

technical

# bulletin

**No. MB-348-C**

## Mini-Pressure Screen

The Mini-Pressure Screen is a small, economical, centrifugal pressure screen. It was designed specifically to meet low flow and capacity requirements in the stock prep, pulp mill, and paper machine approach flow areas, or any application where smaller flows/capacities occur. The screen's simple design significantly lowers the inlet pressure requirements. The feed flow enters directly inside the screen cylinder, passing through the cylinder's holes or slots to the accepts chamber. Rejects move to the back side of the screen housing, with the heavy debris collected in the junk trap located near the inlet port.

The screen rotor can be either a drum type or a foil type, and is mounted directly on the motor shaft via a factory installed hub. The shaft is horizontal, concentric and in line with the screen cylinder, allowing easy accessibility through a removable cover that exposes the entire rotating assembly and the mechanical seal. The screen housing is fastened to the motor's D-type flange, similar to a close-coupled pump, which eliminates extra parts and complexity.

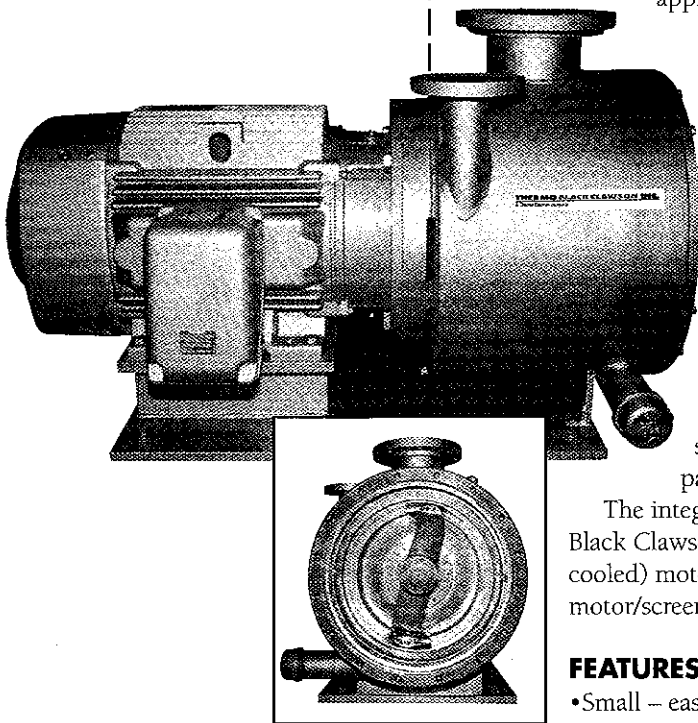
The integral motor, available off-the-shelf, is supplied by Thermo Black Clawson. The extra severe duty TEFC (totally enclosed, fan cooled) motor with D-Flanges and mounting feet supports the entire motor/screen assembly.

### FEATURES/BENEFITS

- Small – easy installation in limited space
- Low capital cost – designed for low flow screen application
- Low specific power requirements – costs less to operate
- Simple design – parts easily accessible for inspection and maintenance
- Standardized design – shorter delivery time required
- All wetted parts 316L stainless steel – added durability and corrosion resistance

