



Submersible Sewage Pumps

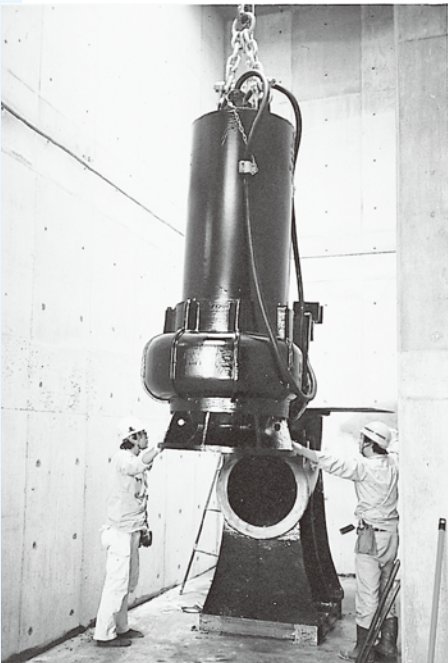
Channel Impeller

B



2

B-series is the Basic of Submersible Sewage Pumps using for all the society fundamentals. Durable and High Quality Products can be used for various kinds of field.



B-series pumps are working in many sewage treatment plants throughout Japan because of their excellent reputations. As durable motor is tough enough against frequent ON/OFF, automatic unattended operation by central control is available.



As it is silent during operation owing to it's underwater operation, B-series pumps are often used at the basement of buildings in the city area.

Even if the condition is very severe, sewage pumps are required to have high and steady performance. Tsurumi B-series pumps can give a solution for this problem.



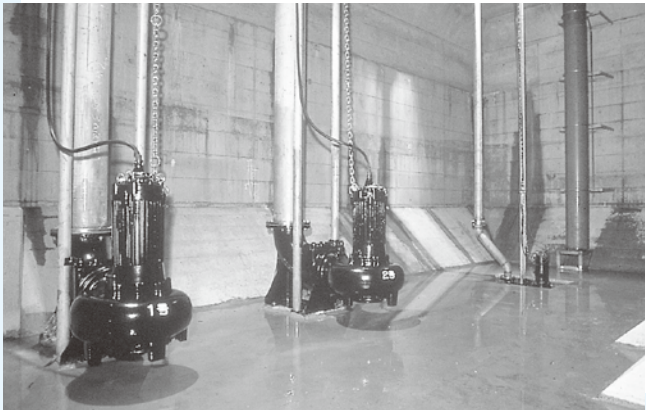
While in overseas, Tsurumi has a lot of sales records with B-series pumps, too. Several inventions adopted by the idea seeking better handling produces ease of maintenance and repair for users comparing to other manufacturers. Because of this, Tsurumi pumps have good reputation as the most intimate pump in the world.



In the shipyard, B-series pumps, which are operated by fully-automatic control, work for level control and dry up. For sea water, sacrificial anodes are applied.



B-series pumps being used for a temporary installation during rainy season. It is used to pump up water of branch river to the main stream when the water level of main stream becomes higher than that of the branch river.



Enough absorption can not be expected in the city center where the ground is covered by concrete. Occasional flood occurs often when a local heavy rain comes. In such case, large capacity B-series pumps play an active role.

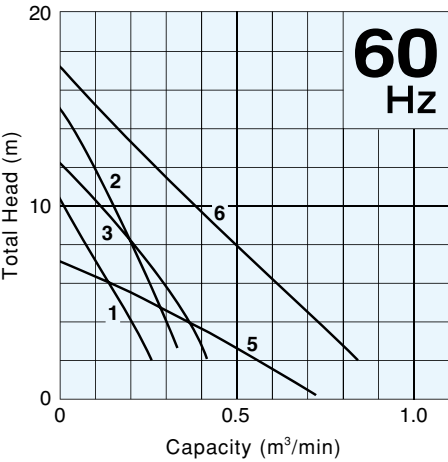
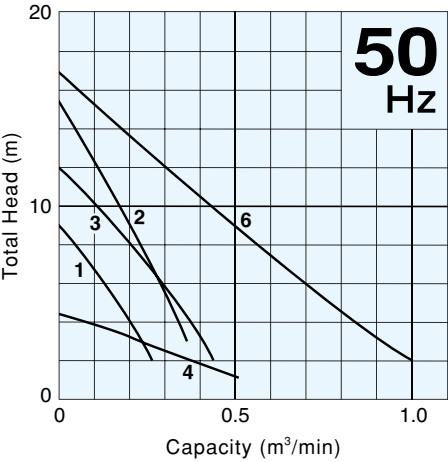


Because of its robust construction, B-series pumps are sometimes used for dewatering in construction site. Compact shape allows high portability comparing against the horizontal pump which requires a firm installation foundation work. In such case, some pump parts are changed its material into harder materials.

