Stainless Steel with Poly Amide Fiber Reinforced Resin make NORUS® pumps Lightweight with Exceptional Durability.

Output: 1/5 ~ 3 hp

Model CR
ShinMaywa® philosophy:  
Addressing and giving shape to customers ideas and needs

ShinMaywa® started as Japan’s first aircraft manufacturer in 1918. Based on a long history of technology development and experience, the company expanded its manufacturing field to respond to product demands, from Wastewater Treatment Equipment to Special Purpose Trucks, Industrial Machinery Systems, Parking Equipment, and Environmental Systems. The foundation of our business activities is the philosophy and commitment to giving shape to our customers ideas and needs. We regard all processes --- from product development through to production, sales, and after-sales maintenance --- as part of manufacturing. This creates customer satisfaction, with the concerted effort of the ShinMaywa® Group.

Corporate Profile

<table>
<thead>
<tr>
<th>Corporate Name</th>
<th>ShinMaywa Industries, Ltd.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Employees</td>
<td>3,772 (consolidated)</td>
</tr>
<tr>
<td>(as of Mar. 31, 2006)</td>
<td>1,956 (non-consolidated)</td>
</tr>
</tbody>
</table>

| Office Headquarters   | 1-1, ShinMeiwa-cho, Takarazuka-shi, Hyogo 665-8550, Japan |
| Stock Listed on       | First Section, Tokyo Stock Exchange |
|                       | First Section, Osaka Securities Exchange |

| Founded               | November 5, 1949 |
| Paid-up Capital       | JPYen 15,981,967,991 |
| (as of Mar. 31, 2006) |                             |

Water Treatment Equipment

Water treatment facilities and equipment, including pumps and mixers, are essential for the effective use and conservation of water resources. ShinMaywa® has a variety of water treatment-related products, including highly reliable Submersible Mixers for agitation and water flow generation for sewage treatment, as well as Facility and Plant use Submersible Pumps. We pay special attention to the manufacturing process so that our customers can be assured their equipment will provide a long life of service.

ShinMaywa® has over 50 years experience as a pump manufacturer. ShinMaywa® produces over 50,000 NORUS® pumps per year, with an outstanding reputation for high quality.
One Point Lifting Eye
Provides balanced easy lifting in and out of sumps.

Anti-Creeping Top Bearing
Provides increased protection against bearing creeping in low head applications.

Cast Aluminum Bearing Housing
Provides better heat dissipation and structural integrity.

High Efficiency Motor
Industry leading Class E insulation for long life and low operating cost.

Excellent Corrosion Resistance
304 stainless steel and Poly Amide fiber reinforced resin provides superior corrosion resistance even in hard applications.

Air Filled Motor
Motor is environmentally safe and provides lower average operating temperature.

NEW Seal Extender
Proprietary design cools seal surface more efficiently than standard seal designs.

Air Release Valve
Releases air in the pump chamber preventing air lock.

Impeller To Shaft Connection
A stainless steel shaft and 304 S.S. impeller boss provides a solid reliable connection.

Cable Entry
Anti-wicking design prevents water from entering the motor housing should the cable get damaged.

Thermal Overload
Prevents motor from overheating due to locked rotor or under voltage.

Unique Hardware Design
Implementation of fiberglass with stainless screws provides excellent resistance to vibration and corrosion.

Stator O-Rings
Our new stator o-rings design provides 250% more sealing surface.

NEW Seamless Stator Casing
Seamless design provides less chance for corrosion.

Vortex Impeller Design
Superior solids handling characteristics, especially with fibrous and stringy materials.

Poly Amide Fiber reinforced resin
Ordinary ABS resin

Test Condition: Pump was operated in 600 liters of water containing 120kg of sand.
NORUS® Model Number Composition

Example

Model Type
CR: Submersible Vortex Sewage Pump

Operation Type
Blank: Manual Operation Type
D: Automatic Operation Type

50 CR 2 . 4 D S – 1

Bore
50: 2" (50mm)
80: 3" (80mm)

Poles
2 : 2 Poles

Output
.15: 1/5 hp
.25: 1/3 hp
.4: 1/2 hp
.75: 1 hp
1.5: 2 hp
2.2: 3 hp

Voltage
1: 115V
2: 230V
3: 460V

Phase
S: Single Phase
T: Three Phase

High Pumping Capability With Guide Rail System

NORUS® guide rail system provides for easy removal and maintenance. Anti-flotation design aids in installation.

The base connection utilizes a unique sealing design that minimizes leakage.
CR - Sewage Pumps
Lightweight Submersible Pump

APPLICATIONS
2. Decorative Water Falls and Water Gardens.
3. Continuous Duty Drainage and Dewatering.
5. Water Transfer.

