Submersible Sump Pump Series

For drainage of wastewater, sewage, facilities and construction equipment.

- High-efficiency non-clog impeller
- Reinforced plastic
- Stainless steel
- Vortex with cutter

Patent pending

Ver.2.5
# Kawamoto’s Submersible Sump Pump Series

**Specification table by model (liquid temperature: 0 to 40°C, pH 5 to 9)**

## For Wastewater, 2 poles

**WUO3-G type**
- Reinforced plastic
- Motor: 2-pole drysealed motor
- Materials: Casing: Plastic
- Impeller: Plastic
- Shaft: SUS304
- Bore: 50mm
- Output: 0.25 - 2.2kW

**WUO3-L type**
- Reinforced plastic
- Motor: 2-pole drysealed motor
- Materials: Casing: Cast iron
- Impeller: Plastic
- Shaft: SUS304
- Bore: 50mm
- Output: 0.25 - 2.2kW

## For Wastewater, 4 poles

**WUP3-G type**
- Stainless steel
- Motor: 4-pole drysealed motor
- Materials: Casing: Stainless steel
- Impeller: Plastic
- Shaft: SUS304
- Bore: 65, 80mm
- Output: 1.5 - 3.7kW

**SU4 type**
- Stainless steel
- Motor: 4-pole drysealed motor
- Materials: Casing: Stainless steel
- Impeller: Stainless steel
- Shaft: SUS304
- Bore: 65, 80mm
- Output: 1.5 - 3.7kW

## For Sewage, 2 poles

**WUZ2/3-G type**
- Stainless steel
- Motor: 2-pole drysealed motor
- Materials: Casing: Stainless steel
- Impeller: Plastic
- Shaft: Titanium
- Bore: 32 - 80mm
- Output: 0.25 - 0.75kW

**YUK2 type**
- Stainless steel
- Motor: 2-pole drysealed motor
- Materials: Casing: Stainless steel
- Impeller: Plastic
- Shaft: Titanium
- Bore: 32 - 80mm
- Output: 0.25 - 0.75kW

## For Sewage, 4 poles

**AU4 type**
- Stainless steel
- Motor: 4-pole drysealed motor
- Materials: Casing: Cast iron
- Impeller: Cast iron
- Shaft: SUS420J2
- Bore: 50 - 150mm
- Output: 0.75 - 22kW

**VU4 type**
- Stainless steel
- Motor: 4-pole drysealed motor
- Materials: Casing: Cast iron
- Impeller: Cast iron
- Shaft: SUS420J2
- Bore: 50 - 150mm
- Output: 0.75 - 22kW

## For Manholes, 4 poles

**BUM type**
- Stainless steel
- Motor: 4-pole drysealed motor
- Materials: Casing: Stainless steel
- Impeller: Stainless steel
- Shaft: SUS420J2
- Bore: 50 - 150mm
- Output: 0.4 - 7.5kW

**VUM type**
- Stainless steel
- Motor: 4-pole drysealed motor
- Materials: Casing: Stainless steel
- Impeller: Stainless steel
- Shaft: SUS420J2
- Bore: 50 - 150mm
- Output: 0.4 - 7.5kW

## For Construction works / For Residual water drainage

**DUG2/DU4/DUM2 type**
- Stainless steel
- Motor: 4-pole drysealed motor
- Materials: Casing: Cast iron
- Impeller: Stainless steel
- Shaft: SUS420J2
- Bore: 40, 50mm
- Output: 0.25 - 2.2kW

**LU2 type**
- Stainless steel
- Motor: 4-pole drysealed motor
- Materials: Casing: Stainless steel
- Impeller: Plastic
- Shaft: SUS420J2
- Bore: 50mm
- Output: 0.4kW

