



ALLHEAT[®]
Thermal Oil
&
Hot Water
Centrifugal
Pumps

The reliable pump people

ALLHEAT® Series Centrifugal Pumps

The ALLHEAT® series centrifugal pump was designed specifically for the safe pumping of hot fluid medias. This versatile and universally applied pump series offers the best technical solution at an excellent price for pumping mineral and synthetic thermal oils at temperatures up to 660 °F (350 °C) or hot water up to 405 °F (207 °C). The main features this product brings to the marketplace include:

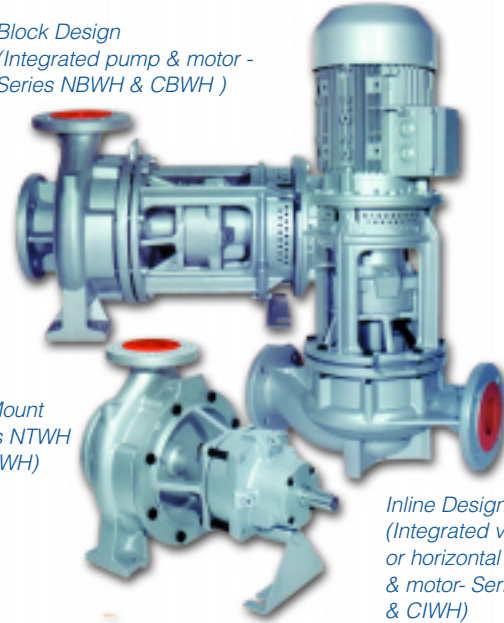
- Low Viscosity Capability (0.2 centistokes min.)
- Safety Packing Rings to isolate contaminants
- Excellent Price/Performance Ratio
- Robust mechanical design with stiffening ribs
- Patented large oil reservoir for the mechanical seal including a patented seal chamber gas venting system
- No additional cooling required for the seal chamber or bearings
- Interchangeable internal parts for foot mounted, block and in-line designs
- High efficiency impeller/casing combination
- Available with balanced or unbalanced mechanical seals
- Insert kits available to upgrade older NTT, CTT Series thermal oil pump designs
- Long life and low maintenance sleeve in-board journal bearings
- Long life, permanently greased, sealed outboard roller bearing
- Double cardanic couplings for high temperature misalignment protection and ease of insert removal



*Block Design
(Integrated pump & motor -
Series NBWH & CBWH)*

*Foot Mount
(Series NTWH
& CTWH)*

*Inline Design
(Integrated vertical
or horizontal pump
& motor- Series NIWH
& CIWH)*



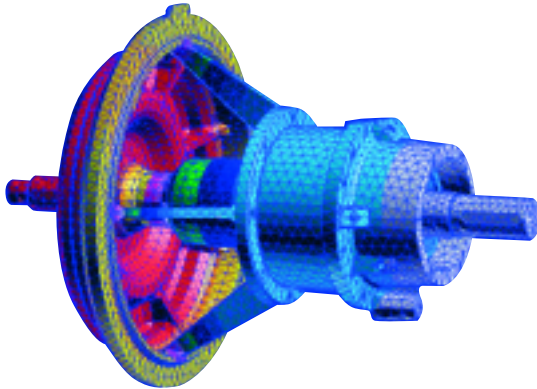
The ALLHEAT® concept is also available in a space saving block and in-line design. The drive motor is flange mounted directly to the pump. The ALLHEAT® in-line pump can also be simply installed into the piping system without any need for a separate support.

- Available in foot mount pump-to-motor (NTWH or CTWH) or integrated pump to motor designs (NIWH or CIWH), (NBWH or CBWH) as shown above
- Integrated pump-motor design (NIWH or CIWH), (NBWH or CBWH), includes an integrated seal chamber, cooling fan, and integrated motor shaft coupling
- All pumps are available in two different shaft and journal bearing arrangements-
 - Carbon journal bearing on a steel shaft with a non-balanced mechanical seal for thermal oil viscosities as low as 0.2 centistokes and temperatures up to 660 °F or for hot water up to 360 °F
 - Sintered Silicon Carbide (SSiC) journal bearings and a balanced mechanical seal for hot water applications exceeding 360 °F to as high as 400 °F or for highly contaminated thermal oil applications
- No serial numbers required (The model number completely describes the pump accurately.)

