



*Single-phase
Portable Dewatering Pumps*

LB/HS/NK LSC/LSP



LB



LB-A



HS



NK



LSC



LSP



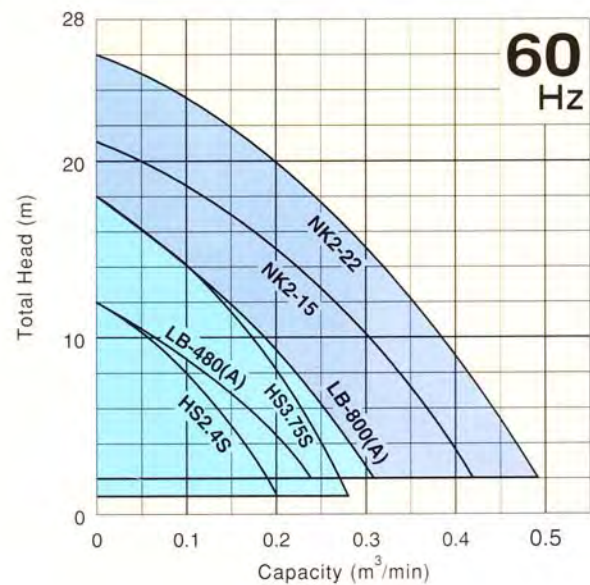
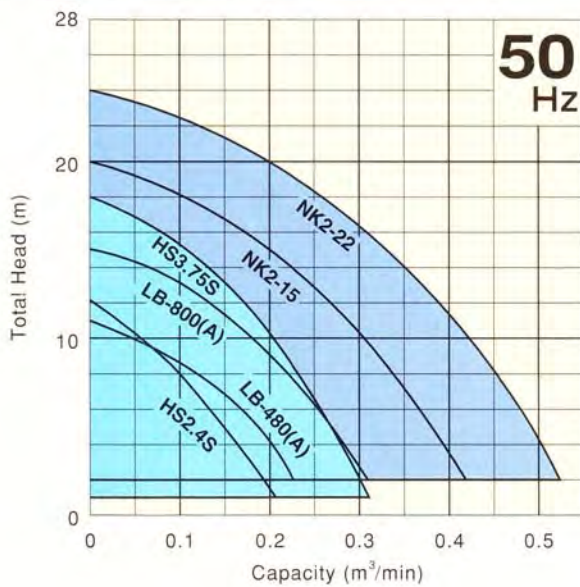
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Performance Table

Single-phase pumps/General construction work's draining, General wastewater draining, Low level water draining, Residual water recovery or draining

Type	Submersible Pumps				Non-submersible Pump
	General construction work's draining			Residual water draining	Residual water recovery or draining
Series	LB	HS	NK	LSC	LSP
Discharge bore mm	50	50·80	50	25	25×25
Power output kW	0.48·0.75	0.4·0.75	1.5·2.2	0.48	0.48
Principal Applications	<ul style="list-style-type: none"> • Draining in general civil engineering and building works • Draining rain water and puddle • Draining water from basements and pits • Draining treated water in water treatment plants • General water taking or draining 			<ul style="list-style-type: none"> • Draining floor water in building works • Draining water remaining at the bottom of manholes, pits, receiving water tanks, and service water tanks • General draining of residual water 	<ul style="list-style-type: none"> • Draining puddles from slabs, floors, etc. at construction sites • As a dewatering facility in factories • Draining residual water from receiving and other tanks
Page No.	3~4	5	6	8~9	7

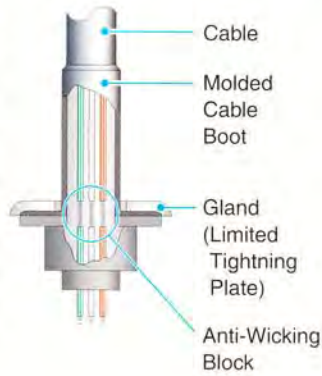
Pump Selection Curves



Common Features

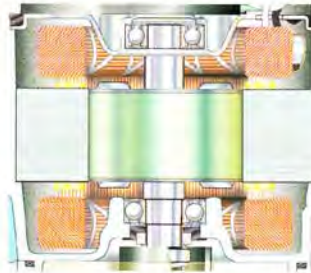
Cable entry

An anti-wicking block is provided at the cable entry section to the motor chamber. Should the cable jacket become damaged, causing the tip of the cable to be accidentally immersed in water, ingress of water in the motor is prevented even if water travels along the lead cores by capillary phenomenon.



