SAUER DANFOSS

OMM
Technical Information
Versions

VERSIONS

Mounting	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	Specials	Main type designation
Front; 3 × M6	Cyl. 16 mm	G 3/8	X			X		X		Yes	Yes		OMM
		G 3/8	X		X			X		Yes	Yes		OMM
Front; 3 × 1/4 - 28 UNF	Cyl. 5/8 in	9/16-18 UNF		X		X		X		Yes	Yes		OMM
		9/16-18 UNF		X	X			X		Yes	Yes		OMM
Front; 3 × M6	Splined B17×14	G 3/8	X			X		X		Yes	Yes		OMM
		G 3/8	X		X			X		Yes	Yes		OMM
													Function diagram - see page : →

Features available (options) :
Speed sensor
Reverse rotation
Drain
Corrosion protected
Painted

SAUER DANFOSS

OMM
Technical Information
Code Numbers

CODE NUMBERS

CODE NUMBERS	DISPLACEMENT [cm³]							Technical data – Page	Dimensions – Page
	8	12.5	20	32	40	50	Mounting flange [1]		
151G	0040	0001	0002	0003	0277	0037	0211	20	28 (29)[2]
151G	0041	0004	0005	0006	0279	0013	0211	20	31 (32)[2]
151G	0048	0031	0032	0033	-	-	-	20	30
151G	0049	0034	0035	0036	-	0094	-	20	33
151G	0046	0024	0025	0026	-	-	0211	20	28 (29)[2]
151G	0047	0027	0028	0029	-	-	0211	20	31 (32)[2]
→	23	23	24	24	25	25			

1) To be ordered separately. Mounting screws included.
2) Dimension with extra mounting flange.

Ordering

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

Example:
151G0035 for an OMM 20 with front mounting (3 × 1/4 - 28 UNF), cyl. 5/8 in shaft and port size 9/16 - 18 UNF.

Note: Orders will not be accepted without the four digit prefix.

SAUER DANFOSS

OMM
Technical Information
Technical data

TECHNICAL DATA FOR OMM WITH 16 MM AND 5/8 IN CYLINDRICAL SHAFT

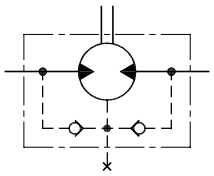
Type			OMM	OMM	OMM	OMM	OMM	OMM
Motor size			**8**	**12.5**	**20**	**32**	**40**	**50**
Geometric displacement	cm^3 [in^3]		8.2 [0.50]	12.9 [0.79]	19.9 [1.22]	31.6 [1.93]	39.8 [2.43]	50.3 [3.08]
Max. speed	min^{-1} [rpm]	cont.	1950	1550	1000	630	500	400
		int.[1]	2450	1940	1250	800	630	500
Max. torque	Nm [lbf-in]	cont.	11 [95]	16 [140]	25 [220]	40 [350]	45 [400]	46 [410]
		int.[1]	15 [135]	23 [200]	35 [310]	57 [500]	70 [620]	88 [780]
		peak[2]	21 [185]	33 [290]	51 [450]	64 [570]	82 [725]	100 [890]
Max. output	kW [hp]	cont.	1.8 [2.4]	2.4 [3.2]	2.4 [3.2]	2.4 [3.2]	2.2 [3.0]	1.8 [2.4]
		int.[1]	2.6 [3.5]	3.2 [4.3]	3.2 [4.3]	3.2 [4.3]	3.2 [4.3]	3.2 [4.3]
Max. pressure drop	bar [psi]	cont.	100 [1450]	100 [1450]	100 [1450]	100 [1450]	90 [1310]	70 [1020]
		int.[1]	140 [2030]	140 [2030]	140 [2030]	140 [2030]	140 [2030]	140 [2030]
		peak[2]	200 [2900]	200 [2900]	200 [2900]	160 [2320]	160 [2320]	160 [2320]
Max. oil flow	l/min [gpm]	cont.	16 [4.2]	20 [5.3]	20 [5.3]	20 [5.3]	20 [5.3]	20 [5.3]
		int.[1]	20 [5.3]	25 [6.6]	25 [6.6]	25 [6.6]	25 [6.6]	25 [6.6]
Max. starting pressure with unloaded shaft	bar [psi]		4 [60]	4 [60]	4 [60]	4 [60]	4 [60]	4 [60]
Min. starting torque	at max. press. drop cont. Nm [lbf·in]		7 [60]	12 [105]	21 [185]	34 [300]	38 [335]	41 [365]
	at max. press. drop int.[1] Nm [lbf·in]		10 [90]	17 [150]	29 [255]	48 [425]	62 [550]	79 [700]
Min. speed[3]	min^{-1} [rpm]		50	40	30	30	30	30

Type			Max. inlet pressure
OMM 8 - 50	bar [psi]	cont.	140 [20309
	bar [psi]	int.[1]	175 [25409
	bar [psi]	peak[2]	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.
[3] Operation by lower speeds may be slightly less smooth.

MAX. PERMISSIBLE SHAFT SEAL PRESSURE

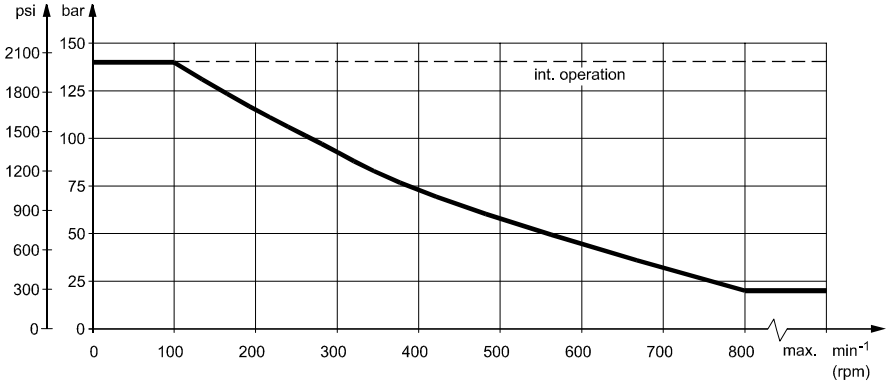
OMM with check valves and without use of drain connection:
The pressure on the shaft seal never exceeds the pressure in the return line.



