8K Series Pumps

Stainless Steel Multistage Centrifugal Pumps

Product Quality, Reliability and Support You Expect

www.catpumps.com
8K Multistage Centrifugal Pumps

Designed for long-life and trouble free service, the 8K series is a superior line of multistage centrifugal pumps. Originally engineered for booster, water purification, and hot water applications, many other industries have adopted this product due to its reliable performance.

The 8K series is an industrial grade pump, consisting of 304 or 316 SS hydraulic assemblies constructed with cast stainless steel flanges for maximum installation support. Optional mechanical seal face configurations are available. The 8K also features tungsten carbide lower pump bearings and sleeves – standard construction for all services, providing maximum operating life. Count on the 8K to get the job done.

Features:
• All stainless steel wetted parts (8K, 8CK feature 304SS – 8SK feature 316SS)
• All Viton® elastomers (other materials available for special applications)
• Available with standard NEMA motors
• Air vent located at the top of casing cover prevents air entrapment eliminating run dry conditions during start up
• Dimensions and flanges built to industry standards to allow easy retrofit of existing systems
• Cartridge style mechanical seals on all series. Standard materials are Silicon Carbide/Carbon/Viton®
• Reinforced Impellers and bowls eliminates flexing during operation
• Temperature range -22° F to 248° F

Materials:
• 8K – 304SS
• 8CK – 304SS/Cast Iron
• 8SK – 316 SS

Applications:
• Water Boosting
• Water Supply
• Reverse Osmosis
• Washing Systems
• Boiler Feed
• Fire Misting
• Water Treatment
• Sprinkler Systems
• Heat Exchangers
• Filtration
• Jockey Pump Service
• Circulation Systems

Part Number Breakdown:

Multistage
8K - 304SS
8CK - 304SS/Cast Iron
8SK - 316 SS

Nominal Size

Number of Stages
1 = Single Phase
3 = Three Phase

Mechanical seal type
S - Silicon Carbide/Carbon/FPM®
G - Silicon Carbide+Graphite/Silicon Carbide/FPM
E - Silicon Carbide/Carbon/EPDM
R - Silicon Carbide+Graphite/Silicon Carbide/EPDM
B - Silicon Carbide/Carbon/EPDM (optional balanced seal)
X - Special order seal materials (consult factory)

Piping Connection Type
F - Round ANSI compatible flange
N - Oval flange
L - Loose ANSI compatible flange
V - Victaulic
C - Clamp
D = Open Drip Proof (ODP)
T = Totally Enclosed Fan Cooled (TEFC)

Horsepower
1 = 1/2 HP
2 = 3/4 HP
3 = 1.0 HP
4 = 1.5 HP
5 = 2.0 HP
6 = 3.0 HP
7 = 5.0 HP
8 = 7.5 HP
9 = 10 HP
10 = 15 HP
11 = 20 HP
12 = 25 HP
13 = 30 HP
14 = 40 HP
15 = 50 HP

*NSF/ANSI 61 & 372 certified configuration
Viton® is a registered trademark of DuPont Dow Elastomers.

For more information, contact Cat Pumps at (763) 780-5440 • catpumps.com
Individual Model Selection:

8K1 Series  Page 4  8K20 Series  Page 9
8K3 Series  Page 5  8K32 Series  Page 10
8K5 Series  Page 6  8K45 Series  Page 11
8K10 Series Page 7  8K64 Series  Page 12
8K15 Series Page 8
8K/8SK 5-Series Performance Curves

1.0 HP - 10 HP • Nominal Speed 3500 RPM • 300# ANSI 1-1/4" 4-Bolt

For more information, contact Cat Pumps at (763) 780-5440 • catpumps.com
8K/8SK 10-Series Performance Curves

1.0 HP - 15 HP • Nominal Speed 3500 RPM • 300# ANSI 2” 8-Bolt

For more information, contact Cat Pumps at (763) 780-5440 • catpumps.com
8K/8SK 15-Series Performance Curves

2.0 HP - 25 HP • Nominal Speed 3500 RPM • 300# ANSI 2" 8-Bolt

For more information, contact Cat Pumps at (763) 780-5440 • catpumps.com
8CK/8SK 32-Series Performance Curves