Bearings

High-grade bearings for high-temperature operation are used. Also, as deep-groove, double-shield ball bearings are used, and as the bearings are permanently lubricated by grease, there is no need for injection of lubricating oil.



High-performance Motor

A motor having stable high performance that meets Tsurumi's high standards of quality is used.

Automatic Motor Protection Device (miniature protector, thermal protector)

If something causes the motor windings to abnormally heat or an overcurrent to flow, the built-in motor protection device automatically detects this to shut off circuits.



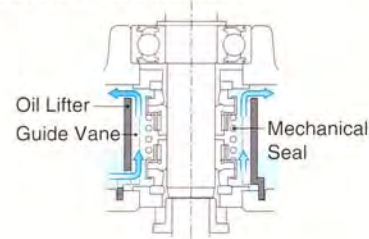
Double-mechanical Seal

By this double-mechanical seal, seal faces are located inside the oil chamber, and are lubricated and cooled by lubricating oil. As seal faces are not lubricated by priming fluid as in an external mechanical type seal (outboard type), the seal is free of any corrosion of metal parts or trouble caused by accumulation of foreign matter inside mechanisms.



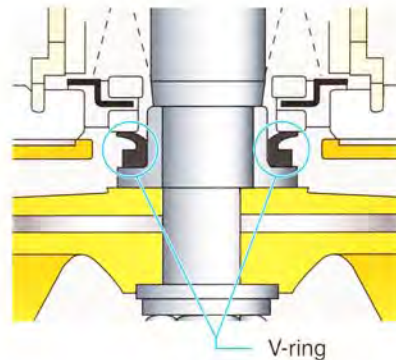
OIL LIFTER (patent pending)

The OIL LIFTER functions to supply oil to the top seal faces even if the lubricant in the oil chamber falls below the rated value, and functions to lubricate and cool the seal faces. This Tsurumi-unique mechanism helps extend the service life of the mechanical seal.



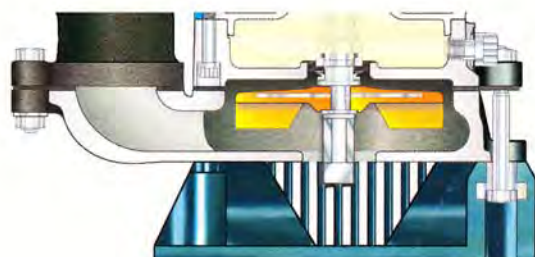
V-ring (LB, LSC, LSP, NK) *HS not available

A V-ring is mounted at the top of the impeller, and is made to closely contact the bottom of the mechanical seal by the internal pressure of the pump casing. This V-ring is mounted to act as a dust seal to prevent fine corrosive particles in the priming fluid from reaching the mechanical seal.



Pump Structure (semi-vortex design) (all models listed in this catalog)

The "high-gap structure" used on the pump minimizes "impeller lock" where foreign matter carried into the pump prevents rotation of the impeller. This structure is resistant to wear, and demonstrates little drop in performance even if impeller becomes worn.



LB

Submersible Portable Dewatering Pump

Having Various Use, Powerful, Mobile Pumps by Light, Strong Materials and Simple Construction



Automatic Version



Individual Features

Light, Strong Materials

Light but strong materials such as aluminium die castings and water-resistant special synthetic rubber are used on the entire pump.



Electrode Auto Control System (LB-A)

Stable electrode-type sensor ON/OFF operation prevents dry running when the water level has fallen. Energy conservation resulting from reduced power consumption and sudden wear of parts is reduced, which improves the overall performance of the pump.

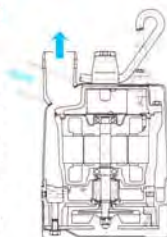


electrode-type sensor

Cooling System/Discharge Port

<Flow-through design>

A high motor cooling effect can be achieved in low-water level operation. Water is discharged from the top, which makes the pump easier to install in narrow locations.



Discharge Direction Can Be Selected

The direction that the discharge port faces can be changed to the top or the side by a single 13-mm box wrench, preventing folding and bending of the hose when the pump is installed horizontally. The hose coupling has notched bolt holes, which means that it can be removed by merely loosening the hexagon cap nuts.



Light, Slim Design

This pump is light and can be easily handled. It has also been constructed in a cylindrical slim body which allows it to be installed in narrow spaces.

Easy Pump Disassembly and Assembly

The pump can be disassembled by only one 13-mm box wrench.

