

CERTIFICATE SCHEDULE
0094/PED/LYO/240077 ENG
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 MINICO2OL(EVO)
/MAXICO2OL(EVO)" :

Config. "MINICO2OL" Bt2
Config. "MAXICO2OL" Bt2
Config. "MINICO2OL EVO éjecteurs" Bt2
Config. "MAXICO2OL EVO éjecteurs" Bt2
Config. "RESERVOIR seul basique" Bt3
Config. "RESERVOIR seul EVO" Bt3
Config. "RECUPERATION DE CHALEUR HR" Bt4

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/240077 ENG

Original Approval: 19 June 2024

Current Certificate: 15 July 2034

Certificate Expiry: 19 June 2034

LRQA Inspection Iberia, S.A. Notified Body 0094

CARRE Mathieu / LRQA inspection Iberia

Equipment data:



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Product Description: Assembly (Article 2 para. 6)
Product Type: Refrigerating System "Machines MINICO2OL(EVO) /MAXICO2OL(EVO)"

Config. "MINICO2OL" Bt2
Config. "MAXICO2OL" Bt2
Config. "MINICO2OL EVO éjecteurs" Bt2
Config. "MAXICO2OL EVO éjecteurs" Bt2
Config. "RESERVOIR seul basique" Bt3
Config. "RESERVOIR seul EVO" Bt3
Config. "RECUPERATION DE CHALEUR HR" Bt4

Refrigerant: CO2

Maximum Design Pressure/Temperatures:

	CO2				OIL	
	LP	MP	HP	Réservoir	Huile	Eau/ Glycolée
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:

- Config. MINICO₂OL evo (P&ID SP-P5-0002):
 - 5 (five) MT Compressors maxi, No PED.
 - 4 (four) LT Compressors maxi, No PED.
 - 6 (six) MT muffler, Cat III
 - 4 (four) LT mufflers, Cat III
 - 1 (one) Oil Separator, Cat. II~IV.**
 - 1 (one) Oil Receiver, Cat. II~IV.**
 - 2 (two) Heat recovery exchangers, Cat II~IV**
 - 3 (three) Pumps, No PED**
 - 1 (one) Suction line receiver, Cat II~IV**
 - 1 (one) Desuperheater, Cat II~IV
 - 1 (one) Liquid Receiver, Cat. II~IV.**
 - 2 (two) Ejectors, Art. 4.3
 - 1 (one) SMHE1 plate heat exchanger, Cat. II~IV.**
 - 1 (one) Subcooler, Cat. II~IV.**

Boundaries:

- Desuperheaters water connections
- Heat recovery water connections
- LP inlet connection



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- "FROM GASCOOLER" HP INLET CONNECTION
- "TO GASCOOLER" HP OUTLET CONNECTION
- Heat recovery water connections
- "FROM MT CONSUMER " MP inlet connection
- "TO CONSUMER " MP outlet connection

2. Config. MINICO₂OL (P&ID SP-P5-0005):

- 6 (tree) MT Compressors maxi, No PED.
- 4 (four) LT Compressors maxi, No PED.
- 1 (one) MT muffler, Cat III
- 4 (four) LT mufflers, Cat III
- **1 (one) Oil Separator, Cat. II~IV.**
- **1 (one) Oil Receiver, Cat. II~IV.**
- **2 (two) Heat recovery exchangers, Cat II~IV**
- **2 (two) Pumps, No PED**
- **1 (one) Suction line receiver, Cat II~IV**
- 1 (one) Air Desuperheater, Cat II~IV
- 1 (one) Suction Accumulator (BACL), Cat II~IV
- **2 (two) Liquid Receiver, Cat. II~IV.**
- **1 (one) plate heat exchanger (clim), Cat. II~IV.**
- **1 (one) Subcooler, Cat. II~IV.**

Boundaries:

- Heat exchanger « clim » water connections
- Heat recovery water connections
- "LT SUCTION" LP inlet connection
- "LT SUCTION H" LP inlet connection

3. Config. MAXICO₂OL evo (P&ID SP-P5-0001):

- 6 (tree) MT Compressors maxi, No PED.
- 4 (four) LT Compressors maxi, No PED.
- 1 (one) MT muffler, Cat III
- 4 (four) LT mufflers, Cat III
- **1 (one) Oil Separator, Cat. II~IV.**
- **1 (one) Oil Receiver, Cat. II~IV.**
- **2 (two) Heat recovery exchangers, Cat II~IV**
- **2 (two) Pumps, No PED**
- **1 (one) Suction line receiver, Cat II~IV**
- 1 (one) Desuperheater, Cat II~IV

