

SCREEN SCREW COMPACTOR - VERTICAL



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A SOLUTION TO FACILITATE LIFTING, WASHING, DEWATERING AND COMPACTION OF SOLIDS, WHILE IMPROVING THE PERFORMANCE AND RELIABILITY OF DRAINAGE SYSTEMS

Johnson Screens® screen screw compactor - vertical (MID/V) is an integrated machine consisting of a screen, spiral and press unit. During operation, solids in the incoming flow will progressively collect onto the screen mesh. At a preset inlet water level, the spiral will be activated and convey the solids up to the pressing zone; brushes fixed to the periphery at the lower section of the spiral will clean the screen mesh.

The solids or screenings are compacted and dewatered and, depending upon the solids properties, a volume reduction up to 40 percent dry solids (DS) or greater can be achieved prior to discharging the screenings into a bin. Continuous bagging systems are also available to receive screenings and abate odor; the screenings can then be sealed without any personal contact.

A jet wash facility will break down and remove faecal and other semi-solid or soluble matter and return it to the inlet flow. Additional jets can be installed to the wash system to meet a higher specification of organic removal from the solids. Faecal matter washing efficiencies greater than 90 percent can be achieved.



AVAILABILITY

MID/V can be supplied in variable lengths to suit individual applications. Vertical screens can also be designed for installation at inclined angles up to 50 degrees from vertical.

APPLICATION CORRECTION FACTORS

As a guide to application selection, the following factors should be applied to the incoming flow.

Effluent	Coefficient
Domestic or municipal sewage (≤ 500 mg/l TSS)	1
Storm Sewage Flows	1.3
Food & Beverage Industries	0.7
Abattoirs	0.5
Tannery & Textile Industries	0.6

SPECIFICATIONS



SCREEN SCREW COMPACTOR - MID/V 2 - 4

µm	mm	MID 2		MID 3		MID 4	
		7.8 in. Ø gpm	200 mm Ø lpm	11.8 in. Ø gpm	300 mm Ø lpm	15.7 in. Ø gpm	400 mm Ø lpm
250	0.25	110	420	159	600	254	960
500	0.50	190	720	270	1,020	380	1,440
1,000	1.00	206	780	380	1,440	571	2,160
2,000	2.00	364	1,380	444	1,680	650	2,460
3,000	3.00	444	1,680	555	2,100	793	3,000
5,000	5.00	618	2,340	682	2,580	1,204	4,560
6,000	6.00	666	2,520	793	3,000	1,221	4,620
7,000	7.00	793	3,000	888	3,360	1,617	6,120

SCREEN SCREW COMPACTOR - MID/V 5 - 7

µm	mm	MID 5		MID 6		MID 7	
		19.7 in. Ø gpm	500 mm Ø lpm	23.6 in. Ø gpm	600 mm Ø lpm	27.5 in. Ø gpm	700 mm Ø lpm
250	0.25	603	2,280	888	3,360	1,268	4,800
500	0.50	872	3,300	1,236	4,680	1,649	6,240
1,000	1.00	1,173	4,440	1,585	6,000	2,330	8,820
2,000	2.00	1,380	5,220	1,871	7,080	2,933	11,100
3,000	3.00	1,411	5,340	2,061	7,800	3,361	12,720
5,000	5.00	1,775	6,720	2,584	9,780	4,264	16,140
6,000	6.00	1,871	7,080	2,695	10,200	4,518	17,100
7,000	7.00	2,140	8,100	2,933	11,100	4,692	17,760

The data contained in this document is for information only and values are typical. Please contact Johnson Screens for confirmation.

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FLOW CAPACITIES

- Up to 4,755 gpm (18,000 lpm) depending on effluent and solids contained within the flow

FABRICATION

- Stainless steel: 304
- Stainless steel: 316
- Spiral: Mild steel or stainless steel, 304 or 316

SCREEN BASKET NOMINAL DIAMETER AVAILABILITY

- 8, 12, 16, 20, 24 and 28 in. (200, 300, 400, 500, 600 and 700 mm) diameter

SCREEN SIZE AVAILABILITY

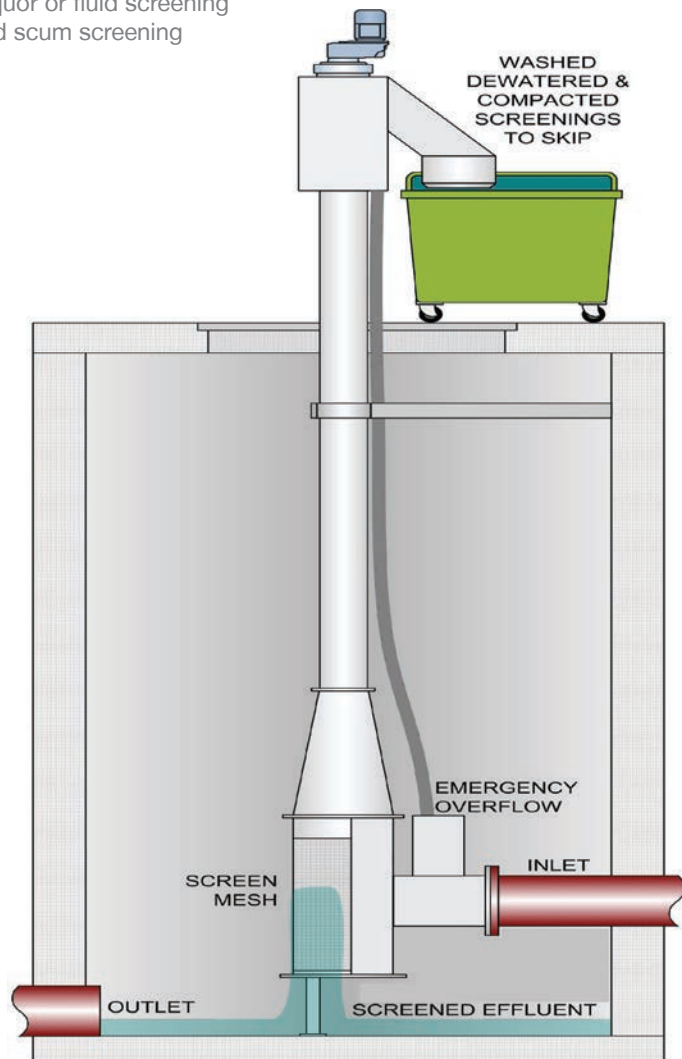
- 250, 500, 1,000 and 2,000 μm (0.25, 0.5, 1 and 2 mm) in Vee-Wire®
- 0.08, 0.12, 0.16, 0.20, 0.24, 0.28 and 0.40 in. (2, 3, 4, 5, 6, 7 and 10 mm) perforated holes

THE BENEFITS

- High quality and reliability at low costs
- Quick and easy installation
- Retrofit capabilities
- Reliable and automatic self-cleaning operation
- Eliminates pump clogging

TYPICAL APPLICATIONS

- Pump chambers
- Manholes, chambers and sumps
- Small sewage treatment works
- Municipal wastewater treatment works
- Industrial effluent discharges
- Abattoirs, fish and other food processing plants
- Process liquor or fluid screening
- Sludge and scum screening



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