



◆ Model number

SD620 - 60 7 E 1 H 1 - L XXX

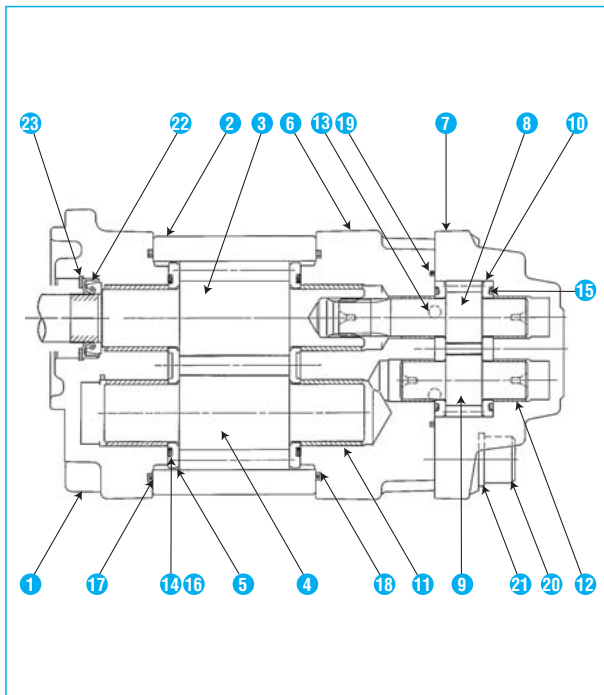
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩

- | | | | |
|---|--|---|---|
| <p>① Series number
SD series</p> <p>② Mounting spigot diameter
- : $\phi 82_{-0.090}^{+0.036}$ Z : $\phi 102_{-0.090}^{+0.036}$
A : $\phi 82.55_{-0.05}^{+0.005}$ B : $\phi 101.6_{-0.05}^{+0.005}$</p> <p>③ No.1 Pump Size</p> | <p>④ No.2 Pump Size</p> <p>⑤ Position of ports
F : side ports (single suction port)
E : side ports (double suction ports)</p> <p>⑥ Port configuration
1 : flange port
2 : G screw thread</p> | <p>⑦ Mounting
H : horizontal 2 bolts</p> <p>⑧ Shaft end
1 : SAE Spline 13 teeth
6 : SAE Spline 15 teeth</p> | <p>⑨ Rotation viewing from shaft end
L = counterclockwise
R = clockwise</p> <p>⑩ Code number in 3 figures</p> |
|---|--|---|---|

◆ Specifications

	Size	Displacement		Rated pressure			Max. peak pressure			Speed min ⁻¹	
		cm ³	in ³	MPa	bar	psi	MPa	bar	psi	MIN.	MAX.
No.1 Pump	40	40.3	2.458	25.0	250	3625	30.0	300	4350	500	3000
	44	44.5	2.715								
	48	48.7	2.971								
	52	52.2	3.184								
	56	55.8	3.404								
	60	60.0	3.660	23.0	230	3335	27.6	276	4002	2500	
	60	60.0	3.660	21.0	210	3045	25.0	250	3625	2400	
No.2 Pump	5	5.10	0.311	13.7	137	1987	17.2	172	2494	500	3000
	7	7.00	0.427								
	8	8.02	0.489								
	9.5	9.50	0.580								

