

# HYDRA-SUPREME FILTER CONSTRUCTION & FUNCTION

## FEATURES

## BENEFITS

### PRECISION ROLLED, HIGH STRENGTH FILTER MEDIA

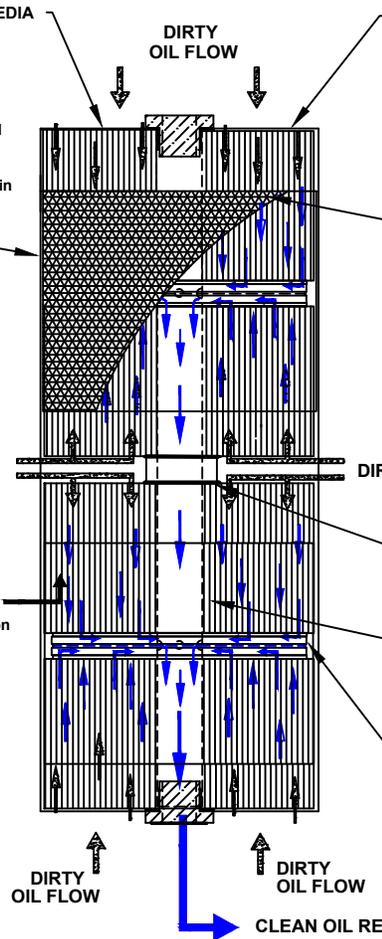
Custom manufactured filter paper has extreme wet strength capability. The proprietary blend of recycled and virgin pulp allows rapid water absorption and maintains the filter's rigidity when wet. Extremely fine creping during production creates minute "pockets" that trap solid debris and force the oil to pass through a labyrinth of media for thorough cleaning. Our proprietary winding techniques eliminate tension rings and soft layers in the media rolls.

### PATENTED FLEXIBLE SEAL

Flexible, external seal provides an absolute barrier to oil trying to bypass the filter process. This type of seal contracts and expands with the filter media as it reacts to pressure and the accumulation of water and debris. The seal also supports the walls of the filter as it softens with absorbed moisture, preventing distortion and collapse. Placing the seal on the outside of the media rolls also creates more filter surface area and contaminant holding capacity.

### HIGH QUALITY CONSTRUCTION PROCESS

Hydra-Supreme filters are built with high quality, heavy duty components that allow maximum filtration efficiency and total quality control. The filters are ruggedly built to prevent handling damage and shipped in sealed bags to assure full capacity and efficiency when placed into service.



### PRECISION MANUFACTURED AND ROLLED MEDIA

The high water capacity and wet strength of the filter roll allows permanent retention of large amounts of water, sludge, and solid debris. The even tension of the layers of paper creates uniform pressure buildup without rupture, internal bypass, and deformation even under high pressures for long filter life. The filter will remain intact well above the rated pressures.

### EXTERNAL BOOT PROVIDES VISIBLE SEAL AND GREATER FILTER CAPACITY.

The external seal allows both inspection and testing of the seal placement after assembly for absolute quality control. The location of the seal on the outside of the element allows use of the entire filter surface and body for filtration, offering up to 30% higher capacity than competing designs. The flexible seal also eliminates the tendency of the wet filter to "buckle" internally (where rigid seals press into the paper roll on other designs) and collapse internally when fully saturated. The Hydra-Supreme design keeps what it captures and does not fall apart under pressure.

### O-RING SEALS AT JUNCTIONS

All segment junctions and surface seals use O-Rings for positive sealing, even at elevated pressures.

### STEEL CENTER TUBE

Precision made steel center tube allows tight manufacturing tolerances and higher assembly pressures for consistently tight sealing at all junctions. The steel tube will not deform, crack or shed debris like the phenolic tubes used in competing designs

### ACCORDIAN DESIGN COLLECTOR PLATES

Flexible collector plate design moves with the filter media to support the end of the media roll, maintain filtration integrity and minimize flow restriction.

## THE BENEFITS OF USING HTI FILTRATION

### TWO PIECE ALUMINUM CAN BODYMAKER

	BEFORE	AFTER
Water Content	284 PM	66 PPM
3-6 Micron Debris	20957 per mL	1286 per mL
6-10 Micron Debris	1197 per mL	39 per mL
10-15 Micron Debris	40 per mL	3 per mL
ISO 4406:1999 Oil Rating	22/17/10	18/13/08

### ROLLER BEARING GEARBOX

	BEFORE	AFTER
Water Content	693 PM	74 PPM
3-6 Micron Debris	25694 per mL	935 per mL
6-10 Micron Debris	109 per mL	1 per mL
10-15 Micron Debris	292 per mL	8 per mL
ISO 4406:1999 Oil Rating	21/14/15	15/07/10

### SERVO HYDRAULIC SYSTEM

	BEFORE	AFTER
Water Content	1418 PM	77 PPM
3-6 Micron Debris	29724 per mL	588 per mL
6-10 Micron Debris	1197 per mL	107 per mL
10-15 Micron Debris	42 per mL	14 per mL
ISO 4406:1999 Oil Rating	22/17/10	16/14/11

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