



WATER  
TECHNOLOGIES

BILFINGER WATER TECHNOLOGIES

# VERTICAL SCREEN SCREW COMPACTOR







## THE SOLUTION FOR LIFTING, WASHING, DEWATERING, COMPACTION SOLIDS AND IMPROVING THE PERFORMANCE AND RELIABILITY OF DRAINAGE SYSTEMS

# VERTICAL SCREEN SCREW COMPACTOR

The vertical screen screw compactor (MID/V) is an integrated system consisting of a screen, screw auger and press unit designed to be installed into sumps, manhole chambers, underground chambers, pumping stations and other confined spaces.

During operation, larger solids will collect directly on the auger from the incoming flow, while the smaller solids will progressively collect onto the screen mesh. At a preset inlet water level, the screw auger will be activated and convey the solids to the pressing zone. Brushes on the lower section of the screw auger clean the screen mesh, allowing for increased flow through the MID/V.

The solids/screenings are compacted and dewatered. Depending on the solids' properties, a volume reduction of up to 40 percent dry solids (DS) can be achieved prior to discharging the screenings into a bin. A continuous bagging system is also available to capture the screenings and control odor and the bag can be easily sealed without contact.

A jet wash facility will break down and remove fecal, semi-solid and 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. Efficiencies greater than 90 percent can be achieved in fecal matter washing.

### Systems

MID/V is available in variable lengths to accommodate various 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 ( $\leq 500$ mg/l TSS)	1
Storm Sewage Flows	1.3
Food and Beverage Industries	0.7
Abattoirs	0.5
Tannery and Textile Industries	0.6



# MAKING THE RIGHT SELECTION

## MID / V VERTICAL SCREEN CHART (MID/V 2 - 4)

mm	MID 2		MID 3		MID 4	
	7.87 in. Ø Nom gpm	200 mm Ø Nom m³/h	11.81 in. Ø Nom gpm	300 mm Ø Nom m³/h	15.74 in. Ø Nom gpm	400 mm Ø Nom m³/h
2.00	364.80	83	444.00	101	649.80	148
3.00	444.00	101	555.00	126	792.60	180
5.00	618.00	140	681.60	155	1,204.80	274
6.00	666.00	151	792.60	180	1,220.40	277
7.00	792.60	180	887.40	202	1,617.00	367

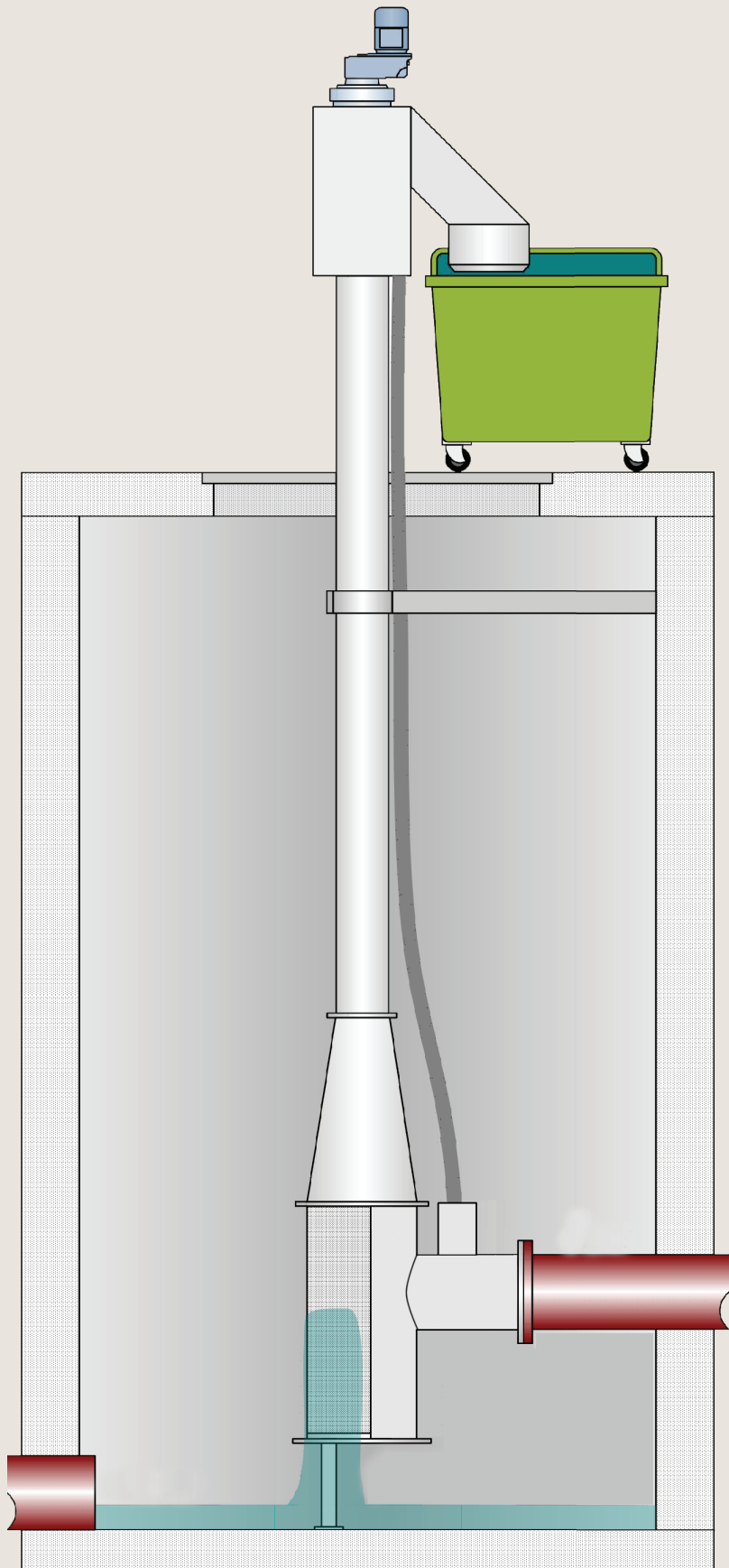
## MID / V VERTICAL SCREEN CHART (MID/V 5 - 7)

mm	MID 5		MID 6		MID 7	
	19.68 in. Ø Nom gpm	500 mm Ø Nom m³/h	23.62 in. Ø Nom gpm	600 mm Ø Nom m³/h	27.55 in. Ø Nom gpm	700 mm Ø Nom m³/h
2.00	200.40	313	279.00	424	436.80	666
3.00	210.00	320	307.20	468	501.00	763
5.00	264.60	403	385.20	587	635.40	968
6.00	279.00	424	401.40	612	673.20	1026
7.00	318.60	486	436.80	606	699.00	1066

The data contained in this document is for reference only and the values are typical. Please contact Bilfinger Water Technologies for more information.

## Typical Applications

- Sumps, manholes chambers, underground chambers and pumping stations
- 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



### Flow Capacities

- Up to 4,741.89 gpm (1,077 m<sup>3</sup>/h) depending upon influent and solids contained within the flow

### Construction

- 304 or 316 stainless steel
- Spiral is available in mild steel and 304 or 316 stainless steel

### Screen Basket Nominal Diameter Availability

- 7.87, 11.81, 15.74, 19.68, 23.62 and 27.56 in. (200, 300, 400, 500, 600 and 700 mm) diameter

### Screen Size Availability

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

### Benefits

- Quality construction
- Reliable operation
- Simple installation
- Fits in confined locations
- Can be retrofitted into an existing system
- Self-cleaning
- Eliminates pump clogging

