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Goulds Pumps

Goulds Model JC

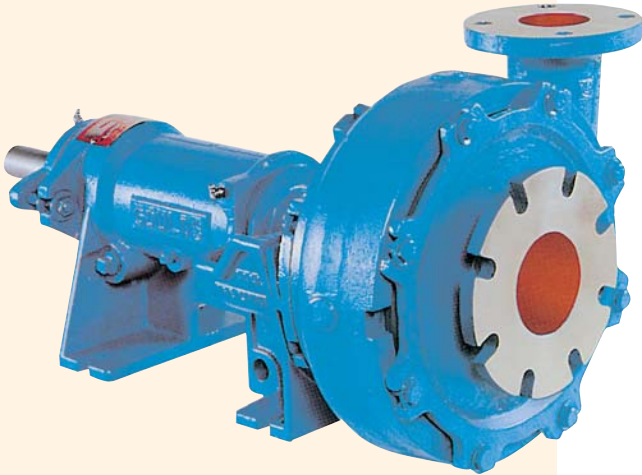
Slurry Pump



Engineered for life

motralec

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Thousands of installations attest to the remarkable versatility of the Model JC Slurry pump. Fifteen sizes are available in a wide range of materials and configurations, making the JC ideal for most medium-duty abrasive and/or corrosive slurry services. Plus, it's designed for extreme ease of maintenance and long hours of reliable operation.



Designed for Handling a Wide Range of Corrosive/Abrasive Slurries

- ◆ Capacities to 7,000 GPM (1,600 m³/h)
- ◆ Heads to 240 feet (73 m)
- ◆ Temperatures to 250°F (120°C)
- ◆ Pressures to 127 PSIG (876 kPa)
- ◆ Spherical solids to 2¹/₄ inches (57 mm)

Design Features

- ◆ **Extra-Thick Wet End Components** — For extended wear life.
- ◆ **Replaceable Wear Liner** — Low maintenance cost.
- ◆ **Heavy-Duty Power End** — Increased mean time between failures.
- ◆ **External Impeller Adjustment** — Maintains original efficiency; simple and fast.
- ◆ **Maximum Parts Interchangeability** — Entire line uses just five power ends.
- ◆ **Sealing Flexibility** — Choice of packing, mechanical seals or Dynamic Seal.

Services

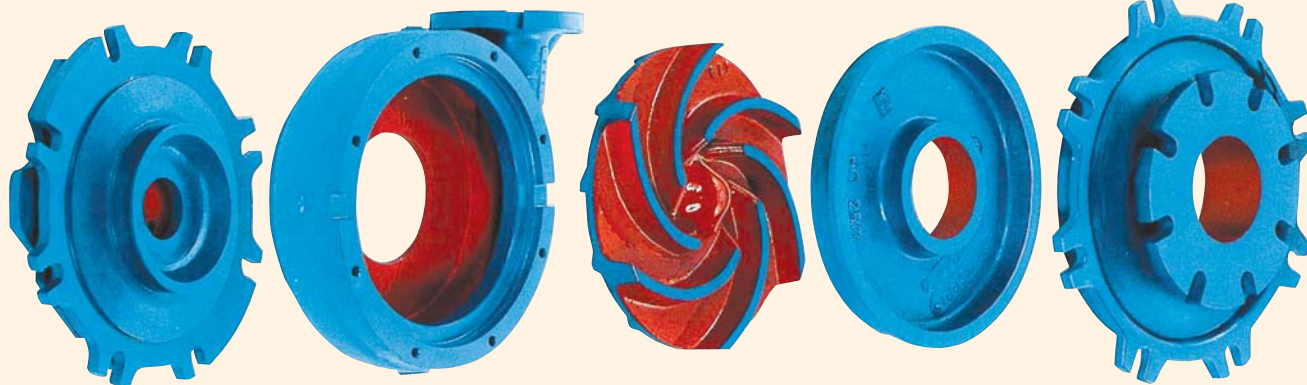
- ◆ Wet scrubber systems
- ◆ Waste sludge
- ◆ Fracing slurries
- ◆ Paper mill wastes and liquors
- ◆ Clay and sand slurries
- ◆ Dirty water
- ◆ Kaolin clay
- ◆ Carbon slurry
- ◆ Lime mud
- ◆ Precipitated CaCO₃

Designed for Long Life, Reliable Operation

Pump End

Wet-end components feature extra metal thickness for extended wear. Replaceable suction cover liner takes all wear on suction side of casing; simplifies maintenance.

