

Technical Information Orbital Motors Type OMP, OMR and OMH

Technical Data

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	cont.	1600	1560	1500	1230	1000	770	615
	[rpm]	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 bar unloaded shaft [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.

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	cont.	535	480	385	310	250	195	155
	[rpm]	int. ¹⁾	670	600	480	385	310	245	190

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Type			OMP	OMP	OMP	OMP	OMP	OMP	OMP
Motor size			110	125	160	200	250	315	400
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 bar unloaded shaft [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	cont.	1230	770	615	480	385	310	250	195	155
	[rpm]	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]

Technical Information Orbital Motors Type OMP, OMR and OMH

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Type			OMP	OMP	OMP	OMP	OMP	OMP	OMP	OMP	OMP
Motor size			50	80	100	125	160	200	250	315	400
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]
		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]
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	cont.	1230	770	615	480	385	310	250	195	155
	[rpm]	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]
		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]	180 [2610]

Technical Information Orbital Motors Type OMP, OMR and OMH

Technical Data

Type			OMP	OMP	OMP	OMP	OMP	OMP	OMP	OMP	OMP
Motor size			50	80	100	125	160	200	250	315	400
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]

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.

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

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

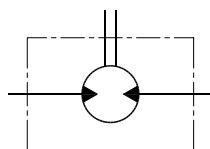
²⁾ Peak load: the permissible values may occur for max. 1% of every minute.

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.

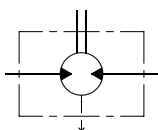


151-1743.10

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

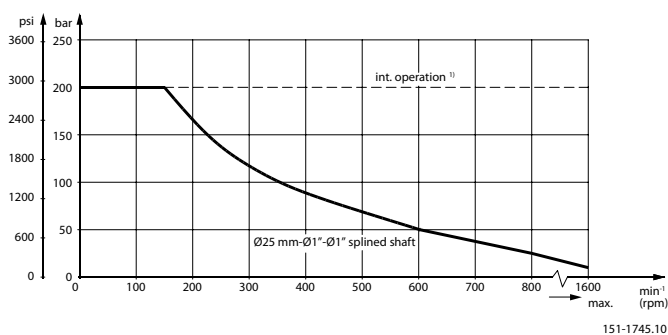
OMP with HPS and drain connection:

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



151-1855.10

Max. permissible shaft seal pressure

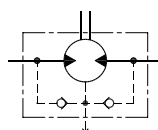


151-1745.10

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



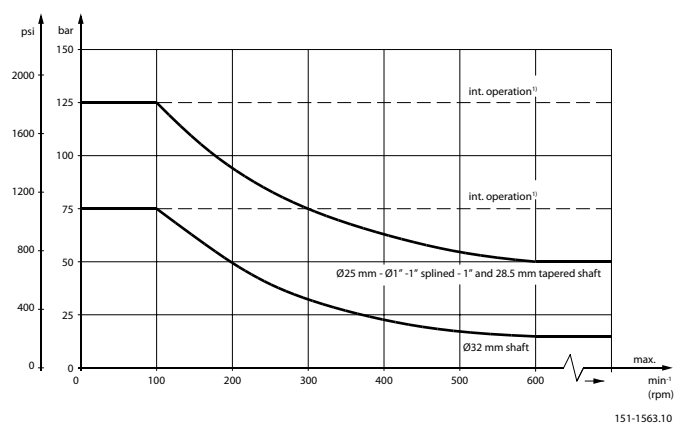
151-320.10

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

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

Technical Data - Max. Permissible Shaft Seal Pressure

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



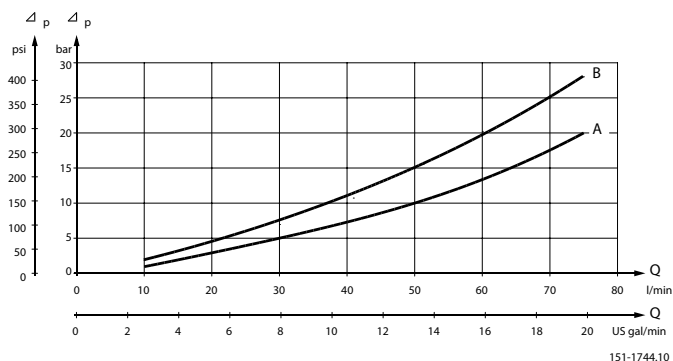
1) Intermittent operation: the permissible values may occur for max. 10% of every minute.

Technical Information Orbital Motors Type OMP, OMR and OMH

Technical Data

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

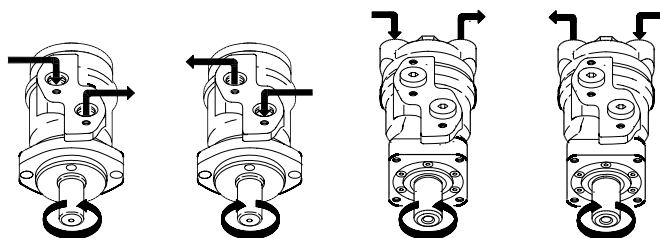
B: OMP 25 - 40 / OMPW

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 mm ² /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



151-1836.10

The permissible radial shaft load (PR) depends on

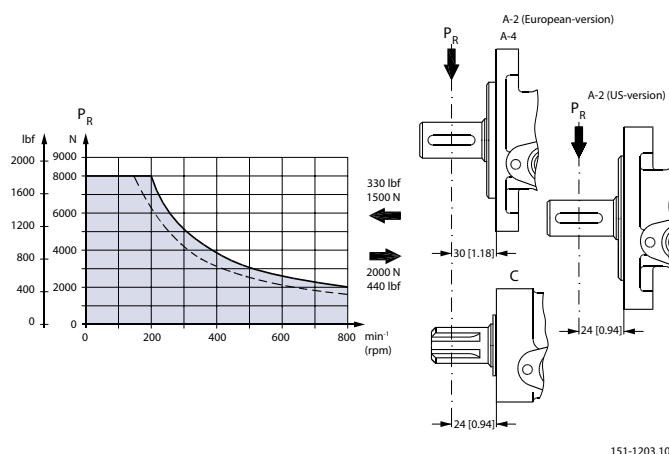
- Speed (n)
- Distance (L) from the point of load to the mounting flange
- Mounting flange version
- Shaft version

