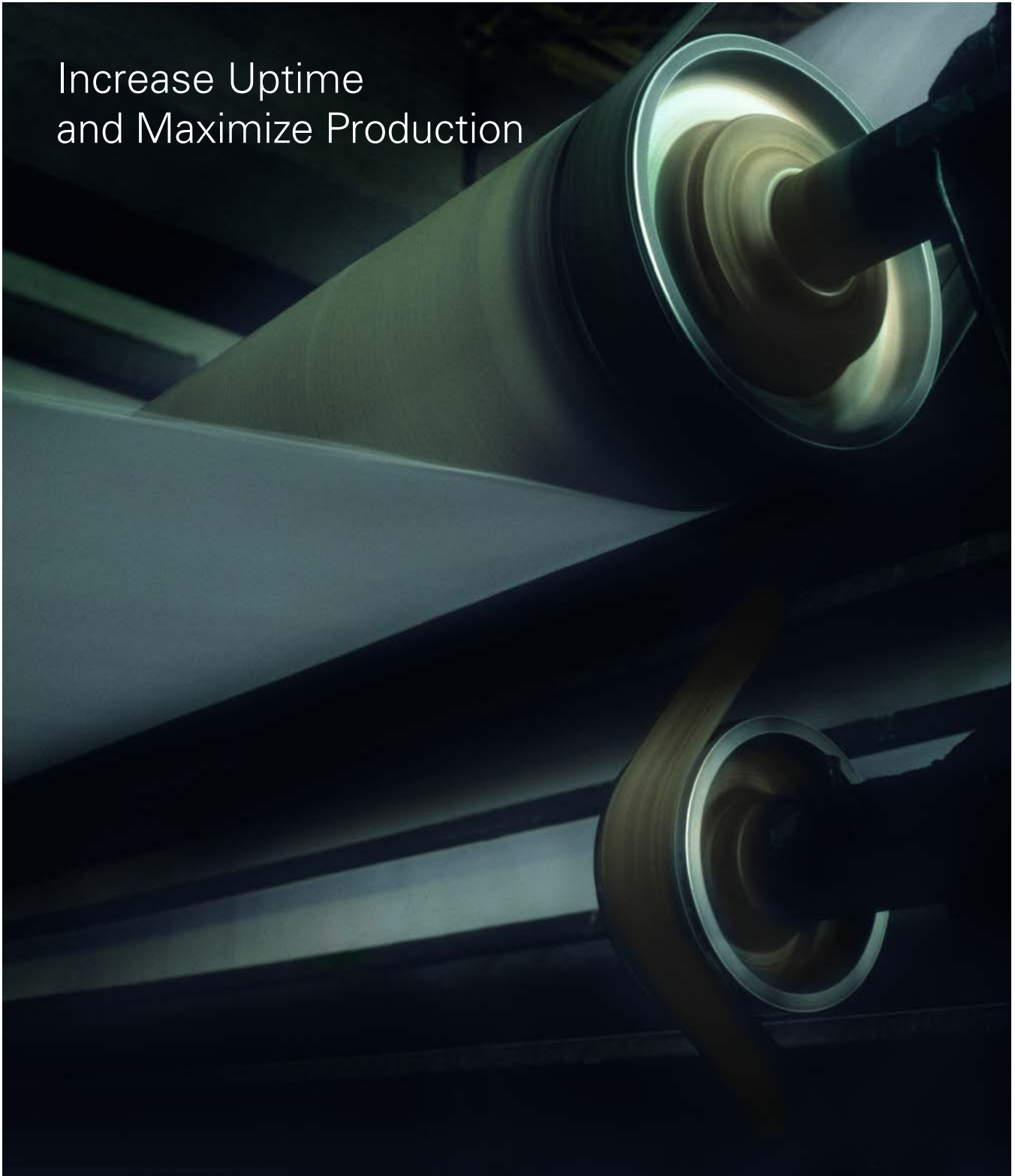




Donaldson Delivers  
**Pulp & Paper  
Filtration Solutions**

Increase Uptime  
and Maximize Production





## Filtration Solutions Engineered for All Types of Equipment

### The Best Solutions for Clean, Dry Oil

Donaldson hydraulic filters and accessories reduce a broad range of contaminants to keep pulp and paper equipment running smoothly — resulting in efficient systems with superior performance.

