

Introducing the

HydraJust™ Engineered Sealing System

—the leak-free, no dilution sealing system designed to replace mechanical seals in industrial pumping applications.

The HYDRA-JUST™ Seal is...

Better Than Both— Packing or Mechanical Seals.

Ordinary packing must leak to perform. And common system upsets can spell disaster for mechanical seals. The HYDRA-JUST™ system provides a truly leak-free rotary seal—without the risk of catastrophic failure.

The Choice for Water Reduction.

Because the HYDRA-JUST™ seal provides cool, dry operation with no product dilution, overall water consumption is significantly reduced. And, unlike mechanical seals, it actually works better in high pressure/low flow conditions.

Designed For True Outage-to-Outage Performance.

Engineered from innovative materials, the HYDRA-JUST™ seal has the versatility to handle a wide range of system upsets and excels in the most hostile environments and abrasive conditions for extraordinary long service life.

Easy to Install.

The HYDRA-JUST™ system consists of a minimal number of components and comes completely split—eliminating the need for a costly dismantling process or back-up equipment.



Garlock

SEALING TECHNOLOGIES®

HydraJust™

Engineered Sealing System

FAQs

What is the HYDRA-JUST™ system?

The HYDRA-JUST™ system is a leak free, no dilution sealing system designed to replace mechanical seals in industrial pumping applications.

Where should I consider using the HYDRA-JUST™ system?

The HYDRA-JUST™ seal can go anywhere that a single mechanical seal is currently being used. The biggest difference between the two technologies is that with HYDRA-JUST™, there is no risk of catastrophic failure.

How is the HYDRA-JUST™ seal different from ordinary packing?

By its very nature, packing has to leak in order to perform. The HYDRA-JUST™ seal uses braided rings in conjunction with other Garlock performance materials to create a truly “leak free” rotary seal.

Is the HYDRA-JUST™ seal difficult to install?

Typical installation time is less than an hour. The sealing components come split so that machinery can be serviced without uncoupling the motor.

Are there special concerns with installation in an abrasive environment as opposed to a fairly clean application?

No. The installation procedure is the same regardless of the media involved.

How much does equipment condition affect the HYDRA-JUST™ seal?

Because the HYDRA-JUST™ seal does not use a machined seal face, the system can tolerate moderate amounts of wear in the stuffing box. Generally speaking, if the equipment is within manufacturer’s design tolerances, the HYDRA-JUST™ seal will make the seal.

How much do I have to adjust the HYDRA-JUST™ seal on start-up?

There is no start-up adjustment. All that is required on start-up is to ensure the seal water entering the flush port is at 2X stuffing box pressure.

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Garlock Sealing Technologies® is
an EnPro Industries company.



ISO 9001:2000
Cert. #001762

I see the HYDRA-JUST™ system comes with a flowmeter, why can't I use my own flowmeter?

The HYDRA-JUST™ system can be purchased with or without a flowmeter. The flowmeter, needle valve and pressure gauge that Garlock provides makes for a user-friendly seal. However, you can run the set without a flowmeter provided you have the means to regulate and measure the pressure of the seal water.

As for using your own meter, the amount of seal water that the HYDRA-JUST™ seal requires is typically between 3 and 10 GPH. That flow rate may be so low that your current flowmeter might not be capable of registering it.

I already have lantern rings in stock, can I use them in place of your barrier pressure ring?

No. While at first glance it may look like a lantern ring, the barrier pressure ring has a very different structure and function. Specifically, it was designed by Garlock to efficiently direct seal water pressure in such a way as to maintain equal force on the inboard and outboard seals.

How long will the HYDRA-JUST™ seal last?

The HYDRA-JUST™ seal is designed to provide “outage-to-outage” service in most industrial pumping applications.

Do I need any special equipment to use the HYDRA-JUST™ system?

All you need is 3-10 GPH of pressurized seal water.

Is HYDRA-JUST™ system cost effective?

The HYDRA-JUST™ seal provides outage-to-outage, leak free service at a price that's lower than that of a mechanical seal. Additionally, because it is not prone to catastrophic failure you can optimize your uptime and schedule maintenance around your production needs rather than re-scheduling production around seal failures.

WARNING:

Properties/applications shown throughout this brochure are typical. Your specific application should not be undertaken without independent study and evaluation for suitability. For specific application recommendations consult Garlock. Failure to select the proper sealing products could result in property damage and/or serious personal injury. Performance data published in this brochure has been developed from field testing, customer field reports and/or in-house testing.