5 HP - 15 HP • Nominal Speed 3450 RPM • 150# ANSI 2-1/2" 4-Bolt
20 HP - 40 HP • Nominal Speed 3450 RPM • 300# ANSI 2-1/2" 8-Bolt

For more information, contact Cat Pumps at (763) 780-5440 • catpumps.com
8CK/8SK 45-Series Performance Curves

7.5 HP - 25 HP • Nominal Speed 3450 RPM • 150# ANSI 3" 4-Bolt
30 HP - 50 HP • Nominal Speed 3450 RPM • 300# ANSI 3" 8-Bolt

For more information, contact Cat Pumps at (763) 780-5440 • catpumps.com
8CK/8SK 64-Series Performance Curves

10 HP - 50 HP • Nominal Speed 3450 RPM • 300# ANSI 4” 8-Bolt

For more information, contact Cat Pumps at (763) 780-5440 • catpumps.com
# Product Specifications

**8 1 - 3 - 5 - 10 - 20K**  
**8S 1 - 3 - 5 - 10 - 20K**

<table>
<thead>
<tr>
<th>Version</th>
<th>8K</th>
<th>8SK</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Nominal size</strong></td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td><strong>Type</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>HP</strong></td>
<td>1/2 to 25 HP</td>
<td></td>
</tr>
<tr>
<td><strong>Capacity</strong></td>
<td>2.9 to 132.1 gpm</td>
<td></td>
</tr>
<tr>
<td><strong>Head</strong></td>
<td>24.3 to 860 ft TDH</td>
<td></td>
</tr>
<tr>
<td><strong>Type of liquid</strong></td>
<td>Clean water (for other clean liquids, consult factory)</td>
<td></td>
</tr>
<tr>
<td><strong>Maximum working pressure</strong></td>
<td>230 / 360 psi (530 / 830 ft TDH)</td>
<td></td>
</tr>
<tr>
<td><strong>Liquid temperature range</strong></td>
<td>-22°F to 248°F (−30°C to 120°C)</td>
<td></td>
</tr>
<tr>
<td><strong>Suction</strong></td>
<td>1 1/4&quot;</td>
<td>2&quot;</td>
</tr>
<tr>
<td><strong>Discharge</strong></td>
<td>1 1/4&quot;</td>
<td>2&quot;</td>
</tr>
</tbody>
</table>

### Performance

- **Impeller**: AISI 304, AISI 316
- **Intermediate casing**: AISI 304, AISI 316
- **Liner ring**: AISI 304, AISI 316
- **Bottom casing**: AISI 304, AISI 316
- **Casing cover**: AISI 304, AISI 316
- **Shaft**: AISI 304, 8S 1-3-5, 10-15-20K (depending on model)  
  - AISI 316L 8S 1-3-5, 10-15-20K (depending on model)  
  - AISI 329A 8S 5-15-20K (depending on model)
- **Shaft sleeve bearing**: Tungsten carbide
- **Shaft seal**: Silicon Carbide / Carbon / FPM
- **O-Ring**: EPDM, FPM
- **Outer casing**: AISI 304, AISI 316L
- **Motor bracket**: Cast iron
- **Tie rod**: Galvanized steel 6.8 strength class ISO 898/1
- **Coupling**: Up to 5 HP Die cast aluminum  
  - From 7 1/2 HP Cast iron
- **Base**: Die cast aluminum

### Pipe Connection

- **Oval flange**: Up to 230 psi
- **Round flange (ANSI compatible)**: Up to 230 psi  
  - From 230 to 360 psi
- **Loose round flange (ANSI compatible)**: Up to 230 psi  
  - From 230 to 360 psi
- **Victaulic**: Up to 230/360 psi
- **Clamp**: Up to 230/360 psi

### Motor

- **Type**: NEMA C/TC/TSC frame, TEFC enclosure
- **Speed**: 2-pole, 60 Hz, 3500 rpm
- **Power Requirements**: 3 Phase, 230/460V or 208-230/460V - Single Phase, 115/230V
- **Direction or rotation**: Clockwise when viewed from motor end
- **Motor options**: Consult factory for optional motor types

