telsat srl

INSTRUCTION MANUAL

DEHYDRATOR

Model GOBI 77A
S/N 16867

WARNING!

Danger of electric shock in models working with alternate current (120 or 220Vac)

Protection against electric shock: Class I equipment.

Leakage current to earth: 3,5 mA max.

Connection to primary power: Use conductors with cross-sectional areas of 0,75 mm^2 with designation H05 VV-F or H05 VVH2-F2.
Before installing the dehydrator be sure that the voltage supply is provided with earth fault protection over 6A. Use earthing terminal of 16 mm^2.

Danger of scald: The dehydrator, during the regeneration cycle, produces heat in the desiccant salts tanks (about 150°C). Be careful you don't touch the tanks when you open the equipment.
We advise you to fix the dehydrator far from very sensitive to heat equipments.

IMPORTANT

The ESD sensitive electronic components are present inside the dehydrator, it may be damaged by possible electrostatic charges. Do not open the metal panels of the dehydrator if the earth cable isn't connected.

Particular care must be taken touching these components, when the ground connection of the equipment is not yet present.

The dehydrator is shipped in an antistatic envelope: if the equipment need to be sent back to the manufacturer, please use the same original packaging material or equivalent. Use only antistatic envelopes.

CE

DECLARATION OF CE and RoHS CONFORMITY

Dichiarazione di conformita' CE e RoHS

Herewith we Criotherm s.r.l.,
Noi Criotherm s.r.l.,

in quality of producer declare that the following Dehydrators for the protection of Wave Guides:
in qualità di produttore dichiariamo che i modelli di Pressurizzatori per la protezione di Guide d'Onda qui di seguito elencati:

Type:
Modello:

GOBI77A

in all the possible configurations correspond to the basic requirements of:
in tutte le varie configurazioni ai quali questa dichiarazione si riferisce sono conformi alle seguenti direttive:

- **EC directive about the low voltage 2014/35/UE of February, 26th 2014 entered into force on April, 20th 2016;**
  Direttiva «Bassa Tensione» 2014/35/UE del 26 Febbraio 2014, recepita come Legge Italiana 20 Aprile 2016;

- **EC directive about the electromagnetic compatibility 2014/30/UE of February, 26th 2014 entered into force on April, 20th 2016;**
  Direttiva «Compatibilità Elettromagnetica» 2014/30/UE del 26 Febbraio 2014, recepita come Legge Italiana 20 Aprile 2016;

according to the following standards when applicable:
secondo le seguenti norme quando applicabili:

EN 61000-6-1, EN 61000-6-3, EN 60950-1

- **EC directive 2011/65/UE of the European Parliament of June, 8th 2011 on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS) starting than January, 3th 2013.**
  Direttiva 2011/65/UE del Parlamento Europeo e del Consiglio del 8 Giugno 2011 con introduzione dal 03 Gennaio 2013 (Direttiva «RoHS») avente come scopo la Restrizione nell'uso di determinate sostanze pericolose nelle di apparecchiature elettriche ed elettroniche.

Milan, October, 26th 2022

Daniele Canepa
General Manager

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1. GENERAL INFORMATION

1.1. Technical characteristics

Air capacity	:	840 Nl/h ± 10%
Number of outlets	:	4 with outlet cocks each
Total volume pressurizable	:	3600 liters
Working pressure range	:	25 kPa ÷ 40 kPa ± 10%
(pressostatic system)		up to 50 kPa during the regenerating phase
Applications	:	Wall, Rack 19" and Rack 21"
Pressure indication	:	Pressure gauge 0 ÷ 60 kPa
High Humidity presence	:	Humidity indicator with change of salt's colour and Electronic Humidity Alarm
Regeneration type	:	Automatic (more than 5 years before change salts)
Dew point	:	<-40°C @ 30°C Tamb. e 80% R.H.
Over pressure protection	:	Safety valve fixed at 57 kPa ± 5%
Air compression	:	2 diaphragm pumps with alternatively working
Desiccant salts type	:	AA 35
Desiccant salts quantity	:	0,5 liter (x4 tanks)
Working temperature	:	-10 + 30°C
Storage temperature	:	-20 + 60°C

Power supply

Voltage	:	230 Vac ± 10%	
Current absorption max	:	Normal working	0,70A
		Salts reactivation (for 45 min. every 4 hours)	1,55A
Electrical connection	:	on IEC connector	
Power supply cable type	:	minimum cross-section of 1 mm² designation H05 VV-F or H05 VVH2-F2	
Hours counter	:	Up to 100.000 not resettable	

Electronic Alarms

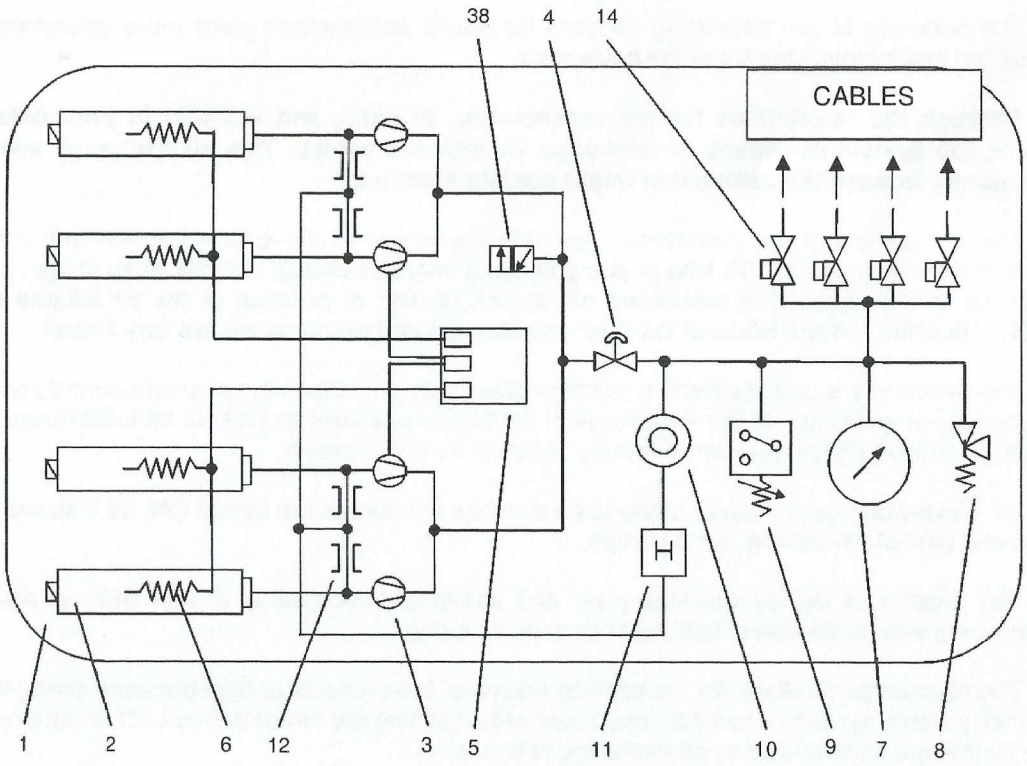
	:	Lack of main supply Low pressure @ <20 kPa alarm and >23 kPa restore ±5% Manual functioning when CP is switched
Efficiency Control – functions (Led advisor)	:	indication of pump 1 working indication of pump 2 working indication of tank 1 regenerating indication of tank 2 regenerating Alarm of warmer 1 broken Alarm of warmer 2 broken Alarm wrong cycle
Electronic Hygrostat – function	:	Alarm of high humidity (@ DP >-10°C)
Tele alarms type	:	Grouped with dry contact switch (Nc-C-No)
Tele alarms connections (pin on connector)	:	To the 9 poles cannon connectors (5) No – (3) C – (1) Nc
Alarms cable type	:	Couple cable
Remote monitoring	:	LAN board
Connection	:	RJ45
Protocol	:	TCP IP

