

# CONSTRUCTION & MINING

SUBMERSIBLE  
DEWATERING PUMPS





## HEAVY-DUTY, EXCELLENT DURABILITY AND RELIABILITY – TSURUMI QUALITY

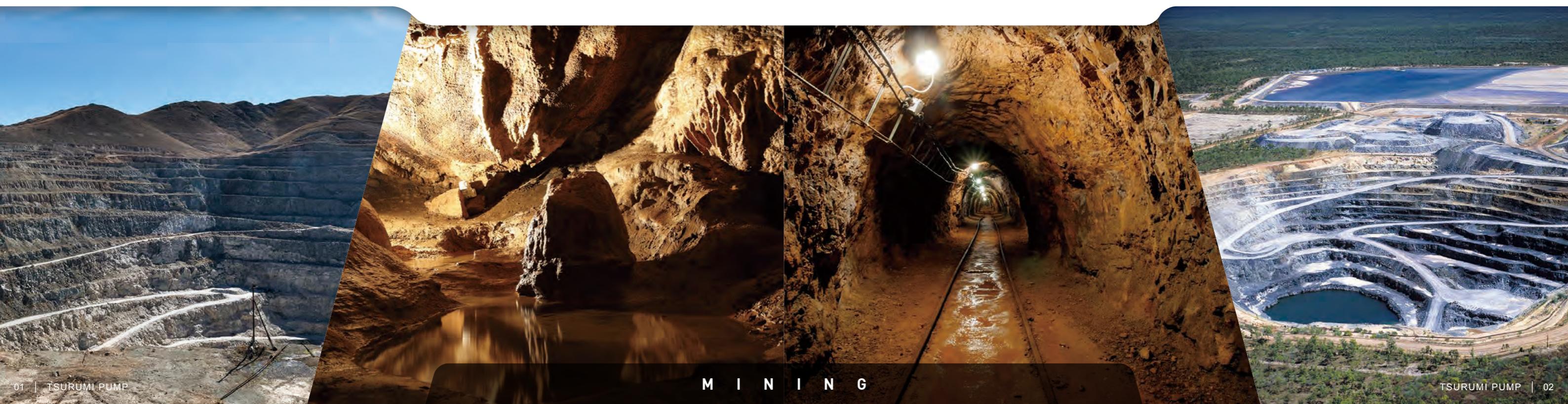
Tsurumi's submersible pumps are designed and developed along the user's line of sight, which is why they are known for their sound quality, durability, ease of maintenance and a high degree of reliability that enables continuous duty over long periods of use.

As a subcategory thereof, Tsurumi has been manufacturing and selling construction and mine dewatering pumps for over 50 years. Here, repeated bench and field testing under harsh conditions have led to a plethora of technologies and valuable know-how that Tsurumi has used to improve durability and maintainability for the rental, construction and mining markets where severe environments demand nothing short of heavy-duty hardware.

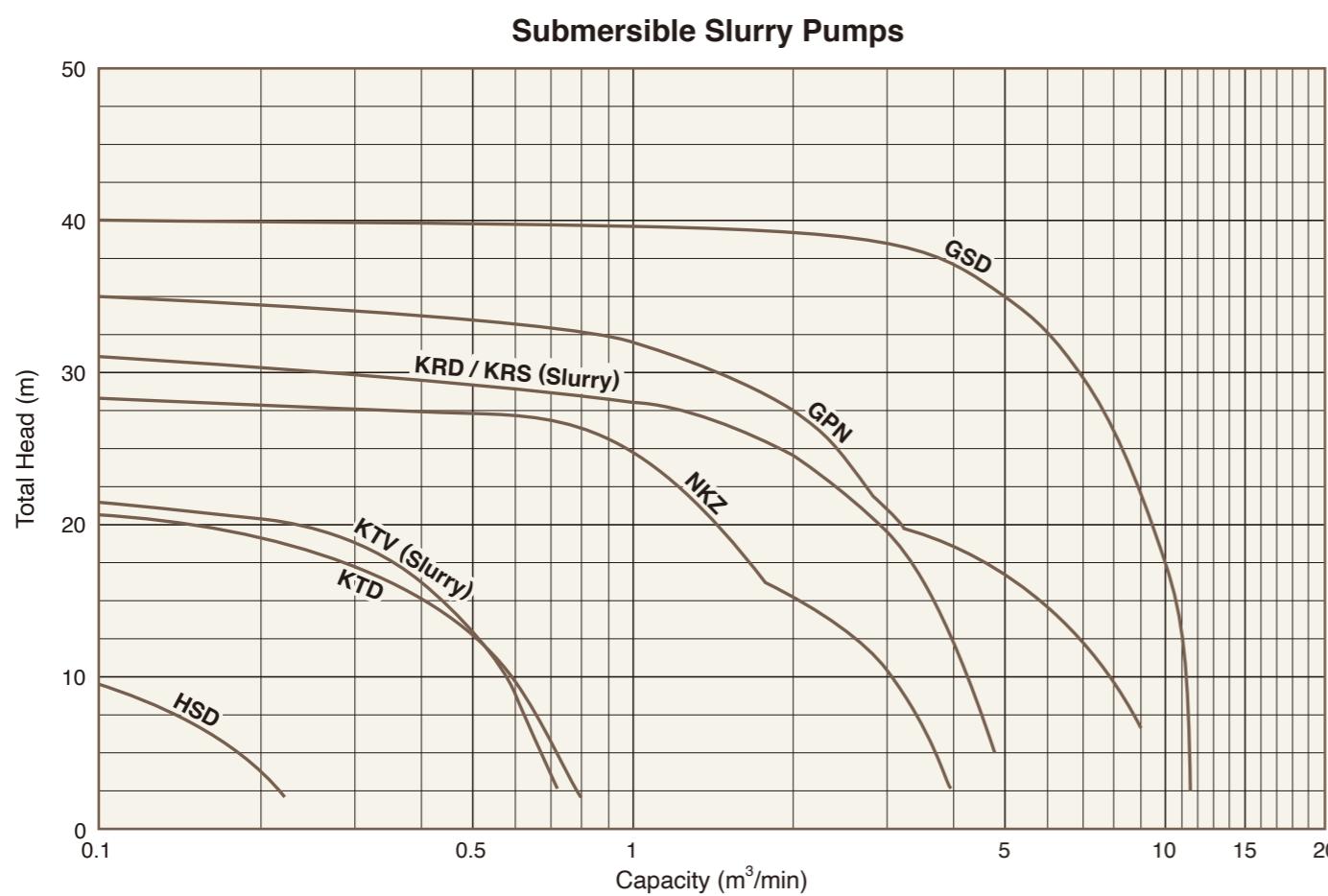
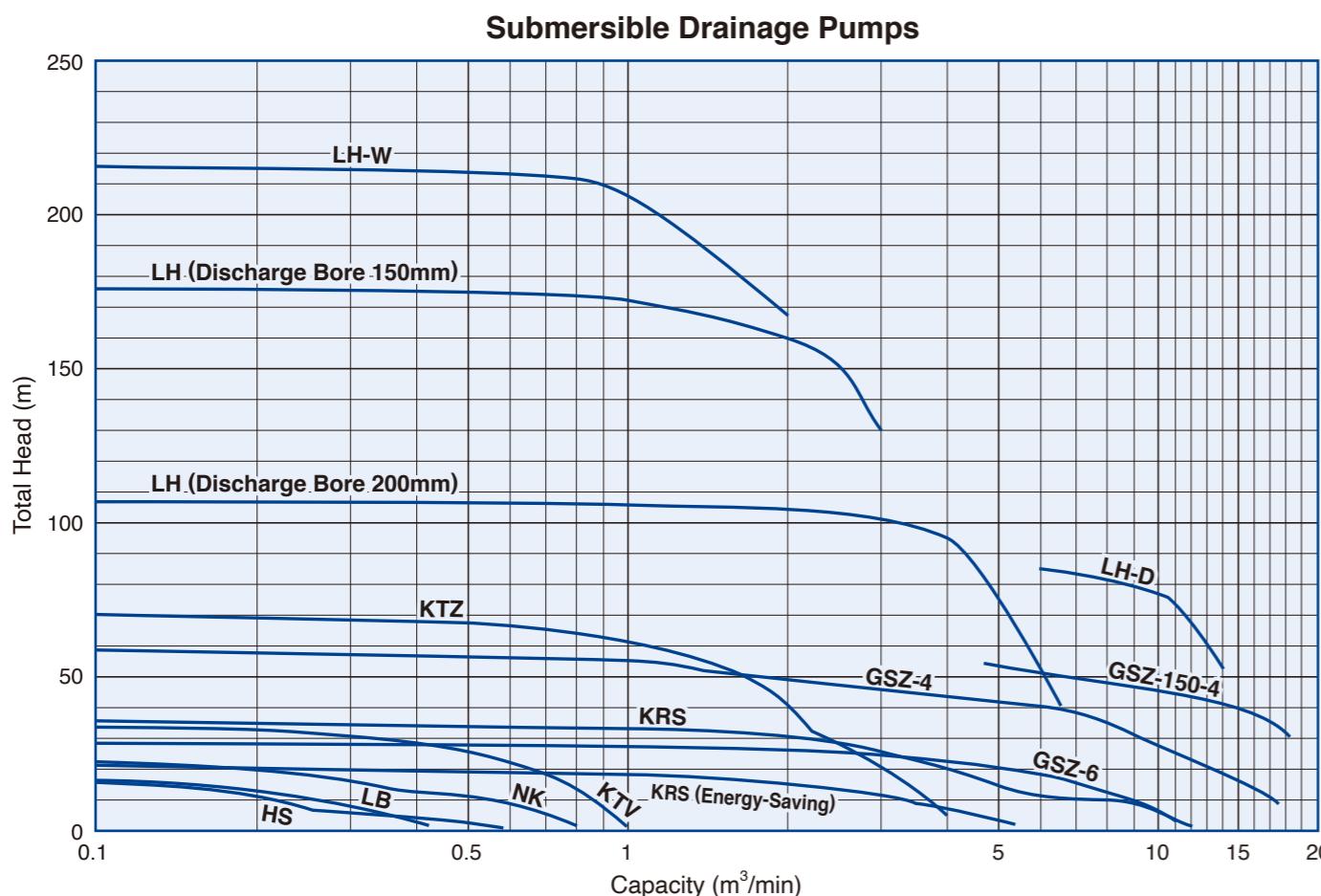
Tsurumi's pumps come in a wide range of sizes from compact packages for household use to midsize and large configurations that better serve construction, tunnel works and mines. Available in an extensive lineup of over 150 pump models of motor outputs (0.1 - 150 kW) and discharge bores (15 - 250 mm), these pumps are suited for a wide range of applications besides general pumping and drainage, including slurries, residues and much more difficult-to-handle media like seawater, high temperature liquids and corrosive liquids. Moreover, Tsurumi has many models capable of turning on/off automatically by way of electrodes or float switches, which contributes to field and environmental management by conserving power and prolonging pump service-life.

