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THE BALDEWEIN COMPANY

Stainless steel sanitary equipment and supplies for the food and related industries since 1927.

Centrifugal Pump Model TF-C Series



Stainless Steel Flow Control Equipment for the Food, Beverage, Dairy, Cosmetics, Biotechnology, Pharmaceutical and Electronics Processing Industries

www.Baldeweinco.com

B-Flo

®

The centrifugal pump for the process industry.

Contents

Introduction	IFC
ordering Information	1
C-Series Specification	2-3
Pump Sizing Guide	4
Head Capacity Curve Charts	5-22
Viscosity and Specific Gravity Table	23
Friction loss Table	24
Pump Dimensions	25
ordering Sheet	IBC

Introduction

The B-FLO name represents the finest in sanitary process equipment. B-FLO pumps have been designed to offer efficient transfer of product over a wide range of head and viscosity conditions. B-FLO pumps are easy to install, clean, and operate.

This catalog will answer many of the questions you may have regarding B-FLO pumps. If you require additional information, a representative will be happy to assist you. A representative can be reached at 1-800-424-5544.

B-FLO pumps are suitable for use in CIP (clean in place) installations. This feature enables easy self-cleaning with no dismantling or take-down. Sanitizing of all product contact areas is automatic.

All B-FLO pumps are available in standard inlet sizes and outlet sizes. In addition, enlarged inlet sizes are available for special applications.

Pump Ordering Information

Determining the model number of your pump is easy as 1-2-3-4.

TF-C 216 md

1 2 3 4

1 pump series
TF-C close coupled

2 casing size

2	12	8
inlet size 2"	Outlet size 1/2"	maximum impeller Dia. 8"

note:

- TF-C Series furnished complete with legs unless otherwise specified on order.
- Casing Gaskets: BUNA - is standard. If other type is required, specify on order.
- Enlarged inlet: When ordering pump with enlarged inlet state inlet size, i.e., TF-C218MD with 3" inlet.

3 port connections

m - clamp
T - Acme Bevel Seat Thread
s - npt Female Thread
F - Flanged
W - Weld

4 Type of seal/standard mate-

D - External balanced sanitary seal
DG - External balanced sanitary seal w/clamped insert
E - Water cooled balanced double seal
F - External balanced seal w/cascading water



Motor Data is not included as part of 4-step ordering number.

Provide the following information:

- Horsepower and RPM
- Electrical phase and voltage
- (Leeson washdown is standard)

if motor is furnished from another source, supply the following:

- Horsepower
- RPM
- NEMA frame size

remember to order needed accessories:

- Check Valve
- Seal Kits and Parts
- Gaskets
- Clamps
- Hangers
- Butterfly Valves
- Ball Valves



"tf-c" series

Model No. tf-c114 tf-c216 tf-c218 tf-c328
 inlet 1-1/2" or 2" 2" or 2-1/2" 2" or 3" 3" or 4"
 Outlet 1-1/2" 1-1/2" 1-1/2" 2"
 Max. imp. 4" 6" 8" 8"

pump specifications seal specifications

Pump Casings:

- Volute type - Standard.
- Inlet-oversizing as noted in chart above.

Pump Connections:

- saniTary: industrial:
- Clamp • Threaded
 - Bevel Seat (ACME) • Flanged

Pump Construction Materials:

- All wetted parts - 316 SS.
- Seals - Carbon (other seals available)
- Casing Gasket - BUNA-N (Standard)
- Viton & Teflon are available.

Pump Finishes:

- Polished or Electropolished

Pump Seals:

- Available in D, E, and F styles

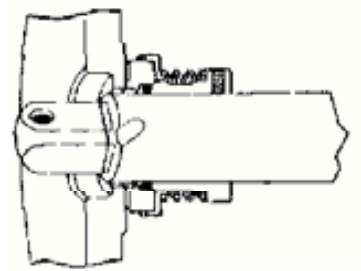
Motor, Electrical:

- 3 Phase - 230/460 volts - 1750 & 3500 rpm.
- Single Phase - 115/230 volts - 1750 & 3500 rpm.