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Legend:  ● Standard  ○ Options
## Product Specifications

### 8C - 32 - 45 - 64K

### 8S - 32 - 45 - 64K

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<thead>
<tr>
<th>PUMP</th>
<th>Version</th>
<th>8CK</th>
<th>8SK</th>
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<tbody>
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<tr>
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<td>32</td>
<td>45</td>
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<tr>
<td>HP</td>
<td></td>
<td>5 to 50 HP</td>
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<tr>
<td>Capacity</td>
<td></td>
<td>66 to 390 gpm</td>
<td></td>
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<tr>
<td>Head</td>
<td></td>
<td>44 to 930 ft TDH</td>
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<tr>
<td><strong>Liquid Handling</strong></td>
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<td></td>
<td></td>
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<tr>
<td>Type of liquid</td>
<td>Clean water (for other clean liquids, consult factory)</td>
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<tr>
<td>Maximum working pressure</td>
<td>to 440 psi (30 bar) max</td>
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<td>Liquid temperature range</td>
<td>5°F to 248°F (-15°C to 120°C)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Size</strong></td>
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<td></td>
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</tr>
<tr>
<td>Suction</td>
<td>2 1/2&quot;</td>
<td>3&quot;</td>
<td>4&quot;</td>
</tr>
<tr>
<td>Discharge</td>
<td>2 1/2&quot;</td>
<td>3&quot;</td>
<td>4&quot;</td>
</tr>
<tr>
<td><strong>Materials</strong></td>
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<tr>
<td>Impeller</td>
<td>AISI 304</td>
<td>AISI 316</td>
<td></td>
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<tr>
<td>Intermediate casing</td>
<td>AISI 304</td>
<td>AISI 316</td>
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<tr>
<td>Liner ring</td>
<td>PTFE/AISI 316</td>
<td>PTFE/AISI 316</td>
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<tr>
<td>Bottom casing</td>
<td>Cast iron</td>
<td>AISI 316</td>
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<tr>
<td>Casing cover</td>
<td>Cast iron</td>
<td>AISI 316</td>
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<tr>
<td>Shaft</td>
<td>AISI 316L</td>
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<td></td>
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<tr>
<td>Shaft sleeve bearing</td>
<td>Tungsten carbide</td>
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<tr>
<td>Shaft seal (Mechanical seal)</td>
<td>Silicon Carbide / Carbon / FPM</td>
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<tr>
<td>O-Ring</td>
<td>EPDM</td>
<td>○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○</td>
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<td>FPM</td>
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<td></td>
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<tr>
<td>Outer casing</td>
<td>AISI 304</td>
<td>AISI 316L</td>
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<tr>
<td>Motor bracket</td>
<td>Cast iron</td>
<td>Cast iron/AISI 316</td>
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<tr>
<td>Tie rod</td>
<td>Galvanized steel 6.8 strength class ISO 898/1</td>
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<tr>
<td>Coupling</td>
<td>Upper half</td>
<td>Steel</td>
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</tr>
<tr>
<td>Lower half</td>
<td>Steel</td>
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<tr>
<td>Base</td>
<td>Cast iron</td>
<td>Cast iron/AISI 316</td>
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<td><strong>Pipe connection</strong></td>
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<td>Raised face</td>
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<tr>
<td>Round flange (ANSI compatible)</td>
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<td>○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○</td>
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<tr>
<td><strong>Motor</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Type</td>
<td>NEMA TC/TSC frame, TEFC enclosure</td>
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<td></td>
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<tr>
<td>Speed</td>
<td>2-pole, 60 Hz, 3450 rpm</td>
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<td></td>
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<tr>
<td>Power Requirements</td>
<td>3 Phase, 208-230/460V</td>
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<tr>
<td>Direction or rotation</td>
<td>Clockwise when viewed from motor end</td>
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<tr>
<td>Test Standard</td>
<td>ISO9906 annex A</td>
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</tbody>
</table>

Legend: □ Standard   ○ Options
Additional Centrifugal Pumps

304 Stainless Steel Casing

Centrifugal pumps offer solutions for high-flow, low-pressure industrial pumping needs. Typical fluids pumped include fresh water or liquids with some suspended solids. Below is a sampling of popular centrifugal models that include the pump, seal and motor. Most of the pumps listed are rated at 3450 rpm, but many models are available at 1725 rpm.