Designed in Japan, Tsurumi's submersible pumps come loaded with original technologies tested and proven over the years such as the anti-wicking cable, motor protector, dual inside mechanical seals with silicon carbide faces, Oil Lifter and more. In addition, for the sake of durability, wear-resistant materials are adopted for parts that tend to wear down more easily, paving the way for continuous duty over extended periods of time.

Because of these qualities, Tsurumi's pumps are put to use in a broad range of fields from civil engineering and construction sites that require high reliability to mines and larger scale project sites for tunnels, bridges, dams and so forth, as well as infrastructure for temporarily bypassing sewerage or draining rainwater to avert flooding.



# Performance Range



# Selection Table

| Drainage                | Series                     | Discharge Bore mm | Motor Output kW | No. of Poles | Discharge Design |           | Agitator       | Automatic Operation          |  |  |
|-------------------------|----------------------------|-------------------|-----------------|--------------|------------------|-----------|----------------|------------------------------|--|--|
|                         |                            |                   |                 |              | Top Discharge    |           |                |                              |  |  |
|                         |                            |                   |                 |              | Flow-Thru        | Side Flow |                |                              |  |  |
| Small Size              | <b>LB / LB-A</b>           | 50 (80)           | 0.48 - 1.5      | 2            | ●                |           |                | Electrode (LB-A)             |  |  |
|                         | <b>HS / HSZ</b>            | 50 • 80           | 0.4 • 0.75      | 2            |                  |           | ●              | Float (HSZ)                  |  |  |
|                         | <b>FAMILY / FAMILY-A</b>   | 15, 25            | 0.1             | 2            | ●                |           |                | Cylindrical Float (FAMILY-A) |  |  |
| Medium Size             | <b>NK</b>                  | 50 • 80           | 1.5 • 2.2       | 2            |                  | ●         |                | Electrode (KTVE)             |  |  |
|                         | <b>KTV / KTVE</b>          | 50 • 80 (100)     | 0.75 - 5.5      | 2            |                  | ●         |                |                              |  |  |
|                         | <b>KTZ / KTZE</b>          | 50 - 150          | 1.5 - 22        | 2            |                  | ●         |                | Electrode (KTZE)             |  |  |
| High Head               | <b>LH</b>                  | 80 - 200          | 3 - 110         | 2            | ●                |           |                |                              |  |  |
|                         | <b>LH-W</b>                | 50 - 100          | 3 - 110         | 2            | ●                |           |                |                              |  |  |
|                         | <b>LH-D</b>                | 250 • 300         | 110 • 185       | 2            | ●                |           |                |                              |  |  |
|                         | <b>Tandem Operation</b>    | 50 - 100          | 3 - 30          | 2            | ●                |           |                |                              |  |  |
| High Volume             | <b>KRS</b>                 | 80 - 250          | 2.2 - 22        | 4            | (KRS1022)        | ●         |                |                              |  |  |
|                         | <b>KRS (Energy-Saving)</b> | 100 - 200         | 3 - 9           | 4            |                  | ●         |                |                              |  |  |
| Sewer Bypass            | <b>KRSU</b>                | 200               | 22              | 4            |                  | ●         |                |                              |  |  |
| High Head & High Volume | <b>GSZ-4</b>               | 150 - 250         | 37 - 150        | 4            |                  |           | (Water Jacket) |                              |  |  |
| High Power              | <b>GSZ-6</b>               | 200               | 22 • 37         | 6            |                  |           | (Water Jacket) |                              |  |  |
| Slurry                  | <b>HSD</b>                 | 50                | 0.55            | 2            |                  | ●         |                |                              |  |  |
|                         | <b>KTV (Slurry)</b>        | 50 • 80 (100)     | 2 • 3           | 2            |                  | ●         |                |                              |  |  |
|                         | <b>KTD</b>                 | 50 • 80           | 2.2 • 3.7       | 2            |                  | ●         |                |                              |  |  |
|                         | <b>KRD / KRS (Slurry)</b>  | 80 - 200          | 5.5 - 18        | 4            |                  | ●         |                |                              |  |  |
|                         | <b>NKZ</b>                 | 80 - 150          | 2.2 - 11        | 4            |                  |           | (Water Jacket) |                              |  |  |
| High Power              | <b>GPN</b>                 | 80 - 200          | 5.5 - 37        | 4 • 6        |                  |           | (Water Jacket) |                              |  |  |
| High Volume             | <b>GSD</b>                 | 200 • 250         | 37 - 75         | 4            |                  |           | (Water Jacket) |                              |  |  |
| Corrosion-Resistant     | <b>SFQ</b>                 | 50 • 80           | 0.4 - 11        | 2            |                  | ●         |                |                              |  |  |
|                         | <b>LH-14 • LH-W-14</b>     | 80 - 200          | 11 - 110        | 2            | ●                |           |                |                              |  |  |
| Residue Drainage        | <b>HSR</b>                 | 50                | 0.4             | 2            |                  | ●         |                |                              |  |  |
|                         | <b>LSC</b>                 | 25 • 50           | 0.48 • 0.75     | 2            | ●                |           |                |                              |  |  |
|                         | <b>LSP</b>                 | 25                | 0.48            | 2            | ●                |           |                |                              |  |  |

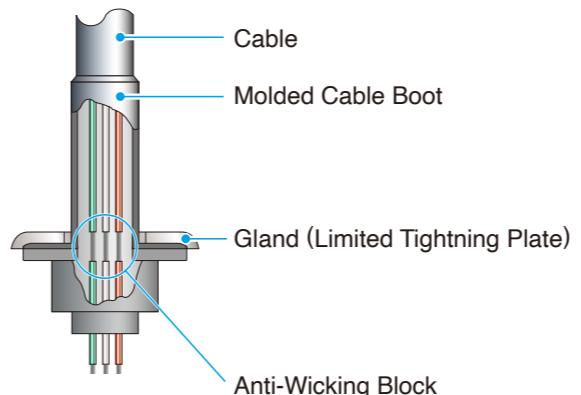
# Structure



\* The cutaway pictures are pumps for the European specifications.  
The pumps of the standard specifications are different shape of a handle and hose coupling.  
Picture of actual pumps, refer to each individual page.

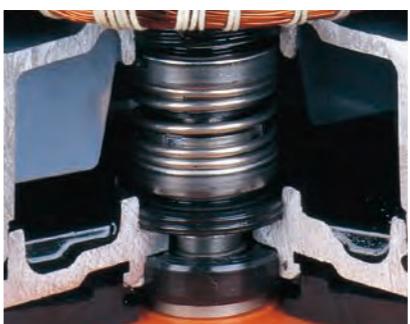
## Anti-Wicking Cable Entry

An anti-wicking block is provided at the cable entry section of the motor chamber. Even if the cable jacket becomes damaged or the tip of the cable is accidentally immersed in water, this device prevents water from traveling into the motor chamber through capillary action.



