

Equipment Register

MULTI-PURPOSE ROLL-IN BLAST CHILLERS

This register applies to equipment containing Fluorinated Gases; operations to test the system and the correct operation of components must be performed, in addition to during the first installation, periodically every six months

DEFINITION OF OPERATOR:

The F-gas regulation sets out that the operator of equipment is responsible for compliance with regulatory obligations. The operator is defined as a “natural or legal person who exercises effective control over the technical operation of equipment and systems”. Based on this definition, the owner of the system containing fluorinated gases is not automatically the operator of the equipment.

“Effective control over the technical operation” of equipment or a system includes, in principle, the following elements:

- free access to the system, which involves the possibility of monitoring components and their operation, and the possibility of granting access to third parties;
- control over operation and ordinary management (for example, making the decision to turn the equipment on and off);
- the power (including financial power) to make decisions in relation to technical modifications (for example, the replacement of a component, the installation of a permanent leak detection system), modifications to the quantity of fluorinated gases in the equipment or system, and the execution of tests and inspections (for example, checks for leaks) or repairs.

Normally, the operator of equipment for domestic use or small commercial equipment is an individual and generally the owner of the equipment, while in commercial and industrial applications, in the majority of cases the operator is a legal person (normally a company) that has the task of issuing instructions to employees regarding the ordinary technical operation of the equipment.

In some cases, in particular in the presence of large installations, contracts are stipulated with service companies for the execution of maintenance and repair operations. In these cases, the determination of the operator depends on contractual and practical agreements between the parties.

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SYSTEM IDENTIFICATION SHEET

EQUIPMENT AND/OR SYSTEM IDENTIFICATION

Type of equipment : Serial no. :

Remote condensing unit : Serial no. :

Type of refrigerant

Total refrigerant load: (Kg)

Place of installation :

St.:no.....

Location : Municipality :Pr :

Date of installation :

Installation carried out by :

OPERATOR IDENTIFICATION (see definition on previous page)

First Name and Last Name (or company name) :

St.:no.....

Location : Municipality :Pr :

Tel. : Fax :

email :

TECHNICIAN IDENTIFICATION

First Name and Last Name: Firm :

St.:no.....

Location : Municipality :Pr :

Tel. : Fa...x :

email :

Technician's certificate of registration no. :

VACUUM OPERATIONS AND NITROGEN CHARGE VERIFICATION

During the installation record in the given numeric order the following values:

1- Nitrogen charge pressure (bar):

2- Nitrogen holding time (hh:mm):

3- Vacuum pressure (bar):

4- Vacuum holding time (hm:mm):

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PERIODIC INSPECTIONS

The following inspections must be made after having turned on the machine and while running a shock freezing cycle with a set cell temperature of -30°C . Record the following data after the cell reaches temperature, wait 5 minutes after the compressor resets. Go to the Input/Output screen and check the values of:

VALUE	Unit	1 st installation	6 months	12 months	18 months
Cell air temperature	$^{\circ}\text{C}$				
Food probe temperature					
Pt1	$^{\circ}\text{C}$				
Pt2	$^{\circ}\text{C}$				
Pt3	$^{\circ}\text{C}$				
Pt4	$^{\circ}\text{C}$				
Evaporator temperature	$^{\circ}\text{C}$				
Capacitor temperature	$^{\circ}\text{C}$				
Door switch status	open / closed				

Connect the High and Low pressure gauges to the condensing unit, and using a multimeter with current clamp for the compressor connections and machine power supply connections, record the values of:

VALUE	Unit	1 st installation	6 months	12 months	18 months
Delivery pressure	bar				
Suction pressure	bar				
Delivery pipe temperature	$^{\circ}\text{C}$				
Suction pipe temperature	$^{\circ}\text{C}$				
Overheating measured on condensing unit	$^{\circ}\text{C}$				
Current absorbed by compressor	A				
Current absorbed by machine	A				
Compressor supply voltage					
L1-L2	V				
L2-L3	V				
L1-L3	V				

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VALUE	Unit	1 st installation	6 months	12 months	18 months
Machine supply voltage					
L1-L2	V				
L2-L3	V				
L1-L3	V				
L1-N	V				
L2-N	V				
L3-N	V				

On the condensing unit, check the liquid tell-tale and record the colour (refrigeration circuit humidity index):

- Green / DRY
- Yellow / WET

The green / dry value is to be considered the correct operating condition.
The yellow / wet value is to be considered a critical condition.

LEAK TEST

Leak detector make and serial no. :

Sensitivity (g/year) :

Date of last calibration :

Test	Outcome 1 st installation		6 months		12 months		18 months	
	NO	YES	NO	YES	NO	YES	NO	YES
Condensing unit	<input type="checkbox"/>	<input type="checkbox"/>						
Suction line	<input type="checkbox"/>	<input type="checkbox"/>						
Delivery line	<input type="checkbox"/>	<input type="checkbox"/>						
Hot gas line	<input type="checkbox"/>	<input type="checkbox"/>						
Expansion and equalisation valve	<input type="checkbox"/>	<input type="checkbox"/>						
Evaporator	<input type="checkbox"/>	<input type="checkbox"/>						

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Also check the torque of the filter bolts :

Torque wrench make and serial no. :

Torque wrench measuring range :

Date of last calibration :

Value measured :

The limit value is set at 28 Nm.

Using a multimeter or suitable tool, check the ground continuity between the grounding line of the electrical panel and the following components :

Test	Test outcome 1 st installation		6 months		12 months		18 months	
	yes	no	yes	no	yes	no	yes	no
Cell panels	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Door panel	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Evaporator	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condensing unit	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Also check the operation of the following installed electrical components :

Test	Test outcome 1 st installation		6 months		12 months		18 months	
	OK	NOK	OK	NOK	OK	NOK	OK	NOK
Door frame heater	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Evaporator tray heater	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condensate drain heater	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Check the correct closure of the cell door, adjust the hinges and stop plate if necessary as explained in the installation manual.

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TEST OUTCOMES

The tests had the following outcomes:

Machine operates correctly

Machine needs to be repaired due to the following reason _____

Machine to be re-inspected within _____ months due to _____

NOTES :

Date Signature(maintenance technician)

Date Signature(operator or system owner)