

Features

- ① Strong and tough with high wear resistant structure and material.
- ② Non-seal (mechanical seal-less) structure is adopted.
- ③ High-pressure, large-capacity (Max. 500 L/min) pump allows expanded selection of head and discharge rate.
- ④ The lineup including the models complying with global standards by supporting efficiency and other regulations.
  - Japan : Top Runner efficiency
  - Europe : IE3 efficiency, CE marking (EU Directive)  
RoHS Directive (2011/65/EU) , 10 substances restricted
  - USA : NEMA Premium efficiency (IE3 efficiency), UL standards (safety)
  - China : GB3 (GB18613-2020)
  - Korea : Energy Efficiency Label and Standard Program (IE3)
- ⑤ 2 options for immersion length are available (excluding VKD111AA- □ ).



Please note that the paint color, etc. of the actual unit may partially differ from the photo.

Description of types

**VKD 15 2 A D -e**

- ①
- ②
- ③
- ④
- ⑤
- ⑥

- ① Model
- ② Output 11:0.75kW, 13:1.5kW, 14:2.2kW, 15:3.0kW
- ③ Series number 1 : Standard leg, long leg  
2 : Standard leg (shaft seal structure changed)
- ④ Phase A : 3-phase
- ⑤ Number of impellers, immersion length [standard leg: 260mm (2.2kW or less) /300 mm(3.0kW), Long leg: 400mm]  
A: 1 impeller/standard leg, B: 2 impellers/standard leg,  
C: 3 impellers/standard leg, D: 4 impellers/standard leg,  
G: 3 impellers/long leg, H: 4 impellers/long leg
- ⑥ Motor efficiency/ voltage  
None : Standard efficiency (equivalent to IE1) / Standard voltage  
-e : Top Runner efficiency (equivalent to IE3) / Standard voltage  
-4Z : Standard efficiency (equivalent to IE1) / Different voltage  
-4Z-e : Top Runner efficiency (equivalent to IE3) / Different voltage  
-7W : UL approved motor (NEMA Premium efficiency)  
-KS : Equipped with Korea Efficiency Label and Standard Program compliant motor (equivalent to IE3)

Global standards

Type	Standards/Regulations	Output
		0.75kW-3.0kW
VKD	IE1 equivalent	●
	CE Marking EU energy efficiency	●
VKD-e	Top Runner Efficiency (IE3 equivalent)	●
	CE Marking EU energy efficiency	●
	GB3(GB18613-2020)	●*1
VKD-7W	UL Standards (safety) NEMA Premium efficiency	●
VKD-KS	Energy Efficiency Label and Standard Program (IE3)	●

\*1 GB certification label is attached as exclusive for GB standard. ● : Compliant

Standard Specification

Used liquid	Property of liquid	Grinding liquid, cutting liquid, etc., after primary treatment *1
	Temperature	-20 to 40°C (No frozen liquid)
	Allowable kinematic viscosity	75mm <sup>2</sup> /s *2
Installation location		Indoor Ambient temperature: -20 to 40 °C, RH 85% or below (no condensation), Height above sea level : 1000m or less, Place not exposed to direct sunlight, Place in an area free of corrosive or explosive gas or vapor.
Material	Pump leg	FC200
	Casing	FC200
	Impeller	FC200
	Main shaft	S45C
Shaft seal structure		Non-seal (mechanical seal-less)
Motor	Power source	3-phase 50/60/60Hz 200/200/220V *3
	Type	Totally enclosed fan-cooled indoor type
	Protection method	IP54
	Thermal class	F *4
	Rating	Continuous
	Number of poles	2P
Standard		IEC60034-1 CE Marking *5
Paint color		Munsell N1

\*1 Take note that special liquid such as water, printing liquid or acid liquid cannot be used. Contact us for other special liquid (ceramic, etc.).  
 \*2 -7W type is 1mm<sup>2</sup>/s. In case of using the liquid with kinematic viscosity exceeding 1mm<sup>2</sup>/s, please contact us separately.  
 \*3 NEMA Premium efficiency (IE3), UL Standards (safety): 60Hz 208/230/460V Korea Energy Efficiency Label and Standard Program (IE3): 60Hz 220/380V, GB18613-2020: 3-phase 50Hz 200V, 50Hz 380V  
 \*4 Thermal class of -7W type is class A. VKD111AA(equivalent to IE1) and VKD132AB(131AF) is class B.  
 \*5 Excluding -7W and -KS types.

