

Technical Information Orbital Motors Type OMP, OMR and OMH

Technical Data

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

Type			OMR	OMR	OMR	OMR	OMR	OMR	OMR	OMR	OMR
Motor size			50	80	100	125	160	200	250	315	375
Geometric displacement	cm ³ [inch]		51.6 [3.16]	80.3 [4.91]	99.8 [6.11]	125.7 [7.69]	159.6 [9.77]	199.8 [12.23]	249.3 [15.26]	315.7 [19.32]	372.6 [22.80]
Max. speed	min ⁻¹	cont.	775	750	600	475	375	300	240	190	160
	[rpm]	int. ¹⁾	970	940	750	600	470	375	300	240	200
Max. torque	N•m [lbf•in]	cont.	100 [890]	195 1730]	240 [2120]	300 [2660]	300 [2660]	300 [2660]	300 [2660]	300 [2660]	300 [2660]
		int. ¹⁾	130 [1150]	220 [1960]	280 [2480]	340 [3010]	390 [3450]	390 [3450]	380 [3360]	420 [3720]	430 [3810]
		peak ²⁾	170 [1510]	270 [2390]	320 [2830]	370 [3280]	460 [4070]	560 [4960]	600 [5310]	610 [5400]	600 [5310]
Max. output	kW [hp]	cont.	7.0 [9.4]	12.5 [16.8]	13.0 [17.4]	12.5 [16.8]	10.0 [13.4]	8.0 [10.7]	6.0 [8.1]	5.0 [6.7]	4.0 [5.4]
		int. ¹⁾	8.5 [11.4]	15.0 [20.1]	15.0 [20.1]	14.5 [19.4]	12.5 [16.8]	10.0 [13.4]	8.0 [10.7]	6.5 [8.7]	6.0 [8.1]
Max. pressure drop	bar [psi]	cont.	140 [2030]	175 [2540]	175 [2540]	175 [2540]	130 [1890]	110 [1600]	80 [1160]	70 [1020]	55 [800]
		int. ¹⁾	175 [2540]	200 [2900]	200 [2900]	200 [2900]	175 [2540]	140 [2030]	110 [1600]	100 [1450]	85 [1230]
		peak ²⁾	225 [3260]	225 [3260]	225 [3260]	225 [3260]	225 [3260]	225 [3260]	200 [2900]	150 [2180]	130 [1890]
Max. oil flow	l/min [US gal/min]	cont.	40 [10.6]	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⁾	50 [13.2]	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]	150 [1330]	200 [1770]	250 [2210]	240 [2120]	260 [2300]	240 [2120]	260 [2300]	240 [2120]
	at max. press.drop int. ¹⁾ N•m [lbf•in]		100 [890]	170 [1510]	230 [2040]	280 [2480]	320 [2830]	330 [2920]	310 [2740]	350 [3100]	380 [3360]

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 OMR with 1 in splined and 28.5 mm tapered shaft

Type			OMR	OMR	OMR	OMR	OMR	OMR	OMR	OMR	OMR
Motor size			50	80	100	125	160	200	250	315	375
Geometric displacement	cm ³ [inch]		51.6 [3.16]	80.3 [4.91]	99.8 [6.11]	125.7 [7.69]	159.6 [9.77]	199.8 [12.23]	249.3 [15.26]	315.7 [19.32]	372.6 [22.80]
Max. speed	min ⁻¹	cont.	775	750	600	475	375	300	240	190	160
	[rpm]	int. ¹⁾	970	940	750	600	470	375	300	240	200

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Type			OMR	OMR	OMR	OMR	OMR	OMR	OMR	OMR	OMR
Motor size			50	80	100	125	160	200	250	315	375
Max. torque	N·m [lbf·in]	cont.	100 [890]	195 [1730]	240 [2120]	300 [2660]	360 [3190]	360 [3190]	360 [3190]	360 [3190]	360 [3190]
		int. ¹⁾	130 [1150]	220 [1950]	280 [2480]	340 [3010]	430 [3810]	440 [3890]	470 [4160]	470 [4160]	460 [4070]
		peak ²⁾	170 [1510]	270 [2390]	320 [2830]	370 [3280]	460 [4070]	560 [4960]	600 [5310]	610 [5400]	600 [5310]
Max. output	kW [hp]	cont.	7.0 [9.4]	12.5 [16.8]	13.0 [17.4]	12.5 [16.8]	12.5 [16.8]	10.0 [13.4]	7.0 [9.4]	5.0 [6.7]	5.0 [6.7]
		int. ¹⁾	8.5 [11.4]	15.0 [20.1]	15.0 [20.1]	14.5 [19.4]	14.0 [18.8]	13.0 [17.4]	9.5 [12.7]	8.0 [10.7]	7.0 [9.4]
Max. pressure drop	bar [psi]	cont.	140 [2030]	175 [2540]	175 [2540]	175 [2540]	165 [2390]	130 [1890]	100 [1450]	85 [1230]	70 [1020]
		int. ¹⁾	175 [2540]	200 [2900]	200 [2900]	200 [2900]	200 [2900]	175 [2540]	140 [2030]	115 [1670]	90 [1310]
		peak ²⁾	225 [3260]	225 [3260]	225 [3260]	225 [3260]	225 [3260]	225 [3260]	200 [2900]	150 [2180]	130 [1890]
Max. oil flow	l/min [US gal/min]	cont.	40 [10.6]	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⁾	50 [13.2]	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]	150 [1330]	200 [1770]	250 [2210]	300 [2660]	300 [2660]	290 [2570]	315 [2790]	300 [2660]
	at max. press.drop int. ¹⁾ N·m [lbf·in]		100 [890]	170 [1510]	230 [2040]	280 [2480]	350 [3100]	400 [3540]	400 [3540]	400 [3540]	380 [3360]

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 OMR with 32 mm, 1 ¼ in cylindrical shaft and 35 mm, 1 ¼ in tapered shaft

Type			OMR	OMR	OMR	OMR	OMR	OMR	OMR	OMR	OMR
Motor size			50	80	100	125	160	200	250	315	375
Geometric displacement	cm ³ [inch]		51.6 [3.16]	80.3 [4.91]	99.8 [6.11]	125.7 [7.69]	159.6 [9.77]	199.8 [12.23]	249.3 [15.26]	315.7 [19.32]	372.6 [22.80]
Max. speed	min ⁻¹	cont.	775	750	600	475	375	300	240	190	160
	[rpm]	int. ¹⁾	970	940	750	600	470	375	300	240	200
Max. torque	N·m [lbf·in]	cont.	100 [890]	195 [1730]	240 [2120]	300 [2660]	380 [3360]	450 [3980]	540 [4780]	550 [4870]	580 [5130]
		int. ¹⁾	130 [1150]	220 [1957]	280 [2480]	340 [3010]	430 [3810]	500 [4430]	610 [5400]	690 [6110]	690 [6110]
		peak ²⁾	170 [1510]	270 [2390]	320 [2830]	370 [3280]	460 [4070]	560 [4960]	710 [6280]	840 [7440]	830 [7350]
Max. output	kW [hp]	cont.	7.0 [9.4]	12.5 [16.8]	13.0 [17.4]	12.5 [16.8]	12.5 [16.8]	11.0 [14.8]	10.0 [13.4]	9.0 [12.1]	7.5 [10.1]
		int. ¹⁾	8.5 [11.4]	15.0 [20.1]	15.0 [20.1]	14.5 [19.4]	14.0 [18.8]	13.0 [17.4]	12.0 [16.1]	10.0 [13.4]	9.0 [12.1]

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Type			OMR	OMR	OMR	OMR	OMR	OMR	OMR	OMR	OMR
Motor size			50	80	100	125	160	200	250	315	375
Max. pressure drop	bar [psi]	cont.	140 [2030]	175 [2540]	175 [2540]	175 [2540]	175 [2540]	175 [2540]	175 [2540]	135 [1960]	115 [1670]
		int. ¹⁾	175 [2540]	200 [2900]	200 [2900]	200 [2900]	200 [2900]	200 [2900]	200 [2900]	175 [2540]	150 [2180]
		peak ²⁾	225 [3260]	225 [3260]	225 [3260]	225 [3260]	225 [3260]	225 [3260]	225 [3260]	210 [3050]	175 [2540]
Max. oil flow	l/min [US gal/min]	cont.	40 [10.6]	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⁾	50 [13.2]	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]	150 [1330]	200 [1770]	250 [2210]	320 [2830]	410 [3630]	500 [4430]	500 [4430]	470 [4170]
	at max. press.drop int. ¹⁾ N·m [lbf·in]		100 [890]	170 [1510]	230 [2040]	280 [2480]	370 [3280]	460 [4070]	550 [4870]	660 [5840]	570 [5050]

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
OMR 50 - 375	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 for Parking Brake Motor OMR F, OMR NF and OMRW NF

Technical data for brake motor		
Holding torque 1)	N·m [lbf·in]	400 [3540]
Min. release pressure 2)	bar [psi]	21 [305]
Max. pressure in brake line	bar [psi]	200 [2900]

1) This brake is to be used only as a passive parking brake. It may not be used for dynamic braking.
2) Brake motors must always have a drain line. The brake release pressure is the difference between the pressure in the brake release line and the pressure in the drain line.

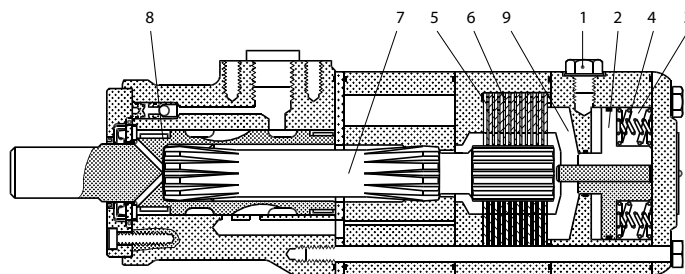
Function

In normal condition where there is no pressure on the integrated brake in OMR, i.e. the brake is applied. The brake is released when hydraulic pressure of 21 bar [300psi] min. is applied to the brake release port (1).