ALLHEAT® pumps have been rigorously tested during continuous factory tests carried out on ALLWEILER's thermal oil and hot water test stand and during practical tests carried out in selected customers' plants since 2000 and 2001 respectively.

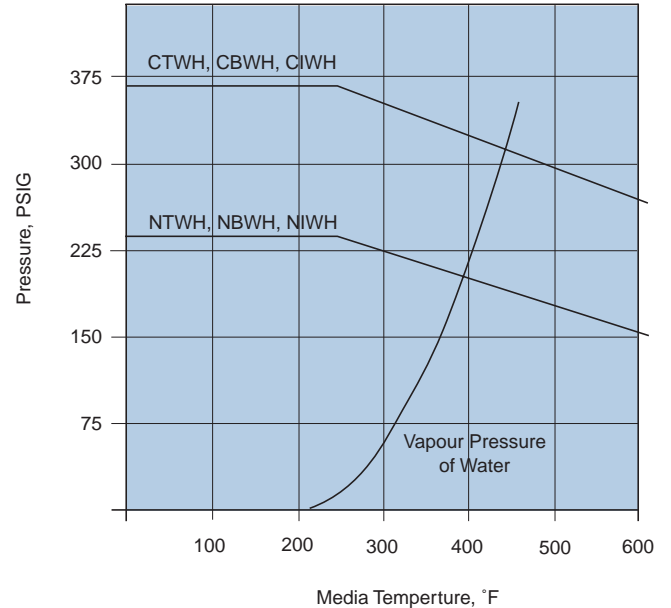
Design

Developed using the latest methods



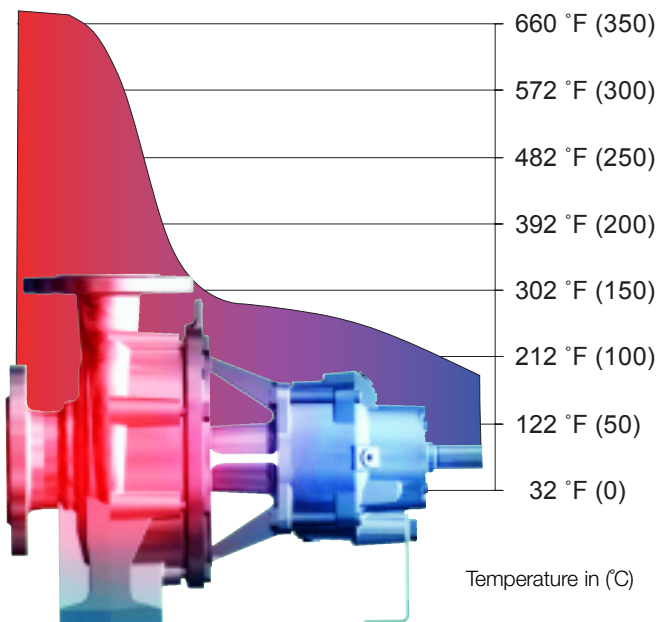
- Flow simulation (computational fluid dynamics) for optimum hydraulic data
- Finite element analysis for maximum stability
- Finite element analysis for optimum temperature distribution
- Computer-aided, rotor-dynamic design
- Computer-aided, sliding bearing design for optimum life