Table of Consumable Parts

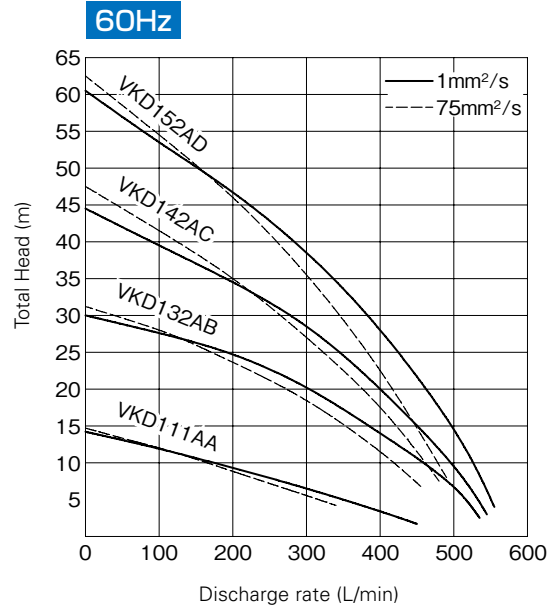
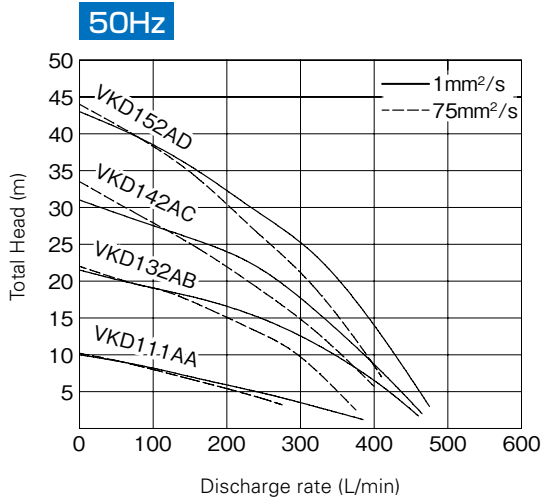
Type	Bearing		Oil seal		O-ring oil thrower		
	Load side	Unload side	Load side	Unload side			
VKD111AA- □	6305ZZ	6203ZZ			P25		
VKD132AB- □	6306ZZ				SC30457	HM25385	P30
VKD142AC- □							
VKD152AD- □	6307ZZ	6205ZZ					
VKD131AF- □							
VKD141AG- □							
VKD151AH- □							

