

BOLDNESS WITH CARE

AB&CO BOILERS & HEATERS



Sustainable
Process Heating

Thermal Oil Heaters

Electrical Heated & Gas/Oil-Fired



TT BOILERS AB&Co

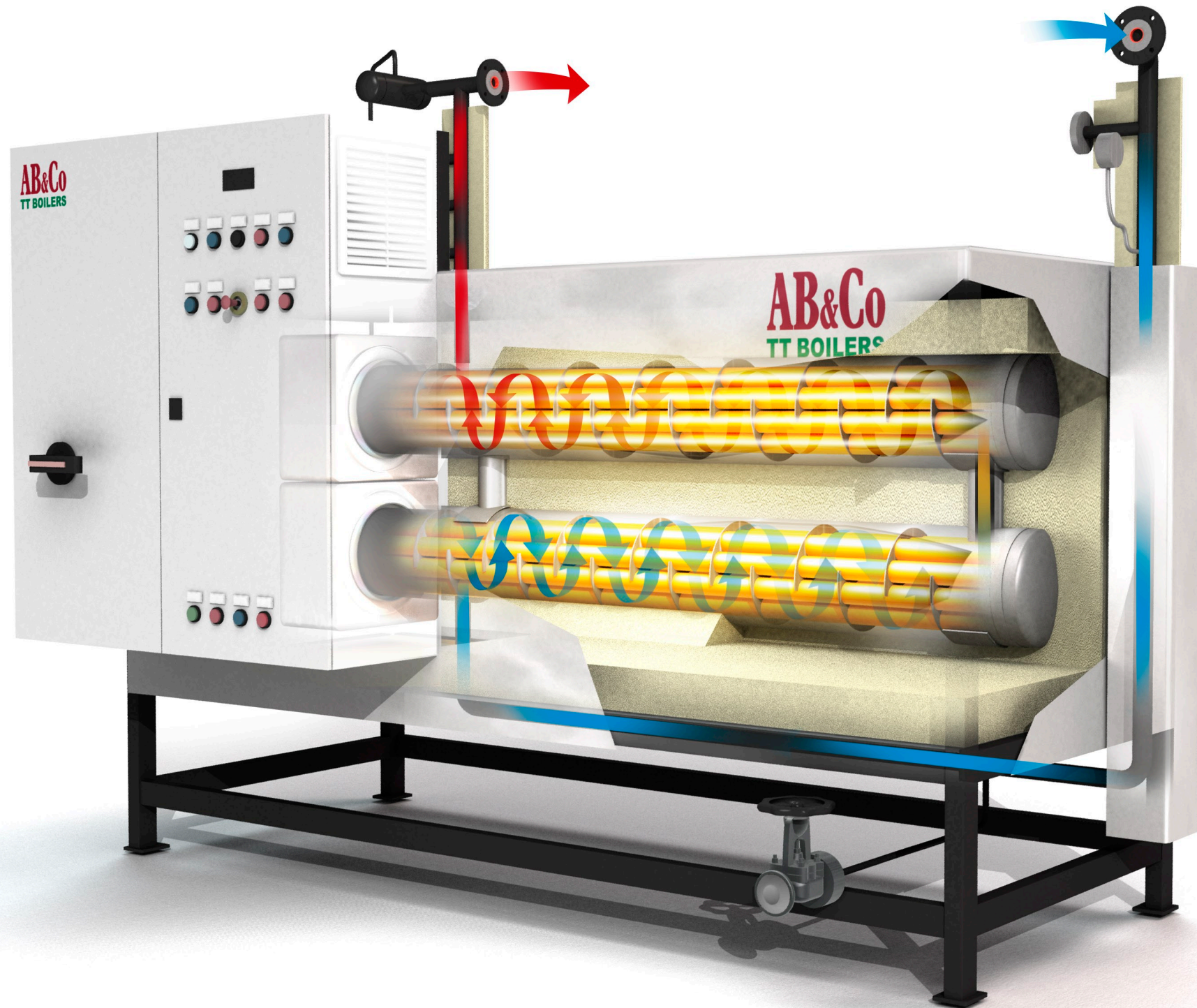


