



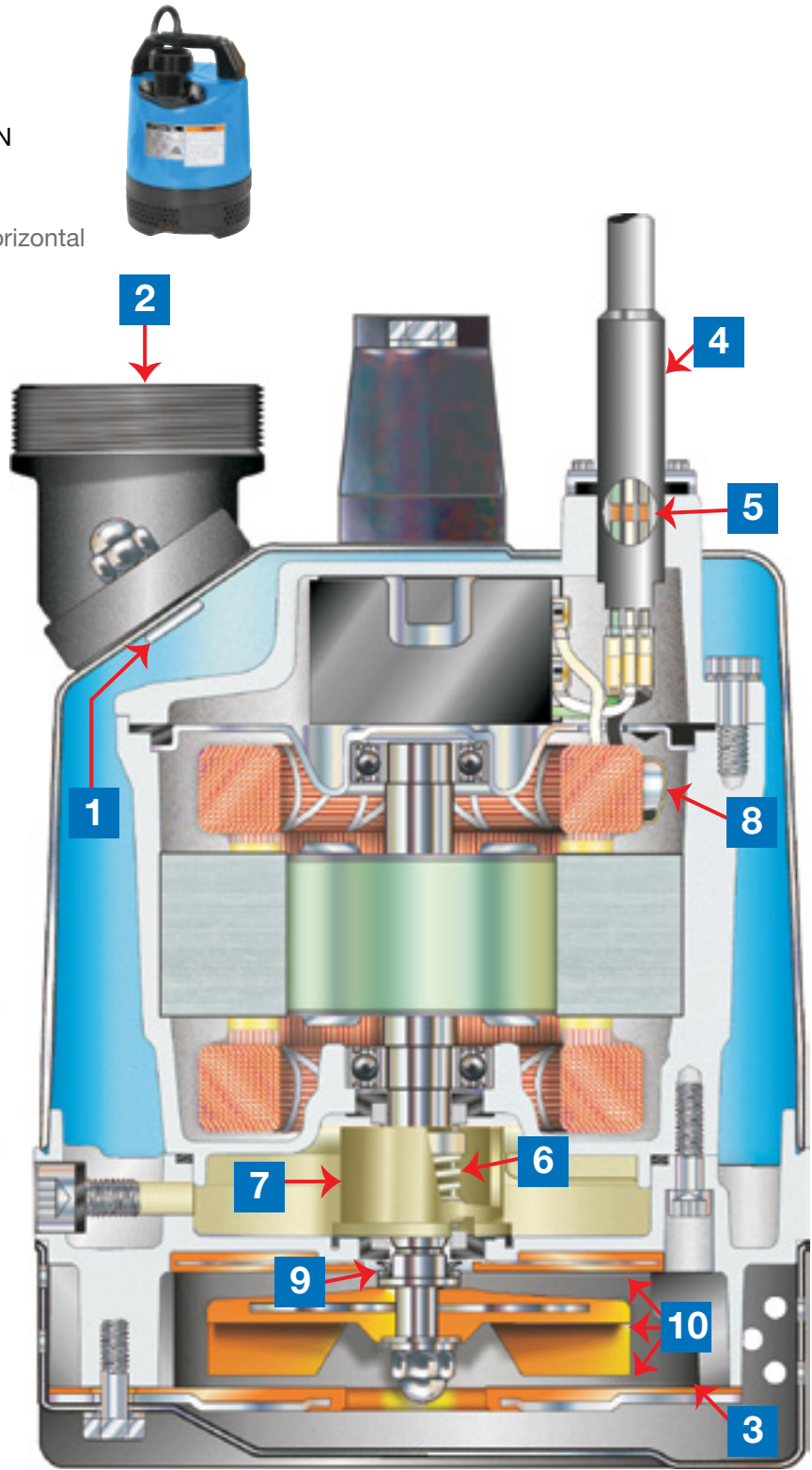
 **TSURUMI PUMP**™  
**BUILT FOR WORK**®  
CONTRACTOR PUMPS | ENGINE PUMPS | GENERATORS



