

FEATURES

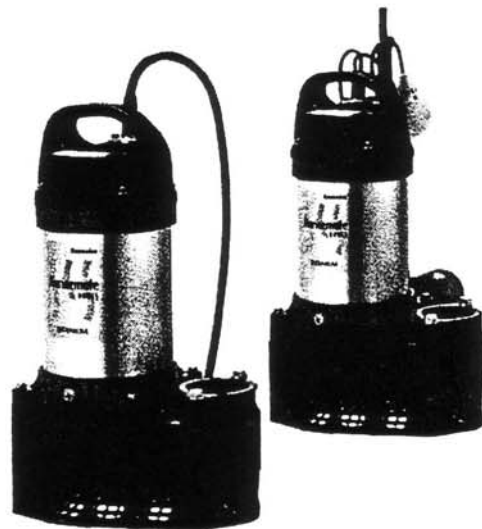
1. Enclosed, FRP (Fiberglass Reinforced Plastic), impeller provides for high head pumping of effluent or water.
2. Double inside mechanical seals with silicon carbide faces, running in an oil filled chamber and further protected by a lip seal, provides for the most durable seal design available.
2. Highly efficient, continuous duty, air filled, copper wound motor with class E, insulation minimizes the cost of operation.
4. Built in thermal & amperage sensing, protector prevents motor failure due to overloading, single phasing (in three phase units), or accidental run -dry conditions.

4 PSH

5. Double shielded, permanently lubricated, high temperature C3 ball bearings rated for a B-10 life of 60,000 hours, extend operational life.
6. Utilization of application appropriate FRP & stainless steel components increases corrosion resistance in a wide variety of applications.

APPLICATIONS

1. Residential, commercial, effluent, wastewater and site drainage.
2. Chemical spill containment.
3. Decorative waterfalls, fountains and fish ponds.
4. Raw water supply from rivers or lakes.



SPECIFICATIONS

- Discharge Size
- Horsepower Range
- Performance Range Capacity Head
- Maximum water temperature
- Materials of Construction
 - Casing (upper)/(lower)
 - Impeller
 - Shaft
 - Motor Frame
 - Fasteners
- Mechanical Seal
 - Elastomers
- Impeller Type
- Solids Handling Capability
- Bearings
- Motor Nomenclature
 - Type, Speed, Hz.
 - Voltage, Phase
 - Insulation
- Accessories
- Operational Mode

STANDARD

- 2" Npt (50 mm)
- 1/3 ~ 1Hp. (.2 ~ .75 Kw)
- 7 ~ 65 Gpm. (.026 ~ .25 m³/min)
- 17 Ft. ~ 53 Ft. (5.1 ~ 16 m)
- 140° F. (60° C.)
- FRP (ABS + G20) / ABS
- FRP (ABS + G20)
- 403 Stainless Steel
- 304 Stainless Steel
- 304 Stainless Steel
- Silicon Carbide
- NBR (Nitril Buna Rubber)
- Enclosed, Multi-vane
- .32~.88" (8~11 mm)
- Pre-lubricated, Double Shielded
- Air Filled, 3600 Rpm, 60 Hz.
- 115 or 230 V., 1 Ph., 230 or 460 V. 3 Ph.
- Class E
- Submersible Power Cable 32' (10 m)
- Manual

OPTIONS

- 2"
- 1/2 HP - 110/160*
- 10 GPM*
- 48'*
- Length as Required
- Model A (Automatic), Model AW (Automatic Alternating)
- TOK 3 (FRP) Slide rail system

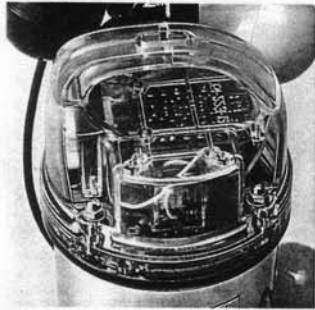
Shaft seal, motor protection prove Tsurumi's time-tested pump-making expertise.

Control substrate

(automatic/automatically interlocked)

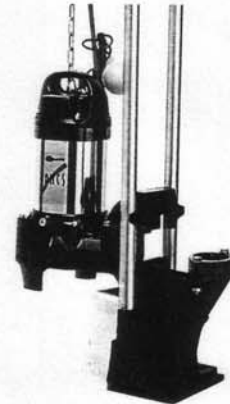
Incorporates an automatic operation system.

- (1) Simply connected to power source for automatic/automatically interlocked operations.
- (2) A teardrop float accurately detects the liquid level, free from interference by waves or sewage, and prevents chattering.

