

IPH Series IP Pump

.21 to 7.68 in³/rev
4350 psi

This is a new design series in which all pump types are installation compatible with previous designs. Note, however, that there is no longer compatibility for some of the seal components between the IPH-3 and IPH-4 sizes and design numbers 10 and 12.

Features

A patented axial and radial pressure loading system provides high efficiency and generates pressures up to 4350 psi.

Outstanding durability and very long life. A modified involute short-tooth gear enables internal gearing for greatly reduced pulsation and noise, and

exceptionally quiet operation. A simple structure makes maintenance and inspection easier.

Specifications

Model No.	Capacity cm ³ /rev (in ³)	Rated Pressure psi	Maximum Operating Pressure psi	Minimum Revolution Speed min ⁻¹	Maximum Revolution Speed min ⁻¹	Weight lbs	
						Type A	Type B
IPH-2A(B) - 3.5-11	3.60 (.21)	3625	4350	600	2000	9.7	5.2
5	5.24 (.31)					9.9	5.5
6.5	6.55 (.39)					10.1	5.7
8	8.18 (.49)					10.5	6.1
IPH-3A(B) - 10-20	10.2 (.62)	3625	4350	600	2000	23.1	10.5
13	13.3 (.81)					23.5	11.0
16	15.8 (.96)					24.2	11.6
IPH-4A(B) - 20-20	20.7 (1.26)	3625	4350	500	2000	33.5	20.9
25	25.7 (1.56)					34.6	22.0
32	32.3 (1.97)					35.7	23.1
IPH-5A(B) - 40-21(11)	40.8 (2.48)	3625	4350	400	2000	70.5	41.8
50	50.3 (3.06)					72.7	44.1
64	63.9 (3.89)					74.9	46.3
IPH-6A(B) - 80-21(11)	81.3 (4.96)	3625	4350	300	2000	136.7	85.9
100	101.6 (6.19)					141.1	90.4
125	125.9 (7.68)					145.5	94.8

Note:

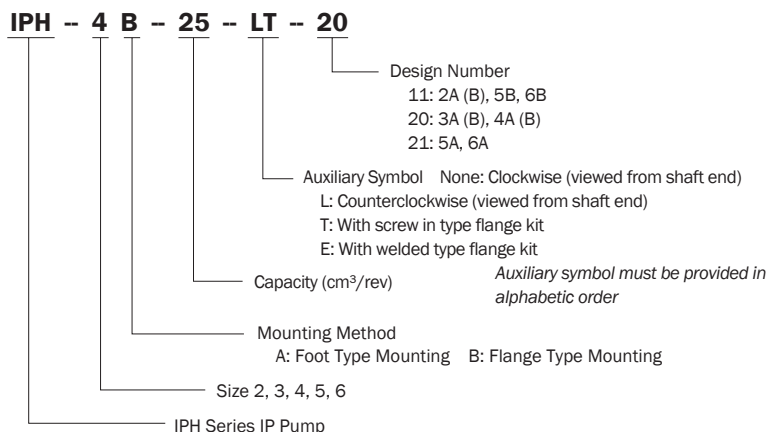
1. Suction Pressure: 3.6 psi.
2. Maximum working pressure shown here is the pressure limit when there are frequent pressure changes.
3. Avoid installation with the suction port towards the bottom of the pump.
4. Specify using the model number format shown below when pipe flanges are required.

- Handling
- 1 For the hydraulic operating fluid, use an R&O type and wear-resistant type of ISO VG32 to 68 or equivalent (viscosity index of at least 90). Use hydraulic operating fluid that provides kinematic viscosity during operation in the range of 20 to 150 centistokes.
 - 2 The operating temperature range is 40 to 149°F. When the oil temperature at

- startup is 40°F or less, perform a warm-up operation at low pressure until the oil temperature reaches 40°F. Use the pump in an area where the temperature is within the range of 32 to 140°F.
- 3 Suction pressure 3.6 psi, and the suction port flow rate should be to greater than 5 ft/sec.
- 4 Avoid pulley, gear, and other drive systems that impart a radial or thrust load on the end of the pump shaft.
- 5 Mount the hydraulic pump so its pump shaft is oriented horizontally. Provide a suction strainer with a filtering grade of about 100µm (150 mesh). For the return line to the tank, use a 10µm line filter.
- 6 Manage hydraulic operating fluid so contamination is maintained at class NAS10 or lower. Take care to avoid contamination with water and other foreign matter, and watch out for discoloration. Whitish fluid indicates that air has contaminated the fluid, and brownish fluid indicates the fluid is dirty.

(continued on following page)

Understanding Model Numbers



- 7 Operate within the RPM range in the catalog for the minimum RPM of the pump. Unload the pump's load pressure to operate at variable speeds. Condition of inflow piping must produce as little inflow load pressure as possible to minimize effect of cavitation.
- 8 When using water- or glycol-based hydraulic operating fluid, refer to page O-3 for details on applicable models
- 9 At startup, repeat the inching operation (start-stop) to bleed air from the pump and pipes.
- 10 Equip an air bleed valve in circuits where it is difficult to bleed air before startup. See page C-13 for more information.
- 11 To ensure proper lubrication of the pump's rubbing surfaces, supply oil to the interior of the pump before starting operation.
- 12 When centering the pump shaft, eccentricity with the motor shaft should be no greater than 0.001 in. Use a pump mounting base of sufficient rigidity. The angle error should be no greater than 1°.
- 13 Contact your agent for information about engines.

Discharge Rate and Required Input for Each Pump Speed

Speed	Pressure psi Model No.	Discharge Rate gpm						Required Input hp					
		100	1015	2030	3045	3625	4350	100	1015	2030	3045	3625	4350
1200 min ⁻¹	IPH-2A(B)- 3.5-11 5 6.5 8	1.1 1.6 2.0 2.5	1.1 1.6 2.0 2.5	1.0 1.5 1.9 2.4	1.0 1.5 1.9 2.4	1.0 1.5 1.8 2.3	1.0 1.4 1.8 2.3	.14 .20 .25 .30	.68 1.2 1.5 1.9	1.6 2.3 2.9 3.6	2.4 3.5 4.3 5.3	2.8 4.1 5.1 6.3	3.5 5.0 6.2 7.6
	IPH-3A(B)- 10-20 13 16	3.2 4.2 4.9	3.1 4.2 4.8	3.0 4.0 4.8	3.0 3.9 4.7	2.9 3.9 4.6	2.9 3.8 4.5	.40 .52 .60	2.4 3.1 3.7	4.3 5.7 6.8	6.6 8.6 10.2	7.9 10.1 12	9.6 12.4 14.8
	IPH-4A(B)- 20-20 25 32	6.5 8.1 10.2	6.7 8.0 10.0	6.28 7.8 9.8	6.1 7.7 9.7	6.1 7.6 9.5	6.0 7.5 9.4	.83 1.0 1.2	5.0 6.1 7.5	8.9 11.0 13.9	13.2 16.4 20.7	15.8 19.7 24.6	19.0 23.4 29.5
	IPH-5A(B)- 40-21(11) 50 64	12.9 15.9 20.2	12.6 15.6 19.8	12.4 15.4 19.5	12.1 15.1 19.2	12.0 14.9 19.0	11.8 14.7 18.8	1.6 1.9 2.4	9.9 11.9 15.0	17.2 21.7 27.6	26.1 32.1 40.9	30.9 38.3 48.6	38.0 45.9 58.3
	IPH-6A(B)- 80-21(11) 100 125	25.7 32.2 39.8	25.2 31.6 39.2	24.7 31.0 38.5	24.2 30.5 37.8	24.0 30.2 37.4	29.8 32.2 37.0	3.2 3.9 4.8	19.1 23.4 28.8	35.1 43.3 53.7	51.8 64.9 86.5	61.9 77.3 96.0	75.2 92.7 115.1
	IPH-2A(B)- 3.5-11 5 6.5 8	1.7 2.4 3.0 3.8	1.6 2.4 3.0 3.8	1.6 2.3 2.9 3.7	1.5 2.3 2.9 3.6	1.5 2.2 2.8 3.5	1.5 2.2 2.8 3.5	.22 .32 .40 .49	1.5 1.9 2.3 2.9	2.7 3.5 4.3 5.4	3.9 4.6 6.5 8.1	4.6 6.1 7.6 9.4	5.5 7.5 9.2 11.4
	IPH-3A(B)- 10-20 13 16	4.8 6.3 7.3	4.7 6.2 7.3	4.6 6.1 7.2	4.5 5.9 7.1	4.5 5.9 7.0	4.4 5.8 6.9	.65 .83 .96	3.8 4.9 5.7	6.7 8.8 10.4	10.0 12.9 15.2	11.9 15.1 18.1	14.4 18.6 22.1
	IPH-4A(B)- 20-20 25 32	9.8 12.2 15.3	9.6 12.0 15.1	9.5 11.8 14.9	9.3 11.7 14.6	9.2 11.5 14.5	9.1 11.4 14.3	1.3 1.6 1.9	7.5 9.1 11.3	13.4 16.6 20.9	19.9 24.8 30.9	23.6 29.0 36.8	28.4 35.2 44.2
	IPH-5A(B)- 40-21(11) 50 64	19.3 23.9 30.3	19.0 23.5 29.9	18.7 23.2 29.4	18.4 22.8 29.0	18.2 22.6 28.8	17.9 22.4 28.5	2.6 3.1 3.9	15.6 18.9 23.6	27.0 33.0 42.3	40.2 49.4 62.7	47.7 58.7 74.6	58.6 70.5 89.7
	IPH-6A(B)- 80-21(11) 100 125	38.6 46.2 59.8	37.9 47.6 58.9	37.3 46.9 58.1	36.7 46.2 57.3	36.3 45.8 56.8	35.8 45.3 56.1	5.2 6.3 7.4	30.0 37.1 45.3	53.9 67.4 83.4	79.9 99.7 123.7	95.0 118 147	115 142 176

Note: Values in the table are general values at an operating fluid viscosity of 46 centistokes. Use the values when selecting the model for your needs.

Parts for IPH Pump (Standard)

	Seal Kit	Najimi 3 Parts Set*	Radial Piston Kit**	Axial Plate Kit***
Single Pump	Mineral Oil/ Water Glycoloi	Mineral Oil	Mineral Oil	Mineral Oil
IPH-2B-***-(L)-11	IHAS-2S2***-10	FZD-7004-***	IHP-2-***-10	IHQ-2-10
IPH-3B-***-(L)-20	IHAS-2S30***-20	FZD-7004-0**	IHP-3-0***-10	IHQ-3-10
IPH-4B-***-(L)-20	IHAS-2S40***-30	FZD-7004-0**	IHP-4-0***-10	IHQ-4-10
IPH-5B-***-(L)-11	IHAS-2S50***-10	FZD-7004-0**	IHP-5-0***-10	IHQ-5-10
IPH-6B-***-(L)-11	IHAS-2S6***-10	FZD-7004-***	IHP-6-***-10	IHQ-6-10

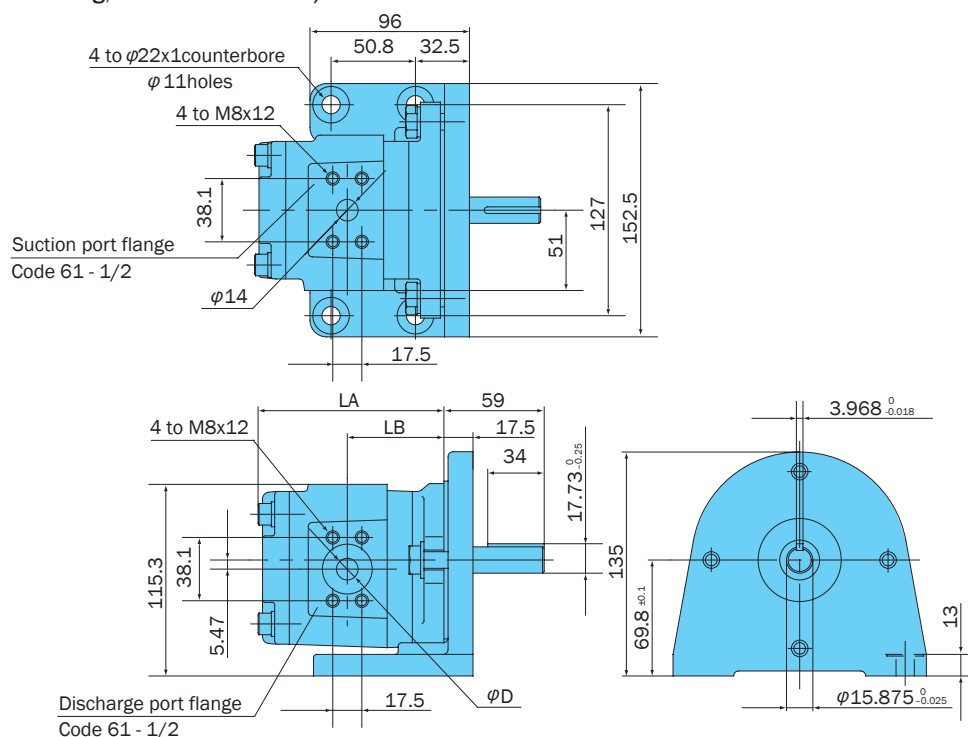
*Najimi set includes: Stopper-pin, axial plate-1, axial plate-2, feeler piece, axial backup ring, O-ring; **Radial Piston Kit includes: Radial piston, radial backup ring, backup ring, O-ring and washer
***Axial Plate Kit includes: Axial plate-1, axial plate-2, axial backup ring and O-ring

	Head (Rear) Side Pump		Shaft Side Pump	
Double Pump	Pump Model	Seal Kit	Pump Model	Seal Kit
IPH-22B-***-(L)-11	IPH-2H-***-(L)-11	IHAS-2H2***-10	IPH-2S-***-(L)-11	IHAS-2S2***-10
IPH-23B-***-(L)-11	IPH-2H-***-(L)-11	IHAS-2H2***-10	IPH-3S-***-(L)-11	IHAS-2S30***-20
IPH-24B-***-(L)-11	IPH-2H-***-(L)-11	IHAS-2H2***-10	IPH-4S-***-H(L)-11	IHAS-2S40***-30
IPH-25B-***-(L)-11	IPH-2H-***-(L)-11	IHAS-2H2***-10	IPH-5S-***-H(L)-11	IHAS-2S50***-10
IPH-26B-***-(L)-11	IPH-2H-***-(L)-11	IHAS-2H2***-10	IPH-6S-***-H(L)-11	IHAS-2S6***-10
IPH-33B-***-(L)-11	IPH-3H-***-(L)-11	IHAS-2H30***-20	IPH-3S-***-(L)-11	IHAS-2S30***-20
IPH-34B-***-(L)-11	IPH-3H-***-(L)-11	IHAS-2H30***-20	IPH-4S-***-(L)-11	IHAS-2S40***-30
IPH-35B-***-(L)-11	IPH-3H-***-(L)-11	IHAS-2H30***-20	IPH-5S-***-H(L)-11	IHAS-2S50***-10
IPH-36B-***-(L)-11	IPH-3H-***-(L)-11	IHAS-2H30***-20	IPH-6S-***-H(L)-11	IHAS-2S6***-10
IPH-44B-***-(L)-11	IPH-4H-***-(L)-11	IHAS-2H40***-30	IPH-4S-***-(L)-11	IHAS-2S40***-30
IPH-45B-***-(L)-11	IPH-4H-***-(L)-11	IHAS-2H40***-30	IPH-5S-***-(L)-11	IHAS-2S50***-10
IPH-46B-***-(L)-11	IPH-4H-***-(L)-11	IHAS-2H40***-30	IPH-6S-***-H(L)-11	IHAS-2S6***-10
IPH-55B-***-(L)-11	IPH-5H-***-(L)-11	IHAS-2H50***-10	IPH-5S-***-F(L)-11	IHAS-2S50***-10
IPH-56B-***-(L)-11	IPH-5H-***-(L)-11	IHAS-2H50***-10	IPH-6S-***-F(L)-11	IHAS-2S6***-10
IPH-66B-***-(L)-11	IPH-6H-***-(L)-11	IHAS-2H6***-10	IPH-6S-***-F(L)-11	IHAS-2S6***-10