Boundaries:

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- Desuperheaters water connections
 - Heat recovery water connections
 - "FROM CONSUMER" LP inlet connection
 - "FROM GASCOOLER" HP INLET CONNECTION
 - "TO GASCOOLER" HP OUTLET CONNECTION
 - Heat recovery water connections
 - "FROM CONSUMER" MP inlet connection
 - "TO RECEIVER" HP outlet connection
4. Config. MAXICO₂OL (P&ID SP-P5-0004):
- 6 (tree) MT Compressors maxi, No PED.
 - 4 (four) LT Compressors maxi, No PED.
 - 1 (one) MT muffler, Cat III
 - 4 (four) LT mufflers, Cat III
 - **1 (one) Oil Separator, Cat. II~IV.**
 - **1 (one) Oil Receiver, Cat. II~IV.**
 - **2 (two) Heat recovery exchangers, Cat II~IV**
 - **2 (two) Pumps, No PED**
 - **1 (one) Suction line receiver, Cat II~IV**
 - 1 (one) Air Desuperheater, Cat II~IV
 - 1 (one) Suction Accumulator (BACL), Cat II~IV
 - **2 (two) Liquid Receivers, Cat. II~IV.**
 - **1 (one) plate heat exchanger (clim), Cat. II~IV.**
 - **1 (one) Subcooler, Cat. II~IV.**

Boundaries:

- Heat exchanger « clim » water connections
 - Heat recovery water connections
 - "LT SUCTION" LP inlet connection
 - "LT SUCTION H" LP inlet connection
5. Config. RESERVOIR seul basique (P&ID SP-P5-0006)
- **2 (two) Liquid Receivers, Cat. II~IV.**
 - **1 (one) plate heat exchanger (clim), Cat. II~IV.**
 - **1 (one) Subcooler, Cat. II~IV.**

Boundaries:

- Heat exchanger « clim » water connections
- Heat recovery water connections
- "TO CONSUMER" MP OUTLET connection
- "TO MP SUCTION LINE" MP OUTLET connection.
- "TO COMPRESSOR ECO" MP OUTLET connection
- "FROM GASCOOLER" HP inlet connection



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CERTIFICATE SCHEDULE 0094/PED/LYO/240077 ENG

6. Config. RESERVOIR seul evo (P&ID SP-P5-0007)
- **2 (two) Liquid Receivers, Cat. II~IV.**
 - **1 (one) Subcooler, Cat. II~IV.**
 - 2 (two) Ejectors, Art. 4.3
 - 2 (two) pumps, No PED

Boundaries:

- Heat exchanger « clim » water connections
- Heat recovery water connections
- "TO CONSUMER" MP OUTLET connection
- "TO LP SUCTION LINE" LP OUTLET connection.
- "TO MP SUCTION LINE" MP OUTLET connection
- "FROM GASCOOLER" HP inlet connection
- LP inlet connection upstream Subcooler

7. Config. RECUPERATION DE CHALEUR HR (P&ID SP-P5-0008)

- **2 (two) Heat recovery exchangers, Cat II~IV**
- **2 (two) Pumps, No PED**

Boundaries:

- Heat recovery water connections
- "TO RECEIVER" HP OUTLET connection
- "From discharge line" HP inlet connection.
- "TO GASCOOLER" HP OUTLET connection
- "FROM GASCOOLER" HP inlet connection
- LP inlet connection upstream Subcooler

Safety devices:

Deviation (and/or causes)	Protection (PED safety device(s) description)	Setting / Capacity / Action(s) (Safety device(s) characteristics)	Device(s) Category
Configs. MINICO2OL evo (P&ID SP-P5-0002, MAXICO2OL (P&ID SP-P5-0004) and MINICO2OL (P&ID SP-P5-0005)			
Overpressure on the Assembly induced by the Compressors 1~6	Pressure Switches item 100	Required: setting value: 0.9 x PS HPside , SIL2, action sequence: shutdown connected compressor	IV
Overpressure on the Assembly induced by the Compressors 7~10	Pressure Switches item 101	Required: setting value: 0.9 x PS MP side , SIL2, action sequence: shutdown connected compressor	IV
Overpressure on Liquid Receivers and Oil receiver due to extreme hot ambient temperature	Pressure Safety Valve item 38 installed on Liquid Receiver	Required: setting pressure: PS on REC side , 10% back pressure max	IV
Overpressure on Oil receiver due to extreme hot ambient temperature	Pressure Safety Valve item 35 installed on Liquid Receiver	Required: setting pressure: PS Oil side , 10% back pressure max	IV
Overpressure on LP Suction receiver due to extreme hot ambient temperature	Pressure Safety Valve item 37 installed on Liquid Receiver	Required: setting pressure: PS on LP side , 10% back pressure max	IV



