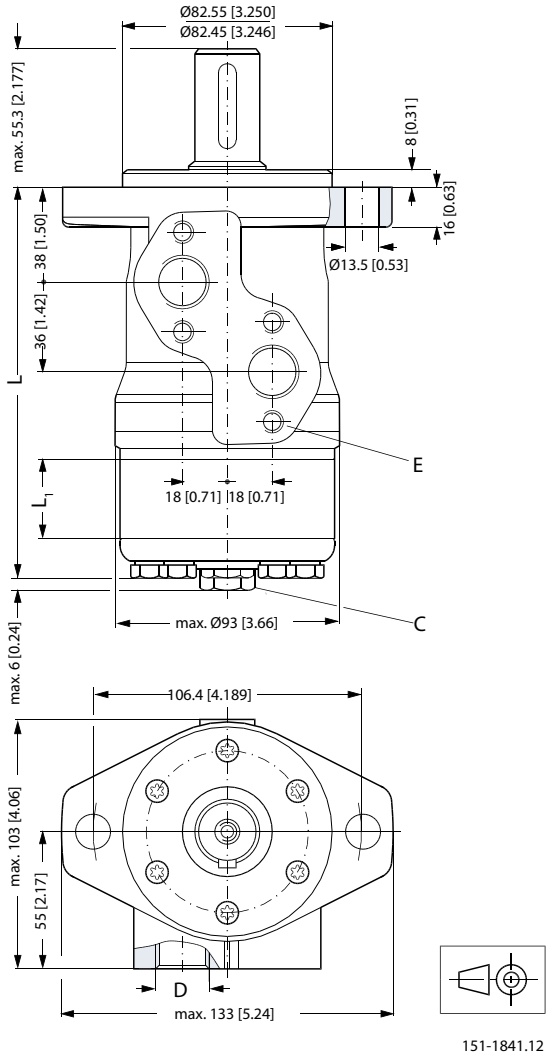


Dimensions

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

Type	Max. L mm [in]	L_1 mm [in]
OMP 50	132.0 [5.20]	6.5 [0.26]
OMP 80	136.0 [5.35]	10.4 [0.41]
OMP 100	138.5 [5.45]	13.0 [0.51]
OMP 125	142.0 [5.59]	16.7 [0.66]
OMP 160	146.5 [5.77]	20.8 [0.82]
OMP 200	151.5 [5.97]	26.0 [1.02]
OMP 250	158.0 [6.22]	32.5 [1.28]
OMP 315	166.5 [6.56]	40.9 [1.61]
OMP 400	177.6 [6.99]	52.0 [2.05]

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.)



