



# ***Submersible Pumps for Wastewater and Sewage***



# Simple in Design but Top in Quality

## Cable Entry

Every cable has an anti-wicking block at the cable entry section on the pump. This mechanism is such that a part of each conductor is stripped back and the part is sealed by molded rubber or epoxy potting which has flowed in between each strand of the conductor. This unique feature prevents wicking along the strand of the conductor itself.



## Motor Protector

Use of a Circle Thermal Protector (CTP) in small pumps is advantageous in applications where a control panel is not likely provided. Integrated in the motor housing, the CTP directly cuts the motor circuit if excessive heat builds up or an overcurrent caused by an electrical or mechanical failure occurs.



A Miniature Thermal Protector (MTP) is embedded in each winding of the motor. These MTPs are connected in series, and their wires are led out of the motor. Should the winding temperature rise to the actuating temperature, the bimetal strip opens to cause the control panel to shut the power supply.



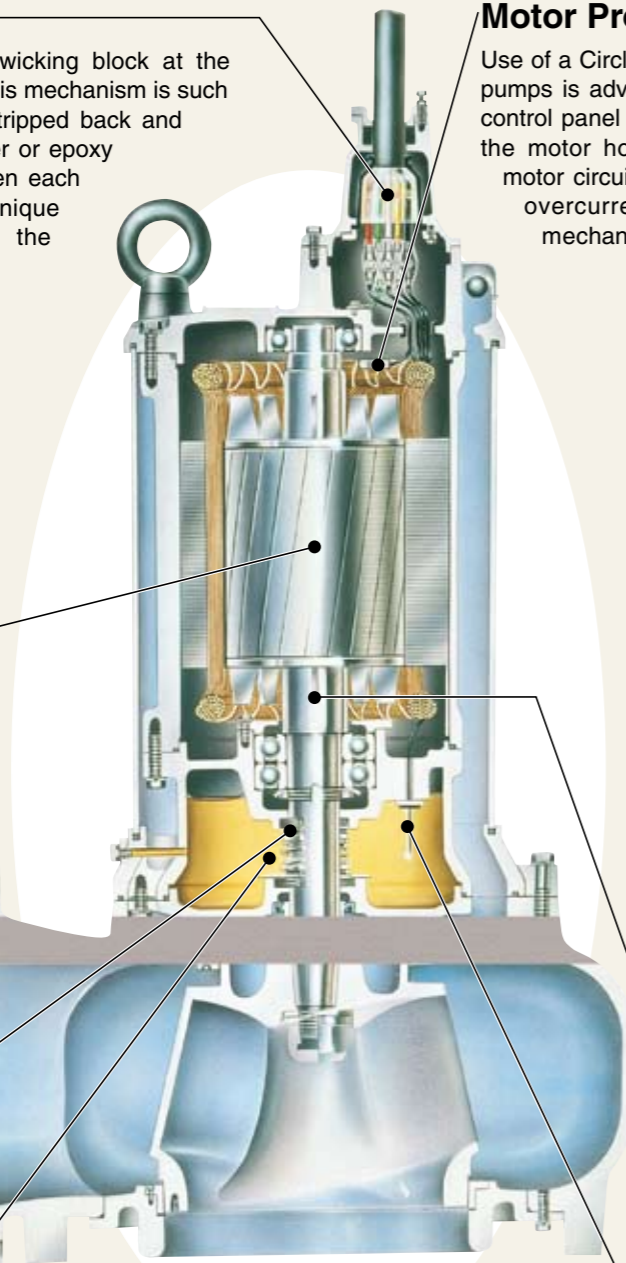
MTPs are supplied as standard on all 11 kW pumps or over. CTPs are supplied on smaller pumps.

## Motor

The motor is a dry-type, squirrel-cage induction motor, housed in a watertight casing, and conforms to insulation classes B, E or F. In each of these insulation classes, all standard pumps can be used in ambient temperatures up to 40°C.

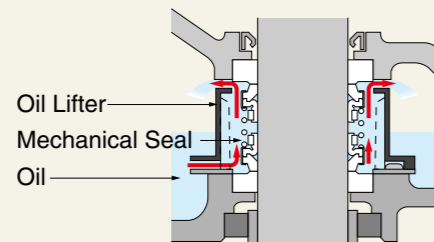
## Mechanical Seal

The mechanical seal with two seal faces containing silicon carbide (SiC) is equipped with the oil chamber. The advantages of the seal are two-fold, it eliminates spring failure caused by corrosion, abrasion or fouling which prevents the seal faces from closing properly, and prevents loss of cooling to the bottom seal faces during run-dry conditions which causes the bottom seal to fail.



## Oil Lifter (Patent Pending)

The Oil Lifter was developed as a lubricating device for the mechanical seal. Utilizing the centrifugal force of the shaft seal, the Oil Lifter forcibly supplies lubricating oil to the mechanical seal and continues to supply the oil to the upper seal faces even if lubricant falls below the rated volume. This amazingly simple device is not only reliably lubricates and cools down, but also retains the stable shaft seal effect and extends the inspection term.



## Shaft

The high-tensile stainless steel shaft used on all pumps is designed to have adequate strength for the transmission of the full load. It is supported by C3 type, high-quality, deep-groove ball bearings.

## Leakage Sensor

A stainless steel, electrode type leakage sensor is standardized for large pumps of 22 kW or over (excluding some models). It senses water incursion into the oil chamber and brings the pump to a halt with the help of a control panel.



## GUIDE RAIL FITTING SYSTEM

The guide rail fitting system connects the pump to and from the piping easily just by lowering and hoisting the pump, allowing easy maintenance and inspection without the need to enter the sump.

### TOS and TO

The TOS/TO is the standard guide rail fitting system made of cast-iron and is compatible with cast-iron pumps. Pumps having a discharge bore from 50 mm to 150 mm are available for the TOS, and from 200 mm to 800 mm are available for the TO (excluding some models).



### TS

This compact guide rail fitting system is ideal for installing in prefabricated lift stations. Its discharge flange is compatible with major flange standards including ANSI 150lb, BS PN10 and DIN PN10. Pumps having a discharge bore from 50 mm to 100 mm are available for the TS (excluding some models).



### TOK

Made of high-quality resin, the TOK is designed for lightweight, small pumps. Rubber bellows attached to the guide hook are inverted to the duckfoot bend when the pump starts operating. This eliminates leakage at the seal even if a lightweight pump is used in combination with the TOK.



## AUTOMATIC MODEL

The automatic model has an integral control circuit and two float switches that operate at a low voltage. It operates automatically in response to the change in water levels.