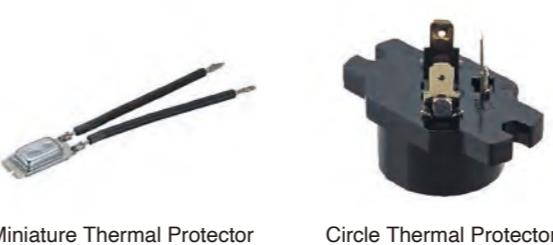
## Dual Inside Mechanical Seal

A dual inside mechanical seal, located in the oil chamber together with the Oil Lifter, has two sealing faces made of quality materials, including silicon carbide (SiC). The advantages of this seal are two-fold; it eliminates spring failure caused by corrosion, abrasion or fouling, which can prevent the seal faces from closing properly, and prevents loss of cooling to the lower seal faces during run-dry conditions, which causes the lower seal faces to fail.



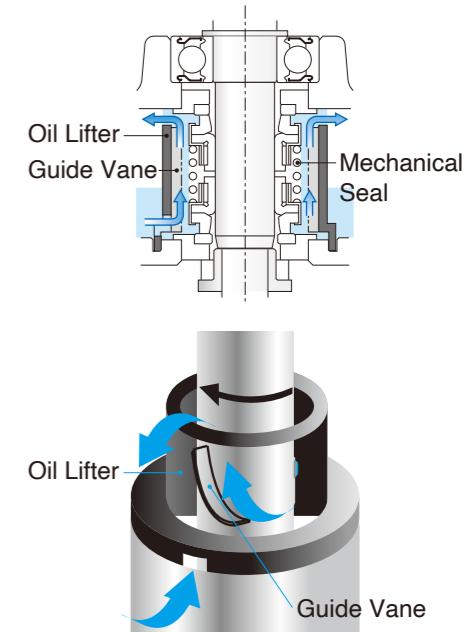
## Automatic Motor Protection Device

A built-in thermal motor protection device reacts to the excessive heat caused by overcurrent or run-dry conditions. It not only cuts off the motor circuit automatically but also resets by itself.



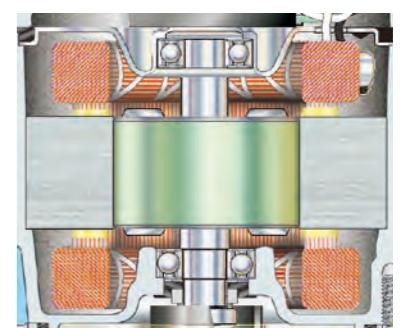
## Oil Lifter

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 upper seal faces even if the lubricant falls below the specified volume. This amazingly simple device reliably lubricates and cools but also stabilizes the effect of the shaft seal and extends the length of the inspection period.



## 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.

# Feature

## Motor Cooling & Discharge Design

### Top Discharge, Flow-Thru Design

This design provides maximum motor cooling efficiency allowing continuous operation at low water levels and extended dry-run capability, and also allows the shape of the pump to be cylindrical and slim for installation in a well casing for deep well dewatering.

LB LB-A FAMILY FAMILY-A LH LH-W LH-D KRS\*  
LH-14 LH-W-14 LSC LSP  
\*KRS1022 only



### Side Discharge Design

The pump has a pump casing that facilitates smoother passage of foreign objects in the pumped liquid. It is a simple and practical design that facilitates inspection and repair work.

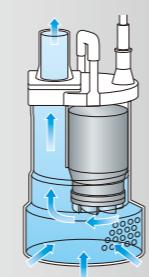
HS HSZ HSD SFQ HSR



### Top Discharge, Side Flow Design

This design assures efficient motor cooling even if the pump runs with its motor exposed to air, and also allows the overall diameter of the pump to be reduced for installation in confined spaces.

NK KTV KTVE KTZ KTZE KRS\* KRSU  
\*excluding KRS1022  
KTV(Slurry) KTD KRD / KRS(Slurry)



### Side Discharge Design with Water Jacket

The side discharge, spiral design allows smoother passage of the sucked solid matters. The motor is cooled by a water jacket assuring efficient motor cooling even when the pump operates with its motor exposed to air.

GSZ-4 GSZ-6 NKZ GPN GSD



## Automatic Operation

The automatic model only operates when sufficient water is present. It not only reduces power consumption but also extends the life of wear parts of the pump as it eliminates dry-running that causes early wear-out.

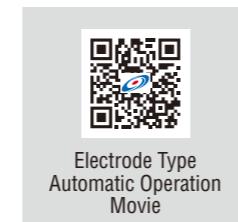
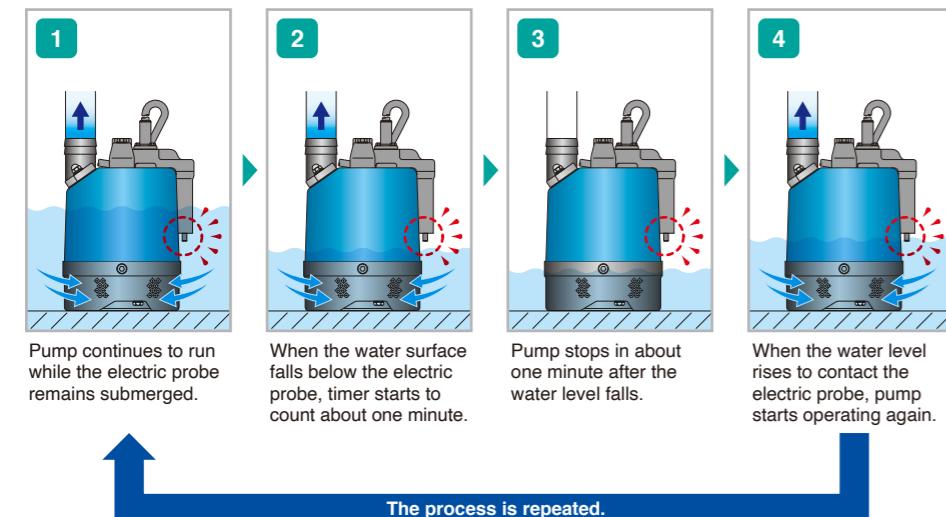
### Electrode (LB-A / KTVE / KTZE)



Tsurumi has developed a unique automatic control device utilizing electrodes. The pump stops automatically in about one minute after the water surface falls below the electric probe. Since this mechanism eliminates dry-running, the pump can reduce power consumption by up to 40 percent compared with non-automatic pumps (Tsurumi comparison). It also prevents chattering caused by a turbulent water surface and extends operating life.



### Automatic Operation (LB-A / KTVE / KTZE)



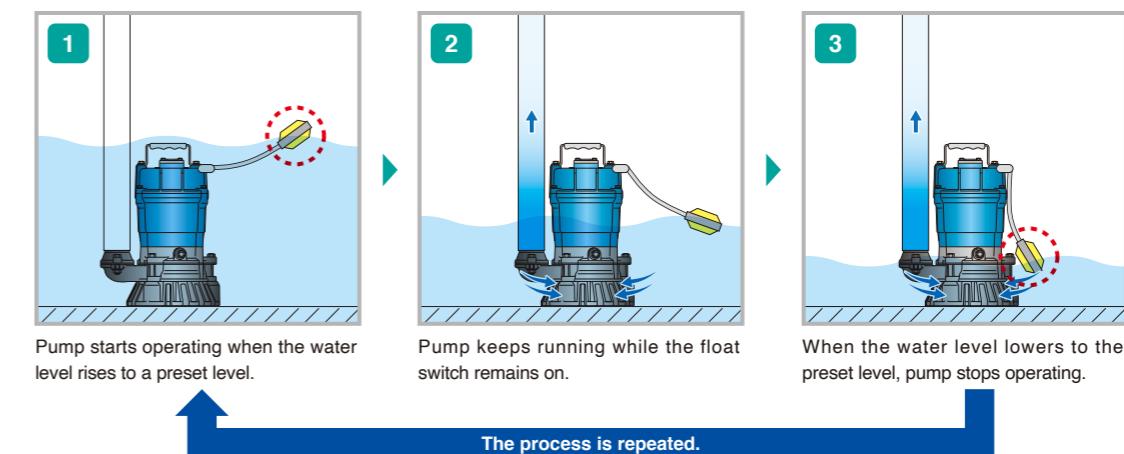
Electrode Type  
Automatic Operation  
Movie

### Float Switch (HSZ / FAMILY-A)

This automatic operation system is controlled by a float switch. When the water level rises and raises the float switch to a preset level, the switch turns on, and the pump starts. When the water level lowers to the preset level, pump operation stops.