**Selection chart**

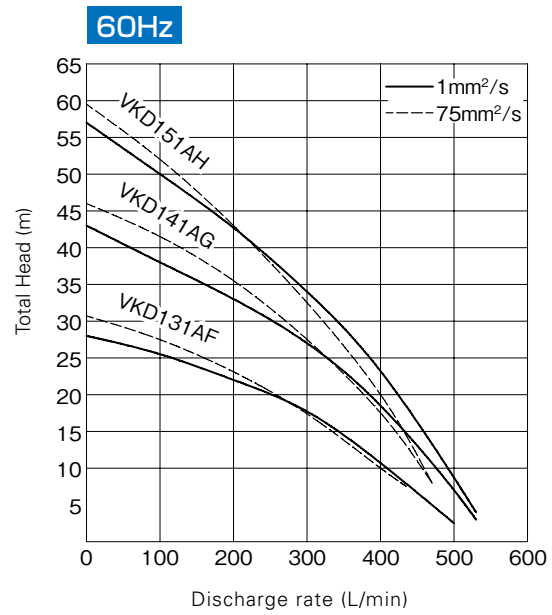
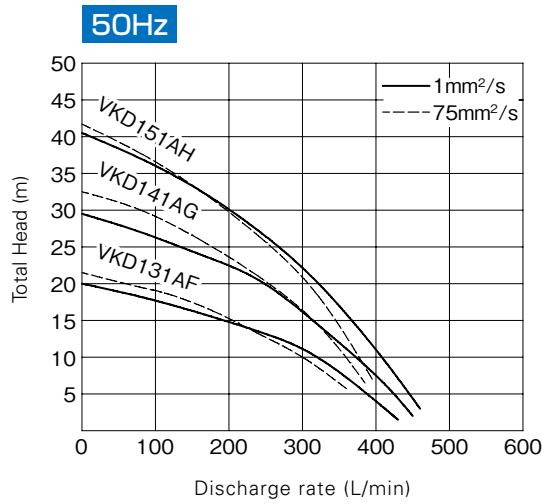
(Values at kinematic viscosity  $1\text{mm}^2/\text{s}$ , specific gravity 1)  
 (Values at kinematic viscosity  $75\text{mm}^2/\text{s}$ , specific gravity 1)

Synchronous rotating speed 50Hz :  $3000\text{min}^{-1}$   
 60Hz :  $3600\text{min}^{-1}$

● **Standard leg**



● **Long leg**



※ Above selection chart is also available for -e/-7W/-KS type, but the allowable kinematic viscosity for -7W type is  $1\text{mm}^2/\text{s}$ .  
 In case of using the liquid with kinematic viscosity exceeding  $1\text{mm}^2/\text{s}$ , please contact us.  
 Note) Take note that discharge rate varies considerably depending on the type and kinematic viscosity of liquid.

