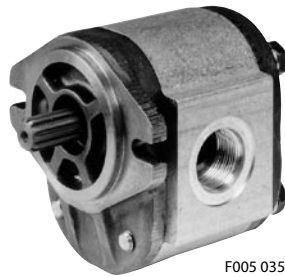


OVERVIEW

Sauer-Danfoss Group 2.5 Series 25SP range of gear pumps use an external spur gear, and positive displacement design of proven high pressure and efficiency. These high performance pumps are robustly constructed. Their durability has been proven, with over 30 years experience, in hydraulic products for mobile and industrial applications. Series 25SP gear pumps enjoy a pressure-balanced design that provides high efficiency for the entire series.

Series 25SP gear pumps



F005 035



F005 066



F005 065

DESIGN

The Series 25SP is designed with high-strength extruded aluminum gear housing. It has a gray iron flange and cover, one-piece shafts and 12-teeth gears, and pressure-balanced design.



F005 067

FEATURES

Special features of the Series 25SP gear pump include:

- wide range of displacement (from 20 to 45 cm³ [1.22 to 2.75 in³])
- variety of splined, parallel, and tapered shaft ends (not all shaft styles are available with all flange styles)
- two industry-standard mounting flanges: SAE A and SAE B
- O-ring boss ports configuration per SAE J1926/1
- optional priority flow divider valve / static load sense priority flow divider
- rear port covers (optional)
- multiple Series 25SP pumps.

**TECHNICAL DATA FOR
 SERIES 25SP**

This table details gear pumps based on the model and displacement configuration. For further information about application and configuration of gear pumps, please see Sauer-Danfoss publication *Group 2.5 Gear Pumps Technical Information*, 520L0658.

Technical data – Series 25SP gear pumps

		Pump model							
		20	22.4	25	28	31.5	35.5	40	45
Displacement	cm ³ /rev [in ³ /rev]	20.0 [1.22]	22.0 [1.37]	25.0 [1.53]	28.0 [1.71]	31.5 [1.92]	35.5 [2.17]	40.0 [2.44]	45.0 [2.75]
Peak pressure	bar [psi]	275 [3950]	275 [3950]	275 [3950]	275 [3950]	275 [3950]	275 [3950]	245 [3552]	225 [3262]
Rated pressure		250 [3625]	250 [3625]	250 [3625]	250 [3625]	250 [3625]	250 [3625]	220 [3190]	200 [2900]
Minimum speed	min ⁻¹	500	500	500	500	500	500	500	500
Maximum speed	(rpm)	3000	3000	2800	2800	2800	2700	2500	2500
Weight	kg [lb]	5.6 [12.34]	5.8 [12.79]	6.0 [13.23]	6.5 [14.33]	6.8 [15.07]	7.2 [15.87]	7.6 [16.76]	8.0 [17.64]
Moment of inertia of rotating components	x 10 ⁻⁶ kg·m ² [x 10 ⁻⁶ lbf·ft ²]	94.8 [2250]	102.8 [2439]	148.8 [3531]	127.7 [3030]	139.3 [3305.6]	152.6 [3621]	167.6 [3977.1]	184.2 [4371.1]
Theoretical flow at maximum speed	l/min [US gal/min]	60.0 [15.85]	67.2 [17.79]	75.0 [19.87]	84.0 [22.21]	94.5 [24.94]	106.5 [28.18]	120.0 [31.69]	135.0 [35.71]

For applications requiring parameters beyond those listed, contact Sauer-Danfoss.

SHAFT, FLANGE, AND PORT CONFIGURATION

This table illustrates the standard 25SP configurations for each pump (all are interchangeable):

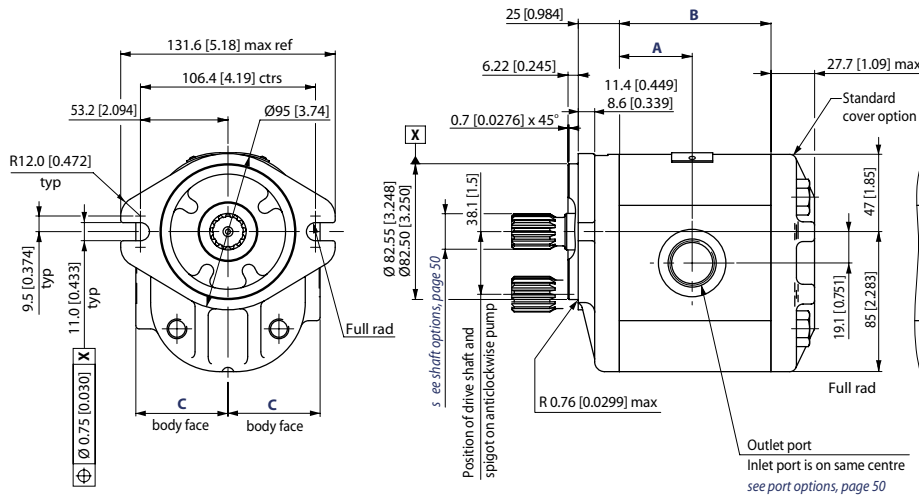
Shaft, flange and port configuration – Series 25SP