### Automatic Operation (HSZ)



Single-phase Portable Drainage Pumps

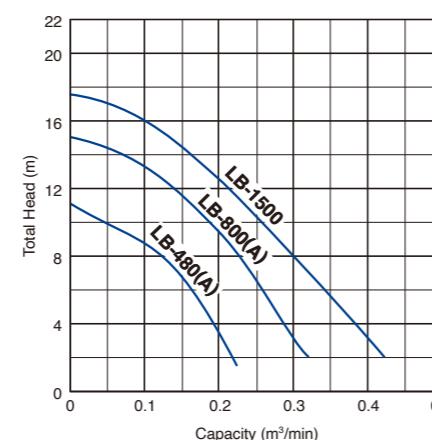
**LB****LB-A**

(LB-A : Automatic pump with electrode)

| Model    |           | Discharge Bore mm | Motor Output kW | Dry Weight kg |           | Dimensions mm |             |     |
|----------|-----------|-------------------|-----------------|---------------|-----------|---------------|-------------|-----|
| Standard | Automatic |                   |                 | Standard      | Automatic | L Standard    | H Automatic |     |
| LB-480   | LB-480A   | 50                | 0.48            | 10.4          | 11        | 189           | 223         | 286 |
| LB-800   | LB-800A   | 50(80)            | 0.75            | 13.1          | 13.7      | 186           | 223         | 341 |
| LB-1500  | —         | 50(80)            | 1.5             | 33            | —         | 187           | —           | 593 |

- Tsurumi typical pumps

- Multi-directional hose coupling (vertical and inclined)
- Automatic model with electrode type relay unit [LB-A]

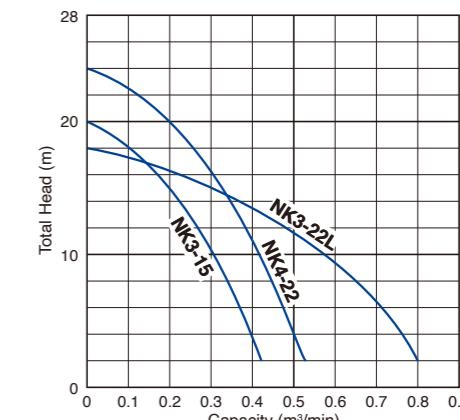


Single-phase Portable Drainage Pumps

**NK**

- Larger output motor

- Durability equivalent to three-phase drainage pumps



Single-phase Portable Drainage Pumps

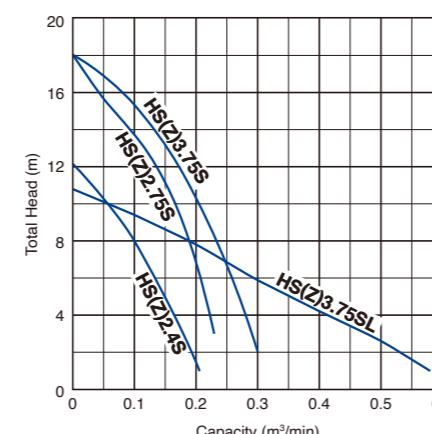
**HS****HSZ**

(HSZ : Automatic pump with float)

| Model    |           | Discharge Bore mm | Motor Output kW | Dry Weight kg |           | Dimensions mm |             |
|----------|-----------|-------------------|-----------------|---------------|-----------|---------------|-------------|
| Standard | Automatic |                   |                 | Standard      | Automatic | L Standard    | H Automatic |
| HS2.4S   | HSZ2.4S   | 50                | 0.4             | 11.3          | 241       | 328           |             |
| HS2.75S  | HSZ2.75S  | 50                | 0.75            | 16.4          | 285       | 394           |             |
| HS3.75S  | HSZ3.75S  | 80                | 0.75            | 16.8          | 285       | 394           |             |
| HS3.75SL | HSZ3.75SL | 80                | 0.75            | 19.6          | 288       | 425           |             |

- Multi-field use pumps with agitator

- Automatic model with single float switch [HSZ]



Three-phase Portable Drainage Pumps

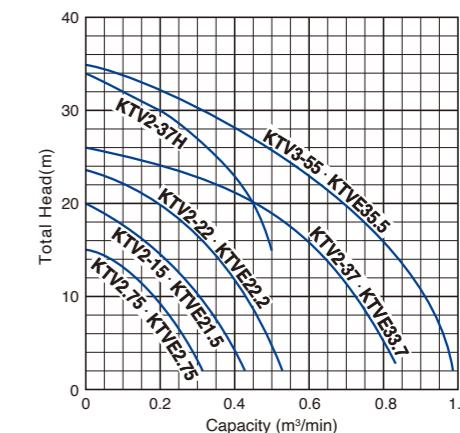
**KTV**  
**KTVE**

(KTVE : Automatic pump with electrode)

| Model    |           | Discharge Bore mm | Motor Output kW | Dry Weight kg |           | Dimensions mm |             |     |
|----------|-----------|-------------------|-----------------|---------------|-----------|---------------|-------------|-----|
| Standard | Automatic |                   |                 | Standard      | Automatic | L Standard    | H Automatic |     |
| KTV2.75  | KTVE2.75  | 50                | 0.75            | 12.5          | 13.3      | 200           | 374         | 422 |
| KTV2.15  | KTVE21.5  | 50(80)            | 1.5             | 21            | 22        | 240           | 392         | 462 |
| KTV2.22  | KTVE22.2  | 50(80)            | 2.2             | 23            | 25        | 240           | 412         | 462 |
| KTV2.37H | —         | 50                | 3.7             | 36            | —         | 285           | 510         | —   |
| KTV2.37  | KTVE33.7  | 80(100)           | 3.7             | 36            | 40        | 285           | 510         | 585 |
| KTV3.55  | KTVE35.5  | 80(100)           | 5.5             | 47            | 52        | 300           | 545         | 620 |

- Lightweight compact pumps made of die-casted aluminium alloy

- Automatic model with electrode type relay unit [KTVE]



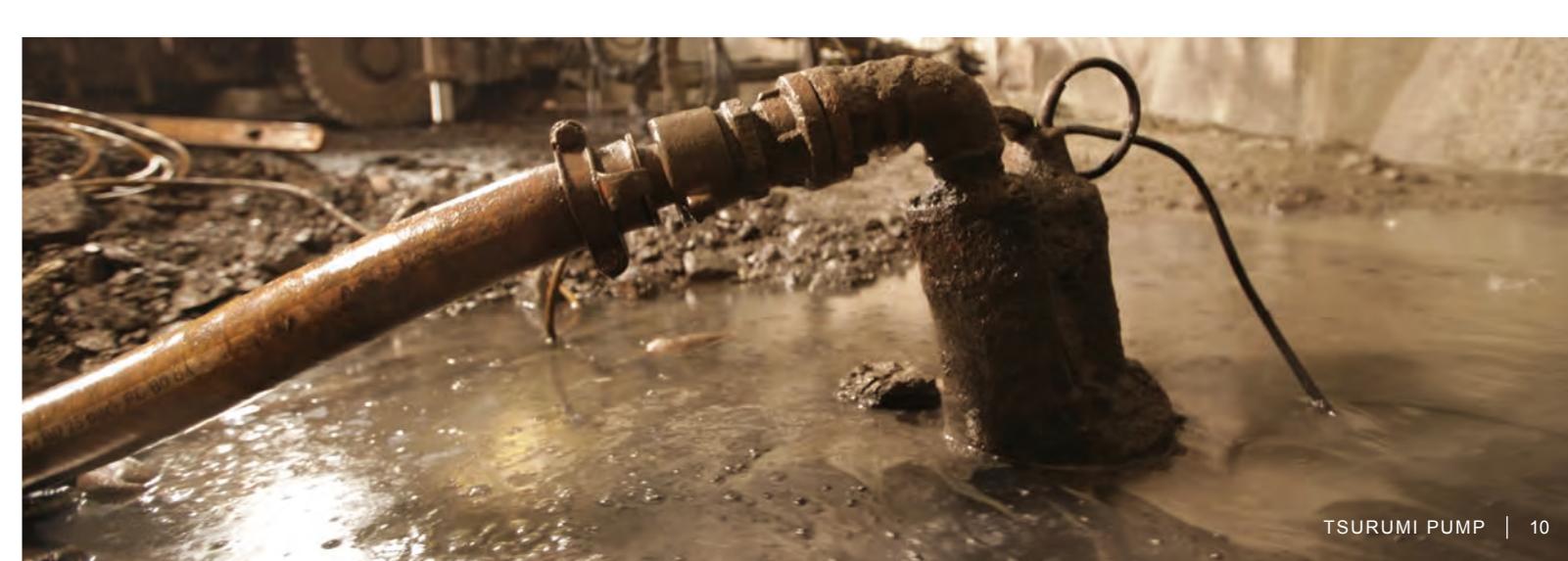
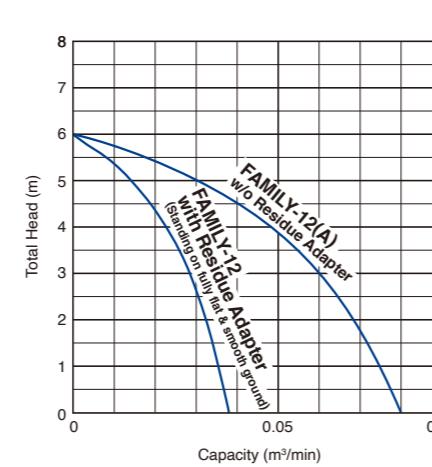
Single-phase Portable Drainage Pumps