This model can be identified by the suffix "A" and is available in the following pump series:

Series	Output Range
B	0.75 through 3.7kW
C	0.75 through 1.5kW
U	0.25 through 3.7kW
UZ	1.5 through 3.7kW
PU	0.15 through 3.7kW
PN	0.25 through 3.7kW
PSF	0.25 through 3.7kW
OM	0.15kW
SQ	0.25 through 0.4kW
TM	0.25 through 3.7kW



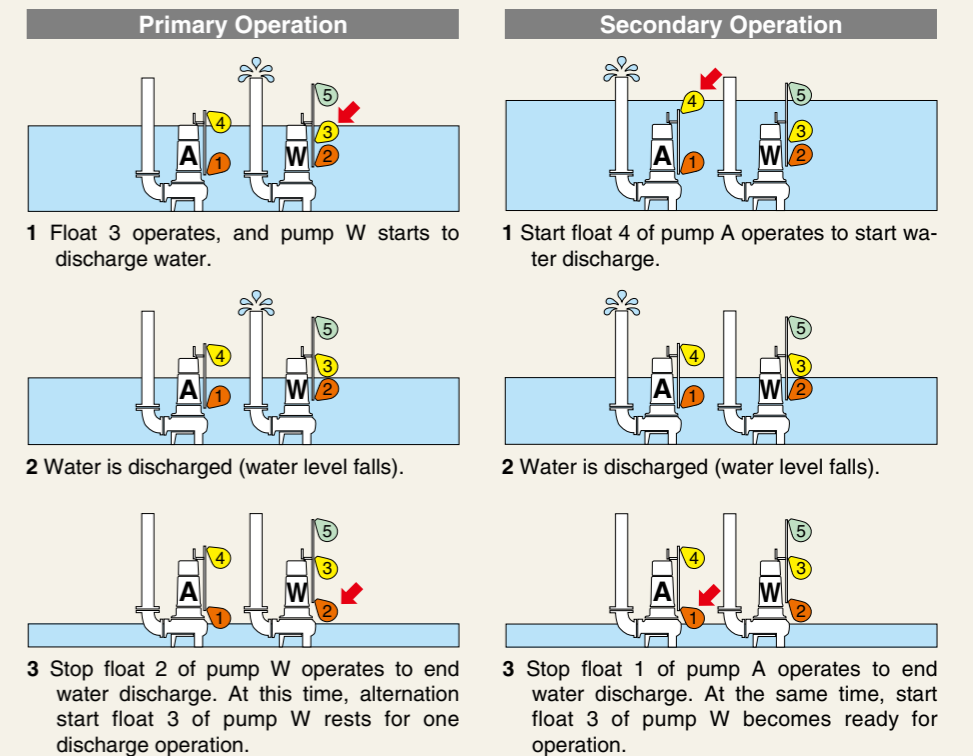
## AUTO-ALTERNATION MODEL

The auto-alternation model is used along with an automatic model. The combination use of these two pumps enables each pump to operate alternately without control panel.

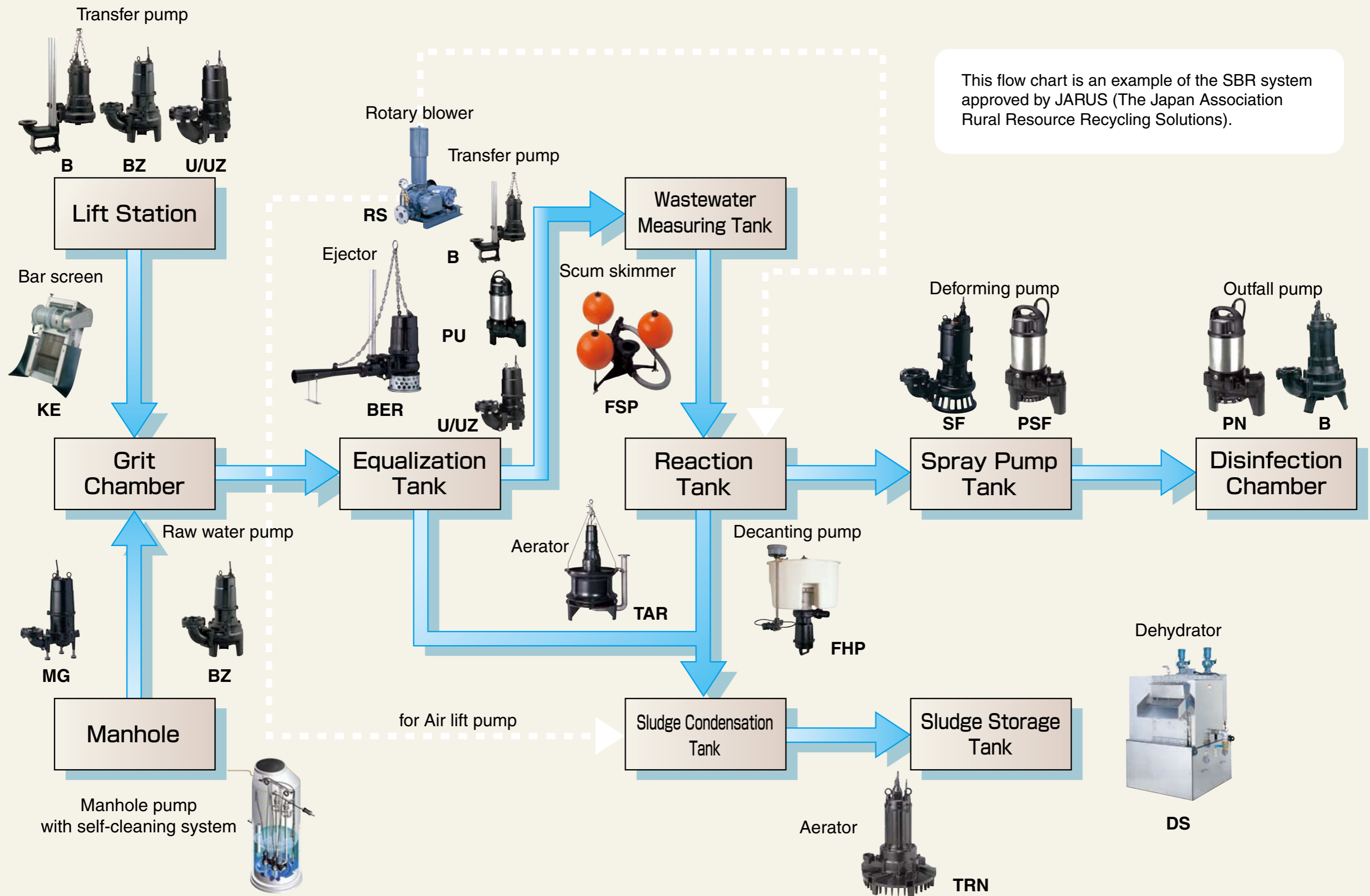
The auto-alternation model has three floats and can be identified by the suffix "W". Refer to standard specifications for availability and model numbers. It is available in the same output range of the automatic pumps.

### How the Auto-alternation Model Works

● Operation is enabled by merely connecting the power supply.



※ Primary operation and secondary operation are repeated alternately.  
 ※ Both primary and secondary operations are performed simultaneously when water has risen to an abnormal level.



# Unequalled in variation, Tsurumi pumps answer

# the most individual needs of every user

## MAJOR IMPELLERS

### CHANNEL



The impeller is semi-open or shrouded type with one or two vanes. It has a wide channel extending from inlet to exit, which allows the pump to pass the solid matters from inflow to discharge with minimal blockage.

### CUTTER



The impeller is a semi-open type with a single vane. A sintered tungsten carbide alloy edge is brazed on an impeller vane, and it rotates on a saw-tooth suction port of a suction cover. This mechanism allows to cut up the foreign matters flowed into the impeller to discharge them.

