

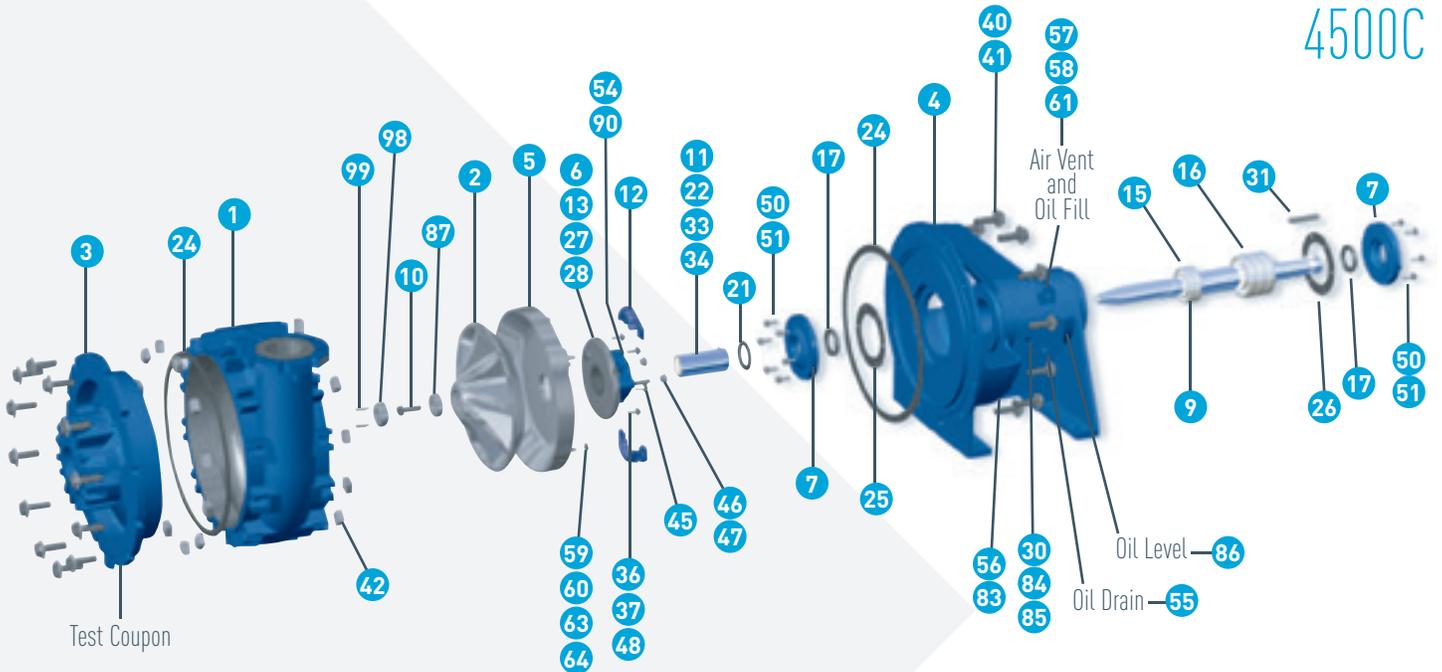


**FAIRBANKS NIJHUIS™**  
4500C, 4600CE AND 4700E SERIES  
VORTEX PUMPS



# FAIRBANKS NIJHUIS™

4500C

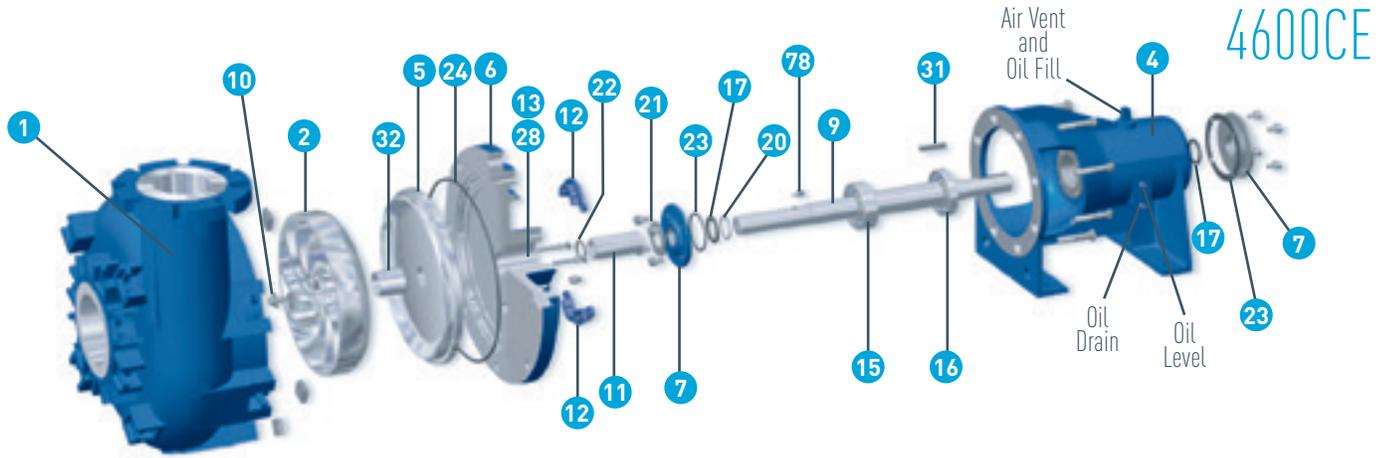


## 4500C

- |                     |                           |                       |                             |
|---------------------|---------------------------|-----------------------|-----------------------------|
| 1 Case              | 20 Retaining Ring*        | 40 Hex Head Bolt      | 60 Hex Nut                  |
| 2 Impeller          | 21 Slinger                | 41 Flat Washer        | 61 Street Elbow, 90 NPT*    |
| 3 Suction Flange    | 22 Shaft Sleeve O-Ring    | 42 Square Head Nut    | 63 Cupped Washer            |
| 4 Bearing Housing   | 24 Case Gasket            | 45 Tap End Stud       | 64 Rubber Washer            |
| 5 Wear Plate        | 25 Bearing Cap Shim       | 46 Hex Nut            | 83 Street Elbow, NPT F x M* |
| 6 Gland Housing     | 26 Bearing Cap Shim       | 47 Flat Washer        | 84 Sight Window, NPT*       |
| 7 Bearing Cap       | 27 Gland Housing Gasket * | 48 Hex Head Bolt      | 85 Oil Level Nameplate*     |
| 9 Shaft             | 28 Packing Ring*          | 50 Hex Head Bolt      | 86 Plug, PP NPT*            |
| 10 Hex Head Bolt    | 29 Serial Plate *         | 51 Lock Washer        | 87 Thrust Washer            |
| 11 Shaft Sleeve     | 30 Drive Screw*           | 54 Pipe Plug, NPTM    | 90 Plug, PP NPT             |
| 12 Split Gland      | 31 Square Shaft Key       | 55 Pipe Plug, NPTM*   | 98 Locking Collar           |
| 13 Lantern Ring*    | 33 Shaft Sleeve Set Screw | 56 Caplug Plug, NPTM* | 99 Socket Head Cap Screw    |
| 15 Inboard Bearing  | 34 Shaft Sleeve Set Screw | 57 Bushing, NPTM*     |                             |
| 16 Outboard Bearing | 36 Rubber Washer          | 58 Air Vent*          |                             |
| 17 Oil Seal         | 37 Cupped Washer          | 59 Tap End Stud       |                             |