Motor Housings:

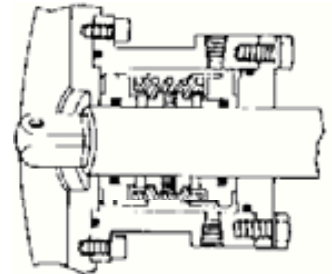
- TEFC (Totally Enclosed Fan Cooled) and sealants.
- Easy Clean
- Other styles available on request

TYPE D External Balanced Seal (Sanitary)



This versatile seal has numerous applications but yet is extremely durable. Dairy products, soft vegetables, beverages and even acid cleaning solutions and detergents are among the recommended uses.

TYPE E Water Cooled Balanced Double Seal (Sanitary)



Type E is designed to withstand heavy duty vacuum applications (to 28" Hg), tacky products, slurries, or pumped products which may exceed 212°F. The seal chamber can be pressurized to permit use of drain piping for coolants

TYPE F – (Sanitary)

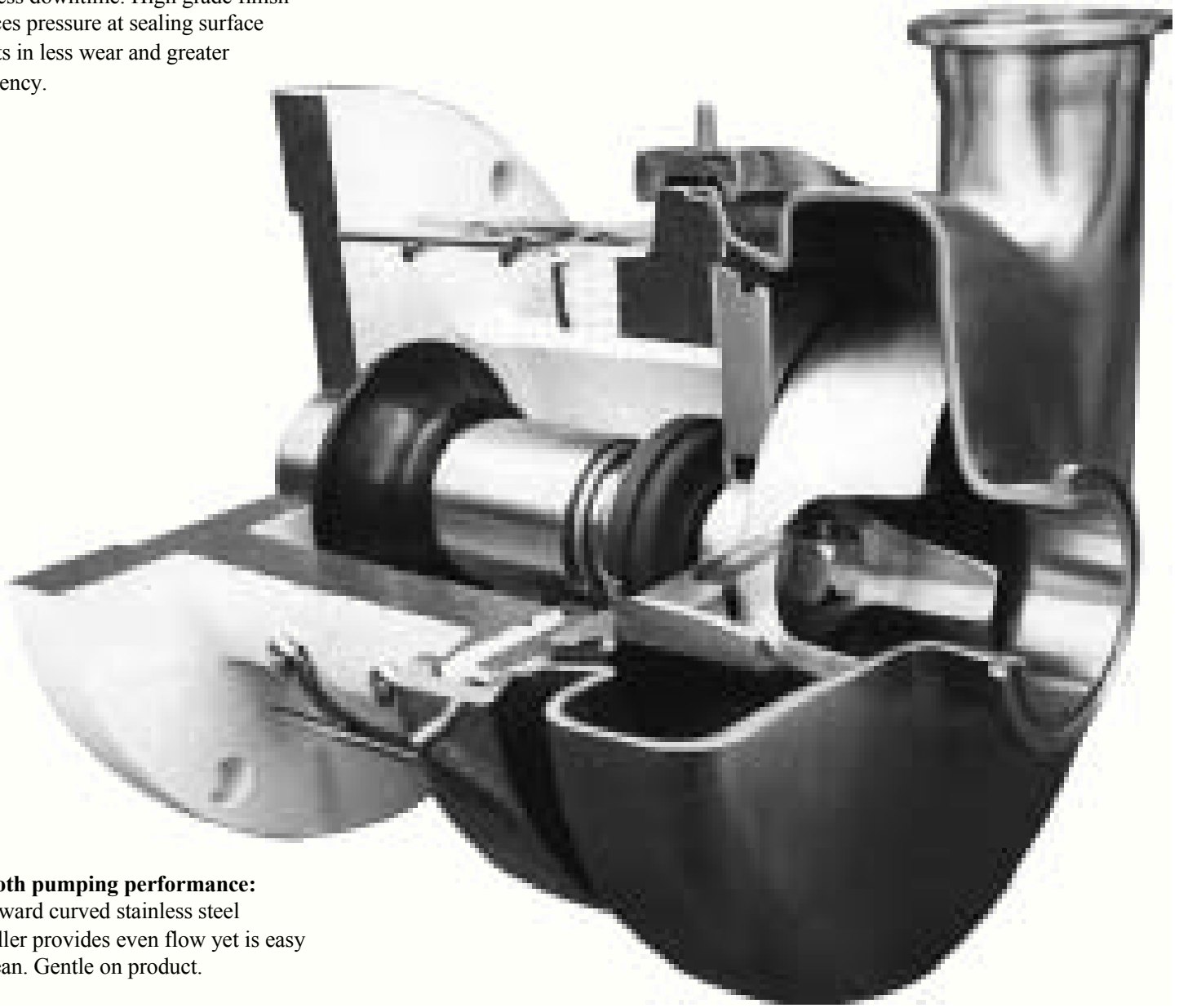
Seal same as Type D seal except includes a water cascade (not shown).