---

**Adjustable float position**

**Vortex**
- For Sewage

**Non-clog**
- For Sewage

**High efficiency**
- For Sewage

**Rust resistant**
- For Sewage

**Motor**
- Stainless steel frame
- 2-pole drysealed motor

**Casing**
- Plastic

**Impeller**
- Plastic

**Shaft**
- SUS304

**Bore**
- 32, 40, 50mm

**Output**
- 0.15 - 0.75kW

---

**Motor**
- Titanium frame
- 2-pole drysealed motor

**Casing**
- Plastic

**Impeller**
- Plastic

**Shaft**
- Titanium

**Bore**
- 32 - 80mm

**Output**
- 0.15 - 3.7kW

---

**Motor**
- Stainless steel frame
- 2-pole drysealed motor

**Casing**
- Plastic

**Impeller**
- Plastic

**Shaft**
- SUS304

**Bore**
- 40 - 80mm

**Output**
- 0.15 - 3.7kW

---

**Motor**
- Stainless steel frame
- 2-pole drysealed motor

**Casing**
- Plastic

**Impeller**
- Plastic

**Shaft**
- SUS304

**Bore**
- 40 - 80mm

**Output**
- 0.15 - 3.7kW

---

**Motor**
- Stainless steel frame
- 2-pole drysealed motor

**Casing**
- SCS13

**Impeller**
- SCS13

**Shaft**
- SUS304

**Bore**
- 40 - 80mm

**Output**
- 0.15 - 3.7kW

---

**Motor**
- Stainless steel frame
- 2-pole drysealed motor

**Casing**
- SCS13

**Impeller**
- SCS13

**Shaft**
- SUS304

**Motor cover**
- SCS13

**Bell mouth**
- SCS13

**Bore**
- 50 - 100mm

**Output**
- 0.4 - 7.5kW

---

**Motor**
- Stainless steel frame
- 2-pole drysealed motor

**Casing**
- Synthetic rubber + SUS304

**Impeller**
- Urethane rubber

**Shaft**
- SUS403

**Bore**
- 40, 50mm

**Output**
- 0.25 - 2.2kW

---

**Motor**
- Stainless steel frame
- 2-pole drysealed motor

**Casing**
- Synthetic rubber

**Impeller**
- Plastic

**Shaft**
- SUS403

**Bore**
- 50mm

**Output**
- 0.4kW

---

**Motor**
- Stainless steel frame
- 2-pole drysealed motor

**Casing**
- Synthetic rubber

**Impeller**
- Plastic

**Shaft**
- SUS403

**Bore**
- 50mm

**Output**
- 0.4kW

---

**Motor**
- Stainless steel frame
- 2-pole drysealed motor

**Casing**
- Synthetic rubber

**Impeller**
- Plastic

**Shaft**
- SUS403

**Bore**
- 50mm

**Output**
- 0.4kW

---

**Motor**
- Stainless steel frame
- 2-pole drysealed motor

**Casing**
- Synthetic rubber + SUS304

**Impeller**
- Urethane rubber

**Shaft**
- SUS403

**Bore**
- 40, 50mm

**Output**
- 0.25 - 2.2kW
For drainage of wastewater, septic tank sump, dirty sump and spring water

- Light and easy to handle, due to resinified pump parts and motor with stainless steel frame.
- Corrosion proof and long-life.
- Equipped with a small special motor with built-in auto-cut of a large starting torque to ensure safety.
- Vortex type and excellent performance to pass foreign objects.
- Strainer is quick detachable type for easy cleaning and maintenance.
- Can be paired with plastic pedestal support (special accessory).
- Starting/stopping water levels are adjustable in L and LN types.
- Improved strainer strength (compared to our conventional models).

**Types**
- Non-automatic WUP3-G type
- Automatic WUP3-LG type
- Auto alternate WUP3-LNG type

**Features**
- Ability to pass foreign objects

---

**SU4 type**
For Wastewater, 2 poles

Application
- For drainage of wastewater, septic tank sump, rain water and spring water pump

Features
- Closed impeller made of Bronze provides excellent pumping performance without startup failures due to rusted impellers.
- Equipped with a motor with built-in auto-cut to prevent motor burnout.
- Can be combined with a plastic pedestal support (special accessory).

**Types**
- Non-automatic SU4 type
- Automatic SU4-L type
- Auto alternate SU4-LN type

**Features**
- Ability to pass foreign objects

---

**SU4 type (pedestal support type)**

---
**ZU type**

**Applicable**
For sewage and wastewater with solids

**Features**
1. The S-shaped impellers provides excellent ability to pass foreign objects.
2. The pump is free from forming air pocket behind impeller.
3. Equipped with a motor with built-in auto-cut to prevent motor burnout.
4. ZUJ type is equipped with a pedestal support for easy maintenance and inspection.
5. Some models with output of 3.7kW or less are available with a float switch (automatic, auto alternate built-in).