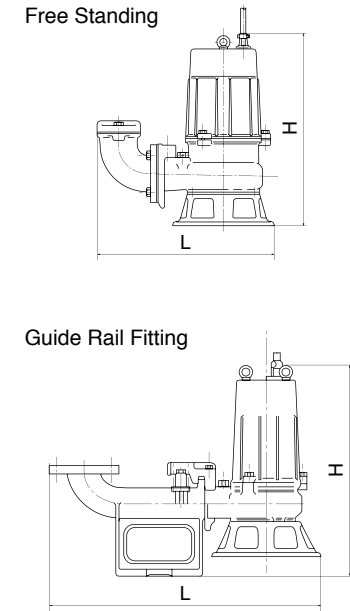
Discharge Bore

50・80mm

Performance Curves



Dimensions



Model Selection 50・80mm

Curve No.	Discharge Bore mm	Standard Model		Automatic Model		Auto-Alternation Model		Motor Output kW	Phase	Speed (S.S.) 50Hz/60Hz min ⁻¹		Starting Method	Cable Length m	Cable Code	Dimensions L×H mm				Dry Weight *4 kg			
															Standard Model		Automatic & Auto-Alternation Model		Standard Model		Automatic & Auto-Alternation Model	
		Free Standing	Guide Rail Fitting	Free Standing	Guide Rail Fitting	Free Standing	Guide Rail Fitting								Free Standing	Guide Rail Fitting	Free Standing	Guide Rail Fitting	Free Standing	Guide Rail Fitting		
1	50	50B2.4S	TOS50B2.4S	—	—	—	—	0.4	Single	3000/3600		Capacitor Start	5	a	340×453	556×511	—	—	25	24	—	—
1	50	50B2.4	TOS50B2.4	—	—	—	—	0.4	Three	3000/3600		D.O.L.	6	A	340×420	556×478	—	—	23	22	—	—
2	50	50B2.75S	TOS50B2.75S	50BA2.75S	TOS50BA2.75S	—	—	0.75	Single	3000/3600		Capacitor Start	5	a(b*2)	405×523	621×566	405×580	621×623	32	30	34	32
2	50	50B2.75H	TOS50B2.75H	50BA2.75H	TOS50BA2.75H	50BW2.75H	TOS50BW2.75H	0.75	Three	3000/3600		D.O.L.	6	A	405×415	621×458	433×496	623×539	24	23	25	24
3	50	50B2.75	TOS50B2.75	50BA2.75	TOS50BA2.75	50BW2.75	TOS50BW2.75	0.75	Three	3000/3600		D.O.L.	6	A	405×439	621×479	433×520	623×560	25	24	26	25
4	80	80BP2.4S (50Hz)	—	—	—	—	—	0.4	Single	3000/ —		Capacitor Run	5	a	296×363	—	—	—	12.7	—	—	—
5	80	80BP2.75S (60Hz)	—	—	—	—	—	0.75	Single	— /3600		Capacitor Run	5	a(b*2)	296×383	—	—	—	14.5	—	—	—
6	80	80B21.5	TOS80B21.5	80BA21.5	TOS80BA21.5	80BW21.5	TOS80BW21.5	1.5	Three	3000/3600		D.O.L.	6	A	446×536	668×586	485×630	707×680	36	34	40	38

Model Selection 100mm

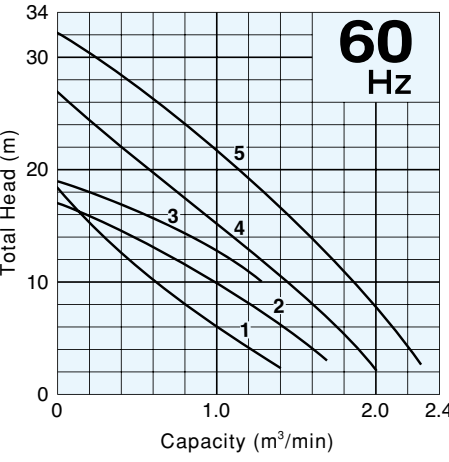
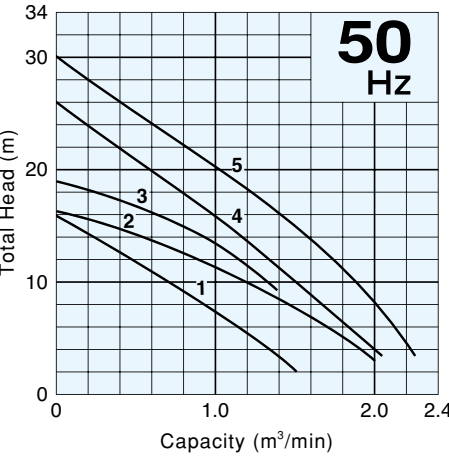
Curve No.	Discharge Bore mm	Standard Model		Automatic Model		Auto-Alternation Model		Motor Output kW	Phase	Speed (S.S.) 50Hz/60Hz min ⁻¹		Starting Method	Cable Length m	Cable Code	Dimensions L×H mm				Dry Weight *4 kg			
															Standard Model		Automatic & Auto-Alternation Model		Standard Model		Automatic & Auto-Alternation Model	
		Free Standing	Guide Rail Fitting	Free Standing	Guide Rail Fitting	Free Standing	Guide Rail Fitting								Free Standing	Guide Rail Fitting	Free Standing	Guide Rail Fitting	Free Standing	Guide Rail Fitting	Free Standing	Guide Rail Fitting
1	100	100B42.2	TOS100B42.2	100BA42.2	TOS100BA42.2	100BW42.2	TOS100BW42.2	2.2	Three	1500/1800		D.O.L.	6	A(B*3)	596×642	754×656	602×733	760×748	68	64	78	74
2	100	100B43.7	TOS100B43.7	100BA43.7	TOS100BA43.7	100BW43.7	TOS100BW43.7	3.7	Three	1500/1800		D.O.L.*1	6	B(C*3)	601×716	759×725	602×863	760×873	84	80	94	90
3	100	100B43.7H	TOS100B43.7H	—	—	—	—	3.7	Three	1500/1800		D.O.L.*1	6	B(C*3)	603×692	761×706	—	—	82	78	—	—
4	100	100B45.5	TOS100B45.5	—	—	—	—	5.5	Three	1500/1800		D.O.L.*1	8	D	686×908	905×906	—	—	140	133	—	—
5	100	100B47.5	TOS100B47.5	—	—	—	—	7.5	Three	1500/1800		D.O.L.*1	8	E	686×929	905×927	—	—	154	147	—	—

*1 Star-Delta available upon request *2 100~120V *3 200~240V
*4 All weights excluding cable
Weights of guide rail fitting model excluding duckfoot bend