All sanitary seals meet 3A accepted practices.

B-FLO pumps are top performers using numerous features

Type F seal: Water cascade attachment is recommended for pumping tacky or hot products up to 212° F, and for vacuum applications to 14" Hg.

Superior seal: Provides a longer life and less downtime. High grade finish reduces pressure at sealing surface results in less wear and greater efficiency.



Smooth pumping performance: Backward curved stainless steel impeller provides even flow yet is easy to clean. Gentle on product.

No disassembly for cleaning:

Unique groove-in-shaft design directs sanitizer to all critical areas. A must for clean-in-place applications.

Casing:

Finely polished casing suitable to meet numerous requirements. Casing available in a wide selection of port connections to meet a variety of piping systems.

B-FLO Pump Sizing Application Data

Use of a Pump Curve Chart

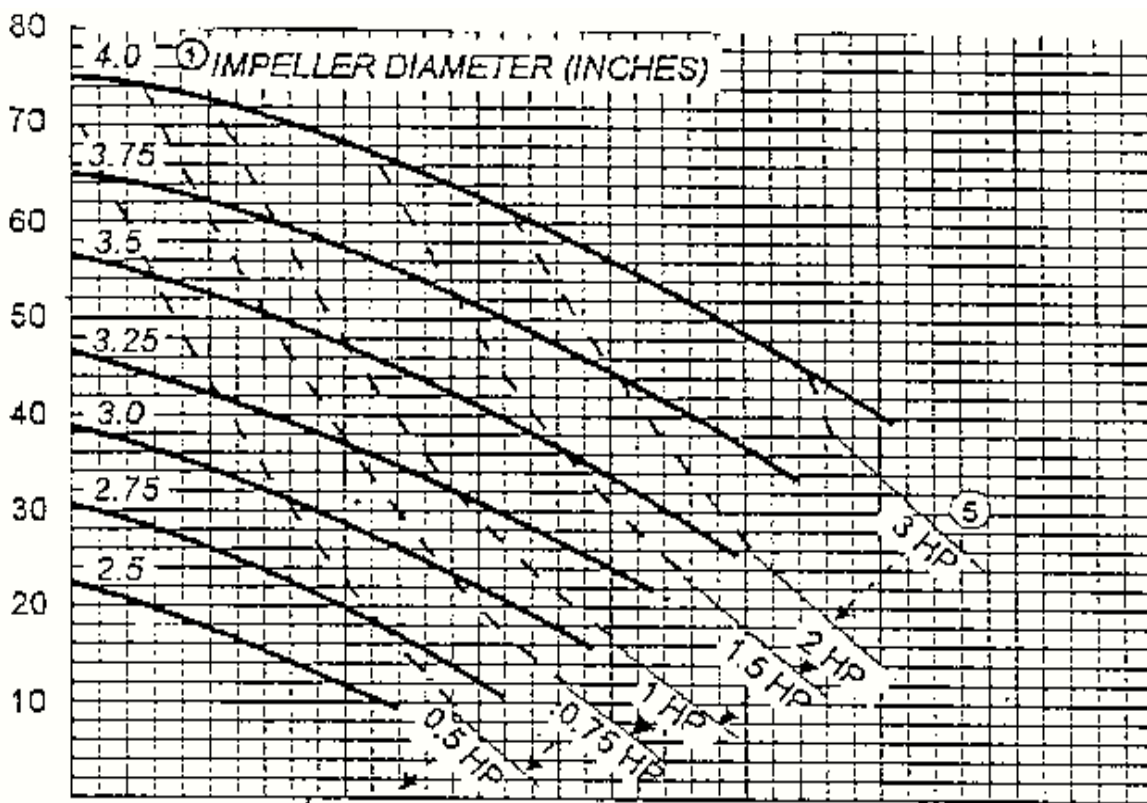
The curve chart is the best resource to use when selecting the proper impeller and motor for applications in the Food, Dairy, Beverage, Pharmaceutical and Cosmetic industries. The curve chart enables the user to determine how a pump will perform at different impeller sizes and motor speeds.