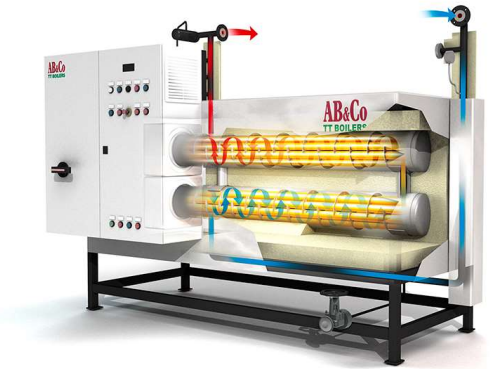
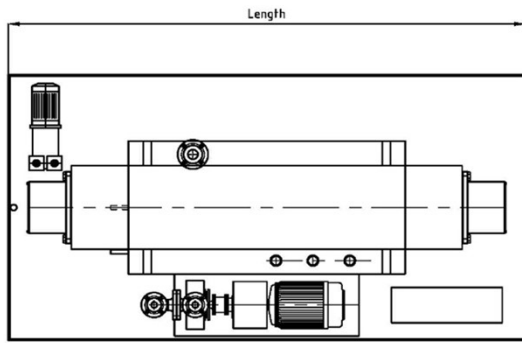
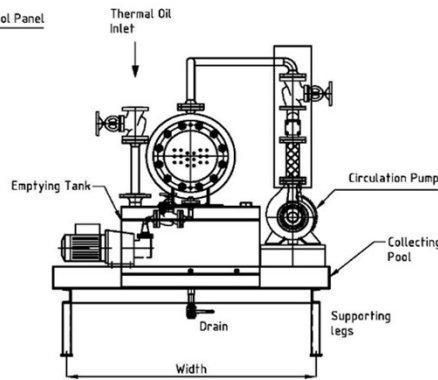
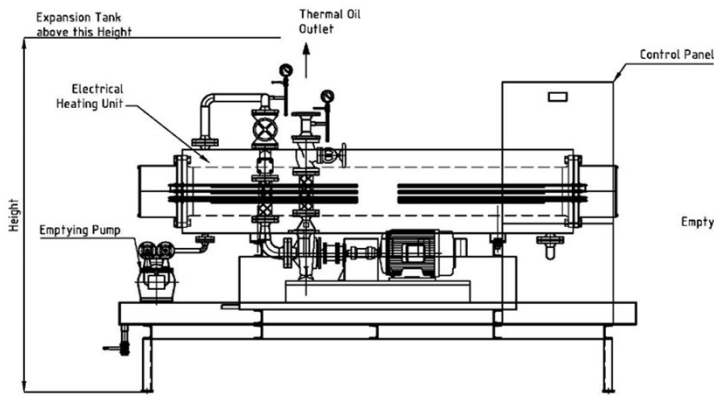
Sustainable
Process Heating