Efficient slurry design impeller for long life, optimum performance. Components are fully-machined for positive alignment.



Stuffing Box Cover

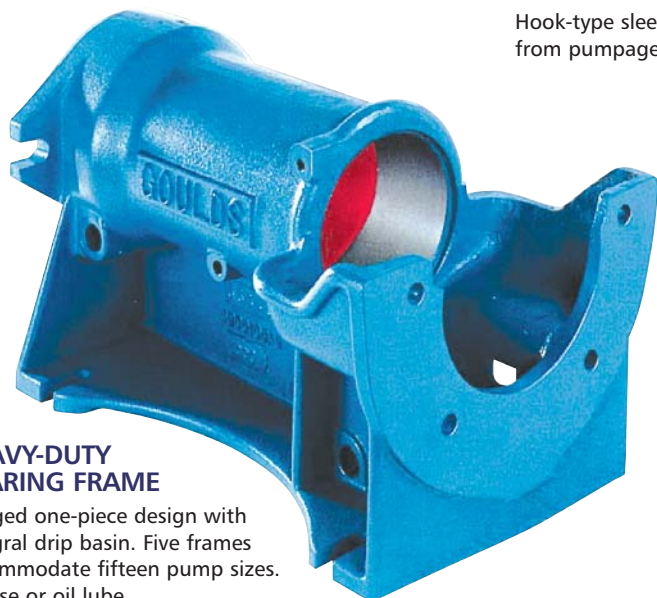
Casing

Impeller

Suction Cover Liner

Suction Cover

Power End



HEAVY-DUTY BEARING FRAME

Rugged one-piece design with integral drip basin. Five frames accommodate fifteen pump sizes. Grease or oil lube.

REPLACEABLE SHAFT SLEEVE

Hook-type sleeve protects shaft from pumpage.



EXTERNAL IMPELLER ADJUSTMENT

Original performance easily maintained by adjustable jacking screws without disassembly of pump.



RUGGED SHAFT ASSEMBLY

Designed for continuous service under the most severe operating conditions. Shaft designed for minimum deflection at maximum loads.