### Comprehensive Product Line

Donaldson delivers proven performance in thousands of applications — offering the industry's largest selection of replacement hydraulic, lube and gear oil filtration products for contamination control.

## Donaldson Solutions for Contamination Problems in Pulp and Paper Mills

### Hydraulic Filtration

Protecting equipment, maintaining uptime and staying efficient are all crucial in the pulp and paper industry. Donaldson hydraulic filters protect critical components from catastrophic failure.

### Paper Machine Lubrication Oil (PMLO) Systems

For higher initial cleanliness, extended filter life and superior system protection, Donaldson offers a complete line of hydraulic filter heads and housings for paper machine lubrication oil systems. Spin-ons and cartridge filters are available with a wide range of medias, with features like deep pleats for higher dirt holding capacity and 5-layer media construction.

### Gear Box Filtration

The Donaldson Filter Panel, Filter Buddy™ or Filter Cart offer convenient off-line filtration, flushing and fluid transfer. Use them with your industrial equipment to achieve and maintain proper ISO cleanliness levels.

### Reservoir Breathers

In high moisture environments, breathers with pressure relief and vacuum breakers limit air exchange and help eliminate water contamination. Donaldson T.R.A.P.™ Breathers provide fast acting protection against particulate and moisture contamination. Donaldson Active Reservoir Vent™ (ARV™) provides an effective dry air purging system to minimize water contamination in fluids.

### Vacuum Dehydration Oil Purification Systems (VDOPS)

VDOPS effectively remove particulate, water and dissolved gases from petroleum and synthetically based fluids. The Donaldson system removes up to 100% of free and emulsified water from oils and up to 90% of dissolved water from oils to as low as 20 ppm. It also removes particulate to as low as ISO 12/10/9 and up to 90% of dissolved gases.



## Your Total System Supplier

Whether it's located on mobile equipment or in a mill, hydraulic components need clean oil for maximum life and optimal productivity.

Count on Donaldson to have the right filters, contamination control products and services to protect critical components in hundreds of applications.

## Why Choose Donaldson?

Pulp and paper mills require the assurance of high performing products for demanding applications. Donaldson products are engineered to fit a wide range of applications used in pulp and paper mills.

A recognized leader in quality replacement filters, Donaldson offers the largest selection of in-stock,

ready-to-ship replacement filters and is committed to providing the absolute best products in the market today. Rest assured that the world's largest manufacturer of industrial filter products is prepared to support you — everyday, everywhere. Ask us how we can help you with all your filtration needs.

## Donaldson Delivers:

- Custom construction capability — products and systems designed to fit your site's unique requirements
- Training seminars for staff tailored to your specific needs
- Global lab and testing capabilities to help solve contamination issues worldwide
- Global manufacturing and distribution network — meaning the filters you need are never far away

# Hydraulic and Lube Oil Filtration Products for Pulp & Paper



## Hydraulic Filtration

Performance under **any** pressure. Protect expensive hydraulic components with Donaldson's complete line of spin-on, cartridge-style and in-tank hydraulic filters.



**DT High-Performance Cartridges Filters** provide better protection from contaminants. Featuring an advanced pleat pack design and engineered to fit a wide range of pulp and paper applications.

- Donaldson Synteq™ media technology delivers longer filter life, higher initial cleanliness and superior system protection
- 73% higher dirt-holding capacity
- 47% lower initial pressure drop
- Micron ratings down to <4 µm



**Duramax® Spin-On Filters** are the highest-rated medium pressure filters available. Proven, reliable, long-lived and easy to install.

- Available for working pressures up to 1000 psi
- Micron ratings down to <4 µm



## Specialized Pulp & Paper Applications

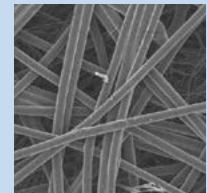
### HRK10 In-Line Assemblies and Cartridge Filters

Strong, durable assembly has an all-steel housing built to withstand the rigors of dedicated bearing lube applications on the wet end, press section and dry end of paper machines.



- ANSI inlet port options
- Variety of service indicators, including electrical port in the differential indicator block
- Multiple bypass valve design – wide range of ratings
- Easy service features – twist and lift cover, drain plug, bleed valve/fill plug in cover
- Cartridge filters employ reverse flow to contain contamination
- Donaldson DT high-performance 4-layer media offered in 6 media grades

*Donaldson Synteq media offers superior performance with lower pressure drop and higher dirt-holding capacity for longer service life.*



### W041 In-Line Cartridge Filters

High flow W041 filter has an aluminum head, cast iron cover and plated steel cylinder for a strong, durable, and dependable base-mounted assembly.

