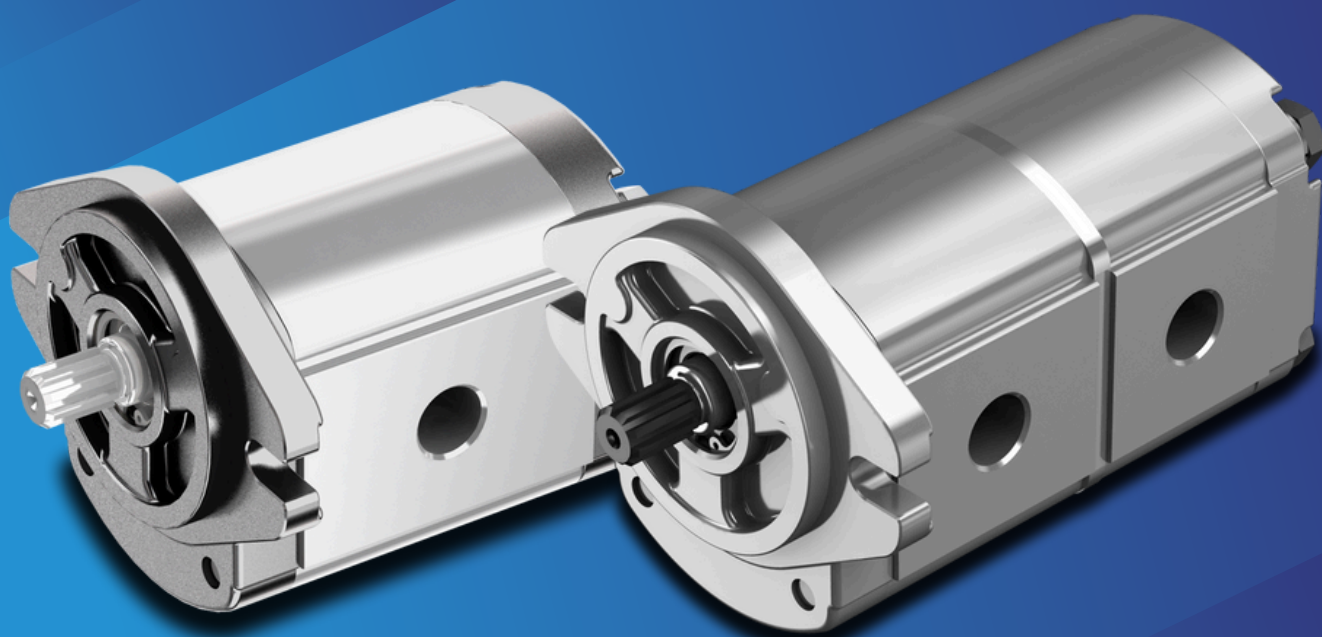
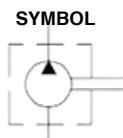


**AIVIO**  
HYDRAULICS

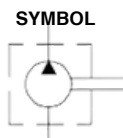


HYDRAULIC GEAR  
PUMP & MOTOR  
“SP SERIES”

## FEATURE



## SP21 SERIES



## FEATURE

A Group 2 aluminum gear pump is a compact, lightweight hydraulic pump designed to deliver fixed displacement fluid flow. It uses two meshing gears inside an aluminum housing to generate hydraulic pressure and flow

- Compact and light weight
- Cast-iron front cover with aluminum body
- Small size, moderate duty-moderate flow
- Fixed displacement gear pump
- Displacement 4.0 - 28.0 cc/rev
- Continuous pressure up to 260 bar
- Intermittent pressure up to 270 bar
- Good heat dissipation

