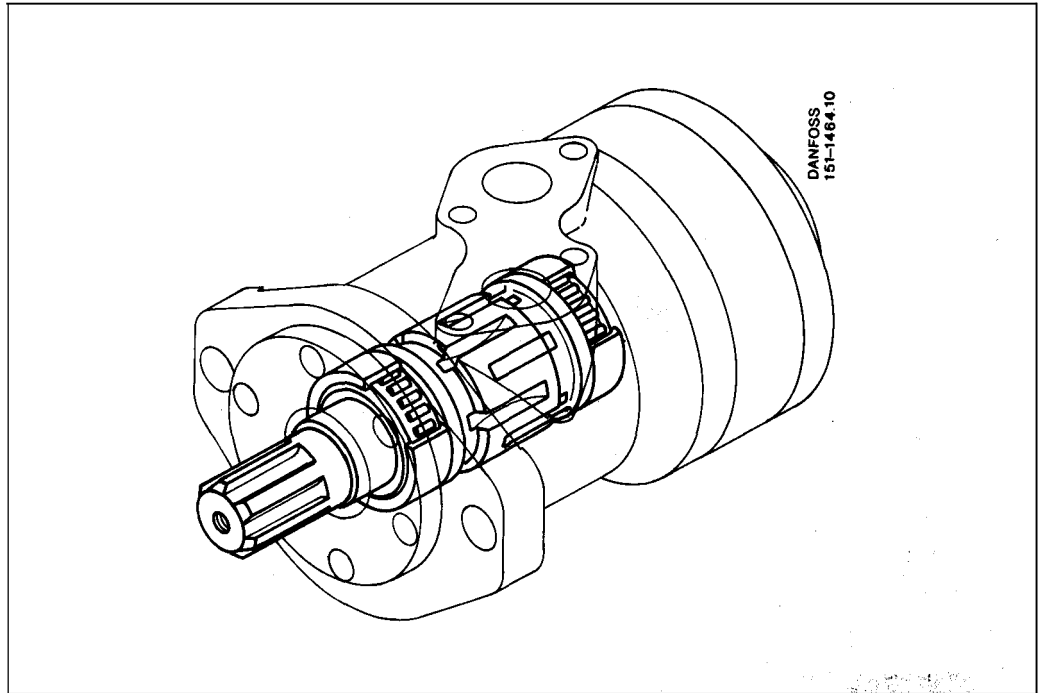


# OMRA hydraulic motor with needle bearings Type OMRA N

HN.12.HA.02 is new

## Introduction



We can now supply OMRA motors where the output shaft runs in needle bearings. The type designation for the new motor is OMRA N. As well as the well known features of our OMRA motors, the needle bearings mean that OMRA N has advantages in many applications such as:

- Applications with demanding operating conditions:
  - Large static radial load
  - Frequent starts and stops
  - Vibrations on the output shaft
- Applications with special requirements for motor function
  - Low static leakage
  - Low starting pressure - even with high radially loaded shaft

## Code numbers

Motor type	OMRA 80 N	OMRA 125 N	OMRA 160 N	OMRA 200 N
Splined shaft	151-6371	151-6373	151-6374	151-6375

The above mentioned motors are those currently available. For information about other displacements or shaft versions, please apply to the sales organisation for Hydraulics