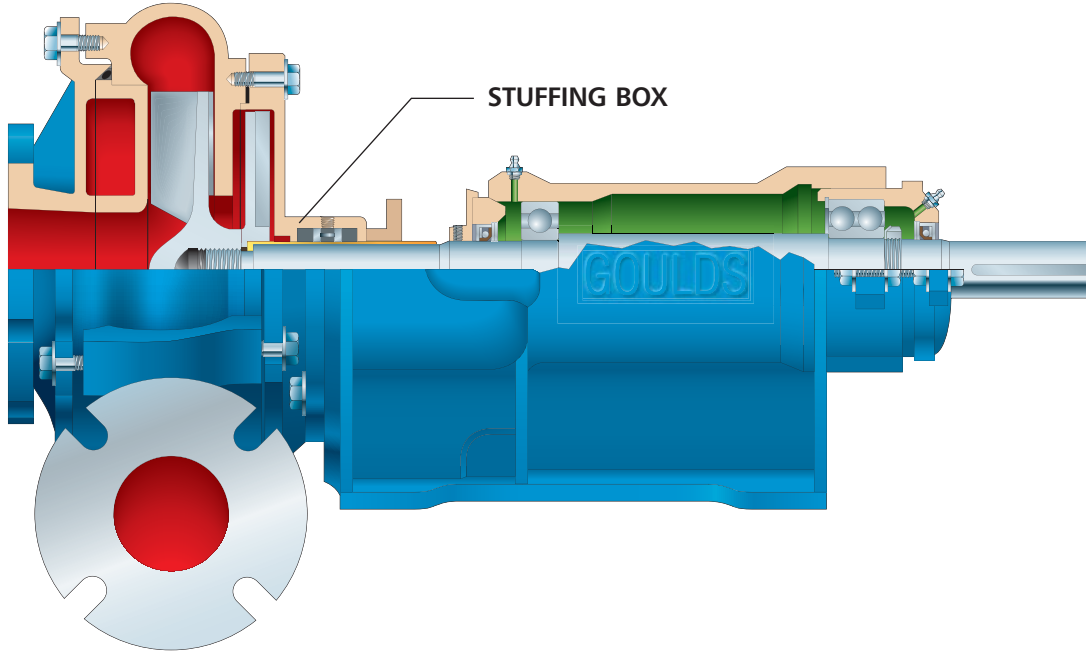
Sealing Flexibility

Dynamic Seal

For Elimination of Mechanical Seal Problems; Reduced Maintenance

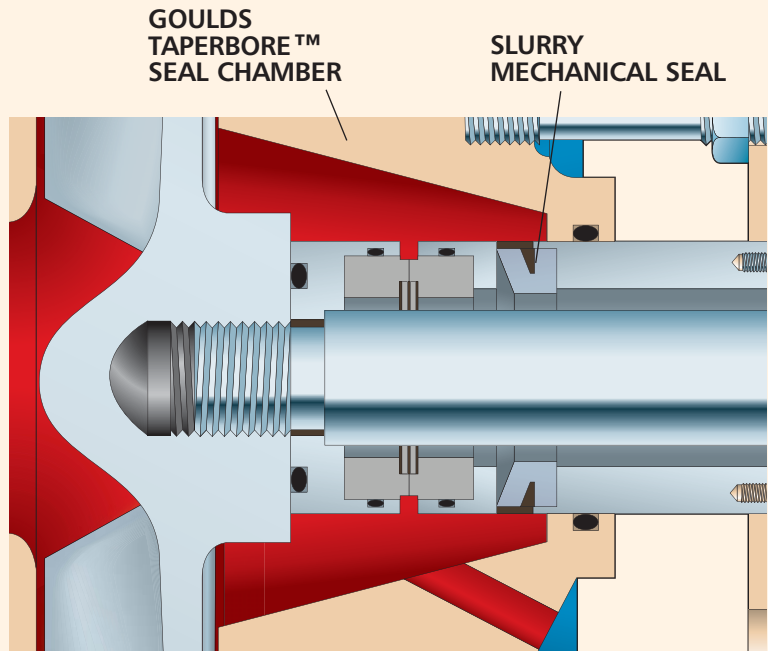
Goulds Dynamic Seal option is ideally suited to handle the tough applications where mechanical seals or packing require outside flush and constant/costly attention. An expeller between the stuffing box cover and impeller pumps liquid from the stuffing box.

For most applications, external seal water is not required... eliminating leakage, pumpage contamination, product dilution and problems associated with piping from a remote source.



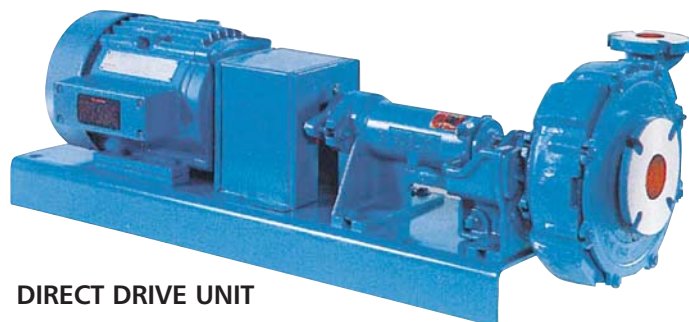
Mechanical Seal

Goulds offers a variety of mechanical seals for applications flexibility including special slurry seals for tough services. In addition, a special enlarged seal chamber is offered for improved lubrication and cooling of the mechanical seal. The tapered throat keeps solids away from seal faces and from building up in the chamber. Seal life is remarkably extended.



Application Flexibility

The Model JC is extremely versatile. A variety of drive arrangements can be supplied for application flexibility.



DIRECT DRIVE UNIT



OVERHEAD BELT DRIVE

Also available mounted side-by-side.

For Sump Pumping Applications

When the Model JC's performance and features are required for sump services, you can choose either a Model JCU submersible or Model VJC cantilever for extended service in abrasive slurry applications.