### VORTEX



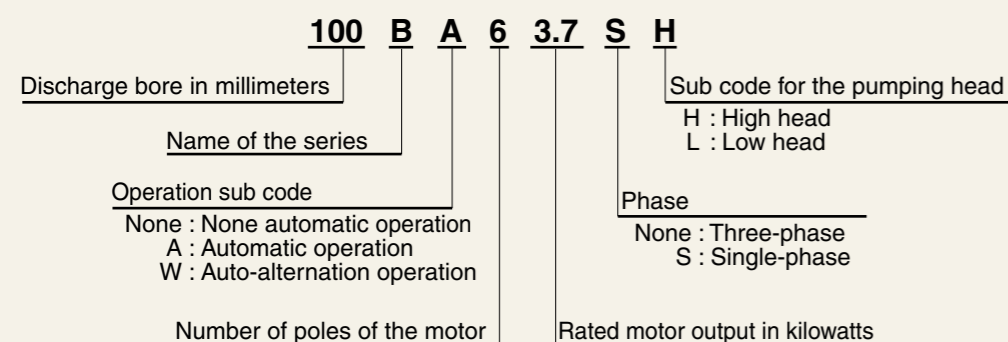
The impeller is a vortex type. The rotation of the impeller produces a whirling, centrifugal action between the impeller and pump casing. Being coupled with a wide pump casing, even large solids and fibrous matters can be pumped out without obstruction.

### GRINDER



The grinder is made of high-chromium cast iron and is highly resistant to abrasion. The grinding mechanism is provided at the suction port of the pump. Flown in suspended solids are cut into small pieces and pumped out. This mechanism eliminates a fear of clogging in small diameter pipes.

## MODEL NUMBER DESIGNATION



### SEWAGE / WASTEWATER

### EFFLUENT

### CORROSION-RESISTANT

### EXPLOSION-PROOF

### WATER TREATMENT EQUIPMENT

SERIES	BORE mm	OUTPUT kW	FEATURE	PAGE
B	50-800	0.4-110	Basic sewage pump with extensive variation	7-8
BZ	80-100	1.5-15	Basic sewage pump with large solid passage	8
C	50-100	0.75-15	Basic sewage pump with cutter mechanism	8
U	40-80	0.25-3.7	Vortex sewage pump with 2-pole motor	9
UZ	50-100	1.5-11	Vortex sewage pump with large solid passage	9
MG	32-50	1.0-3.7	High-head sewage pump with grinding mechanism	9
PU	40-80	0.15-3.7	Vortex sewage pump made of resin	9
PN	40-80	0.25-3.7	Semi-vortex wastewater pump made of resin	10
PSF	40-65	0.25-3.7	High-head effluent pump made of resin	10
SF	50-80	0.75-11	High-head effluent pump made of cast iron	10
OM	32	0.15	Semi-vortex effluent pump made of resin	10
BQ	50-100	0.4-3.7	Stainless steel casting version of B-series	11
CQ	50-100	0.75-3.7	Stainless steel casting version of C-series	11
SQ	40-50	0.25-1.5	Lightweight effluent pump made of stainless steel	11
SFQ	50-80	0.4-11	Chemical effluent pump made of stainless steel casting	12
TM	40-80	0.25-3.7	Seawater pump made of titanium and resin	11
BX	80-100	1.6-3.8	Explosion-proof version of B-series	12
CX	80-100	1.6-3.8	Explosion-proof version of C-series	12
UX	50-80	1.6-4.0	Explosion-proof version of U-series	12
KTX	50-80	0.4-3.7	Explosion-proof effluent pump	12
TRN	32-150	0.75-40	Submersible self-aspirating aerator	13
BER	25-50	0.75-5.5	Submersible self-aspirating ejector	13
FSP	50	0.4-0.75	Floating scum skimmer	13
FHP	40-80	0.25-1.5	Float type decanting pump	14
TAR	65-250	1.5-30	Submersible axial-flow type aerator	14
RS	20-150	0.4-45	Rotary air blower with 3-lobe rotor	14
KE/KS	---	---	Automatic mechanical bar screen (Front screen type)	14
KM	---	---	Automatic mechanical bar screen (Rear screen type)	14

## OPTIONS

### Special Version with Galvanic Corrosion Protection

In sea water, the effect of galvanic corrosion is more serious than that of ordinary corrosion. When two different kinds of metals are dipped into an electrolytic liquid, a battery phenomenon occurs due to the difference in the electric potential of the two metals. In this case, the metal having the higher potential corrodes first. As an option, Tsurumi can supply pumps with parts made of higher electric potential metal as the sacrificial anode.

### Special Version with Non-standard Materials

Tsurumi can also provide you with pumps with essential components such as the impeller, pump casing and 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.

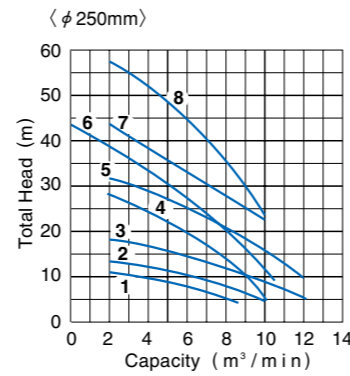
### Special Version for Higher Temperature Liquids

Standard pumps are designed for continuous running at a 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.

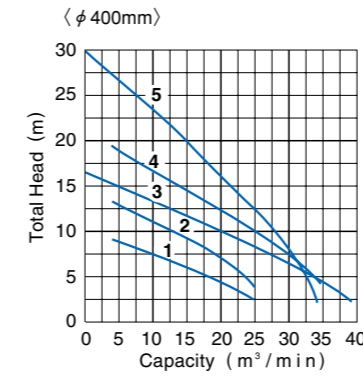
Two high-temperature operation models are available-the Rank 60 for operation in liquids up to 60°C and the Rank 90 for operation in liquids up to 90°C. Consult your dealer for more details. (These special versions are not available for some pump models.)

## B CHANNEL IMPELLER

The B-series is the basic model of the Tsurumi submersible sewage pumps, and it can be used for various kinds of field. A channel impeller practically prevents internal clogging and enables the pump to efficiently transfer sewage and wastewater containing solid matters. It is available as an extended line-up from 50 mm to 800 mm discharge bores.



Curve No.	Model	Discharge Bore mm	Motor Output kW
1	250B611	250	11
2	250B415	250	15
3	250B622	250	22
4	250B430	250	30
5	250B437	250	37
6	250B445	250	45
7	250B455	250	55
8	250B475	250	75



Curve No.	Model	Discharge Bore mm	Motor Output kW
1	400B822	400	22
2	400B637	400	37
3	400B645	400	45
4	400B655	400	55
5	400B675	400	75

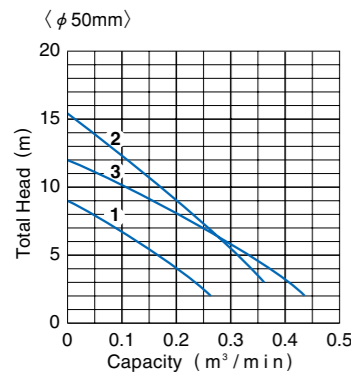
## BZ CHANNEL IMPELLER

The BZ-series has a proprietary single-channel, solid handling impeller that allows the pump to handle solid matters with up to 80 mm in diameter. The pump can efficiently transfer sewage and wastewater containing solid matters.