151-1841.12

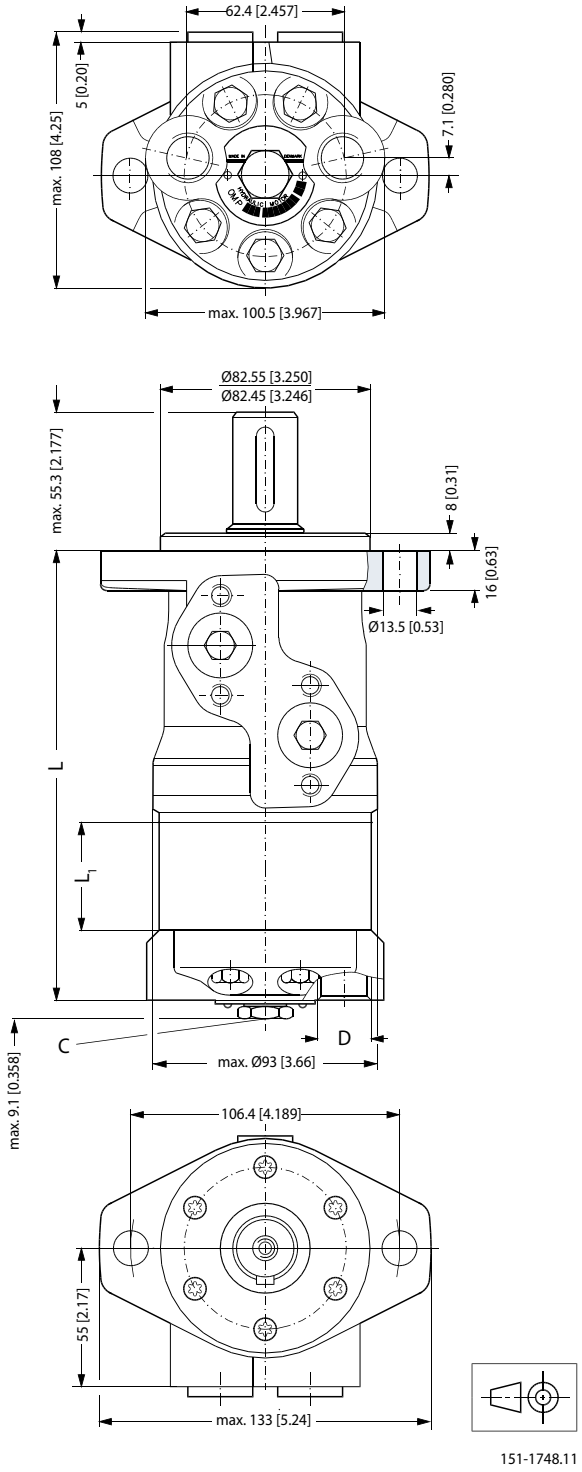
Dimensions - European Version

Dimensions

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

Type	Max. L mm [in]	L_1 mm [in]
OMP 50	146.1 [5.75]	6.5 [0.26]
OMP 80	150.0 [5.91]	10.4 [0.41]
OMP 100	152.7 [6.01]	13.0 [0.51]
OMP 125	156.2 [6.15]	16.7 [0.66]
OMP 160	160.4 [6.32]	20.8 [0.82]
OMP 200	165.6 [6.52]	26.0 [1.02]
OMP 250	172.1 [6.78]	32.5 [1.28]
OMP 315	180.5 [7.11]	40.9 [1.61]
OMP 400	191.6 [7.54]	52.0 [2.05]

