Ballard Power Systems Europe A/S
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Revision history		
Rev.	**Date.**	**Description**
001	17/09/2024	First Issue

Document Title:	**BLPH Project - Performance Test Results (FAT)**
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Ballard Power Systems Europe A/S
Majsmarken 1
DK-9500 Hobro
K559-2254-CWIWP4202202-J08-002

Confirmation of Satisfactory FAT

Part No.	601456B-7002362 Incl. sub-assemblies: 601456B-7002973 601456B-7003716
Product name	FC PowerGen 1000kW
Serial No.	601456B

Ballard Power Systems Europe A/S confirms that the above-listed equipment has satisfactorily with comments undergone and passed the Factory Acceptance Test (FAT) according to

BLPH Project – Acceptance Test Procedure (FAT) [K559-2254-CWIWP4202202-J08-001]

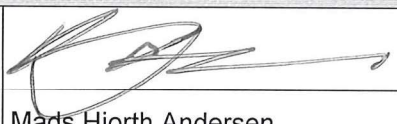
BLPH Project - Test Matrix for FAT and SAT [K559-2254-CWIWP4202202-J99-002]

601456B Crosswind BLPH FAT punch list [K559-2254-CWIWP4202202-J08-003]

prior to the shipment.

CrossWind C.V. acknowledges that the Factory Acceptance Test (FAT) for the above-listed equipment was witnessed and confirms that the test was performed satisfactorily with comments, and all agreed-upon specifications have been met.

Signatures

Ballard Power Systems Europe A/S			
Signature:			
Name:	Mads Hjorth Andersen		
Title:	Project Manager	Date:	04-09-2024
CrossWind C.V.			
Signature:			
Name:	Martin Taylor		
Title:	Crosswind Commissioning Manager	Date:	04-09-2024
Inspector			
Signature:			
Name:	Luigi Pignatelli		
Title:	Inspector for Crosswind	Date:	04-09-2024

Note: This document serves as formal confirmation that the FAT has been successfully completed and witnessed, with both parties in agreement on the satisfactory results. It should be signed by authorized representatives of both parties.

Short Title	Megablock Witnessed Factory Acceptance Test - CrossWind
Full Title	Megablock Witnessed Factory Acceptance Test - CrossWind
Abstract	*A selection of the Factory Acceptance Tests of the CrossWind Megablock system with witnesses from the CrossWind, Shell, Rosetti Marino and a surveyor from Fulkrum (CrossWind).*

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Revision Record

Rev #	Description	Revised By	Date (dd-mm-yyyy)
-	Initial Release	RKN	27-02-2024
1	General updates	RKN	17-06-2024
1a	Updated with results	TAN	20/8-2024
2	Updated leak test procedure	TAN	30-08-2024
2a	Updated with results	TAN	30-08-2024
2b	Updated with leakage rates	MHA	02-09-2024

Luigi Signarelli
ON BEHALF OF CrossWind
DATE 4/9/2024 WR

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1.0 Executive Summary

This document outlines the tests to be included in the witnessed Factory Acceptance Test. These tests aim to show the overall functionality of the fuel cell-based power plant. The verification should show the capability of delivering the expected AC power and that the product is ready to be delivered and installed on site.

When the delegations from CrossWind, Shell, Rosetti Marino and the surveyor from Fulkrum (CrossWind) were at Ballard Europe, Hobro to witness the selection of Factory Acceptance Tests 4/12 tests were performed and passed. The remaining eight tests are to be performed later are the following:

- F18 H2 leakage test
- O01 System Start/stop
- O09 Load Test – Step response 0 to 35%
- O10 Load Test – step response 35% to 70%
- O11 Load Test – Step response 65 to 100%
- O12 Load Test – 100% stability test – 3 hours
- O13 Load Test – Step response 100% to 50%
- O14 Load Test – step response 50% to 0%

2.0 References

- PWR008 Ballard commissioning document
- EN 60204-1
- SPC ID 0103 Cooling Circuit Pressure and Leak Test Procedure
- SPC ID 0104 H2 Leak Test Procedure

3.0 Definitions and Acronyms

FC	FCwave™
H2	Hydrogen
FAT	Factory Acceptance Test
HT1	High temperature 1050kW cooling system
HT2	High temperature 1050kW cooling system
LT	Low temperature cooling system

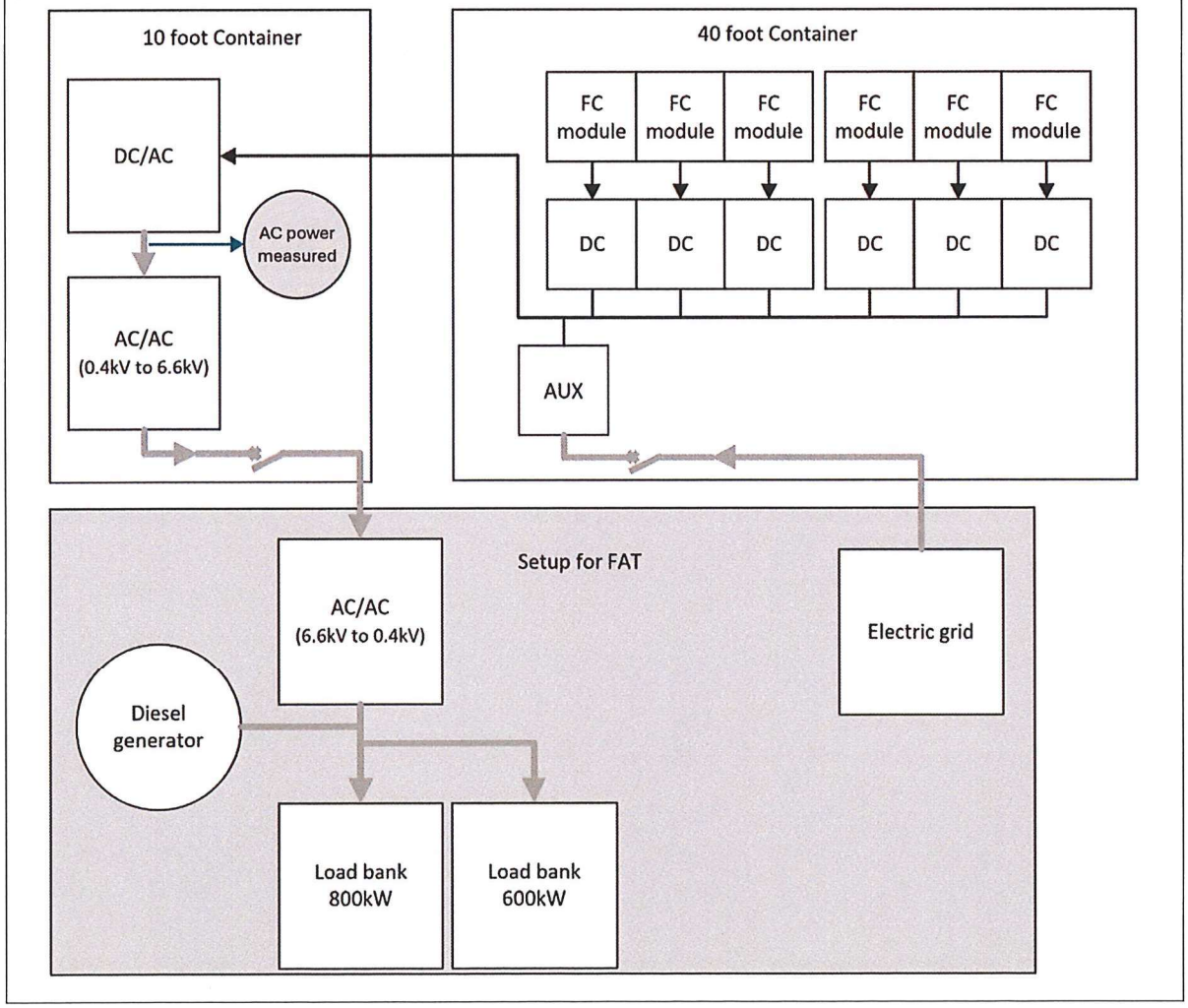
4.0 Objectives and Background

This document describes the witnessed Factory Acceptance Tests. The tests do not include the internal testing that has been done to secure product maturity, mechanical and electrical connections have been done correctly.