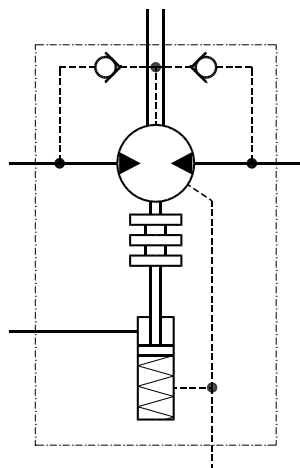
Technical Data

The pressure forces the piston (2) against the springs (3 and 4) disengaging the outer and inner discs (5 and 6) from each other so that the cardan shaft (7) and consequently output shaft (8) become free to rotate.

If the pressure on the brake release port is reduced to less than 21 bar [300psi], the springs force the piston and pressure pad (9) against the brake discs and the cardan shaft/output shaft begin to lock up.



151-1739.10.10



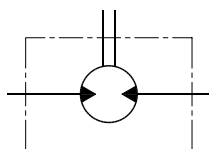
151-1726.10

Technical Data - Max. Permissible Shaft Seal Pressure

OMR with High Pressure Shaft Seal (HPS)

OMR with HPS, without check valves and without drain connection:

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



151-1743.10

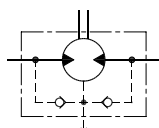
$$P_{\text{seal}} = \frac{P_{\text{in}} + P_{\text{return}}}{2}$$

OMR with HPS, check valves and with drain connection:

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

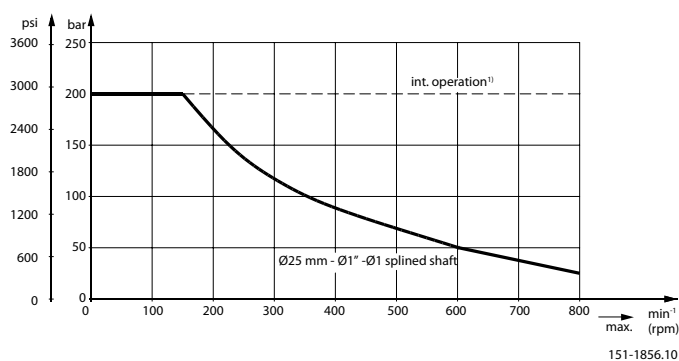
OMR with HPS, check valves and without drain connection:

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



151-320.10

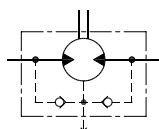
Max. permissible shaft seal pressure



OMR with Standard Shaft Seal

OMR 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



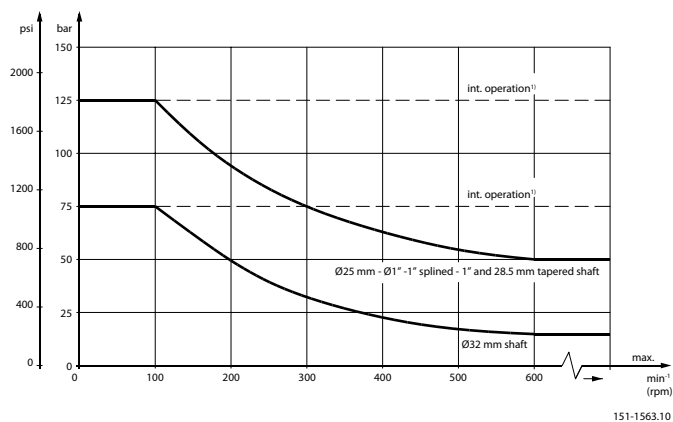
151-320.10

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

Technical Data - Max. Permissible Shaft Seal Pressure

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

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



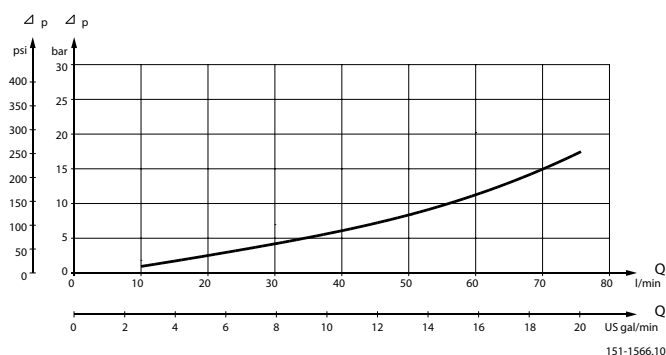
1) Intermittent operation: the permissible values may occur for max. 10% of every minute.

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Technical Data

Pressure Drop in Motor

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

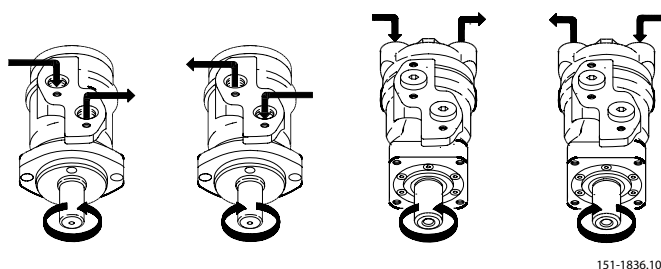


Oil flow in drain line

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



Permissible Shaft Loads for OMR

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

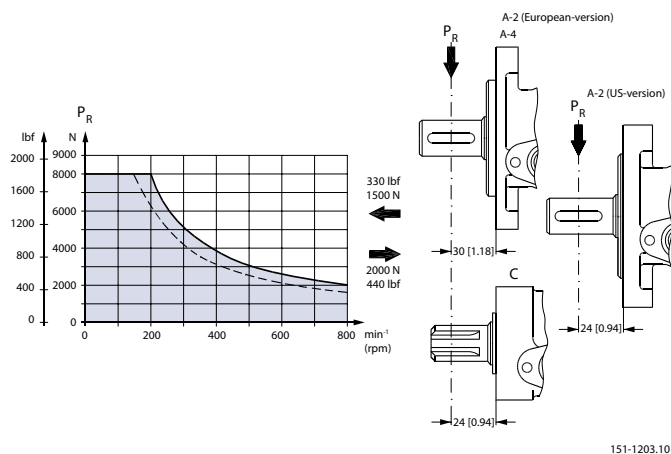
Mounting flange	4-oval flange** 2-hole oval flange (European version)	4-hole oval flange	Square flange** 2-hole oval flange (US-version)
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Technical Data

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

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



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

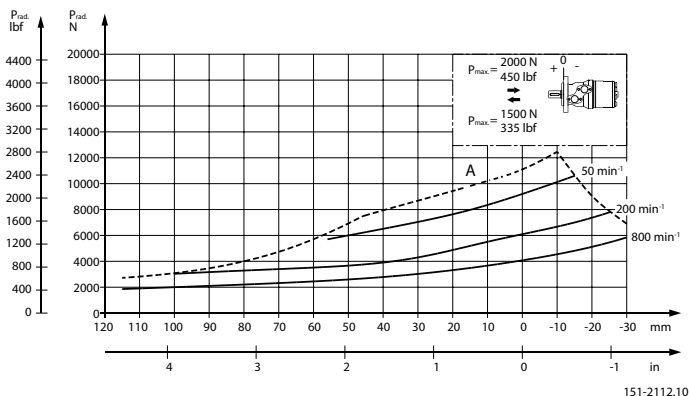
_____ other shaft versions

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 OMR with the output shaft running in needle bearings.

Permissible Shaft Load for OMR N and OMR NF with Needle Bearings



Technical Data

The output shaft on OMR N and OMR NF runs in needle bearings. These bearings and the recessed mounting flange allow a higher permissible radial load in comparison to OMR motors with slide bearings.

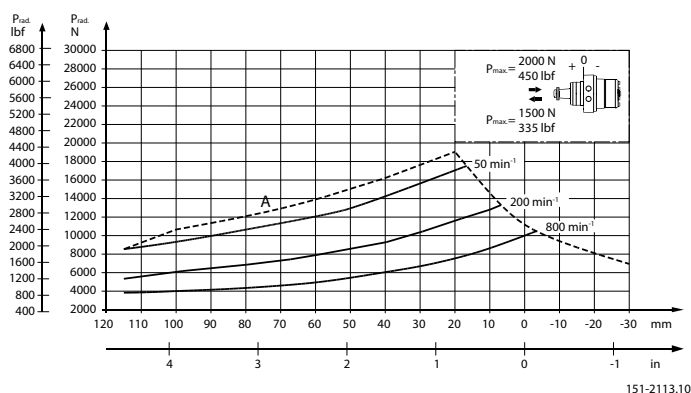
The permissible radial load on the shaft is shown for different speeds as a function of the distance from the mounting flange to the point of load application.

Curve A shows max. radial shaft load. Any shaft load exceeding the values quoted in the curve will involve a 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" DHMH.PK.100.G2.02 520L0232.

Permissible Shaft Load for OMRW N and OMRW NF with Needle Bearings



The output shaft on OMRW N runs in needle bearings. These bearings and the recessed mounting flange allow a higher permissible radial load in comparison to OMR motors with slide 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.

