



Comfort Earth®

Bringing valuable "water" to you



KAWAMOTO PUMP

Pumper® KB-F

<non-inverter type>

Stainless Precision
Casting

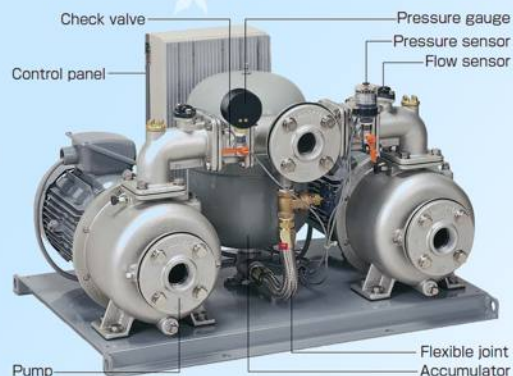
Silent Design

Constant pressure by
flow sensor control



Kawamoto

PUMPER **KB** SERIES



AUTOMATIC OPERATION CONSTANT PRESSURE PUMP

Operation type

Alternate

Alternate/Parallel



Stainless Steel Castings

Save Space

Simple Monitor

Silent Operation

Save Energy

■ SPECIFICATIONS

Control	Constant pressure water supply by optoelectronic pressure sensor and flow sensor		
Operation	Alternate/parallel		
Installation	Outdoor		
Liquid	Clean water, 0~40℃		
Pump	Stainless steel multi-stage centrifugal pump Impeller : Resin, Bronze or SCS13 Casing : SCS13 Shaft : SUS304		
Motor	Type : TEFC 50Hz : 3,000rpm		
Suction	Negative suction : Max total suction head — 6m Positive suction : 0~5m		
Colour	Pump & piping : Silver Accumulator : Gray Control panel : 5Y7/1		

Constant Pressure

Controlled by pressure and individual flow sensor for each pump, stable water supply is possible with less repetition of start and stop during water supply

Reliable Design

Long-life mechanical seal (ceramic x carbon) is adopted for shaft sealing, so long time use is possible with confidence.

Hummer-less Check valve

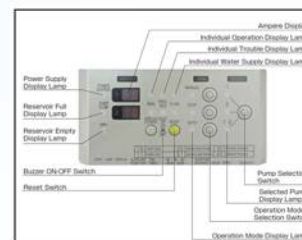
Shock absorber type stainless check valve dedicated design to this package unit prevents water hummer.

APPLICATIONS AND FEATURES

FEATURES

■ MICRO-COMPUTER MONITORING (ALTERNATE AND ALTERNATE/PARALLEL OPERATION TYPE)

1. Pump operation statuses is individually displayed on control panel and if trouble occurs, such trouble is displayed with trouble display function.
2. If a trouble occurs in one of two pumps, starting of such pump will be tested up to two times (re-try function), and if trouble is still not eliminated, operation will automatically be transferred to the other pump for continuous water supply.



■ STATUS OF INDIVIDUAL DISPLAY

Condition	Digital display	Display contents	Note
Power input	F4	No trouble at initial condition	Any trouble is checked by micro-computer about power supply, and if there is no abnormality, F4 and F5 is displayed.
	F5		
Stop	00	Stopping	
Operate	0.1~9.9	Current	When less than 9.9A
	10~99	Current	Between 10A and 100A
	100	Current	More than 100A
	Current	When decreasing operating number of pumps, flushes right side	When the number of operating pump decreases, the lamp lit for more than 3 seconds. (If parallel operation continues, the lamp lits within 3 seconds.)
Trouble	00	Abnormality at power supply end	S-phase failure or frequency abnormality
	01	Reverse phase at power supply end	
	10	Overloading	Detect between 105% and 400% of rated current
	11	Locking	Detect at the current more than 400% of rated current
	20	MC open	No working of magnetic contactor
	21	MC short	Short circuit of magnetic contactor
	30	No discharging	Although pump is operating but no discharge of water
	40	Abnormality of flow sensor	Defective connection of sensor

Silent & Clean

Stainless Steel Castings

The pump casing and flanges are made from precision cast stainless steel to withstand heavy load and free from strain. The connection section is mainly made of stainless steel

Silent Operation

Multistage pump, duplex casing and adoption of integral molded 3D blade impeller realize silent and high efficiency water supply.

Save Space

Compact, less installation space and especially low height design with adopting small high pressure stainless multi-stage pump.

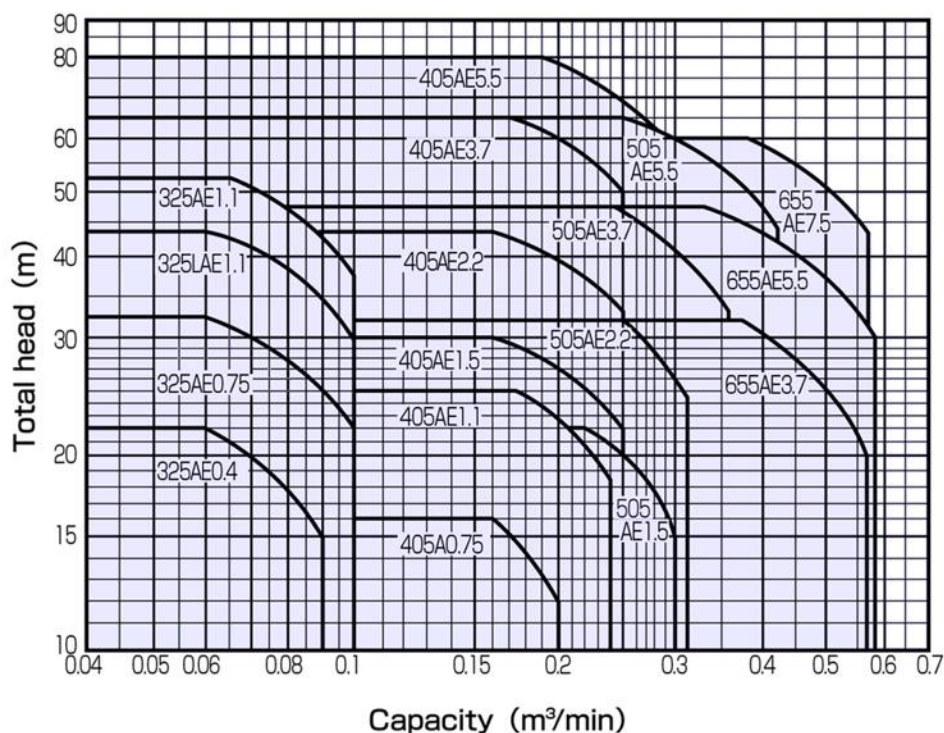
Save Energy

Automatic setting function of the optimal forced operation time in small amount of water supply realizes highly energy saving operation in alternate and alternate/parallel operation model. In addition to that, loss-less operation is available in alternate/parallel operation model with automatic adjustment function for operation time of parallel pump and parallel-OFF point.

