GRISWOLD™
Part of Pump Solutions Group
A DOVER™ COMPANY

ANSI Centrifugal Pumps for the Processing Industry

GRISWOLD 811
Centrifugal Pumps

Where Innovation Flows

www.griswoldpump.com

CENTRIFUGAL PUMPS

PUMP SOLUTIONS GROUP
A DOVER COMPANY

Dover's Pump Solutions Group (PSG®), experts in advanced integrated flow-control solutions that enable the safe and efficient movement, measurement and control of the most critical and valuable materials within targeted global growth markets. PSG features world-class pump brands and has multiple production facilities on three continents (North America, Europe and Asia) that are ISO-certified. PSG is passionately committed to innovative technologies that will positively impact the world. Our priority is providing the market expertise you need by delivering tomorrow's innovative fluid and material-transfer solutions today.

Where Innovation Flows

POSITIVE DISPLACEMENT PUMPS

RECIPROCATING	ROTARY
Almatec® AODDP	Abaque™ PERISTALTIC
Neptune™ METERING	Blackmer® SLIDING VANE
Wilden® AODDP	Maag Industrial INTERNAL GEAR
Quattroflow™ QUATERNARY DIAPHRAGM PUMP TECHNOLOGY	Maag EXTERNAL GEAR
Finder PISTON	Mouvex® ECCENTRIC DISC
Finder PLUNGER	Maag Industrial SCREW
	Ebsray® VANE, GEAR
	Finder SCREW

PSG® Technologies:

PUMPS & SYSTEMS TECHNOLOGIES

CENTRIFUGAL	REGEN TURBINE	MIXERS	COMPRESSORS	SYSTEMS
System One®	Ebsray®	Neptune™	Blackmer®	Automatik®
Griswold™			Mouvex®	Fluid Dynamics™
Finder BETWEEN BEARING (API)				Maag® Filtration
			VACUUM	Neptune™
			Finder LIQUID RING	Finder

Who We Are

Griswold™, headquartered in Grand Terrace, CA, USA, is a premier manufacturer of centrifugal pumps and baseplate systems. Griswold features two main product lines, its ANSI 811 line, which surpasses ANSI/ASME B73.1 requirements, and its end suction centrifugal products commonly used in the water industry. Griswold is an operating company within Dover Corporation's Pump Solutions Group (PSG®), Oakbrook Terrace, IL, USA. PSG features a broad array of leading pump technologies, as well as world-class facilities in the United States, Germany, China, India and France. PSG's leading infrastructure, knowledge base and intellectual capital truly make it the power behind fluid transfer.

Grand Terrace, California (USA) – Griswold is based in the headquarters of Wilden® Pump and Engineering in Grand Terrace, CA. The facility occupies more than 170,000 square feet (15,793 square meters), incorporating a world-class manufacturing facility. Griswold also has a fully equipped R&D laboratory, clean room, test facility, QC department, CAD/engineering department, machine shop and customer-satisfaction department.

Quality · Value · Delivery – Griswold provides solutions for many of the world's largest chemical, oil & gas, power-generation, water parks, zoos, aquariums and fountain companies. Leveraging unique design features, fast delivery and great value, Griswold takes hold where other companies cannot compete. Griswold pumps combine the durability, reliability and speed of delivery needed for pumps operating in many critical applications across the globe.

MARKETS SERVED

ENERGY

Griswold manufactures robust centrifugal pumps suitable for the safe, efficient and reliable transfer of fluids in the energy market. With more than 100,000 pumps in the market, Griswold has the intellectual capital and proven performance to support all your needs.

Typical Applications Handled:

- Power Generation
- Oil & Gas Production

PROCESS

Griswold's chemical-process centrifugal pumps feature premium upgrades from standard ANSI pumps and are perfectly suited for demanding applications. With more than 70 years experience in the market, Griswold has the knowledge, expertise and products to support all your needs.

Typical Applications Handled:

- Chemical Processing
- Textile
- Mining
- Grain Processing
- Petrochemical
- Automotive
- Pulp & Paper
- Food Processing

WATER/WASTEWATER

Griswold plays a critical role in handling fluids used in the water and wastewater industries. Whether it's the chemicals used to treat water, irrigation or ornamental fountains, the experts at Griswold have the solution you need.

Typical Applications Handled:

- Wastewater Systems
- HVAC Systems
- Boilers
- Cooling Towers
- Water Treatment
- Collection & Disposal
- Fountains
- Water Parks
- Zoos
- Commercial Swimming Pools
- Marine
- Commercial & Agricultural Irrigation


Garrison
Ferdinand
Pulp & Paper Co.
Northwest
Brewing Co.
Aiden
Chemical Co.
Jones
Food Processing
LB Storage Terminal
arrison
trochemicals
Harris
Wastewater
Services
East Valley
Waterpark

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Industry Knowledge & Experience

Knowledge – The Griswold™ Pump Company is a veteran in the pump industry with product lines dating back more than 70 years. You'll find a wealth of industry knowledge and experience behind every Griswold product. With more than 100,000 pump installations worldwide and our international distribution network, Griswold excels in a broad range of chemical process, industrial and municipal applications.

Customer Satisfaction – Our commitment to your success extends way beyond our top-of-the-line products. We have structured our staff, systems and inventory to deliver consistent high-level solutions for meeting your most critical equipment and time-sensitive delivery needs. Call our application engineers with any questions regarding performance and repair. We also offer state-of-the-art certified performance testing (witnessed and non-witnessed) that conforms to Hydraulic Institute Standards. We pride ourselves in providing what you need and when you need it.

Engineering & Customer Support
Inventory Optimization
Certified Testing

What Drives Your Pum-Selection Process?

In a rapidly changing world market, there's no longer room for making business decisions based on convention or costly old relationships. Every angle must be scrutinized to give your production process the edge needed to survive economic volatility and polarized competition. Maximizing production and minimizing costs are as much functions of equipment performance as initial and long-term costs of operating and maintaining equipment. Most importantly, you must minimize the time and financial losses caused by production failures.

As a result of more severe applications and the requirement to reduce costly labor, pump specifications must meet even more demanding criteria than ANSI or NSF compliance: Dare to compare to Griswold. In a world where you need every advantage – we're confident you'll choose Griswold. For more than 70 years, Griswold has built a proven track record of performance through extended equipment life, reduced initial cost and total cost of ownership, speed of operation and ease of repair or replacement.

Flexibility – In a world with unique environments and applications, Griswold remains small enough to accommodate your every need. Close-coupled and frame-mounted power options, custom impeller trims, explosion-proof motors, premium baseplates, a variety of seal choices, seal-flush options, certified performance testing that conforms to Hydraulic Institute Standards (witnessed or non-witnessed), and even expedited delivery provide the solution to make your Griswold pump a trouble-free investment.

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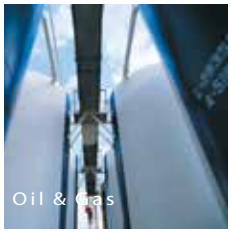
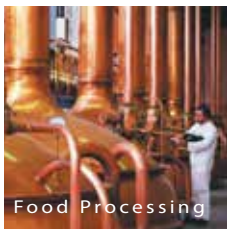
Move Your Process to a Higher Standard

ARE ALL ANSI PUMPS THE SAME?

In 1977, the American National Standards Institute (ANSI) established manufacturing criteria for centrifugal pumps to ensure that dimensional, material composition and safety specifications meet the demanding needs of the chemical-processing industry. Mandatory design features, such as self-ventilation, foot mounting, centerline discharge and back pullout, became the industry's assurance that complying pumps met production and safety needs.

Even though ANSI compliance would seem to level the playing field for pump specification, your choices are actually far more complex. The fact is that many brands just meet the minimum requirements of this standard, and **a pump is far more than just its specifications**. While other brands may offer similar features and performance, you may experience inflated cost, delayed delivery and deflated service. In a market where all ANSI pumps seem the same, **dare to compare**.





