

# VEM Series



▲ Made of PVDF    ▲ Made of PP

## Standard specifications

### Structure

- Drive: Direct drive motor
- Gas seal: Double seal using V-ring and air ring
- Pump body piping: High rigidity plastic type with metal insert
- Casing: Integrated molded volute type
- Impeller: Closed type (Shaft sleeve integrated)

### Operating temperature range:

- PP: 0 to 80°C
- PVDF: 0 to 90°C

### Rotating direction: Clockwise

(When viewed from the motor side)

### Flange: Equivalent to JIS 10K FF

Motor: 2-pole induction motor with dedicated flange, for outdoor use

Paint color: Equivalent to Munsell 2.5B4/8 (Motor)

## Model identification

### VEM - 025 1 F 01 P N A

① ② ③ ④ ⑤ ⑥ ⑦ ⑧

① Name    ② Nozzle diameter    ③ Frame No.

④ O-ring material

F: FPM    E: EPDM

⑤ Motor output

- 01: 0.75 kW    02: 1.5 kW
- 03: 2.2 kW    05: 3.7 kW
- 07: 5.5 kW    10: 7.5 kW

⑥ Body material (casing, body piping, etc.) and length under neck

- P: Made of PP, Length under neck: 400 mm
- K: Made of PP, Length under neck: 275 mm
- M: Made of PVDF, Length under neck: 400 mm
- S: Made of PVDF, Length under neck: 275 mm

⑦ Installation condition

- T: Outside of tank    N: Inside of tank (PVC)\*
- R: Inside of tank (Other than PVC)

\* Indicates materials of suction strainer, discharge pipe and bed plate.

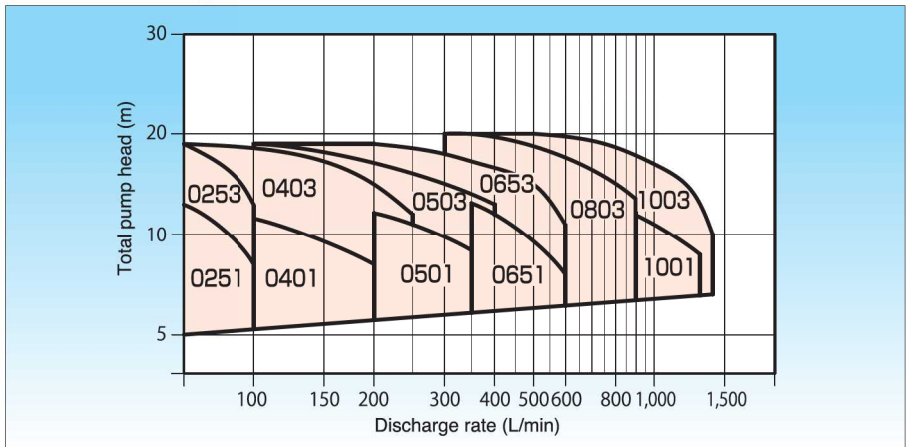
⑧ Material of bolts inside tank

- A: PP    P: PVDF
- (Blank: SUS)

## Applications

- For circulation of chemicals in etching machines, etc.
- For circulation of plating liquids such as chromium, nickel, copper and electroless plating
- For circulation of pickling liquids for wire drawing
- For circulation of waste gas absorbing liquids
- Applicable as circulation pump. Can be installed both inside and outside tank.
- Other than the above, applicable for liquid feed from pits