151-320.10

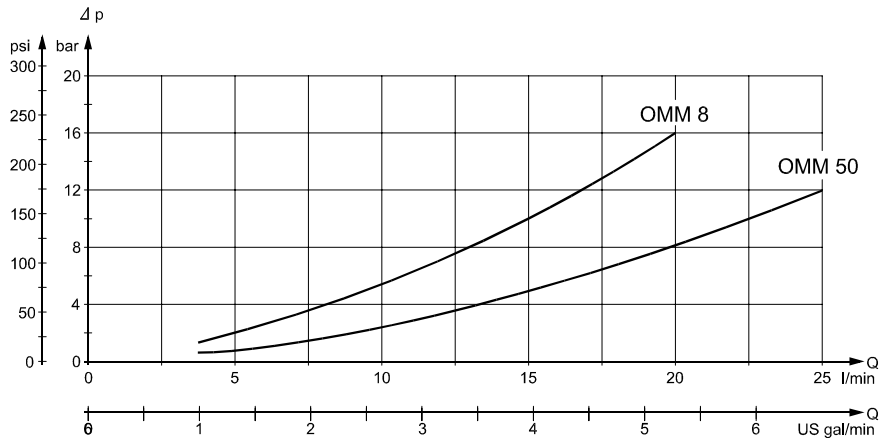
OMM with check valves and drain connection:
The shaft seal pressure equals the pressure on the drain line.

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



151-1671.10

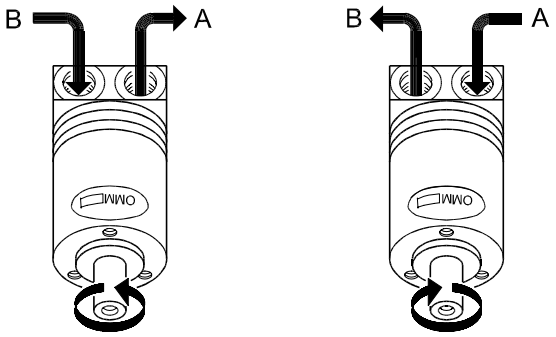
PRESSURE DROP IN MOTOR



151-1367.10

The curve applies to an unloaded motor shaft and an oil viscosity of 35 mm^2/s [165 SUS]

DIRECTION OF SHAFT ROTATION



151-1051.10

PERMISSIBLE SHAFT LOADS FOR OMM

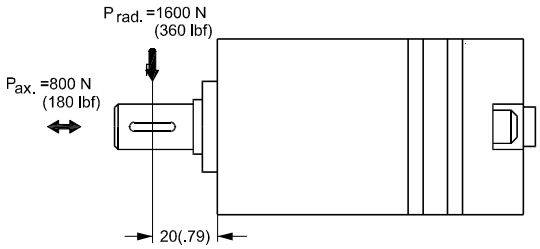
The permissible radial shaft load ($P_{rad.}$) is calculated from the distance (l) between the point of load and the mounting surface:

$$P_{rad.} = \frac{130400}{61.5 + l} \text{ N (l in mm; } l \leq 80 \text{ mm)}$$

$$P_{rad.} = \frac{748}{2.54 + l} \text{ lbf (l in inch; } l \leq 3.15 \text{ in)}$$

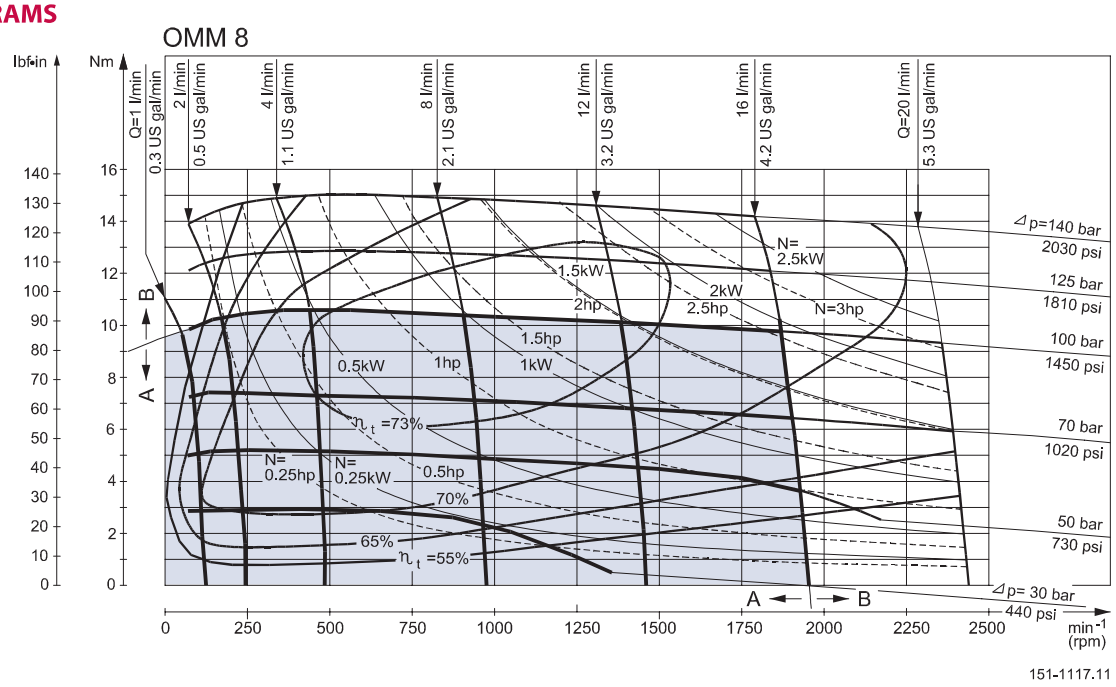
The drawing shows the permissible radial load when l = 15 mm [0.59 in].