Simple Monitor

Easy assessment of pump operation status by individual display, and easy maintenance by self error diagnostic display just in case trouble. (Alternate, Alternate/parallel type)

■ ALTERNATE OPERATION

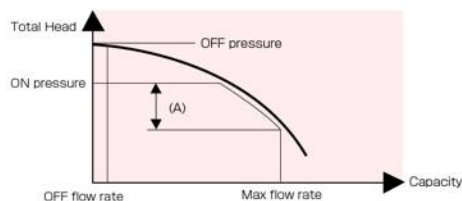


■ SPECIFICATIONS

Unit bore mm	Suction bore mm	Operation	Model	Motor	Performance				※2 ON adjustable range		Accumulator	Noise	
					Capacity m³/min	Total Head m	ON pressure MPa(kgf/cm²)	OFF pressure MPa(kgf/cm²)	MPa(kgf/cm²)	MPa(kgf/cm²)			
				kW									
40	32	Alter-nate	KB2-325AE0.4T4-F	0.4 (※1)	0.06	22	0.22 {2.2}	0.28 {2.9}	0.15 {1.5}	0.12 {1.2}	42		
			KB2-325AE0.75T4-F	0.75	0.06	32	0.31 {3.2}	0.39 {4.0}	0.22 {2.2}	0.17 {1.7}	50		
			KB2-325LAE1.1T4-F	1.1	0.06	44	0.43 {4.4}	0.52 {5.3}	0.29 {3.0}	0.25 {2.5}	49		
			KB2-325AE1.1T4-F	1.1	0.065	53	0.52 {5.3}	0.65 {6.6}	0.36 {3.7}	0.29 {3.0}	51		
40	40		KB2-405AE0.75T4-F	0.75 (※1)	0.16	16	0.16 {1.6}	0.24 {2.4}	0.12 {1.2}	0.088{0.9}	46		
			KB2-405AE1.1T4-F	1.1	0.17	25	0.25 {2.5}	0.31 {3.2}	0.18 {1.8}	0.14 {1.4}	50		
			KB2-405AE1.5T4-F	1.5	0.16	30	0.29 {3.0}	0.35 {3.6}	0.22 {2.2}	0.17 {1.7}	53		
			KB2-405AE2.2T4-F	2.2	0.16	44	0.43 {4.4}	0.51 {5.2}	0.32 {3.3}	0.25 {2.5}	50		
40	50		KB2-405AE3.7T4-F	3.7	0.165	65	0.64 {6.5}	0.73 {7.4}	0.49 {5.0}	0.34 {3.5}	54		
			KB2-405AE5.5T4-F	5.5	0.19	80	0.78 {8.0}	0.92 {9.4}	0.59 {6.0}	0.44 {4.5}	57		
			KB2-505AE1.5T4-F	1.5 (※1)	0.22	22	0.22 {2.2}	0.29 {3.0}	0.15 {1.5}	0.12 {1.2}	50		
			KB2-505AE2.2T4-F	2.2	0.25	32	0.31 {3.2}	0.44 {4.5}	0.24 {2.4}	0.20 {2.0}	51		
50	65		KB2-505AE3.7T4-F	3.7	0.24	48	0.47 {4.8}	0.59 {6.0}	0.32 {3.3}	0.27 {2.8}	55		
			KB2-505AE5.5T4-F	5.5	0.25	65	0.64 {6.5}	0.74 {7.6}	0.43 {4.4}	0.34 {3.5}	58		
			KB2-655AE3.7T4-F	3.7	0.37	32	0.31 {3.2}	0.41 {4.2}	0.23 {2.3}	0.17 {1.7}	56		
			KB2-655AE5.5T4-F	5.5	0.325	48	0.47 {4.8}	0.56 {5.7}	0.29 {3.0}	0.25 {2.5}	60		
			KB2-655AE7.5T4-F	7.5	0.375	60	0.59 {6.0}	0.68 {6.9}	0.43 {4.4}	0.31 {3.2}	62		

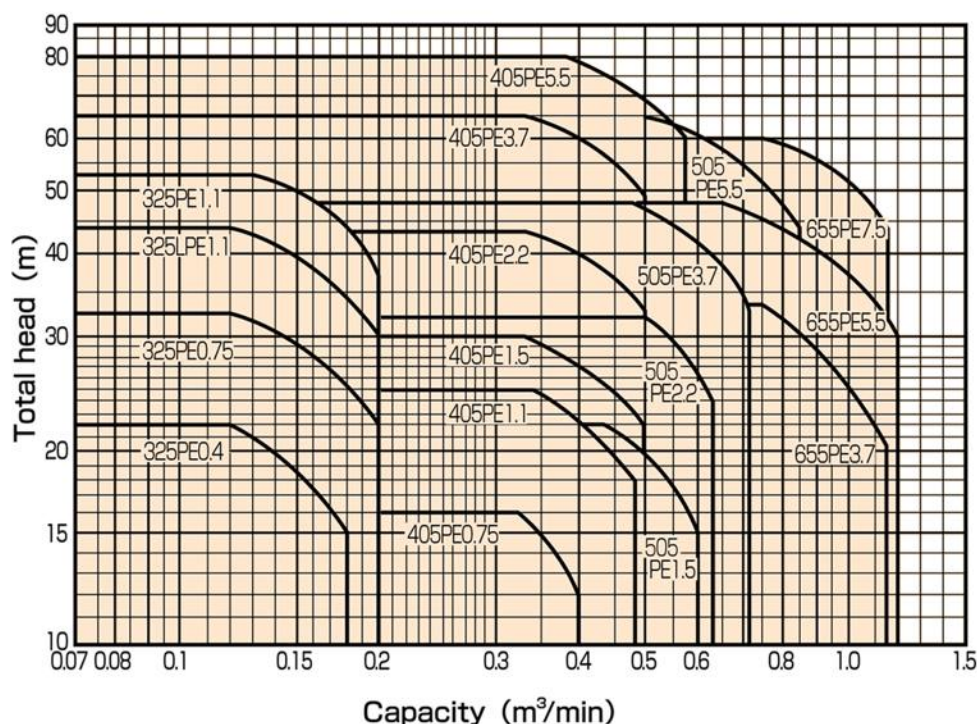
※1 Positive suction only ※2 Lowest adjustable starting pressure

GUIDE TO SELECTION TABLE



- ① Total head : Main pump performance less friction loss of valve
- ② Suction condition on the selection chart and table :
Positive suction series : 0m
Negative suction series : -4m
- ③ ON pressure is adjustable within(A).
In the case of positive suction(0~0.5kg/cm²), additional pressure is obtainable.