## Specification table

Immersion depth	Type	Output (kW)	50Hz					60Hz						
			Rated voltage (V)	Rated current (A)	Starting current (A)	Discharge rate (L/min)	Total head (m)	Rated voltage (V)	Rated current (A)	Starting current (A)	Discharge rate (L/min)	Total head (m)		
Standard leg	VKD111AA	0.75	200	4.7	33.8	80-300	8-4	200/220	5.0/4.9	31.1/34.1	100-400	12-4		
	VKD111AA-4Z		380/400/415	2.5/2.4/2.4	18.0/17.3/17.3			400/440	2.5/2.5	15.6/17.4				
	VKD111AA-e		200	4.7	34.0			200/220	5.0/4.9	32.5/36.0				
	VKD111AA-4Z-e		380/400/415	2.4/2.4/2.4	16.0/17.0/17.5			400/440	2.5/2.5	16.3/18.0				
	VKD111AA-7W							208/230/460	4.3/4.0/2.0	33.9/38.0/19.0				
	VKD111AA-KS							220/380	5.2/3.0	31.5/18.2				
	VKD132AB	1.5	200	7.6	51.4	80-400	20-7	200/220	10/9.2	45/49.6	100-500	28-7		
	VKD132AB-4Z		380/400/415	4.0/3.8/3.7	27.1/25.7/25.0			400/440	5.0/4.6	22.5/24.8				
	VKD132AB-e		200	7.6	49.0			200/220	9.1/7.9	45.5/50.0				
	VKD132AB-4Z-e		380/400/415	3.8/3.8/3.8	23.0/24.5/25.0			400/440	4.6/4.6	22.8/25.0				
	VKD132AB-7W							208/230/460	8.7/8.0/4.0	47.3/52.0/26.0				
	VKD132AB-KS							220/380	9.0/5.2	45.7/26.4				
	VKD142AC	2.2	200	13.7	92.6	80-400	29-9	200/220	13.6/13.2	80.7/88.8	100-500	40-9		
	VKD142AC-4Z		380/400/415	7.3/6.9/6.7	49.3/46.6/45.3			400/440	6.8/6.6	40.4/44.4				
	VKD142AC-e		200	12.0	78.0			200/220	12.1/10.7	72.0/79.0				
	VKD142AC-4Z-e		380/400/415	6.0/6.0/6.0	37.5/39.0/40.5			400/440	6.1/6.1	36.0/39.5				
	VKD142AC-7W							208/230/460	11.7/10.7/5.3	74.8/83.0/41.5				
	VKD142AC-KS							220/380	12/6.9	75/43.3				
	VKD152AD	3.0	200	16	92.5	80-400	40-14	200/220	17.3/16	80.7/88.9	100-500	54-14		
	VKD152AD-4Z		380/400/415	8.3/8.0/7.9	48.0/46.3/45.7			400/440	8.7/8.0	40.6/44.5				
	VKD152AD-e		200	14.5	120			200/220	16.2/14.6	115/126				
	VKD152AD-4Z-e		380/400/415	7.3/7.3/7.3	58.0/60.0/62.0			400/440	8.1/8.1	57.5/63.0				
	VKD152AD-7W							208/230/460	15.3/14.0/7.0	119/130/65.0				
	VKD152AD-KS							220/380	16/9.2	117/67.3				
Long leg	VKD131AF	1.5	200	7.6	51.4	80-400	18-4	200/220	10/9.2	45/49.6	100-500	25-2		
	VKD131AF-4Z		380/400/415	4.0/3.8/3.7	27.1/25.7/25.0			400/440	5.0/4.6	22.5/24.8				
	VKD131AF-e		200	7.6	49.0			200/220	9.1/7.9	45.5/50				
	VKD131AF-4Z-e		380/400/415	3.8/3.8/3.8	23.0/24.5/25.0			400/440	4.6/4.6	22.8/25.0				
	VKD131AF-7W							208/230/460	8.7/8.0/4.0	47.3/52.0/26.0				
	VKD131AF-KS							220/380	9.0/5.2	45.7/26.4				
	VKD141AG	2.2	200	13.7	92.6	80-400	27-7	200/220	13.6/13.2	80.7/88.8	100-500	38-7		
	VKD141AG-4Z		380/400/415	7.3/6.9/6.7	49.3/46.6/45.3			400/440	6.8/6.6	40.4/44.4				
	VKD141AG-e		200	12	78.0			200/220	12.1/10.7	72.0/79.0				
	VKD141AG-4Z-e		380/400/415	6.0/6.0/6.0	37.5/39.0/40.5			400/440	6.1/6.1	36.0/39.5				
	VKD141AG-7W							208/230/460	11.7/10.7/5.3	74.8/83.0/41.5				
	VKD141AG-KS							220/380	12/6.9	75.0/43.3				
	VKD151AH	3.0	200	16	92.5	80-400	37-11	200/220	17.3/16	80.7/88.9	100-500	50-8		
	VKD151AH-4Z		380/400/415	8.3/8.0/7.9	48.0/46.3/45.7			400/440	8.7/8.0	40.6/44.5				
	VKD151AH-e		200	14.5	120			200/220	16.2/14.6	115/126				
	VKD151AH-4Z-e		380/400/415	7.3/7.3/7.3	58.0/60.0/62.0			400/440	8.1/8.1	57.5/63.0				
	VKD151AH-7W							208/230/460	15.3/14.0/7.0	119/130/65.0				
	VKD151AH-KS							220/380	16/9.2	117/67.3				

Note 1) Discharge rate and total head are the values obtained in the tests with a liquid viscosity of 1mm<sup>2</sup>/s (same as fresh water at normal temperature). Note that the pumps cannot be used with water.

Note 2) The pump's rated current (current value listed on the pump nameplate) is the recommended current setting for protection device.