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

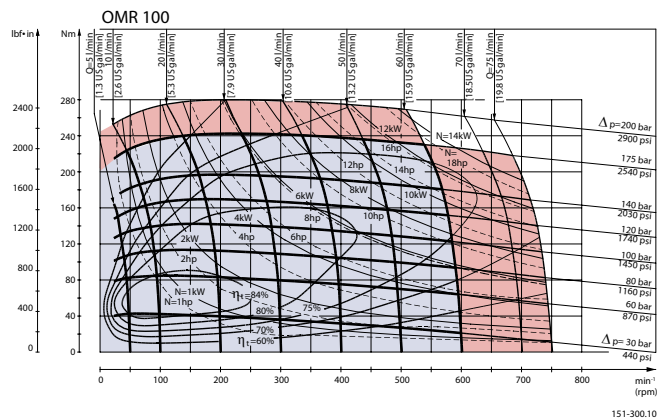
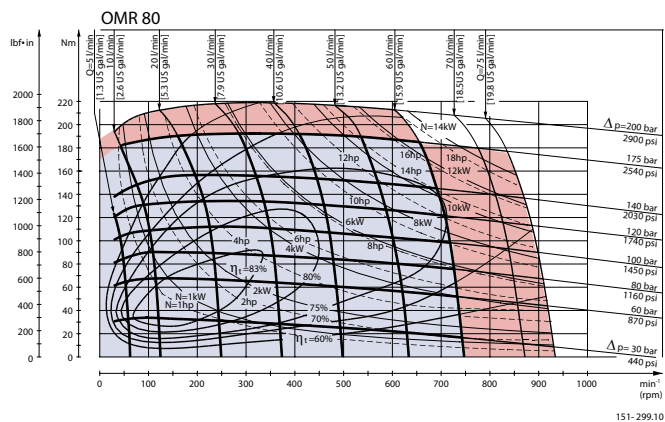
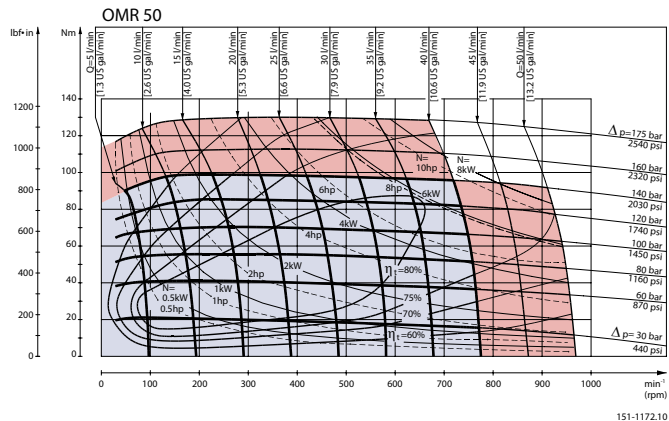
The other curves apply to a B10 bearing life of 2000 hours at the number of revolutions indicated by the curve letter. Mineral based hydraulic oil with a sufficient content of anti-wear additives must be used.

Bearing life calculations can be made using the explanation and formula provided in the chapter »Bearing dimensioning« in the technical information "General" DHMH.PK.100.G2.02 520L0232.

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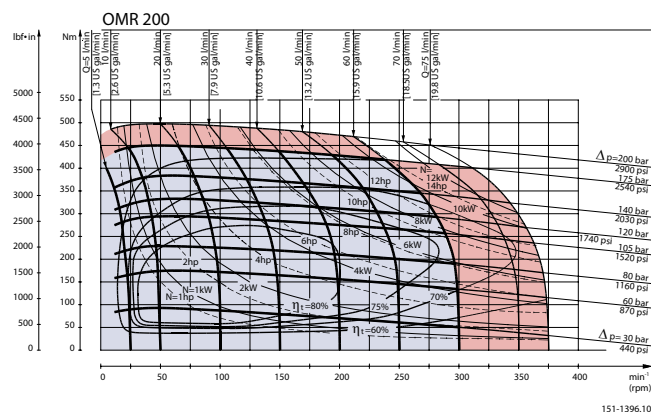
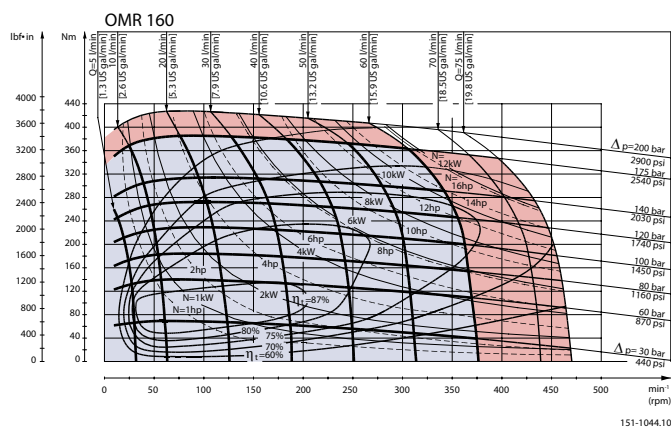
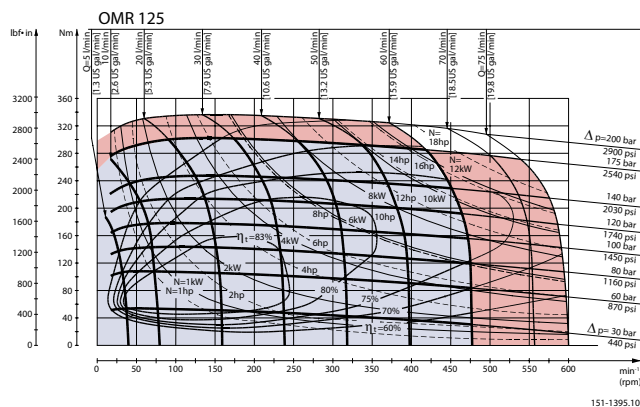
Function Diagrams

Function Diagrams



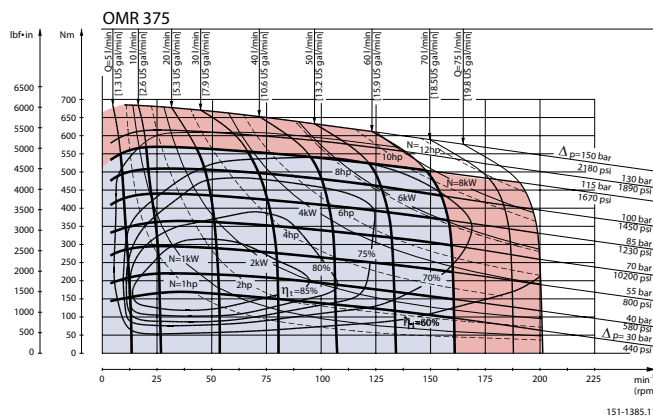
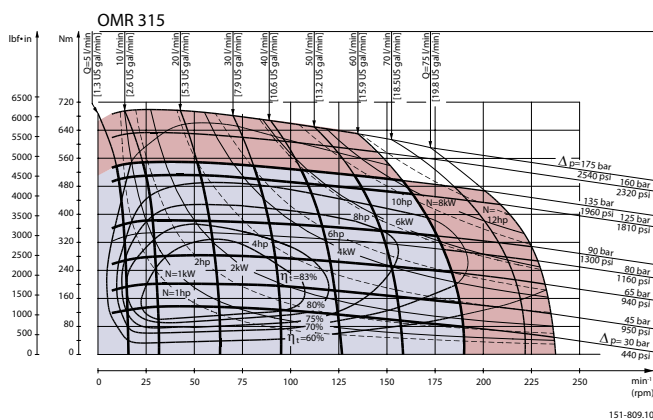
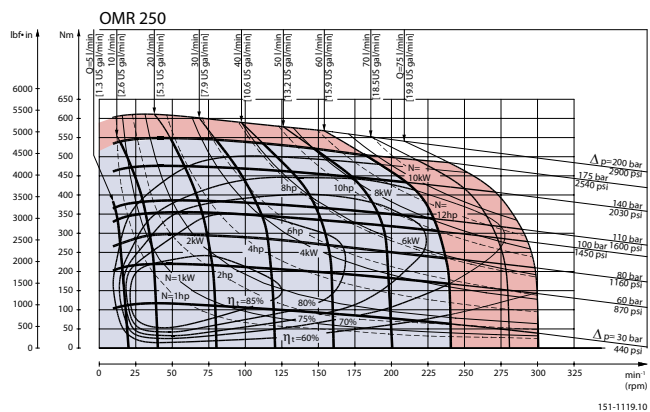
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Function Diagrams



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Function Diagrams



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

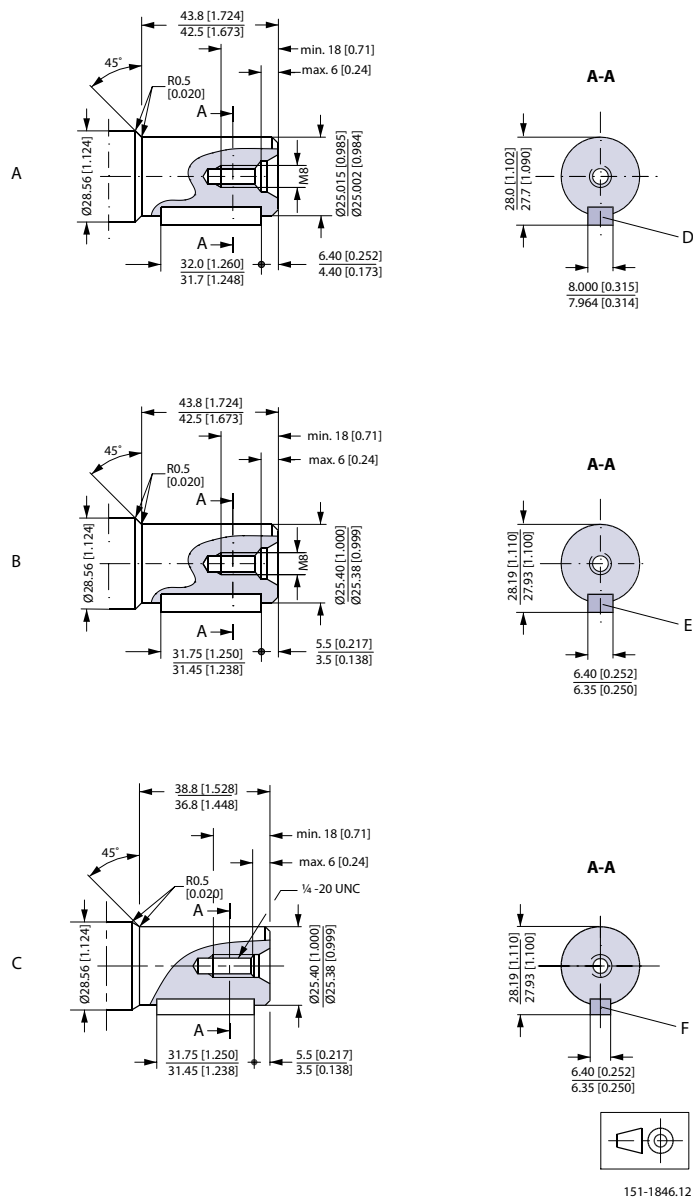
- Continuous range
- Intermittent range (max. 10% operation every minute)

Max. permissible continuous/intermittent pressure drop for the actual shaft version can be found in [Technical data for OMR with 25 mm and 1 in cylindrical shaft](#) on page 42.