The scope of testing is:

- Go through the Megablock with the customer to find defects that needs to be corrected
- Safety systems are functioning correctly in a complete Megablock with coolers.
- Megablock produces AC current, and the tests shall verify the capability to produce AC current following the demand.

Figure 1: Megablock System test overview



5.0 Functional tests

5.1 F02 Visual inspection

5.1.1 Test

The test involves an examination of the paint job through visual inspection, assessing the overall build quality, and checking for any dents. The focus is also on evaluating the assembly quality to ensure compliance with weather resistance.

5.1.2 Relevant Standard / document

- No reference

5.1.3 Brief Test Plan

- Visual inspection with customer of full system meaning inside and outside container solution.
- Take comprehensive pictures of the full system and test setup, including close-ups of vital components, with timestamps for reference.

5.1.4 Pass/Fail criteria.

- Visual inspect with customer to review quality of full system.

5.1.5 Test Result

Table 1: Visual inspection – Test Result

Date tested	Item	Result	Pass/Fail	Notes
13/8-2024	Inspection of paint	Accepted	Pass	See item list for further elaboration
13/8-2024	Assessing build quality	Accepted	Pass	See item list for further elaboration
13/8-2024	Check for dents	Accepted	Pass	See item list for further elaboration

5.2 F07 Electrical safety test – 10-foot container

5.2.1 Test

Follow designated standard to conduct electrical safety test, grounding continuity and high potential.

5.2.2 Relevant Standard / document

- EN 60204-1

5.2.3 Brief Test Plan

- According to EN 60204-1

5.2.4 Pass/Fail criteria.

- All relevant checks in EN 60204-1 chapter 18 passed.

5.2.5 Test Result

Table 2: Electrical safety test - Test results

Date tested	Item	Result	Pass/Fail	Notes
13/8-2024	Grounding Continuity	Accepted	Pass	-
13/8-2024	High Potential	Accepted	Pass	-

Table 3: Electrical safety test - calibration equipment

Unit	Equipment number	Calibration due date	Equipment used for
Metrel CE-Multitester	086-003	19/1-2025	Grounding Continuity and High Potential

5.3 F08 Electrical safety test – 40-foot container

5.3.1 Test

Follow designated standard to conduct electrical safety test, grounding continuity and high potential.

5.3.2 Relevant Standard / document

- EN 60204-1

5.3.3 Brief Test Plan

- According to EN 60204-1

5.3.4 Pass/Fail criteria.

- All relevant checks in EN 60204-1 chapter 18 passed.

5.3.5 Test Result

Table 4: Electrical safety test - Test Result

Date tested	Item	Result	Pass/Fail	Notes
13/8-2024	Grounding Continuity	Accepted	Pass	-
13/8-2024	High Potential	Accepted	Pass	-

Table 5: Electrical safety test - Calibration equipment

Unit	Equipment number	Calibration due date	Equipment used for
Metrel CE-Multitester	086-003	19/1-2025	Grounding Continuity and High Potential

5.4 F10 Safety

5.4.1 Test

Conduct tests of safety inputs and outputs, including emergency stop buttons, smoke detectors, gas detectors and external connections.

5.4.2 Relevant Standard / document

- Safety input checklist according to EN/ISO 13849-2 procedure

5.4.3 Brief Test Plan

- Trigger each safety input according to checklist.
  - Emergency pushbuttons
  - Smoke detectors test
  - H2 sensor test
  - External safety switches
  - External feedback

5.4.4 Pass/Fail criteria.

- Verified according to checklist.
- Each item triggers the correct alarm

5.4.5 Test Result

Table 6: Safety - Test Result

Date tested	Item	Result	Pass/Fail	Notes
13/8-2024	Emergency pushbuttons	OK	Pass	-
13/8-2024	Smoke detectors	OK	Pass	3 sensors in 40ft container and 1 sensor in 10 ft container
13/8-2024	H2 sensors	OK	Pass	3 sensors in 40ft container
13/8-2024	External safety switches	OK	Pass	-
13/8-2024	External feedback	OK	Pass	-

Table 7: Safety - Calibration Equipment

Unit	Equipment number	Calibration due date	Equipment used for
Dräger calibration gas, 2% Hydrogen	Cylinder No: 955-657732	Valid until 10/1-2029	H2 sensors

5.5 F18 H_2 Leakage test

5.5.1 Test procedure

All pipework and H2 instrumentation subassemblies must be inspected, recorded, verified and pass in accordance with the procedure in section 5.4 in *SPC ID 0104 H2 Leak Test Procedure Rev 002* prior to full system FAT.

System H2 leakage test is done system pressure decay test, according to section 5.5 in *SPC ID 0104 H2 Leak Test Procedure Rev 002.*

5.5.2 Pass/Fail criteria.

Pressure decay test with a maximum leakage no greater than specified in test procedure.

Result details are documented in the template *SPC ID 0204 System pressure decay test template*

Parameter	Value	Description
L_A [Nm^3/h]	**2,72 – 3,58 x10^{-3}**	**Maximum allowed pressure decay to pass pressure decay test, where L_A = L_S + L_Mu**
L_S [Nm^3/h]	0	Summarized expected leak rates of all components in the system (per design leak rate).
L_Mu [Nm^3/h]	2,72 – 3,58 x10^{-3}	Calculated accuracy of the measuring system, used to perform the test.
L_C [Nm^3/h]	2,7x10^{-5}	Maximum allowed leak rate for a given pipe section, where integrity/operability of the system may be maintained safely

5.5.3 Test Result

Table 8: H2 leakage - Test Result

Date tested	Item	Leakage rate L_1 [Nm^3/h]	Pass/Fail	Notes
3/9-2024	H2 line 1	4.03E-05	Pass	-
3/9-2024	H2 line 2	8.06E-05	Pass	-
3/9-2024	H2 line 3	0.00E+00	Pass	-
3/9-2024	H2 line 4	1.60E-04	Pass	-
3/9-2024	H2 line 5	7.27E-05	Pass	-
3/9-2024	H2 line 6	-8.16E-05	Pass	-

6.0 Operational tests

Operations are done using operator HMI or remote HMI in normal operating mode.

6.1 O01 System Start/Stop - Normal low load operation.

6.1.1 Test

Fuel Cell system can start, deliver minimum power and perform controlled stop without faults. This test is based on DC power.

6.1.2 Relevant Standard / document

- No reference

6.1.3 Brief Test Plan

- All FC in standby
- Request 100kW DC
- Delay 120 seconds
- Request zero power
- Repeat with new preferred FC until all tested.

6.1.4 Pass/Fail criteria.

- Fuel Cell Package starts without faults.
- No persistent system alarms.
- Correct available power signal.
- DC Power output within +/-5% and stable in less than 60 seconds
- Fuel Cell Package stops without faults.
- FC in stand-by in less than 30 seconds.

6.1.5 Test Result

Table 9: System Start/Stop – Normal low load operation - Test Result

Date tested	Item	Result	Pass/Fail	Notes
3/9-2024	FCwave 1	All pass criterias passed except time to standby	Pass with note	Shut down to standby longer than 30 seconds
3/9-2024	FCwave 2	All pass criterias passed except time to standby	Pass with note	Shut down to standby took 58 seconds. Power output dipped to 82 kW during the test.
3/9-2024	FCwave 3	All pass criterias passed except time to standby	Pass with note	Shut down to standby took 55 seconds.
3/9-2024	FCwave 4	All pass criterias passed except time to standby	Pass with note	Shut down to standby took 59 seconds.
3/9-2024	FCwave 5	All pass criterias passed except time to standby	Pass with note	Shut down to standby took 57 seconds.
3/9-2024	FCwave 6	All pass criterias passed except time to standby	Pass with note	Shut down to standby took 1 minute 3 seconds.

