MAKING MODERN LIVING POSSIBLE

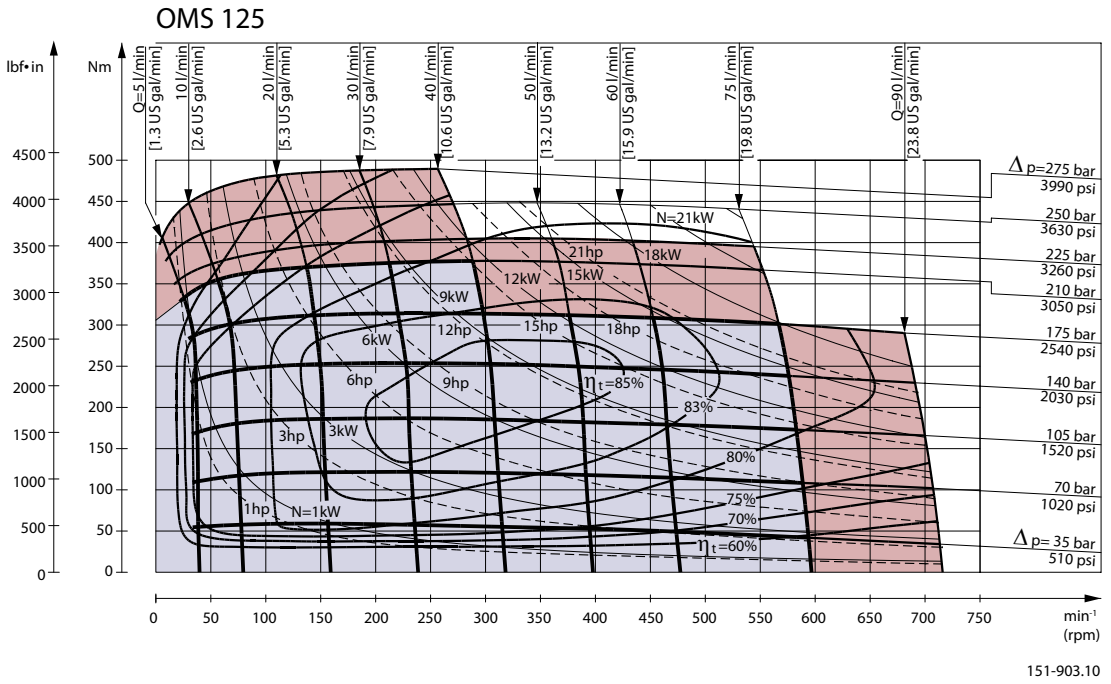
Technical Information

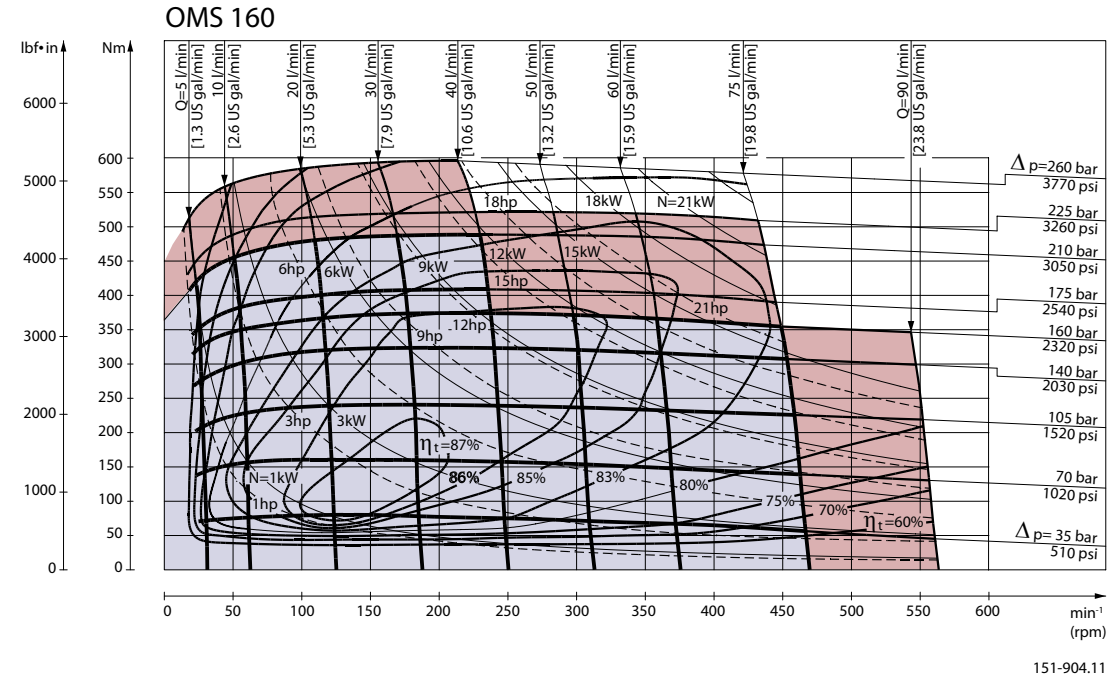
Orbital Motors

OMS, OMT and OMV

powersolutions.danfoss.com

OMS


OMS 125
lbf•in
Nm
Q=5 l/min [1.3 US gal/min]
10 l/min [2.6 US gal/min]
20 l/min [5.3 US gal/min]
30 l/min [7.9 US gal/min]
40 l/min [10.6 US gal/min]
50 l/min [13.2 US gal/min]
60 l/min [15.9 US gal/min]
75 l/min [19.8 US gal/min]
Q=90 l/min [23.8 US gal/min]
Δp=275 bar 3990 psi
250 bar 3630 psi
225 bar 3260 psi
210 bar 3050 psi
175 bar 2540 psi
140 bar 2030 psi
105 bar 1520 psi
70 bar 1020 psi
Δp= 35 bar 510 psi
N=21kW
21hp
18kW
12kW
15kW
9kW
12hp
15hp
18hp
6kW
6hp
9hp
ηt=85%
83%
3hp
3kW
80%
1hp
N=1kW
75%
70%
ηt=60%
min-1 (rpm)
151-903.10


OMS 160
lbf•in
Nm
Q=5 l/min [1.3 US gal/min]
10 l/min [2.6 US gal/min]
20 l/min [5.3 US gal/min]
30 l/min [7.9 US gal/min]
40 l/min [10.6 US gal/min]
50 l/min [13.2 US gal/min]