1 PROVEN TRACK RECORD OF PERFORMANCE

COMPARE
811 ☑
other brands ☐

The Griswold 811 ANSI line offers the best pumps you'll find on the market. Engineered for exceptional performance and maximum flexibility, the 811 models go the distance in the harshest and most difficult fluid-processing applications. Griswold's 811 centrifugal pump was among the first pump designs to comply with the new ANSI standards in the 1970s. More than 30 years of proven performance has enabled Griswold to focus on enhancing its ANSI pump features and support offerings to surpass the industry standard and exceed customer expectations.

2 EXTENDED EQUIPMENT LIFE

COMPARE
811 ☑
other brands ☐

In addition to exceeding ANSI construction requirements, the Model 811 pump includes several features that are critical to long-term operational reliability. To start, the open impeller and seal chambers are designed to facilitate corrosive and erosive substance transport, heat regulation and routine maintenance. The 811's range of enhanced power frames and rigid baseplates combine the latest technology with the highest quality construction to minimize the effects of work forces and shaft deflection, optimize cooling and further simplify the installation and maintenance process. All told, you can expect the 811 pump series to continue performing long after other ANSIs wear out or break down.

3 REDUCED INITIAL & TOTAL COST OF OWNERSHIP

COMPARE
811 ☑
other brands ☐

You may have heard that the initial cost of your pump and parts plays a minor role in your total cost of ownership. NOT TRUE! With Griswold's 811, you get identical quality and longevity as the best-known brands—at a lower initial price. Factor in low cost on parts and the long-term savings are even greater! This translates into the industry's LOWEST total cost of ownership.

4 SPEED AND EASE OF REPLACEMENT

COMPARE
811 ☑
other brands ☐

When meeting your production quota is compromised, each day waiting for repairs can mean significant losses in revenue (which is another factor in true cost of ownership). The Griswold 811 and an extensive inventory of parts are 100% interchangeable with hundreds of thousands of other ANSI pumps currently in use. With stocking distributors from coast-to-coast and throughout the world, you can be up and going before you may even get a response call from the competition!

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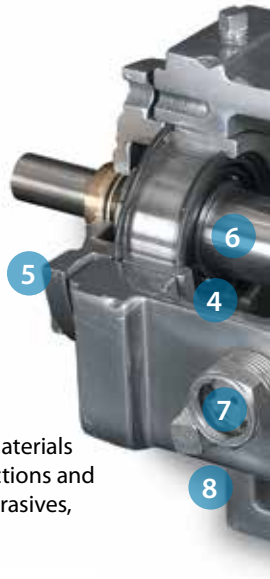


TECHNOLOGY: CENTRIFUGAL

811 Series ANSI/ASME Centrifugal Pumps

The Model 811 is available in a wide range of sizes, capacities and materials to fit virtually any process-fluid application. With more than 30 selections and multiple design options, we've got your application covered - for abrasives, corrosive substances and a wide range of capacities.

Engineered for Flexibility & Durability

Applications

- Oil & Gas
- Chemical
- Petrochemical
- Water Treatment
- Pulp & Paper
- Breweries
- Grain Processing
- Food Processing
- Poultry Processing
- Automotive
- Pharmaceutical
- Steel
- Semiconductor
- Power Generation
- Textile

Features and Benefits:

- ANSI/ASME B73.1-compliant
- Magnetic drain plug
- Extra-large capacity epoxy-coated oil sump
- Registered alignment between frame and adapter
- Standard and low-flow models available
- Heavy-duty power frames
- Fully open impellers with rear-adjustment capability
- Wide variety of mechanical seal options
- Dynamically balanced impellers

Technical Data:

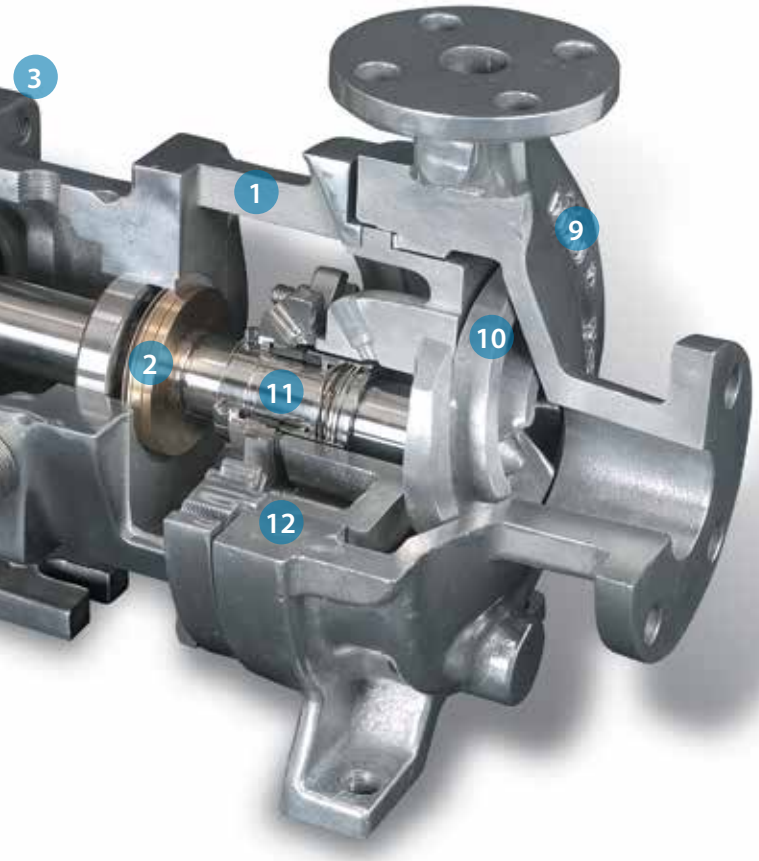
- Ductile iron, 316 stainless steel, CD4MCu and Alloy 20 materials available
- Max. temperature: 260°C (500°F)
- Three stuffing-box options available
- Multiple port sizes available
- Multiple seal-flush plans available
- Steel and composite baseplates available
- Certified testing per Hydraulic Institute and material certifications

Performance Data:

- Max. flow: 1,590 m^3/hr (7,000 gpm)
- Max. head: 275 m (900 ft)

Certifications & Associations:

ANSI/ASME B73.1
Complies with ANSI/ASME B73.1 specifications



1 Ductile-Iron Frame Adapters
Ductile-iron construction provides strength and safety. Precision-machined fits accurately align the liquid end to the power end. Large openings simplify installation and maintenance. Includes jacking bolts to facilitate disassembly.

2 Labyrinth Seals Standard
INPRO® oil seals keep outside contaminants from lubrication media, significantly extending bearing life. Standard in bronze. Carbon-filled PTFE (Teflon®) and magnetic face seals optional.

3 Mounting Frame Flange
Machined to accommodate C-face motor adapters.

4 Extra-Large Capacity Powder-Coated Oil Sump
Maximized oil capacity delivers improved heat transfer and oil temperature, greatly extending bearing life. Designed to accommodate optional fin coolers for higher temperature applications. Impenetrable fusion-bonded epoxy coating on interior surface extends quality, cleanliness and longevity of the lubricating oil.

5 External Clearance Adjustment
Designed for maintaining original flow, pressure and efficiency, minimizing energy consumption and repairs, and extending mean time between repairs (MTBR).

6 Heavy-Duty Shaft and Bearings
Engineered to minimize vibration and shaft deflection, less than 0.002 inch per ANSI/ASME B73.1, optimizing pump life. Sleeved and solid shaft available in a variety of materials. Bearings sized for 10-year life expectancy under tough operating conditions.

7 Oversized Sight Glass
One-inch bulls-eye reflective sight glass facilitates monitoring oil level and condition, critical to bearing life. Bottle oiler optional.