Assembly drawing

Standard leg

Fig.1

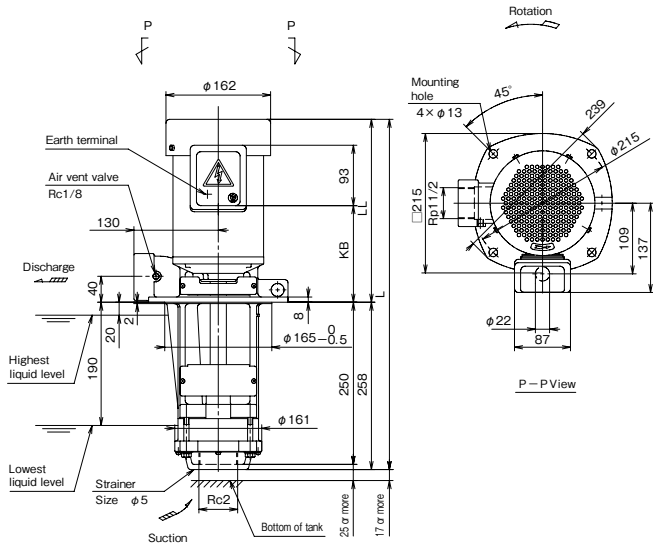
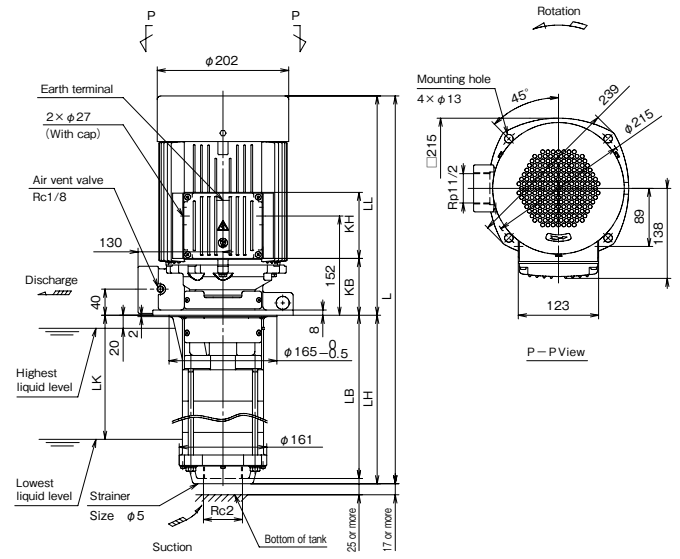
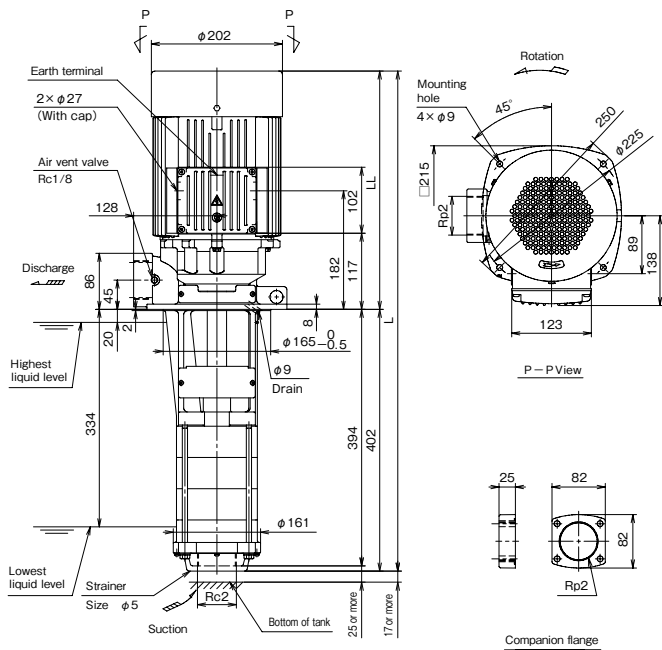


Fig.2



Long leg

Fig.3



Dimensions

Standard leg

(Unit : mm)

Type	Fig.	KB	KH	LB	LH	LK	LL	L	Approx. mass(kg)
VKD111AA	1	139					272	530	24
VKD111AA-e(-7W/-KS)	1	149					282	540	25
VKD132AB	2	87	102	250	258	190	336	594	34
VKD132AB-e(-7W/-KS)	2	87	102	250	258	190	336	594	35
VKD142AC	2	87	102	250	258	190	336	594	36
VKD142AC-e(-7W/-KS)	2	87	102	250	258	190	336	594	37
VKD152AD	2	87	102	298	306	238	336	642	39
VKD152AD-e(-7W/-KS)	2	87	102	298	306	238	356	662	45

※ Above specification is also available for different specification.