**FAMILY**  
**FAMILY-A**

(FAMILY-A : Automatic pump with float)

| Model     |            | Discharge Bore mm | Motor Output kW | Dry Weight kg |           | Dimensions mm |             |     |
|-----------|------------|-------------------|-----------------|---------------|-----------|---------------|-------------|-----|
| Standard  | Automatic  |                   |                 | Standard      | Automatic | L Standard    | H Automatic |     |
| FAMILY-12 | FAMILY-12A | 15, 25            | 0.1             | 3.4           | 3.6       | 157           | 201         | 256 |

- Suitable for domestic use
- Automatic model with cylindrical float switch [FAMILY-A]
- Drain water to 1 mm in depth by attaching optional residue adapter [FAMILY]





Extra High Head Drainage Pumps by Tandem

# Tandem Operation

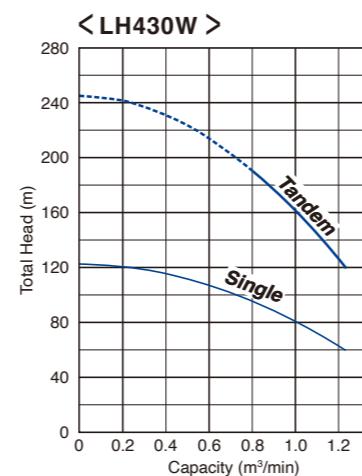
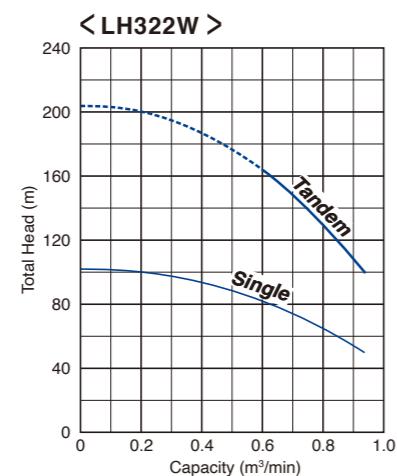
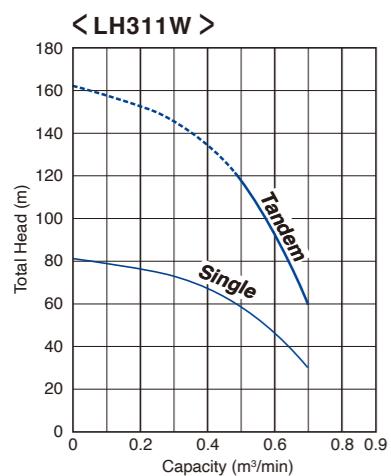
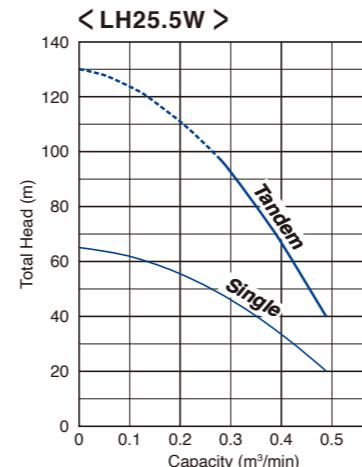
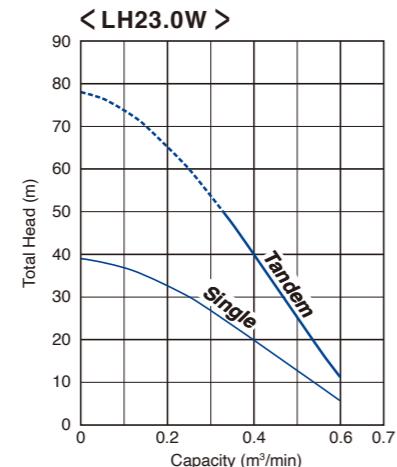
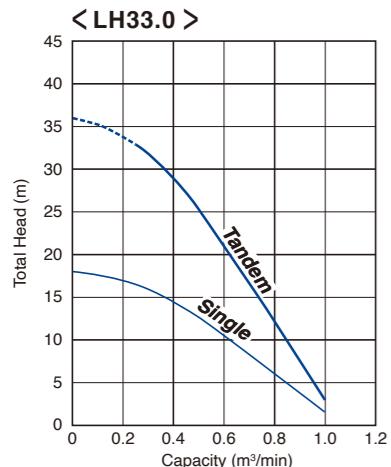
## -LH・LH-W-



"Tandem operation" is an operation method that connects two pumps of the same model in series. This provides double pump head at the same flow rate in comparison with that of a single pump. The principle of tandem operation is the same as that with multistage pumps.

| Model   | Discharge Bore mm | Motor Output kW | Dry Weight kg | Dimensions mm |      |
|---------|-------------------|-----------------|---------------|---------------|------|
|         |                   |                 |               | L             | H    |
| LH33.0  | 80                | 3               | 54            | 185           | 731  |
| LH23.0W | 50                | 3               | 59            | 185           | 759  |
| LH25.5W | 50                | 5.5             | 96            | 254           | 808  |
| LH311W  | 80                | 11              | 125           | 270           | 1043 |
| LH322W  | 80                | 22              | 365           | 330           | 1255 |
| LH430W  | 100               | 30              | 389           | 365           | 1400 |

The intermediate connection pipe is not required in the range indicated as a bold line on curves. If the required total head exceeds the maximum head of the pump without an intermediate connection pipe (indicated as dashed line), an intermediate connection pipe of a length corresponding to the excess amount or more is required.



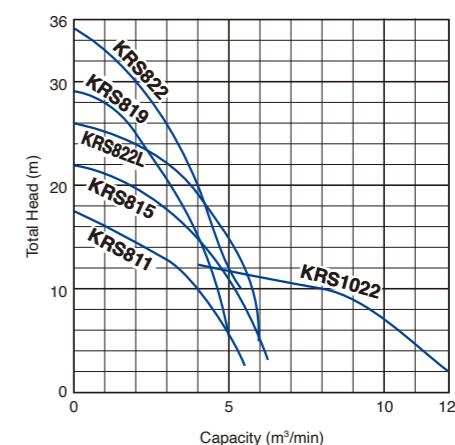
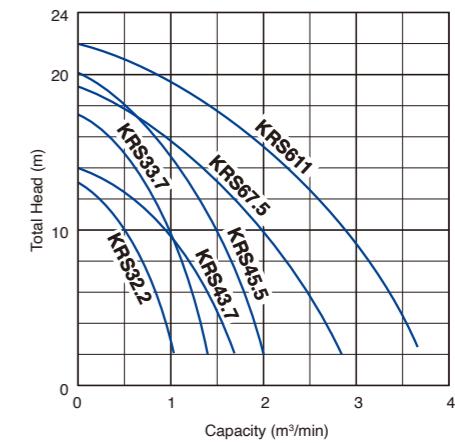
High Volume Drainage Pumps

# KRS



| Model   | Discharge Bore mm | Motor Output kW | Dry Weight kg | Dimensions mm |      |
|---------|-------------------|-----------------|---------------|---------------|------|
|         |                   |                 |               | L             | H    |
| KRS32.2 | 80                | 2.2             | 72            | 340           | 622  |
| KRS33.7 | 80                | 3.7             | 91            | 362           | 707  |
| KRS43.7 | 100               | 3.7             | 88            | 349           | 722  |
| KRS45.5 | 100               | 5.5             | 100           | 364           | 747  |
| KRS67.5 | 150               | 7.5             | 141           | 418           | 866  |
| KRS611  | 150               | 11              | 163           | 436           | 875  |
| KRS811  | 200               | 11              | 179           | 473           | 993  |
| KRS815  | 200               | 15              | 240           | 481           | 1069 |
| KRS819  | 200               | 18.5            | 360           | 576           | 1241 |
| KRS822  | 200               | 22              | 380           | 576           | 1241 |
| KRS822L | 200               | 22              | 380           | 576           | 1241 |
| KRS1022 | 250               | 22              | 390           | 525           | 1419 |

