OMT

Versions

OMT versions

Mounting flange	Shaft	Port size	European version	US version	Drain connection	Check valve	Low pressure release	High pressure release	Main type designation
Standard flange	Cyl. 40 mm	G 3/4	X		Yes	Yes			OMT
	Cyl. 1.5 in	1 1/16-12 UN		X	Yes	Yes			OMT
	Splined 1.5 in	G 3/4	X		Yes	Yes			OMT
		1 1/16-12 UN		X	Yes	Yes			OMT
	Tapered 45 mm	G 3/4	X		Yes	Yes			OMT
	Tapered 1.75 in	1 1/16-12 UN		X	Yes	Yes			OMT
	P.t.o.	G 3/4	X		Yes	Yes			OMT
Wheel	Cyl. 40 mm	G 3/4	X		Yes	Yes			OMTW
	Tapered 45 mm	G 3/4	X		Yes	Yes			OMTW
	Tapered 1.75 in	1 1/16-12 UN		X	Yes	Yes			OMTW
Brake-wheel	Wheel bolt flange	G 3/4	X		Yes	No	X		OMT FX
	Thread hole flange	G 3/4	X		Yes	No	X		OMT FX
Brake-standard	Cyl. 40 mm	G 3/4	X		Yes	No	X		OMT FL
	Splined 1.5 in	G 3/4	X		Yes	No	X		OMT FL
	Cyl. 40 mm	G 3/4	X		Yes	No		X	OMT FH
	Splined 1.5 in	G 3/4	X		Yes	No		X	OMT FH
Short	No output shaft	G 3/4	X		Yes	Yes			OMTS

Features

Features available (options):

- Speed sensor
- Motor with tacho connection
- Viton shaft seal
- Painted
- Ultra short

Code numbers

OMT code numbers

Code Numbers	Displacement [cm^3]					
	160	**200**	**250**	**315**	**400**	**500**
151B	3000	3001	3002	3003	3004	3005
151B	2050	2051	2052	2053	2054	2055
151B	3006	3007	3008	3009	3010	3011
151B	2056	2057	2058	2059	2060	2061
151B	3012	3013	3014	3015	3016	3017
151B	2062	2063	2064	2065	2066	2067

OMT

OMT code numbers (continued)

Code Numbers	Displacement [cm³]					
	160	200	250	315	400	500
151B	3018	3019	3020	3021	3022	3023
151B	3024	3025	3026	3027	3028	3029
151B	3030	3031	3032	3033	3034	3035
151B	2080	2081	2082	2083	2084	2085
151B	3207	3208	3209	3210	3211	3212
151B	3200	3201	3202	3203	3204	3205
151B	4000	4001	4002	4003	4004	4005
151B	4007	4008	4009	4010	4011	4012
151B	4021	4022	4023	4024	4025	4026
151B	4028	4029	4030	4031	4032	4033
151B	3036	3037	3038	3039	3040	3041

Ordering

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

Example:

151B3002 for an OMT 250 with standard flange, cyl. 40 mm shaft and port size G 3/4.

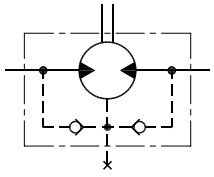
Orders will not be accepted without the four digit prefix.

Technical data

Maximum permissible shaft seal pressure

Motor 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

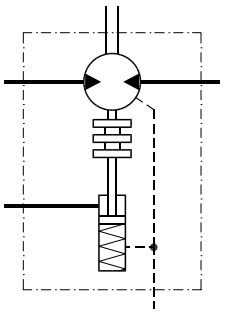
Motor with check valves and with drain connection

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

OMT FX, OMT FL and OMT FH must always be fitted with drain line.

Maximum pressure in drain line is 5 bar [75 psi]

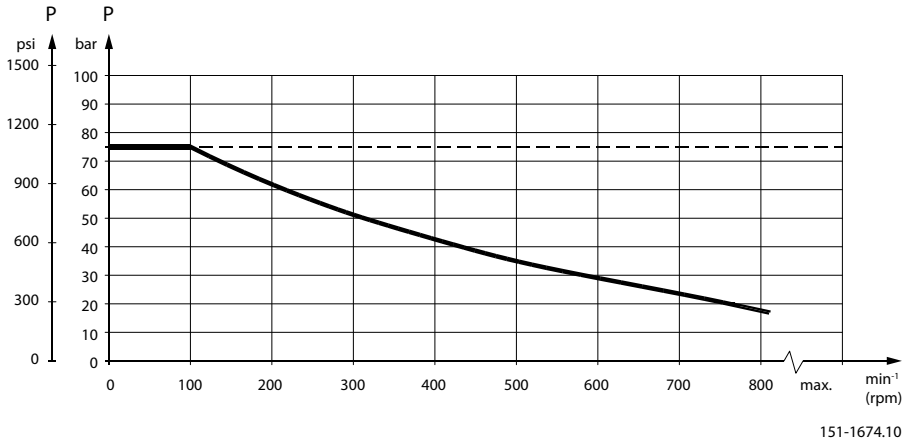
OMT



Motor with check valves and with drain connection

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

Maximum return pressure without drain line or maximum pressure in the drain line



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

——— Continuous operation

OMT, OMTW, OMTS, OMT FX OMT FL and OMT FH

Technical data for OMT, OMTW, OMTS, OMT FX OMT FL and OMT FH

Type			**OMT OMTW OMTS OMT FX OMT FL OMT FH**	**OMT OMTW OMTS OMT FX OMT FL OMT FH**	**OMT OMTW OMTS OMT FX OMT FL OMT FH**	**OMT OMTW OMTS OMT FX OMT FL OMT FH**	**OMT OMTW OMTS OMT FX OMT FL OMT FH**	**OMT OMTW OMTS OMT FX OMT FL OMT FH**
Motor size			**160**	**200**	**250**	**315**	**400**	**500**
Geometric displacement	cm^3 [in^3]		161.1 [9.83]	201.4 [12.29]	251.8 [15.37]	326.3 [19.91]	410.9 [25.07]	523.6 [31.95]
Maximum speed	min^{-1} [rpm]	cont.	625	625	500	380	305	240
		int[1)]	780	750	600	460	365	285

OMT

Technical data for OMT, OMTW, OMTS, OMT FX OMT FL and OMT FH (continued)

Type			**OMT OMTW OMTS OMT FX OMT FL OMT FH**	**OMT OMTW OMTS OMT FX OMT FL OMT FH**	**OMT OMTW OMTS OMT FX OMT FL OMT FH**	**OMT OMTW OMTS OMT FX OMT FL OMT FH**	**OMT OMTW OMTS OMT FX OMT FL OMT FH**	**OMT OMTW OMTS OMT FX OMT FL OMT FH**
Motor size			**160**	**200**	**250**	**315**	**400**	**500**
Maximum torque	Nm [lbf·in]	cont.	470 [4160]	590 [5220]	730 [6460]	950 [8410]	1080 [9560]	1220 [10800]
		int.[1]	560 [4960]	710 [6280]	880 [7790]	1140 [10090]	1260 [11150]	1370 [12130]
Maximum output	kW [hp]	cont.	26.5 [35.5]	33.5 [44.9]	33.5 [44.9]	33.5 [44.9]	30.0 [40.2]	26.5 [35.5]
		int.[1]	32.0 [42.9]	40.0 [53.6]	40.0 [53.6]	40.0 [53.6]	35.0 [46.9]	30.0 [40.2]
Maximum pressure drop	bar [psi]	cont.	200 [2900]	200 [2900]	200 [2900]	200 [2900]	180 [2610]	160 [2320]
		int.[1]	240 [3480]	240 [3480]	240 [3480]	240 [3480]	210 [3050]	180 [2610]
		peak[2]	280 [4060]	280 [4060]	280 [4060]	280 [4060]	240 [3480]	210 [3050]
Maximum oil flow	l/min [USgal/min]	cont.	100 [26.4]	125 [33.0]	125 [33.0]	125 [33.0]	125 [33.0]	125 [33.0]
		int.[1]	125 [33.0]	150 [39.6]	150 [39.6]	150 [39.6]	150 [39.6]	150 [39.6]
Maximum starting pressure with unloaded shaft	bar [psi]		10 [145]	10 [145]	10 [145]	10 [145]	10 [145]	10 [145]
Minimum starting torque	at maximum pressure drop cont. Nm [lbf·in]		340 [3010]	430 [3810]	530 [4690]	740 [6550]	840 [7430]	950 [8410]
	at maximum pressure drop int.[1] Nm [lbf·in]		410 [3630]	520 [4600]	630 [5580]	890 [7880]	970 [8590]	1060 [9380]

[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.

For maximum permissible combination of flow and pressure, see function diagram for actual motor.

Type			**Maximum inlet pressure**	**Maximum return pressure with drain line**
OMT, OMTW, OMTS, OMT FX, OMT FL, OMT FH	bar [psi]	cont.	210 [3050]	140 [2030]
	bar [psi]	int.[1]	250 [3630]	175 [2540]
	bar [psi]	peak[2]	300 [4350]	210 [3050]

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

[2] Peak load: The permissible values may occur for maximum 1% of every minute.

OMT

Brake motors

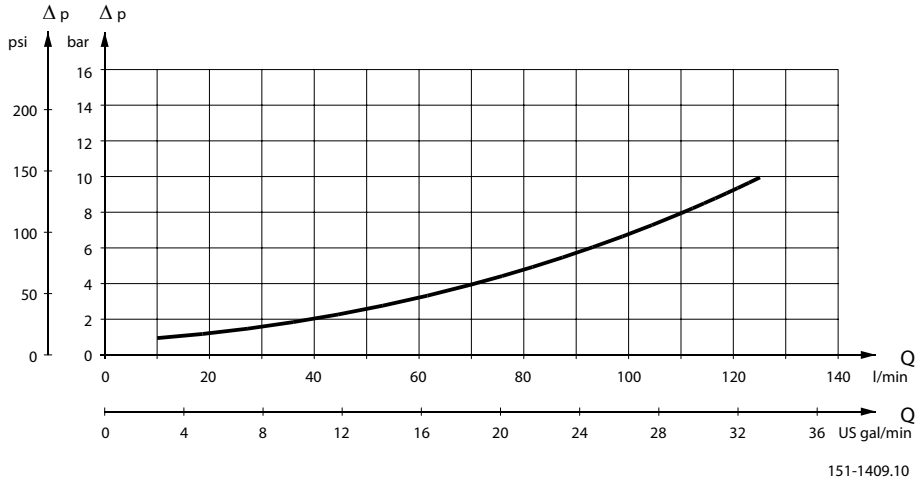
Type	Maximum presssure in drain line[3)]	Holding torque[4)]	Brake-release pressure[3)]	Maximum pressure in brake line
OMT FX, OMT FL	5 bar [70 psi]	1200 Nm [10620 lbf·in]	12 bar [170 psi]	30 bar [440 psi]
OMT FH	5 bar [70 psi]	1200 Nm [10620 lbf·in]	30 bar [440 psi]	280 bar [4060 psi]

[3)] Brake motors must always have a drain line. The brake-release pressure is the difference between the pressure in the brake line and the pressure in the drain line.

