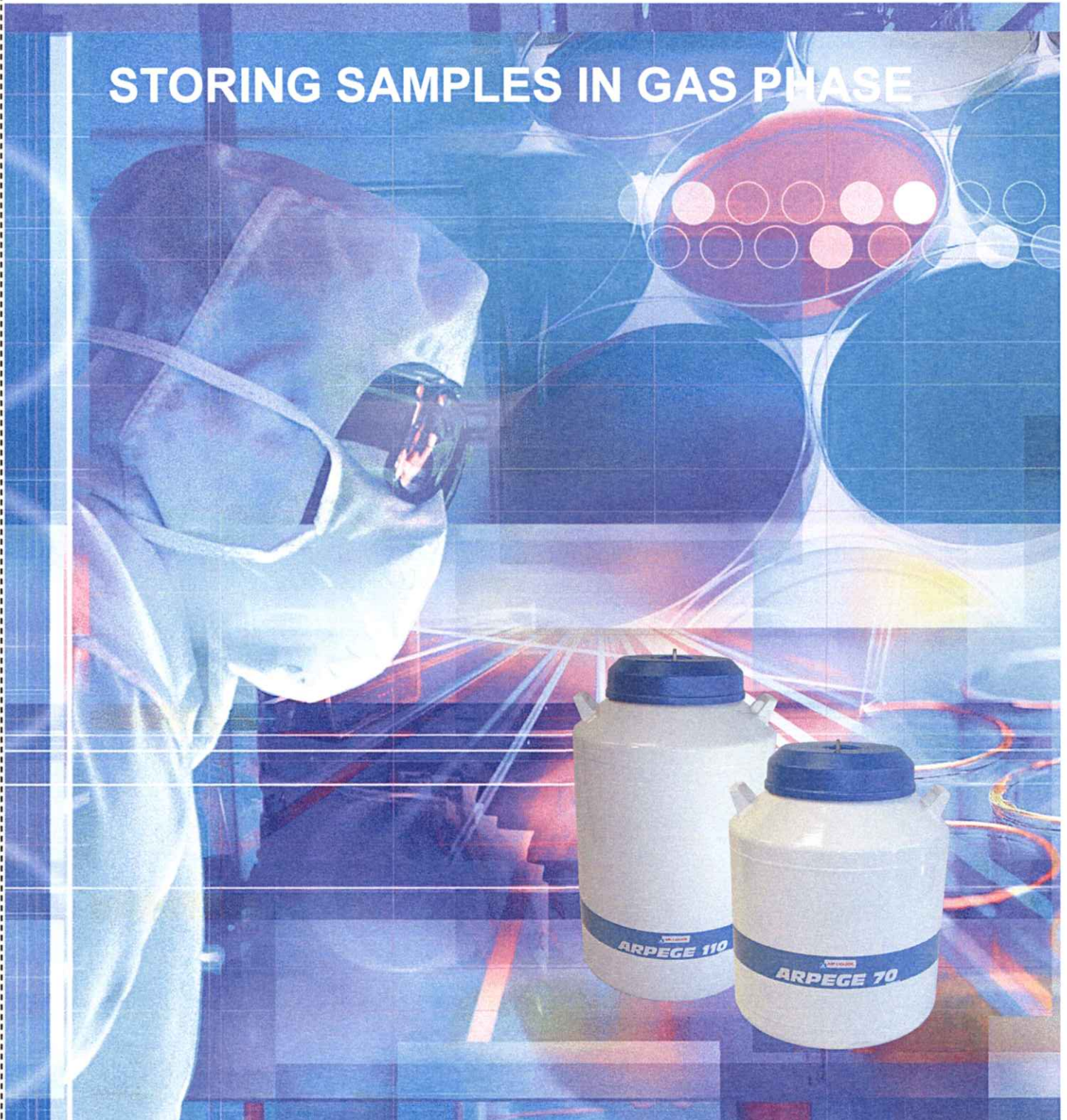


# *The ARPEGE Gas range*

STORING SAMPLES IN GAS PHASE



# The ARPEGE Gas range

## STORING SAMPLES IN GAS PHASE

### ARPEGE GAS VESSELS

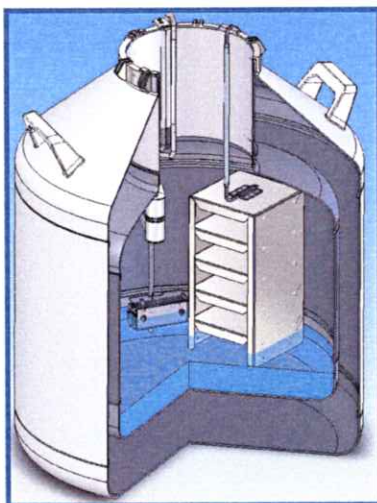


#### **BENEFITS:**

- Minimize the possible risks of cross contaminations through the liquid nitrogen phase.
- Increase Safety for user: no projection of drops removing racks from liquid nitrogen.
- A full range of products: 4 vessels from 1600 up to 5400 Vials 2ml storage. (ARP70-110-140-170)
- Standard kit to transform ARPEGE liquid in ARPEGE gas (cf. p6).
- Easier for user to remove racks. (Lighter, as no liquid in racks).

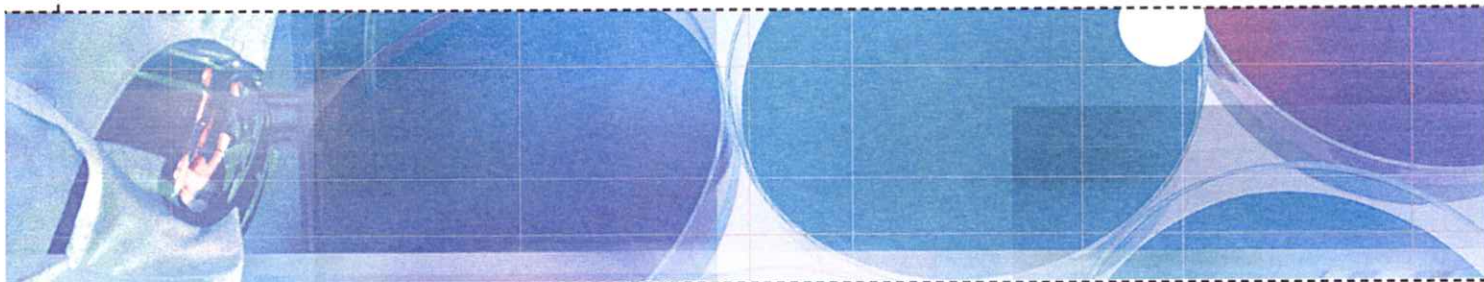
#### **TECHNICAL HIGHLIGHTS:**

- New electronic kits.
- New rack design.
- CLIP: AL patent that enable individual lock & unlock of boxes.



#### **REMIND:**

The Gas phase preservation storage imposed for safety reason an automatic filling system. It is imperative to connect the container to a source of liquid nitrogen.



## ARPEGE GAS RANGE

Characteristics	ARPEGE 70	ARPEGE 110	ARPEGE 140	ARPEGE 170
