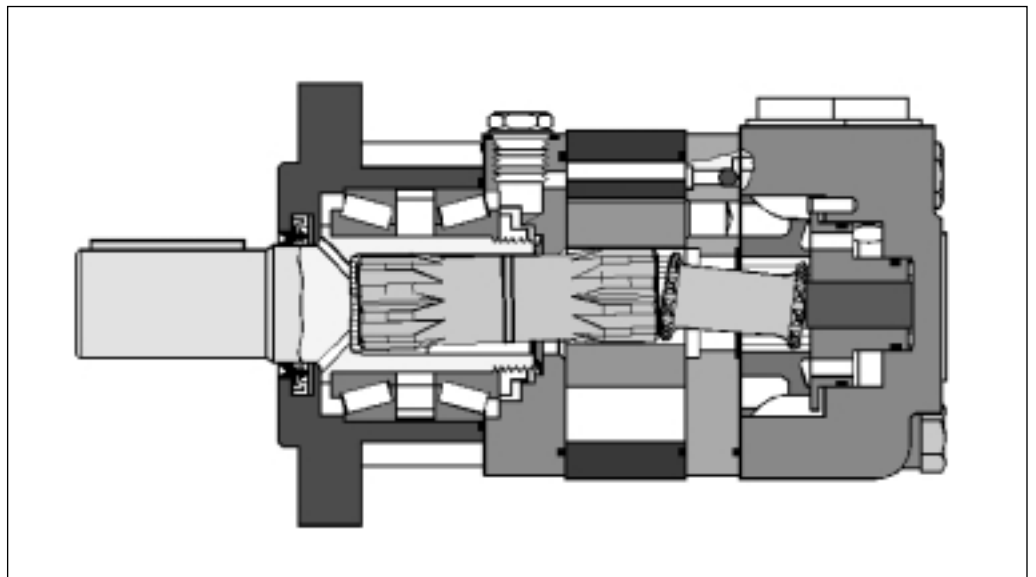


## Hydraulic motor type OMS series 3

### SAE-version

DKMH.PN.130.A1.22 is new



#### Introduction

Sauer-Danfoss now introduces the new hydraulic motors, type OMS series 3. Thorough constructional changes have enabled us to optimise these motors in several important respects:

- Improved output performance  
(higher efficiency at high pressures)
- Uprated values  
(higher permissible pressure and torque)
- Improved endurance  
(longer endurance under high load)

#### Date of introduction

The new OMS series 3 motors will be available as of August 2000.

---

**Code numbers and table of conversion (SAE standard version)**

*Standard flange*

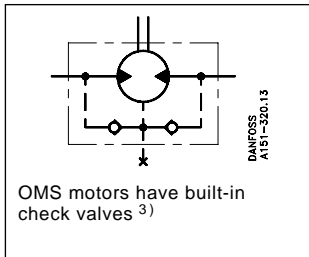
Motor type		OMS 80	OMS 100	OMS 125	OMS 160	OMS 200	OMS 250	OMS 315	OMS 400
Cylindrical shaft 1 1/4 in cyl.	old	151F2000	151F2001	151F2002	151F2003	151F2004	151F2005	151F2006	151F2061
	<b>new</b>	<b>151F2200</b>	<b>151F2201</b>	<b>151F2202</b>	<b>151F2203</b>	<b>151F2204</b>	<b>151F2205</b>	<b>151F2206</b>	<b>151F2261</b>
Splined shaft	old	151F2007	151F2008	151F2009	151F2010	151F2011	151F2012	151F2013	
	<b>new</b>	<b>151F2207</b>	<b>151F2208</b>	<b>151F2209</b>	<b>151F2210</b>	<b>151F2211</b>	<b>151F2212</b>	<b>151F2213</b>	
Tapered shaft	old				151F2017		151F2019	151F2020	
	<b>new</b>				<b>151F2217</b>		<b>151F2219</b>	<b>151F2220</b>	
PTO-shaft	old				151F2024				
	<b>new</b>				<b>151F2224</b>				

