

Chempump

# NC Series

*We're Serious About Sealless Performance*



Canned Motor Pumps

# A SERIOUS STEP FORWARD IN SEALLESS TECHNOLOGY

Chempump has taken a fresh look at sealless pump technology and developed a new generation of canned motor pumps that effectively addresses the critical issues of environmental protection, process management and cost control.

The special features of the NC Series canned motor pump include:

- State-of-the-art electronic pump diagnostics
- ANSI B73.3 dimensions and performance
- Field-replaceable wear components
- Standard secondary containment
- Fully drainable stator and rotor cavities
- Maximum flexibility and interchangeability
- World class motor design and construction
- Meets API 685 and ANSI/HI 5.1-5.6

## Revolutionary Diagnostics

Chempump's revolutionary diagnostic system continuously monitors and displays the position of the entire rotating assembly, both radially and axially, with unprecedented accuracy.



Chempump's exclusive IntelliSense™ electronic diagnostic system provides real-time data on the exact position of the rotor, which changes as a result of axial and/or radial bearing wear. This information allows users to plan simple parts replacement long before a costly failure occurs.

The entire diagnostic system is isolated from the process fluid and is not a sacrificial part that needs to be replaced. The diagnostic display is mounted on the pump, but can also be remotely mounted for easy viewing. RS-485 or 4-20 ma outputs are also available.

## ANSI Dimensions

The pump casing and mounting bolt locations meet the requirements of ANSI B73.3. Forces and moments of the pump casing meet the requirements of API 685. Both 150# and 300# raised face flanges are standard.

## Flexibility and Interchangeability

- NC series pumps are designed for maximum interchangeability of parts.
- One size bearing, shaft sleeve and thrust washer per motor frame support the entire NC Series of pumps.
- All pump casing are adaptable to any size motor frame.
- NC Series pumps are designed for maximum interchangeability of parts.

## Thermal Motor Protection

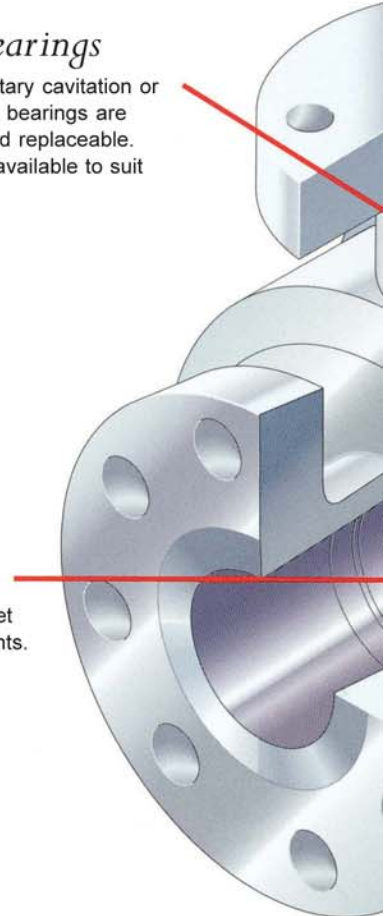
A thermal cut-out (TCO) on the motor windings prevents motor damage due to excessive heat.

## Interchangeable Bearings

Designed to withstand momentary cavitation or dry running, the front and rear bearings are interchangeable and easily field replaceable. Various bearing materials are available to suit any application.

## ANSI Hydraulics

Casing/impeller combinations meet ANSI B73.3 hydraulic design points.



## Advanced Stator Assembly

Designed and manufactured by Chempump to provide maximum efficiency and power, stators feature 0.025" Hastelloy\* C liners. The stator cavity can be dry, oil-filled, or solid filled. Positive secondary containment is standard with all designs.

## Self-Cleaning Filter System

A self-cleaning discharge filter extends motor and bearing life by keeping the recirculation fluid free of damaging particles. The self-cleaning design ensures trouble-free service.

## 2-Year Warranty

Based on an unprecedented application history of over 50 years, Chempump offers a 2-year warranty.

## Sealed Power Leads

Sealed leads protect the electrical connections by maintaining a positive seal of the motor lead wires. They are designed to meet or exceed the pressure and temperature ratings of the pump and allow for mounting of oversized junction boxes.