Pressure Capability



Temperature Capability for Thermal Oils

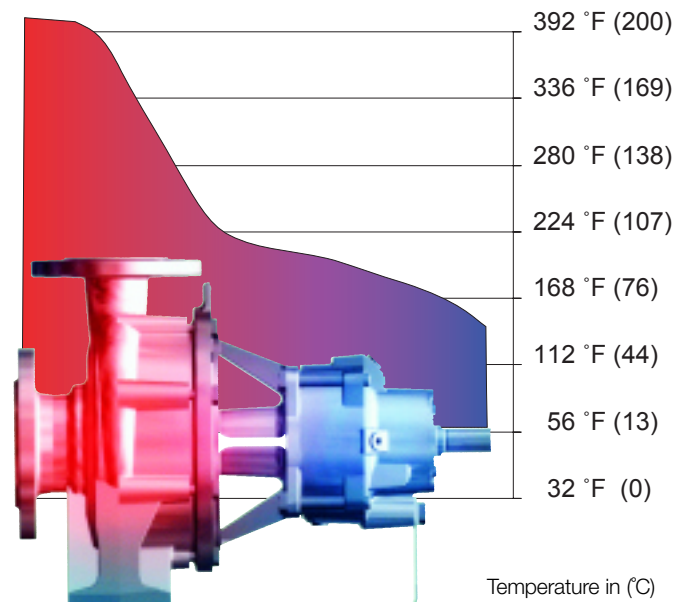
Series NTWH or CTWH with carbon journal bearing, 3500 rpm



Temperature curve with thermal oil at 660°F (350 °C)
ambient temperature: 100 °F (40 °C)

Temperature Capability for Hot Water

Series NTWH or CTWH with SSiC journal bearing, 3500 rpm



Temperature curve with hot water at 400 °F (207 °C)
ambient temperature: 100 °F (40 °C)

ALLHEAT® Foot Mounted Design NTWH, CTWH

NTWH or CTWH

The ALLHEAT® series was particularly designed for the safe pumping of hot media.

This pump offers the best technical solution at an excellent price for pumping thermal oil at temperatures up to 660°F (350°C) or hot water up to 400°F (207°C).

Pressure resistant
housing parts made from nodular cast iron

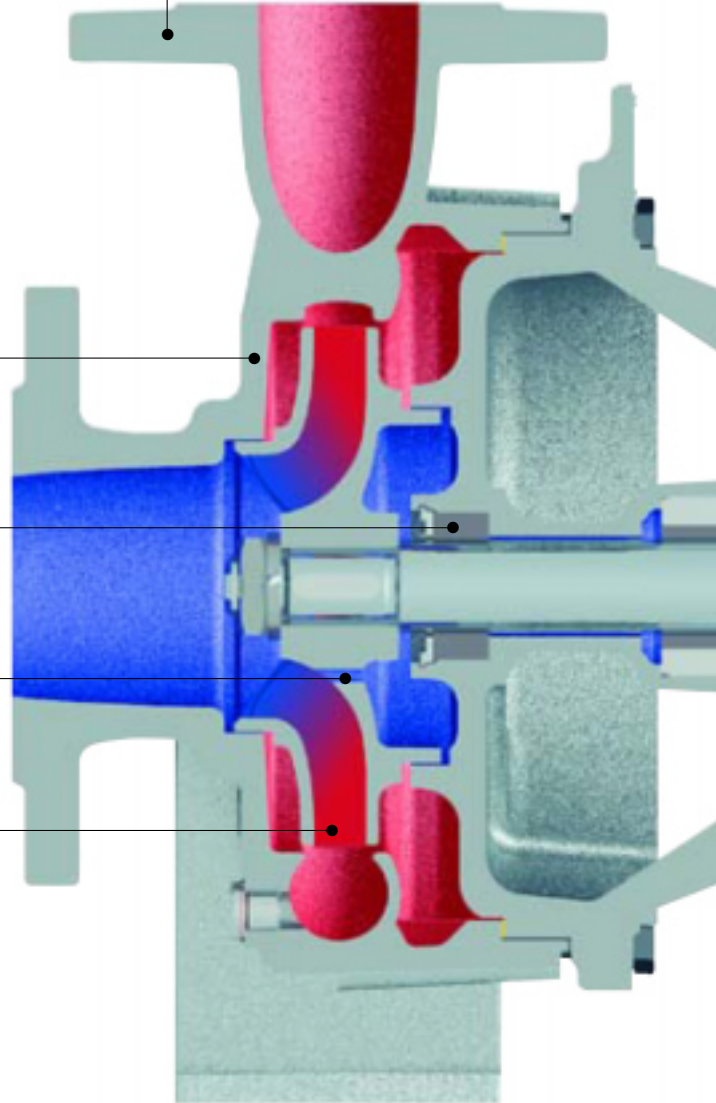
NTWH 150# raised face flanges dimensionally compatible with ANSI B 16.2.
CTWH 300# raised face flange also compatible with ANSI B 16.2