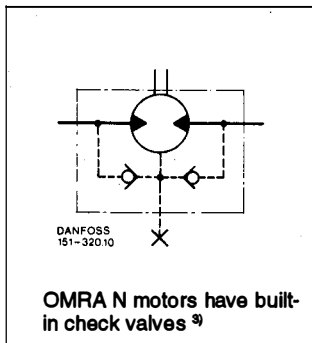
1800-OILSOL  
1800-645765

<https://oilsolutions.com.au/>

sales@oilsolutions.com.au

## Technical data

Type		OMRA80N	OMRA125N	OMRA160N	OMRA200N
Geometric displacement	(cm <sup>3</sup> )	80,3	125,7	159,6	199,8
Max. speed	(r/min) cont.	750	475	375	300
	(r/min) int. <sup>1)</sup>	940	600	470	375
Max. torque	(daNm) cont.	19,5	30	32	33
	(daNm) int. <sup>1)</sup>	22	34	39	45
	(daNm) peak <sup>2)</sup>	27	37	46	56
Max. output	(kW) cont.	12,5	12,5	10,5	9
	(kW) int. <sup>1)</sup>	15	14,5	12,5	11
Max. pressure drop	(bar) cont.	175	175	140	120
	(bar) int. <sup>1)</sup>	200	200	175	175
	(bar) peak <sup>2)</sup>	225	225	225	225
Max. flow	(l/min) cont.	60	60	60	60
	(l/min) int. <sup>1)</sup>	75	75	75	75
Max. inlet pressure	(bar) cont.	175	175	175	175
	(bar) int. <sup>1)</sup>	200	200	200	200
	(bar) peak <sup>2)</sup>	225	225	225	225
Max. return pressure without drain line or Max. pressure in drain line <sup>3)</sup>	(bar) cont. 0-100 r/min	125	125	125	125
	(bar) cont. 100-300 r/min	75	75	75	75
	(bar) cont. 300-600 r/min	50	50	50	-
	(bar) cont. 600-800 r/min	25	-	-	-
	(bar) int. <sup>1)</sup> 0-max. r/min	125	125	125	125
Max. starting pressure with unloaded shaft	(bar)	10	9	7	5
Min. starting torque	(daNm) max. press. drop cont.	15	25	27	26
	(daNm) max. press. drop int. <sup>1)</sup>	17	28	32	41
Min. speed <sup>4)</sup>	(r/min)	10	9	7	5



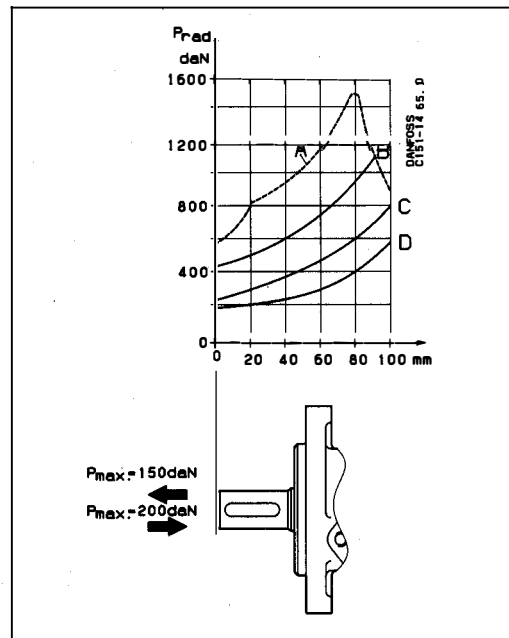
<sup>1)</sup> Intermittent operation: The permissible values may occur for max. 10% of every minute.

<sup>2)</sup> Peak load: The permissible values may occur for max. 1% of every minute.

<sup>3)</sup> The built-in check valves ensure that the pressure on the shaft seal never exceeds the pressure in the return line.

<sup>4)</sup> Operation at lower speeds may be slightly less smooth.

## Permissible shaft load



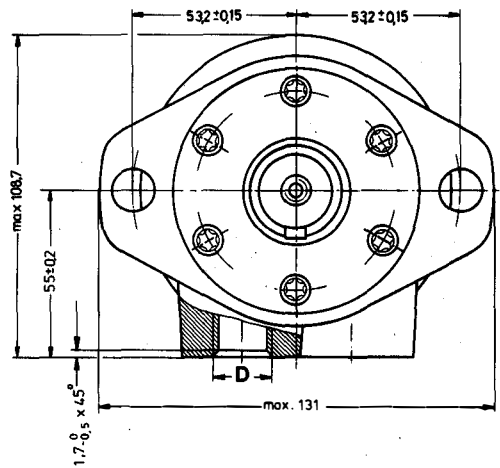
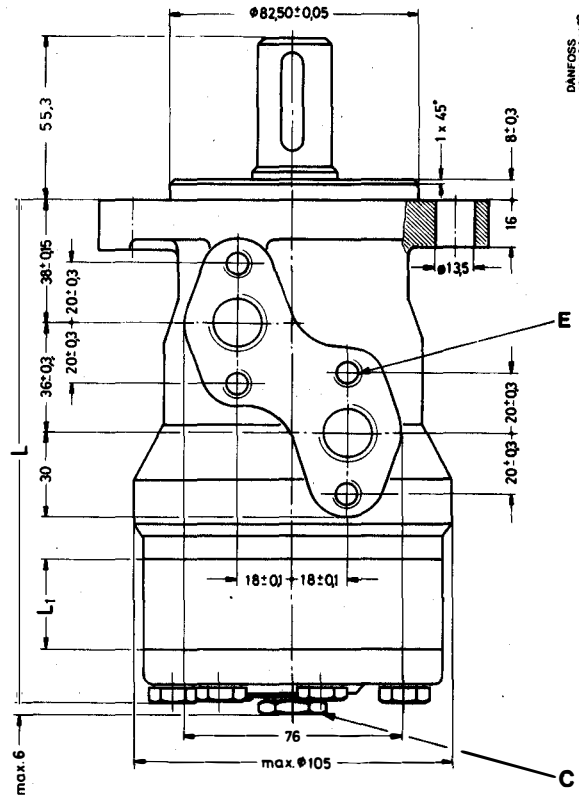
The permissible radial load on the shaft is shown for different speeds as a function of the distance from the mounting flange to the point of load application.