Common Features

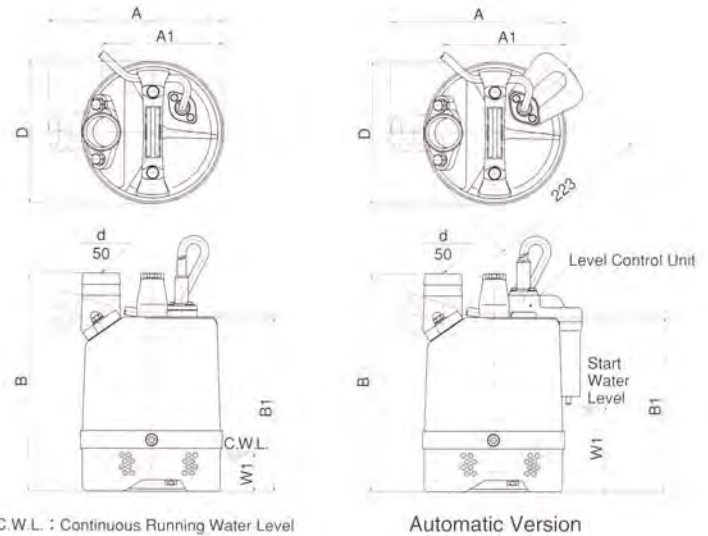
- Cable entry with anti-wicking block
- High-grade bearings for high-temperature operation
- Integrated high-performance motor
- Built-in motor protector
- Oil-bath type double-mechanical seal featuring enhanced stable shaft sealing effect over prolonged use

- Service life of mechanical seal extended by OIL LIFTER (patent pending)
- Mechanical seal protected from corrosive particles in priming fluid by V-ring
- Impeller lock minimized by semi-vortex design

Major Standard Specifications

Discharge bore size mm		50(80)	
Pumping fluid	Type of fluid	Rain water, Spring water, Sand carrying water, Ground water	
	Liquid temperature	0~40°C	
Pump	Components	Impeller	Semi-Vortex
		Shaft seal	Double mechanical seal
		Bearing	Shielded ball bearing
	Materials	Impeller	Urethane rubber
		Casing	Ethylene propylene rubber
		Suction cover	Urethane rubber
	Shaft seal (mechanical seal)	Silicon Carbide	
Motor	Type, poles	Dry-type submersible induction motor, 2 poles	
	Insulation	Class E	
	Phase/Voltage	Single-phase/110V, 200V, 220V, 230V, 240V	
	Motor protector (Built-in)	Miniature protector, Circle thermal protector	
	Lubricant	Turbine oil (ISO VG32)	
	Materials	Frame	Aluminium alloy casting
		Shaft	Stainless steel #403
Cable		PVC Sheath	
Discharge connection	Hose coupling		

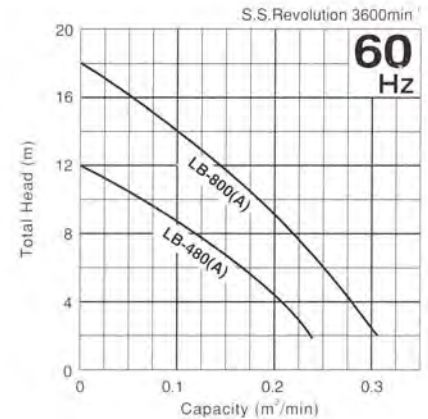
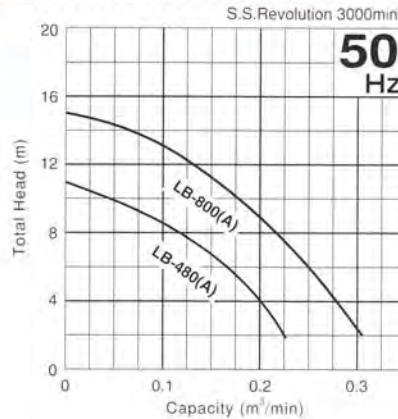
Dimensions



Standard Accessories

- Cabtyre cable.....1pc
- Hose coupling1pc
- Hose band1pc

Performance Curves



Specifications 50/60Hz

Discharge Bore mm	Model	Motor Output kW	Phase	Max. Head m	Max. Capacity m³/min.	Starting Method	Dry Weight kgs	Length of Cabtyre Cable m	Dimensions mm					C.W.L. mm	
									d	A	A1	B	B1		D
50	LB-480	0.48	Single	11/12	0.22/0.24	Capacitor Run	10.4	5	50	231	161	286	228	187	50
50	LB-480A	0.48	Single	11/12	0.22/0.24	Capacitor Run	11.0	5	50	231	161	286	228	187	115
50(80)	LB-800	0.75	Single	15/18	0.31	Capacitor Run	13.2	5	50	230	160	341	283	187	50
50(80)	LB-800A	0.75	Single	15/18	0.31	Capacitor Run	13.8	5	50	230	160	341	283	187	170

● 80mm discharge available on request. ● Dry weight of the pump excluding cable.

