We are the authorized distributor and complete solution provider of the World leading Water pumps, Slurry pumps, Vacuum pumps and Air blower. Currently, the company represent GD - Robuschi, GD - Elmo Rietschle, Weir warman, Weir floway, Torishima, SPXflow - Johnson, Orbit, Wilo and Duraflo.

Company mission is to provide total solutions which exceed our customers expectation with excellent services. The company offers wide-range of services such as designing, installation, commissioning and after sales services.

We would like to thank you all of you for your trust in our products and services, we are confident that you will be satisfied with the products and services forever.

**Contact Us**

Tel : +66 (0)2815 - 6879 - 80  Fax : +66 (0)2815 - 7217  
E-mail: pnvmail@pnvpolytech.com  www.pnvpolytech.com  
181/1, 181/2 Moo 1, Soi Bancha, Suksawad Rd, Pakklong Bangplakod, Prasamutjedi, Samutprakarn 10290.
Rotary Lobe Blowers - From Italy

**How to use it**

- **Pressure - Vacuum**
  - **RBS**
  - **ROBOX Evolution**
  - **CRBIO - GRBIO**

**Specifications**

<table>
<thead>
<tr>
<th>Model</th>
<th>RBS</th>
<th>ROBOX Evolution</th>
<th>CRBIO - GRBIO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type</td>
<td>Positive Displacement</td>
<td>Reduce Sound</td>
<td>Blower packages on skid</td>
</tr>
<tr>
<td>Air Blower</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pressure (Max.)</td>
<td>1,000 mbar(g)</td>
<td>1,000 mbar(g)</td>
<td>400 mbar(g)</td>
</tr>
<tr>
<td>Vacuum (Max.)</td>
<td>500 mbar(a)</td>
<td>500 mbar(a)</td>
<td>400 mbar(a)</td>
</tr>
<tr>
<td>Capacity (Max.)</td>
<td>25,000 m³/hr</td>
<td>10,400 m³/hr</td>
<td>3,850 m³/hr</td>
</tr>
<tr>
<td>Discharge size</td>
<td>50 - 500 mm</td>
<td>50 - 300 mm</td>
<td>50 - 200 mm</td>
</tr>
<tr>
<td>Material</td>
<td>Cast iron, Stainless steel and Cast iron chemical coating</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Qualification</td>
<td>Robuschi provides premium rotary lobe blowers at varying pressures above atmospheric up to 1,000 mbar(g) and for vacuum duties up to 100 mbar(a) along with maximum air flow of 25,000 m³/hr. The large number of models, sizes, options, configurations available provides solutions for most industrial applications.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Low Pressure Screw Compressors - From Italy

**How to use it**

- **Pressure - Vacuum**
  - **RSW**
  - **ROBOX Screw Low - High Pressure**
  - **ROBOX Screw Vacuum**
  - **ROBOX energy**

**Specifications**

<table>
<thead>
<tr>
<th>Model</th>
<th>RSW</th>
<th>ROBOX Screw Low - High Pressure</th>
<th>ROBOX Screw Vacuum</th>
<th>ROBOX energy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type</td>
<td>Low pressure</td>
<td>Highly efficient</td>
<td>Highly efficient</td>
<td>Highly efficient</td>
</tr>
<tr>
<td>Oil-free screw</td>
<td>oil-free screw</td>
<td>compressor unit</td>
<td>compressor unit</td>
<td>screw compressor unit</td>
</tr>
<tr>
<td>Compressor</td>
<td>compressor</td>
<td>in vacuum operation</td>
<td>permanent magnet motor</td>
<td></td>
</tr>
<tr>
<td>Pressure (Max.)</td>
<td>2,500 mbar(g)</td>
<td>1,000 - 2,500 mbar(g)</td>
<td>N/A</td>
<td>1,000 mbar(g)</td>
</tr>
<tr>
<td>Vacuum (Max.)</td>
<td>N/A</td>
<td>N/A</td>
<td>300 mbar(a)</td>
<td>N/A</td>
</tr>
<tr>
<td>Capacity (Max.)</td>
<td>12,500 m³/hr</td>
<td>10,500 m³/hr</td>
<td>8,700 m³/hr</td>
<td>4,200 m³/hr</td>
</tr>
<tr>
<td>Discharge size</td>
<td>100 - 300 mm</td>
<td>100 - 300 mm</td>
<td>100 - 300 mm</td>
<td>100 - 200 mm</td>
</tr>
<tr>
<td>Material</td>
<td>Cast iron and Cast steel</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Qualification</td>
<td>Robuschi's latest product innovation is the Low Pressure Screw Compressor range, available in high pressure up to 2,500 mbar(g), low pressure up to 1,000 mbar(g) and vacuum up to 300 mbar(a) configurations with a maximum air flow of 10,500 m³/hr. The ROBOX energy RSW &quot;core&quot; (patent) with the innovative motor with Permanent Magnets and integrated electrical panel, offering maximum efficiency, compactness, simple maintenance.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
**Rotary Lobe Blowers - From Italy**

**Vacuum**

**RB - DV**  
**TRB - DV**

- **MODEL**: RB-DV, TRB-DV  
- **Type**: Vacuum PD Blower, Vacuum PD Blower Compact  
- **Vacuum (Max.)**: 100 mbar(a), 100 mbar(a)  
- **Capacity (Max.)**: 10,500 m³/hr, 550 - 1,000 m³/hr  
- **Discharge size**: 80 - 300 mm, 80 - 300 mm  
- **Material**: Cast iron  
- **Qualification**: RB-DV series of rotary three lobe PD blowers can operate at high vacuum levels thanks to a Robuschi patented device that injects atmospheric air. TRB-DV are completely assembled compact group sets with noise enclosure developed for vacuum truck handling wet and/or dry waste. It is possible to install this group with up to 5° degree tilt. Power take off connection can be made by either hydraulic motor and or V- belt transmission.