<b>STORAGE CAPACITY OF 2ML VIALS</b>				
Total capacity of 2ml vials (100/box)	1 600	3 200	4 200	5 400
Number of racks	4	4	6	6
Number of stages (2ml vials)	4	8	7	9
<b>STORAGE OF CAPACITY OF 5ML VIALS</b>				
Total capacity of 5ml vials	648	1 296	1 458	1 944
Number of racks	4	4	6	6
Number of stages (5ml vials)	2	4	3	4
<b>STORAGE OF CAPACITY OF STRAWS</b>				
Total capacity 0.25ml	9 520	19 040	28 560	57 120
Total capacity 0,5ml	3 400	6 800	10 200	15 300
Total capacity CBS 0,5ml	2 380	4 760	7 140	10 710
Number of racks	4	4	6	6
Number of stages	1	2	2	3
<b>AUTONOMY</b>				
Useful capacity (l)	15	15	20	20
Daily evaporation (l/day)*	0,6	0,65	0,65	0,7
Static holding time (days)*	25	23	30	28
<b>TECHNICAL DATA</b>				
Diameter of neck (mm)	215	215	215	215
Weight full with equipment (kg)	50	60	73	77
External diameter (mm)	586	586	683	683
Overall height (mm)	738	962	911	1028

\* Daily evaporation and static holding time are measured at 20°C, 1013 mb, vessel stationary, lid closed, and without inventory system. These values are nominal and can vary according to the history of the vessel and the manufacturing tolerances.

