



REQUEST FOR PROPOSAL

Seismic Qualification of BTRS Chiller

Augmented Quality

Specification Number
SP-ES-1512

KRŠKO NUCLEAR POWER PLANT

Revision 1
September 2026

Written by:


Daniel Celarec

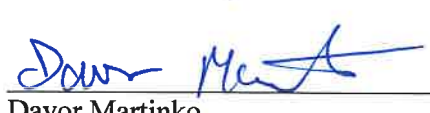
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1 INTRODUCTION

The Boron Thermal Regeneration System chiller is a refrigeration unit cooled by Essential Service Water (ESW) and forms an integral part of the Boron Thermal Regeneration System (BTRS) chilled water loop. The system includes a surge tank, chiller pumps, the letdown chiller heat exchanger, associated piping, valves, and controls. Its primary function is to provide the cooling required for boron concentration control during reactor end-of-cycle operation.

The chiller is designed to support the boron storage mode of the Boron Thermal Regeneration System. In this mode, it supplies chilled water to maintain the demineralizer inlet temperature at approximately 10°C, enabling the resin beds to absorb and store boron from the reactor coolant. The chiller shall maintain this temperature under all design operating conditions. As boron storage represents the maximum cooling demand, it is used as the design basis for sizing and performance evaluation of the chiller.

Nuclear power plant Krško is replacing the existing Boron Thermal Regeneration System chiller. The new unit shall be qualified for Operating Basis Earthquake (OBE) conditions. The complete assembly, including refrigeration equipment, pressure-retaining components, control and starter panels, supports, piping connections, and anchorage, shall be qualified to withstand OBE seismic accelerations. The unit must maintain structural integrity and remain operable during and following the seismic event.

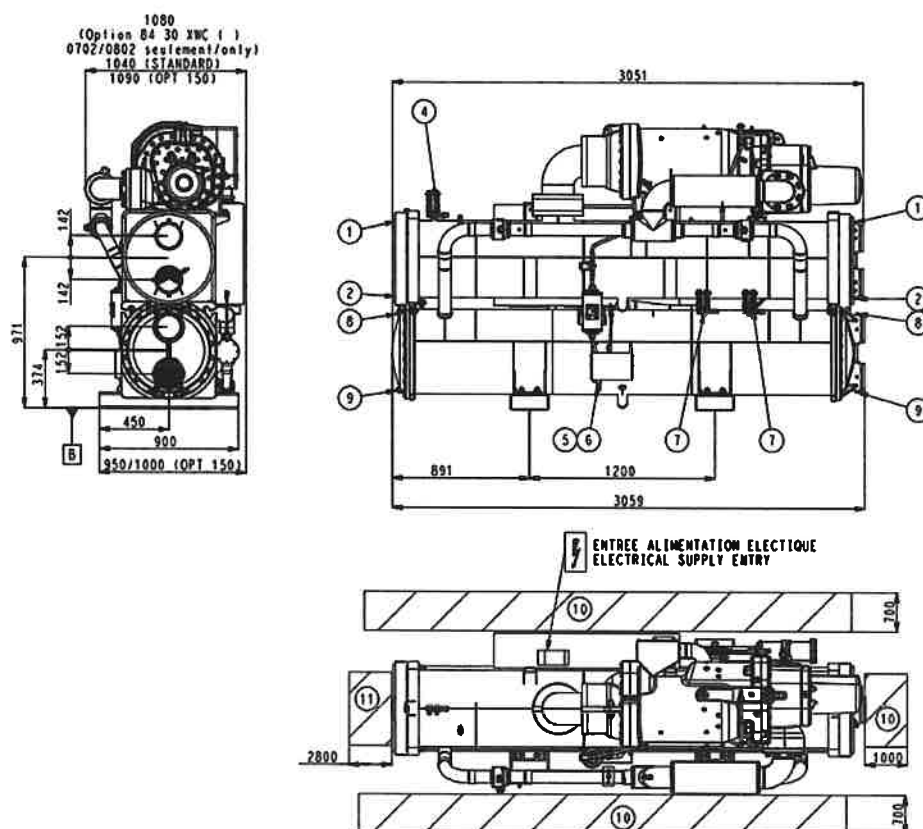


Figure 1: Manufacturer's Drawing of new unit 30XW 0652B [4.1].

2 SCOPE OF SERVICES

The new unit is 3.06 m long, 1.04 m wide and 1.848 m high, and its operating mass is 3247 kg. The remaining operating parameters are listed in the manufacturer's technical list [4.2]. Note that the 3D photograph in the top right corner of the technical list [4.2] is generic and does not match unit type 30XW 0652B. However, the data in the technical list is correct for the unit, which is subject to qualification per this specification.

The scope of this service, as per this specification:

1. Unloading of the test specimen from the transport vehicle, handling and positioning of the specimen, and all activities required to prepare the specimen for seismic qualification testing. This includes the installation of the intermediate adapter plate between the specimen and the shake table, the connection of power, control, and monitoring cables.
2. Seismic qualification test of the new Boron Thermal Regeneration System chiller unit, its electrical sub-components, and seismic qualification by analysis of rotating and active mechanical components. More details are given in Section 2.1. See also the manufacturer's unit drawings in ref. [4.1].
3. Manufacture and install a 30-40 mm thick intermediate plate between the BTRS unit and test table. Bolted to the table, it will be prepared for fixing the sample unit with bolts or welds, based on the anchoring design.
4. If deemed necessary during the tests, NEK will perform mechanical modifications such as skid anchorage (using bolts or welds), sub-component connections/anchorages, and stiffeners, etc., in order to enhance the specimen's resistance to OBE. These modifications exclude changes to the pressure boundary, electrical or instrumental and control components. NEK is responsible for overseeing these modifications, while the laboratory carries out the physical adjustments in accordance with NEK's on-site instructions.
5. The whole test may use two time slots, depending on the selected qualification approach, as described in Section 2.1.
6. Deliverables:
 - a. Preliminary test procedure
 - b. Final test procedure
 - c. Perform test(s) and/or analyses*
 - d. Preliminary test report(s)*
 - e. Final test report

Note*: The number of tests and preliminary reports depends on the selected qualification approach as described in Section 2.1.

2.1 Qualification approach

The seismic qualification of equipment should demonstrate a component's ability to perform its function during and after the time it is subjected to five OBEs. Test shall be performed in accordance with IEEE 344 [6.1] and SP-S702 [6.2].

The component shall be qualified using either qualification approach A or B, with the choice made by NEK later in the project, but before the purchase order, depending on the

detailed technical and operational requirements of the purchased equipment (see Section 11). At the stage of the project's public tender, of which this specification forms part, the contractor shall submit proposals for both options below (A and B):

A. Option A consists of seismic qualification of the component using a two-phase approach combining testing and analysis:

- PHASE 1: In Phase 1, a qualification test is performed in which the BTRS unit is filled with water at the prescribed pressure under simulated five OBE seismic conditions. The component is not in operation mode, so no water flow through the loops is required. The power breaker and relays on the BTRS unit are energized during the test to monitor for potential chattering or any other electrical failure. In addition to the BTRS unit, the auxiliary electrical cabinet is tested under the same seismic input. The auxiliary electrical cabinet is energized and fully functional during the test. During the tests, amplified accelerations are measured at various locations on the skid, including locations of sensitive electrical, rotating or mechanical components, such as breakers, relays, pumps, compressors, valves, and other electrical and instrumental components. After each OBE test, the BTRS unit and electrical auxiliary cabinet are inspected for integrity, focusing on bolt tightness or looseness, pressure boundary integrity, and mechanical damage. The unit breaker, relays, and electrical auxiliary cabinet will be additionally checked for functionality and chattering.
- PHASE 2: In Phase 2, analytical qualification of sensitive rotating and mechanical components essential to the functionality of the BTRS unit, which did not function during the Phase 1 test, such as pumps, compressors, and valves, is performed under simulated accelerations at the locations of these components, as measured in Phase 1. The list of sensitive components essential for the functionality of the BTRS unit will be provided by the purchaser at a later stage of the project, concurrent with the delivery of the testing procedure.

B. Option B closely resembles Option A, with breakers and relays installed in the BTRS unit, tested for proper function and chatter in a separate time slot under simulated accelerations at the component locations. This option will be chosen in case that unit's breakers and relays cannot be properly energized during the Phase 1 testing and so will be taken out of the unit and tested separately. This approach requires two test slots: the second one, focused on the unit's breakers and relays, occurs after testing the main BTRS and electrical cabinet.

2.2 Test requirements

Tests will involve exposing the devices and assemblies to vibratory motion that replicates the equipment mounting motion experienced during an OBE. For main unit testing, the required response spectra in Figure 2 (SP-S702, Rev.11 [6.2]) should be used as an input. In the case of qualification approach B, amplified spectra derived from test measurements at various points on the unit should be defined as the required response spectra for the qualification of electrical sub-components (unit's breakers and relays) in the second phase.

The assembly or device shall be mounted in a manner that simulates its intended service installation, with excitation applied at the mounting points. The contractor shall provide a rigid adapter plate between the unit and the testing table. Vertical and horizontal inputs shall be applied simultaneously. For testing purposes, the duration of the strong-motion acceleration shall be 20.0 seconds.

The test input shall be a time history that simulates the required response spectra developed using 2% damping. The Test response spectrum shall envelop the required response spectra over the entire frequency range by a minimum of 10%.

ZPAs shall be obtained from the individual Required response spectra. The response spectra in this specification are plotted up to 50 Hz, and the corresponding accelerations shall be used as the ZPAs. The use of ZPA values for the qualification of the equipment with natural frequencies above 50 Hz is acceptable.