C: Drain connection
G ¼; 12 mm [0.47 in] deep
D: G ½; 15 mm [0.59 in] deep

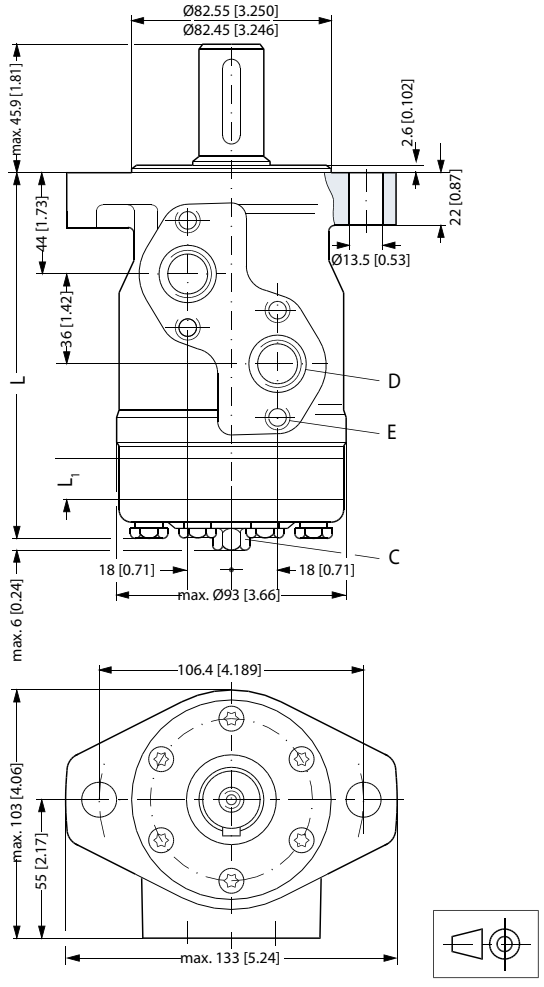


Dimensions

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

Type	Max. L mm [in]	L_1 mm [in]
OMP 25	136.0 [5.35]	4.1 [0.16]
OMP 32	137.0 [5.39]	5.2 [0.20]
OMP 40	138.0 [5.43]	6.5 [0.26]
OMP 50	138.0 [5.43]	6.5 [0.26]
OMP 80	142.0 [5.59]	10.4 [0.41]
OMP 100	144.5 [5.69]	13.0 [0.51]
OMP 125	148.0 [5.83]	16.7 [0.66]
OMP 160	152.5 [6.00]	20.8 [0.82]
OMP 200	157.5 [6.20]	26.0 [1.02]
OMP 250	164.0 [6.46]	32.5 [1.28]
OMP 315	172.5 [6.79]	40.9 [1.61]
OMP 400	183.6 [7.23]	52.0 [2.05]

C: Drain connection G 7/16 UNF; 12 mm [0.47 in] deep
D: G 7/8 - 14 UNF; 16.7 mm [0.66 in] deep
E: M8; 13 mm [0.51 in] deep (4 pcs.)



151-1217.11

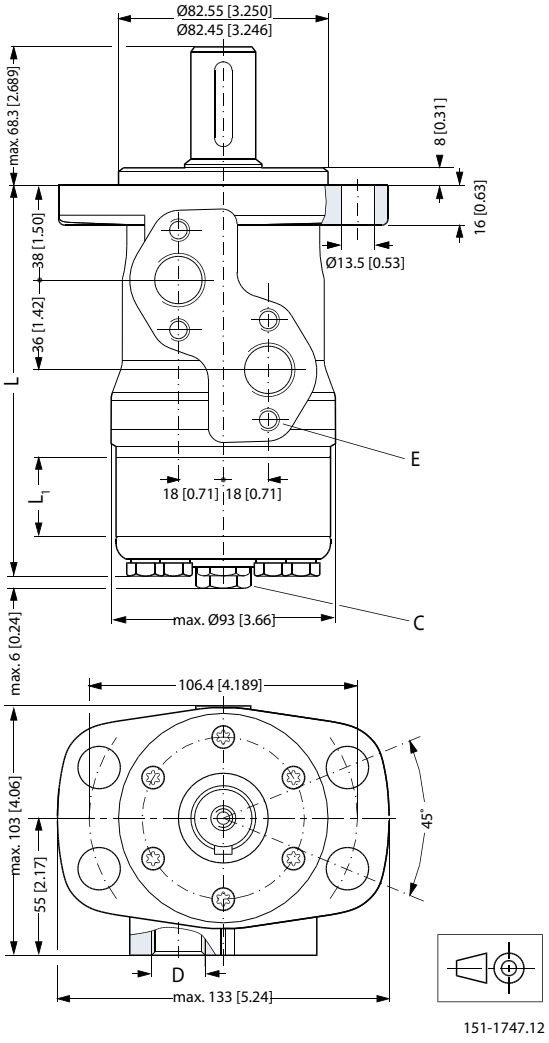
Dimensions - European Version

Dimensions

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

Type	Max. L mm [in]	L_1 mm [in]
OMP 50	132.0 [5.20]	6.5 [0.26]
OMP 80	136.0 [5.35]	10.4 [0.41]
OMP 100	138.5 [5.45]	13.0 [0.51]
OMP 125	142.0 [5.59]	16.7 [0.66]
OMP 160	146.5 [5.77]	20.8 [0.82]
OMP 200	151.5 [5.97]	26.0 [1.02]
OMP 250	158.0 [6.22]	32.5 [1.28]
OMP 315	166.5 [6.56]	40.9 [1.61]
OMP 400	177.6 [6.99]	52.0 [2.05]

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.)