\* Not shown

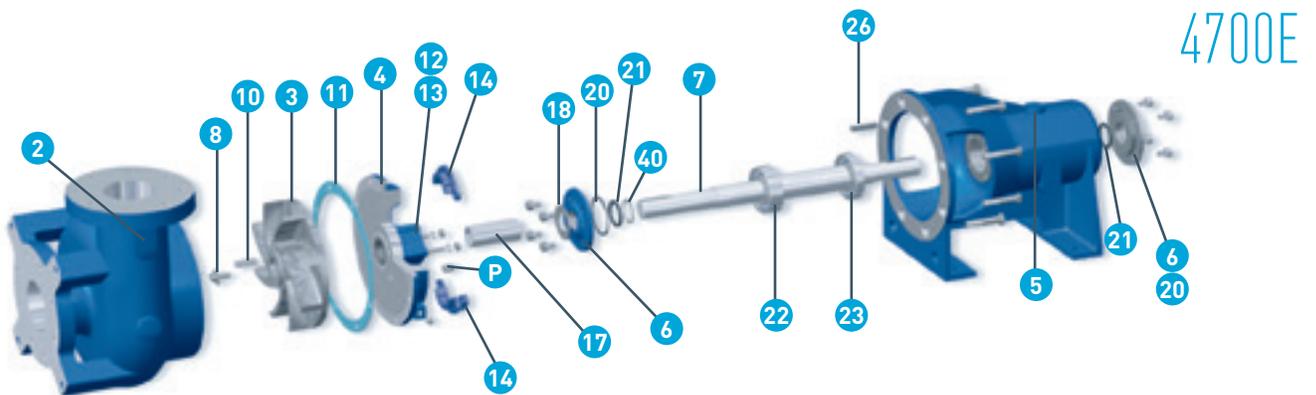
# Pump Features and Selection



## 4600CE

- |                   |                        |                           |                         |
|-------------------|------------------------|---------------------------|-------------------------|
| 1 Case            | 9 Shaft                | 16 Radial Bearing         | 24 Case Gasket (O-Ring) |
| 2 Impeller        | 10 Lockscrew, Impeller | 17 Oil Seal               | 28 Packing Ring*        |
| 4 Bearing Housing | 11 Shaft Sleeve        | 20 Snap Ring              | 31 Shaft Key            |
| 5 Wear Plate      | 12 Split Gland         | 21 Slinger                | 32 Collet               |
| 6 Backplate       | 13 Lantern Ring*       | 22 Sleeve Gasket (O-Ring) | 78 Sleeve Drive Key     |
| 7 Bearing Cap     | 15 Thrust Bearing      | 23 Bearing Cap Gasket     |                         |

\* Not shown



## 4700E

- |                                 |                       |                                  |              |
|---------------------------------|-----------------------|----------------------------------|--------------|
| 2 Case                          | 8 Lockscrew, Impeller | 17 Shaft Sleeve                  | 26 Shaft Key |
| 3 Impeller                      | 10 Impeller Key       | 18 Sleeve Gasket – Slinger (S&M) | 40 Snap Ring |
| 4 Backplate and Packing Housing | 11 Case Gasket        | 20 Bearing Cap Gasket **         | P Plug       |
| 5 Bearing Housing               | 12 Lantern Ring*      | 21 Oil Seal                      |              |
| 6 Bearing Cap                   | 13 Packing Ring*      | 22 Thrust Bearing                |              |
| 7 Shaft                         | 14 Split Gland        | 23 Radial Bearing                |              |

\*Not shown

\*\*Outboard gaskets not shown

## History and Development

Fairbanks Nijhuis™ Pump leads the industry in innovative pump engineering and manufacturing with a complete line of solids handling pumps including the 5400, 5700, 2400 and VTSH Series for raw sewage, return activated, waste activated, mixed liquor and other process liquids with solids concentration up to 3%.

The 4500C and 4600 CE Series hard metal vortex pump handles flows from 50 – 3,000 GPM and heads to 200 feet using a fully recessed impeller ideally suited for grit applications with higher concentrations of solids and sludge.

## Fairbanks Nijhuis Vortex Pumps

Model 4500C heavy duty, slow speed high chrome iron (nominal 650 Brinell) pump with fully recessed cupped type vortex impeller with two-piece case and removable wear plate.

- Sizes 2", 3", 4", 6", 8" discharge with various optional suction sizes
- Flow rates to 3,000 gallons per minute
- Head to 140 feet

Model 4600CE standard duty pump with high chrome iron liquid end, with fully recessed vortex impeller pump and replaceable high chrome iron wear plate.

- Sizes 2", 3", 4", 6" discharge
- Flow rates to 1,400 gallons per minute
- Head to 160 feet

Model 4700E cast iron fully recessed vortex pump with one-piece casing (other alloys are available).

- Sizes 2", 3", 4", 6" discharge
- Flow rates to 1,800 gallons per minute
- Head to 200 feet



## NoseCone™

Our NoseCone kit protects your impeller hardware against erosion, corrosion and abrasion. This makes removal of the impeller far easier, reduces downtime and minimizes the need to replace these components when the pump impeller is removed for service. NoseCone also enhances hydraulic efficiency by providing a smoother passage of pumped fluid at the impeller hub.



## Package Options

Fairbanks Nijhuis can supply many different drive configurations with your vortex pump, including motors, V-belt drive or direct coupling drive. Mounting arrangements include overhead, in-line or side-by-side configuration.



## Fairbanks Nijhuis Pump

In addition to our vortex pumps, Fairbanks Nijhuis manufactures a broad range of pumps for public works and industrial installations, including dry pit and submersible solids handling, chopper, vertical lineshaft and submersible turbine, mixed-flow and axial-flow propeller pumps, horizontal and vertical splitcase, a complete line of FM-approved and UL Listed fire pumps (both electric motor and diesel engine driven) and domestic jet and submersible well pumps.



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Because we are continuously improving our products and services, Pentair reserves the right to change specifications without prior notice.  
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