



## Aalborg MD-T

### Tank washing heat exchanger (seawater)

#### Tank washing heater in precious materials

The Aalborg MD-T tank washing heat exchanger is designed with straight tubes in Cu/Ni 70/30 noble alloy material which provides the advantages of a very durable product that is resistant to seawater corrosion and eliminates the need for sacrificial anodes. The externally sealed, floating head tube sheet compensates for thermal expansion.

- Seawater heating capacity: 60-380 m<sup>3</sup>/h
- Custom-designed for the individual application
- User-friendly operation - easy to service
- Highly efficient, small foot print
- Reliable

#### Description

The Aalborg MD-T tank washing heat exchanger is designed for horizontal installation and an operating pressure of 16 bar(g).

The use of precious aluminum bronze material for tube sheets and water boxes and the straight tube design means that the heat exchanger will require very little service.

The Aalborg MD-T tank washing heat exchanger comes with connections for optional equipment such as thermometers, pressure gauge and sensors for seawater outlet temperature and condensate level.

#### Aalborg MD-T tank washing heat exchanger control panel

Scope of supply specified according to each individual tank washing heat exchanger system.

- Electro-pneumatic operation
- Easy to install, user-friendly and easy to service
- Reliable and well known OEM components

#### Description

The control panel for the Aalborg MD-T tank washing heat exchanger is dimensioned according to each individual installation. The equipment is electro-pneumatically operated.

The washing water outlet temperature is governed by a PT100 temperature sensor, and a 4-20 mA signal is generated by a transmitter and is used to control the steam supply to the heat exchanger to maintain an invariably constant washing water



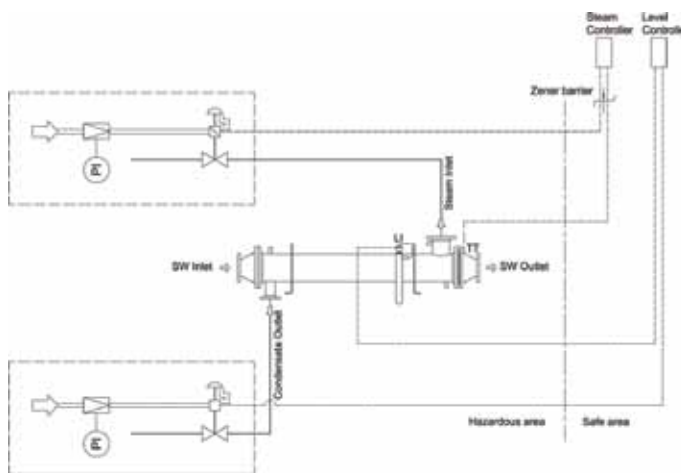
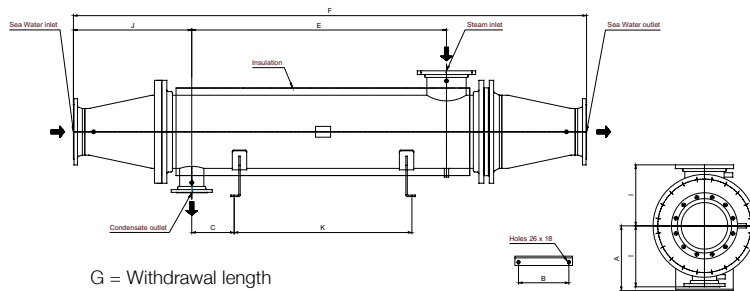
temperature. The temperature is displayed on the controller located in the cargo pump room.

Maintaining a steady temperature ensures the best possible tank cleaning with minimal energy consumption and protects against deposits in the heat exchanger.

The 4-20 mA signal is today's standard in the industry. The condensate level is controlled by measuring the differential pressure. Precise control ensures maximum condensate cooling, enhances efficiency and thus energy consumption.

The controller is used to operate the condensate valve and is provided with alarms for low and high condensate levels as well. Steam and condensate valves are supplied as a unit with an intrinsically safe positioner. A pneumatic air filter/regulator and an actuator are premounted for operation of the valve.

**Design pressure:** 16 bar(g)  
**Design temperature:** 204/100°C  
**Flanges:** JIS-16K/EN1092-1 PN16  
**Mounting style:** Horizontally



All dimensions are a guideline only.  
 Dimension drawing will be produced upon request.

## Standard product range

## Capacity and dimensions

Type	A	B	C	ØD	E	F	G	I	J	K
MD25-T	250	230	170	405	1430	2330	1900	300	318	1160
MD30-T	250	230	200	460	1630	2570	2100	325	322	1320
MD40-T	350	300	300	610	1555	1940	2100	375	635	1200
MD50-T	450	350	300	715	2470	4260	3100	425	820	1935

Nozzles	MD25	MD30 M	D35	MD40	MD50
Seawater inlet	N1	DN150	DN200	DN250	DN300
Seawater outlet	N2	DN150	DN200	DN250	DN300
Steam inlet	N3	DN150	DN200	DN250	DN300
Condensate outlet	N4	DN65	DN100	DN125	DN150

Type	Seawater flow m <sup>3</sup> /h	Washing water heating capacity °C	Steam consumption (170°C) t/h
MD25-T	60	+5 to 80	9.3
MD30-T	120	+5 to 80	18.6
MD35-T	180	+5 to 80	27.9
MD40-T	240	+5 to 80	37.2
MD50-T	380	+5 to 80	58.8

Dimensions in mm

MDD00263EN 1508

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