

VAF™ Hydrocyclone Separators VHS Series

GENERAL INFORMATION

The VHS Series Hydrocyclone Separator provides a low-cost solution for cooling tower maintenance as well as pretreatment for feed waters such as surface and well waters that contain high levels of sand or other large debris.

Evoqua's VAF™ brand Hydrocyclone Separators are effective in removing suspended particles from any flow stream of water where the specific gravity (density) of the particle(s) is heavier than the fluid it is in. The more significant the difference in gravity between the water and the particle, the greater the efficiency of the removal process. Depending on the specific gravity of the particle and the viscosity of the flow stream, very small and denser particles can be removed.

An automatic purge controller and valve can be used on all applications. This eliminates the need for manual flushing, turning the separator into an automatic system.

Backed by Evoqua's decades of experience, the VHS-Series separator provides performance and reliability at a cost-effective price.

HOW IT WORKS

Liquids and solids enter the unit and begin travelling in a circular flow. This centripetal action forces heavier particles downward in a spiral motion to the separation chamber. The particles collect in this separation chamber and are purged from the system on a time interval. The processed water is drawn from the separator's vortex and up through the outlet.



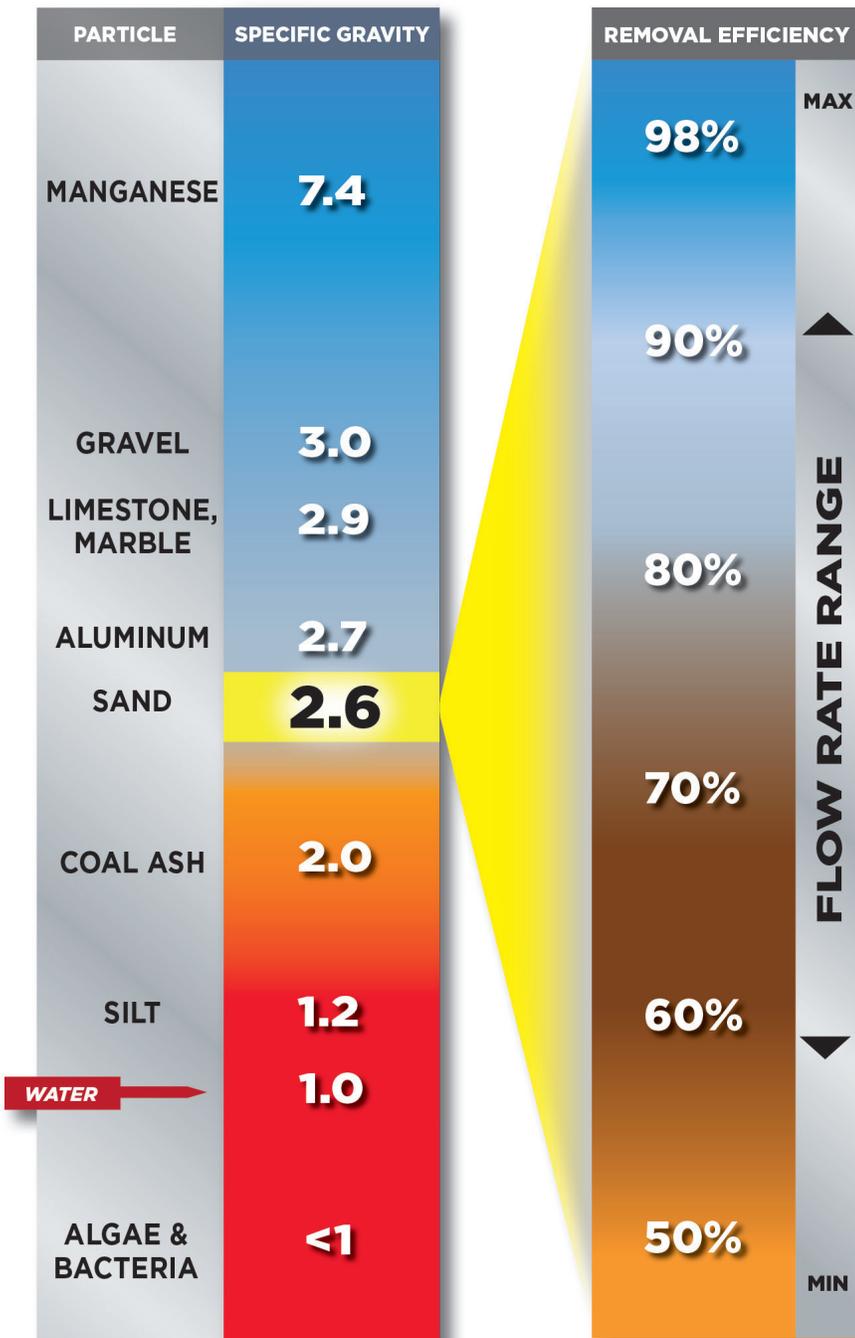
FEATURES & BENEFITS

- No moving parts
- Removal of up to 98% of solids 2.6 specific gravity and higher
- Heavy duty construction
- Accommodates any flow rate 1m³/hr (4gpm) to 1772m³/hr (7800gpm) with a single unit
- Operating pressure 1.5 to 10Bar (25 to 150psi)
- Significantly reduces loading on downstream components

CONTACT INFORMATION

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PARTICLE REMOVAL EFFICIENCIES



Specific Gravity

The more significant the difference between the specific gravity (density) of the particle and the water it is in, the greater the efficiency of the removal process of the particle.

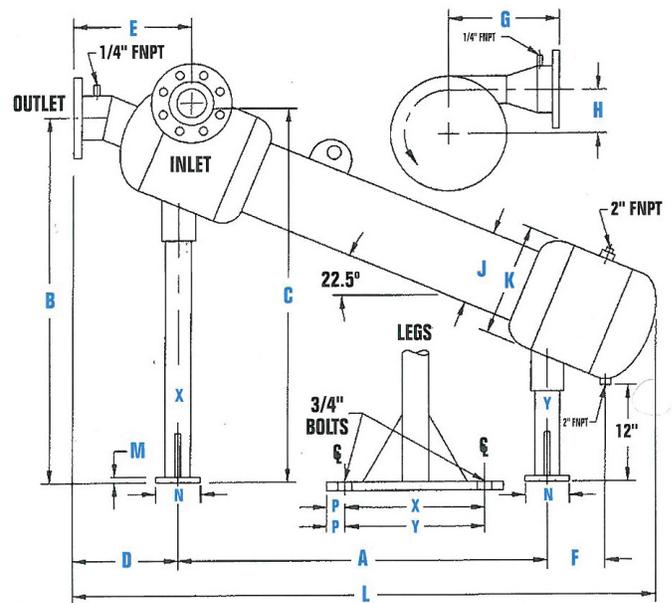
Removal Efficiency

The efficiency of the separation process is reduced based on the percentage reduction from the maximum stated flow of each model

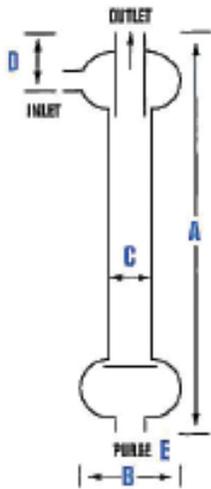
TECHNICAL INFORMATION - VERTICAL SEPARATORS