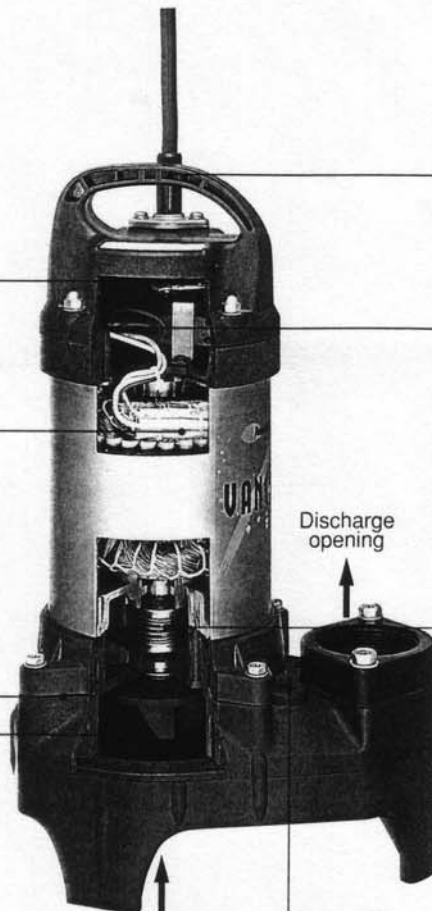


Hung at one point

The pump is hung with chain at one point to facilitate installation. The TOK3 resin auto-setter with guide rails readily connects a small pump to or separates it from piping only by lifting it up/down. No need to descend the pit for maintenance.



• The vertical section below is that of PU (non-automatic) model.



Motor

Dry submersible induction motor

Back pull-out structure

Unfastening the bolts between the oil casing and the upper pump casing allows the body to be separated into the pump section and the motor section with the impeller left in position. This facilitates inspections of the main portions. The pump section can be disassembled/reassembled using a large (No. 3) Phillips screwdriver.



Motor protection

An incorporated circle thermal protector stops motor operation by cutting off the electric circuit using a bimetal breaker if, for some reason or other, excess current is applied to the motor or the motor is overheated. The motor automatically resumes operation when its temperature gets back to normal.

Shaft seal

A single-coil double mechanical seal made of silicon carbide perfectly prevents water from leaking into the inside of the motor. The mechanical seal is very important for normal operations of submersible pumps.

Air vent valve

Prevents air locking. Molded together with the casing in a monoblock mold, which is only possible by the resin processing technique.

No stop-float adjustment (interlocked auto-operation)

Neither the automatic version nor automatic interlocked version calls for liquid level setting at installation. In particular, it is not necessary to adjust the stop float for the automatic interlocked models.

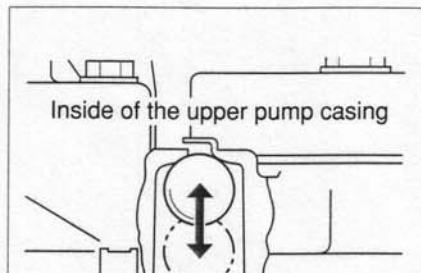
Impellers



Vortex impeller
(for all models
except PSH)



Closed impeller
(for PSH)



PSH for waste water (high head)

- A closed impeller with outstanding characteristics ensures a very high head compared with equivalents.
- Resin and stainless-steel wet parts prevents locking of the pump.

■ Applications

1. Defoaming and draining at various waste water treatment plants.
2. Draining various industrial waste water.
3. Draining rainwater and spring water.



Non-Automatic

■ Major Standard Specifications

Item		Discharge Bore mm		
		40	50	
Pumping fluid	Type of fluid	Waste water, treated water from septic tanks and stored water.		
	Liquid temperature	0~40°C		
Pump	Components	Impeller	Closed	
		Shaft seal	Double mechanical seal	
		Bearing	Shielded ball bearing	
	Materials	Impeller	Resin containing glass fiber	
		Upper casing	Resin containing glass fiber	
		Lower casing	Resin containing glass fiber	
	Shaft seal (mechanical seal)	Silicon carbide		
Motor	Type, Poles	Dry-type submersible induction motor, 2 poles		
	Insulation	Class E		
	Phase/Voltage	Single/110V, 200V, 220V, 230V, 240V Three/220V, 346V, 380V, 400V, 415V, 440V, 460V,		
	Motor protector (built-in)	Circle thermal protector		
	Lubricant	Turbine oil (ISO VG32)		
	Materials	Frame	Stainless steel #304	
		Shaft	Stainless steel #403	
Cable		PVC Sheath		
Connection to piping		Special screwed flange		