Intermittent pressure drop and oil flow must not occur simultaneously.

Shaft Version

Shaft Version



A: Cylindrical shaft
25 mm

B: Cylindrical shaft 1 in

US version

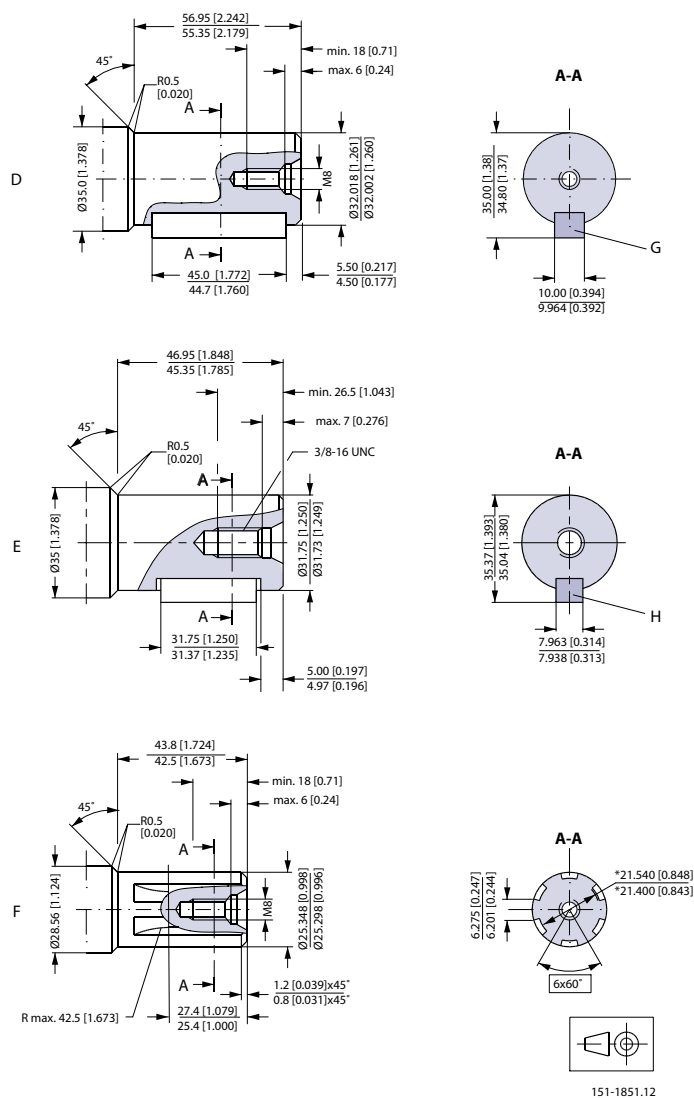
C: Cylindrical shaft
1 in

D: Parallel key
A8 • 7 • 32
DIN 6885

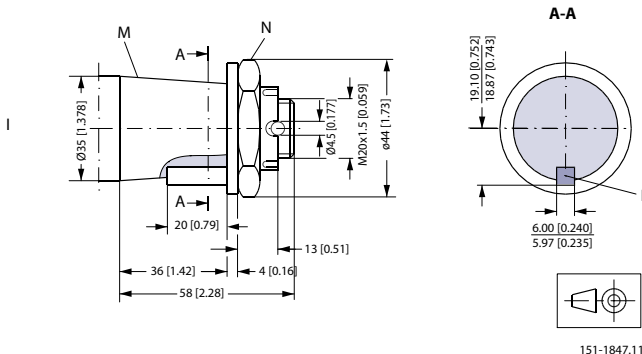
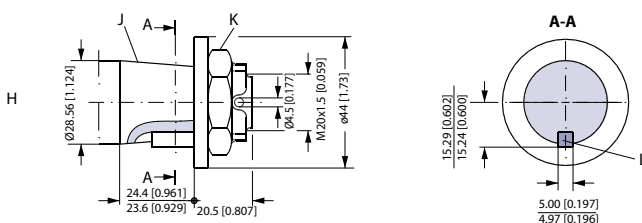
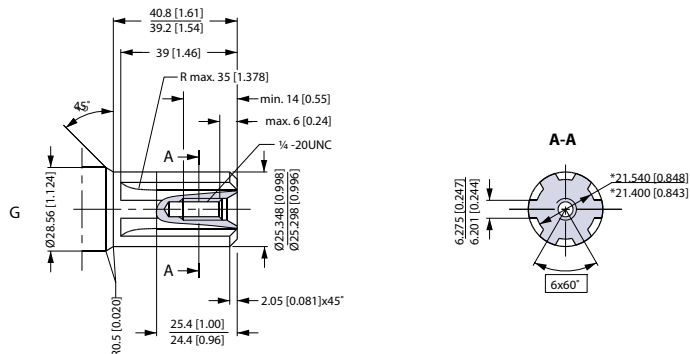
E: Parallel key
1/4 • 1/4 • 1 1/4 in
B.S. 46

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

Shaft Version



Shaft Version



US version

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

H: Tapered shaft 28.5 mm
(ISO/R775)

I: Tapered shaft 35 mm

K: DIN 937
NV 30
Tightening torque:
100 ± 10 N·m
[885 ± 85 lbf·in]

J: Taper 1:10

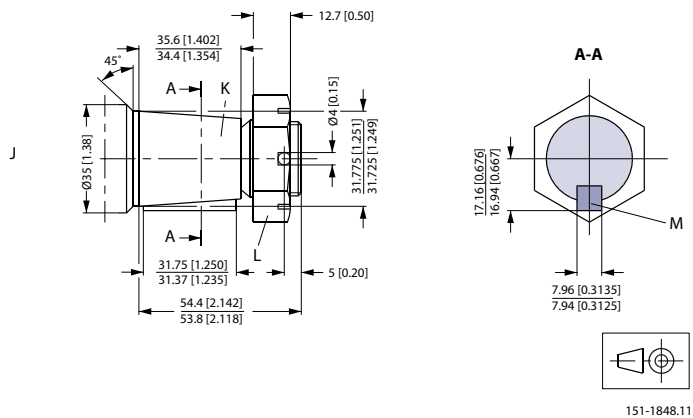
M: Taper 1:10

L: Parallel key
B5 • 5 • 14
DIN 6885

P: Parallel key
B6 • 6 • 20
DIN 6885

N: DIN 937
NV 41
Tightening torque:
200 ± 10 N·m [1770 ± 85 lbf·in]

Shaft Version



J: Tapered shaft 1 1/4 in

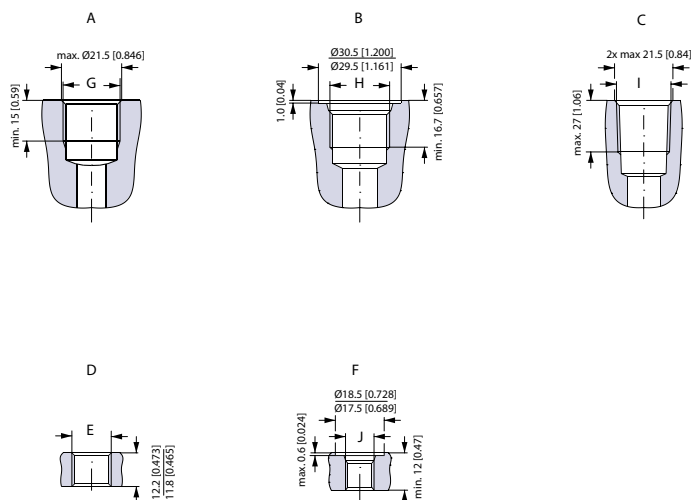
L: 1 - 20 UNEF
Across flats 1 7/16
Tightening torque:
200 ± 10 Nm [1770 ± 85 lbf-in]

K: Cone 1:8
SAE J501

M: Parallel key
5/16 • 5/16 • 1 1/4
SAE J501

Port Thread Versions

Port Thread Versions



151-1844.11

A: G main ports

G: ISO 228/1 - G $\frac{1}{2}$

D: G drain port

E: ISO 228/1 - G $\frac{1}{4}$

O-ring boss port

B: UNF main ports

H: 7/8 - 14 UNF

O-ring boss port

F: UNF drain port

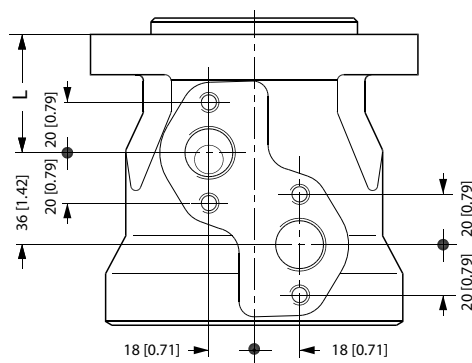
J: 7/16 - 20 UNF

C: NPTF main ports

I: $\frac{1}{2}$ - 14 NPTF

Manifold Mount

European version



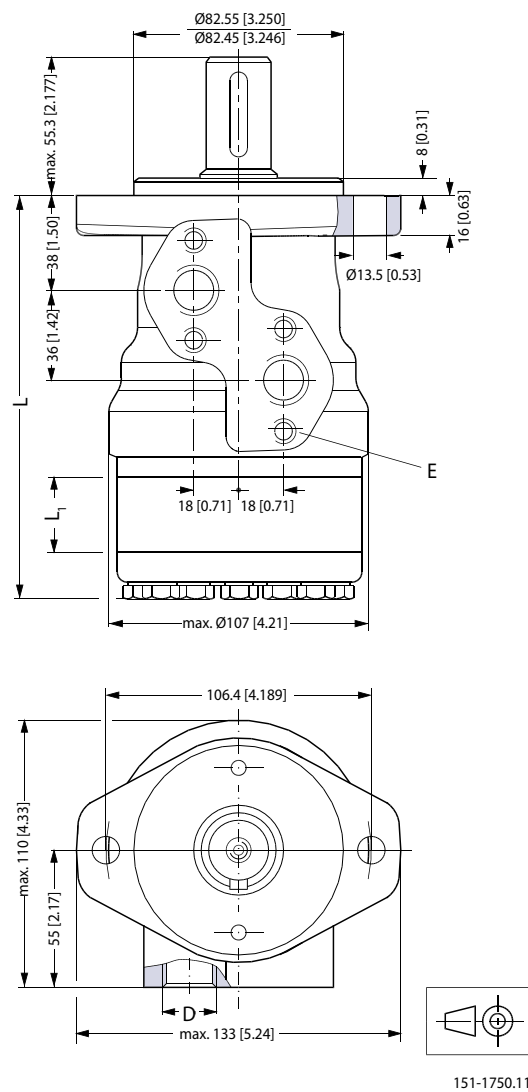
151-2135.10

L: see dimensional drawing for given OMR motor: [Dimensions-European version](#) on page 59 and [Dimension-US Version](#) on page 65