## General Specification

PUMP HOUSING DIMENSION : see page : 6-8

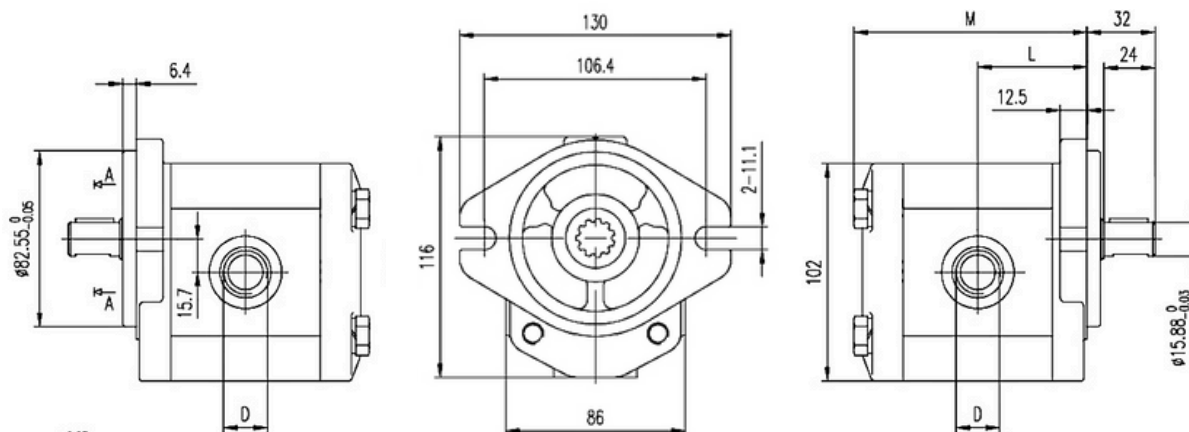
MULTIPLE PUMP COMBINATION : see page 6-8

Displacement	Pressure			N Max	N Min	Inlet	Outlet	Wt (Kg.)
cc/rev	P1	P2	P3	(Rpm)	(Rpm)	(BSPP)	BSPP	Approx.
4.0	260	270	285	4000	600	G1/2"	G1/2"	3.60
6.0	260	270	285	4000	600	G1/2"	G1/2"	3.70
8.0	260	270	285	3500	500	G1/2"	G1/2"	3.80
10.0	260	270	285	3000	500	G3/4"	G1/2"	3.90
12.0	260	270	285	3000	500	G3/4"	G1/2"	4.00
14.0	240	250	265	3000	500	G3/4"	G1/2"	4.10
16.0	240	250	265	3000	500	G3/4"	G1/2"	4.30
18.0	230	240	255	2500	500	G3/4"	G1/2"	4.40
20.0	210	220	235	2500	500	G3/4"	G1/2"	4.50
22.0	190	200	215	2500	500	G3/4"	G1/2"	4.60
25.0	190	200	215	2000	500	G3/4"	G1/2"	4.70
28.0	160	170	185	2000	500	G1"	G3/4"	4.80

## Standard Dimension

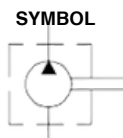
FRONT END : see page 4

DRIVE SHAFT : see page 5



EXAMPLE OF SP21-SEA A - KEYED SHAFT 15.88MM

## SP31 SERIES



## FEATURE

A Group 3 aluminum gear pump is a compact, good heat dissipation hydraulic pump designed to deliver fixed displacement fluid flow. It uses two meshing gears inside an aluminum housing to generate hydraulic pressure and flow

- Compact and durable
- Cast-iron front cover with aluminum body
- large size, heavy duty-high flow
- Fixed displacement gear pump
- Displacement 20 - 71 cc/rev
- Continuous pressure up to 250 bar
- Intermittent pressure up to 265 bar
- Good heat dissipation

