GOULDS PUMPS



PUMP SELECTION GUIDE

Goulds Pumps

ITT Industries

Engineered for life

Pump Selection Guide

Goulds Pumps presents this *Pump Selection Guide* to assist users in making an easy initial selection of the best pump for a particular service. To do this, simply refer to the selection chart on page 3 where the full line of Goulds pumps are listed by pump type.

For more details about your selection, refer to the page indicated.

Contact your nearest Goulds, A-C sales office or representative for a complete data package on any pump(s) in which you are interested. They will also furnish you with any information you require to assure proper pump selection for optimum reliability and performance.

Goulds Pumps...Serving The World's Industries



Chemical
The family of chemical process pumps include both ANSI and ISO models. Goulds specializes in high alloys for our chemical pumps ranging from 316SS to Zirconium and even special alloys if needed. Unique non-metallic pumps offer distinct advantages when handling severe corrosives.

Magnetic drive pumps are designed for services where leakage cannot be tolerated. Our complete understanding of chemical processing and related industries gives us a clear advantage in finding solutions to these particular pumping problems.



Pulp And Paper
Goulds leadership in the pulp and paper industry has been largely due to the success of our comprehensive range of pumps that stand up to the harsh operating requirements of this industry. The Model 3175 has been prized for performance since its introduction in 1968. Goulds latest

3180/3185 paper stock/process pump line extends the offering farther for users with a preference for a metric pump. Other superior pumps include the 3500 medium consistency stock pump and a complete line of double suction and LoPulse fan pumps.



Mining And Minerals
Goulds and A-C Pump dominance in the mining industry dates back to the latter 1800s. Designed for the most severe applications, our pumps can be found in coal, aluminum, copper, iron, clay, phosphate, potash, soda ash, salt, gold and aggregate industry throughout the world.

Goulds & A-C offer the widest range of corrosion and abrasion resistant slurry pumps in the industry, including vertical, horizontal and submersible designs for cyclone feed, tailings disposal, minerals processing, mine dewatering, clarifier underflow, and sump services.



Power Generation
Goulds offers a wide variety of pumps designed specifically for uses within this industry. The Model 3600, the most modern axially split multi-stage pump in the world, is ideally suited for boiler feed service. The 3310H segmented multi-stage pump is proven in over 1200 installations worldwide.

Vertical turbine and double suction pumps can handle the most demanding condensate or circulating water needs. Sumps can be cleared with Goulds line of vertical or submersible sump pumps. Also available are pumps for slurry, ash handling and other tough applications.



Oil Refining And Gas Processing
The Model 3700 API process pump has set performance standards and contributed to Goulds leadership in this industry. For in-line services, Goulds offers the 3910 API pump.

Vertical turbine pumps are available in any configuration including can pumps for low NPSH, fire pumps and submersibles. Design and manufacturing capabilities include standard commercial grades, ASME Section VIII, and API-610 (8th Edition) for total line capability.



Primary Metals
The wide range of products makes Goulds the ideal choice for the demanding services of this industry. Vertical and submersible abrasives handling, slurry pumps for scale pits, chemical pumps for pickle liquor and leaching solutions,

vertical turbines and double suction pumps for cooling tower and dewatering applications. Also, pumps for waste acid, scrubber service, and quench.



Water And Wastewater
Goulds and A-C Pump offer the most comprehensive line of double suction, end suction, multi-stage, non-clog and vertical turbine pumps for water supply, booster, low lift, and high lift.

For non-clog solids handling, a range of horizontal, vertical sump and submersible pumps have helped professional engineers solve pollution problems around the world.



Food And Beverage
Adhering to strict process requirements is only one of the reasons for Goulds entry into the forefront of these industries. Goulds pumps handle a wide variety of grain processing,

water, wastes, corrosives, and erosives. Breweries, bottling companies, canneries and a multitude of food and liquid industries rely on Goulds for successful operations.

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Pump Selection Chart

Goulds makes the widest range of pumps in the industry — pumps to handle virtually any service. This selection chart is designed to help you find and specify the best pump for your service.

Pump Category	Goulds Model	Pump Type	Chemical	Pulp & Paper	Mining & Minerals	Power Generation	Oil Refining & Gas Processing	Primary Metals	Water & Wastewater	Food & Beverage	Nature of Pumpage: Corrosive	Nature of Pumpage: High Temperature 500°F (260°C) and Greater	Nature of Pumpage: Solids: Abrasive	Nature of Pumpage: Solids: Non-Abrasive	Nature of Pumpage: Solids: Fibrous/ Stringy	Refer to Page
PumpSmart	Process Pumping System															4
PRO Services	Repair & Service of all Rotating Equipment Types and Manufacture															4
Paper Stock/ Process	3175	Paper Stock/Process														5
	3180/3185	Paper Stock/Process														5
	3181/3186	High Temperature														5
	3500	Heavy Duty Paper Stock														5
Chemical Process	3171	Vertical Sump & Process														5
	CV 3171	Non-Clog Vertical Sump Process														5
	NM 3171	FRP Vert. Sump/Process														5
	3196	ANSI Chemical Process														6
	LF 3196	Low Flow ANSI Process														6
	HT 3196	ANSI High Temperature Process														6
	CV 3196	Non-Clog Process														6
	3796	Self-Priming Process														6
	3996	ANSI In-Line Process														6
	3296 EZMAG	ANSI Metallic Sealless Process														7
	NM 3196	ANSI FRP Process														7
	3298	ANSI Tefzel® Lined Sealless														7
	SP 3298	ANSI Tefzel® Lined Sealless														7
	3198	ANSI PFA Teflon® Lined Process														7
	V 3298	Tefzel® Lined Sealless														7
	3299	ANSI PFA Teflon® Lined Sealless														7
	IC	ISO Chemical Process														8
	ICB	Close-coupled ISO Process														8
	ICP	High Temperature ISO Process														8
	ICM	ISO Metallic Magnetic Drive														8
	ICV	ISO Vertical Column, Wet Pit														8
	ICMP	High Temp. ISO Magnetic Drive														8
API Process	3700/3710	API-610 Process														9
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	3640	High Temp. Two-Stage														9
Sump/ Abrasives/ Solids Handling	Whirl-Flo	Vortex														10
	Prime Line	Industrial Self-Priming														10
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	SRL-C	Rubber-Lined Abrasive Slurry														11
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	RX	Side Suction Abrasive Slurry														11
	5500	Severe Duty Abrasive Slurry														11
	HS	Non-Clog Solids Handling														11
	CW	Abrasive Slurry														11
	CWX	Abrasive Slurry														11
Multi-Stage & Double Suction	3310H	High Pressure Multi-Stage														12
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	3335	Diffuser Type Multi-Stage														12
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	NSX															14
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	YDD															14
	WCA															14
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	WMCC															14
	WMCE															14
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	VIT	Vertical Industrial Turbine														15
	VIS	Vertical Submersible														15
	VMP	Vertical Marine														15

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PRO Services™
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- Parts Supply

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- Training

Optimization of Assets
- Predictive Analysis/Condition Monitoring
- Root Cause Failure Analysis
- Pump & System Assessments
- Upgrades – Mechanical & Hydraulic
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- Technical Expertise
- Factory Trained Service Personnel
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PROCESS PUMPS

Model 3171

Vertical Sump and Process

The "Veteran" vertical sump and process pump. Thousands of installations — industrial process, sump drainage, corrosive liquids, pollution control, molten salts. Rugged, heavy construction. Simple mounting.