*A - 2 flange*

Motor type		OMS 80	OMS 100	OMS 125	OMS 160	OMS 200	OMS 250	OMS 315	OMS 400
Cylindrical shaft 1 in cyl.	old		151F2101						
	<b>new</b>		<b>151F2301</b>						
Cylindrical shaft 1 1/4 in cyl.	old							151F2122	151F2123
	<b>new</b>							<b>151F2322</b>	<b>151F2323</b>

## Technical data

Motor type		OMS 80	OMS 100	OMS 125	OMS 160	OMS 200	OMS 250	OMS 315	OMS 400	
Geometric displacement	(in <sup>3</sup> )	4.91	6.10	7.67	9.74	12.20	15.25	19.21	23.98	
Max. speed	(rpm)	cont.	810	750	600	470	375	300	240	190
		int. <sup>1)</sup>	1000	900	720	560	450	360	285	230
Max. torque	(in-lbs)	cont.	1750	2200	2850	3100	3500	4100	4800	4950
		int. <sup>1)</sup>	2100	2650	3300	4250	4400	5100	5600	5700
		peak <sup>2)</sup>	2300	2800	3500	4800	5800	6100	7400	7400
Max. output	(hp)	cont.	21	23	23	21	19	17	15	14
		int. <sup>1)</sup>	25	28	28	28	23	20	18	16.5
Max. pressure drop	(psi)	cont.	2500	2500	2500	2300	2300	2000	2000	1750
		int. <sup>1)</sup>	3000	3000	3000	3000	3000	2500	2500	2000
		peak <sup>2)</sup>	3300	3300	3300	3300	3300	2900	2900	2500
Max. oil flow	(gpm,US)	cont.	17	20	20	20	20	20	20	20
		int. <sup>1)</sup>	21	24	24	24	24	24	24	24
Max. inlet pressure	(psi)	cont.	3000	3000	3000	3000	3000	3000	3000	3000
		int. <sup>1)</sup>	3600	3600	3600	3600	3600	3600	3600	3600
		peak <sup>2)</sup>	4400	4400	4400	4400	4400	4400	4400	4400
Max. starting pressure with unloaded shaft	(psi)	170	150	150	120	120	120	120	120	
Min. starting torque	(in-lbs)	at max. press. drop cont.	1450	1800	2300	2500	2900	3200	3900	4200
		at max. press. drop int. <sup>1)</sup>	1750	2200	2700	3500	3600	3900	4600	4900
Min. speed <sup>4)</sup>	(rpm)	10	10	8	8	6	6	5	5	



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

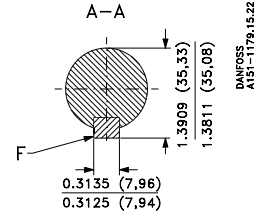
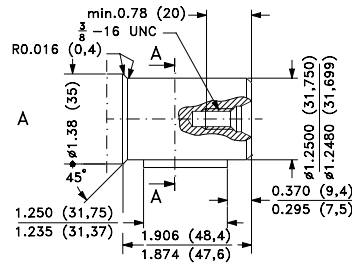
<sup>2)</sup> Peak load: The permissible values may occur for max. 1% of every minute.

<sup>3)</sup> The built in check valves ensure that the pressure on the shaft seal never exceeds the pressure in the return line. Max. pressure for OMS is dictated by the technical data for the component to be attached.

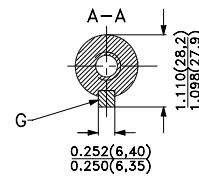
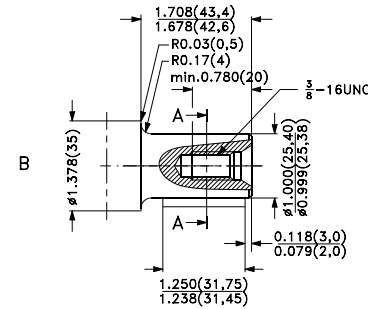
<sup>4)</sup> Operation at lower speeds may be slightly less smooth.