Thermal Oil Heaters Electrical Heated Unit



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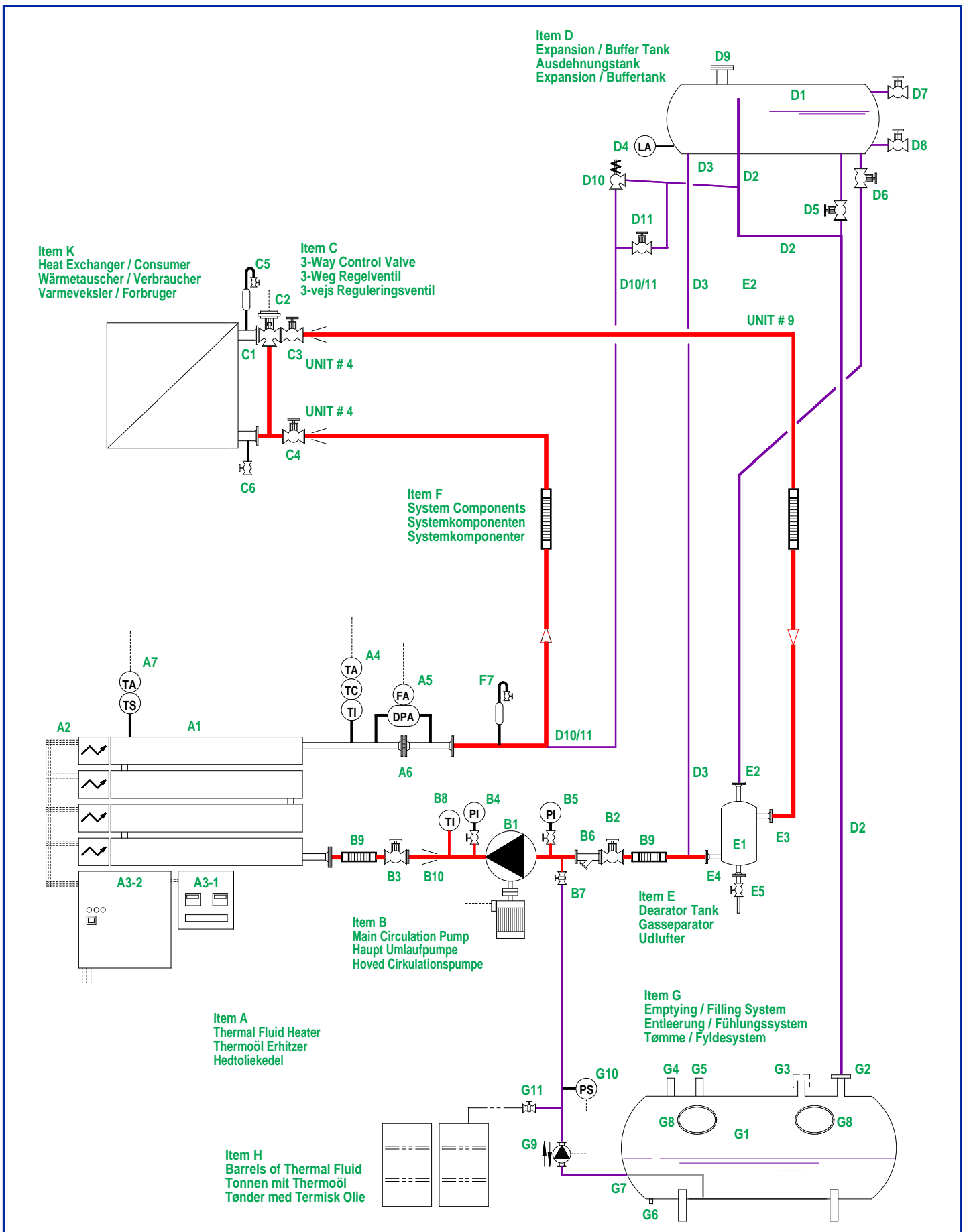