<table>
<thead>
<tr>
<th>Types</th>
<th>Operation method</th>
<th>Model</th>
<th>Bore (mm)</th>
<th>Diameter of foreign objects (sphere) (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-automatic</td>
<td>ZU3 type, ZU3-L type</td>
<td>ZUJ type</td>
<td>80</td>
<td>40 (for 2.2kW or above)</td>
</tr>
<tr>
<td>Automatic</td>
<td>WUO(3)-G type</td>
<td>ZUJ type</td>
<td>80</td>
<td>40 (for 2.2kW or above)</td>
</tr>
<tr>
<td>Auto alternate</td>
<td>WUO(3)-LN type</td>
<td>ZUJ type</td>
<td>80</td>
<td>40 (for 2.2kW or above)</td>
</tr>
</tbody>
</table>

**Ability to pass foreign objects**

- ZU3 type: 80
- ZU3-L type: 80
- ZUJ type: 80
- ZUJ-L type: 80
- ZUJ-LN type: 80

**BU4 type**

**Applicable**
For discharge of sewage and wastewater

**Features**
1. The closed-type non-clog impeller and our original casing structure provide high pumping performance.
2. Equipped with a motor with built-in auto-cut (7.5kW or less) to prevent motor burnout. Motor with output of 11kW or above can detect abnormal temperature rise of the motor coil as an external signal.
3. Two types available: flange type and pedestal support type for easy maintenance and inspection.
4. Some models with output of 3.7kW or less are available with a float switch (automatic, auto alternate built-in).
5. High pressure model BU4-LN type is also available.

<table>
<thead>
<tr>
<th>Types</th>
<th>Operation method</th>
<th>Model</th>
<th>Bore (mm)</th>
<th>Diameter of foreign objects (sphere) (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-automatic</td>
<td>BU4 type</td>
<td>BU4-L type</td>
<td>80</td>
<td>40 (for 2.2kW or above)</td>
</tr>
<tr>
<td>Automatic</td>
<td>BU4 type</td>
<td>BU4-LN type</td>
<td>80</td>
<td>40 (for 2.2kW or above)</td>
</tr>
<tr>
<td>Auto alternate</td>
<td>BU4 type</td>
<td>BU4-L type</td>
<td>80</td>
<td>40 (for 2.2kW or above)</td>
</tr>
</tbody>
</table>

**Ability to pass foreign objects**

- BU4 type: 80
- BU4-L type: 80
- BU4-LN type: 80
- BU4 type (pedestal support type): 80
Vortex with cutter

AU4 type

For Sewage, 4 poles

Application

- For drainage from sewage tanks, kitchens, and drainage of other sewage and wastewater

Features

1. The ceramic-coated cutter piece helps maintain long service life with excellent performance.
2. Original suction configuration (patented) and casing structure.
3. Equipped with a motor with built-in auto-cut to prevent motor burnout.
4. Two types available: flange type and pedestal support type for easy maintenance and inspection.
5. Some models with output of 3.7kW or less are available with a float switch (automatic, auto alternate built-in).

Types

- AU4 type
- AU4-L type
- AU4-LN type
- AU4 type (pedestal support type)

Ability to pass foreign objects

Non-automatic
- AU4 type
- AU4-L type
- AU4-LN type
- AU4 type (pedestal support type)

Auto alternate
- AU4 type
- AU4-L type
- AU4-LN type
- AU4 type (pedestal support type)

Automatic
- AU4 type
- AU4-L type
- AU4-LN type
- AU4 type (pedestal support type)

Stainless Steel, Vortex type

VUS type

For Sewage, 4 poles

Application

- For discharge of sewage and wastewater from buildings, factories, hospitals, apartments, etc.

Features

1. All stainless steel structure (pump, motor, pedestal support) provides corrosion proof and long life.
2. Excellent ability to pass foreign objects (can discharge spherical solids with a diameter which equals to the bore size and superior pumping performance.
3. Vortex type increases resistant against wearing due to sand etc., and prevents startup failure due to rusted impellers.
4. Equipped with a motor with built-in auto-cut to prevent motor burnout.
5. Two types available: flange type and pedestal support type for easy maintenance and inspection.