8 Magnetic Drain Plug
Collects damaging metallic contaminants away from the bearings.

9 Extra-Heavy Casings
Class 150 pumps incorporate Class 300 wall thickness as standard, extending reliability and casing life under severe corrosive/erosive conditions:

- Top centerline, self-venting discharge for air handling
- Back pull-out to simplify maintenance
- Rigid casing feet prevent pipe-load misalignment and promote seal/casing life
- Discharge connection for pressure gauge or seal bypass-flush connection standard on Ductile-Iron and Stainless-Steel casings
- Class 150 FF standard for positive sealing. Optional Class 150 RF/300 FF/RF available.
- Casing drain standard in Ductile Iron and Stainless-Steel for simplified maintenance

10 Fully Open Impeller
With double the wear area of enclosed models, the 811's impeller offers superior handling of solids, corrosives and abrasives. Back pump-out vanes reduce hydraulic loads and seal chamber pressure.

11 Sealing Flexibility
Wide range of sealing options coupled with seal chambers and stuffing boxes selected for service condition to improve lubrication and heat dissipation of seal faces, maximizing pump uptime.

12 Contained Casing Gasket
Provides positive sealing at casing joint to prevent "blow out" of liquids and to facilitate disassembly.

INCREASED HEAD FOR LOW VOLUMES

Standard ANSI pumps (with expanding-style volute casing) are not designed for low-flow, high-head applications because their excessive radial loads and shaft vibration can shorten bearing and seal life. Griswold's Model 811LF series is designed with a circular concentric casing in conjunction with a radial vane impeller to reduce those excessive radial loads and minimize shaft deflection, thus extending MTBR.

1 CIRCULAR CONCENTRIC VOLUTE CASING

The fully machined concentric volute reduces excessive radial loads experienced in low-flow, high-head applications. Shaft vibration and deflection are minimized, extending bearing and mechanical seal life.

Model 811LF series pumps come standard with raised-face flanges for positive sealing. The following flange options are available:

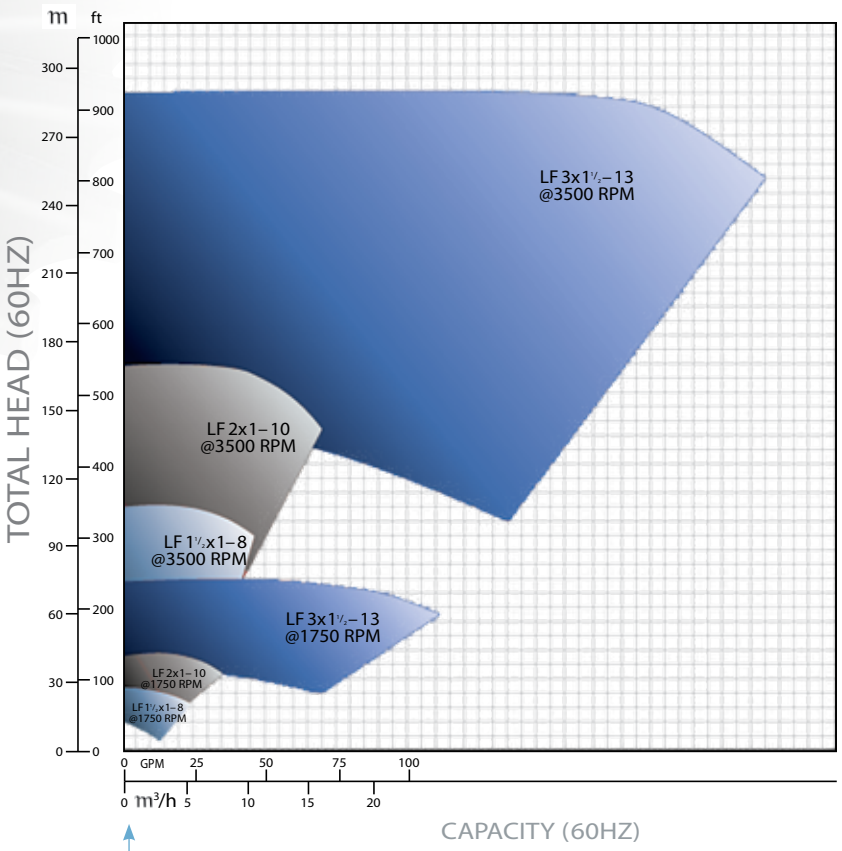
1.5X1-8LF: 150 RF Standard (300 RF Optional)

2X1-10LF: 150 RF Standard (300 RF Optional)

3X1.5-13LF: 300 RF Standard

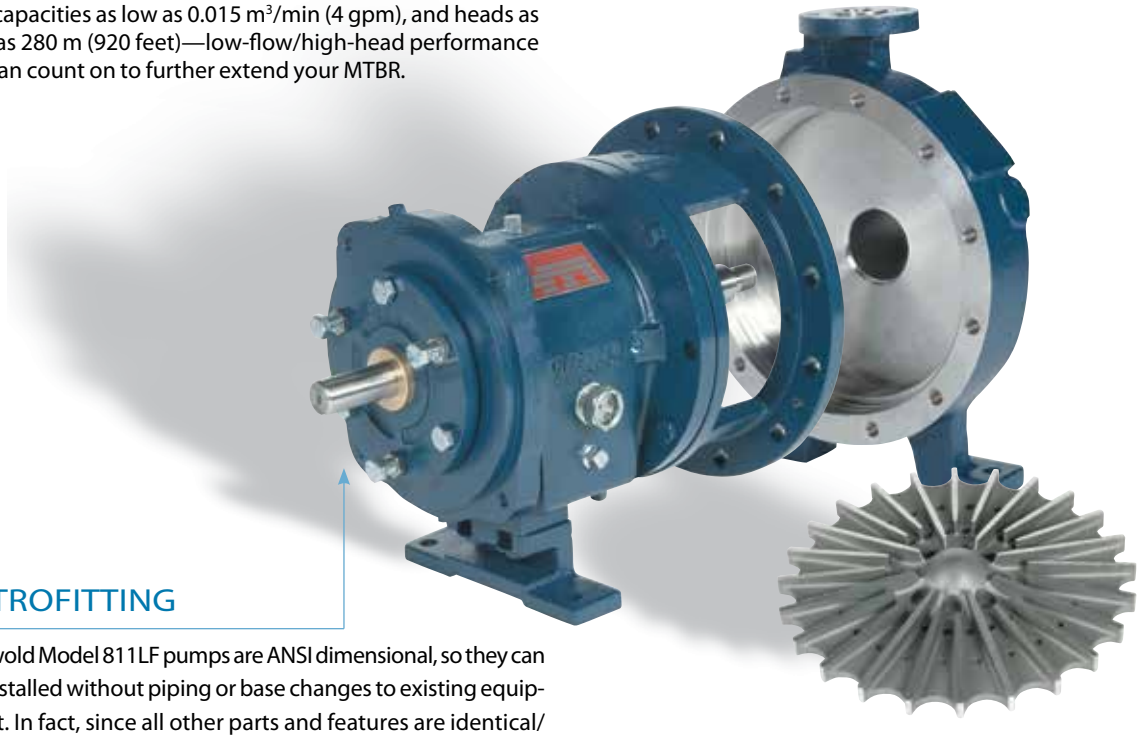
2 LOW-FLOW RADIAL VANE IMPELLER

Griswold's radial vane impellers are specially designed to reduce the thrust load and seal chamber pressure normally associated with low-flow applications. When operating in reduced-volume conditions, the low-flow impeller's vanes provide better hydraulic control than traditional ANSI impellers. Balance holes reduce both axial thrust and seal-chamber pressure, extending bearing and seal life.



3 811LF PERFORMANCE

With a traditional ANSI pump, throttling or recirculating flow to attain low-flow conditions causes excessive radial load and shaft deflection—all of which can result in premature failure to bearings and mechanical seals. Griswold 811LF pumps feature flow capacities as low as 0.015 m³/min (4 gpm), and heads as high as 280 m (920 feet)—low-flow/high-head performance you can count on to further extend your MTBR.