6.2 O09 Load Test – step response 0 to 35%

6.2.1 Test

Test step response by adding 35% load in one step from no load while measuring AC power quality.

6.2.2 Relevant Standard / document

- SPC ID 0107 Power Quality Measurement Test Procedure

6.2.3 Brief Test Plan

- All FC in stand-by.
- Apply set point by requesting 350kW AC

6.2.4 Pass/Fail criteria.

- AC output: +/- 10% actual to curve at any time.
- FC: Startup time < curve+5 seconds at any FC.
- AC power quality within SPC ID 107
- No persistent system alarms.

6.2.5 Test Result

Table 10: Load Test - step response 0 to 35% - Test Result

Date tested	Item	Result	Pass/Fail	Notes
3/9-2024	Step response 0-35%	45 seconds for start-up 0-350kW AC. Slight overshoot on 30 kW AC	Pass	With reference to document C08 it is estimated that a ramp time to 500 kW is 75 seconds.
3/9-2024	AC power quality	2,8-2,9% VAC THD 2-50 No alarms	Pass	

6.3 O10 Load Test – step response 35% to 70%

6.3.1 Test

Test step response by adding 35% load in one step to reach 70% load while measuring AC power quality.

6.3.2 Relevant Standard / document

- SPC ID 0107 Power Quality Measurement Test Procedure

6.3.3 Brief Test Plan

- 3 FC running delivering 350kW AC steady state.
- 2 FC in stand-by
- Apply set point by requesting 700kW AC power.

6.3.4 Pass/Fail criteria.

- AC output: +/- 10% actual to curve at any time.
- FC: Startup time < curve+5 seconds at any FC
- AC power quality within SPC ID 107
- No persistent system alarms.

6.3.5 Test Result

Table 11: Load Test - step response 35% to 70% - Test Result

Date tested	Item	Result	Pass/Fail	Notes
3/9-2024	Step response 35%-70%	All 3 started up. 23 seconds startup time	Pass	With reference to document C08 it is estimated that a ramp time from 250 kW to 750 kW is 45 seconds.
3/9-2024	AC power quality	2,8-3,0 % VAC THD 2-50 No alarms	Pass	

6.4 O11 Load Test – step response 65% to 100%

6.4.1 Test

Test step response by adding 35% load in one step to reach full load while measuring AC power quality.

6.4.2 Relevant Standard / document

- SPC ID 0107 Power Quality Measurement Test Procedure

6.4.3 Brief Test Plan

- 6 FC running delivering 650kW AC steady state.
- Apply set point by requesting 1000kW AC power.

6.4.4 Pass/Fail criteria.

- AC output: +/- 10% actual to curve at any time.
- FC: Startup time < curve+5 seconds at any FC.
- AC power quality within SPC ID 107
- No persistent system alarms.

6.4.5 Test Result

Table 12: Load Test - step response 65% to 100% - Test Result

Date tested	Item	Result	Pass/Fail	Notes
3/9-2024	Step response 65%-100%	18 seconds startup time	Pass	With reference to document C08 it is estimated that a ramp time from 250 kW to 750 kW is 45 seconds.
3/9-2024	AC power quality	3,0-3,1 % VAC THD 2-50 No alarms	Pass	

6.5 O12 Load Test – 100% stability test - 3 hours.

6.5.1 Test

Test steady state at 100% load for 3 hours while measuring power quality.

6.5.2 Relevant Standard / document

- SPC ID 0107 Power Quality Measurement Test Procedure

6.5.3 Brief Test Plan

- 6 FC running delivering 1000kW steady state.

6.5.4 Pass/Fail criteria.

- AC output: +/- 10% actual to curve at any time.
- FC: Shutdown time < curve+5 seconds at any FC.
- AC power quality within SPC ID 107
- No persistent system alarms.

6.5.5 Test Result

Table 13: Load Test – Steady state 100% load - Test Result

Date tested	Item	Result	Pass/Fail	Notes
04-09-24	Full load test	1000 kW for 3 hours	Pass	See below
04-09-24	AC power quality	2.3-3.6 % VAC THD 2-50 No alarms	Pass	

- Following added to document 05/09/2024
- In agreement with customer, after half elapsed time of the test, BOP load was increased to maximum by the following:
  - All HT fans forced to 100%
  - HT Coolant pumps forced to 70%
  - Ventilation (40ft+10ft) increased to 100%
- No impact on power delivery was observed.

6.6 O13 Load Test – step response 100% to 50%

6.6.1 Test

Test step response by removing 50% load in one step at full load while measuring power quality.

6.6.2 Relevant Standard / document

- SPC ID 0107 Power Quality Measurement Test Procedure

6.6.3 Brief Test Plan

- 6 FC running delivering 1000kW steady state.
- Request 500kW AC.

6.6.4 Pass/Fail criteria.

- AC output: +/- 10% actual to curve at any time.
- FC: Shutdown time < curve+5 seconds at any FC.
- AC power quality within SPC ID 107
- No persistent system alarms.

6.6.5 Test Result

Table 14: Load Test - step response 100% to 50% - Test Result

Date tested	Item	Result	Pass/Fail	Notes
3/9-2024	Step response 100%-50%	Ramp down in 15 seconds	Pass	Wit reference to document C08 it is estimated that a ramp down time from 800 kW to 200 kW is 15 seconds.
3/9-2024	AC power quality	3,0-2,6 % VAC THD 2-50 No alarms	Pass	

6.7 O14 Load Test – step response 50% to 0%

6.7.1 Test

Test step response by removing 50% load in one step to no load while measuring AC power quality.

6.7.2 Relevant Standard / document

- SPC ID 0107 Power Quality Measurement Test Procedure

6.7.3 Brief Test Plan

- 3 FC running delivering 500kW AC.
- Request 0% and apply set point.

6.7.4 Pass/Fail criteria.

- AC output: +/- 10% actual to curve at any time.
- FC: Shutdown time < curve+5 seconds at any FC.
- AC power quality within SPC ID 107
- No persistent system alarms.

6.7.5 Test Result

Table 15: Load Test - step response 50% to 0% - Test Result

Date tested	Item	Result	Pass/Fail	Notes
03-09-2024	Step response 50%-0%		Pass	Test is executed with 6 FC instead of 3 as the plan describes
—	AC power quality	NA	NA	Not applicable due to the unit not producing power

ON BEHALF OF Ballard
DATE 6/9/2024 WR

SPC ID 0203 Pipework inspection and leakage test check sheet

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Revision Record

Rev #	Description	Revised By	Date dd-mm-yyyy
-	Initial Draft	TAN	21-08-2024
1	Released	TAN	30-8-2024

Checked by: MHA	Date: 29/08-2024
Approved by: MHA	Date: 30/08-2024

Project	601456B Crosswind BLPH
Date	30-08-2024
Identification of piping system (photo or P&ID) [✓ or -]	✓
Inspected by	MKD
Document Approved by	MFO
Filing date	02-09-2024

Follow the procedure in section 5.4 of *SPC ID 0104 Leakage Test Procedure*

*=Pass criteria according to inspection tool user instruction

**=Calculated value based on allowable leakage rate plus sniffing tool uncertainty

*** Not applicable due to refitting/preswaging of joint/Not a ferrule fitting

		Visual inspection	Gauge Inspection*	Auditorial inspection	Sniffing inspection		Overall result
Item type	**Item ID**	**Pass/fail**	**Pass/fail**	**Pass/fail**	**Pass/fail**	**Pass criteria** [PPM]**	**[Pass/fail]**
H2 heater, String 1	1-H-BV-1	✓	NA***	✓	✓	35ppm	✓
H2 heater, String 1	1-H-CLA-1	✓	NA***	✓	✓	35ppm	✓
H2 heater, String 1	1-H-CMC-G-1	✓	✓	✓	✓	35ppm	✓