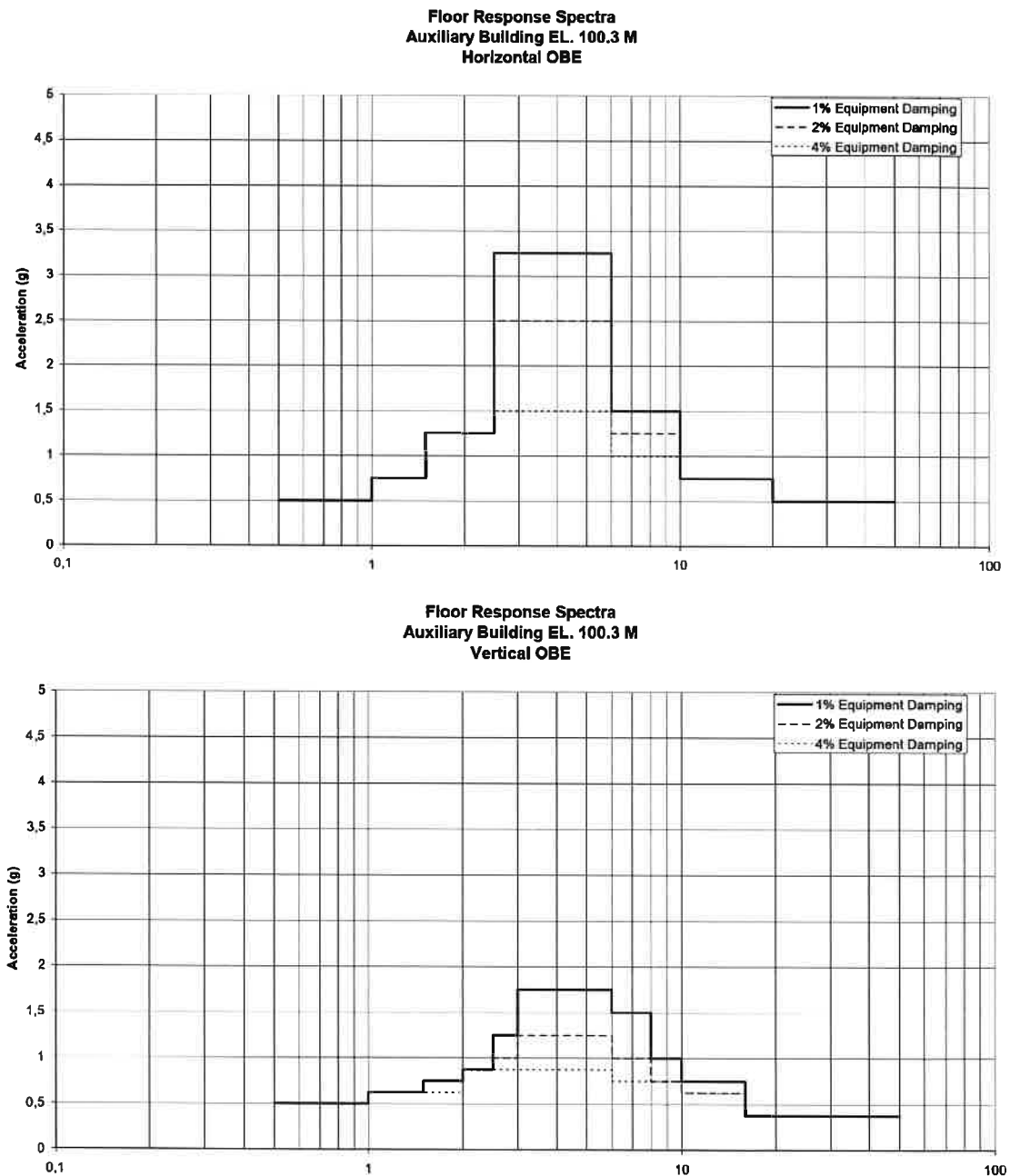


Figure 2: OBE Floor Response Spectra [6.2].

2.3 Analysis requirements

The seismic input for qualification of rotation in active mechanical equipment by analysis is represented by response spectra of measured accelerations at the locations of these components, as measured in Phase 1 of the qualification process (see also Section 2.1). The calculated seismic stress shall be added to the equipment's operating stresses.

If the fundamental natural frequency of the equipment (including the effect of the supports and attached components, if any) is greater than or equal to rigid frequency, the equipment may be analysed statically as follows:

- a. In the static analysis, the seismic forces on each component of the equipment shall be obtained by multiplying each lumped mass by the rigid frequency floor acceleration. The seismic force shall act on the mass points of each component.

If the fundamental natural frequency of the equipment in any direction is less than the rigid frequency, the analysis of all equipment shall be performed as follows:

1. A stress analysis shall be performed using the inertia forces or equivalent static loads.
2. Shears, moments, stresses, deflections, and accelerations shall be calculated on a mode-by-mode basis.
3. The system response shall be obtained by combining each modal response by the square root of the sum of the squares, except for closely spaced modes where the absolute sum of the responses shall be used. The closely spaced modes are defined as those whose frequency difference is less than 10% of the frequency.
4. The responses of the equipment to the two horizontal and the vertical response spectra inputs shall be combined as follows:

$$R = \max (RH1 + R_v \text{ or } RH2 + R_v),$$

where RH1 and RH2 are the two components of the maximum horizontal response.
R_v is the maximum vertical response.

The static load equivalent, or static analysis, method involves multiplying the total weight of the equipment or component member by the specified seismic acceleration coefficient from the appropriate response spectra. The magnitude of the seismic acceleration coefficient is determined based on the component's expected dynamic response characteristics. Components, which can be characterised as single-degree-of-freedom systems, are considered to have a modal participation factor of 1. Seismic acceleration coefficients for multi-degree-of-freedom systems, which may be in the resonance region of the amplified response spectra curves, are increased by 50 per cent (multiplied by 1.5) to account conservatively for the increased modal participation.

2.4 Documentation

For the documentation (test procedure) and Test Qualification Report, see requirements in SP-S702 [6.2].

2.5 Potential Modifications of the specimen unit

During the test, Krško Nuclear Power Plant engineers—including seismic, electrical, and mechanical specialists—will oversee the testing activities in accordance with the test procedure. They will also identify any necessary measures to enhance the seismic resistance of the equipment being tested. The NPP Krško engineers will suggest suitable

technical solutions, while laboratory staff will carry out the physical modifications on the test sample. All modifications to the tested specimen or unit will remain under the responsibility of NPP Krško.

Potential mechanical modifications would include skid anchorage (via bolts or welds), minor support-component connections, and stiffeners. These modifications exclude changes to the pressure boundary or I&C components.

Due to potential adjustments and improvements, the entire testing process could last up to five days.

2.6 Seismic test duration

Due to possible modifications during testing, the total test duration could extend to 5 days in the laboratory. This timeframe should be noted by the lab (please reserve this time in the lab schedule).

3 SAFETY CLASSIFICATION OF SERVICES

This order is classified as Augmented Quality.

4 DESIGN INPUTS

The potential Contractor shall prepare the list of any necessary inputs (drawings, calculation notes, reports, documents) needed for performing the requested scope of work and include it in the proposal. NEK will inform the potential Contractor about availability of such documents from the list and terms under which they can be handed over, solely as required inputs for the scope of services.

Available input documents:

- 4.1 Manufacturer's Drawing of new unit 30XW 0652B, Carrier
- 4.2 Technical List of the Unit 30XW 0652B, Carrier

5 APPLICABLE DESIGN CONTROL PROGRAM

All services shall be provided according to Chapter 6 and applicable quality assurance program according to Section 20 of this specification.

6 APPLICABLE CODES, STANDARDS, AND DESIGN CRITERIA

The work should consider the following literature and regulatory guidance:

- 6.1 IEEE 344, 2004.
- 6.2 SP-S702, Technical Specification, Seismic Analysis, Testing, and Documentation, Krško Nuclear Power Plant, Revision 12.
- 6.3 QS-610, Quality Specification QS 610 - Generic Quality Assurance Program Requirements, Krško Nuclear Power Plant, Revision 2.

7 AFFECTED SYSTEMS

Not applicable.

8 IDENTIFICATION OF AFFECTED EQUIPMENT

Boron Thermal Regeneration System Chiller.

9 REVIEW AND/OR VERIFICATION OF SERVICES

NEK will conduct internal preliminary and final reviews of the final report. The Contractor shall prepare a response to the preliminary review, comment on it and take it into full consideration as part of the contracted services.

10 SCHEDULE

As per the Tender Documentation.

11 STATUS REPORTING REQUIREMENTS

Regular communication shall be maintained throughout the project to ensure effective coordination between all parties. Communication channels and protocols will be established during the kick-off meeting. No formal periodic status reports are required.

12 NEK RESPONSIBILITIES

NEK will provide the following:

1. Documentation
 - Documents listed in Section 4 of this Technical Specification.
 - Preliminary drawings will be available during the tendering phase.
 - Final drawings will be provided upon issuance of the Purchase Order.
2. Qualification Approach
 - A clear instruction specifying which qualification approach will be used (Approach A or Approach B).
 - The final decision/requirement will be made at the Purchase Order stage.
3. Installation Instructions for Qualification Approach A
 - If Qualification Approach A is selected, NEK will provide a detailed installation instruction report.
 - The report will be available one month prior to testing.
4. Sensitive Components for Qualification Approach B
 - If Qualification Approach B is selected, NEK will provide a list of components critical to BRTS unit functionality that will be tested in the 2nd time slot.
 - This list will form part of the installation instruction report and will be available one month prior to testing.

5. Mechanical Modifications

- Responsibility for defining and providing instructions for any mechanical modifications that may be required to improve seismic resistance during testing.