## 50 Hz model capacity chart



## 50 Hz model specifications table

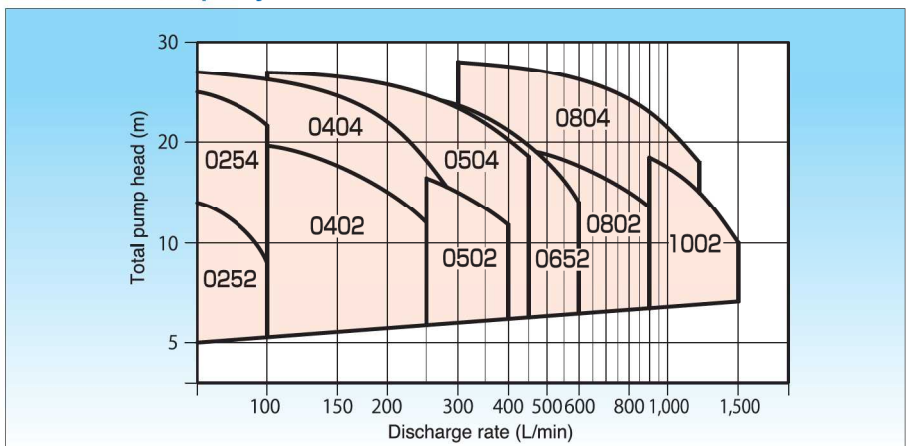
Model	Nozzle diameter (mm)	Discharge rate (L/min)	Total pump head (m)	Motor output (kW)
VEM-0251	25	60	10	0.75
VEM-0253		50	14	1.5
VEM-0401	40	150	9	0.75
VEM-0403		200	15	1.5
VEM-0501	50	290	10	1.5
VEM-0503		300	15	2.2
VEM-0651	65	400	12	2.2
VEM-0653		500	15	3.7
VEM-0803	80	800	15	5.5
VEM-1001	100	1,000	10	5.5
VEM-1003		1,200	15	7.5

Motor output is given for liquids with a specific gravity of 1.0 at the target point.

Model	Applicable motor (kW)
VEM-0251-0653	0.75, 1.5, 2.2, 3.7
VEM-0803-1003	5.5, 7.5

Only a dedicated motor (full-closed, outer fan type for outdoor use) can be used.

## 60 Hz model capacity chart



## 60 Hz model specifications table

Model	Nozzle diameter (mm)	Discharge rate (L/min)	Total pump head (m)	Motor output (kW)
VEM-0252	25	50	12	0.75
VEM-0254		70	23	1.5
VEM-0402	40	200	15	1.5
VEM-0404		200	22	2.2
VEM-0502	50	300	15	2.2
VEM-0504		350	22	3.7
VEM-0652	65	500	18	3.7
VEM-0802	80	800	15	5.5
VEM-0804		800	24	7.5
VEM-1002	100	1,200	15	7.5

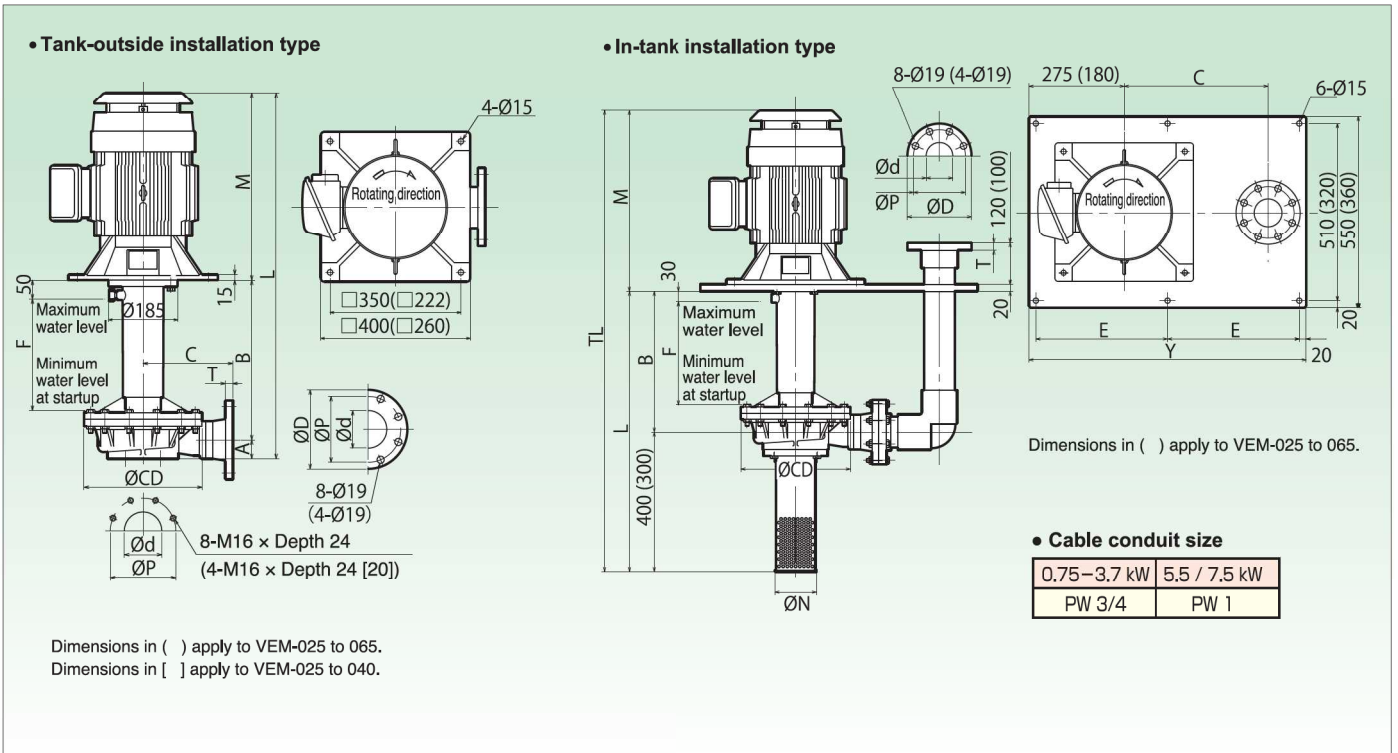
Motor output is given for liquids with a specific gravity of 1.0 at the target point.

