



TSURUMI PUMP[®]

BUILT FOR WORK[®]

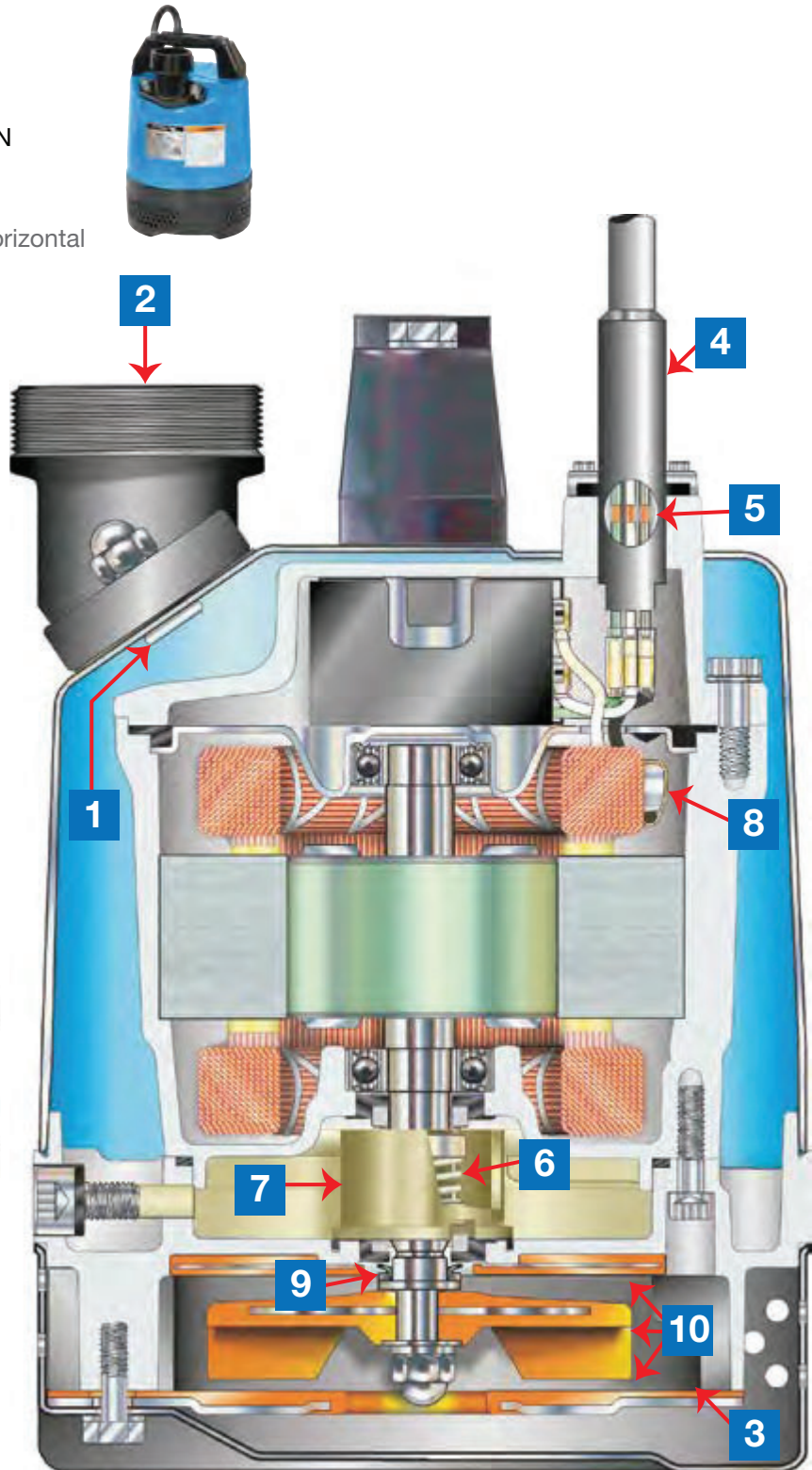
CONTRACTOR PUMPS | ENGINE PUMPS | GENERATORS