Type L-ELVTO - GENERAL MAIN DATA

Heat Capacity / Output	[kW]	10	50	100	150	200	350	500	1.000	1.200	1.400
	[Mcal/h]	9	43	86	129	172	301	430	860	1.032	1.204
FLOW HTF @ Δt=40K	[m³/h]	0,4	2,1	4	6	8	15	21	42	50	58
PUMP HEAD HTF	[bar]	6	6	6	6	6	6	6	6	6	6
PRESSURE DROP HTF HEATER	[bar]	1,5	2	2	2	2	2	2	3	3	3
POWER CONSUMPTION	[kW]	10,1	51	101	152	202	354	505	1.010	1.212	1.414
ABSORBED CURRENT @ 3 X 400 V	[A]	15	73	146	219	292	510	729	1.458	1.750	2.041
INLET / OUTLET - HTF	[DN]	25	25	32	32	40	50	65	80	100	100
LENGTH (TOTAL SKID)	[mm]	2.300	2.500	3.000	3.100	3.500	3.500	3.500	3.500	3.700	3.700
LENGTH HEATER ONLY	[mm]	2.100	2.400	2.800	2.900	3.200	3.200	3.200	3.200	3.400	3.400
WIDTH (TOTAL SKID)	[mm]	700	1.000	1.100	1.100	1.100	1.200	1.700	1.900	2.300	2.500
WIDTH HEATER ONLY	[mm]	300	400	500	600	700	900	1.300	1.500	1.800	1.900
HEIGHT (TOTAL SKID)	[mm]	1.500	1.800	1.900	2.000	2.100	2.300	2.400	2.500	2.600	2.700
HEIGHT HEATER (RACK) ONLY	[mm]	500	700	800	900	1.000	1.200	1.200	1.300	1.300	1.400
WEIGHT - EMPTY (TOTAL SKID)	[kg]	900	1.300	1.600	2.000	2.400	2.900	3.100	3.400	3.800	4.500
DESIGN PRESSURE (TYPICAL)	[bar]	10	10	10	10	10	10	10	10	10	10
VOLUME - TOTAL PRESSURE VESSELS	[litres]	10	50	80	115	150	250	400	500	600	700
TEMPERATURE SET HTF (TYPICAL)	[°C]	280/240	280/240	280/240	280/240	280/240	280/240	280/240	280/240	280/240	280/240
TEMPERATURES HTF (MAX. OPERATION)	[°C]	300	300	300	300	300	300	300	300	300	300
POWER STAGES (TYPICAL)	[-]	1	1	2	2	3	3	4	4	5	5
SKID - SCOPE OF SUPPLY	Heater, pump, control panel, deaerator, heat trap, valves and internal piping - as shown on sketch above Exclusive expansion tank and reservoir, which are delivered separately (location to be determined on site)										
THERMAL FLUID	The thermal fluid (heat transfer fluid / HTF) should of sufficient high quality - approved by AB&CO. Recommended is a mineral white fluid (parafine / naphtene) that is high temperature resistant non-fouling, non-toxic fluid type.										
APPROVAL / CERTIFICATE	The heaters design follow DIN 4754 and is thus designed for PED 2014/68/EU. The heaters are approved accordingly with CE-mark and will be delivered with the documentation required by EU regulations.										

Disclaimer : The above dimensions are preliminary intended for guidance only without any responsibility to AB&CO. They are subject to changes without any notice and will depend on actually chosen design and specific requirements.



AB&Co

AB&CO TT BOILERS
Copenhagen, Denmark

AB&CO REF.NO.:

DRWG.:

elvtosy2

DATE:

30.05.2005

SIGN.:

ab

SUBJECT
THEMA
EMNE

TT BOILERS ELECTRIC THERMAL OIL HEATING SYSTEM
SCOPE ACCORDING TO DIN4754

TT BOILERS ELECTRISCHER THERMOÖL HEIZUNGANLAGE
UMFANG NACH DIN 4754

TT BOILERS EL-OPVARMET HEDTOLIESYSTEM
UDFØRELSE IHT. DIN 4754

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AB&CO BOILERS & HEATERS



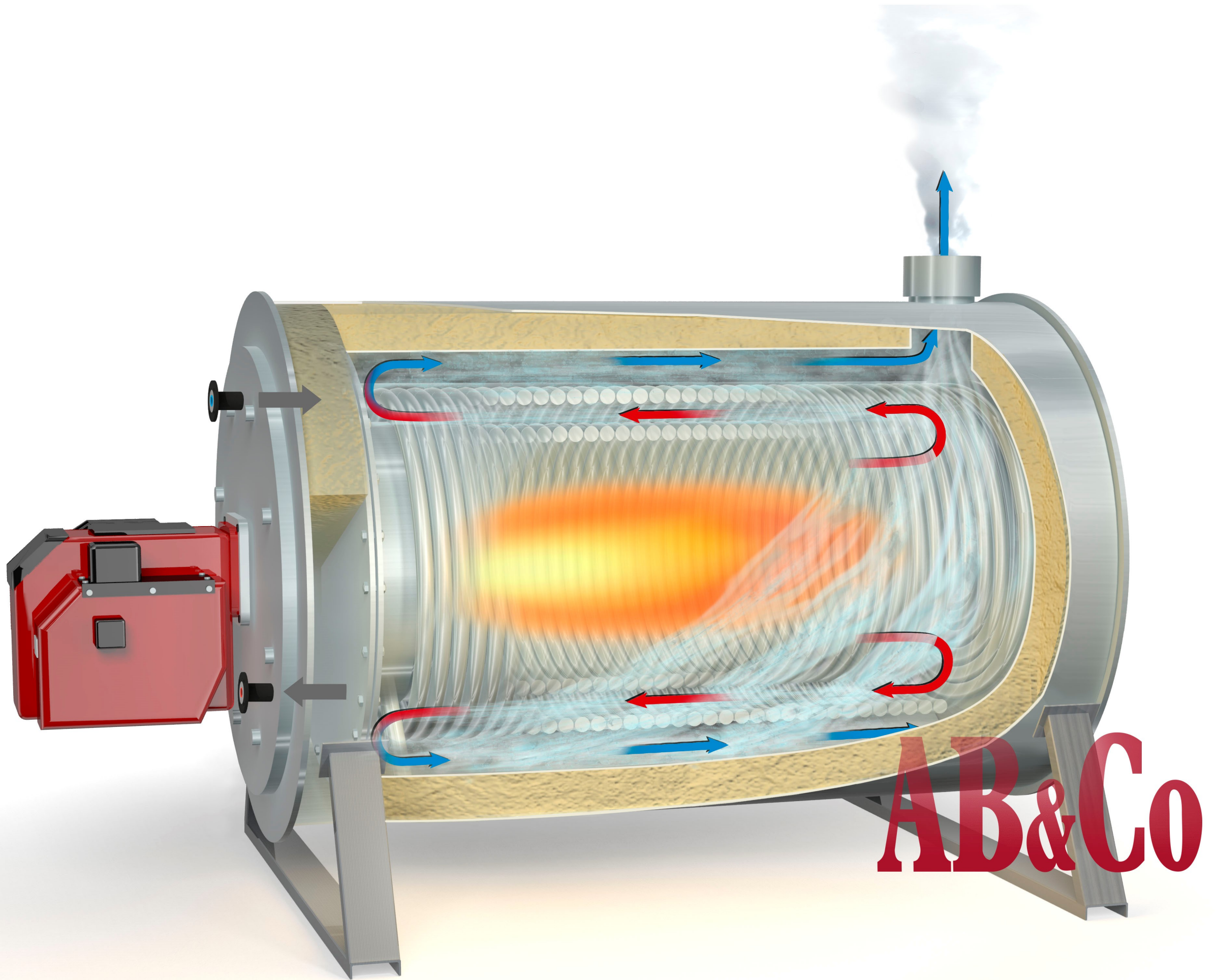
Sustainable
Process Heating

Thermal Oil Heaters Gas/Oil-fired Types

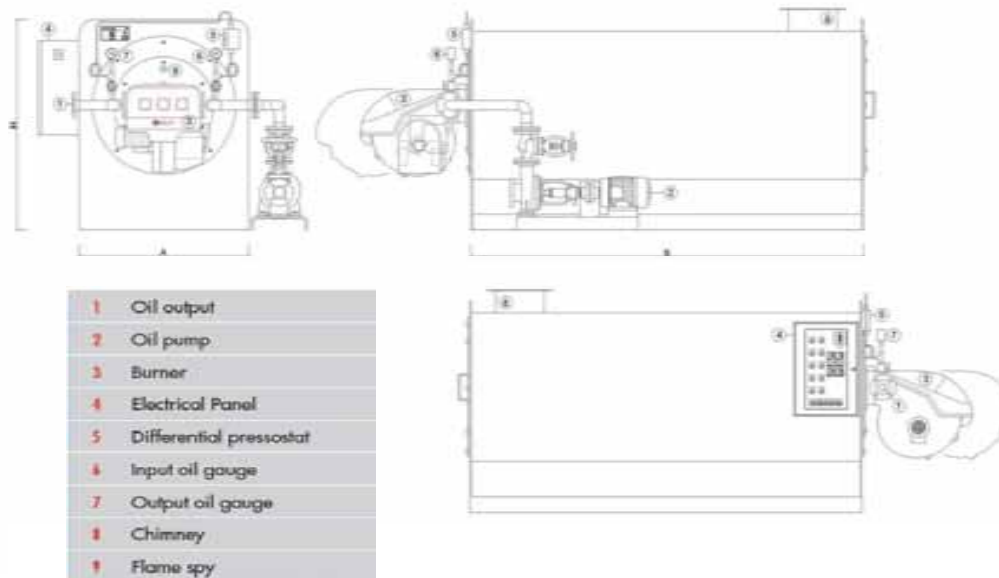


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TT BOILERS AB&Co



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Thermal Oil Heater
Horizontal Model

'Economical & High Quality'

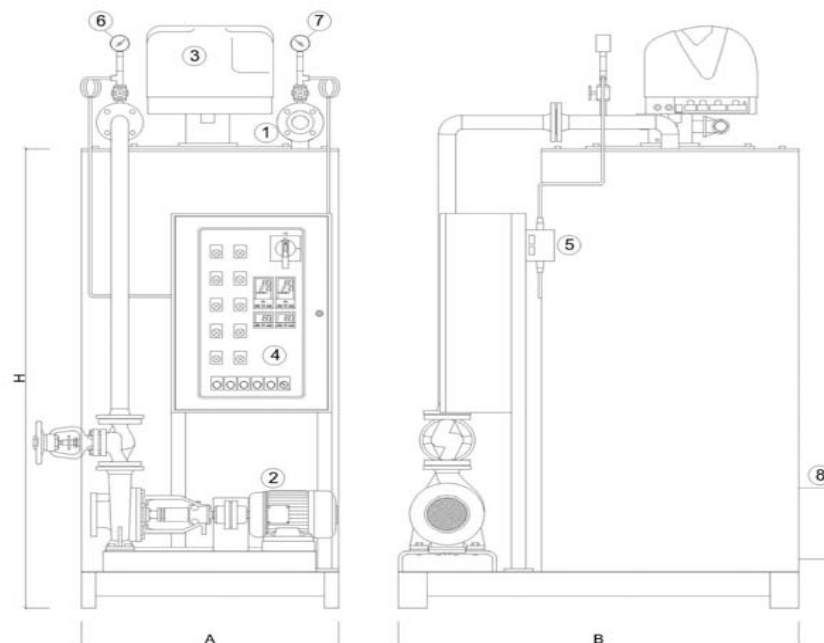
"HORIZONTAL" TEKNIK MODEL - Main Data																	
Heat Capacity / Output	[Mcal/h]	100	200	300	400	500	600	700	800	1000	1200	1500	1800	2000	2500	3000	4000
	[kW]	116	233	349	465	582	698	816	930	1163	1396	1744	2098	2326	2915	3489	4664
FLOW @ Δt=40K	[m³/h]	5	10	15	20	25	30	35	40	50	60	75	90	100	125	150	200
PRESSURE / PUMP	[bar]	3,5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Δp / HEATER	[bar]	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	2	2	2	2	2