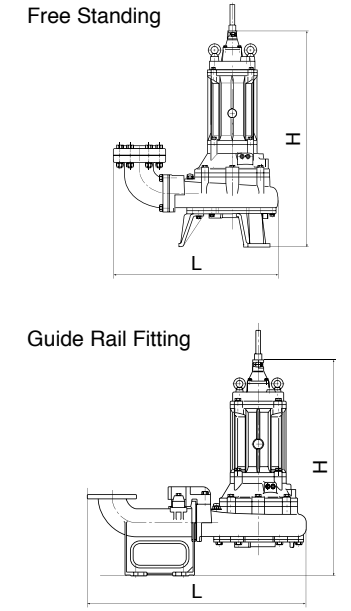
Discharge Bore

100mm

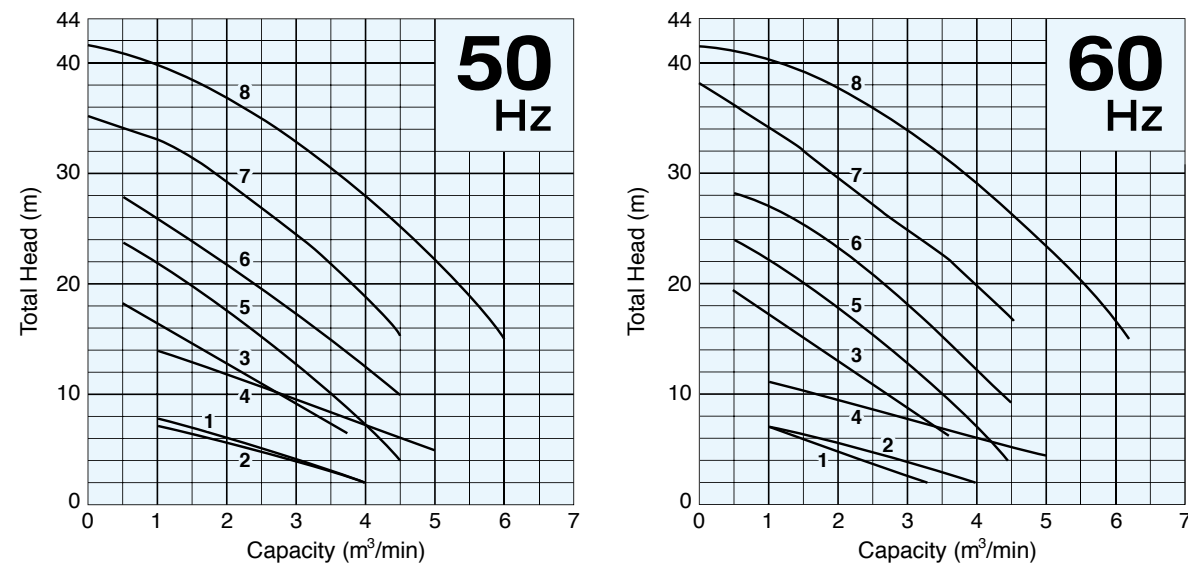
Performance Curves



Dimensions



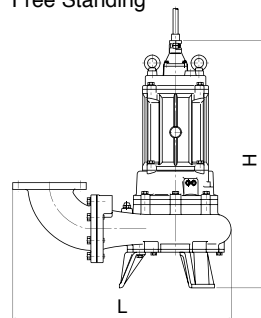
Discharge Bore

150mm**Performance Curves****Model Selection**

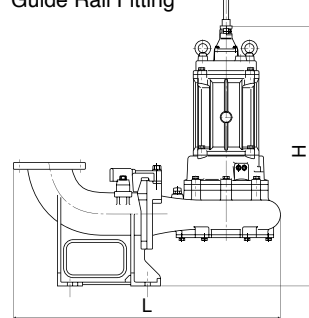
Curve No.	Discharge Bore mm	Model		Motor Output kW	Phase	Speed (S.S.) 50Hz/60Hz min ⁻¹	Starting Method	Cable Length m	Cable Code	Dimensions L×H mm		Dry Weight * ³ kg	
		Free Standing	Guide Rail Fitting							Free Standing	Guide Rail Fitting	Free Standing	Guide Rail Fitting
1	150	150B43.7	TOS150B43.7	3.7	Three	1500/1800	D.O.L.* ¹	C	B(C* ²)	871×875	1065×820	145	120
2	150	150B63.7	TOS150B63.7	3.7	Three	1000/1200	D.O.L.* ¹	6	D	838×903	1023×926	188	158
3	150	150B47.5H	TOS150B47.5H	7.5	Three	1500/1800	D.O.L.* ¹	8	E	834×951	1028×976	205	175
4	150	150B47.5L	TOS150B47.5L	7.5	Three	1500/1800	D.O.L.* ¹	8	E	871×1085	1065×1030	200	175
5	150	150B411	TOS150B411	11	Three	1500/1800	Star-Delta	8	F	895×1097	1089×1052	245	215
6	150	150B415	TOS150B415	15	Three	1500/1800	Star-Delta	8	G	895×1167	1089×1122	266	236
7	150	150B422	TOS150B422	22	Three	1500/1800	Star-Delta	10	P	898×1222	1092×1181	327	298
8	150	150B437	TO150B437	37	Three	1500/1800	Star-Delta	10	Q	1085×1548	1306×1380	640	540

*¹ Star-Delta available upon request*² 200~240V*³ All weights excluding cable
Weights of guide rail fitting model excluding duckfoot bend**Dimensions**