Reliable Automatic Operation

Repeats



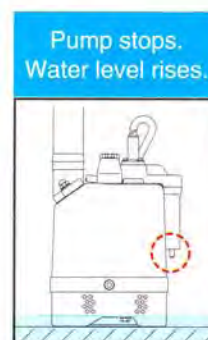
Electrodes submerged in water closing circuit for electric current. The pump starts to operate.



Water level has fallen. Electrodes in air opening circuit for electric current. Timer starts and pump continues to operate.



Timer continues pump operation for approximately one minute. If water again contacts, the electrodes timer is cancelled and pump continues operating.



Timer stops after approximately one minute.



Water level rises to contact electrodes and the pump restarts.

HS

Submersible Portable Dewatering Pump

Long-term best seller spiral casing pump equipped with high performance motor



Individual Features

Light, Strong Materials

Light but strong materials such as aluminium die castings and water-resistant special synthetic rubber are used on the entire pump.

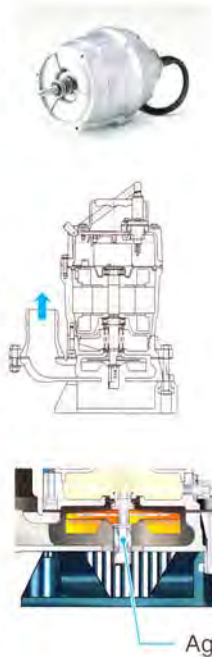
Cooling System/Discharge Port

<Spiral design>

The spiral structure of this pump allows sand and silt-laden water to pass through efficiently.

Agitator

An agitator is provided on the extension of the pump shaft. This not only prevents "air locking" which is caused by air building up inside the casing, but also reduces clogging when solid objects are sucked in.



Common Features

- Cable entry with anti-wicking block
- High-grade bearings for high-temperature operation
- Integrated high-performance motor
- Built-in motor protector
- Oil-bath type double-mechanical seal featuring enhanced stable shaft sealing effect over prolonged use
- Service life of mechanical seal extended by OIL LIFTER (patent pending)
- Impeller lock minimized by semi-vortex design

Major Standard Specifications

Item	Discharge bore size mm	
	50	80(50)
Pumping fluid	Type of fluid	Rain water, Ground water, Sand carrying water
	Liquid temperature	0~40°C
Pump	Components	Impeller: Semi-Vortex Shaft seal: Double mechanical seal Bearing: Shielded ball bearing
	Materials	Impeller: Urethane rubber Casing: Ductile iron casting Shaft seal (mechanical seal): Silicon Carbide
		Motor
Materials		Frame: Aluminium alloy casting Shaft: Stainless steel #403 Cable: PVC Sheath
Discharge connection	Hose coupling	

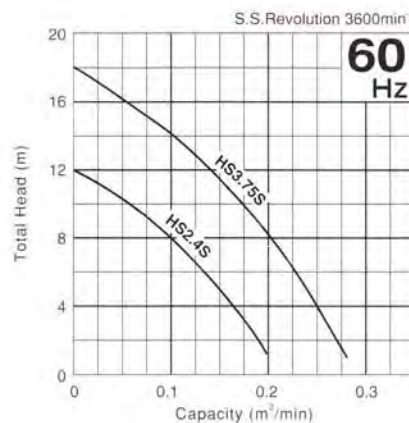
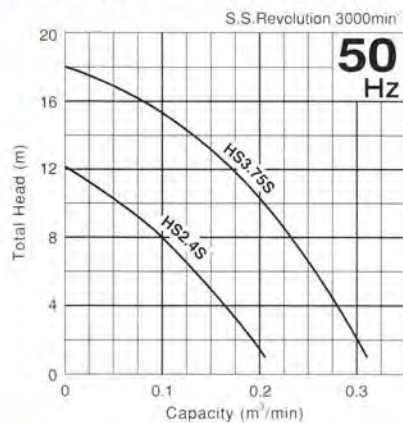
Standard Accessories