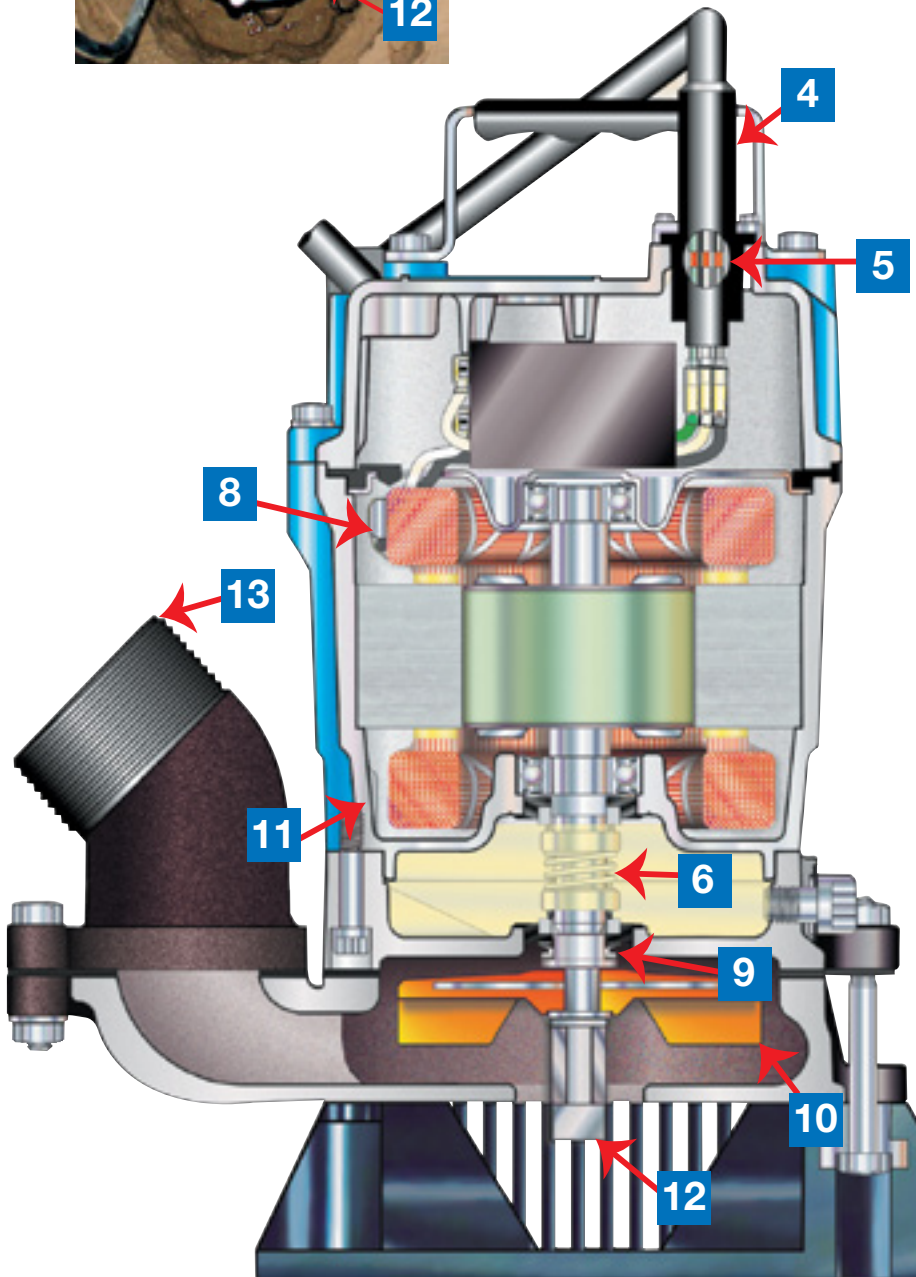
## ELECTRIC SUBMERSIBLE PUMPS - Long Life by Design

