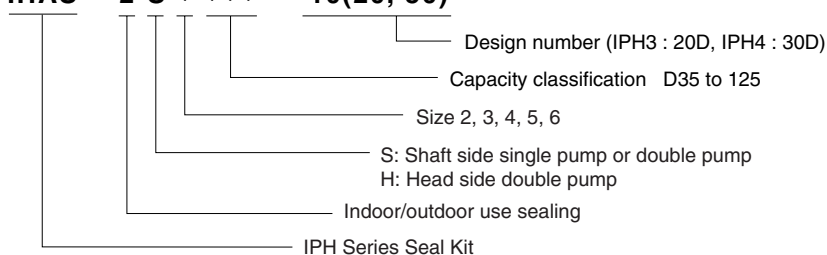


IPH Series Seal Kit

Understanding Seal Kit **IHAS - 2 S * ** - 10(20, 30)**

Model Numbers :



Seal Kit Number	Applicable Pump Model No.	Component Part Numbers							
		18	Qty	19	Qty	20	Qty	21	Qty
		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	Qty	25	Qty	26	Qty	27	Qty	28	Qty
	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	2
2S2005-10	"	1	"	3	"	2	R12 × 2	1	R12 × 2	2
2S2D65-10	"	1	"	3	"	2	R14 × 2	1	R14 × 2	2
2S2008-10	"	1	"	3	"	2	R16 × 2	1	R16 × 2	2
IHAS-2S3010-20	ISD-25388	1	R86 × 2	3	R30 × 2	2	R15 × 2.5	1	R15 × 2.5	2
2S3013-20	"	1	"	3	"	2	R18 × 2.5	1	R18 × 2.5	2
2S3016-20	"	1	"	3	"	2	R20 × 2.5	1	R20 × 2.5	2
IHAS-2S4020-30	ISD-32458	1	R108 × 3	3	R38 × 2.5	2	R21 × 2.5	1	R21 × 2.5	2
2S4025-30	"	1	"	3	"	2	R23 × 3	1	R23 × 3	2
2S4032-30	"	1	"	3	"	2	R26 × 3	1	R26 × 3	2
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.

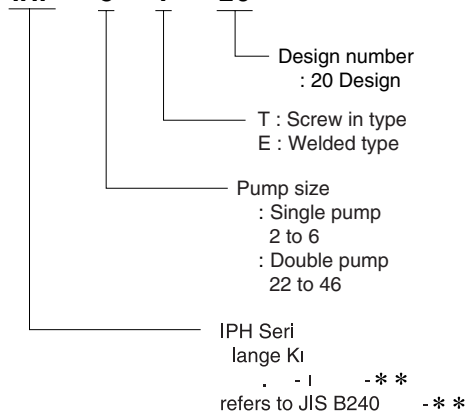
IPH Series Pipe Flange Kit

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



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

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

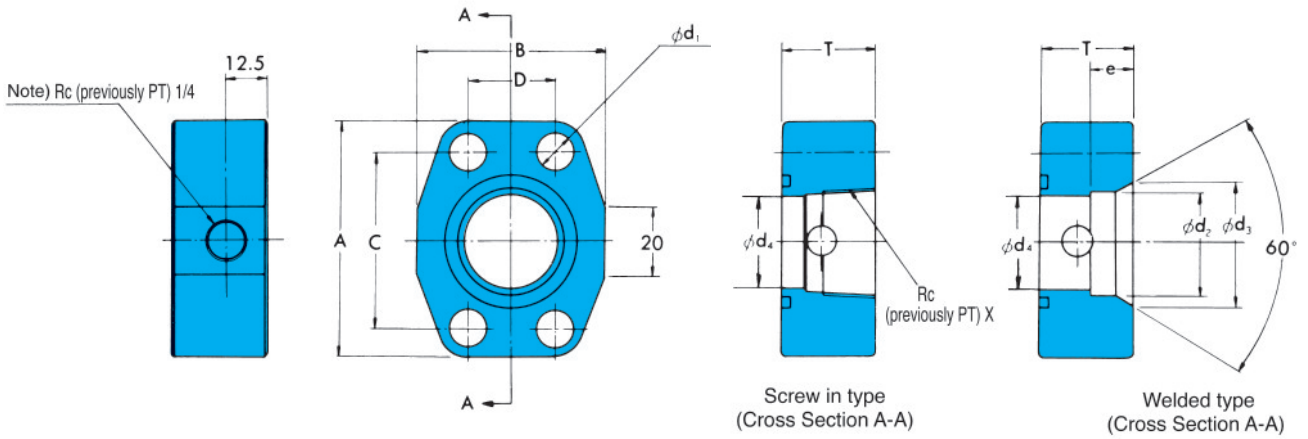
Note)1. In the case of a double pump, the flange kit includes three flanges: one for the common IN port and two OUT port flanges. When using separate IN ports, use separate single pump flange kits, one each for the head side and the shaft side.