- Cabtyre cable1pc
- Hose coupling1pc
- Hose band1pc

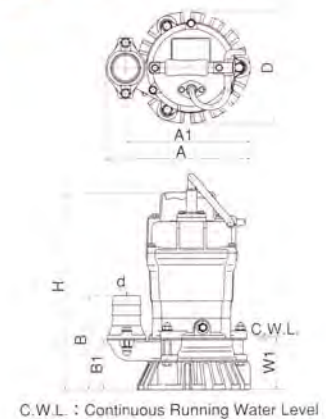
Optional Specifications

- Extended cable
- Special paint

Performance Curves



Dimensions



Specifications 50/60Hz

Discharge Bore mm	Model	Motor Output kW	Phase	Max. Head m	Max. Capacity m³/min.	Starting Method	Dry Weight kgs	Length of Cabtyre Cable m	Dimensions mm							C.W.L. mm
									d	A	A1	B	B1	D	H	
50	HS2.4S	0.4	Single	12	0.2	Capacitor Run	11.3	5	50	241	207	158	84	184	328	90
80(50)	HS3.75S	0.75	Single	18	0.3/0.28	Capacitor Run	17.5	5	80	285	233	217	109	184	388	90

● 50mm discharge available on request. ● Dry weight of the pump excluding cable.

NK

Submersible Portable Dewatering Pump



Maximum output pump among single-phase pumps

Common Features

- Cable entry with anti-wicking block
- High-grade bearings for high-temperature operation
- Integrated high-performance motor
- Built-in motor protector
- Oil-bath type double-mechanical seal featuring enhanced stable shaft sealing effect over prolonged use
- Service life of mechanical seal extended by OIL LIFTER (patent pending)
- Mechanical seal protected from corrosive particles in priming fluid by V-ring
- Impeller lock minimized by semi-vortex design

Individual Features

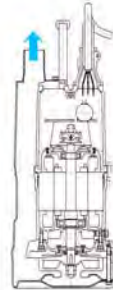
Incorporating Starting Capacitor

No special starts are required. Just connect the power supply to enable operation.

Cooling System/Discharge Port

<Side flow design>

Efficient motor cooling can be achieved. Water is discharged from the top, which makes the pump easier to install in narrow locations.



Major Standard Specifications

Item		Discharge bore size mm	50	
Pumping fluid	Type of fluid	Rain water, Ground water, Sand carrying water		
	Liquid temperature	0~40°C		
Pump	Components	Impeller	Semi-Vortex	
		Shaft seal	Double mechanical seal	
		Bearing	Shielded ball bearing	
	Materials	Impeller	Ductile iron casting	
Casing		Ethylene propylene rubber		
	Shaft seal (mechanical seal)	Silicon Carbide		
Motor	Type, poles	Dry-type submersible induction motor, 2 poles		
	Insulation	Class B		
	Phase/Voltage	Single-phase/110V, 220V, 230V, 240V		
	Motor protector(Built-in)	Circle thermal protector		
	Lubricant	Turbine oil (ISO VG32)		
	Materials	Frame	Aluminium alloy casting	
		Shaft	Stainless steel #403	
Cable		Chloroprene Sheath		
Discharge connection		Hose coupling		

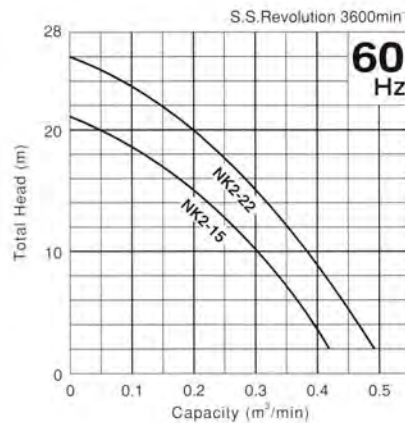
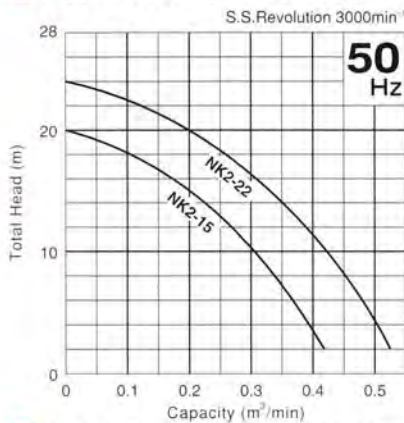
Standard Accessories

- Cabtyre cable1pc
- Hose coupling1pc

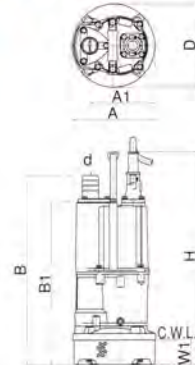
Optional Specifications

- Extended cable
- Special paint

Performance Curves



Dimensions



C.W.L. : Continuous Running Water Level

Specifications 50/60Hz

Discharge Bore mm	Model	Motor Output kW	Phase	Max. Head m	Max. Capacity m ³ /min.	Starting Method	Dry Weight kgs	Length of Cabtyre Cable m	Dimensions mm							C.W.L. mm
									d	A	A1	B	B1	D	H	
50	NK2-15	1.5	Single	20	0.42	Capacitor Start	31.6	10	50	240	187	555	473	240	623	80
50	NK2-22	2.2	Single	24	0.53	Capacitor Start + Capacitor Run	32.0	10	50	240	187	555	473	240	623	80

● Dry weight of the pump excluding cable.