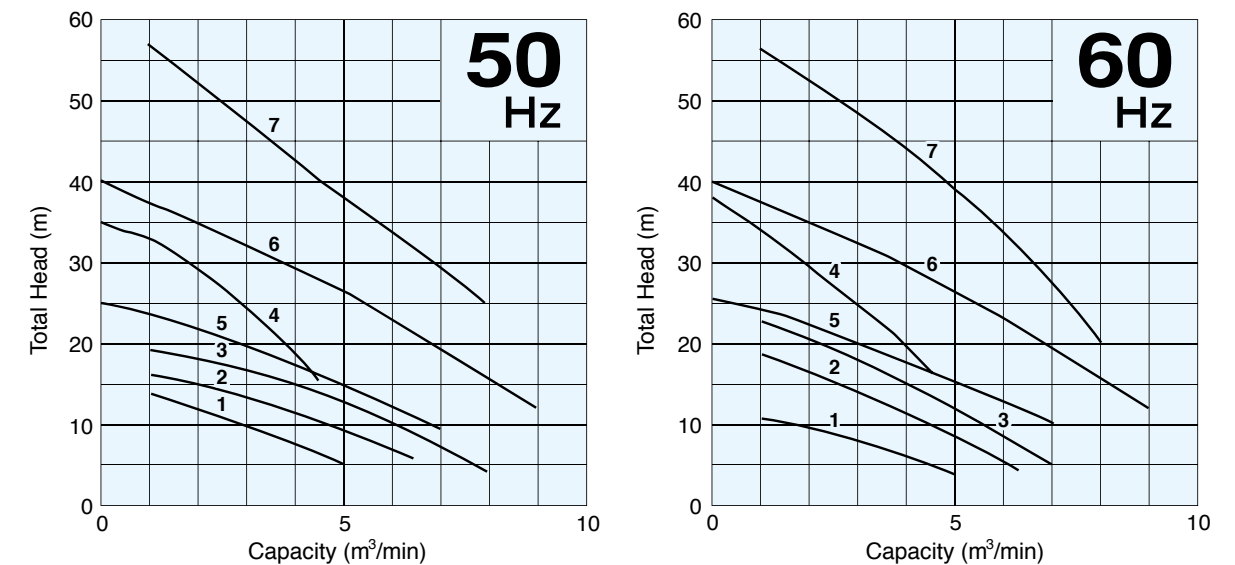
Free Standing



Guide Rail Fitting



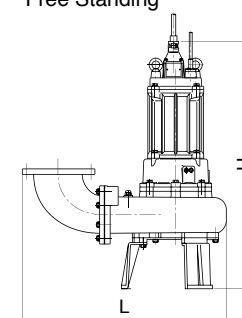
Discharge Bore

200mm**Performance Curves****Model Selection**

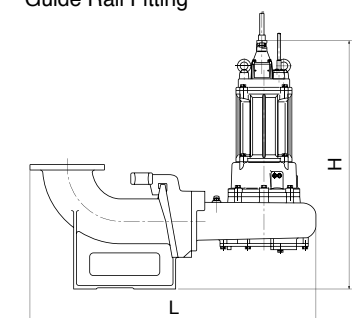
Curve No.	Discharge Bore mm	Model		Motor Output kW	Phase	Speed (S.S.) 50Hz/60Hz min ⁻¹	Starting Method	Cable Length m	Cable Code	Dimensions L×H mm		Dry Weight * ³ kg	
		Free Standing	Guide Rail Fitting							Free Standing	Guide Rail Fitting	Free Standing	Guide Rail Fitting
1	200	200B47.5	TO200B47.5	7.5	Three	1500/1800	D.O.L.* ¹	8	E	926×1085	1266×1050	207	212
2	200	200B411	TO200B411	11	Three	1500/1800	Star-Delta	8	F	926×1131	1266×1096	253	258
3	200	200B415	TO200B415	15	Three	1500/1800	Star-Delta	8	G	971×1196	1234×1161	291	276
4	200	200B422H	TOS200B422H	22	Three	1500/1800	Star-Delta	10	P	953×1222	1117×1181	332	298
5	200	200B422	TOS200B422	22	Three	1500/1800	Star-Delta	10	P	953×1222	1117×1181	323	289
6	200	200B437	TO200B437	37	Three	1500/1800	Star-Delta	10	J(Q* ²)	1190×1571	1428×1458	670	565
7	200	200B455	TO200B455	55	Three	1500/1800	Star-Delta	10	K	1188×1698	1499×1612	1060	1020

*¹ Star-Delta available upon request*² 200~240V*³ All weights excluding cable
Weights of guide rail fitting model excluding duckfoot bend**Dimensions**

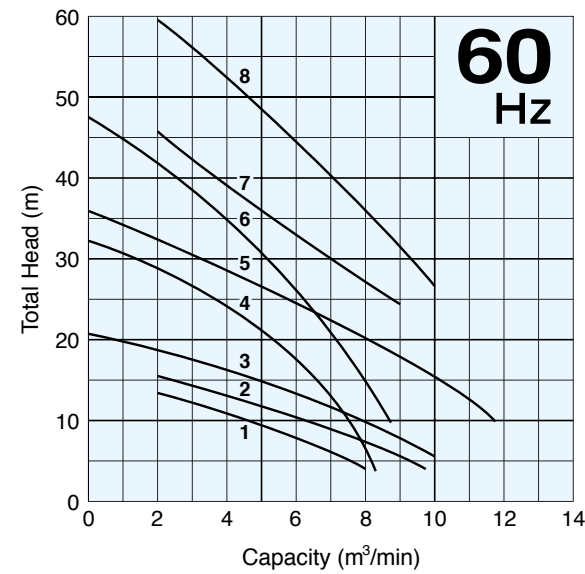
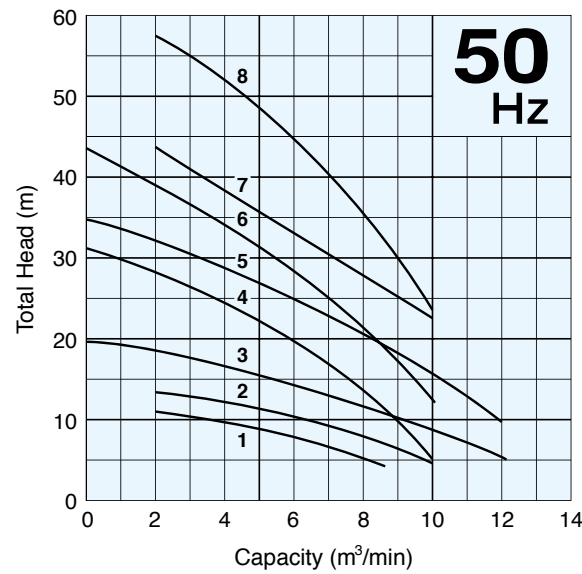
Free Standing



Guide Rail Fitting



Discharge Bore

250mm**Performance Curves****Model Selection**

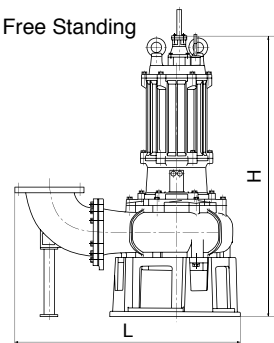
Curve No.	Discharge Bore mm	Model		Motor Output kW	Phase	Speed (S.S.) 50Hz/60Hz min ⁻¹	Starting Method	Cable Length m	Cable Code	Dimensions L×H mm		Dry Weight * ² kg	
		Free Standing	Guide Rail Fitting							Free Standing	Guide Rail Fitting	Free Standing	Guide Rail Fitting
1	250	250B611	TO250B611	11	Three	1000/1200	Star-Delta	8	M(N* ¹)	1203×1211	1513×1165	430	390
2	250	250B415	TO250B415	15	Three	1500/1800	Star-Delta	8	G	1146×1228	1451×1194	411	371
3	250	250B622	TO250B622	22	Three	1000/1200	Star-Delta	10	J	1313×1565	1586×1504	665	560
4	250	250B430	TO250B430	30	Three	1500/1800	Star-Delta	10	J	1295×1512	1566×1445	645	525
5	250	250B437	TO250B437	37	Three	1500/1800	Star-Delta	10	Q	1295×1575	1566×1508	725	600
6	250	250B445	TO250B445	45	Three	1500/1800	Star-Delta	10	J	1313×1537	1578×1478	695	595
7	250	250B455	TO250B455	55	Three	1500/1800	Star-Delta	10	K	1293×1698	1585×1634	1100	1040
8	250	250B475	TO250B475	75	Three	1500/1800	Star-Delta	10	K	1293×1698	1585×1634	1150	1090

*¹ 200~240V*² All weights excluding cable

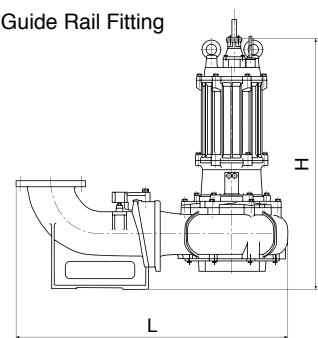
Weights of guide rail fitting model excluding duckfoot bend