### APPLICATIONS

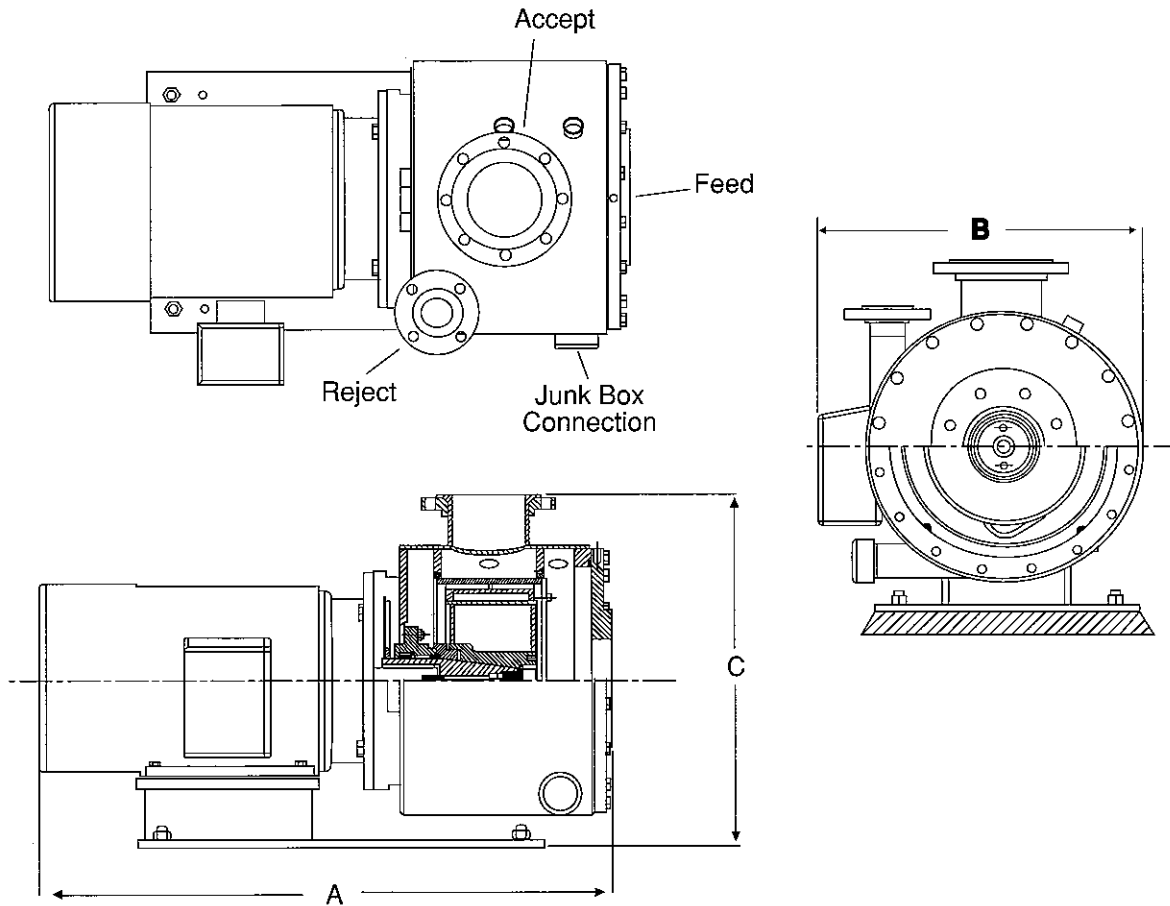
- Stock prep, pulp mill, approach flow, pilot plants
- Coarse and fine tailing screen positions
- Fiber scalping from white water
- Black liquor filter
- Fiber recovery
- Improved efficiency in screening system



**THERMO BLACK CLAWSON INC.**

A Thermo Fibertek company

# Mini-Pressure Screen



Model		A	B	C	Diameter			Motor (60Hz)				Maximum Pressure Rating	Shipping Weight	Operating Weight		
					Feed	Accept	Reject	Option 1		Option 2						
								Connected	RPM	Connected	RPM					
10	in	34	23	30	3	3	1.5	HP	10	1200	7.5	900	75psi	lbs.	1300	1600
	mm	864	584	762	76	76	38	kW	7.5		5.5	517 kPa	kg	590	730	
25	in	42	23	30	4	4	2.0	HP	20	1200	15	900	75 psi	lbs.	1500	1900
	mm	1067	584	762	102	102	102	kW	15		11	517 kPa	kg	680	865	
50	in	50	23	30	6	6	2.5	HP	30	1200	20	900	75 psi	lbs.	2100	2700
	mm	1270	584	762	152	152	64	kW	22		15	517 kPa	kg	950	1225	
75	in	63	29	32	8	8	3	HP	60	1200	50	900	75 psi	lbs.	2700	3500
	mm	1600	737	813	203	203	76	kW	45		37	517 kPa	kg	1225	1590	