**SUBMERSIBLE PUMPS WITH INTEGRAL MOTOR AND SEAL**
45 to 100 gpm (170 to 379 lpm)

<table>
<thead>
<tr>
<th>PUMP MODEL</th>
<th>MAXIMUM FLOW</th>
<th>MAXIMUM PRESSURE</th>
<th>HORSEPOWER</th>
<th>PHASE/VOLTAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>gpm</td>
<td>lpm</td>
<td>psi</td>
<td>bar</td>
</tr>
<tr>
<td>1K100</td>
<td>45</td>
<td>170</td>
<td>10</td>
<td>0.69</td>
</tr>
<tr>
<td>1K201</td>
<td>73</td>
<td>276</td>
<td>17</td>
<td>1.17</td>
</tr>
<tr>
<td>1K203</td>
<td>73</td>
<td>276</td>
<td>17</td>
<td>1.17</td>
</tr>
<tr>
<td>1K205</td>
<td>73</td>
<td>276</td>
<td>17</td>
<td>1.17</td>
</tr>
<tr>
<td>1K301</td>
<td>74</td>
<td>280</td>
<td>21</td>
<td>1.45</td>
</tr>
<tr>
<td>1K303</td>
<td>74</td>
<td>280</td>
<td>21</td>
<td>1.45</td>
</tr>
<tr>
<td>1K305</td>
<td>74</td>
<td>280</td>
<td>21</td>
<td>1.45</td>
</tr>
<tr>
<td>2K102</td>
<td>88</td>
<td>333</td>
<td>9</td>
<td>0.62</td>
</tr>
<tr>
<td>2K103</td>
<td>88</td>
<td>333</td>
<td>9</td>
<td>0.62</td>
</tr>
<tr>
<td>2K200</td>
<td>100</td>
<td>379</td>
<td>11</td>
<td>0.76</td>
</tr>
<tr>
<td>2K202</td>
<td>100</td>
<td>379</td>
<td>11</td>
<td>0.76</td>
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</tbody>
</table>

*Motor side seal is NBR fitted Carbon/Ceramic and impeller side seal is Viton® fitted Silicon Carbide/Silicone Carbide.
**Supplied with automatic float switch
***Manual models, no float switch

**END-SUCTION MOTORIZED UNITS WITH TEFC 56J NEMA MOTOR**
38 to 63 gpm (144 to 238 lpm)

<table>
<thead>
<tr>
<th>PUMP MODEL</th>
<th>MAXIMUM FLOW</th>
<th>MAXIMUM PRESSURE</th>
<th>HORSEPOWER</th>
<th>PHASE/VOLTAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>38</td>
<td>144</td>
<td>62</td>
<td>4.3</td>
</tr>
<tr>
<td>3K132WT0</td>
<td>38</td>
<td>144</td>
<td>62</td>
<td>4.3</td>
</tr>
<tr>
<td>3K132WT3</td>
<td>52</td>
<td>197</td>
<td>13</td>
<td>0.9</td>
</tr>
<tr>
<td>3K142WT0</td>
<td>63</td>
<td>238</td>
<td>32</td>
<td>2.2</td>
</tr>
<tr>
<td>3K142WT3</td>
<td>63</td>
<td>238</td>
<td>32</td>
<td>2.2</td>
</tr>
<tr>
<td>3K152WT0</td>
<td>63</td>
<td>238</td>
<td>44</td>
<td>3.0</td>
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<tr>
<td>3K152WT3</td>
<td>63</td>
<td>238</td>
<td>44</td>
<td>3.0</td>
</tr>
<tr>
<td>3K162WT3</td>
<td>63</td>
<td>238</td>
<td>63</td>
<td>4.3</td>
</tr>
</tbody>
</table>

Note: All motors are rated at 3450 rpm except model 3K392BT3 which is rated at 1725. All models listed are equipped with a Viton®/Carbon/Ceramic chemical resistant seal. Buna-N and high temperature seals are also available.