Dimensions

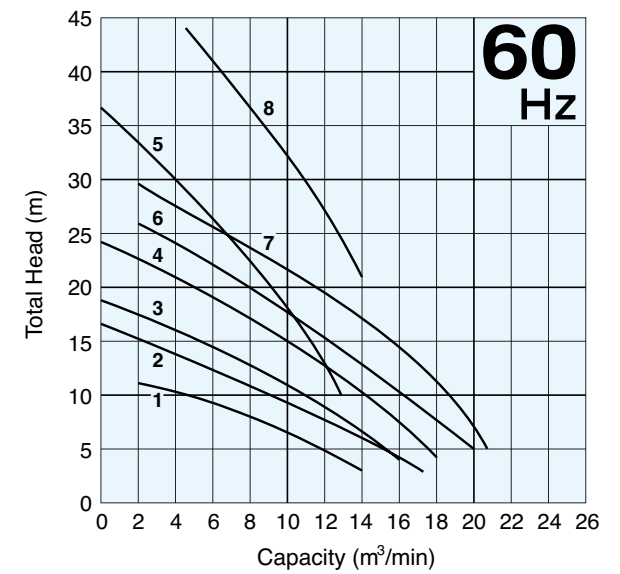
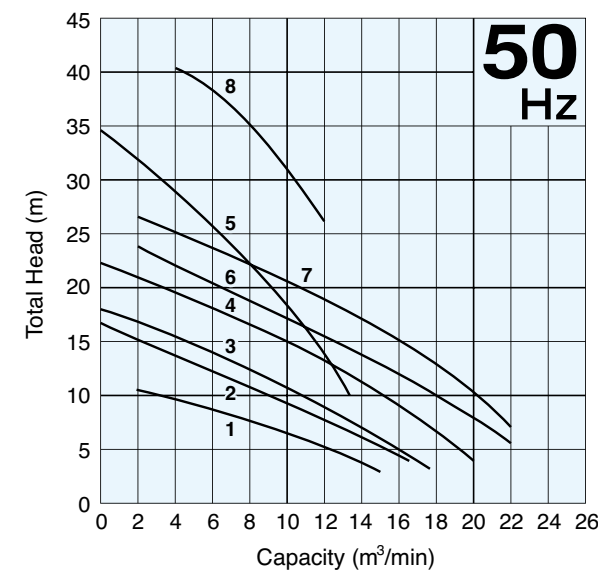
Free Standing



Guide Rail Fitting



Discharge Bore

300mm**Performance Curves****Model Selection**

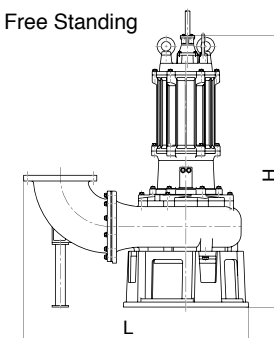
Curve No.	Discharge Bore mm	Model		Motor Output kW	Phase	Speed (S.S.) 50Hz/60Hz min ⁻¹	Starting Method	Cable Length m	Cable Code	Dimensions L×H mm		Dry Weight * ² kg	
		Free Standing	Guide Rail Fitting							Free Standing	Guide Rail Fitting	Free Standing	Guide Rail Fitting
1	300	300B615	TO300B615	15	Three	1000/1200	Star-Delta	8	N(O* ¹)	1302×1314	1666×1274	550	520
2	300	300B622	TO300B622	22	Three	1000/1200	Star-Delta	10	J	1366×1574	1685×1577	720	615
3	300	300B630	TO300B630	30	Three	1000/1200	Star-Delta	10	Q	1366×1637	1685×1640	765	635
4	300	300B637	TO300B637	37	Three	1000/1200	Star-Delta	10	Q	1366×1644	1685×1647	785	660
5	300	300B445	TO300B445	45	Three	1500/1800	Star-Delta	10	J	1348×1586	1667×1567	785	655
6	300	300B645	TO300B645	45	Three	1000/1200	Star-Delta	10	K	1414×1788	1778×1721	1300	1230
7	300	300B655	TO300B655	55	Three	1000/1200	Star-Delta	10	K	1414×1833	1778×1766	1550	1500
8	300	300B475	TO300B475	75	Three	1500/1800	Star-Delta	10	K	1436×1698	1795×1663	1150	1100

*¹ 200~240V*² All weights excluding cable

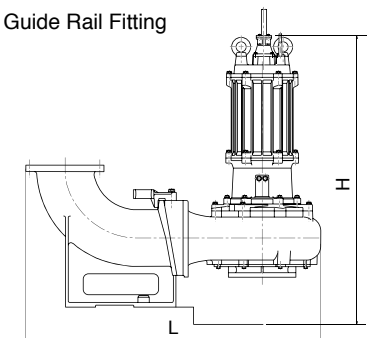
Weights of guide rail fitting model excluding duckfoot bend