Directives		
EEC directives	:	2014/30/UE and 2014/35/UE 2011/65/UE RoHS Compliance
Quality standard	:	Under UNI EN 29001

Sizes and weight		
Application wall	:	482 (l) x 310 (h) x 290 (p) mm
Application rack 19"	:	482 (l) x 310 (h) x 245 (p) mm
Application rack 21"	:	535 (l) x 310 (h) x 245 (p) mm
Net weight	:	21 kg

Installation accessories included		
Power connector	:	n° 1 IEC socket
Alarms connector	:	n° 1 female connector with plastic case
Tube PR-5 or MB Ø10 mm.	:	25 meters
Output angle adapters	:	n° 4 plastic L code H2291(Dehydrator side)
Quick release union elbow	:	n° 4 code H22106 (Cables side)
Adapters for cables connectors	:	n° 4 code H0905 (1/8" thread)

Scheme of principle



1) Air inlet filters
2) Drying columns
3) Pumps
4) Pressure regulator
5) Electronic board
6) Regenerations heaters
7) Pressure gauge
8) Safety Valve
9) Pressure sensor
10) Humidity indicator
11) Electronic Humidity probe
12) Regeneration restrictions
14) Output shut-off valves
38) Solenoid valve

1.2. General description

The Desiccant Dehydrators model **GOBI77A** are automatic regeneration equipments, designed to protect air-dielectric cable systems up to **3600 liters.** Able to supply more than **840 Nl/h** of dry air with a working pressure from **25 kPa up** to **40 kPa** when the pump stop to save energy.

The functioning principle of the automatic regeneration is based on the alternating use of two pumps and two drying columns. The air, sucked by one pump, is dehydrated through the drying tank and compressed in order to keep the pressure value corresponding to that necessary for protecting the cables.

By means of an electronic pressure sensor regulator, some sampling instruments as a pressure gauge, a humidity indicator, safety valve, etc., the pressure and the dew-point of the air is controlled for putting it in the cables.

The automatic reactivation system is based on two sections, each of them composed of one pump and a two drying tanks. The tanks contain a non-toxic chemical salt which is able to hold the moisture of the air and to push it out subsequently by heating. An electronic programmer handles in turn the activation of each section so that the reactivation of the salts in one section is possible while the other one dehydrates the air. The exchange occurs cyclically every four hours in order to always have the system ready to release air at the right stage of drying in case of a sudden demand from the cables protected.

The presence of two alternating sections for the air compression gives more guarantee of operation and increase the life of the equipment.

Through the restrictions for the regeneration of salts, and working in pressostatic mode, the system continues to exchange air with the cables. This air exchange allows constantly to wash the cables that might contain moisture..

The pumps are of the membrane type with movement to the connecting rod and motor rotation without brushes. This kind of pump needs a very little energy to work, even at start and, because of the absence of lubricating oil, there's no risk of pollution of the air inflated into cables. Besides, since it works at low pressure, its wear and maintenance are very limited.

The dehydrator is equipped with a locking system pumps in the event of an abnormality of the logic of the programmer. In this way, if one of the two pumps were to suck air from the column in the regeneration phase, prevents the entry of humid air in the cables.

An irreversible hours counter starts to count when the pumps are turned ON, so it shows the total real time of functioning of the pumps.

The bright Led display provides clear and immediate information in real time on device functioning without the use of buttons or drop-down menu.

The relevant parameters like the working pressure, low pressure or high pressure alarm, high Humidity alarm, system forced and total hours of functioning are remotized by LAN. Furthermore the alarms are sommarized by an exchange relè contact.

The LAN board every one second send some strings with the data of the Dehydrator. By the monitoring system of the customer it can be connected in the internal net to have the status of the Dehydrator remotized.

1.3. Operation

Following scheme 1, the environment air passes through the filters (1), enters into two of the four drying tanks (2), where the moisture falls on the salts, is sucked up by the pump (3), and compressed. Subsequently a pressure sensor regulator (9) control the pressure value to the level necessary to protect the cables.

About every 4 hours, a programmer (5) cyclically gives rise to commutation of the pumps (3) and the heating resistors (6) thus allowing the depleted salts to be regenerated. When this inversion occurs, the pump being used stops and the other one starts up, so that the air can pass through the second tank. The drying agent is regenerated by heating of the salts, which is achieved by means of the electrical heaters (6) for about 45 minutes at 150°C; simultaneously with an inverse flow of dry air, which causes the moisture in the column to be expelled. A system called Restriction (12) causes a small calibrated leak, which is used to expel, from the tank, the steam produced by heating the salts. During this phase of regeneration the pump work continuously and the pressure increase up to 50 kPa to expel the humidity from the tanks. In this phase, the pressure regulator (4), permit to regulate the pressure at 50 kPa while the pump run continuously.

The pressure gauge (7) displays the value of the pressure in the protected system and any variations caused by various influences, such as guide leaks, manipulation of the regulator, etc.

A safety valve (8), calibrated at 58 kPa ± 5% ensures protection of the low pressure tubing, and the cables is protected from any over-pressures caused by sudden changes in temperature, incorrect use of the pressure regulator, etc.