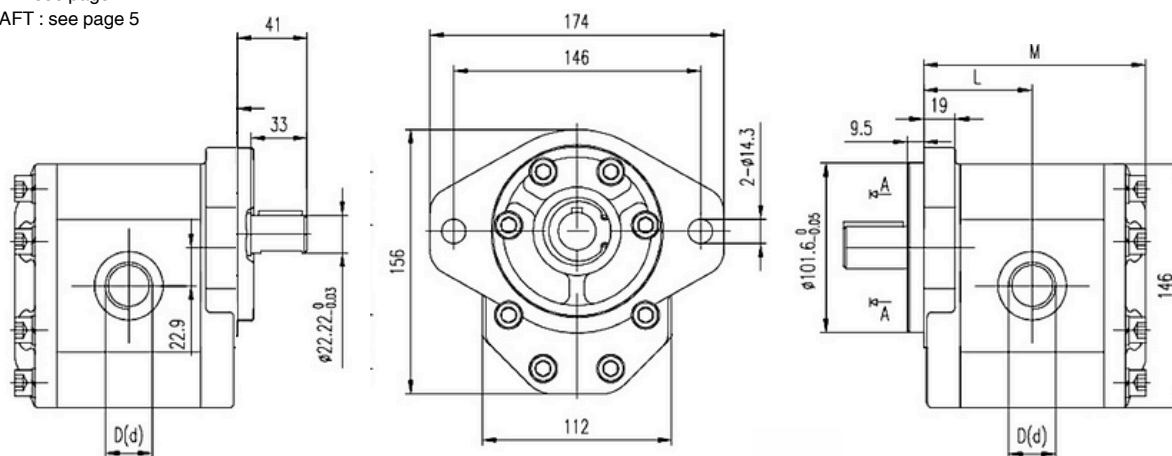
## General Specification

PUMP HOUSING DIMENSION : see page : 6-8  
MULTIPLE PUMP COMBINATION : see page 6-8

Displacement cc/rev	Pressure			N Max (Rpm)	N Min (Rpm)	Inlet (BSPP)	Outlet BSPP	Wt (Kg.) Approx.
	P1	P2	P3					
20.0	250	265	280	3500	600	G1"	G3/4"	8.70
22.0	250	265	280	3500	600	G1"	G3/4"	8.80
26.0	250	265	280	3000	600	G1"	G3/4"	9.10
33.0	230	250	270	3000	500	G1"	G3/4"	9.40
39.0	230	250	270	3000	500	G1"	G3/4"	9.70
46.0	230	250	270	3000	500	G1-1/4"	G1"	9.80
52.0	220	240	260	3000	500	G1-1/4"	G1"	10.30
55.0	200	230	250	2800	400	G1-1/4"	G1"	10.60
63.0	200	230	250	2800	400	G1-1/4"	G1"	10.90
71.0	180	200	220	2800	400	G1-1/2"	G1-1/4"	11.00

## Standard Dimension

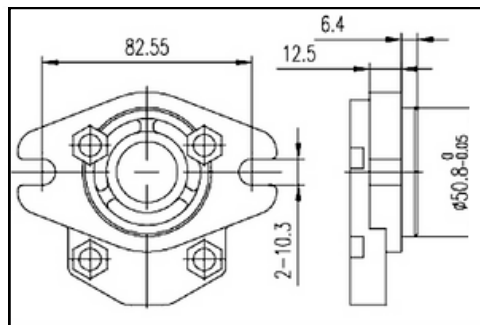
FRONT END : see page 4  
DRIVE SHAFT : see page 5



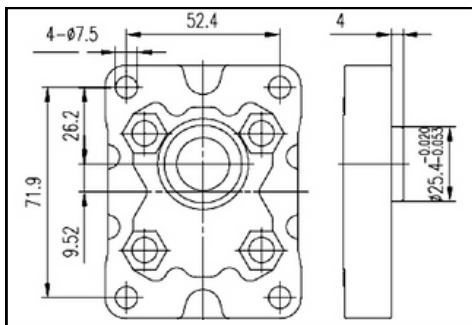
EXAMPLE OF SP31-SEA B - KEYED SHAFT 22.22MM



## SP11 SERIES

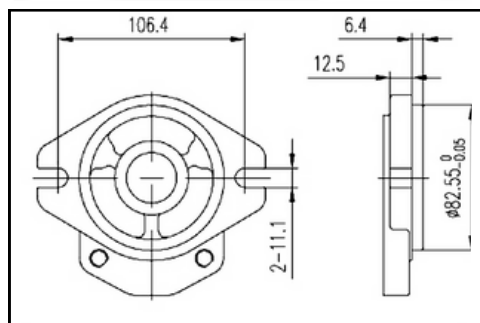


SAE AA Ø50.8MM

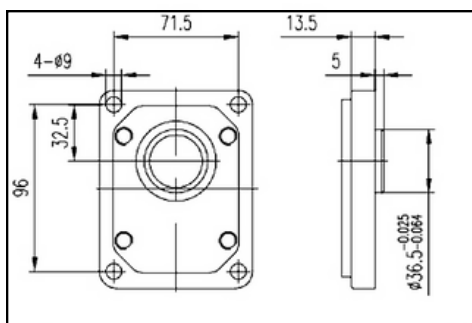


EUROPEAN Ø25.4MM.