4 RETROFITTING

Griswold Model 811LF pumps are ANSI dimensional, so they can be installed without piping or base changes to existing equipment. In fact, since all other parts and features are identical/interchangeable within the entire 811 ANSI line, the 811LF case and impeller can be easily retrofitted to an existing Griswold pump as well as hundreds of thousands of other ANSI pumps already in service.

EXTENSIVE OPTIONS

Griswold offers a broad range of options and upgrades to tailor the 811's handling and performance to meet virtually any fluid-processing application. Griswold's engineering staff can assist you in configuring pump size, material and components to best suit your specific plant and processing requirements.

We've Got You Covered

COMPARE
811 ☑
other brands ☐

1 BASEPLATE MOUNTING SYSTEMS

Griswold offers a complete range of pre-engineered rigid baseplates designed to reduce stress and vibration as well as extend MTBR, thus ensuring long-term durability. A wide selection of metallic and non-metallic baseplates provides flexibility in selecting the best base to fit your operating needs and budget. Bases include a fully enclosed steel coupling guard as standard with optional non-sparking coupling guard available.

Fabricated Steel Base (enhanced fabricated steel base also available)

Composite Base

2 HIGH & LOW TEMPERATURE CAPABILITY

COMPARE
811 ☑
other brands ☐

- Heat Jacket: Clamps onto the casing to manage heat transfer. Easy to install or remove for servicing.
- Jacketed Seal Chamber: Maintains temperature control for heating or cooling of sealing environment.
- Bearing Frame Finned Cooler: Directly cools oil to lower bearing temperature. Recommended for temperatures higher than 350°C (662°F).

COMPARE
811 ☑
other brands ☐

3 SEAL-FLUSH PLANS

ANSI/ASME B73.1 seal flush and cooling plans are offered to control emission levels, improve lubrication and cooling of the seal faces, and reduce downtime. Ask for assistance in selecting the best plan.

COMPARE
811 ☑
other brands ☐

4 LUBRICATION OPTIONS

811 power ends accommodate all lubrication systems, including flood oil, oil mist and grease lubrication. The power ends are pre-drilled for all lubrication methods and can be easily converted in the field without modification.

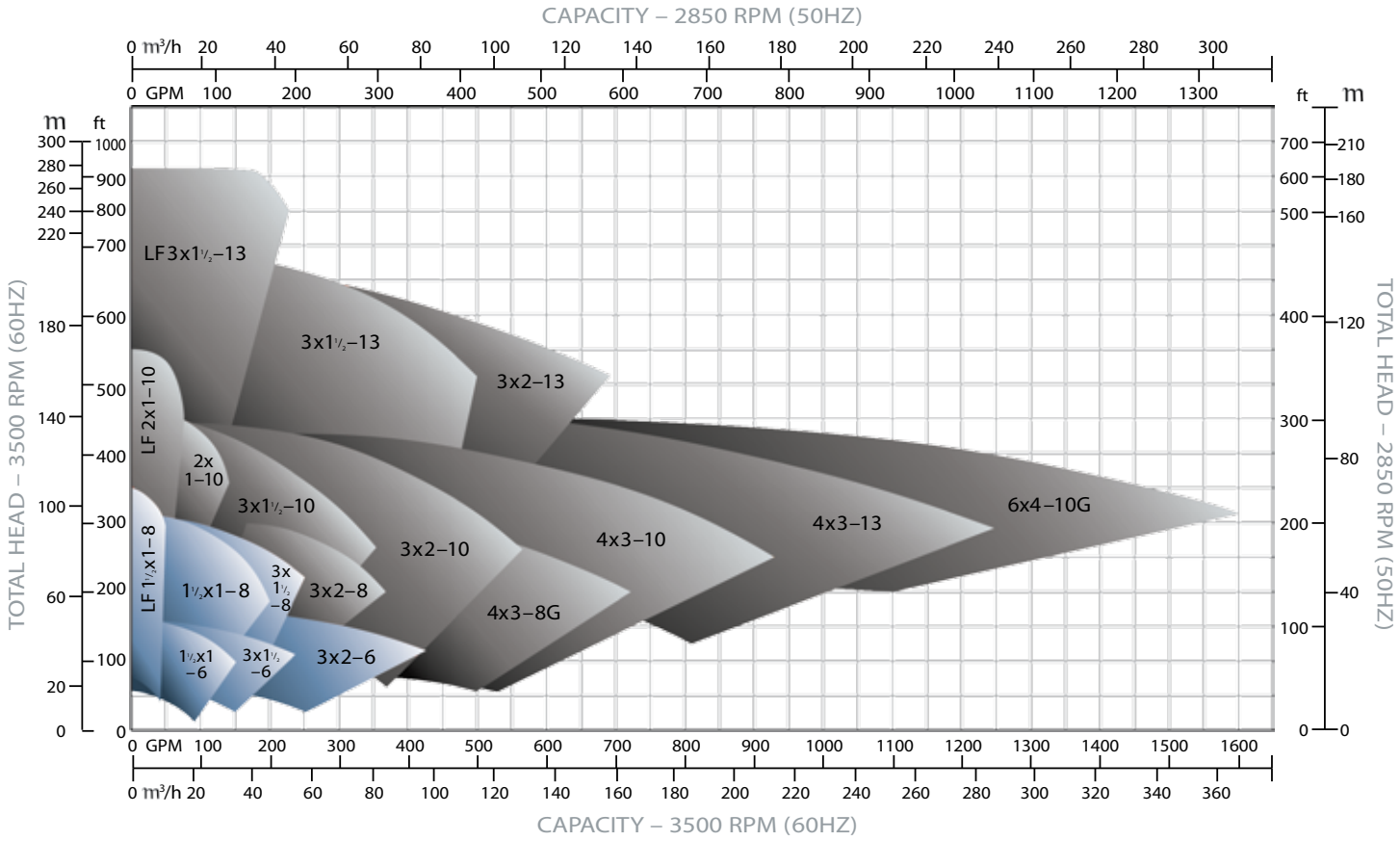
5 SPECIAL SURFACE PREPARATION

Griswold offers a variety of optional surface-preparation processes for extended corrosion protection and contaminant-free pumping:

COMPARE
811 ☑
other brands ☐

- Electro-Polishing
- Passivation
- Hard-Metal Coatings
- Fusion-Bonded, Epoxy-Coated Power End
- Special Paint Systems