■ Specifications 50/60 Hz

	Discharge Bore mm	Model		Motor Output kW	Phase	Total Head m	Capacity m ³ /min	Starting Method	Dry Weight kg	Length of Cabtyre Cable m
		Free Standing	Guide Rail Fitting							
Non-Automatic	40	3-PSH	Special accessory	0.25	Single-phase	10	0.05	Capasitor Motor	7.8	6
	40	3-PSHT	Special accessory	0.25	Three-phase	10	0.05	Direct-On-Line Start	7.2	6
	40	4-PSH	Special accessory	0.4	Single-phase	14	0.05	Capasitor Motor	8.6	6
	40	4-PSHT	Special accessory	0.4	Three-phase	14	0.05	Direct-On-Line Start	8.1	6
	50	8-PSHT	Special accessory	0.75	Three-phase	15	0.10	Direct-On-Line Start	9.7	6

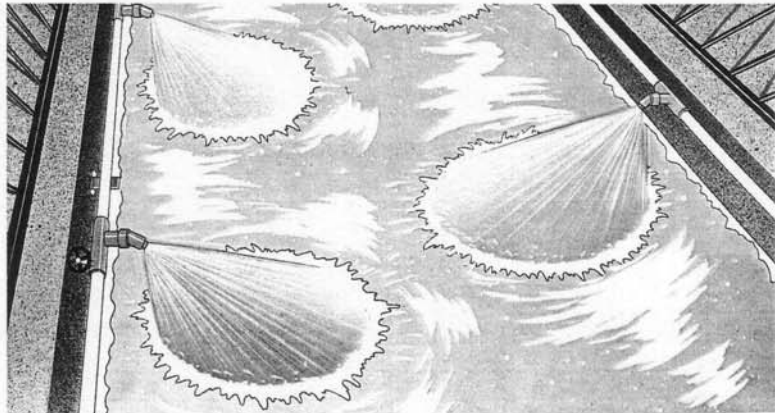
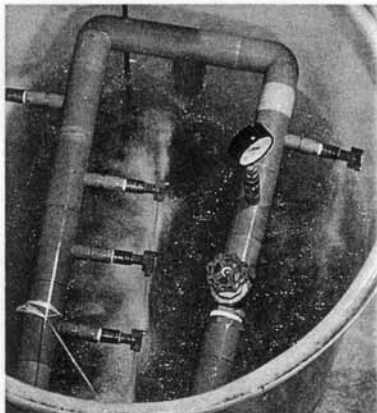
• Cable is not included in the dry weight.

■ Standard Accessories for Free Standing Type

- Cabtyre cable 1 piece
- Special screwed-in mating flange with bolts and packing 1 set
- Aboveground nameplate 1 piece

■ Special Accessories

- TOK3-type* guide rail fitting (auto-setter) for small pumps
 - Duck foot bend (with bolts) 1 set
 - Guide support (with bolts) 1 set
 - Guide hook (with bolts) 1 set
 - Pump lifting chain (with shackle, 4 m) 1 piece
- *See the back cover for TOK3 autosetter details.