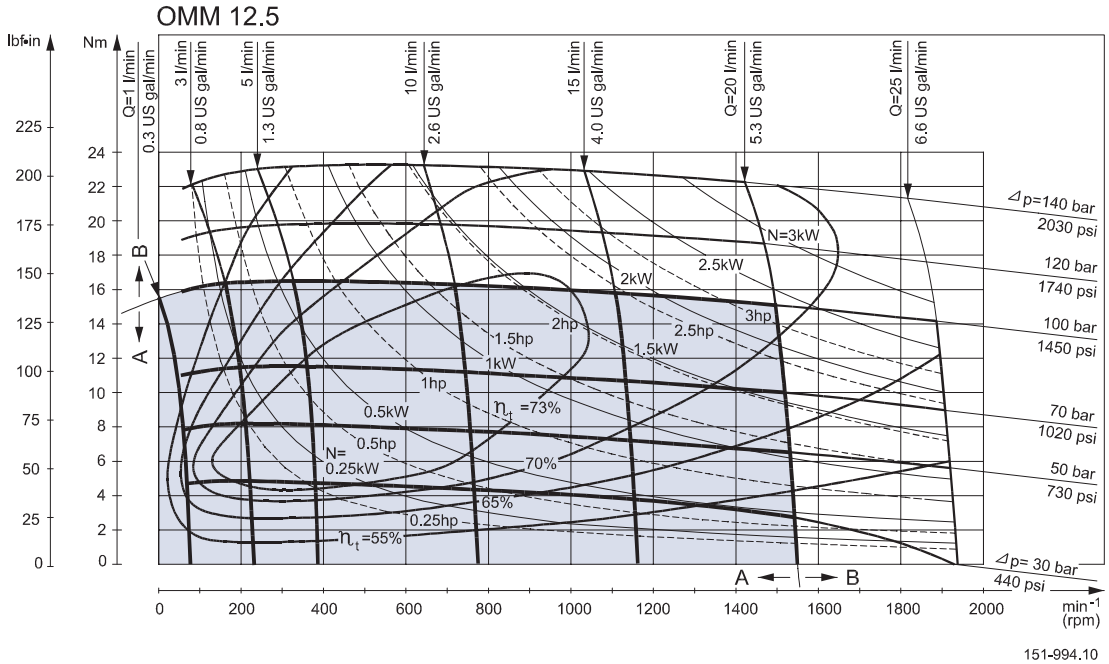
The calculated shaft load should never exceed the permissible value.



151-980.11

FUNCTION DIAGRAMS





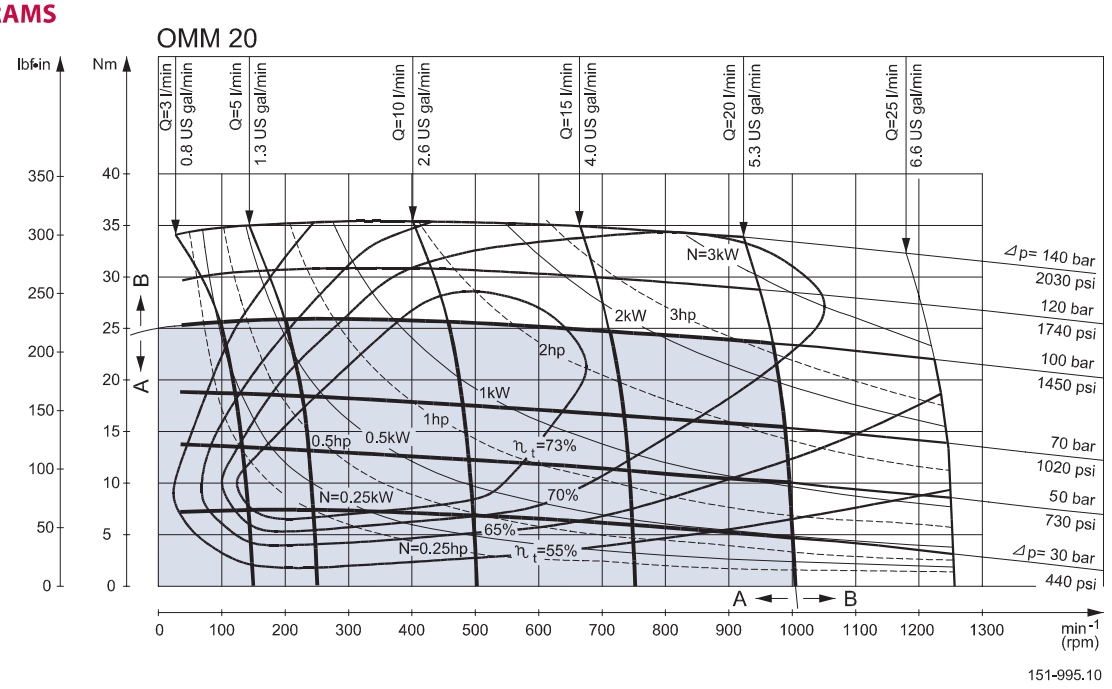
Explanation of function diagram use, basis and conditions can be found on page 4.