Operating at 1750 RPM and 3500 RPM, curves have been listed for the B-FLO TF-C114, TF-C216, TF-C218 and TF-C328 centrifugal pumps on the following pages. An instructional chart is listed below.

Note: Column #1 on the left shows Head in Feet.
Column #2 at the bottom shows Gallons Per Minute.
Impeller sizes are listed on curve line
Motor horsepower listed on diagonal serrated lines.
NPSH required is #3 and listed at the bottom of chart

Example: On the curve listed below, find the impeller size and horsepower of motor for 75 GPM against total head pressure of 40 feet.

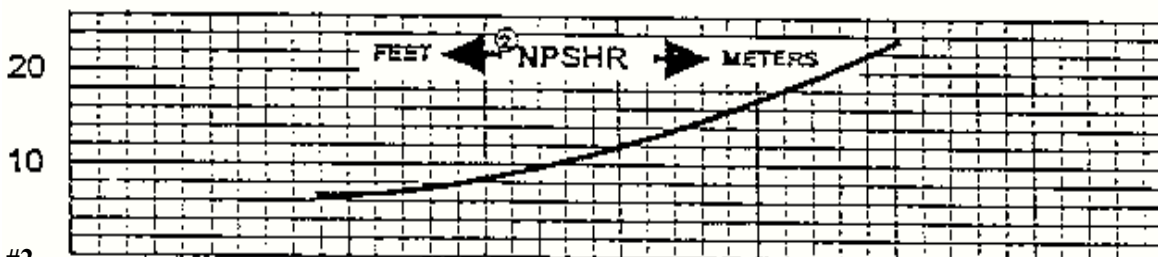
Column #1



Answer to example:

- To determine duty point:
Find first the 35 feet of head in column #1. Second, find the 75 gallon per minute in column #2. Then, trace the 35 feet of head mark to the right until it intersects the 75 gpm line.
- To determine impeller diameter. The duty point falls between the 3.25 and 3.5 impeller curve lines. Always choose the curve line above the duty point. In this case it would be 3.5 inches.
- To determine NPSHR (Net Positive Suction Head Required): Use the NPSHR graph and plot the intersection point of 75 GPM. Follow horizontally to the left. it reads 9 feet. (This will be Net Positive Suction Head Required.)
- You will see at this point a 3.25 impeller and a 1-1/2 horsepower motor is required.

Note: NPSHA (Net Positive Suction Available) must be $>$ or $=$ NPSHR (Net Positive Suction Head Required).