151-1747.12

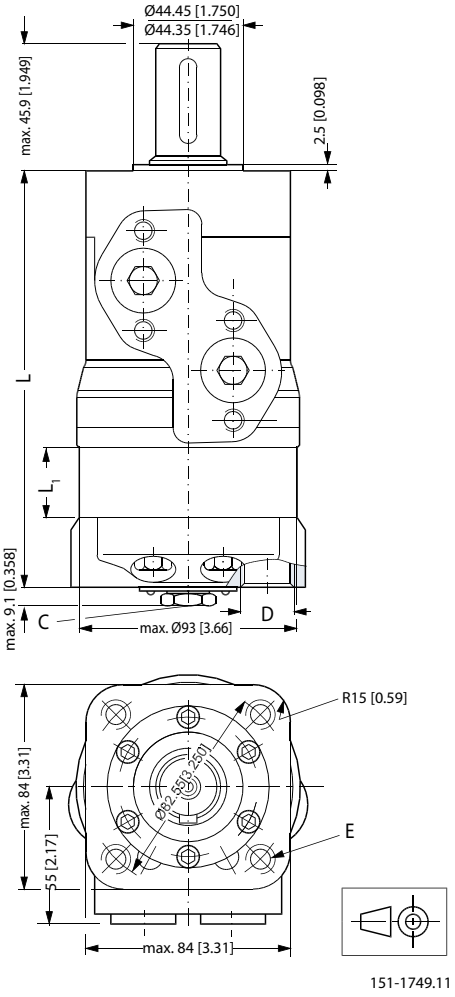
Dimensions - European Version

Dimensions

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

Type	Max. L mm [in]	L_1 mm [in]
OMP 50	152.0 [5.98]	6.5 [0.26]
OMP 80	156.0 [6.14]	10.4 [0.41]
OMP 100	158.6 [6.24]	13.0 [0.51]
OMP 125	162.1 [6.38]	16.7 [0.66]
OMP 160	166.4 [6.55]	20.8 [0.82]
OMP 200	171.6 [6.76]	26.0 [1.02]
OMP 250	178.1 [7.01]	32.5 [1.28]
OMP 315	186.5 [7.34]	40.9 [1.61]
OMP 400	197.6 [7.78]	52.0 [2.05]

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



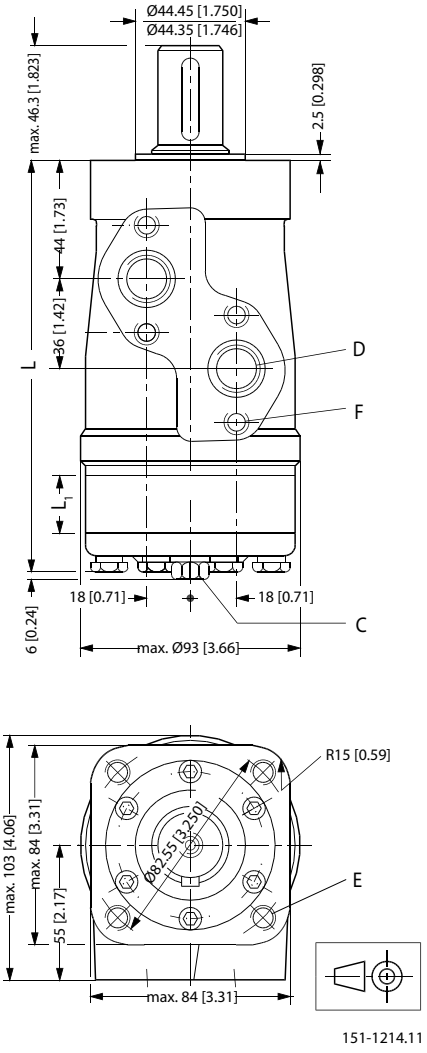
Dimensions - US Version

Dimensions

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

Type	Max. L mm [in]	L_1 mm [in]
OMP 50	132.0 [5.20]	6.5 [0.26]
OMP 80	136.0 [5.35]	10.4 [0.41]
OMP 100	138.5 [5.45]	13.0 [0.51]
OMP 125	142.0 [5.59]	16.7 [0.66]
OMP 160	146.5 [5.77]	20.8 [0.82]
OMP 200	151.5 [5.97]	26.0 [1.02]
OMP 250	158.0 [6.22]	32.5 [1.28]
OMP 315	166.5 [6.56]	40.9 [1.61]
OMP 400	177.6 [6.99]	52.0 [2.05]

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.)