◆ Typical assembly

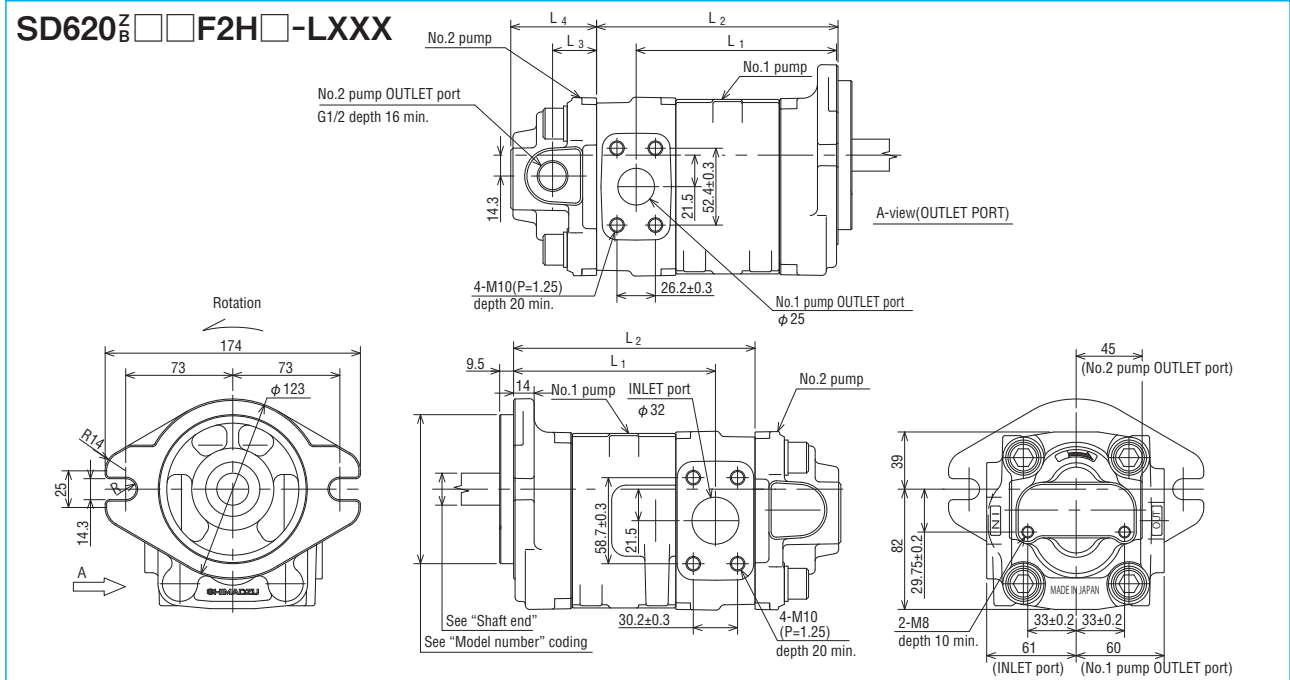


Item No.	Name	QTY	Material
①	Front cover	1	Aluminum alloy
②	No.1 Body	1	Cast iron
③	No.1 Drive gear	1	Alloy steel
④	No.1 Driven gear	1	Alloy steel
⑤	Side plate	2	Special alloy steel
⑥	Adapter plate	1	Aluminum alloy
⑦	No.2 Body	1	Aluminum alloy
⑧	No.2 Drive gear	1	Alloy steel
⑨	No.2 Driven gear	1	Alloy steel
⑩	Side plate	2	Special alloy steel
⑪	Bush	4	Special alloy steel
⑫	Bush	4	Special alloy steel
⑬	Steel ball	2	Alloy steel
⑭	Gasket	2	Nitrile rubber
⑮	Gasket	2	Nitrile rubber
⑯	Back-up	2	Synthetic resin
⑰	Gasket	1	Nitrile rubber
⑱	Gasket	1	Nitrile rubber
⑲	Gasket	1	Nitrile rubber
⑳	Bolt	4	Alloy steel
㉑	Washer	4	Carbon steel
㉒	Oil seal	1	Nitrile rubber
㉓	Retainer ring	1	Carbon tool steel

NOTES : "QTY" shows the amount per one

◆ Outline dimensions

dimensions in mm



NOTE 1. Figure shown indicated counterclockwise rotation "L" viewing from shaft end. Clockwise rotation "R" is mirror image of this.

2. Unless otherwise specified, tolerance on dimension are ± 1.0 mm.

Size	L ₁	L ₂	Size	L ₃	L ₄
40	124.6	151.6	5	30	60
44	128.1	155.1	7		
48	131.6	158.6	8		
52	134.6	161.6	9.5		
56	137.6	164.6			
60	141.1	168.1			

◆ Combination of double pump

1. Limitation in maximum delivery pressure due to PQ value.

Calculate the PQ value, using the following equation, and use the pump at the pressure range lower than the value shown in Table-1.

Input shaft	$PQ1 > P1 \times Q1 + P2 \times Q2$
Intermediate joint	$PQ2 > P2 \times Q2$

P1, P2 : Delivery pressure (MPa) of No.1, No.2 pump.
Pr1, Pr2 : Rated pressure (MPa) of No.1, No.2 pump.
Q1, Q2 : Displacement volume (cm³) of No.1, No.2 pump.
• P1 < Pr1 • P2 < Pr2

Table-1 Allowable PQ value

	PQ1 Input shaft	PQ2 Intermediate joint
SAE spline 15T	2158	330
SAE spline 13T	1472	

2. Limitation in maximum rotating speed due to suction flow.

It is advised to use the pump at the rotating speed lower than the value, which is satisfied with the equation in Table-2.

Table-2 Limitation in maximum rotating speed

For single suction port	$\phi 32$: $N \times (Q1 + Q2) \div 1000 < 143$ (L/min)
For double suction port	Lower value of the maximum speed.

N: Maximum allowable rotating speed (min⁻¹).

● Shaft end

SAE Spline (Some dimensions are different form SAE standard.)	
SAE Spline 13 teeth	SAE Spline 15 teeth
<p>No. of tooth : 13 D.P. : 16/32 Pressure angle : 30° Over pin dia. : 24.891 ~ 24.819 Pin dia. : φ3.048</p>	<p>No. of tooth : 15 D.P. : 16/32 Pressure angle : 30° Over pin dia. : 28.097 ~ 28.025 Pin dia. : φ3.048</p>