### 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.

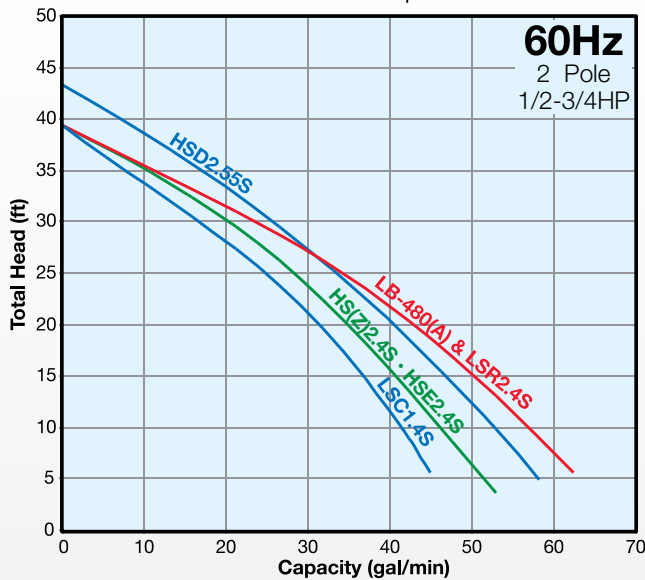
**13** 45° ANGLED DISCHARGE CONNECTOR: Provides for a more stable installation for either vertical or horizontal discharge hose.

## GROUP PERFORMANCE RANGE

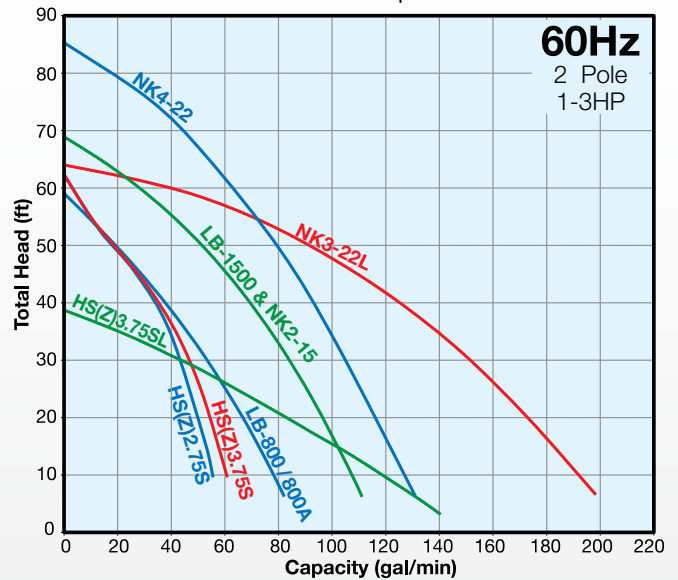
**Reliable and cost-effective pumps** enable Tsurumi to remain an industry leader in the rental and construction markets. Our customers know that while many pumps may look the same, only Tsurumi incorporates the most durable components into the final manufactured product.