Mounting flange	4-oval flange** 2-hole oval flange (European version)	4-hole oval flange	Square flange** 2-hole oval flange (US-version)
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Technical Information Orbital Motors Type OMP, OMR and OMH

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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 (PR) - l in mm	800 250000 N* n 95 + L	800 187500 N* n 95 + L	800 250000 N* n 101 + L
Permissible shaft load (PR) - l in inch	800 2215 lbf* n 3.74 + L	800 1660 lbf* n 3.74 + L	800 2215 lbf* n 3.98 + L
* $n \geq 200 \text{ min}^{-1} [\text{rpm}]$; $\leq 55 \text{ mm} [2.2 \text{ in}]$ $n < 200 \text{ min}^{-1} [\text{rpm}]$; $= > \text{PRmax} = 8000 \text{ N} [1800 \text{ lbf}]$ ** For both European and US-version			



----- cylindrical shaft 32 mm [1.26 in]

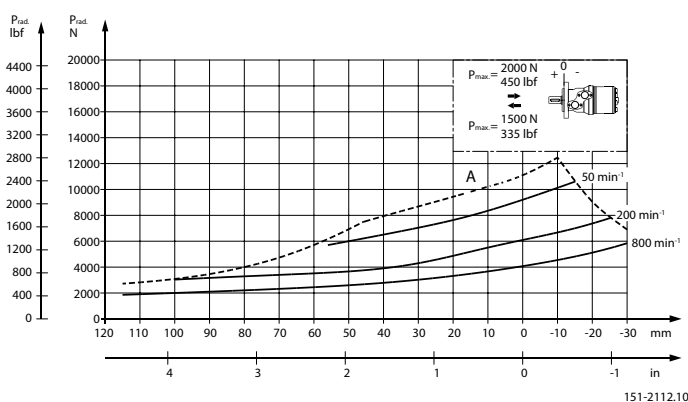
_____ other shaft versions

The curve shows the relation between PR and n

- when $l = 30 \text{ mm} [1.18 \text{ in}]$ for motors with A2 (European version) and A4 oval mounting flange
- when $l = 24 \text{ mm} [0.94 \text{ in}]$ 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.

Technical Data

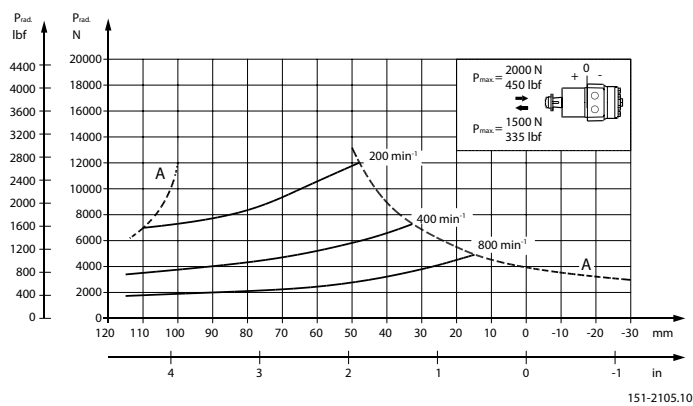
The permissible radial load on the shaft is shown for different speeds as a function of the distance from the mounting flange to the point of load application.

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



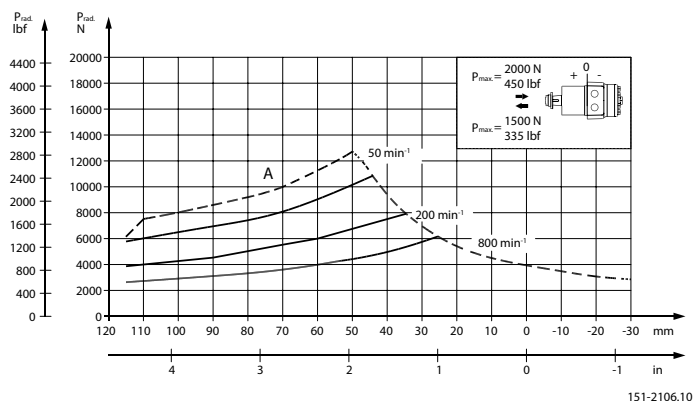
The output shaft on OMPW can be offered in slide bearings similar to the other OMP-motors. The permissible higher radial load is therefore due to the recessed mounting flange moving the point of load closer to the motor bearings.

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.

Technical Data

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

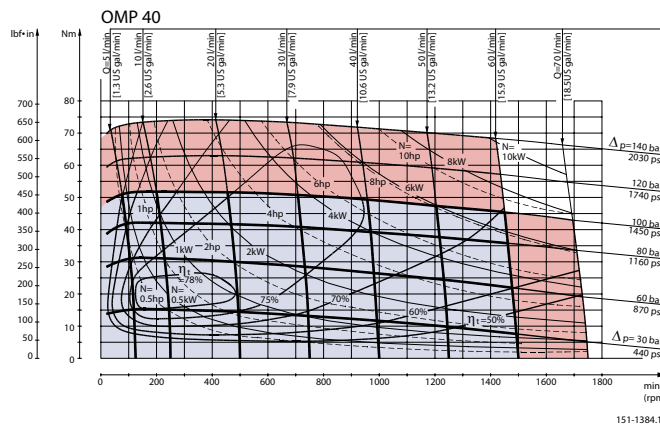
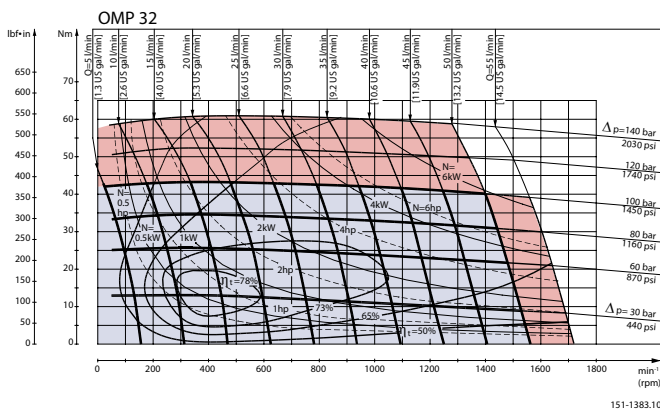
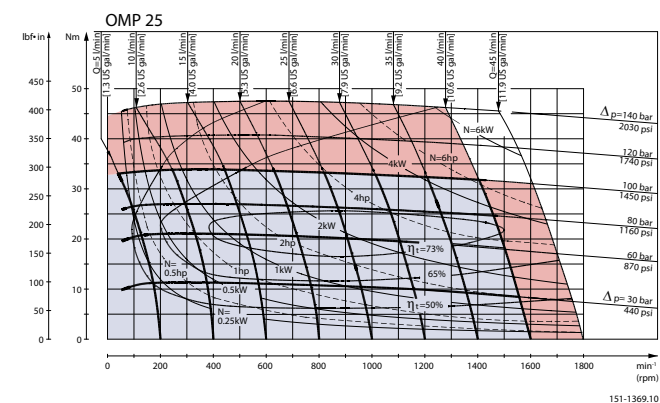
Function Diagrams