Dimensions

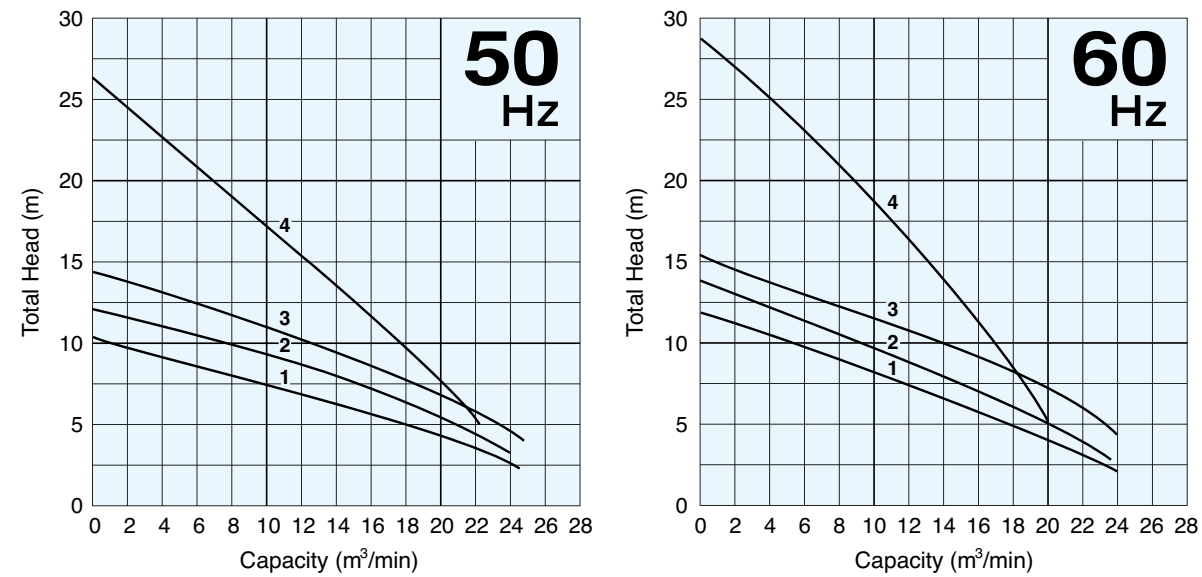
Free Standing



Guide Rail Fitting



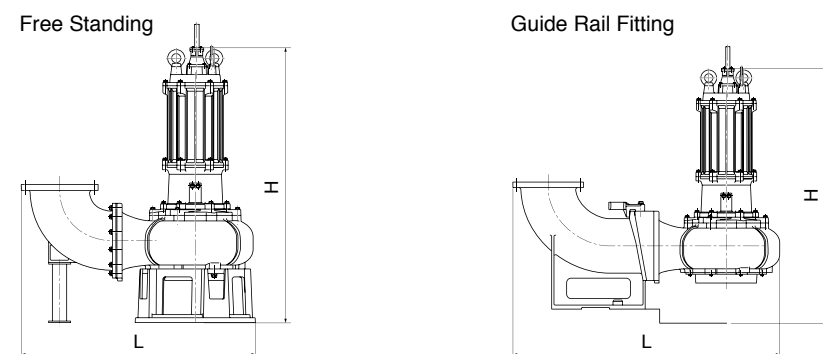
Discharge Bore

350mm**Performance Curves****Model Selection**

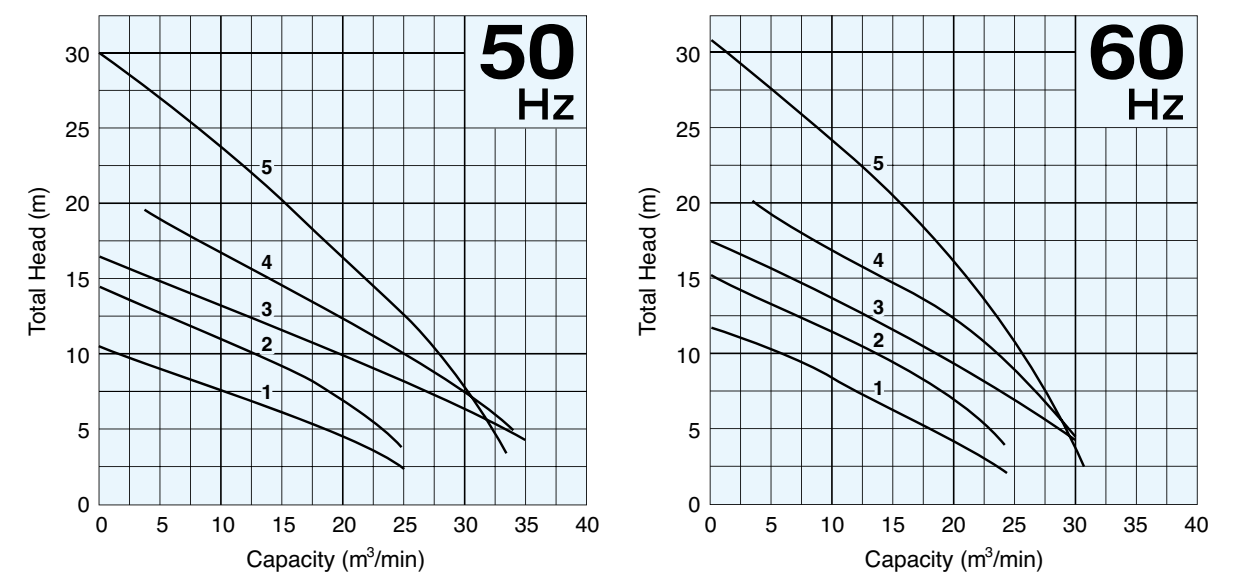
Curve No.	Discharge Bore mm	Model		Motor Output kW	Phase	Speed (S.S.) 50Hz/60Hz min ⁻¹	Starting Method	Cable Length m	Cable Code	Dimensions L×H mm		Dry Weight * ² kg	
		Free Standing	Guide Rail Fitting							Free Standing	Guide Rail Fitting	Free Standing	Guide Rail Fitting
1	350	350B822	TO350B822	22	Three	750/900	Star-Delta	10	J	1488×1677	1845×1692	910	760
2	350	350B630	TO350B630	30	Three	1000/1200	Star-Delta	10	J(Q* ¹)	1488×1677	1845×1692	870	720
3	350	350B637	TO350B637	37	Three	1000/1200	Star-Delta	10	J(Q* ¹)	1488×1684	1845×1699	905	750
4	350	350B645	TO350B645	45	Three	1000/1200	Star-Delta	10	J	1488×1788	1845×1811	1316	1161