- Deep pleat filters standard for higher dirt holding capacity
- Donaldson DT high-performance 4-layer media offered in 5 media grades
- Large T-handle and top cover access for fast servicing without tools
- Wide range of indicator options
- 2 filter length options for design flexibility
- 2 drain plugs in base and cover bleed/fill plug
- Thermal lockout and surge control incorporated in many of the differential pressure indicators



### W620 In-Line Cartridge Filters

The W620 filter assembly contains the popular HF3 filter. The differential pressure indicator line is designed to work with the wide variety of bypass valves.

- Donaldson DT high-performance 4-layer media offered in 5 media grades
- Cast iron head and steel housing
- Reverse flow bypass valve option available
- Thermal lockout and surge control incorporated in many of the differential pressure indicators



### PMLO (Paper Machine Lube Oil)

Replacement cartridge filters that cross to existing Pall® Ultipleat® housings commonly used in many PMLO applications.

- Direct fit replacements for Pall® 8300, 8310 and 8314 series housings

### Auxiliary Hydraulic Systems

Replacement cartridge filters that cross to typical auxiliary hydraulic systems.

- Direct fit replacements for Pall® Ultipleat® SRT 219, 319, 619 housings
- Replacements to fit (older) Pall® 9600 and 9604 series housings

### Dedicated Bearings

Replacement filter cartridges for dedicated bearings typically found on the wet end of paper machines.

- Direct fit replacements for Pall® 8300 and 8310 series (smaller size housings), and 8314 (coreless style)
- Direct fit replacements for Pall® Ultipleat® SRT 219, 319, 619 housings



# Hydraulic and Lube Oil Filtration Products for Pulp & Paper



## T.R.A.P.™ & Air Breathers

Breathers provide clean airflow into reservoirs and storage containers where there is an exchange of air as fluid levels change.



### Reservoir Breathers

In high moisture sites or applications with significant changes in machine environments, breather caps with pressure relief and vacuum breakers limit air exchange and provide a positive suction head at the pump inlet.

- Prevents atmospheric contamination from entering, while allowing for sufficient reservoir air movement

### T.R.A.P.™ (Thermally Reactive Advanced Protection) Breathers

provide fast-acting protection against airborne particulate and moisture contamination. T.R.A.P. breathers prevent moisture from entering tanks – and actually “pump” it out with each flow cycle.

- T.R.A.P. media regenerates its water-holding capacity – service life that is 3-4 times that of conventional desiccant breathers
- Removes atmospheric moisture at 15% relative humidity
- Prevents particles 3 µm and larger from entering the system at 97% efficiency



## Water Contamination Control

### ARV™ (Active Reservoir Vent™)

- Purges wet, humid air from reservoir head space
- Greater uptime, longer bearing life, lower energy consumption, fewer parts replaced, and greater machine efficiency
- Minimal maintenance and lower cost
- Prefilter and afterfilter for particle removal
- Provides protection from particulate wear



### Vacuum Dehydration Oil Purification System

- Variable frequency drive to improve inlet condition and performance
- Filter plugged alarm
- Claw vacuum pump for superior performance and long life
- Upstream and downstream oil sample ports
- Space efficient
- High water extraction rates



## Gear Box Filtration

Donaldson Water Absorbing Filters for smaller circuits remove free and some dissolved water. Also available: contamination control filter options that remove particulate matter. They can be permanently mounted (Filter Panel) or deployed throughout the mill (Filter Cart and Filter Buddy).