Model	Applicable motor (kW)
VEM-0252-0652	0.75, 1.5, 2.2, 3.7
VEM-0802-1002	5.5, 7.5

Only a dedicated motor (full-closed, outer fan type for outdoor use) can be used.

## 60 Hz model applicable motors

## ■ Dimensional drawing



## ■ Dimensions table for tank-outside installation type

Model	Motor (kW)	A	B		F		L		C	M	φCD	φd	φP	φD	T
			K/S type	P/M type	K/S type	P/M type	K/S type	P/M type							
VEM-025	0.75	25	275	400	175	300	691	816	160	356	240	25	90	125	16
	1.5	25	275	400	175	300	729	854	160	391	240	25	90	125	16
	2.2	25	275	400	175	300	729	854	160	391	240	25	90	125	16
VEM-040	0.75	25	275	400	175	300	691	816	160	356	240	40	105	140	16
	1.5	25	275	400	175	300	729	854	160	391	240	40	105	140	16
	2.2	25	275	400	175	300	729	854	160	391	240	40	105	140	16
VEM-050	0.75	25	275	400	175	300	777	902	160	458	240	40	105	140	16
	1.5	38	275	400	175	300	745	867	175	391	260	50	120	155	16
	2.2	38	275	400	175	300	742	867	175	391	260	50	120	155	18
VEM-065	0.75	38	275	400	175	300	790	915	175	458	260	50	120	155	18
	1.5	38	275	400	175	300	790	915	175	458	260	50	120	155	18
	2.2	38	275	400	175	300	724	867	175	391	260	65	140	175	18
VEM-080	3.7	38	275	400	175	300	790	915	175	458	260	65	140	175	18
	5.5	50	—	428	—	300	—	982	240	499	310	77	150	185	20
VEM-100	7.5	50	—	428	—	300	—	982	240	499	310	77	150	185	20
	5.5	50	—	428	—	300	—	982	240	499	310	100	175	210	20
VEM-100	7.5	50	—	428	—	300	—	982	240	499	310	100	175	210	20