- ☐ Capacities to 3,180 GPM (722 m^3/h)
- ☐ Heads to 344 feet (95 m)
- ☐ Temperatures to 450° F (232° C)
- ☐ Pit Depths to 20 feet (6 m)

Materials: Cast Iron, Bronze-fitted, CD4MCu, 316SS, Alloy 20, Hastelloy B and C

21 Sizes



Model NM 3171

FRP Vertical Sump/Process

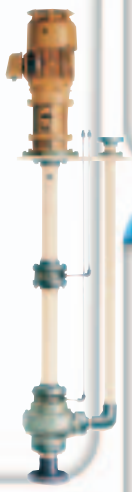
For severe corrosive applications. Casing and impeller interchangeable with Model NM 3196. Cost-effective alternative to high alloys.

- ☐ Capacities to 1,250 GPM (284 m^3/h)
- ☐ Heads to 300 feet (92 m)
- ☐ Temperatures to 200° F (79° C)
- ☐ Pit Depths to 16 feet (5 m)

Material: High-strength, Corrosion-resistant GMP-2000*

13 Sizes

*Proprietary molding process/ material GMP-2000



Model CV 3171

Vertical Sump and Process

The CV 3171 is a recessed impeller, circular volute type sump pump. Ideal for large solids and shear sensitive fluids. Circular volute minimizes radial loads making this the ideal pump for low flow process applications.

- ☐ Capacities to 1,300 GPM (295 m^3/h)
- ☐ Heads to 320 feet (126 m)
- ☐ Temperatures to 450° F (232° C)
- ☐ Pit Depths to 20 feet (6 m)

Materials: Cast Iron, CD4MCu, 316SS, Alloy 20, Hastelloy B and C

6 Sizes



Model 3175

Paper Stock/Process

For the toughest services. Thousands of installations handle stock, solids, fibrous/stringy materials, abrasive slurries, and corrosives. Patented dynamic seal option eliminates mechanical seal problems.

- ☐ Capacities to 28,000 GPM (6360 m^3/h)
- ☐ Heads to 350 feet (107 m)
- ☐ Temperatures to 450°F (232° C)
- ☐ Pressures to 285 PSIG (1,965 kPa)

Materials: All Iron/316SS Trim, 316SS, 317SS, CD4MCu

27 Sizes



Model 3500

Medium Consistency Systems

Thick stock pulp is pumped with the model 3500 medium consistency pumping system. System includes engineered standpipe, control valve, dilution system and level transmitter. A patented air separation device removes air from the pulp to improve mixing effectiveness.

Bleaching chemicals and oxygen are mixed in-line with the model 3501 mixer with double shear rotor, optimized injection port, and unique low pressure drop casing design.

- ☐ Consistencies from 8% to 16%
- ☐ Capacities to 1,500 (pump) and 2,000 adstpd (mixer)
- ☐ Pressures to 325 PSIG (2240 kPa)
- ☐ Materials from 316SS to Titanium



Model 3180/3185

Paper Stock/Process

All customer requirements were considered in this line of paper stock/process pumps. . .excellent hydraulic coverage, high efficiency, extreme ease of maintenance, and mechanical reliability.

The Model 3185 pump furnished with ISO or JIS flange drilling, metric fasteners, dimensions. Open or enclosed impeller. Labyrinth seals standard.

Model 3180 standard with ANSI flanges.

- ☐ Capacities to 26,000 GPM (6000 m^3/h)
- ☐ Heads to 410 feet (125 m)
- ☐ Temperatures to 446° F (230° C)
- ☐ Pressures to 232 PSIG (1,600 kPa)

Materials: All Iron/316SS Trim, 316SS, 317SS, CD4MCu

33 Sizes



Model 3181/3186

High Temperature Paper Stock/Process

End suction, top centerline discharge, self-venting. Centerline mounted for high temperature services. High efficiency enclosed impeller. TaperBore™ seal chamber standard with mechanical seal arrangement.

- ☐ Capacities to 20,000 GPM (4,600 m^3/h)
- ☐ Heads to 410 feet (125 m)
- ☐ Temperatures to 572° F (300° C)
- ☐ Pressures to 360 PSIG (25 bar)

Materials: CD4MCu, 316SS, 317SS

23 Sizes



ANSI PROCESS PUMPS

Model 3196

ANSI Process

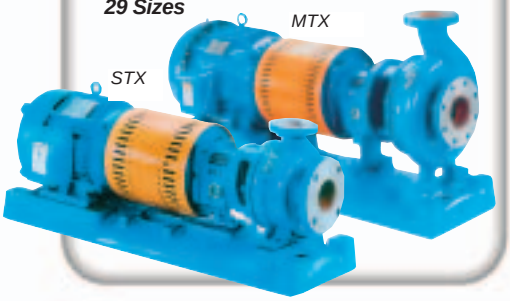
This is the original ANSI pump that has become the standard of the industry. Over 600,000 installations attest to the remarkable performance of the 3196.

Available with a wide range of ANSI *PLUS*™ features for handling difficult applications. *X-Series* power ends provide standard features for improved bearing and mechanical seal life.

- ☐ Capacities to 6,000 GPM (1364 m^3/h)
- ☐ Heads to 730 feet (222 m)
- ☐ Temperatures to 500° F (260° C)
- ☐ Pressures to 375 PSIG (2586 kPa)

Materials: Ductile Iron, 316SS, CD4MCu, Alloy 20, Monel, Nickel, Hastelloy B and C, Titanium

29 Sizes



Model HT 3196

ANSI High Temperature Process Pump

Centerline mounted in a heavy duty fabricated steel casing support, the Model HT 3196 minimizes shaft misalignment and piping strain associated with elevated temperatures up to 700° F. This eighth member of the ANSI pump family features Goulds' premier *X-Series* power end, multiple seal chamber options including the Taper Bore™ Plus, and a wide variety of rigid and rugged mounting systems.

- ☐ Capacities to 4,500 GPM (1,023 m^3/h)
- ☐ Heads to 925 feet (282 m)
- ☐ Temperature to 700° F (372° C)
- ☐ Pressures to 450 PSIG (3,102 kPa)

Materials: Carbon Steel, 316SS, CD4MCu, Alloy 20, Hastelloy C

28 Sizes



Model LF 3196

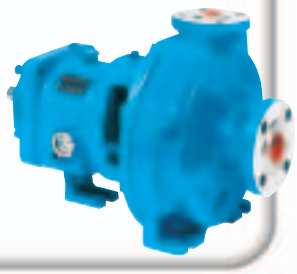
Low Flow ANSI Process

Designed specifically to provide superior performance for low flow services. Features a concentric (circular volute) casing and open radial vane impeller to eliminate hydraulic and mechanical problems at low flows. *X-Series* power ends.