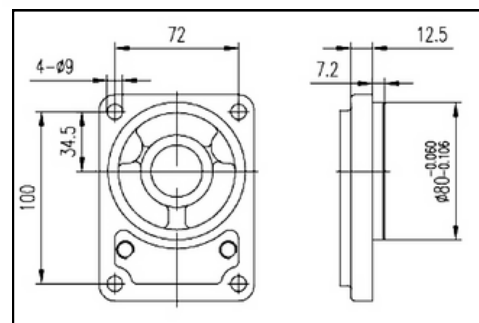
## SP21 SERIES



SAE A Ø82.55MM.

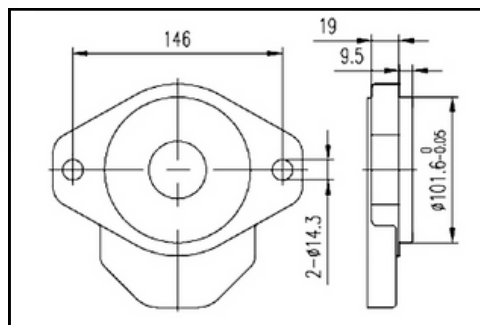


EUROPEAN Ø36.5MM.

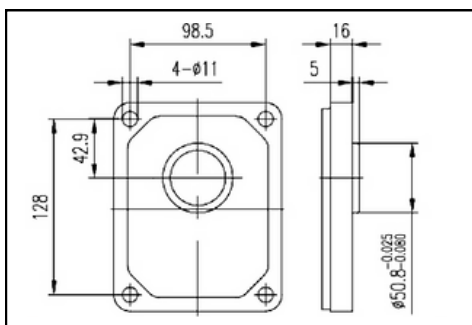


GERMAN BOSCH Ø80MM.

## SP31 SERIES

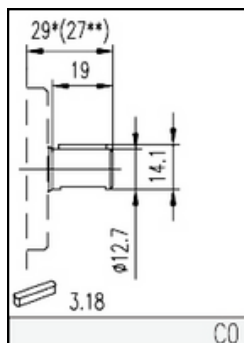


SAE B Ø101.6MM.

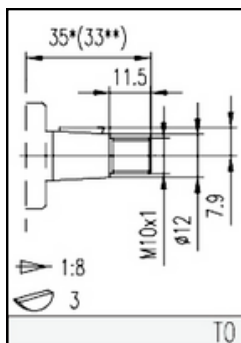


EUROPEAN Ø50.8MM.

## SP11 SERIES

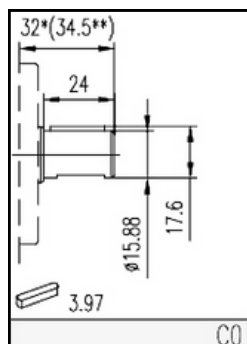


KEYED 12.7MM.

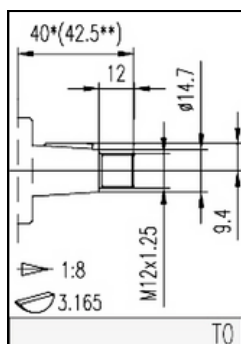


TAPER 1: 8

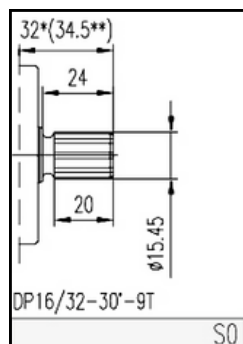
## SP21 SERIES



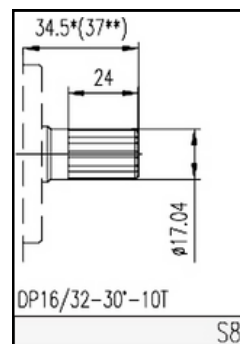
KEYED 15.88MM.