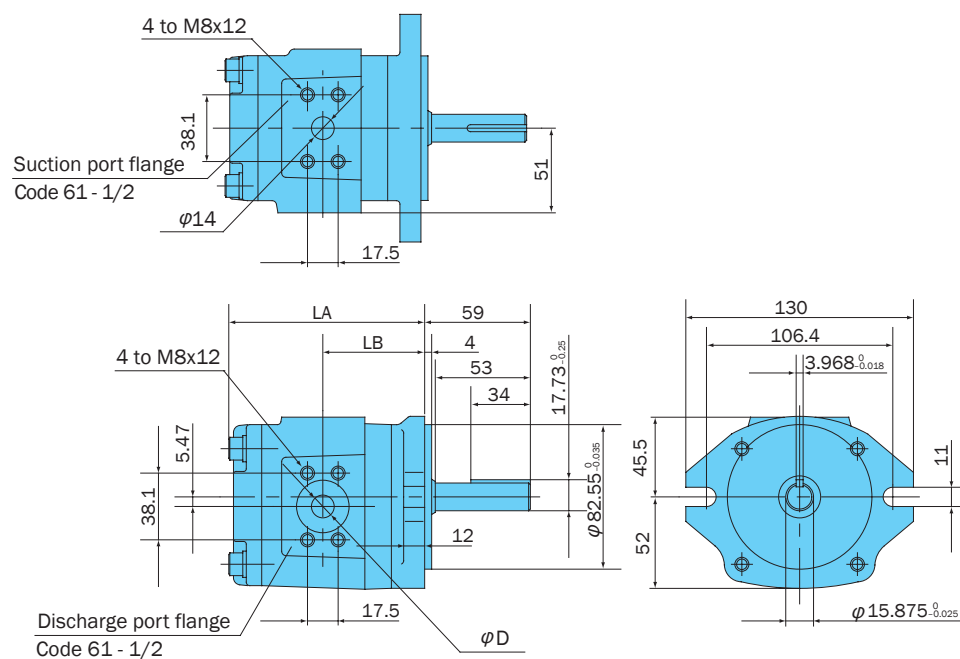
*Regarding Shaft side pump: H, F means the way of the bolt - H: 2-Bolt type, F: 4-Bolt type

Installation Dimension Drawings

IPH-2A-*-11 (Foot Mounting, Clockwise Rotation)



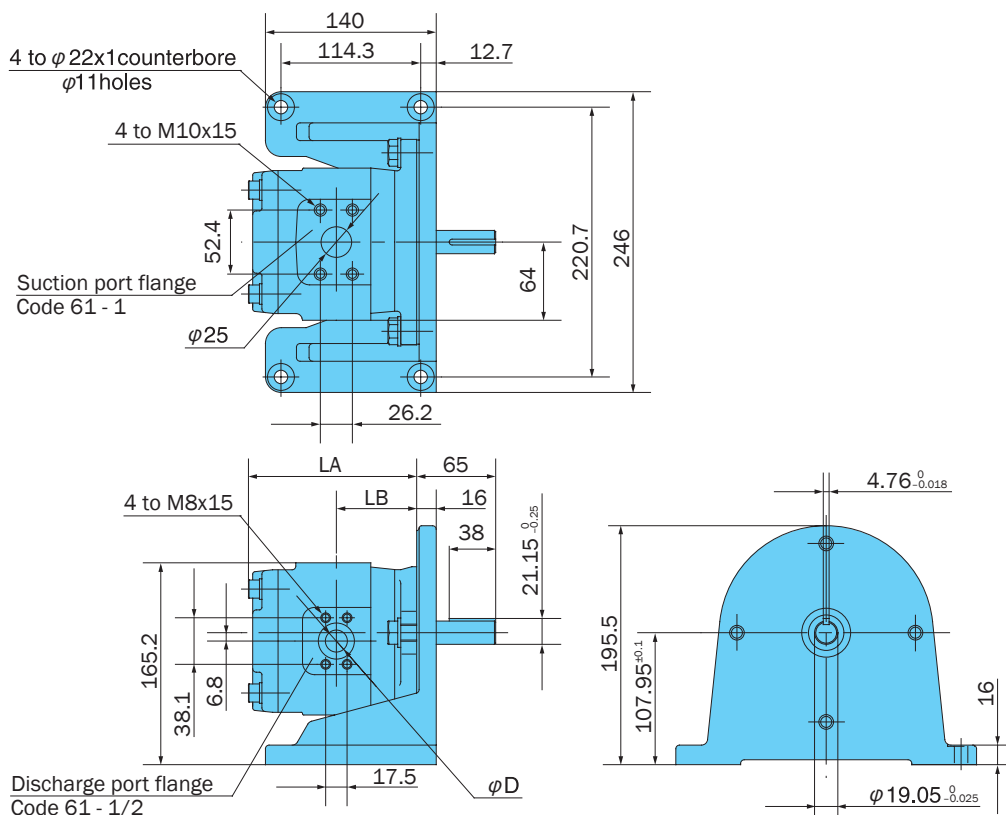
IPH-2B-*-11 (Flange Mounting, Clockwise Rotation) SAE A Mount



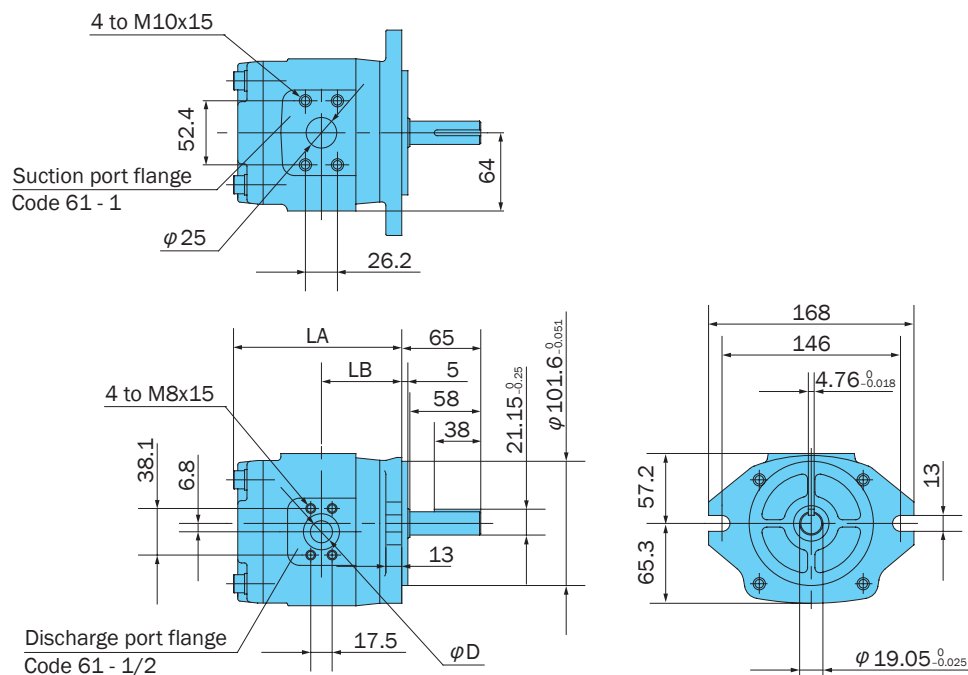
Model No.	Dimensions (mm)		
	LA	LB	$\varnothing D$
IPH-2*-3.5-*-11	107	51.0	8.9
IPH-2*-5-*-11	112	53.5	11
IPH-2*-6.5-*-11	116	55.5	12
IPH-2*-8-*-11	121	58.0	13

Note: IPH-2A (B)-*-L-11 (foot mounting/flange mounting, counterclockwise rotation) are the mirror image of the drawings shown above. In the case the suction port flange is facing upwards, the discharge port flange is positioned to the right when viewed from the shaft side.

IPH-3A-*-20 (Foot Mounting, Clockwise Rotation)



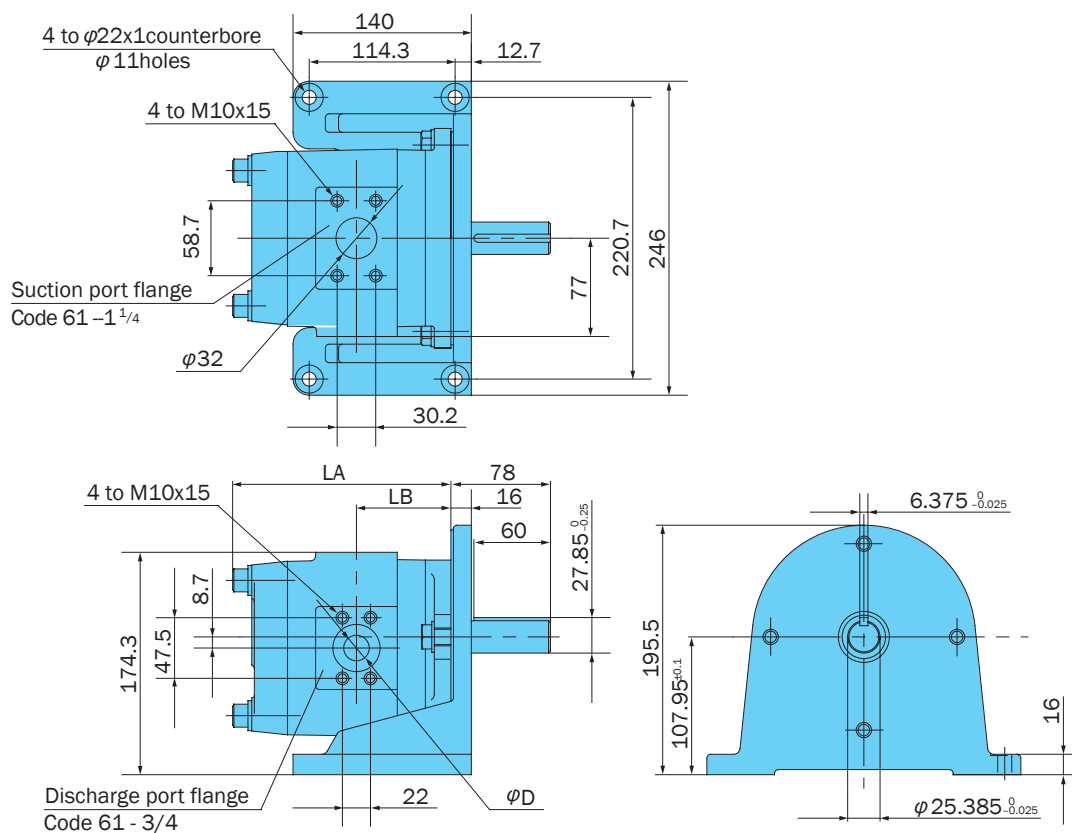
IPH-3B-*-20 (Flange Mounting, Clockwise Rotation) SAE B Mount 3/4 Shaft



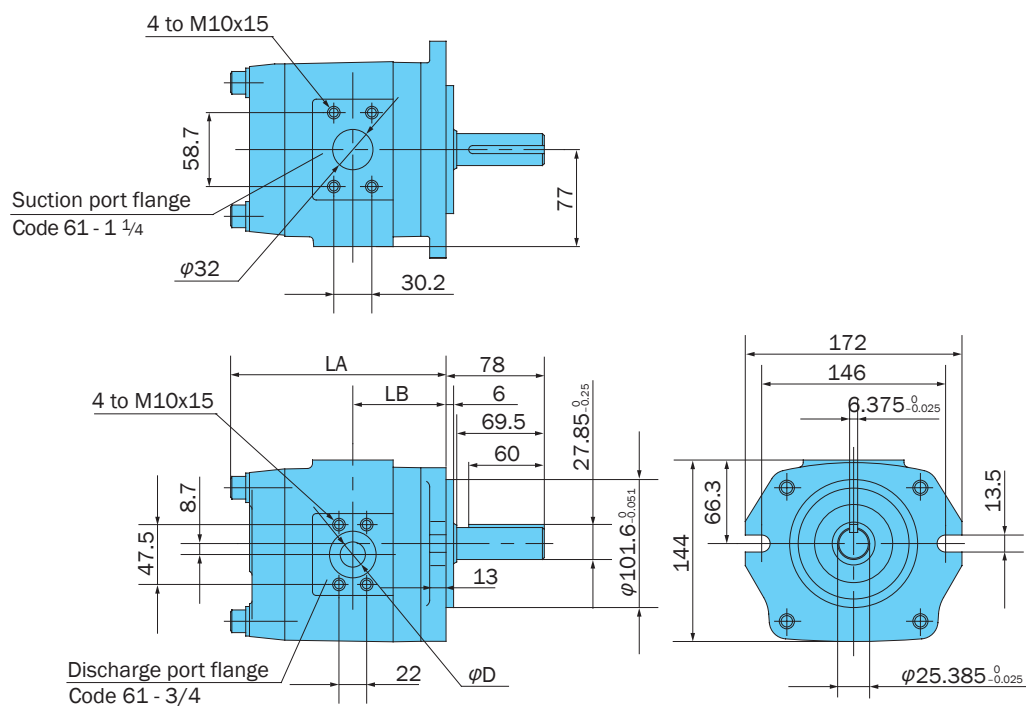
Model No.	Dimensions (mm)		
	LA	LB	ϕD
IPH-3*-10-*-20	128.5	60.0	14
IPH-3*-13-*-20	134.5	63.0	17
IPH-3*-16-*-20	139.5	65.5	18

Note: IPH-3A (B)*-L-20 (foot mounting/flange mounting, counterclockwise rotation) are the mirror image of the drawings shown above. In the case the suction port flange is facing upwards, the discharge port flange is positioned to the right when viewed from the shaft side.