H2 heater, String 1	1-H-CMC-G-2	✓	✓	✓	✓	35ppm	✓
H2 heater, String 1	1-H-CMC-G-3	✓	✓	✓	✓	35ppm	✓
H2 heater, String 1	1-H-CMC-G-4	✓	✓	✓	✓	35ppm	✓
H2 heater, String 1	1-H-CUA-1	✓	NA***	✓	✓	35ppm	✓
H2 heater, String 2	2-H-BV-1	✓	NA***	✓	✓	35ppm	✓
H2 heater, String 2	2-H-CLA-1	✓	NA***	✓	✓	35ppm	✓
H2 heater, String 2	2-H-CMC-G-1	✓	✓	✓	✓	35ppm	✓
H2 heater, String 2	2-H-CMC-G-2	✓	✓	✓	✓	35ppm	✓
H2 heater, String 2	2-H-CMC-G-3	✓	✓	✓	✓	35ppm	✓
H2 heater, String 2	2-H-CMC-G-4	✓	✓	✓	✓	35ppm	✓
H2 heater, String 2	2-H-CUA-1	✓	NA***	✓	✓	35ppm	✓
H2 heater, String 3	3-H-BV-1	✓	NA***	✓	✓	35ppm	✓
H2 heater, String 3	3-H-CLA-1	✓	NA***	✓	✓	35ppm	✓
H2 heater, String 3	3-H-CMC-G-1	✓	✓	✓	✓	35ppm	✓

H2 heater, String 3	3-H-CMC-G-2	✓	✓	✓	✓	35ppm	✓
H2 heater, String 3	3-H-CMC-G-3	✓	✓	✓	✓	35ppm	✓
H2 heater, String 3	3-H-CMC-G-4	✓	✓	✓	✓	35ppm	✓
H2 heater, String 3	3-H-CUA-1	✓	NA***	✓	✓	35ppm	✓
H2 heater, String 4	4-H-BV-1	✓	NA***	✓	✓	35ppm	✓
H2 heater, String 4	4-H-CLA-1	✓	NA***	✓	✓	35ppm	✓
H2 heater, String 4	4-H-CMC-G-1	✓	✓	✓	✓	35ppm	✓
H2 heater, String 4	4-H-CMC-G-2	✓	✓	✓	✓	35ppm	✓
H2 heater, String 4	4-H-CMC-G-3	✓	✓	✓	✓	35ppm	✓
H2 heater, String 4	4-H-CMC-G-4	✓	✓	✓	✓	35ppm	✓
H2 heater, String 4	4-H-CUA-1	✓	NA***	✓	✓	35ppm	✓
H2 heater, String 5	5-H-BV-1	✓	NA***	✓	✓	35ppm	✓
H2 heater, String 5	5-H-CLA-1	✓	NA***	✓	✓	35ppm	✓
H2 heater, String 5	5-H-CMC-G-1	✓	✓	✓	✓	35ppm	✓

H2 heater, String 5	5-H-CMC-G-2	✓	✓	✓	✓	35ppm	✓
H2 heater, String 5	5-H-CMC-G-3	✓	✓	✓	✓	35ppm	✓
H2 heater, String 5	5-H-CMC-G-4	✓	✓	✓	✓	35ppm	✓
H2 heater, String 5	5-H-CUA-1	✓	NA***	✓	✓	35ppm	✓
H2 heater, String 6	6-H-BV-1	✓	NA***	✓	✓	35ppm	✓
H2 heater, String 6	6-H-CLA-1	✓	NA***	✓	✓	35ppm	✓
H2 heater, String 6	6-H-CMC-G-1	✓	✓	✓	✓	35ppm	✓
H2 heater, String 6	6-H-CMC-G-2	✓	✓	✓	✓	35ppm	✓
H2 heater, String 6	6-H-CMC-G-3	✓	✓	✓	✓	35ppm	✓
H2 heater, String 6	6-H-CMC-G-4	✓	✓	✓	✓	35ppm	✓
H2 heater, String 6	6-H-CUA-1	✓	NA***	✓	✓	35ppm	✓

H2 Heater string 1,2,3 Inlet

M: Manifold
H: Heater
BV: Ball Valve
MANO: Manometer
PRV: Pressure Relief Valve
CUR: Reducing Union
CTR: Reducing Tee
CMC: Male Connector
CLA: Union Elbow
CTA: Union Tee
CSWC: Tube Socket Weld Connector
CPA: Plug
Red Arrow indicates inspected item.





H2 Heater string 4,5,6 Inlet



H2 Heater string 1,2,3,4,5,6 Shut-off Valve & Pipes

M: Manifold
H: Heater
BV: Ball Valve
MANO: Manometer
PRV: Pressure Relief Valve
CUR: Reducing Union
CTR: Reducing Tee
CMC: Male Connector
CLA: Union Elbow
CTA: Union Tee
CSWC: Tube Socket Weld Connector
CPA: Plug
Red Arrow indicates inspected item.





SPC ID 0203 Pipework inspection and leakage test check sheet

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Revision Record

Rev #	Description	Revised By	Date dd-mm-yyyy
-	Initial Draft	TAN	21-08-2024
1	Released	TAN	30-8-2024

Checked by: MHA	Date: 29/08-2024
Approved by: MHA	Date: 30/08-2024

Project	601456B Crosswind BLPH
Date	30-08-2024
Identification of piping system (photo or P&ID) [✓ or -]	✓
Inspected by	MKD
Document Approved by	MFO
Filing date	02-09-2024

Follow the procedure in section 5.4 of *SPC ID 0104 Leakage Test Procedure*

*=Pass criteria according to inspection tool user instruction

**=Calculated value based on expected leakage rate plus sniffing tool uncertainty

*** Not applicable due to refitting/preswaging of joint/Not a ferrule fitting

		Visual inspection	Gauge Inspection*	Auditorial inspection	Sniffing inspection		Overall result
Item type	**Item ID**	**Pass/fail**	**Pass/fail**	**Pass/fail**	**Pass/fail**	**Pass criteria** [PPM]**	**[Pass/fail]**
H2 Heater+Container, String 1	1-H-CUA-1	✓	NA***	✓	✓	35ppm	✓
H2 Heater+Container, String 1	1-C-CUR-1	✓	NA***	✓	✓	35ppm	✓
H2 Heater+Container, String 2	2-H-CUA-1	✓	NA***	✓	✓	35ppm	✓
H2 Heater+Container, String 2	2-C-CUR-1	✓	NA***	✓	✓	35ppm	✓

H2 Heater+Container, String 3	3-H-CUA-1	✓	NA***	✓	✓	35ppm	✓
H2 Heater+Container, String 3	3-C-CUR-1	✓	NA***	✓	✓	35ppm	✓
H2 Heater+Container, String 4	4-H-CUA-1	✓	NA***	✓	✓	35ppm	✓
H2 Heater+Container, String 4	4-C-CUR-1	✓	NA***	✓	✓	35ppm	✓
H2 Heater+Container, String 5	5-H-CUA-1	✓	NA***	✓	✓	35ppm	✓
H2 Heater+Container, String 5	5-C-CUR-1	✓	NA***	✓	✓	35ppm	✓
H2 Heater+Container, String 6	6-H-CUA-1	✓	NA***	✓	✓	35ppm	✓
H2 Heater+Container, String 6	6-C-CUR-1	✓	NA***	✓	✓	35ppm	✓

H2 Heater+Container string 1,2,3,4,5,6



M: Manifold
H: Heater
C: Container
BV: Ball Valve
MANO: Manometer
PRV: Pressure Relief Valve
CUR: Reducing Union
CTR: Reducing Tee
CMC: Male Connector
CLA: Union Elbow
CTA: Union Tee
CSWC: Tube Socket Weld Connector
CPA: Plug
Red Arrow indicates inspected item.

H2 Container pipe to FCwave



M: Manifold
H: Heater
C: Container
BV: Ball Valve
MANO: Manometer
PRV: Pressure Relief Valve
CUR: Reducing Union
CTR: Reducing Tee
CMC: Male Connector
CLA: Union Elbow
CTA: Union Tee
CSWC: Tube Socket Weld Connector
CPA: Plug
Red Arrow indicates inspected item.