Maintenance friendly-
Easy to dismantle.
Pump housing can remain in pipeline.

The Safety Gland
prevents contamination from entering the sleeve bearing & the mechanical seal

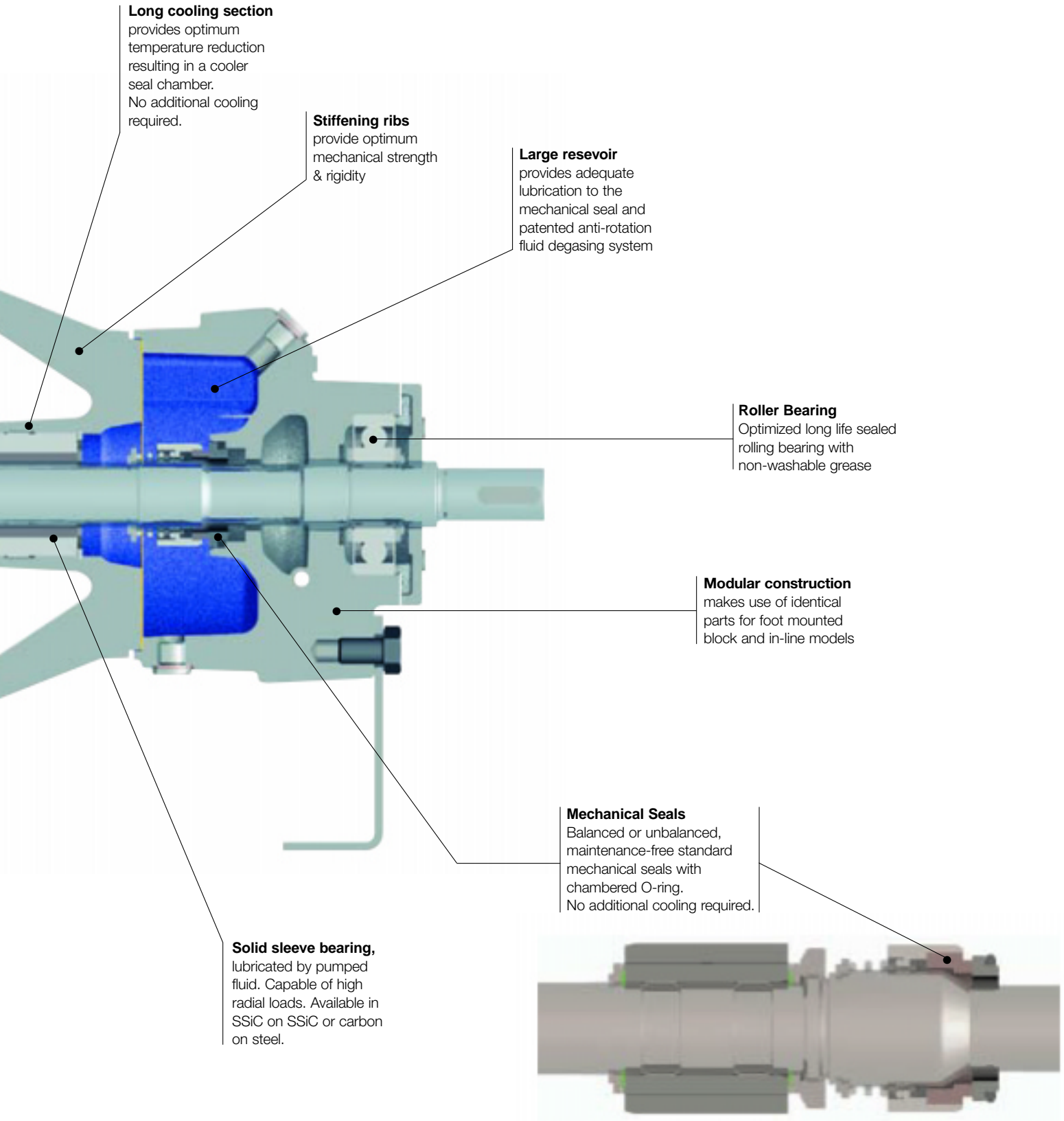
Hydraulically balanced
impellers minimize axial thrust