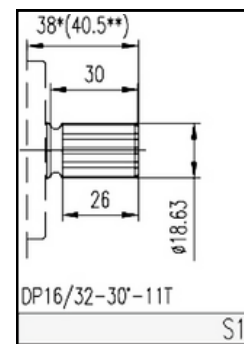
TAPER 1: 8



SPLINE 9 T

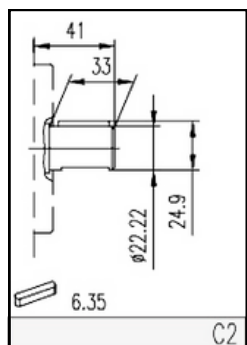


SPLINE 10 T

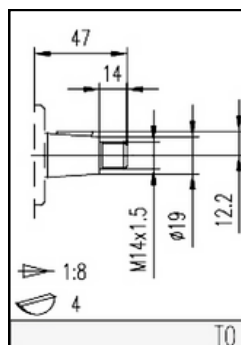


SPLINE 11T

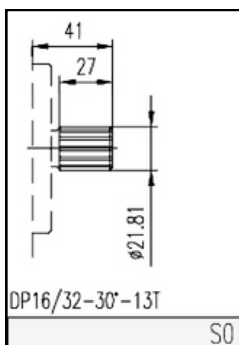
## SP31 SERIES



KEYED 22.22MM.

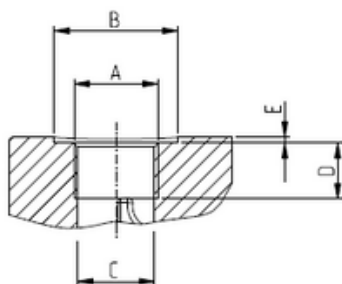


TAPER 1: 8

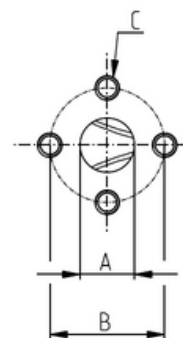


SPLINE 13T

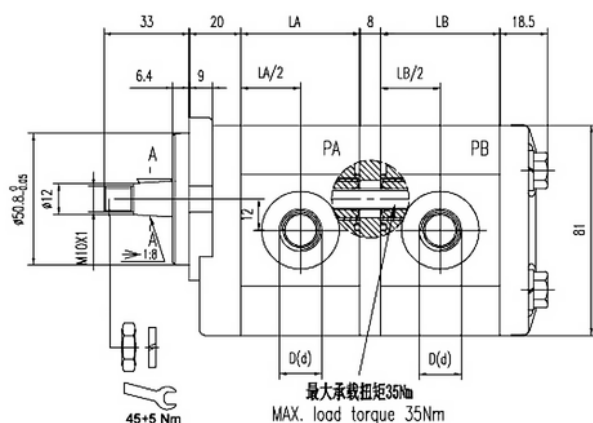
## PORTING EUROPEAN FLANGE



Normal size (BSPF)	ØA Inch	ØC (mm.)	ØD (mm.)
3/8"	G 3/8	15.0	14.0
1/2"	G 1/2	19.0	17.0
3/4"	G 3/4	24.5	18.0
1"	G 1	30.5	18.0
1-1/4"	G 1-1/4	39.0	22.0
1-1/2"	G 1-1/2	45.0	24.0

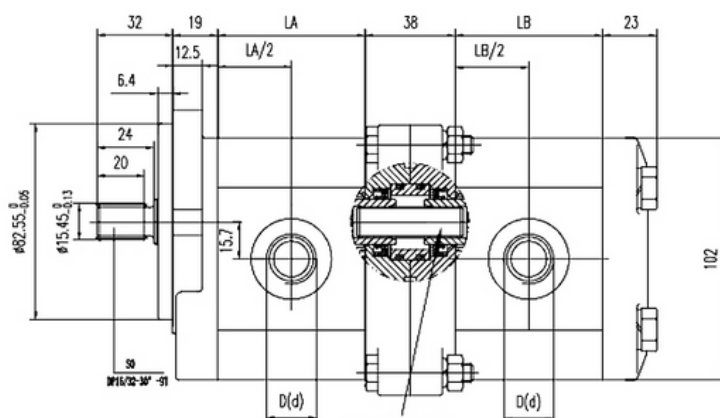


Norminal size (EUROPEAN)	A (mm.)	B (mm.)	C (mm.)
EA	13	30.0	M6
EB	19	40.0	M8
ED	27	51.0	M10
EF	33	62.0	M12