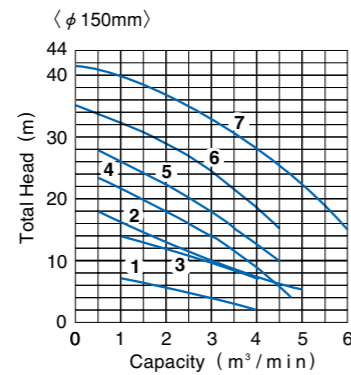


## C CUTTER IMPELLER

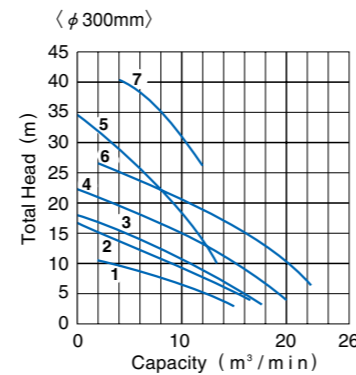
The C-series incorporates a channel impeller with cutter mechanism that cuts up foreign matters sucked up with sewage to prevent the pump from clogging. The mechanism is composed of a sintered tungsten carbide alloy edge brazed on an impeller vane and a suction cover with a saw-tooth suction port.



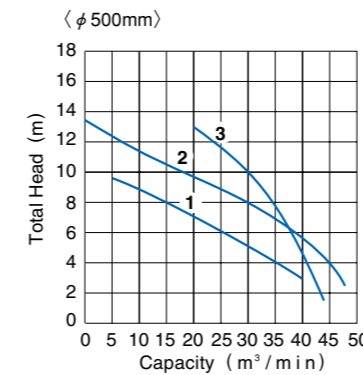
Curve No.	Model		Discharge Bore mm	Motor Output kW
	Standard	Automatic		
1	50B2.4	—	50	0.4
2	50B2.75S	50BA2.75S	50	0.75
	50B2.75H	—	50	0.75
3	50B2.75	—	50	0.75



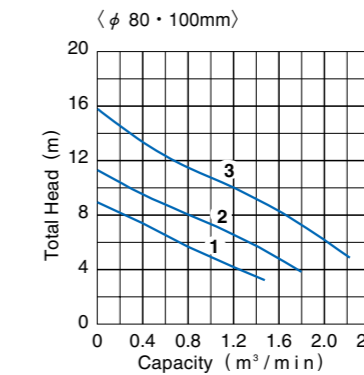
Curve No.	Model	Discharge Bore mm	Motor Output kW
1	150B63.7	150	3.7
2	150B47.5H	150	7.5
3	150B47.5L	150	7.5
4	150B411	150	11
5	150B415	150	15
6	150B422	150	22
7	150B437	150	37



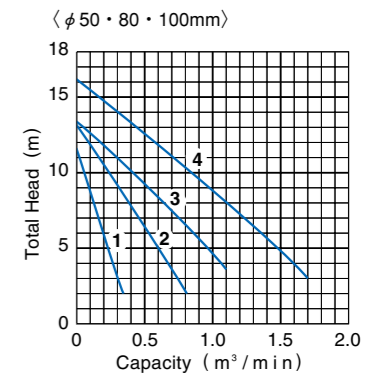
Curve No.	Model	Discharge Bore mm	Motor Output kW
1	300B615	300	15
2	300B622	300	22
3	300B630	300	30
4	300B637	300	37
5	300B445	300	45
6	300B655	300	55
7	300B475	300	75



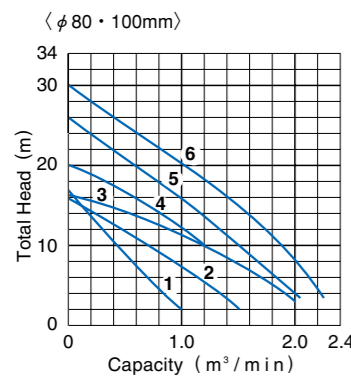
Curve No.	Model	Discharge Bore mm	Motor Output kW
1	500B1037	500	37
2	500B855	500	55
3	500B675	500	75



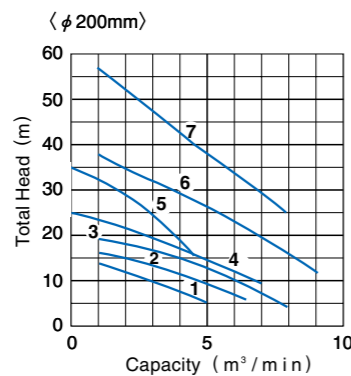
Curve No.	Model	Discharge Bore mm	Motor Output kW
1	80BZ41.5	80	1.5
2	100BZ42.2	100	2.2
3	100BZ43.7	100	3.7



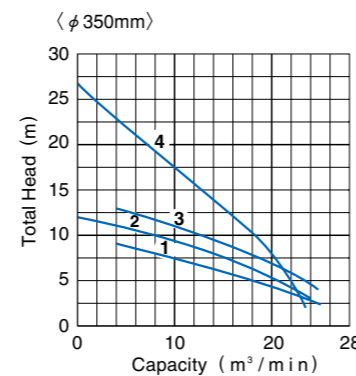
Curve No.	Model			Discharge Bore mm	Motor Output kW
	Standard	Automatic	Auto-Alternation		
1	50C2.75S	50CA2.75S	—	50	0.75
	50C2.75	50CA2.75	50CW2.75	50	0.75
	80C21.5	80CA21.5	80CW21.5	80	1.5
2	100C42.2	—	—	100	2.2
3	100C43.7	—	—	100	3.7



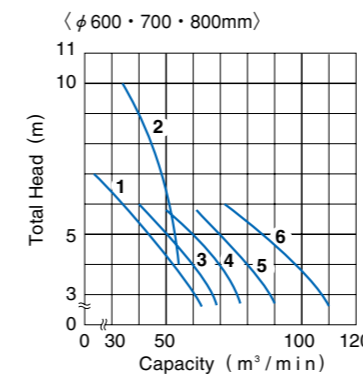
Curve No.	Model			Discharge Bore mm	Motor Output kW
	Standard	Automatic	Auto-Alternation		
1	80B21.5	80BA21.5	80BW21.5	80	1.5
2	100B42.2	100BA42.2	100BW42.2	100	2.2
3	100B43.7	100BA43.7	100BW43.7	100	3.7
4	100B43.7H	—	—	100	3.7
5	100B45.5	—	—	100	5.5
6	100B47.5	—	—	100	7.5



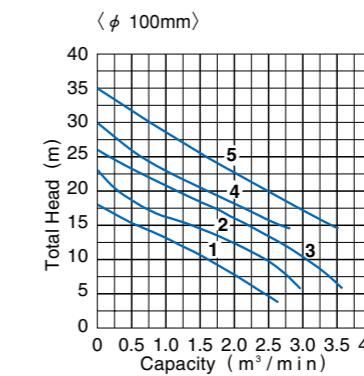
Curve No.	Model	Discharge Bore mm	Motor Output kW
1	200B47.5	200	7.5
2	200B411	200	11
3	200B415	200	15
4	200B422	200	22
5	200B422H	200	22
6	200B437	200	37
7	200B455	200	55



Curve No.	Model	Discharge Bore mm	Motor Output kW
1	350B822	350	22
2	350B630	350	30
3	350B637	350	37
4	350B645	350	45