AIR LIQUIDE reserves the right to modify the information contained in this document without notice.

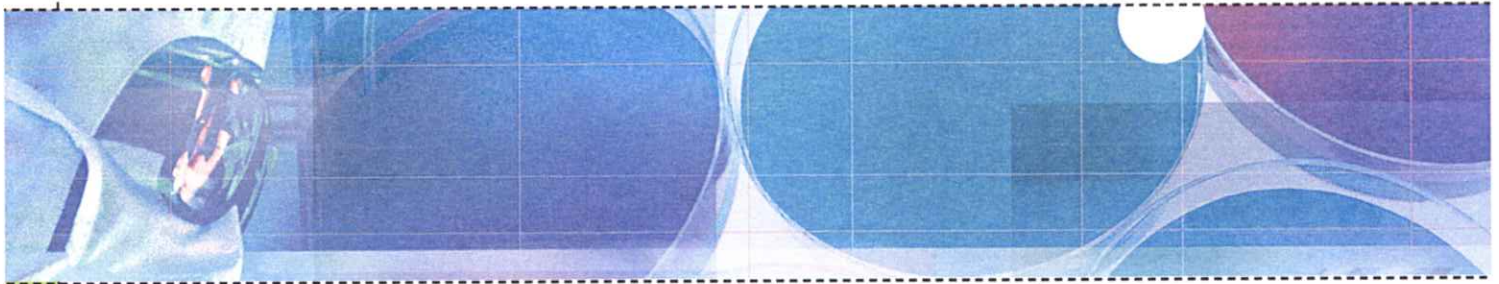
## YOUR VESSEL DEPENDING ELECTRONIC & INVENTORY SYSTEM

	2ml vial racks	5ml vial racks	Straws racks	Level indicator Automatic filling *	Temperature indicator *	CryoView monitoring **	Remote control 4-20mA ***	Remote control RS485 ***
ARPEGE 70	ARPEGE70-G-103	●		●				
	ARPEGE70-G-104	●		●	●			
	ARPEGE70-G-106	●		●	●	●		
	ARPEGE70-G-107	●		●	●		●	
	ARPEGE70-G-108	●		●	●			●
	ARPEGE70-G-203		●		●			
	ARPEGE70-G-204		●		●	●		
	ARPEGE70-G-206		●		●	●		
	ARPEGE70-G-207		●		●	●	●	
	ARPEGE70-G-208		●		●	●		●
	ARPEGE70-G-303			●	●			
	ARPEGE70-G-304			●	●	●		
	ARPEGE70-G-306			●	●	●		
	ARPEGE70-G-307			●	●		●	
	ARPEGE70-G-308			●	●	●		●
	ARPEGE 110	ARPEGE110-G-103	●		●			
ARPEGE110-G-104		●		●	●			
ARPEGE110-G-106		●		●	●	●		
ARPEGE110-G-107		●		●	●		●	
ARPEGE110-G-108		●		●	●			●
ARPEGE110-G-203			●		●			
ARPEGE110-G-204			●		●	●		
ARPEGE110-G-206			●		●	●		
ARPEGE110-G-207			●		●		●	
ARPEGE110-G-208			●		●	●		●
ARPEGE110-G-303				●	●			
ARPEGE110-G-304				●	●	●		
ARPEGE110-G-306				●	●	●		
ARPEGE110-G-307				●	●		●	
ARPEGE110-G-308				●	●	●		●

\* One output RS485 per indicator (Level & Temperature) - **Signal to be exploited** by external telemonitoring system.(level, temperature, solenoid valve, alarms) ( 1 "ModBus" address per indicator ).

\*\* Overall network monitoring device integrated for temperature, level of liquid nitrogen, solenoid valve, alarms.

\*\*\* Additional external cabinet (4-20mA or RS485) - **Signals to be exploited** for global external telemonitoring (level, temperature, solenoid valve, alarms).( 1 "ModBus" address per vessel ).