**END-SUCTION MOTORIZED UNITS WITH TEFC 213/215JM NEMA MOTOR**
153 to 380 gpm (579 to 1,438 lpm)

<table>
<thead>
<tr>
<th>PUMP MODEL</th>
<th>MAXIMUM FLOW</th>
<th>MAXIMUM PRESSURE</th>
<th>HORSEPOWER</th>
<th>PHASE/VOLTAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>153</td>
<td>579</td>
<td>90</td>
<td>6.2</td>
</tr>
<tr>
<td>4K142WT3</td>
<td>250</td>
<td>946</td>
<td>82</td>
<td>5.7</td>
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<tr>
<td>4K252WT3</td>
<td>380</td>
<td>1,438</td>
<td>84</td>
<td>5.8</td>
</tr>
</tbody>
</table>

Note: All motors are rated at 3450 rpm. All models listed are equipped with a Viton®/Carbon/Ceramic chemical resistant seal. Buna-N and high temperature seals are also available.

**SELF-PRIMING MOTORIZED UNITS WITH TEFC 56J NEMA MOTOR**
18.5 gpm (70 lpm)

<table>
<thead>
<tr>
<th>PUMP MODEL</th>
<th>MAXIMUM FLOW</th>
<th>MAXIMUM PRESSURE</th>
<th>HORSEPOWER</th>
<th>PHASE/VOLTAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>18.5</td>
<td>70</td>
<td>56</td>
<td>3.9</td>
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<tr>
<td>5K112WT0</td>
<td>18.5</td>
<td>70</td>
<td>56</td>
<td>3.9</td>
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<tr>
<td>5K112WT3</td>
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<td>70</td>
<td>82</td>
<td>5.7</td>
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<tr>
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<td>18.5</td>
<td>70</td>
<td>82</td>
<td>5.7</td>
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</table>

Note: All motors are rated at 3450 rpm. All models listed are equipped with a Viton®/Carbon/Ceramic chemical resistant seal. Buna-N and high temperature seals are also available.

For more information, contact Cat Pumps at (763) 780-5440 • catpumps.com
ABOUT CAT PUMPS

Proven Quality, Customer Focused
Cat Pumps is the world leader in the design, manufacture and marketing of the most dependable high-pressure positive displacement reciprocating triplex pumps and systems in the market. Our mission to exceed customer expectations for quality, reliability, availability, delivery, technical expertise and aftermarket support to assure the best value in all the industries served.

LOCATIONS

Worldwide Headquarters
Cat Pumps
1681 94th Lane Northeast
Minneapolis, MN 55449
USA
P: 763-780-5440
F: 763-780-2958
technsupport@catpumps.com
www.catpumps.com
Territories Served
U.S., Canada

International Division
P: 763-780-5440
F: 763-785-4329
intlsales@catpumps.com
www.catpumps.com
Territories Served
Africa, Asia, Australia, Central and South America, Mexico, Middle East, New Zealand, Turkey

Cat Pumps International N.V.
Heiveldekens 6A
2550 Kontich
Belgium
P: 32 3 450 71 50
F: 32 3 450 71 51
cpi@catpumps.be
www.catpumps.be
Territories Served
Western Europe (except U.K., Germany, and Austria)

Cat Pump (U.K.) Ltd.
1 Fleet Business Park, Sandy Lane
Church Crookham
FLEET, Hampshire GU52 8BF
England
P: +44 1252 622031
F: +44 1252 626655
sales@catpumps.co.uk
technical@catpumps.co.uk
www.catpumps.co.uk
Territories Served
England, Ireland, Scotland, N. Ireland, Wales

Cat Pumps Deutschland GmbH
Buchwiesse 2, D-65510
Idstein
Germany
P: +49 6126 9303 0
F: +49 6126 9303 33
catpumps@t-online.de
www.catpumps.de
Territories Served
Austria, Commonwealth of Independent States (CIS), Germany and Eastern Europe

SALES, DISTRIBUTION, SERVICE

Call today for product and application assistance.
763-780-5440 or visit us at www.catpumps.com