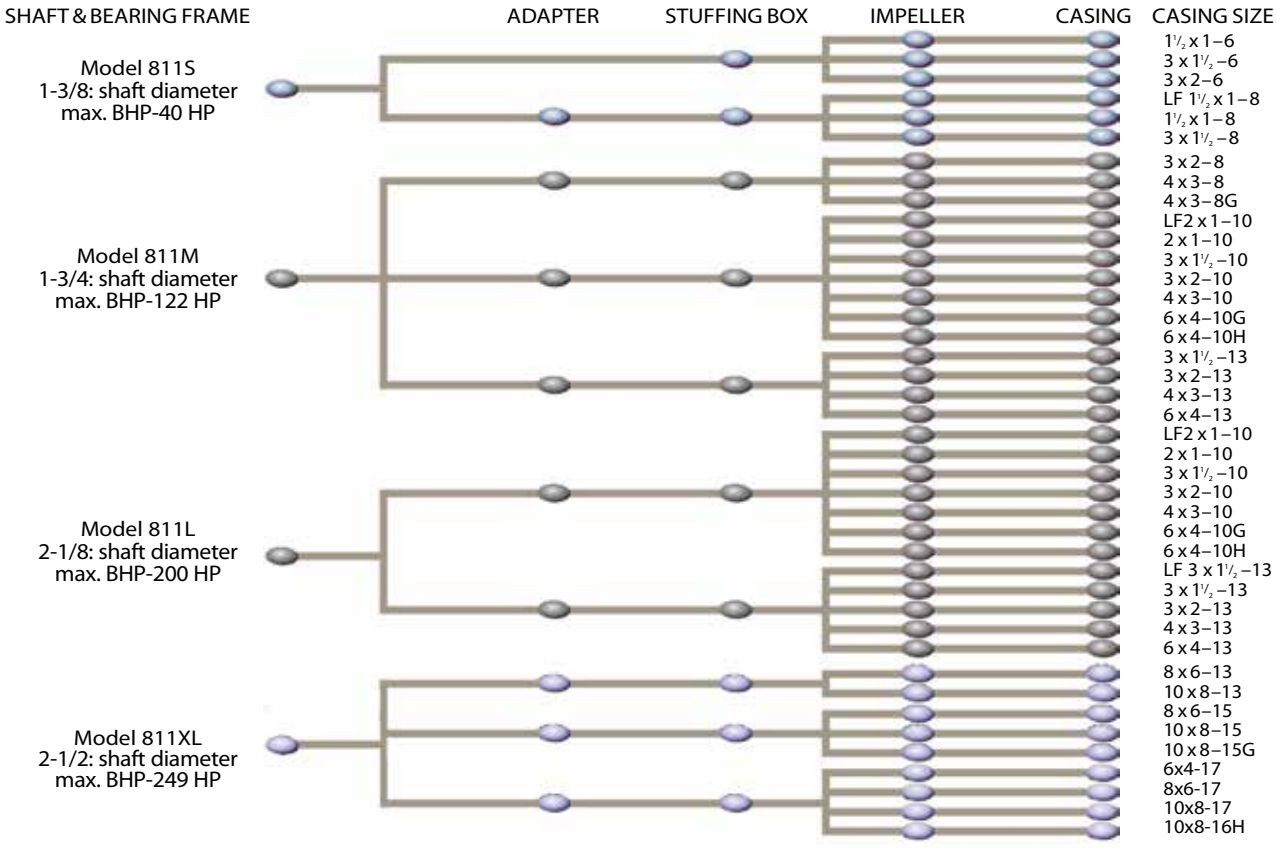
3500 2850 RPM Performance Curve



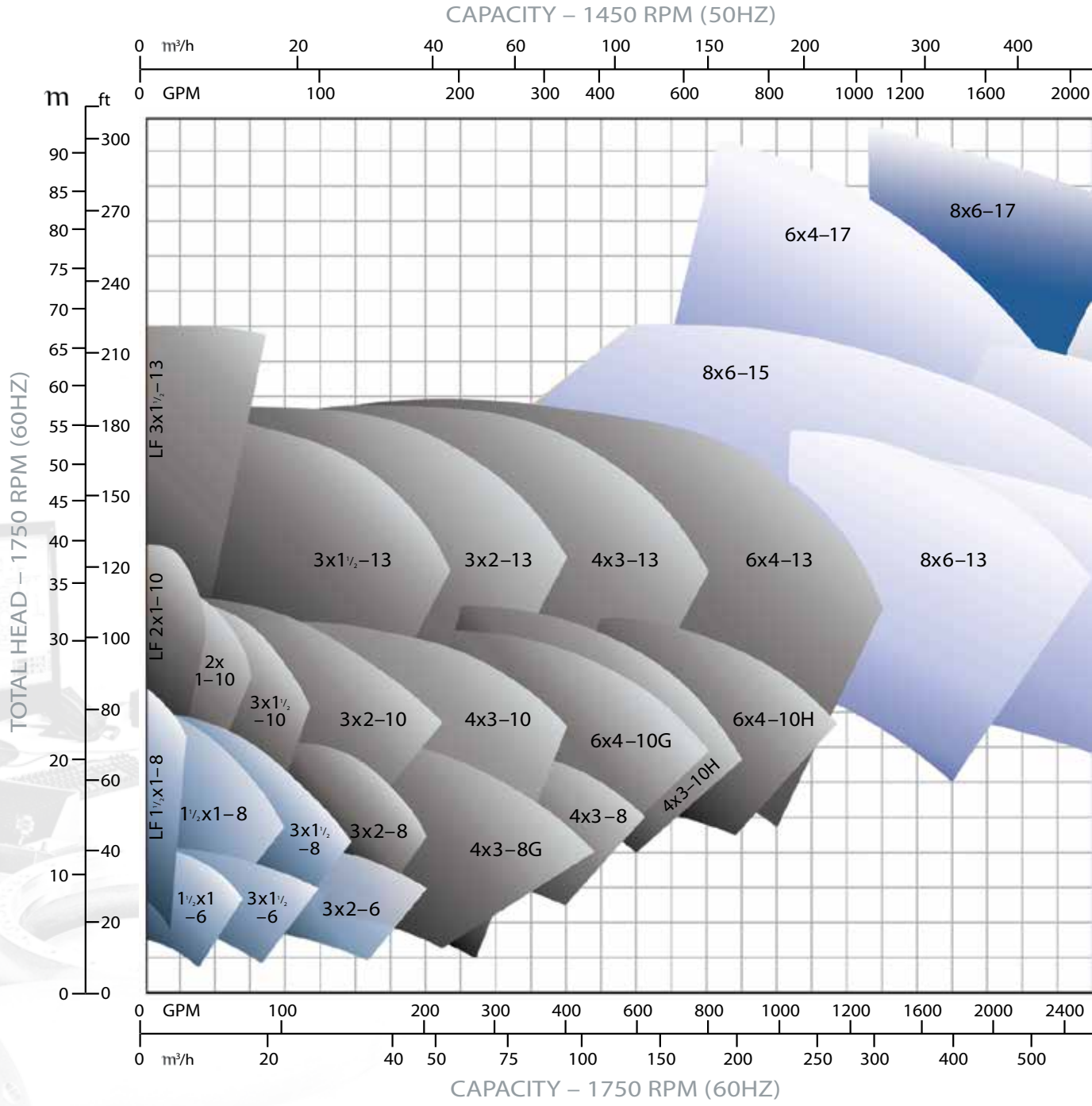
Construction Details

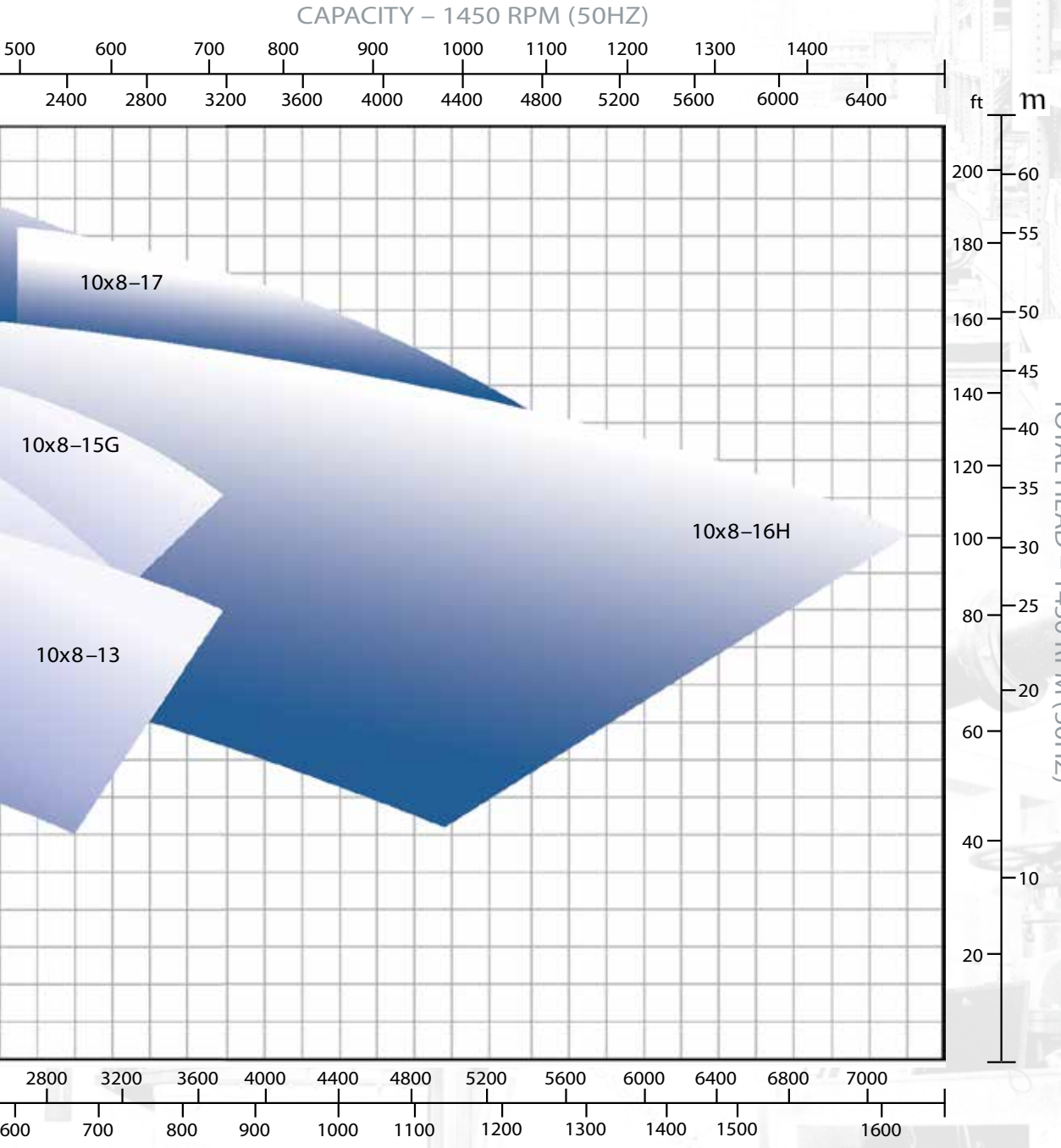
Griswold 811 Model		Model 811 S	Model 811 M	Model 811 L	Model 811 XL
Volute		Single			
Nominal Case Thickness (in.)		3/8	1/2 (6x4–13A80 = 5/8)		9/16
Corrosive Allowance @ Max.		1/8			
Working Pressure		Limits set by ANSI B16.5			
Max. Working (psig)		See Pressure/Temp. charts on following page			
Hydro Test PSIG @ 100°F		150% of working pressure at 100°F (38°C)			
Max. Liquid Temp.		350°F (177°C) without Cooling / 500°F (260°C) with Cooling			
	At Coupling (in.)	7/8	1-1/8	1-7/8	2-3/8
Shaft	Sleeve Dia. Under Seal (in.)	1-3/8	1-3/4	2-1/8	2-1/2
Diameter	Under Impeller (in.)	3/4	1	1-1/4	1-1/2
	Under Sleeve (in.)	1-1/8	1-1/2	1-7/8	2
	Overhang (in.)	6 1/8	8-3/8	8-3/8	9-31/32
	Radial	SKF 6207	SKF 6309	SKF 6311	SKF 6313
Bearings	Thrust	SKF 5306 A/C3	SKF 5309 A/C3	SKF 7310 BECBM	SKF 5313 A/C3