6. Unit specimen Delivery

- The unit specimen will initially be delivered to NEK. After inspection and confirmation of its suitability for testing, it will be transported by truck to the testing laboratory for qualification tests. NKE is responsible for transportation to and from the lab.

13 WORK SCOPE CHANGES

The Contractor shall notify NEK about any required scope change, including the reasons for such request. NEK shall provide the formal response within 8 working days.

14 DELIVERABLES

The Contractor shall prepare and hand over the deliverables listed in the table below. All deliverables must be reviewed and approved by NEK. Contractor shall resolve all open items in accordance with NEK comments. All documentation shall be written in English.

Electronic versions shall be provided in the formats listed in the table below.

Deliverables	Hard copies	El. Copies No.
Preliminary Test Procedure	0	1
Final Test Procedure	0	1
Draft Seismic Qualification Test Report	0	1
Final Seismic Qualification Test Report	1	1

15 RECORDS

Not applicable.

16 NEK CONTACTS

Contractor shall coordinate all technical and scheduling matters with the assigned NEK project manager and responsible engineer.

Responsible engineer:

Daniel Celarec
Phone: + 386 7 4802 206
E-mail: daniel.celarec@nek.si

Deputy responsible engineer:

Franjo Boh
Phone: + 386 7 4802 753
E-mail: franjo.boh@nek.si

17 CONTRACTOR TECHNICAL APPROACH

References regarding the contractor's prior execution of this seismic qualification test and the supporting analytical calculations will be required during the public tender phase of this project.

18 ACCESS TO CONTRACTOR FACILITY AND DOCUMENTS

The Contractor shall grant NEK representatives access to the Contractor's facility(ies) for reviewing and verifying documents, overseeing, and witnessing the work and tests being conducted.

19 SUBCONTRACTED WORK

The Contractor shall not subcontract any portion of the required services without the NEK's written approval. Subcontractors will be required to be technically qualified to satisfy all NEK criteria.

20 QUALITY ASSURANCE REQUIREMENTS

The Contractor is to be qualified for the scope of the Contract (seismic qualification test, analytical qualification analysis). The qualified Contractor shall have a quality system programme that meets the requirements for the AQ per Attachment A of the NEK Quality Specification QS-610 [6.3].

Purchaser will supervise the laboratory (-ies) seismic qualification activities within the scope of supply per this Specification.

21 NEK PROPRIETARY DATA

NEK has a proprietary interest in all drawings, design, specifications, documents, information and know-how that may be furnished pursuant contract execution. Also, NEK has a proprietary interest in any know-how, improvement, discovery, and invention which may be made, developed, or conceived in the performance of work hereunder or which may arise or result therefrom (hereinafter collectively referred to as the "Information"). All such information shall be considered to be proprietary of NEK.

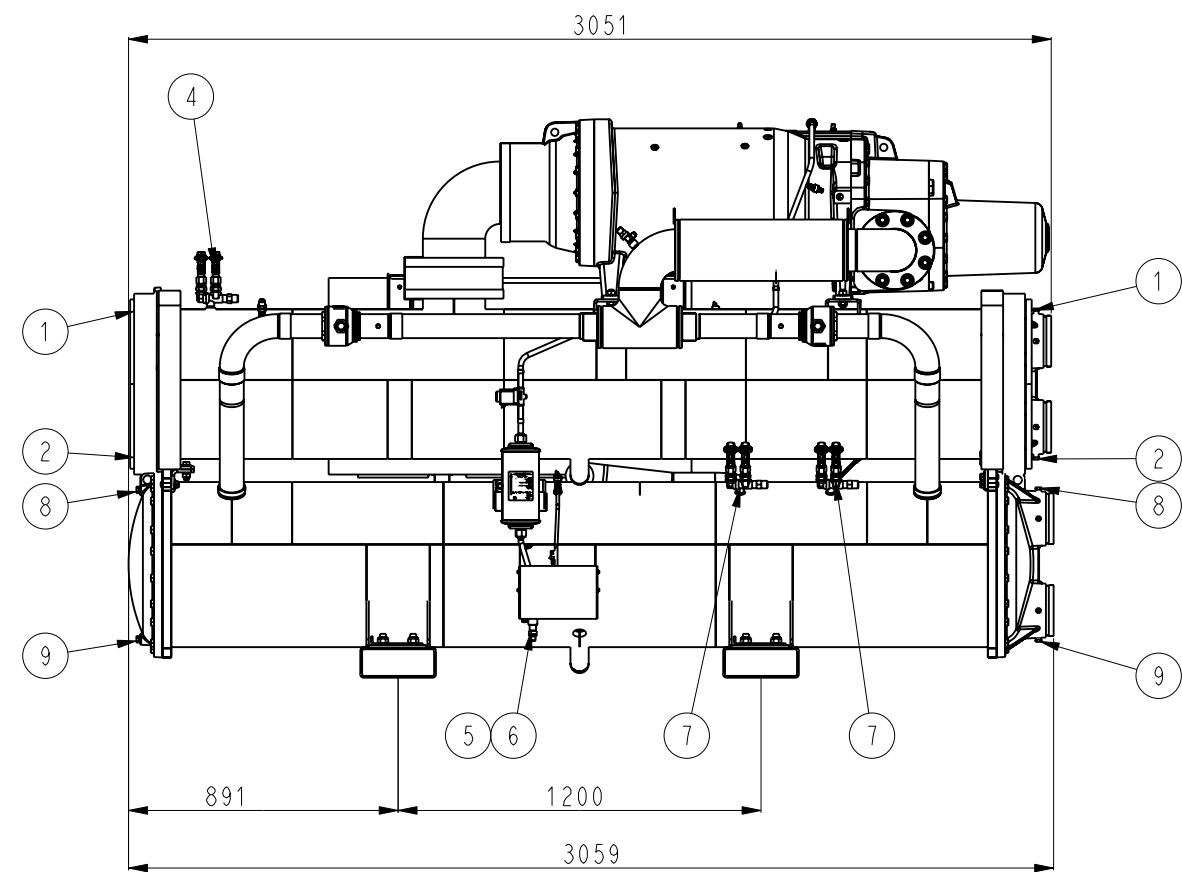
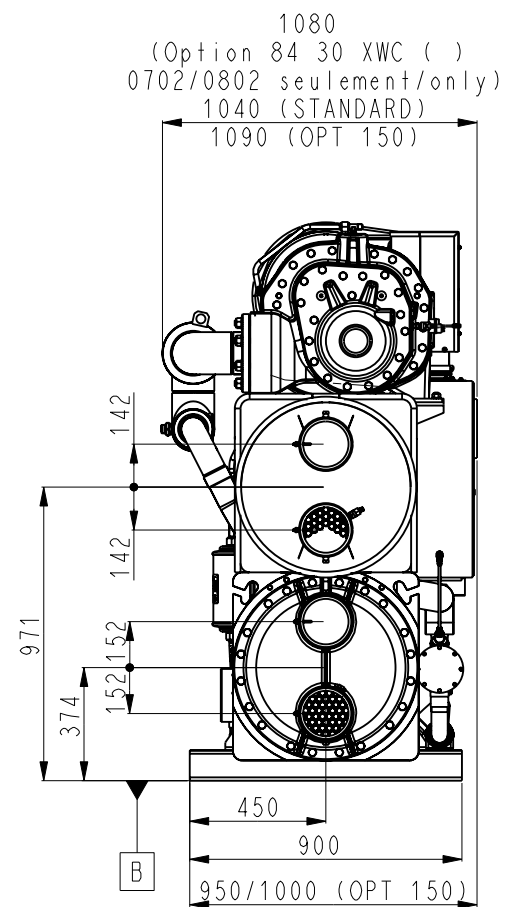
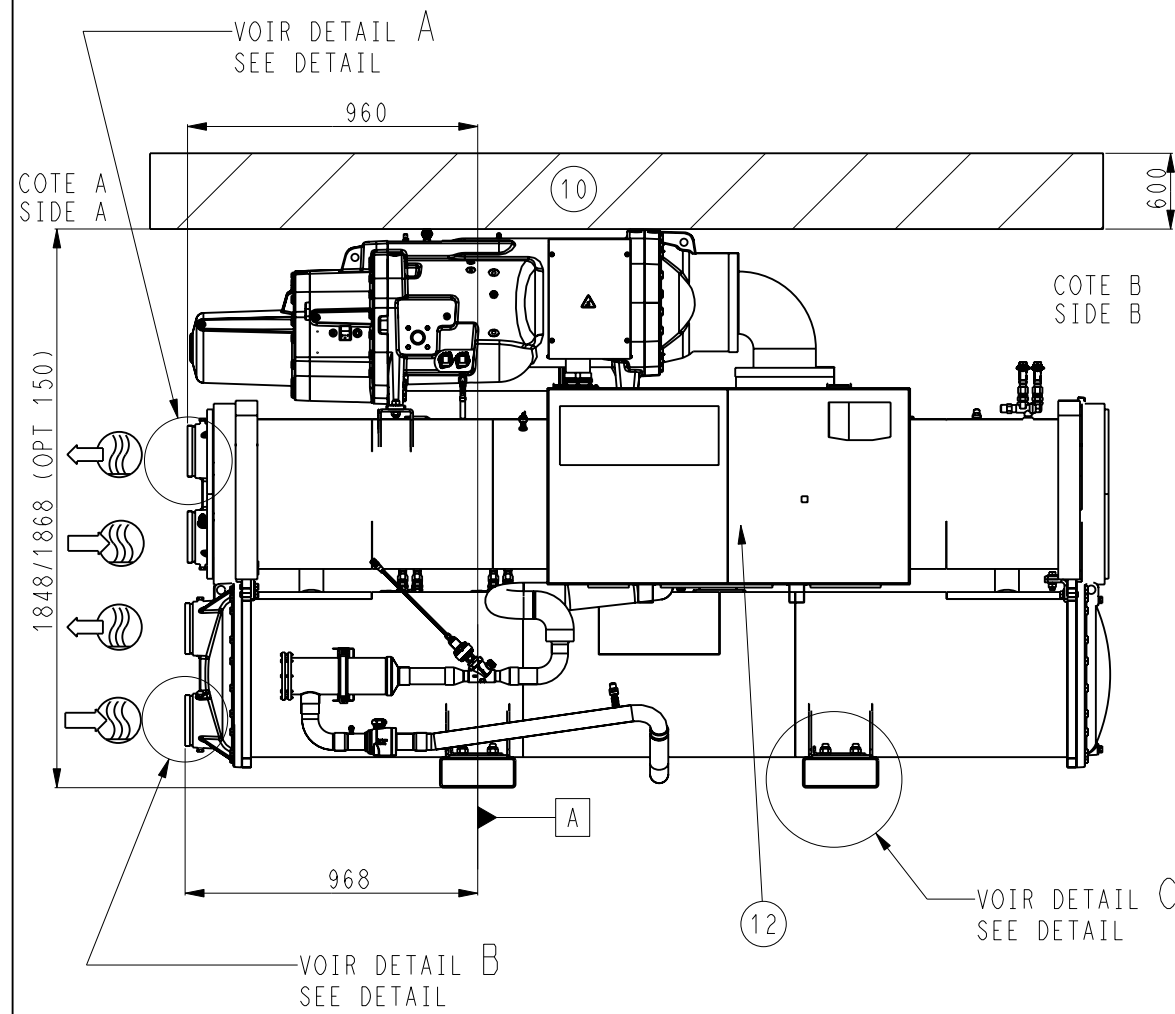
The right to use any such Information shall be restricted to the Contractor only, for its internal use, and shall be entirely tied to the performance of the Contract.