Column #2

U.S. GALLONS PER MINUTE

B-FLO TE-C Series Centrifugal

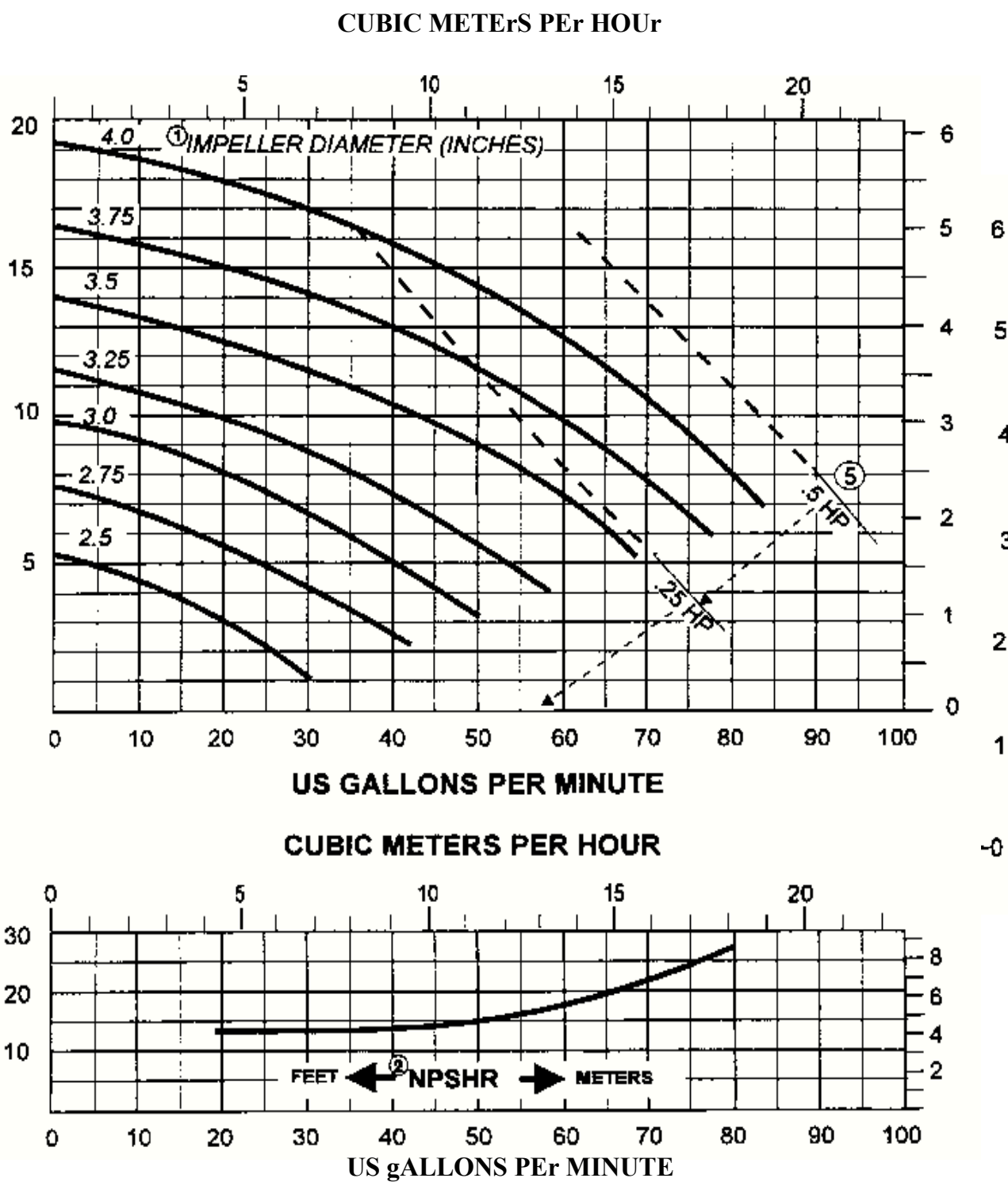
Capacity Curves Model: C114

Based on water at 70°F (22°C)

60 Hz

1750 rPM

Size: 2 x 1-1/2 x 4



NOTES:

- 1 Impeller diameters available in 1/16-inch increments $\text{Kg/cm} = \text{Head in Meters} \times \text{Specific Gravity}$
- 2 NPSHR is shown for maximum impeller diameter $\text{5} \frac{10}{\text{HP}} \times 0.746 = \text{Kw}$
- 3 $\text{psi} = \text{Head in Feet} \times \text{Specific Gravity}$



THE BALDEWEIN COMPANY
Stainless steel sanitary equipment and supplies

Customer _____ Contact _____ Date _____

I. Sizing Data Required

Product _____ Temperature: _____ Min. ° F _____ Max. ° F
Viscosity (Centipoise) _____ Product Weight _____ (pounds per gallon)
Gallons Per Minute _____ Total Head _____ ft. _____ psi
Pounds Per Hour _____
Corrosive Material: Yes Type _____ No _____

Suction Line

TubingSize _____ inches Total Elbows _____
Vertical Drop _____ feet Total Tees _____
Casing Drain: Yes No _____ Total Valves _____
Corrosive Material: Yes Type _____ No _____

Discharge Line

TubingSize _____ Total Elbows _____
Vertical Run _____ Total Tees _____
Horizontal Run _____ Total Valves _____

Note: Clamp connections are standard. If other connection is required, specify. _____

Discharge Valve: Butterfly _____ Ball _____ Disc Check _____

Other _____
If Top Line supplies pump motor, the following data is required:

Voltage _____ Hertz _____ Phase _____

II. Fill out the following after pump and motor are sized

Pump: _____ Motor: _____
Model _____ Type _____
Casing Size _____ Horsepower _____
Impeller Size _____ RPM _____
Seal Type _____ Frame Size _____
Voltage _____ Hertz _____ Phase _____



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Contact your Baldewein CO Representative for Assistance

Phone: 800-424-5544

Fax: 847-455-1706

PUMPS & STRAINERS- Centrifugal, Rotary lobe, Filters and Strainers



VALVES - Manual, Actuated, Diaphragm



FITTINGS - Clamp, Sanitary Butt Weld, Bevel Seat, Tube OD Butt weld, Custom, Biopharm



TUBING, GAUGES, SIGHT GLASSES, BRAIDED HOSE



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