■ ALTERNATE/PARALLEL OPERATION

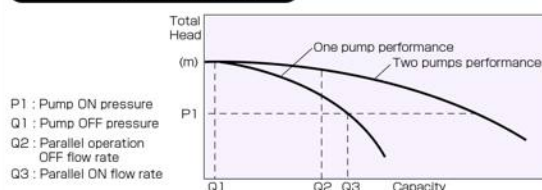


■ SPECIFICATIONS

Unit bore	Suction bore	Operation	Model	Motor	Performance				ON adjustable range	※2 Accumulator	Noise
					Capacity	Total Head	ON pressure	OFF pressure			
mm	mm			kW	m ³ /min	m	MPa(kgf/cm ²)	MPa(kgf/cm ²)	MPa(kgf/cm ²)	MPa(kgf/cm ²)	dB(A)
40	32	Alter- nate/ Parallel	KB2-325PE0.4T4-F	0.4×2 (※1)	0.12	22	0.22 {2.2}	0.28 {2.9}	0.15 {1.5}	0.12 {1.2}	45
			KB2-325PE0.75T4-F	0.75×2	0.12	32	0.31 {3.2}	0.39 {4.0}	0.22 {2.2}	0.17 {1.7}	52
			KB2-325LPE1.1T4-F	1.1×2	0.12	44	0.43 {4.4}	0.52 {5.3}	0.29 {3.0}	0.25 {2.5}	51
			KB2-325PE1.1T4-F	1.1×2	0.13	53	0.52 {5.3}	0.65 {6.6}	0.36 {3.7}	0.29 {3.0}	53
50	40		KB2-405PE0.75T4-F	0.75×2 (※1)	0.32	16	0.16 {1.6}	0.24 {2.4}	0.12 {1.2}	0.088{0.9}	49
			KB2-405PE1.1T4-F	1.1×2	0.34	25	0.25 {2.5}	0.31 {3.2}	0.18 {1.8}	0.14 {1.4}	52
			KB2-405PE1.5T4-F	1.5×2	0.32	30	0.29 {3.0}	0.35 {3.6}	0.22 {2.2}	0.17 {1.7}	55
			KB2-405PE2.2T4-F	2.2×2	0.32	44	0.43 {4.4}	0.51 {5.2}	0.32 {3.3}	0.25 {2.5}	52
65	50		KB2-405PE3.7T4-F	3.7×2	0.33	65	0.64 {6.5}	0.73 {7.4}	0.49 {5.0}	0.34 {3.5}	56
			KB2-405PE5.5T4-F	5.5×2	0.38	80	0.78 {8.0}	0.92 {9.4}	0.59 {6.0}	0.44 {4.5}	60
			KB2-505PE1.5T4-F	1.5×2 (※1)	0.44	22	0.22 {2.2}	0.29 {3.0}	0.15 {1.5}	0.12 {1.2}	53
			KB2-505PE2.2T4-F	2.2×2	0.5	32	0.31 {3.2}	0.44 {4.5}	0.24 {2.4}	0.20 {2.0}	54
80	65		KB2-505PE3.7T4-F	3.7×2	0.48	48	0.47 {4.8}	0.59 {6.0}	0.32 {3.3}	0.27 {2.8}	57
			KB2-505PE5.5T4-F	5.5×2	0.5	65	0.64 {6.5}	0.74 {7.6}	0.43 {4.4}	0.34 {3.5}	61
			KB2-655PE3.7T4-F	3.7×2	0.74	32	0.31 {3.2}	0.41 {4.2}	0.23 {2.3}	0.17 {1.7}	58
			KB2-655PE5.5T4-F	5.5×2	0.65	48	0.47 {4.8}	0.56 {5.7}	0.29 {3.0}	0.25 {2.5}	62
			KB2-655PE7.5T4-F	7.5×2	0.75	60	0.59 {6.0}	0.68 {6.9}	0.43 {4.4}	0.31 {3.2}	64

※1 Positive suction only ※2 Lowest adjustable starting pressure

OPERATION MECHANISM



■ ALTERNATE OPERATION

- 1 The pump is stopping at pressure(P) in the left figure.
- 2 When water is consumed and pressure drops to P1, the pump starts
- 3 When the flow rate is more than Q1, a pump continues operations.
- 4 When the flow rate becomes less than Q1, a pump stops operation.
- 5 Two pumps repeat (1)~(4) alternately.

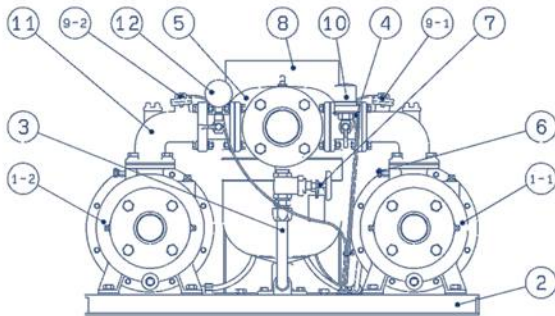
■ ALTERNATE/PARALLEL OPERATION

- 1 When the flow rate is less than Q3, operation mechanism is same as ALTERNATE OPERATION.
- 2 If the flow rate reaches to Q3 during operation of one pump, the pressure becomes to P1 and parallel operation by two pumps starts
- 3 If the flow rate becomes less than Q2 during two pumps parallel operation, the first pump stops and the other pump continues operation.
- 4 When the flow rate is more than Q3, two pumps repeat (2)~(3) operation.

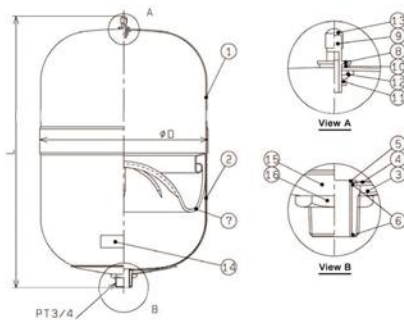
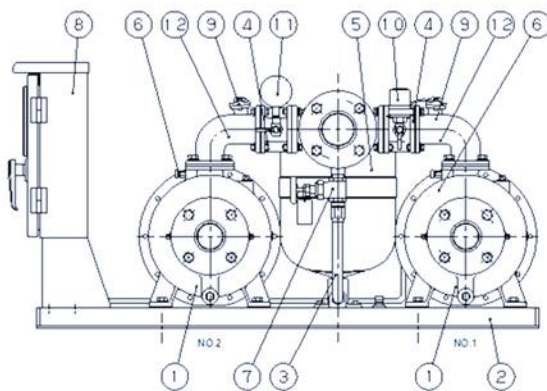
SECTION VIEW

UNIT PUMP PARTS LIST

0.4~3.7 kW

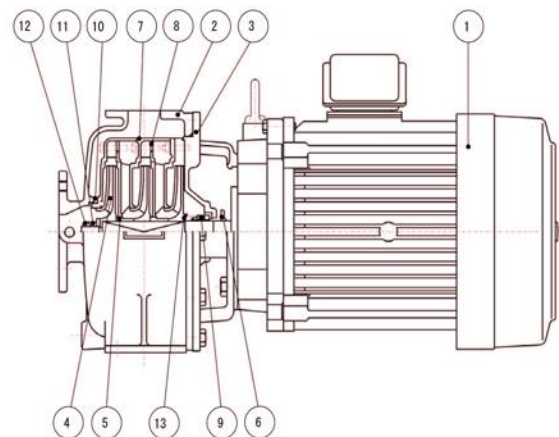


5.5~7.5 kW



NO.	Name	Description
1-1	Pump	No.1
1-2	Pump	No.2
2	Base plate	SPCC
3	Flexible joint	SUS304
4	Check valve	SCS13 (JIS G5121) impact relief type
5	Accumulator	10ℓ
6	Air vent	SUS304
7	Gate valve	Bronze
8	Control panel	ECFW-F
9-1	Flow sensor	For No.1 pump
9-2	Flow sensor	For No.2 pump
10	Pressure sensor	
11	Connecting elbow	SCS13 (JIS G5121)

MAIN PUMP PARTS LIST



NO.	Name	Description
1	Motor	
2	Casing	SCS13 (JIS G5121)
3	Casing cover	SCS13 (JIS G5121)
4	Impeller	Resin, Bronze or SCS13
5	Sleeve	Bronze or SUS304
6	Deflector	NBR
7	Guide vane	Resin or BC6 (JIS H5120)
8	Seperator	Resin or BC6 (JIS H5120)
9	Mechanical seal	Ceramic x Carbon
10	O ring	Rubber (NBR)
11	Impeller nut	SUS304
12	Plain washer	SUS304
13	Spring stopper	SUS304

SPECIFICATIONS

Discription	Unit	PTD3-1
Length (L)	mm	375
Width (W)	mm	233
Setting pressure	MPa (kgf/cm ²)	0.29 (3.0)
Capacity	L	11.45
Weight	kg	4.5
Max. working pressure	MPa (kgf/cm ²)	0.83 (8.5)
Setting Gas	-	Nitrogen gas
Liquid for usage	-	Clean water

No	Discription	Q'ty	Material	Remark	No	Discription	Q'ty	Material	Remark
1	Shell upper	1	SPCE	t=1.6	9	Core	1	C3604BD	-
2	Shell	1	SPCE	t=1.6	10	Seal washer	1	SPCC, NBR	-
3	Nipple	1	SUS316L	-	11	Nut	1	C3604BD	-
4	Lining sheet	1	Polypropylene	-	12	Washer	1	SPCC, NBR	-
5	Lining pipe	1	TB340	-	13	Cap	1	C3604BD	-
6	O ring	2	NBR	-	14	Nameplate	1	Resin Film	-
7	Bladder	1	CM	NOK CA55	15	Supporter	1	SPCC, NBR	Ni-Cr galvanized
8	Gas valve body	1	C3604BD	-	16	Lock nut	1	Steel	Ni-Cr galvanized