The pressure sensor (9), located in the low pressure zone, triggers an alarm in the event of an excessive lowering of pressure. Lowering of the latter below 20 kPa caused by a leak in the cables or because the device is not working, is signalled by a red indicator light, and the exchange contact of a relay for a remote alarm, if any. The restoration of that alarm occurs when the pressure exceeds again 23 kPa.

Before being output, the dried air passes through a humidity probe (11) which, if the degree of air drying rises more than -10°C above the dew point, triggers an alarm, and through a humidity indicator (10) which allows the state of the salts to be checked visually.

1.4. Controls, alarms and display

For this section, refer to scheme 2.

Main switch (16)

The main switch (16) activates/de-activates the devices; a green LED (25) indicates when it is ON.

Pressure gauge (7)

The pressure gauge provides analogue indication of the pressure, with values referenced to the kPa scale. The sampling is carried out in the area at low pressure and indicates the setting value of the pressure of work before any flow meters.

Pressure regulator (4)

The pressure regulator adjusts high pressures to the optimal value during the regeneration phase to expel the humidity in the tanks. Its calibration is carried out in the factory and has a locking system anti-tampering.

Safety valve (8)

The safety valve removes all the over pressures higher than the calibration point 58 kPa ± 5%, in order to avoid that tampering or failures to be damage the dehydrator or the cables.

Humidity indicator (10)

The humidity indicator shows the degree of drying of the dehydrated air, on the basis of the change in the colour of the salts. By observing the colour of the salts through the frontal viewing glass, it is possible to check whether the drying salts are effective (orange) or if there is a fault (dark blue/green).

Led Display (34)

This display provides complete information in real time on device functioning:

- ON (25) [green Led]
- pressure alarm (26) [red Led]
- CP indicator (30) showing manual operating mode [yellow Led]
- pump 1 or pump 2 in operation (29) [green Led]
- tank 1 or tank 2 in regeneration phase (31) [green Led]
- fault in tank 1 or tank 2 regeneration indicator (32) [red Leds]
- wrong cycle (28) [red Led]

CP pumps switch (33)

The lever (33) is used to disengage automatic operation of the regeneration system, and to force switching of the pumps. Moving the lever to position 1 or 2 excludes the programmed cycle and pump 1 or 2, respectively.

This control can be used to check, one after the other, that the pumps are working correctly, without waiting for switching (every 4 hours) of the programmer.

The switching from central position (automatic mode) to position 1 or 2 is indicated by yellow LED (30) located on the efficiency control display. If the indicator is ON, this means that the machine is in emergency state (manual operation).

Warning: This operation must be carried out after having checked the regeneration state: wait, if necessary, for the regeneration tank linked to the pump to be forced to cool. This is because on switching to a pump, during the phase of heating the drying salts contained in the tank connected to it, risks letting moisture into the cables or the pump stops if the dehydrator is provided with blocking system (see 1.2).

Hours counter (35)

The hours counter (35) is irreversible counter, it starts to count when the pumps are ON. It shows the total real time of functioning of the pumps.

LAN Board (24)

The dehydrator is provided with an exit LAN to transmit the data to an another tele-control system. The LAN board transform the signal RS232 in signal TCP/IP and transmit in sequence the follow data:

- Serial Number and production date;
- Pressure value;
- Total hours of functioning;
- Which pump working in that moment;
- If there is in progress the salts regeneration;
- Any alarm in progress: - Low pressure
  - High humidity
  - Pump forced

About the LAN transmit board, his set and eventually programming please refer to the USR-TCP232-T2 User Manual enclosed with the dehydrator.

If you don't have your software is possible download and install on your PC a software of USR IOT to create a virtual COM to see the data transmitted by LAN:

https://www.pusr.com/support/downloads/USR-VCOM_Virtual-Serial-SoftwareV372525_Setup.html

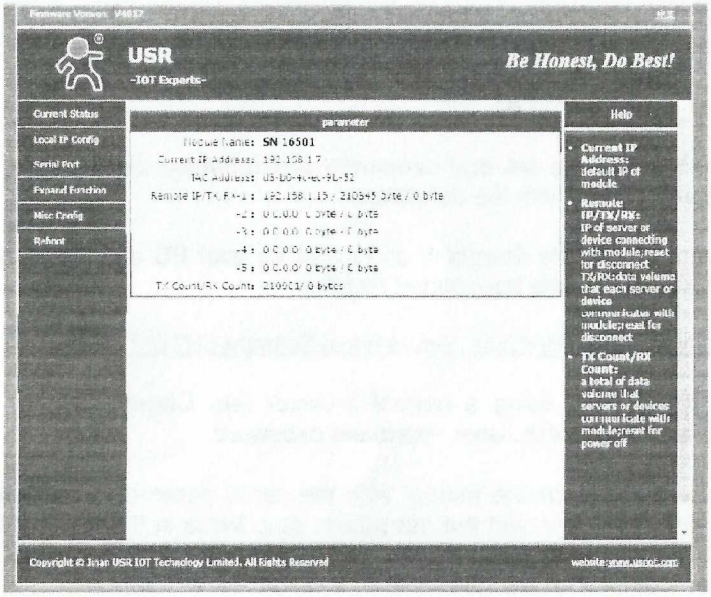
The parameters are visible also using a normal browser (eg. Chrome) typing his IP address. The follow is the default IP address, User name and password.

Note: all our dehydrators esc from the factory with the same parameters. Change the parameters on the base of your net to connect the dehydrator at it. Write in the follow table the new parameters and conserve this user manual with the dehydrator combined. Each User manual have a Serial Number stamped on his cover.

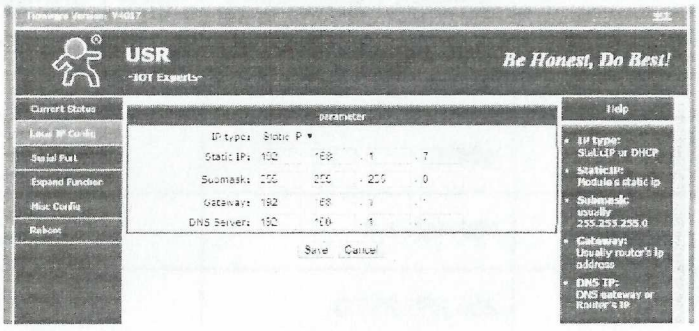
Item	Default Parameters	New Parameters
User name	admin	
Password	admin	
IP address	192.168.1.7	
Subnet mask	255.255.255.0	
Default gateway	192.168.1.1	
Serial baud rate - Do not change	2400	2400
Serial parameter - Do not change	None, 8, 1	None, 8, 1

Local port	20108	
Target IP (Note: Insert the IP of PC utilized)	192.168.1.15	
Target port	7110	
Module name (the SN of the dehydrator)	eg. SN 16501	
Webserver port	80	