Curve A indicates the max. radial shaft load at speeds up to 200 r/min. Any shaft load exceeding the values quoted in curve A will involve a risk of breakage.

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

A:  $n \leq 200$  r/min  
 B:  $n = 300$  r/min  
 C:  $n = 500$  r/min  
 D:  $n = 800$  r/min

# Dimensions

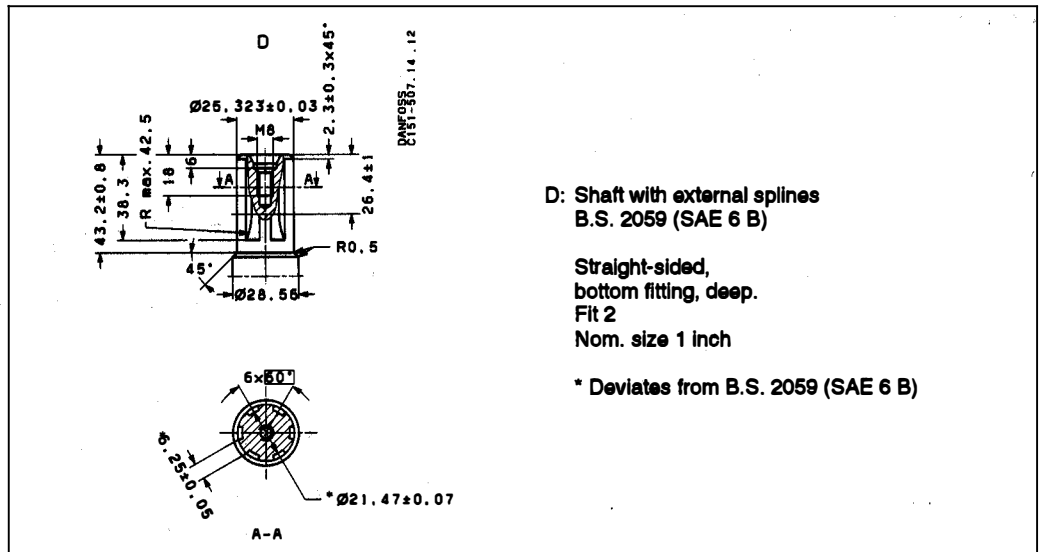


Type	$L_{max}$	$L_1$
OMRA 80 N	140,5	14,0
OMRA 125 N	148,5	21,8
OMRA 160 N	154,5	27,8
OMRA 200 N	161,5	34,8

C: Drain connection  
 G 1/4; 12 mm deep  
 D: G 1/2; 15 mm deep  
 E: M8; 13 mm deep (4 off)

**Note:**  
 The designation G for pipe threads replaces the previous designation BSP.F of BS/ISO 228/1.

**Shaft version**



**Conversion factors**

The technical data in this Tech Note is stated in standard ISO units only. These units are converted into British Standard units by using the following conversion factors:

1 daNm	=	88.5 lbf in
1 kW	=	1.34 hp
1 bar	=	14.5 lbf/in <sup>2</sup>
1 daN	=	2.248 lbf
1 cm <sup>3</sup>	=	0.061 in <sup>3</sup>
1 liter	=	0.22 gallon UK