Types

- VUS type
- VUS-L type
- VUS-LN type
- VUS type (pedestal support type)

Ability to pass foreign objects

Non-automatic
- VUS type
- VUS-L type
- VUS-LN type
- VUS type (pedestal support type)

Auto alternate
- VUS type
- VUS-L type
- VUS-LN type
- VUS type (pedestal support type)

Automatic
- VUS type
- VUS-L type
- VUS-LN type
- VUS type (pedestal support type)

High-efficiency non-clog impeller

BUM type

For Manholes, 4 poles

Application

- Submersible sump pumps for manholes installed as relay pumps for sewage main piping and sewage treatment facilities such as for sewage relay and drainage of sump from agricultural communities.

Features

1. The ability to pass foreign objects is 100% of the bore size (can discharge spherical solids with a diameter which equals to the bore size).
2. The closed-type, high-efficiency, non-clog impeller (patent pending) and our original casing structure provide high pumping performance with high efficiency.
3. Combination of a prewhirl tank and a pump with bell mouth allows operation up to low residual water level, while discharging suspended particles and suppressing scum and bad smell.
4. Control panel for manhole pumps and necessary parts are also available as special accessories.

Types

- VU4 type
- VU4-L type
- VU4-LN type
- VU4 type (pedestal support type)

Ability to pass foreign objects

Non-automatic
- VU4 type
- VU4-L type
- VU4-LN type
- VU4 type (pedestal support type)

Auto alternate
- VU4 type
- VU4-L type
- VU4-LN type
- VU4 type (pedestal support type)

Automatic
- VU4 type
- VU4-L type
- VU4-LN type
- VU4 type (pedestal support type)
### Operation method

- **Pump/manhole combination table**

<table>
<thead>
<tr>
<th>Type</th>
<th>Material</th>
<th>Features</th>
</tr>
</thead>
<tbody>
<tr>
<td>VUM type</td>
<td>Stainless steel</td>
<td>Stainless steel made vortex type</td>
</tr>
</tbody>
</table>

#### Application

- Pump: Stainless steel made precision casting (SCS) is used in the pump and pedestal support, which gives features of high corrosion proof and durable with long service life.
- **The pump is a vortex type with non-blocking feature, with a 4-pole motor with a large starting torque.**
- **Can discharge spherical solids with a diameter which equals to the bore size.**
- **Combination of a prewhirl tank and a pump with bell mouth allows operation up to low residual water level, while discharging suspended particles and suppressing scum and bad smell.**

#### Standard accessories

- Stainless steel pump, stainless steel bell mouth, stainless steel pedestal support, stainless steel direct coupling straight pipe, stainless steel chain.

#### Ability to pass foreign objects

- 2/3 of the bore space diameter is not blocked.

#### Pump/manhole combination table

<table>
<thead>
<tr>
<th>Type</th>
<th>Material</th>
<th>Features</th>
</tr>
</thead>
<tbody>
<tr>
<td>VUM type</td>
<td>Stainless steel</td>
<td>Stainless steel made vortex type</td>
</tr>
</tbody>
</table>

### Separate sold parts

- **Control panel for ECM2 type manhole pump**
  - Easy installation of pole mounting: (Outdoor specification with lock)
  - Supports thrust-in water level gauges and float switches in standard models.
  - Standard models also support indicators, ammeters, and earth leakage circuit breakers as well as counter of accumulated operation time and total pump head.
  - Equipped with an abnormal water level detector function.
  - Control panels with automatic alarming device are available as a variation. (Standard models have an installation space.)

#### Specifications

<table>
<thead>
<tr>
<th>Description</th>
<th>Alternate</th>
<th>Alternate/Dual</th>
<th>Indicators</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indicators</td>
<td>8 IND.</td>
<td>8 IND.</td>
<td>Operation, start, fault (separate)</td>
</tr>
<tr>
<td>Indicator height</td>
<td>8000 → 15000 (length + width + depth)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Applicable Palmer for installation</td>
<td>304, 316L, 316L, 316L, 316L</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Hose Coupling (bamboo shoot shaped) Plastic

- **Hose Coupling (bamboo shoot shaped) Plastic**
  - **For WUP1 type**

<table>
<thead>
<tr>
<th>Type</th>
<th>Name</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>32</td>
<td>12A Hose coupling</td>
<td></td>
</tr>
<tr>
<td>40</td>
<td>45A Hose coupling</td>
<td></td>
</tr>
<tr>
<td>50</td>
<td>50A Hose coupling</td>
<td></td>
</tr>
</tbody>
</table>

### Special accessories

- **Pedestal Support Plastic**
  - For WUP1 type
  - **For WUP1 type**: WUP1-G, WUP1-D, G, W2Y type