LSP

Novel mechanism design pump equipped with a reverse flow prevention device, capable of carrying by one hand

Portable Residue
Dewatering Pump



Individual Features

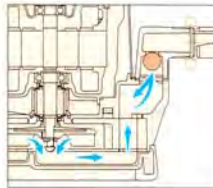
Light, Strong Materials

Light but strong materials such as aluminium die castings and water-resistant special synthetic rubber are used on the entire pump.



Low-water level Draining Mechanism

This pump can take up water from shallow puddles, for example. The new siphon breaker mechanism prevents reverse flow of water and seeping of introduced water.



Cooling System/Discharge Port

<Flow-through design>

Pumped water cools the motor, which enables the unit to run continuously even the pump body is exposed in air.

Common Features

- Cable entry with anti-wicking block
- High-grade bearings for high-temperature operation
- Integrated high-performance motor
- Built-in motor protector
- Oil-bath type double-mechanical seal featuring enhanced stable shaft sealing effect over prolonged use
- Service life of mechanical seal extended by OIL LIFTER (patent pending)
- Mechanical seal protected from corrosive particles in priming fluid by V-ring
- Impeller lock minimized by semi-vortex design

Major Standard Specifications

Item		Suction×Discharge bore mm	25×25	
Pumping fluid	Type of fluid	Residual water, Puddles		
	Liquid temperature	0~40°C		
Max. suction capacity	Max. vacuum	550mmHg		
Pump	Components	Impeller	Semi-Vortex	
		Shaft seal	Double mechanical seal	
		Bearing	Shielded ball bearing	
	Materials	Impeller	Urethane rubber	
		Casing	Ethylene propylene rubber	
		Suction cover	Stainless steel #403	
		Bottom plate	Aluminium alloy casting + rubber	
		Suction opening	Aluminium alloy casting	
		Discharge coupling with handle	Aluminium alloy casting	
		Outer cover	Steel plate	
Shaft seal (mechanical seal)	Silicon Carbide			
Motor	Type, poles	Dry-type submersible induction motor, 2 poles		
	Insulation	Class E		
	Phase/Voltage	Single-phase/110V, 200V, 220V, 230V, 240V		
	Motor protector(Built-in)	Miniature protector		
	Lubricant	Turbine oil (ISO VG32)		
	Materials	Frame	Aluminium alloy casting	
		Shaft	Stainless steel #403	
Cable		PVC Sheath		
Discharge connection		Hose coupling		

Standard Accessories

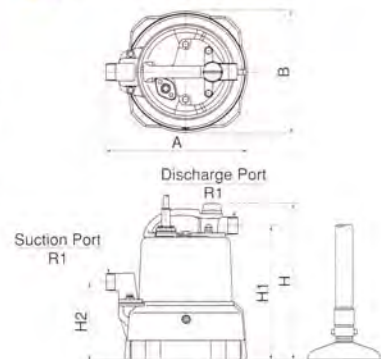
- Cabtyre cable1pc
- Suction hose (with metal fitting, 5m)1pc
- Suction attachment1pc
- (Discharge) Union coupling1pc

Optional Accessories

- Discharge hose
- Suction pipe/attachment set
 - Suction pipe (Straight)1pc
 - Suction pipe (Bend)1pc
 - Suction attachment (for Floor) ...1pc
 - Suction attachment (for Corner) 1pc



Dimensions



Optional Specifications

- Extended cable

Specifications 50/60Hz

Bore mm (Suction×Discharge)	Model	Motor Output kW	Phase	Starting Method	Max. Head m	Max. Capacity m ³ /min.	Vacuum (MAX.) kPa {mmHg}	Dry Weight kgs	Length of Cabtyre Cable m	Dimensions mm				
										A	B	H	H1	H2
25×25	LSP1.4S	0.48	Single	Capacitor Run	8/9	0.06	73.3{550}	12.3	5	276	240	307	263	1'

● Dry weight of the pump excluding cable.