**Pressure-Vacuum**

**RBS/AV**  
**BIOGAS (Blower package)**  
**CRBS - GRBS**

- **MODEL**: RBS/AV, BIOGAS, CRBS-GRBS  
- **Type**: High Vacuum Blowers, Complete Set Havy  
- **Pressure (Max.)**: N/A, 1,000 mbar(g), 1,000 mbar(g)  
- **Vacuum (Max.)**: 0.001 mbar(a), 1,000 mbar(g)  
- **Capacity (Max.)**: 9,400 m³/hr, 2,850 m³/hr, 25,000 m³/hr  
- **Discharge size**: 80 - 200 mm, 50 - 200 m, 300 - 500 mm  
- **Material**: Cast iron, Stainless steel and Cast iron chemical coating  
- **Qualification**: Robuschi provides premium rotary lobe blowers at varying pressures above atmospheric up to 1,000 mbar(g) and for vacuum duties up to 100 mbar(a) along with maximum air flow of 25,000 m³/hr. The large number of models, sizes, options, configurations available provides solutions for most industrial applications.
**Chemical Process Pump (PROCHEM) [UNI EN 22858 STANDARD] - From Italy**

- **MODEL**: RACN-RACNS, RCN-RCNS, RKC-RKCS, RCPN-RCPNS
- **Head (Max.)**: 
  - RACN-RACNS: 80 m
  - RCN-RCNS: 75 m
  - RKCS-RKCS: 75 m
- **Temp (Max.)**: 
  - RACN-RACNS: 170 °C
  - RCN-RCNS: 170 °C
  - RKCS-RKCS: 170 °C
- **Capacity (Max.)**: 
  - RACN-RACNS: 2,000 m³/hr
  - RCN-RCNS: 1,000 m³/hr
  - RKCS-RKCS: 700 m³/hr
- **Discharge size**: 
  - RACN-RACNS: 80 - 300 mm
  - RCN-RCNS: 65 - 200 mm
  - RKCS-RKCS: 65 - 200 mm
- **Material**: Cast iron, Stainless Steel
- **Qualification**: The PROMIX pumps are single stage horizontal centrifugal pumps with axial inlet, designed to pump all types of chemically inert or aggressive liquid, also viscos liquid, and those containing high percentage of solid particles in suspension, and slurry.
  - **RACN-RACNS**: centrifugal pumps with open channel impeller.
  - **RCN-RCNS**: centrifugal pumps with closed impellers with Semi opened axial inlet.
  - **RKCS-RKCS**: with open type installed in recessed position.

**Process Pump For Slurry Application (PROMIX) - From Italy**

- **MODEL**: RN-RNS, RKNS, E-Liquids
- **Type**: High fluid dynamics, Centrifugal, Heavy duty solution, Centrifugal pumps, centrifugal pumps with Semi opened axial inlet.
- **Head (Max.)**: 
  - RN-RNS: 140 m
  - RKNS: 60 m
  - E-Liquids: 95 m
- **Temp (Max.)**: 
  - RN-RNS: 280 °C
  - RKNS: 280 °C
  - E-Liquids: 90 °C
- **Capacity (Max.)**: 
  - RN-RNS: 2,600 m³/hr
  - RKNS: 110 m³/hr
  - E-Liquids: 110 m³/hr
- **Discharge size**: 
  - RN-RNS: 32 - 300 mm
  - RKNS: 32 - 50 mm
  - E-Liquids: 32 - 2000 mm
- **Material**: Cast iron, 304 Stainless steel, 316 Stainless steel
- **Qualification**: The PROCHEM pumps are single stage horizontal centrifugal pumps with axial inlet, designed in conformity with UNI EN 22858 standards.
  - **RN-RNS**: innovative components assure an high fluid dynamics efficiency.
  - **RKNS (Non clogging)**: Heavy duty solution for suspended crystals, muddy and/or viscous liquids.
  - **E**: pumps are single-stage horizontal centrifugal pumps for clear water pumping.
### Liquid Ring Vacuum Pumps - From Italy