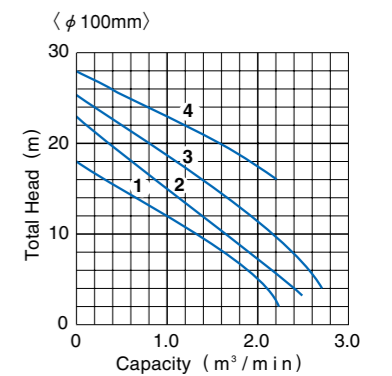


Curve No.	Model	Discharge Bore mm	Motor Output kW
1	600B1255	600	55
2	600B1085	600	85
3	700B1265	700	65
4	700B1275	700	75
5	800B1290	800	90
6	800B14110	800	110



Curve No.	Model	Discharge Bore mm	Motor Output kW
1	100BZ45.5	100	5.5
2	100BZ47.5	100	7.5
3	100BZ411	100	11
4	100BZ411H*	100	11
5	100BZ415	100	15

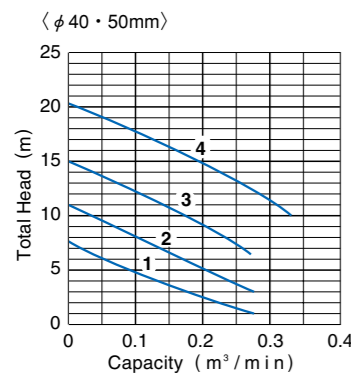
\*50Hz only



Curve No.	Model	Discharge Bore mm	Motor Output kW
1	100C45.5	100	5.5
2	100C47.5	100	7.5
3	100C411	100	11
4	100C415	100	15

## U VORTEX IMPELLER

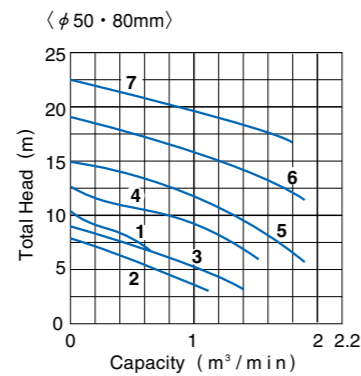
The U-series is a vortex pump powered by a 2-pole motor. The impeller produces vortex flow that allows fibrous materials and solid matters to be pumped out with minimum contact to the impeller. It offers a practically choking-free operation in sewage pumping.



Curve No.	Model			Discharge Bore mm	Motor Output kW
	Standard	Automatic	Auto-Alternation		
1	40U2.25S	40UA2.25S	40UW2.25S	40	0.25
	40U2.25	40UA2.25	40UW2.25	40	0.25
	50U2.4S	50UA2.4S	50UW2.4S	50	0.4
2	50U2.4	50UA2.4	50UW2.4	50	0.4
	50U2.75	50UA2.75	50UW2.75	50	0.75
4	50U21.5	50UA21.5	50UW21.5	50	1.5

## UZ VORTEX IMPELLER

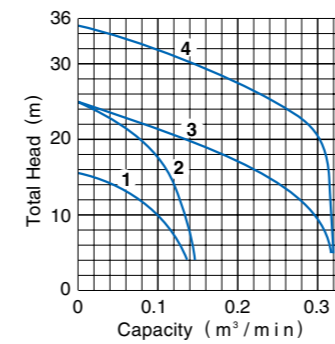
The UZ-series is a vortex pump driven by a 4-pole motor. It has a large solid passage that is equivalent to its discharge diameter and is excellent in the solid handling capability. It offers a practically choking-free operation in sewage pumping.



Curve No.	Model			Discharge Bore mm	Motor Output kW
	Standard	Automatic	Auto-Alternation		
1	50UZ41.5	50UZA41.5	50UZW41.5	50	1.5
2	80UZ41.5	80UZA41.5	80UZW41.5	80	1.5
3	80UZ42.2	80UZA42.2	80UZW42.2	80	2.2
4	80UZ43.7	80UZA43.7	80UZW43.7	80	3.7
5	80UZ45.5	—	—	80	5.5
6	80UZ47.5	—	—	80	7.5
7	80UZ411	—	—	80	11

## MG VORTEX IMPELLER

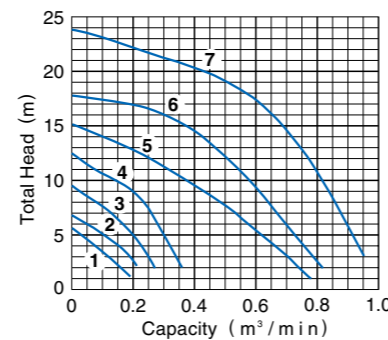
The MG-series has a grinding mechanism in its suction port, and it cuts incoming solid into small pieces. This enables the pump to transfer sewage via a small diameter pipe without the fear of clogging.



Curve No.	Model	Discharge Bore mm	Motor Output kW
1	32MG21.0	32	1.0
2	32MG21.5	32	1.5
3	50MG22.2	50	2.2
4	50MG23.7	50	3.7

## PU VORTEX IMPELLER

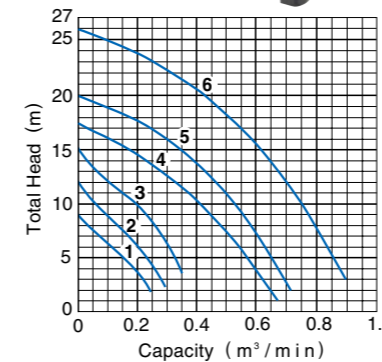
The PU-series is one of the Tsurumi VANCS-series. Being made of stainless steel and special resin, the pump is not only lightweight but corrosion-resistant as well. Built-in vortex impeller and large passage facilitate pump operations to readily dispose of liquid containing various kinds of foreign matters.



Curve No.	Model			Discharge Bore mm	Motor Output kW
	Standard	Automatic	Auto-Alternation		
1	40PU2.15S	40PUA2.15S	40PUW2.15S	40	0.15
	40PU2.15	40PUA2.15	40PUW2.15	40	0.15
2	40PU2.25S	40PUA2.25S	40PUW2.25S	40	0.25
	40PU2.25	40PUA2.25	40PUW2.25	40	0.25
3	50PU2.4S	50PUA2.4S	50PUW2.4S	50	0.4
	50PU2.4	50PUA2.4	50PUW2.4	50	0.4
4	50PU2.75S	50PUA2.75S	—	50	0.75
	50PU2.75	50PUA2.75	50PUW2.75	50	0.75
5	80PU21.5	80PUA21.5	80PUW21.5	80	1.5
6	80PU22.2	80PUA22.2	80PUW22.2	80	2.2
7	80PU23.7	80PUA23.7	80PUW23.7	80	3.7

## PN VORTEX IMPELLER

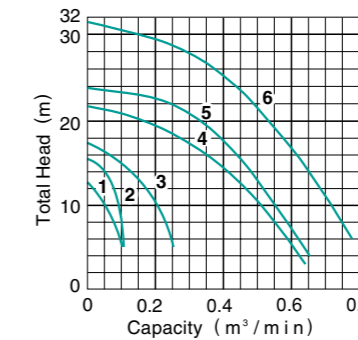
The PN-series is one of the Tsurumi VANCS-series. Being made of stainless steel and special resin, the pump is not only lightweight but corrosion-resistant as well. The semi-vortex pump design with moderate impeller passage provides efficient performance for versatile applications.