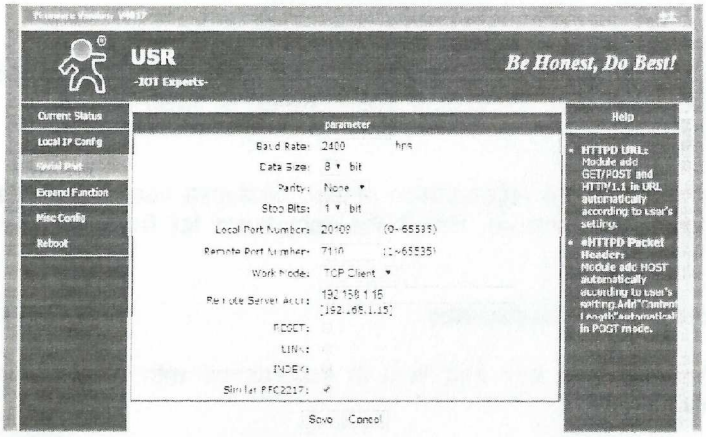
On the browser type http//:192.168.1.7 - User name: admin - Password: admin



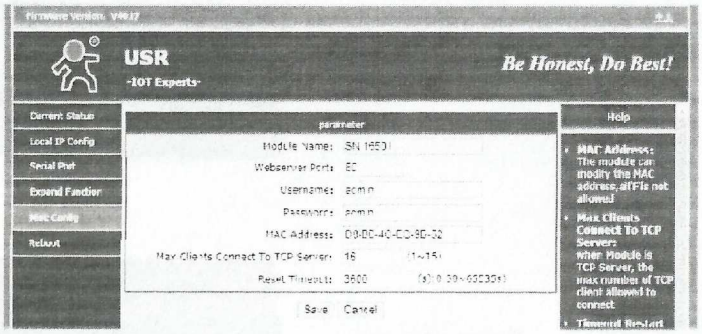
Current status



Local IP Config



Serial port



Misc config

2. INSTALLATION AND STARTING

2.1. Installation

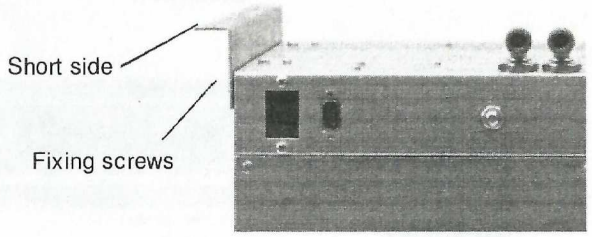
Warning: Install the dehydrator so as to have the pressure gauge at eye-level height. In this way there will be no possibility of the device sucking in dust from the ground, and there will be no danger of accidental knocks while the floor is being swept, or while objects are being transported nearby.

Attention: The dehydrator, during the regeneration phase, produces heat in the desiccant salts tanks (about 150°C) and high moisture. Install the dehydrator far from very sensitive equipments.

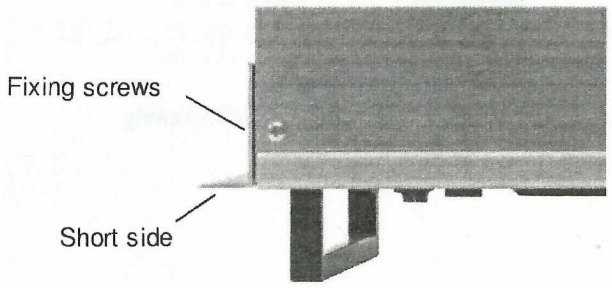
1) Carefully remove the device from the package.

2) Remove the fixing fins from the box and fit it in accordance with one of the three arrangements described below:

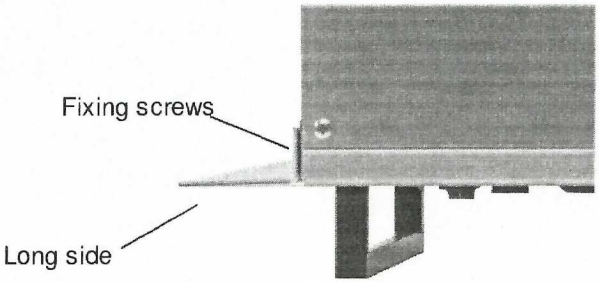
- WALL APPLICATION: Turn the fins over so that the shorter side is turned towards the outside, and tighten the fixing screws.



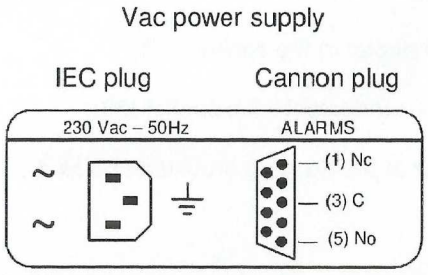
- 19" RACK APPLICATION: Arrange the fins so that the shorter side is turned outwards, and tighten the fixing screws



- 21" RACK APPLICATION: Arrange the fins so that the longer side is turned outwards, and tighten the fixing screws.



3) Connect the ground wire, the power cables to the connecting plug (20) (scheme 2) and connect the remote alarms cables to the connector (19) supplied with the device, as follows:

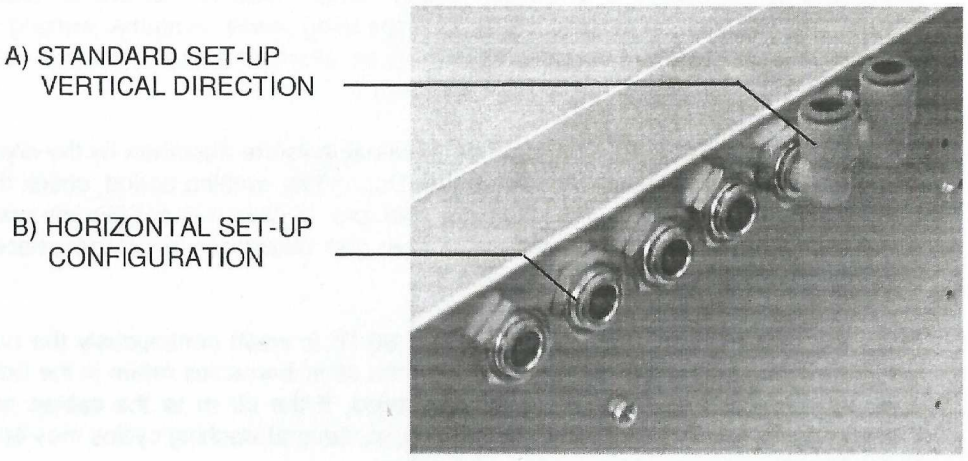


Warning: For the power supply, use cables with a minimum cross-section of 1,5 mm² with designation H05VV-F o H05 VVH2-K. Before installing the dehydrator sure that mains has a protection against ground faults with minimum threshold of 6 A.