**Pressure-Vacuum**

<table>
<thead>
<tr>
<th>MODEL</th>
<th>RVS</th>
<th>ORVS</th>
<th>LRVS - CRVS</th>
<th>KRVS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type</td>
<td>Water Recirculation</td>
<td>Oil Recirculation</td>
<td>Water Recirculation</td>
<td>Water Recirculation</td>
</tr>
<tr>
<td>Pressure (Max.)</td>
<td>2,000 mbar(g)</td>
<td>N/A</td>
<td>2,000 mbar(g)</td>
<td>2,000 mbar(g)</td>
</tr>
<tr>
<td>Vacuum (Max.)</td>
<td>33 mbar(a)</td>
<td>10 mbar(a)</td>
<td>33 mbar(a)</td>
<td>33 mbar(a)</td>
</tr>
<tr>
<td>Capacity (Max.)</td>
<td>4,200 m³/hr</td>
<td>800 m³/hr</td>
<td>4,200 m³/hr</td>
<td>4,200 m³/hr</td>
</tr>
<tr>
<td>Discharge size</td>
<td>25 - 200 mm</td>
<td>25 - 100 mm</td>
<td>100 - 200 mm</td>
<td>40 - 200 mm</td>
</tr>
<tr>
<td>Material</td>
<td>Cast iron, Stainless Steel, Bronze</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Qualification</td>
<td>Elmo Rietschle, are a recognized leader providing compressed air and gas, vacuum and fluid technologies to industries throughout the world. Offering an outstanding range of side channel blowers, dry running and oil lubricated rotary vane vacuum pumps and compressors, screw vacuum pumps and claw vacuum pumps and compressors.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Screw Vacuum Pumps - From Germany

<table>
<thead>
<tr>
<th>Model :</th>
<th>Side Channel</th>
<th>Rotary Vane</th>
<th>Claw</th>
<th>Screw</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type :</td>
<td>Pressure &amp; Vacuum</td>
<td>Pressure &amp; Vacuum</td>
<td>Pressure &amp; Vacuum</td>
<td>Vacuum</td>
</tr>
<tr>
<td>Capacity (Max.)</td>
<td>2,500 m³/hr</td>
<td>1,500 m³/hr</td>
<td>1,000 m³/hr</td>
<td>720 m³/hr</td>
</tr>
<tr>
<td>Pressure (Max.)</td>
<td>1 bar(g)</td>
<td>1.5 bar(g)</td>
<td>2.2 bar(g)</td>
<td>N/A</td>
</tr>
<tr>
<td>Vacuum (Max.)</td>
<td>350 mbar(a)</td>
<td>0.1 mbar(a)</td>
<td>50 mbar(a)</td>
<td>0.05 mbar(a)</td>
</tr>
<tr>
<td>Material</td>
<td>Cast iron, Ductile iron, Bronze, Stainless steel</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Special material (Duplex SS., Cast steel, Ni resist, Alloy steel)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Qualification</td>
<td>Elmo Rietschle, are a recognized leader providing compressed air and gas, vacuum and fluid technologies to industries throughout the world. Offering an outstanding range of side channel blowers, dry running and oil lubricated rotary vane vacuum pumps and compressors, screw vacuum pumps and claw vacuum pumps and compressors.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### End Suction Centrifugal Pumps, Double Suction - From Japan

<table>
<thead>
<tr>
<th>Model</th>
<th>CAL, CAR</th>
<th>CAM, CAS</th>
<th>CPC</th>
<th>CDM, CDMV</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Model</strong></td>
<td>CAL, CAR</td>
<td>CAM, CAS</td>
<td>CPC</td>
<td>CDM, CDMV</td>
</tr>
<tr>
<td><strong>Application</strong></td>
<td>Energy saving</td>
<td>High head</td>
<td>Chemical &amp; Petrochemical industries</td>
<td>High capacity for general industries</td>
</tr>
<tr>
<td><strong>Head (Max.)</strong></td>
<td>100 m</td>
<td>160 m</td>
<td>150 m</td>
<td>300 m</td>
</tr>
<tr>
<td><strong>Temp (Max.)</strong></td>
<td>-80 to 100°C</td>
<td>-80 to 100°C</td>
<td>Up to 200°C</td>
<td>Up to 80°C</td>
</tr>
<tr>
<td><strong>Capacity (Max.)</strong></td>
<td>600 m³/hr</td>
<td>600 m³/hr</td>
<td>1,500 m³/hr</td>
<td>33,000 m³/hr</td>
</tr>
<tr>
<td><strong>Discharge Size</strong></td>
<td>32 - 200 mm</td>
<td>32 - 200 mm</td>
<td>32 - 250 mm</td>
<td>200 - 1,400 mm</td>
</tr>
<tr>
<td><strong>Material Casing</strong></td>
<td>Cast iron, 304 Stainless steel, 316 Stainless steel</td>
<td>Cast iron, Bronze, 304 Stainless steel, 316 Stainless steel</td>
<td>Stainless steel, Duplex Stainless steel</td>
<td></td>
</tr>
<tr>
<td><strong>Impeller</strong></td>
<td>Cast iron, Bronze, 304 Stainless steel, 316 Stainless steel</td>
<td>Cast iron, Bronze, Stainless steel, Duplex SS.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Shaft</strong></td>
<td>Stainless steel, Duplex Stainless steel</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Qualification**

CAL, CAR, CAM, CAS series are high efficiency end-suction volute pump, called Torishima Eco Pump.

CPC is an end-suction volute pump as per ISO 2858-1975, specially applied for chemical and petrochemical industries.

