

NONPULSING DESIGN PRESSURE SCREEN FOR PAPER MACHINE HEADBOX APPLICATIONS

The Black Clawson 60NP Selectifier screen is a high volume, low consistency screen primarily used as a paper machine screen located just prior to the headbox. This rugged, yet simple design is available in three sizes to handle flow rates from 8,500 to 58,000 gpm (32,000 to 220,000 lpm). Standard construction is 316L stainless steel. Polished interior surfaces and gasketless flanges are available if required.

Pressurized paper machine screens do an excellent job of removing pins, scale, shives, flakes, and other unwanted tramp debris, as well as deflocculating the stock to improve formation. They protect against felt and wire damage, and help reduce lumps, slime slugs and strings which can cause paper breaks. This leads to improved quality and increased productivity.

The 60NP series Selectifier screen has a capacity rating which allows a single screen with a single cylinder to be installed ahead of the larger, high speed paper machines available today. The single screen, single cylinder concept greatly reduces capital equipment cost, as well as installation, piping and control costs, and the number of spares required.

60NP SELECTIFIER SCREEN FEATURES

- Single cylinder, accessible design permits fast and easy inspection, foil adjustment, washup and maintenance
- Cylinder can be removed with rotor and drive still in place
- Reliable mechanical seal requires no external seal water
- Modular design drive allows quick exchange during shutdown
- Unobstructed accepts chamber — no sites for stock build-up
- Low pressure drop
- Rotor designed for low energy consumption
- Capable of meeting stringent pulsation requirements
- Available with conventional smooth surface screen cylinder, or optional Lehman contoured surface screen cylinder
- Junk trap on reject line to remove gross heavy contaminants
- Standard 75 psi (516 kPa) pressure rating (higher pressure ratings available)
- Standard 316L stainless steel construction for all wetted parts
- Optional polished interior surfaces and special gasketless flanges available

“NP” STANDS FOR NONPULSING

Black Clawson pioneered the use of a rotor with foils which prevents stock from blinding over the screen plate by backflushing it periodically. The same pulsations which keep the screen plate clear (along with pulsations generated by the fan pump) can cause basis weight variations (barring), and adversely affect formation. Normally, this occurs when the pulsations are relatively low in frequency and high in amplitude.

Extensive laboratory analysis (later confirmed in the field) showed that by spreading the discharge connection to the body increasing the number of foils in the discharge zone, pulsation amplitude was reduced and frequency was increased to the point where the detrimental effects of the pulsations were nearly eliminated. By properly designing the rotor and screen body, Black Clawson has developed a high capacity screen line which offers both low energy consumption and greatly reduced pulsation.

Pulsation levels have been reduced well below the 0.05 psi (0.34 kPa) maximum specified by many hydraulic headbox suppliers. Today, 60NP Selectifier screens can be built to meet the most stringent pulsation amplitude and frequency requirements.



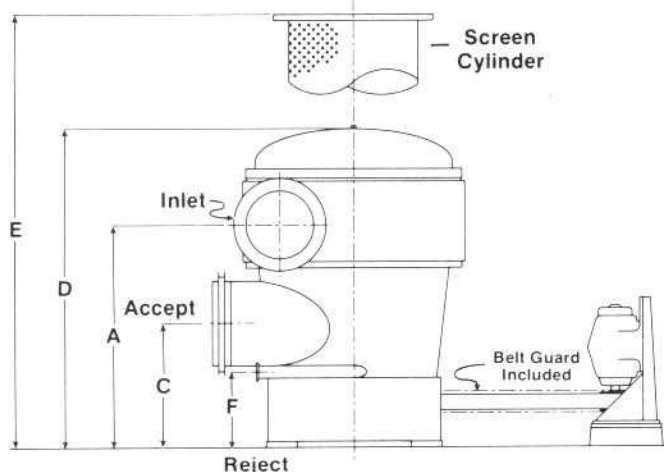
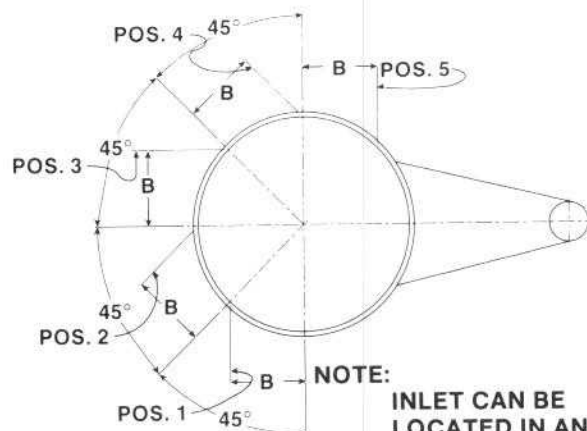
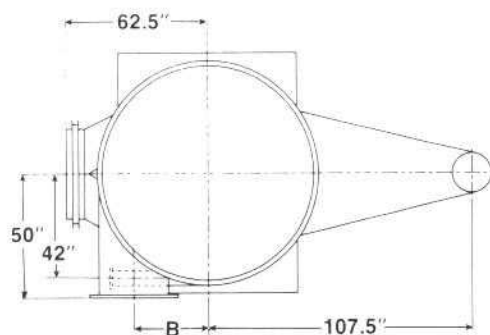
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60NP SELECTIFIER® SCREEN