IPH-4A-*-20 (Foot Mounting, Clockwise Rotation)



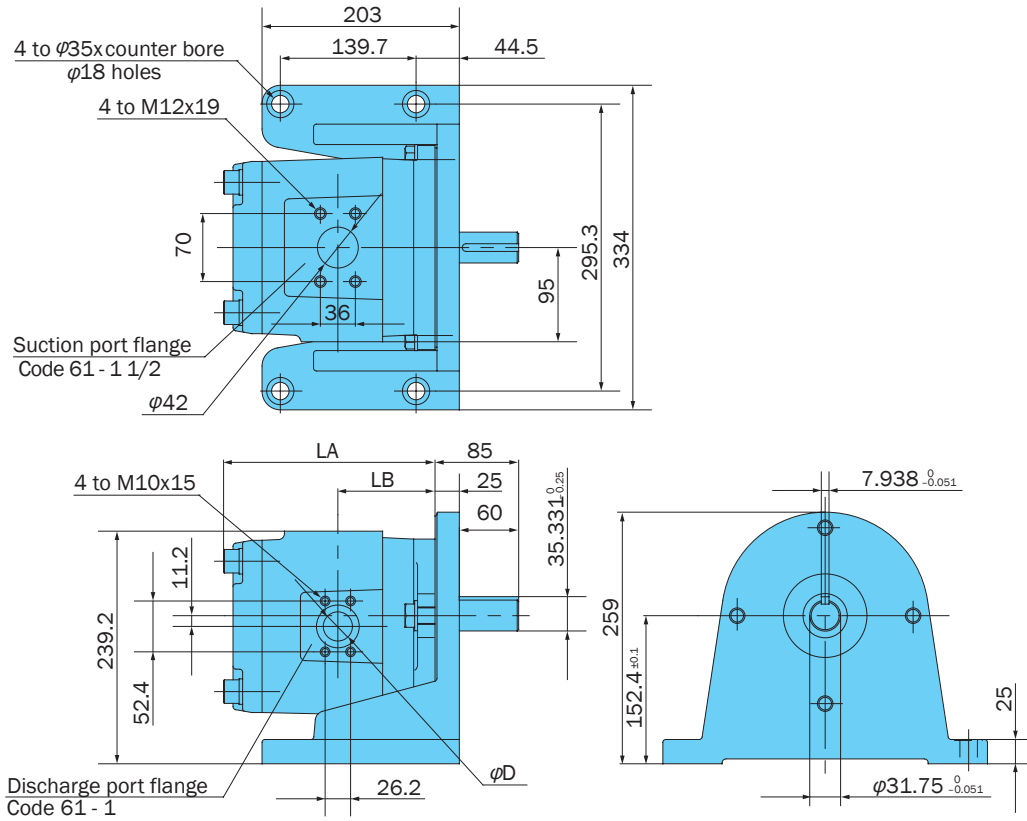
IPH-4B-*-20 (Flange Mounting, Clockwise Rotation) SAE BB Mount



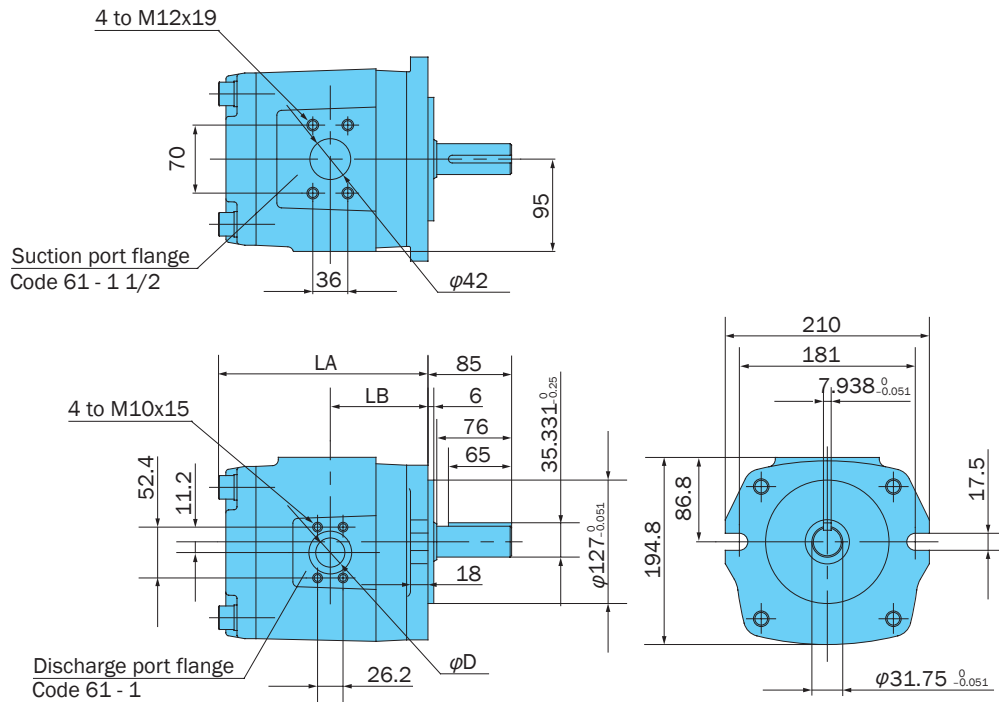
Model No.	Dimensions (mm)		
	LA	LB	ϕD
IPH-4*-20-*-20	164.5	71	18
IPH-4*-25-*-20	170.5	74	20
IPH-4*-32-*-20	178.5	78	24

Note: IPH-4A (B)-*-L-20 (foot mounting/flange mounting, counterclockwise rotation) are the mirror image of the drawings shown above. In the case the suction port flange is facing upwards, the discharge port flange is positioned to the right when viewed from the shaft side.

IPH-5A-*-21 (Foot Mounting, Clockwise Rotation)



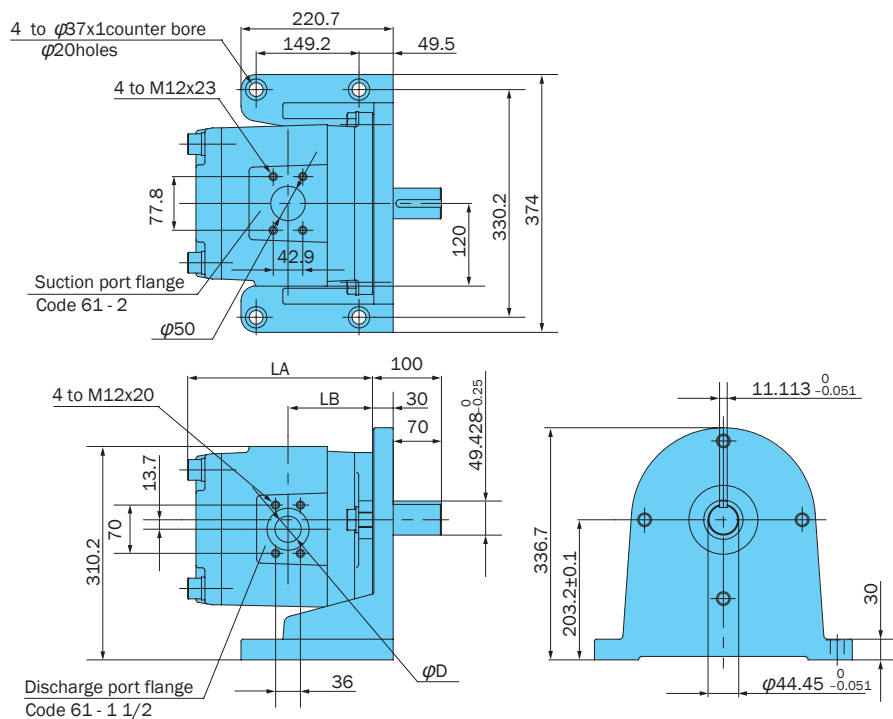
IPH-5B-*-11 (Flange Mounting, Clockwise Rotation) SAE C Mount



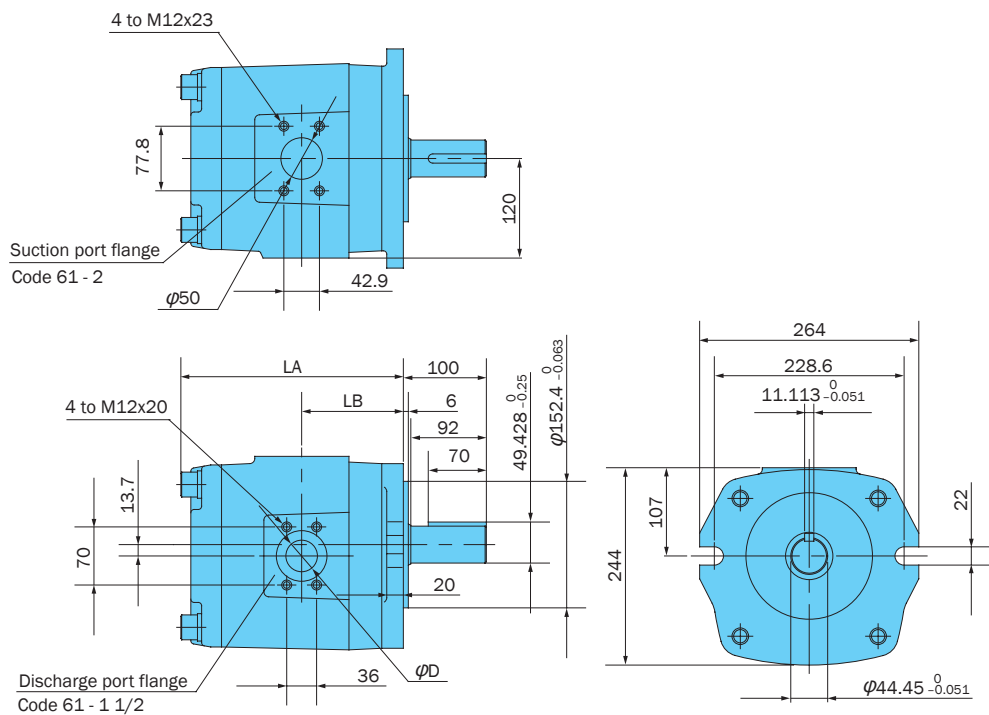
Model No.	Dimensions (mm)		
	LA	LB	ϕD
IPH-5*-40-*-21 (11)	201.5	91.0	24
IPH-5*-50-*-21 (11)	208.5	94.5	26
IPH-5*-64-*-21 (11)	218.5	99.5	28

Note: IPH-5A (B)-*-L-21 (11) (foot mounting/flange mounting, counterclockwise rotation) are the mirror image of the drawings shown above. In the case the suction port flange is facing upwards, the discharge port flange is positioned to the right when viewed from the shaft side.

IPH-6A-*-21 (Foot Mounting, Clockwise Rotation)



IPH-6B-*-11 (Flange Mounting, Clockwise Rotation) SAE D Mount



Model No.	Dimensions (mm)		
	LA	LB	ϕD
IPH-6*- 80-*-21 (11)	241.5	111.5	32
IPH-6*-100-*-21 (11)	251.5	116.5	36
IPH-6*-125-*-21 (11)	263.5	122.5	38

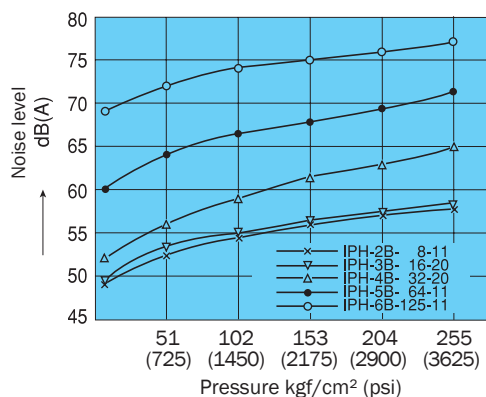
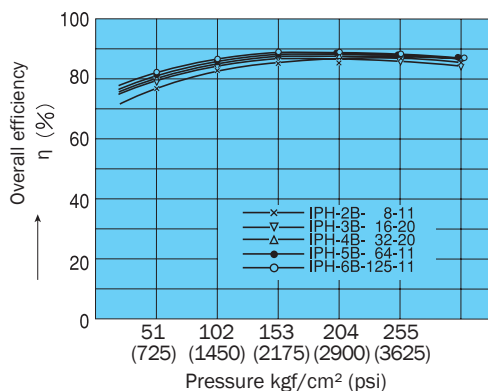
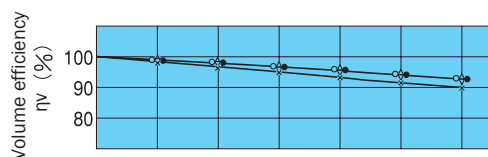
Note: IPH-6A (B)-*-L-21 (11) (foot mounting/flange mounting, counterclockwise rotation) are the mirror image of the drawings shown above. In the case the suction port flange is facing upwards, the discharge port flange is positioned to the right when viewed from the shaft side.

Performance Curves

Revolution Speed 1200 rpm

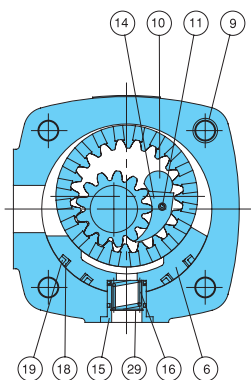
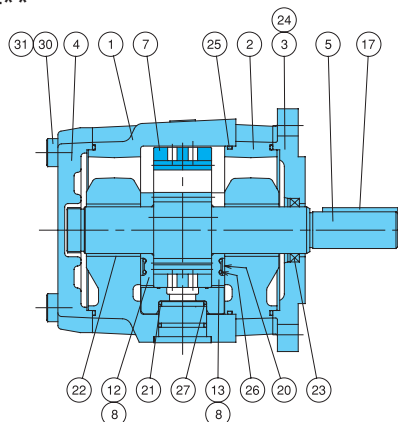
Operating Hydraulic Fluid Viscosity 46 centistokes

Representative Characteristics Under Above Conditions



Cross-sectional Drawing

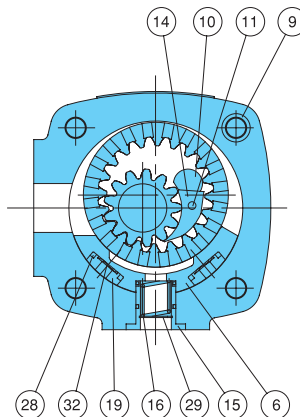
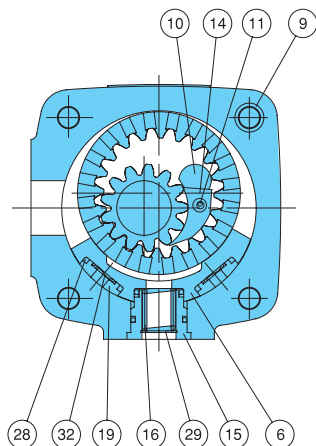
IPH-*B-***



Note: Drawings shown above are the IPH-5 and IPH-6.

The lower left cross-sectional drawing is the IPH-4, the radial seal #18 was removed and a wave washer was added.

The lower right cross-sectional drawing is the IPH-2 and IPH-3, the bushing #8 was removed, the spring pin #11 was replaced with a guide pin, and the radial seal #18 was removed and a wave washer #32 was added.