DIMENSIONS

0.4~3.7kW

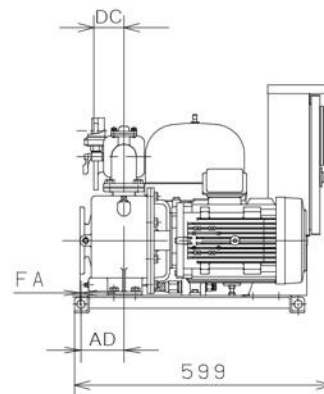
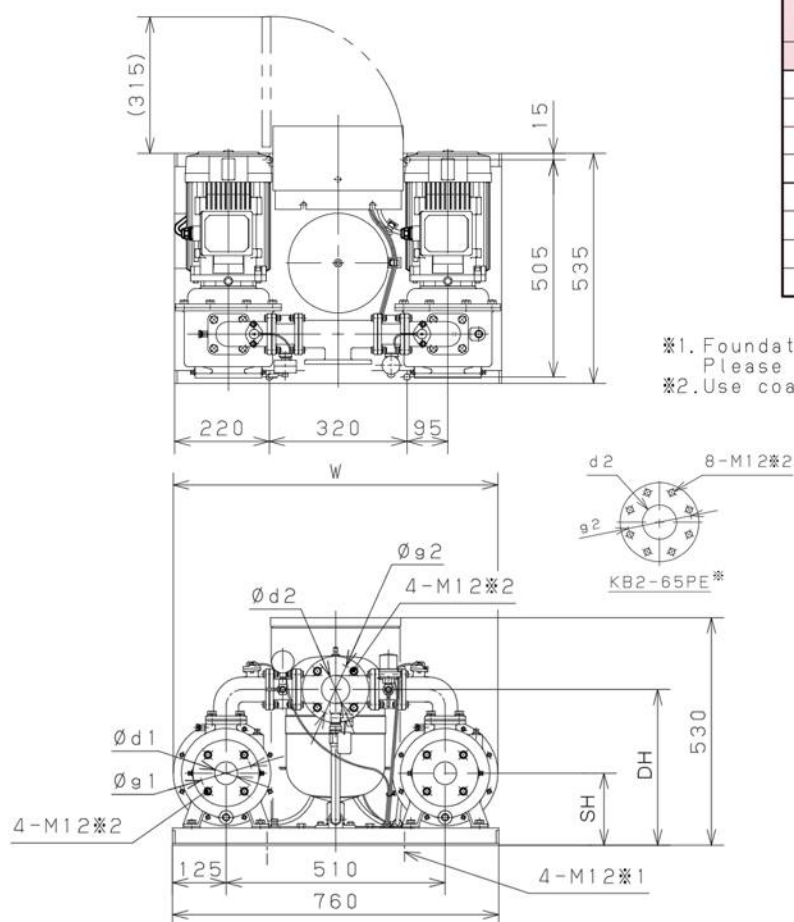
● Flange

Unit=mm

Unit bore mm	Suction bore mm	Operation	d1	d2	g1	g2
40	32	Alternate	32	40	100	105
40	40		40	40	105	105
40	50		50	40	120	105
50	65		65	50	140	120
40	32	Alternate/ Parallel	32	40	100	105
50	40		40	50	105	120
65	50		50	65	120	140
80	65		65	80	140	150

※1. Foundation bolts are special accessories.
Please purchase separately.

※2. Use coated bolts when connecting the pump and pipes.



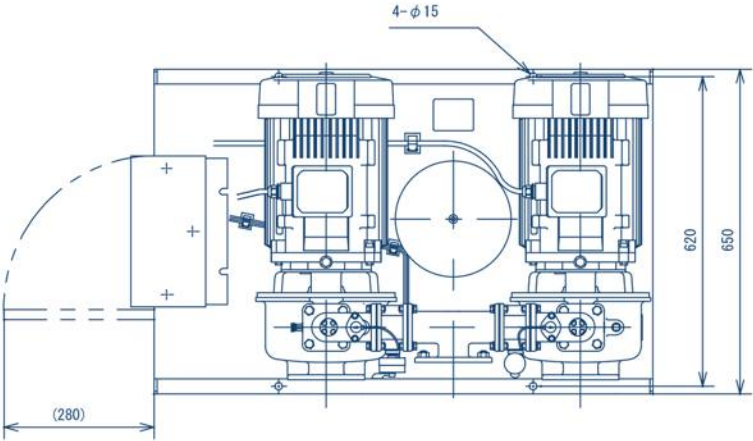
DIMENSIONS

	Unit bore	Suction bore	Operation	Model	Motor	Combination						Weight	
Hz	mm	mm			kW	SH	DH	FA	AD	DC	W	kg	
50	40	32	2 pumps Alternate	KB2-325AE0.4T4-F	0.4	168	363	—28	100	70	—	91	
				KB2-325AE0.75T4-F	0.75	168	363	—28	100	70	—	103	
				KB2-325LAE1.1T4-F	1.1	168	363	2	100	70	—	114	
				KB2-325AE1.1T4-F	1.1	168	363	5	100	70	—	115	
	40	40		KB2-405AE0.75T4-F	0.75	168	363	—40	100	70	—	103	
				KB2-405AE1.1T4-F	1.1	168	363	—40	100	70	—	113	
				KB2-405AE1.5T4-F	1.5	168	363	—40	100	70	—	118	
				KB2-405AE2.2T4-F	2.2	168	363	2	100	70	—	125	
	40	50		KB2-405AE3.7T4-F	3.7	183	396	—3	108	70	792	171	
				KB2-505AE1.5T4-F	1.5	168	363	—40	100	70	—	126	
				KB2-505AE2.2T4-F	2.2	168	363	2	100	70	—	133	
				KB2-505AE3.7T4-F	3.7	168	363	2	100	70	—	153	
	50	65		KB2-655AE3.7T4-F	3.7	183	420	—10	110	100	792	177	
	40	32		2 pumps Alternate/ Parallel	KB2-325PE0.4T4-F	0.4×2	168	363	—28	100	70	—	91
					KB2-325PE0.75T4-F	0.75×2	168	363	—28	100	70	—	103
					KB2-325LPE1.1T4-F	1.1×2	168	363	2	100	70	—	114
					KB2-325PE1.1T4-F	1.1×2	168	363	5	100	70	—	115
	50	40	KB2-405PE0.75T4-F		0.75×2	168	363	—40	100	70	—	104	
			KB2-405PE1.1T4-F		1.1×2	168	363	—40	100	70	—	114	
			KB2-405PE1.5T4-F		1.5×2	168	363	—40	100	70	—	119	
			KB2-405PE2.2T4-F		2.2×2	168	363	2	100	70	—	126	
	65	50	KB2-405PE3.7T4-F		3.7×2	183	396	—3	108	70	792	172	
			KB2-505PE1.5T4-F		1.5×2	168	363	—40	100	70	—	127	
			KB2-505PE2.2T4-F		2.2×2	168	363	2	100	70	—	134	
			KB2-505PE3.7T4-F		3.7×2	168	363	2	100	70	—	154	
	80	65	KB2-655PE3.7T4-F		3.7×2	183	420	—10	110	100	792	179	

Note : FA is distance from foundation hole to pump flange face.