CDM, CDMV is a horizontal split case suitable for seawater desalination plants, power plants, water and wastewater, water transmission and irrigation, etc.

### Large Pump, Multi-stage Pumps - From Japan

<table>
<thead>
<tr>
<th>Model</th>
<th>IS/ISV</th>
<th>SP/SPV</th>
<th>MMK</th>
<th>MMO</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Model</strong></td>
<td>IS/ISV</td>
<td>SP/SPV</td>
<td>MMK, MML</td>
<td>MMO</td>
</tr>
<tr>
<td><strong>Application</strong></td>
<td>Axial-flow</td>
<td>Vertical, mixed-flow</td>
<td>Boiler feed</td>
<td>High pressure</td>
</tr>
<tr>
<td><strong>Head (Max.)</strong></td>
<td>5 m</td>
<td>100 m</td>
<td>500 m</td>
<td>400 m</td>
</tr>
<tr>
<td><strong>Temp (Max.)</strong></td>
<td>40°C</td>
<td>80°C</td>
<td>250°C</td>
<td>110°C</td>
</tr>
<tr>
<td><strong>Capacity (Max.)</strong></td>
<td>186,000 m³/hr</td>
<td>81,600 m³/hr</td>
<td>1,800 m³/hr</td>
<td>130 m³/hr</td>
</tr>
<tr>
<td><strong>Discharge Size</strong></td>
<td>400 - 4,600 mm</td>
<td>300 - 2,800 mm</td>
<td>40 - 350 mm</td>
<td>40 - 800 mm</td>
</tr>
<tr>
<td><strong>Material Casing</strong></td>
<td>Cast iron, Ductile cast iron, Stainless steel, Duplex SS.</td>
<td>Cast iron, Bronze, Stainless steel, Duplex SS.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Impeller</strong></td>
<td>Cast iron, Bronze, Stainless steel, Duplex SS.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Shaft+Sleeve</strong></td>
<td>Cast iron, Bronze, Stainless steel, Duplex SS.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Qualification**

IS/ISV are axial-flow propeller pumps, mainly applied for drainage pumps in case of low head and large capacity condition. SP/SPV is a vertical, mixed-flow pump suitable for a wide range of application, such as seawater intake pumps for desalination, cooling water pumps for power stations, and drainage pumps, etc. MMK, MML, MMO are horizontal, radially splitting section pumps, single flow. The casings are sealed by flat gasket and held together by the bolts. The stage casing and the tie bolts are encased in a steel cladding. The pump feet are arranged either below the pump or at centre line according to the number of stages and the temperature.
**Heavy Duty Slurry Pump - From Australia**

**MODEL** : AH  
**Application** : Mill discharge, Process pumps, Low pressure tailings  
**Pressure(Max.)** : 20.6 bar  
**Temp(Max)** : 280 °C  
**Capacity(Max)** : 18,000 m³/hr  
**Discharge size** : 25 - 1,200 mm  
**Liner Material** : Natural rubber, Synthetic rubber, Chrome, Alloy Etc.  
**Qualification** : - AH® pump provides excellent wear life while maintaining efficiency during the wear cycle providing the best total operating cost.  
- WBH® pump is the world’s new standard for heavy duty.

**MODEL** : WBH  
**Application** : Mill discharge, Process pumps, Low pressure tailing  
**Pressure(Max.)** : 20.6 bar  
**Temp(Max)** : 100°C  
**Capacity(Max)** : 3,000 m³/hr  
**Discharge size** : 25 - 300 mm

**Axial Flow Pump, Slurry Pump - From Nederland, Australia**

**MODEL** : Q-Series  
**Application** : Salt & potash, Pulp & paper, Chemicals, Metals and mining, Slurry Pump  
**Pressure(Max.)** : 69 bar  
**Temp(Max)** : 200 °C  
**Capacity(Max)** : 7,000 m³/hr  
**Discharge size** : 700 - 2000 mm  
**Liner Material** : Cast iron, Carbon steel Austenitic, Duplex or 6Mo ss., Nickel, Nickel-copper, Nickel-chrome, moly alloys, Titanium  
**Qualification** : - Q-Series Axial Flow Pumps model QCL model is a horizontal elbow design in fabricated construction with separate pump casing. The pump is designed for continuous circulation of fluids.  
- XU unlined pump is easy to maintain and offers the lowest cost of ownership in its class.  
- TC/C pump is an uncased design available in erosion resistant materials designed specifically for non-clog and gentle pumping applications.
### Vertical Turbine Pump for AWWA, API - 610 & UL/FM Fire Pump - From USA.