- ☐ Capacities to 220 GPM (50 m^3/h)
- ☐ Heads to 925 feet (282 m)
- ☐ Temperatures to 700° F (372° C)
- ☐ Pressures to 450 PSIG (3102 kPa)

Materials: Ductile Iron, 316SS, CD4MCu, Alloy 20, Hastelloy B and C

4 Sizes



Model CV 3196

Non-Clog ANSI Process

Perfect solution for handling bulky, fibrous, or shear-sensitive liquids. Recessed impeller design provides non-clog pumping with minimum solids degradation. Capability to handle liquids containing 10 to 20 percent air/gas. *X-Series* power ends.

- ☐ Capacities to 2,700 GPM (610 m^3/h)
- ☐ Heads to 440 feet (134 m)
- ☐ Temperatures to 500° F (260° C)
- ☐ Pressures to 285 PSIG (1965 kPa)

Materials: Ductile Iron, CD4MCu, Alloy 20, Hastelloy B and C

7 Sizes



Model 3796

Self-Priming ANSI Process

One-piece casing eliminates need for separate priming chamber, air separator, valves, or by-pass line. Fully open impeller can be trimmed to meet specific hydraulic requirements. *X-Series* power ends.

- ☐ Capacities to 1,250 GPM (284 m^3/h)
- ☐ Heads to 430 feet (131 m)
- ☐ Temperatures to 500° F (260° C)
- ☐ Suction Lifts to 25 feet (7.6 m)

Materials: Ductile Iron, 316SS, CD4MCu, Alloy 20, Hastelloy B and C, Titanium

8 Sizes



Model 3996

In-Line ANSI Process

For corrosives, abrasives, and high temperature. Fully open impeller, back pull-out design, heavy duty construction. Field alignment not required.

- ☐ Capacities to 1,500 GPM (340 m^3/h)
- ☐ Heads to 700 feet (213 m)
- ☐ Temperatures to 500° F (260° C)
- ☐ Pressures to 375 PSIG (2585 kPa)

Materials: Ductile Iron, 316SS, Alloy 20, Monel, Nickel, Hastelloy B and C, CD4MCu, Titanium

13 Sizes



SEALLESS PROCESS PUMPS

Model SP 3298

Self-Priming Lined

When suction pressure is negative and air or gases must be evacuated to accomplish pump priming, the SP 3298 has a self-priming dual volute that primes on demand with only an initial charge of liquid in the casing. Priming is accomplished within the casing, eliminating the need for auxiliary priming systems.

- ☐ Capacities to 275 GPM (63 m^3/h)
- ☐ Heads to 150 feet (46 m)
- ☐ Temperatures to 250° F (121° C)
- ☐ Pressures to 175 PSIG (1207 kPa)
- ☐ Effective Static Lift to 20 feet (6m)

Lining Material: Tefzel® (ETFE)

2 Sizes



Model 3298

Magnetic Drive ANSI Lined

Designed to handle moderate to severe corrosives with or without solids. Sealless design provides effective alternative to pumps with mechanical seal problems. Thick linings for extended pump life.

- ☐ Capacities to 320 GPM (000 m^3/h)
- ☐ Heads to 460 feet (161 m)
- ☐ Temperatures to 250° F (00° C)
- ☐ Pressures to 225 PSIG (0000 kPa)

Lining Material: Tefzel® (ETFE)

15 Sizes



Model 3296 EZMAG

Magnetic Drive ANSI Process

Robust, simple sealless design ideal for difficult liquids, such as corrosives, pollutants, ultra-pure liquids and toxics. Meets ANSI dimensional specifications. Features a bearing cartridge for ease of maintenance and improved reliability.

- ☐ Capacities up to 700 GPM (159 m^3/h)
- ☐ Heads to 550 feet (168 m)
- ☐ Temperatures to 536° F (280° C)
- ☐ Pressures to 275 PSIG (1896 kPa)

Materials: 316SS
Others upon request

11 Sizes



Model V 3298

Vertical ANSI Lined Process

Ideal for moderate to severe corrosives. With or without solids, the 3298 can handle the tough chemical services. As a sealless design, it's an effective alternative to pumps with mechanical seal problems.
Meets strictest EPA regulations.

- ☐ Capacities to 320 GPM (270 m^3/h)
- ☐ Heads to 460 feet (129 m)
- ☐ Temperatures to 250°F (121°C)
- ☐ Pressures to 225 PSIG (1551 kPa)

Materials: Tefzel® (ETFE) Construction

4 Sizes



Model 3299

Magnetic Drive ANSI Lined

Designed to handle moderate to severe corrosives with or without solids. Sealless design provides effective alternative to pumps with mechanical seal problems. Thick linings for extended pump life.

- ☐ Capacities to 425 GPM (000 m^3/h)
- ☐ Heads to 490 feet (000 m)
- ☐ Temperatures to 350° F (000° C)
- ☐ Pressures to 275 PSIG (1896 kPa)

Lining Material: PFA

5 Sizes



SEALED LINED & NON-METALLIC PUMPS

Model 3198

PFA Process ANSI Lined

Virgin PFA TEFLON® for handling a wide range of severe corrosive liquids, trace contaminants, and mixtures. The 3198 features ANSI B73.1 design, X-Series power ends. TEFLON® molded in place by high pressure technique and mechanically locked.

- ☐ Capacities to 800 GPM (182 m^3/h)
- ☐ Heads to 450 feet (137 m)
- ☐ Temperatures to 300° F (150° C)
- ☐ Pressures to 225 PSIG (1550 kPa)

Material: PFA *Teflon®*

5 Sizes



Model NM 3196

FRP ANSI Process

All liquid end parts constructed of vinylester thermoset resin – the industry's choice for moderate corrosives. True volute design, one-piece casing with fully open impeller. Utilizes *X-Series* power ends for maximum interchangeability, conformity to ANSI dimensional standards. Corrosion resistant FRP baseplate standard.

- ☐ Capacities to 800 GPM (182 m^3/h)
- ☐ Heads to 500 feet (152 m)
- ☐ Temperatures to 200° F (93° C)
- ☐ Pressures to 220 PSIG (1517 kPa)

Material: High Strength, Corrosion Resistant GMP-2000*

*Proprietary molding process/material GMP-2000

13 Sizes



ISO PROCESS PUMPS

Model IC

ISO Process

This series is designed in accordance with ISO 5199 and ISO 2858, making it ideal for worldwide chemical or industrial process applications. IC pumps are fitted with a patented seal chamber design called the Cyclone seal chamber, which has been proven to provide the optimum sealing environment for extended mechanical seal life.

- ☐ Capacities to 1,980 GPM (450 m³/h)
- ☐ Heads to 482 feet (150 m)
- ☐ Temperature ranges from -40° F to 350° F (-40° C to 177° C)
- ☐ Pressures to 235 PSIG (16 bar)

Materials: Ductile Iron, 316SS, Duplex Stainless, Alloy 20, Hastelloy C and Titanium.



34 Sizes

Model ICB

Close-coupled ISO Process Pump

The ICB Series is an extension to the IC series ISO 5199 frame mounted chemical pump series. These new pumps provide a compact and economical pumping solution ideal for OEM applications and confined spaces in industrial processes. No spacer coupling or alignment is required, reducing capital equipment costs and simplifying installation and maintenance. ICB pumps are fitted with our **patented Cyclone Seal Chamber,** proven to provide the optimum sealing environment for extended mechanical seal life.