[4)] For the supply of motors with holding torques higher than those stated, please contact the Danfoss sales organization.

For maximum permissible combination of flow and pressure, see function diagram for actual motor.

Pressure drop in motor



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

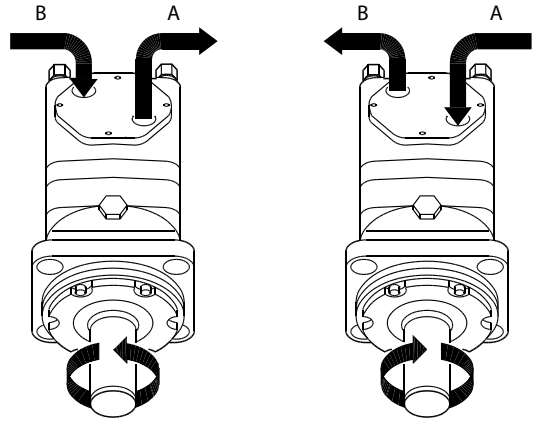
Oil flow in drain line

Maximum oil flow in the drain line at a return pressure less than 5-10 bar [75-150 psi]

Pressure drop		Viscosity		Oil flow in drain line	
bar	**[psi]**	**mm^2/s**	**[SUS]**	**l/min**	**[US gal/min]**
140	[2030]	20	[100]	2.5	[0.66]
		35	[165]	1.5	[0.40]
210	[3050]	20	[100]	5.0	[1.32]
		35	[165]	3.0	[0.79]

OMT

Direction of shaft rotation



Permissible shaft loads for OMT

Mounting flange:

Standard

Shaft:

All shaft types

Mounting flange:

Wheel

Shaft:

All shaft types

The output shaft runs in tapered roller bearings that permit high axial and radial forces.

The permissible radial load on the shaft is shown for an axial load of 0 N as a function of the distance from the mounting flange to the point of load application.

The curve is based on B10 bearing life (2000 hours or 12,000,000 shaft revolutions at 100 min^{-1}) at rated output torque, when mineral-based hydraulic oil with a sufficient content of anti-wear additives, is used.

For 3,000,000 shaft revolutions or 500 hours – increase these shaft loads with 52%.

The dash curve shows maximum radial shaft load. Any shaft load exceeding the values shown in the curve will involve a risk of breakage.

Bearing life calculations can be made using the explanation and formula provided in the chapter *"Bearing dimensioning* in the technical information *General Orbital Motors*, **BC152886483554**.

Mounting flange:

Brake-wheel

Shaft:

All shaft types

OMT

Mounting flange:

Brake-standard

Shaft:

All shaft types

The output shaft runs in tapered roller bearings that permit high axial and radial forces.

The permissible radial load on the shaft is shown for an axial load of 0 N as a function of the distance from the mounting flange to the point of load application.

The curve is based on B10 bearing life (2000 hours or 12,000,000 shaft revolutions at 100 min^{-1}) at rated output torque, when mineral-based hydraulic oil with a sufficient content of anti-wear additives, is used.

For 3,000,000 shaft revolutions or 500 hours – increase these shaft loads with 52%.

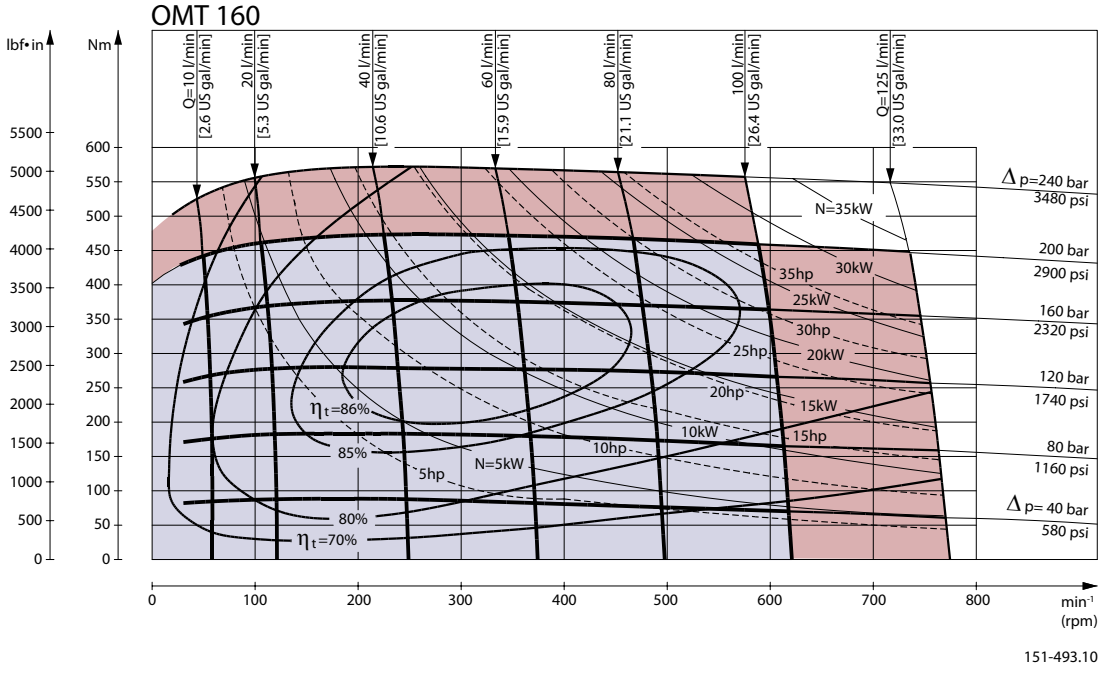
The dash curve shows max. radial shaft load. Any shaft load exceeding the values shown in the curve will involve a risk of breakage.

Bearing life calculations can be made using the explanation and formula provided in the chapter *Bearing dimensioning* in the technical information *General Orbital Motors*, **BC152886483554**.

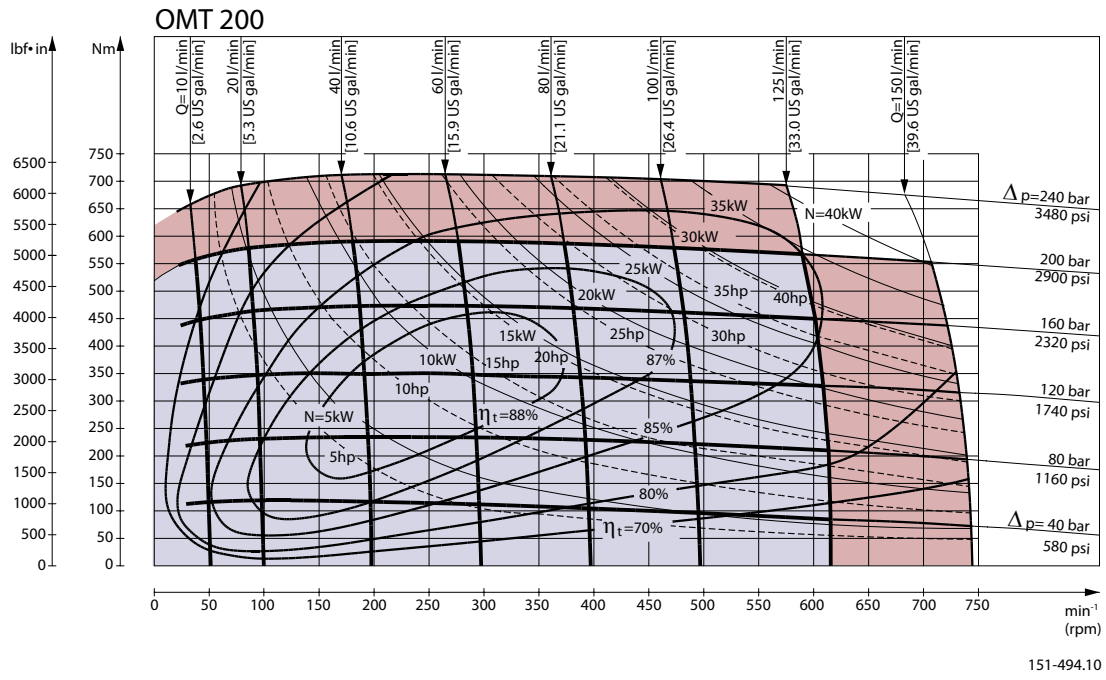
OMT Function diagrams

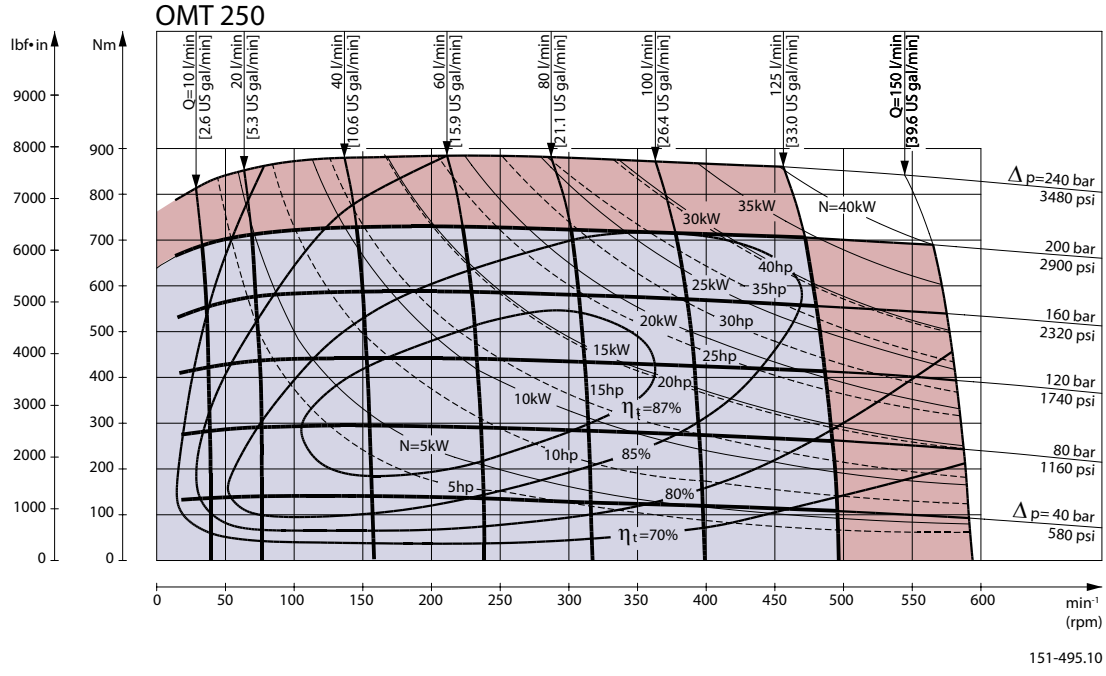
Continuous range

Intermittent range (maximum 10% operation every minute)