<table>
<thead>
<tr>
<th>MODEL</th>
<th>Capacity (Max.)</th>
<th>Temp.</th>
<th>Pressure (Max.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>VC</td>
<td>7,950 m³/hr</td>
<td>-145 to 450 °C</td>
<td>207 bar</td>
</tr>
<tr>
<td>Low-lift</td>
<td>7,950 m³/hr</td>
<td>N/A</td>
<td>2.41 bar</td>
</tr>
<tr>
<td>A&amp;AF</td>
<td>1,140 m³/hr</td>
<td>N/A</td>
<td>20.7 bar</td>
</tr>
<tr>
<td>VF&amp;F FR</td>
<td>7,950 m³/hr</td>
<td>-145 to 450 °C</td>
<td>103 bar</td>
</tr>
<tr>
<td>F&amp;FR</td>
<td>8,000 m³/hr</td>
<td>-145 to 450 °C</td>
<td>103 bar</td>
</tr>
<tr>
<td>VU</td>
<td>8,000 m³/hr</td>
<td>N/A</td>
<td>13.8 bar</td>
</tr>
</tbody>
</table>

**Typical options of construction**
- Semi-open or enclosed impellers.
- Bowl and impeller wear rings.
- Thrust balanced impellers (Reduced downthrust on motor bearings)
- Flanged or threaded column pipe.
- Product lubricated, water flush or oil lubricated shafting.

### Heavy Duty Slurry Pump - From Australia

<table>
<thead>
<tr>
<th>MODEL</th>
<th>Capacity (Max.)</th>
<th>Temp.</th>
<th>Pressure (Max.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>VC</td>
<td>7,950 m³/hr</td>
<td>145 to 450 °C</td>
<td>207 bar</td>
</tr>
<tr>
<td>Low-lift</td>
<td>7,950 m³/hr</td>
<td>N/A</td>
<td>2.41 bar</td>
</tr>
<tr>
<td>A&amp;AF</td>
<td>1,140 m³/hr</td>
<td>N/A</td>
<td>20.7 bar</td>
</tr>
<tr>
<td>VF&amp;F FR</td>
<td>7,950 m³/hr</td>
<td>-145 to 450 °C</td>
<td>103 bar</td>
</tr>
<tr>
<td>F&amp;FR</td>
<td>8,000 m³/hr</td>
<td>-145 to 450 °C</td>
<td>103 bar</td>
</tr>
<tr>
<td>VU</td>
<td>8,000 m³/hr</td>
<td>N/A</td>
<td>13.8 bar</td>
</tr>
</tbody>
</table>

**Typical options of construction**
- Semi-open or enclosed impellers.
- Bowl and impeller wear rings.
- Thrust balanced impellers (Reduced downthrust on motor bearings)
- Flanged or threaded column pipe.
- Product lubricated, water flush or oil lubricated shafting.
MODEL : Portable and Fixed Mount
The Enhanced Classic Line (ECL) are fixed mount and portable mixers that offer the highest performance and quality, giving our customers an even stronger and more versatile product.

MODEL : A310/A510
Applications
• Varying tip chord angle allows for further optimization of mixer selection
• Maximizes flow generation while minimizing fluid shear
• The A310 is standard for all Lightnin gear drive portable mixers

MODEL : Series 10
Durable, versatile, cost-effective, the field proven series 10 unit was designed with minimal maintenance in mind. The largest taper roller bearings in a mixer of this class help produce a B10 life of 100,000 hrs. or greater, the integrated “drywell” and casing design eliminate the risk of oil leakage over the tank or into the product.

MODEL : A220/A315
Applications
• High efficiency wide bladed impeller design with high flow/power ratio
• Has also been successfully used for gas handling applications
• Operates at lower torque than a conventional radial flow impeller, thus reducing capital costs

MODEL : A130
Applications
• Half pipe shaped blades improves gas handling over R100 impeller while reducing torque requirements by up to 40%
• Radial design provides shear to achieve good contacting for liquid-liquid and gas-liquid dispersions and emulsions

MODEL : ISOGate Valve & Cavex Hydrocyclone

- ISOGate Valve
- Cavex Hydrocyclone
- ISOGate® AutoBall
- WS knife gate valves
- Isogate® MP CB, OB
- Isogate® MP OB
- Isogate® AutoBall
- ISOGate® MP OB

Application:
• On/Off Isolation of low pressure slurry to 10 bar, Cyclone Feed, Flotation, Thickener, Underflow.

Pressure (Max.):
- 10.3 bar
- 10.3 bar
- 10.3 bar
- 0.25 bar

Temp (Max.):
- 120°C
- 120°C
- 80°C
- 80°C

Size:
- 50 - 600 mm
- 15 - 600 mm
- 80 - 600 mm
- 40 - 1,200 mm

Material:
- Ductile iron
- Mild Steel
- Mild Steel
- Metal rubber lined

MODEL : Series 70 / 80
The workhorse of the Lightnin mixer drive range with over 40,000 placed in service since its introduction in 1970, the 70 series mechanical design technology is the industry’s most proven agitator drive technology.
**Centrifugal Pumps : Self-priming, Multistage Pump**

**MODEL :** FreFlow  
**Application :** Horizontal, handles gas and particle content  
**Capacity (Max.) :** 350 m³/hr  
**Head (Max.) :** 80 m  
**Pressure (Max.) :** 9 bar  
**Temp (Max.) :** 95 °C  
**Materials :** Cast iron, Bronze, Stainless steel

**MODEL :** MCH & MCV  
**Application :** Horizontal & Vertical  
**Capacity (Max.) :** 100 m³/hr  
**Head (Max.) :** 340 m  
**Pressure (Max.) :** 40 bar  
**Temp (Max.) :** 150 °C (MCH), 120 °C (MCV)  
**Materials :** Cast iron, Bronze