FLANGE	[DN]	25	32	32	40	50	50	50	65	65	80	80	100	100	100	125	150
LENGHT B (EX. BURNER)	[mm]	1200	1300	1600	2000	2500	2400	2600	2700	3000	3200	3600	3700	4000	4100	4300	4800
WIDTH A	'[mm]	800	1100	1100	1100	1100	1100	1200	1300	1400	1400	1500	1600	1600	1800	1900	2200
HEIGHT H	[mm]	950	1350	1350	1350	1350	1350	1600	1500	1650	1650	1750	1850	1850	1960	2150	2300
FLUE GAS OUTLET Ø	'[mm]	160	200	200	300	300	300	350	350	350	350	450	450	450	550	550	600
WEIGHT (EMPTY)	[kg]	800	1000	1200	1350	1450	1800	2100	2300	2550	2900	3300	3600	3800	4500	5000	5600
TEMPERATURES	Normal outgoing temperature of the thermal fluid from the heaters is max. 280°C. Standard design is the fluid returning 40°C lower (Δt=40K)																
PRESSURE IN SYSTEM	The system is considered as an open and atmospheric and without any pressure exposed to the expansion tank.																
THERMAL FLUID	The thermal fluid (heat transfer fluid / HTF) should preferable be of the brand ABCO NF or an equal non-fouling, non-toxid fluid type.																
APPROVAL / CERTIFICATE	The heaters design follow DIN 4754 and is thus designed for 10 bar. PED 2014/68/EU applies for these heaters and is approved accordingly with CE-mark																

