

# Goulds Products for Pulp and Paper



**ITT**

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# Goulds Pumps for the Pulp & Paper Industry

## Heavy Duty Paper Stock Pumps



All customer requirements were considered in the design of the 3180 and 3185 paper stock/process pump. The result is a true world class pump line . . . a product without compromise.

**World Class Design** 3185 pumps comply to ISO 5199 with eight sizes conforming to ISO 2858 dimensions. Metric fasteners and fittings used throughout.

**Excellent Hydraulic Coverage** Designed for full 50/60 Hz coverage.

**External Impeller Adjustment** Original high efficiency and performance maintained by simple axial adjustment resulting in low operating costs, reduced downtime.

**Sealing Flexibility** Choice of packing, mechanical seals or dynamic seal.

**Application Flexibility** Choice of open or enclosed impeller.

**Back Pull-out Construction** Spacer-type coupling allows one craft maintenance.

**Renewable Wear Parts** Low maintenance costs.

**Labyrinth Seals** Eliminate lubricant contamination for maximum bearing life.

**Maximum Parts Interchangeability** Entire line uses just four power ends.

## ANSI / ISO Standard Dimension Process Pumps

Over a million installations attest to the remarkable performance and durability of Goulds ANSI and ISO process pumps.

**External Impeller Adjustment** Original high efficiency maintained by simple adjustment.

**Double Row Thrust Bearing** Provides minimum shaft end play for long seal life.

**Heavy Duty Shaft** Designed for toughest services.

**Bearing Cooling** Standard for flexibility in process changes.

**Maximum Interchangeability** Bearing frame completely interchangeable with five different pump models.

**Bonus Casing Thickness** All 150 psi pumps have 300 psi wall thickness as standard.



## Fan Pumps



**Horizontally Split Casing** In-line suction and discharge nozzles in lower half casing for ease of inspection/maintenance.

**Double Suction Impeller** Assures Hydraulic Axial Balance for lower thrust bearing loads, longer pump life, and low maintenance.

**Dual Volute Casing** Assures Radial Balance for lower radial bearing loads, longer pump life and low maintenance.

**Wear Rings** Easily replaceable wear rings renew running clearances, protect against impeller, casing wear. Overall cost of operation is minimized.

**Sealing Flexibility** Choice of packing or wide range of mechanical seals.

**Installation Versatility** Horizontal or vertical mounting, clockwise or counterclockwise rotation.

**Material Flexibility** Available in a wide variety of metals from cast iron to stainless steels.

**Pump Selection Chart** This is a partial list of products used in pulp and paper services. For complete, specific information on all Goulds products, visit our website at [www.gouldspumps.com](http://www.gouldspumps.com)