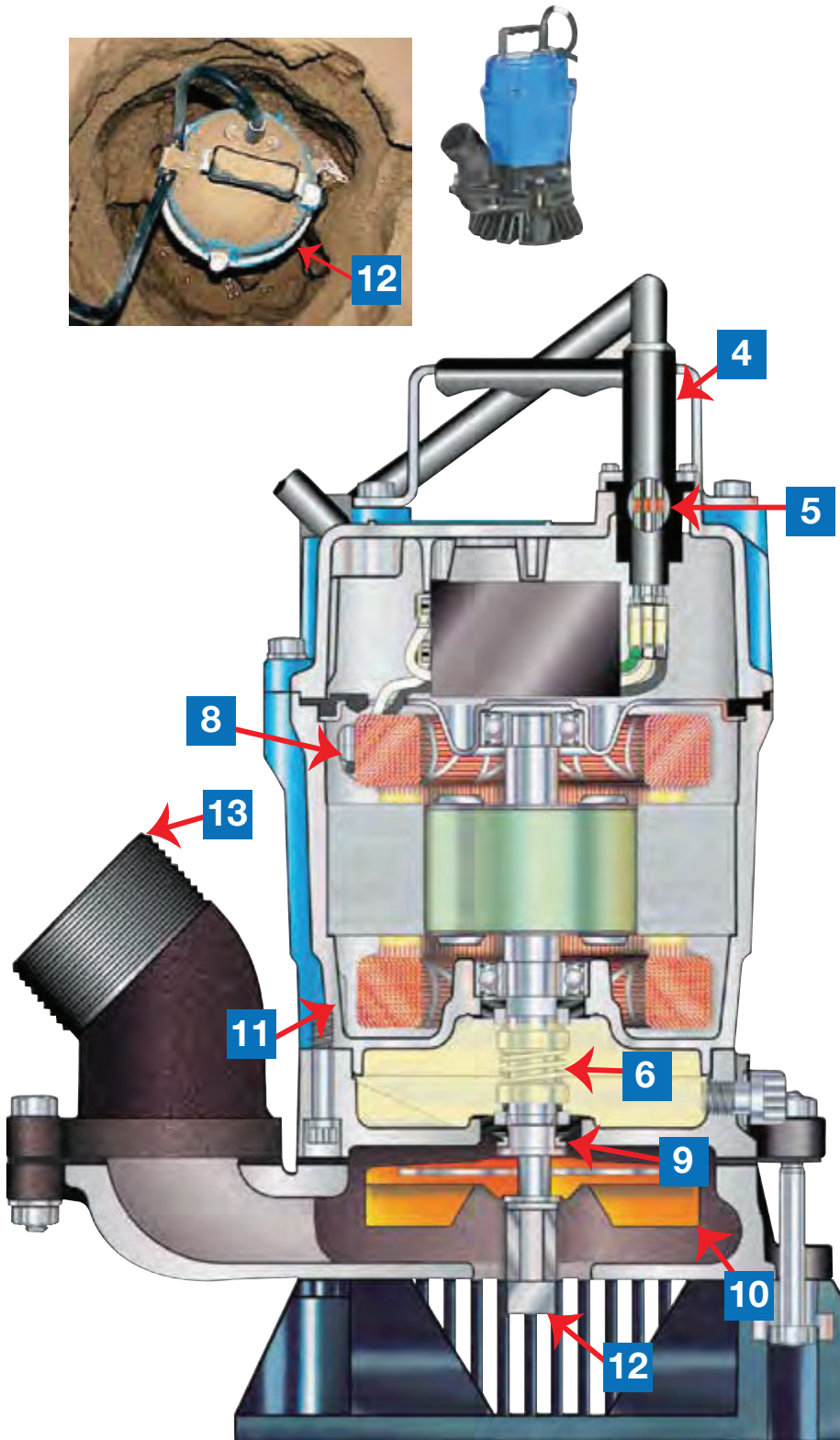
ELECTRIC SUBMERSIBLE PUMPS - Long Life by Design

LB Features

- 1** TOP DISCHARGE, FLOW THRU DESIGN
- 2** MULTI-DIRECTIONAL DISCHARGE CONNECTOR: Can be configured for horizontal or vertical discharge. Providing for a more stable installation.
- 3** RUBBER CASING WITH LARGE ROUNDED CUT-WATERS: Resists wear and degradation of performance due to abrasive particles.
- 4** CABLE BOOT: Prevents kinking at cable entrance by extending bending radius.
- 5** ANTI-WICKING BLOCK: Prevents water incursion due to capillary wicking, should the power cable be damaged or the end submerged.
- 6** DUAL INSIDE MECHANICAL SEAL WITH SILICON CARBIDE FACES: Provides longer operational life of any seal available.
- 7** OIL LIFTER: Provides lubrication of the seal faces down to 1/3 of normal oil level and extends seal life by ten times—uses no additional power.



Featured Model LB-480



Featured Model HS2.4S

(Not all features available on every Tsurumi submersible pump)

8 MINIATURE THERMAL MOTOR PROTECTOR: Protects against overheating & run-dry.

9 V-RING SEAL PROTECTOR: Protects mechanical seal from abrasive particles.

10 URETHANE, SEMI-VORTEX IMPELLER & WEAR PLATES: Resists wear by abrasive particles and does not depend on close tolerances to maintain pump performance.



Tsurumi Impeller polished, not worn by abrasive material.



Competitor Impeller is effectively worn out.