*¹ 200~240V*² All weights excluding cable

Weights of guide rail fitting model excluding duckfoot bend

Dimensions

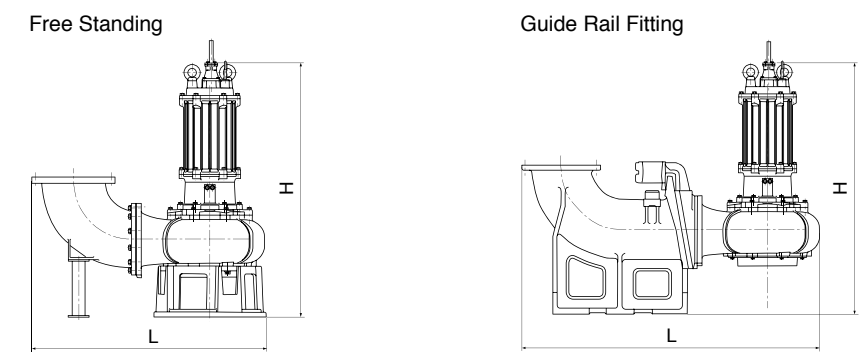
Discharge Bore

400mm**Performance Curves****Model Selection**

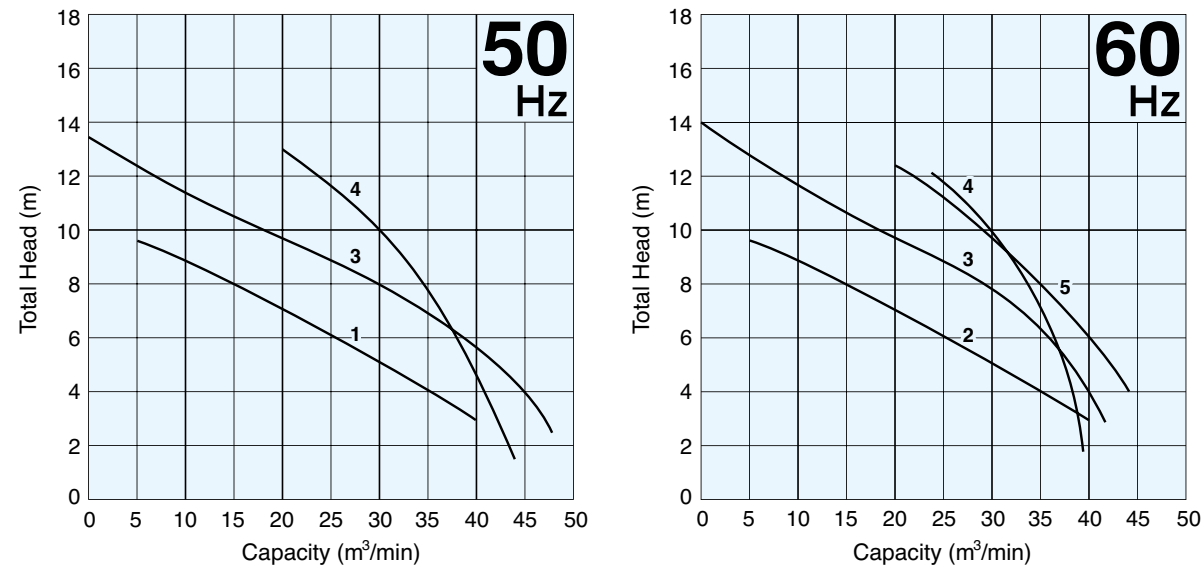
Curve No.	Discharge Bore mm	Model		Motor Output kW	Phase	Speed (S.S.) 50Hz/60Hz min ⁻¹	Starting Method	Cable Length m	Cable Code	Dimensions L×H mm		Dry Weight * ² kg	
		Free Standing	Guide Rail Fitting							Free Standing	Guide Rail Fitting	Free Standing	Guide Rail Fitting
1	400	400B822	TO400B822	22	Three	750/900	Star-Delta	10	J	1583×1677	2122×1752	930	865
2	400	400B637	TO400B637	37	Three	1000/1200	Star-Delta	10	J(Q* ¹)	1583×1684	2122×1759	925	855
3	400	400B645	TO400B645	45	Three	1000/1200	Star-Delta	10	J	1633×1792	2130×1920	1416	1346
4	400	400B655	TO400B655	55	Three	1000/1200	Star-Delta	10	K	1621×1878	2140×1956	1750	1700
5	400	400B675	TO400B675	75	Three	1000/1200	Star-Delta	10	K	1616×1878	2135×1956	1850	1800

*¹ 200~240V*² All weights excluding cable

Weights of guide rail fitting model excluding duckfoot bend

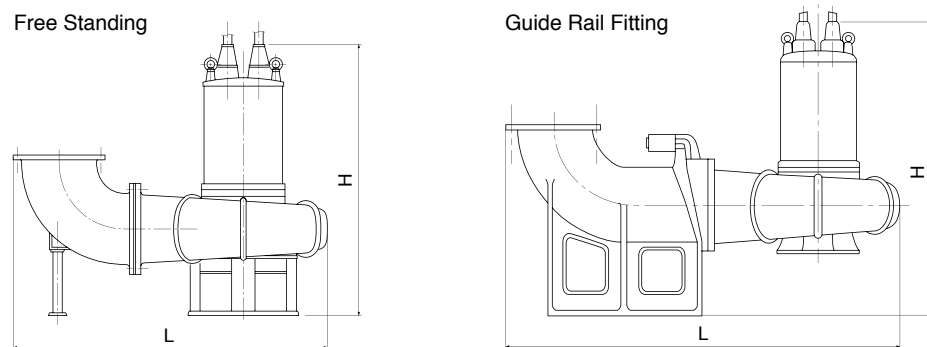
Dimensions

Discharge Bore

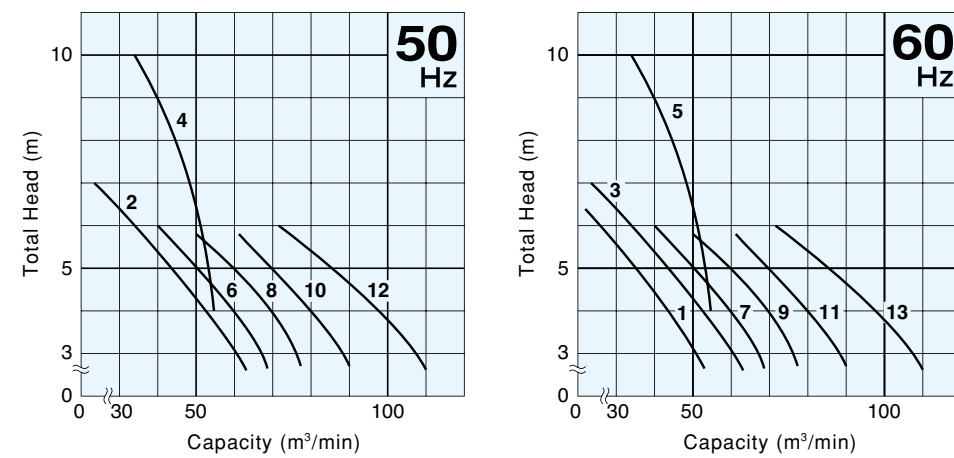
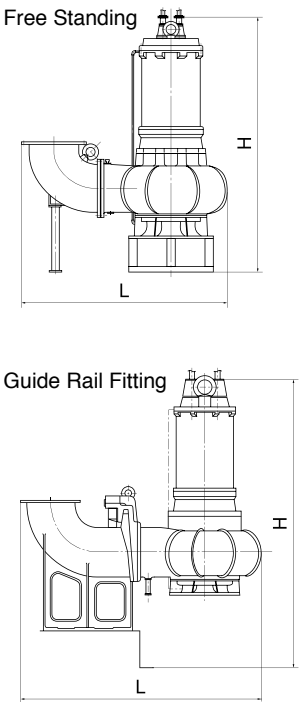
500mm**Performance Curves****Model Selection**

Curve No.	Discharge Bore mm	Model		Motor Output kW	Phase	Speed (S.S.) 50Hz/60Hz min ⁻¹	Starting Method	Cable Length m	Cable Code	Dimensions L×H mm		Dry Weight* kg		Frequency
		Free Standing	Guide Rail Fitting							Free Standing	Guide Rail Fitting	Free Standing	Guide Rail Fitting	
1	500	500B1037	TO500B1037	37	Three	600/—	Star-Delta	10	K	2073×2081	2624×2183	2050	1950	50Hz only
2	500	500B1237	TO500B1237	37	Three	—/600	Star-Delta	10	K	2073×2081	2624×2183	2050	1950	60Hz only
3	500	500B855	TO500B855	55	Three	750/900	Star-Delta	10	K	2111×2077	2662×2225	2150	2050	50Hz/60Hz
4	500	500B675	TO500B675	75	Three	1000/1200	Star-Delta	10	K	2263×1987	2814×2152	2150	2050	50Hz/60Hz
5	500	500B875	TO500B875	75	Three	—/900	Star-Delta	10	K	2150×2694	2700×2644	2550	2450	60Hz only