Model JCU Submersible Slurry Pump

- ◆ Capacities to 4,000 GPM (910 m³/h)
- ◆ Heads to 210 feet (65 m)
- ◆ Temperatures to 140°F (60°C)
- ◆ Solids to 2 inches (50 mm)

Features

- Adjustable impeller clearance
- Permanently lubricated bearings
- Automatic reset thermostats
- Tandem mechanical seals
- Optional slide rail assembly

Model VJC Vertical Cantilever Slurry Pump

- ◆ Capacities to 7,500 GPM (1,703 m³/h)
- ◆ Heads to 260 feet (79 m)
- ◆ Temperatures to 200°F (93°C)
- ◆ Pit depths to 11 feet (3.4 m)
- ◆ Solids to 3⁷/₈ inches (98 mm)

Features

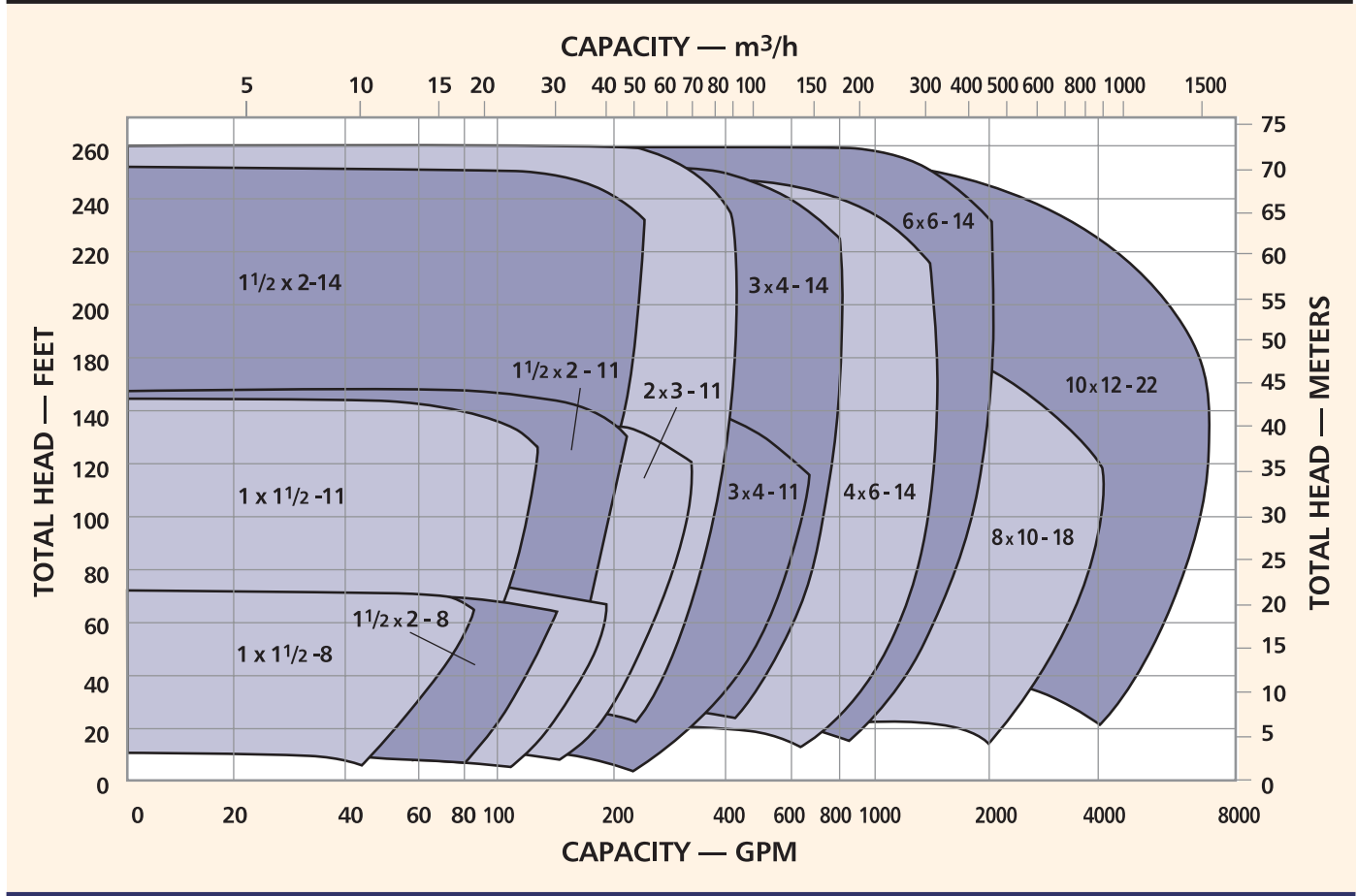
- Cantilever design
- External impeller adjustment
- Heavy-duty bearings
- Bottom suction
- Removable suction liner