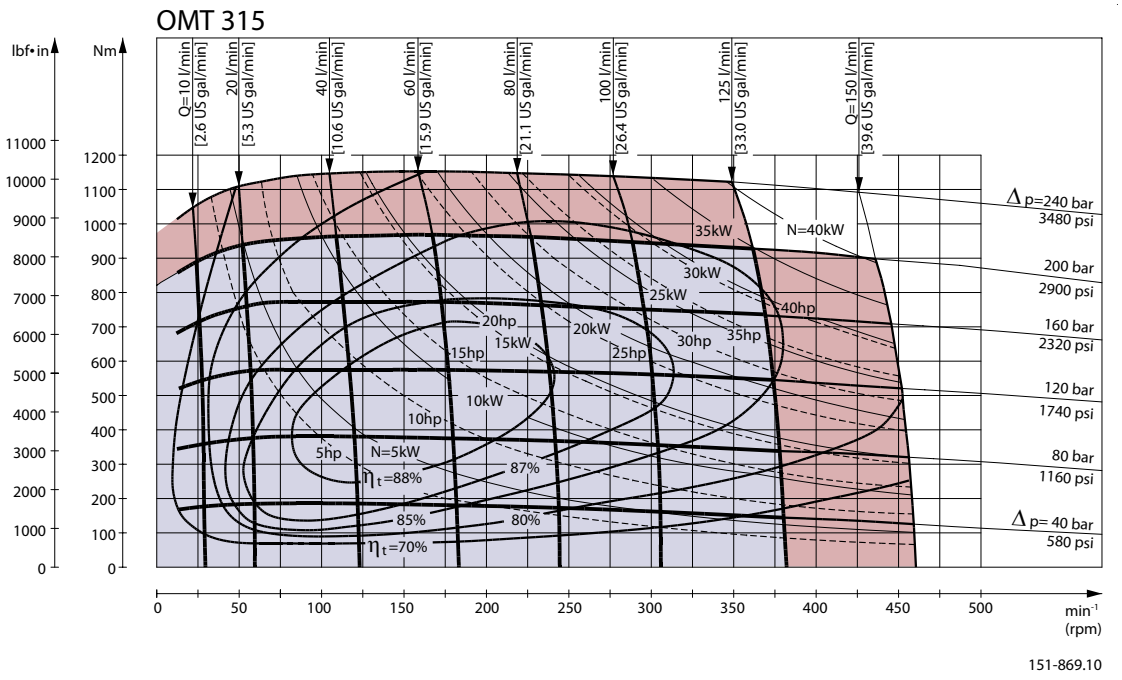


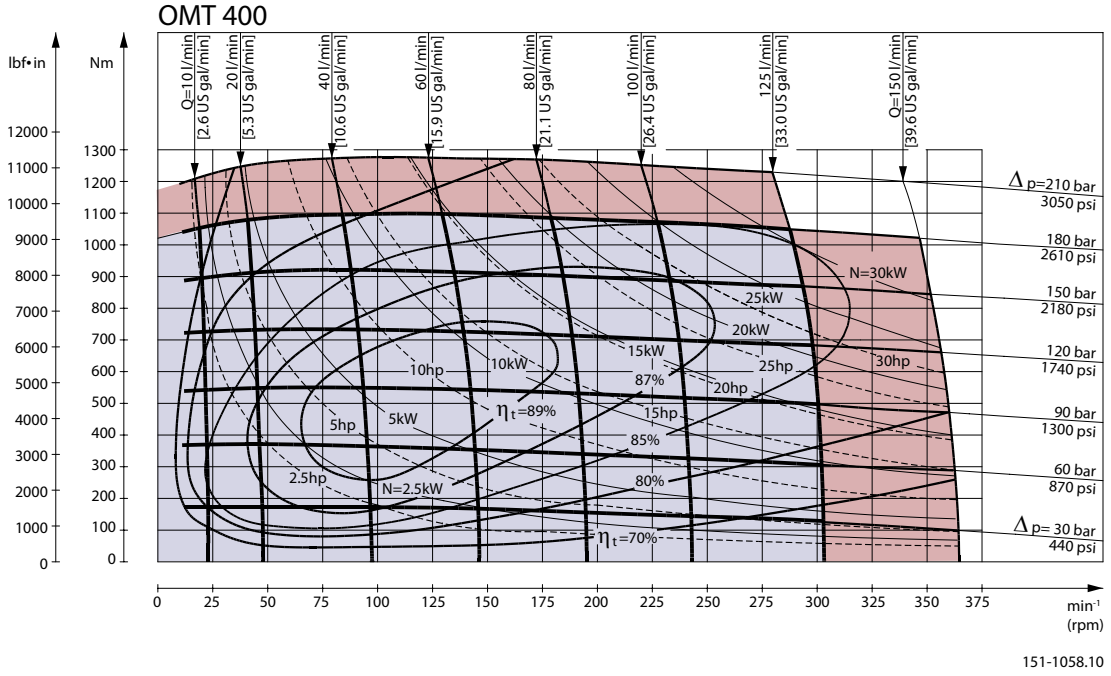
OMT


OMT 200
lbf• in
Nm
Q=10 l/min [2.6 US gal/min]
20 l/min [5.3 US gal/min]
40 l/min [10.6 US gal/min]
60 l/min [15.9 US gal/min]
80 l/min [21.1 US gal/min]
100 l/min [26.4 US gal/min]
125 l/min [33.0 US gal/min]
Q=150 l/min [39.6 US gal/min]
Δp=240 bar 3480 psi
200 bar 2900 psi
160 bar 2320 psi
120 bar 1740 psi
80 bar 1160 psi
Δp= 40 bar 580 psi
N=40kW
35kW
30kW
25kW
20kW
15kW
10kW
N=5kW
35hp
40hp
30hp
25hp
20hp
15hp
10hp
5hp
87%
85%
80%
ηt=88%
ηt=70%
min-1 (rpm)
151-494.10

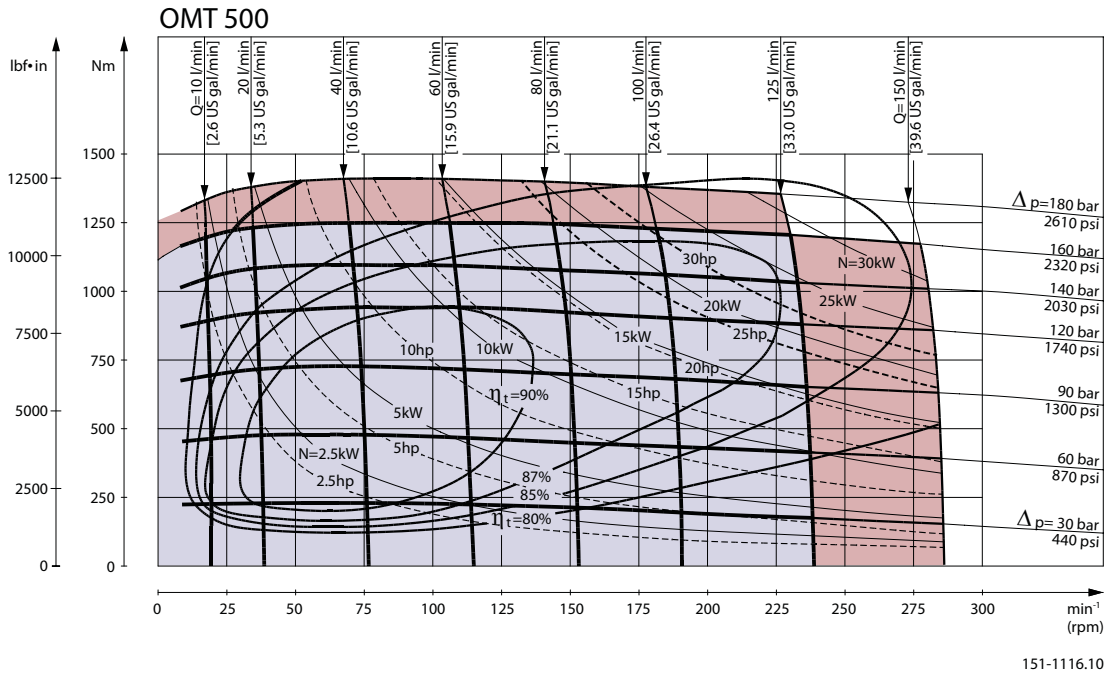

OMT 250
lbf• in
Nm
Q=10 l/min [2.6 US gal/min]
20 l/min [5.3 US gal/min]
40 l/min [10.6 US gal/min]
60 l/min [15.9 US gal/min]
80 l/min [21.1 US gal/min]
100 l/min [26.4 US gal/min]
125 l/min [33.0 US gal/min]
Q=150 l/min [39.6 US gal/min]
Δp=240 bar 3480 psi
200 bar 2900 psi
160 bar 2320 psi
120 bar 1740 psi
80 bar 1160 psi
Δp= 40 bar 580 psi
N=40kW
35kW
30kW
25kW
20kW
15kW
10kW
N=5kW
40hp
35hp
30hp
25hp
20hp
15hp
10hp
5hp
85%
80%
ηt=87%
ηt=70%
min-1 (rpm)
151-495.10

OMT


OMT 315
lbf•in
Nm
Q=10 l/min [2.6 US gal/min]
20 l/min [5.3 US gal/min]
40 l/min [10.6 US gal/min]
60 l/min [15.9 US gal/min]
80 l/min [21.1 US gal/min]
100 l/min [26.4 US gal/min]
125 l/min [33.0 US gal/min]
Q=150 l/min [39.6 US gal/min]
Δ p=240 bar 3480 psi
200 bar 2900 psi
160 bar 2320 psi
120 bar 1740 psi
80 bar 1160 psi
Δ p= 40 bar 580 psi
N=40kW
35kW
30kW
25kW
20kW
15kW
10kW
5hp
10hp
15hp
20hp
25hp
30hp
35hp
40hp
N=5kW
ηt=88%
87%
85%
80%
ηt=70%
min-1 (rpm)
151-869.10


OMT 400
lbf•in
Nm
Q=10 l/min [2.6 US gal/min]
20 l/min [5.3 US gal/min]
40 l/min [10.6 US gal/min]
60 l/min [15.9 US gal/min]
80 l/min [21.1 US gal/min]
100 l/min [26.4 US gal/min]
125 l/min [33.0 US gal/min]
Q=150 l/min [39.6 US gal/min]
Δ p=210 bar 3050 psi
180 bar 2610 psi
150 bar 2180 psi
120 bar 1740 psi
90 bar 1300 psi
60 bar 870 psi
Δ p= 30 bar 440 psi
N=30kW
25kW
20kW
15kW
10kW
5kW
2.5hp
5hp
10hp
15hp
20hp
25hp
30hp
N=2.5kW
ηt=89%
87%
85%
80%
ηt=70%
min-1 (rpm)
151-1058.10