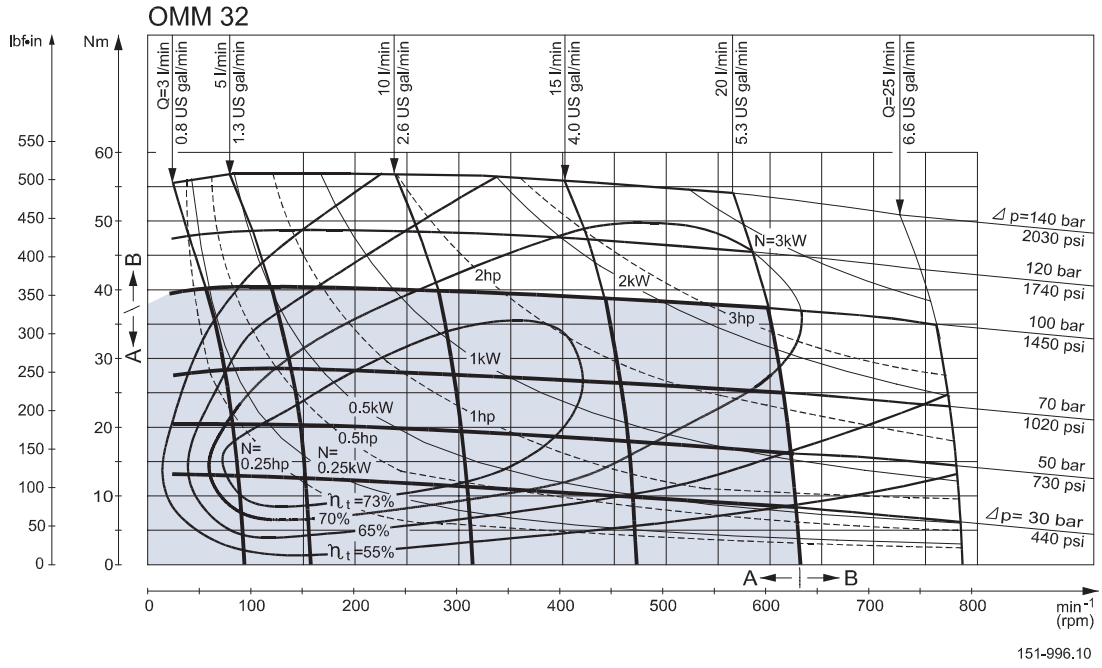
- A: Continuous range
- B: Intermittent range (max. 10% operation every minute)

Max. permissible continuous/intermittent pressure drop for the actual shaft version can be found on page 20.

Note: 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 4.

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

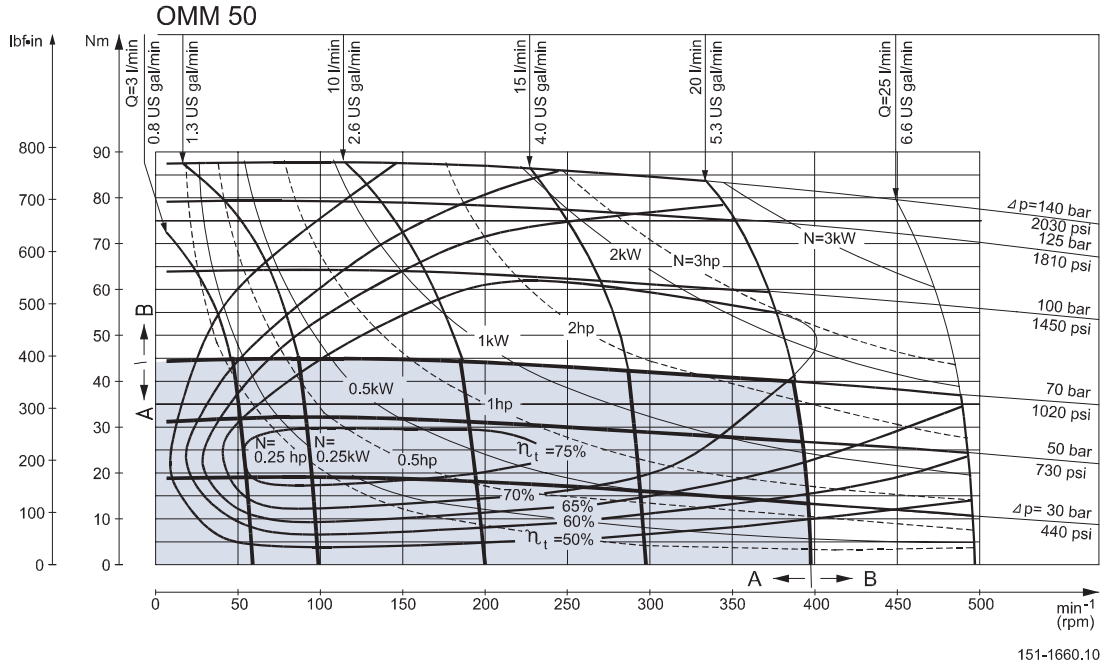
Max. permissible continuous/intermittent pressure drop for the actual shaft version can be found on page 20.

Note: Intermittent pressure drop and oil flow must not occur simultaneously.

FUNCTION DIAGRAMS

OMM 40

No function diagram available for OMM 40.



Explanation of function diagram use, basis and conditions can be found on page 4.

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

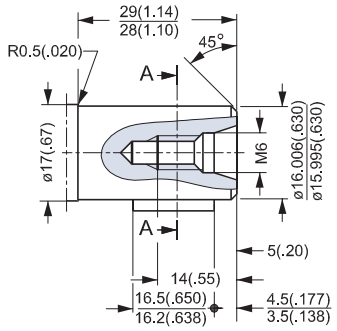
Max. permissible continuous/intermittent pressure drop for the actual shaft version can be found on page 20.

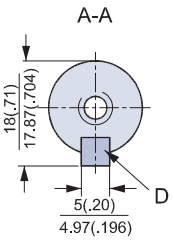
Note: Intermittent pressure drop and oil flow must not occur simultaneously.