<i>Displacement</i> <i>(cc/rev)</i>	<i>LA-LB</i> <i>(mm.)</i>	<i>LA/2 , LB/2</i> <i>(mm.)</i>
1.4	44	22
2.1	46	23
2.8	48	24
3.5	50	25
4.1	52	26
5.2	56	28
6.2	58	29
7.6	62	31
9.3	64	32
11	66	33
13.8	70	35

## SP21/SP21 SERIES



MAX. load torque 65Nm

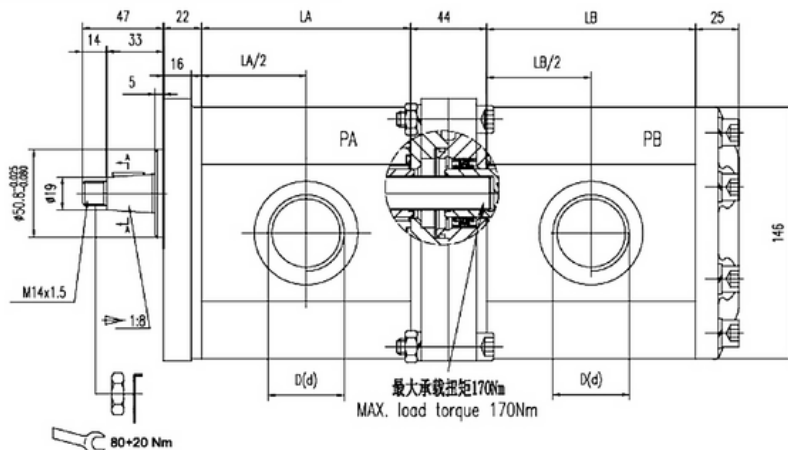
**SP21 series**

<i>Displacement</i>	<i>LA-LB</i>	<i>LA/2 , LB/2</i>
<i>(cc/rev)</i>	<i>(mm.)</i>	<i>(mm.)</i>
<b>4.0</b>	50.8	25.4
<b>6.0</b>	54.2	27.1
<b>8.0</b>	57.4	28.7
<b>10.0</b>	60.8	30.4
<b>12.0</b>	64.2	32.1
<b>14.0</b>	67.8	33.9
<b>16.0</b>	70.8	35.4
<b>18.0</b>	74.2	37.1
<b>20.0</b>	77.6	38.8
<b>22.0</b>	80.8	40.4
<b>25.0</b>	86	43.0
<b>28.0</b>	90.8	45.4

