

Waste Water Treatment

SPIRAMATIC Fine Drum Screens VSA and VSA MBR

15



Application ▼



Description ▼

SPIRAMATIC VSA Fine Drum Screens consist of a rotating drum screen, a conveyor screw, and a compaction zone. Depending on the application, the fine screen drum can be made up of a set of steel bars – in which case the distance between the bars determines the desired slot width – or of a perforated sheet filter. The cylindrically shaped drum can be placed inside a channel or in a fabricated tank.

SPIRAMATIC VSA Fine Drum Screens wash, convey and dewater waste water screenings all in one unit. They are designed to wash out organic matter from screenings. Both screen basket and dewatering zone are self-cleaning. Rotating around its axis, the cylindrical filter conveys the screenings to a loading hopper placed in the centre. A set of spray nozzles washes the filter during operation. A screw, placed inside the conveying pipe, with its top in the discharge hopper, conveys the screenings towards the following treatment stages during which organic substances are washed out. Subsequently, solids are compacted and dewatered in the compacting and drainage area. Finally, solids are discharged through a discharge chute into a container or compactor.



Benefits ▼

- ✓ Triple face seal for maximum capture efficiency of fine solids;
- ✓ Spray bar installed on the outside of the screen basket, thus enabling optimum capture of small solids;
- ✓ Cleaning brush fitted on the screen maintains screen surface clean;
- ✓ Durable brush attached to the flighting on the auger trough sweeping even smallest solids into auger trough for removal;
- ✓ Large, robust, self-lubricating bronze bushing (no lubrication pump or maintenance required);
- ✓ Low energy consumption and limited maintenance.

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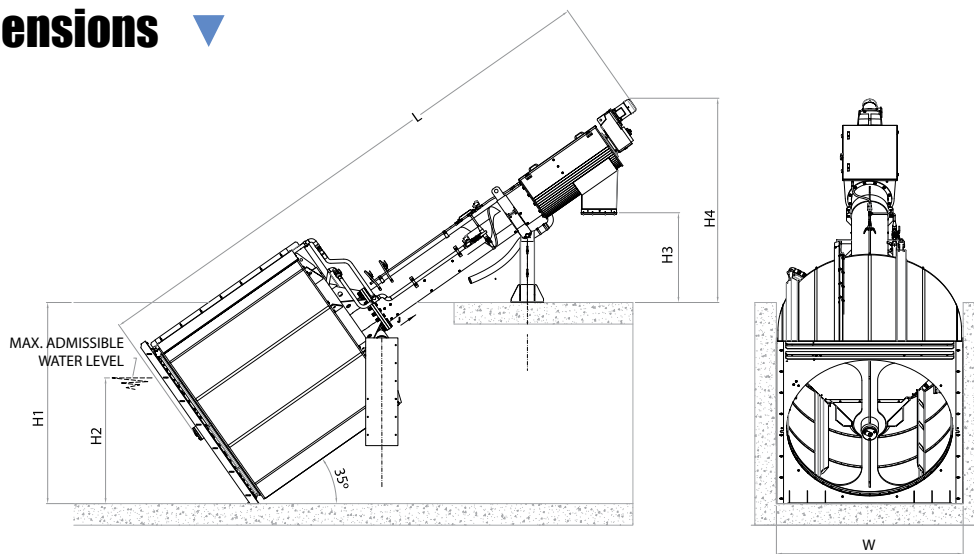
Technical Features / Performance

- ▶ Filter mesh sizes for MBR pre-treatment:
- ▶ 1.0 – 1.5 – 2.0 – 3.0 mm round holes
- ▶ Filter mesh sizes (other than MBR use):
- ▶ 5.0 – 6.0 mm round holes
- ▶ 0.5 – 1.0 – 2.0 – 3.0 – 4.0 – 5.0 – 6.0 mm wedge wire
- ▶ Channel width: 600 ~ 3,000mm
- ▶ 35-degree incline angle
- ▶ Frame manufactured from 304 L / 316 L SS
- ▶ Spiral manufactured from special ST 52 steel, or 304 L / 316 L SS
- ▶ Removable, sliding aluminium covers (option)
- ▶ Fixed stainless steel covers (option)
- ▶ Bagger (option)
- ▶ Heating device (option)
- ▶ Control panel (option)
- ▶ In-tank version available for sizes up to 1,600

| VSA MBR | | | | | |
|-----------------------|---|----------------|--------|-------|-------|
| PEAK FLOW RATE [m³/h] | | | | | |
| MODEL | MAX. ADMISSIBLE UPSTREAM WATER LEVEL - mm | CIRCULAR HOLES | | | |
| | | 1 mm | 1.5 mm | 2 mm | 3 mm |
| VSA 600 | 450 | 145 | 170 | 205 | 260 |
| VSA 800 | 520 | 150 | 230 | 280 | 350 |
| VSA 1000 | 675 | 250 | 385 | 460 | 580 |
| VSA 1200 | 800 | 355 | 550 | 660 | 830 |
| VSA 1400 | 930 | 485 | 750 | 900 | 1,140 |
| VSA 1600 | 1,110 | 675 | 1,040 | 1,260 | 1,580 |
| VSA 1800 | 1,235 | 845 | 1,310 | 1,580 | 1,980 |
| VSA 2000 | 1,300 | 960 | 1,480 | 1,800 | 2,260 |
| VSA 2200 | 1,500 | 1,270 | 1,950 | 2,360 | 2,980 |
| VSA 2400 | 1,680 | 1,580 | 2,430 | 2,940 | 3,700 |
| VSA 2600 | 1,750 | 1,730 | 2,660 | 3,230 | 4,060 |
| VSA 3000 | 2,050 | 2,384 | 3,490 | 4,615 | 5,292 |