- General-purpose heavy-duty cast iron pumps
- Suitable for high volume pumping



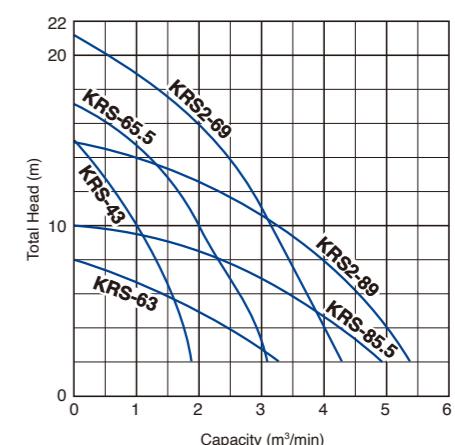
High Volume Drainage Pumps

# KRS (Energy-Saving)



| Model    | Discharge Bore mm | Motor Output kW | Dry Weight kg | Dimensions mm |     |
|----------|-------------------|-----------------|---------------|---------------|-----|
|          |                   |                 |               | L             | H   |
| KRS-43   | 100               | 3               | 95            | 378           | 723 |
| KRS-63   | 150               | 3               | 97            | 384           | 866 |
| KRS-65.5 | 150               | 5.5             | 118           | 425           | 790 |
| KRS-2-69 | 150               | 9               | 155           | 490           | 812 |
| KRS-85.5 | 200               | 5.5             | 126           | 446           | 941 |
| KRS2-89  | 200               | 9               | 175           | 473           | 933 |

- General-purpose heavy-duty cast iron pumps
- Energy-saving type of low output and low head reduces power consumption



Submersible Pump for Sewage Bypass

**KRSU**

- Submersible pump for provisional sewage bypass between manholes
- Suitable for temporarily bypassing drainage in sewer construction work

| Model   | Discharge Bore mm | Motor Output kW | Dry Weight kg | Dimensions mm |      |
|---------|-------------------|-----------------|---------------|---------------|------|
|         |                   |                 |               | L             | H    |
| KRSU822 | 200               | 22              | 430           | 546           | 1486 |

High Head &amp; High Volume Drainage Pumps

**GSZ-4**

- Heavy-duty high head, high volume drainage pumps with internal 4 pole motor
- Water jacket for forcibly cooling the motor at low water level

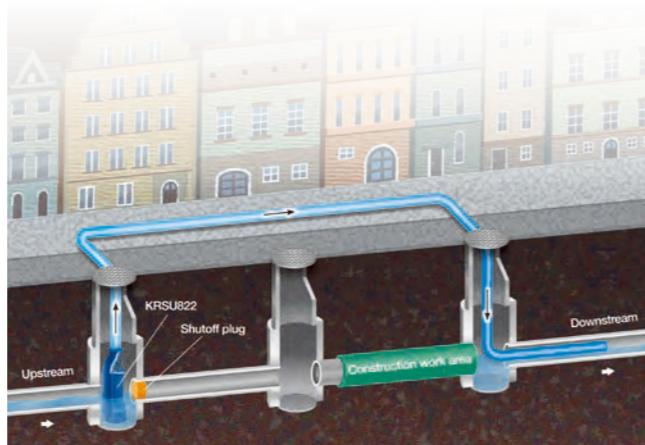
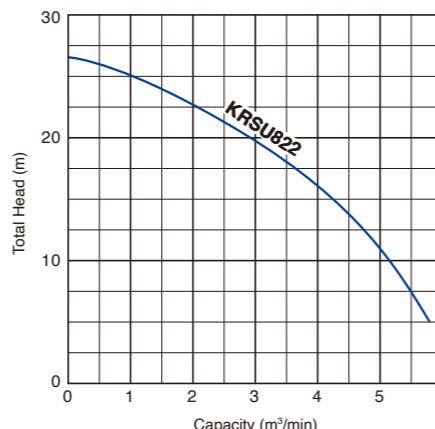
| Model      | Discharge Bore mm | Motor Output kW | Dry Weight kg | Dimensions mm |      |
|------------|-------------------|-----------------|---------------|---------------|------|
|            |                   |                 |               | L             | H    |
| GSZ5-37-4H | 150               | 37              | 595           | 900           | 1553 |
| GSZ5-37-4  | 200               | 37              | 566           | 915           | 1583 |
| GSZ4-45-4  | 200               | 45              | 583           | 915           | 1591 |
| GSZ2-55-4  | 250               | 55              | 1091          | 1050          | 1927 |
| GSZ2-75-4  | 250               | 75              | 1141          | 1050          | 1927 |
| GSZ2-75-4L | 250               | 75              | 1200          | 1050          | 1972 |
| GSZ-150-4  | 250               | 150             | 2315          | 1218          | 2420 |

High Volume Drainage Pumps

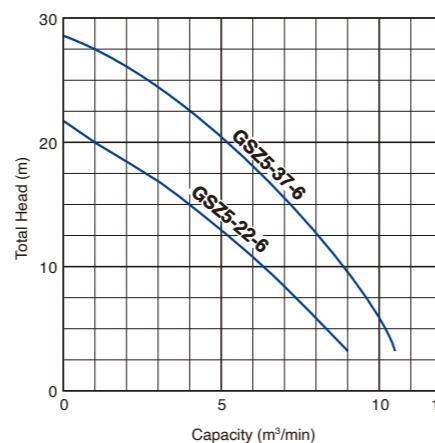
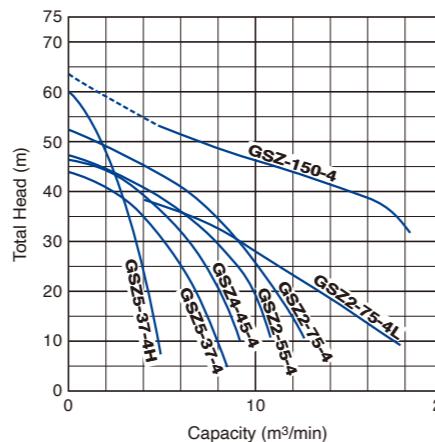
**GSZ-6**

- Heavy-duty high volume drainage pumps with internal 6 pole motor
- Capable of discharging slurries laden with silt, earth, sand or other particulate
- Water jacket for forcibly cooling the motor at low water level

| Model     | Discharge Bore mm | Motor Output kW | Dry Weight kg | Dimensions mm |      |
|-----------|-------------------|-----------------|---------------|---------------|------|
|           |                   |                 |               | L             | H    |
| GSZ5-22-6 | 200               | 22              | 685           | 965           | 1360 |
| GSZ5-37-6 | 200               | 37              | 796           | 1047          | 1421 |



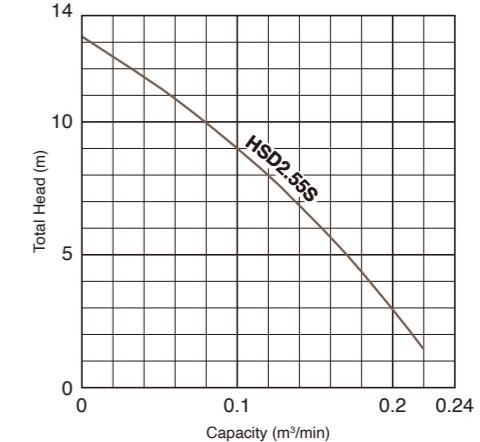
It is not recommended to operate the unit continuously along the dashed curve.

**Slurry**

Single-phase Portable Slurry Pump

**HSD**

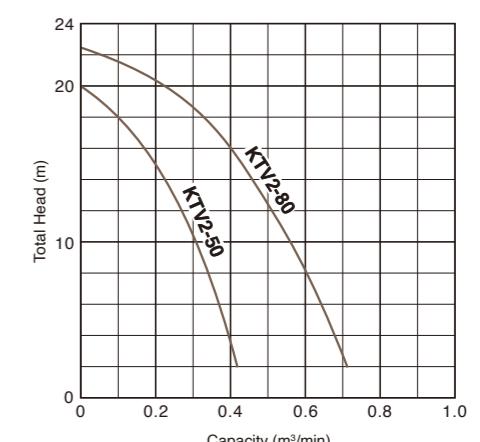
- Equipped with high-chromium cast iron impeller and agitator



Three-phase Portable Slurry Pumps

**KTV (Slurry)**

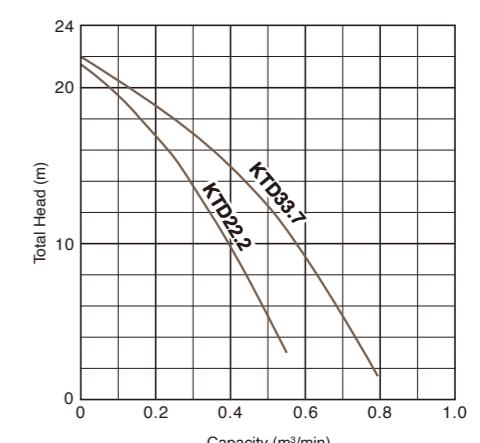
- Lightweight compact pumps made of die-casted aluminium alloy
- Equipped with high-chromium cast iron impeller and ductile cast iron agitator