- ☐ Capacities to 1,980 GPM (450 m³/h)
- ☐ Heads to 492 feet (150 m)
- ☐ Temperature ranges from -40° F to 284° F (-40° C to 140° C)
- ☐ Pressures to 230 PSIG (16 bar)

Materials: Ductile Iron, Stainless Steel



29 Sizes

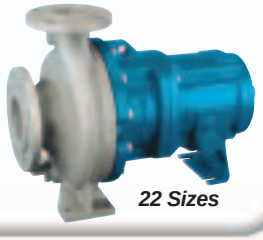
Model ICM

ISO Metallic Magnetic Drive Process

The ICM pump is the optimum metallic sealless pump for process fluid services in the chemical, paper, and general industries where ISO dimensions are preferred. The ICM is specifically designed to pump difficult fluids such as corrosives, pure, and toxic liquids. Its sealless, sturdy design combines with a wide variety of wet end materials. The bearings are chemical and abrasion resistant Silicon Carbide (SSiC). Optional SAFEGLIDE® PLUS dry-run protection can be provided.

- ☐ Capacities to 1,760 GPM (400 m³/h)
- ☐ Heads to 685 feet (210 m) at 3,500 rpm
- ☐ Temperature ranges from -40° F to 360° F (-40° C to 180° C)
- ☐ Pressures to 232 PSIG (16 bar)

Materials: Stainless Steel, Hastelloy, Ductile Iron, Alloy 20 and Titanium



22 Sizes

Model ICP

High Temperature ISO Process Pump

The ICP is a heavy duty chemical process pump designed for extreme temperatures and pressures. The ICP complies with ISO standards and features the patented Cyclone Seal Chamber for extended seal service life. Centerline casing design is self venting. Large capacity oil sump provides maximum bearing cooling. Optional inducer reduces NPSHr.

- ☐ Capacities to 1,980 GPM (450 m³/h)
- ☐ Heads to 492 feet (150 m)
- ☐ Temperature ranges from -40° F to 535° F (-40° C to 280° C)
- ☐ Pressures to 363 PSIG (25 bar)

Materials: Carbon Steel, Stainless Steel, Duplex Stainless Steel and Hastelloy C



34 Sizes

Model ICMP

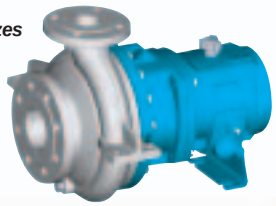
High Temperature ISO Metallic Magnetic Drive Process

The ICMP is a heavy-duty metallic sealless pump for applications with high temperature and pressure conditions. It is designed for aggressive, toxic and pure media. The centerline casing is optimal for the compensation of dimensional changes due to temperature fluctuations. SSIC silicon carbide plain bearings, optionally with SAFEGLIDE® PLUS dry run protection. Unique cartridge plain bearing design. Inducer option.

- ☐ Capacities to 1,760 gpm (400 m³/h)
- ☐ Heads to 685 ft (210 m) at 3500 rpm
- ☐ Temperature ranges from - 40° F to 535° F (- 40° C to 280° C)
- ☐ Pressures to 365 PSIG (25 bar)

Materials: Stainless Steel, Hastelloy, Cast Iron, Alloy 20, Titanium

ICMP–22 Sizes



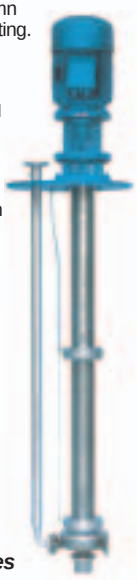
Model ICV

ISO Vertical Column, Wet Pit

The ICV vertical chemical pump installs easily into open wet pits or industrial tanks minimizing start-up costs. Rugged design and construction provide operational safety and smooth, efficient operation. Life cycle enhancing features include patented Cyclone seal cover, duplex stainless steel sleeve bearings, high-stability column pipe, and high strength shafting. Complies with ISO 2858 and 5199.

- ☐ Capacities to 1,980 GPM (450 m³/h)
- ☐ Heads to 492 feet (150 m)
- ☐ Temperature ranges from -40° F to 210° F (-40° C to 100° C)
- ☐ Pressures to 230 PSIG (16 bar)

Materials: Ductile Iron, Stainless Steel, Duplex Stainless Steel, Alloy 20, Hastelloy C.



21 Sizes

API PROCESS PUMPS

Models 3700 & 3710

API-610 (8th Edition) Process

High temperature and high pressure process pumps designed to fully meet the requirements of API-610 (8th Edition). Centerline support for high temperature stability, maximum rigidity. Tangential discharge for maximum hydraulic efficiency.

Available in top suction design (Model 3710).

- ☐ Capacities to 6,500 GPM (1,475 m^3/h)
- ☐ Heads to 1,150 feet (350 m)
- ☐ Temperatures to 800° F (427° C)
- ☐ Pressures from full vacuum to 870 PSIG (6,000 kPa)

Materials: Carbon Steel, 12% Chrome, 316SS, Duplex SS, other high alloys

35 Sizes



Model 3600 & 3620

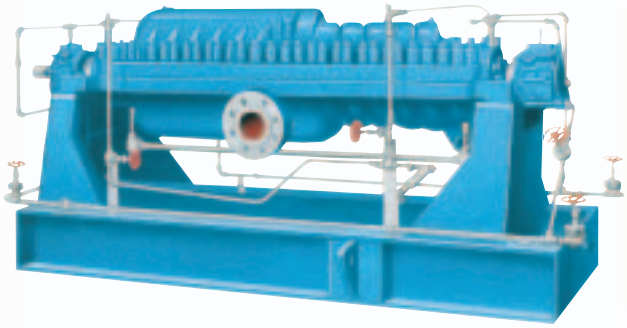
High Temperature Double Suction

Between bearings, radially split process pumps designed for smooth, reliable operation. Fully meets requirements of API-610.

- ☐ Capacities to 20,000 GPM (4,540 m^3/h)
- ☐ Heads to 1,500 feet (455 m)
- ☐ Temperatures to 850° F (455° C)
- ☐ Pressures to 1,000 PSIG (6,895 kPa)

Materials: Carbon Steel, 12% Chrome, 316LSS, Duplex SS, other higher alloys

24 Sizes



Model 3640

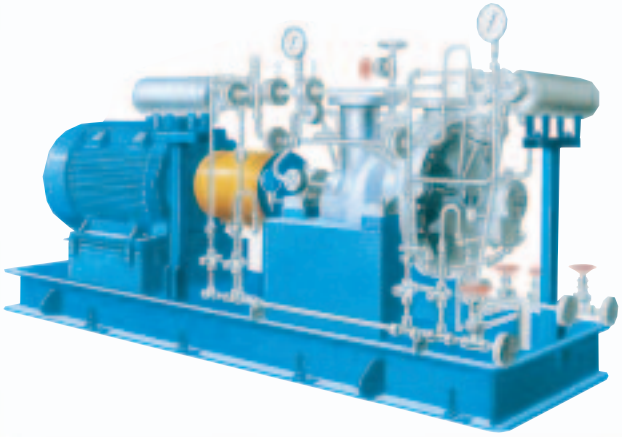
High Temperature Two-Stage

Between bearings, radially split process pumps designed for smooth, reliable operation. Meets toughest specification requirements of API-610.