The above data are based on the economical standard TEKNIK model. Other customised models in special designs are available at: www.thermal-oil-heater.eu

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Thermal Oil Heater Vertical Model

'Economical & High Quality'

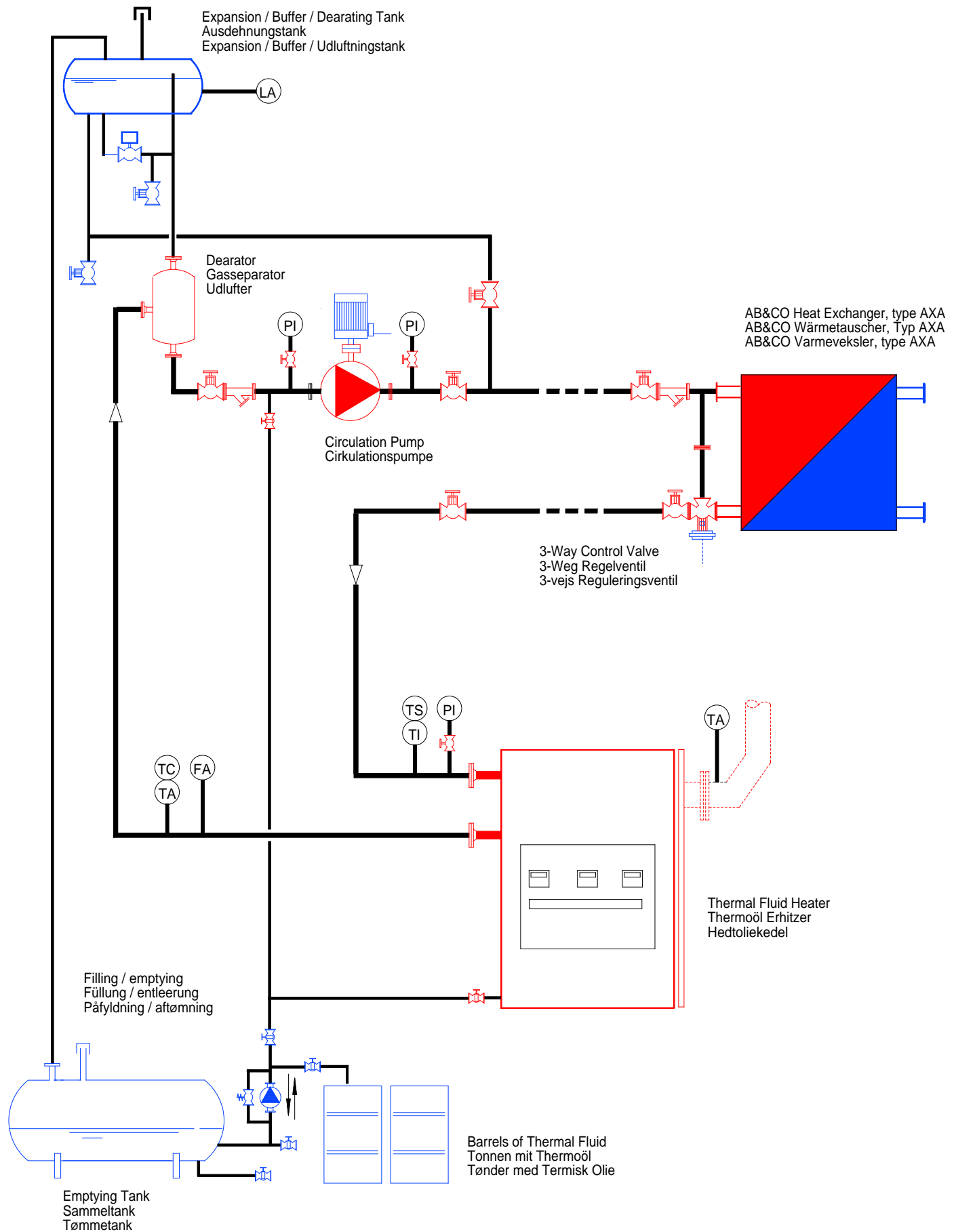


- | | |
|---|-------------------------|
| 1 | Oil output |
| 2 | Oil pump |
| 3 | Burner |
| 4 | Electrical Panel |
| 5 | Differential pressostat |
| 6 | Input oil gauge |
| 7 | Output oil gauge |
| 8 | Chimney |

"VERTICAL" TEKNIK MODEL - Main Data														
Heat Capacity / Output	[Mcal/h]	100	200	300	400	500	600	800	1000	1200	1500	2000	2500	3000
		[kW]	116	233	349	465	582	698	930	1163	1396	1744	2326	2915
FLOW @ Δt=40K	[m³/h]	5	10	15	20	25	30	40	50	60	75	100	125	150
PRESSURE / PUMP	[bar]	3,5	5	5	5	5	5	5	5	5	5	5	5	5
Δp / HEATER	[bar]	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	2	2	2
FLANGE	[DN]	25	32	32	40	50	50	50	65	80	80	100	100	100
LENGHT B	[mm]	1300	1400	1400	1400	1600	1600	1700	1700	1800	1800	2000	2200	2200
WIDTH A	[mm]	800	900	900	900	1000	1050	1200	1200	1400	1400	1800	2000	2000
HEIGHT H (EX. BURNER)	[mm]	1500	1500	1800	2000	2100	2300	2600	2800	3000	3300	3100	3400	3600
FLUE GAS OUTLET Ø	[mm]	160	220	260	300	320	350	400	350	400	450	500	550	550