	Bearing Span	4-1/8	6-3/4	6-7/8	9-1/4
Mechanical Seal Size (in.)		1-3/8	1-3/4	2-1/8	2-1/2
Stuffing Box	I.D. (in.)	2	2-1/2	2-7/8	3-3/8
Standard Bore	Depth (in.)	2-1/8	2-5/8		3
	Distance End of Box to Nearest Obstruction	2-1/2	2-13/16		2-15/16
Stuffing Box	I.D. (in.)	2-7/8	3-1/2	3-7/8	4-1/2
Large Bore	Depth (in.)	2-1/8	2-5/8		3
	Distance End of Box to Nearest Obstruction	2-3/16	2-13/16		2-17/20
Lantern Ring Width (in.)		7/16	5/8		5/8

Component Interchangeability



1750 1450 RPM Performance Curve

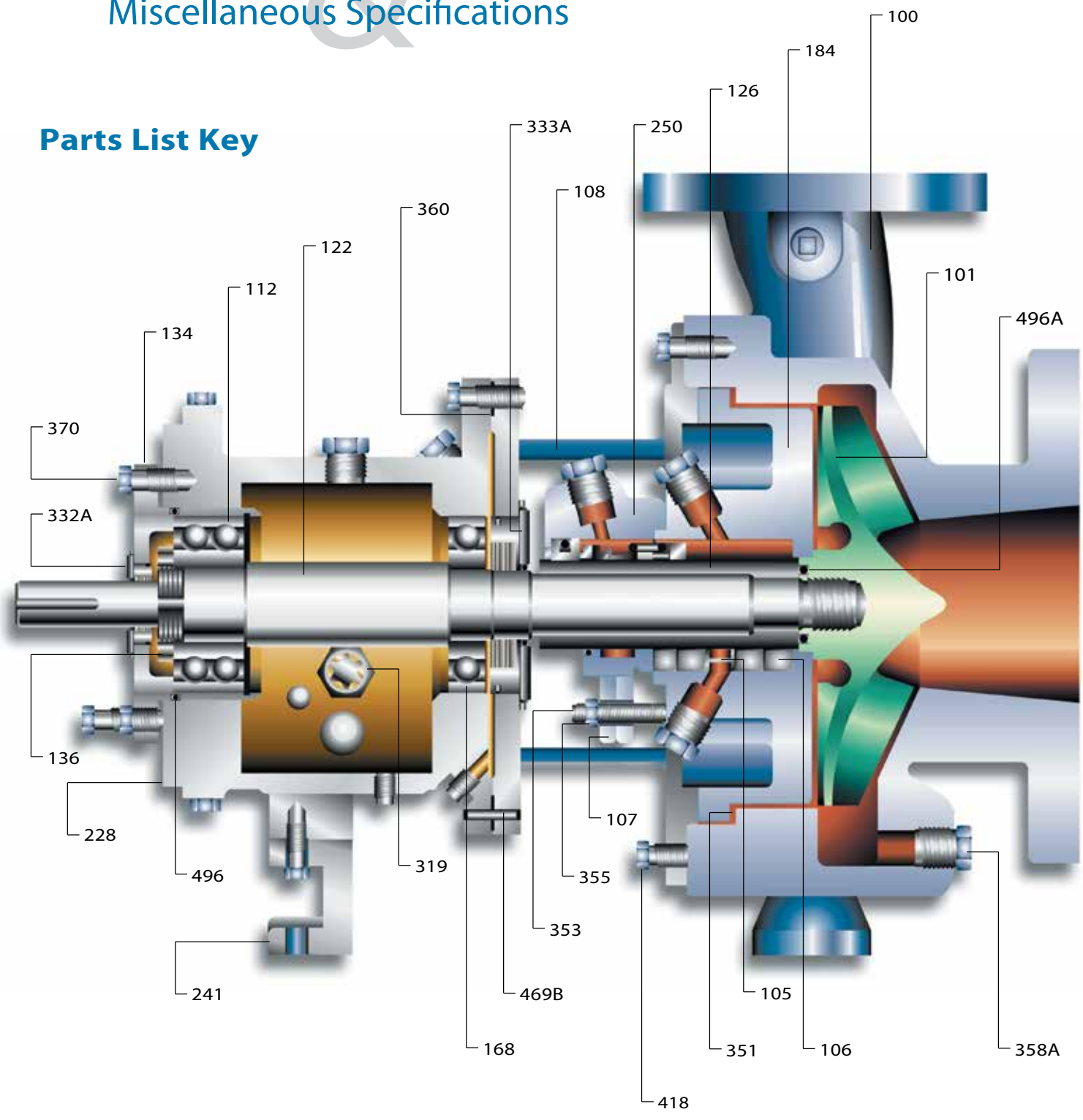



CAPACITY – 1450 RPM (50HZ)
500 600 700 800 900 1000 1100 1200 1300 1400
2400 2800 3200 3600 4000 4400 4800 5200 5600 6000 6400
ft
m
200 180 160 140 120 100 80 60 40 20
60 55 50 45 40 35 30 25 20 10
TOTAL HEAD – 1450 RPM (50HZ)
10x8–17
10x8–15G
10x8–16H
10x8–13
2800 3200 3600 4000 4400 4800 5200 5600 6000 6400 6800 7000
600 700 800 900 1000 1100 1200 1300 1400 1500 1600
CAPACITY – 1750 RPM (60HZ)