Long leg

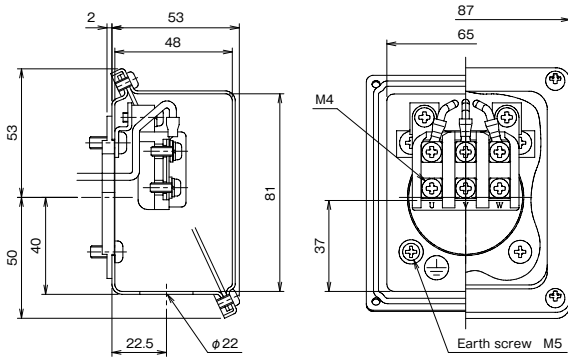
(Unit : mm)

Type	Fig.	LL	L	Approx. mass(kg)
VKD131AF	3	366	768	40
VKD131AF-e(-7W/-KS)	3	366	768	41
VKD141AG	3	366	768	43
VKD141AG-e(-7W/-KS)	3	366	768	44
VKD151AH	3	366	768	44
VKD151AH-e(-7W/-KS)	3	386	788	50

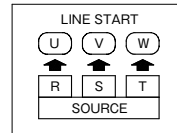
Detailed drawing of terminal box

VKD111AA(-e)

Assembly drawing



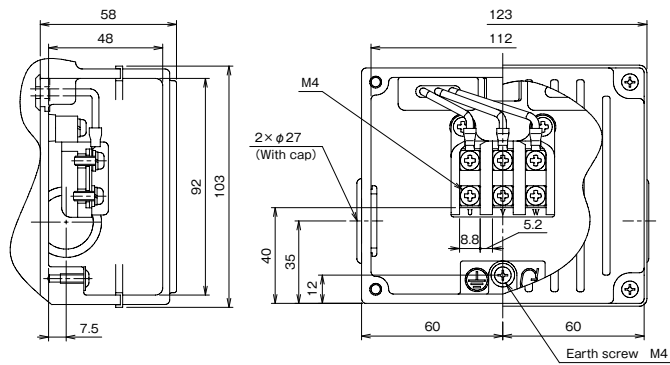
Connection diagram



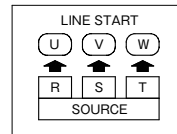
VKD132AB(-e)/142AC(-e)/152AD(-e)

VKD131AF(-e)/141AG(-e)/151AH(-e)