Dimensions-European version

Dimensions

Side port version with 2-hole oval mounting flange (A2 flange). With high pressure shaft seal



D: G ½; 15 mm [0.59 in] deep

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

Type	Max. L		L1	
	mm	[in]	mm	[in]
OMR 50	136.5	[5.37]	9.0	[0.35]
OMR 80	141.5	[5.57]	14.0	[0.55]
OMR 100	145.0	[5.71]	17.4	[0.69]
OMR 125	149.5	[5.89]	21.8	[0.86]
OMR 160	155.5	[6.12]	27.8	[1.09]
OMR 200	162.5	[6.40]	34.8	[1.37]

Type	Max. L		L1	
	mm	[in]	mm	[in]
OMR 250	171.5	[6.75]	43.5	[1.71]
OMR 315	182.5	[7.19]	54.8	[2.16]
OMR 375	192.7	[7.59]	65.0	[2.56]

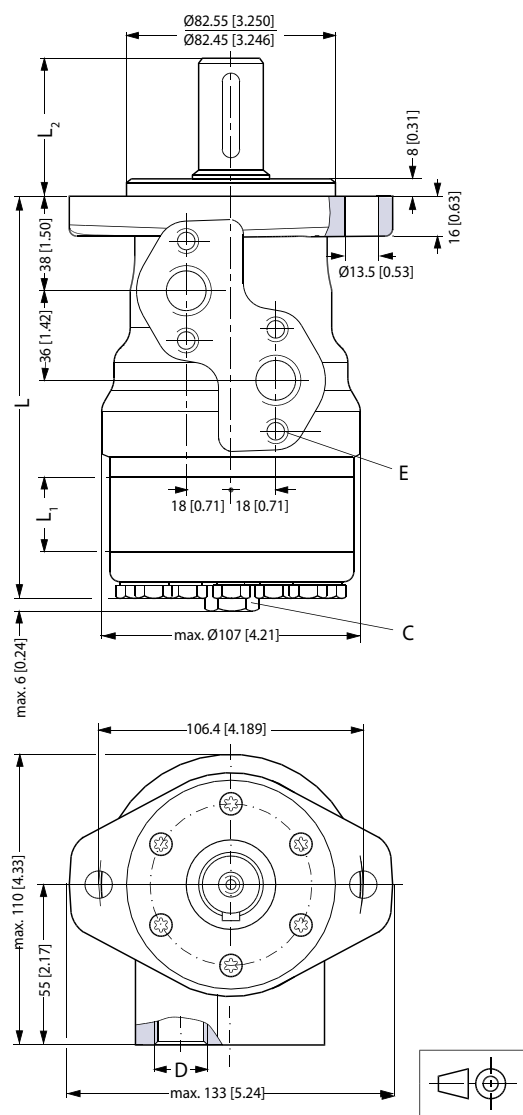
[illegible]

D: G ½; 15 mm [0.59 in] deep

Dimensions-European version

Type	Max. L		L1	
	mm	[in]	mm	[in]
OMR 50	136.5	[5.37]	9.0	[0.35]
OMR 80	141.5	[5.57]	14.0	[0.55]
OMR 100	145.0	[5.71]	17.4	[0.69]
OMR 125	149.5	[5.89]	21.8	[0.86]
OMR 160	155.5	[6.12]	27.8	[1.09]
OMR 200	162.5	[6.40]	34.8	[1.37]
OMR 250	171.5	[6.75]	43.5	[1.71]
OMR 315	182.5	[7.19]	54.8	[2.16]
OMR 375	192.7	[7.59]	65.0	[2.56]

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



151-1849.13

Technical Information Orbital Motors Type OMP, OMR and OMH

Dimensions-European version

C: Drain connection

G ¼; 12 mm [0.47 in] deep

E: M8; 13 mm [0.51 in] deep

(4 pcs.)

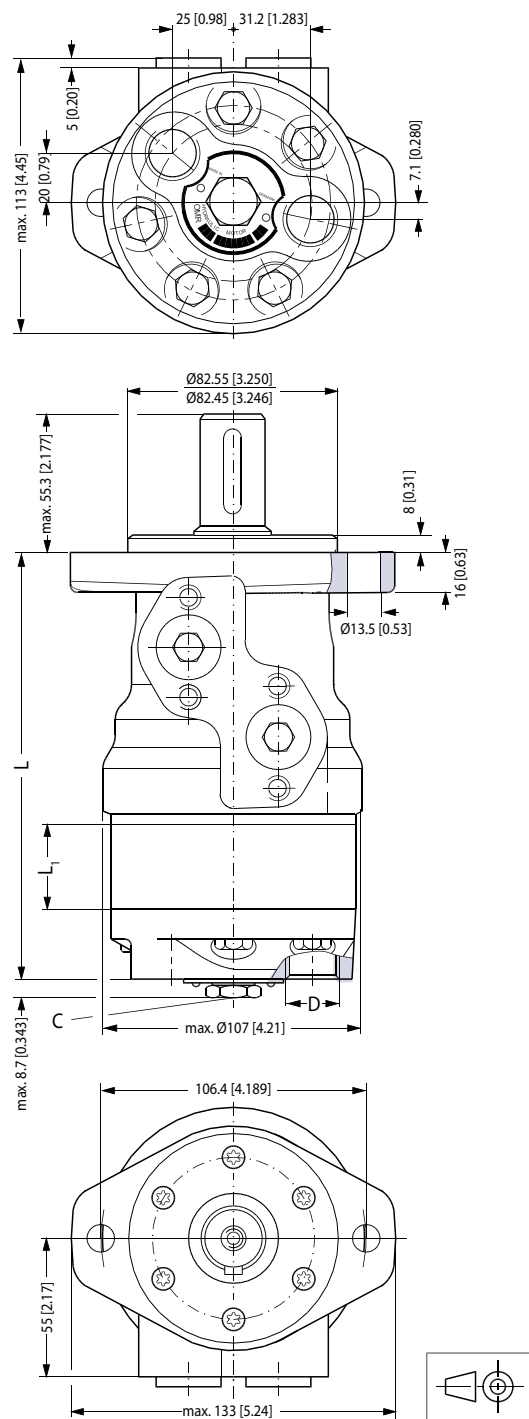
D: G ½; 15 mm [0.59 in] deep

Output shaft.max.	L2	
	mm	[in]
Cylindrical shaft 32 mm [1.26 in]	68.3	[2.69]
Cylindrical shaft 25 mm [0.98 in]	55.3	[2.18]
Tapered shaft 28.56 mm [1.12 in]	56.3	[2.19]

Type	Max. L		L1	
	mm	[in]	mm	[in]
OMR 50	136.5	[5.37]	9.0	[0.35]
OMR 80	141.5	[5.57]	14.0	[0.55]
OMR 100	145.0	[5.71]	17.4	[0.69]
OMR 125	149.5	[5.89]	21.8	[0.86]
OMR 160	155.5	[6.12]	27.8	[1.09]
OMR 200	162.5	[6.40]	34.8	[1.37]
OMR 250	171.5	[6.75]	43.5	[1.71]
OMR 315	182.5	[7.19]	54.8	[2.16]
OMR 375	192.7	[7.59]	65.0	[2.56]

Dimensions-European version

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



C: G ¼; 12 mm [0.47 in] deep

D: G ½; 15 mm [0.59 in] deep

Technical Information Orbital Motors Type OMP, OMR and OMH

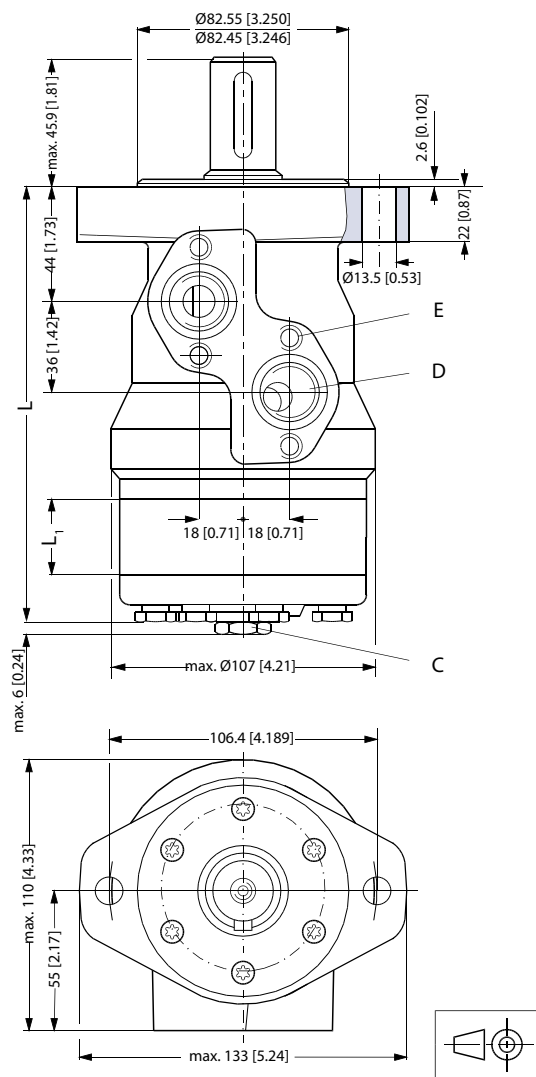
Dimensions-European version

Type	Max. L		L1	
	mm	[in]	mm	[in]
OMR 50	151.6	[5.96]	9.0	[0.35]
OMR 80	156.6	[6.17]	14.0	[0.55]
OMR 100	160.0	[6.30]	17.4	[0.69]
OMR 125	164.4	[6.47]	21.8	[0.86]
OMR 160	170.4	[6.71]	27.8	[1.09]
OMR 200	177.4	[6.98]	34.8	[1.37]
OMR 250	186.1	[7.33]	43.5	[1.71]
OMR 315	197.4	[7.77]	54.8	[2.16]
OMR 375	207.6	[8.17]	65.0	[2.56]