GENERAL DIMENSIONS - NOT CERTIFIED  
FOR CONSTRUCTION OR INSTALLATION

Recycled Fiber • Chemical Pulping • Stock Preparation

**THERMO BLACK CLAWSON INC.**

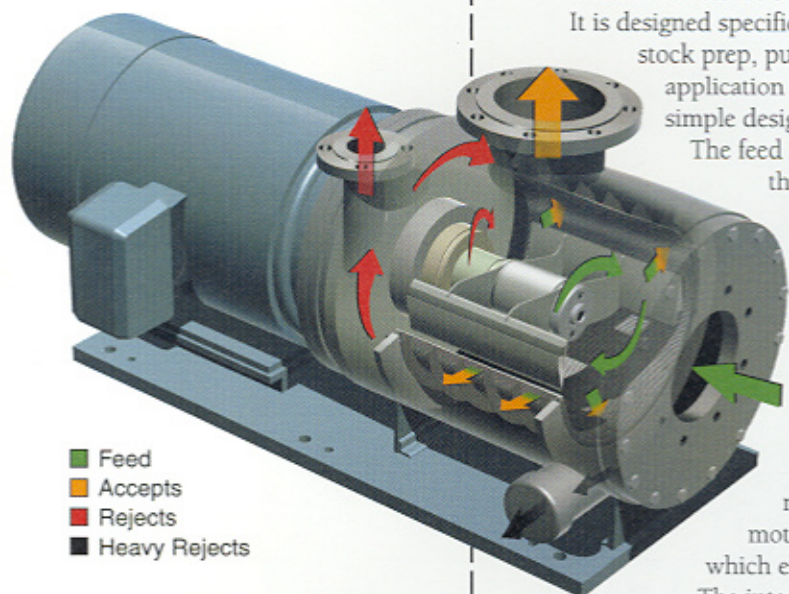
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**MB-348-D**

**Mini-Pressure Screen**



- Feed
- Accepts
- Rejects
- Heavy Rejects

The Mini-Pressure Screen is a small, economical, centrifugal pressure screen. It is designed specifically to meet low flow and capacity requirements in the stock prep, pulp mill, and paper machine approach flow areas, or any application where smaller flows/capacities occur. The screen's simple design significantly lowers the inlet pressure requirements.

The feed flow enters directly inside the screen cylinder, passing through the cylinder's holes or slots to the accepts chamber. Rejects move to the back side of the screen housing, with the heavy debris collected in the junk trap located near the inlet port.

The screen rotor can be either a drum type or a foil type, and is mounted directly on the motor shaft via a factory installed hub. The shaft is horizontal, concentric and in line with the screen cylinder, allowing easy accessibility through a removable cover that exposes the entire rotating assembly and the mechanical seal. The screen housing is fastened to the motor's D-type flange, similar to a close-coupled pump, which eliminates extra parts and complexity.

The integral motor, available off-the-shelf, is supplied by Thermo Black Clawson. The extra severe duty TEFC (totally enclosed, fan cooled) motor with D-Flanges and mounting feet supports the entire motor/screen assembly.

