

Thermia Robust



Reliable and optimal energy solutions for higher capacity requirements.

The Robust range offers reliable and efficient heat pumps with capacities between 13 and 45 kW. Up to 8 heat pumps can be combined for even higher requirements.

Regardless of your existing heating system, we have an ideal solution for heating and cooling your home or building. The heat sources can be rock, soil or water. Heat pumps are docked into the existing system and extra energy for peak demands can be electricity, oil, pellets or district heating – the choice is yours.

The heat pump can even be used to cool your home or building (accessory). The cold medium from the energy source is utilized as long as it remains cold enough (passive cooling). Then, if you wish, the heat pump's compressor takes over and cools the medium (active cooling). All models are equipped with scroll compressors, which ensure silent, reliable operation and high efficiency in all temperatures ranges.

Investing in a heat pump from Thermia always makes good economic sense, but it is also an investment in comfort.

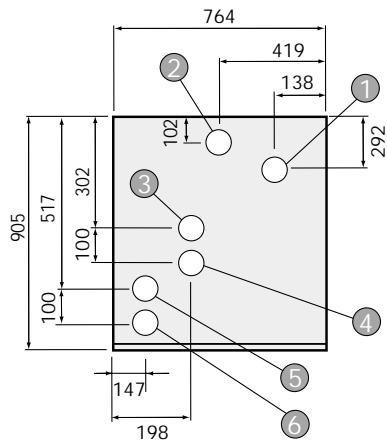
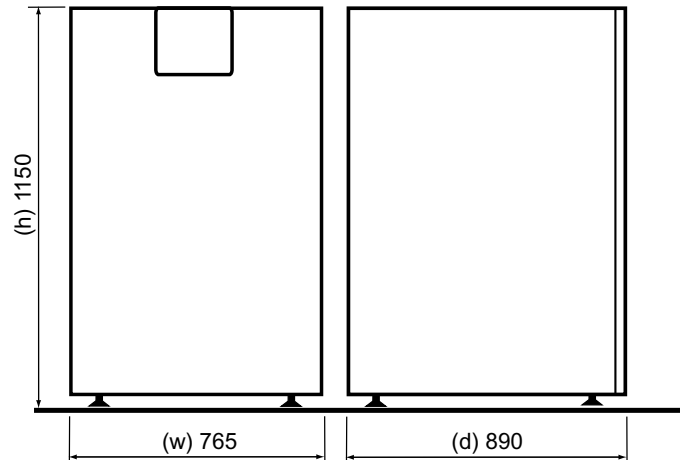
Whether you heat or cool your home or building, you'll soon realize the advantages of heat pumps from Thermia, always a reliable supplier.

Thermia Robust



Thermia Värme AB
 Box 950
 671 29 Arvika
 Sweden
 Tel. +46 570 813 00
 Fax +46 570 144 10

www.thermia.com



Connections

1. Inlet heating system
2. Return heating system
3. Hot gas circuit inlet (from HP)
4. Hot gas circuit return (to HP)
5. Chilled water return (to HP)
6. Chilled water inlet (from HP)
7. Radiator, return (to HP)

All connections are 35 Cu.

Technical data Thermia Robust

Model	22U/M	28U/M	38U/M	45U/M	13H	16H	23H	26H
Refrigerant ²⁾								
- Type	R404A	R404A	R404A	R404A	R134a	R134a	R134a	R134a
- Quantity, kg	3.5	3.6	4.3	5.5	2.7	3.1	3.35	3.7
- Test pressure, MPa	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2
- Design pressure, MPa	2.9	2.9	2.9	2.9	2.0	2.0	2.0	2.0
Electrical supply, 400V/3-N								
- Rated output, kW	9.2	10.1	14.0	16.2	9.2	10.1	14.0	16.2
- Starting current LRA, A	98	120	135	175	98	120	135	175
- Fuse, A	25	25	35	35	25	25	35	35
Weight, kg	280	290	320	345	280	290	320	345
Nominal power								
- Rated power ¹⁾ , kW	22.6/21.0	27.1/25.0	38.2/34.9	44.2/40.8	13.4/12.7	16.7/15.9	23.1/21.9	26.1/25.0
- Heat factor ¹⁾ , COP	4.2/2.8	4.1/2.8	4.1/2.8	4.2/2.9	4.3/3.0	4.4/3.0	4.2/3.0	4.2/3.0
Nominal flow rates								
- Chilled water, l/s	1.33	1.59	2.13	2.60	0.77	0.97	1.34	1.52
- Heating system, l/s	0.54	0.64	0.9	1.06	0.32	0.4	0.55	0.62
External available pressure								
- Chilled water ²⁾ , kPa	200	185	163	150	216	211	205	194
Internal pressure drop								
- Heating system	27	35	37	39	11	16	24	30
Maximum temp. heating system, °C								
	55	55	55	55	65	65	65	65

¹⁾ As per EN 255 for chilled water in / heat carrier out at 0/35°C and 0/50°C.

²⁾ The calculation is based on water and a Wilo pump. (Pressure drop without non return valve).