NB: Alarms are transmitted by changes in the state of a relay contact. In normal operating conditions, therefore, the contact will be closed between C and Nc. In case of an alarm, or dehydrator switched off, the contact between C and No will be closed. All alarms are summarized on a single relay.

4) Arrangement of the dried air output connectors (21):

The dehydrator is delivered set up to use semi-rigid tubes PR-5 with vertical output (standard set-up). If an alternative solution is required, the dehydrator can be configured in one of the following ways.



A) STANDARD SET-UP: vertical outlet with rotating elbow at quick-release union for tube PR-5 when the applications are Wall;

B) HORIZONTAL CONFIGURATION: quick-release union output for tube PR-5 when the application is in Rack 19";

N.B: If you wish to modify a configuration, just press the ring on the elbow or the output connector and simultaneously remove the accessory connected (tube, elbow).

5) Insert the dehydrator's connecting tubes to the cables in the connectors output connectors (21). When inserting the semi-rigid tube PR-5 or MB-PELD in the quick-release unions, you should press the part right in;

6) Insert the remote alarm connector in the socket (19) and tighten the fixing screws;

7) Insert the power connector in the socket (20);

8) Insert the RJ45 LAN connector in the socket (36);

9) Insert the dehydrator in the housing provided and fix it.

2.2 Starting

IMPORTANT: the Dehydrator GOBI77A need a minimum volume of 30 liters connected to it to work. Do not leave the dehydrator in function with the outlet cocks close and without a volume connected.

NB: The LED display and analog gauge display at a glance the status of operation of the equipment without having to press buttons or perform manual operations.

1) Turn the main switch (16) to ON;

2) Using the pressure gauge (7), check that the pressure increases and the red alarm Led (26) goes out when the pressure exceeds 23 kPa;

   Note: Illumination of this Led, both on switching on and switching off, is slightly delayed, so that negative pressure peaks do not trigger spurious alarms.

3) Open the dehydrator's air output valves (14) to introduce the dried air in the cables; The filling time of the cables is a function of their length, size and of any air leaks of the system. This can last for several hours. After the filling phase, in normal working situation, the pumps operate in pressostatic system in an alternating way. With this system the cables have continuously a little flow of washing.

   Note: For one day (at least 12 hours) the eventual moisture absorbed by the drying agent during the storing period will be discharged. During this working period, check the colour of the salts through the humidity indicator (10) and, in case it is not already orange, you should observe the changing of the colour from dark blue/green to orange; check that the red Led (27) on the hygrostat goes out.

   Note: the system have a little return flow of 80 l/h to wash continuously the cables. So when the pump stopped (pressure > 40 kPa) the air in the cables return in the Dehydrator, is analyzed by the humidity probe and expelled. If the air in to the cables is wet the humidity alarm warns with a red Led. In this case, several washing cycles may be required to completely eliminate moisture from the cables.

4) If there are leakages exceed the capacity limit of the dehydrator (the pressure don't reached 40 kPa) operate on the cables to eliminate the leakages to preserve the life of the pumps. Leave opened only the outlet cock of the respective way you want check to avoid influence with the other ways.

   Note: to preserve the life of the pumps, the Dehydrator should not work more than 10÷12 hours a day. In case operate to eliminate the leakages in the cables!

2.3 Adjustments

All the adjustments and calibrations are carried out at the factory before the device is shipped. The settings may have to be re-adjusted if the values do not correspond with those required for protecting the cables. Ask the right values at the factory when you ordering the dehydrator. Is not possible change the values outside the factory.

The working pressure range is setted at 40 kPa to stop the pump and at 25 kPa to start the pump. During the regeneration phase the pump work continuously and the pressure can reach up to 50 kPa in function of the total volume protected.

The safety valve (8), which protects the cables and the dehydrator from any over-pressure, is fixed at 58 kPa ±5%.

The pressure alarm (9) intervene, generating an alarm, when the pressure goes below 20 kPa and is restored when the pressure exceeds 23 kPa ±1. Illumination of the red Led and the exchange of contacts of the remote alarm is slightly delayed, so that negative pressure peaks do not trigger spurious alarms.

The electronic hygrostat (11) is calibrated at a value of -10°C ± 5% of the dew point; the device will generate an high humidity alarm if this value is exceeded (red Led - remote alarm).

2.4 Stop

The dehydrator is stopped by turning the main switch (16) to the OFF position.

N.B.: Switching off of the dehydrator, before the output valves are closed, causes an slow emptying of the cables (80 l/h)

By closing the output cocks, the cables aren't any more protected from the safety valve, danger of increase of pressure inside the cables!

3. ORDINARY MAINTENANCE

3.1. Procedure for replacement of the desiccant salts

Salts desiccant contained in the four tanks have a very high durability and their deterioration is in function of the environment (dust, high humidity, pollution). The replacement of the desiccant salts should be performed every five years to ensure the proper air drying.

To replace the desiccant salts contained in the tanks (2) proceed as follows, according to scheme 3:

1) Switch off the dehydrator by means of the main switch (16) and remove it from its location;

2) Disconnect the power connector (20), the remote alarms connector (19) and the ground cable (18);

3) Disconnect the tubes connecting to the cables from the output connectors (21);

N.B.: To disconnect the tubes press the coloured ring on the quick-release-union and simultaneously remove the tube.

Warning: Danger of burn! If the dehydrator is switched off, while it was regenerating, wait the cooling of the tank.

4) Unscrew the four screws of the lower grille to access the tanks;

1) Unscrew the air inlet filters (1), empty the tank and replace the salts using a funnel;

N.B.: Use CRIOTHERM desiccant salts - type AA35, see the spare parts code at the section 6; During the filling gently tap on the tank to cram good salts avoiding empty space.

6) Clean the filters with compressed air and fit them back, or replace them if replace clogged by the dust of salts.

7) Reassemble all parts repeating the described operations in reverse (make sure you push the air tubes all the way in).

4. EXTRA-ORDINARY MAINTENANCE

In case of damage, please contact the repair center TELSAT srl by writing to the telsat@telsat.it or contact your seller directly.

CAUTION: When replacing the fuses used solely and exclusively fuses of equal value and characteristics of interruption. The use of fuses of higher value due to electrocution and fire hazard.

