

THREE PASS THERMAL OIL HEATER

RANGE	from 116 to 5815 kW
THERMOCARRIER FLUID	thermal oil
WORKING TEMPERATURE	280°C (higher temperature on request)

MODELS	120	230	350	465	700	930	1160
	1500	1900	2300	2900	3500	4650	5800

DESCRIPTION

Three pass thermal oil heater.
Horizontal design, vertical on request.

DIATHER’ is a thermarl oil heater, three pass.
It can be operated with liquid or gaseous fuels.

Design features:

- Coil: two concentric coils with bottom screen, inserted in the outer shell, hermetically sealed to the smokes, formed by drawn up pipes of seamless steel tubes type, wound in spiral, in quality steel of suitable thickness.
- Bottom: of the boiler body boiler, bolted, insulated and endowed with cleaning door and smoke chamber connection to the chimney
- Front door: is built in welded steel plate, of wide dimensions to facilitate the operations of maintenance, hinged, insulated with refractory material and endowed with flame sight glass and burner plate
- Furnace: with passing flame, accessible from the front door
- The base: is built with a steel frame.
- Insulation: the shell is thermally insulated with a double layer of rock wool cladding, suitably supported and covered externally of aluminum.

Standard equipment: (1)

- 2 flanged connections (flow and return)
- Group of gaskets, bolts and counter flanges for flanged connections.
- 1 differential pressure switch.
- 2 manometers on flow and return manifolds.
- Drain valve.
- Lifting lugs.
- Control panel board IP55 400V - 3+N - 50Hz
- Document folder enclosing:
  - Manufacturer's Declaration of Conformity.
  - Installation, operation and service manuals.
  - Certificates of safety components.
  - Control board’s electric schemes and related Declaration of Conformity.

Optional equipment:

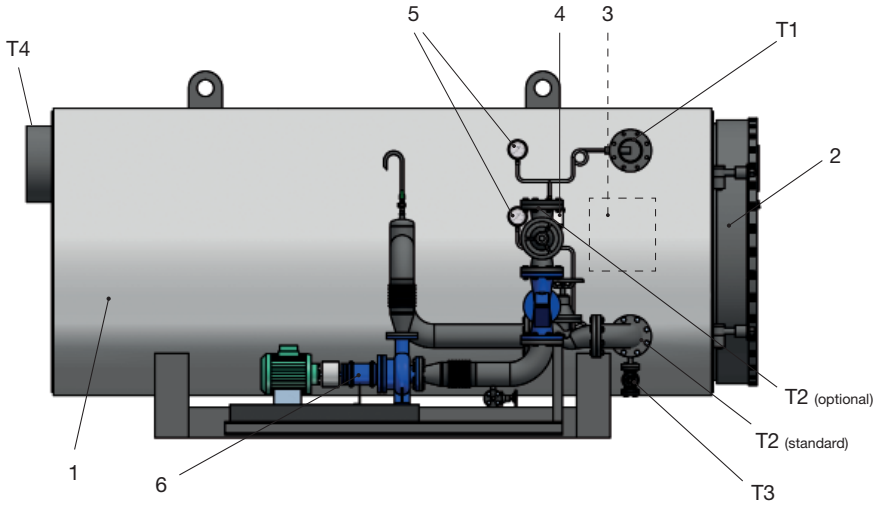
- Casing in stainless steel
- Single circulation oil pump unit
- Double circulation oil pump unit
- Panel board
- Expansion tank for thermal oil in the atmoshperic and pressurised version
- Thermal oil collection vessel
- Plant oil circulation pump f
- Dearator
- Combustion air preheater

(1) The quantity and the model may vary according to the configuration.

MAIN COMPONENTS

1. Boiler body
2. Front door
3. Panel board
4. Differential pressure switch
5. Manometers on flow and return manifolds
6. Oil circulation pump group (optional)

T1. Flow connection
T2. Return connection
T3. Drain
T4. Chimney connection



TECHNICAL DATA

Model	Nominal output	Nominal input	Δp smoke side	Oil pump flow rate	Delta T	Head pressure	Pump power	Burner head max. dia.	Burner head min. length	Empty weight
	kW	*kW*	*mbar*	*m^3/h*	*K*	*m.c.l.*	*kW*	*mm*	*mm*	*kg*
120	116	134	1,5	6	35	45	3,0	150	150/200	530
230	232	267	2,0	10,6	40	49	5,5	180	190/250	780
350	348	401	2,5	15	42	48	5,5	180	220/300	1000
465	465	534	3,0	22	38	45	5,5	260	220/300	1520
700	697	802	3,4	30	42	45	7,5	260	220/300	1700
930	930	1069	3,5	42	40	40	7,5	270	220/300	2200
1160	1163	1337	3,8	50	42	46	11,0	270	220/300	2950
1500	1512	1738	4,0	69	40	42	11,0	310	220/300	3700
1900	1861	2139	4,2	81	42	50	15,0	310	220/300	4080
2300	2326	2673	4,5	101	42	49	15,0	340	220/300	5300
2900	2907	3342	4,5	126	42	60	30,0	380	250/300	7200
3500	3489	4010	5,0	159	40	56	30,0	380	250/300	8000
4650	4652	5347	6,0	202	42	58	37,0	400	250/300	12250
5800	5815	6684	7,0	252	42	58	45,0	400	250/300	14560