Model JCU

Model VJC

Hydraulic Coverage



Proven Performance

Goulds Model JC is in use by many industries on the most demanding slurry pump applications. The versatility of the product combined with rugged design and ease of maintenance have satisfied thousands of users' requirements for a pump that has it all.



Materials of Construction

Item Number	Part Name	MATERIAL					
		Cast Iron	Cast Iron HC600 Impeller and Suction Cover Liner	Cast Iron with 316SS Impeller	HC600	316SS	CD4MCu
100	Casing	Cast Iron	Cast Iron	Cast Iron	HC600	316SS	CD4MCu
100B	Suction Cover Liner	Cast Iron	HC600	Cast Iron	HC600	316SS	CD4MCu
101	Impeller	Cast Iron	HC600	316SS	HC600	316SS	CD4MCu
105	Lantern Ring	Teflon*					
106	Packing	Polymer				316SS	CD4MCu
107	Gland	Cast Iron					
112	Thrust Bearing	Steel					
122	Shaft	Steel 1045					
123	Deflector	Cast Iron					
126	Shaft Sleeve	416SS				316SS	C-20
134	Bearing Housing	Cast Iron					
168	Radial Bearing	Steel					
182	Suction Cover	Cast Iron				316SS	CD4MCu
184	Stuffing Box Cover	Cast Iron †				316SS	CD4MCu
184A	TaperBore™ Seal Chamber	Cast Iron				316SS	CD4MCu
332	Grease Seal (Outboard)	Buna-N					
333	Grease Seal (Inboard)	Buna-N					
228	Bearing Frame	Cast Iron					
262	Expeller	HC600				CD4MCu	
353	Mechanical Seal	As Required					
351	Gasket	Buna-N					
412	O-ring, Suction Cover to Casing	Buna-N					