### GROUP PERFORMANCE RANGE ELECTRIC SUBMERSIBLE PUMPS

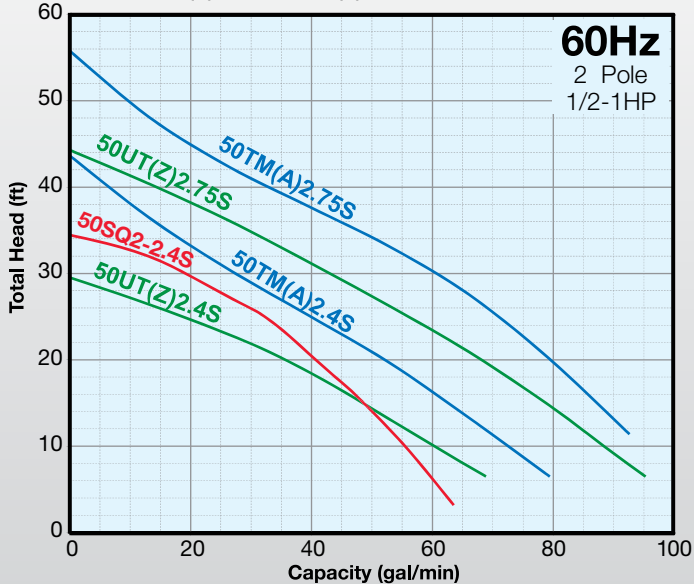
Electric Submersible Pumps: Under 1HP



Electric Submersible Pumps: 1HP or more



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



## LSC • LSR - GROUND DRAINAGE PUMP

**LSC DRAINAGE PUMP:** Original residue dewatering pump; able to pump down to the floor, even the smallest puddle can be pumped dry. LSC drainage pump is the best for complete drainage of flat surfaces where a sump is not available.

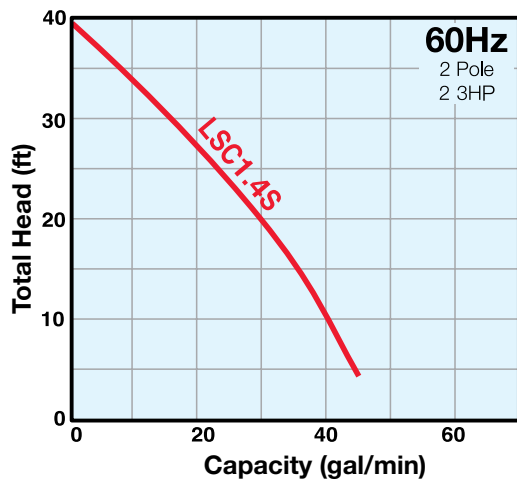
**LSR DRAINAGE PUMP:** Pump holds suction for drainage to 0.4 inch water level.



LSC1.4S



LSR2.4S

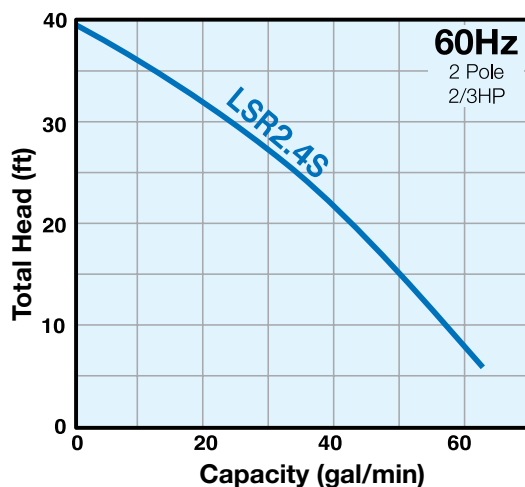


### LSC1.4S Features

- Prime pump through discharge outlet for start up at any water level
- Internal check valve holds prime and prohibits back flow through pump when stopped
- Urethane, Semi Vortex Impeller and Wear Plates for maximum durability and maintaining pump performance
- Dual Inside Mechanical Seal With SiC faces provides longer operational life
- Oil Lifter provides lubrication of the seal faces
- V-Ring Seal protects mechanical seal from abrasive particles

### Optional Accessories - See page 24-27

- SLS-LSC20 Automatic operation surface level switch
- 2" Discharge
- Discharge hoses
- Quick connect fittings



### LSR2.4S Features

- Urethane, Semi Vortex Impeller and Wear Plates for maximum durability and maintaining pump performance
- Dual Inside Mechanical Seal With SiC faces provides longer operational life
- Oil Lifter provides lubrication of the seal faces
- V-Ring Seal protects mechanical seal from abrasive particles

### Optional Accessories - See page 24-27

- SLS-LSR32 Automatic operation surface level switch
- 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		
LSC1.4S	2/3	Single	3/4	20	7 11/16	12 7/16	0.04	31

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		
LSR2.4S	2/3	Single	2	32	8 1/4	11 3/8	0.2	30

