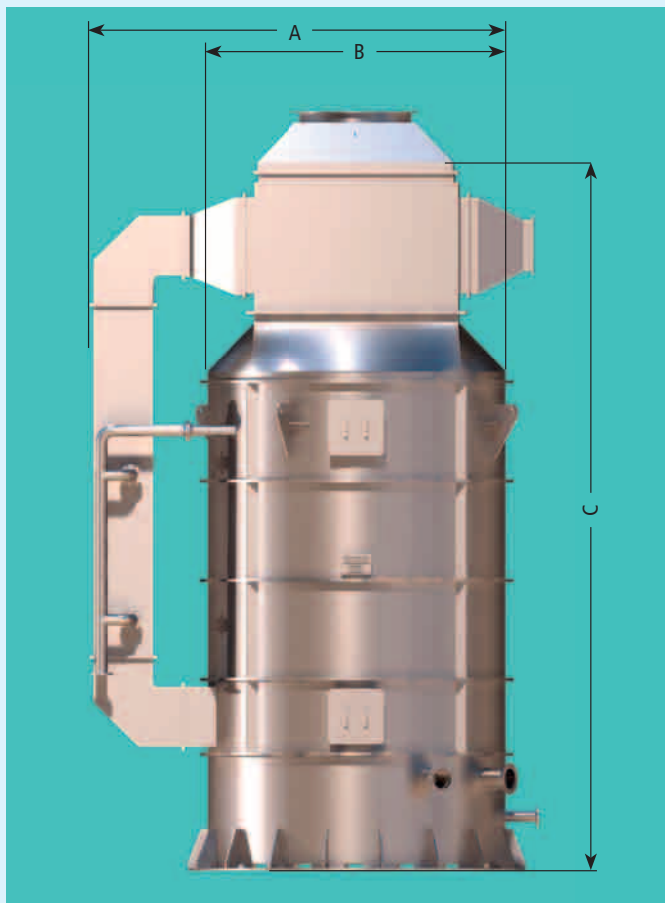
**Capacity****up to 30 MW**

Technical Description

This is a completely new system for SO_x and the removal of solid particles occurring in exhaust gases from diesel engines and boiler operations. The main characteristic of this system is dry separation of soot and other harmful matters contained in exhaust gases with a specially designed ventilator/separator, known as VentSep. Separated solid particles pass through the bag filter, and are then collected in the soot collection pot. The scrubber system does not produce any sludge which would have to be disposed of at harbours. VentSep removes up to 97% of the solid particles.

In the case of main engine scrubbing, VentSeps are placed in front of the exhaust gas boiler, which is then protected from any fouling and with no risk of fire from soot. Soot blowers are now no longer required and the period between necessary overhauls is significantly extended. After the exhaust gas boiler, clean gases - no longer containing soot but still with sulphur content - enter the heat exchanger which is placed on the top of the scrubber. The heat exchanger is cross-designed; exhaust gases that enter the heat exchanger are cooled down by the cold exhaust emitting from the scrubber. At the same time, the exhaust is being heated up with the entering gases, before passing through to the funnel. This energy-saving system is the second main characteristic of this scrubber process.

For SO_x removal the gases are guided via the channel that connects the heat exchanger on the top, and scrubber at the bottom. This channel is designed with nozzles, which are used to lower the temperature of the gases. This is the first stage of scrubbing, i.e. removing SO_x . From the bottom of the scrubber, the exhaust gases flow through the two - stage wet filter, in which more SO_x is removed (up to 97%). This design can be operated in either open or closed loop configuration.



Main Engine MCR (MW)	C* m	B* m	A* m	Dry Weight* t
2	5.0	1.7	2.5	12.0
4	5.5	2.1	3.0	14.0
6	6.5	2.6	3.8	15.0
8	7.0	3.0	4.3	16.0
10	7.6	3.3	4.8	17.5
12	8.0	3.6	5.2	19.0
14	8.8	3.8	5.5	20.0
16	9.5	4.0	6.0	21.0
18	10.0	4.6	6.5	23.0
20	10.5	4.8	7.0	24.0
25	11.0	5.0	7.5	27.0
30	12.0	6.0	8.5	35.0

Boiler (Furnace) MW	C* m	B* m	A* m	Dry Weight* t
1	4.70	0.65	1.40	0.69
2	4.70	0.95	1.60	1.45
3	4.90	1.20	1.80	2.80
4	4.95	1.40	2.00	4.20
5	4.95	1.50	2.20	7.10
8	4.95	1.60	2.30	9.50
10	5	1.7	2.5	12
20	5.5	2,1	3	14
30	6.5	2.6	3.8	15
40	7	3	4.3	16
50	7.6	3.3	4.8	17.5
60	8	3.6	5.2	19
70	8.8	3.8	5.5	20
80	9.5	4	6	21
90	10	4.6	6.5	23
100	10.5	4.8	7	24
125	11	5	7.5	27
150	12	6	8.5	35

*Dimensions A, B and C as well as weight and water volume may differ for systems with forced circulation exhaust gas economisers which use the FMB-VF-LONOX boiler as steam separator.

Dimensions vary when gas is used as fuel.

Exact dimensions for common scrubber on request.