SHAFT VERSION

A: Cylindrical shaft
16 mm (xx in)
D: Parallel key
A5 × 5 × 16
DIN 6885

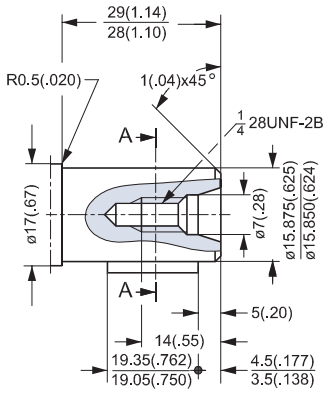
A

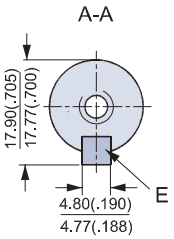




US version
B: Cylindrical shaft
$^{5}/_{8}$ in
E: Parallel key
$^{3}/_{16} \times {}^{3}/_{16} \times {}^{3}/_{4}$ in
B.S. 46

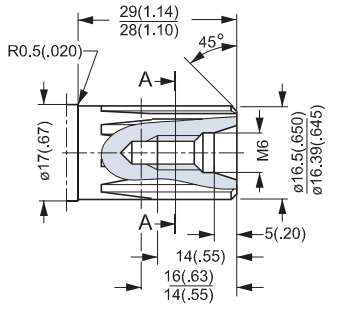
B

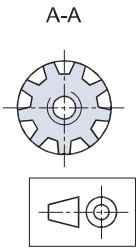




C: Involute splined shaft
B17 × 14, DIN 5482

C

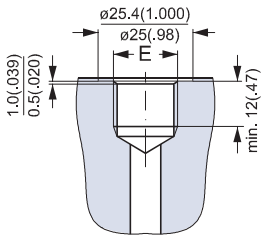




151-1866.10

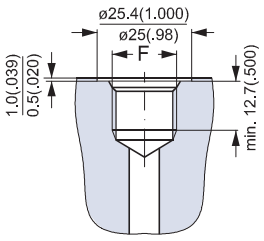
PORT THREAD VERSIONS

A



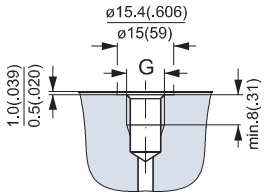
A: G main ports
E: ISO 228/1 - G3/8

B



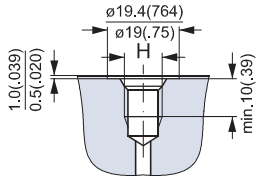
B: UNF main ports
F: 9/16 - 18 UNF
O-ring boss port

C



C: G drain ports
G: ISO 228/1 - G1/8

D



151-1869.10

D: UNF drain ports
H: 3/8 - 24 UNF
O-ring port

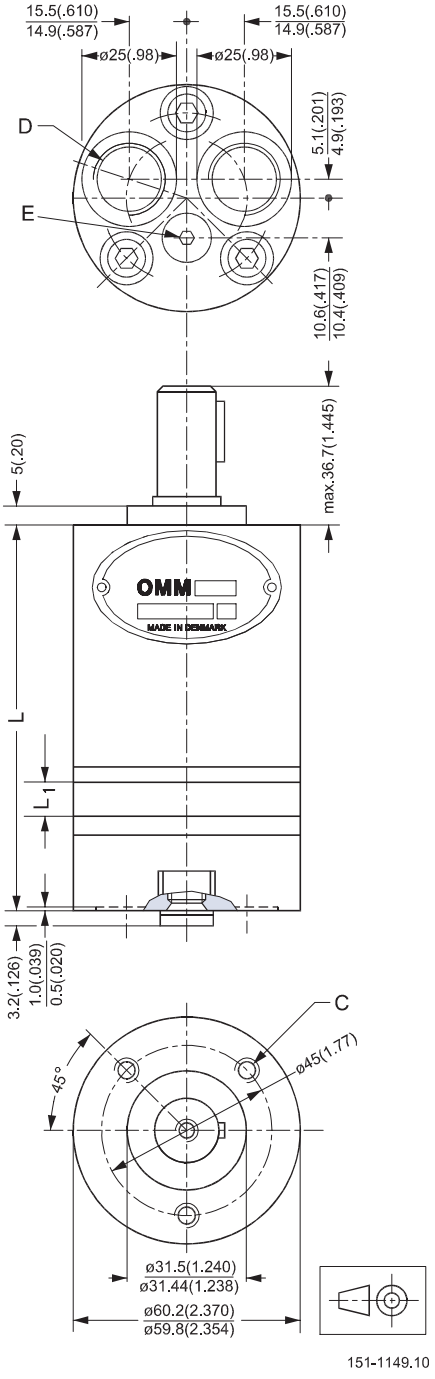
OMM
Technical Information
Dimensions – European version

DIMENSIONS

OMM.
End port version.

Type	$L_{max.}$	L_1 mm [in]
OMM 8	104.0 [4.09]	3.5 [0.14]
OMM 12.5	106.0 [4.17]	5.5 [0.22]
OMM 20	109.0 [4.29]	8.5 [0.33]
OMM 32	114.0 [4.49]	13.5 [0.53]
OMM 40	118.0 [4.65]	17.0 [0.67]
OMM 50	122.0 [4.80]	21.5 [0.85]

C: M6; 10 mm [0.39 in] deep
D: G 3/8; 12 mm [0.47 in] deep
E: Drain connection G 1/8;
8 mm [0.39 in] deep