**FEATURES/BENEFITS**

- Small – easy installation in limited space
- Low capital cost – designed for low flow screen application
- Low specific power requirements – costs less to operate
- Simple design – parts easily accessible for inspection and maintenance
- Standardized design – shorter delivery time required
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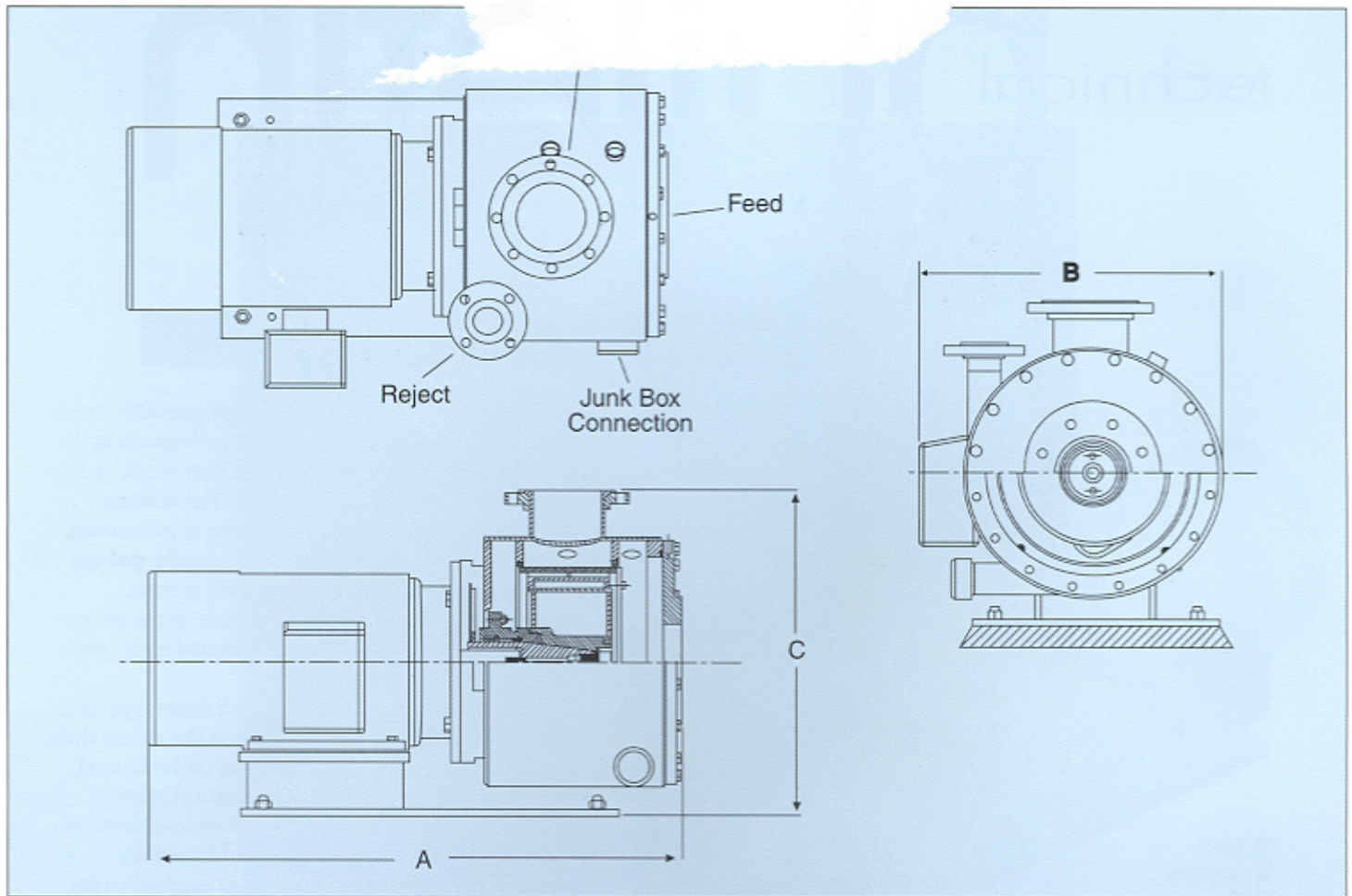
**APPLICATIONS**

- Stock prep, pulp mill, approach flow, pilot plants
- Coarse and fine tailing screen positions
- Fiber scalping from white water
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## Mini-Pressure Screen