| VSA NON MBR | | | | | | | | | | | |
|-----------------------|---|----------------|-------|--------|-------|-------|-------|------------|-------|-------|--|
| PEAK FLOW RATE [m³/h] | | | | | | | | | | | |
| MODEL | MAX. ADMISSIBLE UPSTREAM WATER LEVEL - mm | CIRCULAR HOLES | | | | | | WEDGE WIRE | | | |
| | | 5 mm | 6 mm | 0.5 mm | 1 mm | 2 mm | 3 mm | 4 mm | 5 mm. | 6 mm. | |
| VSA 600 | 450 | 244 | 257 | 75 | 125 | 190 | 230 | 260 | 280 | 295 | |
| VSA 800 | 520 | 422 | 444 | 130 | 220 | 330 | 405 | 455 | 485 | 510 | |
| VSA 1000 | 675 | 713 | 748 | 220 | 370 | 560 | 685 | 765 | 820 | 860 | |
| VSA 1200 | 800 | 983 | 1,035 | 300 | 510 | 780 | 935 | 1,050 | 1,130 | 1,190 | |
| VSA 1400 | 930 | 1,405 | 1,479 | 430 | 725 | 1,100 | 1,320 | 1,500 | 1,615 | 1,700 | |
| VSA 1600 | 1110 | 1,936 | 2,045 | 620 | 1,050 | 1,515 | 1,850 | 2,065 | 2,225 | 2,350 | |
| VSA 1800 | 1235 | 2,305 | 2,434 | 865 | 1,460 | 2,015 | 2,460 | 2,750 | 2,955 | 3,120 | |
| VSA 2000 | 1300 | 2,847 | 2,995 | 1,065 | 1,805 | 2,490 | 3,035 | 3,390 | 3,650 | 3,840 | |
| VSA 2200 | 1500 | 3,440 | 3,627 | 1,290 | 2,180 | 3,000 | 3,670 | 4,100 | 4,410 | 4,650 | |
| VSA 2400 | 1680 | 4,095 | 4,349 | 1,540 | 2,600 | 3,580 | 4,370 | 4,880 | 5,250 | 5,575 | |
| VSA 2600 | 1750 | 4,813 | 5,093 | 1,805 | 3,055 | 4,210 | 4,580 | 5,735 | 6,170 | 6,530 | |
| VSA 3000 | 2050 | 6,369 | 6,747 | 2,390 | 4,040 | 5,560 | 6,785 | 7,590 | 8,165 | 8,650 | |

Overall Dimensions



| VSA MBR - FINE DRUM SCREEN | | | | | | | |
|----------------------------|----------------------|------------------------|---|---|---------------------|---|------------------|
| MODEL | CHANNEL WIDTH W - mm | CHANNEL HEIGHT H1 - mm | DISCHARGE HEIGHT ABOVE CHANNEL EDGE H3 - mm | TOTAL HEIGHT ABOVE CHANNEL EDGE H4 - mm | TOTAL LENGTH L - mm | MAX. ADMISSIBLE INLET WATER LEVEL H2 - mm | DRIVE POWER - kW |
| VSA 600 | 650 | 800 | 1,250 | 2,180 | 4,850 | 450 | 0.75 |
| VSA 800 | 800 | 1,000 | 1,250 | 2,170 | 5,180 | 520 | 1.10 |
| VSA 1000 | 1,000 | 1,200 | 1,250 | 2,170 | 5,400 | 675 | 1.10 |
| VSA 1200 | 1,200 | 1,400 | 1,250 | 2,275 | 5,830 | 800 | 1.10 |
| VSA 1400 | 1,400 | 1,600 | 1,250 | 2,275 | 6,030 | 930 | 1.50 |
| VSA 1600 | 1,600 | 1,800 | 1,250 | 2,275 | 6,200 | 1,110 | 1.50 |
| VSA 1800 | 1,800 | 2,000 | 1,250 | 2,520 | 6,970 | 1,235 | 2.20 |
| VSA 2000 | 2,000 | 2,200 | 1,250 | 2,520 | 7,170 | 1,300 | 2.20 |
| VSA 2200 | 2,200 | 2,400 | 1,250 | 2,530 | 7,350 | 1,500 | 2.20 |
| VSA 2400 | 2,400 | 2,600 | 1,250 | 2,535 | 7,410 | 1,680 | 2.20 |
| VSA 2600 | 2,600 | 2,800 | 1,250 | 2,845 | 7,630 | 1,750 | 3.00 |
| VSA 3000 | 3,000 | 3,200 | 1,250 | 3,155 | 7,850 | 2,050 | 3.00 |

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DS.VSA-T / VSA-T MBR EN, December 2017, 8/00



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