### Filter Cart

- For off-line filtration, flushing and fluid transfer of mill machinery
- Two in-series pressure filters remove coarse/fine particulate matter
- Optional water absorbing filter for particulate matter and water removal
- High efficiency media grades
- 1 hp motor with 10 gpm pump
- Rugged, durable frame for longer life
- Safety relief valve prevents pressure damage
- Overload switch guards against overheating



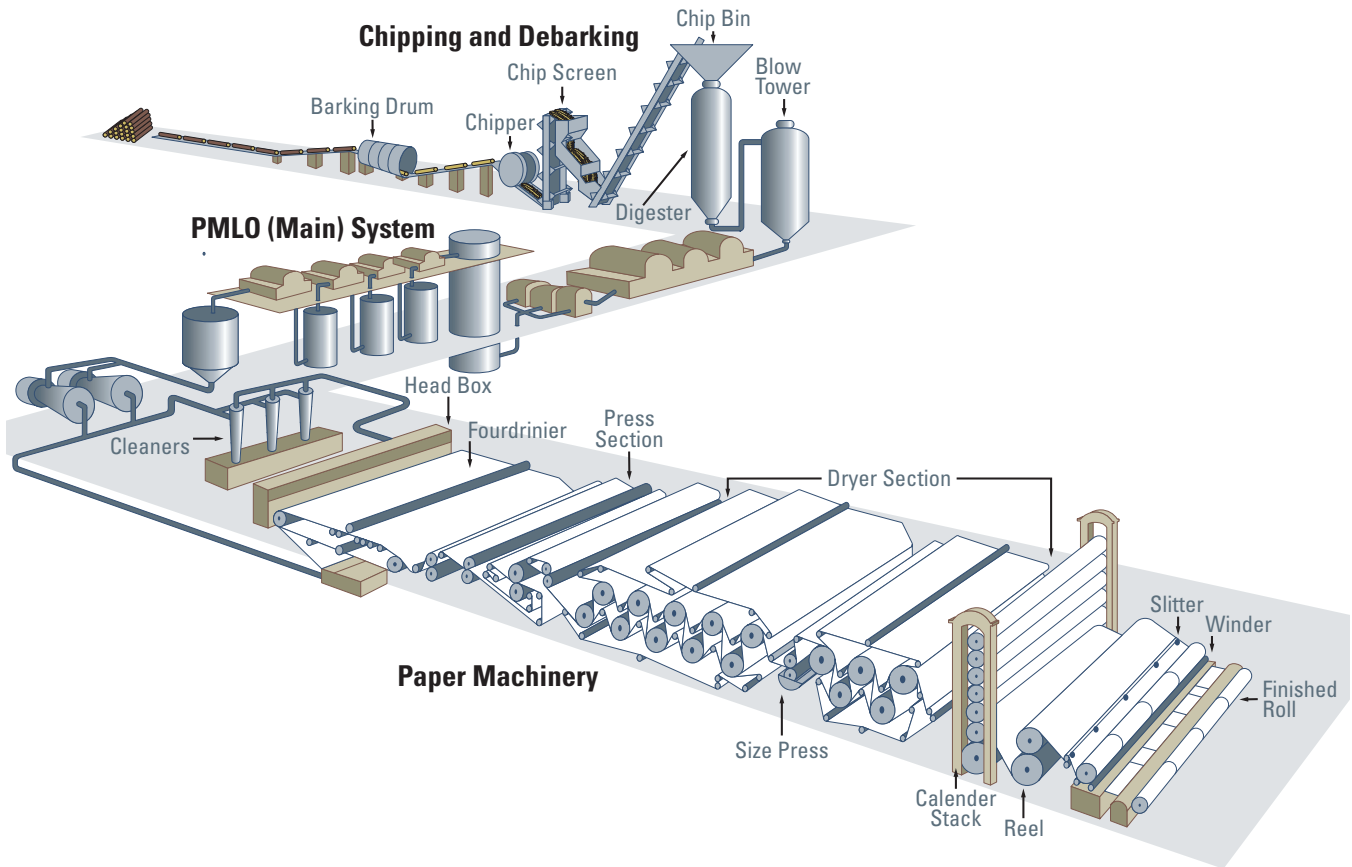
### Filter Buddy™













- Small, handheld, light for portability and use in tight spaces
- Allows for kidney looping reservoirs
- Convenient transfer and filtering from drum to reservoir
- Dual HMK04 filtration with Donaldson's exclusive high efficiency Synteq™ media
- Coarse/fine particle or water/particle removal
- Rugged, durable frame for long service life.
- Overload switch guards against overheating
- Sample ports enable cleanliness measurements