## Replaceable Shaft Sleeves

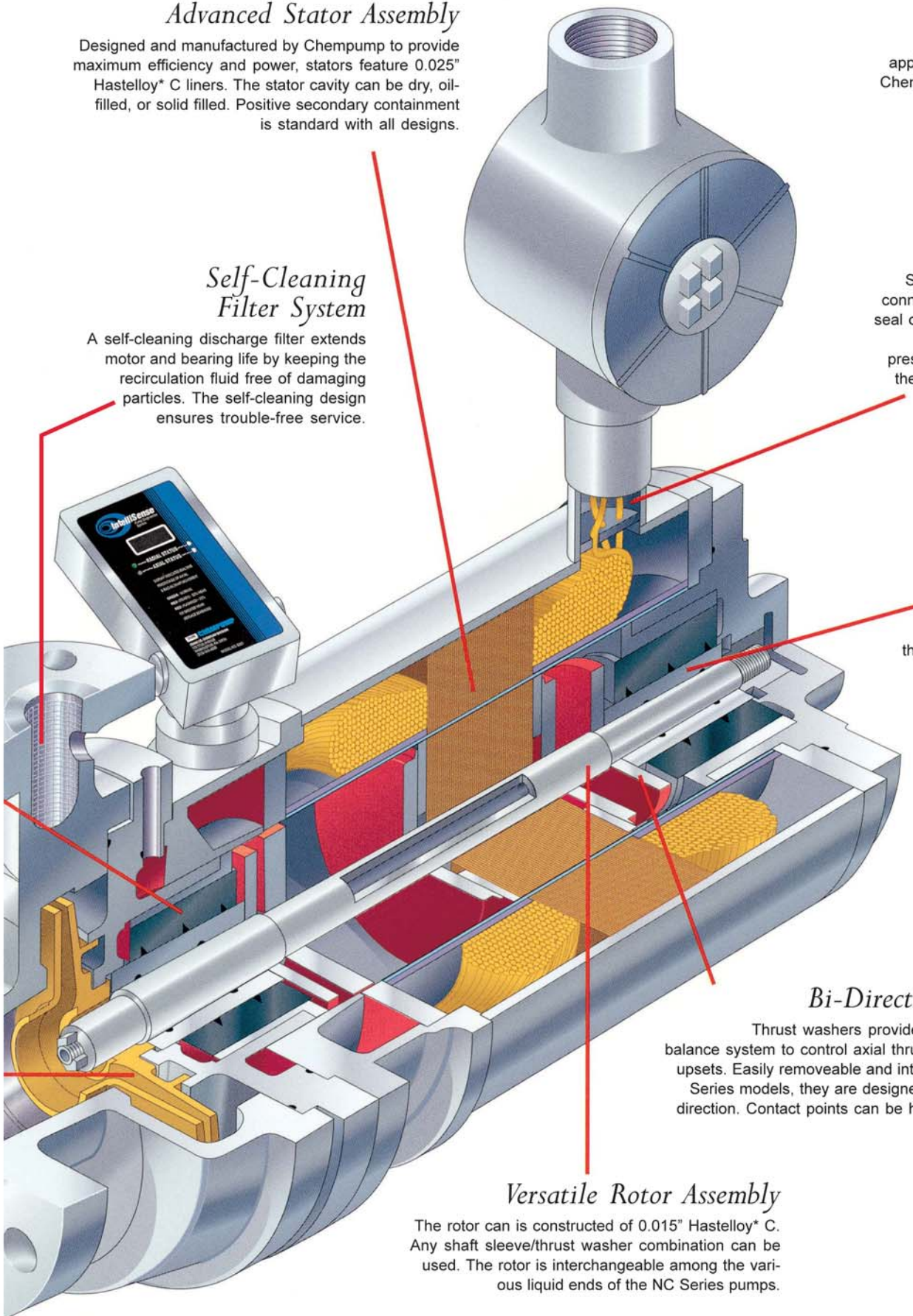
Located at rotor assembly journal areas, the shaft sleeves can be removed easily for replacement and are interchangeable among various NC Series pumps. Sleeves can be hard-surfaced for severe applications.

## Bi-Directional Thrust Washers

Thrust washers provide back-up to the hydraulic thrust balance system to control axial thrust during start-up and/or system upsets. Easily removeable and interchangeable among various NC Series models, they are designed to tolerate axial thrust in either direction. Contact points can be hardened for severe applications.