11 COPPER WINDINGS WITH CLASS E INSULATION

HS Features

12 AGITATOR: Suspends sand and mud, allowing for sediment removal from sumps or basins.

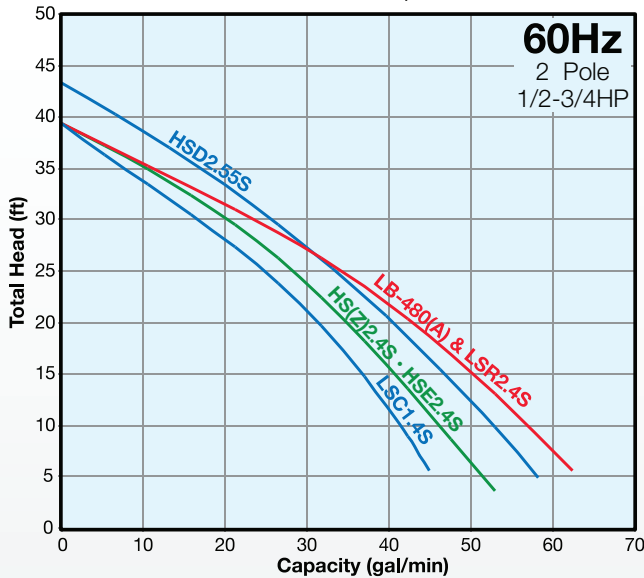
13 45° ANGLED DISCHARGE CONNECTOR: Provides for a more stable installation for either vertical or horizontal discharge hose.

GROUP PERFORMANCE RANGE

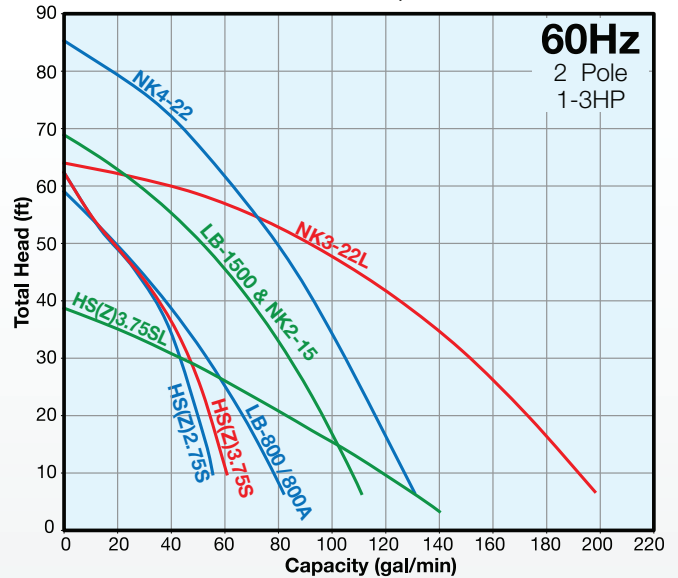
Reliable and cost-effective pumps enable Tsurumi to remain an industry leader in the rental and construction markets. Our customers know that while many pumps may look the same, only Tsurumi incorporates the most durable components into the final manufactured product.