Assembly drawing



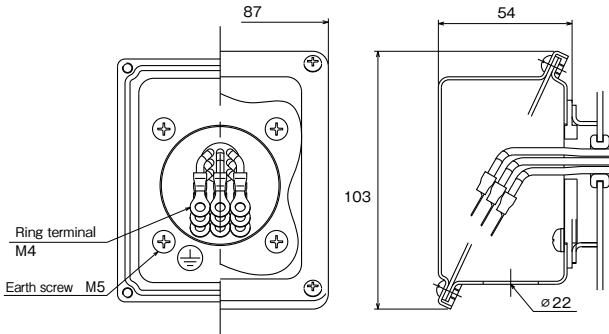
Connection diagram



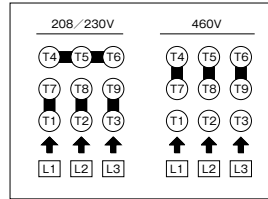
■ Detailed drawing of terminal box

●VKD-7W 0.75kW

■ Assembly drawing

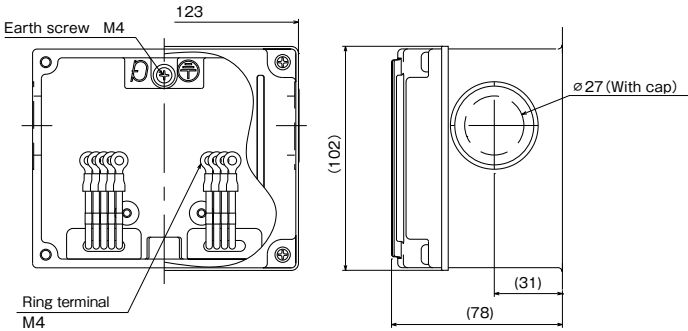


■ Connection diagram

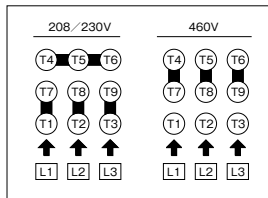


●VKD-7W 1.5kW and above

■ Assembly drawing

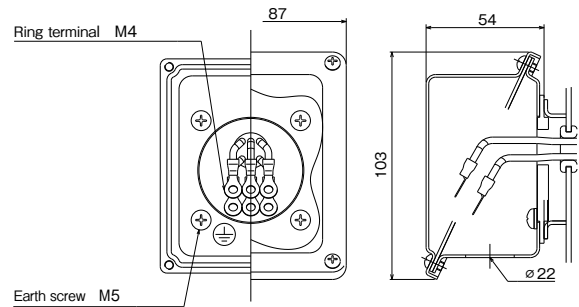


■ Connection diagram

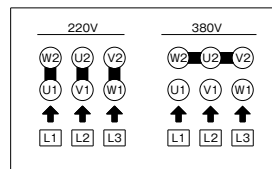


●VKD-KS 0.75kW

■ Assembly drawing

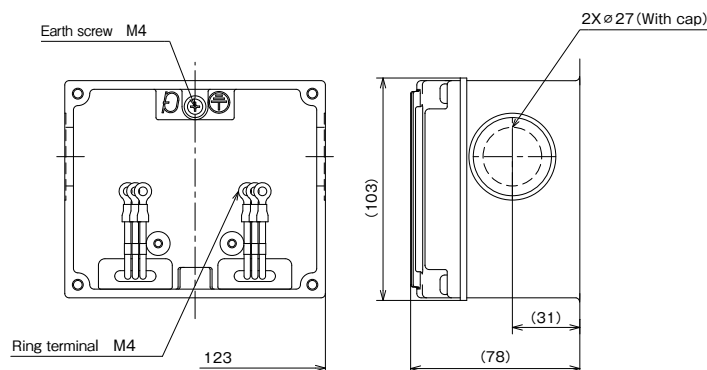


■ Connection diagram

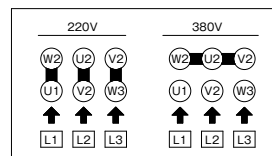


●VKD-7W 1.5kW and above

■ Assembly drawing

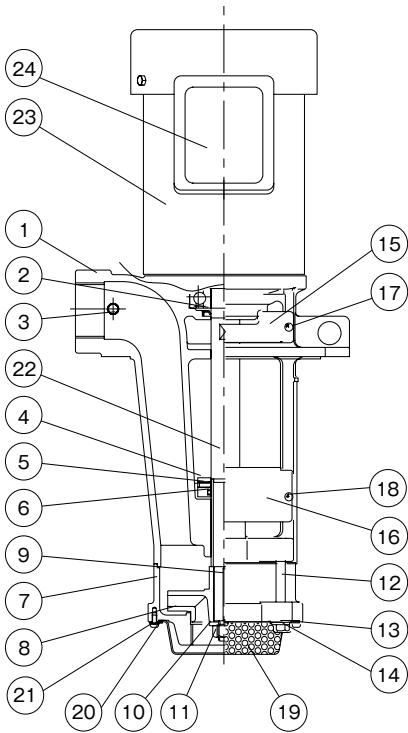


■ Connection diagram



Sectional drawing

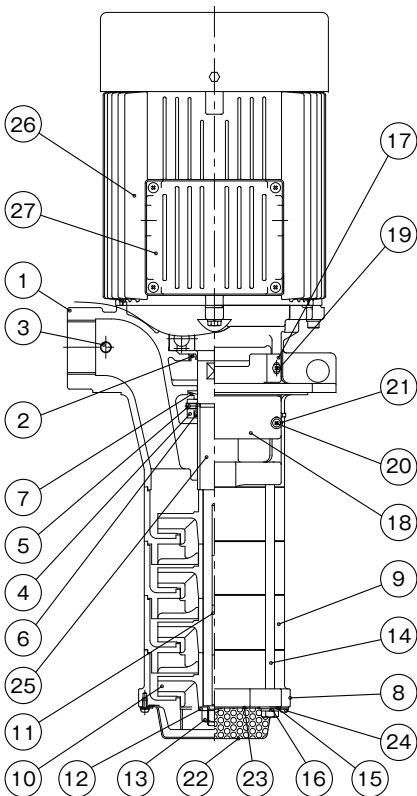
●VKD111AA (-□)



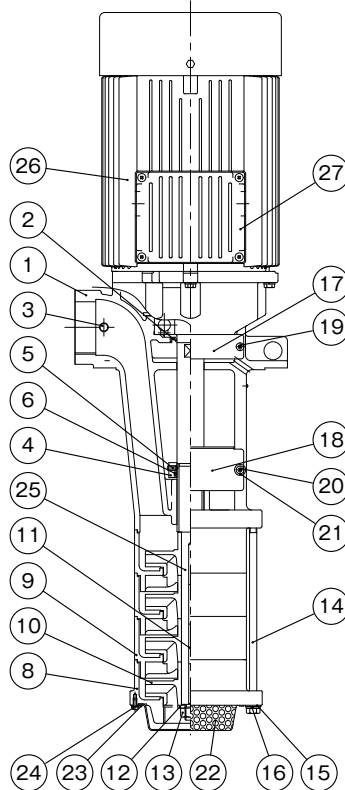
No.	Part name	Material
1	Pump leg	FC200
2	Oil seal	NBR
3	Air vent valve	SUS
4	Oil thrower	SUS304
5	Hexagon socket set screw	SCM435
6	O-ring	FPM
7	Casing	FC200
8	Impeller	FC200
9	Key	S45C-D
10	Plain washer	SPCC
11	Hexagon nut	SS
12	Fastening bolt	SS
13	Plain washer	SPCC
14	Spring washer	SWRH62
15	Side plate	SPCC
16	Side plate	SPCC
17	Pan head screw	SS