151-1149.10

SAUER DANFOSS

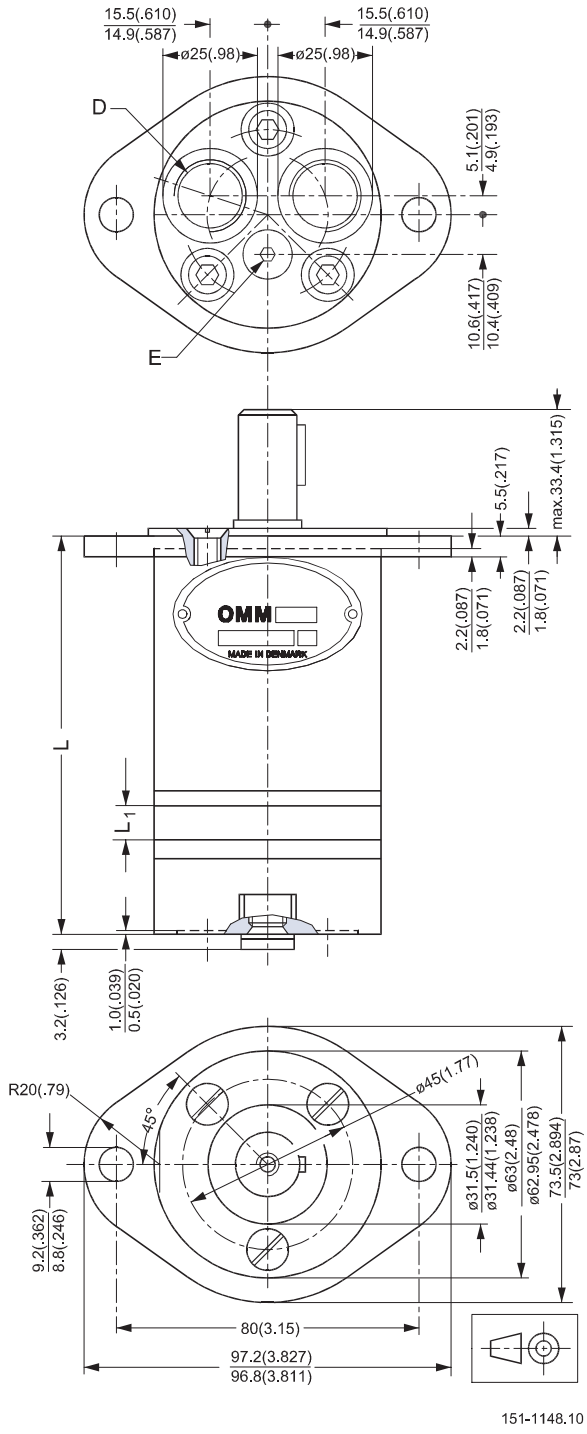
OMM
Technical Information
Dimensions – European version

DIMENSIONS

OMM.
End port version with extra mounting flange.

Type	$L_{max.}$	L_1 mm [in]
OMM 8	107.5 [4.23]	3.5 [0.14]
OMM 12.5	109.5 [4.31]	5.5 [0.22]
OMM 20	112.5 [4.43]	8.5 [0.33]
OMM 32	117.5 [4.63]	13.5 [0.53]
OMM 40	118.0 [4.65]	17.0 [0.67]
OMM 50	125.5 [4.94]	21.5 [0.85]

D: G 3/8; 12 mm [0.47 in] deep
E: Drain connection G 1/8; 8 mm [0.39 in] deep



151-1148.10

SAUER DANFOSS

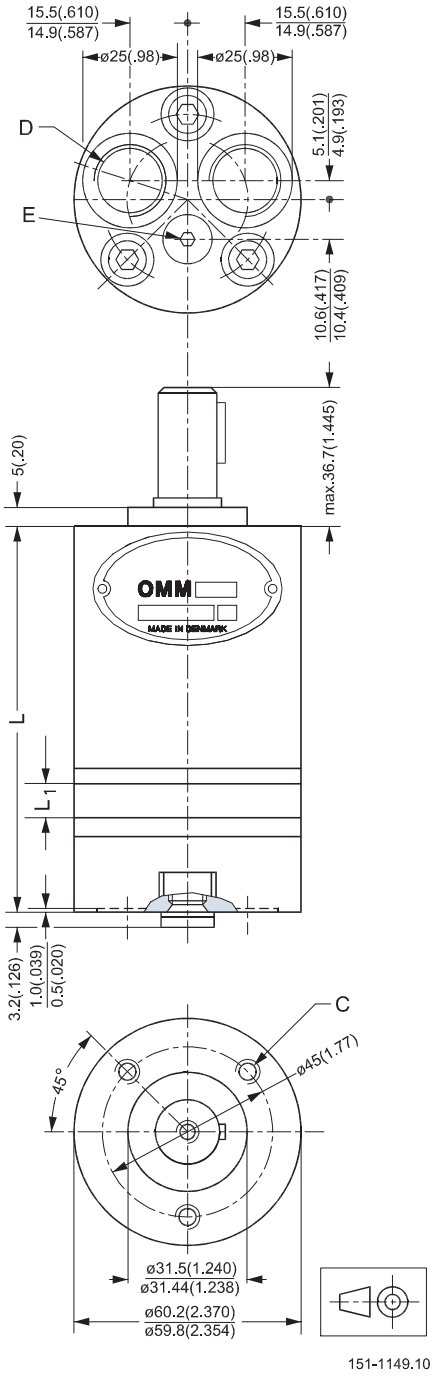
OMM
Technical Information
Dimensions – US version

DIMENSIONS

OMM.
End port version.