MODEL	FLOW M3/HR (GPM)	LINE SIZE CM (IN)	LENGTH CM (IN)	WEIGHT KG (LBS)	FLUSH PORT
VHS-10	1-2 (4-10)	1.3 (0.5)	54.6 (21.5)	6 (13)	1" NPT
VHS-20	2-5 (10-20)	1.9 (0.75)	54.6 (21.5)	7 (15)	1" NPT
VHS-40	4-9 (18-38)	2.5 (1.0)	77.5 (30.5)	12 (26)	1" NPT
VHS-50	6-12 (26-52)	3.2 (1.25)	77.5 (30.5)	12 (26)	1" NPT
VHS-80	9-18 (38-79)	3.8 (1.5)	77.5 (30.5)	12 (26)	1" NPT
VHS-120	14-27 (63-120)	5.1 (2.0)	96.5 (38)	20 (44)	2" NPT
VHS-180	23-41 (100-180)	6.4 (2.5)	111.8 (44)	25 (55)	2" NPT
VHS-260	28-59 (125-260)	7.6 (3.0)	121.9 (48)	34 (75)	2" NPT
VHS-340	43-78 (190-345)	10.2 (4.0)	124.5 (49)	55 (120)	2" NPT
VHS-400A	45-91 (200-400)	10.2 (4.0)	203.2 (80)	127 (280)	2" NPT
VHS-700A	83-159 (365-700)	15.2 (6.0)	269.9 (106.3)	224 (493)	2" NPT
VHS-950A	114-216 (500-950)	15.2 (6.0)	269.9 (106.3)	224 (493)	2" NPT
VHS-1600A	182-363 (800-1600)	20.3 (8.0)	289.6 (114)	328 (722)	2" NPT
VHS-2300A	295-522 (1300-2300)	25.4 (10.0)	313.7 (123.5)	382 (840)	2" NPT
VHS-3400A	460-772 (2025-3400)	30.5 (12.0)	353.1 (139)	636 (1400)	2" NPT
VHS-5000A	676-1136 (2975-5000)	35.6 (14.0)	387.4 (152.5)	907 (2000)	2" NPT
VHS-6200A	909-1408 (4000-6200)	40.6 (16.0)	406.4 (160)	1048 (2310)	2" NPT
VHS-7800A	1136-1772 (5000-7800)	45.7 (18.0)	449.6 (177)	1248 (2750)	2" NPT

PRODUCT DIMENSIONS - ANGELED SEPARATORS



VERTICAL SEPARATORS



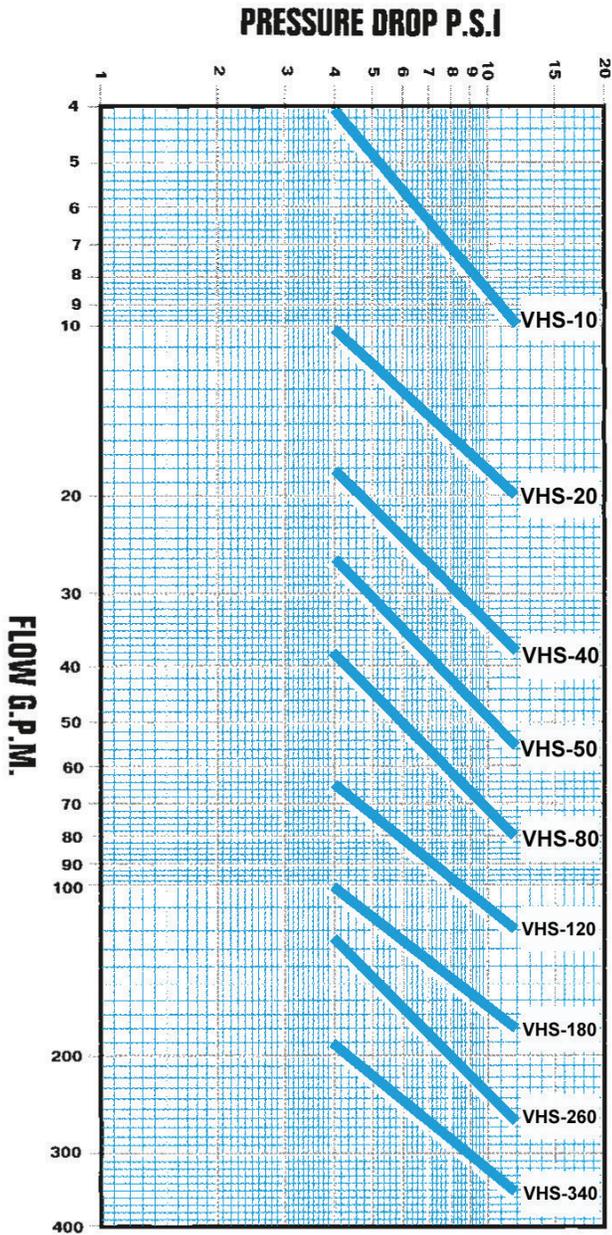
INLET/ OUTLET	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"	2-1/2"	3"	4"
	CM								
A	54.6	54.6	77.5	77.5	77.5	96.5	111.8	122	124.5
B	15.2	15.2	15.2	15.2	15.2	20.3	25.4	25.4	30.5
C	6.1	6.1	8.6	8.6	8.6	11.4	11.4	14	16.8
D	6.4	6.4	6.4	7.1	7.1	8.4	11.4	12.5	16.5
E	2.5	2.5	2.5	2.5	2.5	5.1	5.1	5.1	5.1