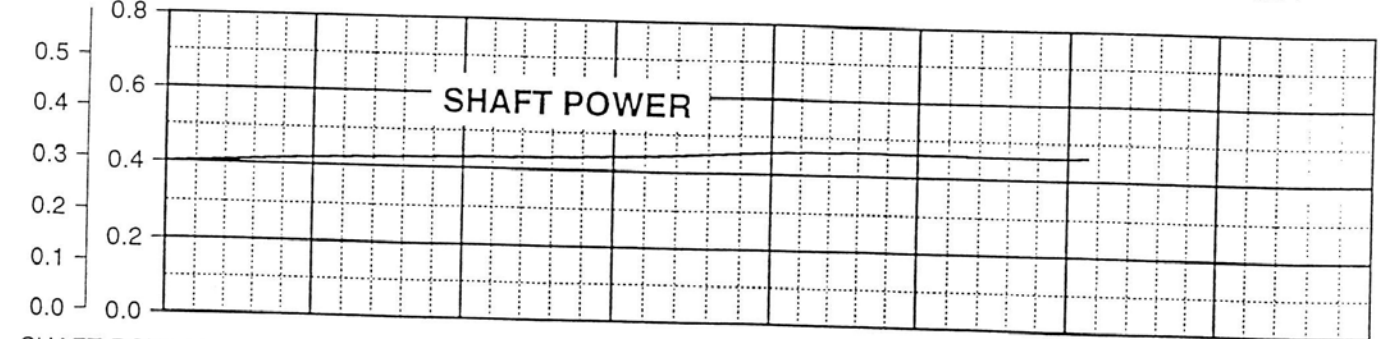
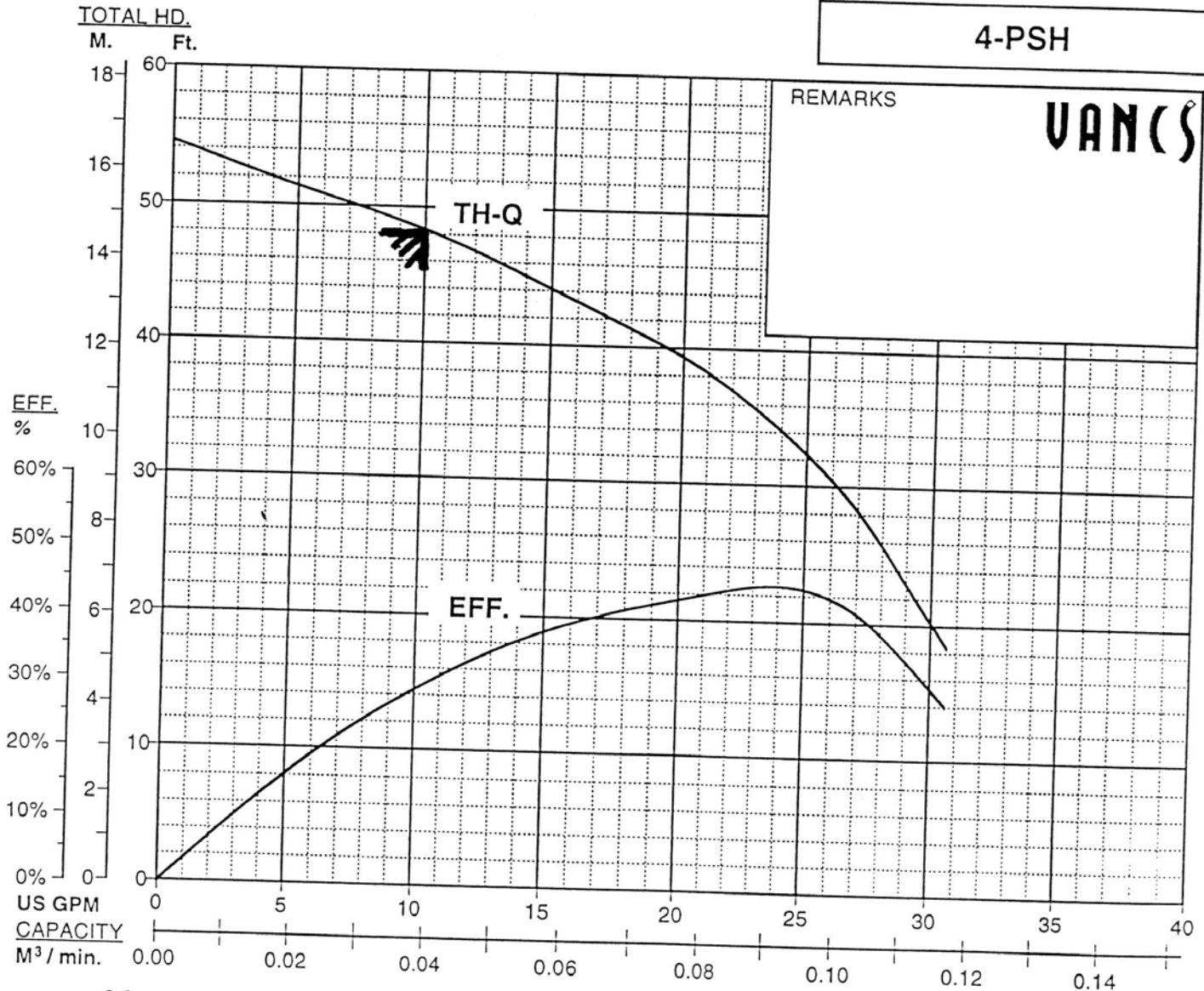


VANCS - SERIES - PSH
(FRP) EFFLUENT PUMPS

PERFORMANCE CURVE

MODEL	BORE	HP	KW	RPM	SOLIDS DIA	LIQUID	SG.	VISCOSITY	TEMP.
4-PSH	1.5" / 40mm	1/2	0.4	3415	0.32" / 8mm	WATER	1.0	1.81 CST	60°F
PUMP TYPE	PHASE	VOLTAGE		AMPERAGE		HZ	STARTING METHOD		INS. CLASS
Effluent Pump	Single	100 / 110		7.1 / 6.5		60	Capacitor		E
CURVE NO.	DATE	PHASE	VOLTAGE	AMPERAGE	HZ	STARTING METHOD		INS. CLASS	
001	09-15-98								