### Filter Panels

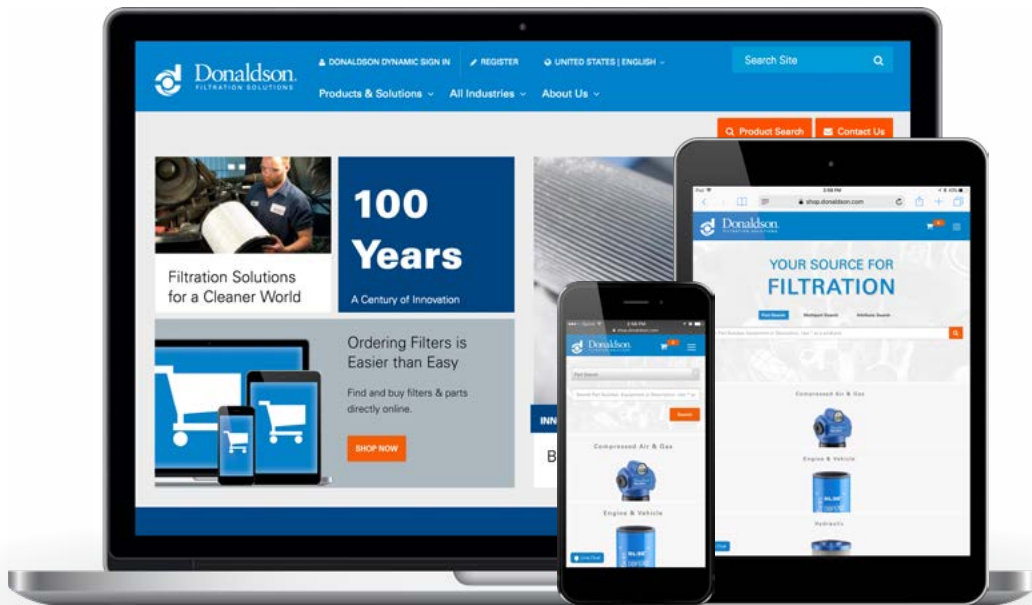
- Fixed-mount offline filtration
- Four pump flow-rate options
- Economical supplement to current filtration
- High efficiency media grades for cost effective filtration and ISO cleanliness levels
- Dual-stage filtration for coarse/fine particle removal
- Optional water absorbing element for particulate and water removal



	Application	Recommended Donaldson Product
 HRK10	Paper Machine Lube Oil (PMLO)	HRK10 Series, individual filter assemblies, multiple housings mounted in series.
 W061	Winder Hydraulic Systems	W061 Series assemblies, duplex version, 1x1 housing.
 W061	Crown Roll Hydraulics	W061 Series assemblies, duplex version, 1x1 housing.
 W041	Woodyard Operations, HPU for Chip, Paper Machine Lube Oil (PMLO)	W041 Series, 39" size assembly.
<b>Dump System</b>		
 W041  HRK10	Paper Machine Lube, Dedicated Bearing	Single W041-16" size assembly for this section or use the HRK10 Series assembly.
<b>Lube, Wet End</b>		
 W041  HRK10	Paper Machine Lube, Dedicated Bearing	Single W041-16" size assembly for this section or use the HRK10 Series assembly.
<b>Lube, Press Section</b>		
 W041  HRK10	Paper Machine Lube, Dedicated Bearing	Single W041-16" size assembly for this section or use the HRK10 Series assembly.
<b>Lube, Dry End</b>		
 Filter Panel	Coater Section for finished product, dedicated off-line kidney loop.	Panel Unit with dual spin-on filters.
 Portable Filter Cart	Winder, Crown Roll HPUs	Portable Filter Cart for flushing of the hydraulic reservoirs.



# Finding your Donaldson filter online has never been easier.



## DISCOVER.

Looking for a complete filtration system or advice on choosing the right filter option? Go online to **donaldson.com** to learn about the broad range of filtration solutions offered by Donaldson – and to help you decide which option is right for your application.

## DECIDE.

If you're an equipment owner that needs to purchase filters and parts – it's easy to find the right Donaldson part, make an online shopping list and even request a quote from one of our distributors. We make finding filters *easier than easy* at **shop.donaldson.com**.



Donaldson Company, Inc.  
Minneapolis, MN

[donaldson.com](http://donaldson.com)  
[shop.donaldson.com](http://shop.donaldson.com)

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Brazil 55-11-4894-6339  
Europe 32-16-38-3811  
South Africa 27-11-997-6000

Southeast Asia 65-6311-7373  
Greater China 86-400-650-0610  
Japan 81-42-540-4112  
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India 91-124-4807-400

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