Three-phase Portable Slurry Pumps

**KTD**

- Heavy-duty cast iron pumps
- Equipped with high-chromium cast iron impeller and ductile cast iron agitator



| Model   | Discharge Bore mm | Motor Output kW | Dry Weight kg | Dimensions mm |     |
|---------|-------------------|-----------------|---------------|---------------|-----|
|         |                   |                 |               | L             | H   |
| KTD22.2 | 50                | 2.2             | 38            | 235           | 550 |
| KTD33.7 | 80                | 3.7             | 65            | 297           | 644 |

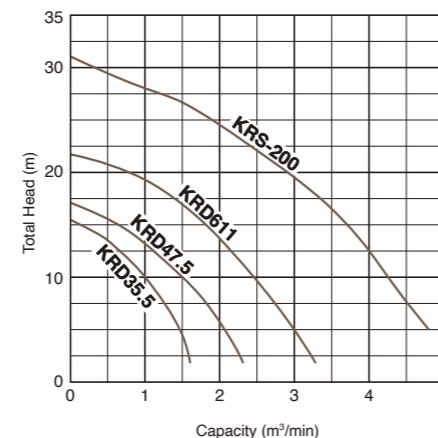
**Slurry**

Slurry Pumps

**KRD****KRS**(Slurry)

| Model   | Discharge Bore mm | Motor Output kW | Dry Weight kg | Dimensions mm |
|---------|-------------------|-----------------|---------------|---------------|
|         | L                 | H               |               |               |
| KRD35.5 | 80                | 5.5             | 107           | 351 838       |
| KRD47.5 | 100               | 7.5             | 154           | 418 936       |
| KRD611  | 150               | 11              | 175           | 436 961       |
| KRS-200 | 200               | 18              | 395           | 576 1140      |

- Heavy-duty cast iron pumps
- Equipped with high-chromium cast iron impeller and agitator

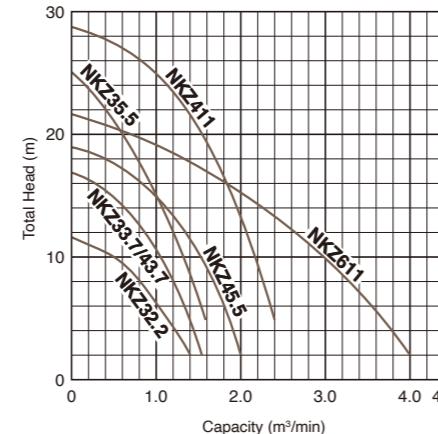


Slurry Pumps

**NKZ**

| Model   | Discharge Bore mm | Motor Output kW | Dry Weight kg | Dimensions mm |
|---------|-------------------|-----------------|---------------|---------------|
|         | L                 | H               |               |               |
| NKZ32.2 | 80                | 2.2             | 102           | 466 719       |
| NKZ33.7 | 80                | 3.7             | 107           | 466 719       |
| NKZ35.5 | 80                | 5.5             | 146           | 491 798       |
| NKZ43.7 | 100               | 3.7             | 104           | 466 719       |
| NKZ45.5 | 100               | 5.5             | 129           | 482 759       |
| NKZ411  | 100               | 11              | 217           | 546 885       |
| NKZ611  | 150               | 11              | 210           | 618 842       |

- Wide product lineup with agitator
- Water jacket for forcibly cooling the motor at low water level

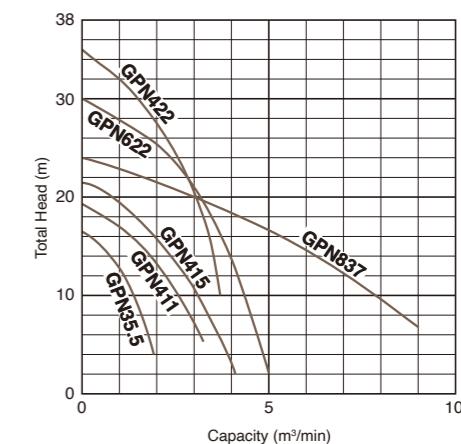


High Power Slurry Pumps

**GPN**

| Model   | Discharge Bore mm | Motor Output kW | Dry Weight kg | Dimensions mm |
|---------|-------------------|-----------------|---------------|---------------|
|         | L                 | H               |               |               |
| GPN35.5 | 80                | 5.5             | 160           | 487 841       |
| GPN411  | 100               | 11              | 239           | 617 924       |
| GPN415  | 100               | 15              | 242           | 617 924       |
| GPN422  | 100               | 22              | 410           | 725 1102      |
| GPN622  | 150               | 22              | 415           | 725 1102      |
| GPN837  | 200               | 37              | 815           | 1015 1606     |

- High powered heavy-duty slurry pumps with internal 4 or 6 pole motor
- Chromium molybdenum steel shaft suitable for strong slurry
- Equipped with high-chromium cast iron impeller, suction plate and agitator
- Water jacket for forcibly cooling the motor at low water level

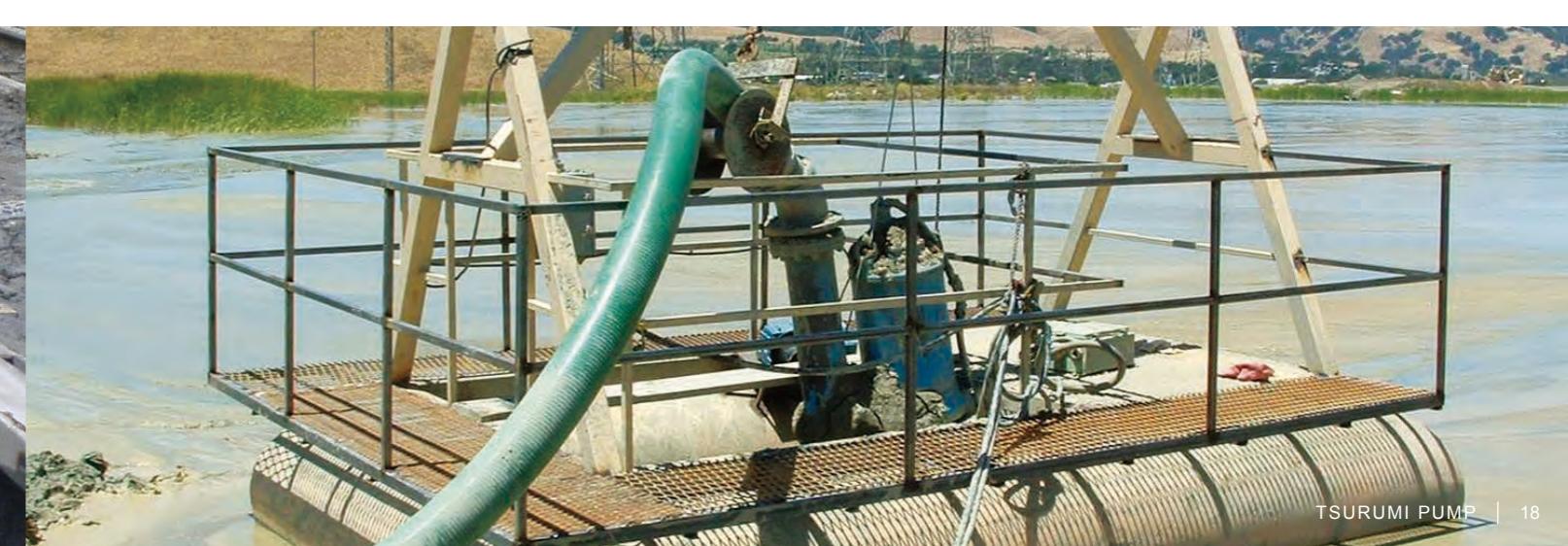
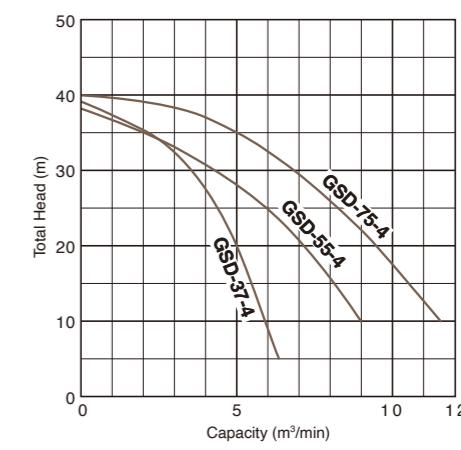


High Volume Slurry Pumps

**GSD**

| Model    | Discharge Bore mm | Motor Output kW | Dry Weight kg | Dimensions mm |
|----------|-------------------|-----------------|---------------|---------------|
|          | L                 | H               |               |               |
| GSD-37-4 | 200               | 37              | 685           | 915 1583      |
| GSD-55-4 | 250               | 55              | 1220          | 1050 1927     |
| GSD-75-4 | 250               | 75              | 1220          | 1050 1927     |