Shaft	Flange	Port
<p>SAE A 11-tooth splined</p>	<p>SAE A 2-bolt</p>	<p>SAE O-ring boss Inlet: 1⁵/₁₆"-12UNF, Outlet: 1¹/₁₆"-12UNF</p>
<p>SAE B 13-tooth splined</p>	<p>SAE B 2-bolt</p>	<p>SAE port Inlet: 1⁵/₁₆"-12UNF, Outlet: 1¹/₁₆"-12UNF</p>

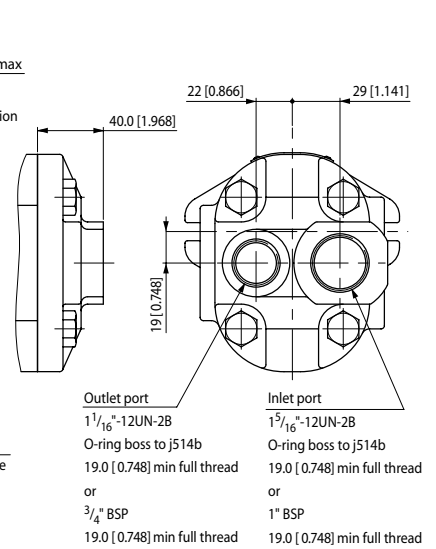
DIMENSIONS

mm
 [in]

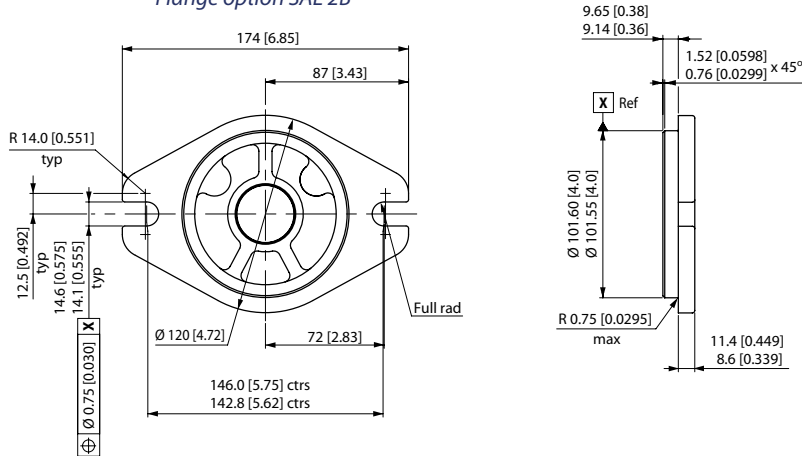
Flange option SAE 2A



Rear ported cover option



Flange option SAE 2B

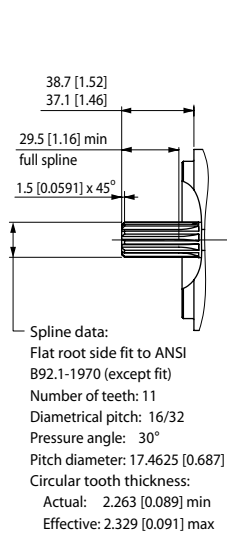
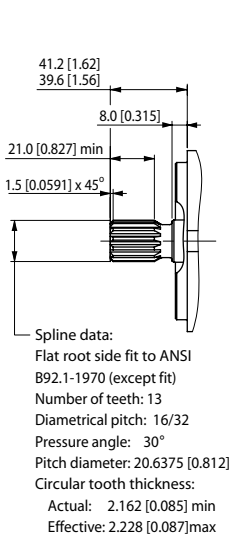