4-PSH



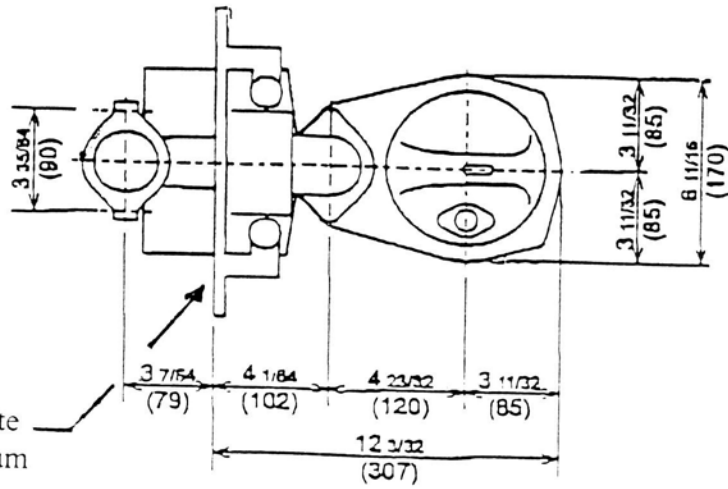
SHAFT POWER
KW BHP

DESIGN - 10 GPM @ 48' (2.1 PSI)

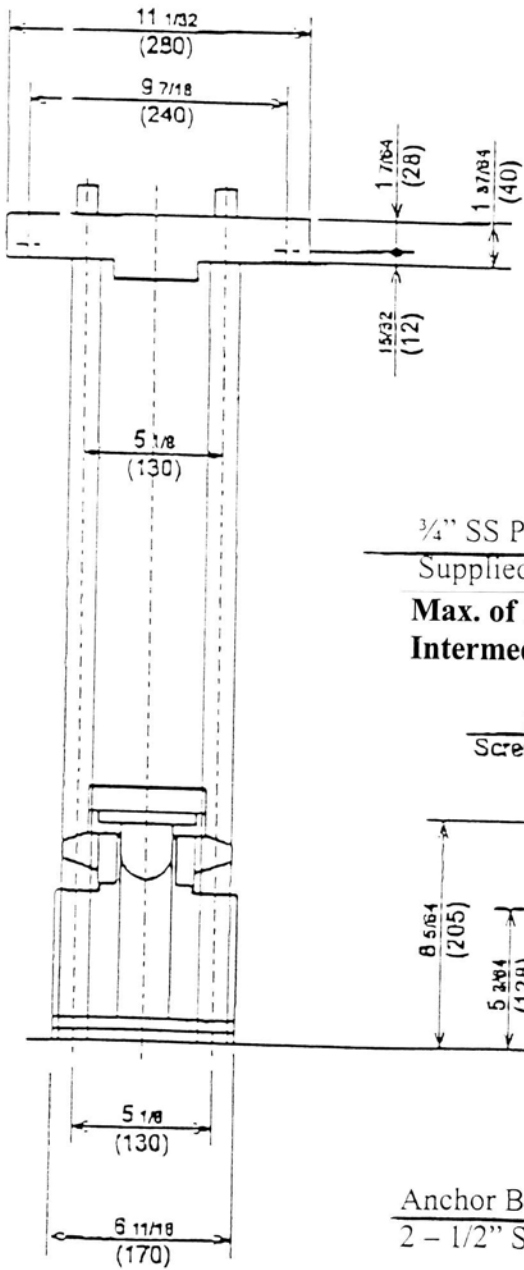
TSS Sample Pump

Tsurumi 4PSH Enclosed Impeller
Submersible Pump, 1/2hp, 110/1/60,
33' power cord, 25' SS chain, fiber-
glass foot mount & intermediate
support. Supports req'd every 10'
for customers 3/4", 316 SS, sch. 40 pipe.
Design - 10 gpm @ 48'
20 gpm @ 39'

Detail 4



Optional - Intermediate
Wall Bracket, aluminum



Intermediate Supports
Req'd every 10'
P/N 094-140-17

Guide Support Bolts
2 - 3/8" SS

3/4" SS Pipe, Sch. 40
Supplied by Contractor

**Max. of 10' between
Intermediate Supports**

2" NPT
Screwed Flange

Anchor Bolts
2 - 1/2" SS

25' SS Chain &
33' Power Cord

C.W.L.

L.W.L.

C.W.L. : Continuous Running Water Level
L.W.L. : Lowest Water Level

Optional - Footwall support, aluminum