Curve No.	Model			Discharge Bore mm	Motor Output kW
	Standard	Automatic	Auto-Alternation		
1	40PN2.25S	40PNA2.25S	40PNW2.25S	40	0.25
	40PN2.25	40PNA2.25	40PNW2.25	40	0.25
	50PN2.4S	50PNA2.4S	50PNW2.4S	50	0.4
2	50PN2.4	50PNA2.4	50PNW2.4	50	0.4
	50PN2.75S	50PNA2.75S	—	50	0.75
3	50PN2.75	50PNA2.75	50PNW2.75	50	0.75
	50PN21.5	50PNA21.5	50PNW21.5	50	1.5
4	80PN22.2	80PNA22.2	80PNW22.2	80	2.2
6	80PN23.7	80PNA23.7	80PNW23.7	80	3.7

## PSF CLOSED IMPELLER

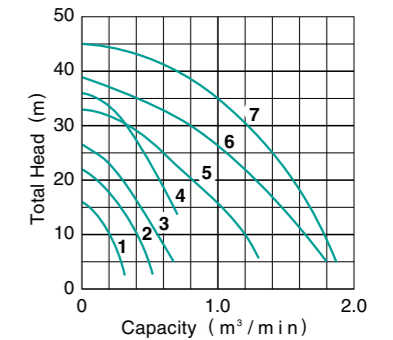
The PSF-series is one of the Tsurumi VANCS-series. Being made of stainless steel and special resin, the pump is not only lightweight but corrosion-resistant as well. Built-in closed impeller generates the highest head in VANCS-series.



Curve No.	Model			Discharge Bore mm	Motor Output kW
	Standard	Automatic	Auto-Alternation		
1	40PSF2.25S	40PSFA2.25S	40PSFW2.25S	40	0.25
	40PSF2.25	40PSFA2.25	40PSFW2.25	40	0.25
	40PSF2.4S	40PSFA2.4S	40PSFW2.4S	40	0.4
2	40PSF2.4	40PSFA2.4	40PSFW2.4	40	0.4
	50PSF2.75	50PSFA2.75	50PSFW2.75	50	0.75
3	50PSF2.75	50PSFA2.75	50PSFW2.75	50	0.75
	50PSF21.5	50PSFA21.5	50PSFW21.5	50	1.5
5	65PSF22.2	65PSFA22.2	65PSFW22.2	65	2.2
6	65PSF23.7	65PSFA23.7	65PSFW23.7	65	3.7

## SF SEMI-OPEN IMPELLER

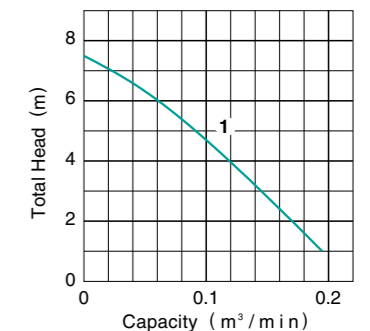
The SF-series is a cast iron, compact, effluent pump having a semi-open impeller. It is designed for high-head pumping plus defoaming at wastewater treatment plants.



Curve No.	Model	Discharge Bore mm	Motor Output kW
1	50SF2.75	50	0.75
2	50SF21.5	50	1.5
3	50SF22.2	50	2.2
4	50SF23.7	50	3.7
5	80SF25.5	80	5.5
6	80SF27.5	80	7.5
7	80SF211	80	11

## OM VORTEX IMPELLER

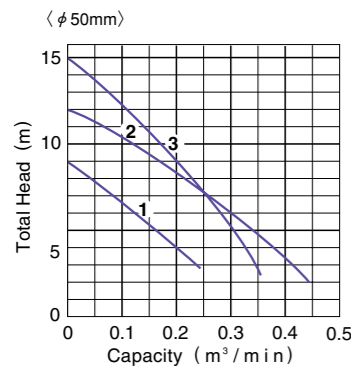
The OM3 and OMA3 are made of stainless steel and special resin. The pump is not only lightweight but corrosion-resistant as well. The semi-vortex pump design minimizes "impeller lock" that occurs when mixed in debris is about to impede impeller rotation. An automatic model uses a cylindrical float, allowing it to be installed in tight spaces.



Curve No.	Model		Discharge Bore mm	Motor Output kW
	Standard	Automatic		
1	OM3	OMA3	32	0.15

**BQ CHANNEL IMPELLER**

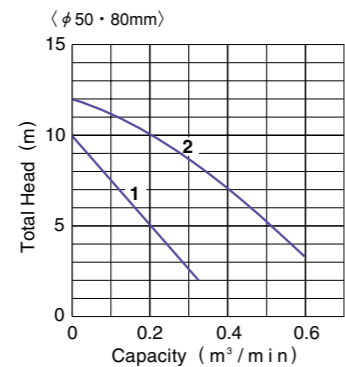
The BQ-series is based on B-series, but all the wetted parts are made of austenitic stainless steel. Wide opening channel impeller and shaver mechanism of the suction cover performs smooth dewatering even the liquid contains suspended solids.



Curve No.	Model	Discharge Bore mm	Motor Output kW
1	50BQ2.4	50	0.4
2	50BQ2.75	50	0.75
3	50BQ2.75H	50	0.75

**CQ CUTTER IMPELLER**

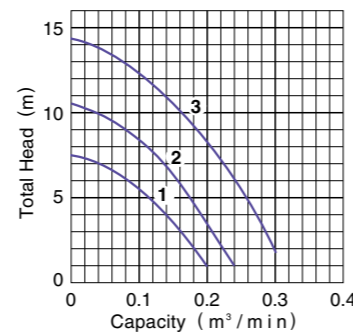
The CQ-series is based on C-series, but all the wetted parts are made of austenitic stainless steel. Wide opening channel impeller with cutter mechanism drains powerfully even the liquid contains suspended solid and fibrous matters.



Curve No.	Model	Discharge Bore mm	Motor Output kW
1	50CQ2.75	50	0.75
2	80CQ21.5	80	1.5

**SQ VORTEX IMPELLER**

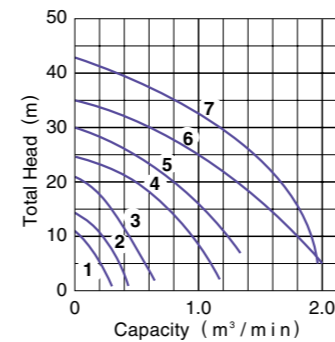
The SQ-series is designed for compact and lightweight, and all the wetted parts are made of austenitic stainless steel. Its structure, "flow-thru design" cools the motor and permits the unit to operate at a low water level.



Curve No.	Model		Discharge Bore mm	Motor Output kW
	Standard	Automatic		
1	40SQ2.25S	40SQA2.25S	40	0.25
	40SQ2.25	—		
2	50SQ2.4S	50SQA2.4S	50	0.4
	50SQ2.4	—		
3	50SQ2.75	—	50	0.75

**SFQ SEMI-OPEN IMPELLER**

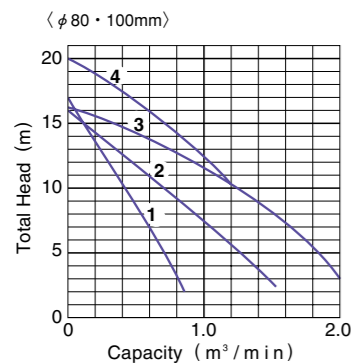
The SFQ-series is made of austenitic stainless steel, ideal for draining corrosive liquid in chemical plant or other industrial plant. The pump is a highly specialist pump in term of design and materials.