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

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	Nominal Diameter	Dimensions (mm)							Weight kg
			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	0.4
-100060	SAE J518b 3/4	3/4	65	52	47.5	22.0	33	11	20	0.6
-100080	SAE J518b 1	1	70	59	52.4	26.2	33	11	27	0.6
☆ -100100	SAE J518b 1 1/4	1 1/4	79	73	58.7	30.2	38	11	33	1.0
-100120	SAE J518b 1 1/2	1 1/2	94	83	70.0	36.0	38	13	37.5	1.4
☆ -100160	SAE J518b 2	2	102	97	77.8	42.9	38	13	50	1.7
☆ -100200	SAE J518b 2 1/2	2 1/2	114	109	88.9	50.8	43	13	60	2.1
☆ -100240	SAE J518b 3	3	135	131	106.4	61.9	48	17.5	71	3.3

Welded Type

Pipe Flange Kit Part Number	SAE Standard	Pipe Diameter	Dimensions (mm)										Weight kg
			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	0.4
-200060	SAE J518b 3/4	3/4	65	52	47.5	22.0	33	12	11	27.7	35	20	0.6
-200080	SAE J518b 1	1	70	59	52.4	26.2	33	14	11	34.5	42	27	0.6
☆ -200100	SAE J518b 1 1/4	1 1/4	79	73	58.7	30.2	38	16	11	43.2	48	33	1.0
-200120	SAE J518b 1 1/2	1 1/2	94	83	70.0	36.0	38	18	13	49.1	58	37.5	1.4
☆ -200160	SAE J518b 2	2	102	97	77.8	42.9	38	19	13	61.1	68	50	1.7
☆ -200200	SAE J518b 2 1/2	2 1/2	114	109	88.9	50.8	43	22	13	77.1	82	60	2.1
☆ -200240	SAE J518b 3	3	135	131	106.4	61.9	48	25	17.5	90.0	97	71	3.3

Recommended Tightening Torque for Flange Installation Bolts

For aluminum body

For cast body (shared IN port)

Mounting bolt	Tightening Torque N · m {kgf · cm}
M8	19.6 to 23.5 {200 to 240}
M10	49.0 to 58.8 {500 to 600}
M12	88.2 to 112.7 {900 to 1150}

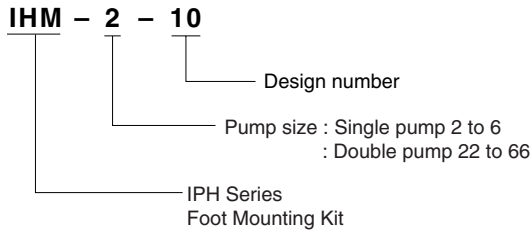
Mounting bolt	Tightening Torque N · m {kgf · cm}
M10	50 to 65 { 510 to 662}
M12	88 to 112 { 898 to 1140}
M16	215 to 275 {2192 to 2800}

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

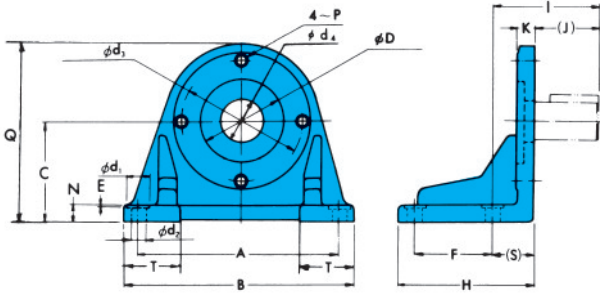
IPH Series Foot Mounting Kit

Understanding Foot Mounting Kit Numbers:

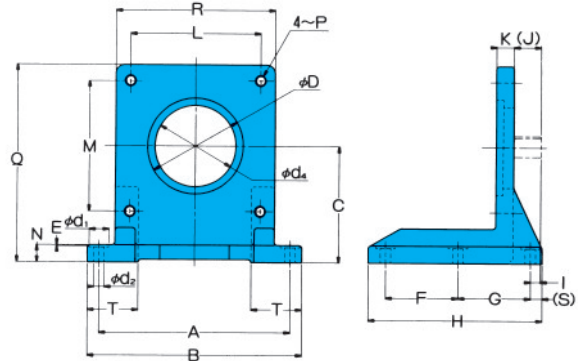
When only the mounting feet are required for a single pump or double pump, pump mounting bolts, washers and other parts are sold together as the Foot Mounting Kit.