DIMENSIONS

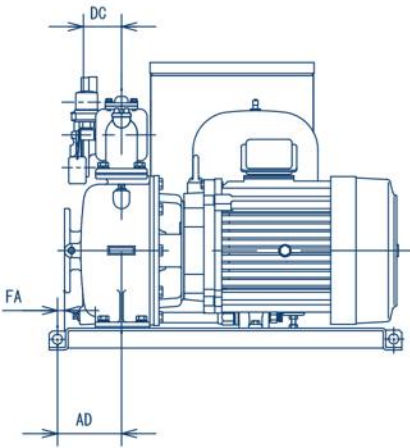
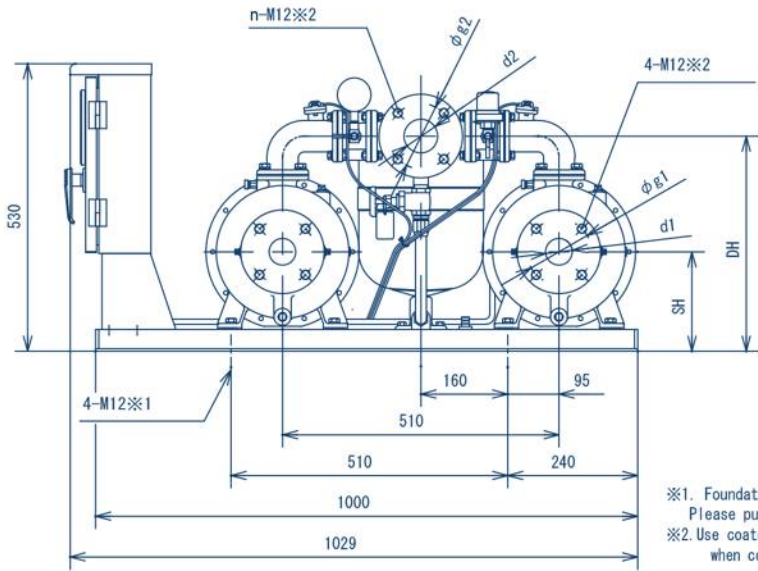
5.5~7.5kW



● Flange

Unit=mm

Unit bore mm	Suction bore mm	Operation	d1	d2	g1	g2	n
40	40	Alternate	40	40	105	105	4
40	50		50	40	120	105	4
50	65		65	50	140	120	4
50	40	Alternate/ Parallel	40	50	105	120	4
65	50		50	65	120	140	4
80	65		65	80	140	150	8



※1. Foundation bolts are special accessories.
Please purchase separately.
※2. Use coated bolts
when connecting the pump and pipes.

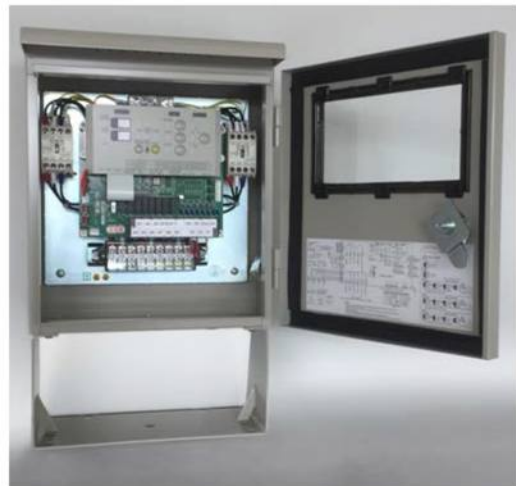
Hz	Unit bore mm	Suction bore mm	Operation	Model	Motor kW	Combination					Weight kg
50	40	40	2 pumps Alternate	KB2-405AE5.5T4-F	5.5	183	396	13	118	70	184
	40	50		KB2-505AE5.5T4-F	5.5	183	396	13	118	70	182
	50	65		KB2-655AE5.5T4-F	5.5	203	465	20	120	100	187
				KB2-655AE7.5T4-F	7.5	203	465	20	120	100	249
	50	40	2 pumps Alternate/ Parallel	KB2-405PE5.5T4-F	5.5×2	183	396	13	118	70	185
	65	50		KB2-505PE5.5T4-F	5.5×2	183	396	13	118	70	243
				KB2-655PE5.5T4-F	5.5×2	203	465	20	120	100	186
	80	65		KB2-655PE7.5T4-F	7.5×2	203	465	20	120	100	242

Note : FA is distance from foundation hole to pump flange face.

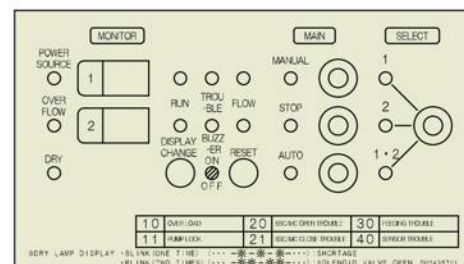
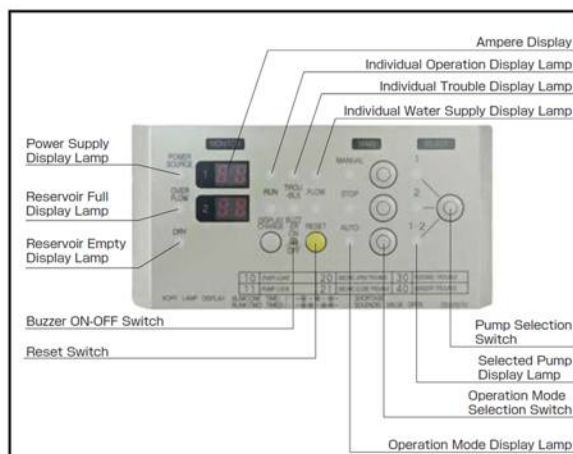
CONTROL PANEL <TYPE:ECFW-F>

■ SPECIFICATIONS

Type		ECFW-F	
Operation		Alternate of 2 pumps	Alternate/Parallel of 2 pumps
Materials		Box:Steel (1.2t) Door:Resin (2.0t)	
Colour		Gray	
Installation site		Outdoor	
Ambient temperature		-5~40℃	
Humidity		Below 90%Rh	
Assorted equipment	Magnetic contactor	○ (2 pcs)	
	Main select switch	○ (Manual-Stop-Auto)	
	Motor protection	○ (Software based on ampere)	
	Select switch for respective pump	○ (No.1-No.2-No.1&2)	
	Ammeter	○	
	Floatless switch	○	
	Alarm buzzer	○	
Function	Trouble detect	○	
	Automatic switch over to another pump	○	
	No discharge detect	○	
	Auto adjust of ON-OFF frequency	○	
	Auto adjust of parallel operation ON-OFF	○	
	Re-try of defect pump	○	
Display lamp	Power supply	○ (Red)	
	Operation mode (Auto-Stop-Manu)	○ (Red) × 3pc	
	Pump selection (No.1,2 or 1&2)	○ (Red) × 3pc	
	Operation	○ (Red) × 2pc	
	Trouble	○ (Orange) × 2pc	
	Discharging	○ (Red) × 2pc	
	Reservoir full	○ (Orange)	
	Reservoir empty	○ (Orange)	
External signal (No volt)	Operation	○	
	Trouble	○	
	Reservoir full	○	
	Reservoir empty	○	