# SPECIFICATIONS - SINGLE PHASE PUMPS: LSR • LSC • NK • SQ • UT(Z) • TM(A)

	LSR2.4S	LSC1.4S	NK2-15	NK4-22	NK3-22L	50SQ2-2.4S	50UT2.4S	50UTZ2.4S	50UT2.75S	50UTZ2.75S	50TM2.4S	50TMA2.4S	50TM2.75S	50TMA2.75S			
	2" Ground Level Pump	1" Floor Level Pump	3" Heavy Duty High Head Pump	3" Heavy Duty High Head Pump	3" Heavy Duty High Flow Pump	2" Portable Corrosion Resistant Pump	2" Cast Iron Submersible Pump	2" Cast Iron Auto Submersible Pump	2" Cast Iron Submersible Pump	2" Cast Iron Auto Submersible Pump	2" Manual Titanium Pump	2" Auto Titanium Pump	2" Manual Titanium Pump	2" Auto Titanium Pump			
FLUID	Max. Capacity (GPM)	62.4	45	111	131	210	63	69	95	79	92						
	Max. Head (ft.)	39.5	39	69	85	59	34	29.5	44	44	56						
	Solid Diameter (in.)	0.236		0.334			0.236	1.4			0.394						
PUMP	Impeller	Semi-Vortex			Semi-Open	Semi-Vortex	Semi-Vortex			Semi-Vortex							
	Impeller Material	Urethane Rubber		Ductile Iron Casing		High Chrome	PPO Plastic	Polyphenylene			PPO Plastic						
	Casing Material	Ethylene Propylene Rubber				Cast Iron	304 SS and NBR Rubber	Cast Iron			ABS Plastic						
	Wear Plate Material	Urethane Rubber		Integral Part of Casing		Ductile Iron Casing	304 Stainless Steel	---			---						
	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)										White Mineral Oil (ISO VG32)					
	Seal Lubricant Amount (oz.)	5.1	5.2	9.1			5.4	5.4		7.8		8.1					
	Seal Protection	V-Ring and Oil Lifter										Oil Lifter					
	Discharge Connection	2" MNPT Coupling	3/4" MNPS Coupling	3" MNPT Coupling (2" optional)			2" FNPT Flange	2" MNPT Coupling			2" FNPT Flange						
	MOTOR	Motor Output (HP)	2/3		2	3		1/2	1/2		1	1/2		1			
Phase		Single Phase															
Voltage (V)		115		110 or 220		230	220	115 or 230		115		115 or 220		115 or 230			
Amperage - Rated Current		5.9 (115V)		23.0 (110V) 11.5 (220V)		11.7	13	5.1 (115V) 2.9 (230V)		5.7 (115V)		9.9 (115V) 5.2 (220V)		5.8 (115V) 2.9 (230V)		8.7 (115V) 4.6 (230V)	
Amperage - Starting Current		12.4 (115V)		141 (110V) 70 (220V)		70	70	18 (115V) 9 (230V)		11.1 (115V)		30.7 (110V) 17.6 (220V)		18 (115V) 7.9 (230V)		35 (115V) 16.7 (230V)	
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	F	B	E	E			E						
Motor Protection (Built-In)		Miniature Protector		Circle Thermal Protector			Miniature Protector			Circle Thermal Protector	Miniature Protector	Circle Thermal Protector		Miniature Protector			
Plug Configuration (Nema)		5-15P (115V)		No Plug			5-15P (115V) No Plug (230V)		5-15P (115V)		5-15P (115V) No Plug (220V)		5-15P (115V) No Plug (230V)				
Cable - # of Conductors x AWG		3C x 16AWG		3C x 12AWG	3C x 14AWG		3C x 16AWG			3C x 14AWG		3C x 16AWG		3C x 14AWG			
Standard Cable Length (ft.)		32	20	32			20			32		32					
Max. Cable Length (ft.)		110 (115V)		75 (110V) 300 (220V)		180	150	100 (115V) 380 (230V)		110 (115V)		100 (115V) 380 (220V)		45 (115V) 180 (230V)		48 (115V) 180 (230V)	
Recommended Generator Capacity (watts)		2700		7200		10000		3000		2700		4600		3000		4500	
Optional Float Switch	SLS-LSR32	SLS-LSC20	TS-304 (115V) TS-303 (220V)		TS-303		TS-301	TS-301	N/A	TS-302	N/A	TS-301	N/A	TS-302	N/A		
DIMENSION	Diameter (in.)	8 1/4	7 2/3	9 7/16	9 7/16	9 1/4	7 1/16	9 1/2	9 1/2	9 1/2	9 1/2	9 5/16					
	Height (in.)	11 3/8	12 7/16	24 1/2	24 3/16	26 1/2	14 7/16	13 3/4	15 3/4	16	18	14 3/16	14 3/4	14 15/16	15 1/2		
	Continuous Running Water Level (C.W.L.) (in.)	0.2	0.04	3 1/4	3 1/4	4 3/4	2 3/8	11 3/4	15 3/4 (Pump Starting Water Level)	11 3/4	18 (Pump Starting Water Level)	12 3/4	23 7/8 (Pump Starting Water Level)	13 5/8	24 5/8 (Pump Starting Water Level)		
	Shipping Weight (lbs.)	30	31	80	78	84	27	34	35	43	43	23	24	25	26		