**MODEL :** MCHZ  
**Application :** Horizontal, Self-priming  
**Capacity (Max.) :** 100 m³/hr  
**Head (Max.) :** 340 m  
**Pressure (Max.) :** 40 bar  
**Temp (Max.) :** 120 °C  
**Materials :** Cast iron

**Positive Displacement Pumps : Flexible Impeller, Rotary Lobe Pump**

**MODEL :** FIP&FB  
**Application :** Self-priming pumps, industry  
**Capacity (Max.) :** 37.5 m³/hr  
**Pressure (Max.) :** 4 bar  
**Temp (Max.) :** 55 °C  
**Materials :** Bronze, Stainless steel, Polished stainless steel

**MODEL :** TopWing  
**Application :** High hygienic bi-wing & multilobe rotors  
**Capacity (Max.) :** 156 m³/hr  
**Pressure (Max.) :** 15 bar  
**Temp (Max.) :** 150 °C (Thermal oil)  
**Viscosity (Max.) :** 80,000 m Pas / cP  
**Materials :** Stainless steel (316L), Duplex

**MODEL :** TopLobe, TopLobePlus  
**Application :** Hygienic tri-lobe rotors  
**Capacity (Max.) :** 125 m³/hr, 124 m³/hr  
**Pressure (Max.) :** 22 bar, 10 bar  
**Temp (Max.) :** 70 °C, 100 °C (Thermal oil)  
**Viscosity (Max.) :** 100,000 m Pas / cP  
**Materials :** Stainless steel (316L), Duplex

**Positive Displacement Pumps : Internal Gear Pumps, self-priming Pump**

**MODEL :** TopGear TG L, TG G  
**Application :** Low viscosity, general purpose heavy duty  
**Capacity (Max.) :** 8 m³/hr, 250 m³/hr  
**Pressure (Max.) :** 30 bar, 16 bar  
**Temp (Max.) :** 250 °C, 300 °C  
**Viscosity (Max.) :** 60,000 m Pas / cP, 80,000 m Pas / cP  
**Materials :** Nodular cast iron, Cast iron

**MODEL :** TopGear TG II  
**Application :** High demanding heavy duty  
**Capacity (Max.) :** 130 m³/hr  
**Pressure (Max.) :** 16 bar  
**Temp (Max.) :** 300 °C  
**Viscosity (Max.) :** 80,000 m Pas / cP  
**Materials :** Stainless steel, Cast steel, Ductile iron

**MODEL :** TopGear MAG  
**Application :** Seal-less, with magnetic drive duty  
**Capacity (Max.) :** 80 m³/hr  
**Pressure (Max.) :** 16 bar  
**Temp (Max.) :** 250 °C  
**Viscosity (Max.) :** 10,000 m Pas / cP  
**Materials (Max.) :** Cast iron, Stainless steel
Centrifugal Pumps: Standardized pumps

- **MODEL**: CombiNorm
  - **Application**: Utility or general purpose pump according to EN 733
  - **Capacity (Max.)**: 1500 m³/hr
  - **Head (Max.)**: 100 m
  - **Pressure (Max.)**: 10 bar
  - **Temp (Max.)**: 200 °C
  - **Materials**: Cast iron, Nodular cast iron, Bronze

- **MODEL**: CombiPro
  - **Application**: Heavy duty process pump according to API 610, 682, 685
  - **Capacity (Max.)**: 350 m³/hr
  - **Head (Max.)**: 160 m
  - **Pressure (Max.)**: 35 bar
  - **Temp (Max.)**: 350 °C
  - **Materials**: Carbon steel, 13% Cr-steel, Stainless steel (316)

- **MODEL**: CombiChem
  - **Application**: Heavy duty chemical pump according to ISO 5199 and EN 22858
  - **Capacity (Max.)**: 800 m³/hr
  - **Head (Max.)**: 160 m
  - **Pressure (Max.)**: 16 bar
  - **Temp (Max.)**: 200 °C
  - **Materials**: Cast iron, Nodular cast iron, Bronze, Stainless steel

- **MODEL**: CombiMag
  - **Application**: Heavy duty seal-less pump according to ISO 5199 and EN 22858
  - **Capacity (Max.)**: 550 m³/hr
  - **Head (Max.)**: 160 m
  - **Pressure (Max.)**: 16 bar
  - **Temp (Max.)**: 300 °C
  - **Materials**: Cast iron, Nodular cast iron, Stainless steel, Duplex, Alloy 20, Hastelloy C

- **MODEL**: CombiBloc
  - **Application**: Compact close-coupled pump
  - **Capacity (Max.)**: 850 m³/hr
  - **Head (Max.)**: 105 m
  - **Pressure (Max.)**: 10 bar
  - **Temp (Max.)**: 120 °C
  - **Materials**: Cast iron, Bronze

- **MODEL**: CombiSump
  - **Application**: Vertical pump with dry motor EN 733, EN 22858 and API 610
  - **Capacity (Max.)**: 1,500 m³/hr
  - **Head (Max.)**: 160 m
  - **Pressure (Max.)**: 16 bar
  - **Temp (Max.)**: 160 °C
  - **Materials**: Cast iron, Nodular cast iron, Bronze, Stainless steel, Carbon steel, 13% Cr-steel