GROUP PERFORMANCE RANGE ELECTRIC SUBMERSIBLE PUMPS

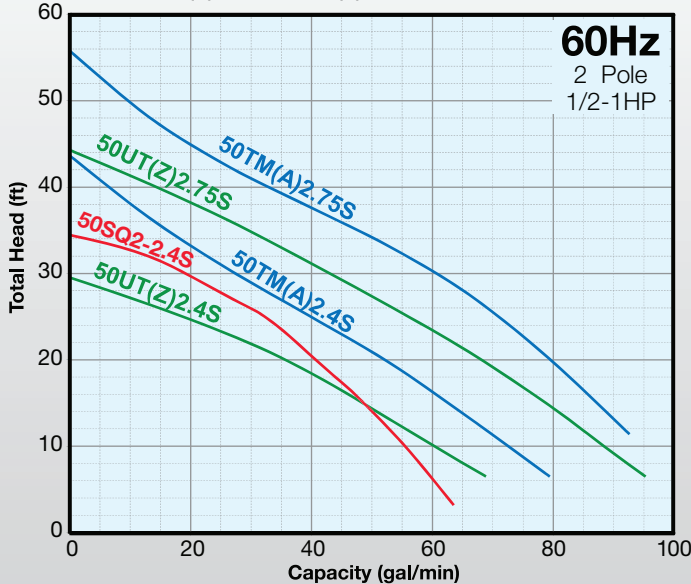
Electric Submersible Pumps: Under 1HP



Electric Submersible Pumps: 1HP or more

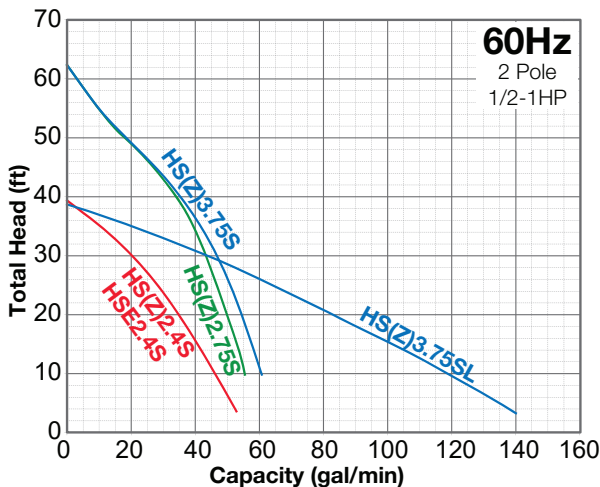


TM(A) Series • UT(Z) Series • 50SQ2-2.4S



HS • HSZ • HSE - TRASH PUMPS

HS / HSZ / HSE Series TRASH PUMPS: Durable trash pumps in two sizes—a 1HP 3-inch discharge and a 1/2HP 2-inch discharge. Both designed to pump water containing sand, solids and debris with minimal wear and clogging. HS2.4S / 2.75S / 3.75S / 3.75SL are manual trash pumps, and HSZ2.4S / 2.75S / 3.75S / 3.75SL are automatic trash pumps with integrated float switches. HSE2.4S is a HS2.4S trash pump with Automatic Water Level Sensor.



HS • HSZ • HSE TRASH PUMP Features

- Built-in shaft mounted agitator suspends solids
- Urethane Semi Vortex Impeller for maximum durability and pump performance
- Dual Inside Mechanical Seal With SiC faces provides longest operational life
- Oil Lifter provides lubrication of the seal faces
- V-Ring Seal design protects mechanical seal from abrasive particles

Technical Features of Automatic (E) Water Level Sensor*

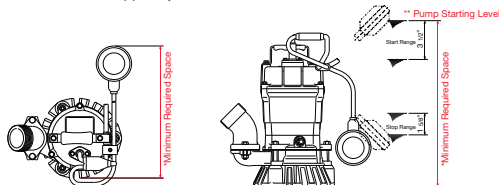
* not for use in distilled or deionized water

- Sensitive electrodes detect water to start pump operation even when foreign materials are present
- Internal 60-second timer eliminates frequent on/off operation in rough water to extend motor life
- Automatic water level sensor completely molded in resin and covered by rubber case for protection against rough handling.
- Jobsite tested for more than 30,000 on-off cycles without failure or damage

Optional Accessories - See page 24-27

- Vertical discharge coupling
- 2-inch NPT coupling available for HS(Z)3.75S

HSZ2.4S / 2.75S / 3.75S(L) Pump Dimension Reference



Certified by Intertek Testing Service to UL and CSA standards for submersible construction pumps.

Model	Motor Output (HP)	Phase	Discharge Bore (inch)	Cable Length (ft)	Dimension (inch)		Continuous Running Water Level (inch)	Float Start Level	Float Stop Level	Shipping Weight (lbs.)
					Diameter	Height				
HS2.4S	1/2	Single	2	20	10 1/16	12 15/16	3 1/2	N/A	30	
HSZ2.4S	1/2	Single	2	20	13 1/2*	15 1/8*	15 1/8*	15 1/8	4 3/4	30
HSE2.4S	1/2	Single	2	32	10 1/16	14 1/8	6 1/2	N/A	30	
HS2.75S	1	Single	2	32	11 7/16	15 5/16	3 1/2	N/A	47	
HSZ2.75S	1	Single	2	32	13 1/2*	17 1/2*	17 1/2*	17 1/2	7 1/8	47
HS3.75S	1	Single	3*	32	12 7/16	15 5/16	3 1/2	N/A	50	
HS3.75SL	1	Single	3	32	12 7/16	16 3/4	4 3/4	N/A	55	
HSZ3.75S	1	Single	3*	32	13 1/2*	17 1/2*	17 1/12*	17 1/2	7 1/8	50
HSZ3.75SL	1	Single	3	32	15 3/4*	19 7/8*	19 7/8*	19 7/8	7 1/8	55

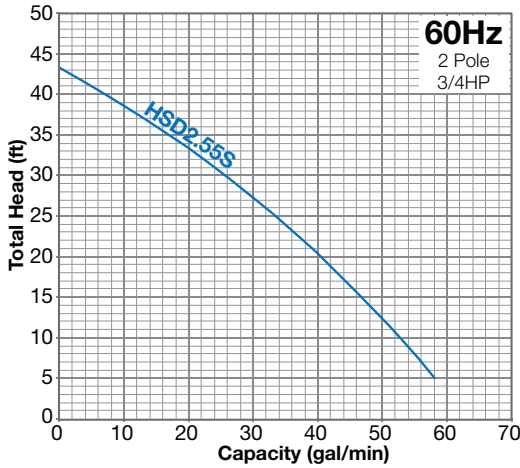
*2" is optional

*Minimum Required Space

*Pump Starting Level

HSD - EXTREME DUTY TRASH PUMP

EXTREME DUTY TRASH PUMP: Pumps water containing sand, solids and debris with minimal wear and clogging.