Part No. Part Name

1	Body -1
2	Body -2
3	Mounting
4	Rear cover
5	Pinion shaft
6	Radial piston
7	Internal gear
8	Bushing
9	Knock pin
10	Stopper pin
11	Spring pin (guide pin)
12	Axial plate -1
13	Axial plate -2
14	Feeler piece
15	Spring holder
16	Spring
17	Key
18	Radial seal
19	Radial backup ring
20	Axial backup ring
21	Backup ring
22	Bearing
23	Oil seal
24	Pin
25	O-ring
26	O-ring
27	O-ring
28	O-ring
29	Snap ring
30	Screw
31	Washer
32	Wave washer

*Note: See page C2 for Parts/Kit Numbers

IPH Series Seal Kit

Understanding Seal Kit
Model Numbers :

IHAS -- 2 S * * -- 10 (20, 30)**

Design Number (IPH3 : 20D, IPH4 : 30D)

Capacity Classification D35 to 125

Size 2, 3, 4, 5, 6

S: Shaft Side Single Pump or Double Pump
H: Head Side Double Pump

Indoor/Outdoor Use Sealing

IPH Series Seal Kit

Seal Kit Number	Applicable Pump Model No.	Component Part Numbers							
		18	Q'ty	19	Q'ty	20	Q'ty	21	Q'ty
		Radial Seal		Radial Backup Ring		Axial Backup Ring		Backup ring	
IHAS-2S2D35-10	IPH-2A(B)-3.5-11			IH34J-102D35-1A	2	IH34J-202000	2	IH34J-402D35	1
2S2005-10	5			102005-1A	2	"	2	402005	1
2S2D65-10	6.5			102D65-1A	2	"	2	402D65	1
2S2008-10	8			102008-1A	2	"	2	402008	1
IHAS-2S3010-20	IPH-3A(B)-10-20			IH34J-103010-1A	2	IH34J-203000	2	IH34J-403010	1
2S3013-20	13			103013-1A	2	"	2	403013	1
2S3016-20	16			103016-1A	2	"	2	403016	1
IHAS-2S4020-30	IPH-4A(B)-20-20			IH34J-104020-2A	2	IH34J-204000-1A	2	IH34J-404020	1
2S4025-30	25			104025-2A	2	"	2	404025	1
2S4032-30	32			104032-2A	2	"	2	404032	1
IHAS-2S5040-10	IPH-5A(B)-40-21(11)	IH33J-105040-1A	2	IH34J-105040-1A	2	IH34J-205000	2	IH34J-405040	1
2S5050-10	50	105050-1A	2	105050-1A	2	"	2	405050	1
2S5064-10	64	105064-1A	2	105064-1A	2	"	2	405064	1
IHAS-2S6080-10	IPH-6A(B)-80-21(11)	IH33J-106080-1A	2	IH34J-106080-1A	2	IH34J-206000	2	IH34J-406080	1
2S6100-10	100	106100-1A	2	106100-1A	2	"	2	406100	1
2S6125-10	125	106125-1A	2	106125-1A	2	"	2	406125	1

Seal Kit Number	Component Part Numbers								
	23	Q'ty	25	Q'ty	26	Q'ty	27	Q'ty	28
	Oil seal		O-ring		O-ring		O-ring		O-ring
IHAS-2S2D35-10	ISD-20328	1	R68 × 2	3	R23 × 2	2	R10 × 2	1	R10 × 2
2S2005-10	"	1	"	3	"	2	R12 × 2	1	R12 × 2
2S2D65-10	"	1	"	3	"	2	R14 × 2	1	R14 × 2
2S2008-10	"	1	"	3	"	2	R16 × 2	1	R16 × 2
IHAS-2S3010-20	ISD-25388	1	R86 × 2	3	R30 × 2	2	R15 × 2.5	1	R15 × 2.5
2S3013-20	"	1	"	3	"	2	R18 × 2.5	1	R18 × 2.5
2S3016-20	"	1	"	3	"	2	R20 × 2.5	1	R20 × 2.5
IHAS-2S4020-30	ISD-32458	1	R108 × 3	3	R38 × 2.5	2	R21 × 2.5	1	R21 × 2.5
2S4025-30	"	1	"	3	"	2	R23 × 3	1	R23 × 3
2S4032-30	"	1	"	3	"	2	R26 × 3	1	R26 × 3
IHAS-2S5040-10	ISD-40558	1	R140 × 3	3	R49 × 3	2	R26 × 3	1	
2S5050-10	"	1	"	3	"	2	R29 × 3.5	1	
2S5064-10	"	1	"	3	"	2	R33 × 3.5	1	
IHAS-2S6080-10	ISD-50659	1	R172 × 4	3	R60 × 3.5	2	R34 × 3.5	1	
2S6100-10	"	1	"	3	"	2	R38 × 4	1	
2S6125-10	"	1	"	3	"	2	R43 × 4	1	

Note: 1. Oil seals are manufactured by Nippon Oil Seal Industry Co. Ltd. (NOK).
2. O-rings are not available through retail sources. Consult your agent for more information.

IPH Series Pipe Flange Kit

Understanding Flange Kit Model Numbers :

The pipe flange kit combines the flanges, bolts, washers, and O-rings required for each type of pump into a single kit.

The component parts table shows the screw in type flange kit. In the case of the welded type flange, the flange part number is IH03J-200040 (1 of IH03J-100040 changes to 2). All other included parts are the same.

IHF - 3 - T - 20

Design Number
: 20 Design

T : Screw in Type
E : Welded Type

Pump Size

: Single Pump

2 to 6

: Double Pump

22 to 46

IPH Series Flange Kit

Note: O-ring 1B-* *

refers to JIS B2401-1B-* *

Screw in type Flange Kit model No.	Applicable Pump Model No.	Code 61	IN Flange							
		Size	Flange Part No.		Bolt		Washer		O-ring	
IHF-2-T-20	IPH-2A(B)-*-11	1/2"	IH03J-100040	1	TH- 8 × 45	4	WS-B- 8	4	IB-P22	1
IHF-3-T-20	IPH-3A(B)-*-20	1"	IH03J-100080	1	TH-10 × 50	4	WS-B-10	4	IB-G35	1
IHF-4-T-20	IPH-4A(B)-*-20	1 1/4"	IH03J-100100	1	TH-10 × 55	4	"	4	IB-G40	1
IHF-5-T-20	IPH-5A(B)-*-21(11)	1 1/2"	IH03J-100120	1	TH-12 × 55	4	WS-B-12	4	IB-G50	1
IHF-6-T-20	IPH-6A(B)-*-21(11)	2"	IH03J-100160	1	TH-12 × 60	4	"	4	IB-G60	1

Code 61	OUT Flange								Plug	
Size	Flange Part No.		Bolt		Washer		O-ring			
1/2"	IH03J-100040	1	TH- 8 × 45	4	WS-B- 8	4	IB-P22	1	TPHA-1/4	2
1/2"	IH03J-100040	1	TH- 8 × 45	4	"	4	IB-P22	1	"	2
3/4"	IH03J-100060	1	TH-10 × 50	4	WS-B-10	4	IB-G30	1	"	1
1"	IH03J-100080	1	TH-10 × 50	4	"	4	IB-G35	1	"	2
1 1/2"	IH03J-100120	1	TH-12 × 60	4	WS-B-12	4	IB-G50	1	"	1

Note: 1. In the case of a double pump, the flange kit includes three flanges: one for the common IN port and two OUT port flanges. When using separate IN ports, use separate single pump flange kits, one each for the head side and the shaft side.

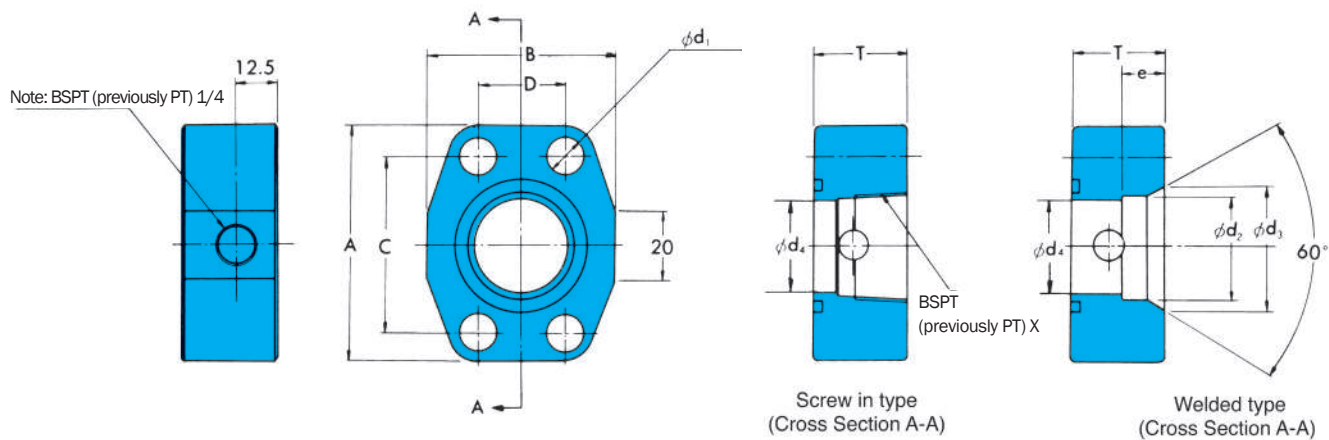
Note: 2. There is no common IN port in the case of the double pump models IPH-55, IPH-56, and IPH-66, or a single IN port is used.

Screw in type Flange Kit model No.	Applicable Pump Model No.	IN Flange							
		Flange Part No.		Bolt		Washer		O-ring	
IHF-22-T-20	IPH- 22B-*.-11	IH03J-100060	1	TH-10 × 50	4	WS-B-10	4	IB-G30	1
IHF-23-T-20	23	IH03J-100080	1	"	4	"	4	IB-G35	1
IHF-24-T-20	24	IH03J-100120	1	TH-12 × 55	4	WS-B-12	4	IB-G50	1
IHF-25-T-20	25	IH03J-100160	1	TH-12 × 60	4	"	4	IB-G60	1
IHF-26-T-20	26	IH03J-100200	1	TH-12 × 65	4	"	4	IB-G75	1
IHF-33-T-20	IPH- 33B-*.-11	IH03J-100100	1	TH-10 × 55	4	WS-B-10	4	IB-G40	1
IHF-34-T-20	34	IH03J-100120	1	TH-12 × 55	4	WS-B-12	4	IB-G50	1
IHF-35-T-20	35	IH03J-100160	1	TH-12 × 60	4	"	4	IB-G60	1
IHF-36-T-20	36	IH03J-100200	1	TH-12 × 60	4	"	4	IB-G75	1
IHF-44-T-20	IPH- 44B-*.-11	IH03J-100120	1	TH-12 × 55	4	"	4	IB-G50	1
IHF-45-T-20	45	IH03J-100200	1	TH-12 × 65	4	"	4	IB-G75	1
IHF-46-T-20	46	IH03J-100240	1	TH-16 × 75	4	WS-B-16	4	IB-G85	1

*IPH Numbers include both Inlet and Outlet Flange Kits

OUT Flange (Shaft Side)								OUT Flange (Head Side)								Plug	
Flange Part No.		Bolt		Washer		O-ring		Flange Part No.		Bolt		Washer		O-ring			
IH03J-100040	1	TH- 8 × 45	4	WS-B- 8	4	IB-P22	1	IH03J-100040	1	TH- 8 × 45	4	WS-B- 8	4	IB-P22	1	TPHA-1/4	3
IH03J-100040	1	"	4	"	4	IB-P22	1	"	1	"	4	"	4	"	1	"	3
IH03J-100060	1	TH-10 × 50	4	WS-B-10	4	IB-G30	1	"	1	"	4	"	4	"	1	"	3
IH03J-100080	1	"	4	"	4	IB-G35	1	"	1	"	4	"	4	"	1	"	2
IH03J-100120	1	TH-12 × 60	4	WS-B-12	4	IB-G50	1	"	1	"	4	"	4	"	1	"	2
IH03J-100040	1	TH- 8 × 45	4	WS-B- 8	4	IB-P22	1	IH03J-100040	1	TH- 8 × 45	4	WS-B- 8	4	IB-P22	1	"	2
IH03J-100060	1	TH-10 × 50	4	WS-B-10	4	IB-G30	1	"	1	"	4	"	4	"	1	"	3
IH03J-100080	1	"	4	"	4	IB-G35	1	"	1	"	4	"	4	"	1	"	2
IH03J-100120	1	TH-12 × 60	4	WS-B-12	4	IB-G50	1	"	1	"	4	"	4	"	1	"	2
IH03J-100060	1	TH-10 × 50	4	WS-B-10	4	IB-G30	1	IH03J-100060	1	TH-10 × 50	4	WS-B-10	4	IB-G30	1	"	3
IH03J-100080	1	"	4	"	4	IB-G35	1	"	1	"	4	"	4	"	1	"	2
IH03J-100120	1	TH-12 × 60	4	WS-B-12	4	IB-G50	1	"	1	"	4	"	4	"	1	"	2

Pipe Flange Installation Dimension Diagram



Screw in type

Pipe Flange Kit Part Number	SAE Standard Code 61	Nominal Diameter	Dimensions (mm)							Weight lbs
			A	B	C	D	T	ϕd_1	ϕd_4	
IH03J -100040	SAE J518b 1/2	1/2	54	46	38.1	17.5	33	9	12.7	.88
-100060	SAE J518b 3/4	3/4	65	52	47.5	22.0	33	11	20	1.3
-100080	SAE J518b 1	1	70	59	52.4	26.2	33	11	27	1.3
☆ -100100	SAE J518b 1 1/4	1 1/4	79	73	58.7	30.2	38	11	33	2.2
-100120	SAE J518b 1 1/2	1 1/2	94	83	70.0	36.0	38	13	37.5	3.0
☆ -100160	SAE J518b 2	2	102	97	77.8	42.9	38	13	50	3.7
☆ -100200	SAE J518b 2 1/2	2 1/2	114	109	88.9	50.8	43	13	60	4.6
☆ -100240	SAE J518b 3	3	135	131	106.4	61.9	48	17.5	71	7.2

Welded Type

Pipe Flange Kit Part Number	SAE Standard Code 61	Pipe Diameter	Dimensions (mm)										Weight lbs
			A	B	C	D	T	e	ϕd_1	ϕd_2	ϕd_3	ϕd_4	
IH03J -200040	SAE J518b 1/2	1/2	54	46	38.1	17.5	33	11	9	22.2	27	12.7	.88
-200060	SAE J518b 3/4	3/4	65	52	47.5	22.0	33	12	11	27.7	35	20	1.3
-200080	SAE J518b 1	1	70	59	52.4	26.2	33	14	11	34.5	42	27	1.3
☆ -200100	SAE J518b 1 1/4	1 1/4	79	73	58.7	30.2	38	16	11	43.2	48	33	2.2
-200120	SAE J518b 1 1/2	1 1/2	94	83	70.0	36.0	38	18	13	49.1	58	37.5	3.0
☆ -200160	SAE J518b 2	2	102	97	77.8	42.9	38	19	13	61.1	68	50	3.7
☆ -200200	SAE J518b 2 1/2	2 1/2	114	109	88.9	50.8	43	22	13	77.1	82	60	4.6
☆ -200240	SAE J518b 3	3	135	131	106.4	61.9	48	25	17.5	90.0	97	71	7.2

Recommended Tightening Torque for Flange Installation Bolts

For aluminum body

Mounting bolt	Tightening Torque ft/lbs
M8	14 to 17
M10	36 to 43
M12	65 to 83

For cast body (shared IN port)

Mounting bolt	Tightening Torque ft/lbs
M10	36 to 47
M12	64 to 82
M16	158 to 202

Note: There is no BSPT (previously PT) 1/4 tap for the above flange numbers (exclusively for suction port use) marked with a star (☆).