Model		A	B	C	Diameter			Motor (60Hz)				Maximum Pressure Rating	Shipping Weight	Operating Weight		
								Option 1		Option 2						
					Feed	Accept	Reject	Connected	RPM	Connected	RPM					
10	in	34	23	30	3	3	1.5	HP	10	1200	7.5	900	75psi 517 kPa	lbs. kg	958 435	1058 480
	mm	864	584	762	76	76	38	kW	7.5	7.5	5.5	5.5				
25	in	42	23	30	4	4	2.0	HP	20	1200	15	900	75 psi 517 kPa	lbs. kg	1465 665	1588 720
	mm	1067	584	762	102	102	102	kW	15	11	11	11				
50	in	50	23	30	6	6	2.5	HP	30	1200	20	900	75 psi 517 kPa	lbs. kg	2100 953	2241 1017
	mm	1270	584	762	152	152	64	kW	22	15	15	15				
75	in	63	29	32	8	8	3	HP	60	1200	50	900	75 psi 517 kPa	lbs. kg	2700 1225	2950 1338
	mm	1600	737	813	203	203	76	kW	45	37	37	37				

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**MODEL 50**  
**MINI PRESSURE SCREEN**

**SPECIFICATIONS**

Each unit furnished with:

Type 316L stainless steel for body parts in contact with stock.

150 lb. ASA flanged 6" inlet connection,  
150 lb. ASA flanged 6" accept nozzle,  
150 lb. ASA flanged 2½" reject nozzle.

NS-III rotating element with 2 foils.

Direct coupled 20 hp, 900 rpm TEFC motor, mounted on integral steel base, motor supplied.

Mechanical seal (requires 1-3 gpm coolant at 10 psi above inlet pressure).

A ThermoTek PHL type screen cylinder, with .079" diameter holes, Lehman contour, constructed of 3/16" thick 316L stainless steel having 15.6% O.A.

Maximum hydraulic pressure rating of 75 psi.

Reference Drawing 4003371 and Bulletin No. MB-348-B.

Estimated shipping weight of skidded screen 2,100 lbs.  
Operating weight 2,700 lbs.

**RECOMMENDATIONS**

Minimum inlet pressure 15 psi, maximum 75 psi.

CAVAN #180128

**Model 50 Mini Pressure Screen**  
**General Specifications**

<b>MATERIAL OF CONSTRUCTION:</b>	316L stainless steel for all parts in contact with stock. (Integral motor base, and flanges are mild steel.)
<b>SURFACE FINISH:</b>	Glass bead blasted, unpainted (except base & flanges are painted).
<b>SEAL DESIGN:</b>	Mechanical
<b>SEAL LUBRICATION:</b>	Cooling water lines installed, piped to bulkhead, 1/4" NPT. Requires 1-3 gpm at 10 psi above inlet pressure.
<b>ROTOR DESIGN:</b>	Options: Non-stringing drum or low power foil type
<b>DRIVE TYPE:</b>	Direct coupled, motor driven.
<b>SCREEN CYLINDER DIMENSIONS:</b>	16"ID x 9"H
<b>NOZZLES:</b>	Inlet: 6" Diameter 150 Lb. ASA Flanged Accept: 6" Diameter 150 Lb. ASA Flanged Reject: 2½" Diameter 150 Lb. ASA Flanged Drain/Heavy Junk Trap: 2½" NPT
<b>INLET PRESSURE REQUIREMENTS:</b>	Minimum inlet pressure 15 psi, maximum 75 psi.
<b>MOTOR (OPTIONS):</b> (Only one motor is supplied.)	20 hp, 900 rpm 30 hp, 1200 rpm 25 hp, 1000 rpm (30 hp/1200 rpm motor operated @ 50 Hz)
<b>MAXIMUM PRESSURE RATING:</b>	75 PSI
<b>SHIPPING WEIGHT/OPERATING WEIGHT:</b>	2,100 lbs. / 2,700 lbs.
<b>OUTSIDE DIMENSIONS:</b>	50"L x 23"W x 30"H
<b>REFERENCE DRAWING:</b>	4003371