<table>
<thead>
<tr>
<th>Type</th>
<th>Name</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>40</td>
<td>LUP-40-GK</td>
<td>1.7mm or less</td>
</tr>
<tr>
<td>50</td>
<td>LUP-50-GK</td>
<td>1.7mm or less</td>
</tr>
<tr>
<td>65</td>
<td>LUP-65-7K</td>
<td>3.1kW</td>
</tr>
<tr>
<td>80</td>
<td>LUP-80-7K</td>
<td>2.2, 1.7kW</td>
</tr>
</tbody>
</table>

### Stainless Steel Pedestal Support

- **Stainless Steel Pedestal Support**
  - Includes a rope for hanging the pump.

### Dimensions

<table>
<thead>
<tr>
<th>Name</th>
<th>Diameter (mm)</th>
<th>Length (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>UJP-40</td>
<td>40</td>
<td>900</td>
</tr>
<tr>
<td>UJP-65</td>
<td>65</td>
<td>900</td>
</tr>
<tr>
<td>UJP-80</td>
<td>80</td>
<td>900</td>
</tr>
</tbody>
</table>

### Control Panel

- **ECM2-P type**
  - **ECM2-P type (indoor)**
  - **ECM2-P type (outdoor)**

<table>
<thead>
<tr>
<th>Type</th>
<th>Name</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>32</td>
<td>12A</td>
<td></td>
</tr>
<tr>
<td>40</td>
<td>45A</td>
<td></td>
</tr>
<tr>
<td>50</td>
<td>50A</td>
<td></td>
</tr>
</tbody>
</table>

### Float Switch

- **EFS type**
  - Float switch and lock due to foreign objects, no power transmission due to tripped earth leakage breaker, and pump fault are identified and displayed by LED.

### Sump Pump Defect Detector

- **Operational pump**: Submersible sump pump with a float switch for three phase 20kW.
DUG2/DU4/DUM2 type
For Construction

Applications
For general civil engineering and construction works, and drainage from pits, manholes, etc.

Features
① Uses semi-open impeller to avoid clogging by foreign objects.
② Small size and light weight enable easy handling, maintenance and inspection.
③ Equipped with a motor with built-in auto-cut to prevent motor burnout.

LU2 type
For Residual water

Applications
For drainage of bottom water from water receiving tank cleaning and residual water of various pits, pools, etc.

Features
① Residual water sump pump with excellent drainage performance, with the minimum pumping water level in millimeter order. [The minimum pumping water level varies depending on the bottom surface conditions, 1 - 3mm]
② In-pump air separation mechanism prevents air lock and improves re-pumping performance.
③ Uses aluminum frame motor to realize a light and compact design which is easy to carry. (Mass: 8.0kg)
④ Equipped with a small powerful motor with built-in auto-cut to prevent motor burnout.
Submersible Sump Pump Outline Dimensions (The diagrams are for reference only) Please request a delivery specification when planning installation.

**Pedestal support type**

<table>
<thead>
<tr>
<th>Last unit</th>
<th>M</th>
<th>A</th>
<th>Auto alternate -LN</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cast iron</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stainless steel</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Flange type**

<table>
<thead>
<tr>
<th>Last unit</th>
<th>M</th>
<th>A</th>
<th>Auto alternate -LN</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cast iron</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stainless steel</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Model**

<table>
<thead>
<tr>
<th>Model</th>
<th>Bore</th>
<th>Flange type</th>
</tr>
</thead>
<tbody>
<tr>
<td>VU4 type</td>
<td></td>
<td></td>
</tr>
<tr>
<td>VU4-L(N) type</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SU4 type</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SU4-L(N) type</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ZUJ type</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ZUJ-L(N) type</td>
<td></td>
<td></td>
</tr>
<tr>
<td>AU4 type</td>
<td></td>
<td></td>
</tr>
<tr>
<td>AU4-L(N) type</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BU4 type</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BU4-H type</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BU4-L(N) type</td>
<td></td>
<td></td>
</tr>
<tr>
<td>VUS type</td>
<td></td>
<td></td>
</tr>
<tr>
<td>VUS-L(N) type</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Pedestal support type**

<table>
<thead>
<tr>
<th>Last unit</th>
<th>M</th>
<th>A</th>
<th>Auto alternate -LN</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cast iron</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stainless steel</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Model**