IPH Series Pipe Flange Kit

Understanding Foot Mounting Kit Numbers:

When only the mounting feet are required for a single pump or double pump, pump mounting bolts, washers and other parts are sold together as the Foot Mounting Kit.

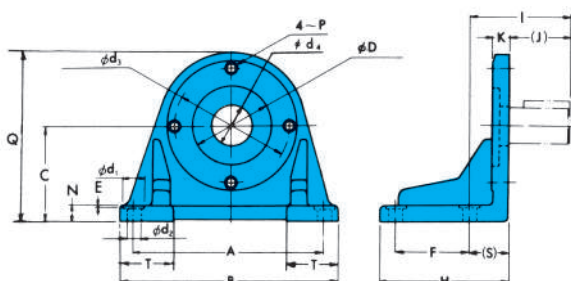
IHM - 2 - 10

Design Number

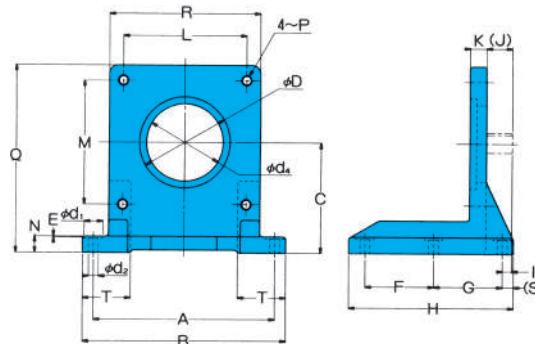
Pump Size: Single Pump 2 to 6
: Double Pump 22 to 66

IPH Series Foot Mounting Kit

Foot Mounting Installation Measurement Chart SAE-2BOLT-MOUNTING



SAE-4BOLT-MOUNTING



SAE-2BOLT-MOUNTING

Foot Mounting Kit Model No.	Applicable Pump Model No.		Accessories				Dimensions (mm)					
	SINGLE PUMP	DOUBLE PUMP	Bolt	Q'ty	Washer	Q'ty	A	B	C	E	F	H
IHM-2-10	IPH-2	—	TB-10 × 30	2	WP-10	2	127	152.5	69.8	1	50.8	96
IHM-4-10	IPH-3	—	TB-12 × 30	2	WG-12	2	220.7	246	107.95	1	114.3	140
IHM-4-10	IPH-4	—	TB-12 × 30	2	WG-12	2	220.7	246	107.95	1	114.3	140
IHM-22-10		IPH-22	TB-10 × 30	2	WP-10	2	171.45	204	107.95	1	95.25	150
IHM-44-10		IPH23, IPH-33	TB-12 × 30	2	WG-12	2	235	267	139.7	1	127	193
IHM-44-10		IPH-24, IPH-34, IPH-44	TB-12 × 30	2	WG-12	2	235	267	139.7	1	127	193
IHM-45-10	IPH-5	IPH-25, IPH-35, IPH-45	TB-16 × 40	2	WP-16	2	295.3	334	152.4	1	139.7	203
IHM-46-10	IPH-6	IPH-26, IPH-36, IPH-46	TB-20 × 50	2	WP-20	2	330.2	374	203.2	1	149.2	220.7

Foot Mounting Kit Model No.	Dimensions (mm)													Weight lbs
	I	(J)	K	N	P	Q	(S)	T	φD	φd ₁	φd ₂	φd ₃	φd ₄	
IHM-2-10	74	41.5	17.5	13	M10	135	32.5	36.5	82.55	22	11	106.4	50	4.4
IHM-4-10	61.7	49	16	16	M12	195.5	12.7	53	101.6	22	11	146	40	12.1
IHM-4-10	74.7	62	16	16	M12	195.5	12.7	53	101.6	22	11	146	40	12.1
IHM-22-10	73.5	41	18	18	M10	180	32.5	50	82.55	22	11	106.4	40	14.3
IHM-44-10	89.5	45	20	20	M12	232	44.5	57.5	101.6	22	14	146	40	26.4
IHM-44-10	102.5	58	20	20	M12	232	44.5	57.5	101.6	22	14	146	40	26.4
IHM-45-10	104.5	60	25	25	M16	259	44.5	61	127	35	18	181	86	29.7
IHM-46-10	119.5	70	30	30	M20	337	49.5	64	152.4	37	20	228.6	100	48.5

*IHM-2-10, IHM-4-10, and IHM-45-10 are the same as PVS pump foot mounting PSM-101000, PSM102000, and PSM103000 respectively.

SAE-4BOLT-MOUNTING

Foot Mounting Kit Model No.	Applicable Pump Model No.	Accessories				Dimensions (mm)							
		Bolt	Q'ty	Washer	Q'ty	A	B	C	E	F	G	H	I
IHM-55-10	IPH-55	TH-20 × 50	4	WS-B-20	4	330	370	200	1	125	125	300	17
IHM-66-10	IPH56, IPH-66	TH-24 × 60	4	WS-B-24	4	380	430	260	1	140	140	340	17

Foot Mounting Kit Model No.	Dimensions (mm)														Weight lbs
	(J)	K	L	M	N	P	Q	R	(S)	T	φ D	φ d ₁	φ d ₂	φ d ₄	
IHM-55-10	47	30	224.6	224.6	30	M20	340	275	20	90	165.1	34	18	140	70.5
IHM-66-10	52	40	247.5	247.5	40	M24	415	310	25	105	177.8	34	18	150	105.8

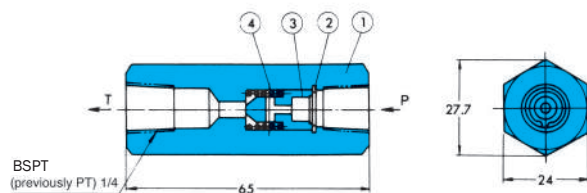
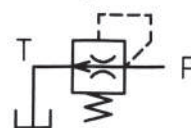
Air Bleed-off Valve

Equipping an air bleed-off valve on the pump's discharge side helps to simplify air bleeding during test operation.

Specifications

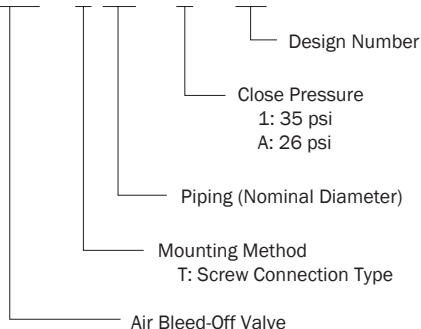
Air inside the pump and the suction pipe is exhausted rapidly when the pump is started up.
When discharge pressure reaches 29 psi or greater after the pump intakes oil, a valve closes to prevent oil from leaking.
Maximum operating pressure: 4350 psi.
Provide piping to ensure that the tank port is under the oil level surface.

JIS symbol



Understanding Model Numbers

CAB - T 02 - 1 - 11



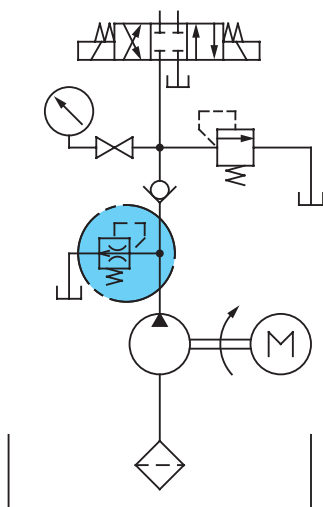
Part No.	Part Name	Q'ty
1	Valve body	1
2	Snap ring	1
3	Valve	1
4	Spring	1

Note: 1) If chattering occurs in a circuit when CAB-T02-1-11 is used, use CAB-T02-A-11 instead.
2) If chattering occurs in a circuit when CAB-T02-A-11 is used, use of a CAB air bleed-off valve is not required.

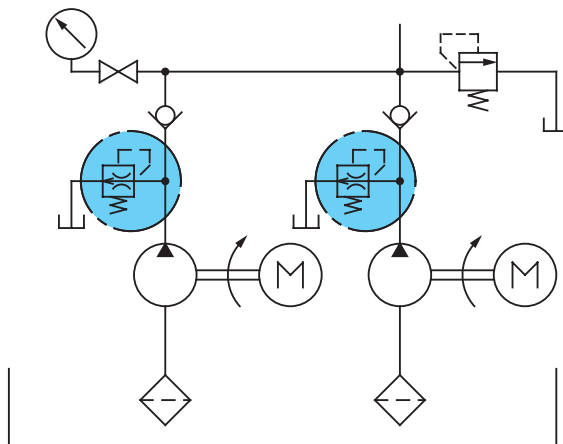
Application Examples

Example of Circuits that Require an Air Bleed-off Valve:

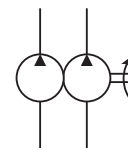
- 1) When using a Type 2 or Type 3 check valve (Sample Circuit A)
- 2) When unload circuit function cannot be achieved (Sample Circuit A)
- 3) When the discharge sides of multiple pumps run together (Sample Circuit B)



Circuit Diagram A



Circuit Diagram B



IPH Series Double IP Pump

.21 to 7.68 in³/rev
4350 psi

All the types in this new design (11D) series are installation compatible with the previous design (10D). Note, however, that there is no longer compatibility for some of the seal components between the IPH-3 and IPH-4 sizes and the 3 and 4 sizes.

Features

Configured with the high-pressure, low-noise IPH Series and IP pumps, these double pumps greatly expand

the range of application for the IP pump.
A wide selection of pump combinations

provides options that are perfect for just about any type of application imaginable.

Specifications

Model No.	Discharge Rate (1200min ⁻¹ No-load)		Revolution Speed		Operating Pressure MPa (psi)	Required Power at 1200min ⁻¹ , 3045 psi hp		
	Vent Side gpm	Shaft Side gpm	Min. min ⁻¹	Max. min ⁻¹				
IPH-22B-*.*(-*)-11 IPH-23B IPH-24B IPH-25B IPH-26B	1.1 to 2.5	4.3 to 9.8 12.2 to 18.9 24.8 to 38.7 48.9 to 76.6 97.5 to 151.0	600	2000	Rated: 21 (3045) Max: 30 (4350)	10.7 15.5 26.1 46.2 85.8		
IPH-33B IPH-34B IPH-35B IPH-36B		12.2 to 18.9 24.8 to 38.7 48.9 to 76.6 97.5 to 151.0				20.5 30.9 51.0 90.7		
IPH-44B IPH-45B IPH-46B		24.8 to 38.7 48.9 to 76.6 97.5 to 151.0				41.5 61.6 101.3		
IPH-55B IPH-56B		48.9 to 76.6 97.5 to 151.0				81.8 121.4		
IPH-66B		97.5 to 151.0				159.9		
	3.2 to 4.9	12.2 to 18.9 24.8 to 38.7 48.9 to 76.6 97.5 to 151.0	500					
	6.5 to 10.2	24.8 to 38.7 48.9 to 76.6 97.5 to 151.0	400					
	12.9 to 20.2	48.9 to 76.6 97.5 to 151.0	300					

Note:

1. Maximum Pressure: Maximum pressure limit when there are frequent pressure changes. However, maximum pressure is the same as rated pressure when load is applied to the head side and shaft side simultaneously.
2. Suction Pressure: 4.3 psi
3. Avoid installation with the suction port towards the bottom of the pump. If the revolution speed will exceed 1800mm-1, provide separate piping for shaft side and head size IN ports.
4. Specify using the model number format shown below when pipe flange is required.

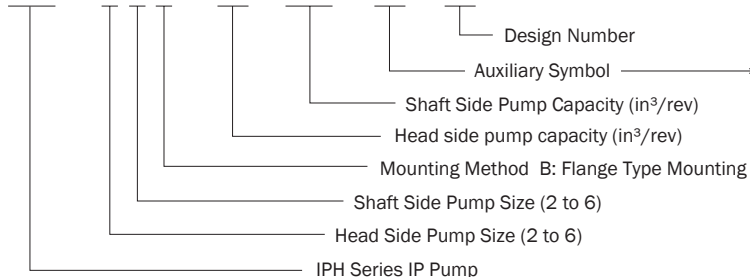
5. Working pressure is continuous operating pressure when the same pressure exists on the head side and shaft side.
6. Individual pump performance on the head side and shaft side is the same as that of the single pumps. Required power is the sum of the power required by each of the two pumps.
7. The "Required Power at 1200min-1, 3045 psi (hp)" column in the above table are based on combinations that provide the maximum capacity for each model number, when pressure at both the head side and shaft side is 3045 psi. Examples

combinations that provide "the maximum capacity for each model number" are IPH-22B-8-8-11 for IPH-22b, and IPH-46B-32- 125-11 for IPH-46B.

- Handling
- 1 Handling is in accordance with procedures for the IPH pump. See page C-1 for more information.

Understanding Model Numbers

IPH - 4 6 B - 20 - 125 - LT - 11



- None: Clockwise (viewed from shaft end)
- L : Counterclockwise (viewed from shaft end)
- T : Includes Screw IN Flange Kit (for shared IN port)
- TT : Includes Screw IN Flange Kit (for individual IN port)
- E : Includes Welded Flange Kit (for shared IN port)
- EE : Includes Welded Flange Kit (for individual IN port)

Auxiliary symbol must be provided in alphabetic order.

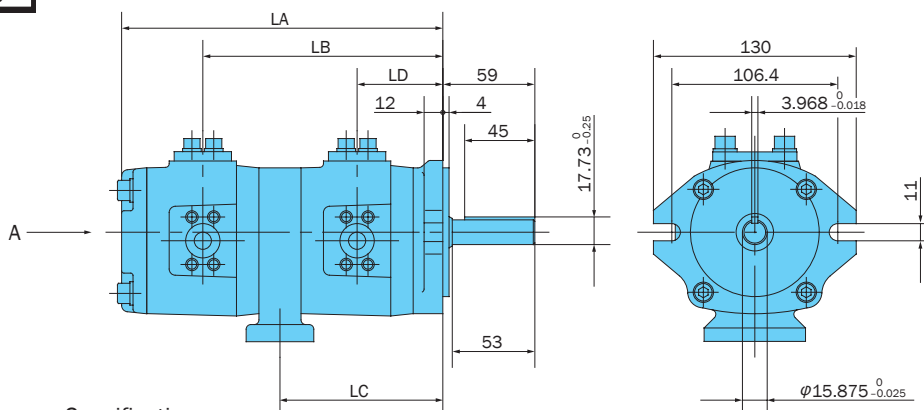
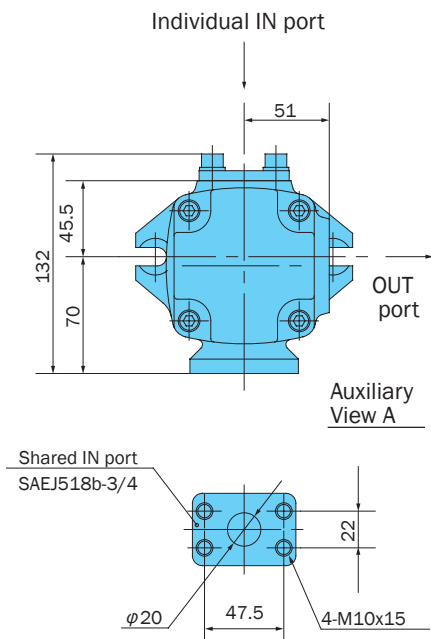
- IPH Series Double IP Pump Foot Mounting Kit
See the IPH Series (single) IP pump section in page C-12.