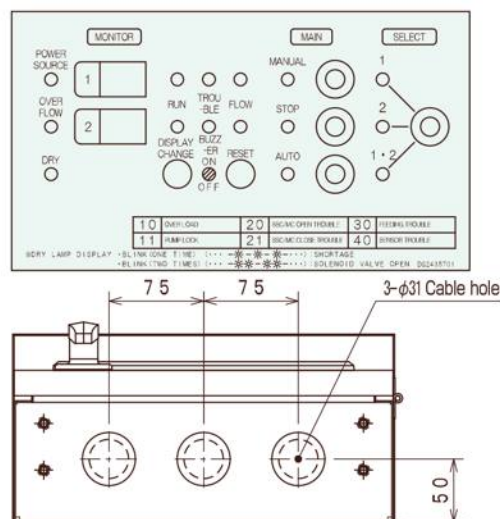
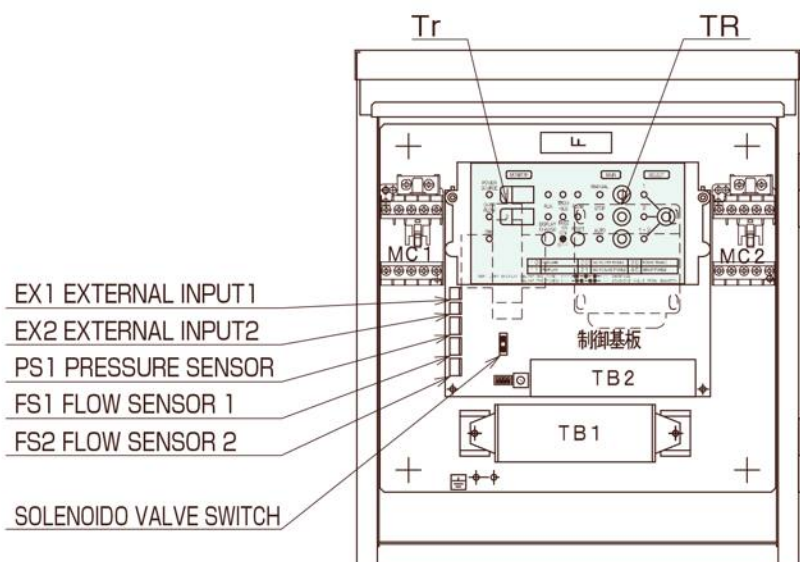
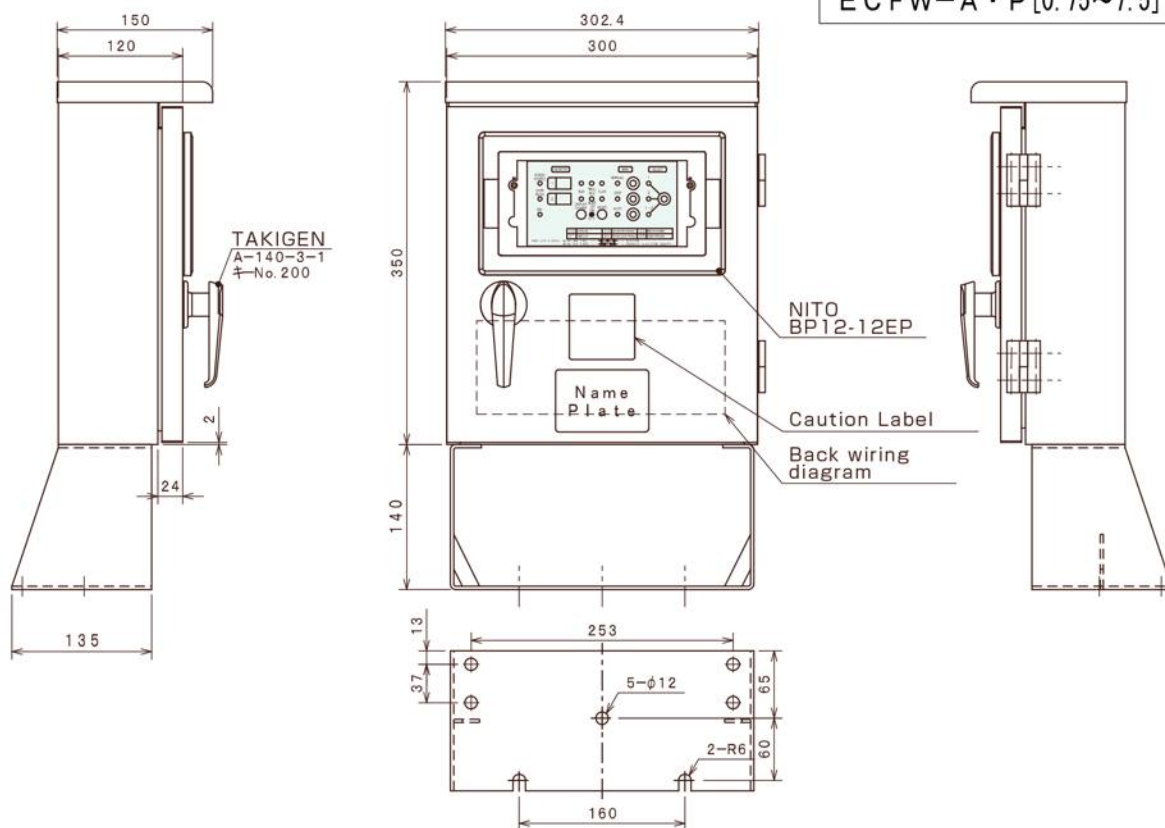