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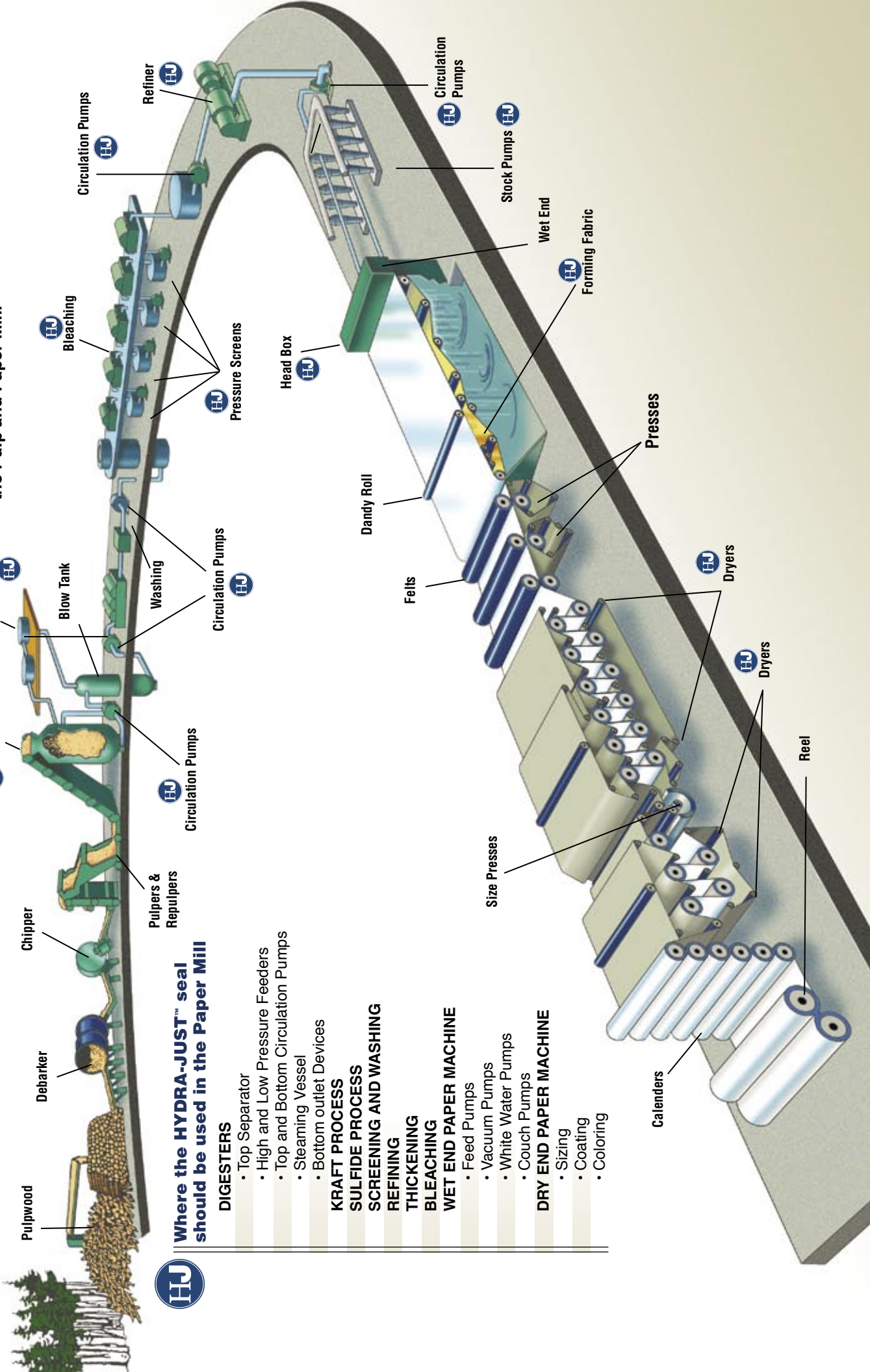
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HydraJust™ Paper Making Process Paper Mill Applications

The HYDRA-JUST™ system's unmatched abrasion and chemical resistance, coupled with its water efficiency, make it the ideal sealing solution in the Pulp and Paper Mill.



Where the HYDRA-JUST™ seal should be used in the Paper Mill

- DIGESTERS**
 - Top Separator
 - High and Low Pressure Feeders
 - Top and Bottom Circulation Pumps
 - Steaming Vessel
 - Bottom outlet Devices
- KRAFT PROCESS**
- SULFIDE PROCESS**
- SCREENING AND WASHING**
- REFINING**
- THICKENING**
- BLEACHING**
- WET END PAPER MACHINE**
 - Feed Pumps
 - Vacuum Pumps
 - White Water Pumps
 - Couch Pumps
- DRY END PAPER MACHINE**
 - Sizing
 - Coating
 - Coloring

Pulpwood, Debarcker, Chipper, Pulpers & Repulpers, Digester, Chemical Recovery, Blow Tank, Washing, Bleaching, Refiner, Circulation Pumps, Pressure Screens, Head Box, Dandy Roll, Felts, Stock Pumps, Wet End Forming Fabric, Presses, Size Presses, Calenders, Dryers, Reel.

Customer: **Florida Pulp & Paper Mill**
 Project: **Bottom Circulating Pump**
 Solution: **HYDRA-JUST™ Rotary Seal**

CASE STUDY

Performance Comparison Annual Profit Impact

Florida Paper Mill

A large paper mill in the Florida panhandle had a major problem. The bottom circulating pump on their digester was down for seal replacement far too often and if it couldn't run, then neither could the digester.

Originally, the mill was using Kevlar® and GFO® packing to seal the pump, but this would only last 3-6 weeks. In addition to lost production time due to rapid seal failure, the mill had to deal with white liquor leaking out of the pump and the waste of having to use vast amounts of flush water to maintain the packing.

A mechanical seal was installed with the hope of fixing the problem. However, due to fluctuations in the mill's seal water pressure, the mechanical seal failed in less than a week.

That's where Garlock and the HYDRA-JUST™ system came in. The mill went from monthly failures to annual maintenance, dramatically cut their water use and realized significant operating savings. In fact, the HYDRA-JUST™ seal worked so well the mill installed an identical seal in their top circulating pump.

KEVLAR is a registered trademark of DuPont
 GFO is a registered trademark of Gore and Associates

	Current Practices	Garlock's Solution	Profits Gained
Costs due to lost production	\$14,479	\$1,207	\$13,272
Costs for the Seals	\$5,052	\$550	\$4,502
Costs for Associated Parts	\$1,800	\$150	\$1,650
Labor Costs to Install	\$7,104	\$592	\$6,512
Annual Operational Impact	\$28,435	\$2,499	\$25,936