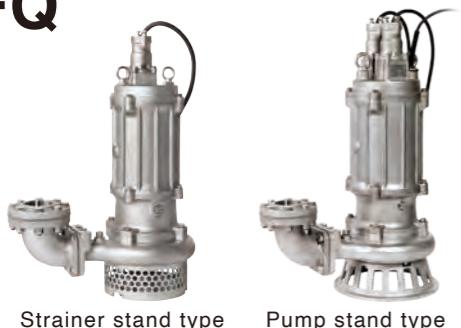
- Heavy-duty high head, high volume slurry pumps with internal 4 pole motor
- Equipped with high-chromium cast iron impeller and agitator



## Corrosion-Resistant

Corrosion-resistant Pumps

### SFQ



Strainer stand type      Pump stand type

| Model      | Discharge Bore mm | Motor Output kW | Dry Weight kg | Dimensions mm |     |
|------------|-------------------|-----------------|---------------|---------------|-----|
|            |                   |                 |               | L             | H   |
| 50SFQ2.4S  | 50                | 0.4             | 21            | 252           | 427 |
| 50SFQ2.4   | 50                | 0.4             | 20            | 252           | 398 |
| 50SFQ2.75  | 50                | 0.75            | 22            | 252           | 398 |
| 80SFQ21.5  | 80                | 1.5             | 36            | 329           | 484 |
| 80SFQ23.7  | 80                | 3.7             | 52            | 359           | 542 |
| 80SFQ25.5* | 80                | 5.5             | 124           | 635           | 844 |
| 80SFQ27.5* | 80                | 7.5             | 128           | 635           | 844 |
| 80SFQ211*  | 80                | 11              | 148           | 635           | 892 |

\* The SFQ 5.5-11kW models are selectable from the strainer stand type or the pump stand type.

High Head Corrosion-resistant Pumps

### LH-14

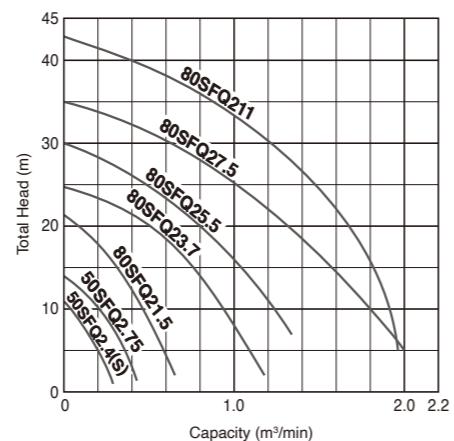
### LH-W-14



LH-14      LH-W-14

| Model     | Discharge Bore mm | Motor Output kW | Dry Weight kg | Dimensions mm |      |
|-----------|-------------------|-----------------|---------------|---------------|------|
|           |                   |                 |               | L             | H    |
| LH422-14  | 100               | 22              | 370           | 420           | 1352 |
| LH637-14  | 150               | 37              | 540           | 530           | 1448 |
| LH6110-14 | 150               | 110             | 1350          | 592           | 1887 |
| LH837-14  | 200               | 37              | 540           | 530           | 1488 |
| LH8110-14 | 200               | 110             | 1400          | 592           | 1887 |
| LH311W-14 | 80                | 11              | 320           | 330           | 1184 |
| LH322W-14 | 80                | 22              | 340           | 330           | 1275 |

- Corrosion-resistant pumps made of 316 stainless steel casting
- Suitable for acidic, chemical fluids of low pH value
- Available in guide rail fitting system



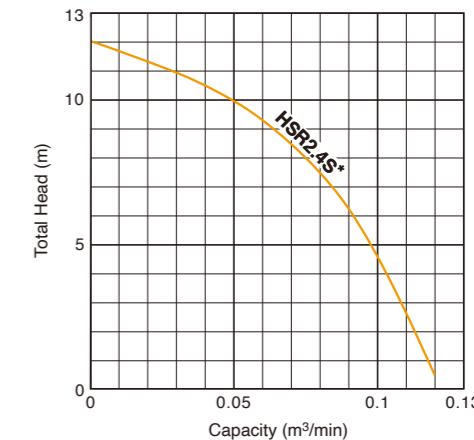
## Residue Drainage

Single-phase Portable Residue Drainage Pump

### HSR



- Suitable for draining shallow standing water
- Drain water to 1 mm in depth
- Multi-directional hose coupling (vertical and inclined)



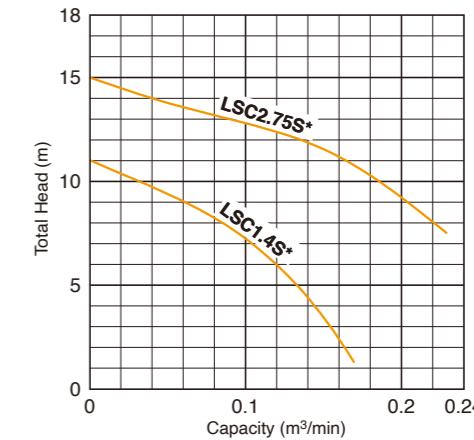
\* The curve shows the pump performance while operating in a hanging condition without any restriction to the suction.

Single-phase Portable Residue Drainage Pump

### LSC



- Suitable for draining shallow standing water
- Drain water to 1 mm in depth
- Multi-directional hose coupling (vertical and inclined)
- Swing check valve prevents reverse-flow



\* The curve shows the pump performance while operating in a hanging condition without any restriction to the suction.

Single-phase Portable Self-priming Residue Drainage Pump

### LSP



- Suitable for draining shallow standing water
- Can drain water at narrow space by free-positioning suction attachment
- Syphon breaker mechanism prevents reverse-flow

| Model   | Suction & Discharge mm | Motor Output kW | Dry Weight kg | Dimensions mm |     |
|---------|------------------------|-----------------|---------------|---------------|-----|
|         |                        |                 |               | L             | H   |
| LSP1.4S | 25                     | 0.48            | 16.5          | 300           | 307 |

Tsurumi offers a series of pumps for low level standing water, which can suck up and drain a small volume of stagnant or residual water. With a compact and lightweight design, these pumps provide excellent portability. Also, because they run on a single-phase power supply, these pumps are easy to handle. Various types of pumps are available in our product lineup: some models can drain water to a minimum level of 1 mm, while others are equipped with a water reverse-flow preventing mechanism or a suction attachment. These pumps are suitable for draining shallow standing water, for example, draining water on the floor of construction sites, pits, water collection/feed tanks and small puddles, by taking advantage of the characteristics of each model.

Recently, the Zika virus, which threatens to go global, and Dengue fever, which induces a high fever, have been prevalent in tropical and subtropical zones of South East Asia and elsewhere. Tsurumi's residue drainage pumps can smoothly drain standing water where disease-carrying mosquitoes breed. Eliminating standing water is the most significant countermeasure against infection of the above diseases, as it prevents mosquitoes from breeding.



## Anti Zika and Dengue Prevent Mosquito Breeding

Drain water to 1 mm

### HSR



Can pump water as shallow as 5 mm from the bottom of the pump and drain water to 1 mm in depth.

### FAMILY

option

\* excluding automatic model



Attaching the optional residue adapter to the pump casing allows draining to 1 mm in depth.

Drain water to 1 mm, prevent reverse-flow

### LSC



Can drain water to 1 mm in depth. A valve seat and swing check valve prevent suctioned water from backflowing.

Portable suction attachment, prevent reverse-flow

### LSP



Can pump pooled water from shallow recesses using the suction attachment.  
A syphon breaker mechanism prevents backflowing and the seal water from draining out.

## Options

### Seawater-Resistant Version

Tsurumi's pumps can be combined with a seawater-resistant kit (optional) that adds a "galvanic anode" and "seawater-resistant special cast iron impeller," and enables about two years of service. (The service period depends on operating conditions.)



### High Temperature Liquids Version

Tsurumi's pumps are applicable to high temperature liquids of up to 80°C. Pumps of the standard specification can discharge liquids of up to 40°C. However, there are many fields that need to discharge higher temperature liquids, e.g., discharging industrial water from a power plant or ironworks, or discharging hot spring water from a mine in a volcanic zone.

### Corrosion-Resistant Version

Tsurumi's pumps can be fabricated with all fluid-contacting parts made of 316 stainless steel, including the impeller, pump casing, motor frame, outer cover, strainer stand, and flange/hose coupling.



### High Voltage Version

Tsurumi's pumps can be manufactured to between 380 - 1000 V ratings that are often required for mining applications.

The pumps meet mining safety standards as they come with screened cables and motors with built-in diodes for ground-fault checks.



Seawater-Resistant Pumps Web



We reserve the right to change the specifications and designs without prior notice. The OO series and model OO are indicated with our series/model codes in this catalog.

**TSURUMI  
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