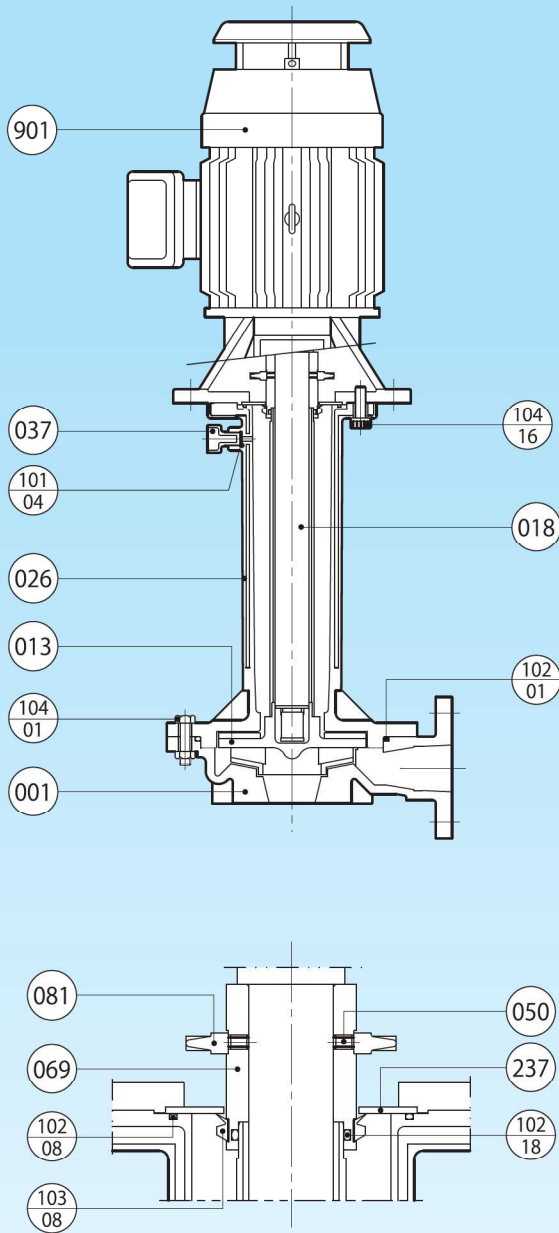
## ■ Dimensions table for in-tank installation type

Model	Motor (kW)	B		F		L		TL		C	M	φCD	φN	E	Y	φd	φP	φD	T
		K/S type	P/M type	K/S type	P/M type	K/S type	P/M type	K/S type	P/M type										
VEM-025	0.75	255	380	175	300	555	680	931	1056	267	376	240	58	245	530	25	90	125	16
	1.5	255	380	175	300	555	680	966	1091	267	411	240	58	245	530	25	90	125	16
	2.2	255	380	175	300	555	680	966	1091	267	411	240	58	245	530	25	90	125	16
VEM-040	0.75	255	380	175	300	555	680	931	1056	307	376	240	58	270	580	40	105	140	16
	1.5	255	380	175	300	555	680	966	1091	307	411	240	58	270	580	40	105	140	16
	2.2	255	380	175	300	555	680	966	1091	307	411	240	58	270	580	40	105	140	16
VEM-050	0.75	255	380	175	300	555	680	1033	1158	307	478	240	58	270	580	40	105	140	16
	1.5	255	380	175	300	555	680	966	1091	175	391	260	86	295	630	50	120	155	16
	2.2	255	380	175	300	555	680	966	1091	175	391	260	86	295	630	50	120	155	18
VEM-065	0.75	255	380	175	300	555	680	1033	1158	175	438	260	86	295	630	50	120	155	18
	1.5	255	380	175	300	555	680	966	1091	175	391	260	86	305	650	65	140	175	18
	2.2	255	380	175	300	555	680	966	1091	175	391	260	86	305	650	65	140	175	18
VEM-080	3.7	255	380	175	300	555	680	1033	1158	175	438	260	86	305	650	65	140	175	18
	5.5	—	408	—	300	—	808	—	1327	240	475	310	124	380	800	77	150	185	20
VEM-100	7.5	—	408	—	300	—	808	—	1327	240	475	310	124	380	800	77	150	185	20
	5.5	—	408	—	300	—	808	—	1327	240	475	310	124	430	900	100	175	210	20
VEM-100	7.5	—	408	—	300	—	808	—	1327	240	475	310	124	430	900	100	175	210	20