## YOUR VESSEL DEPENDING ELECTRONIC & INVENTORY SYSTEM

	2ml vial racks	5ml vial racks	Straws racks	Level indicator Automatic filling *	Temperature indicator *	CryoView monitoring **	Remote control 4-20mA ***	Remote control RS485 ***
ARPEGE 140	ARPEGE140-G-103	●		●				
	ARPEGE140-G-104	●		●	●			
	ARPEGE140-G-106	●		●	●	●		
	ARPEGE140-G-107	●		●	●		●	
	ARPEGE140-G-108	●		●	●			●
	ARPEGE140-G-203		●		●			
	ARPEGE140-G-204		●		●	●		
	ARPEGE140-G-206		●		●	●		
	ARPEGE140-G-207		●		●	●	●	
	ARPEGE140-G-208		●		●	●		●
	ARPEGE140-G-303			●	●			
	ARPEGE140-G-304			●	●	●		
	ARPEGE140-G-306			●	●	●	●	
	ARPEGE140-G-307			●	●	●		●
ARPEGE140-G-308			●	●	●		●	
ARPEGE 170	ARPEGE170-G-103	●		●				
	ARPEGE170-G-104	●		●	●			
	ARPEGE170-G-106	●		●	●	●		
	ARPEGE170-G-107	●		●	●		●	
	ARPEGE170-G-108	●		●	●			●
	ARPEGE170-G-203		●		●			
	ARPEGE170-G-204		●		●	●		
	ARPEGE170-G-206		●		●	●		
	ARPEGE170-G-207		●		●	●	●	
	ARPEGE170-G-208		●		●	●		●
	ARPEGE170-G-303			●	●			
	ARPEGE170-G-304			●	●	●		
	ARPEGE170-G-306			●	●	●	●	
	ARPEGE170-G-307			●	●	●		●
ARPEGE170-G-308			●	●	●		●	

\* One output RS485 per indicator (Level & Temperature) - **Signal to be exploited** by external telemonitoring system.(level, temperature, solenoid valve, alarms) ( 1 "ModBus" address per indicator ).

\*\* Overall network monitoring device integrated for temperature, level of liquid nitrogen, solenoid valve, alarms.

\*\*\* Additional external cabinet (4-20mA or RS485) - **Signals to be exploited** for global external telemonitoring (level, temperature, solenoid valve, alarms).( 1 "ModBus" address per vessel ).



## TRANSFORM YOUR ARPEGE 70 - 110 - 140 - 170 LIQUID IN ARPEGE GAS

If you have an existing ARPEGE LIQUID, you can modify it in ARPEGE GAS replacing the full electronic kit and the inventory systems. For such operating we've created specific Kits (Cf below)

### **Be careful !**

The Gas phase preservation storage imposed for safety reasons an automatic filling system. It is imperative to connect the container to a source of liquid nitrogen.

### **ELECTRONIC KIT**

#### **ARPEGE 70**

Electronic Kit for Arpege70 Level Indicator + AutoFilling	ACC-ARP-G-13
Electronic Kit for Arpege70 Temperature and Level Indicator + AutoFilling	ACC-ARP-G-14
Electronic Kit for Arpege70 Temperature and Level Indicator + AutoFilling + Cryoview	ACC-ARP-G-38
Electronic Kit for Arpege70 Temp + Level Indicator + AutoFilling + Tele-monitoring 4/20mA	ACC-ARP-G-15
Electronic Kit for Arpege70 Temp + Level Indicator + AutoFilling + Tele-monitoring RS485	ACC-ARP-G-16

#### **ARPEGE 110**

Electronic Kit for Arpege110 Level Indicator + AutoFilling	ACC-ARP-G-20
Electronic Kit for Arpege110 Temperature and Level Indicator + AutoFilling	ACC-ARP-G-21
Electronic Kit for Arpege110 Temperature and Level Indicator + AutoFilling + Cryoview	ACC-ARP-G-39
Electronic Kit for Arpege110 Temp + Level + AutoFilling + Tele-monitoring 4/20mA	ACC-ARP-G-22
Electronic Kit for Arpege110 Temp + Level + AutoFilling + Tele-monitoring RS485	ACC-ARP-G-23