WEIGHT (EMPTY)	[kg]	700	950	1100	1250	1400	1600	2200	2400	2600	3100	3300	3500	4000
TEMPERATURES	Normal outgoing temperature of the thermal fluid from the heaters is max. 280°C. Standard design is the fluid returning 40°C lower (Δt=40K)													
PRESSURE IN SYSTEM	The system is considered as an open and atmospheric and without any pressure exposed to the expansion tank.													
THERMAL FLUID	The thermal fluid (heat transfer fluid / HTF) should preferable be of the brand ABCO NF or an equal non-fouling, non-toxid fluid type.													
APPROVAL / CERTIFICATE	The heaters design follow DIN 4754 and is thus designed for 10 bar. PED 2014/68/EU applies for these heaters and is approved accordingly with CE-mark													

The above data are based on the economical standard TEKNIK model. Other customised models in special designs are available at: www.thermal-oil-heater.eu

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SUBJECT
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AB&CO TT BOILERS THERMAL FLUID HEATING SYSTEM
SCOPE ACCORDING TO DIN4754

AB&CO TT BOILERS THERMOÖL HEIZUNGANLAGE
UMFANG NACH DIN 4754

AB&CO TT BOILERS HEDTOLIESYSTEM
UDFØRELSE IHT. DIN 4754

AB&CO REF.NO.:

CODE:

vtofrave

DATE:

SIGN.:

22.03.99

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