INLET/ OUTLET	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"	2-1/2"	3"	4"
	IN								
A	21.5	21.5	30.5	30.5	30.5	38	44	48	49
B	6	6	6	6	6	8	10	10	12
C	2.4	2.4	3.4	3.4	3.4	4.5	4.5	5.5	6.6
D	2.5	2.5	2.5	2.8	2.8	3.3	4.5	4.9	6.5
E	1	1	1	1	1	2	2	2	2

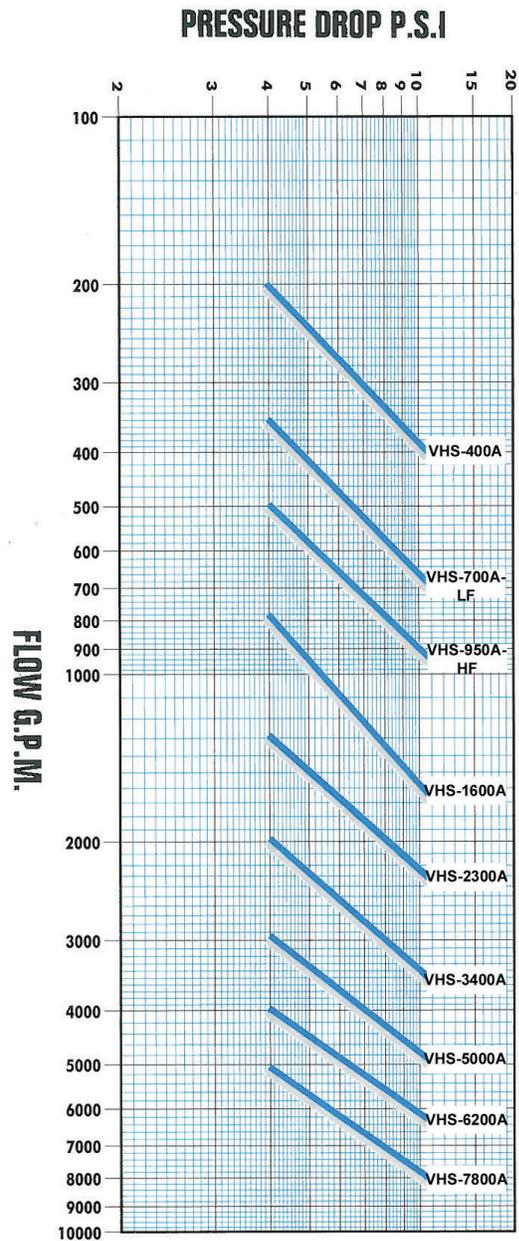
INLET/ OUTLET	4"	LF6"	HF6"	8"	10"	12"	14"	16"	18"
	IN								
A	48.5	63.0	63.0	71.0	78.0	102.0	102.5	108.0	118.5
B	46.5	59.5	59.5	65.0	71.0	75.3	85.4	89.3	98.3
C	46.5	60.4	58.8	66.0	72.8	76.5	86.6	90.0	100.3
D	16.0	20.5	20.5	21.8	21.0	23.8	24.5	24.4	27.0
E	19.0	20.8	20.8	22.6	24.5	26.6	27.8	29.0	33.6
F	7.5	10.5	10.5	12.0	13.0	14.3	12.0	12.0	15.0
G	19.0	22.0	22.0	24.5	29.0	32.0	33.5	33.5	34.5
H	4.0	5.8	5.3	5.6	7.0	8.1	9.0	9.0	11.0
J	6.6	10.8	10.8	12.8	16.0	18.0	20.0	24.0	28.0
K	12.0	16.0	16.0	18.0	22.0	26.0	28.0	30.0	36.0
L	80.0	106.3	106.3	114.0	123.5	139.0	152.5	160.0	177.0
M	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
N	5.0	5.0	5.0	5.0	5.0	5.0	6.0	6.0	6.0
P	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
X	22.0	30.0	30.0	34.0	42.0	50.0	50.0	54.0	57.8
Y	14.0	14.0	14.0	16.0	20.0	26.0	26.0	28.0	29.8

FLOW AND PRESSURE LOSS CHARTS

Vertical Separators



Angeled Separators



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