NOTE: In the event of intervention by unauthorized personnel will void the warranty automatically. Each type of intervention must still be performed by highly qualified personnel.

5. TROUBLES SHOOTING

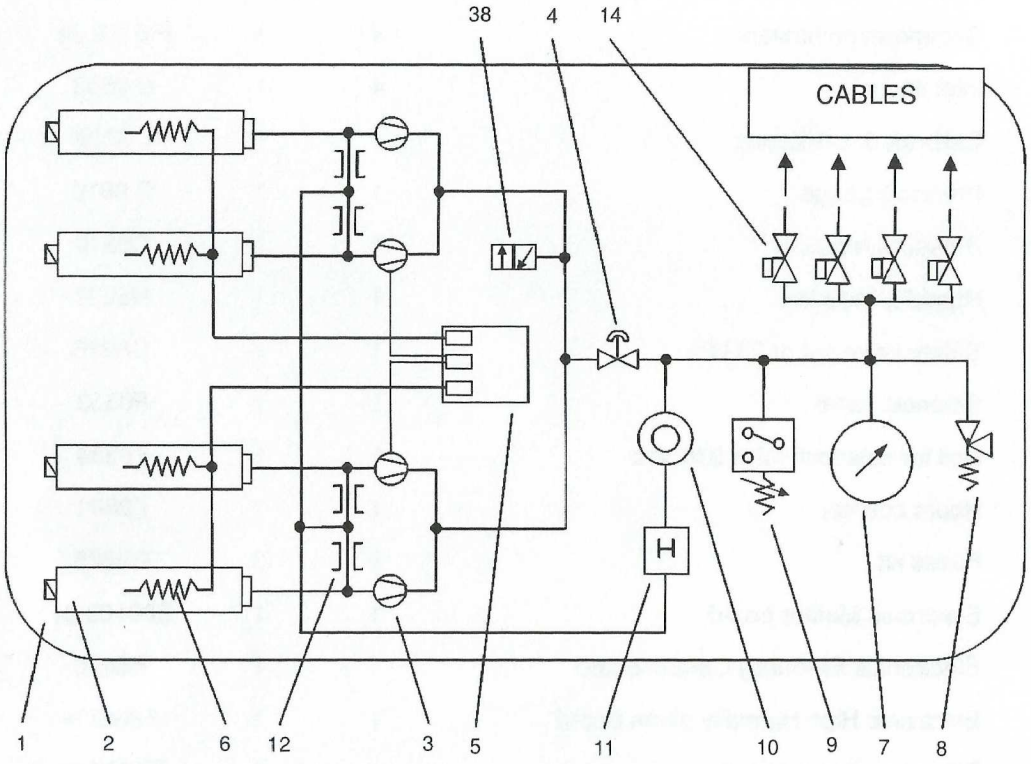
SYMPTOM	CAUSE	OPERATION
The dehydrator doesn't work	The main switch is OFF	Turn the main switch to ON
	The main fuse is broken	Replace the fuse.
	Wrong power connection or lack of power.	Check the equipment connection and the supply voltage efficiency. Check the right polarity.
	No possibility of finding or removing the problem.	Contact the builder
Low pressure alarm	Considerable leakages in the cables under protection.	Check the cables and remove the leakages.
	Wrong pneumatic connections or perforated tube.	Connect correctly the tubes of the dehydrator. Locate the leakage zone, check the tubes are completely insert in the quick-release unions and aren't punctured.
	The pumps don't work.	Check connections and power on the connectors. At the start time the CP must be in automatic position. Replace the pump.
	The pump flow capacity is not sufficient.	Replace the pumps or the membrane and valves of the pumps;
	The alarm circuit is broken.	Replace the electronic board.
	The safety valve is broken.	Replace the safety valve.
	Pump draws from a tank hot.	Check the temperature sensor and the cycle of operation.
	The solenoid valve is always open	Replace the control board or the solenoid valve.
Humidity alarm	Desiccant salts exhausted.	Replace the desiccant salts in the tanks.
	Regeneration cycle wrong.	Replace the electronic board.
	Suction hoses with holes or reversed.	Replace or reverse correctly the hoses.
	Regeneration haters is/are faulty.	Replace the Regeneration heaters
	Electronic board is broke	Replace the board

SYMPTOM	CAUSE	OPERATION
Incorrect regeneration alarm	Electrical connections are incorrect.	Reset the electrical connections.
	Efficiency control board is broken.	Replace the board.
	Timer board is broken.	Replace the board.
Remote alarm always presents	Presence of some alarm.	Remove the cause.
	Main board is broken.	Replace the board.
	Incorrect connections on the terminal block.	Reset the connections.