- ☐ Capacities to 1,500 GPM (340 m^3/h)
- ☐ Heads to 1,400 feet (425 m)
- ☐ Temperatures to 850° F (455° C)
- ☐ Pressures to 750 PSIG (5,170 kPa)

Materials: Carbon Steel, 12% Chrome, 316LSS, Duplex SS, other higher alloys

6 Sizes



Model 3910

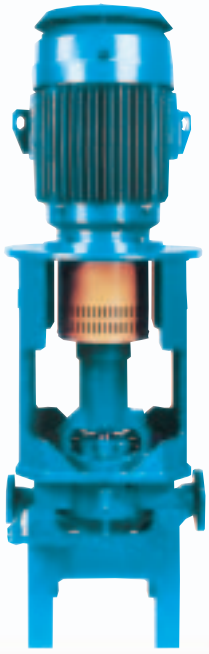
Bearing Frame In-Line

High pressure, high temperature services meets API-610 requirements. Back pull-out for ease of maintenance. Bearing frame carries pump loads.

- ☐ Capacities to 7,500 GPM (1,700 m^3/h)
- ☐ Heads to 750 feet (229 m)
- ☐ Temperatures to 650° F (343° C)
- ☐ Pressures to 595 PSIG (4,100 kPa)

Materials: Carbon Steel, 12% Chrome, 316LSS, Duplex SS, other higher alloys

28 Sizes



SUMP/ABRASIVES/SOLIDS HANDLING

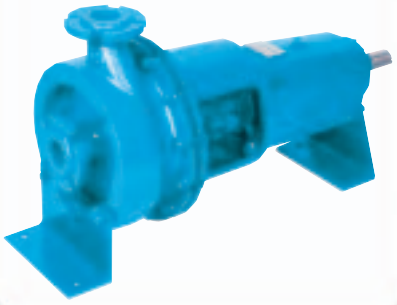
Whirl-Flo®

End Suction Recessed Impeller

These rugged pumps are capable of passing port-sized spherical solids, slurries, stringy matters, and soft solids with clog-free dependability. Fully recessed impellers provide a straight flow path through the Whirl-Flo for unsurpassed solids handling and no casing wear. Whirl-Flo is available in a variety of metallurgies to handle a range of abrasive and corrosive liquids.

- ☐ Capacities to 2,400 GPM (550 m^3/h)
- ☐ Heads to 340 feet (102 m)
- ☐ Temperatures to 250° F (120° C)

Materials: Cast Iron, HC600, 316 Stainless Steel



Prime Line

Industrial Duty Self-Priming

For tank unloading, sump and other suction lift applications, Goulds offers a complete line of heavy duty self-priming pumps which provide dependable, trouble-free operation. The Prime Line pumps offer high capacity, versatile options for handling chemicals, oils, and wastewater.

- ☐ Capacities to 7,000 GPM (1,600 m^3/h)
- ☐ Heads to 280 feet (85 m)
- ☐ Temperatures to 250° F (120° C)
- ☐ Suction Lifts to 25 feet (7.6 m)

Materials: Cast Iron, Bronze Fitted, 316SS Fitted



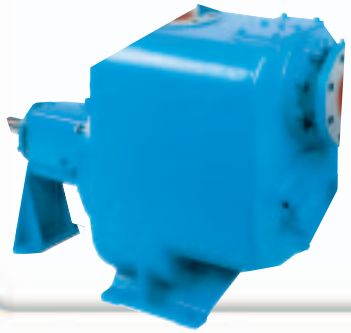
Trash Hog®

Solids Handling Self-Priming

Goulds Trash Hog is designed for superior solids handling capability, optimum pump performance, and extreme ease of maintenance for a wide range of industrial, pulp and paper, mining, and wastewater services. Whether handling sludge, debris or plant wastes, there's no other pump that compares to the Trash Hog.

- ☐ Capacities to 6,000 GPM (1,363 m^3/h)
- ☐ Heads to 140 feet (43 m)
- ☐ Temperatures to 225° F (107° C)
- ☐ Pressures to 85 PSIG (586 kPa)
- ☐ Suction Lifts to 25 feet (7.6 m)
- ☐ Spherical solids to 3 inches (76 mm)

Materials: Cast Iron, Stainless Steel, CD4MCu, HC600 Fitted



Model VHS & VJC

Vertical Cantilever

Ideal for range of tough sump services... abrasive slurries— mine slurry, fly ash, foundry sand, clay, coal prep, power plants, or large solids handling.

Models VJC – *10 Sizes*

- ☐ Capacities to 7,500 GPM (1,703 m^3/h)
- ☐ Heads to 240 feet (73 m)
- ☐ Solids to 2.25 inches (57 mm)

Materials: Cast Iron, High Chrome Iron, 316SS

Model VHS – *7 Sizes*

- ☐ Capacities to 7,000 GPM (1,590 m^3/h)
- ☐ Heads to 140 feet (43 m)
- ☐ Solids to 10 inches (254 mm)

Materials: Cast Iron, High Chrome Iron, 316SS



Model HSU, HSUL & JCU

Submersible

Four different models allow selection of very best pump for the service conditions whether large, stringy, fibrous solids, or abrasive slurries.

- ☐ Capacities to 4,000 GPM (910 m^3/h)
- ☐ Heads to 220 feet (67 m)
- ☐ Temperatures to 194° F (90° C)
- ☐ Solids to 6 inches (152 mm)

Materials: Cast Iron, 28% Chrome Iron, CD4MCu, 316SS



ABRASIVES/SOLIDS HANDLING

Model RX

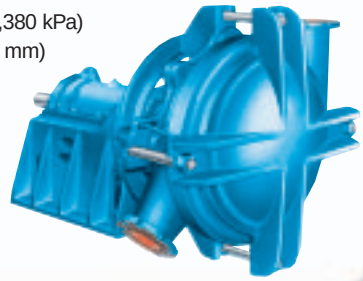
Side Suction Abrasive Slurry

Heavy duty pump designed for economical handling of highly concentrated abrasive slurries at high heads with low speeds. These pumps have gained unparalleled acceptance in the coal preparation, alumina and concrete industries because of their reliability and extreme ease of maintenance.

- ☐ Capacities to 3,700 GPM (840 m^3/h)
- ☐ Heads to 325 feet (100 m)
- ☐ Pressures to 200 PSIG (1,380 kPa)
- ☐ Solids to 2.875 inches (73 mm)

Materials: HC600

8 Sizes



Model JC

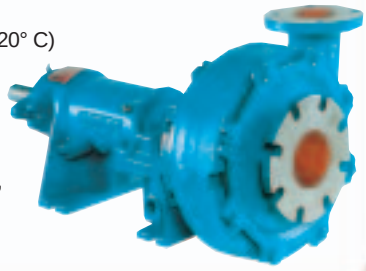
Medium Duty Slurry

Ideal for most medium duty abrasive and/or corrosive slurry services. Extra thick wet end components extend wear life. Replaceable wear liner for low maintenance cost. Available with dynamic seal for elimination of seal problems, reduced maintenance. Variety of drive arrangements available for application flexibility.