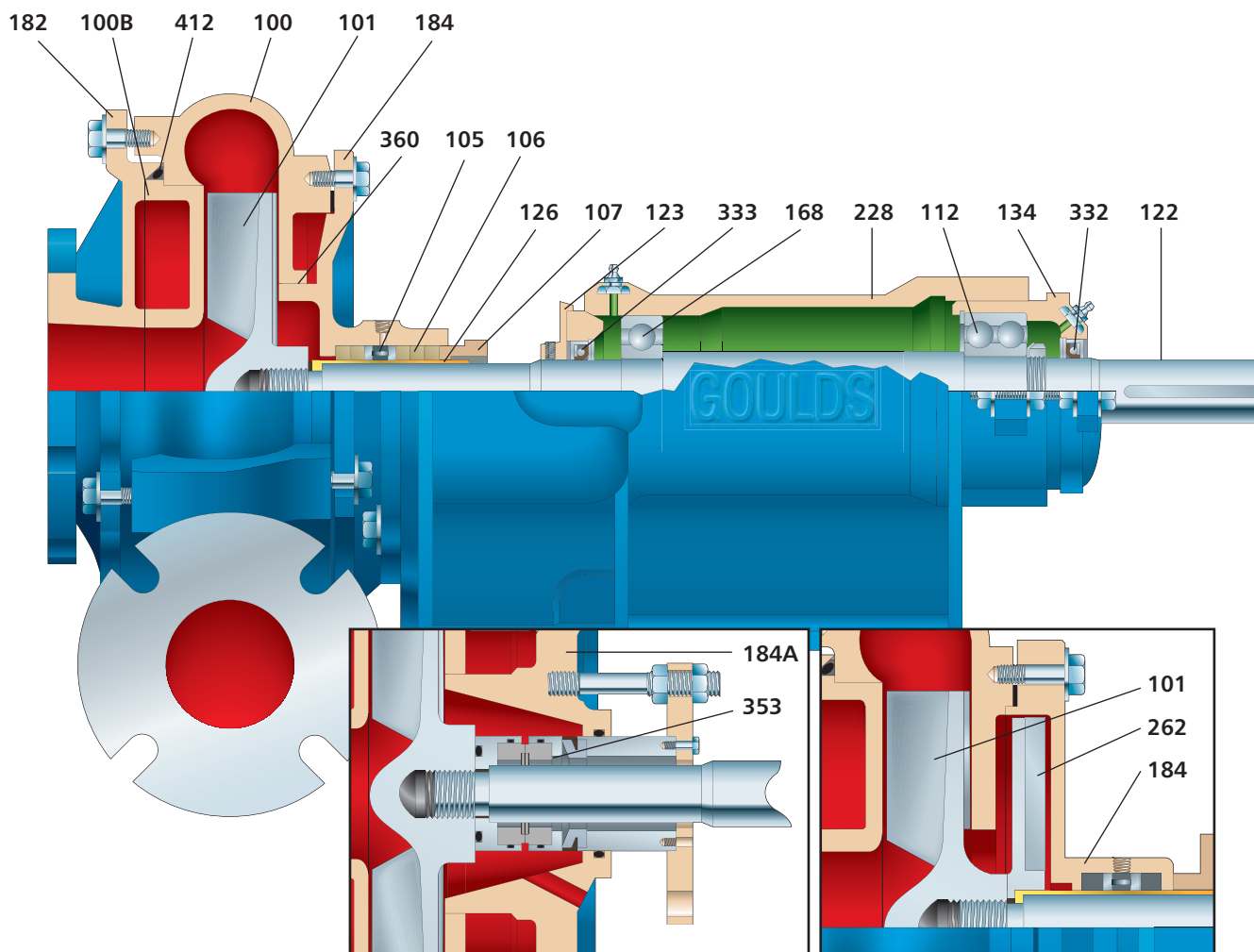
* E.I. DuPont® Trademark

† HC600 on HC600 Dynamic Seal.

Construction Details All dimensions in inches and (mm).

Pump Size	Frame	PUMP						STUFFING BOX						
		Max. Casing Thickness	Max. Solids Size	Working Pressure Cast Iron	Working Pressure HC600 & 316SS	Max HP (kW)	Shaft Dia. at Coupling	Bore	Depth	Sleeve OD	Shaft Dia. Under Sleeve	Packing Size	No. of Rings	Seal Water Req'd
1 x 1 1/2 - 8	1J	.375 (10)	.5 (12)	110 PSIG (758 kPa)	127 PSIG (876 kPa)	25 (19)	1.375 (35)	2.625 (67)	2.938 (75)	1.875 (48)	1.437 (37)	3/8 (9.5)	5	3 GPH
1 x 1 1/2 - 11			.75 (19)											
1 1/2 x 2 - 8		.56 (15)	.875 (22)											
1 1/2 x 2 - 11			.75 (19)											
2 x 3 - 8														
2 x 3 - 11	2J	.375 (10)	.75 (19)			60 (45)	1.625 (41)	2.875 (73)	2.938 (75)	2.125 (54)	1.75 (45)	3/8 (9.5)	5	3 GPH
1 1/2 x 2 - 14		.56 (15)	.875 (22)											
2 x 3 - 14	3J	.62 (16)	1.125 (28)			125 (93)	2.125 (54)	3.5 (89)	2.938 (75)	2.75 (70)	2.25 (57)	3/8 (9.5)	5	4 GPH
3 x 4 - 11			1.5 (38)											
3 x 4 - 14			4J											
4 x 6 - 14	200 (150)	2.625 (67)				4.375 (111)	3.75 (95)	3.375 (86)	2.94 (75)	1/2 (13)	5	7 GPH		
6 x 6 - 14 (LS)			400 (300)	3.00 (76)	5.375 (137)								4.5 (245)	4.125 (105)
6 x 6 - 14 (HS)	5J	.75 (19)				2.25 (57)								
8 x 10 - 18			5J	.75 (19)	2.25 (57)									
10 x 12 - 22	5J	.75 (19)				2.25 (57)								