Dimension-US Version

Dimensions

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



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

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

E: M8; 13 mm [0.51 in] deep (4-off)

Type	Max. L mm [in]	L1 mm [in]
OMR 50	142.5 [5.61]	9.0 [0.35]
OMR 80	147.5 [5.81]	14.0 [0.55]
OMR 100	151.0 [5.95]	17.4 [0.69]
OMR 125	155.4 [6.12]	21.8 [0.86]

Technical Information Orbital Motors Type OMP, OMR and OMH

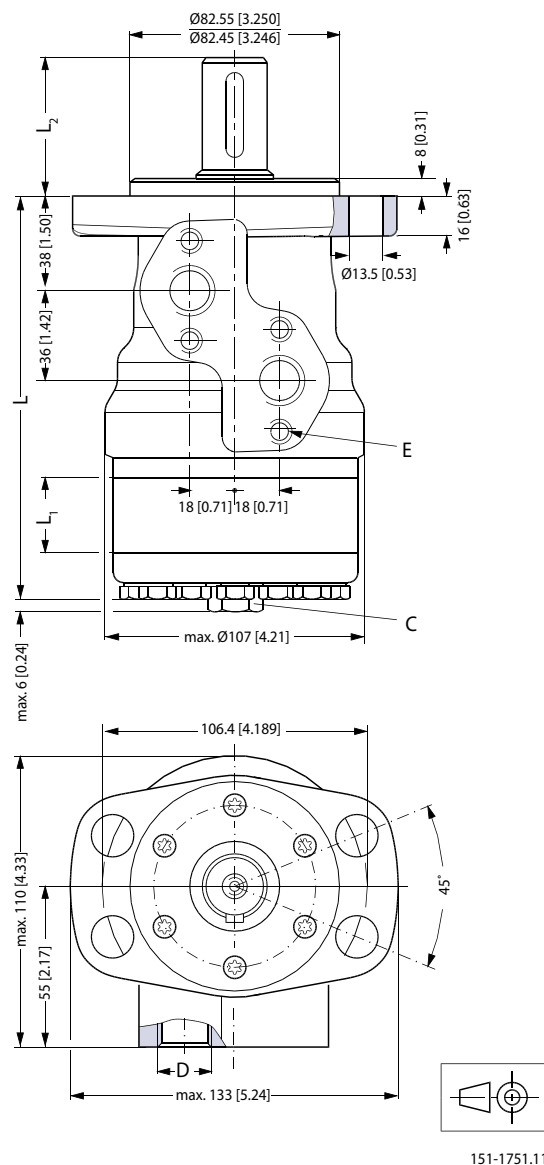
Dimension-US Version

Type	Max. L mm [in]	L1 mm [in]
OMR 160	161.5 [6.36]	27.8 [1.09]
OMR 200	168.5 [6.63]	34.8 [1.37]
OMR 250	177.5 [6.99]	43.5 [1.71]
OMR 315	188.5 [7.42]	54.8 [2.16]
OMR 375	198.5 [7.82]	64.8 [2.56]

Dimensions-European Version

Dimensions

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



C: Drain connection

G ¼; 15 mm [0.47 in] deep

E: M8; 13 mm [0.51 in] deep

(4 pcs.)

D: G ½; 15 mm [0.59 in] deep

Output shaft.max.	L2 mm [in]
Cylindrical shaft 32 mm [1.26 in]	68.3 [2.69]
Cylindrical shaft 25 mm [0.98 in]	55.3 [2.18]
Tapered shaft 28.56 mm [1.12 in]	56.3 [2.19]

Technical Information Orbital Motors Type OMP, OMR and OMH

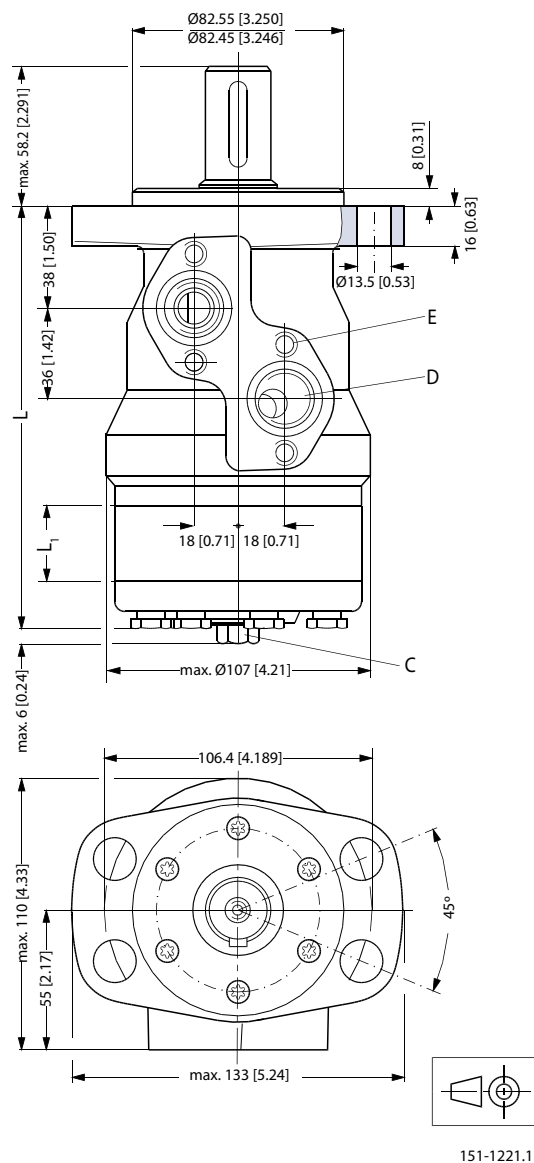
Dimensions-European Version

Type	Max. L mm [in]	L1 mm [in]
OMR 50	136.5 [5.37]	9.0 [0.35]
OMR 80	141.5 [5.57]	14.0 [0.55]
OMR 100	145.0 [5.71]	17.4 [0.69]
OMR 125	149.5 [5.89]	21.8 [0.86]
OMR 160	155.5[6.12]	27.8 [1.09]
OMR 200	162.5 [6.40]	34.8 [1.37]
OMR 250	171.5 [6.75]	43.5 [1.71]
OMR 315	182.5[7.19]	54.8 [2.16]
OMR 375	192.7 [7.59]	65.0 [2.56]

Dimensions-US Version

Dimensions

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



151-1221.11

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

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

E: M8; 13 mm [0.51 in] deep (4-off)

Type	Max. L mm [in]	L1 mm [in]
OMR 50	136.5 [5.37]	9.0 [0.35]
OMR 80	141.5 [5.57]	14.0 [0.55]
OMR 100	145.0 [5.71]	17.4 [0.69]

Technical Information Orbital Motors Type OMP, OMR and OMH

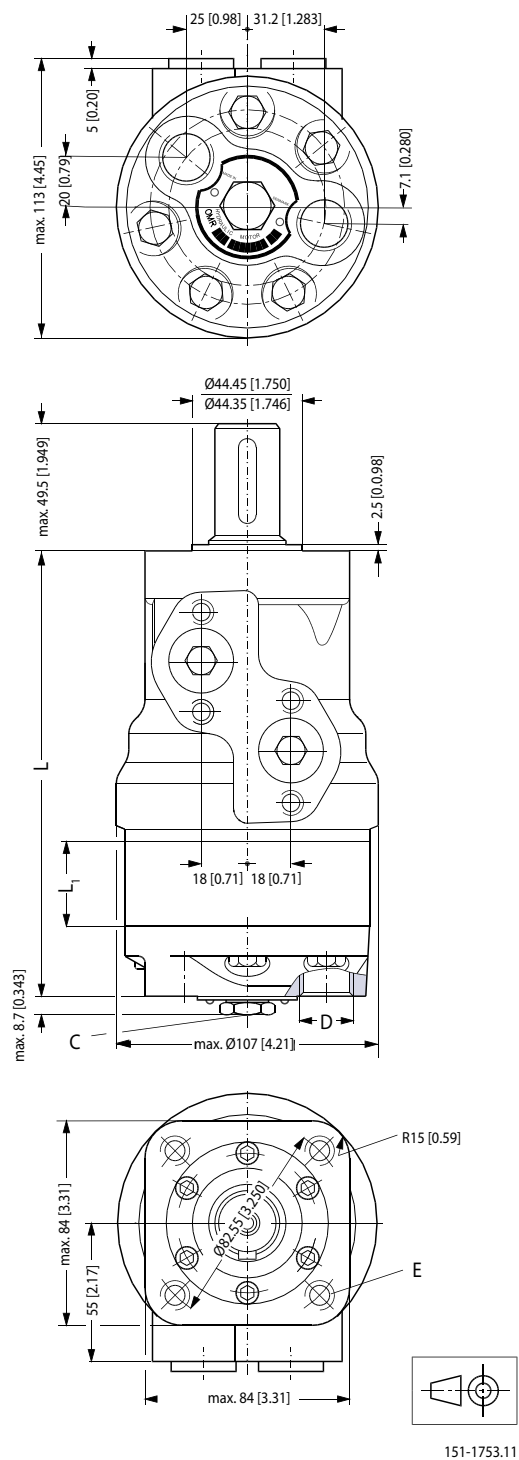
Dimensions-US Version

Type	Max. L mm [in]	L1 mm [in]
OMR 125	149.5 [5.89]	21.8 [0.86]
OMR 160	155.5 [6.12]	27.8 [1.09]
OMR 200	162.5 [6.40]	34.8 [1.37]
OMR 250	171.5 [6.75]	43.5 [1.71]
OMR 315	182.5 [7.19]	54.8 [2.16]
OMR 375	192.7 [7.59]	65.0 [2.56]

Dimensions-European Version

Dimensions

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



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.)

