

Interline



**Closed loop recirculation
chiller system
CRC-1700 serie**



Model CRC 1700 series Closed loop chiller system

Introduction

The CRC-1700 series closed loop chiller systems are designed specially to provide an independent source of coolant for analysers and analyser systems.

The unit is ideal for use in applications where the plant cooling systems cannot meet the specific coolant requirements for analyser systems.

The units are skid mounted and of a modular design, ensuring easy adaption to specific requirements. The units are designed for extended periods of unattended and trouble free operation.

Description

The CRC-1700 series chiller units are air blast cooled compression type refrigeration units, utilising Freon as refrigerant in order to maintain a preset temperature in a coolant container.

Each unit is comprising of:

- Compression type refrigeration unit including prefilled and sealed refrigerant circuit.
- Stainless steel insulated coolant container with coolant circulation pump and bypass.
- Control unit with thermal overload protection for both compressor and circulation pumpmotor.

The coolant is continuously circulated through the external consumers and returned to the atmospheric container via a circulation pump inside the unit.

An adjustable bypass is installed to maintain sufficient circulation over the Freon vaporiser coil. Coolant is made available from bulkhead fittings in the base frame.

In the refrigerant circuit a number of devices are installed to prevent damage to the unit and to ensure safe and unattended operation on a continuous basis.

Safety devices:

- moisture filter and dryer
- liquid catcher
- suction pressure control
- low and high pressure switching
- crank case heating (if required)

All components in the freon circuit, with the exception of the compressor and condenser, are free of maintenance. Special care has been taken in the selection of components in this freon circuit on their technical specifications as well as world wide distribution, this minimizing down time if component failure occurs.

The control unit provides a DOL starter relay with thermal overload protection for the compressor motor, all required switching for automatic operation of the unit as well as fusing and motor protection switches for the coolant circulation pump.

The complete unit is mounted in a skid made of pressed galvanised sheet metal profile and fully covered with removable panels. The unit is suitable for floor mounting.

Finish

All carbon steelparts will be coated with a two-pack epoxy paint. Colour RAL 7032.

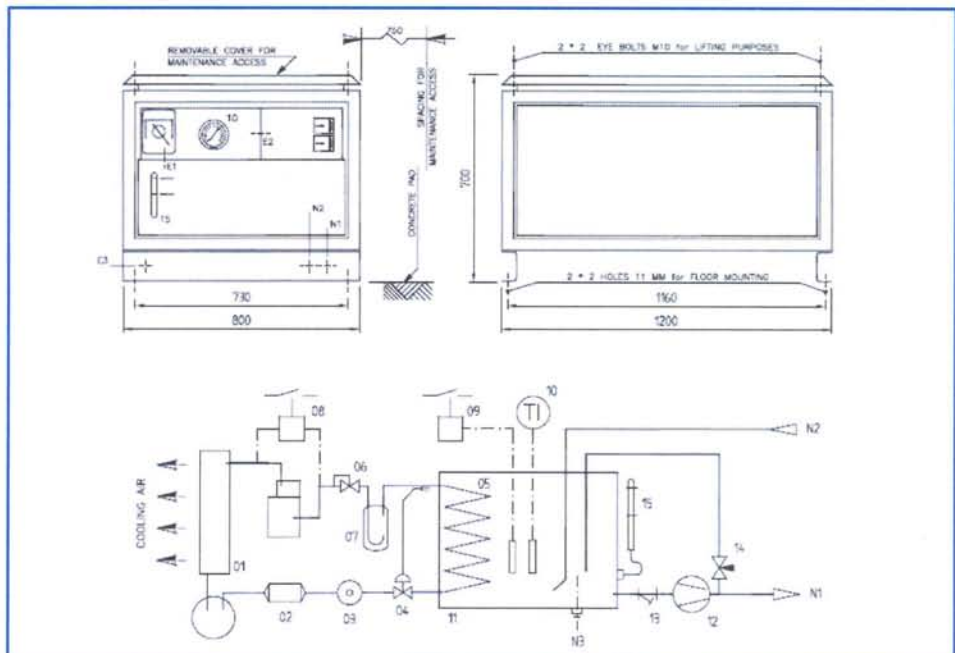
Galvanised surfaces, stainless steel and non ferrous materials will remain untreated.