<table>
<thead>
<tr>
<th>Model</th>
<th>Bore</th>
<th>Flange type</th>
</tr>
</thead>
<tbody>
<tr>
<td>VU4 type</td>
<td></td>
<td></td>
</tr>
<tr>
<td>VU4-L(N) type</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SU4 type</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SU4-L(N) type</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ZUJ type</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ZUJ-L(N) type</td>
<td></td>
<td></td>
</tr>
<tr>
<td>AU4 type</td>
<td></td>
<td></td>
</tr>
<tr>
<td>AU4-L(N) type</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BU4 type</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BU4-H type</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BU4-L(N) type</td>
<td></td>
<td></td>
</tr>
<tr>
<td>VUS type</td>
<td></td>
<td></td>
</tr>
<tr>
<td>VUS-L(N) type</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Pedestal support type**

<table>
<thead>
<tr>
<th>Last unit</th>
<th>M</th>
<th>A</th>
<th>Auto alternate -LN</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cast iron</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stainless steel</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Model**

<table>
<thead>
<tr>
<th>Model</th>
<th>Bore</th>
<th>Flange type</th>
</tr>
</thead>
<tbody>
<tr>
<td>VU4 type</td>
<td></td>
<td></td>
</tr>
<tr>
<td>VU4-L(N) type</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SU4 type</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SU4-L(N) type</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ZUJ type</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ZUJ-L(N) type</td>
<td></td>
<td></td>
</tr>
<tr>
<td>AU4 type</td>
<td></td>
<td></td>
</tr>
<tr>
<td>AU4-L(N) type</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BU4 type</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BU4-H type</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BU4-L(N) type</td>
<td></td>
<td></td>
</tr>
<tr>
<td>VUS type</td>
<td></td>
<td></td>
</tr>
<tr>
<td>VUS-L(N) type</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Important Safety Precautions

- Matters falling under the following may not be covered by the warranty: uses out of the specified scope of application, failure to comply with precautions, improper repairs and alterations, matters arising from natural disasters, matters arising from the installation environment (improper power source, foreign objects, sand etc.), non-compliance with laws and regulations or standards pertaining thereto, accidental or intentional damage or injury, replacement of consumable parts, defects due to resale, etc.
- Do not use the product for applications out of the product specifications. Doing so may cause electric shock, fire, water leakage, etc.
- Have spare equipment ready when using pumps for equipment for living things (fish farms, fish tanks, aquariums, etc.) or critical equipment.
- Pump failure may cause lack of oxygen and water quality deterioration, and may affect the lives of the living things. When using pumps for equipment for living things (fish farms, fish tanks, aquariums, etc.), do not install the pump in the tank where the living things are put into. The current leakage or sealing liquid leak from the mechanical seal may cause the death of the living things.
- If used to transport food-related items, give due consideration to the materials used. Contamination by foreign objects may occur.
- Avoid using for living things which disagrees with copper alloy. It may affect the lives of the living things.
- Select a product which is appropriate for your application. Inappropriate use of products may cause accidents.
- Conduct construction in accordance with the applicable laws and regulations (the Technical Standards of Electric Installation, interior wiring regulation, Building Standards Act, Water Supply Law, etc.). Not only does it violate the laws and regulations, but it also may cause injuries due to electric shock, fire, falling and tipping over.
- Do not use in places where people are assumed to get in contact with the product (baths, pools, lakes, etc.). Electric leak may occur and cause electric shock.
- Depending on the equipment, attach a filter etc. appropriate for your application on the discharge side before use, perform thorough flushing to check that there is no contamination. Cutting oil, rubber mold releasing agent, foreign objects etc. from the manufacturing line and cutting oil, foreign objects etc. from the pipeline may contaminate the liquid which is to be handled.
- Do not operate pumps with a specification of 50Hz at 60Hz. It may cause damage due to overpressure or burn damage of motors etc. due to overload. Do not operate pumps with a specification of 60Hz at 50Hz. Pump performance may be reduced.
- Only repair technicians may disassemble, repair, modify the product or replace cables. Defects may cause failure, damage, electrification or fire.
- It is recommended that both periodic and daily inspections be performed in order to ensure that the pump will operate reliably for as long as possible. Failure to perform inspections may lead to pump failure, accidents etc. For periodic inspections, please consult your distributor or our nearest sales office.