SPC ID 0204 System Pressure Decay Test Template

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Revision Record

Rev #	Description	Revised By	Date dd-mm-yyyy
-	Initial Draft	TAN	21-08-2024
1	Released	TAN	30-08-2024
2	Updated	TAN	09-09-2024

Purpose	Pressure decay test template for recording tightness and evaluating system pipework integrity
Reference procedure	SPC ID 0104 rev 002 H2 Leak Test Procedure

Checked by	MHA	Date: 09/09-2024
Approved by	MHA	Date: 09/09-2024

Title	System Pressure Decay, Complete Assembly, Crosswind
Project	601456B Crosswind BLPH
Test date	03-09-2024
Identification of piping system (photo or P&ID) [✓ or -]	✓ see Sheet "P&ID"

Test volume	String 1 HA01+DA02-QM01 to YV_H30 solenoid valve in FCwave 1. Similar valves for string 2-6.
Test fluid/gas	Hydrogen
Test location	Crosswind Container, Majsmarken 1, 9500 Hobro Denmark
Test performed by	TAN
Results approved by	MHA
Filing date	09-09-2024

L_S - Expected leak rate for pipework system							
Ferrule fittings tightness tolerance	< 0		bar				
Bonded seal tightness tolerance	< 0		bar				
L_S total*	= 0		bar				
L_S total	=	0	NM3/h				
L_Mu - Measuring system uncertainty							
pressure gauge uncertainty							
transmitter FS (full scale)	=	16	barg				
Linearity	<	0.2	% of FS	=	<	32	mbar
Non-repeatability	<	0.1	% of FS	=	<	16	mbar
Analogue input	±	10	microA	=		10	mbar/10 minutes
Accuracy ±0.25% actual reading	±	32.5	microA		=	32.5	mbar
Temperature uncertainty (3 Kelvin)				=	±	82	mbar/10 minutes
L_Mu total					=	172.5	mbar

*=All joints and valves are considered to be classified "enhanced tightness". Hence zero allowable leak rate

Calculation of L_Mu, measuring system uncertainty

	V	T0	T1	T2	P0	P1	P2	Pa1	Pa2	t	L_Mu
	M3	°C	°C	°C	kPa	barg	barg	kPa	kPa	minutes	NM3/h
String 1	3.46E-03	15	15	15	101.325	7.150	6.978	101.325	101.325	10	3.53E-03
String 2	3.05E-03	15	15	15	101.325	7.150	6.978	101.325	101.325	10	3.12E-03

String 3	2.67E-03	15	15	15	101.325	7.150	6.978	101.325	101.325	10	2.72E-03
String 4	2.74E-03	15	15	15	101.325	7.150	6.978	101.325	101.325	10	2.80E-03
String 5	3.12E-03	15	15	15	101.325	7.150	6.978	101.325	101.325	10	3.19E-03
String 6	3.50E-03	15	15	15	101.325	7.150	6.978	101.325	101.325	10	3.58E-03

Calculation of L_A, max evaluated leak rate for pipework system acceptance

	L_S	L_Mu		L_A
	NM3/h	NM3/h		NM3/h
String 1	0	3.53E-03	=	3.53E-03
String 2	0	3.12E-03	=	3.12E-03
String 3	0	2.72E-03	=	2.72E-03
String 4	0	2.80E-03	=	2.80E-03
String 5	0	3.19E-03	=	3.19E-03
String 6	0	3.58E-03	=	3.58E-03

Procedure

Fill in design pressure =	6.5	barg
The Test Pressure is 1.1 times design pressure or above =	7.15	barg
If the system previosly has been leakage tested with formier gas, this test can also use the used gas for operation		
To perform the test follow "Sequence" paragraph 5.5.3 in SPC 0104 H2 Leak Test Procedure		

Calculation of L1, actual leak rate

	V	T0	T1	T2	P0	P1	P2	Pa1	Pa2	t	L1 (gas leakage rate)
	M3	°C	°C	°C	kPa	barg	barg	kPa	kPa	minutes	NM3/h
String 1	0.003458573	15	19.7	19.7	101.325	7.494	7.492	1015	1015	10	4.03E-05
String 2	0.003458573	15	19.7	19.7	101.325	7.578	7.574	1015	1015	10	8.06E-05
String 3	0.002666793	15	19.7	19.7	101.325	7.95	7.95	1015	1015	10	0.00E+00
String 4	0.002741607	15	19.7	19.7	101.325	7.552	7.542	1015	1015	10	1.60E-04
String 5	0.003120525	15	19.7	19.7	101.325	7.452	7.448	1015	1015	10	7.27E-05
String 6	0.003500483	15	19.7	19.7	101.325	7.28	7.284	1015	1015	10	-8.16E-05

Sensor	Sensor placement
Temperature sensor T1 & T2	BT01 Sensor in H2 heater
Pressure sensor P1 & P2	FCwave pressure inlet sensor
Atmospheric pressure Pa1 & Pa2	Data from https://www.dmi.dk/maalinger/show/DK/2620167/Hobro/

Result of test

	L1	<	L_A	Pass (Below acceptance criteria L_A)
	NM3/h		NM3/h	Pass/Fail
String 1	4.03E-05	<	3.53E-03	Pass
String 2	8.06E-05	<	3.12E-03	Pass
String 3	0.00E+00	<	2.72E-03	Pass
String 4	1.60E-04	<	2.80E-03	Pass
String 5	7.27E-05	<	3.19E-03	Pass
String 6	-8.16E-05	<	3.58E-03	Pass

Title: System Pressure Decay, Complete Assembly, CrossWind
P&ID of Hydrogen Supply system