- ☐ Capacities to 7,000 GPM (1,600 m^3/h)
- ☐ Heads to 240 feet (73 m)
- ☐ Temperatures to 250° F (120° C)
- ☐ Pressures to 150 PSIG (1,034 kPa)
- ☐ Solids to 2.25 inches (57 mm)

Materials: Cast Iron, HC600, 316SS, CD4MCu

15 Sizes



Model 5500

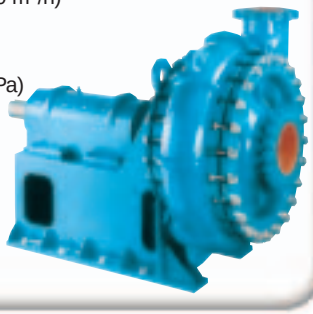
Severe Duty Slurry

The "Workhorse" of severe duty slurry pumps. It's not only built to stand up to the toughest services, but the Model 5500 is also designed for extreme ease of maintenance. A heavy duty power end, extra thick wall sections, and easily replaceable wear parts add up to long, reliable operation.

20 Sizes

- ☐ Capacities to 11,000 GPM (2,500 m^3/h)
- ☐ Heads to 370 feet (113 m)
- ☐ Temperatures to 250° F (121° C)
- ☐ Pressures to 500 PSIG (3,448 kPa)
- ☐ Solids to 4 inches (102mm)

Materials: HC600, CD4MCu



Models SRL/SRL-C/SRL-XT

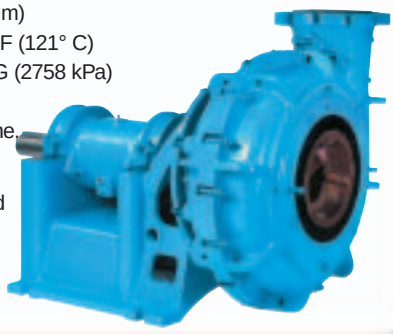
Abrasive Slurry Handling

The SRL pumps are designed to handle the toughest abrasive slurry. Features include wear resistant rubber liners for maximum life and engineered for ease of maintenance.

- ☐ Capacities to 20,000 GPM (4,540 m^3/h)
- ☐ Heads to 150 feet (46 m)
- ☐ Temperatures to 250° F (121° C)
- ☐ Pressures to 400 PSIG (2758 kPa)

Lining Materials: Natural Rubber, Neoprene, Nitrile, Polyurethane, Chlorobutyl, Hypalon, Ceramic Composites and Metal Alloys

16 Sizes



Model HS

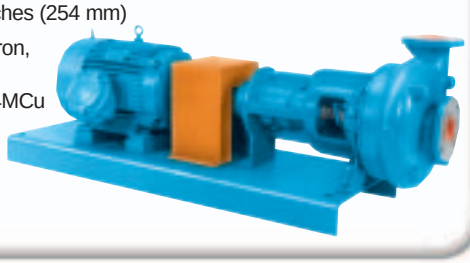
Hydro-Solids

For handling sludges and slurries containing large solids, entrained air, fibrous materials, corrosives and abrasives. Features recessed, non-clog impeller. Also available in vertical drypit (Model HSD) design.

- ☐ Capacities to 7,000 GPM (1,590 m^3/h)
- ☐ Heads to 140 feet (43 m)
- ☐ Temperatures to 200° F (93° C)
- ☐ Pressures to 100 PSIG (690 kPa)
- ☐ Solids to 10 inches (254 mm)

Materials: Cast Iron, High Chrome Iron, 316SS, CD4MCu

7 Sizes



Model CW/CWX

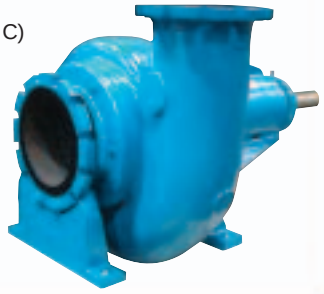
Abrasive Slurry

The CW is a chrome iron, abrasive duty slurry pump with a back pull-out design. The CWX is a Model CW using a "shearpeller" to enable pumping of stringy materials and slurries with entrained air. Both pump options are available with a dynamic seal.

- ☐ Capacities to 13,000 GPM (2,950 m^3/h)
- ☐ Heads to 300 feet (90 m)
- ☐ Temperatures to 250° F (120° C)
- ☐ Solids to 5 inches (127 mm)

Materials: HC600 only

11 Sizes



MULTI-STAGE/AXIAL FLOW/DOUBLE SUCTION

Model 3600

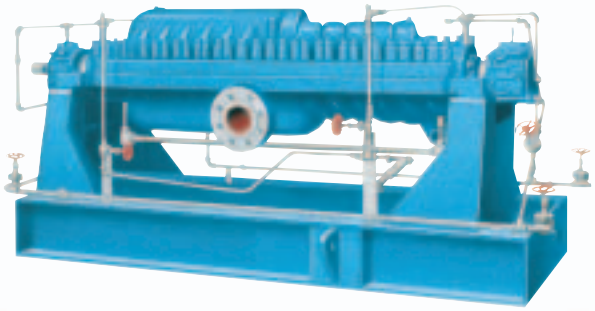
Heavy Duty Multi-Stage

Advanced design with proven operating history. Axially split, with many enhanced features that make it an extremely reliable, high performance pump well suited to a wide range of services.

- ☐ Capacities to 2,600 GPM (590 m^3/h)
- ☐ Heads to 5,500 feet (1,675 m)
- ☐ Temperatures to 400° F (205° C)
- ☐ Pressures to 2,500 PSIG (17,238 kPa)

Materials: Carbon Steel, 12% Chrome, 316LSS, Duplex SS

7 Sizes



Model 3310H/3311

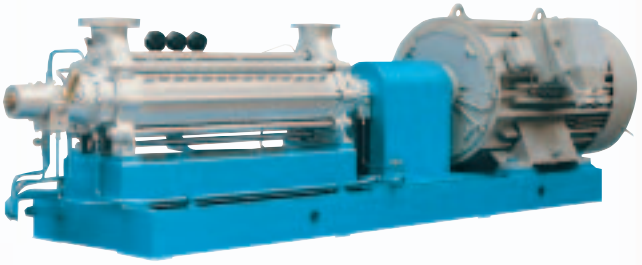
High Pressure Multi-Stage

Radially split, segmented multi-stage pump; a proven state-of-the-art design for the most demanding high pressure services. Many special features for application flexibility. Ideal for cogeneration, boiler feed, reverse osmosis, booster, water, oil.

- ☐ Capacities to 1,200 GPM (272 m^3/h)
- ☐ Heads to 5,400 feet (1,646 m)
- ☐ Temperatures to 374° F (190° C)
- ☐ Pressures to 2,465 PSIG (17,000 kPa)

Materials: Carbon Steel/Cast Iron, Carbon Steel/12% Chrome Trim, All 12% Chrome

4 Sizes



Model Axial Flow®

Axial Flow

For continuous circulation of corrosive/abrasive solutions, slurries, and process wastes. Fabricated elbow or cast elbow designs available. Most suitable for low head, high capacity pumping.