Technical Information Orbital Motors Type OMP, OMR and OMH

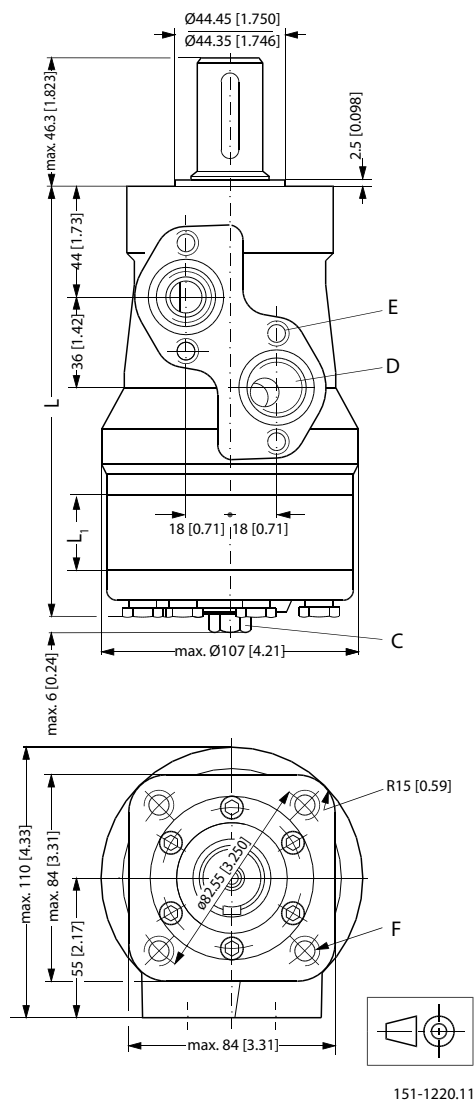
Dimensions-European Version

Type	Max. L mm [in]	L1 mm [in]
OMR 50	157.6 [6.21]	9.0 [0.35]
OMR 80	162.6 [6.40]	14.0 [0.55]
OMR 100	166.0 [6.54]	17.4 [0.69]
OMR 125	170.4 [6.71]	21.8 [0.86]
OMR 160	176.4 [6.95]	27.8 [1.09]
OMR 200	183.4 [7.22]	34.8 [1.37]
OMR 250	192.1 [7.56]	43.5 [1.71]
OMR 315	203.4 [8.02]	54.8 [2.16]
OMR 375	213.5 [8.41]	65.0 [2.56]

Dimensions-US Version

Dimensions

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



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

E: M8; 13 mm [0.51 in] deep (4-off)

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

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

Type	Max. L mm [in]	L1 mm [in]
OMR 50	142.5 [5.61]	9.0 [0.35]
OMR 80	147.5 [5.81]	14.0 [0.55]
OMR 100	151.0 [5.95]	17.4 [0.69]
OMR 125	155.4 [6.12]	21.8 [0.86]

Technical Information Orbital Motors Type OMP, OMR and OMH

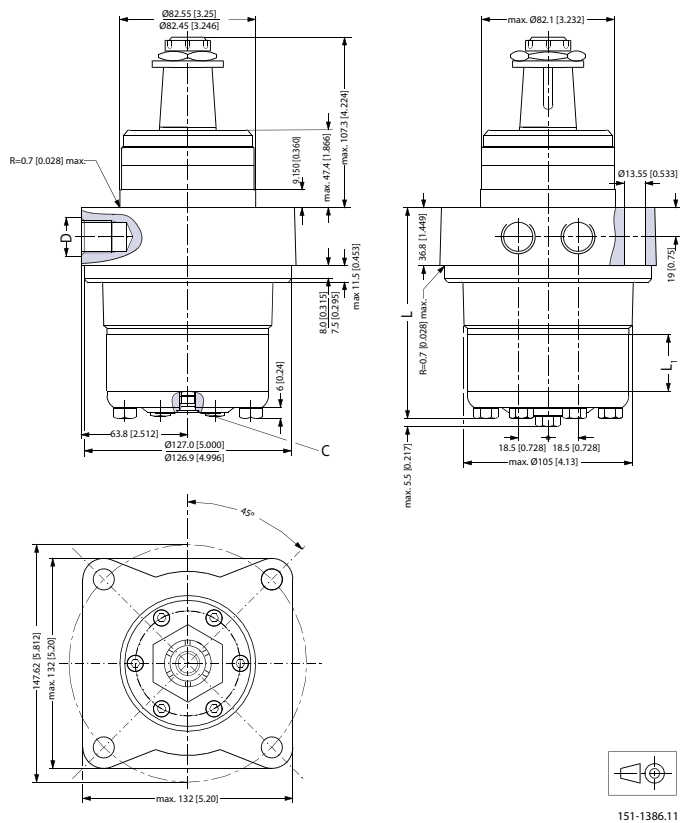
Dimensions-US Version

Type	Max. L mm [in]	L1 mm [in]
OMR 160	161.5 [6.36]	27.8 [1.09]
OMR 200	168.5 [6.63]	34.8 [1.37]
OMR 250	177.5 [6.99]	43.5 [1.71]
OMR 315	188.5 [7.42]	54.8 [2.16]
OMR 375	198.7 [7.82]	65.0 [2.56]

Dimensions-European Version

Dimensions

OMRW N wheel motor



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

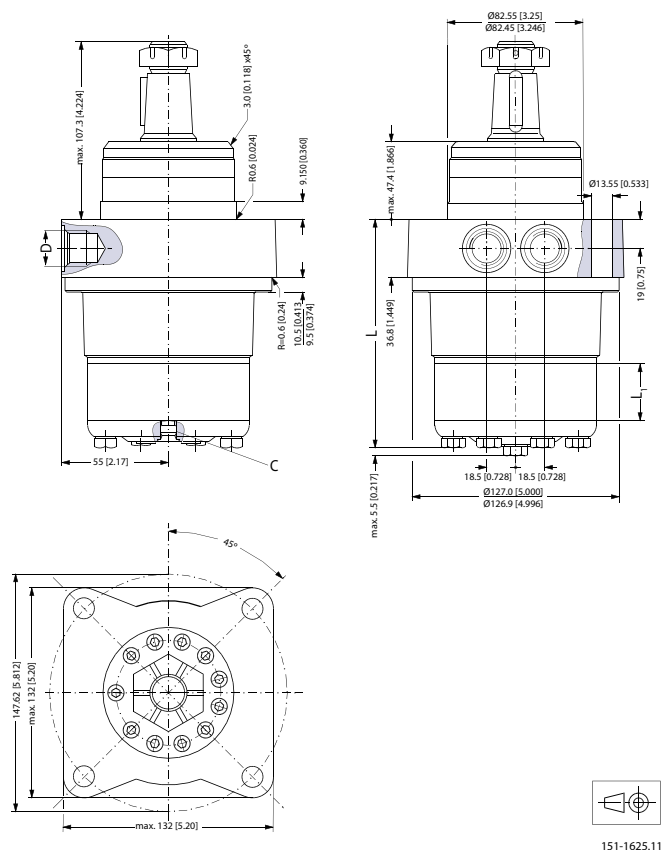
D: G ½; 15 mm [0.59 in] deep

Type	Max. L mm [in]	L1 mm [in]
OMRW 50 N	107.0 [4.21]	9.0 [0.35]
OMRW 80 N	112.0 [4.41]	14.0 [0.55]
OMRW 100 N	115.4 [4.54]	17.4 [0.69]
OMRW 125 N	119.8 [4.72]	21.8 [0.86]
OMRW 160 N	125.8 [4.95]	27.8 [1.09]
OMRW 200 N	132.8 [5.23]	34.8 [1.37]
OMRW 250 N	141.5 [5.57]	43.5 [1.71]
OMRW 315 N	153.0 [6.02]	54.8 [2.16]
OMRW 375 N	163.0 [6.42]	65.0 [2.56]