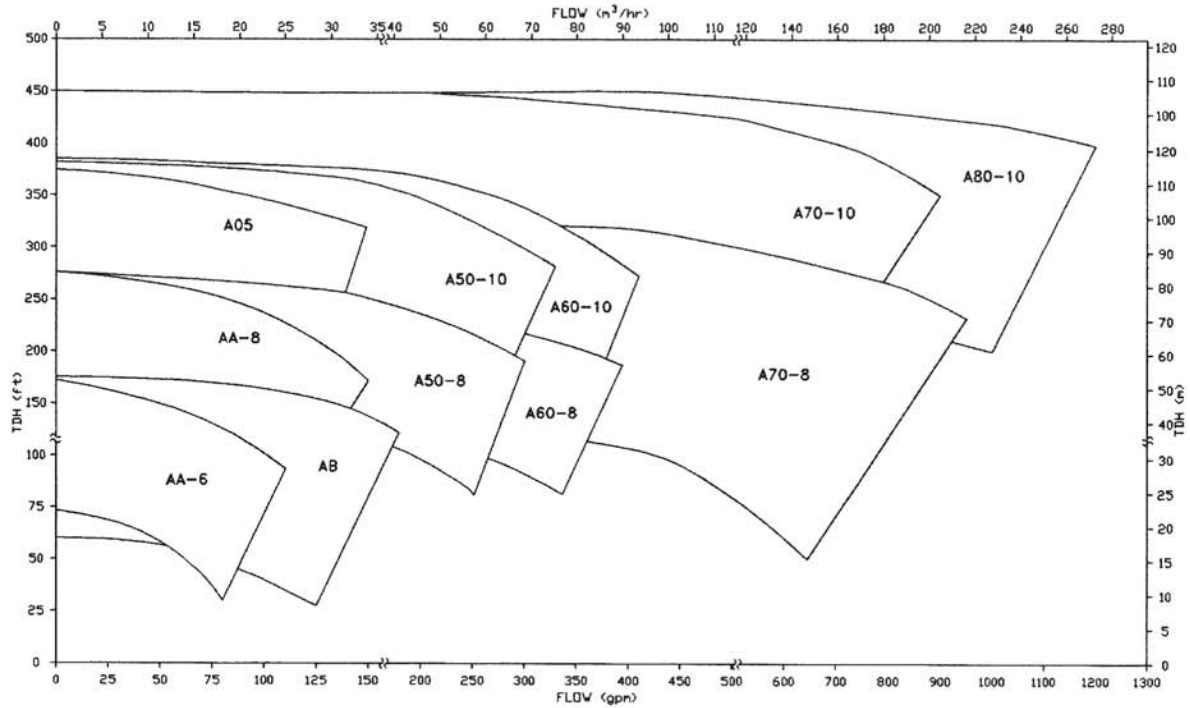
## Versatile Rotor Assembly

The rotor can is constructed of 0.015" Hastelloy\* C. Any shaft sleeve/thrust washer combination can be used. The rotor is interchangeable among the various liquid ends of the NC Series pumps.



\*Hastelloy is a registered trademark of Haynes.

# SPECIFICATIONS



The composite performance curve above gives the approximate flow rates and total dynamic heads for NC SERIES models, based on 20°C water at sea level. Individual, detailed performance curves are available at [www.chempump.com](http://www.chempump.com)

ANSI SIZE	SUCTION x DISCHARGE X IMPELLER DIAMETER	X	A	D	E	HA	MINIMUM MOTOR			MAXIMUM MOTOR	
							C	G	C	G	
AA	1-1/2 x 1 x 6	6-1/2	15-11/16	5-1/4	3	7-1/2	24-7/8	16-1/8	29-5/8	20-7/8	
AB	3 x 1-1/2 x 6	6-1/2	15-3/16	5-1/4	3	7-1/2	24-1/2	15-3/4	29-1/4	20-1/2	
AA	1-1/2 x 1 x 8	6-1/2	15-3/16	5-1/4	3	7-1/2	24-1/2	15-3/4	29-1/4	20-1/2	
A50	3 x 1-1/2 x 8	8-1/2	17-3/16	8-1/4	4-7/8	11-1/4	24-9/16	15-13/16	33-5/16	24-9/16	
A60	3 x 2 x 8	9-1/2	17-3/16	8-1/4	4-7/8	11-1/4	24-9/16	15-13/16	33-5/16	24-9/16	
A70	4 x 3 x 8	11	17-3/16	8-1/4	4-7/8	11-1/4	23-11/16	20-3/16	34-7/16	25-11/16	
A05	2 x 1 x 10	8-1/2	17-1/8	8-1/4	4-7/8	11-1/4	24-9/16	15-13/16	33-5/16	24-9/16	
A50	3 x 1-1/2 x 10	8-1/2	17-3/16	8-1/4	4-7/8	11-1/4	24-9/16	15-13/16	33-5/16	24-9/16	
A60	3 x 2 x 10	9-1/2	17-7/16	8-1/4	4-7/8	11-1/4	24-9/16	15-13/16	33-5/16	24-9/16	
A70	4 x 3 x 10	11	17-3/16	8-1/4	4-7/8	11-1/4	23-1/4	19-11/16	33-15/16	25-3/16	
A80	6 x 4 x 10	13-1/2	17-1/2	8-1/4	4-7/8	11-1/4	23-1/2	19-15/16	34-3/16	25-7/16	