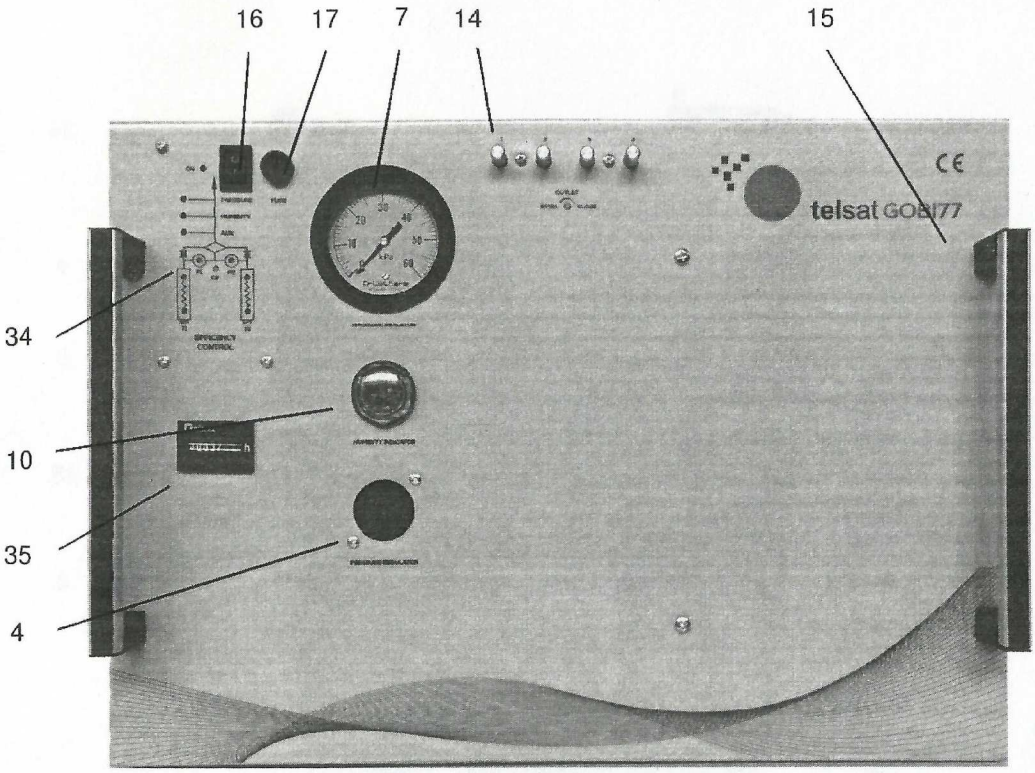
6. SPARE PARTS REFERENCE

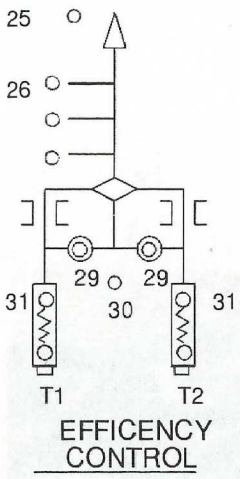
Item	Description	Quantity n°	Packet n°	Code
1	Pumps	2	1	P 2002.01
2	Desiccant salts type AA35	0,5 lt x 4	2 lt	M 1840
3	Regeneration heaters	4	1	F 0118.01
4	Inlet filters	4	1	H 2502
5	Calibrated restrictions	4	1	L 3703
6	Pressure gauge	1	1	D 0810
7	Pressure regulator	1	1	D0810
8	Humidity indicator	1	1	H2021
9	Safety valve set at 60 kPa	1	1	D0926
10	Solenoid valve	1	1	F0333
11	Coil for solenoid valve 230 Vac	1	1	F0334
12	Hours counter	1	1	F0801
13	Fuses kit	3	3	G0625
14	Electronic Mother board	1	1	E80103.01
15	Electronics Efficiency Control board	1	1	E8090
16	Electronic High Humidity alarm board	1	1	E80SI04
17	Electronic Timer board	1	1	E8085.04
18	Electronic Pressure board with LAN	1	1	E80115
19	Display board	1	1	E 8099
20	Thermal sensor	2	1	E2305
21	Plug and connector poles kit	1+1	2	M 3312
22	90° elbows with release union	4	1	H 2291
23	Tube PR-5 or MB-PELD Ø 8x10	25m	1	M0331.01
24	Quick release union elbow WG side	4	1	H22106
25	Adapter for Andrew connectors up to 23GHz	4	1	H0905

7. ILLUSTRATIONS AND SCHEMES

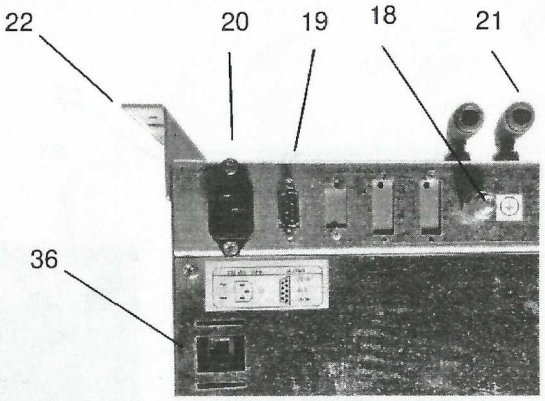


1) Air inlet filters
2) Drying columns
3) Pumps
4) Pressure regulator
5) Electronic boards
6) Regenerations heaters
7) Pressure gauge
8) Safety Valve
9) Pressure sensor
10) Humidity indicator
11) Humidity probe
12) Regeneration restrictions
14) Output shut-off valves
38) Solenoid valve