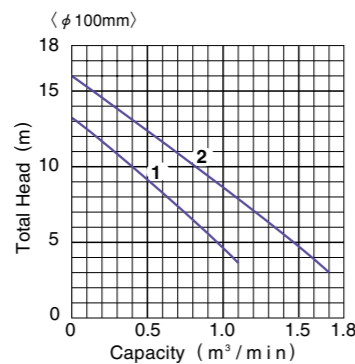
Curve No.	Model	Discharge Bore mm	Motor Output kW
1	50SFQ2.4S	50	0.4
	50SFQ2.4	50	0.4
2	50SFQ2.75	50	0.75
3	80SFQ21.5	80	1.5
4	80SFQ23.7	80	3.7
5	80SFQ25.5	80	5.5
6	80SFQ27.5	80	7.5
7	80SFQ211	80	11

**TM VORTEX IMPELLER**

The TM-series is one of the Tsurumi VANCS-series. Being all wetted parts made of titanium and special resin, the pump is not only lightweight but corrosion-resistant against seawater and fits marine use. In addition to the listed line-up from 0.25 kW to 1.5 kW models, 2.2 kW and 3.7 kW models are also available.



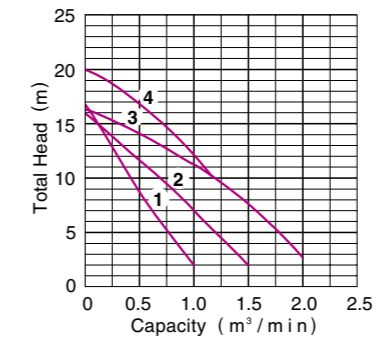
Curve No.	Model	Discharge Bore mm	Motor Output kW
1	80BQ21.5	80	1.5
2	100BQ42.2	100	2.2
3	100BQ43.7	100	3.7
4	100BQ43.7H	100	3.7



Curve No.	Model	Discharge Bore mm	Motor Output kW
1	100CQ42.2	100	2.2
2	100CQ43.7	100	3.7

**BX CHANNEL IMPELLER**

The BX-series is the explosion-proof type of the B-series and is available for operating in an area in which an explosive atmosphere occurs occasionally. The pump conforms to the relevant EU directives and is certified by ATEX II 2 G Ex d IIB T4 standard.

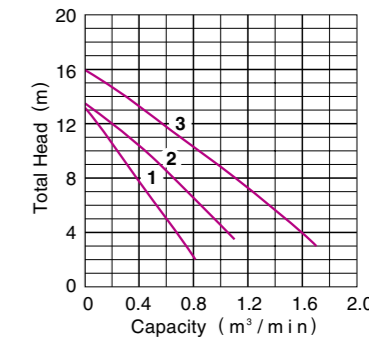


Curve No.	Model	Discharge Bore mm	Motor Output kW
1	80BX21.6	80	1.6
2	100BX42.3	100	2.3
3	100BX43.8	100	3.8
4	100BX43.8H	100	3.8

The BX-series is available in 50Hz only.

**CX CUTTER IMPELLER**

The CX-series is the explosion-proof type of the C-series and is available for operating in an area in which an explosive atmosphere occurs occasionally. The pump conforms to the relevant EU directives and is certified by ATEX II 2 G Ex d IIB T4 standard.

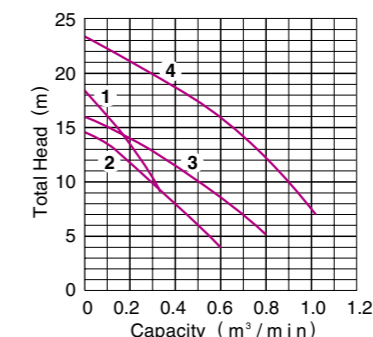
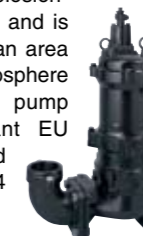


Curve No.	Model	Discharge Bore mm	Motor Output kW
1	80CX21.6	80	1.6
2	100CX42.3	100	2.3
3	100CX43.8	100	3.8

The CX-series is available in 50Hz only.

**UX VORTEX IMPELLER**

The UX-series is the explosion-proof type of the U-series and is available for operating in an area in which an explosive atmosphere occurs occasionally. The pump conforms to the relevant EU directives and is certified by ATEX II 2 G Ex d IIB T4 standard.

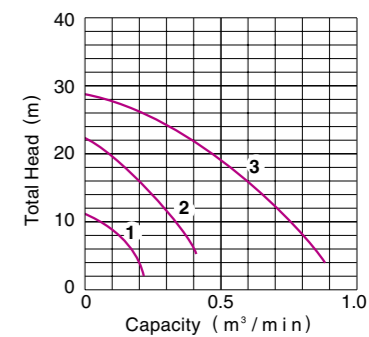


Curve No.	Model	Discharge Bore mm	Motor Output kW
1	50UX21.6	50	1.6
2	80UX21.6	80	1.6
3	80UX22.4	80	2.4
4	80UX24.0	80	4.0

The UX-series is available in 50Hz only.

**KTX SEMI-OPEN IMPELLER**

The KTX-series is the explosion-proof type of the general dewatering pumps, KTZ-series. The pump is available for operating in an area in which an explosive atmosphere occurs occasionally. It is designed to conform class 2 Group 4 that is equivalent to d II T4.



Curve No.	Model	Discharge Bore mm	Motor Output kW
1	50KTX2.4S	50	0.4
2	50KTX21.5	80	1.5
3	80KTX23.7	50	3.7

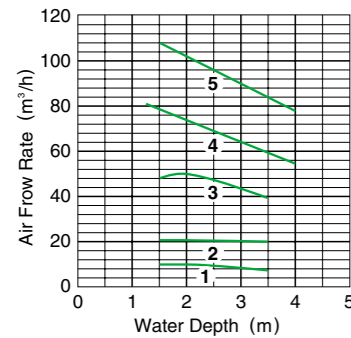
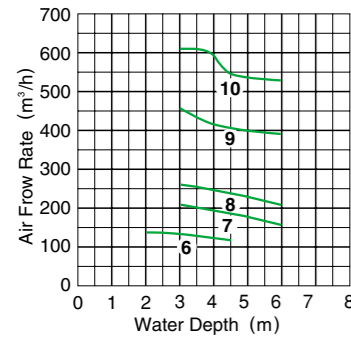
## TRN AERATOR

The TRN-series is a submersible aerator having a self-aspirating function. A built-in special semi-open impeller generates negative pressure, draws in air from above the water surface. The drawn air and liquid are mixed and discharged at a high pressure. This innovative mechanism contributes to highly efficient dissolution of oxygen.



### Air Flow Rate – Water Depth Curves

(The air flow rates are expressed at the standard condition, i.e. temperature of 20°C, 1 atm and may vary by up to approx. 5%.)