Centrifugal Pumps: Magnetic Drive, InLine Pump

- **MODEL**: CombiMug
  - **Application**: Heavy duty seal-less pump according to ISO 5199 and EN 22858
  - **Capacity (Max.)**: 550 m³/hr
  - **Head (Max.)**: 160 m
  - **Pressure (Max.)**: 16 bar
  - **Temp (Max.)**: 300 °C
  - **Materials**: Cast iron, Nodular cast iron, Stainless steel, Duplex, Alloy 20, Hastelloy C

- **MODEL**: CombiLine, CombiLineBloc
  - **Application**: Close-coupled circulation pump on extended shaft motor
  - **Capacity (Max.)**: 500 m³/hr
  - **Head (Max.)**: 100 m
  - **Pressure (Max.)**: 10 bar
  - **Temp (Max.)**: 140 °C
  - **Materials**: Cast iron, Bronze

- **MODEL**: CombiTherm
  - **Application**: Specially developed for thermal oil (DIN 4754) and hot water applications (ratings and dimensions to EN 733)
  - **Capacity (Max.)**: 400 m³/hr
  - **Head (Max.)**: 160 m
  - **Pressure (Max.)**: 16 bar
  - **Temp (Max.)**: 350°C (Thermal oil)
  - **Materials**: Nodular cast iron

Centrifugal Pumps: Self-priming, Multistage Pump

- **MODEL**: CombiPrime H & V
  - **Application**: Horizontal & Vertical (variable position suction bend), Hydraulics according to EN 733
  - **Capacity (Max.)**: 500 m³/hr [H]
  - **Head (Max.)**: 800 m³/hr [V]
  - **Pressure (Max.)**: 100 m
  - **Temp (Max.)**: 80 °C
  - **Materials**: Cast iron, Bronze

- **MODEL**: CombiBloc
  - **Application**: Compact close-coupled pump
  - **Capacity (Max.)**: 850 m³/hr
  - **Head (Max.)**: 105 m
  - **Pressure (Max.)**: 10 bar
  - **Temp (Max.)**: 120 °C
  - **Materials**: Cast iron, Bronze, Stainless steel
## End Suction Horizontal Pump

<table>
<thead>
<tr>
<th>Model</th>
<th>EH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capacity (Max.)</td>
<td>1,660 m³/hr</td>
</tr>
<tr>
<td>Head (Max.)</td>
<td>150 m</td>
</tr>
<tr>
<td>Temp.</td>
<td>-10 °C - 105 °C</td>
</tr>
<tr>
<td>Discharge size</td>
<td>32 - 300 mm</td>
</tr>
<tr>
<td>Material</td>
<td>Cast iron, Cast steel, 316 Stainless steel, Duplex SS., Ni - Resist</td>
</tr>
<tr>
<td>Qualification</td>
<td>Use in air - condition system, Boiler water supplying, Cool water circulation, Water supplying for pressure - booster, Fire protection sprinkling system, Circulation of industrial water, carry the liquids which is similar to clean water, Manufacturing process area.</td>
</tr>
</tbody>
</table>

## Split Casing Pump

<table>
<thead>
<tr>
<th>Model</th>
<th>SC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capacity (Max.)</td>
<td>12,600 m³/hr</td>
</tr>
<tr>
<td>Head (Max.)</td>
<td>220 m</td>
</tr>
<tr>
<td>Temp.</td>
<td>-10 °C - 105 °C</td>
</tr>
<tr>
<td>Discharge size</td>
<td>80 - 350 mm</td>
</tr>
<tr>
<td>Material</td>
<td>Cast iron, Cast steel, 316 Stainless steel, Duplex SS., Ni - Resist</td>
</tr>
<tr>
<td>Qualification</td>
<td>Waterworks, Irrigation, Drainage pumping stations, Power stations, Industrial water supply systems &amp; fire fighting applications in refineries.</td>
</tr>
</tbody>
</table>

## Self-Priming Centrifugal Pump

<table>
<thead>
<tr>
<th>Model</th>
<th>ST, SU</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capacity (Max.)</td>
<td>1,250 m³/hr</td>
</tr>
<tr>
<td>Head (Max.)</td>
<td>40 m</td>
</tr>
<tr>
<td>Temp.</td>
<td>-10 °C - 105 °C</td>
</tr>
<tr>
<td>Discharge size</td>
<td>50 - 300 mm</td>
</tr>
<tr>
<td>Material</td>
<td>Cast iron, Ductile cast iron, Stainless steel, Duplex SS.</td>
</tr>
<tr>
<td>Qualification</td>
<td>Self-priming pump are designed for rugged and dependable solid handling application. The heavy duty and easy to maintain design provide economical and non clog operation in handling solid-laden liquids and slurries.</td>
</tr>
</tbody>
</table>