Optimized hydraulics
Highly efficient impellers



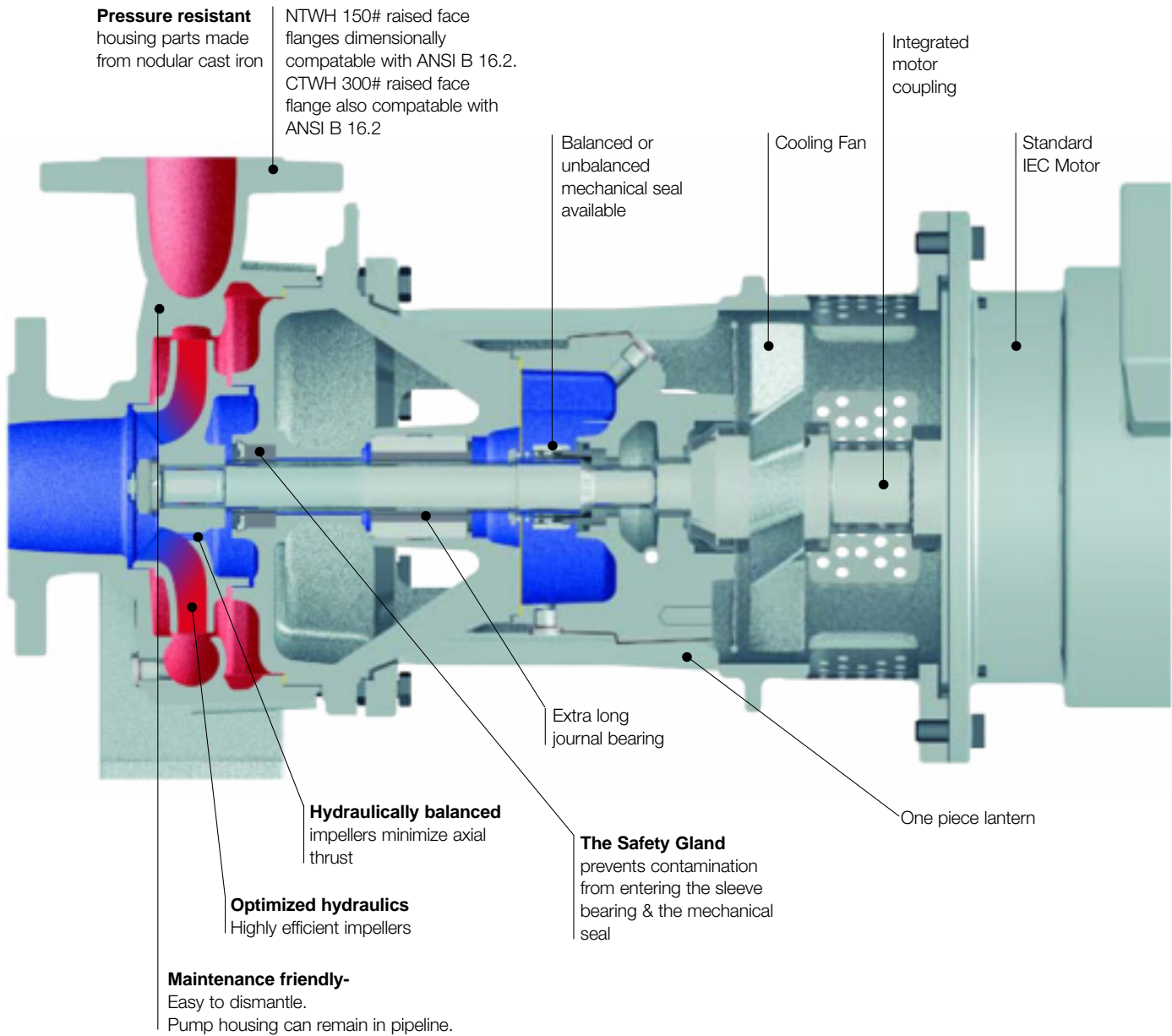
Performance Data				
	Series NTWH		Series CTWH	
Output of up to	6500 GPM	660 m3/h	—	300 m3/h
Max. head	330 ft.	100 m	475 ft.	145 m
Temperatures of pumped media				
Thermal oil up to	660°F	350°C	660°F	350°C
Hot water up to	360°F	183°C	360/400°F	183/207 °C
Casing pressure	240 psi	16 bar	240/375 psi	16/25 bar
Material	Nodular Iron	EN-GJS-400-15 (GGG-40)	Nodular Iron	EN-GJS-400-18LT (GGG-40.3)

