

## EU TYPE EXAMINATION CERTIFICATE-PRODUCTION TYPE

This is to certify that **LRQA Inspection Iberia, S.A.**.. Notified Body for Pressure Equipment Directive 2014/68/UE, did (in accordance with Module B of the Directive) undertake a Type Examination on the stated pressure equipment to ensure its conformity with the requirements of the Directive which apply to it. The equipment identified below was shown to comply.

This certificate is issued to:

APPLICANT: Refrigeration Solutions France (Profroid)  
Aubagne (13), France

PRODUCT DESCRIPTION: Assembly (Article 2 para. 6)

PRODUCT TYPE: Refrigerating System "Machines POWERCOOL(S-M-L-XL)  
/HEATCO2OL I" :  
Config. "S/M"  
Config. "L/XL"

Refrigerant: CO2

The attached Schedule details the content of the Technical Documentation and Specified Standards and shall form a part of this certificate.

**"This Certificate is not valid for pressure equipment, the design, ratings or operational parameters of which have been varied from the specimen tested. The manufacturer shall notify LRQA Inspection Iberia, S.A. of any modification or changes to the equipment in order to maintain a valid certificate."**

"This certificate is valid for ten years from the date of issue."

**Certificate No: 0094/PED/LYO/240079 ENG**

Original Approval: 19 June 2024

Current Certificate: 19 June 2024

Certificate Expiry: 19 June 2034

LRQA Inspection Iberia, S.A. Notified Body 0094

Mathieu CARRE / LRQA inspection Iberia



## CERTIFICATE SCHEDULE 0094/PED/LYO/240079 ENG

Equipment data:

Product Description: Assembly (Article 2 para. 6)

Product Type: Refrigerating System "Machines POWERCOOL(S-M-L-XL)  
/HEATCO2OL I" :  
Config. "S/M"  
Config. "L/XL"

Refrigerant: CO2

Maximum Design Pressure/Temperatures:

	CO2				OIL	Eau/ Glycolée
	LP	MP	HP	Réservoir	Huile	
PS MAX (bars)	80	80	130	80	80	10
TS MAX (°C)	+43	+80	+150	+45	+80	+80
TS MIN (°C)	-50	-15	-10	-10	-10	-40

Assembly components:

1. Config. S/M (P&ID SP-P5-0021):
  - 6 (six) LT Compressors maxi, No PED.
  - 8 (eight) MT Compressors maxi, No PED.
  - **2 (two) Oil Separators, Cat. II~IV.**
  - **1 (one) Oil receiver, Cat. II~IV**
  - **1 (one) Liquid Receivers, Cat. I~IV.**
  - **1 (one) LP Suction Receiver, Cat. I~IV**
  - **1 (one) MP Suction Receiver, Cat. II~IV**
  - **8 (eight) Superheater suction MT heat exchanger HE99 maxi, Cat II~IV**
  - **1(one) Superheater suction LT heat exchanger HE80 maxi, Cat II~IV**
  - **1 (one) Desuperheater HE130, Cat. II~IV**
  - **1 (one) Chiller, Cat. II~IV**
  - **11 (ten) Ejectors maxi, No PED**
  - **8 (eight) Heat recovery exchanger, Cat. II~IV**
  - **1 (one) Pump, no PED**
  - Piping and accessories, Cat. I maxi.

Boundaries:

- "FROM EXTERNAL LT DESUPERHEATER" MP INLET CONECTION
- Heat recovery water connections
- "TO CONSUMER" MP outlet connection



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## CERTIFICATE SCHEDULE 0094/PED/LYO/240079 ENG

- "FROM MT CONSUMER" MP INLET CONECTION
  - "HOT GAS DEFROST FROM EVAPORATOR" MP inlet connection
  - "HOT GAS DEFROST TO EVAPORATOR" MP outlet connection
  - Superheater suction LT heat exchanger MP connections "TO LIQUID LINE" and "FROM LIQUID LINE"
  - "TO LT SUCTION" MP outlet connection
  - "LT SUCTION -H" LP inlet connection
  - Desuperheater HE130 water connections
2. Config. L/XL (P&ID SP-P5-0020):
- 5 (five) MT Compressors maxi, No PED.
  - **2 (two) Oil Separators, Cat. II~IV.**
  - **2 (two) Chiller, Cat. II~IV**
  - **3 (three) Heat recovery exchanger, Cat. II~IV**
  - **5 (five) Ejectors maxi, No PED**
  - **1 (one) Oil receiver, Cat. II~IV**
  - **1 (one) Pump, no PED**
  - Piping and accessories, Cat. I maxi.