## Vertical Multistage Centrifugal Pump

<table>
<thead>
<tr>
<th>Model</th>
<th>VM, VMS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capacity (Max.)</td>
<td>110 m³/hr</td>
</tr>
<tr>
<td>Head (Max.)</td>
<td>300 m</td>
</tr>
<tr>
<td>Temp.</td>
<td>-15 °C - 120 °C</td>
</tr>
<tr>
<td>Discharge size</td>
<td>25 - 100 mm</td>
</tr>
<tr>
<td>Material</td>
<td>Cast iron, Ductile cast iron, Stainless steel, Duplex SS.</td>
</tr>
<tr>
<td>Qualification</td>
<td>VM/VMS is a kind of vertical non-self priming multistage centrifugal pump, which is driven by a standard electric motor. The motor output shaft directly connects with the pump shaft through a coupling. The pressure-resistant cylinder and flow passage components are fixed between pump head and inlet and outlet section with tie-bar bolts. The inlet and outlet are located at the pump bottom as inlined.</td>
</tr>
</tbody>
</table>
**Positive Displacement Helical Rotor Pump - From South Africa**

<table>
<thead>
<tr>
<th>Model</th>
<th>Capacity (Max.)</th>
<th>Head (Max.)</th>
<th>Temp.(Max.)</th>
<th>Discharge size</th>
<th>Material</th>
<th>Qualification</th>
</tr>
</thead>
<tbody>
<tr>
<td>B, D Range</td>
<td>138 m³/hr</td>
<td>40 m</td>
<td>50 °C</td>
<td>50 - 800 mm</td>
<td>Gray cast iron, 316 Stainless steel</td>
<td>Suitable for liquid pumps. Such as wastewater Sludge, sludge in the treatment ponds of viscous Wastewater, etc. Use a variety of materials to be suitable for chemicals, acid, alkali, diesel oil, lubricated oil for no leakage application. Pump seals include Packed gland seal or Mechanical seal.</td>
</tr>
<tr>
<td>Mini Range</td>
<td>210 m³/hr</td>
<td>18 m</td>
<td>105 °C</td>
<td>50 - 1,800 mm</td>
<td>EN8, Tool steel, 316 Stainless steel / HCP*</td>
<td></td>
</tr>
</tbody>
</table>

**Water pumps, Economical price**

<table>
<thead>
<tr>
<th>Model</th>
<th>Type</th>
<th>Capacity (Max.)</th>
<th>Head (Max.)</th>
<th>Temp.(Max.)</th>
<th>Discharge size</th>
<th>Material</th>
<th>Qualification</th>
</tr>
</thead>
<tbody>
<tr>
<td>SK, SW, KN, MFV</td>
<td>Non-clog pump &amp; Mixed flow pump</td>
<td>8,000 m³/hr</td>
<td>70 m</td>
<td>50 °C</td>
<td>50 - 800 mm</td>
<td>Cast iron, Ductile iron, Bronze, Stainless steel</td>
<td>Suitable for pumping Raw water, Wastewater that use for agriculture, industries and general application. For chemical liquid such as Seawater, Acid, Alkali, etc., the pump materials can be selected for the application. Pump seals can be selected as Gland packing seal or Mechanical seal. Pumps also can be driven by Engine.</td>
</tr>
<tr>
<td>RN, HS, PB, FG</td>
<td>Multi-stage pump ISO 2858</td>
<td>1,500 m³/hr</td>
<td>1,400 m</td>
<td>150 °C</td>
<td>25 - 300 mm</td>
<td>Special material (Duplex SS., Cast steel, Ni resist, Alloy steel)</td>
<td></td>
</tr>
<tr>
<td>ST, SN, LE, ME, GST, GSN, GME, SCP</td>
<td>Split casing pump</td>
<td>17,000 m³/hr</td>
<td>250 m</td>
<td>135 °C</td>
<td>50 - 1,200 mm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>VMF, CNE</td>
<td>Vertical turbine pump</td>
<td>25,000 m³/hr</td>
<td>450 m</td>
<td>105 °C</td>
<td>100 - 1,800 mm</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
# AFTER SALES & ENGINEERING SERVICES

- Pump's training service
- Shaft alignment service
- Site test & commissioning work
- Site maintenance service
- Pump installation service
- Site inspection service
- Site maintenance service
- Blower overhauling
- Modify & Fabrication Blower
- Belts tensioning set up
- Pump overhauling
- Electrical testing work
- Pump's inspection Service
- Site test & commissioning service
- Site test & commissioning service
- Pump's installation service

## CUSTOMER REFERENCES

- Electricity Generating Authority Thailand
- Royal Irrigation Department
- Metropolitan Waterworks Authority
- Provincial Waterworks Authority
- IRPC Public Company Limited
- PTT Group
- Thaioil PCL.
- Bangchak Corporation PCL.
- Bridgestone Group(Thailand) Co.,Ltd.
- Mitsubishi Motors(Thailand) Co.,Ltd.
- AutoAlliance(Thailand) Co., Ltd.
- Siam Cement Group (SCG)
- Siam City Cement PCL.
- Asia Cement PCL.
- Rojana Industrial Park PCL.
- Gulf Group
- Betagro Group
- Sun Food International Co.,Ltd
- Charoen Pokphand Group (CP)
- Thai Airways International PCL.
- General Motors (Thailand) Co.,Ltd.
- Double A (1991) PCL.