#### **ARPEGE 140**

Electronic Kit for Arpege140 Level Indicator + AutoFilling	ACC-ARP-G-27
Electronic Kit for Arpege140 Temperature and Level Indicator + AutoFilling	ACC-ARP-G-28
Electronic Kit for Arpege140 Temperature and Level Indicator + AutoFilling + Cryoview	ACC-ARP-G-40
Electronic Kit for Arpege140 Temp + Level + AutoFilling + Tele-monitoring 4/20mA	ACC-ARP-G-29
Electronic Kit for Arpege140 Temp + Level + AutoFilling + Tele-monitoring RS485	ACC-ARP-G-30

#### **ARPEGE 170**

Electronic Kit for Arpege170 Level Indicator + AutoFilling	ACC-ARP-G-34
Electronic Kit for Arpege170 Temperature and Level Indicator + AutoFilling	ACC-ARP-G-35
Electronic Kit for Arpege170 Temperature and Level Indicator + AutoFilling + Cryoview	ACC-ARP-G-41
Electronic Kit for Arpege170 Temp + Level + AutoFilling + Tele-monitoring 4/20mA	ACC-ARP-G-36
Electronic Kit for Arpege170 Temp + Level + AutoFilling + Tele-monitoring RS485	ACC-ARP-G-37

### **Kit includes:**

- the gauge of level.
- the system of filling gas.
- the electronic device selected.

### **INVENTORY SYSTEMS 2ml & 5ml vials**

#### **ARPEGE 70**

Set of 4 Racks 4 levels for Vials 2 ml (Arpege70 Gas)	ACC-RACK-300
Set of 4 Racks 2 levels for Vials 5 ml (Arpege70 Gas)	ACC-RACK-304

#### **ARPEGE 110**

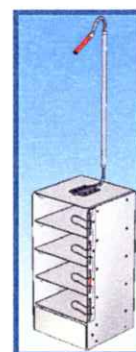
Set of 4 Racks 8 levels for Vials 2 ml (Arpege110 Gas)	ACC-RACK-301
Set of 4 Racks 4 levels for Vials 5 ml (Arpege110 Gas)	ACC-RACK-305

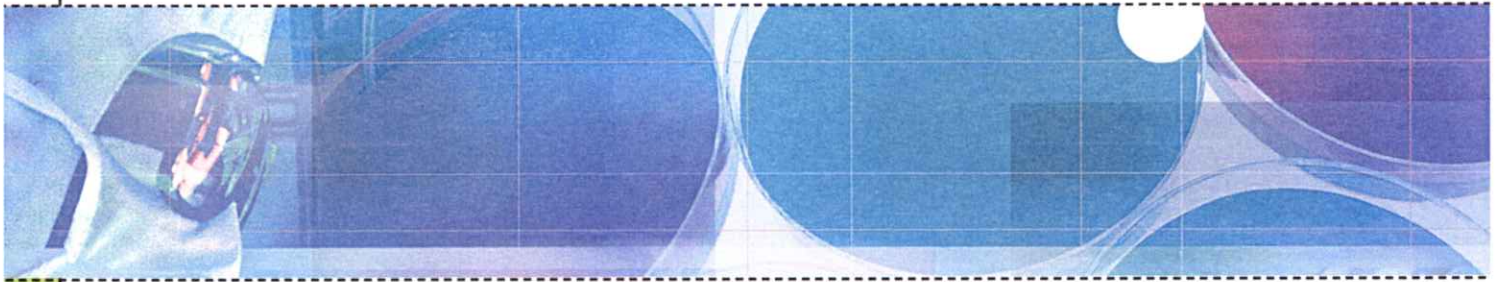
#### **ARPEGE 140**

Set of 6 Racks 8 levels for Vials 2 ml (Arpege140 Gas)	ACC-RACK-302
Set of 6 Racks 3 levels for Vials 5 ml (Arpege140 Gas)	ACC-RACK-306

#### **ARPEGE 170**

Set of 6 Racks 9 levels for Vials 2 ml (Arpege170 Gas)	ACC-RACK-303
Set of 6 Racks 4 levels for Vials 5 ml (Arpege170 Gas)	ACC-RACK-307





## ACCESSOIRES

### BOXES

- ACC-BOXTUBE-102 Cryoplastic boxe for 2ml vials (for 81 vials) - 133\*133\*51
- ACC-BOXTUBE-100 Cryoplastic boxe for 2ml vials (for 100 vials) - 133\*133\*51
- ACC-BOXTUBE-103 Cryoplastic boxe for 5ml vials (for 81 vials) - 133\*133\*95