LSP

Portable Residue
Dewatering Pump

Novel mechanism design pump equipped with a reverse flow prevention device, capable of carrying by one hand



Individual Features

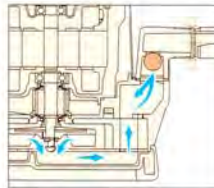
Light, Strong Materials

Light but strong materials such as aluminium die castings and water-resistant special synthetic rubber are used on the entire pump.



Low-water level Draining Mechanism

This pump can take up water from shallow puddles, for example. The new siphon breaker mechanism prevents reverse flow of water and seeping of introduced water.



Cooling System/Discharge Port

<Flow-through design>

Pumped water cools the motor, which enables the unit to run continuously even the pump body is exposed in air.

Common Features

- Cable entry with anti-wicking block
- High-grade bearings for high-temperature operation
- Integrated high-performance motor
- Built-in motor protector
- Oil-bath type double-mechanical seal featuring enhanced stable shaft sealing effect over prolonged use
- Service life of mechanical seal extended by OIL LIFTER (patent pending)
- Mechanical seal protected from corrosive particles in priming fluid by V-ring
- Impeller lock minimized by semi-vortex design

Major Standard Specifications

Item		Suction X Discharge bore mm	25 X 25
Pumping fluid	Type of fluid	Residual water, Puddles	
	Liquid temperature	0~40°C	
Max. suction capacity	Max. vacuum	550mmHg	
Pump	Components	Impeller	Semi-Vortex
		Shaft seal	Double mechanical seal
		Bearing	Shielded ball bearing
	Materials	Impeller	Urethane rubber
		Casing	Ethylene propylene rubber
		Suction cover	Stainless steel #403
		Bottom plate	Aluminium alloy casting + rubber
		Suction opening	Aluminium alloy casting
		Discharge coupling with handle	Aluminium alloy casting
		Outer cover	Steel plate
Shaft seal (mechanical seal)	Silicon Carbide		
Motor	Type, poles	Dry-type submersible induction motor, 2 poles	
	Insulation	Class E	
	Phase/Voltage	Single-phase/110V, 200V, 220V, 230V, 240V	
	Motor protector (Built-in)	Miniature protector	
	Lubricant	Turbine oil (ISO VG32)	
	Materials	Frame	Aluminium alloy casting
Shaft		Stainless steel #403	
Cable		PVC Sheath	
Discharge connection		Hose coupling	

Standard Accessories

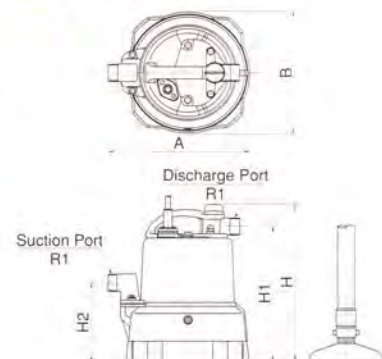
- Cabtyre cable1pc
- Suction hose (with metal fitting, 5m)1pc
- Suction attachment1pc
- (Discharge) Union coupling1pc

Optional Accessories

- Discharge hose
- Suction pipe/attachment set
 - Suction pipe (Straight)1pc
 - Suction pipe (Bend)1pc
 - Suction attachment (for Floor) ...1pc
 - Suction attachment (for Corner) 1pc



Dimensions



Optional Specifications

- Extended cable

Specifications 50/60Hz

Bore mm (Suction X Discharge)	Model	Motor Output kW	Phase	Starting Method	Max. Head m	Max. Capacity m ³ /min.	Vacuum (MAX.) kPa {mmHg}	Dry Weight kgs	Length of Cabtyre Cable m	Dimensions mm				
										A	B	H	H1	H2
25 X 25	LSP1.4S	0.48	Single	Capacitor Run	8/9	0.06	73.3{550}	12.3	5	276	240	307	263	153

● Dry weight of the pump excluding cable.

LSC

Submersible Residue
Dewatering Pump

Original residual dewatering pump capable of pumping water down to a minimum level of 1 mm



Individual Features

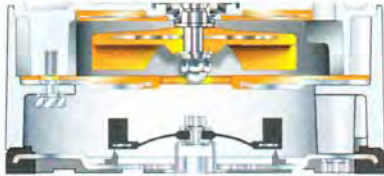
Light, Strong Materials

Light but strong materials such as aluminium die castings and water-resistant special synthetic rubber are used on the entire pump.



Low-water level Draining Mechanism

A pump sump is not required, and water can be drained down to a minimum level of 1 mm. A proprietary seal valve seat and newly developed swing valve do not allow reverse flow of water once it is sucked in.



Cooling System/Discharge Port

<Flow-through design>

Pumped water cools the motor, which enables the unit to run continuously even the pump body is exposed in air.