**Shaft versions**

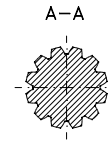
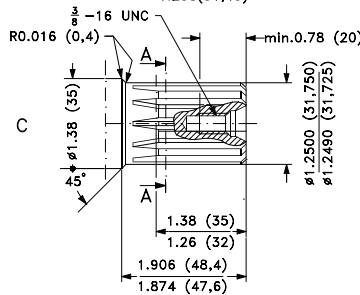
A: Cylindrical shaft  
 ø1 1/4 inch  
 F: Parallel key  
 5/16 x 5/16 x 1 1/4 inch  
 SAE J744



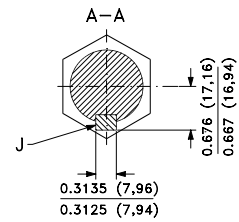
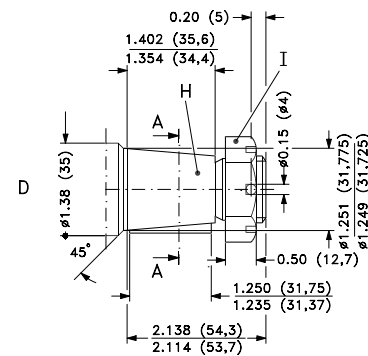
B: Cylindrical shaft  
 ø1 inch  
 G: Parallel key  
 A 1/4 x 1/4 x 1 1/4 inch  
 B.S. 46



C: Involute splined shaft  
 ANS B92.1 - 1970 standard  
 Flat root side fit  
 Pitch 12/24  
 Teeth 14  
 Major dia. 1.25 inch  
 Pressure angle 30°

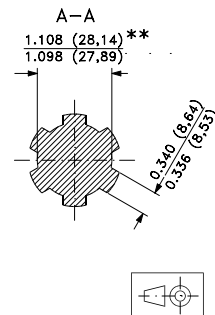
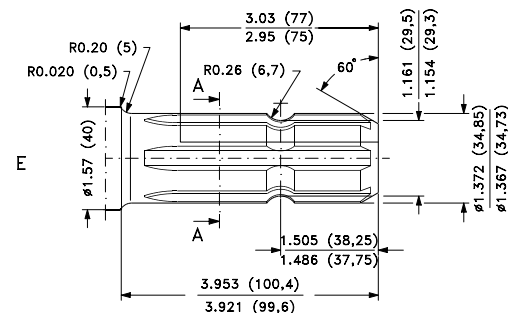


D: Tapered shaft 1 1/4 inch  
 H: Cone 1 : 8  
 SAE J501  
 I: 1 - 20 UNEF  
 Across flats: 1 7/16 inch  
 Tightening torque 1770 ± 90 in-lbs  
 J: Parallel key  
 5/16 x 5/16 x 1 1/4 inch  
 SAE J501



E: P.t.o-shaft  
 DIN 9611 Form 1  
 (ISO R500 without pin hole)