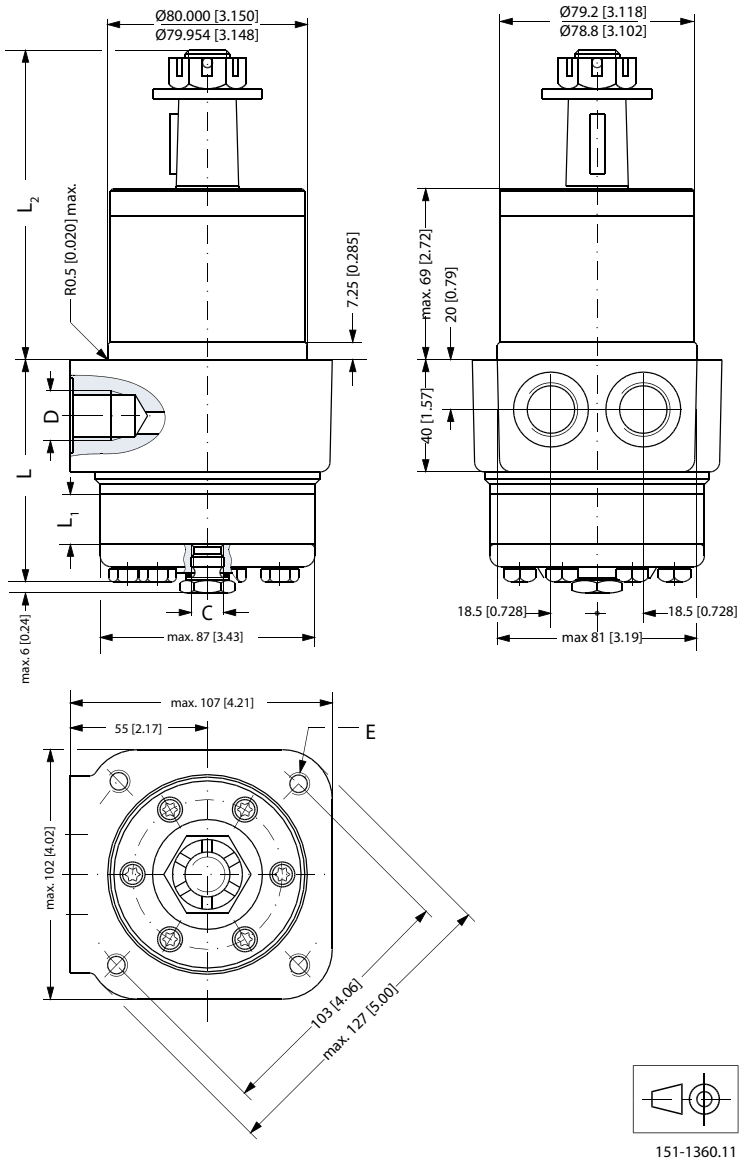
Dimensions

OMPW and OMPW N wheel motor

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	Max. L mm [in]	L_1 mm [in]
OMP 50	71.8 [2.83]	6.5 [0.26]
OMP 80.	75.7 [2.98]	10.4 [0.41]
OMP 100	78.3 [3.08]	13.0 [0.51]
OMP 125	81.6 [3.21]	16.7 [0.66]
OMP 160	86.1 [3.39]	20.8 [0.82]
OMP 200	91.3 [3.60]	26.0 [1.02]
OMP 250	97.8 [3.85]	32.5 [1.28]
OMP 315	106.2 [4.18]	40.9 [1.61]
OMP 400	117.3 [4.62]	52.0 [2.05]

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.)



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