811

Parts, Materials, & Miscellaneous Specifications

Parts List Key



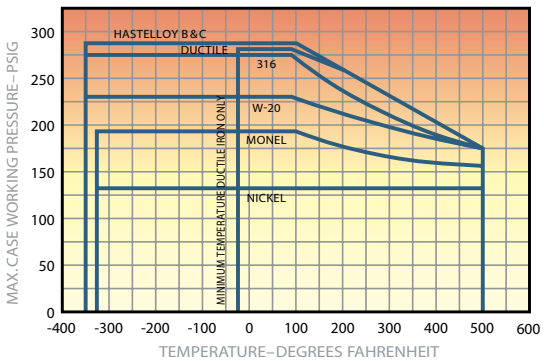
Parts and Material Composition

ITEM NO.	REQ'D PER PUMP	PART NAME	ALL DUCTILE IRON	ALL 316SS	ALL ALLOY 20	ALL CD4MCu
100	1	Casing	DI	316SS	Alloy 20	CD4MCu
101	1	Impeller	DI	316SS	Alloy 20	CD4MCu
105	1	Lantern Ring	Glass-Filled TFE			
106	1	Packing	SIL C-8201 Acid Rest.		TFE	
107	1	Packing Gland	316SS		Alloy 20	
108	1	Frame Adapter	Ductile Iron			
112	1	Outboard (Thrust) Bearing	Double-Row Angular Contact**			
122	1	Shaft - Less Sleeve (Optional)	316SS		Alloy 20	
122	1	Shaft - With Sleeve	SAE4140			
126	1	Shaft Sleeve	316SS		Alloy 20	
134	1	Bearing Housing	Cast Iron			
136	1	Lock Nut / Lock Washer	Steel			
168	1	Inboard (Radial) Bearing	Single-Row Deep Groove			
184	1	Stuffing Box	DI	316SS	Alloy 20	CD4MCu
228	1	Frame	Cast Iron (Ductile for Small Frame)			
241	1	Frame Foot	Cast Iron			
250	1	Gland	316SS		Alloy 20	
319	1	Sight-Oil Gauge	Cad. Plated			
332A	1	Labyrinth Oil Seal (Outboard)	Bronze (Optional Carbon Filled Teflon)			
333A	1	Labyrinth Oil Seal (Inboard)	Bronze (Optional Carbon-Filled Teflon®)			
351	1	Casing Gasket	Aramid Fiber with EPDM Rubber			
353	4	Gland Stud	316SS			
355	4	Gland Nut	304SS			
357K	2	Hex Nut	304SS			
358A	1	Casing Drain Plug (Optional)	Steel	316SS	Alloy 20	316SS
360	1	"Gasket, Frame-to-Adapter"	Vellumoid			
360A	1	"Gasket, Bearing-End Cover"	Vellumoid (811XL Only)			
370	3	Brg. Hsg.Hex Bolt	Steel			
418	3	Cas. Jack Screw	Steel			
469B	2	Dowel Pin	Steel			
496	1	Brg. Hsg. O-Ring	Buna Rubber			
496A	1	Impeller O-Ring	Glass-Filled TFE			

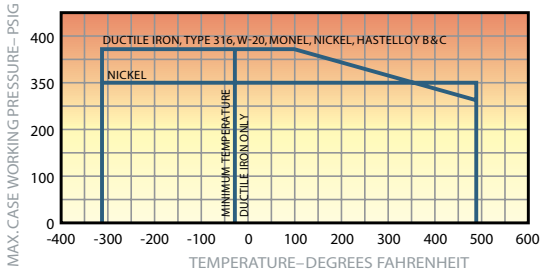
** 811L Power End features Duplex Angular Contact.
Additional materials available upon request.

Pressure and Temperature Capability

MAXIMUM WORKING PRESSURE LIMITS
MODELS 811S, 811M, 811L; CLASS 150 FLANGES

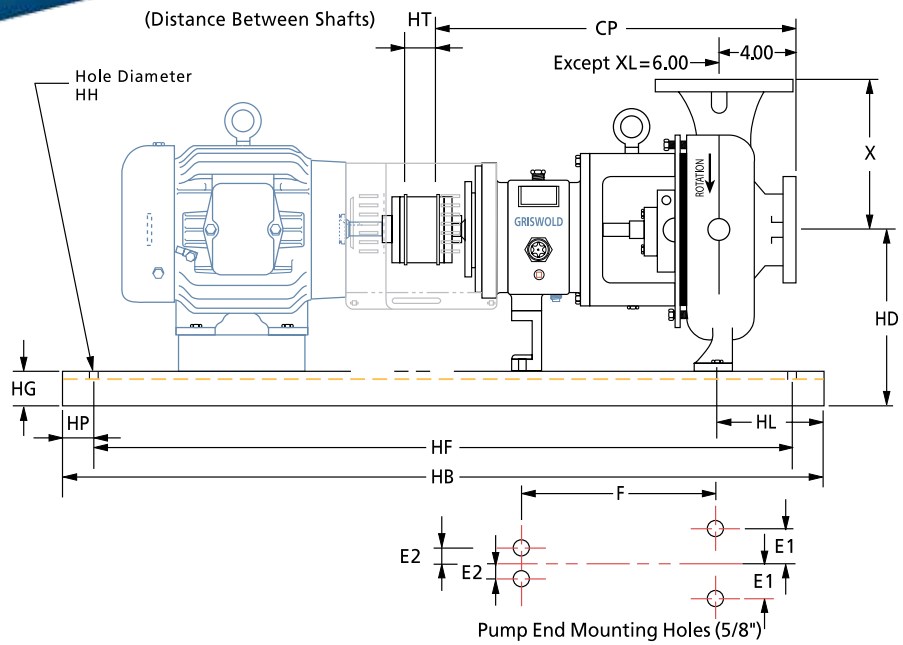


MAXIMUM WORKING PRESSURE LIMITS
MODELS 811S, 811M, 811L; CLASS 300 FLANGES



Note: Final selections must be based on temperature and pressure limits given in general data section.