Pump Type	Model	Capacities to	Heads to	Temperatures to	Pressures to	Materials of construction	Services	Ask for Bulletin
Paper Stock	3175	28000 GPM 6359 m <sup>3</sup> /h	320 ft 98 m	450°F 232° C	275 PSIG 1896 kPa	Iron, Bronze, 316SS, Alloy 20, Ductile Iron, 317SS, Ni-Resist, Nickel, Titanium, CD4MCu, Hastelloy B & C	Paper Stock thru 6% Consistency, Dry End Broke Repulper, Hydropulper, Blow Tank to Screens, Secondary/Tertiary Cleaner Feed and Rejects, Reclaimed Fiber, Couch Pit, Black Liquor, Digester Circulation, High Density Chlorine Tower to Washer, Brown Stock Washer.	723.4
	3180/ 3185	26000 GPM 6000 m <sup>3</sup> /h	410 ft 125 m	446° F 230° C	232 PSIG 1,600 kPa			3180/3185
	3181/ 3186	20000 GPM 4600 m <sup>3</sup> /h	410 ft 125 m	508° F 300° C	360 PSIG 40 bar	CD4MCu, 316SS, 317SS	Digester Circulation	3181/3186
ANSI Process	3196	6,000 GPM 1364 m <sup>3</sup> /h	730 ft 222 m	500° F 260° C	375 PSIG 2586 kPa	Ductile Iron, 316SS, CD4MCu, Alloy 20, Monel, Nickel, Titanium, Hastelloy B & C	Digester make-up - green and white liquor, Black liquor recovery, Acid/Caustic/Chemicals, Titanium Dioxide, Clay Slurry, Paper Stock to 3% Bleach Plant - Sodium Hypochlorite, ClO <sub>2</sub> , Saveall, Shower and Felt Cleaning, Condensate, Mill Water, Transfer	3196
	HT3196	4500 GPM 1023 m <sup>3</sup> /h	925 ft 282 m	700° F 372° C	450 PSIG 3102 kPa			725.12
	Dynamic Seal	1300 GPM 295 m <sup>3</sup> /h	500 ft 152 m	300° F 150° C	Max Suction Pressure to 65 ft (20 m)	CD4MCu, 316SS, Alloy 20, Ductile Iron, other machineable alloys.	Titanium Dioxide, Clay Slurry, White Water, Filler Materials, Evaporator.	725.1A1
ISO Process	IC	1980 GPM 450 m <sup>3</sup> /h	482 ft 150 m	350° F 177° C	235 PSIG 16 bar	DI, 316SS, Duplex SS, Hastelloy C, Titanium	Liquor, Condensate Mill Water, Transfer	IC
	ICP	1980 GPM 450 m <sup>3</sup> /h	482 ft 150 m	535° F 280° C	365 PSIG 25 bar	Carbon Steel, Duplex SS, Hastelloy C	Foul Condensate	ICP
Self-Priming	3796	1250 GPM 284 m <sup>3</sup> /h	430 ft 131 m	500° F 260° C	Suction Lifts to 25 ft (7.6 m)	Iron, 316SS, CD4MCu, A20, Hastelloy	Acid Sump, Tank Car Unloading, Chemical Transfer	725.4
In-Line	3996	1500 GPM 340 m <sup>3</sup> /h	700 ft 207 m	500° F 260° C	375 PSIG 1475 kPa	Iron, 316SS, CD4MCu, A20, Hastelloy, Titanium, Monel, Nickel	White Water, Chemical Transfer, Mill Water	725.2
Non-Metallic	NM3196	800 GPM 182 m <sup>3</sup> /h	500 ft 152 m	200° F 93° C	220 PSIG 1517 kPa	High strength, Corrosion Resistant GMP-2000	HCl Acid Transfer / Feed	725.6
Sealless ANSI	3198	800 GPM 182 m <sup>3</sup> /h	450 ft 137 m	300° F 150° C	225 PSIG 1550 kPa	PFA Lined	Acid Unloading	725.3
	3298	1200 GPM 270 m <sup>3</sup> /h	530 ft 161 m	360° F 180° C	275 PSIG 1896 kPa	ETFE Lined	CID <sub>2</sub> Transfer	725.7
	3296	700 GPM 159 m <sup>3</sup> /h	440 ft 134 m	425° F 315° C	285 PSIG 1965 kPa	316SS, Alloy 20, Hastelloy C	Acid Service	725.9
Sealless ISO	ICM	1760 GPM 400 m <sup>3</sup> /h	685 ft 210 m	360° F 180° C	232 PSIG 16 bar	DI, SS, Hastelloy, Alloy 20, Titanium	Acid Service	ICM
	MDK	420 GPM 95 m <sup>3</sup> /h	280 ft 85 m	250° F 120° C	235 PSIG 16 bar	FEP and PP Lined	CID <sub>2</sub> Transfer	MDK
High Temp	3700	6500 GPM 1150 m <sup>3</sup> /h	1150 ft 350 m	800° F 427° C	870 PSIG 6000 kPa	Carbon Steel, 12% Chrome, 304SS, 316SS, Alloy 20, other machineable alloys.	High Pressure Shower / Felt Cleaning, Power House Services.	724.1
Double Suction	3408 3410	8000 GPM 1817 m <sup>3</sup> /h	570 ft 174 m	350° F 177° C	400 PSIG 2758 kPa	All iron, bronze fitted, 316SS, iron w/316SS fitted.	Mill Water, Transfer, White Water, Fan Pump/LoPulse, Headbox Supply/LoPulse, Primary Cleaner Supply, Primary Screen Supply, Cooling Tower, River Water Supply, Filtrate	721.8
	3409	1200 GPM 2725 m <sup>3</sup> /h	850 ft 259 m	250° F 120° C	400 PSIG 2758 kPa			
	3420	65000 GPM 14762 m <sup>3</sup> /h	400 ft 122 m	275° F 135° C	200 PSIG 1380 kPa			
	3498	225000 GPM 51098 kPa	800 ft 244 m	275° F 135° C	250 PSIG 1742 kPa			
Multi Stage	3600	2600 GPM 590 m <sup>3</sup> /h	5500 ft 1675 m	400° F 205° C	2500 PSIG 17238 kPa	Carbon Steel, 12% Chrome, 316 LSS, Duplex SS	High Pressure Shower/Felt Cleaning, Knock-off Shower.	722.8
	3335	280 GPM 64 m <sup>3</sup> /h	2500 ft 762 m	400° F 205° C	1100 PSIG 7584 kPa	CS, 316SS		722.10
	3310H	1200 gpm 272 m <sup>3</sup> /h	5400 ft 1646 m	374° F 190° C	2465 PSIG 17000 kPa	Carbon Steel, CI, CS 12%, All 12% Chrome	Boiler Feed, High Pressure Shower.	722.1
	3316	3000 GPM 681 m <sup>3</sup> /h	1000 ft 305 m	350° F 177° C	550 PSIG 3795 kPa	All Iron, All Bronze, All 316SS, Bronze-Fitted	Boiler Feed, High Pressure Shower, Condensate	722.6
Hard Metal Slurry	5000 5500	17000 GPM 3861 m <sup>3</sup> /h	425 ft 139 m	250° F 121° C	500 PSIG 3448 kPa	Available in a wide range of abrasive/corrosive resistant alloys.	Lime Mud, White Liquor, Green Liquor	727.1
Submersible	HSU	4000 GPM 910 m <sup>3</sup> /h	220 ft 67 m	194° F 90° C		CI, 28% Chrome Iron, CD4MCu, 316SS, Iron	Sump, Dewatering, Lift, Mill Water Service, Booster, Transfer	230.1
Vertical Sump & Process	3171	3180 GPM 720 m <sup>3</sup> /h	290 ft 88 m	450° F 232° C	Pit Depths to 20 ft (6 m)	Cast Iron, Bronze Fitted, All Bronze, 316SS, Alloy 20, Hastelloy B & C	Sump, Dewatering, Lift, Tank Car Unloading, Corrosives	726.1
	5100	7500 GPM 1703 m <sup>3</sup> /h	240 ft 73 m	200° F 93° C		High Chrome Iron, 316SS	Lime Mud, White Liquor, Green Liquor	727.2
	Trash Hog	6000 GPM 1363 m <sup>3</sup> /h	140 ft 43 m	225° F 107° C	Pit Depths to 28 ft (8 m)	CI, SS, 316SS, CD4MCu	Chemical Sump/Transfer	726.2
Vertical Turbine	VIT	60000 GPM 13627 m <sup>3</sup> /h	3500 ft 1067 m	450° F 232° C		Wide Range of Alloys	Cooling Tower, River Water Supply, Water Treatment	3A.1