Testing

The unit is fully functionally tested on maximum capacity during a 48 hours test run at our works prior to shipment.

Conn	Description	Size
N1	Coolant outlet	12 OD
N2	Coolant return	12 OD
N3	Container drain	1/2"NPT-F (plugged)
E1	Power supply	M20*1.5
E2	Signal out (option)	M20*1.5
E3	Earth stud	M10

P.No.	Description
1	Condenser unit
2	Filter-drier
3	Sight glass
4	Injection valve
5	Vaporiser coil
6	Evaporating press. reg.
7	Suction accumulator
8	Pressure switch
9	Temperature switch
10	Temperature indicator
11	Coolant container
12	Coolant circulation pump
13	Suction filter
14	By-pass valve
15	Level indicator



Specification

Coolant container	vol. 50 litre
Refrigerant	R134A
Coolant temperature	-10 to +5°C
Cooling capacity (nominal)	CRC-1700 - 1,3 : 1200 Watt CRC-1700 - 1,5 : 1750 Watt CRC-1700 - 2,5 : 2200 Watt Capacities are with +5°C coolant temperature and 25°C ambient (RH=70%)
Ambient Conditions	max. temperature +40°C / RH=80% (suitable for outdoor installation)
Circulation pump	rotary vane type
capacity	model 101 100 l/hr @ 10 barg discharge pressure model 201 200 l/hr @ 10 barg " " model 301 300 l/hr @ 10 barg " "
materials	body : bronze shaft : AISI 304 seals : mechanical (carbon)
Area classification	Zone 1-IIB-T3. Areas acc. Cenelec
Power supply	400 VAC/50 Hz - 3 pH + Neutral
Power consumption	CRC-1700 - 1,3 : 1 kW CRC-1700 - 1,5 : 1,4 kW CRC-1700 - 2,5 : 1,8 kW Consumption may vary with pumpunit installed and deviation in ambient temperature and required coolant temperature.

Available options

Coolant temperature range	-/- 20 to +15°C with limited field adjustability
Coolant low level alarm	Volt -free SPDT contact
Coolant high temperature alarm	Volt -free SPDT contact
Power supplies	- 415 VAC/50-60 Hz - 3 wire - 400 VAC/50-60 Hz - 3 wire
Dual power supply	- 3 pH 400 or 415 VAC for compressor and pump motor - 1 pH 220 or 110 VAC for control unit Irregular power supply voltages are subject to design modification and available on request.
High capacity vane type circulation pump	capacity : 100 litre/hr @ 10 barg
materials	body : Brass shaft: AISI 304 seals: Mechanical (carbon)
Area classification	- Zone 1 - IIB - T4/5 - Zone 1 - IIC - T4/5

Interline Systems BV has adopted the policy of continuous product development. Although this bulletin has been compiled with great care, current standard executions may deviate.

Application Questionnaire

CRC 1700 serie - Closed loop chiller unit

Return this page by fax for a detailed quotation of further information

Customer : Interline ref. :
Customer ref. : Date :
Enduser :
Project :
Equipment I.D. :
Tag no. : Sheet rev. : 0

Ambient Conditions

	Min	Max
Temperature (°C)
Humidity (% RH)

Power supply

Standard 400 VAC / 50 Hz - 3 ph+N, for alternative provide information

Voltage :
Frequency :

Coolant Requirements

	Min	Max
Temperature (°C)
Flow (L/Hr)
Pressure (BarG)

Options Required

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Environment

Industrial / Refinery / Marine
(hazardous / ingress)

Area Classification (specify)

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Cooling Capacity (kW) kW

Special requirements / Remarks

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Interline

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