### Safety devices:

Deviation (and/or causes)	Protection (PED safety device(s) description)	Setting / Capacity / Action(s) (Safety device(s) characteristics)	Device(s) Category
Config. "S/M"			
Overpressure on the Assembly induced by the Compressors C1-C5	Pressure Switches item C1-PZH1 to C5-PZH1	Required: <b>setting value: cut-off 120b</b> , SIL2, action sequence: shutdown connected compressor	IV
Overpressure on the Assembly induced by the Compressors C1-C5	Pressure Switch item PZH1	Required: <b>setting value: cut-off 120b</b> , SIL2, action sequence: shutdown connected compressor	IV
Overpressure on Oil separators and heat recovery due to extreme hot ambient temperature	Pressure Safety Valve item SV1 installed on Oil separator	Required: <b>setting pressure: 120bar</b> , 10% back pressure max	IV
Overpressure on Liquid Receiver due to extreme hot ambient temperature and fluid expansion	Pressure Safety Valve item SV2 installed on Liquid Receiver	Required: <b>setting pressure: 80bar</b> , 10% back pressure max	IV
Config. "L/XL"			
Overpressure on the Assembly induced by the Compressors C1-C8	Pressure Switches item C1-PZH1 to C8-PZH1	Required: <b>setting value: cut-off 120b</b> , SIL2, action sequence: shutdown connected compressor	IV
Overpressure on the Assembly induced by the Compressors C1-C8	Pressure Switch item PZH1	Required: <b>setting value: cut-off 108b</b> , SIL2, action sequence: shutdown connected compressor	IV
Overpressure on the Assembly induced by the Compressors F1-F6	Pressure Switches item F1-PZH1 to F8-PZH1	Required: <b>setting value: cut-off 60b</b> , SIL2, action sequence: shutdown connected compressor	IV
Overpressure on Suction Receiver LS1 due to extreme hot ambient temperature and fluid expansion	Pressure Safety Valve item SV3 installed on Suction Receiver	Required: <b>setting pressure: 60bar</b> , 10% back pressure max	IV
Overpressure on Liquid Receiver due to extreme hot ambient temperature and fluid expansion	Pressure Safety Valve item SV2 installed on Liquid Receiver	Required: <b>setting pressure: 80bar</b> , 10% back pressure max	IV



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<u>Deviation</u> <i>(and/or causes)</i>	<u>Protection</u> <i>(PED safety device(s) description)</i>	<u>Setting / Capacity / Action(s)</u> <i>(Safety device(s) characteristics)</i>	<u>Device(s)</u> <u>Category</u>
Overpressure on Oil separators and heat recovery due to extreme hot ambient temperature	Pressure Safety Valve item SV1 installed on Oil separator	Required: <b>setting pressure: 120bar</b> , 10% back pressure max	IV
*Refer to document SW052 for each safety valve minimum required discharge capacity in function of refrigerant and equipment it protects.			

The undermentioned documents have been reviewed for compliance with the Pressure Equipment Directive 2014/68/EU and following Design Code(s):

EN378-2: 2016

### Technical File Contents

Title	Document Number	Rev	Date
P&ID POWERCOOL S	SP-P5-0021	A	14/06/2024
P&ID POWERCOOL M / L	SP-P5-0020	A	14/06/2024
CE NAMEPLATE DRAWING	MPS-P5-001	-	14/06/2024
DOSSIER FABRICANT Machines POWERCOOL(S-M-L-XL) /HEATCO2OL I	DF-P5-0012	3	14/06/2024
Liste des composants critiques suivant Annexe I de la directive des équipements sous pression 2014/68/UE Directive Machine 2006/42/CE annexe I	LCC-P5-0002	07_03_2024	14/06/2024
CE NAMEPLATE DRAWING	MPS-P5-001	5	14/06/2024
NOTICE D'INSTRUCTIONS ORIGINALE POWERCOOL	IOM_Powercool_LMS_FR_2024_06_20	-	14/06/2024
Evaluation et reduction des risques suivant Annexe I de la directive des équipements sous pression 2014/68/EU	ADR-P5-001	11_03_2024	14/06/2024
RAPEX Robinets bloqués 240403	-	-	14/06/2024
Rapport de situation interne	ESS-P5-0001	7	14/06/2024
Rapport de situation interne	SEN378-P5-0001	9	14/06/2024
Evaluation et réduction des risques suivant-Détails de EN378-2 - Art.6.2.6.2	SEN378-P5-0009	13_11_2023	14/06/2024
Capacités minimales de décharge requises pour les récipients	SW 052 "RECIPIENTS TRANSCRITIQUE"	20/03/2024	14/06/2024
Capacités minimales de décharge requises pour les récipients	SW 052 "RECIPIENTS TRANSCRITQUES MULTI"	20/03/2024	14/06/2024
Capacités minimales de décharge requises pour les récipients	SW 052 "ECHANGEURS TRANSCRITIQUE"	20/03/2024	14/06/2024

### LRQA Reports

Title	Document Number	Date
Design Appraisal Document	PRJ11100429247-1/Btrans4 Issue 03	14/06/2024
Visit Report	PRJ11100512758-1 -1/VR_B_Btrans4 Issue 01	18/06/2024



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Schedule Issue: Issue 01  
Date of Schedule Issue: 19 June 2024  
Notified Body 0094

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