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

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

See Page 26-27 for more details



**TS-301 • TS-302 • TS-303 • TS-304**

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

TS-301 • TS-302 .... NEMA 5-15P plug; 30'  
TS-303 ..... 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 GUIDE for Electric Submersible Pumps

### Electric Submersible Pumps

	Float Switch	Sand Kit	Residue Kit	2" Straight Discharge	3" Straight Discharge
<b>MODEL</b>					
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)

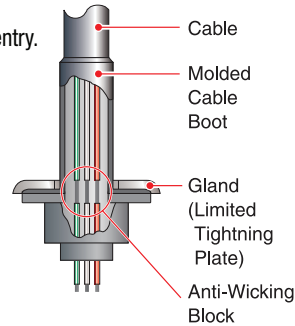
	2" Discharge Hose NPT	2" Discharge Hose Quick Connect	2" Quick Disconnect 'A'	3" Discharge Hose NPT	3" Discharge Hose Quick Connect	3" Quick Disconnect 'A'
<b>MODEL</b>						
LB-480	X	X	X			
LB-480A	X	X	X			
LB-800	X	X	X			
LB-800A	X	X	X			
LB-1500*	X	X	X	X	X	X
HS2.4S	X	X	X			
HSZ2.4S	X	X	X			
HSE2.4S	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.

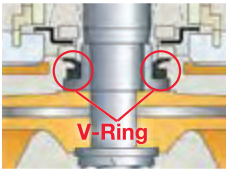


**Anti-Wicking Cable Entrance:** Maximum protection against water incursion through the cable entry.

- 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.



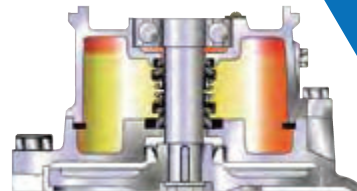
**V-Ring:** V-Ring is mounted at the top of the impeller and is brought in close contact to the bottom of the mechanical seal by the internal pressure of the pump casing. This V-Ring acts as a dust seal to prevent fine abrasive particles in the pumping fluid from reaching the mechanical seal.



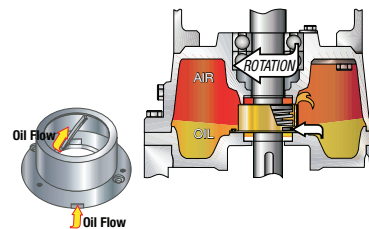
**High-Performance Motor:** Dry type, squirrel-cage, induction motor, housed in a watertight casing, conforms to either insulation class B or E, or F. In both of these classes, all standard pumps can be used in ambient temperature up to 104°F (40°C).

### 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.



## BUILT FOR WORK<sup>®</sup>

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