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

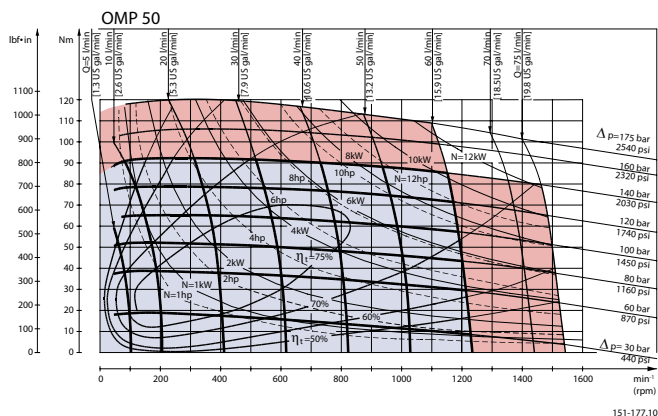
- Continuous range
- Intermittent range (max. 10% operation every minute)

Max. permissible continuous/intermittent pressure drop for the actual shaft version can be found in [Technical data for OMP with 25 mm and 1 in cylindrical shaft](#) on page 11.

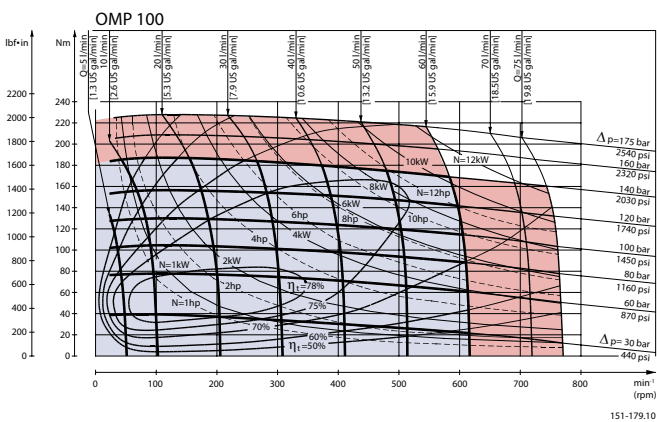
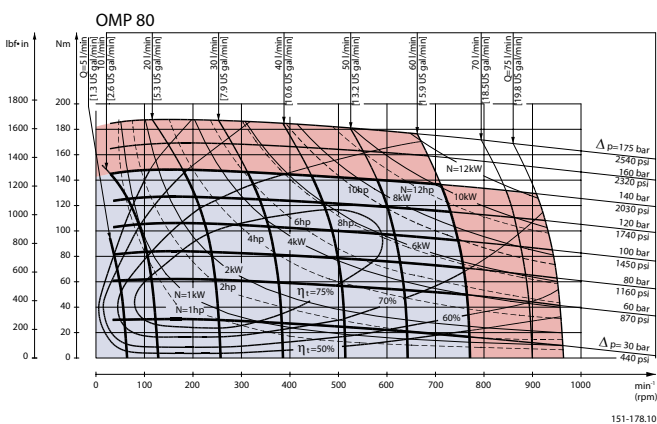
Intermittent pressure drop and oil flow must not occur simultaneously.



Function Diagrams

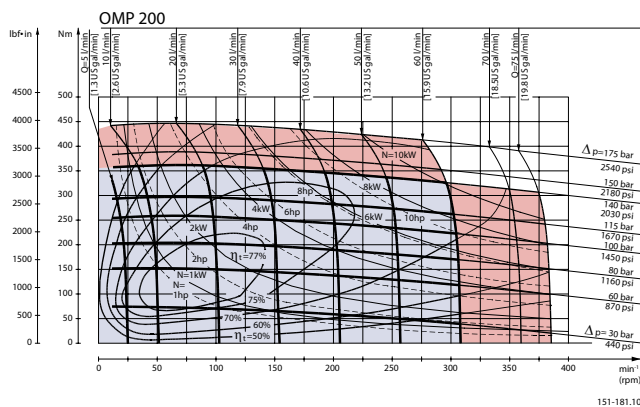
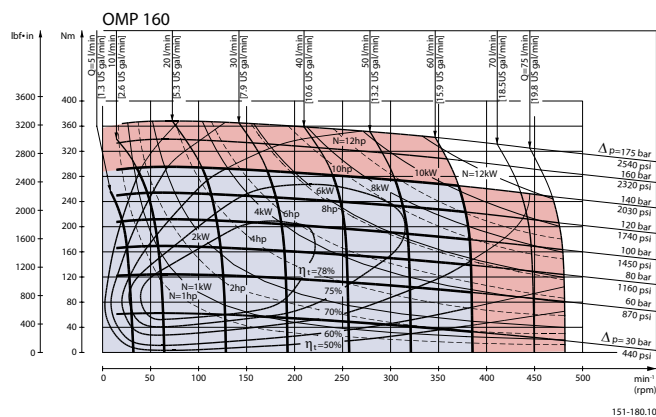
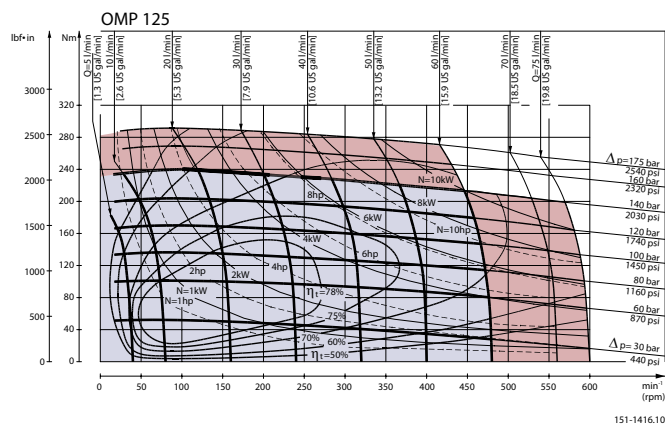