**PRO Services™:**  
Your Business Solution For ...

**Routine Maintenance \* Plant Shutdown \* Field Repair \*  
Contract Services \* Turnkey Service**

### In The Shop ... Or On The Road.

PRO Services engineers and technicians are experienced with servicing all types of pumps and rotating equipment. Customers utilize PRO Services for commissioning, troubleshooting, and field repairs of pumps, pumping systems, and other pieces of rotating equipment. PRO Services engineers and technicians utilize state-of-the-art techniques and equipment to provide the highest level of service in the industry.

- Factory Trained Service Technicians
- Fast Turnaround
- Emergency Service - 24 hours/day, 7 days/week, 365 days/year
- ISO Certified
- Quality

## PUMP SMART® CONTROL SOLUTIONS

PumpSmart® intelligent flow system significantly reduces life cycle costs of process pumping. PumpSmart is an advanced technology system that works with any centrifugal pump utilizing a smart VFD controller and our proprietary control software.

● **Reliability**

Longer pump and seal life means reduced maintenance and downtime.

● **Control**

Improved pumping accuracy and repeatability means better process control.

● **Operating Cost**

Variable speed cuts energy cost up to 70%.

● **Flexibility**

Control any centrifugal pump up to 700 HP.

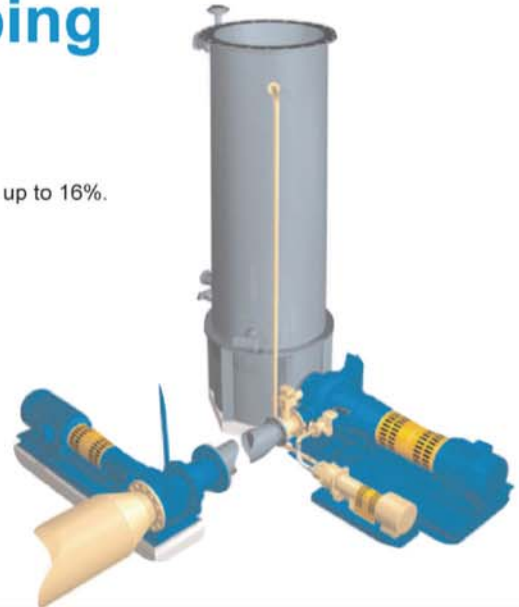


PumpSmart may also eliminate the need for control valves, flow meters, recirculation piping, and suction valves, reducing capital and installation costs.

## Medium Consistency Pumping and Mixing

- The Goulds Medium Consistency Pumping System is designed for pulp consistency up to 16%.
- Patented Air Separation gives improved bleaching effectiveness.
- Optimix Mixer is world's most effective mixer.
- DoubleShear mixing works in chemical and gas mixing applications.

### Solutions for the modern bleach plant



Visit our website at [www.gouldspumps.com](http://www.gouldspumps.com)



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