HSD2.55S Trash Pump Features

- Anti-wicking block prevents water incursion
- Oil Lifter extends seal life by ten times
- Dual Inside Mechanical Seal with silicon carbide faces provides longer operational life of any seal available
- V-Ring Seal design protects mechanical seal from abrasive particles
- Built-in larger shaft mounted agitator suspends solids & eliminates clogging
- High Chromium Iron impeller & agitator
- Ductile iron pump casing
- 3/4 HP motor; larger than HS2.4S
- Easy pump end disassembly

Optional Accessories - See page 24-27

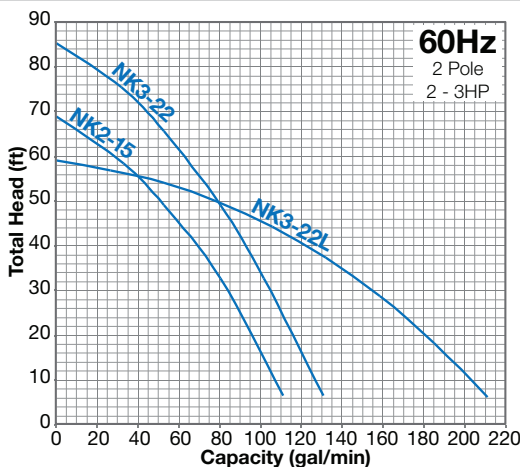
- Float switch
- Straight discharge
- Discharge hoses
- Quick connect fittings

Certified by Intertek Testing Service to UL and CSA standards for submersible construction pumps.

Model	Motor Output (HP)	Phase	Discharge Bore (inch)	Cable Length (ft)	Dimension (inch)		Continuous Running Water Level (inch)	Shipping Weight (lbs.)
					Diameter	Heights		
HSD2.55S	3/4	Single	2	32	10 3/8	15 3/8	4 1/8	38

NK - HEAVY DUTY HIGH HEAD PUMP

Heavy duty, single phase high head pumps capable of handling abrasive materials with minimal wear.



NK2-15 • NK4-22 • NK3-22L Features

- Terminal board for voltage reconnect allows for change from 110V to 220V (NK2-15 only)
- NK2-15 & NK4-22: Semi Vortex Impeller and Synthetic Rubber Wear Plates for maximum durability and maintaining pump performance
- NK3-22L: Semi-Open Impeller
- Dual Inside Mechanical Seal With SiC faces provides longer operational life
- Oil Lifter provides lubrication of the seal faces
- V-Ring Seal design protects mechanical seal from abrasive particles

Optional Accessories - See page 24-27

- TS-303 & TS-304 Float Switch for automatic operation
- Sand kit
- 2" NPT coupling
- Control panel
- Discharge hoses
- Quick connect fittings

Certified by Intertek Testing Service to UL and CSA standards for submersible construction pumps.

Model	Motor Output (HP)	Phase	Discharge Bore (inch)	Cable Length (ft)	Dimension (inch)		Continuous Running Water Level (inch)	Shipping Weight (lbs.)
					Diameter	Heights		
NK2-15	2	Single	3*	32	9 7/16	24 1/2	3 1/4	80
NK4-22	3	Single	3*	32	9 7/16	24 3/16	3 1/4	81
NK3-22L	3	Single	3*	32	9 1/4	26 1/2	4 3/4	90