OMP 60 under preparation

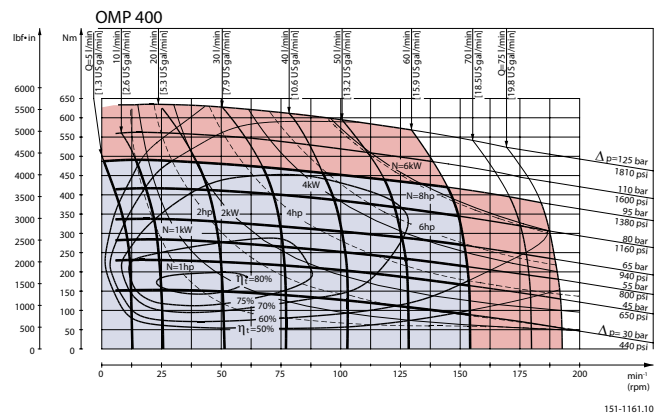
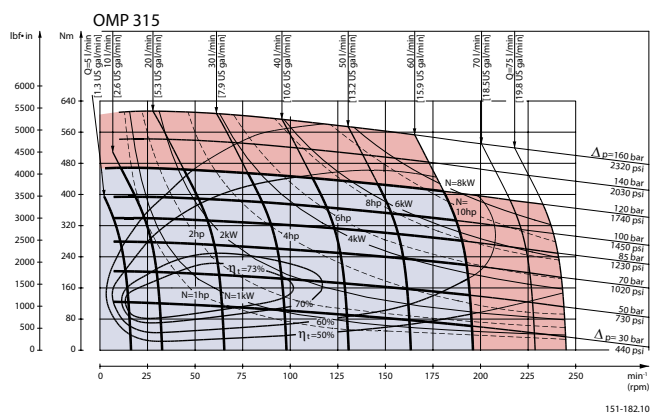
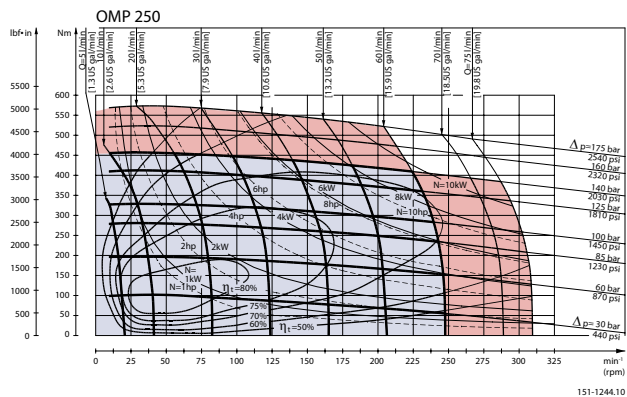