60 l/min [15.9 US gal/min]
75 l/min [19.8 US gal/min]
Q=90 l/min [23.8 US gal/min]
Δp=260 bar 3770 psi
225 bar 3260 psi
210 bar 3050 psi
175 bar 2540 psi
160 bar 2320 psi
140 bar 2030 psi
105 bar 1520 psi
70 bar 1020 psi
Δp= 35 bar 510 psi
18hp
18kW
N=21kW
12kW
15kW
6hp
6kW
9kW
15hp
21hp
12hp
9hp
3hp
3kW
ηt=87%
86%
85%
83%
80%
N=1kW
1hp
75%
70%
ηt=60%
min-1 (rpm)
151-904.11

OMS

Type	L_{max} mm [in]	L_1 mm [in]	L_2 mm [in]
OMS 80	167 [6.57]	14.0 [0.551]	124 [4.88]
OMS 100	170 [6.69]	17.4 [0.685]	127 [5.00]
OMS 125	175 [6.89]	21.8 [0.858]	132 [5.20]
OMS 160	181 [7.13]	27.8 [1.094]	138 [5.43]
OMS 200	188 [7.40]	34.8 [1.370]	145 [5.71]
OMS 250	196 [7.72]	43.5 [1.713]	153 [6.02]
OMS 315	208 [8.19]	54.8 [2.157]	165 [6.50]
OMS 400	221 [8.70]	68.4 [2.693]	178 [7.01]

Output shaft		L_3 mm [in]
All shafts except P.t.o. shaft	max	67 [2.64]
	min	65 [2.56]
P.t.o. shaft	max	109 [4.29]
	min	107 [4.21]