OMT



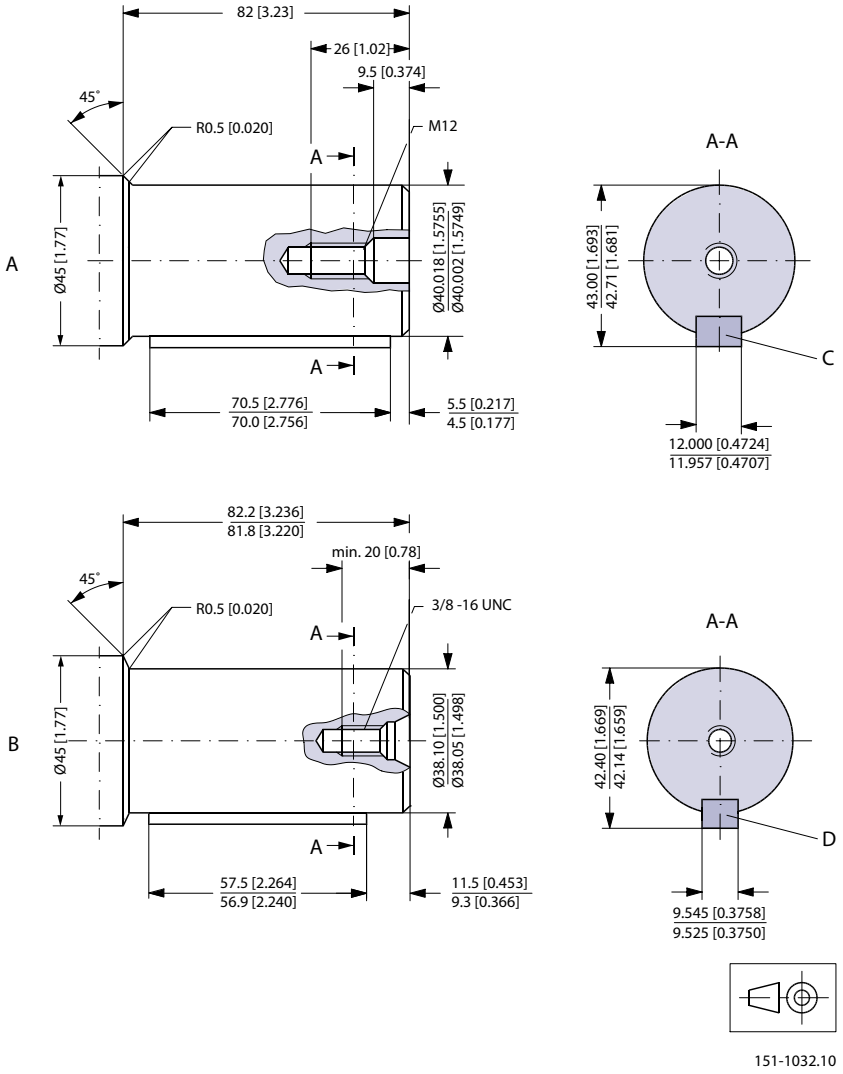
Function diagram use

Explanation of function diagram use, basis and conditions, see *Speed, torque, and output* on page 7.

Intermittent pressure drop and oil flow must not occur simultaneously.

OMT

Shaft version



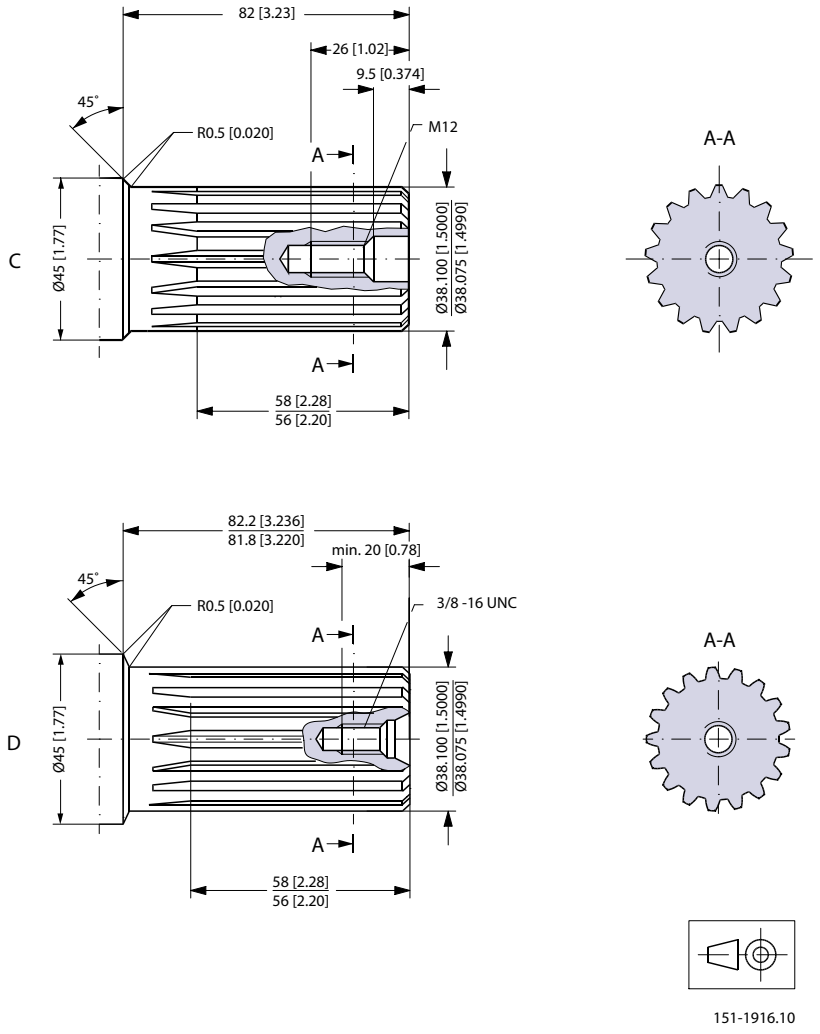
A Cylindrical 40 mm shaft

C Parallel key
A12 × 8 × 70
DIN 6885
Keyway deviates from standard

B Cylindrical 1.5 in shaft

D Parallel key
3/8 × 3/8 × 21/4 in
B.S. 46
Keyway deviates from standard

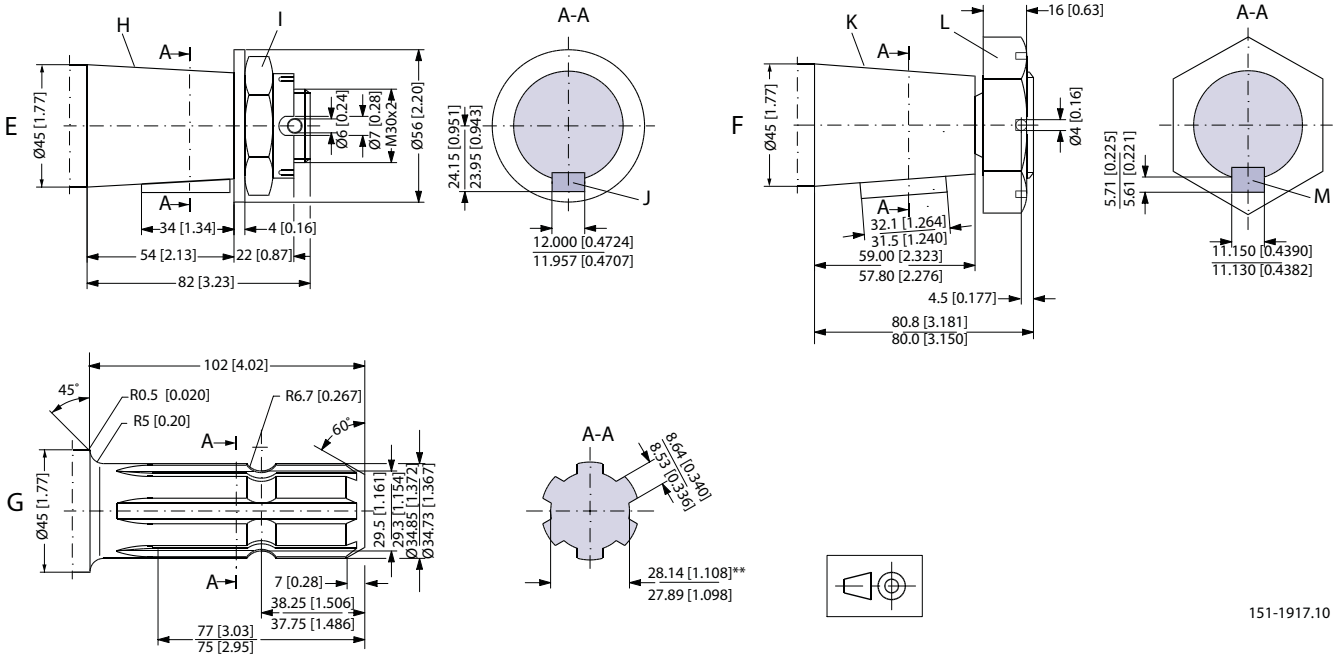
OMT



C Involute splined shaft
ANS B92.1 - 1970 standard
Flat root side fit
Pitch 12/24
Teeth 17
Major diameter 1.50 in
Pressure angle 30°

D **US version**
Involute splined shaft
ANS B92.1 - 1970 standard
Flat root side fit
Pitch 12/24
Teeth 17
Major diameter 1.50 in
Pressure angle 30°

OMT



E Tapered 45 mm shaft (ISO/R775)

I DIN 937

Across flats: 46 mm

Tightening torque: 500 ± 30 Nm [4430 ±270 lbf·in]

H Taper 1:10

J Parallel key

B12 × 8 × 28

DIN 6885

Keyway deviates from standard

F Tapered 1.75 in shaft

K Cone 1:8

SAE J501

L 1 1/4 - 18 UNEF

Across flats 2 3/16 in

Tightening torque: 500 ±10 Nm (4425 ±90 lbf·in)