* All weights excluding cable
Weights of guide rail fitting model excluding duckfoot bend

Dimensions

Discharge Bore

600·700·800mm**Performance Curves****Dimensions****Model Selection**

Curve No.	Discharge Bore mm	Model		Motor Output kW	Phase	Speed (S.S.) 50Hz/60Hz min ⁻¹	Starting Method	Cable Length m	Cable Code	Dimensions L×H mm		Dry Weight* kg		Frequency
		Free Standing	Guide Rail Fitting							Free Standing	Guide Rail Fitting	Free Standing	Guide Rail Fitting	
1	600	600B1845	TO600B1845	45	Three	—/400	Star-Delta	10	K	2522×3100	3062×3100	5000	5200	60Hz only
2	600	600B1255	TO600B1255	55	Three	500/—	Star-Delta	10	K	2522×3100	3062×3100	3150	3350	50Hz only
3	600	600B1455	TO600B1455	55	Three	—/514	Star-Delta	10	K	2522×3100	3062×3100	3150	3350	60Hz only
4	600	600B1085	TO600B1085	85	Three	600/—	Star-Delta	10	K	2468×3100	3008×3100	3100	3300	50Hz only
5	600	600B1285	TO600B1285	85	Three	—/600	Star-Delta	10	K	2468×3100	3008×3100	3100	3300	60Hz only
6	700	700B1265	TO700B1265	65	Three	500/—	Star-Delta	10	K	2840×3560	3440×3660	4000	4400	50Hz only
7	700	700B1465	TO700B1465	65	Three	—/514	Star-Delta	10	K	2840×3560	3440×3660	4000	4400	60Hz only
8	700	700B1275	TO700B1275	75	Three	500/—	Star-Delta	10	K	2840×3560	3440×3660	4200	4600	50Hz only
9	700	700B1475	TO700B1475	75	Three	—/514	Star-Delta	10	K	2840×3560	3440×3660	4200	4600	60Hz only
10	800	800B1290	TO800B1290	90	Three	500/—	Star-Delta	10	L	3053×3790	3623×3790	5600	5800	50Hz only
11	800	800B1490	TO800B1490	90	Three	—/514	Star-Delta	10	L	3053×3790	3623×3790	5600	5800	60Hz only
12	800	800B14110	TO800B14110	110	Three	428/—	Star-Delta	10	L	3053×3790	3623×3790	5800	6000	50Hz only
13	800	800B16110	TO800B16110	110	Three	—/450	Star-Delta	10	L	3053×3790	3623×3790	5800	6000	60Hz only

* All weights excluding cable
Weights of guide rail fitting model excluding duckfoot bend

CABTYRE CABLE CODE REFERENCE

Single-phase

Code	No. of Cables	Cores × mm ²	Outer Dia. mm	Material
a	1	3 × 1.25	10.1	PVC
b	1	3 × 2.0	10.9	

Code	No. of Cables	Cores × mm ²	Outer Dia. mm	Material
D	1	4 × 3.5	14.1	Chloroprene Rubber
E	1	4 × 5.5	16.8	Chloroprene Rubber
F	3	4 × 3.5	14.1	Chloroprene Rubber
		3 × 3.5	12.9	Chloroprene Rubber
		2 × 1.25	9.6	PVC
G	3	4 × 5.5	16.8	Chloroprene Rubber
		3 × 5.5	15.2	Chloroprene Rubber
		2 × 1.25	9.6	PVC
J	3	4 × 14	21.7	Chloroprene Rubber
		3 × 14	19.7	Chloroprene Rubber
		4 × 1.25	11.1	PVC
K	2	3 × 38	35.8	Chloroprene Rubber
		1 × 22	35.8	Chloroprene Rubber
		3 × 2	35.9	Chloroprene Rubber

Code	No. of Cables	Cores × mm ²	Outer Dia. mm	Material
L	2	3 × 60	45.7	Chloroprene Rubber
		1 × 22	45.7	
		3 × 2	45.7	
M	1	7 × 3.5	21.3	
		2 × 2	21.3	
N	1	7 × 5.5	24.4	
O	1	7 × 8	25.6	
P	3	4 × 14	21.7	Chloroprene Rubber
		3 × 14	19.7	Chloroprene Rubber
		2 × 1.25	9.6	PVC
Q	3	4 × 22	28.8	Chloroprene Rubber
		3 × 22	26.1	Chloroprene Rubber
		4 × 1.25	11.1	PVC

Three-phase

Code	No. of Cables	Cores × mm ²	Outer Dia. mm	Material
A	1	4 × 1.25	11.1	PVC
B	1	4 × 2.0	11.8	
C	1	4 × 3.5	13.9	

TSURUMI OPTIONS

SPECIAL VERSION WITH GALVANIC CORROSION PROTECTION

In seawater, a material's resistance to corrosion can be seen clearly. When metals with different potentials are brought into contact in seawater, only the metal of lower potential corrodes. As the difference in potential increases, the metal of lower potential corrodes faster. As an option, Tsurumi can supply pumps with parts made of higher electric potential metal as the sacrificial anode.

SPECIAL VERSION FOR HIGHER TEMPERATURE LIQUID

Standard pumps are designed for continuous running at the maximum ambient temperature of 40°C. In addition to these, Tsurumi can provide pumps for operation at higher liquid temperatures upon request. Refitting for operation at higher temperatures involves modification of not only the insulation of motor windings but also several components.

Two high-temperature operating models are available - the Rank 60 for operation in liquids up to 60°C and the Rank 90 for operation in liquids up to 90°C. Consult your dealer for more details. (These special versions are not available for some pump models.)

SPECIAL VERSION WITH NON-STANDARD MATERIALS

Tsurumi can also provide you with pumps with essential components such as the impeller, pump casing and the suction cover made of non-standard materials. Select from stainless steel, chromium iron and bronze to suit your specific requirements. Consult your dealer for more details.

SPECIAL ACCESSORIES

FLOAT SWITCHES

Tsurumi offers two types of float switches (liquid level sensors). A micro-switch is incorporated in both types.

Model MC-2 is a heavy-duty type float switch with a shock absorber. Having equipped with a high grade micro switch, the MC-2 assures trouble-free operation in the liquid containing much suspended solids and floating scum. Either of the two contacts, normally-open or normally-close, can be selected as required.



Model RF-5 is an economy type float which can detect upper/lower-limit water levels with single float. The snap on-off action ensures stable operation in clean or waste water containing suspended solids or oil and fat.



We reserve the right to change the specifications and designs for improvement without prior notice.

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