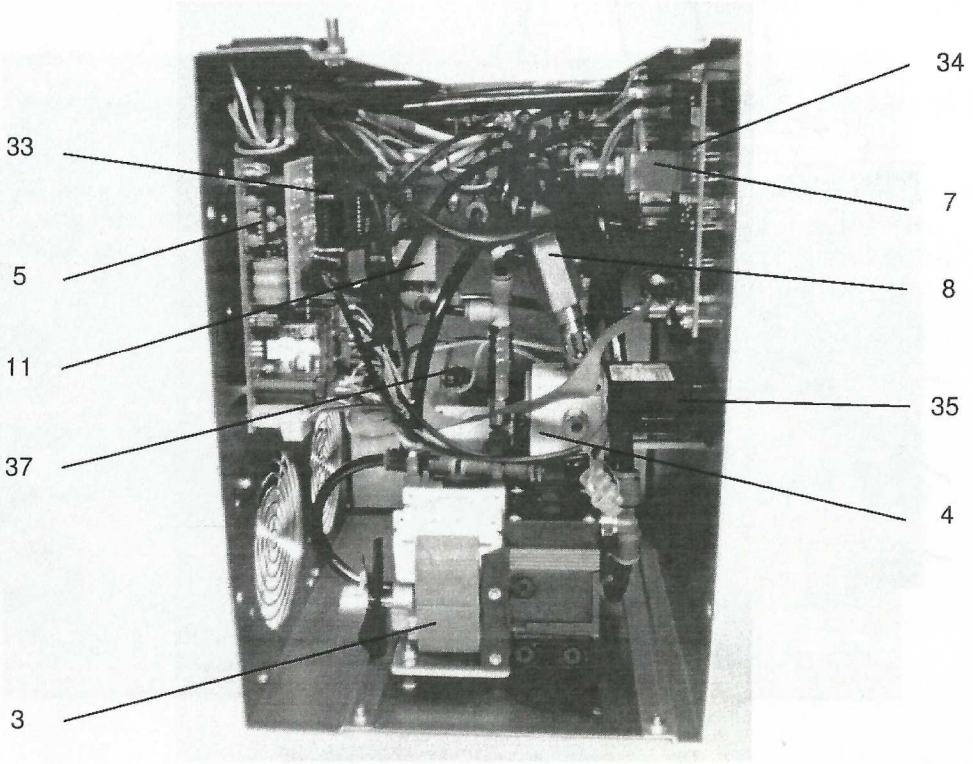


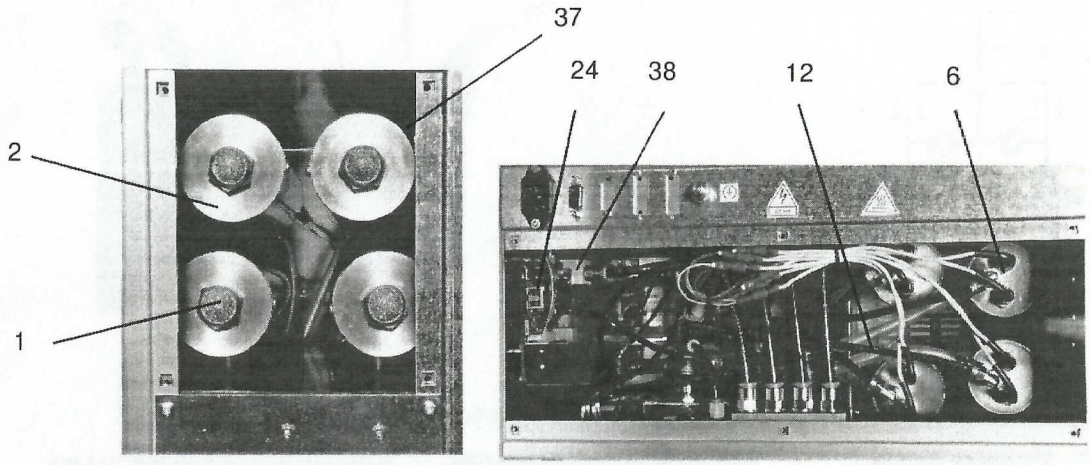


EFFICENCY CONTROL



4) Pressure regulator
7) Pressure gauge
10) Humidity indicator
14) Output shut-off valves
15) Handles
16) ON/OFF switch
17) General fuse
18) Ground point
19) Remote alarms connector
20) Power supply connector
21) Air output connectors
22) Fixing fins
25) Dehydrator ON/OFF Led
26) Low pressure alarm Led
27) High Humidity alarm Led
28) Wrong cycle alarm Led
29) Working pumps Led
30) Manual function alarm Led
31) Indication regeneration phase
32) Regeneration Heaters T1 or T2 broke alarm Led
34) Display board
35) Hours counter
36) RJ45 LAN connector

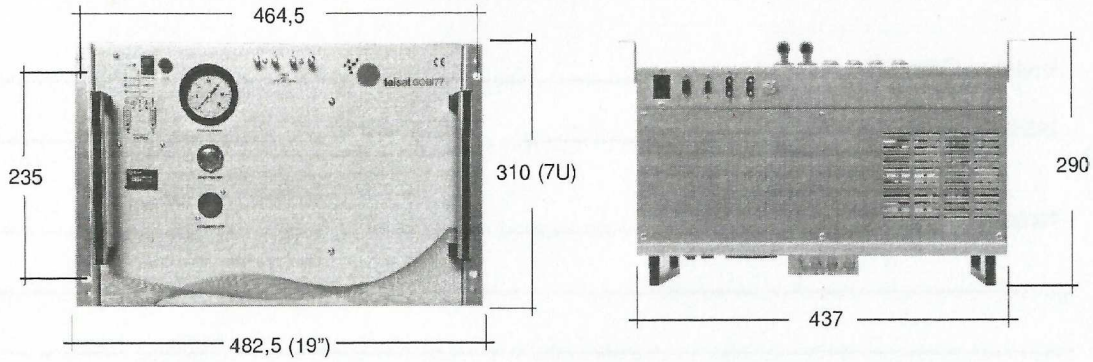




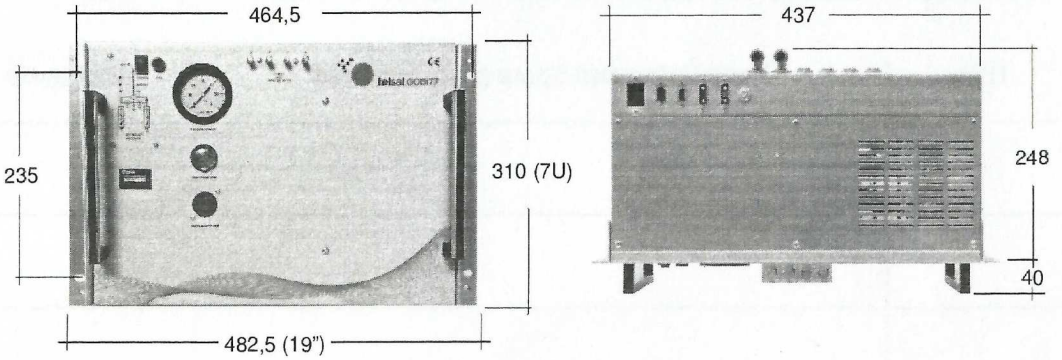
1) Inlet filters
2) Drying columns
3) Pumps
4) Pressure regulator
5) Electronics boards
6) Regenerations heaters
7) Pressure gauge
8) Safety Valve
10) Humidity indicator
11) Humidity probe
12) Tubes union tanks
24) LAN and pressure board
33) Control pump CP switch
34) Display board
35) Hours counter
37) Thermal sensors
38) Solenoid valve

Mounting and size

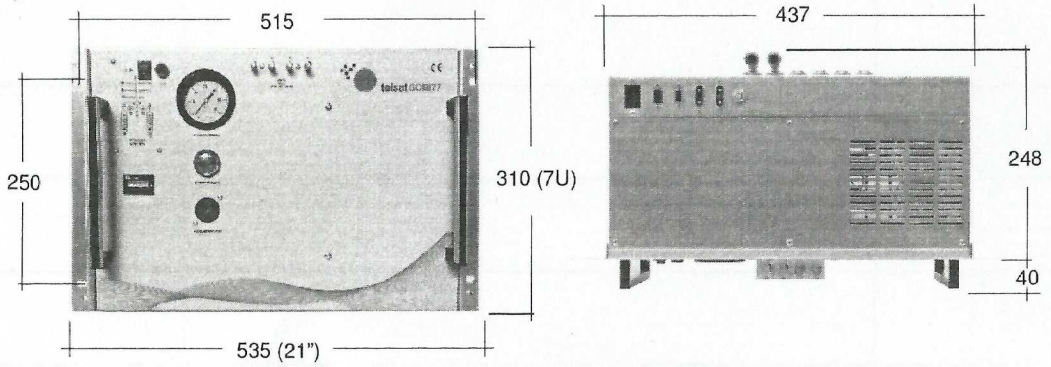
Application on wall



Rack 19" application



Rack 21" application



Sizes in mm.

Net weight 21 kg.

8. MAINTENANCE REGISTER

8.1 Installation data

- Installer Company : _____

- Installation date : _____ Signature: _____

- Note : _____

_____

_____

8.2 Ordinary and extra-ordinary maintenance register

Date	Description and Spare parts replaced	Signature

Date	Description and Spare parts replaced	Signature

Phone: +39.02.9904.8430 – Fax: +39.02.9904.8312 – E.mail: telsat@telsat.it