- IPH Series Double IP Pump Pipe Flange
See the IPH Series (single) IP pump section in page C-10.

Installation Dimension Drawings

IPH-22B-*-11

(Flange Mounting, Clockwise Rotation)



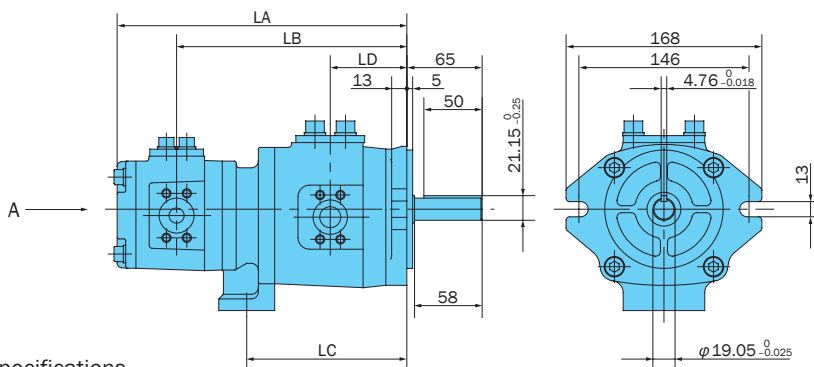
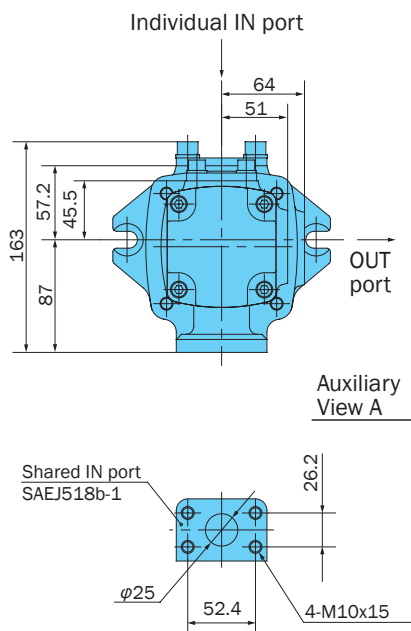
Specifications

Model No.	Volume in ³		Weight lbs	Dimensions (mm)			
	Vent Side	Shaft Side		LA	LB	LC	LD
IPH-22B-3.5-3.5-11	.21	.21	12.7	211.5	160	105.5	51
-5		.31	13.0	216.5	165	110.5	53.5
-6.5		.39	13.2	220.5	169	114.5	55
-8		.49	13.6	225.5	174	119.5	58
IPH-22B-5 -5 -11	.31	.31	13.2	221.5	167.5	110.5	53.5
-6.5		.39	13.4	225.5	171.5	114.5	55
-8		.49	13.8	230.5	176.5	119.5	58
IPH-22B-6.5-6.5-11	.39	.39	13.6	229.5	173.5	114.5	55
-8		.49	14.1	234.5	178.5	119.5	58
IPH-22B-8 -8 -11	.49	.49	14.5	239.5	181	119.5	58

Note: Dimensions shown in this diagram are for a single pump.

IPH-23B-*-11

(Flange Mounting, Clockwise Rotation)

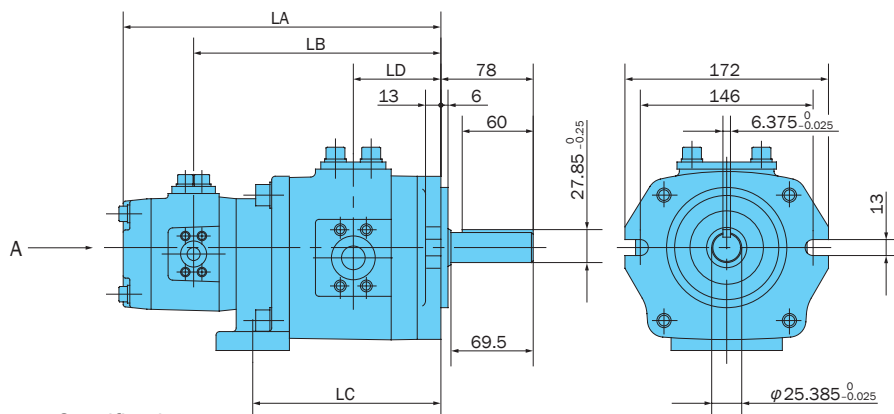
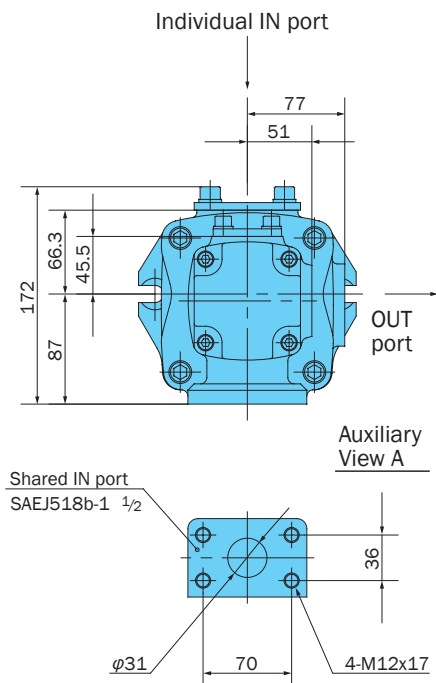


Specifications

Model No.	Volume in ³		Weight lbs	Dimensions (mm)			
	Vent Side	Shaft Side		LA	LB	LC	LD
IPH-23B-3.5-10-11	.21	.62	18.0	230.5	179	126	60
-13		.81	18.5	236.5	185	132	63
-16		.96	19.1	241.5	190	137	65.5
IPH-23B-5 -10-11	.31	.62	18.3	235.5	181.5	126	60
-13		.81	18.7	241.5	187.5	132	63
-16		.96	19.4	246.5	192.5	137	65.5
IPH-23B-6.5-10-11	.39	.62	18.5	239.5	183.5	126	60
-13		.81	18.9	245.5	189.5	132	63
-16		.96	19.6	250.5	194.5	137	65.5
IPH-23B-8 -10-11	.49	.62	18.9	244.5	186	126	60
-13		.81	19.4	250.5	192	132	63
-16		.96	20.0	255.5	197	137	65.5

Note: IPH-22B (23B)-*-L-11 (foot mounting/flange mounting, counterclockwise rotation) are the mirror image of the drawings shown above. In the case the individual port is facing upwards, the discharge port flange is positioned to the right when viewed from the shaft side.

IPH-24B-*-11
(Flange Mounting, Clockwise Rotation)

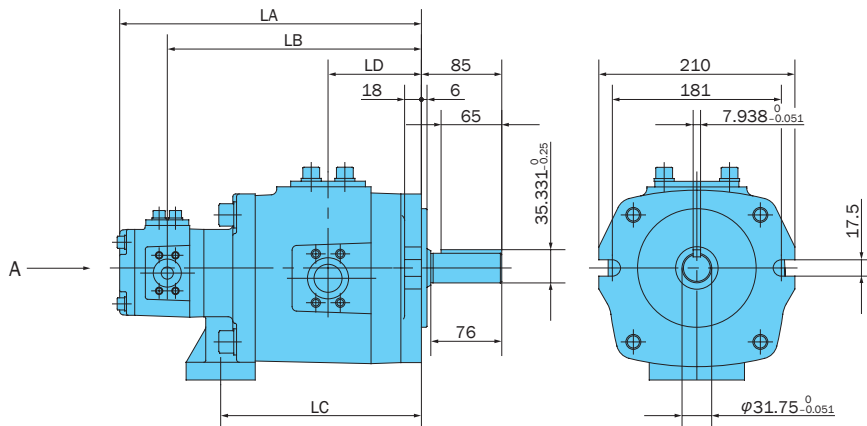
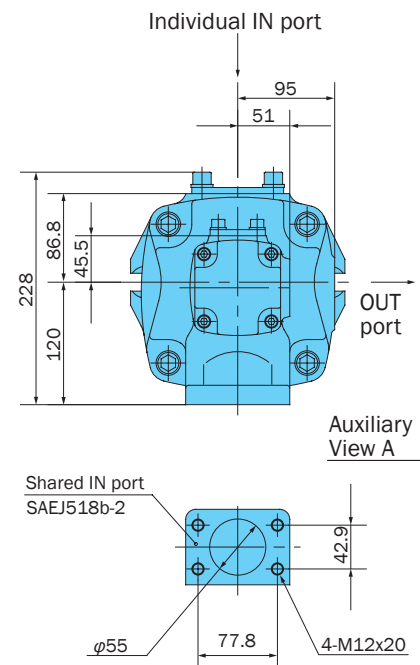


Specifications

Model No.	Volume in ³		Weight lbs	Dimensions (mm)			
	Vent Side	Shaft Side		LA	LB	LC	LD
IPH-24B-3.5-20-11	.21	1.26	28.2	250.5	199	153	71
-25		1.56	19.3	256.5	205	159	74
-32		1.97	30.4	264.5	213	167	78
IPH-24B-5-20-11	.31	1.26	28.4	255.5	201.5	153	71
-25		1.56	29.5	261.5	207.5	159	74
-32		1.97	30.6	269.5	215.5	167	78
IPH-24B-6.5-20-11	.39	1.26	28.6	259.5	203.5	153	71
-25		1.56	29.7	265.5	209.5	159	74
-32		1.97	30.8	273.5	217.5	167	78
IPH-24B-8-20-11	.49	1.26	29.1	264.5	206	153	71
-25		1.56	30.2	270.5	212	159	74
-32		1.97	31.3	278.5	220	167	78

Note: Dimensions shown in this diagram are for a single pump.

IPH-25B-*-11
(Flange Mounting, Clockwise Rotation)

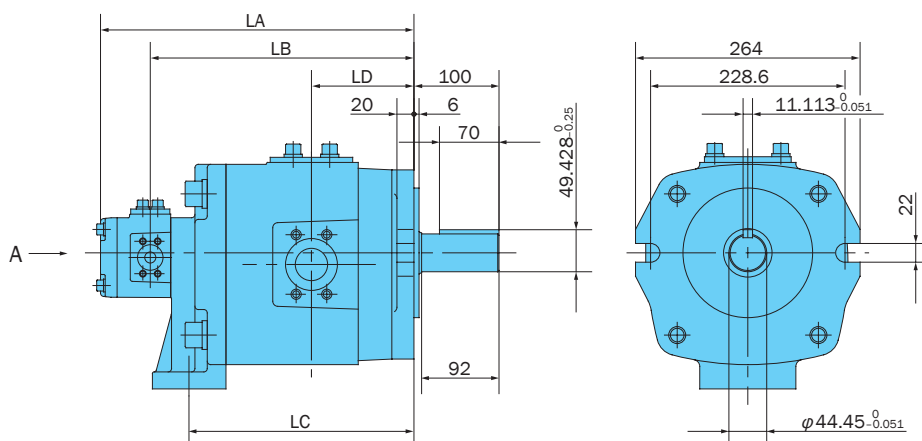
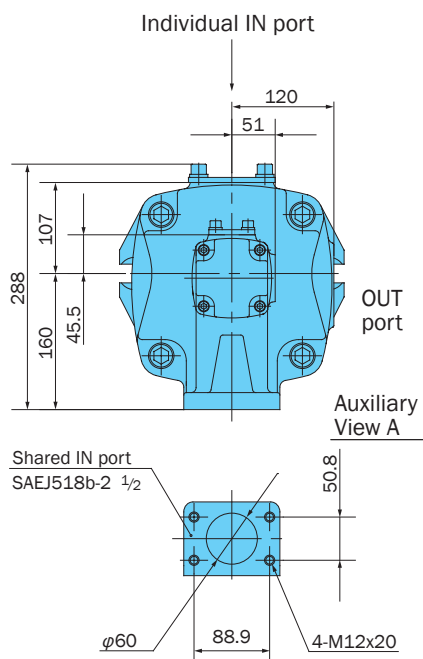


Specifications

Model No.	Volume in ³		Weight lbs	Dimensions (mm)			
	Vent Side	Shaft Side		LA	LB	LC	LD
IPH-25B-3.5-40-11	.21	2.48	53.1	298.5	247	197	91
-50		3.06	55.3	305.5	254	204	94.5
-64		3.89	57.5	315.5	264	214	99.5
IPH-25B-5-40-11	.31	2.48	53.3	303.5	249.5	197	91
-50		3.06	55.5	310.5	256.5	204	94.5
-64		3.89	57.7	320.5	266.5	214	99.5
IPH-25B-6.5-40-11	.39	2.48	53.5	307.5	251.5	197	91
-50		3.06	55.7	314.5	258.5	204	94.5
-64		3.89	57.9	324.5	268.5	214	99.5
IPH-25B-8-40-11	.49	2.48	54.0	312.5	254	197	91
-50		3.06	56.2	319.5	261	204	94.5
-64		3.89	58.4	329.5	271	214	99.5

Note: IPH-24B (25B)-*-L-11 (foot mounting/flange mounting, counterclockwise rotation) are the mirror image of the drawings shown above. In the case the individual IN port is facing upwards, the discharge port flange is positioned to the right when viewed from the shaft side.

IPH-26B-*-11
(Flange Mounting, Clockwise Rotation)

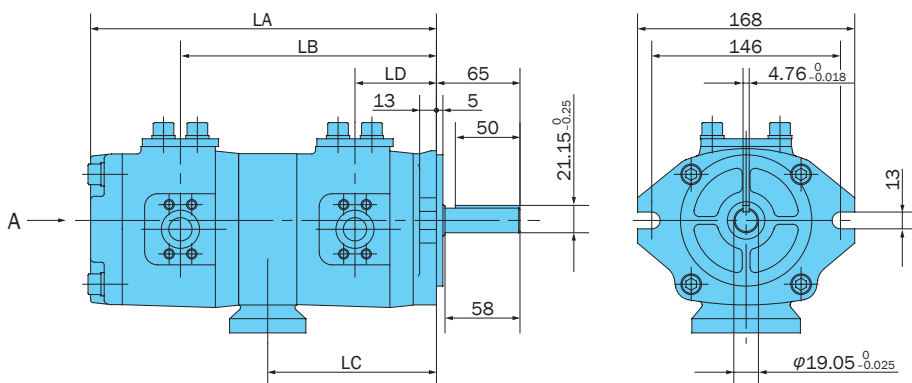
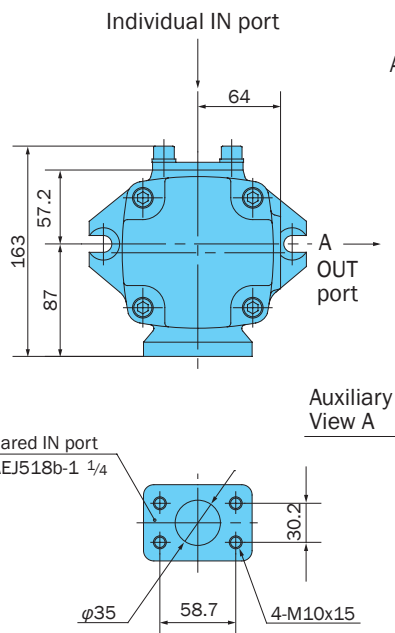


Specifications

Model No.	Volume in ³		Weight lbs	Dimensions (mm)			
	Vent Side	Shaft Side		LA	LB	LC	LD
IPH-26B-3.5 - 80-11	.21	4.96	101	345.5	294	240	111.5
-100		6.19	105	355.5	304	250	116.5
-125		7.68	110	367.5	316	262	122.5
IPH-26B-5 - 80-11	.31	4.96	101	350.5	296.5	240	111.5
-100		6.19	105	360.5	306.5	250	116.5
-125		7.68	110	372.5	318.5	262	122.5
IPH-26B-6.5 - 80-11	.39	4.96	101	354.5	298.5	240	111.5
-100		6.19	106	364.5	308.5	250	116.5
-125		7.68	110	376.5	320.5	262	122.5
IPH-26B-8 - 80-11	.49	4.96	102	357	301	240	111.5
-100		6.19	106	367	311	250	116.5
-125		7.68	110	379	323	262	122.5

Note: Dimensions shown in this diagram are for a single pump.