Curve No.	Model	Air-inlet Bore mm	Motor Output kW
1	32TRN2.75	32	0.75
2	32TRN21.5	32	1.5
3	50TRN42.2	50	2.2
4	50TRN43.7	50	3.7
5	50TRN45.5	50	5.5
6	80TRN47.5	80	7.5
7	80TRN412	80	12
8	80TRN417	80	17
9	100TRN424	100	24
10	150TRN440	150	40

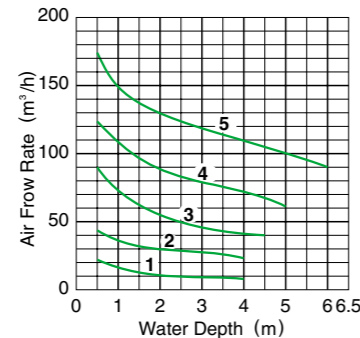
## BER EJECTOR

The BER-series is a submersible ejector comprising a B-series sewage pump and a venturi-jet pump. It draws in air by means of its self-aspirating mechanism and discharges the mixture of air and water through the diffuser. The powerful single jet current is unrivaled in vertical stirring convection.



### Air Flow Rate – Water Depth Curves

(The air flow rates are expressed at the standard condition, i.e. temperature of 20°C, 1 atm and may vary by up to approx. 5%.)



Curve No.	Model	Air-inlet Bore mm	Motor Output kW
1	8-BER4	25	0.75
2	15-BER3	32	1.5
3	22-BER5	50	2.2
4	37-BER5	50	3.7
5	55-BER5	50	5.5

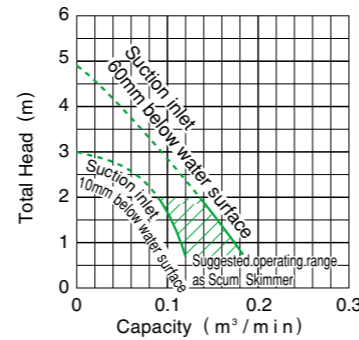


## FSP SCUM SKIMMER

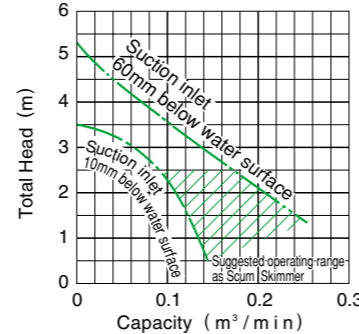
The FSP-series is a scum skimmer, incorporating a jet injector. It guarantees a stable sucking process even if water, air, and suspended matters are drawn in from water surface simultaneously.



<4-FSP2>



<8-FSP3>

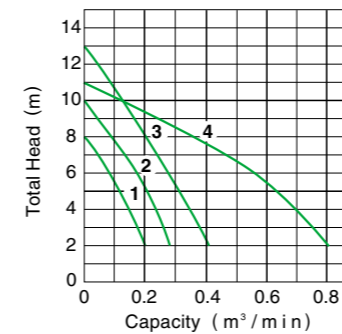


Model	Discharge Bore mm	Motor Output kW
4-FSP2	50	0.4
8-FSP3	50	0.75



## FHP DECANTING PUMP

The FHP-series is a decanting pump, having a monitoring device for the sludge surface. The pump ensures that only supernatant liquid is discharged without any entrapment of sediment.



Curve No.	Model	Discharge Bore mm	Motor Output kW
1	FHP3-3	40	0.25
	FHP3-3T	40	0.25
2	FHP2-4	50	0.4
	FHP2-4T	50	0.4
3	FHP3-8T	50	0.75
4	FHP2-15T	80	1.5



## TAR AERATOR

The TAR-series is a submersible aerator having an axial-flow impeller. The air supplied by a blower is broken into fine bubbles and is mixed with water by its strong water current. An extremely high oxygen transfer rate can be achieved with less energy consumption.



Air-inlet Bore : 65-200mm  
Motor Output : 1.5-30kW

## RS BLOWER

The RS-series is a rotary air blower with a 3-lobe rotor. A highly well-balanced rotor and innovative helical outlet port minimizes violent impact and pulsation noise. It is applicable to a wide variety of applications.

Discharge Bore : 20-150mm  
Motor Output : 0.4-45kW  
Air Volume : Max. 28m³/min  
Discharge Pressure : Max. 58.8kPa



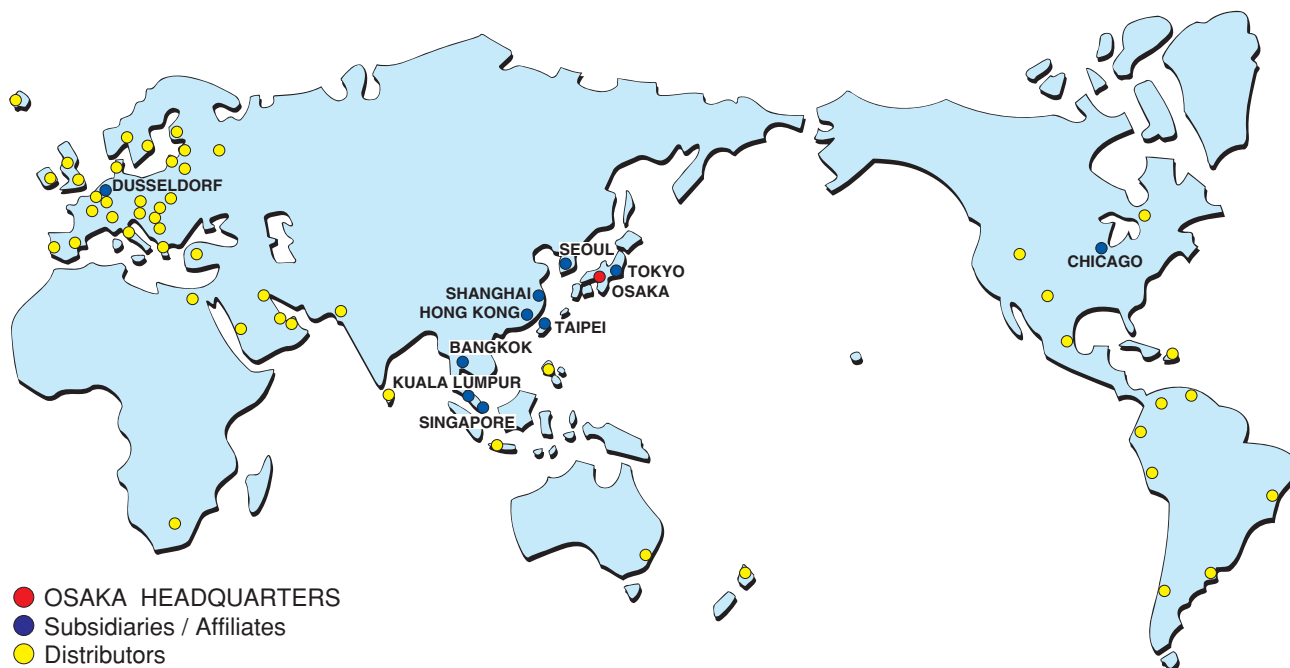
## KE/KS/KM BAR SCREEN

The KE/KS/KM-series are automatic mechanical bar screens for removing solids before aeration. Bar spacing available is from 1 mm to 50 mm. All the major parts are made of 304 stainless steel. They are designed to be compact and easy to install.





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