SPC ID: 0204
Revision: 2

Printed on: 09-09-2024

Hydrogen Supply System - Fuel Cells 1-6

=RE01
Fuel Cell System 1

+GB01
FCwave 1

-XM01
20mm
H2 Supply Inlet

-WP_H2927
Hydrogen
3.5-4.5 barg
-5.4 - 80°C
<4.9 g/s

+GB02
FCwave 2

-XM01
20mm
H2 Supply Inlet

-WP_H2926
Hydrogen
3.5-4.5 barg
-5.4 - 80°C
<4.9 g/s

+GB03
FCwave 3

-XM01
20mm
H2 Supply Inlet

-WP_H2925
Hydrogen
3.5-4.5 barg
-5.4 - 80°C
<4.9 g/s

=RE02
Fuel Cell System 2

+GB04
FCwave 4

-XM01
20mm
H2 Supply Inlet

-WP_H2924
Hydrogen
3.5-4.5 barg
-5.4 - 80°C
<4.9 g/s

+GB05
FCwave 5

-XM01
20mm
H2 Supply Inlet

-WP_H2923
Hydrogen
3.5-4.5 barg
-5.4 - 80°C
<4.9 g/s

+GB06
FCwave 6

-XM01
20mm
H2 Supply Inlet

-WP_H2922
Hydrogen
3.5-4.5 barg
-5.4 - 80°C
<4.9 g/s

=HA01+DA02
Hydrogen Supply System, Container #1 Outside

-XT01
Wall pass-through

-WP_H2917
Hydrogen
3.5-4.5 barg
-5.4 - 80°C
<4.9 g/s

-XT02
Wall pass-through

-WP_H2916
Hydrogen
3.5-4.5 barg
-5.4 - 80°C
<4.9 g/s

-XT03
Wall pass-through

-WP_H2915
Hydrogen
3.5-4.5 barg
-5.4 - 80°C
<4.9 g/s

-XT04
Wall pass-through

-WP_H2914
Hydrogen
3.5-4.5 barg
-5.4 - 80°C
<4.9 g/s

-XT05
Wall pass-through

-WP_H2913
Hydrogen
3.5-4.5 barg
-5.4 - 80°C
<4.9 g/s

-XT06
Wall pass-through

-WP_H2912
Hydrogen
3.5-4.5 barg
-5.4 - 80°C
<4.9 g/s

Y V
QM21

=HA01+DA02-QM21
DN20
Shut-off valve

Y V
QM22

=HA01+DA02-QM22
DN20
Shut-off valve

Y V
QM23

=HA01+DA02-QM23
DN20
Shut-off valve

Y V
QM24

=HA01+DA02-QM24
DN20
Shut-off valve

Y V
QM25

=HA01+DA02-QM25
DN20
Shut-off valve

Y V
QM26

=HA01+DA02-QM26
DN20
Shut-off valve

-WP_H2907
Hydrogen
3.5-4.5 barg
-5.4 - 80°C
<4.9 g/s

-WP_H2906
Hydrogen
3.5-4.5 barg
-5.4 - 80°C
<4.9 g/s

-WP_H2905
Hydrogen
3.5-4.5 barg
-5.4 - 80°C
<4.9 g/s

-WP_H2904
Hydrogen
3.5-4.5 barg
-5.4 - 80°C
<4.9 g/s

-WP_H2903
Hydrogen
3.5-4.5 barg
-5.4 - 80°C
<4.9 g/s

-WP_H2902
Hydrogen
3.5-4.5 barg
-5.4 - 80°C
<4.9 g/s

Y V
QM11

=HA01+DA02-QM11
DN20
Shut-off Valve

Y V
QM12

=HA01+DA02-QM12
DN20
Shut-off Valve

Y V
QM13

=HA01+DA02-QM13
DN20
Shut-off Valve

Y V
QM14

=HA01+DA02-QM14
DN20
Shut-off Valve

Y V
QM15

=HA01+DA02-QM15
DN20
Shut-off Valve

Y V
QM16

=HA01+DA02-QM16
DN20
Shut-off Valve

-BL01
SI = 11 mm
Ex Point Liquid Detection

BT01
PT1000 -40...150 °C
Liquid Temperature Sensor

-CM01
SS316, Volume 146L
Hydrogen Heater Vessel

-WP01
DN25, 3000m
Tube Coil

-WP02
DN25, 3000m
Tube Coil

-WP03
DN25, 3000m
Tube Coil

-WP04
DN25, 3000m
Tube Coil

-WP05
DN25, 3000m
Tube Coil

-WP06
DN25, 3000m
Tube Coil

-EA01
3x400V, 9kW, Ex
Heating Element 1

-EA02
3x400V, 9kW, Ex
Heating Element 2

-WP_H2947
Hydrogen
3.5 - 4.5 barg
-5.4 - 80°C
<4.9 g/s

-WP_H2946
Hydrogen
3.5 - 4.5 barg
-5.4 - 80°C
<4.9 g/s

-WP_H2945
Hydrogen
3.5 - 4.5 barg
-5.4 - 80°C
<4.9 g/s

-WP_H2944
Hydrogen
3.5 - 4.5 barg
-5.4 - 80°C
<4.9 g/s

-WP_H2943
Hydrogen
3.5 - 4.5 barg
-5.4 - 80°C
<4.9 g/s

-WP_H2942
Hydrogen
3.5 - 4.5 barg
-5.4 - 80°C
<4.9 g/s

H

=HA01+DA02-QM01
DN25
Isolation Valve, Lockable

H

=HA01+DA02-QM02
DN25
Isolation Valve, Lockable

H

=HA01+DA02-QM03
DN25
Isolation Valve, Lockable

H

=HA01+DA02-QM04
DN25
Isolation Valve, Lockable

H

=HA01+DA02-QM05
DN25
Isolation Valve, Lockable

H

=HA01+DA02-QM06
DN25
Isolation Valve, Lockable

=HKN70
Baseload Power Hub, Hydrogen Supply

0.5 - 25.4 g/s
-5.4 - 80°C
3.5 - 4.5 barg
Hydrogen

=HA01+DA02-XM01
DN32 ASME B16.5
H2 Supply Connection

P T
BT01

=HA01+DA02-BP01
0...10 barg
Hydrogen Inlet
Pressure Transmitter

-WP_H2900
Hydrogen
3.5 - 4.5 barg
-5.4 - 80°C
0.5 - 25.4 g/s

H

=HA01+DA02-QM00
DN32
Manual shutoff valve
Lockable

-WP_H2901
Hydrogen
3.5 - 4.5 barg
-5.4 - 80°C
0.5 - 25.4 g/s

Reference Item Number	Ballard Part # TBD
EPLAN Project Name	6014568 - Shell Baseload Power Hub
EPLAN Revision	-.P13
EPLAN Project Pages	319
=	+ + + & 802

REVISION INFORMATION	
DESCRIPTION	
DATE	08-Mar-24

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DRAWING	6014568 C03 Process and Instrumentation Diagram
REVISION	-.P13
DRAWING TITLE	Crosswind/Shell Baseload Power Hub, Fuel Cell Container 1MW, no BESS
SHEET TYPE/DESC	Hydrogen Supply System
ALL SHEETS ARE THE SAME REVISION STATUS	SIZE A1
LANGUAGE EN	SHEET/TOTAL 4 / 14

FRMS110653/08

Title	F07 & F08 Electrical safety test - 40 ft and 10 ft container
Project	601456B CrossWind BLPH
Test date [DD-MM-YYYY]	13-08-2024
Test location	Crosswind Containers, Majsmarken 1, 9500 Hobro, Denmark
Test performed by	PBL & TAN

Grounding continuity

EN 60204-1:2018 - Section 18.2.2 - Test 1

Test performed with a test current of 10A

Main location	Location	Measurement	Unit
40ft container	Busbar to busbar	0.024	Ohm
	Module 1	0.018	Ohm
	DC/DC cabinet 1	0.023	Ohm
	Module 2	0.024	Ohm
	DC/DC cabinet 2	0.019	Ohm
	Module 3	0.026	Ohm
	DC/DC cabinet 3	0.016	Ohm
	Module 4	0.026	Ohm
	DC/DC cabinet 4	0.016	Ohm
	Module 5	0.024	Ohm
	DC/DC cabinet 5	0.017	Ohm
	Module 6	0.029	Ohm
	DC/DC cabinet 6	0.015	Ohm
	Control cabinet	0.021	Ohm
	Control cabinet right door	0.032	Ohm
	Lifting crane track, dolly	0.028	Ohm
	LT piping	0.031	Ohm
	Isolation transformer cover	0.039	Ohm
	Cable tray	0.019	Ohm

Main location	Location	Measurement	Unit
10ft container	Busbar to busbar	0.019	Ohm
	Main DC/Acpoint 1	0.032	Ohm
	Main DC/Acpoint 2	0.024	Ohm
	Main DC/Acpoint 3	0.027	Ohm
	DC/AC conduncter point 1	0.037	Ohm
	DC/AC conduncter point 2	0.022	Ohm
	DC/AC conduncter point 3	0.023	Ohm
	LT coolant pipe	0.024	Ohm
	Cable tray	0.02	Ohm
	Main transforer grounding bolt	0.023	Ohm
	Main transformer chassis	0.02	Ohm
	Cable tray	0.022	Ohm

Title	F07 & F08 Electrical safety test - 40 ft and 10 ft container
Project	601456B CrossWind BLPH
Test date [DD-MM-YYYY]	13-08-2024
Test location	Crosswind Containers, Majsmarken 1, 9500
Test performed by	PBL & TAN

Isolation resistance
EN 60204-1:2018 - Section 18.3
Test performed with a test voltage of 1000V

Main location	Location	Measurement	Unit
40 ft container	L1-PE	> 999.9	MOhm
	Cooling skid L1	10.01	Mohm
	Colling skid L2	6.252	Mohm
	Cooling skid L3	12.81	Mohm
	AUX supply L1	251	Mohm
	AUX supply L2	337	MOhm
	AUX supply L3	237	Mohm

Main location	Location	Measurement	Unit
10ft container	L1+L2+L3-PE on AC circuit	592	Mohm

Title	F07 & F08 Electrical safety test - 40 ft and 10 ft container
Project	601456B CrossWind BLPH
Test date [DD-MM-YYYY]	13-08-2024
Test location	Crosswind Containers, Majsmarken 1, 9500
Test performed by	PBL & TAN

Isolation resistance

EN 60204-1:2018 - Section 18.4

Test performed with a test voltage of 2500VAC

Main location	Location	Measurement	Unit	Notes
40ft container	PE and L1	0	mA	The surge arrestor has been bypassed to allow the test to be conducted
	PE and L2	0	mA	
	PE and L3	0	mA	

Main location	Location	Measurement	Unit	Notes
10 FT container	PE and L1	7.1	mA	
	PE and L2	7.1	mA	
	PE and L3	7	mA	

Date: 2024-09-11

Author: PBL, TAN

Ballard Power Systems Europe

Summary:

Thermographic report from Crosswind FAT2, 2024-09-04.