IPH-33B-*-11
(Flange Mounting, Clockwise Rotation)

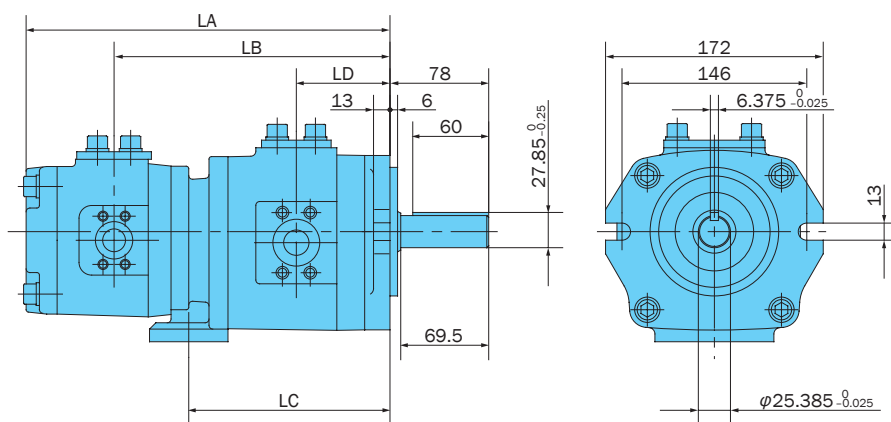
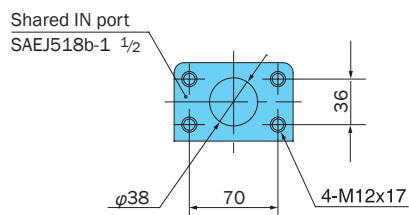
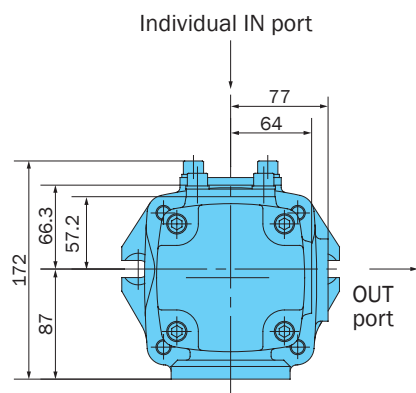


Specifications

Model No.	Volume in ³		Weight lbs	Dimensions (mm)			
	Vent Side	Shaft Side		LA	LB	LC	LD
IPH-33B-10 -10-11	.62	.62	22.7	255.5	189	124.5	60
-13		.81	23.1	261.5	195	130.5	63
-16		.96	23.8	266.5	200	135.5	65.5
IPH-33B-13 -13-11	.81	.81	23.1	267.5	198	130.5	63
-16		.96	24.2	272.5	203	135.5	65.5
IPH-33B-16 -16-11	.96	.96	24.9	277.5	205.5	135.5	65.5

Note: IPH-26B (33B)-*-L-11 (foot mounting/flange mounting, counterclockwise rotation) are the mirror image of the drawings shown above. In the case the individual IN port is facing upwards, the discharge port flange is positioned to the right when viewed from the shaft side.

IPH-34B-*-11
(Flange Mounting, Clockwise Rotation)

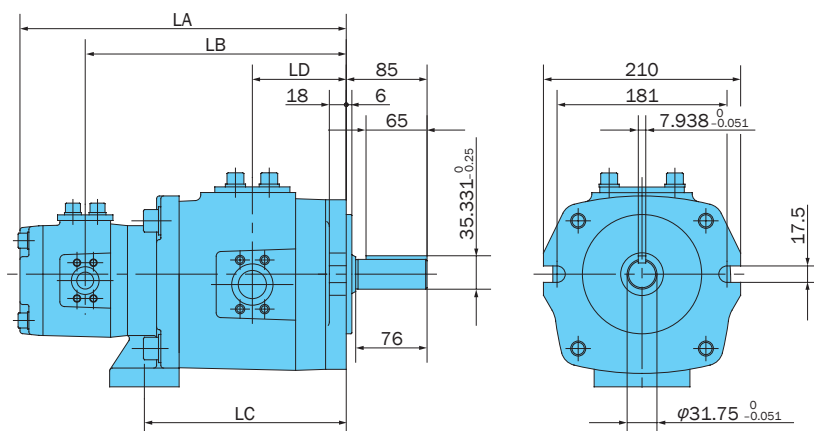
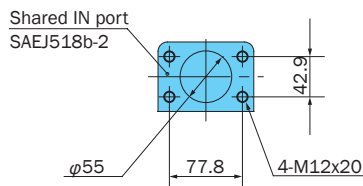
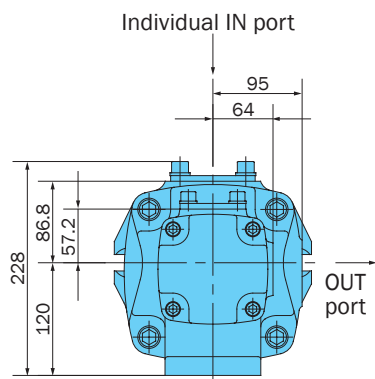


Specifications

Model No.	Volume in ³		Weight lbs	Dimensions (mm)			
	Vent Side	Shaft Side		LA	LB	LC	LD
IPH-34B-10 -20-11	.62	1.26	32.8	272	209	153	71
-25		1.56	33.9	278	215	159	74
-32		1.97	35.0	286	223	167	78
IPH-34B-13 -20-11	.81	1.26	33.2	278	212	153	71
-25		1.56	34.3	284	218	159	74
-32		1.97	35.5	292	226	167	78
IPH-34B-16 -20-11	.96	1.26	33.9	283	214.5	153	71
-25		1.56	35.0	289	220.5	159	74
-32		1.97	36.1	297	228.5	167	78

Note: Dimensions shown in this diagram are for a single pump.

IPH-35B-*-11
(Flange Mounting, Clockwise Rotation)

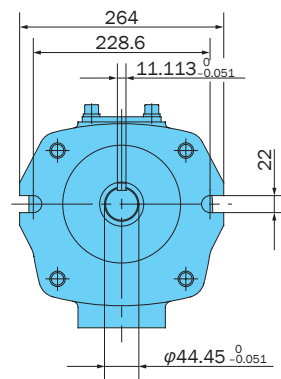
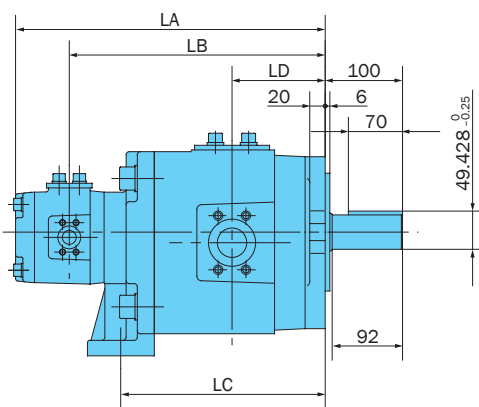
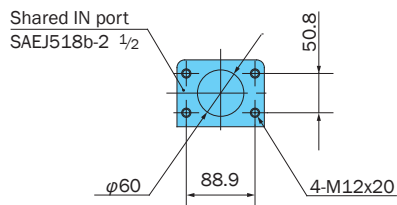
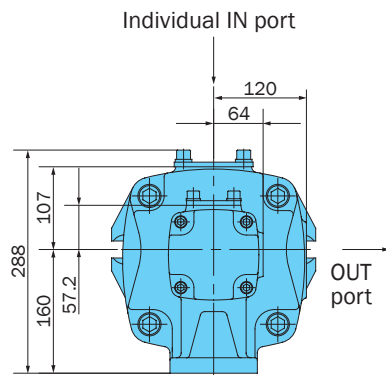


Specifications

Model No.	Volume in ³		Weight lbs	Dimensions (mm)			
	Vent Side	Shaft Side		LA	LB	LC	LD
IPH-35B-10 -40-11	.62	2.48	58.2	323.5	257	197	91
-50		3.06	60.4	330.5	264	204	94.5
-64		3.89	62.6	340.5	274	214	99.5
IPH-35B-13 -40-11	.81	2.48	58.6	329.5	260	197	91
-50		3.06	60.8	336.5	267	204	94.5
-64		3.89	63.0	346.5	277	214	99.5
IPH-35B-16 -40-11	.96	2.48	59.3	334.5	262.5	197	91
-50		3.06	61.5	341.5	269.5	204	94.5
-64		3.89	62.7	351.5	279.5	214	99.5

Note: IPH-34B (35B)-*-L-11 (foot mounting/flange mounting, counterclockwise rotation) are the mirror image of the drawings shown above. In the case the individual IN port is facing upwards, the discharge port flange is positioned to the right when viewed from the shaft side.

IPH-36B-*-11
(Flange Mounting, Clockwise Rotation)

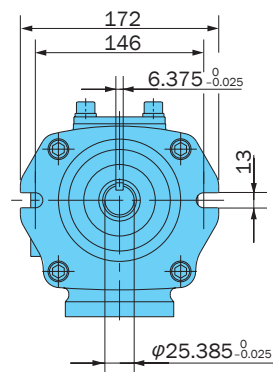
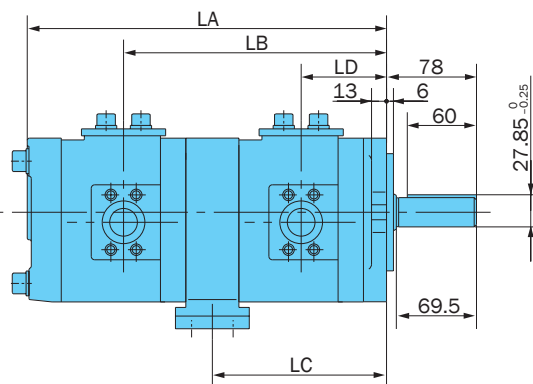
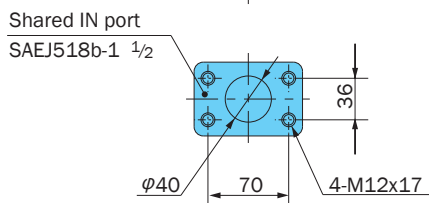
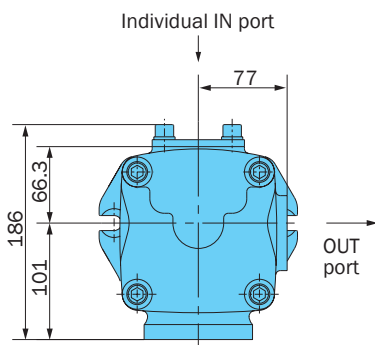


Specifications

Model No.	Volume in ³		Weight lbs	Dimensions (mm)			
	Vent Side	Shaft Side		LA	LB	LC	LD
IPH-36B-10 - 80-11	.62	4.96	105	370.5	304	240	111.5
-100		6.19	110	380.5	314	250	116.5
-125		7.68	114	392.5	326	262	122.5
IPH-36B-13 - 80-11	.81	4.96	106	376.5	307	240	111.5
-100		6.19	110	386.5	317	250	116.5
-125		7.68	115	398.5	329	262	122.5
IPH-36B-16 - 80-11	.96	4.96	106	381.5	309.5	240	111.5
-100		6.19	111	391.5	319.5	250	116.5
-125		7.68	115	403.5	331.5	262	122.5

Note) Dimensions shown in this diagram are for a single pump.

IPH-44B-*-11
(Flange Mounting, Clockwise Rotation)

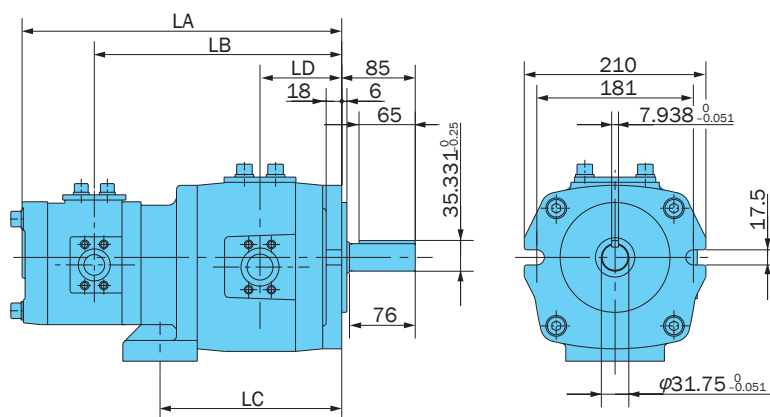
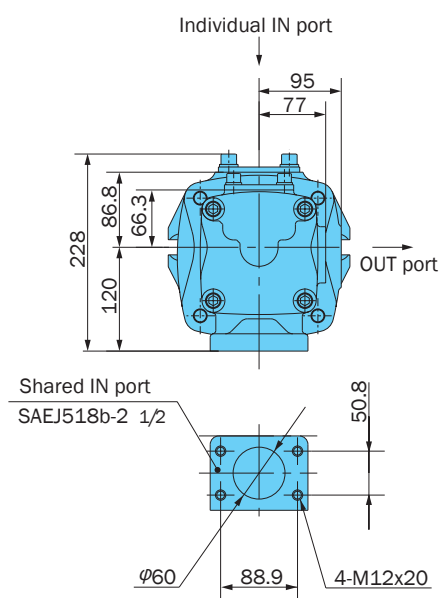


Specifications

Model No.	Volume in ³		Weight lbs	Dimensions (mm)			
	Vent Side	Shaft Side		LA	LB	LC	LD
IPH-44B-20 -20-11	1.26	1.26	42.9	307	219	145	71
-25		1.56	44.1	313	225	151	74
-32		1.97	45.2	321	233	159	78
IPH-44B-25 -25-11	1.56	1.56	45.2	319	228	151	74
-32		1.97	46.3	327	236	159	78
IPH-44B-32 -32-11	1.97	1.97	47.4	335	240	159	78

Note: IPH-36B (44B)-*-L-11 (foot mounting/flange mounting, counterclockwise rotation) are the mirror image of the drawings shown above. In the case the individual IN port is facing upwards, the discharge port flange is positioned to the right when viewed from the shaft side.