M Parallel key

7/16 × 7/16 × 1 1/4

B.S. 46

Keyway deviates from standard

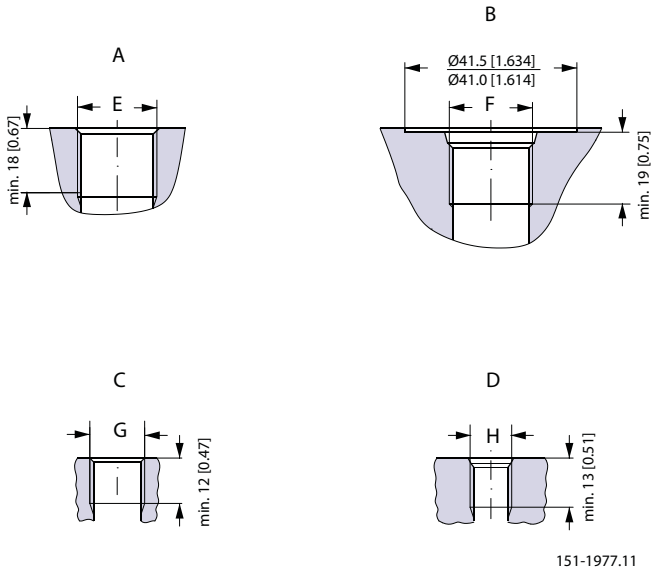
G P.t.o. shaft

DIN 9611 Form 1 (ISO/R500 without pin hole)

** Deviates from DIN 9611

OMT

Port thread versions

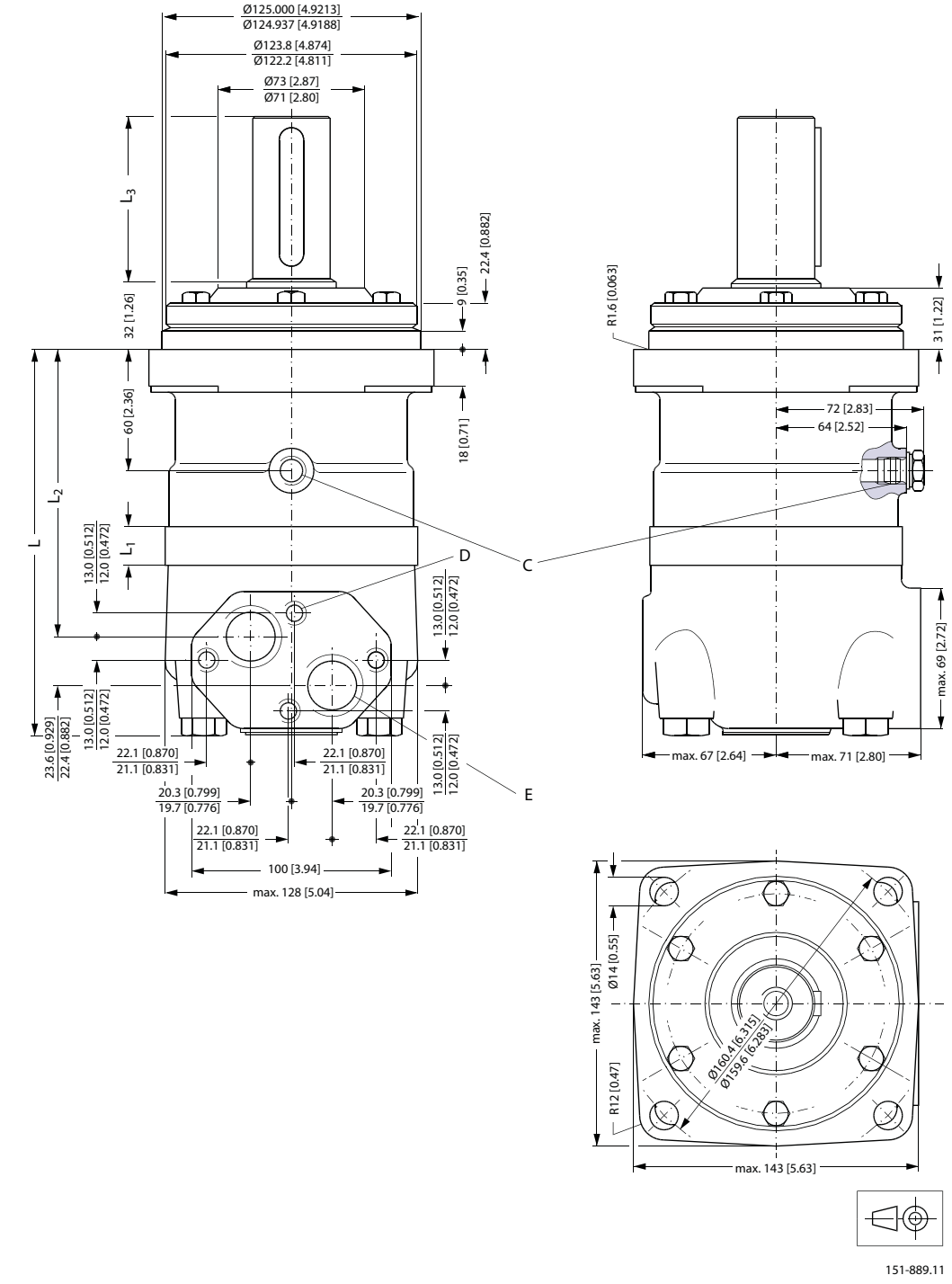


A	G main ports	**B**	UN main ports
E	ISO 228/1 - G3/4 O-ring boss port	**F**	1 1/16 - 12 UN
C	G drain port	**D**	UNF drain port
G	G: ISO 228/1 - G1/4 O-ring boss port	**H**	9/16 - 18 UNF

OMT

Dimensions

OMT standard flange - European version



151-889.11

C: Drain connection, G 1⁄4; 12 mm [0.47 in] deep

D: M10; 10 mm [0.39 in] deep

E: G 3⁄4; 17 mm [0.67 in] deep

OMT

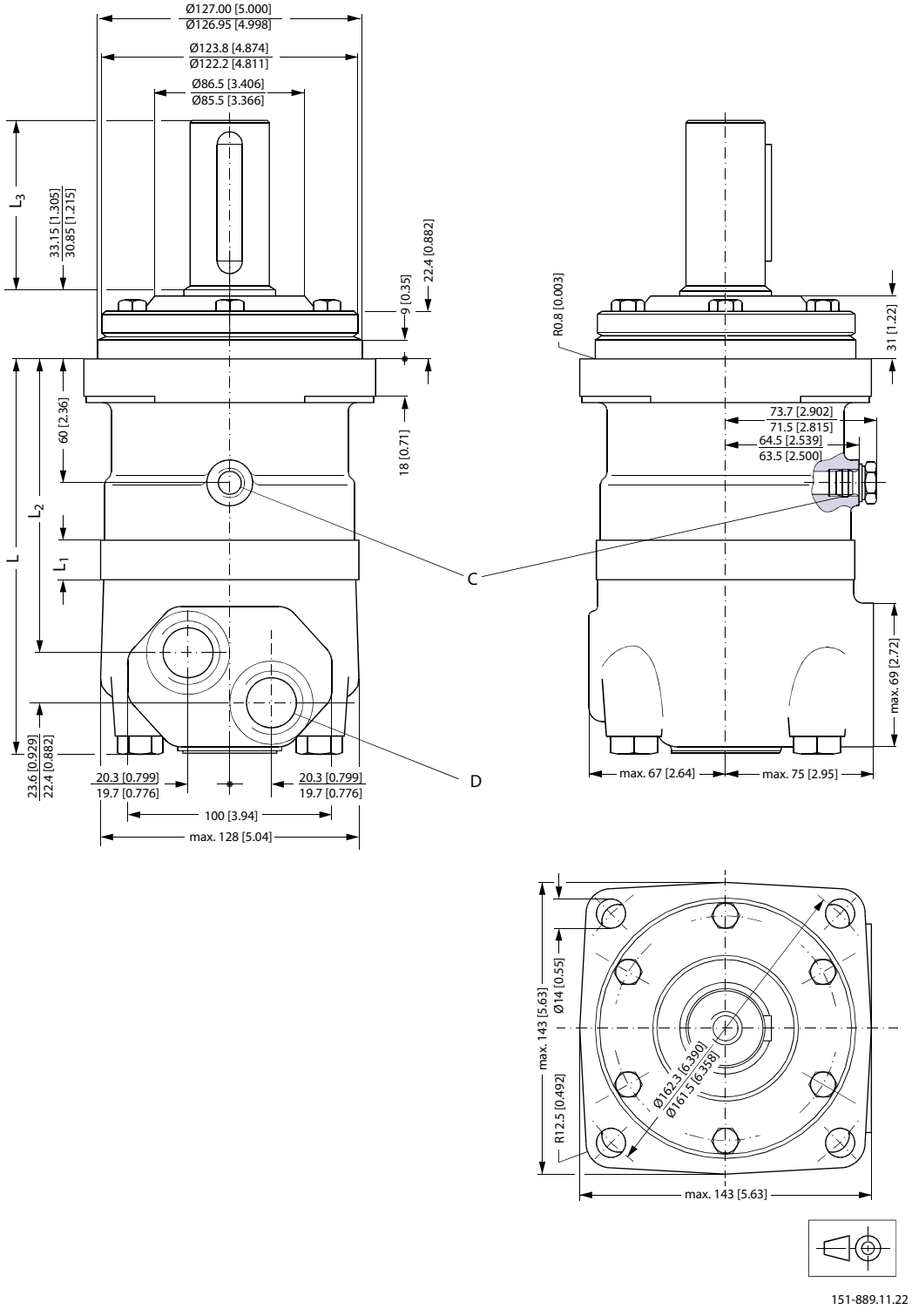
Type		OMT 160	OMT 200	OMT 250	OMT 315	OMT 400	OMT 500
$L_{Max.}$	mm	192	197	203	213	223	237
	[in]	[7.56]	[7.76]	[7.99]	[8.39]	[8.78]	[9.33]
L_1*	mm	16.5	21.5	27.8	37.0	47.5	61.5
	[in]	[0.650]	[0.846]	[1.094]	[1.457]	[1.870]	[2.421]
L_2	mm	140	145	151	161	171	185
	[in]	[5.51]	[5.71]	[5.94]	[6.34]	[6.73]	[7.28]
Weight	kg	20.0	20.5	21.0	22.0	23.0	24.0
	[lb]	[44.1]	[45.2]	[46.3]	[48.5]	[50.7]	[52.9]

* The gearwheel set is 3.5 mm [0.138 in] wider across the rollers than the L1 dimensions

Output shaft		All shafts except P.t.o. shaft	P.t.o. shaft
L_3	mm	82	102
	[in]	[3.23]	[4.02]