SPECIFICATIONS - SINGLE PHASE PUMPS: LB • HS(Z) • HSE • HSD

	LB-480	LB-480A	LB-800	LB-800A	LB-1500	HS2.4S	HS2.4S	HS2.75S	HS2.75S	HS3.75S	HS3.75S	HS3.75SL	HS3.75SL	HSE2.4S	HSD2.55S																
	2" Dewatering Pump	2" Auto Dewatering Pump	2" Slimline Pump	2" Auto Slimline Pump	3" Slimline Pump	2" Sand/Solid Trash Pump	2" Auto Trash Pump	2" Sand/Solid Trash Pump	2" Auto Trash Pump	3" Sand/Solids Trash Pump	3" Auto Trash Pump	3" Sand/Solids Trash Pump	3" Auto Trash Pump	2" Trash Pump with Auto Water Level Sensor	2" Extreme Durable Sand Pump																
FLUID	Max. Capacity (GPM)	63		82		111		53		55		61		132																	
	Max. Head (ft.)	40		59		69		39		62		62		36																	
	Solid Diameter (in.)	0.236					0.276					0.393																			
PUMP	Impeller	Semi-Vortex			Semi-Open		Semi-Vortex																								
	Impeller Material	Urethane Rubber			High Chrome		Urethane Rubber							High Chrome																	
	Casing Material	Ethylene Propylene Rubber		Butadiene Rubber & Natural Rubber		Butadiene Rubber & Natural Rubber & Steel		Gray Iron Casing						Ductile Iron Casing																	
	Wear Plate Material	Urethane Rubber			Natural Rubber		Integral Part of Casing																								
	Shaft Seal - Type / Material	Double Inside Mechanical Seal with Silicon Carbide faces on lower seals and Carbon Ceramic Faces on upper seals																													
	Seal Lubricant - Type	SAE 10W/20W or Turbine Oil (ISO VG32)																													
	Seal Lubricant Amount (oz.)	5.2					12.5					5.4																			
	Seal Protection	V-Ring and Oil Lifter																													
	Discharge Connection	2" MNPT Coupling			3" MNPT Coupling (2" is optional)		2" MNPT Coupling		2" MNPT Coupling		3" MNPT Coupling (2" optional)		3" MNPT Coupling		2" MNPT Coupling																
	MOTOR	Motor Output (HP)	2/3		1		2		1/2		1		1		1		1/2		3/4												
Phase		Single Phase																													
Voltage (V)		115 or 230		115		115 or 230		115 or 230		115		115 or 230		115		115															
Amperage - Rated Current		5.9 (115V) 3.0 (230V)		5.9 (115V)		10.5 (115V) 5.2 (230V)		26.2 (115V) 13.2 (230V)		5.2 (115V) 2.7 (230V)		10.0 (115V)		9.7 (115V) 4.9 (230V)		5.2 (115V)		7.3 (115V)													
Amperage - Starting Current		12.4 (115V) 5.9 (230V)		12.4 (115V)		20.6 (115V) 12.6 (230V)		112 (115V) 56 (230V)		12.4 (115V) 5.9 (230V)		29.7 (115V)		29.7 (115V) 18.5 (230V)		12.4 (115V)		19.0 (115V)													
Type		Continuous Duty, Air Filled, 3600 RPM, 60Hz																													
Bearings		Double shielded, permanently lubricated, high-temp C3 with B-10 life of 60,000 hours																													
Insulation Class		E				B		E																							
Motor Protection (Built-In)		Miniature Protector		Circle Thermal Protector			Miniature Protector			Circle Thermal Protector				Miniature Protector		Circle Thermal Protector															
Plug Configuration (NEMA)		5-15P (115V) No Plug (230V)		5-15P (115V) No Plug (230V)		No Plug		5-15P (115V) No Plug(230V)		5-15P (115V) No Plug (230V)																					
Cable - # of Conductors x AWG		3C x 16AWG		3C x 14AWG		3C x 12AWG (115V) 3C x 12AWG (230V)		3C x 16AWG		3C x 14AWG				3C x 16AWG																	
Standard Cable Length (ft.)		32		50			20			32				32		32															
Max. Cable Length (ft.)		110 (115V) 420 (230V)		110 (115V)		100 (115V) 400 (230V)		70 (115V) 160 (230V)		125 (115V) 460 (230V)		100 (115V) 430 (230V)				120 (115V)		90 (115V)													
Recommended Generator Capacity (watts)		1230			2240			7320		1230		3190				1230		2100													
Optional Float Switch		TS-301		N/A		TS-302 (115V) TS-303 (230V)		N/A		TS-303 (230V operation only)		TS-301 (115V)		N/A		TS-302		N/A													
DIMENSION	Diameter (in.)	7 11/16		8 3/4		7 9/16		8 3/4		7 3/8		10 1/16		13 1/2		11 7/16		13 1/2		12 7/16		13 1/2		12 7/16		15 3/4		10 1/16		10 3/8	
	Height (in.)	11 1/4		11 1/4		13 7/16		13 7/16		23 5/16		12 15/16		15 1/8		15 5/16		17 1/2		15 5/16		17 1/2		16 3/4		19 7/8		14 1/8		15 3/8	
	Continuous Running Water Level (C.W.L) (in.)	2		4 1/2 (Pump Starting Water Level)		2		6 3/4 (Pump Starting Water Level)		3 1/8		3 1/2		15 1/8 (Pump Starting Water Level)		3 1/2		17 1/2 (Pump Starting Water Level)		3 1/2		17 1/2 (Pump Starting Water Level)		4 3/4		19 7/8 (Pump Starting Water Level)		6 1/2 (Pump Starting Water Level)		4 1/8	
	Shipping Weight (lbs.)	28		29		38		39		88		30		30		47		47		50		50		55		55		30		38	

PUMP ACCESSORIES for Electric Submersible Pumps, Engine Pumps & Portable Generators

Automatic Float Switch Model: TS-301/302/303/304, SLS-LSR32, SLS-LSC20

See Page 30-31 for more details



TS-Series (TS-301/302/303/304)

Piggy-back float switches allow fast & easy installation of Tsurumi submersible pumps for automated operation.

TS301/TS302: NEMA 5-15P plug; 30'
TS303: NEMA 6-15P plug; 30'



SLS-LSC20 / SLS-LSR32

The surface level switch is used to automate a utility/floor sucking pump. Set the Surface Level Switch on the floor and plug the power cord from the pump into the piggyback plug on the switch. Plug the piggy-back plug into a standard 120 VAC wall outlet (the unit will also work on GFI outlets).