IPH-45B--11**
(Flange Mounting, Clockwise Rotation)

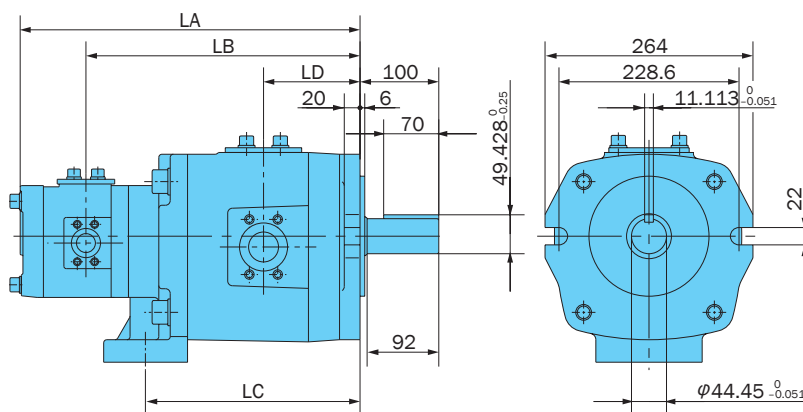
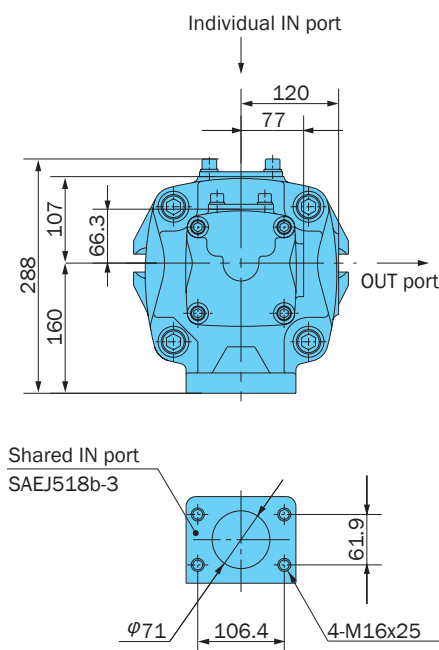


Specifications

Model No.	Volume in ³		Weight lbs	Dimensions (mm)			
	Vent Side	Shaft Side		LA	LB	LC	LD
IPH-45B-20 -40-11	1.26	2.48	66.3	357	276	203	91
-50		3.06	68.5	364	283	210	94.5
-64		3.89	70.7	374	293	220	99.5
IPH-45B-25 -40-11	1.56	2.48	67.4	363	279	203	91
-50		3.06	69.6	370	286	210	94.5
-64		3.89	71.3	380	296	220	99.5
IPH-45B-32 -40-11	1.97	2.48	68.5	371	283	203	91
-50		3.06	70.7	378	290	210	94.5
-64		3.89	72.9	388	300	220	99.5

Note: Dimensions shown in this diagram are for a single pump.

IPH-46B--11**
(Flange Mounting, Clockwise Rotation)



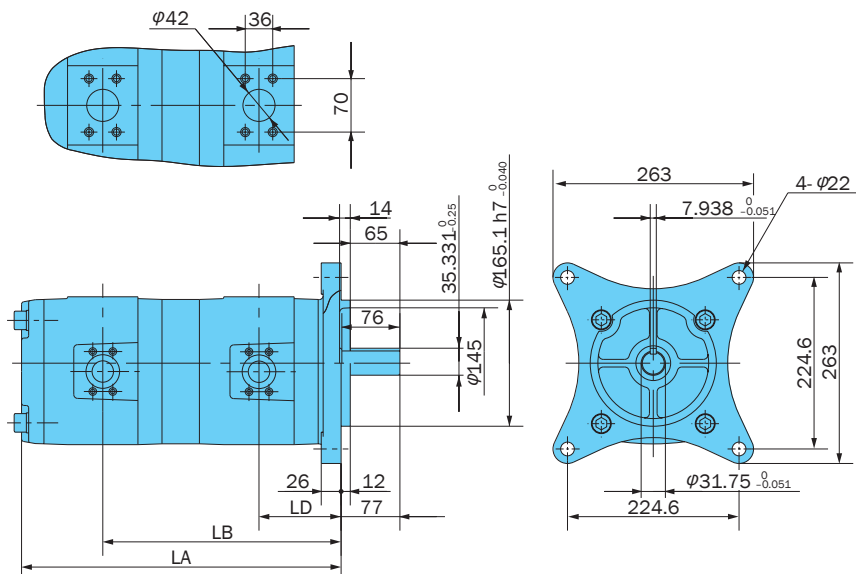
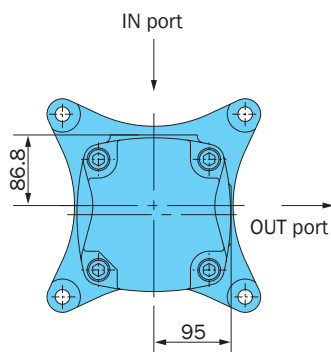
Specifications

Model No.	Volume in ³		Weight lbs	Dimensions (mm)			
	Vent Side	Shaft Side		LA	LB	LC	LD
IPH-46B-20 - 80-11	1.26	4.96	115	404	323	250	111.5
-100		6.19	119	414	333	260	116.5
-125		7.68	124	426	345	272	122.5
IPH-46B-25 - 80-11	1.56	4.96	116	410	326	250	111.5
-100		6.19	120	420	336	260	116.5
-125		7.68	125	432	348	272	122.5
IPH-46B-32 - 80-11	1.97	4.96	117	418	330	250	111.5
-100		6.19	121	428	340	260	116.5
-125		7.68	126	440	352	272	122.5

Note: Dimensions shown in this diagram are for a single pump.

Note: IPH-45B (46B)-**-L-11 (foot mounting/flange mounting, counterclockwise rotation) are the mirror image of the drawings shown above. In the case the individual IN port is facing upwards, the discharge port flange is positioned to the right when viewed from the shaft side.

IPH-55B--11**
(Flange Mounting, Clockwise Rotation)

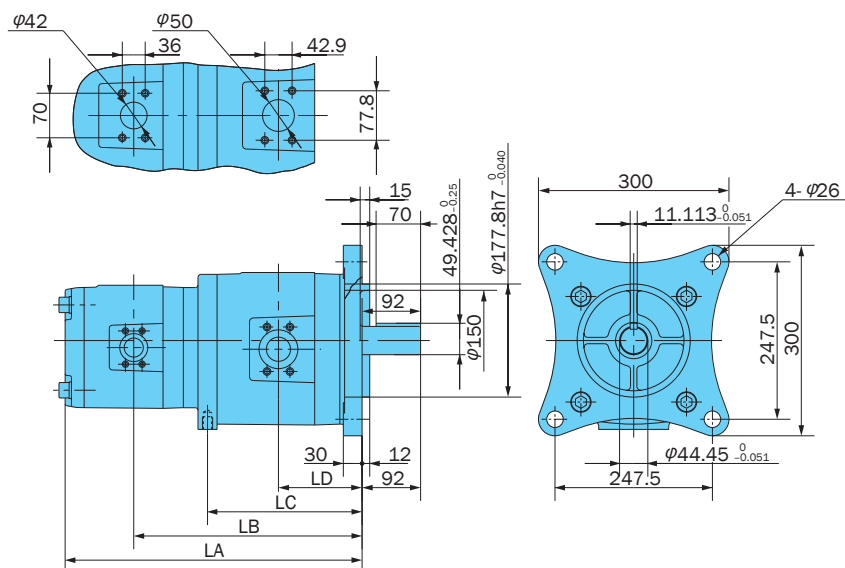
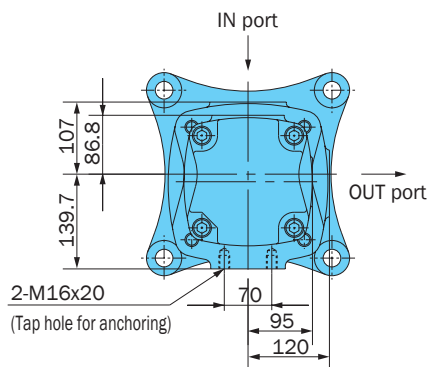


Specifications

Model No.	Volume in ³		Weight lbs	Dimensions (mm)		
	Vent Side	Shaft Side		LA	LB	LD
IPH-55B-40 -40-11	2.48	2.48	100	385	286	99
-50		3.06	102	392	293	102.5
-64		3.89	105	402	303	107.5
IPH-55B-50 -50-11	3.06	3.06	104	399	296.5	102.5
-64		3.89	107	409	306.5	107.5
IPH-55B-64 -64-11	3.89	3.89	109	419	311.5	107.5

Note: Dimensions shown in this diagram are for a single pump.

IPH-56B--11**
(Flange Mounting, Clockwise Rotation)



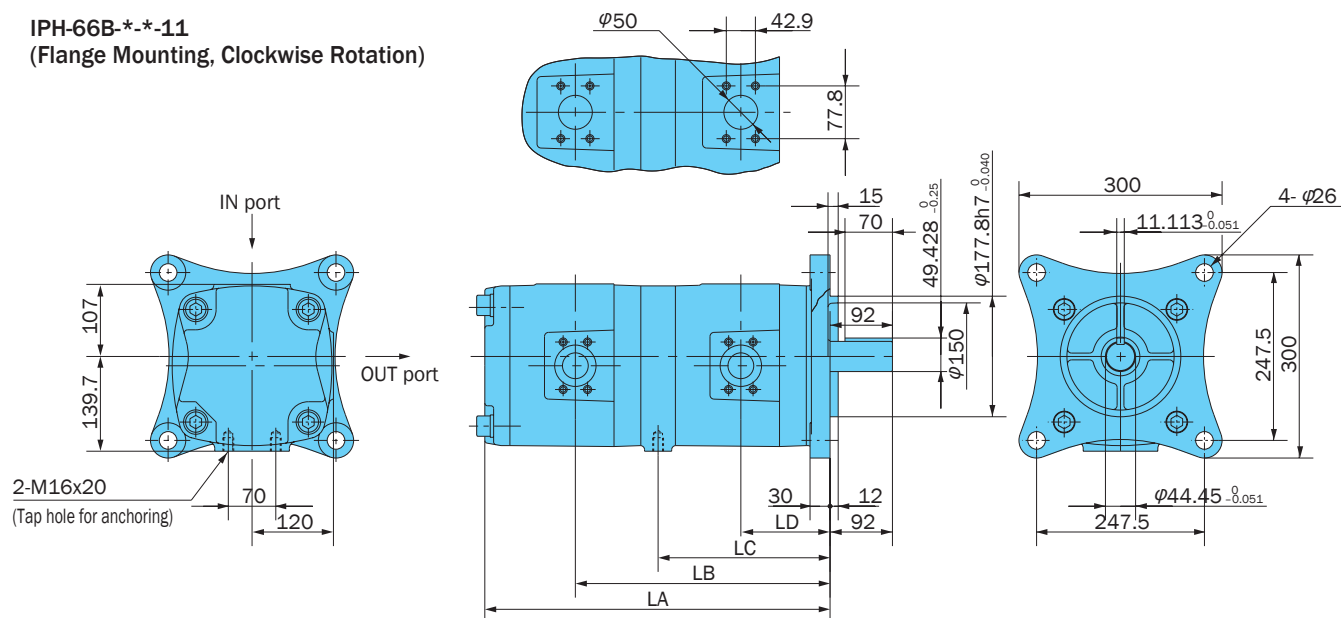
Specifications

Model No.	Volume in ³		Weight lbs	Dimensions (mm)			
	Vent Side	Shaft Side		LA	LB	LC	LD
IPH-56B-40 - 80-11	2.48	4.96	156	427	328	221	120.5
-100		6.19	160	437	338	231	125.5
-125		7.68	164	449	350	243	131.5
IPH-56B-50 - 80-11	3.06	4.96	158	434	331.5	221	120.5
-100		6.19	162	444	341.5	231	125.5
-125		7.68	167	456	353.5	243	131.5
IPH-56B-64 - 80-11	3.89	4.96	160	444	336.5	221	120.5
-100		6.19	164	454	346.5	231	125.5
-125		7.68	169	466	358.5	243	131.5

Note: Dimensions shown in this diagram are for a single pump.

Note: IPH-55B (56B)-**-L-11 (foot mounting/flange mounting, counterclockwise rotation) are the mirror image of the drawings shown above. In the case the individual IN port is facing upwards, the discharge port flange is positioned to the right when viewed from the shaft side.

IPH-66B--11**
(Flange Mounting, Clockwise Rotation)



Specifications

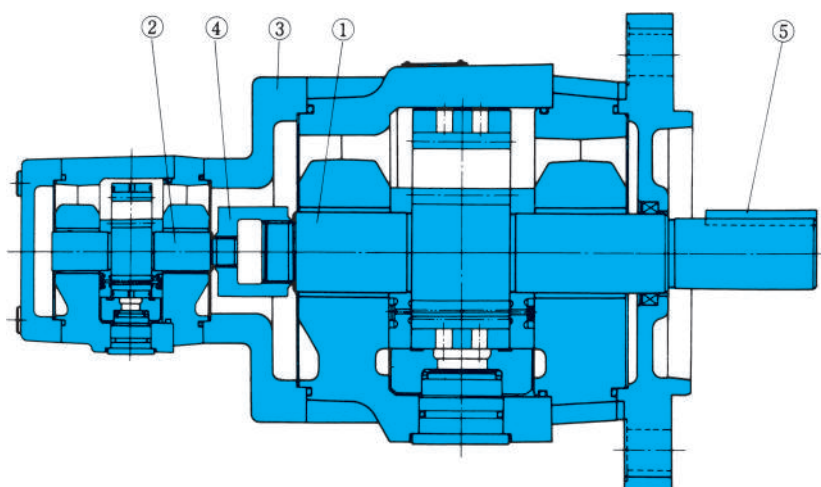
Model No.	Volume in ³		Weight lbs	Dimensions (mm)			
	Vent Side	Shaft Side		LA	LB	LC	LD
IPH-66B- 80- 80-11	4.96	4.96	196	470	347.5	234	120.5
-100		6.19	201	480	357.5	244	125.5
-125		7.68	205	492	369.5	256	131.5
IPH-66B-100-100-11	6.19	4.96	205	490	362.5	244	125.5
-125		7.68	209	502	374.5	256	131.5
IPH-66B-125-125-11	7.68	7.68	214	514	380.5	256	131.5

Note: Dimensions shown in this diagram are for a single pump.

Note: IPH-66B-*-L-11 (foot mounting/flange mounting, counterclockwise rotation) are the mirror image of the drawings shown above. In the case the suction port flange is facing upwards, the discharge port flange position is to the right when viewed from the shaft side.

Cross-sectional Drawing

IPH Series Double IP Pump



Part No.	Part Name
1	Pinion shaft -1
2	Pinion shaft -2
3	Body -3
4	Joint
5	Key

Note: In the case of a double pump, use single pump parts in addition to the 5 parts listed above.

• **IPS Series Double IP Pump Seal Kit**
The double pump seal kit combines a shaft side pump seal kit with a head side pump seal kit. The shaft side pump seal kit (IHAS-2S*****) is the same as the single pump seal

kit. The head side pump seal kit (IHAS-2H*****) includes the same component parts as the single pump seal kit, except that it does not have a #23 oil seal. See the IPH Series (single) IP pump section in page C-9 for more information.

• **Air bleed-off valve**
See the IPH Series (single) IP pump section in page C-13.