All such Information is subject to the confidentiality provision

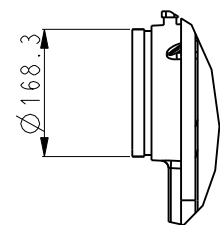
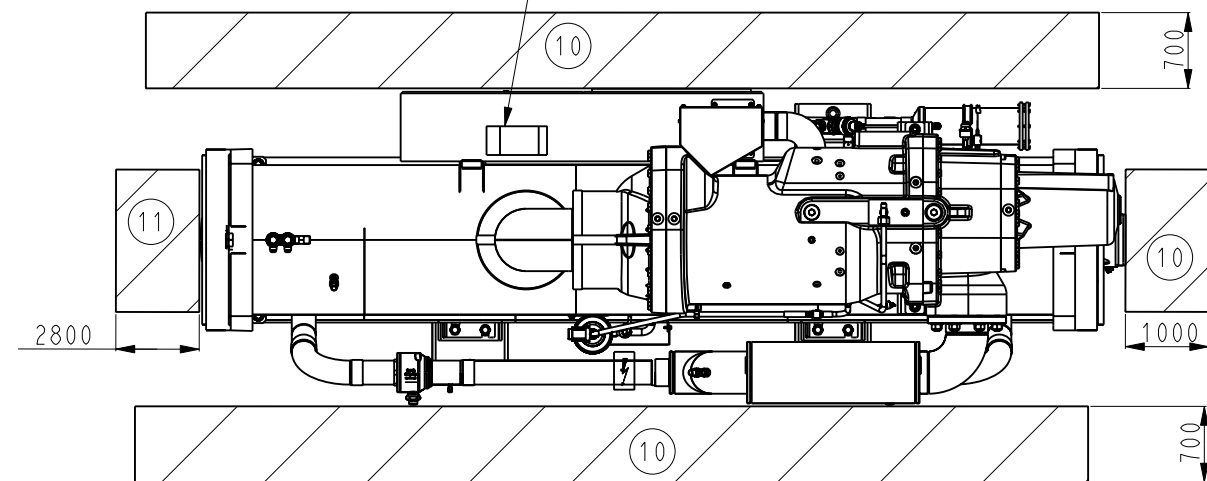
Attachments

- Reference 4.1: Manufacturer's Drawing of new unit 30XW 0652B, Carrier
- Reference 4.2: Technical List of the Unit 30XW 0652B, Carrier*

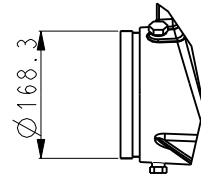
*Note: 3D photograph in the top right corner of the technical list [4.2] is generic and does not match unit type 30XW 0652B. However, the data in the technical list is correct for the unit, which is subject to qualification per this specification.



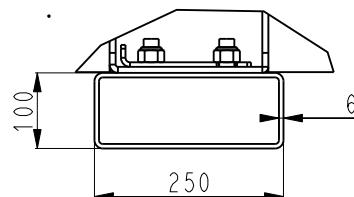
ENTREE ALIMENTATION ELECTRIQUE
ELECTRICAL SUPPLY ENTRY



DETAIL A
ECHELLE 1:10



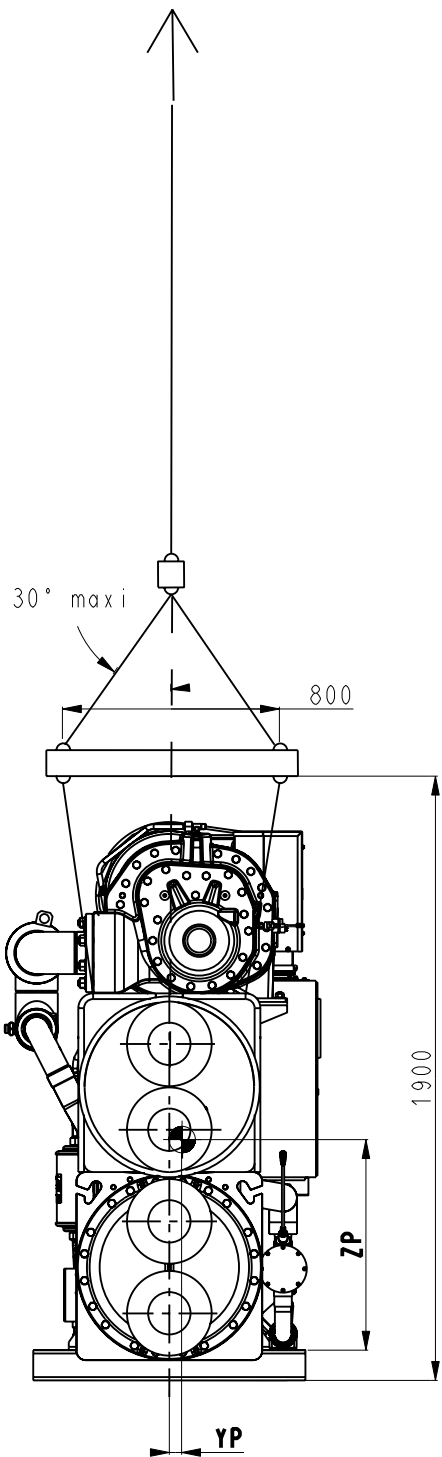
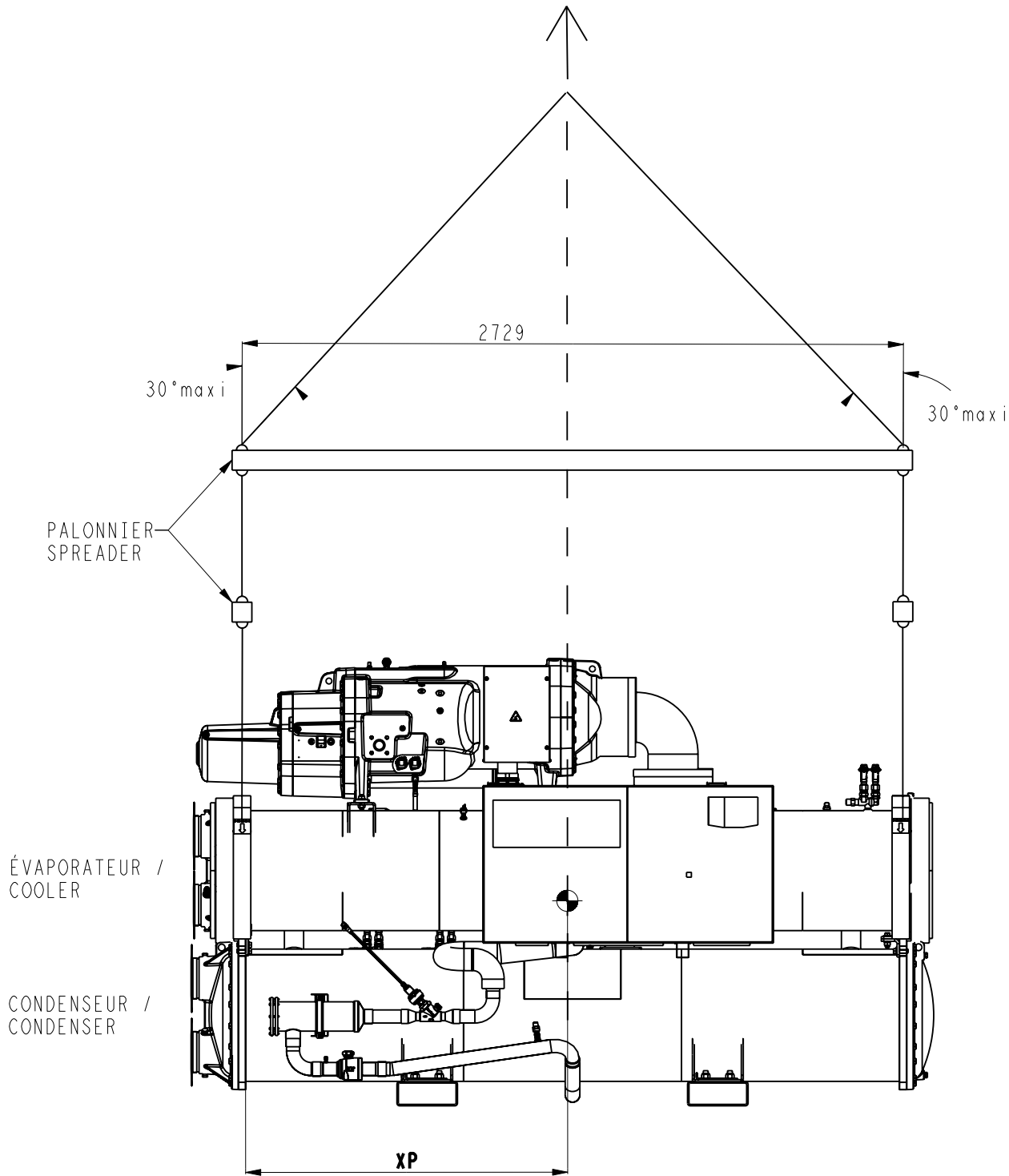
DETAIL B
ECHELLE 1:10