Function Diagrams

OMP 110 under preparation

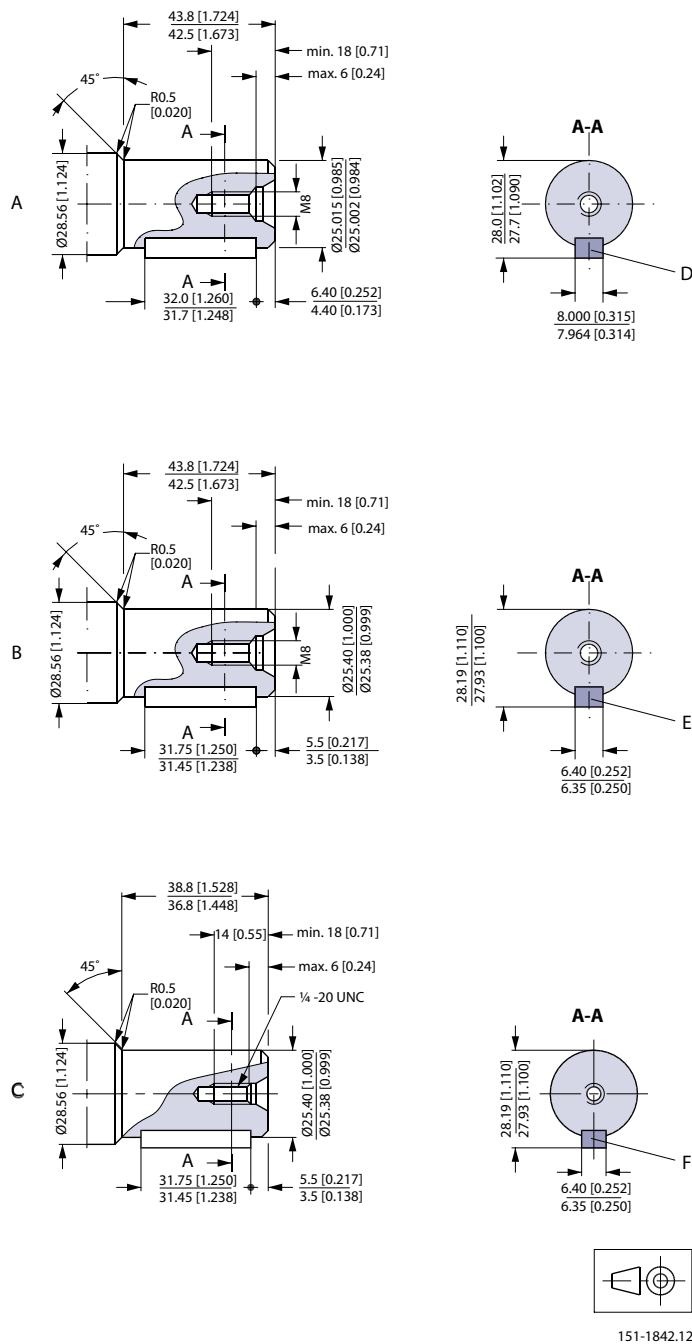


Function Diagrams



Shaft Version

Shaft Version



A: Cylindrical shaft
25 mm

D: Parallel key
A8 • 7 • 32
DIN 6885

B: Cylindrical shaft
1 in

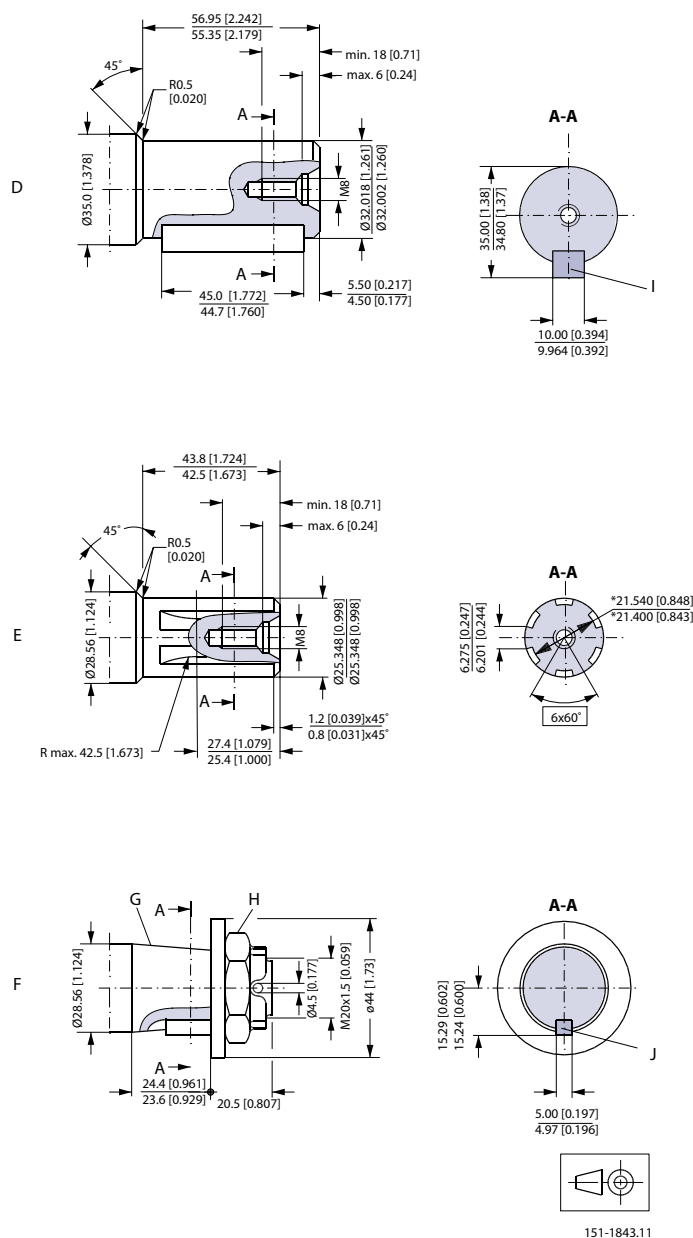
E: Parallel key
1/4 • 1/4 • 11/4 in
B.S. 46

US version

C: Cylindrical shaft
1 in

F: Parallel key
1/4 • 1/4 • 11/4 in
B.S. 46

Shaft Version



D: Cylindrical shaft 32 mm

G: Taper 1:10

F: Tapered shaft

E: Splined shaft
B.S. 2059 (SAE 6 B)
Straight-sided,
bottom fitting, dep.

H: DIN 937
NV 30
Tightening torque:
100 ± 10 N·m [885 ± 88.50 lbf·in]

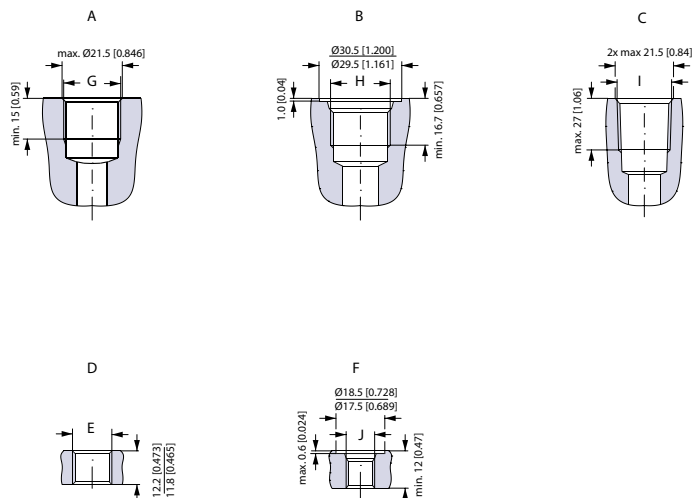
I: Parallel key
A10 8 45
DIN 6885

Fit 2
Nom. size 1 in
* Deviates from BS 2059 (SAE 6B)

J: Parallel key
B5 5 14
DIN 6885

Port Thread Versions

Port Thread Versions



151-1844.11

A: G main ports

G: ISO 228/1 - G1/2

D: G drain port

E: ISO 228/1 - G1/4

B: UNF main ports

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

F: UNF drain port

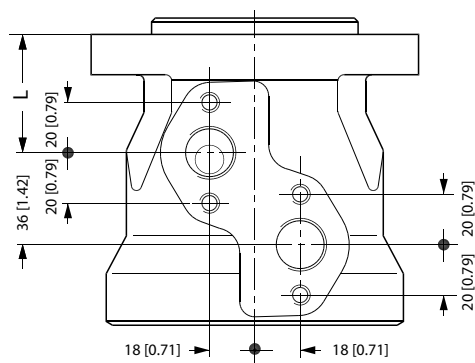
J: 7/16 - 20 UNF
O-ring boss port

C: NPTF main ports

I: 1/2 - 14 NPTF

Manifold Mount

European version



151-2135.10

L: see dimensional drawing for given OMP motor:

[Dimensions - European Version](#) on page 28

[Dimensions - US Version](#) on page 32

[Dimensions - European Version](#) on page 33

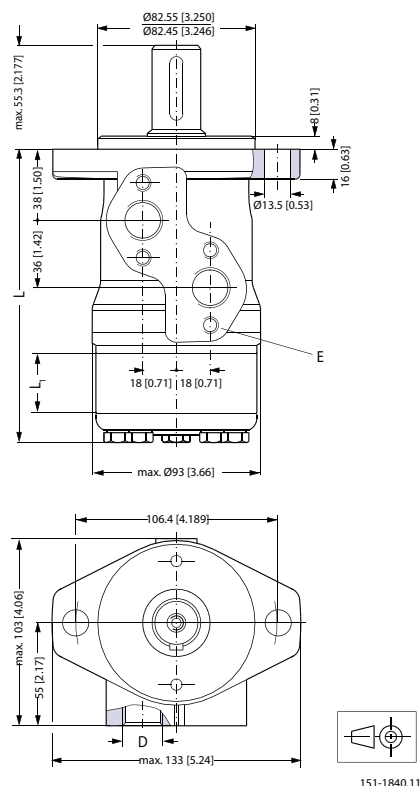
[Dimensions - US Version](#) on page 35

[Dimensions - European Version](#) on page 37

Dimensions - European Version

Dimensions

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



151-1840.11

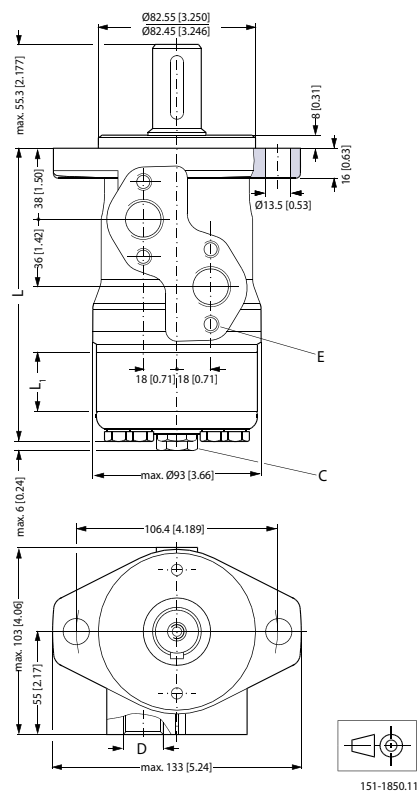
D: G 1/2; 15 mm [0.59 in] deep

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

Type	Max. L mm [in]	L1 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]

Dimensions - European Version

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



C: Drain connection

G ¼; 12 mm [0.47 in] deep

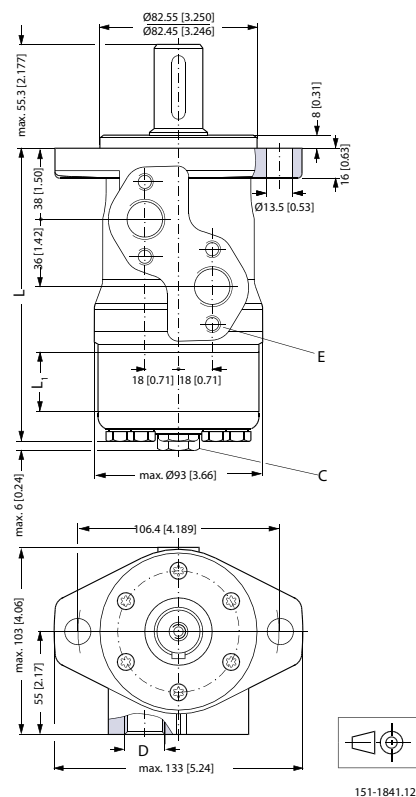
E: M8; 13 mm [0.51 in] deep
(4 pcs.)

D: G ½; 15 mm [0.59 in] deep

Type	Max.L mm [in]	L1 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]

Dimensions - European Version

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



C: Drain connection

G ¼; 12 mm [0.47 in] deep

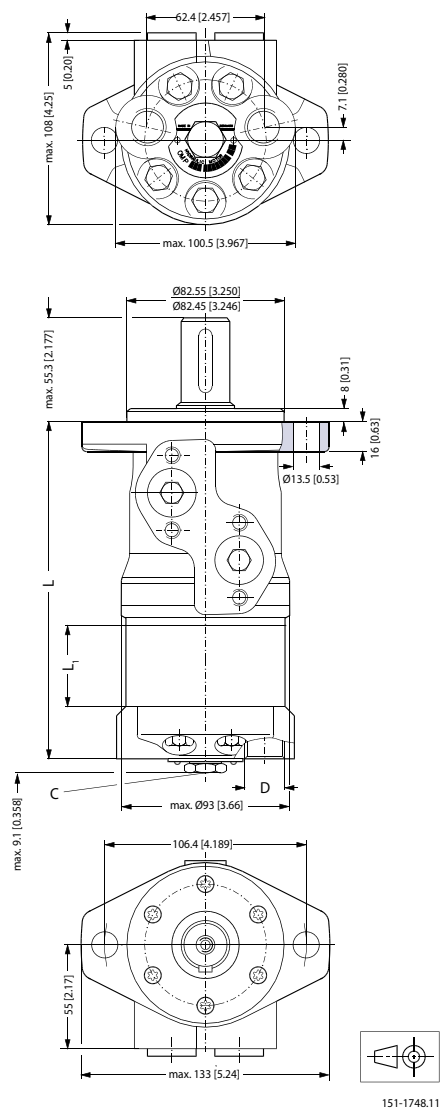
E: M8; 13 mm [0.51 in] deep
(4 pcs.)

D: G ½; 15 mm [0.59 in] deep

Type	Max. L mm [in]	L1 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]

Dimensions - European Version

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



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

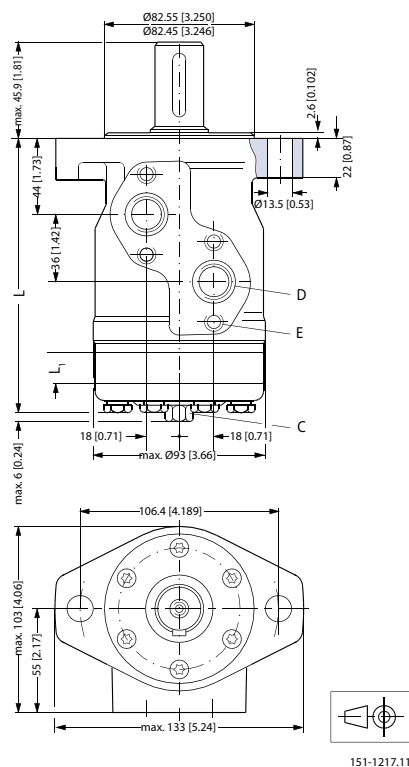
D: G ½; 15 mm [0.59 in] deep

Type	Max. L mm [in]	L1 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]