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Deviation <i>(and/or causes)</i>	Protection <i>(PED safety device(s) description)</i>	Setting / Capacity / Action(s) <i>(Safety device(s) characteristics)</i>	Device(s) Category
Overpressure on MP Suction receiver due to extreme hot ambient temperature	Pressure Safety Valve item 36 installed on Liquid Receiver	Required: setting pressure: PS on MP side , 10% back pressure max	IV
Overpressure on Oil separator, eco heat exchanger and heat recovery due to extreme hot ambient temperature	Pressure safety valve item 41	Required: setting pressure: PS HP , 10% back pressure max	IV
Overpressure on the Assembly induced by the Compressors 1~6	Pressure Switch item 42	Required: setting value: 0.9 x PS HPside , SIL2, action sequence: shutdown connected compressor	IV
Config. MAXICO2OL evo (P&ID SP-P5-0001)			
Overpressure on the Assembly induced by the Compressors 1~6	Pressure Switches item 100	Required: setting value: 0.9 x PS HPside , SIL2, action sequence: shutdown connected compressor	IV
Overpressure on the Assembly induced by the Compressors 7~10	Pressure Switches item 101	Required: setting value: 0.9 x PS MP side , SIL2, action sequence: shutdown connected compressor	IV
Overpressure on LP Suction receiver due to extreme hot ambient temperature	Pressure Safety Valve item 37 installed on Liquid Receiver	Required: setting pressure: PS on LP side , 10% back pressure max	IV
Overpressure on MP Suction receiver due to extreme hot ambient temperature	Pressure Safety Valve item 37 installed on Liquid Receiver	Required: setting pressure: PS on MP side , 10% back pressure max	IV
Overpressure on the Assembly induced by the Compressors 1~6	Pressure Switch item 41	Required: setting value: 0.9 x PS HPside , SIL2, action sequence: shutdown connected compressor	IV
Overpressure on Oil separator, eco heat exchanger and heat recovery due to extreme hot ambient temperature	Pressure safety valve item 41	Required: setting pressure: PS HP , 10% back pressure max	IV
Config. RESERVOIR seul basique (P&ID SP-P5-0006) and RESERVOIR seul evo (P&ID SP-P5-0007)			
Overpressure on Suction receiver due to extreme hot ambient temperature	Pressure Safety Valve item 36 installed on Liquid Receiver	Required: setting pressure: PS on REC side , 10% back pressure max	IV
Config. RECUPERATION DE CHALEUR HR (P&ID SP-P5-0008)			
N/A	N/A	N/A	N/A
*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 (SP_EVO_COMPRESSEURS)	SP-P5-0001	-	14/06/2024
P&ID (SP_EVO_ONE-FRAME)	SP-P5-0002	-	14/06/2024
P&ID (SP_MAXI)	SP-P5-0004	A	14/06/2024
P&ID (SP_MINI)	SP-P5-0005	A	14/06/2024
P&ID (SP_RESERVOIR)	SP-P5-0006	A	14/06/2024
P&ID (SP_RESERVOIR EVO)	SP-P5-0007	-	14/06/2024
P&ID (SP_HR)	SP-P5-0008	A	14/06/2024
CE NAMEPLATE DRAWING	MPS-P5-001	-	14/06/2024



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Title	Document Number	Rev	Date
DOSSIER FABRICANT Machines MINICO2OL(EVO) MAXICO2OL(EVO)	DF-P5-0001	06	15/07/2024
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	IOM_MiniCO2OL MaxiCO2OL CO2OLtecEvo_2024_07_05	-	15/07/2024
Evaluation et reduction des risques suivant Annexe I de la directive des équipements sous pression 2014/68/UE	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/Btrans2 Issue 03	15/07/2024
Visit Report	PRJ11100512758 -1/VR_B_Btrans2 Issue 01	18/06/2024

Schedule Issue: Issue 02
Date of Schedule Issue: 15 July 2024
Notified Body 0094

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