OMS

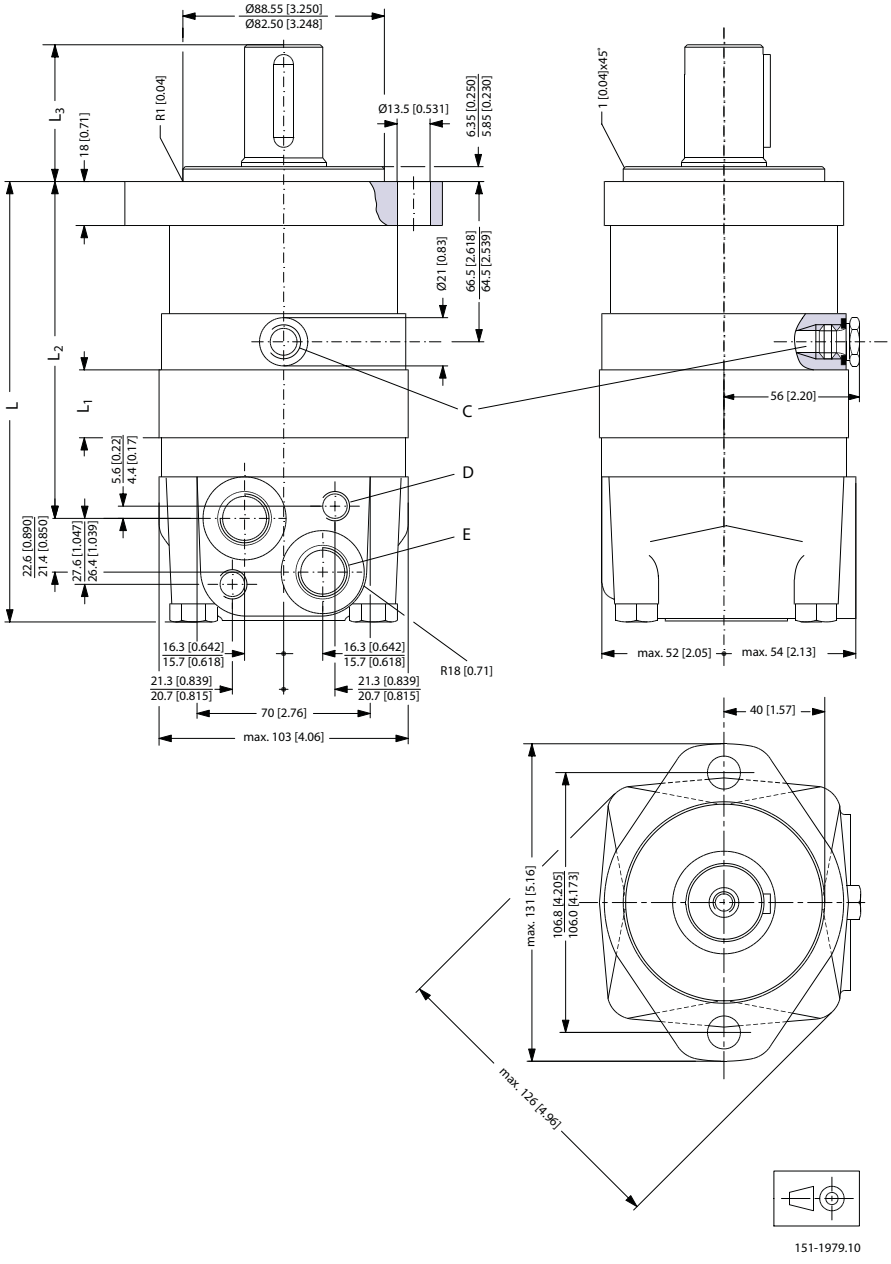
Type	L_{max} mm [in]	L_1 mm [in]	L_2 mm [in]
OMS 160	181 [7.13]	27.8 [1.094]	138 [5.43]
OMS 200	188 [7.40]	34.8 [1.370]	145 [5.71]
OMS 250	196 [7.72]	43.5 [1.713]	153 [6.02]
OMS 315	208 [8.19]	54.8 [2.157]	165 [6.50]
OMS 400	221 [8.70]	68.4 [2.693]	178 [7.01]
OMS 500	221 [8.70]	68.4 [2.693]	178 [7.01]

Output shaft		L_3 mm [in]
Cyl.1.25 in Splined 1.25 in	max	57 [2.24]
	min	55 [2.17]
Tapered 1.25 in	max	67 [2.64]
	min	65 [2.56]

OMS

Type	L_{max} mm [in]	L_1 mm [in]	L_2 mm [in]
OMS 125	186 [7.32]	21.8 [0.858]	144 [5.67]
OMS 160	192 [7.56]	27.8 [1.094]	150 [5.91]
OMS 200	199 [7.83]	34.8 [1.370]	157 [6.18]
OMS 250	208 [8.19]	43.5 [1.713]	166 [6.54]
OMS 315	219 [8.62]	54.8 [2.157]	177 [6.97]
OMS 400	232 [9.13]	68.4 [2.693]	190 [7.48]

A-2 flange—US version



C: Drain connection 7/16 - 20 UNF;