GENERAL DIMENSIONS
SCREEN SIZE

DIMENSION		60NP/72		60NP/60		60NP/48	
		in.	mm	in.	mm	in.	mm
Inlet Diameter		30	762	30	762	24	610
Inlet Height	A	96.4	2448	87.9	2232	84.9	2156
Inlet Offset	B	30.3	770	30.3	770	33.3	845
Accept Diameter		36	914	30	762	30	762
Accept Height	C	53.4	1356	47.9	1216	47.9	1216
Overall Height	D	135.7	3447	127.2	3231	121.2	3078
Cylinder Removal Height	E	187	4750	167	4242	149	3785
Reject Diameter		6	152	6	152	6	152
Reject Height	F	31.1	790	28.5	725	28.5	725

NOTE: Dimensions apply to standard 75 psi model only.

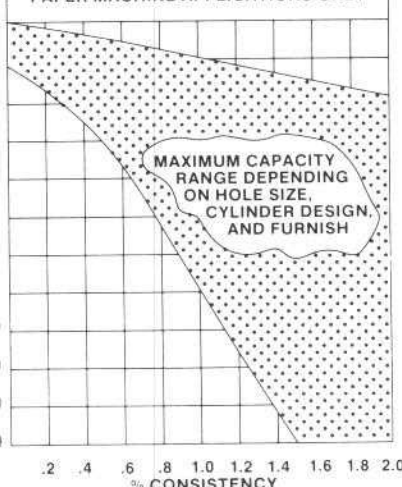
GENERAL DIMENSIONS—NOT CERTIFIED
FOR CONSTRUCTION OR INSTALLATION

CAPACITY RANGE

IMPORTANT: The capacity ranges shown can be obtained through the use of standard cylinders or with the patented Black Clawson Lehman design cylinder. The Lehman design cylinder offers increased capacities and reduced levels of fractionation when compared to standard design cylinders. Proper screen operation requires the best equipment available employed in a properly engineered system. Black Clawson has many years of screening experience available to you. We will assist you in deciding upon the proper equipment and make recommendations to optimize the installation. With over 7,000 screens sold world wide, Black Clawson is your best choice for equipment to process pulp and paper stock flows.

60NP/72		60NP/60		60NP/48	
gpm	lpm	gpm	lpm	gpm	lpm
58,100	220,200	49,000	185,700	39,575	150,300
53,950	204,500	45,500	172,400	36,750	139,300
49,800	188,700	42,000	159,200	33,925	128,600
45,650	173,000	38,500	145,900	31,100	117,900
41,500	157,300	35,000	132,700	28,275	107,200
37,350	141,600	31,500	119,400	25,450	96,500
33,200	125,800	28,000	106,100	22,625	85,700
29,050	110,100	24,500	92,900	19,800	75,000
24,900	94,400	21,000	79,600	16,975	64,300
20,750	78,600	17,500	66,300	14,150	53,600
16,600	62,900	14,000	53,100	11,325	42,900
12,450	47,200	10,500	39,800	8,500	32,200

PAPER MACHINE APPLICATIONS ONLY



Black Clawson