System is operating at 100% (1MW) and have been at full power for >1 hour with the cooling and ventilation system operating at 100%.

Test start at 8:55

The first few images are the system from a distance.

First half of the report shows thermal images from inside the 40ft container, with focus on DC power cables, pumps and fans and process exhaust pipes.

Second half of the report shows the system test equipment and outside the system.

There are no items of concern.

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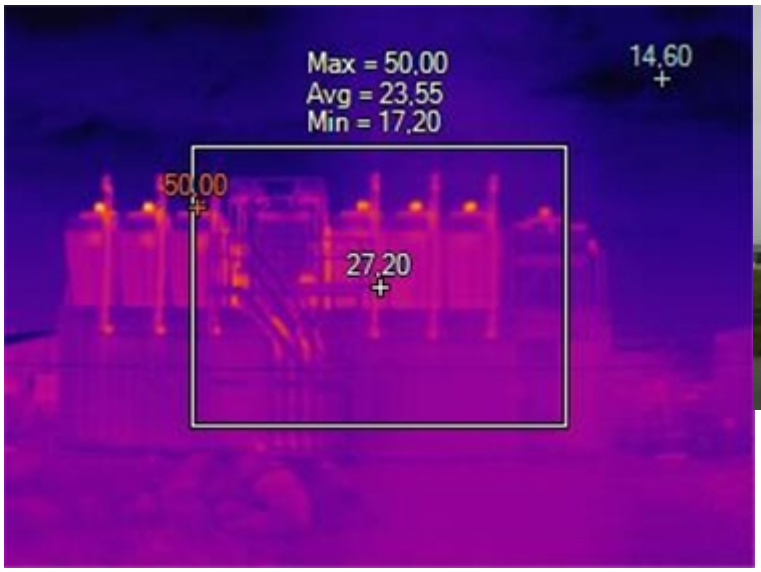




Image Info

Name	IR_00252.IS2
Emissivity	0,95
Background Temperature	22,00 °C
Calibration Range	-10,00 °C to 550,00 °C
Image Range	14,60 °C to 50,00 °C
Image Time	04/09/2024 11:45:17 AM

Marker Info

Marker Name	Maximum	Minimum	Average	Emissivity	BG Temp	Std.Dev	Delta-T
Centerpoint	27,2 °C	27,2 °C	27,2 °C	0,95	22,0 °C	0,00	
Centerbox	50,0 °C	17,2 °C	23,6 °C	0,95	22,0 °C	2,67	
Hot	50,0 °C	50,0 °C	50,0 °C	0,95	22,0 °C	0,00	
Cold	14,6 °C	14,6 °C	14,6 °C	0,95	22,0 °C	0,00	

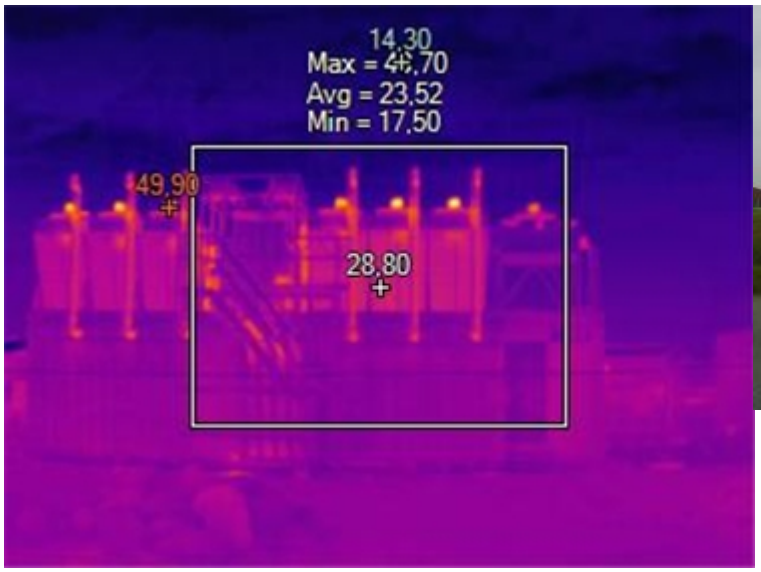


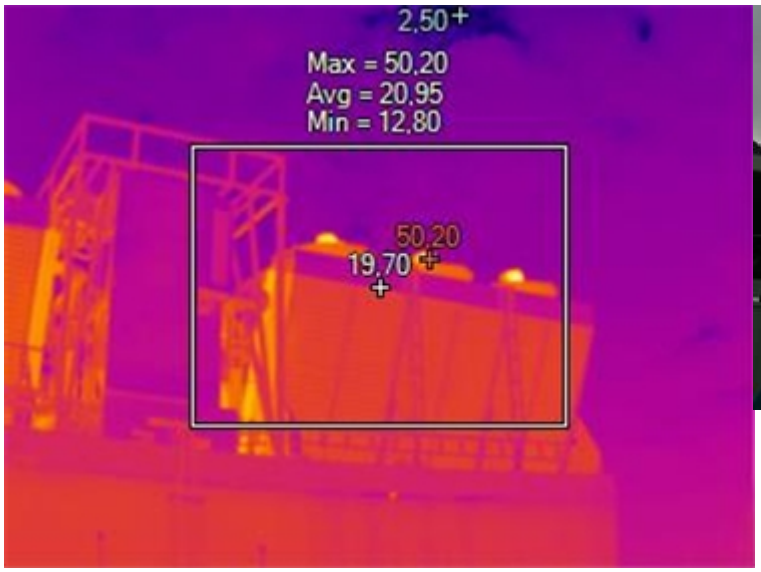


Image Info

Name	IR_00251.IS2
Emissivity	0,95
Background Temperature	22,00 °C
Calibration Range	-10,00 °C to 550,00 °C
Image Range	14,30 °C to 49,90 °C
Image Time	04/09/2024 11:45:00 AM

Marker Info

Marker Name	Maximum	Minimum	Average	Emissivity	BG Temp	Std.Dev	Delta-T
Centerpoint	28,8 °C	28,8 °C	28,8 °C	0,95	22,0 °C	0,00	
Centerbox	49,7 °C	17,5 °C	23,5 °C	0,95	22,0 °C	3,28	
Hot	49,9 °C	49,9 °C	49,9 °C	0,95	22,0 °C	0,00	
Cold	14,3 °C	14,3 °C	14,3 °C	0,95	22,0 °C	0,00	



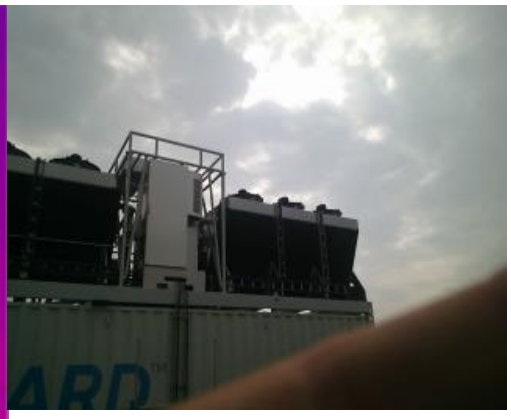


Image Info

Name	IR_00250.IS2
Emissivity	0,95
Background Temperature	22,00 °C
Calibration Range	-10,00 °C to 550,00 °C
Image Range	2,50 °C to 50,20 °C
Image Time	04/09/2024 11:43:56 AM