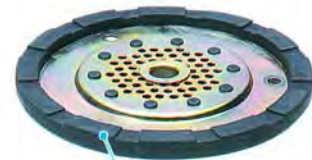
Discharge Direction Can Be Selected

The direction that the discharge port faces can be changed to the top or the side by a single 13-mm box wrench, preventing folding and bending of the hose when the pump is installed horizontally. The hose coupling has notched bolt holes, which means that it can be removed by merely loosening the hexagon cap nuts.



Base Plate with Rubber Lining Enables Use on FRP Tanks

The base plate is provided with a rubber lining to prevent scratching even if the pump is used on FRP or PVC floor surfaces.



Rubber Lining

Common Features

- Cable entry with anti-wicking block
- High-grade bearings for high-temperature operation
- Integrated high-performance motor
- Built-in motor protector
- Oil-bath type double-mechanical seal featuring enhanced stable shaft sealing effect over prolonged use

- Service life of mechanical seal extended by OIL LIFTER (patent pending)
- Mechanical seal protected from corrosive particles in priming fluid by V-ring
- Impeller lock minimized by semi-vortex design

Major Standard Specifications

Discharge bore size mm		25	
Pumping fluid	Type of fluid	Cleaning water, Water on floor, Puddles	
	Liquid temperature	0~40°C	
Pump	Components	Impeller	Semi-Vortex
		Shaft seal	Double mechanical seal
		Bearing	Shielded ball bearing
	Materials	Impeller	Urethane rubber
		Casing	Ethylene propylene rubber
		Suction cover	Urethane rubber
	Shaft seal (mechanical seal)	Silicon Carbide	
Motor	Type, poles	Dry-type submersible induction motor, 2 poles	
	Insulation	Class E	
	Phase/Voltage	Single-phase/110V, 200V, 220V, 230V, 240V	
	Motor protector(Built-in)	Miniature protector	
	Lubricant	Turbine oil (ISO VG32)	
	Materials	Frame	Aluminium alloy casting
		Shaft	Stainless steel #403
Cable		PVC Sheath	
Discharge connection	Hose coupling		



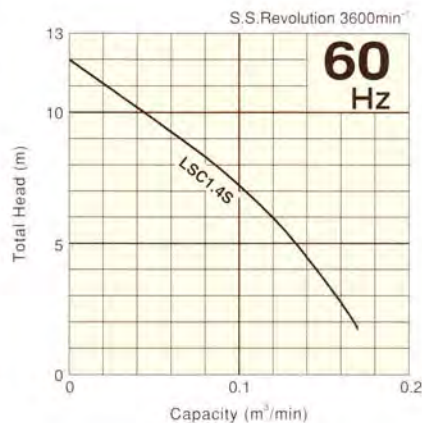
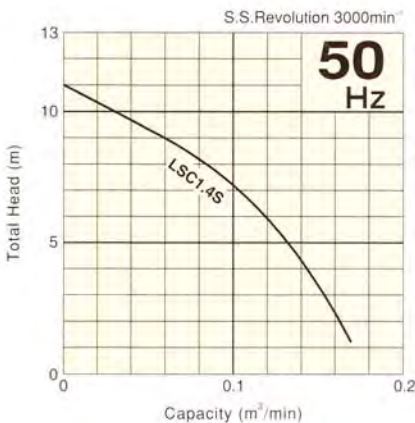
Standard Accessories

- Cabtyre cable1pc
- Hose band1pc
- ϕ 25mm union, and hose coupling1set

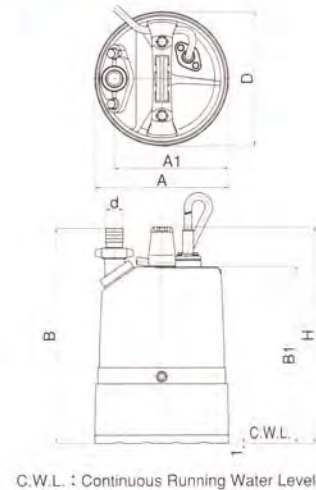
Optional Specifications

- Extended cable

Performance Curves



Dimensions



Specifications 50/60Hz

Discharge Bore mm	Model	Motor Output kW	Phase	Max. Head m	Starting Method	Dry Weight kgs	Length of Cabtyre Cable m	Dimensions mm							C.W.L. mm
								d	A	A1	B	B1	D	H	
25	LSC1.4S	0.48	Single	11/12	Capacitor Run	12	5	25	196	168	316	258	196	316	1

- Dry weight of the pump excluding cable.

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

**TSURUMI
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