OMT

OMT standard flange - US version



C: Drain connection 9⁄16 - 18 UNF; 13 mm [0.51 in] deep O-ring boss port

D: 1 1⁄16 - 12 UN; 19 mm [0.75 in] deep O-ring boss port

OMT

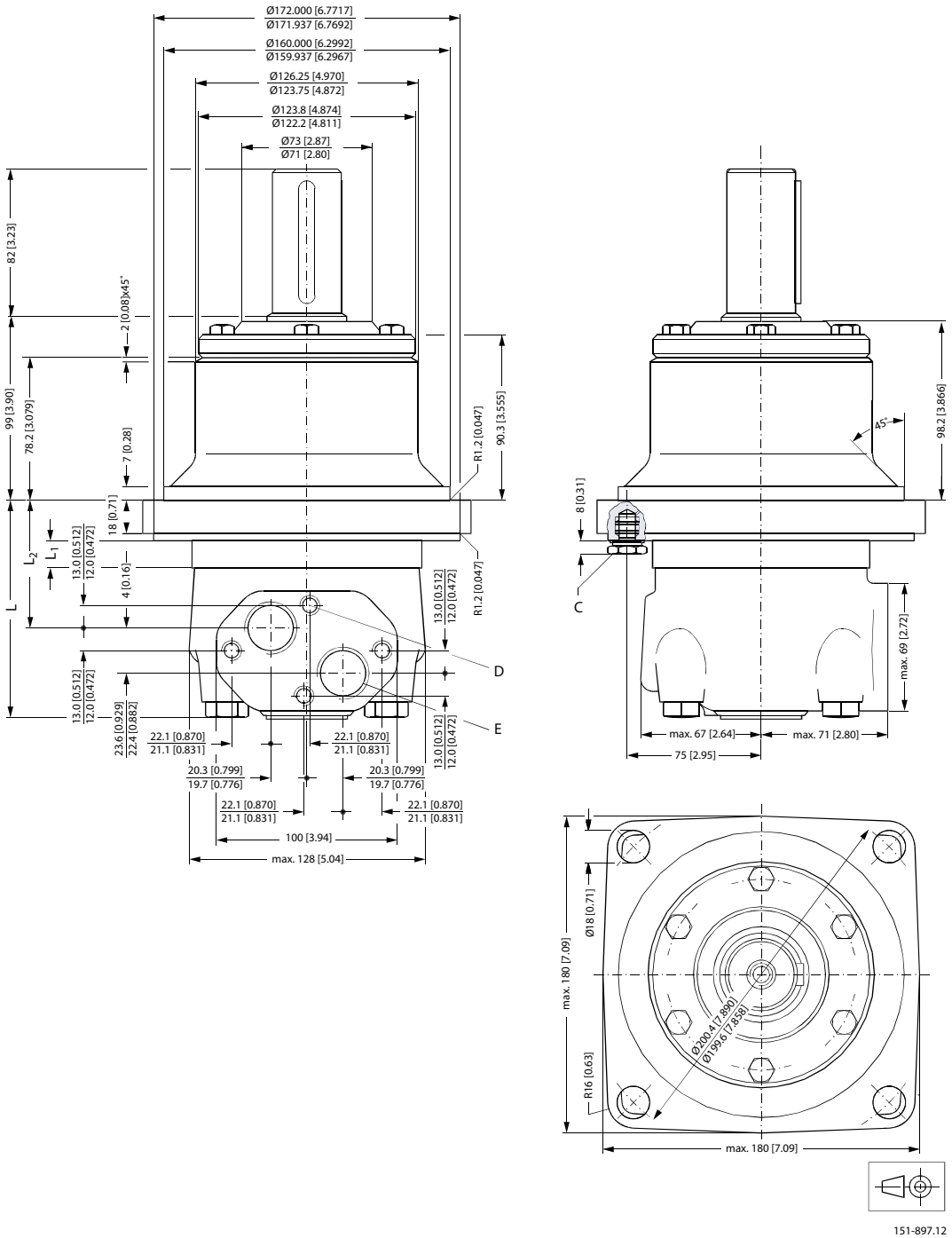
Type		OMT 160	OMT 200	OMT 250	OMT 315	OMT 400	OMT 500
$L_{Max.}$	mm	192	197	203	213	223	237
	[in]	[7.56]	[7.76]	[7.99]	[8.39]	[8.78]	[9.33]
L_1*	mm	16.5	21.5	27.8	37.0	47.5	61.5
	[in]	[0.650]	[0.846]	[1.094]	[1.457]	[1.870]	[2.421]
L_2	mm	140	145	151	161	171	185
	[in]	[5.51]	[5.71]	[5.94]	[6.34]	[6.73]	[7.28]
Weight	kg	20.0	20.5	21.0	22.0	23.0	24.0
	[lb]	[44.1]	[45.2]	[46.3]	[48.5]	[50.7]	[52.9]

* The gearwheel set is 3.5 mm [0.138 in] wider across the rollers than the L1 dimensions

Output shaft		Cyl. 1.5 in, Splined 1.5 in	Tapered 1.75 in
L_3	mm	82	80.4
	[in]	[3.23]	[3.17]

OMT

OMT Wheel - European version



C: Drain connection, G 1⁄4; 12 mm [0.47 in] deep

D: M10; 10 mm [0.39 in] deep

E: G 3⁄4; 17 mm [0.67 in] deep

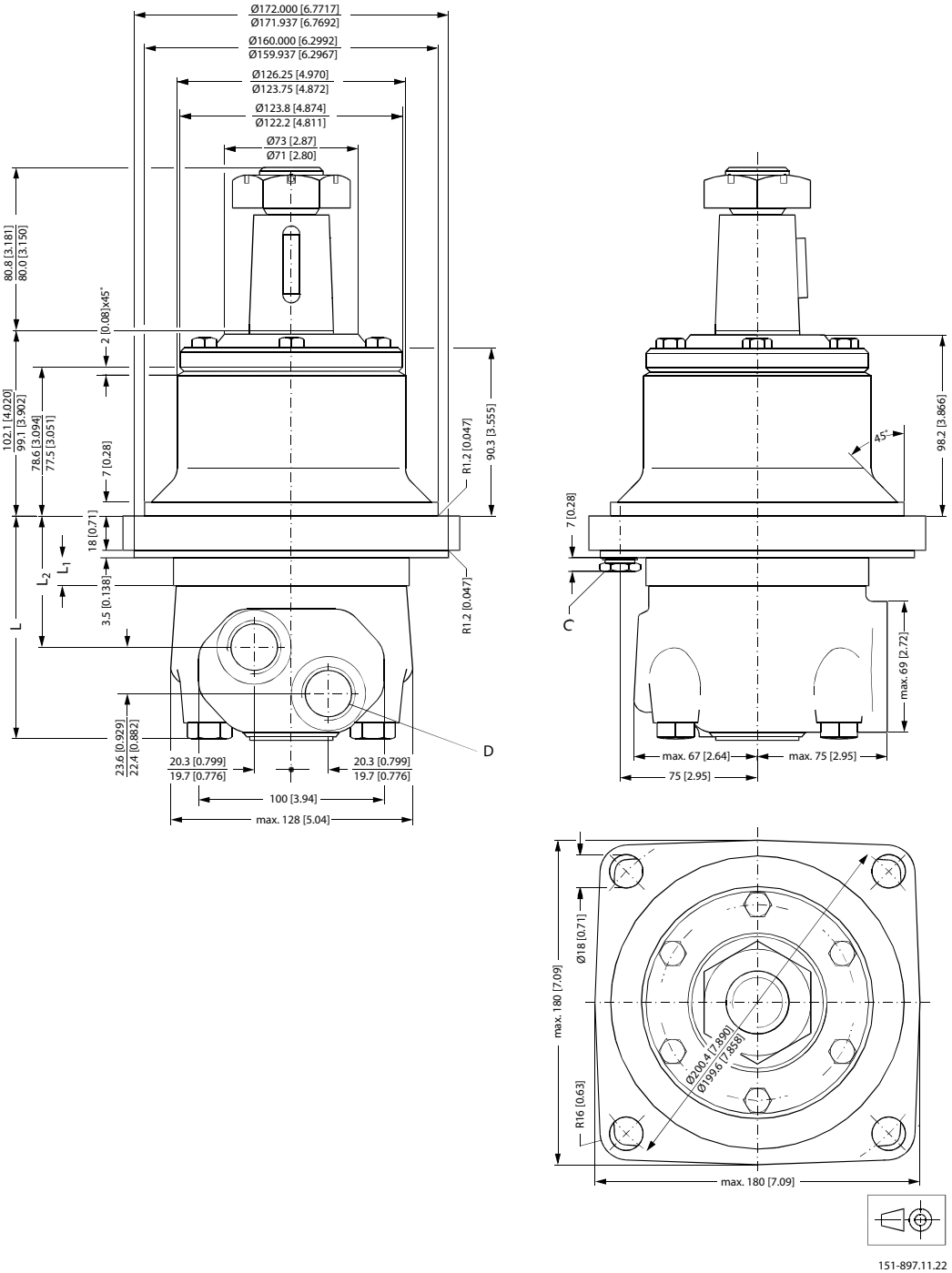
OMT

Type		OMTW 160	OMTW 200	OMTW 250	OMTW 315	OMTW 400	OMTW 500
$L_{Max.}$	mm	126	131	137	146	157	171
	[in]	[4.96]	[5.16]	[5.39]	[5.75]	[6.18]	[6.73]
L_1*	mm	16.5	21.5	27.8	37.0	47.5	61.5
	[in]	[0.650]	[0.846]	[1.094]	[1.457]	[1.870]	[2.421]
L_2	mm	73	78	84	94	104	118
	[in]	[2.87]	[3.07]	[3.31]	[3.70]	[4.09]	[4.65]
Weight	kg	22.0	22.5	23.0	24.0	25.0	26.0
	[lb]	[48.5]	[49.6]	[50.7]	[52.9]	[55.1]	[57.3]

* The gearwheel set is 3.5 mm [0.138 in] wider across the rollers than the L1 dimensions

OMT

OMT Wheel - US version



C: Drain connection, 9⁄16 - 18 UNF; 13 mm [0.51 in] deep, O-ring boss port

D: 1 1⁄16 - 12 UN; 19 mm [0.75 in] deep, O-ring boss port

*

* The gearwheel set is 3.5 mm [0.138 in] wider across the rollers than the L1 dimensions