18	Pan head screw	SS
19	Strainer	SPCC
20	Holding metal	SPCC
21	Pan head screw with captive washer	SS
22	Main shaft	S45C
23	Motor	—
24	Terminal box	SPCC

Note 1) The materials in the table above are equivalents.  
 Note 2) Structure and other details are subject to change without notice.

●VKD132AB (-□) / VKD142AC (-□) / VKD152AD (-□)



●VKD131AF (-□) / VKD141AG (-□) / VKD151AH (-□)



No.	Part name	Material
1	Pump leg	FC200
2	Oil seal	NBR
3	Air vent valve	SUS
4	Oil thrower	SUS304
5	Hexagon socket set screw	SCM435
6	O-ring	FPM
7	Deflector <sup>Note 1</sup>	NBR
8	Casing	FC200
9	Casing	FC200
10	Impeller	FC200
11	Key	S45C-D
12	Plain washer	SPCC
13	Hexagon nut	SS
14	Fastening bolt	SS
15	Plain washer	SPCC
16	Spring washer	SWRH62
17	Side plate	SPCC
18	Side plate	SPCC
19	Pan head screw	SS
20	Pan head screw	SS
21	Plain washer	SPCC
22	Strainer	SPCC
23	Holding metal	SPCC
24	Pan head screw with captive washer	SS
25	Main shaft	S45C-D
26	Motor	—
27	Terminal box	ADC12

Note 1) VKD132AB(-□), VKD142AC(-□), and VKD152AD(-□) only.  
 Note 2) The materials in the table above are equivalents.  
 Note 3) Structure and other details are subject to change without notice.