DETAIL C
ECHELLE 1:10

TOLERANCE	30XW()0652 - 0702 - 0802	DATE	27-Jun-24	Feuille Sheet 1/7
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Carrier

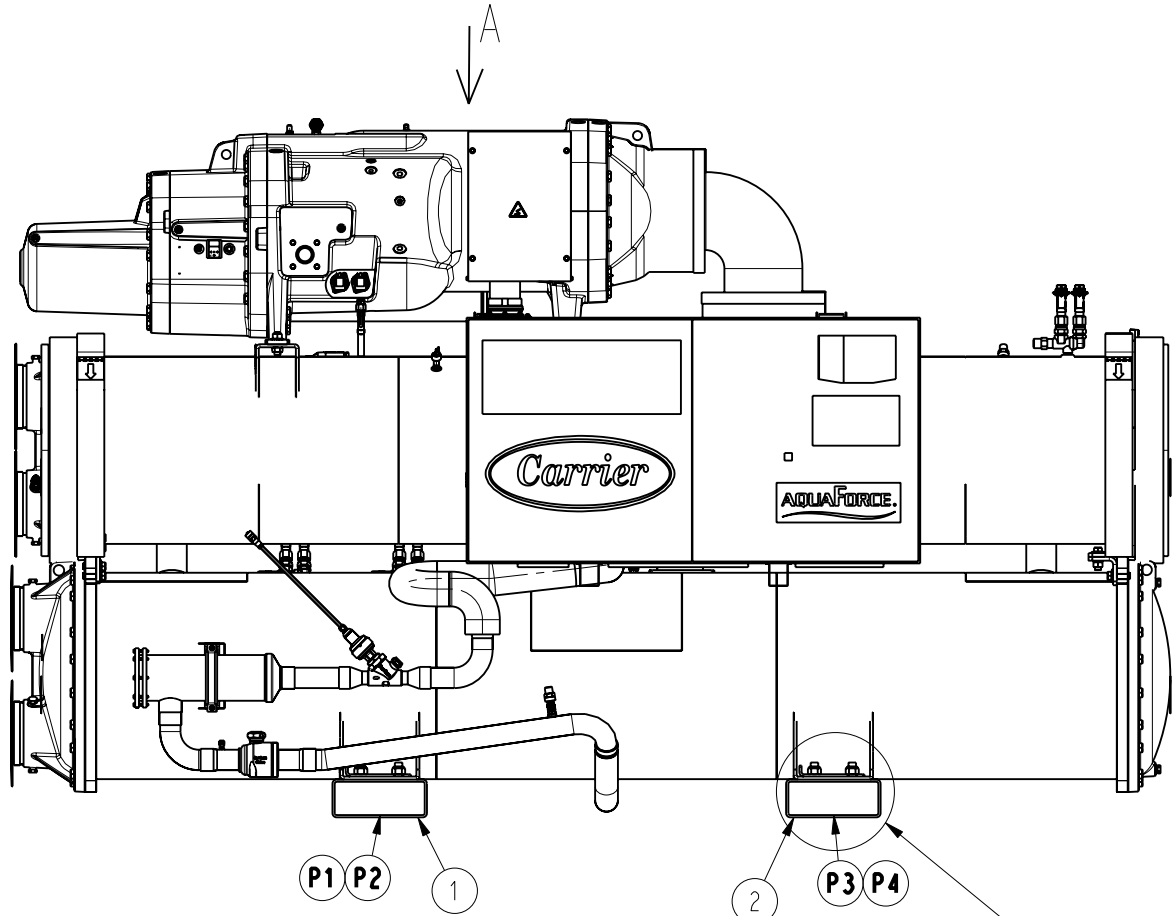


STD	30XW()0652	30XW()0702	30XW()0802
XP	1083	1081	1081
YP	17	17	17
ZP	926	928	929

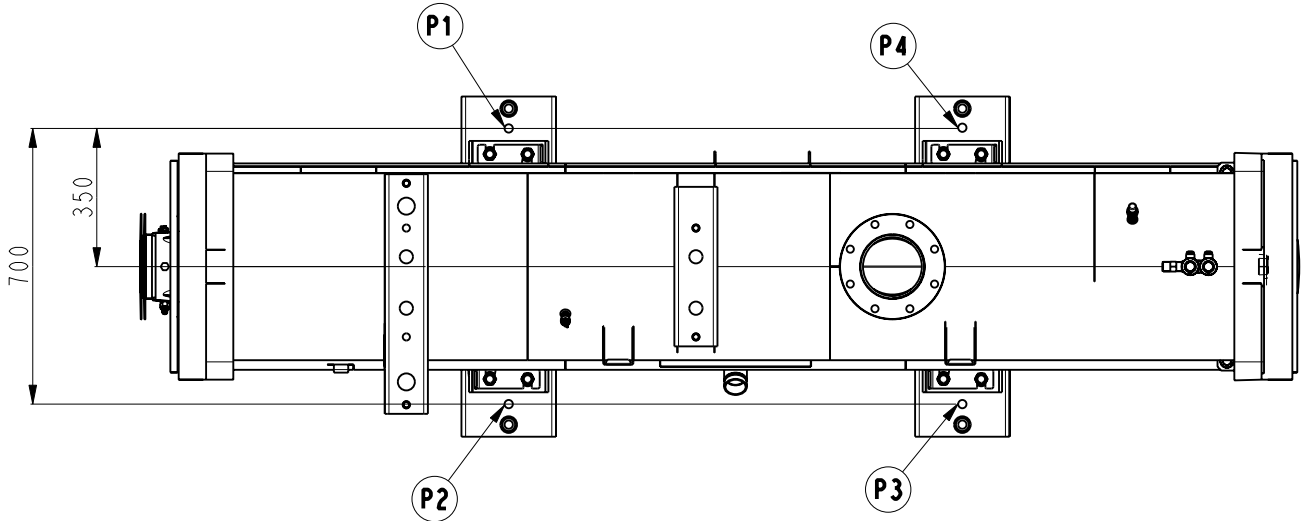
OTP 150	30XW()0652	30XW()0702	30XW()0802
XP	1062	1062	1060
YP	17	17	17
ZP	948	950	953

ÉVAPORATEUR /
COOLER

CONDENSEUR /
CONDENSER



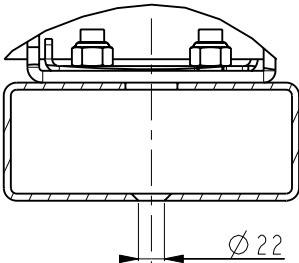
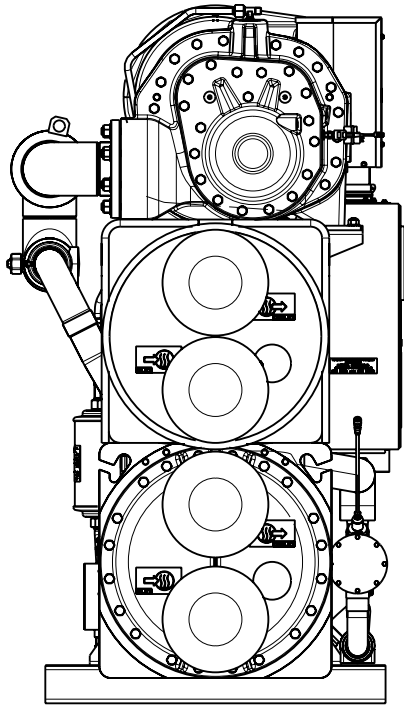
VOIR DETAIL D
SEE DETAIL



VUE SUIVANT A
FOLLOW A VIEW

Note :

- P1 à P4 : Points de fixation au sol. Les supports 1 et 2 doivent être en contact avec le sol sur toute leur longueur.
- P1 to P4 : Fixing points. The barrels 1 and 2 should be in contact with the ground throughout their length.