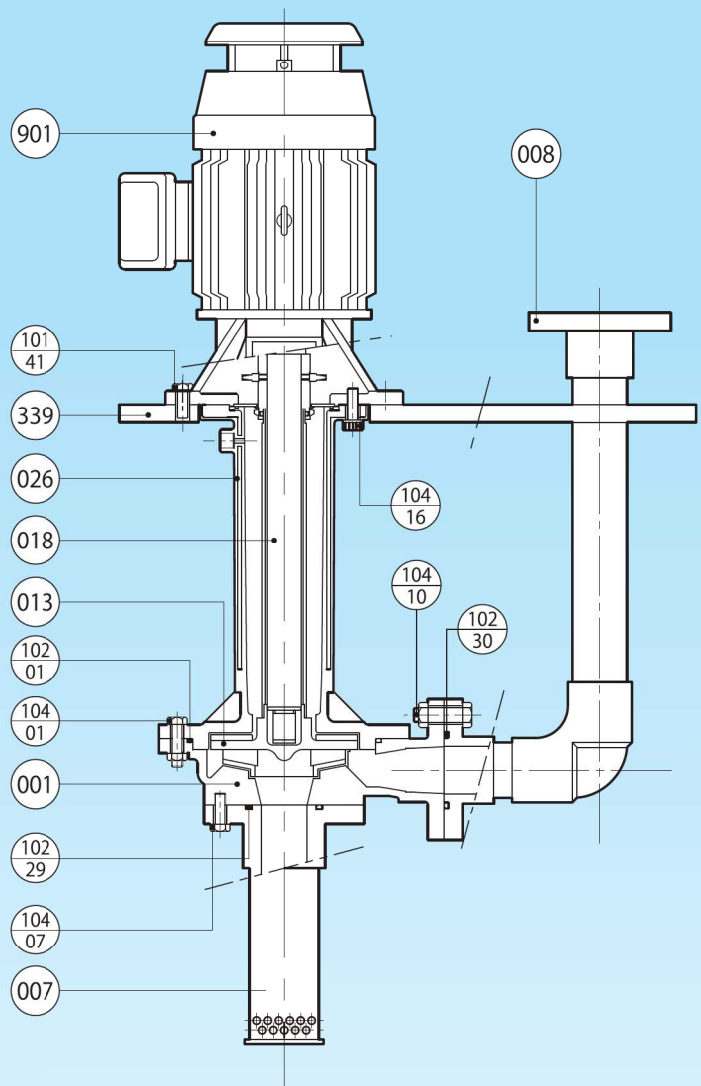
# VEM Series

## Cross-section structural drawing

• Tank-outside installation type



• In-tank installation type



Part No	Part name	Material	Q'ty
001	Casing	PVDF/PP	1
007	Suction strainer	PVC(HT.PVC)	1
008	Discharge pipe	PVC(HT.PVC)	1
013	Impeller (Shaft sleeve integrated)	PVDF/PP	1
018	Main shaft	S45C	1
026	Pump body piping	PVDF/PP	1
050	Gas seal support set screw	SUS304	1 set
069	Gas seal support	PP	1
081	Air ring	EPDM	1
101-04	Gasket (Air vent plug)	FPM	1
102-01	O-ring (Casing)	EPDM	1
102-08	O-ring (Gas seal plate)	EPDM	1

Part No.	Part name	Material	Q'ty
102-18	O-ring (Gas seal support)	EPDM	1
102-29	O-ring (Suction strainer)	FPM/EPDM	1
102-30	O-ring (Discharge pipe)	FPM/EPDM	1
103-08	V-ring (Gas seal)	FPM	1
104-01	Casing bolt/nut	PVDF/PP	1 set
104-07	Suction strainer bolt	PVC(HT.PVC)	1 set
104-10	Discharge pipe bolt/nut	PVDF/PP	1 set
104-16	Pump body piping bolt	PPS	1 set
104-41	Head plate bolt	SUS304	1 set
237	Gas seal plate	C-PTFE	1
339	Bed plate	PVC	1
901	Motor		1

\*● 007: Exchangeable with suction short pipe.

● 104-01: For tank outside installation, SUS304 is used.