Type	$L_{max.}$	L_1 mm [in]
OMM 8	104.0 [4.09]	3.5 [0.14]
OMM 12.5	106.0 [4.17]	5.5 [0.22]
OMM 20	109.0 [4.29]	8.5 [0.33]
OMM 32	114.0 [4.49]	13.5 [0.53]
OMM 50	122.0 [4.80]	21.5 [0.85]

C: 1/4 - 28 UNF - 2B;
min. 10 mm [0.39 in] deep
D: 9/16 - 18 UNF;
12 mm [0.47 in] deep
O-ring boss port
E: 3/8 - 24 UNF;
8 mm [0.39 in] deep
O-ring port



151-1149.10

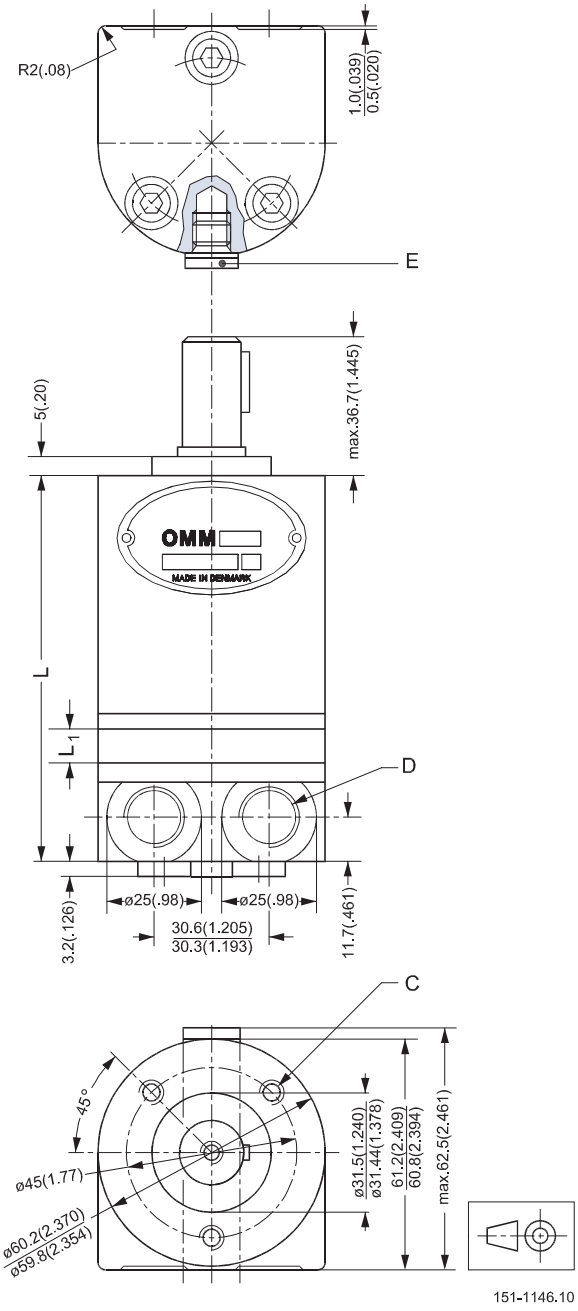
OMM
Technical Information
Dimensions – European version

DIMENSIONS

OMM.
Side port version.

Type	$L_{max.}$	L_1 mm [in]
OMM 8	105.8 [4.17]	3.5 [0.14]
OMM 12.5	107.8 [4.24]	5.5 [0.22]
OMM 20	110.8 [4.36]	8.5 [0.33]
OMM 32	115.8 [4.56]	13.5 [0.53]
OMM 40	118.0 [4.65]	17.0 [0.67]
OMM 50	123.8 [4.87]	21.5 [0.85]

C: M6; 10 mm [0.39 in] deep
D: G 3/8; 12 mm [0.47 in] deep
E: Drain connection G 1/8; 8 mm [0.39 in] deep



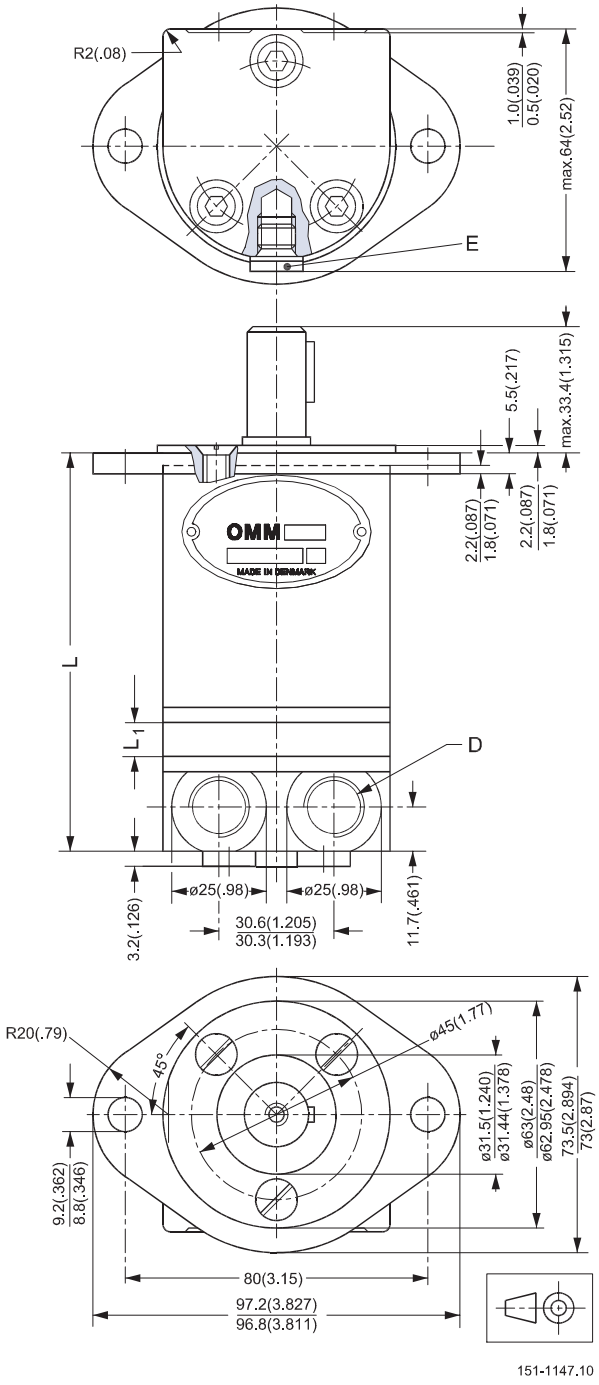
OMM
Technical Information
Dimensions – European version

DIMENSIONS

OMM.
Side port version with extra mounting flange.