Sectional View Model JC



Mechanical Seal with TaperBore™
PLUS Seal Chamber

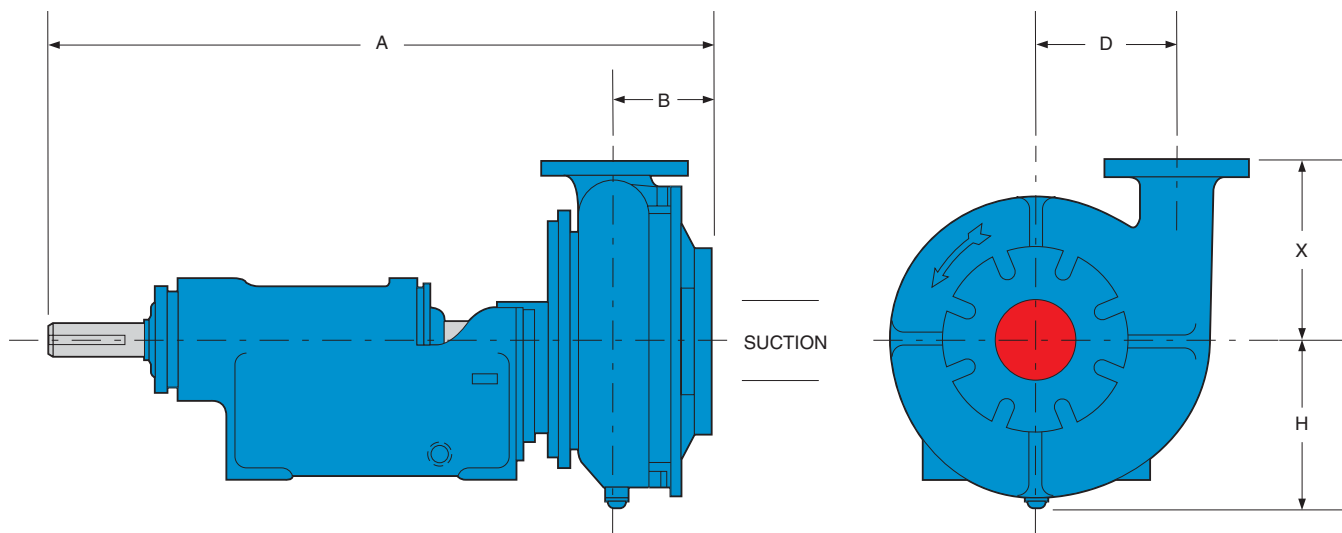
Dynamic Seal

Materials of Construction

MATERIAL	SPECIFICATION
Cast Iron	ASTM A48
HC600	ASTM A532-Class A Hardened
316SS	AISI 316 or ASTM A743 CF8M
416SS	AISI 416

MATERIAL	SPECIFICATION
CD4MCu	ASTM A743 CD4MCu
C-20	ASTM A296 CN7M
Polymer	Graphitized Polymer Fiber
Teflon®	Glass-filled TFE

Dimensions Model JC All dimensions in inches and (mm). Not to be used for construction.



DIMENSIONS							
Pump Size	Frame	A	B	D	H	X	Lbs./ (kg)
1 x 1 1/2 - 8		31.00 (787)	3.00 (76)	4.44 (113)	5.75 (146)	6.25 (159)	190 (87)
1 x 1 1/2 - 11		31.00 (787)	3.00 (76)	5.88 (149)	6.25 (159)	7.00 (178)	220 (100)
1 1/2 x 2 - 8	1J	31.50 (800)	3.50 (89)	5.00 (127)	6.38 (162)	6.50 (165)	195 (89)
1 1/2 x 2 - 11		31.50 (800)	3.50 (89)	6.44 (164)	7.88 (200)	7.50 (191)	230 (105)
2 x 3 - 8		32.00 (813)	4.00 (102)	5.13 (130)	6.75 (171)	6.88 (175)	205 (94)
2 x 3 - 11		32.00 (813)	4.00 (102)	6.56 (167)	8.75 (222)	8.00 (203)	245 (112)
1 1/2 x 2 - 14		31.50 (800)	3.50 (89)	7.88 (200)	9.38 (238)	8.25 (210)	315 (144)
2 x 3 - 14	2J	32.00 (813)	4.00 (102)	8.06 (205)	8.25 (210)	9.00 (229)	330 (150)
3 x 4 - 11		32.75 (832)	4.75 (121)	6.88 (175)	9.12 (232)	8.63 (219)	300 (137)
3 x 4 - 14		36.75 (933)	4.75 (121)	8.38 (213)	10.62 (270)	9.25 (235)	440 (200)
4 x 6 - 14	3J	37.25 (946)	5.25 (133)	9.13 (232)	11.62 (295)	10.50 (267)	475 (216)
6 x 6 - 14 (LS)		38.38 (975)	5.63 (143)	9.50 (241)	13.62 (346)	12.50 (318)	590 (269)
3 x 6 - 18		42.26 (1073)	6.00 (152)	11.50 (292)	12.19 (310)	12.00 (305)	805 (366)
6 x 6 - 14 (HS)	4J	42.12 (1070)	5.63 (143)	9.50 (241)	13.62 (346)	12.50 (318)	710 (323)
8 x 10 - 18		46.38 (1178)	9.63 (245)	13.00 (330)	18.00 (457)	16.50 (419)	1020 (464)
10 x 12 - 22	5J	50.62 (1286)	9.63 (245)	17.00 (432)	21.88 (556)	20.00 (508)	1800 (819)