- ☐ Capacities to 200,000 GPM (35,000 m^3/h)
- ☐ Heads to 30 feet (9 m)
- ☐ Temperatures to 350° F (180° C)
- ☐ Pressures to 150 PSIG (1034 kPa)
- ☐ Solids to 9 inches (228 mm)

Materials: Cast Iron, 304SS, 316SS, CD4MCu, Nickel, Monel, Alloy 20, UHB-904L, Titanium, Hastelloy, Sanicro 28

12 Sizes



Model 3355

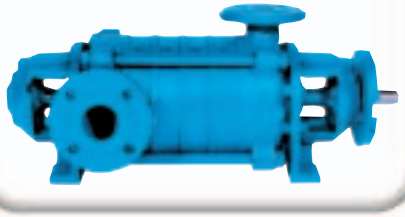
Multi-Stage

Multi-stage ring section pump designed for high pressure services including: boiler feed, reverse osmosis, shower service, and much more.

- ☐ Capacities to 1,500 USGPM (340 m^3/h)
- ☐ Heads to 1,640 feet (500 m)
- ☐ Max. speed to 3,600 rpm (3,600 min^{-1})
- ☐ Discharge from 1 1/2" to 5"
- ☐ Temperatures to 280° F (140° C)
- ☐ Pressures to 800 PSIG (55 bar)*

Materials: Cast Iron, Stainless Steel, Stainless Fitted

8 Sizes



Model 3935

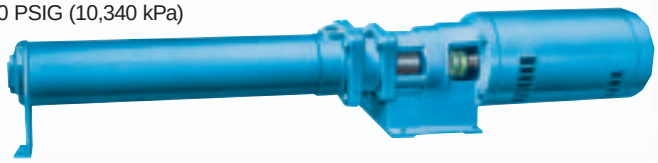
Centrifugal Diffuser Multi-Stage

Centrifugal diffuser type multi-stage pumps well suited for boiler feed, reverse osmosis, petrochemical and hydrocarbon services.

- ☐ Capacities to 140 GPM (32 m^3/h)
- ☐ Heads to 2,600 feet (792 m)
- ☐ Temperatures to 400° F (204° C)
- ☐ Pressures to 1,500 PSIG (10,340 kPa)

Material: Carbon Steel

4 Sizes



3400 Series

Horizontal Split Case, Double Suction

Designed for a wide range of industrial, municipal, and marine services.

- ☐ Capacities to 225,000 GPM (51,098 m^3/h)
- ☐ Heads to 900 feet (274 m)
- ☐ Suction sizes to 78" and discharge sizes to 66"
- ☐ Working pressures to 400 PSIG (2,758kPa)
- ☐ Temperatures to 350° F (177° C)

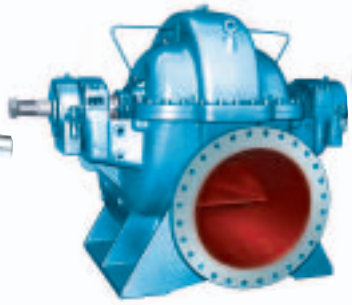
Materials: Cast Iron/Bronze, All Iron, All Bronze, Cast Iron/Stainless Steel, All Stainless Steel



SMALL CAPACITY
Model 3410
(to 7,000 GPM/1,590 m^3/h)



MEDIUM CAPACITY
Model 3409
(to 12,000 GPM/2,725 m^3/h)



LARGE CAPACITY
Model 3420
(to 65,000 GPM/14,762 m^3/h)



EXTRA LARGE CAPACITY
Model 3498
(to 225,000 GPM/51,098 m^3/h)

Model 3316

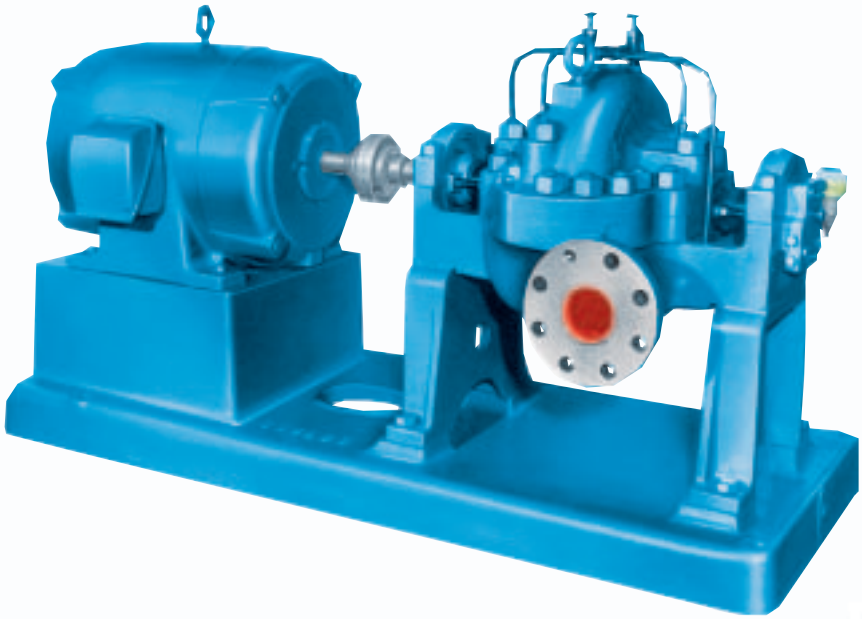
Two-Stage Splitcase

Horizontal split case pumps ideally suited for boiler feed, mine dewatering, and other services requiring moderately high heads with a wide range of operating conditions.

- ☐ Capacities up to 3,000 GPM (681 m^3/h)
- ☐ Heads to 1,000 feet (305 m)
- ☐ Temperatures to 350° F (177° C)
- ☐ Pressures to 550 PSIG (3,792 kPa)

Materials: Bronze-fitted, Cast Iron, Bronze, 316SS

9 Sizes



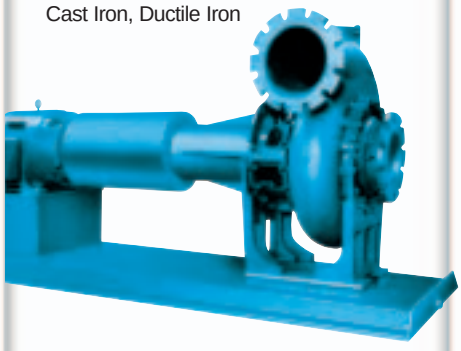
Model NSW

Small Capacity Sewage Pump

Single stage – enclosed non – clog type impeller for pumping wastewater and other non-corrosive liquids with soft solids.

- ☐ Capacities to 9,000 GPM (2,044 m^3/h)
- ☐ Heads to 275 feet (84 m)
- ☐ Solids to 6.38 inches (162 mm)

Materials:
Cast Iron, 2-3% Nickel Cast Iron, Ductile Iron



*Also available in vertical configurations (NSWV)

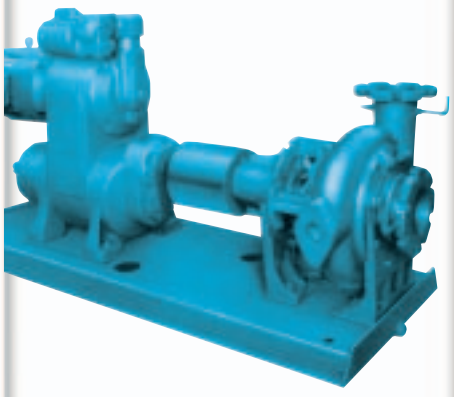
Model NSX

Small Capacity Sewage Pump

Single stage – open *Shearpeller* impeller specially designed for pumping wastewater, with fibrous or stringy solids.