Dimensions - US Version

Dimensions

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



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

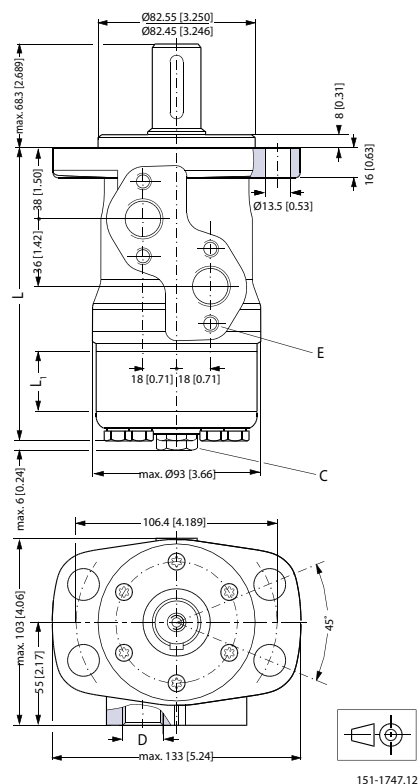
E: M8; 13 mm [0.51 in] deep
(4 pcs.)

Type	Max. L mm [in]	L1 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]

Dimensions - European Version

Dimensions

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



C: Drain connection

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

E: M8; 13 mm [0.51 in] deep

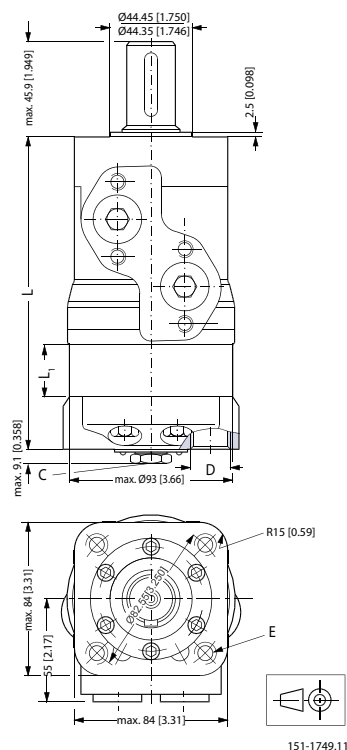
(4 pcs.)

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

Type	Max. L mm [in]	L1 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]

Dimensions - European Version

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



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

D: G ½; 15 mm [0.59 in] deep

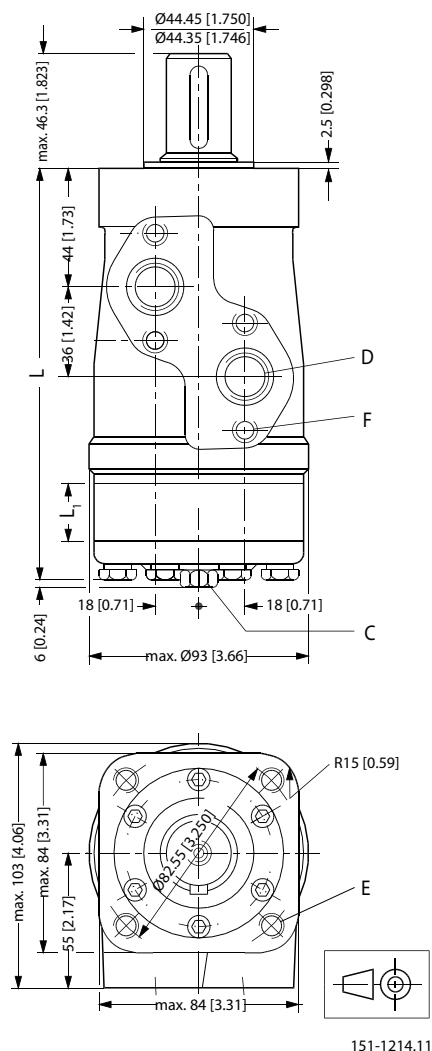
E: M10; 15 mm [0.59 in] deep

Type	Max. L mm [in]	L1mm [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]

Dimensions - US Version

Dimensions

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



C: Drain connection
7/16 - 20 UNF;
12 mm [0.47 in] deep

E: 3/8 - 16 UNC;
15 mm [0.59 in] deep
(4 off)

D: 7/8 - 14 UNF;
16.76 mm [0.66 in] deep
or 1/2 - 14 NPTF

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

Type	Max. L mm [in]	L1 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]

Technical Information Orbital Motors Type OMP, OMR and OMH

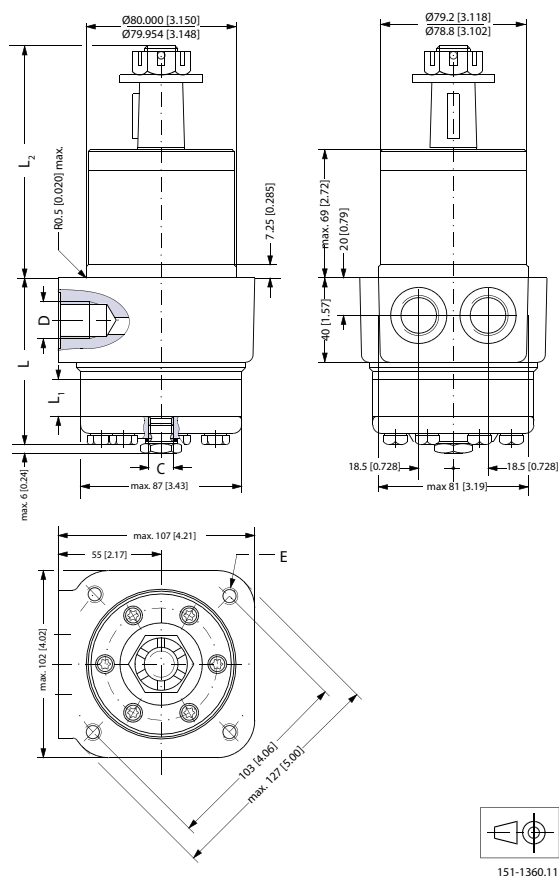
Dimensions - US Version

Type	Max. L mm [in]	L1 mm [in]
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]

Dimensions - European Version

Dimensions

OMPW and OMPW N wheel motor



C: Drain connection

G 1/4; 12 mm [0.47 in] deep

E: M10; 20 mm [0.79 in] deep
(4 pcs.)