D: M10; 13 mm [0.51 in] deep

OMS

12 mm [0.47 in] deep
O-ring boss port

E: 7/8 - 14 UNF;
16.7 mm [0.657 in] deep
O-ring boss port

Type	L_{max} mm [in]	L_1 mm [in]	L_2 mm [in]
OMS 80	167 [6.57]	14.0 [0.551]	124 [4.88]
OMS 100	170 [6.69]	17.4 [0.685]	127 [5.00]
OMS 125	175 [6.89]	21.8 [0.858]	132 [5.20]
OMS 160	181 [7.13]	27.8 [1.094]	138 [5.43]
OMS 200	188 [7.40]	34.8 [1.370]	145 [5.71]
OMS 250	196 [7.72]	43.5 [1.713]	153 [6.02]
OMS 315	208 [8.19]	54.8 [2.157]	165 [6.50]
OMS 400	221 [8.70]	68.4 [2.693]	178 [7.01]
OMS 500	221 [8.70]	68.4 [2.693]	178 [7.01]

Output shaft		L_3 mm [in]
Cyl.1 in Splined 1 in	max	52 [2.05]
	min	50 [1.97]
Cyl.1.25 in Splined 1.25 in	max	57 [2.24]
	min	55 [2.17]
Tapered 1.25 in	max	67 [2.64]
	min	65 [2.56]

OMS

Type	L_{max} mm [in]	L_1 mm [in]	L_2 mm [in]
OMS 80	171 [6.73]	14.0 [0.551]	128 [5.04]
OMS 100	174 [6.85]	17.4 [0.685]	131 [5.16]
OMS 125	179 [7.05]	21.8 [0.858]	136 [5.35]
OMS 160	185 [7.28]	27.8 [1.094]	142 [5.59]
OMS 200	192 [7.56]	34.8 [1.370]	149 [5.87]
OMS 250	200 [7.87]	43.5 [1.713]	157 [6.18]
OMS 315	212 [8.35]	54.8 [2.157]	169 [6.65]
OMS 400	225 [8.86]	68.4 [2.693]	182 [7.17]
OMS 500	225 [8.86]	68.4 [2.693]	182 [7.17]

Output shaft		L_3 mm [in]
Cyl.1 in Splined 1 in	max	49 [1.93]
	min	47 [1.85]
Cyl.1.25 in Splined 1.25 in	max	54 [2.13]
	min	52 [2.05]

OMS

Type	L_{max} mm [in]	L_1 mm [in]	L_2 mm [in]
OMS 80	167 [6.57]	14.0 [0.551]	124 [4.88]
OMS 100	170 [6.69]	17.4 [0.685]	127 [5.00]
OMS 125	175 [6.89]	21.8 [0.858]	132 [5.20]
OMS 160	181 [7.13]	27.8 [1.094]	138 [5.43]
OMS 200	188 [7.40]	34.8 [1.370]	145 [5.71]
OMS 250	196 [7.72]	43.5 [1.713]	153 [6.02]
OMS 315	208 [8.19]	54.8 [2.157]	165 [6.50]
OMS 400	221 [8.70]	68.4 [2.693]	178 [7.01]
OMS 500	221 [8.70]	68.4 [2.693]	178 [7.01]

Output shaft		L_3 mm [in]
Splined 1.25 in	max	57 [2.24]
	min	55 [2.17]
Splined 0.875 in	max	42 [1.65]
	min	40 [1.57]

Weight of motors

Code number and weight of motors (continued)

Code no	Weight	
	kg	[lb]
151B4030	25.5	56.2
151B4031	26.5	58.4
151B4032	27.5	60.6
151B4033	28.5	62.8
151F0500	9.8	21.6
151F0501	10.0	22.1
151F0502	10.3	22.7
151F0503	10.7	23.6
151F0504	11.1	24.5
151F0505	11.6	25.6
151F0506	12.3	27.1
151F0507	9.8	21.6
151F0508	10.0	22.1
151F0509	10.3	22.7
151F0510	10.7	23.6
151F0511	11.1	24.5
151F0512	11.6	25.6
151F0513	12.3	27.1
151F0514	9.8	21.6
151F0515	10.0	22.1
151F0516	10.3	22.7
151F0517	10.7	23.6
151F0518	11.1	24.5
151F0519	11.6	25.6
151F0520	12.3	27.1
151F0521	10.3	22.7
151F0522	10.5	23.1
151F0523	10.8	23.8
151F0524	11.2	24.7
151F0525	11.6	25.6
151F0526	12.1	26.7
151F0527	12.8	28.2
151F0528	10.3	22.7
151F0529	10.5	23.1
151F0530	10.8	23.8
151F0531	11.2	24.7
151F0532	11.6	25.6
151F0533	12.1	26.7
151F0534	12.8	28.2
151F0535	7.8	17.2