Dimensional & BHP Casting Data



Small Pump End and Baseplate

PUMP-END DIMENSIONS										
	Pump Size	ANSI Designation	Discharge	Suction	D	X	CP	E1	E2	F
SMALL	1-1/2 x 1 - 6	AA	1	1-1/2	5-1/4	6-1/2	17-1/2	3	0	7-1/2
	3 x 1-1/2 - 6	AB	1-1/2	3	5-1/4	6-1/2	17-1/2	3	0	7-1/2
	3 x 2 - 6	AC	2	3	5-1/4	6-1/2	17-1/2	3	0	7-1/2
	1-1/2 x 1 - 8	AA	1	1-1/2	5-1/4	6-1/2	17-1/2	3	0	7-1/2
	LF 1-1/2 x 1 - 8	AA	1	1-1/2	5-1/4	6-1/2	17-1/2	3	0	7-1/2
	3 x 1-1/2 - 8	AB	1-1/2	3	5-1/4	6-1/2	17-1/2	3	0	7-1/2

BASEPLATE DIMENSIONS										
Max NEMA Frame	Baseplate number	HA**	HB	HT Min	HD	HE	HF	HG Max	HH	HL	HP
184T	139	12/15	39	3.5	9	4.5	36.5	3.75	0.75	4.5	1-1/4
256T	148	15/18	48	3.5	10.5	6	45.5	4.13	0.75	4.5	1-1/4
326TS	153	18/21	53	3.5	12.88	7.5	50.5	4.75	0.75	4.5	1-1/4

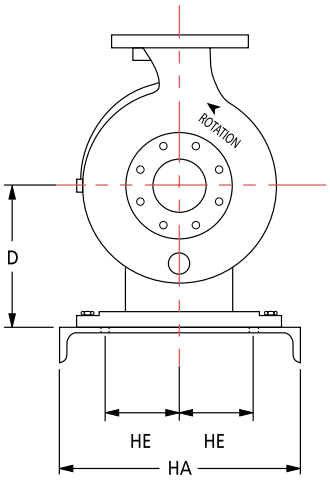
Medium and Large Pump End and Baseplate

PUMP-END DIMENSIONS										
	Pump Size	ANSI Designation	Discharge	Suction	D	X	CP	E1	E2	F
MEDIUM	3 x 2 - 8	A60	2	3	8-1/4	9-1/2	23-1/2	4-7/8	3-5/8	12-1/2
	4 x 3 - 8	A70	3	4	8-1/4	11	23-1/2	4-7/8	3-5/8	12-1/2
	4 x 3 - 8G	A70	3	4	8-1/4	11	23-1/2	4-7/8	3-5/8	12-1/2
MEDIUM OR LARGE (LF 3 x 1-1/2 - 13 available with large frame only)	2 x 1 - 10	A05	1	2	8-1/4	8-1/2	23-1/2	4-7/8	3-5/8	12-1/2
	LF 2 x 1 - 10	A05	1	2	8-1/4	8-1/2	23-1/2	4-7/8	3-5/8	12-1/2
	3 x 1-1/2 - 10	A50	1-1/2	3	8-1/4	8-1/2	23-1/2	4-7/8	3-5/8	12-1/2
	3 x 2 - 10	A60	2	3	8-1/4	9-1/2	23-1/2	4-7/8	3-5/8	12-1/2
	4 x 3 -10	A70	3	4	8-1/4	11	23-1/2	4-7/8	3-5/8	12-1/2
	6 x 4 - 10G	A80	4	6	10	13-1/2	23-1/2	4-7/8	3-5/8	12-1/2
	6 x 4 - 10H	A80	4	6	10	13-1/2	23-1/2	4-7/8	3-5/8	12-1/2
	3 x 1-1/2 - 13	A20	1-1/2	3	10	10-1/2	23-1/2	4-7/8	3-5/8	12-1/2
	LF3x 1-1/2 - 13	A20	1-1/2	3	10	10-1/2	23-1/2	4-7/8	3-5/8	12-1/2
	3 x 2 - 13	A30	2	3	10	11-1/2	23-1/2	4-7/8	3-5/8	12-1/2
	4 x 3 - 13	A40	3	4	10	12-1/2	23-1/2	4-7/8	3-5/8	12-1/2
	6 x 4 -13	A80	4	6	10	13-1/2	23-1/2	4-7/8	3-5/8	12-1/2

BASEPLATE DIMENSIONS											
Max NEMA Frame	Baseplate number	HA**	HB	HT Min	If pump D=8.25 HD	If pump D=10 HD	HE	HF	HG Max	HH	HL	HP
184T	245	12/15	45	3.5	12	13.75	4.5	42.5	3.75	0.75	4.5	1-1/4
215T	252	15/18	52	3.5	12.38	14.13	6	49.5	4.13	0.75	4.5	1-1/4
286T	258	18/21	58	3.5	13	14.75	7.5	55.5	4.75	1	4.5	1-1/4
365T	264	18/21	64	3.5	13.88	14.75	7.5	61.5	4.75	1	4.5	1-1/4
405TS	268	24/26	68	3.5	14.88	14.88	9.5	65.5	4.75	1	4.5	1-1/4
449TS	280	24/26	80	3.5	15.88	15.88	9.5	77.5	4.75	1	4.5	1-1/4

* Flange drilling is standard ANSI 150-lb, flat face. All LF pumps use 15-lb raised face flanges, except the LF3x1-1/2-13, which uses 300-lb raised face flanges.

** HA dimensions represent Griswold's standard construction/ANSI maximum width, respectively.



PUMP-END DIMENSIONS										
	Pump Size	ANSI Designation	Discharge	Suction	D	X	CP	E1	E2	F
X-LARGE	8 x 6 -13	A90	6	8	14-1/2	16	33-7/8	8	4.5	18-3/4
	10 x 8 - 13	A100	8	10	14-1/2	18	33-7/8	8	4.5	18-3/4
	8 x 6 - 15	A110	6	8	14-1/2	18	33-7/8	8	4.5	18-3/4
	10 x 8 - 15	A120	8	10	14-1/2	19	33-7/8	8	4.5	18-3/4
	10 x 8 - 15G	A120	8	10	14-1/2	19	33-7/8	8	4.5	18-3/4
	6 x 4-17	A105	4	6	14-1/2	16	33-7/8	8	4.5	18-3/4
	8 x 6-17	A110	6	8	14-1/2	18	33-7/8	8	4.5	18-3/4
	10 x 8-17	A120	8	10	14-1/2	19	33-7/8	8	4.5	18-3/4
	10 x 8-16H	A120	8	10	14-1/2	19	33-7/8	8	4.5	18-3/4

BASEPLATE DIMENSIONS											
Max NEMA Frame	Baseplate number	HA**	HB	HT Min	HD	HE	HF	HG Max	HH	HL	HP
286T	368	24/26	68	5	19.25	9.5	65.5	4.75	1	6.5	1-1/4
405T	380	24/26	80	5	19.25	9.5	77.5	4.75	1	6.5	1-1/4
449T	398	24/26	98	5	19.25	9.5	95.5	4.75	1	6.5	1-1/4

* Flange drilling is standard ANSI 150-lb flat face. All LF pumps use 150-lb raised-face flanges, except the LF 3 x 1-1/2 - 13, which uses 300-lb raised-face flanges.

** HA dimensions represent Griswold's standard construction/ANSI maximum width, respectively.

Tapped Openings (NPT)

PURPOSE	NUMBER OF TAPS	TAP SIZE			
		811S	811M	811L	811XL
Lantern-Ring Connection*	2	1/4	3/8	3/8	3/8
Frame-Adapter Drain*	1		SLOT	SLOT	SLOT
Casing Drain**	1	1/2	1/2	1/2	RTF
Alternate Casing Drain	1	1/2	1/2	1/2	1/2
Bearing-Frame Cooling*	2	1/2 & 1	1/2 & 1	1/2 & 1	1/2 & 1
Discharge-Gage Connection**	1	1/4	1/4	1/4	1/4
Suction-Gage Connection	1	1/4	3/8	3/8	3/8
Stuffing-Box Circulating Line**	1	1/4	3/8	3/8	3/8
Quench- Gland Connection*	2	1/4	1/4	1/4	1/4

* Indicates items furnished standard.

** Standard in Ductile Iron and Stainless Steel; optional in other materials.

Materials/Casting Specs

DASH	MATERIAL	CASTING SPECIFICATION
N6	Ductile Iron	ASTM A395 Grade 65-45-15
91	316SS	ASTM A351 Grade CF8M
20	Alloy 20	ASTM A351 Grade CN7M
X4	Duplex	ASTM A995 Grade 1B (CD4MCuN)

B.H.P. Limits

R.P.M.	MODEL			
	811S	811M	811L	811XL
3560	40.0	122.0	200.0	
2900	32.7	99.5	165.0	
1780	20.0	61.0	100.0	340.0
1450	16.3	49.7	81.5	203.0
1180	13.3	40.5	66.4	165.0
880	9.9	30.2	49.5	123.0

Where Innovation Flows

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