Hoses

See Page 26-27 for more details

Hose Kit



Hose Kit with NPT



Hose Kit with Quick Connect

Discharge Hose



NPT



Quick Connect

Other Hoses



Mill Hose



Suction Hose

Suction Hose



NPT



Quick Connect

Hose Accessories



Hose Nozzle



Quick Connect 'A'



Quick Connect 'F'

PUMP ACCESSORIES for Electric Submersible Pumps, Engine Pumps & Portable Generators

Sand Kit

Model: K15-SK / K22-SK

The Sand Kit can be added to the NK Series to suspend sand and prevent sand lock.



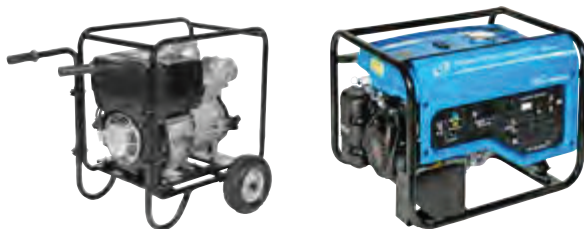
Residue Kit

Model: HS-RK

Available for the HS2.4S, the Residue Kit allows pumping of residual water down to 0.4 inches.



Wheel Kit / Lifting Bail



Wheel Kit PGWK-HX
for TPG4 Series Generator & Gas Engine Pumps



Lifting Bail
1560179500

Heavy-duty and easy to install our wheel kits, and lifting bails fit Tsurumi engine pumps & generators.

Wheel Kit (PGWK-HX)

for TPG4 generators & TE/EPT/THP engine pumps






Lifting Bail (1560179500)

for all TPG4 generators & TE/EPT/THP engine pumps*







*excluding TPG4-3000HDX

PUMP ACCESSORIES GUIDE for Electric Submersible Pumps

Electric Submersible Pumps

	Float Switch	Sand Kit	Residue Kit	2" Straight Discharge	3" Straight Discharge
MODEL					
LB-480	TS-301				
LB-480A					
LB-800	TS-302				
LB-800A					
LB-1500	TS-303 (220V Only)			032-351-11	
HS2.4S	TS-301		HS-RK	032-214-11	
HSZ2.4S			HS-RK	032-214-11	
HSE2.4S			HS-RK	032-214-11	
HS2.75S	TS-302				032-160-11
HSZ2.75S					032-160-11
HS3.75S	TS-302			032-158-16	032-160-11
HSZ3.75S				032-158-16	032-160-11
HS3.75SL	TS-302			032-158-16	032-160-11
HSZ3.75SL				032-158-16	032-160-11
HSD2.55S	TS-301			032-214-11	
NK2-15	TS-304 (115V)/TS-303 (220V)	K15-SK			
NK4-22	TS-303	K22-SK			
NK3-22L	TS-303				
LSR2.4S	SLS-LSR32				
LSC1.4S	SLS-LSC20			032-426-18	

Electric Submersible Pumps (continued)

	2" Discharge Hose NPT	2" Discharge Hose Quick Connect	2" Quick Disconnect 'A'	3" Discharge Hose NPT	3" Discharge Hose Quick Connect	3" Quick Disconnect 'A'
MODEL						
LB-480	X	X	X			
LB-480A	X	X	X			
LB-800	X	X	X			
LB-800A	X	X	X			
LB-1500*	X	X	X	X	X	X
HS2.4S	X	X	X			
HSZ2.4S	X	X	X			
HSE2.4S	X	X	X			
HS2.75S	X	X	X			
HSZ2.75S	X	X	X			
HS3.75S				X	X	X
HSZ3.75S				X	X	X
HS3.75SL				X	X	X
HSZ3.75SL				X	X	X
HSD2.55S	X	X	X			
NK2-15				X	X	X
NK4-22				X	X	X
NK3-22L				X	X	X
LSR2.4S	X	X	X			
LSC1.4S						

* Standard discharge size is 2". 3" is optional.

PUMP ACCESSORIES GUIDE for Engine Pumps & Portable Generators

Engine Driven Pumps: Discharge Size 1" and 1 1/2"

	Wheel Kit	Lifting Bail	1" Mill Hose	1" Suction Hose NPT	1.5" Mill Hose	1.5" Suction Hose NPT	1" Lexan Nozzle	1.5" Lexan Nozzle
MODEL	PGWK-HX Wheel kit ONLY 	1560179500 Lifting Bail ONLY 	XHM1N50 	XHS1N20 	XHM15N50 	XHS15N20 	XHLN1N20 	XHLN15N20
TE2-25H			X	X				
THP-4070HA	X	X	X		X	X	X	X

Engine Driven Pumps: Discharge Size 2", 3", and 4"