CONTROL PANEL



DIMENSION DIAGRAM - 3PHASES 380V

DIMENSION DIAGRAM
MODEL
ECFW-A · P [0.75~7.5] T4-S

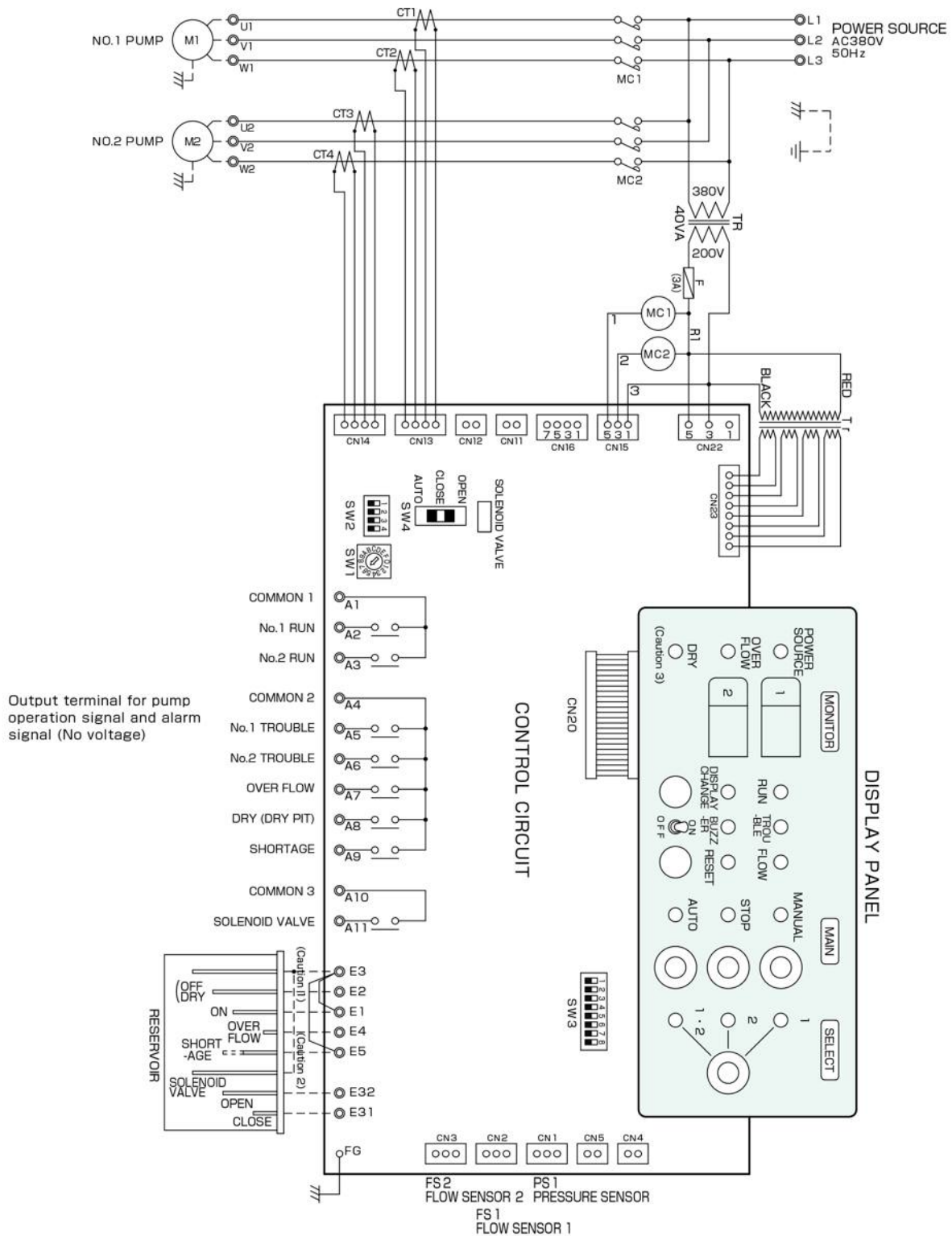


OUTER PLATE	SGCC 1.2t
DOOR	SGCC 1.2t
INNER PLATE	SPHC 2.3t
PAINT	MUNSELL 5Y7/1
WEIGHT	11.5kg

TB1								
L1	L2	L3	U1	V1	W1	U2	V2	W2

TB2								
A1	A2	A3	A10	A11	E4	E5	E32	E31
A4	A5	A6	A7	A8	A9	E3	E2	E1

WIRING DIAGRAM - 3 PHASES 380V



Caution

- 1 : When you use the electrode or the float switch, please remove the short-circuit line between E3 and E1, E3 and E5.
- 2 : When you don't use the function of SHORTAGE, please connect the short-circuit line between E3 and E5.
- 3 : When SHORTAGE is detected, the DRY lamp is blinked every second.
When the SOLENOID VALVE opens, the DRY lamp is blinked two times every two seconds.

DATA & OPTIONAL EQUIPMENT

■ PUMP DATA

Unit bore mm	Suction bore mm	Model	Impeller material	Mechanical seal (※)	Pressure sensor	Applicable Vibration isolator
40	32	KB2-325 \hat{A} E0.4T4-F	Resin	ϕ 16 EA103-16J	PSR-2.2K	BK-820
		KB2-325 \hat{A} E0.75T4-F	//	ϕ 20 EA560-20J	PSR-3.2K	//
		KB2-325 \hat{A} E1.1T4-F	//		PSR-5.3K	//
		KB2-325 \hat{A} E1.1T4-F	//		PSR-4.4K	//
40	40	KB2-405 \hat{A} E0.75T4-F	SCS13		PSR-1.6K	//
		KB2-405 \hat{A} E1.1T4-F	//		PSR-2.5K	//
		KB2-405 \hat{A} E1.5T4-F	//		PSR-3.0K	//
		KB2-405 \hat{A} E2.2T4-F	//		PSR-4.4K	//
		KB2-405 \hat{A} E3.7T4-F	CAC901		PSR-6.5K	//
		KB2-405 \hat{A} E5.5T4-F	//	ϕ 25 EA560-25J	PSR-8.0K	BK-1060
40	50	KB2-505 \hat{A} E1.5T4-F	SCS13	ϕ 20 EA560-20J	PSR-2.0K	BK-820
		KB2-505 \hat{A} E2.2T4-F	//		PSR-3.0K	//
		KB2-505 \hat{A} E3.7T4-F	//		PSR-4.8K	//
		KB2-505 \hat{A} E5.5T4-F	CAC901	ϕ 25 EA560-25J	PSR-6.5K	BK-1060
50	65	KB2-655 \hat{A} E3.7T4-F	//	ϕ 20 EA560-20J	PSR-3.2K	BK-820
		KB2-655 \hat{A} E5.5T4-F	//	ϕ 25 EA560-25J	PSR-4.8K	BK-1060
		KB2-655 \hat{A} E7.5T4-F	//		PSR-5.5K	//

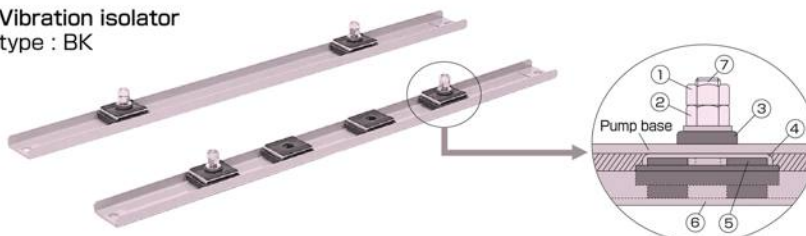
※ Ceramics × Carbon

■ MOTOR DATA

Hz	Output kW	Rated value				Starting			Insulation	Bearing	
		Current A	Speed min ⁻¹	Efficiency %	Power Factor %	Current A	Torque %	Method		Inboard	Outboard
50	0.4T	1.3	2850	76.6	77.2	8.0	295	DOL	F	6304 ZZC3	6203 ZZC3
	0.75	2.0	2795	80.2	85.7	12.0	390			6305 ZZC3	6303 ZZC3
	1.1	2.9	2860	80.9	83.5	18.2	530			6306 ZZC3	6303 ZZC3
	1.5	3.4	2850	85	86.6	21.6	354			6306 ZZC3	6303 ZZC3
	2.2	4.8	2880	85.1	88.1	33.0	325			6307 ZZC3	6206 ZZC3
	3.7	7.6	2885	87.7	88.1	61.3	372			6307 ZZC3	6206 ZZC3
	5.5	11.5	2910	87.0	89.8	89.3	318			6309 ZZC3	6207 ZZC3
	7.5	15	2930	87.8	88.5	120	140			6310 ZZC3	6207 ZZC3

■ OPTIONAL EQUIPMENT

Vibration isolator
type : BK



NO.	Name
1	Nut
2	Plain washer
3	Rubber pad
4	Spacer
5	Isolator
6	Frame
7	Bolt

Isolation efficiency	More than 80%
Stopper	By stainless steel (SUS304 for JIS G4303) made bolt of M12 to withstand horizontal earthquake gravitational acceleration of 1G and vertical earthquake gravitational acceleration of 0.5G

DATA & OPTIONAL EQUIPMENT

OPTIONAL EQUIPMENT



●Discharge direction change connecting pipe (Stainless steel) Bore: 40~65mm

●Level relay (For low water level detection, excluding single operation)

●Electrode holder/Electrode bar



Model	
EHC-3N	3P Withoud resister
EHC-4N	4P Withoud resister
EHC-3	3P with resister
EHC-4	4P with resister
Electrode	1m
Electrode separator	3P
Nut	

●Suction unit



Cast iron

Stainless steel

Bore: 40 ~ 250mm
SSF-S type: Stainless steel type is also available.

- Useful for maintenance and inspection of foot valve and suction pipe
- Lever of foot valve is easy able to move from the ground
- Foot valve and suction pipe is able to lift up from the ground (not necessary to enter in the water tank)

●Foot valve (In case of suction lift up use)

VF-VF2 foot valve with lever

- (With 3m stainless steel wire)
- VF2: Rust free resin material



Resin
VF2 type
Bore: 32 ~ 80mm



Cast iron
VF type
Bore: 40 ~ 80mm
VFF type (Flange type) is also available.

Stainless steel foot valve

- Using SCS13 for main parts, hard and long life.