PRO Services®
Extending
Equipment Life...

Product Repair (all types and brands of rotating equipment)

- Service Center Repair
- Field Service
- Parts Supply

Reliability Improvement

- Inventory Management
- Replacement/Exchange
- Turnkey Repair/Installation
- Training

Optimization of Assets

- Predictive Analysis/Condition Monitoring
 - Root Cause Failure Analysis
 - Pump & System Assessments
 - Upgrades – Mechanical & Hydraulic
 - Maintenance Management/Contract Maintenance
-
- Technical Expertise
 - Fast Turnaround
 - Factory Trained Service Personnel
 - Emergency Service – 24 hours/day, 7 days/week
 - Quality
 - ISO and Safety Certified

PROSMART

ProSmart® provides continuous machinery monitoring to identify little problems...like downtime. Using wireless technology, advanced signal processing capabilities, and easy-to-deploy sensors, ProSmart offers an affordable means to monitor all of your rotating equipment anywhere in the world. By identifying and alerting you to changes in operating conditions, ProSmart increases your time to respond to either correcting the upset condition, or properly plan its repair.



Using wireless technology, advanced signal processing capabilities, and easy-to-deploy sensors, ProSmart offers an affordable means to monitor all of your rotating equipment anywhere in the world. By identifying and alerting you to changes in operating conditions, ProSmart increases your time to respond to either correcting the upset condition, or properly plan its repair.

Key Features include:

- Continuous data acquisition and analysis – ProSmart collects vibration, temperature, and available process conditions every five seconds; saving you time from routine data collection.
- Automatic Notification and Accessibility – By alerting when a machine goes into distress, you are able to focus your resources on recovery activities. The ProNet web-hosted solution allows access to information anywhere in the world through a standard Internet browser connection.
- Advanced diagnostic tools – More than simple overall data, ProSmart provides advanced analysis capabilities such as time-waveform, spectral, and spectral windowing.
- Easy to deploy – Using plug and play sensors, wireless connectivity, and an industrially hardened enclosure, ProSmart can be easily deployed throughout your plant, including hazardous areas.

PUMPSMART

PumpSmart® is the latest advancement in pump control and protection to reduce energy consumption, increase uptime and decrease maintenance cost. It allows the pump to be right-sized to the application by dialing in the speed and torque which increases flow economy, reduces heat and vibration, and improves overall system reliability.

- **Simplified Pump Control** – PumpSmart was designed specifically to optimize pumping applications and can be used to control a single pump or coordinate between multiple pumps without the need for an external controller.
- **Pump Protection** – PumpSmart guarantees to protect the pump from upset conditions with patented sensorless pump protection algorithms.
- **Smart Flow** – PumpSmart features a sensorless flow function for centrifugal pumps that can calculate the flow of the pump within ± 5% of the pump rated flow.
- **Drive for the DCS** – While most VFDs can only provide basic information, PumpSmart offers unparalleled insight to the pump operation which allows for smoother process control and efficiency.
- **Pump Experts** – PumpSmart is a variable speed drive with pump-specific algorithms imbedded into the drive. With over 150 years of pump knowledge, let the pump experts take responsibility of your pump system.