Dimensions-US Version

Dimensions

OMRW N wheel motor



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

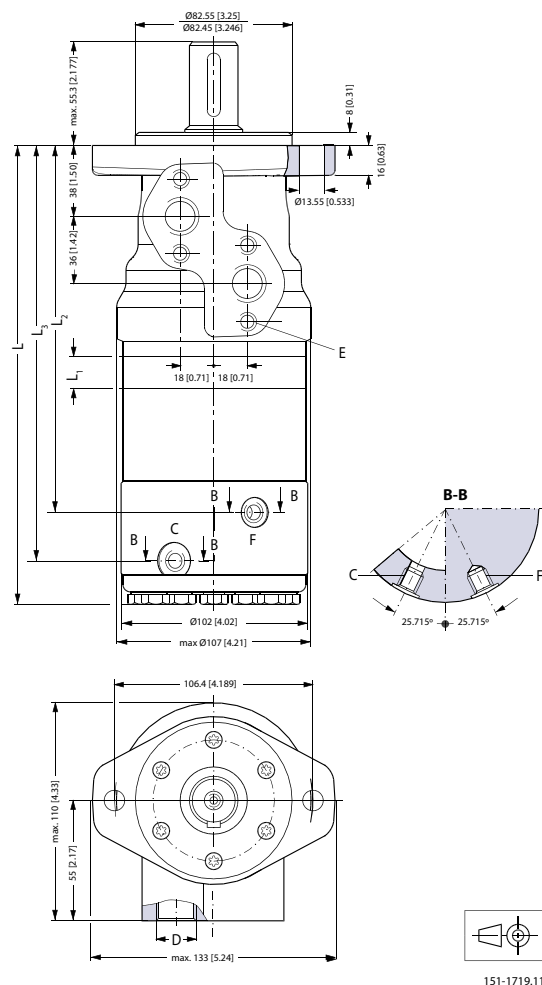
D: 7/8 - 14 UNF;
17 mm [0.66 in] deep

Type	Max. L mm [in]	L1 mm [in]
OMRW 50 N	107.0 [4.21]	9.0 [0.35]
OMRW 80 N	112.0 [4.41]	14.0 [0.55]
OMRW 100 N	115.4 [4.54]	17.4 [0.69]
OMRW 125 N	119.8 [4.72]	21.8 [0.86]
OMRW 160 N	125.8 [4.95]	27.8 [1.09]
OMRW 200 N	132.8 [5.23]	34.8 [1.37]
OMRW 250 N	141.5 [5.57]	43.5 [1.71]
OMRW 315 N	153.0 [6.02]	54.8 [2.16]
OMRW 375 N	163.0 [6.42]	65.0 [2.56]

Dimensions-European Version

Dimensions

OMR F motor



C: Drain connection

G ¼; 12 mm [0.47 in] deep

E: M8; 13 mm [0.51 in] deep

D: G ½; 15 mm [0.59 in] deep

F: Brake release connection G ¼

Type	Max. L mm [in]	L1 mm [in]	L2 mm [in]	L3 mm [in]
OMR 80 F	241.3 [9.50]	14.0 [0.55]	187.3 [7.37]	210.8 [8.30]
OMR 100 F	244.7[9.63]	17.4 [0.69]	190.7 [7.51]	214.2 [8.43]
OMR 125 F	249.1 [9.81]	21.8 [0.86]	195.1 [7.68]	218.6 [8.61]
OMR 160 F	255.1 [10.04]	27.8 [1.09]	201.1 [7.92]	224.6 [8.84]
OMR 200 F	262.1 [10.32]	34.5 [1.37]	208.1 [8.19]	231.6 [9.12]
OMR 250 F	270.8 [10.66]	43.5 [1.71]	216.8 [8.54]	240.3 [9.46]
OMR 315 F	282.1 [11.11]	54.8 [2.16]	228.1 [8.98]	251.6 [9.91]
OMR 375 F	292.3 [11.51]	65.0 [2.56]	238.3 [9.38]	261.8 [10.31]

Dimensions

[illegible]

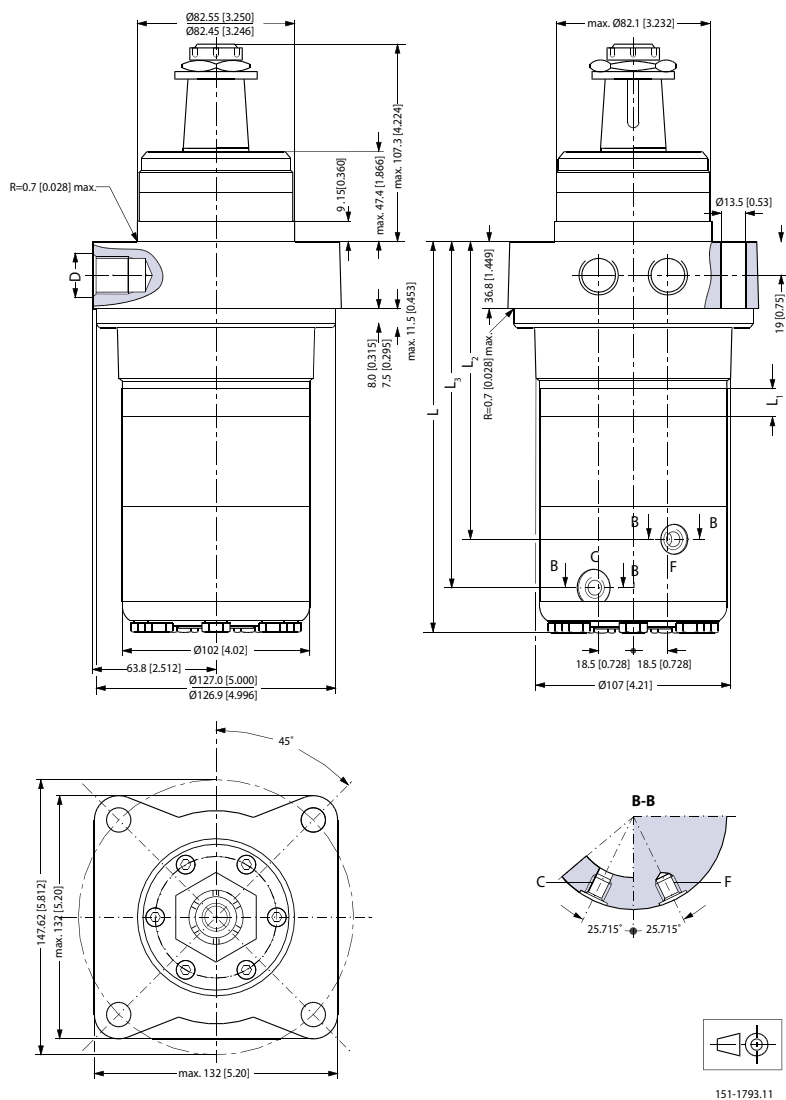
F: Brake release connection 7/16 - 20 UNF

Type	Max. L mm [in]	L1 mm [in]	L2 mm [in]	L3 mm [in]
OMR 80 NF	247.3 [9.74]	14.0 [0.55]	193.3 [7.61]	216.8 [8.54]
OMR 100 NF	250.7 [9.87]	17.4 [0.69]	196.7 [7.74]	220.2 [8.67]
OMR 125 NF	255.1 [10.04]	21.8 [0.86]	201.1 [7.92]	224.6 [8.84]
OMR 160 NF	261.1 [10.28]	27.8 [1.09]	207.1 [8.15]	230.6 [9.08]
OMR 200 NF	268.1 [10.55]	34.8 [1.37]	214.1 [8.43]	237.6 [9.35]
OMR 250 NF	276.8 [10.90]	43.5 [1.71]	222.8 [8.77]	246.3 [9.70]
OMR 315 NF	288.1 [11.34]	54.8 [2.16]	234.1 [9.22]	257.6[10.14]
OMR 375 NF	298.3 [11.74]	65.0 [2.56]	244.3 [9.62]	267.8 [10.54]

Dimensions-European Version

Dimensions

OMRW NF motor



C: Drain connection

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

E: M8; 13 mm [0.51 in] deep

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

F: Brake release connection G $\frac{1}{4}$

Type	Max. L mm [in]	L1 mm [in]
OMRW 80 NF	213.2[8.39]	14.0 [0.55]
OMRW 100 NF	216.6 [8.53]	17.4 [0.69]
OMRW 125 NF	221.0 [8.70]	21.8 [0.86]
OMRW 160 NF	227.0 [8.94]	27.8 [1.09]
OMRW 200 NF	234.0 [9.21]	34.8 [1.37]

Technical Information Orbital Motors Type OMP, OMR and OMH

Dimensions-European Version

Type	Max. L mm [in]	L1 mm [in]
OMRW 250 NF	242.7 [9.56]	43.5 [1.71]
OMRW 315 NF	254.0 [10.0]	54.8 [2.16]
OMRW 375 NF	264.2 [10.40]	65.0 [2.56]

Type	Max. L2 mm [in]	L3 mm [in]
OMRW 80 NF	159.2 [6.27]	182.7 [7.19]
OMRW 100 NF	162.6 [6.40]	186.1 [7.50]
OMRW 125 NF	167.0 [6.57]	190.5 [7.50]
OMRW 160 NF	173.0 [6.81]	196.5 [7.74]
OMRW 200 NF	180.0 [7.09]	203.5 [8.01]
OMRW 250 NF	188.7[7.43]	212.2 [8.35]
OMRW 315 NF	200.0 [7.87]	223.5 [8.80]
OMRW 375 NF	210.2 [8.28]	233.7 [9.20]

Technical Information Orbital Motors Type OMP, OMR and OMH

Version

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
4 hole oval flange (A4-flange)	Ø 82.5 mm [3.25 in]	Ø 106.4 mm [4.20 in]	Cyl. 32 mm	G ½	*		*			*		Yes	Yes	OMH
			Cyl. 35 mm	G ½	*		*			*		Yes	Yes	OMH
			Cyl. 1 1/4 in	7/8 - 14 UNF		*	*			*		Yes	Yes	OMH
			Splined 1 in SAE 6B	7/8 - 14 UNF		*	*			*		Yes	Yes	OMH
			Splined 1 1/4 in	G ½	*		*			*		Yes	Yes	OMH
			Splined 1 1/4 in	7/8 - 14 UNF		*	*			*		Yes	Yes	OMH
			Tapered 35 mm	G ½	*		*			*		Yes	Yes	OMH

* Version is available.

Technical Information Orbital Motors Type OMP, OMR and OMH

Code Numbers**Code Numbers**

Code numbers	Displacement [cm ³]				
	200	250	315	400	500
151H	1002	1003	1004	1005	1006
151H	1012	1013	1014	1015	1016
151H	1042	1043	1044	1045	1046
151H	1080	1082	1083	1084	1081
151H	1022	1023	1024	1025	1026
151H	1052	1053	1054	1055	1056
151H	-	-	1034	1035	1036
	84	84	85	85	86

Ordering

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

Example:

151H1044 for an OMH 315 with A4 flange, cyl. 1 ¼ in shaft, port size 7/8 - 14 UNF

Orders will not be accepted without the four digit prefix.