PRODUCT PLUS VALUES

COIL
two concentric coils with bottom screen, inserted in the outer shell, hermetically sealed to the smokes, formed by drawn up pipes of “seamless steel tubes” type, wound in spiral, in quality steel of suitable thickness

BOTTOM
of the boiler body boiler, bolted, insulated and endowed with cleaning door and smoke chamber connection to the chimney

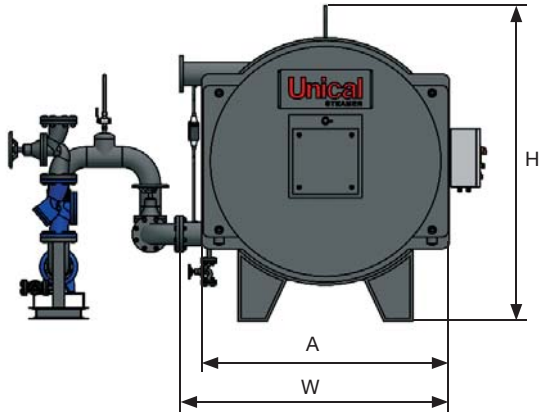
FURNACE
with passing flame, accessible from the front door

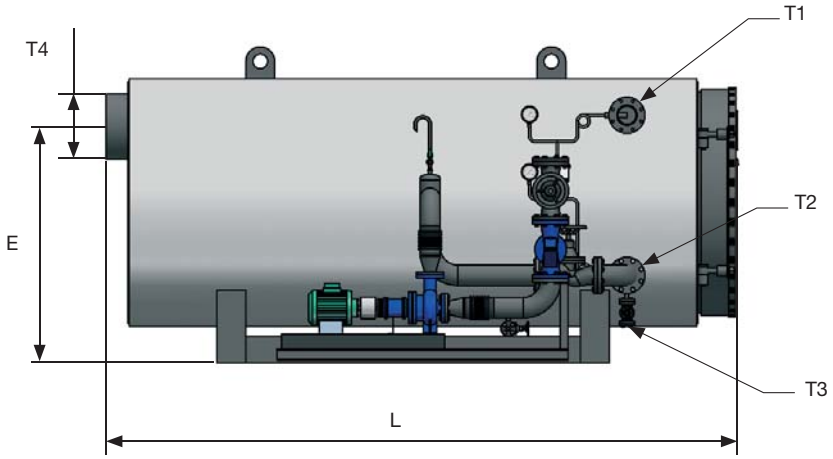
FRONT DOOR
of wide dimensions to facilitate the operations of maintenance, hinged, insulated with refractory material and endowed with flame sight glass and burner plate

EXTERNAL INSULATION
formed by a double layer of high-density rock wool

EXTERNAL CASING
in aluminium

DIMENSIONS





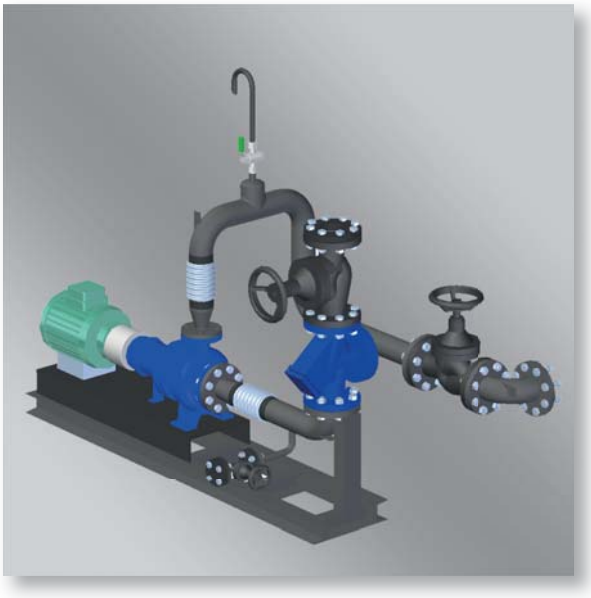
Modello	W	L	H	A	E	T1/T2	T3	T4
	mm	*mm*	*mm*	*mm*	*mm*	*DN*	*DN*	*Ø mm*
120	1045	1260	1200	890	750	32	20	200
230	1150	1650	1330	1000	850	40	20	250
350	1150	2100	1330	1000	850	50	25	250
465	1335	2320	1570	1210	1070	65	25	300
700	1295	2570	1570	1210	1070	65	25	300
930	1375	2970	1680	1310	1150	80	25	350
1160	1590	3170	1910	1500	1370	100	25	350
1500	1685	3570	2040	1630	1480	100	25	400
1900	1685	3920	2040	1630	1480	125	25	400
2300	1800	4270	2210	1800	1620	125	25	450
2900	2150	4500	2560	2150	1950	150	32	500
3500	2150	5100	2560	2150	1950	150	32	500
4650	2600	6050	2910	2460	2270	200	40	600
5800	2800	6450	3160	2660	2450	200	40	700

STANDARD DELIVERED EQUIPMENTS

- Three smoke pass diathermic oil boiler
- Outer aluminium casing
- Insulating mattress for burner blast tube
- Group of gaskets, bolts and counter flanges for flanged connections
- Differential pressure switch
- n. 2 manometers in glycerine bath, on flow and return manifolds
- Drain valve

OPTIONAL EQUIPMENTS

- Outer casing in stainless steel
- Single pump oil circulation group
- Double pump oil circulation group
- Pre-drilling of the burner plate according to the burner model
- Panel board



Single pump oil circulation oil group



Double pump oil circulation oil group