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

Output shaft.max.	L2 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]	L1 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]

Technical Information Orbital Motors Type OMP, OMR and OMH

Dimensions - European Version

Type	Max. L mm [in]	L1 mm [in]
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]

Technical Information Orbital Motors Type OMP, OMR and OMH

Versions

Versions

Mounting flange	Spigot diameter (front/rear end)	Bolt circle diameter (BC)	Shaft	Port size	EU	US	Side port	End port	Flange port	Std. shaft seal	High pressure shaft seal	Drain connection	Check valve	Main type designation
2 hole oval flange (A2-flange)	Ø 82.5 mm [3.25 in]	Ø 106.4 mm [4.20 in]	Cyl. 25 mm	G ½	*		*				*	No	No	OMR
				G ½	*		*			*	Yes	Yes	OMR	
				G ½	*			*		*	Yes	Yes	OMR	
			Cyl. 1 inch	G ½	*		*			*	No	No	OMR	
				G ½	*		*			*	Yes	Yes	OMR	
				7/8 - 14 UNF		*	*			*	Yes	Yes	OMR	
			Splined 1 inch	G ½	*		*			*	No	No	OMR	
				G ½	*		*			*	Yes	Yes	OMR	
				7/8 - 14 UNF		*	*			*	Yes	Yes	OMR	
			Cyl. 32 mm	G ½	*		*			*	Yes	Yes	OMR	
Tap. 28.5 mm	G ½	*		*			*	Yes	Yes	OMR				
4 hole oval flange (A4-flange)	Ø 82.5 mm [3.25 in]	Ø 106.4 mm [4.20 in]	Cyl. 25 mm	G ½	*		*			*	Yes	Yes	OMR	
			Cyl. 32 mm	G ½	*		*			*	Yes	Yes	OMR	
			Cyl. 1¼ in	7/8 - 14 UNF		*	*			*	Yes	Yes	OMR	
Square flange (C-flange)	Ø 44.4 mm [1.75 in]	Ø 82.5 mm [3.25 in]	Cyl. 25 mm	G ½	*			*		*	Yes	Yes	OMR	
			Cyl. 1 in	7/8 - 14 UNF		*	*			*	Yes	Yes	OMR	
OMR motors with corrosion resistant parts														
2 hole oval flange (A2-flange)	Ø 82.5 mm [3.25 in]	Ø 106.4 mm [4.20 in]	Cyl. 25 mm	G ½	*		*			*		Yes	Yes	OMR C
OMR motors with needle bearings														
2 hole oval flange (A2-flange)	Ø 82.5 mm [3.25 in]	Ø 106.4 mm [4.20 in]	Cyl. 25 mm	G ½	*		*			*		Yes	Yes	OMR N
Wheel	Ø 82.5 mm [3.25 in]	Ø 147.6 mm [5.81 in]	Tap. 35 mm	G ½	*				*	*		Yes	Yes	OMRW N
			Tap. 1¼ in	7/8 - 14 UNF		*			*	*		Yes	Yes	OMRW N
OMR motors with integrated brake														
2 hole oval flange (A2-flange)	Ø 82.5 mm [3.25 in]	Ø 106.4 mm [4.20 in]	Cyl. 25 mm	G ½	*		*			*		Yes	Yes	OMR F
OMR motors with integrated brake and needle bearings														
2 hole oval flange (A2-flange)	Ø 82.5 mm [3.25 in]	Ø 106.4 mm [4.20 in]	Cyl. 1 in	7/8 - 14 UNF		*	*			*		Yes	Yes	OMR NF
Wheel	Ø 82.5 mm [3.25 in]	Ø 147.6 mm [5.81 in]	Tap. 35 mm	G ½	*				*	*		Yes	Yes	OMRW NF

* Version is available.

Technical Information Orbital Motors Type OMP, OMR and OMH

Versions**Features available (options)**

Low leakage (low speed valve) Reverse rotation

Speed sensor Painted

Viton shaft seal

Technical Information Orbital Motors Type OMP, OMR and OMH

Code Numbers

Code Numbers

Code numbers	Displacement [cm ³]								
	50	80	100	125	160	200	250	315	375
151-	0410	0411	0412	0413	0414	0415	0416	0417	0418
151-	0710	0711	0712	0713	0714	0715	0716	0717	0718
151-	6190	6191	6192	6193	6194	6195	6196	6197	6198
151-	0400	0401	0402	0403	0404	0405	0406	0407	0408
151-	0700	0701	0702	0703	0704	0705	0706	0707	0708
151-	7240	7241	7242	7243	7244	7245	7246	7247	7248
151-	0420	0421	0422	0423	0424	0425	0426	0427	0428
151-	0720	0721	0722	0723	0724	0725	0726	0727	0728
151-	7250	7251	7252	7253	7254	7255	7256	7257	7258
151-	0248	0242	0243	0208	0244	0245	0247	0246	6294
151-	0265	0266	0267	6295	0268	0269	0271	0270	6296
151-	6010	6011	6012	6013	6014	6015	6016	6017	6018
151-	6000	6001	6002	6003	6004	6005	6006	6007	6008
151-	6110	6111	6112	6113	6114	6115	6116	6117	6118
151-	6210	6211	6212	6213	6214	6215	6216	6217	6218
151-	7260	7261	7262	7263	7264	7265	7266	7267	7269
OMR motors with corrosion resistant parts									
151-	1231	1232	1233	1238	1234	1235	1236	1237	1243
OMR motors with needle bearings									
151-	6380	6381	-	6383	6384	6385	6386	6387	6388
151-	6300	6301	6302	6303	6304	6305	6306	6307	6308
151-	6430	6431	6432	6433	6434	6435	6436	6437	6438
OMR motors with integrated brake									
151-	-	6461	6462	6463	6464	6465	6466	6467	6468
OMR motors with integrated brake and needle bearings									
151-	-	6471	6472	6473	6474	6475	6476	6477	6478
151-	-	-	6442	6443	6444	6445	-	-	-
	51	51	52	52	53	53	54	54	55

Ordering

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

Example:

151-6004 for an OMR 160 with A4 flange, cyl. 32 mm shaft, port size G 1/2 and side port version.

Orders will not be accepted without the four digit prefix.