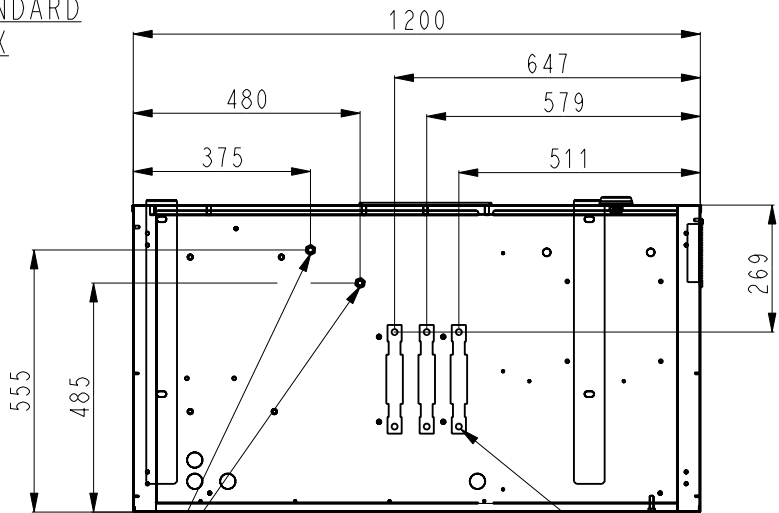
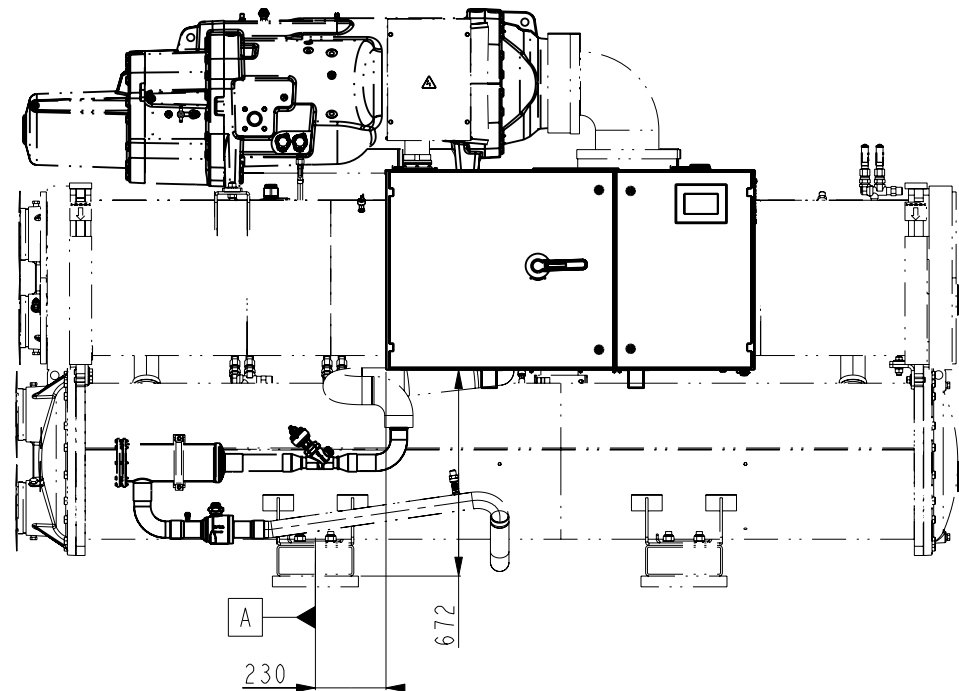


DETAIL D
ECHELLE 5:32

Operating weight ±6% Poids en fonctionnement ±6%	30XW()0652	30XW()0702	30XW()0802
P1 (Kg)	1125	1134	1140
P2 (Kg)	1221	1231	1237
P3 (Kg)	469	469	471
P4 (Kg)	432	432	434
PT (Kg)	3247	3266	3282

Operating weight ±6% Poids en fonctionnement ±6%	30XW()0652 OPT 150	30XW()0702 OPT 150	30XW()0802 OPT 150
P1 (Kg)	1209	1220	1232
P2 (Kg)	1312	1324	1336
P3 (Kg)	461	465	465
P4 (Kg)	425	429	429
PT (Kg)	3407	3438	3462

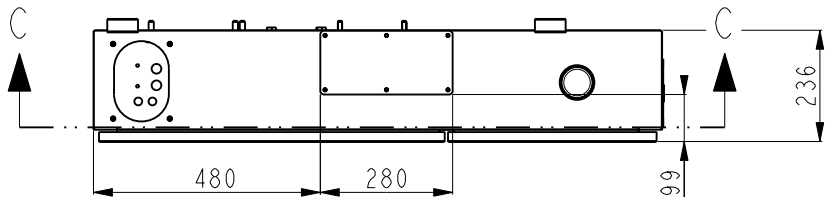
COFFRET ÉLECTRIQUE STANDARD
STANDARD ELECTRICAL BOX



PE CLIENT FILETE M12
PE CUSTOMER THREADED M12

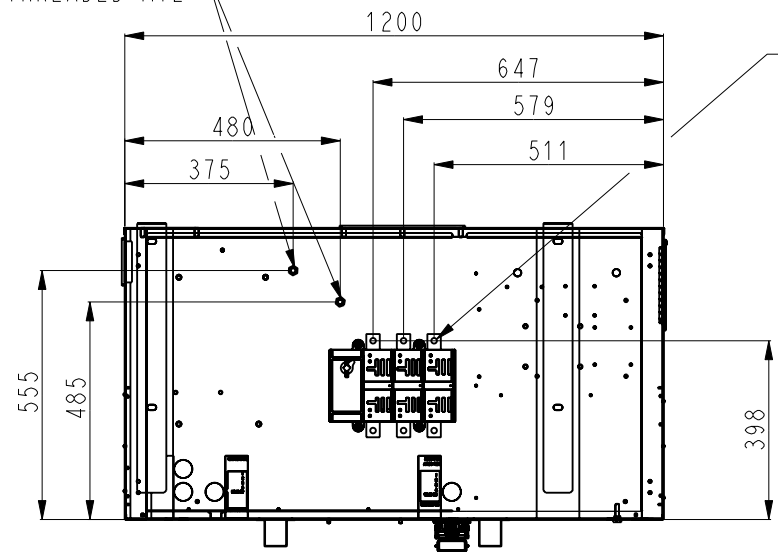
RACCORDMENT CLIENT M12
CUSTOMER CONNEXION M12

COUPE / SECTION C-C



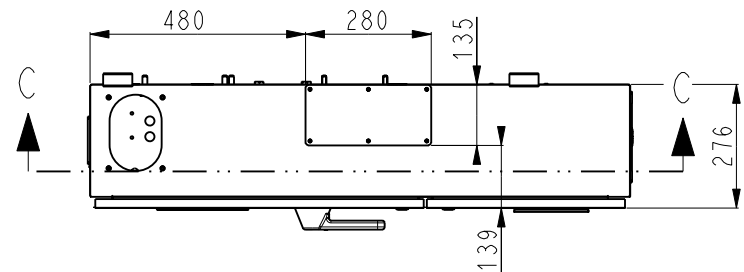
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PE CUSTOMER THREADED M12

OPT 20 COFFRET ÉLECTRIQUE
OPT 20 ELECTRICAL BOX



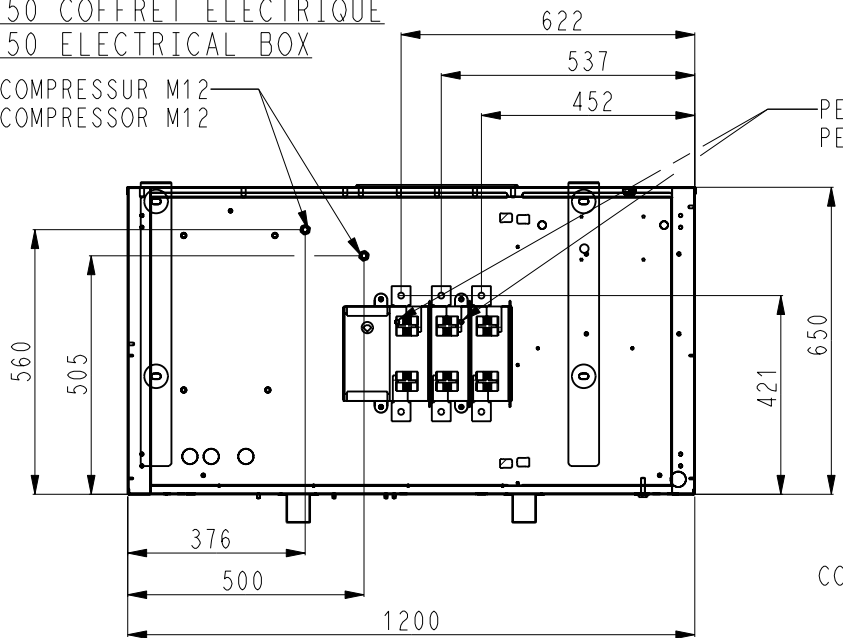
RACCORDMENT CLIENT M12
CUSTOMER CONNEXION M12

COUPE / SECTION C-C



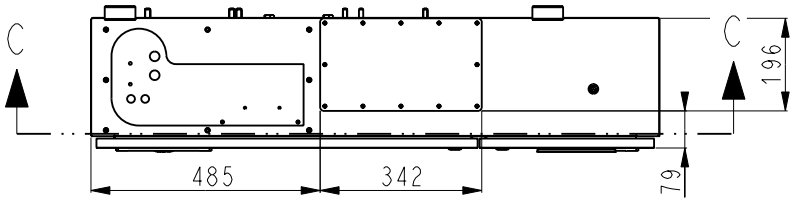
OPT 150 COFFRET ÉLECTRIQUE
OPT 150 ELECTRICAL BOX