OMT

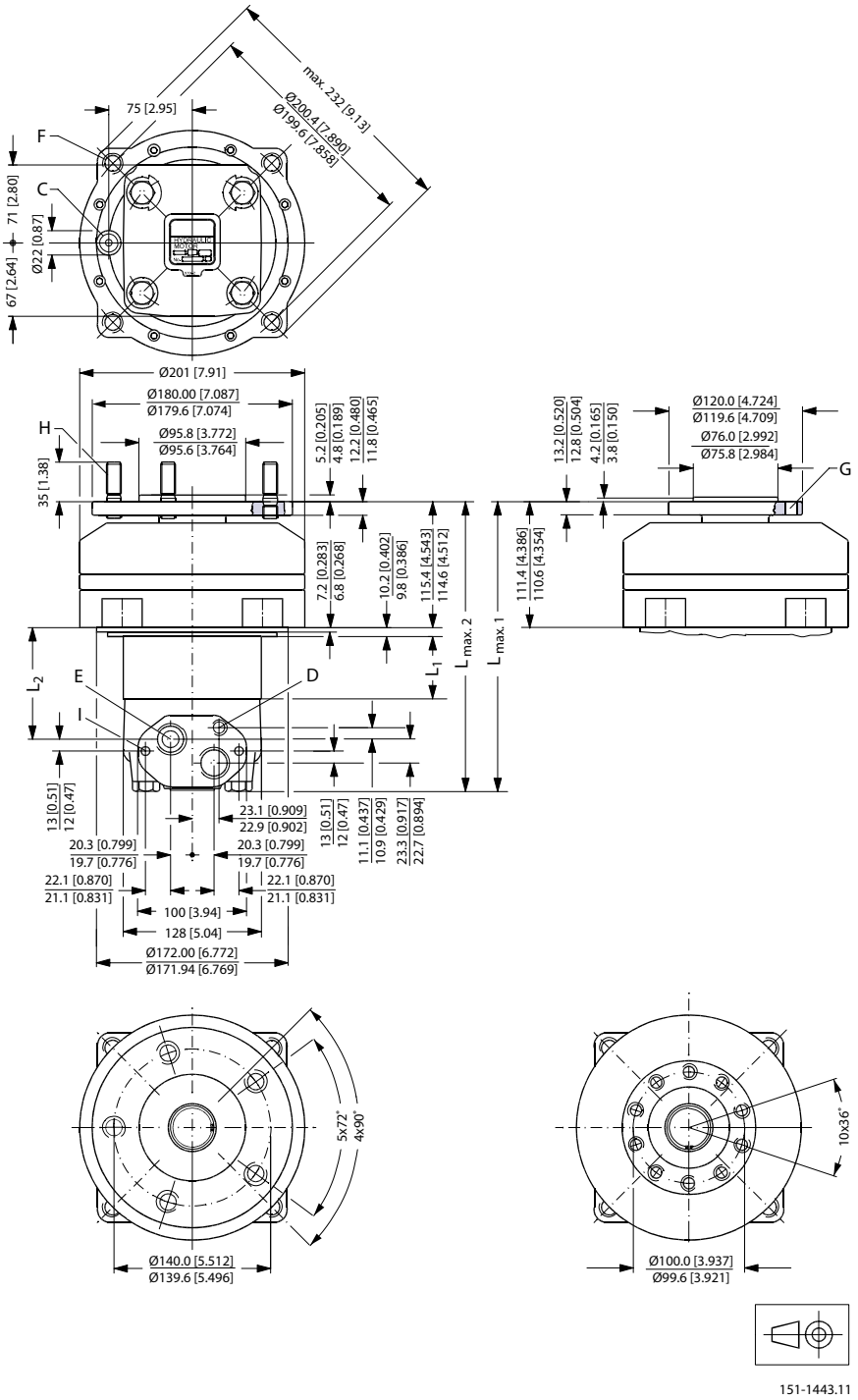
Type		OMTW 160	OMTW 200	OMTW 250	OMTW 315	OMTW 400	OMTW 500
$L_{Max.}$	mm	126	131	137	146	157	171
	[in]	[4.96]	[5.16]	[5.39]	[5.75]	[6.18]	[6.73]
L_1	mm	16.5	21.5	27.8	37.0	47.5	61.5
	[in]	[0.650]	[0.846]	[1.094]	[1.457]	[1.870]	[2.421]
L_2	mm	73	78	84	94	104	118
	[in]	[2.87]	[3.07]	[3.31]	[3.70]	[4.09]	[4.65]
Weight	kg	22.0	22.5	23.0	24.0	25.0	26.0
	[lb]	[48.5]	[49.6]	[50.7]	[52.9]	[55.1]	[57.3]

Type	L_{max} mm [in]	L_1^* mm [in]	L_2 mm [in]
OMTW 160	123 [4.84]	16.5 [0.650]	73 [2.87]
OMTW 200	128 [5.04]	21.5 [0.846]	78 [3.07]
OMTW 250	134 [5.28]	27.8 [1.094]	84 [3.31]
OMTW 315	144 [5.67]	37.0 [1.457]	94 [3.70]
OMTW 400	154 [6.06]	47.5 [1.870]	104 [4.09]
OMTW 500	168 [6.61]	61.5 [2.421]	118 [4.65]

* The gearwheel set is 3.5 mm [0.138 in] wider across the rollers than the L1 dimensions

OMT

OMT Brake-wheel - European version



151-1443.11

C: Brake-release port G 1/4; 12 mm [0.47 in] deep (BS/ISO 228/1)

D: Drain connection G 1/4; 12 mm [0.47 in] deep

E: G 3/4; 17 mm [0.67 in] deep

OMT

F: 4 × M12; 27 mm [1.06 in] deep

G: 10 × M12

H: Wheel bolts 5 × M14 × 1.5

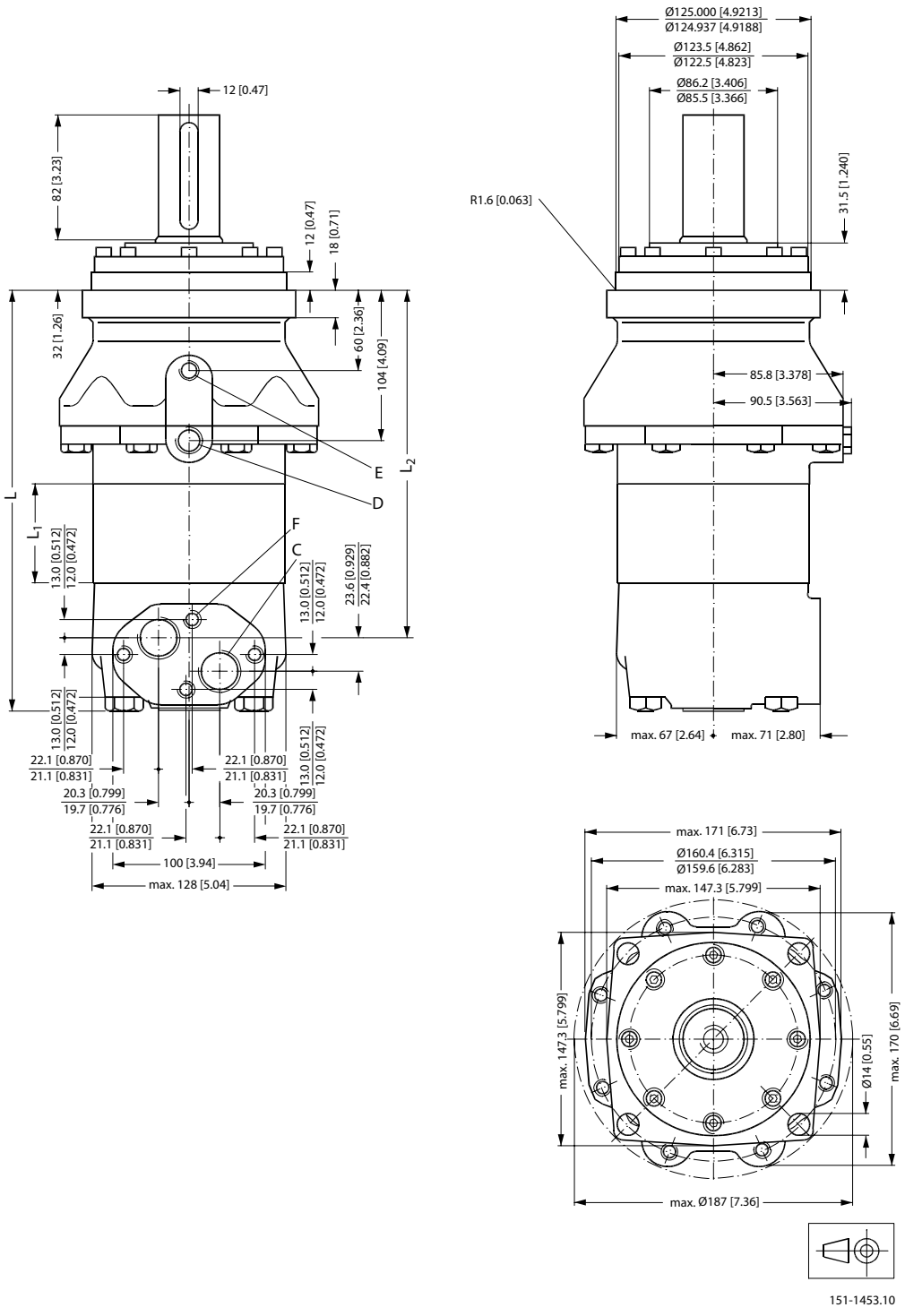
I: M10; 10 mm [0.39 in] deep

Type		OMT 160 FX	OMT 200 FX	OMT 250 FX	OMT 315 FX	OMT 400 FX	OMT 500 FX
$L_{Max.\ 1}$	mm	225	230	236	245	256	270
	[in]	[8.86]	[9.06]	[9.29]	[9.65]	[10.08]	[10.63]
$L_{Max.\ 2}$	mm	228	234	240	249	260	274
	[in]	[8.98]	[9.21]	[9.45]	[9.80]	[10.24]	[10.79]
L_1*	mm	16.5	21.5	27.8	37.0	47.5	61.5
	[in]	[0.650]	[0.846]	[1.094]	[1.457]	[1.870]	[2.421]
L_2	mm	62	67	74	83	93	107
	[in]	[2.45]	[2.65]	[2.89]	[3.26]	[3.67]	[4.22]
Weight	kg	31.0	31.5	32.0	33.0	34.0	35.0
	[lb]	[68.3]	[69.4]	[70.5]	[72.8]	[75.0]	[77.2]

* The gearwheel set is 3.5 mm [0.138 in] wider across the rollers than the L1 dimensions

OMT

OMT Brake-standard - European version



C: G 3/4; 17 mm [0.67 in] deep (BS/ISO 228/1)