FRONT END : see page 4  
DRIVE SHAFT : see page 5  
PORT SIZE : see page 6



## SP31/SP31 SERIES

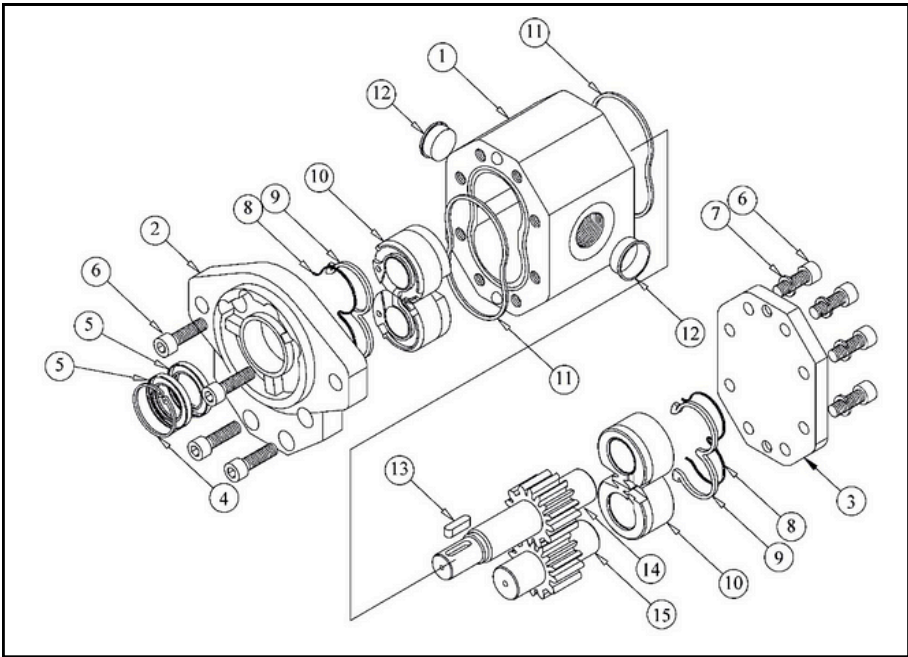


**SP31 series**

<i>Displacement</i>	<i>LA-LB</i>	<i>LA/2 , LB/2</i>
<i>(cc/rev)</i>	<i>(mm.)</i>	<i>(mm.)</i>
<b>20.0</b>	81.2	40.6
<b>22.0</b>	83.2	41.6
<b>26.0</b>	86.2	43.1
<b>33.0</b>	92.2	46.1
<b>39.0</b>	99.2	49.6
<b>46.0</b>	105.2	52.6
<b>52.0</b>	111.4	55.7
<b>55.0</b>	113.2	56.6
<b>63.0</b>	121	60.5
<b>71.0</b>	128	64.0

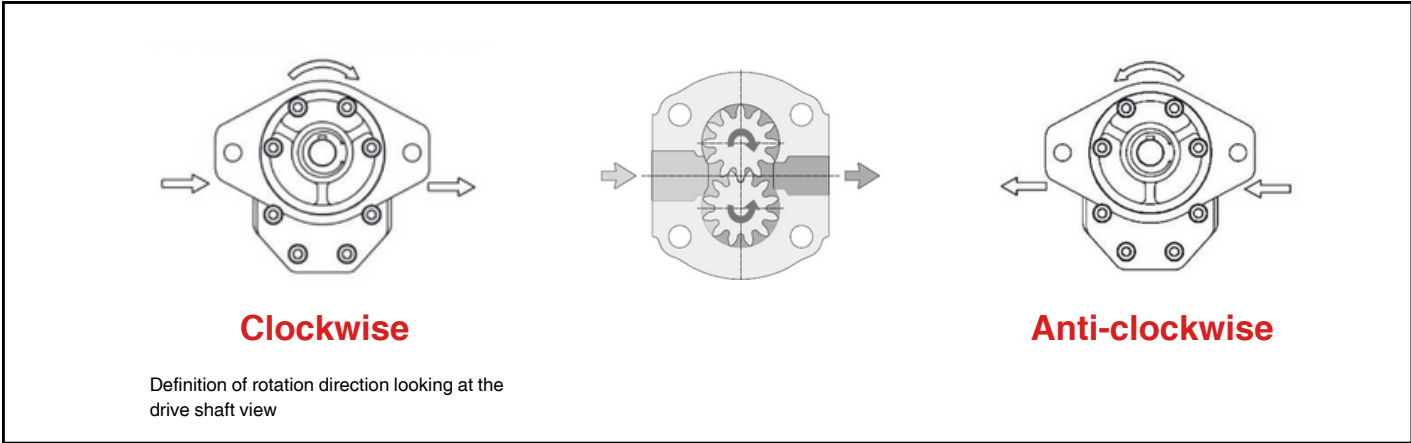
FRONT END : see page 4  
DRIVE SHAFT : see page 5  
PORT SIZE : see page 6

SP SERIES



ITEM	DESCRIPTION
1	Gear housing
2	Front end cover
3	Rear end cover
4	Snap ring
5	Shaft seal
6	bolt
7	Spring washer
8	Back up seal
9	Pump seal
10	Trust plate
11	Gasket
12	Cap
13	key
14	Drive shaft
15	Driven shaft

Rotation Direction of Gear pump



The logo for AIVIO HYDRAULICS. The word "AIVIO" is in a large, red, outlined font, and "HYDRAULICS" is in a smaller, black, outlined font below it.

# AIVIO

## HYDRAULICS

**Hydraulics Mart (S) Pte Ltd**

**Address : No 11, Tuas Bay Close, West Star #06-01 Singapore 636996**

**Email: [sales-enquiry@hydraulic-engineer.net](mailto:sales-enquiry@hydraulic-engineer.net)**

**Office Tel: +65 67580555**

**WhatsApp: +65 82337685**