- ☐ Capacities to 4,000 GPM (908 m^3/h)
- ☐ Heads to 100 feet (30 m)
- ☐ Solids to 5.31 inches (133 mm)

Materials:
Cast Iron / 431SS Fitted



*Also available in vertical configurations (NSXV)

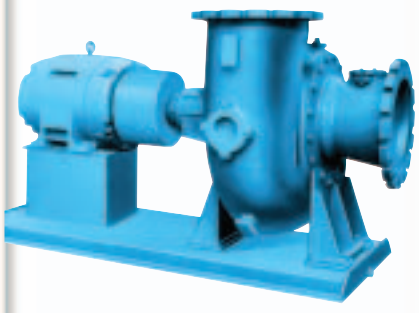
Model NSY

Medium Capacity Sewage Pump

Single stage – enclosed mixed flow type impeller for pumping wastewater and other non-corrosive liquids with soft solids.

- ☐ Capacities to 23,000 GPM (5,223 m^3/h)
- ☐ Heads to 85 feet (26 m)
- ☐ Solids to 9 inches (229 mm)

Materials:
Cast Iron, 2-3% Nickel Cast Iron, Ductile Iron



*Also available in vertical configurations (NSYV)

Models NSSE, NSSF & WSY

Large Capacity Sewage Pumps

The pumps are designed with large, unobstructed passages through the impeller and volute which make them ideally suited for pumping sewage, waste water, and storm water.

- ☐ Capacities to 140,000 GPM (31,800 m^3/h)
- ☐ Heads to 230 feet (70 m)

Materials:
Cast Iron, 2-3% Nickel Cast Iron, Ductile Iron

*Also available in vertical configurations (NSSEV, NSSFV, WSYV)



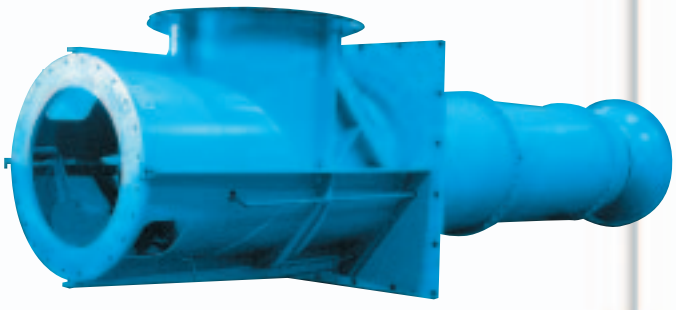
Model WCAX, YDD, WCA, WCB, WMCC & WMCE

Wet Pit Column Pumps

Wet Pit Column Pumps are custom designed for maximum reliability and high efficiency.

- ☐ Capacities to 500,000 GPM (114,000 m^3/h)
- ☐ Heads to 600 feet (185 m)

Materials:
Bronze Fitted, All Bronze, SS Fitted, Ni Resist, All SS



VERTICAL TURBINES

Model VIC

Vertical Can-Type

A wide range of hydraulic conditions allows meeting requirements of virtually every pumping service. Designed to meet custom specifications of the user. Model VIC can-type turbine meets API-610 specifications.



Model VIC

- ☐ Capacities to 80,000 GPM (18,168 m^3/h)
- ☐ Heads to 3,500 feet (1,070 m)
- ☐ Temperatures to 500° F (260° C)

Materials: Any Machinable Alloy

Model VIT

Vertical Industrial Turbine

A wide range of hydraulic conditions allows meeting requirements of virtually every pumping service. Designed to meet custom specifications of the user. Model VIC can-type turbine meets API-610 specifications.



Model VIT

- ☐ Capacities to 65,000 GPM (14,762 m^3/h)
- ☐ Heads to 3,500 feet (1067 m)
- ☐ Temperatures to 450° F (232° C)

Materials: Any Machinable Alloy

Model VIS

Vertical Submersible

For deep settings or where use of lineshaft pumps is impractical. For irrigation, service water, deep well supply, offshore and mine dewatering.



- ☐ Capacities to 4,000 GPM (908 m^3/h)
- ☐ Heads to 1,400 feet (427 m)

Materials:
Any Machinable Alloy

Model VMP

Vertical Marine

Goulds Model VMP pump is an automatically self-priming unit designed specially for efficient unloading and stripping of product tankers and barges.



- ☐ Capacities to 20,000 GPM (4,542 m^3/h)
- ☐ Heads to 635 feet (194 m)
- ☐ Temperatures to 250° F (120° C)

Pick Your Perfect Process Pump



Whether it's for severe corrosives, abrasive slurries, fibrous/stringy solids, high temperature liquids, hazardous fluids, low flow or high capacity services – Goulds has a perfect, reliable solution. The Goulds selection of fluid solutions includes horizontal and vertical configurations in a range of alloy and non-metallic constructions, sealed and sealless. Goulds wide range of products ensures that we have the right pump for virtually every application.

Pump Selection Checklist

The following Pump Selection Checklist is designed to assist users in reviewing most pump requirements for ultimate selection of the best pump. Your Goulds representative has been specially trained in pump application and should be contacted to assist in final pump selection for optimum reliability and safety.

I. REQUIREMENTS

1A SYSTEM

Service:_____
Capacity:_____
Total Dynamic Head: _____
NPSH Available:_____
Suction Pressure:_____
Minimum Flow Rate:_____
Total Working Pressure: ___

2A LIQUID PROPERTIES

Liquid: _____
Vapor Pressure: _____
Specific Heat: _____
Viscosity:_____
Solids Size/Content: _____
Specific Gravity: _____
Temperature:_____
Characteristics: (flammable, explosive, carcinogenic, toxic, noxious, regulated, etc.):
_____

3A SAFETY/ENVIRONMENTAL

☐ UL label (explosion-proof enclosures)
☐ Regulations (government, local, plant)
☐ Temperature limits
☐ Fugitive emission limits
☐ Product purity
☐ Best Available Control Technology
☐ Reporting requirements

4A ECONOMY/RELIABILITY

☐ MTBF requirements
☐ Lubrication
☐ Cooling/Heating
☐ Operator experience
☐ Operator maintenance
☐ Extra product filtering
☐ Ease of installation

II. PUMP

1B

Pump Size _____
Impeller diameter _____
HP, efficiency _____
$NPSH_R$ _____
Minimum Pump Flow _____
Speed (RPM) _____

2B

Materials of Construction _____
Bearing cooling_____
Sealing/flushing requirements_____
Jacketing for cooling/heating _____

3B

Explosion-proof enclosures
_____
Safety protection options
_____
Coupling guard options
_____
Casing drain _____
Flange options _____
O-ring materials _____

4B

Type of lubrication _____
Start-up assistance_____
Operator training_____
Maintenance training _____
Baseplate options_____
Oil seal options_____

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