



RTDF

Solutions for Deep Freezing Systems



R717

down to
-30°C



Model RTDF chillers

Features

Solutions for Deep Freezing Systems

The Trane RTDF chiller is an industrial refrigeration air-cooled chiller for outdoor installation specifically designed for deep freezing applications with an air-cooled chiller. It is ideal for deep freezing processes requiring heat transfer fluids between -12°C and -30°C.

Easy installation

- Plug & play
- No machine room
- Compact design

Environmentally responsible and safe solution

- Market leading by lowest refrigerant charge (R717 with zero ODP and zero GWP)
- No water consumption

Reliable and high efficiency

- Inverter driven semi-hermetic screw compressors with permanent magnet motors and variable VI
- Dual circuit



Features

- Galvanised steel body and chassis with polyester paint
- 400V-3Ph-50Hz power supply.
- Semihermetic screw compressors with variable speed permanent magnet motor. Suction filter, oil filter, discharge check valve. Suction and discharge valves integrated in the compressor
- Miscible oil with return through suction
- High efficiency vertical oil separator
- Tropicalised condenser with aluminium microchannel coils, with Polyester Powder Coating treatment allowing the system to operate at ambient temperatures up to 47 °C.
- Oil cooler with stainless steel tube coils and aluminium fins
- Variable speed EC motor fans for condensing pressure and oil temperature control
- Evaporator with stainless steel welded plates
- Electronic expansion valve, and electronic liquid injection valve for compressor cooling in extreme conditions
- Stainless steel refrigeration circuit with decanter. Filter service valves, sight glasses, pressure switches and high and low pressure transducers
- Stainless steel hydraulic circuit with fill/drain valve, air vent, flow switch, inlet and outlet thermometers and pressure gauges
- Closed economiser with plate heat exchanger for liquid subcooling and medium pressure injection
- Electrical control panel. Integrated compressor inverter. Differential protection. Individual magneto-thermal and thermal protection for compressor and fans
- Electronic control with digital control panel, cooling capacity control, condensation control, VI variation by solenoid, start/stop sequence, compressor, fan and pump safety and stop sequence, compressor/s, fans and pumps safeties. Web interface and external communication

Options

- Stainless steel shell and tube evaporator
- Stainless steel tube condenser and aluminium fins
- Partial heat recovery (20 %)
- Total heat recovery (80 %)
- Hydraulic kit with back-up pump
- Refrigerant leak detector

Heat Recovery

Heat recovery is reusing the energy which is produced as a natural by-product of the cooling cycle.

RTDF offers two options for heat recovery, Partial Heat Recovery (PHR) option and Total Heat Recovery (THR) option, answering the specific requirements of industrial users, such as fast defrost cycles, hot water production for sterilization, tap water production, etc.

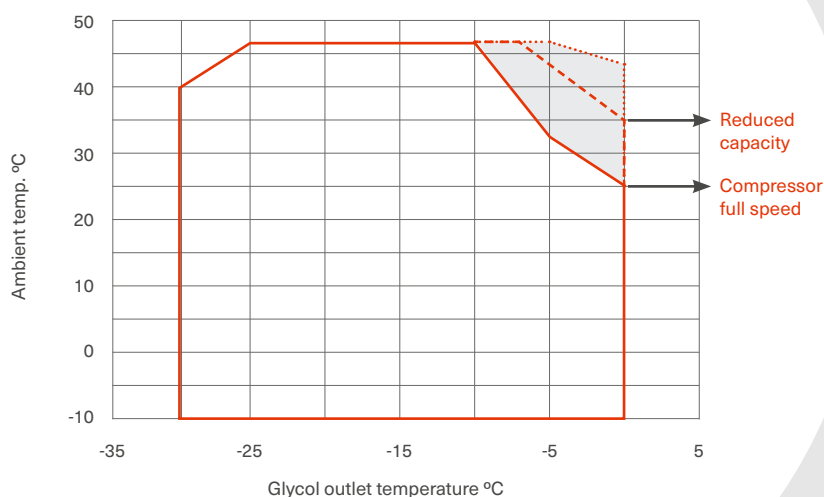
Semihermetic screw compressors

Compressors are characterised by their compact design, low noise level and low vibrations.

The screw is designed with high compression pressure and variable VI. It is driven by an integrated permanent magnet motor on high precision roller bearings, with a service life of sixty thousand hours.



Operating map



General specifications

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Low temperature (-19 to -25°C)		030	035	040	050	070	080	100
Cooling capacity (1)	(kW)	128	130	158	192	259	315	383
Total power input	(kW)	103	106	126	148	209	249	291
Maximum current	(A)	216	296	313	321	584	619	635
Number of compressors		2	1	1	1	2	2	2
Number of circuits		2	1	1	1	2	2	2
Number of fans (ø 800mm)		6	6	6	8	10	10	14
Airflow	(m ³ /h)	114000	114000	114000	182000	228000	228000	320000
Glycol flow	(m ³ /h)	22	22.3	27	33	44.5	54	65.5
Hydraulic connection		DN100	DN100	DN125	DN125	DN150	DN150	DN150
Dimensions and weight								
Length	(mm)	5040	5040	5040	6480	7960	7960	10920
Width	(mm)	2200	2200	2200	2200	2200	2200	2200
Height	(mm)	2315	2315	2315	2315	2315	2315	2315
Weight	(kg)	4386	3540	3540	4552	5450	5570	7290
Refrigerant charge R717	(kg)	16	16	21	25	33	42	48

(1) Nominal performance positive temperature: 35 °C ambient temperature with glycol inlet/outlet at -19/-25 °C, with a ethylene glycol concentration of 50 %.



Trane – by Trane Technologies (NYSE: TT), a global climate innovator – creates comfortable, energy efficient indoor environments through a broad portfolio of heating, ventilating and air conditioning systems and controls, services, parts and supply. For more information, please visit trane.eu or tranetechnologies.com.

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