The ETA Series

The ETA is Carver’s large flow, end suction pump series for handling water, oils, and chemicals in process and general industry applications. Designed as a horizontal foot-mounted unit, the ETA can also be vertically mounted and electric motor, diesel engine, or steam turbine driven.

Designed for flow rates typically beyond the range of ANSI end suction pumps, the ETA features back pull out designs for easy maintenance and low life cycle cost, making it a very cost competitive alternative to axial split case pumps.

Hydraulic performance for the ETA extends to 9,500 GPM and 360 feet of head. This range is covered by thirteen sizes in cast iron and bronze-fitted iron as the standard, off-the-shelf materials with higher alloys also available.

All ETA’s feature large stuffing boxes, high efficiency enclosed impellers, oil or grease lubricated bearing frames, and replaceable wear rings as standard. Common options include double, tandem, and cartridge seals, seal flush plans, API style baseplates, and spacer couplings. Full performance testing to API-610 or U.S. military specifications is also available.

All together, these features and options combine to make the ETA a pump of exceptional value, combining affordability with some of the most efficient hydraulics found for a pump of this type.

Most importantly, as with all our other pumps, the ETA offers the reliability, low total life cost, and lasting value that has made Carver one of the most trusted names in pumps.

Hydraulics
• Flows to 10,000 GPM (2,270 m³/hr)
• Heads to 360 ft. (110 m)
• Efficiencies to 88%
• Power to 500 HP (375 KW)
• Speeds to 1,750 RPM
• Temperatures to 250° F (120° C)

Applications
• Cooling tower water recirculation
• Fire fighting systems
• Ground water evacuation
• Irrigation supply
• Light hydrocarbon transfer
• Mine dewatering
• Municipal water supply
• Raw water supply
• Refinery off-site loading and transfer
• Solvents transfer
• Wastewater treatment systems
## Why an ETA?

Among its many advantages, the ETA offers the technical benefits of:

- **Casing** – 360° registered fits assure alignment of critical fits. Casing drains included at no additional cost.
- **Connections** – Inlet guide vanes lower NPSH(r). Centerline discharge minimizes stresses for greater rotor, bearing, and seal life.
- **Impellers** – Enclosed, balanced to ISO G2.5 standards for vibration-free operation and greater rotor, bearing, and seal life.
- **Shafts** – Large diameters and fillet radii reduce stresses at cross section changes for greater bearing and seal life.
- **Wear Rings** – Replaceable type reduce impeller wear and axial loads on bearings for greater impeller, bearing, and seal life.

To see for yourself how the ETA redefines value in a large flow pump, contact us or any of our stocking distributors.

## Standard Materials

<table>
<thead>
<tr>
<th>Component</th>
<th>Material</th>
</tr>
</thead>
<tbody>
<tr>
<td>Casing</td>
<td>Cast iron</td>
</tr>
<tr>
<td>Impeller</td>
<td>Cast iron or bronze</td>
</tr>
<tr>
<td>Bearing frame</td>
<td>Cast iron</td>
</tr>
<tr>
<td>Shaft sleeve</td>
<td>416 SS</td>
</tr>
<tr>
<td>Wear rings</td>
<td>Cast iron or bronze</td>
</tr>
<tr>
<td>Mechanical Seal</td>
<td>Carbon on ceramic or silicon carbide</td>
</tr>
</tbody>
</table>

## Design Data

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Impellers</td>
<td>Enclosed, high efficiency</td>
</tr>
<tr>
<td>Input power</td>
<td>Up to 500 HP</td>
</tr>
<tr>
<td>Mounting</td>
<td>Horizontal or vertical</td>
</tr>
<tr>
<td>Bearing type</td>
<td>Deep groove, oil lubricated</td>
</tr>
<tr>
<td>Radial bearing</td>
<td>( L_{10} ) life of 50,000 hrs.</td>
</tr>
<tr>
<td>Thrust bearing</td>
<td>( L_{10} ) life of 25,000 hrs.</td>
</tr>
<tr>
<td>Connections</td>
<td>ANSI 150 lb. flanges</td>
</tr>
</tbody>
</table>
Since we built our first pumps in 1938, the Carver name has become synonymous with value. Today we are recognized as one of the world's leading centrifugal pump companies, building pumps to the most demanding engineering specifications and military standards in the world.

Our company is located in Muscatine, Iowa, 25 miles southwest of the Quad Cities area. Our operations there include some of the most modern manufacturing equipment and pump development software available, and we are committed to the highest quality possible-in our products and our people. Along these lines, Carver was also one of the first American pump companies to attain ISO 9001 certification-the most recognized standard for quality in the world.

From an applications standpoint Carver has traditionally built pumps for water, oil, and chemicals for both the public and private sectors. Our product line includes both horizontal and vertical end suction, multi-stage, axial split case, self-priming, API, and solids-handling pumps that all carry the same Carver trademark: lasting value from solid, straightforward designs engineered to provide many years of service.

These pumps are also backed by unparalleled aftermarket support. Our network of stocking distributors, manufacturer's representatives and certified service centers throughout the world means that no matter where your pump may be installed, there are local sales and service people ready to support your aftermarket needs.

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