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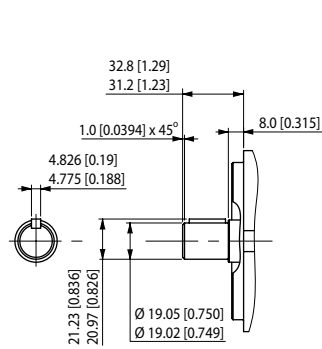
Series 25SP dimensions

Type (displacement)		20.0	22.4	25.0	28.0	31.5	35.5	40.0	45.0
Dimension	A	32.4 [1.275]			44.3 [1.744]				
	B	64.8 [2.551]	67.3 [2.649]	69.9 [2.752]	88.5 [3.484]	92.2 [3.630]	96.3 [3.791]	100.9 [3.972]	106.1 [4.177]
Inlet	C	1 5/16" 12 UNF O-ring							
Outlet	c	1 1/16" 12 UNF O-ring							

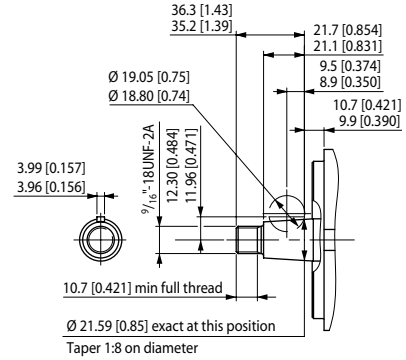
SHAFT OPTIONS



Key supplied with pump



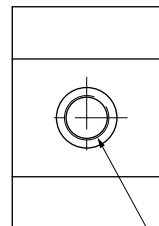
Key, tab washer & lock nut supplied with pump



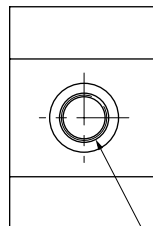
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PORTS OPTIONS

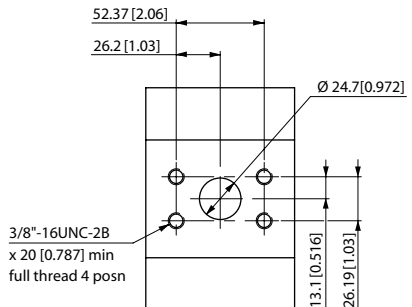
Outlet port options



3/4" BSP
 x 16.3 [0.642] min full thread
 Ø 36.0 x 0.5 [Dia1.42 x 0.0197]
 deep spotface

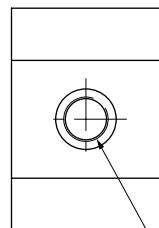


1-1/16"-12UNC-2B
 x 19 [0.748] min full thread
 O-ring boss to SAE J514b
 Ø 41.0 x 0.5 [Dia1.61 x 0.0197]
 deep spotface

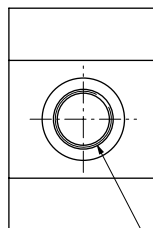


This port is not available on pump sizes 20.0L, 22.4L & 25.0L. This port is only available in the orientation shown.

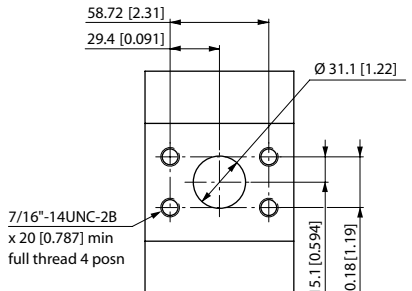
Inlet port options



1" BSP
 x 19.1 [0.752] min full thread
 Ø 43.5 x 0.5 [Dia1.71 x 0.0197]
 deep spotface



1-5/16"-12UN-2B
 x 19 [0.748] min full thread
 O-ring boss to SAE J514b
 Ø 49.0 x 0.5 [Dia1.93 x 0.0197]
 deep spotface



This port is not available on pump sizes 20.0L, 22.4L & 25.0L. This port is only available in the orientation shown.

P005 077E

**SHAFT AND FLANGE
 AVAILABILITY**

This table details the standard Series 25SP group shafts and flange combinations that are currently available with the maximum shaft torque limits. For further information about application and configuration of gear pumps, please see Sauer-Danfoss publication *Group 2.5 Gear Pumps Technical Information*, 520L0658.

Shaft and flange availability and torque capacity

Shaft		Mounting flange code with maximum torque
Description	Code	in Nm [lbf·in]
SAE Spline 13T 16/32p	SB	203 [1797]
SAE Spline 11T 16/32p	SA	140 [1239]
Parallel 19 mm [0.748 in]	SK	140 [1239]
Taper 1:8	SD	350 [3098]