Tristar Cooling

Compact air conditioning system

The Tristar Cooling is a compact air conditioning system that has been specially developed for industrial applications.

The Tristar Cooling is suitable for:
- ventilation with fresh air and recirculation of air from inside
- cooling
- extending with a heating system
- filtration from EU4 to EU8

As standard, the Tristar Cooling comprises the following parts:

ROBUST CASING

The casing is made of Colterra. This high-quality aluminium alloy is light in weight, has a long life and is corrosion-resistant. The panels are double-walled and fitted with 25 mm thick thermal and acoustic insulation. The air-inflow cowl and the condensers are fitted with thermogalvanized gauze screens.

COOLING SYSTEM

The cooling system comprises:

1. **Three heat exchangers**
   Large size for industrial use.

2. **Expansion valve**

3. **Accessories**
   - microfilter dryer 30 ppm
   - sight-glass with moisture indicator
   - four LP/HP pressostats with TÜV certificate
   - resistanceless ball valves
   - liquid filter

4. **Two compressors**
   These compressors are economical and quiet. The refrigerating output can be increased discretely. This gives considerable energy savings. The scroll compressors are connected as each others reserve and can be used as such. This guarantees operational reliability.

AIR MANAGEMENT

Mixer section
This adds fresh air to the recirculated air in proportions from 0 to 100%. A maximum use of free cooling is standard.

Filter section
The filters can be replaced quickly and easily. The standard filter class is EU6. Other classes from EU4 to EU8 are available. The filters are fitted with a U-tube manometer and monitoring devices. These also prevent the evaporator freezing up.

Fan section
To give optimal energy consumption, the Tristar Cooling is fitted with a back-ward-curved double-intake centrifugal fan.

Condenser section
Two condensers ensure that the effect does not diminish even in a more contaminated environment. Two axial fans discharge the heat upwards. These fans operate at low speeds and are thus very quiet.

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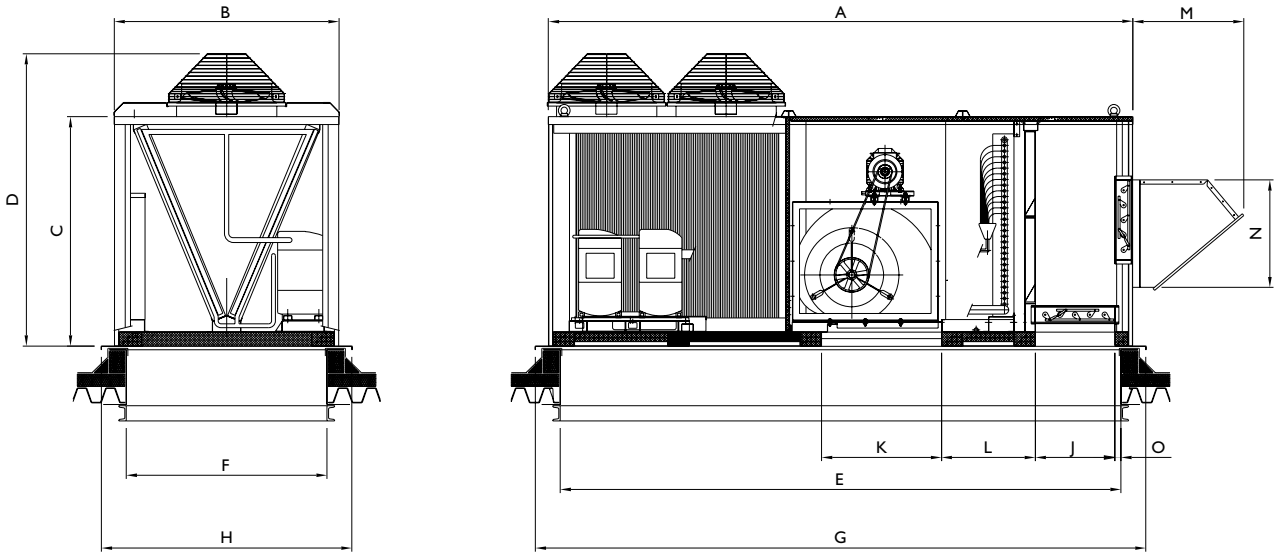
CONTROLS

A weatherproof switch box is fitted in the unit for its control. An outside temperature sensor and a supply sensor are included as standard. Two different types of external control of the unit are possible: central or local.
The Tristar Cooling is supplied ready for use. The unit has been designed for installation on roofs on structural curbs.

Removable side panels facilitate inspection and maintenance.
A main switch can be used to turn the unit off during inspection or maintenance work.

The Tristar Cooling satisfies all STEK and CE guidelines and can be supplied with various coolants.



	TRIC/14	TRIC/26
Cooling capacity (gradually adjustable)	0 - 24 - 34 - 58 kW	0 - 52 - 100 kW
C.O.P. (cooling efficiency)	3,6	3,4
Evaporator	copper with profiled AL – louvers	
Distance between louvers/inflow surface	2,0 mm / 1,74 m^2	2,0 mm / 2,94 m^2
Filter class	F6 (Eurovent, EU 6)	
Quantity and dimensions	4 St. 594x594x97 mm 2 St. 289x594x97 mm	9 St. 594x594x97 mm
Fan	backward-curved radial ventilator	
Air flow capacity at 200 Pa external	13.800 m^3/h	25.500 m^3/h
Minimum – maximum	10.000 - 14.400 m^3/h	16.000 - 26.000 m^3/h
Nominal power consumption	2,5 kW	5,0 kW
Motor power	3,0 kW	5,5 kW
Compressors	Scroll compressors, two in tandem	
Nominal consumption	12,0 kW (together)	22,6 kW (together)
Condensers	two in V – arrangement	
Condenser capacity together	76 kW	132 kW
Distance between louvers / inflow surface	2,0 mm / 4,03 m^2	2,0 mm / 8,32 m^2
Air flow capacity	20.000 m^3/h	38.000 m^3/h
Nominal consumption	0,4 + 0,6 kW	0,8 + 1,2 kW
Coolant	R 407C	
Quantity of cooling agent	18,0 kg	34,0 kg
Sound pressure level		
8,0 m open field distance	63 dB(A)	68 dB(A)
Weight	ca. 1080 kg	ca. 1980 kg
Power supply	400 V - 3P - 50 Hz	
Nominal consumption	16 kW	30 kW
Safety fuse	63 A, slow	80 A, slow
Starting current	134 A	198 A
Control	24 V AC	

This technical information relates to the following air conditions: outside 28° C, inside 25° C, 18° C wet.

Safety devices:

- pressostats with DIN – certification
- isolating transformer
- rotation direction monitor
- phase monitor
- motor safety switch
- safety against compressor overload
- filter monitor
- frost prevention
- delayed run-in of compressor
- collective defect relay

All these safety devices contribute to a longer life and higher reliability of the unit.

Dimensions of the unit	TRIC/14	TRIC/26
Length of casing A	4134	5545
Width of casing B	1588	1921
Height of casing C	1617	2200
Height of casing D	2061	2590
Length of roof opening E	3964	5344
Width of roof opening F	1418	1716
Length of flange G	4316	5704
Width of flange H	1770	2076
Stale air opening J	562 x 1200	663 x 1560
Blow-out opening K	848 x 848	1008 x 1008
Opening distance L	617	966
Length of suction hood M	784	890
Height of suction hood N	759	903

Dimensions in mm