PE COMPRESSUR M12
PE COMPRESSOR M12



PE CLIENT FILETÉ M10
PE CUSTOMER THREADED M10

COUPE / SECTION C-C

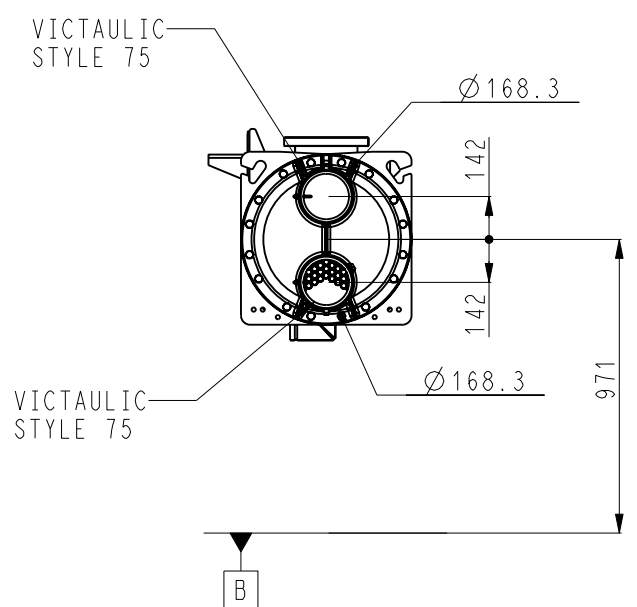


TOLERANCE	30XW()0652 - 0702 - 0802	DATE	27-Jun-24	Feuille Sheet 4/7
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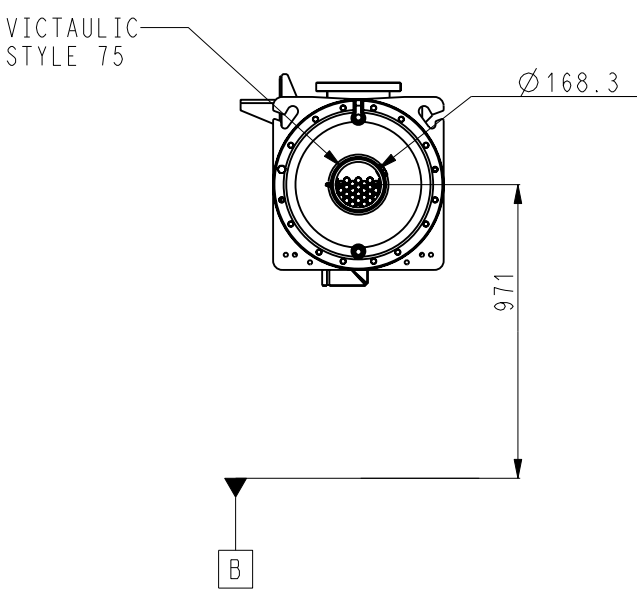
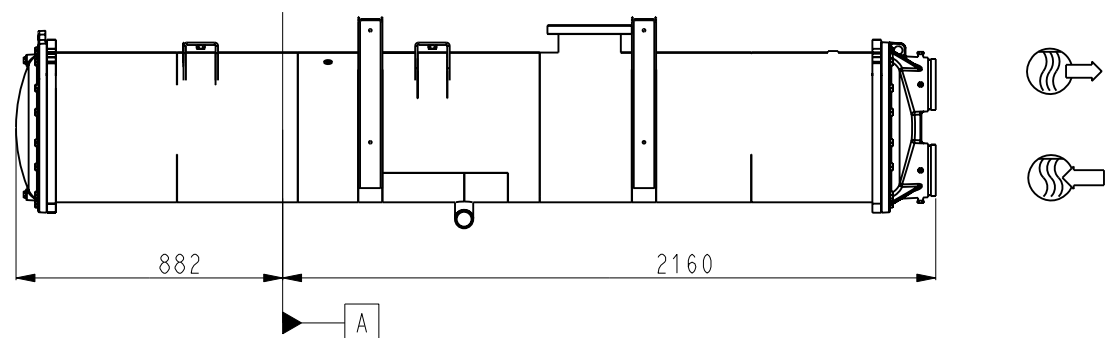
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EVAPORATEUR / COOLER



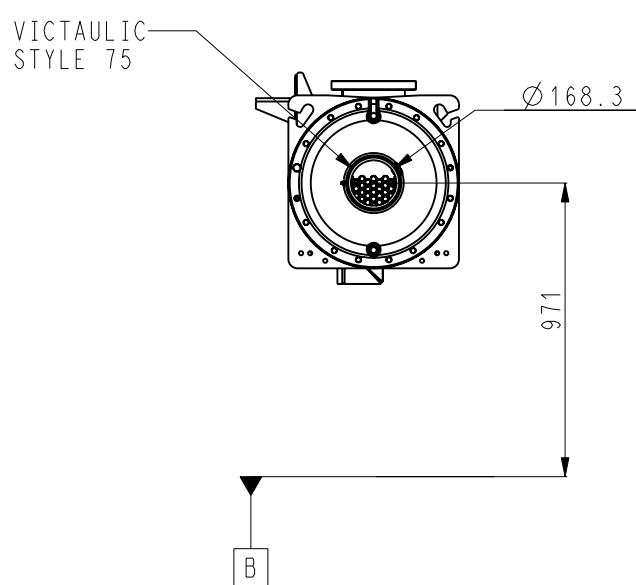
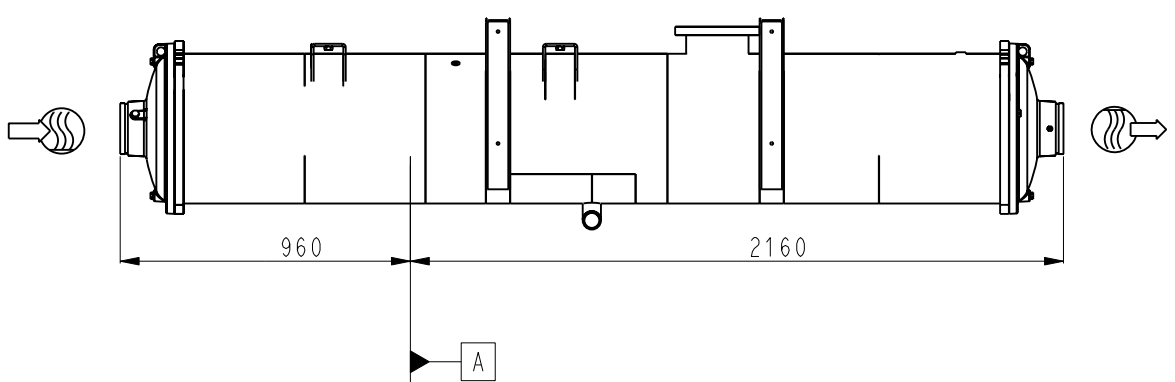
OPTION 107 COTE A SIDE A

COTE B SIDE B



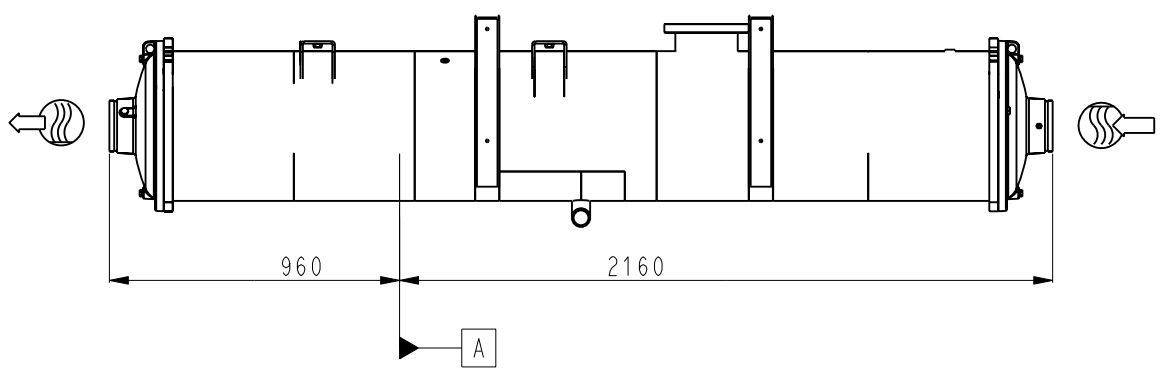
OPTION 100C OR OPTION 6 COTE A SIDE A

COTE B SIDE B



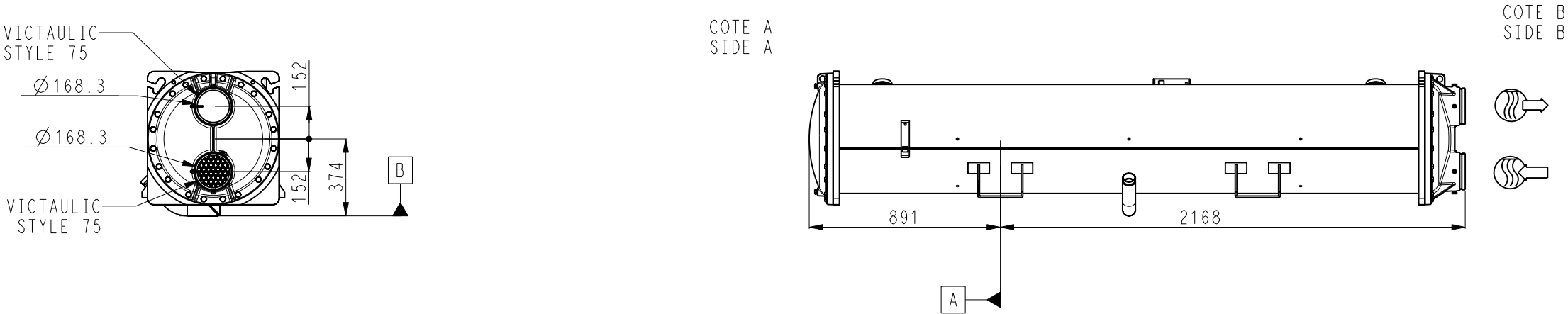
OPTION 100C + 107 OR OPTION 6 + 107 COTE A SIDE A