Clips  
Air Liquide patent



Boxes

### VIALS

Vial features	White cap	Red cap	Blue cap	Green cap	Yellow cap
2ml vials round bottomed	ACC-BOXTUBE-11	ACC-BOXTUBE-12	ACC-BOXTUBE-13	ACC-BOXTUBE-14	ACC-BOXTUBE-15
1ml vials with skirt	ACC-BOXTUBE-6	ACC-BOXTUBE-7	ACC-BOXTUBE-8	ACC-BOXTUBE-9	ACC-BOXTUBE-10
5ml vials round bottomed	ACC-BOXTUBE-16	ACC-BOXTUBE-17	ACC-BOXTUBE-18	ACC-BOXTUBE-19	ACC-BOXTUBE-20

### ROLLER BASES

- Roller base ARPEGE 70/110 | ACC-ARP-305
- Roller base ARPEGE 140/170 | ACC-ARP-304



Flexible hose



Vials



Roller base



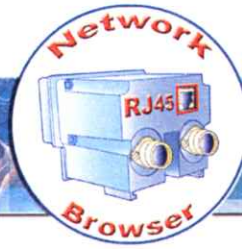
TP100

### VESSEL OF FILLING AND FLEXIBLE HOSE

- TP100 with operating head | REF: TP100-1  
(for details see leaflet of TP range)
- Flexible hose for Liquid Nitrogen Lg:1,1m | REF: ACC-FL180180NL-11  
(Other lengths available)
- Flexible hose for Liquid Nitrogen Lg:1,5m | REF: ACC-FL180180NL-15  
(Other lengths available)

**New !**

# CryoView



[www.dmc.airliquide.com](http://www.dmc.airliquide.com)

# Plug and Play

## CRYOVIEW (\*):

- > Embedded Web server for storing data
- > Plug and Play system (connection to customer network via a simple RJ45 cable delivered)
- > Friendly user system

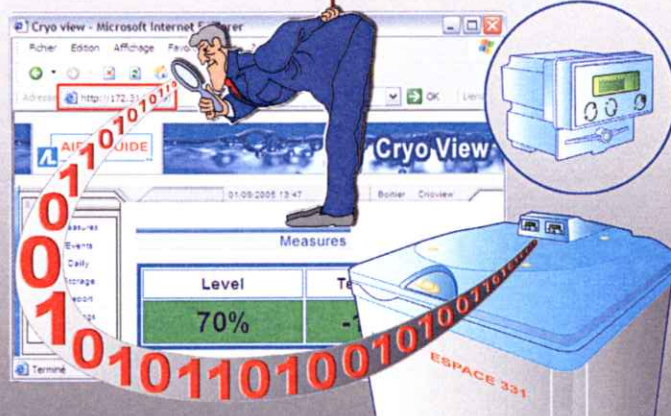
### TO

- > Consult easily data without any software installation
- > Storage of data (temperature, level, alarms, events...) during 366 days
- > Transfer of data via an RJ45 cable. (Standard Browser such as Internet Explorer, Netscape... will be needed to display all data)

### AVAILABLE FOR FOLLOWING VESSELS (Liquid or Gas Phase)

- > ESPACE
- > RCB
- > ARPEGE

<http://172.31.80.39>



## Some of the available screens :

	<b>Level of Liquid nitrogen, temperature.</b>	
	<b>Daily graph (either, both level and T°).</b>	
	<b>Alarms, state of the solenoid valve.</b>	
	<b>Change the thresholds (with password).</b>	
	<b>Events (high and low level...).</b>	
	<b>Setting : Clock, parameters.</b>	
	<b>Command (solenoid valve).</b>	

**Available for the RCB, Espace and Arpege range.**  
( Either in liquid or gaseous phase )



- Air Liquide DMC, Parc Gustave-Eiffel - 8, av. Gutenberg, Bussy-Saint-Georges / 77607 Marne la vallée Cedex 3 / Tel : +33 1.64.76.15.00 -

\* CRYOVIEW is an electronic card integrated by AL-DMC in AL-DMC Electronic Cabinets (Level and Temperature).

CRYOVIEW is only sold with electronic cabinet (Level and Temperature).

## Contact

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