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 kg
	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	2.0
IHM-4-10	61.7	49	16	16	M12	195.5	12.7	53	101.6	22	11	146	40	5.5
IHM-4-10	74.7	62	16	16	M12	195.5	12.7	53	101.6	22	11	146	40	5.5
IHM-22-10	73.5	41	18	18	M10	180	32.5	50	82.55	22	11	106.4	40	6.5
IHM-44-10	89.5	45	20	20	M12	232	44.5	57.5	101.6	22	14	146	40	12.0
IHM-44-10	102.5	58	20	20	M12	232	44.5	57.5	101.6	22	14	146	40	12.0
IHM-45-10	104.5	60	25	25	M16	259	44.5	61	127	35	18	181	86	13.5
IHM-46-10	119.5	70	30	30	M20	337	49.5	64	152.4	37	20	228.6	100	22.0

*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

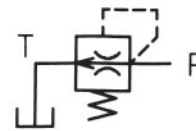
Foot Mounting Kit Model No.	Applicable Pump Model No.	Accessories				Dimensions (mm)								
	DOUBLE PUMP	Bolt	Q'ty	Washer	Q'ty	A	B	C	E	F	G	H	I	
IHM-55-10	IPH-55	TH-20 × 50	4	WS-B-20	4	330	370	200	1	125	125	300	17	
IHM-66-10	IPH56, IPH-66	TH-24 × 60	4	WS-B-24	4	380	430	260	1	140	140	340	17	

Foot Mounting Kit Model No.	Dimensions (mm)														Weight kg
	(J)	K	L	M	N	P	Q	R	(S)	T	φD	φd ₁	φd ₂	φd ₃	
IHM-55-10	47	30	224.6	224.6	30	M20	340	275	20	90	165.1	34	18	140	32.0
IHM-66-10	52	40	247.5	247.5	40	M24	415	310	25	105	177.8	34	18	150	48.0

Air Bleed-off Valve

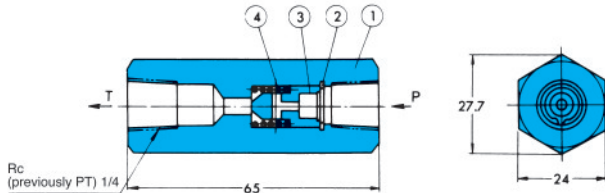
Equipping an air bleed-off valve on the pump's discharge side helps to simplify air bleeding during test operation.

JIS symbol



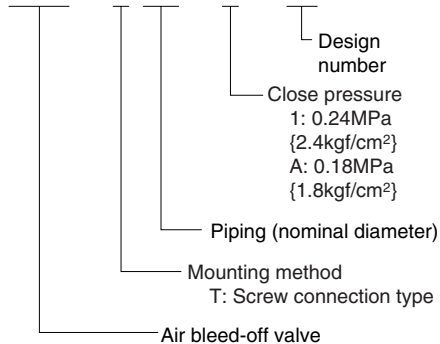
Specifications

- ① Air inside the pump and the suction pipe is exhausted rapidly when the pump is started up. When discharge pressure reaches 0.2MPa {2.0kgf/cm²} or greater after the pump intakes oil, a valve closes to prevent oil from leaking.
- ② Maximum operating pressure: 30MPa {306kgf/cm²}
- ③ Provide piping to ensure that the tank port is under the oil level surface.



Understanding Model Numbers

CAB - T 02 - 1 - 11



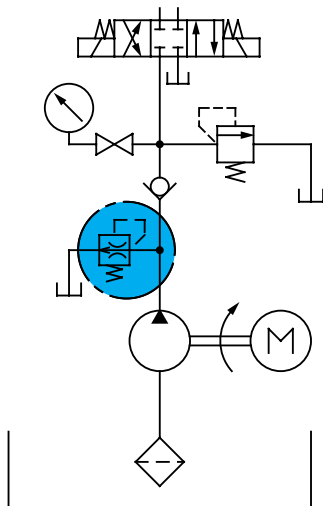
Part No.	Part Name	Q'ty
1	Valve body	1
2	Snap ring	1
3	Valve	1
4	Spring	1

- 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.

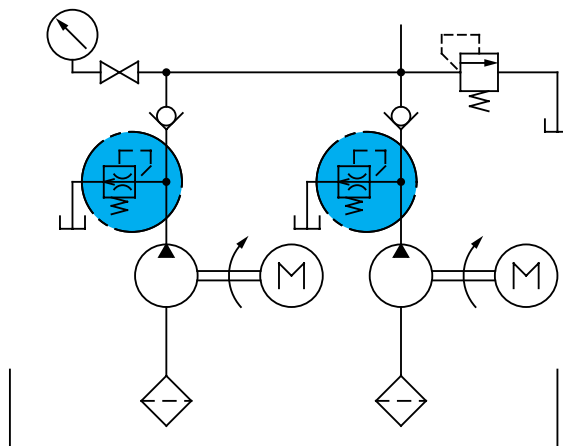
Application Examples

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