D: Drain connection G 3/8; 14 mm [0.55 in] deep

E: Brake-release port G 1/4; 12 mm [0.47 in] deep

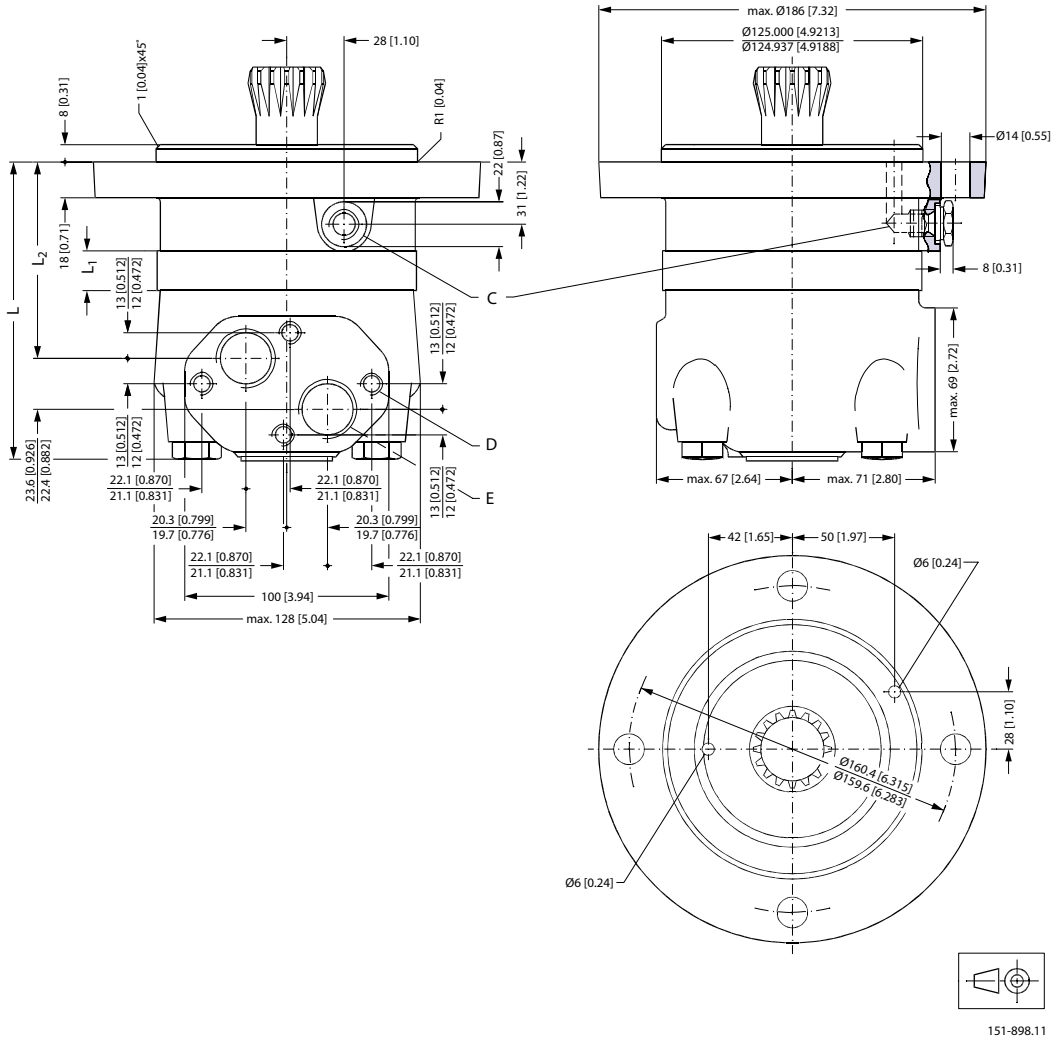
OMT

F: M10; 10 mm [0.39 in] deep

Type		OMT 160 FL/FH	OMT 200 FL/FH	OMT 250 FL/FH	OMT 315 FL/FH	OMT 400 FL/FH	OMT 500 FL/FH
$L_{Max.}$	mm	230	233	241	250	261	275
	[in]	[9.06]	[9.17]	[9.49]	[9.84]	[10.28]	[10.83]
L_1*	mm	16.5	21.5	27.8	37.0	47.5	61.5
	[in]	[0.650]	[0.846]	[1.094]	[1.457]	[1.870]	[2.421]
L_2	mm	178	183	189	199	209	223
	[in]	[7.01]	[7.20]	[7.44]	[7.83]	[8.23]	[8.78]
Weight	kg	24.5	25.0	25.5	26.5	27.5	28.5
	[lb]	[54.0]	[55.1]	[56.2]	[58.4]	[60.6]	[62.8]

* The gearwheel set is 3.5 mm [0.138 in] wider across the rollers than the L1 dimensions

OMT short - European version



C: Drain connection G 1⁄4; 12 mm [0.47 in] deep

OMT

D: M10; 10 mm [0.39 in] deep E: G 3⁄4; 17 mm [0.67 in] deep

*

Type		OMTS 160	OMTS 200	OMTS 250	OMTS 315	OMTS 400	OMTS 500
$L_{Max.}$	mm	146	151	157	166	177	191
	[in]	[5.75]	[5.94]	[6.18]	[6.54]	[6.97]	[7.52]
L_1	mm	16.5	21.5	27.8	37.0	47.5	61.5
	[in]	[0.650]	[0.846]	[1.094]	[1.457]	[1.870]	[2.421]
L_2	mm	96	101	107	116	127	142
	[in]	[3.78]	[3.98]	[4.21]	[4.57]	[5.00]	[5.59]
Weight	kg						
	[lb]						

Type	Lmax	L1	L2
OMTS 500			

OMTS

Installation

The cardan shaft of the OMTS motor acts as an “output shaft”. Because of the movement of the shaft, no seal can be fitted at the shaft output.

Internal oil leakage from the motor will therefore flow into the attached component.

During start and operation it is important that the spline connection and the bearings in the attached component receive oil and are adequately lubricated. To ensure that the spline connection receives sufficient oil, a conical sealing ring between the shaft of the attached component and the motor intermediate plate is recommended. This method is used in the OMT.

The conical sealing ring (code. no. 633B9022) is supplied with the motor.

To ensure that oil runs to the bearings and other parts of the attached component, the stop plate must have a hole in it (see fig. below).

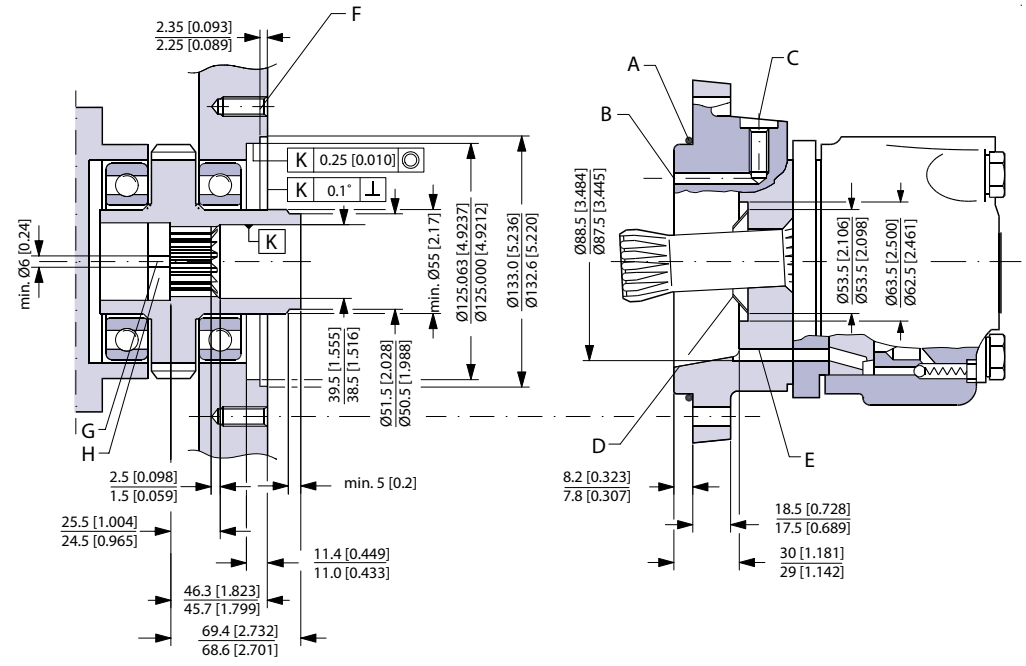
We recommend an O-ring between motor and attached component. The O-ring (code no. 151B1040) is supplied with the motor. If motor and attached component have been separated, remember to refill before starting up. Fill the oil through the drain connection.

* The gearwheel set is 3.5 mm [0.138 in] wider across the rollers than the L1 dimensions

OMT

Attached component dimensions

OMTS dimensions of the attached component in millimeter [inches]



A O-ring: 125 × 3 mm

B External drain channel

C Drain connection
G 1⁄4; 12 mm [0.47 in] deep

D Conical seal ring

E Internal drain channel

F M12; min. 18 mm [0.71 in] deep

G Oil circulation hole

H Hardened stop plate

Attached component internal splines

The attached component must have internal splines corresponding to the external splines on the motor cardan shaft (see the following drawing).

Material:

Case hardening steel with a tensile strength corresponding at least to 20 MoCr4 (900 N/mm^2) or SAE 8620.

OMT

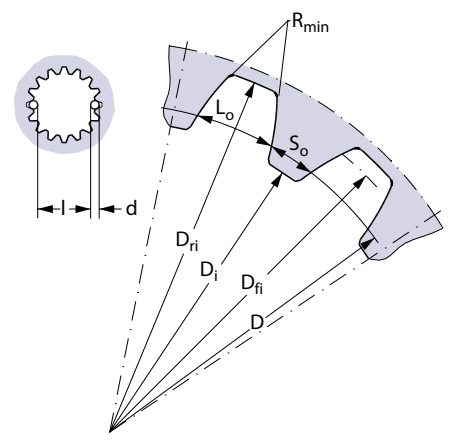
Hardening specification:

- On the surface: HV = 750 ± 50
- 0.7 ± 0.2 mm under the surface: HV = 560

Internal involute spline data; Standard ANS B92.1-1970, class 5 (corrected m · X = 1; m = 2.1166)

Flat root side fit		**mm**	**in**
Number of teeth	z	16	16
Pitch	DP	12/24	12/24
Pressure angle		30°	30°
Pitch dia.	D	33.8656	1.3333
Major dia.	D_{ri}	$38.4_0^{+0.4}$	$1.5118_0^{+0.0157}$
Form dia. (min.)	D_{fi}	37.6	1.4803
Minor dia.	D_i	$32.150_0^{+0.04}$	$1.2657_0^{+0.00157}$
Space width (circular)	L_o	$4.516^{\pm0.037}$	$0.1777^{\pm0.0014}$
Tooth thickness (circular)	S_o	2.170	0.0854
Fillet radius	$R_{min.}$	0.5	0.02
Max. measurement between pins*	l	$26.9_0^{+0.1}$	$1.059_0^{+0.004}$
Pin dia.	d	$4.834^{\pm0.001}$	$0.1903^{\pm0.00004}$

* Finished dimensions (when hardened).



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Motor or attached component drain connection

Use the drain line when pressure in the return line exceeds the permissible pressure on the shaft seal of the attached component.

Connect the drain line either at the:

- Motor drain connection
- Drain connection of the attached component

If a drain line is fitted to the attached component, it must be possible for oil to flow freely between motor and attached component.

The drain line must be led to the tank in such a way that there is no risk of the motor and attached component being drained of oil when at rest.

The maximum pressure in the drain line is limited by the attached component and its shaft seal.

OMT versions and code numbers

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

- Section *OMT technical data*, specify the technical data for OMT for each shaft type.
- In section *OMT function diagrams*, the diagram for each motor size is shown.
- See *OMT dimensions* for outer main dimensions for the different OMT motor types.