Type	$L_{max.}$	L_1 mm [in]
OMM 8	109.3 [4.30]	3.5 [0.14]
OMM 12.5	111.3 [4.38]	5.5 [0.22]
OMM 20	114.3 [4.50]	8.5 [0.33]
OMM 32	119.3 [4.70]	13.5 [0.53]
OMM 40	118.0 [4.65]	17.0 [0.67]
OMM 50	127.3 [5.01]	21.5 [0.85]

D: G 3/8; 12 mm [0.47 in] deep
E: Drain connection G 1/8; 8 mm [0.39 in] deep



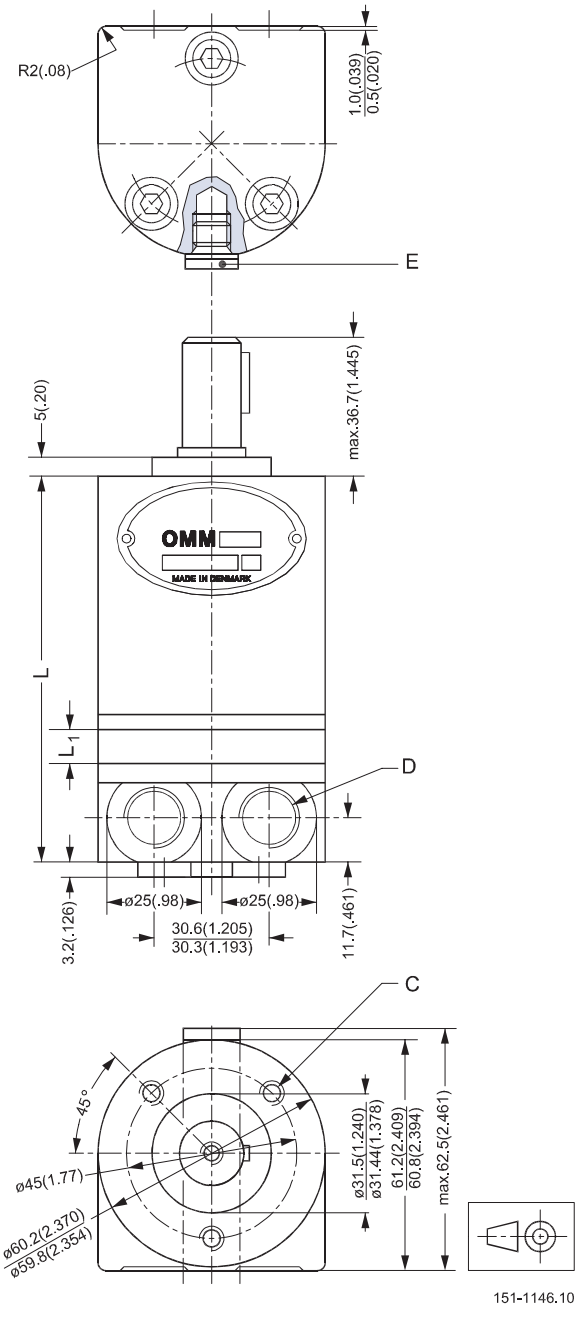
OMM
Technical Information
Dimensions – US version

DIMENSIONS

OMM.
Side port version.

Type	$L_{max.}$	L_1 mm [in]
OMM 8	105.8 [4.17]	3.5 [0.14]
OMM 12.5	107.8 [4.24]	5.5 [0.22]
OMM 20	110.8 [4.36]	8.5 [0.33]
OMM 32	115.8 [4.56]	13.5 [0.53]
OMM 50	121.8 [4.80]	21.5 [0.85]

C: 1/4 - 28 UNF - 2B;
min. 10 mm [0.39 in] deep
D: 9/16 - 18 UNF;
12 mm [0.47 in] deep
E: 3/8 - 24 UNF;
8 mm [0.39 in] deep



SAUER DANFOSS

OML and OMM
Technical Information
Weight of motors

WEIGHT OF MOTORS

Code no.	Weight	
	kg	lb
151G0001	2.0	4.4
151G0002	2.1	4.6
151G0003	2.2	4.8
151G0004	2.0	4.4
151G0005	2.1	4.6
151G0006	2.2	4.8
151G0013	2.4	5.3
151G0024	2.0	4.4
151G0025	2.1	4.6
151G0026	2.2	4.8
151G0027	2.0	4.4
151G0028	2.1	4.6
151G0029	2.2	4.8

Code no.	Weight	
	kg	lb
151G0031	2.0	4.4
151G0032	2.2	4.8
151G0033	2.2	4.8
151G0034	2.0	4.4
151G0035	2.2	4.8
151G0036	2.2	4.8
151G0037	2.4	5.3
151G0040	1.9	4.2
151G0041	1.9	4.2
151G0046	1.9	4.2
151G0047	1.9	4.2
151G0048	1.9	4.2

Code no.	Weight	
	kg	lb
151G0049	1.9	4.2
151G0094	2.4	5.3
151G0277	2.3	5.1
151G0279	2.3	5.1
151G2001	1.0	2.2
151G2002	1.0	2.2
151G2003	1.1	2.4
151G2004	1.2	2.6
151G2021	1.0	2.2
151G2022	1.0	2.2
151G2023	1.1	2.4
151G2024	1.2	2.6