VFST2 type
Bore: 40 ~ 100mm
Screwed type



VFSF2 type
Bore: 50 ~ 250mm
Flange type

●Vibration proof joint (Rubber ball type)



- Can not be used for hot water supply and water circulation for pool water

●Pipe silencer



- Absorb pressure pulse and vibration from pump
Can directly connect with pump same as vibration proof joint
- Can directly connect with pump same as vibration proof joint
- Nylon coating flange type for preventing red discolorment water is also available
- Both installation available suction side and discharge side
- Can not be used for hot water supply and water circulation for pool water

★ PACKAGE BOOSTER PUMP with INVERTER



KF2 Series



IE4 IE5 KFE Series

DATA & OPTIONAL

Advertise

OUR COMPANY

Kawamoto Pump Asia Co., Ltd.

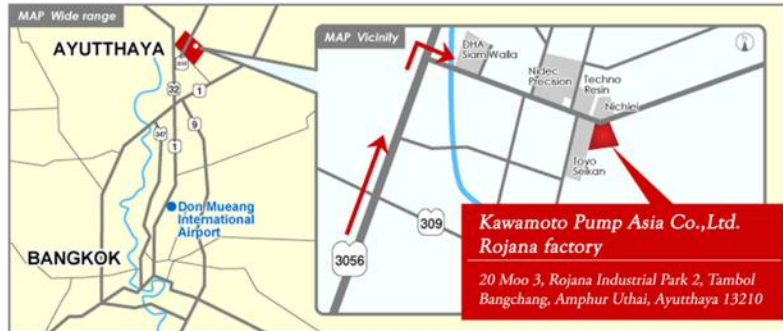
 THAILAND

Rojana Factory



Ayutthaya factory

Tel. 03-574-6860



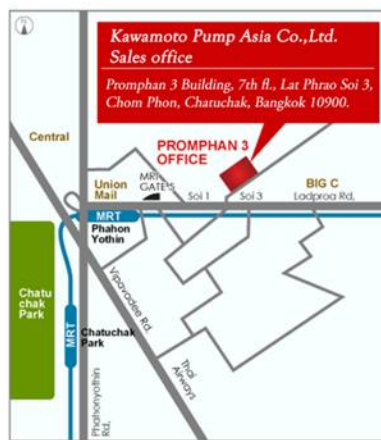
Rojana Industrial Park 2, Ayutthaya

Bangkok Sales Office

Bangkok sales office

E-mail. kpa@kawamoto-pump.co.th

Tel. 02-024-6606



**Promphan building 3
7th Floor**

Kawamoto Pump Mfg. Co., Ltd.

 JAPAN



Head office

11-39, 4-chome, Ohsu, Naka-ku, Nagoya, Aichi 460-8650 JAPAN

Phone: +81-52-251-7173

Fax: +81-52-241-6151

URL: <http://www.kawamoto.co.jp/eng/>



Located immediately outside No.10 exit of Kamimaezu subway station



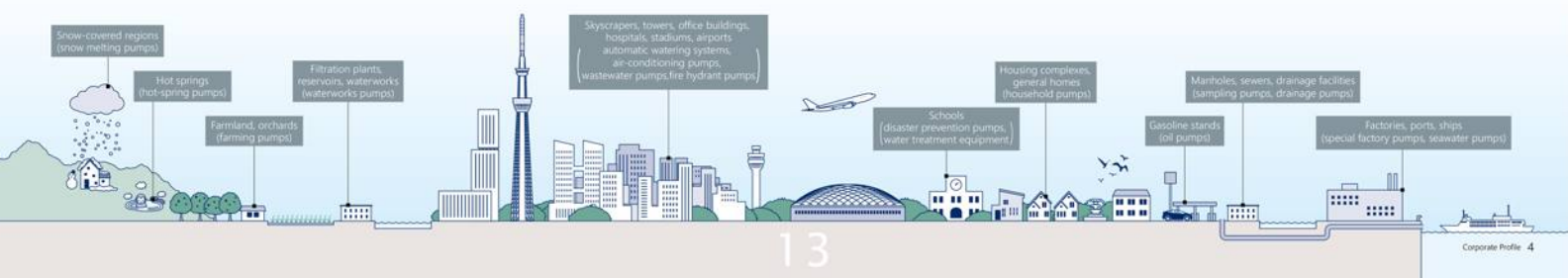
Okazaki Factory

1, Goryoden, Hashime-cho, Okazaki, Aichi 444-8530 JAPAN

Phone: +81-564-31-4191



20 minutes walk from Meitetsu Nagoya Main Line Uto station.
15 minutes by car from Shinanjo station.





Important Safety Precautions

Always read the manual thoroughly and fully comprehend the contents for safe operation before starting use. Precautions for using products safely and for preventing personal injuries or physical damage are given in the manual. ※We bear no responsibility when the above listed precautions are not observed.

- Matters falling under the following may not be covered by the warranty: uses out of the specified scope of application, failure to comply with precautions, improper repairs and alterations, matters arising from natural disasters, matters arising from the installation environment (improper power source, foreign objects, sand etc.), non-compliance with laws and regulations or standards pertaining thereto, accidental or intentional damage or injury, replacement of consumable parts, defects due to resale, etc.
- Do not use the product for applications out of the product specifications. Doing so may cause electric shock, fire, water leakage, etc.
- Have spare equipment ready when using pumps for equipment for living things (fish farms, fish tanks, aquariums, etc.) or critical equipment.
- Pump failure may cause lack of oxygen and water quality deterioration, and may affect the lives of the living things.
When using pumps for equipment for living things (fish farms, fish tanks, aquariums, etc.), do not install the pump in the tank where the living things are put into. The current leakage or sealing liquid leak from the mechanical seal may cause the death of the living things.
- If used to transport food-related items, give due consideration to the materials used. Contamination by foreign objects may occur.
- Avoid using for living things which disagrees with copper alloy. It may affect the lives of the living things.
- Select a product which is appropriate for your application. Inappropriate use of products may cause accidents.
- Conduct construction in accordance with the applicable laws and regulations (the Technical Standards of Electric Installation, interior wiring regulation, Building Standards Act, Water Supply Law, etc.). Not only does it violate the laws and regulations, but it also may cause injuries due to electric shock, fire, falling and tipping over.
- Do not use in places where people are assumed to get in contact with the product (baths, pools, lakes, etc.). Electric leak may occur and cause electric shock.
- Depending on the equipment, attach a filter etc. appropriate for your application on the discharge side before use, perform thorough flushing to check that there is no contamination. Cutting oil, rubber mold releasing agent, foreign objects etc. from the manufacturing line and cutting oil, foreign objects etc. from the pipeline may contaminate the liquid which is to be handled.
- Do not operate pumps with a specification of 50Hz at 60Hz. It may cause damage due to overpressure or burn damage of motors etc. due to overload. Do not operate pumps with a specification of 60Hz at 50Hz. Pump performance may be reduced.
- Only repair technicians may disassemble, repair, modify the product or replace cables. Defects may cause failure, damage, electrification or fire.
- It is recommended that both periodic and daily inspections be performed in order to ensure that the pump will operate reliably for as long as possible. Failure to perform inspections may lead to pump failure, accidents etc. For periodic inspections, please consult your distributor or our nearest sales office.

Note

Specifications/Configurations may be altered as a result of improvements and such.
Unauthorized reproduction of this document is prohibited.

Kawamoto Pump Asia CO., LTD.

20 Moo 3, Rojana Industrial Park 2, Tambol Bangchang, Amphur Uthai,
Phranakhon Si Ayutthaya 13210 Thailand.

TEL: 0-3574-6860 FAX: 0-3574-6866
E-mail: kpa@kawamoto-pump.co.th
Website: www.kawamoto-pump.co.th

For any question about pumps, please contact your nearest distributor