ALLHEAT® Foot Mounted Design NTWH, CTWH



ALLHEAT® Block Design

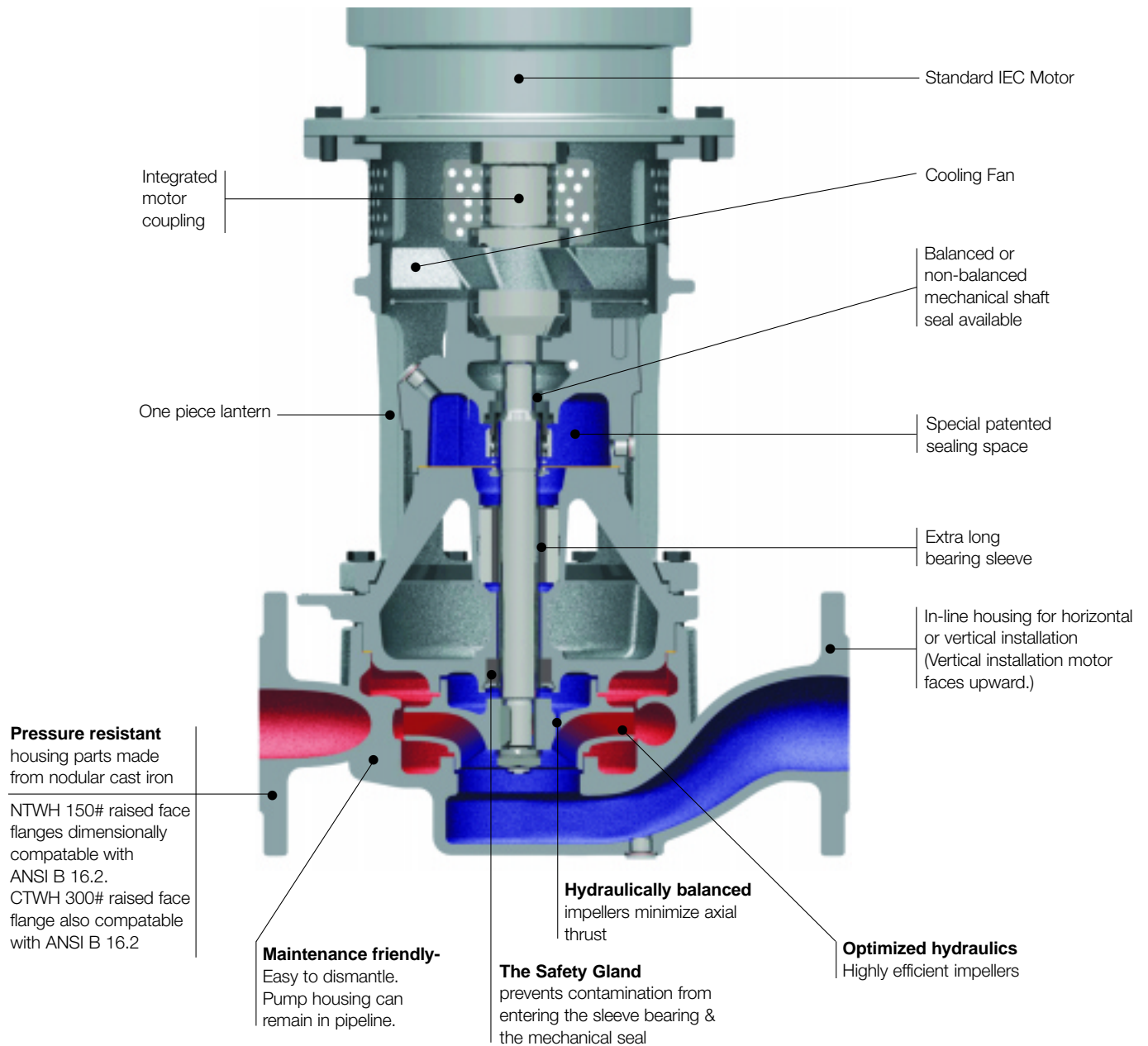
NBWH, CBWH



Performance Data				
	Series NBWH		Series CBWH	
Output of up to	1200 GPM	270 m3/h	1100 GPM	240 m3/h
Max. head	300 ft.	92m	205 ft	63m
Temperatures of pumped media				
Thermal oil up to	660°F	350°C	660°F	350°C
Hot water up to	360°F	183°C	360/400°F	183/207 °C
Casing pressure	230 psi	16 bar	230/360 psi	16/25 bar
Material	Nodular Iron	EN-GJS-400-15 (GGG-40)	Nodular Iron	EN-GJS-400-18LT (GGG-40.3)

ALLHEAT® In-Line Design

NIWH, CIWH



Performance Data				
	Series NIWH		Series CIWH	
Output of up to	970 GPM	220 m3/h	460 gpm	105 m3/h
Max. head	300 ft	92m	140 ft.	58 m
Temperatures of pumped media				
Thermal oil up to	660°F		660°F	350°C
Hot water up to	300° F	183° C	360/400° F	183/207 ° C
Casing pressure	230 psi	16 bar	230/360 psi	16/25 bar
Material	Nodular Iron	EN-GJS-400-15 (GGG-40)	Nodular Iron	EN-GJS-400-18LT (GGG-40.3)

Imo Pump is proud to be a member of the Colfax Pump Group associated with Allweiler Pump of Radolfzell, Germany, Houttuin Pump of Utrecht, The Netherlands, Warren Pump of Warren, Massachusetts, USA, providing World-Class fluid handling equipment and services to a global market.

Imo Pump means in a word, Performance. Imo Pump's "Performance Over Time" provides the best overall value by providing low maintenance or lengthy service intervals and efficient product operation or low energy costs, which results in the lowest "Total Cost of Ownership".

All of Imo Pump's products are designed to be of "Heavy Duty - Industrial Grade" construction and certain models are designed specifically for "Severe Duty" services such as Marine, Power Generation or Process Applications.

Imo Pump is fully qualified to respond on all of the imposed quality and design standards provided, such as Military Standards, ABS, ANSI, ASME, SAE, ISO-9000, CE, UL, CSA, NEMA and ISO, among others.

Imo Pump maintains a fully qualified staff of experienced Application Engineers, Technical Sales Engineers, Product Engineers, Service Engineers and Draftsmen capable of handling the most demanding applications.

We are responding to our customer needs with efficient, reliable products capable of handling a wide range of fluids over a long service life.

Our QuickServe Department processes internet and credit card orders. Most repair kits can be shipped same or next business day delivery saving valuable down time. Visit our E-Commerce site on the web or call our customer service department to place your order today!

www.imo-pump.com



Quality Management System



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The reliable pump people