	Strainer	Wheel Kit	Lifting Bail	2" Hose Kit NPT	2" Hose Kit Quick	2" Dis. Hose NPT 50'	2" Dis. Hose Quick 50'	2" Suc. Hose NPT 20'	2" Suc. Hose Quick 20'	2" Quick Disconnect 'A'	3" Hose Kit NPT	3" Hose kit Quick
MODEL		PGWK-HX Wheel kit ONLY 	1560179500 Lifting Bail ONLY 	XHK2RNPT 	XHK2RQC 	XXHS2D 	XHD2QC50 	XXHS2S 	XHS2QC20 	G200-A-AL 	XHK3RNPT 	XHK3RQC
TE3-50HA / -50V	Z047		X	X	X	X	X	X	X	X		
TE3-80HA / -80V	Z048	X	X								X	X
TE2-100HA	Z055	X	X									
EPT3-50HA / -50V	Z049	X	X	X	X	X	X	X	X	X	X	X
EPT3-80HA	Z050	X	X									
EPT3-100HA / -100V	Z051	X	X									
TD(E)6-200	Included			X	X	X	X	X	X	X		
TD(E)6-300	Included										X	X

Engine Driven Pumps: Discharge Size 2", 3", and 4" (Continued)

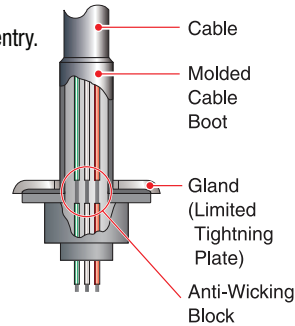
	3" Dis. Hose NPT 50'	3" Dis. Hose Quick 50'	3" Suc. Hose NPT 20'	3" Suc. Hose Quick 20'	3" Quick Disconnect 'A'	4" Hose Kit NPT	4" Hose kit Quick	4" Dis. Hose NPT 50'	4" Dis. Hose Quick 50'	4" Suc. Hose NPT 20'	4" Suc. Hose Quick 20'	4" Quick Disconnect 'A'
MODEL	XXHS3D 	XHD3QC50 	XXHS3S 	XHS3QC20 	G300-A-AL 	XHK4RNPT 	XHK4RQC 	XXHS4D 	XHD4QC50 	XXHS4S 	XHS4QC20 	G400-A-AL
TE3-50HA / -50V												
TE3-80HA / -80V	X	X	X	X	X							
TE2-100HA						X	X	X	X	X	X	X
EPT3-50HA / -50V												
EPT3-80HA	X	X	X	X	X							
EPT3-100HA / -100V						X	X	X	X	X	X	X
TD(E)6-200												
TD(E)6-300	X	X	X	X	X							

Portable Generators

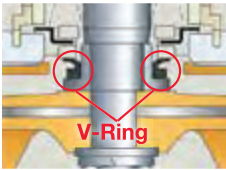
	Wheel Kit	Lifting Bail
MODEL	PGWK-HX Wheel kit ONLY 	15601795000 Lifting Bail ONLY
TPG4-3000HDX	X	
TPG4-3400HDX	X	
TPG4-4500HDX	X	X
TPG4-6000HDX	X	X
TPG4-7000HDX	X	X
TPG4-7000HDXE	X	X
TPG4-7500HDX	X	X
TPG4-7500HDXE	X	X

Anti-Wicking Cable Entrance: Maximum protection against water incursion through the cable entry.

- Molded Cable Boot or Cable Protection Tube - extends cable bending radius, prevents abrading, and reduces fatigue.
- Cable Gland - provides 360 degree compression of cable boot, protection tube or cable bush for a water tight fit.
- Anti-Wicking Block - window cuts on conductor insulation expose strands to molded rubber or epoxy to prove water wicking through the strands and entering the motor providing protection even if the cable insulation is cut.



Circle Thermal Protector (CTP): For pumps with 1-10HP: 3-Pole protector connects to each winding of the motor and reacts to excessive heat and amperage. Automatic reset at safe temperature to restart the motor. No motor protection circuit required in starter or control panel.



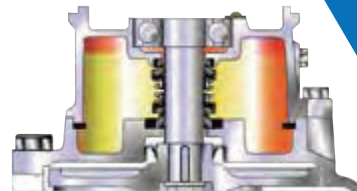
V-Ring: V-Ring is mounted at the top of the impeller and is brought in close contact to the bottom of the mechanical seal by the internal pressure of the pump casing. This V-Ring acts as a dust seal to prevent fine abrasive particles in the pumping fluid from reaching the mechanical seal.



High-Performance Motor: Dry type, squirrel-cage, induction motor, housed in a watertight casing, conforms to either insulation class B or E, or F. In both of these classes, all standard pumps can be used in ambient temperature up to 104°F (40°C).

Dual Inside, Silicon Carbide Mechanical Seals:

Isolation of mechanical seals in an oil chamber provides a clean, non-corrosive and abrasion free lubricating environment to prevent spring failure due to corrosion or abrasion and bottom seal failure due to loss of cooling during dry-run conditions.



Oil Lifter: Tsurumi's Oil Lifter encloses the mechanical seal and uses the centrifugal force generated by the rotating shaft and seal to pump oil to the upper seal faces. Upper and lower seal faces are positively lubricated even when extremely low oil levels exist, as experienced after long periods of extended operation.