Standard Specifications

<table>
<thead>
<tr>
<th>Applicable Liquid</th>
<th>Liquid Type</th>
<th>Sewage and Wastewater or Water Containing Sludge</th>
</tr>
</thead>
<tbody>
<tr>
<td>Liquid Type</td>
<td>Liquid Temperature</td>
<td>0 ~ 104°F. (40°C)</td>
</tr>
<tr>
<td>Liquid Temperature</td>
<td>Dry-Type Submersible Induction Motor (3,600rpm/60Hz)</td>
<td></td>
</tr>
<tr>
<td>Type</td>
<td>Motor Type</td>
<td>Dry-Type Submersible Induction Motor</td>
</tr>
<tr>
<td>Insulation Class</td>
<td>Three/230V or 460V (1/5 ~ 3hp)</td>
<td></td>
</tr>
<tr>
<td>Phase/Voltage</td>
<td>Condenser-Run</td>
<td>Direct-on-Line</td>
</tr>
<tr>
<td>Starting Method</td>
<td>Discharge Size</td>
<td>2” NPT (50mm) for 1/5 ~ 1hp</td>
</tr>
<tr>
<td>Construction</td>
<td>Impeller</td>
<td>3” NPT (80mm) for 2 ~ 3hp</td>
</tr>
<tr>
<td>Solid Passage Diameter</td>
<td>Vortex</td>
<td></td>
</tr>
<tr>
<td>Shaft Seal</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Impeller</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shaft Seal</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Construction</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Motor</td>
<td>Discharge Size</td>
<td></td>
</tr>
<tr>
<td>Motor</td>
<td>Impeller</td>
<td></td>
</tr>
<tr>
<td>Power Cable</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Material</td>
<td>Pump Shaft</td>
<td></td>
</tr>
<tr>
<td>Pump Shaft</td>
<td>420J2 S.S.</td>
<td></td>
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<tr>
<td>Stator Casing</td>
<td>304 S.S.</td>
<td></td>
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<tr>
<td>Pump Casing</td>
<td>Poly Amide Fiber Reinforced Resin</td>
<td></td>
</tr>
<tr>
<td>Bearing</td>
<td>Upper: Anti-creeping Pre-lubricated Double Shielded</td>
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</tr>
</tbody>
</table>
### NORUS® Model: CR Dimensions

**NPT Dimensions (single phase/115V, three phase/230V)**

<table>
<thead>
<tr>
<th>Pump Model</th>
<th>Con. Type</th>
<th>Bore (inch)</th>
<th>Phase</th>
<th>Output (hp)</th>
<th>Running Amps/Watts</th>
<th>Cap.-Head @ B.E.P. (gpm-ft)</th>
<th>Dimensions (inch)</th>
<th>Weight (lbs.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>50CR2.15S-1</td>
<td>F60</td>
<td>2</td>
<td>1/5</td>
<td>3.0/328</td>
<td>26.42-11.48</td>
<td>14.96 8.11 5.67 5.91</td>
<td>12.99 12.2</td>
<td></td>
</tr>
<tr>
<td>50CR2.25S-1</td>
<td>F50</td>
<td>2</td>
<td>1/3</td>
<td>4.4/414</td>
<td>34.34-15.75</td>
<td>15.51 9.45 6.89 5.91</td>
<td>12.99 15.5</td>
<td></td>
</tr>
<tr>
<td>50CR2.4S-1</td>
<td>F50</td>
<td>2</td>
<td>1/2</td>
<td>5.5/567</td>
<td>42.27-21.0</td>
<td>15.67 9.45 6.89 6.10</td>
<td>13.19 18.1</td>
<td></td>
</tr>
<tr>
<td>50CR2.75S-1</td>
<td>F50</td>
<td>2</td>
<td>1/1</td>
<td>10.0/1088</td>
<td>58.12-29.20</td>
<td>15.67 9.45 6.89 6.10</td>
<td>13.19 21.0</td>
<td></td>
</tr>
</tbody>
</table>

**Guide Rail Dimensions (single phase/115V, three phase/230V)**

<table>
<thead>
<tr>
<th>Pump Model</th>
<th>Con. Type</th>
<th>Bore (inch)</th>
<th>Phase</th>
<th>Output (hp)</th>
<th>Running Amps/Watts</th>
<th>Cap.-Head @ B.E.P. (gpm-ft)</th>
<th>Dimensions (inch)</th>
<th>Weight (lbs.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>50CR2.15S-1</td>
<td>P50RL</td>
<td>2</td>
<td>1/5</td>
<td>3.0/328</td>
<td>26.42-10.82</td>
<td>15.55 17.16 5.67 6.50</td>
<td>13.58 12.2</td>
<td></td>
</tr>
<tr>
<td>50CR2.25S-1</td>
<td>P50RL</td>
<td>2</td>
<td>1/3</td>
<td>4.4/414</td>
<td>34.34-14.11</td>
<td>16.10 18.50 6.89 6.50</td>
<td>13.58 15.5</td>
<td></td>
</tr>
<tr>
<td>50CR2.4S-1</td>
<td>P50RL</td>
<td>2</td>
<td>1/2</td>
<td>5.5/567</td>
<td>42.27-19.68</td>
<td>16.10 18.50 6.89 6.50</td>
<td>13.58 18.1</td>
<td></td>
</tr>
<tr>
<td>50CR2.75S-1</td>
<td>P50RL</td>
<td>2</td>
<td>1</td>
<td>10.0/1088</td>
<td>58.12-26.90</td>
<td>16.10 18.50 6.89 6.50</td>
<td>13.58 21.0</td>
<td></td>
</tr>
</tbody>
</table>

---

### Model: CR Dimensions (inch)

#### (inch)

- **A**
- **B**
- **C**
- **D**
- **E**

#### (lbs.)

- **Manual**
- **Automatic**

---

**Diagram of Model CR Dimensions**

- **NPT Dimensions**
- **Guide Rail Dimensions**

---

**Manual**

- **Automatic**
The dawning of a new pump has begun.

U.S. Distribution Through:
Fielding Pump
8510 S. Sandy Parkway
Sandy, UT 84070
Toll Free: 877-213-3598
Fax: 801-676-4696
sales@fieldingpump.com

Authorized Dealer:

ShinMaywa Industries, Ltd.
Overseas Sales Dept.
Phone: +81-45-584-1321 Fax: +81-45-584-1320
E-mail: overseas@sb.shinmaywa.co.jp
http://www.shinmaywa.co.jp

Specifications and dimensions are subject to change without notice.
Our technologies achieve a customer’s unshaken trust.