\*\* Deviates from DIN 9611

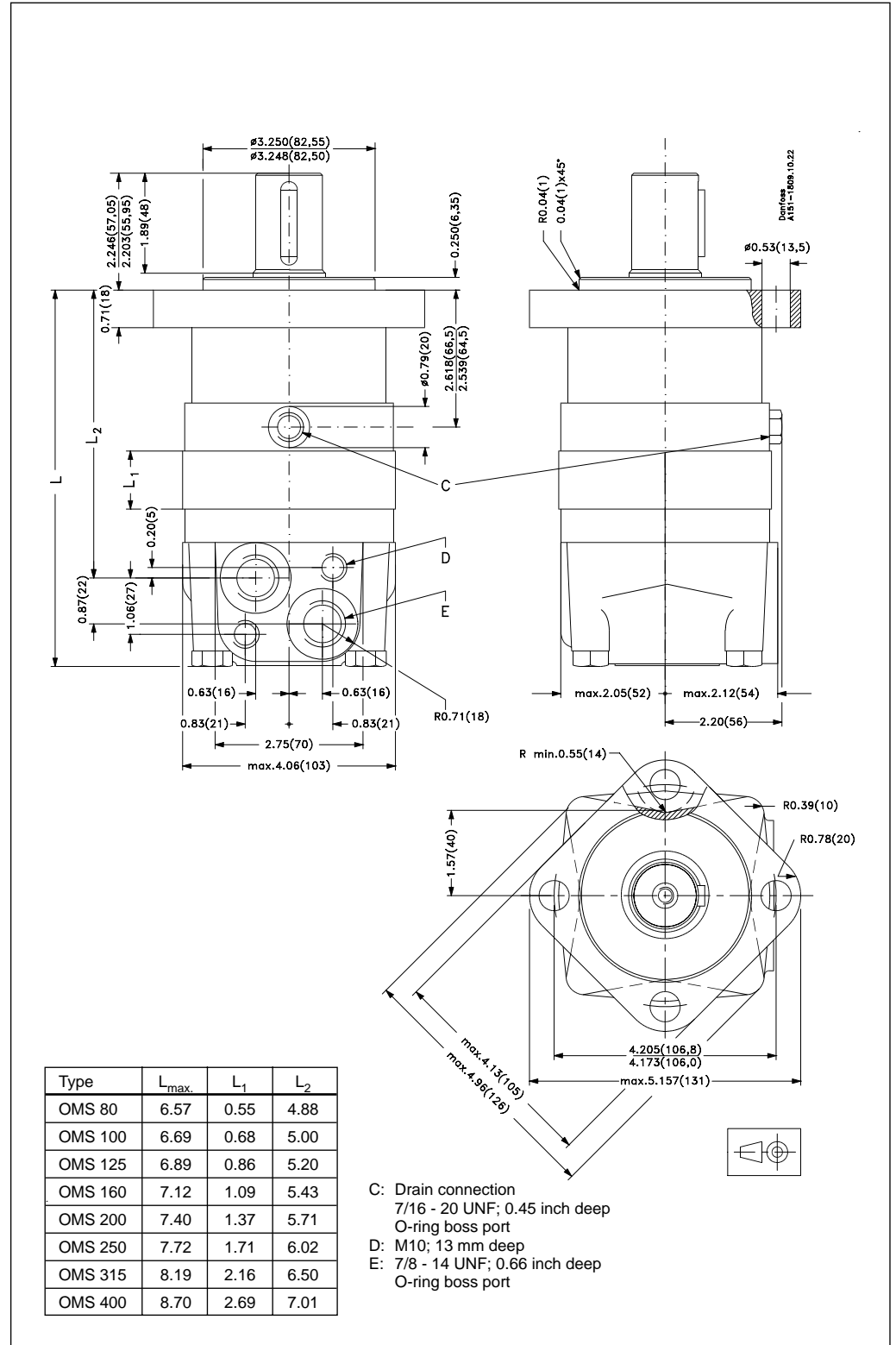


## Dimensions

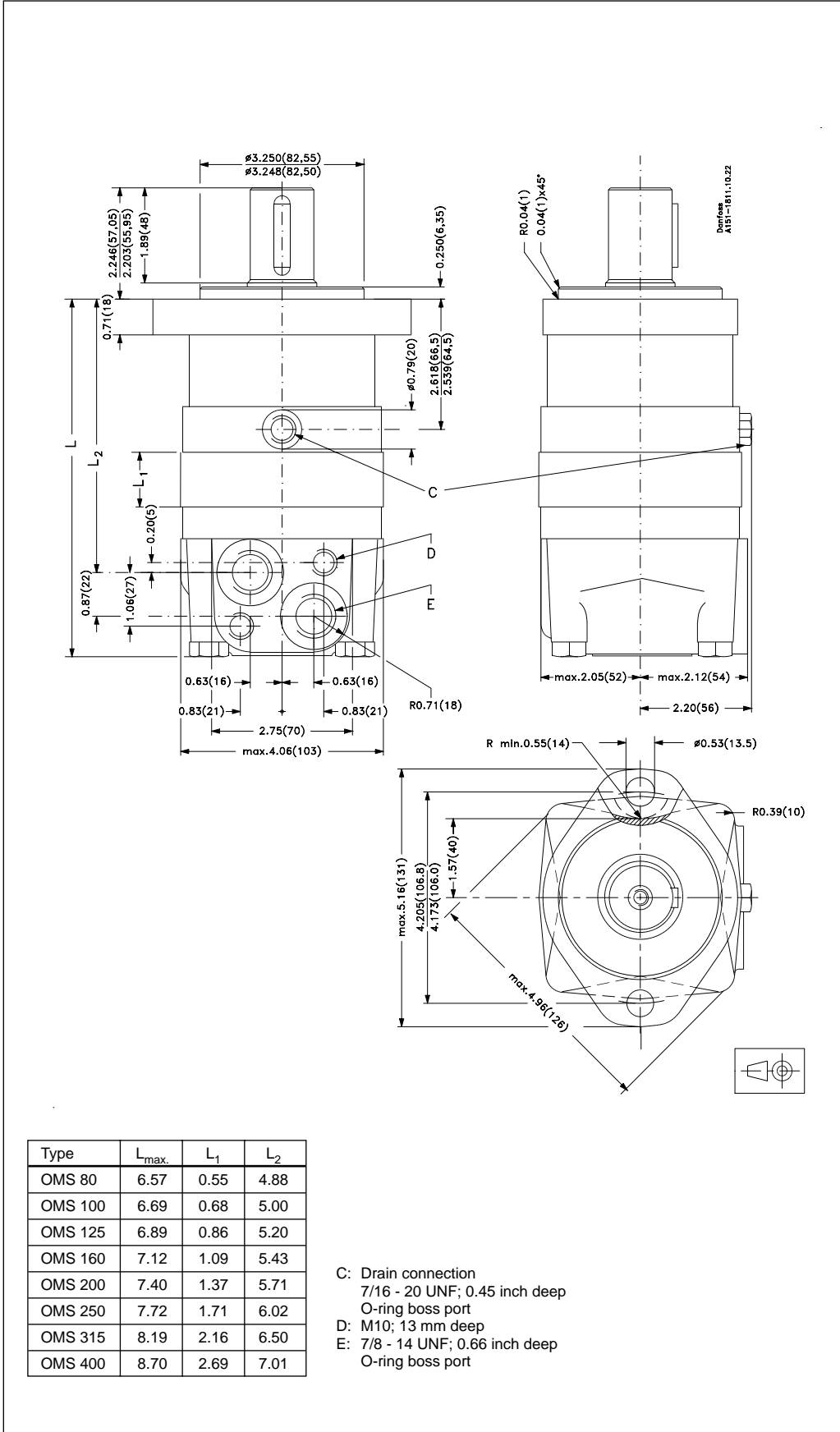
In relation to OMS series 2, the OMS series 3 motors have the following changed dimensions:

- Motor 2 mm longer, measured from the mounting flange.

- A- and B-ports moved 3 mm backwards towards the end of the motor.
- Port face for A- and B-ports 1 mm higher measured from the centre line of the motor.



Dimensions



---

**Comments**

---

## Comments

---

Sauer-Danfoss can accept no responsibility for possible errors in catalogues, brochures and other printed or electronic material. Sauer-Danfoss reserves the right to alter its products without prior notice. This also applies to products already ordered provided that such alterations can be made without subsequent changes being necessary in specifications already agreed. All trademarks in this material are properties of the respective companies. Sauer-Danfoss and the Sauer-Danfoss logo type are trademarks of the Sauer-Danfoss Group. All rights reserved.

---