COTE B SIDE B

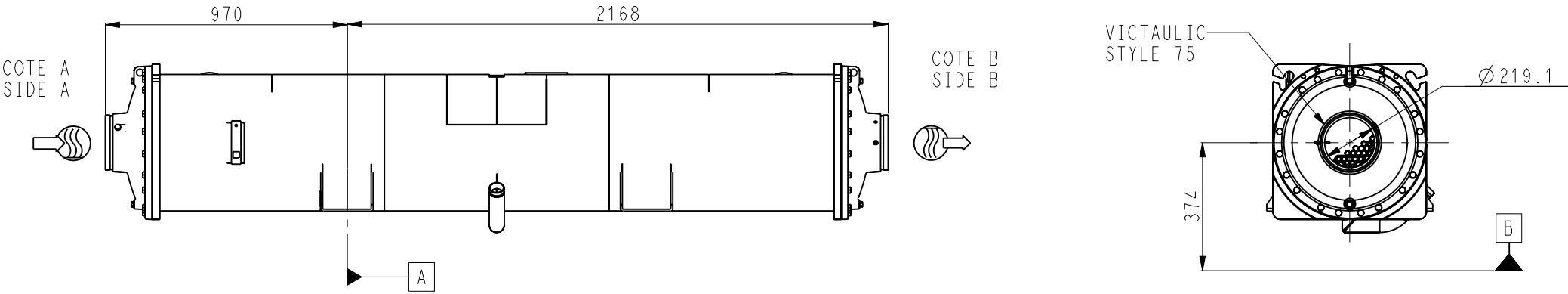


CONDENSEUR / CONDENSER

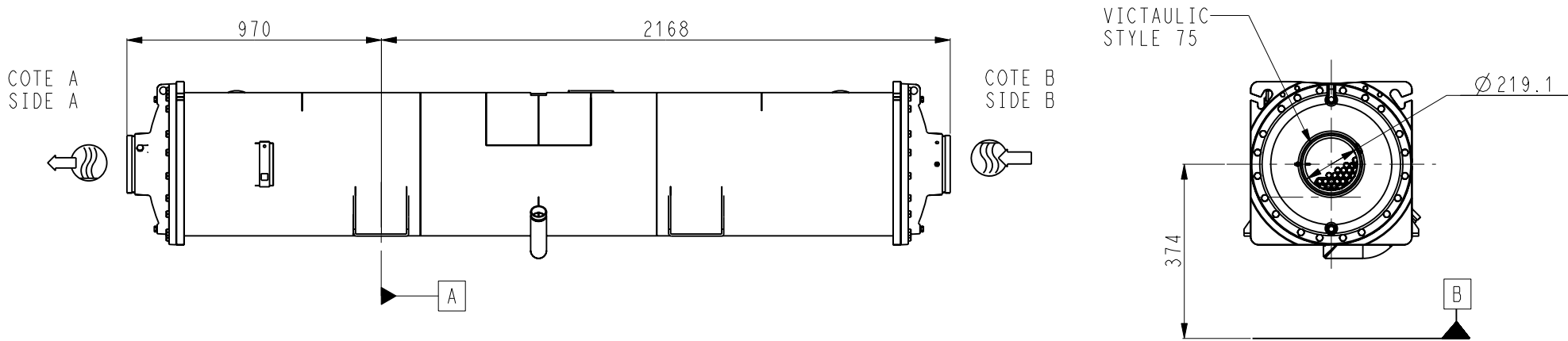
OPTION 107A



OPTION 102C



OPTION 107A + 102C



TOLERANCE	30XW()0652 - 0702 - 0802		DATE	Feuille Sheet 6/7
±10			27-Jun-24	Indice
			00DCG000022600	



AquaForce 30XW 0652B
Water-cooled chiller with fixed speed screw

Certified values : European Market

Performance Information		
Mode		Cooling
Cooling Capacity ⁽¹⁾	kW	669
Cooling Efficiency (EER) ⁽¹⁾	kW/kW	5.94
Heating Capacity to Reject ⁽¹⁾	kW	783
Unit Power Input ⁽¹⁾	kW	113
Sound power level ⁽¹⁾	dB(A)	96.0
Sound Pressure Level at 1.0m ⁽¹⁾	dB(A)	78.0
Minimum Capacity ⁽²⁾	kW	136
Maximum Capacity	kW	669

(1) All performances are compliant with EN14511 – 3 : 2022. Sound power level according to ISO9614 – 1.
(2) Due to the minimum flow rate allowable a lower inlet water temperature might have to be specified to achieve this performance.



Non contractual picture

Operating Conditions		
System element		Cooling
Evaporator		
Fluid	Fluid Type	Fresh Water
	Fouling Factor (sqm-K)/kW	0.000
	Leaving Temperature °C	6.0
	Entering Temperature °C	12.3
	Fluid Flow l/s	25.2
	Total pressure drop kPa	28.2
Condenser		
Fluid	Fluid Type	Fresh Water
	Fouling Factor (sqm-K)/kW	0.000
	Leaving Temperature °C	32.2
	Entering Temperature °C	25.0
	Fluid Flow l/s	26.1
	Total pressure drop kPa	32.2
Altitude	m	0

Unit Configuration	
107	Reversed evaporator water connections
149B	Modbus over IP and RS485
150B	Condensing temperature limitation
152	Control for low cond. temperature
158A	7" user interface
159	Input contact for refrigerant leak detection
257	Low noise level
266	Welded evaporator connection kit
267	Welded condenser water connection kit
271	Compressor thermal insulation
284	230V electrical plug
EU	European Compliance

Ecodesign data ⁽³⁾⁽⁴⁾		
Allowed applications for CE mark:		
Low Temp. Comfort Cooling : T>=2°C*	SEER 12/7°C ηs cool	6.64 262.7
Medium Temp. Comfort Cooling : T>=13°C*	SEER 23/18°C ηs cool	7.60 301.0
High Temp. Process Cooling : T>=2°C*	SEPR 12/7°C	8.83

(3) * ECODSIGN Compliant per (EU) N°2016/2281
(4) All data related to seasonal efficiency are given for standard units and main options (Brine pump energy efficiency...).

Unit Information		
Manufacturing Source(s)		Montluel site - France
Refrigerant type		R-134a
Refrigerant Weight	kg	145.0
Tonnes CO2 Equivalent	Tonnes	207
Category PED		CAT IV
Number of Refrigerant Circuit		1
Number of Passes (Evaporator / Condenser)		2 / 2
Connection Diameter (Evaporator)	mm	168.3
Connection Diameter (Condenser)	mm	168.3
Number of Compressor		1
Operating	Weight	kg 3247
	Length	mm 3060
	Width	mm 1040
Shipping	Height	mm 1848
	Weight	kg 3140
	Length	mm 3060
	Width	mm 1040
	Height	mm 1848

Electric Information		
Unit Voltage	V-Ph-Hz	400-3-50
Standby Power	W	50
Power Factor		0.88
Maximum Current	A	278
Startup Current	A	587

Documentation	
	Technical documents (IOM, PSD, ...)
	TDS



This unit is certified in the LCPHP Programme of Eurovent Certita Certification, with its allowed component options as per the TCR document in force at all the conditions with a fouling factor of 0 m2K/kW (except ISEER) and with no antifreeze solution (except MT and LT Process Chiller applications when certified). The certified standard performances and the certified selection software version can be verified in www.eurovent-certification.com.
Outside the scope of AHRI Water-Cooled Water-Chilling and Heat Pump Water-Heating Packages Certification Program or not optionally certified, but is rated in accordance with p. 1/2 AHRI Standard 550/590 (IP) and AHRI Standard 551/591 (S).



Damijan Mihelic (Sep 01, 2026 3:35:59 PM)

AquaForce 30XW 0652B
Water-cooled chiller with fixed speed screw
Certified values :

Cooling Loadline							
Unit Performances							
Percent of max capacity	%	Max	90.0	80.0	70.0	60.0	50.0
Cooling Capacity	kW		669	602	535	468	335
Heating Capacity to Reject	kW		783	703	624	546	394
Estimated Machine Load Percent	%		100.0	89	78	69	53
Unit Power Input	kW		113	100.0	88.0	77.2	59.6
Cooling Efficiency (EER)	kW/kW		5.94	6.03	6.08	6.07	5.62
Sound power level	dB(A)		96.0	96.0	96.0	96.0	96.0
Evaporator Data							
Fluid Entering Temperature	°C		12.3	11.7	11.1	10.4	9.2
Fluid Leaving Temperature	°C		6.0	6.0	6.0	6.0	6.0
Fluid Flow Rate	l/s		25.2	25.2	25.2	25.2	25.2
Total pressure drop	kPa		28.2	28.2	28.2	28.3	28.3
Condenser Data							
Fluid Entering Temperature	°C		25.0	25.0	25.0	25.0	25.0
Fluid Leaving Temperature	°C		32.2	31.5	30.7	30.0	28.6
Fluid Flow Rate	l/s		26.1	26.1	26.1	26.1	26.1
Total pressure drop	kPa		32.2	32.2	32.2	32.2	32.2

Values given are interpolated and are not directly measurable under laboratory conditions
Bold values are performances for the maximum capacity.



This unit is certified in the LCPHP Programme of Eurovent Certita Certification, with its allowed component options as per the TCR document in force at all the conditions with a fouling factor of 0 m2K/kW (except ISEER) and with no antifreeze solution (except MT and LT Process Chiller applications when certified). The certified standard performances and the certified selection software version can be verified in www.eurovent-certification.com.
Outside the scope of AHRI Water-Cooled Water-Chilling and Heat Pump Water-Heating Packages Certification Program or not optionally certified, but is rated in accordance with p.2/2 AHRI Standard 550/590 (LP) and AHRI Standard 551/591 (S).