Marker Info

Marker Name	Maximum	Minimum	Average	Emissivity	BG Temp	Std.Dev	Delta-T
Centerpoint	19,7 °C	19,7 °C	19,7 °C	0,95	22,0 °C	0,00	
Centerbox	50,2 °C	12,8 °C	20,9 °C	0,95	22,0 °C	5,34	
Hot	50,2 °C	50,2 °C	50,2 °C	0,95	22,0 °C	0,00	
Cold	2,5 °C	2,5 °C	2,5 °C	0,95	22,0 °C	0,00	

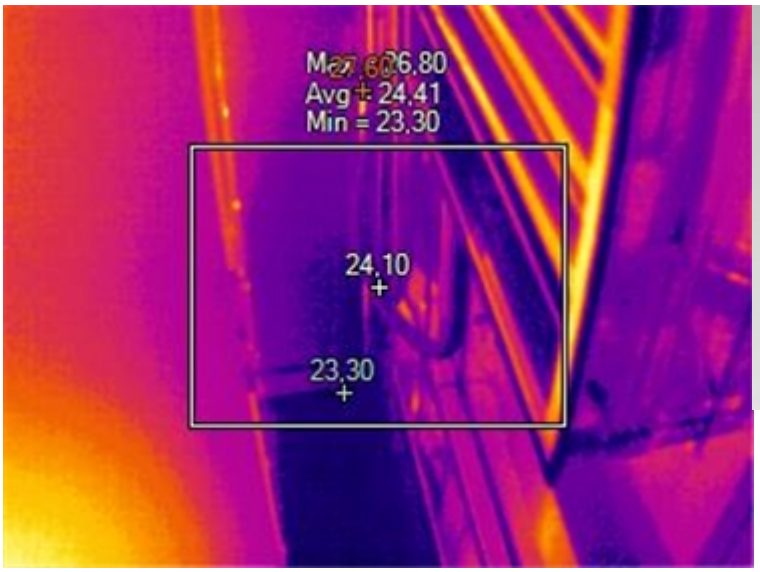




Image Info

Name	IR_00248.IS2
Emissivity	0,95
Background Temperature	22,00 °C
Calibration Range	-10,00 °C to 550,00 °C
Image Range	23,30 °C to 27,60 °C
Image Time	04/09/2024 11:31:07 AM

Marker Info

Marker Name	Maximum	Minimum	Average	Emissivity	BG Temp	Std.Dev	Delta-T
Centerpoint	24,1 °C	24,1 °C	24,1 °C	0,95	22,0 °C	0,00	
Centerbox	26,8 °C	23,3 °C	24,4 °C	0,95	22,0 °C	0,56	
Hot	27,6 °C	27,6 °C	27,6 °C	0,95	22,0 °C	0,00	
Cold	23,3 °C	23,3 °C	23,3 °C	0,95	22,0 °C	0,00	





Image Info

Name	IR_00247.IS2
Emissivity	0.95
Background Temperature	22.00 °C
Calibration Range	-10.00 °C to 550.00 °C
Image Range	23.10 °C to 28.60 °C
Image Time	04/09/2024 11:31:00 AM

Marker Info

Marker Name	Maximum	Minimum	Average	Emissivity	BG Temp	Std.Dev	Delta-T
Centerpoint	23.7 °C	23.7 °C	23.7 °C	0.95	22.0 °C	0.00	
Centerbox	28.6 °C	23.2 °C	23.9 °C	0.95	22.0 °C	0.55	
Hot	28.6 °C	28.6 °C	28.6 °C	0.95	22.0 °C	0.00	
Cold	23.1 °C	23.1 °C	23.1 °C	0.95	22.0 °C	0.00	

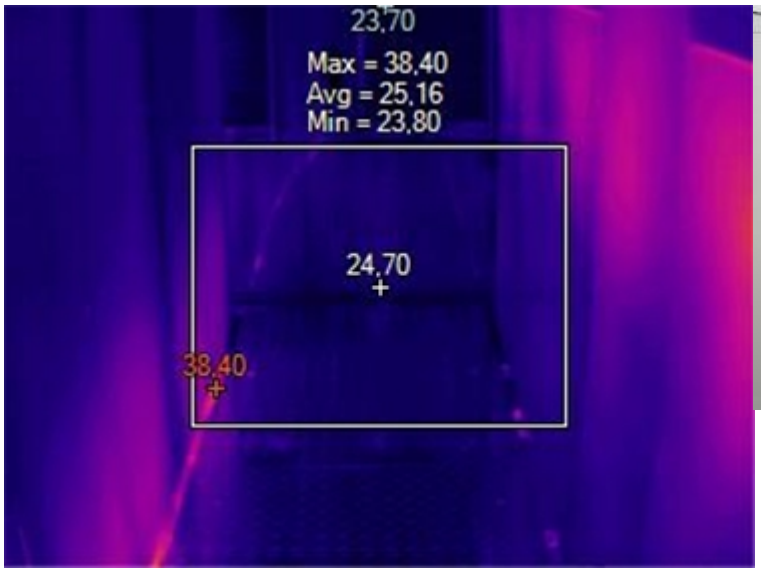




Image Info

Name	IR_00246.IS2
Emissivity	0,95
Background Temperature	22,00 °C
Calibration Range	-10,00 °C to 550,00 °C
Image Range	23,70 °C to 38,40 °C
Image Time	04/09/2024 11:30:47 AM

Marker Info

Marker Name	Maximum	Minimum	Average	Emissivity	BG Temp	Std.Dev	Delta-T
Centerpoint	24,7 °C	24,7 °C	24,7 °C	0,95	22,0 °C	0,00	
Centerbox	38,4 °C	23,8 °C	25,2 °C	0,95	22,0 °C	0,71	
Hot	38,4 °C	38,4 °C	38,4 °C	0,95	22,0 °C	0,00	
Cold	23,7 °C	23,7 °C	23,7 °C	0,95	22,0 °C	0,00	

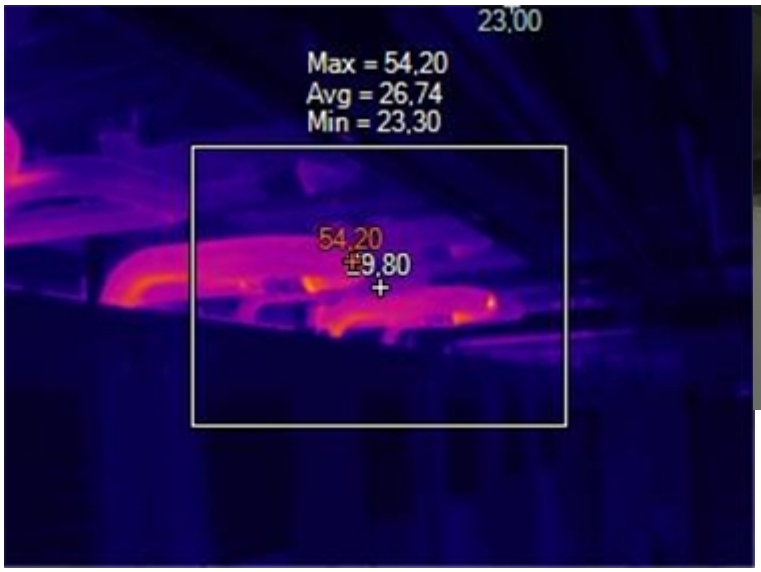




Image Info

Name	IR_00245.IS2
Emissivity	0,95
Background Temperature	22,00 °C
Calibration Range	-10,00 °C to 550,00 °C
Image Range	23,00 °C to 54,20 °C
Image Time	04/09/2024 11:30:41 AM

Marker Info

Marker Name	Maximum	Minimum	Average	Emissivity	BG Temp	Std.Dev	Delta-T
Centerpoint	29,8 °C	29,8 °C	29,8 °C	0,95	22,0 °C	0,00	
Centerbox	54,2 °C	23,3 °C	26,7 °C	0,95	22,0 °C	3,47	
Hot	54,2 °C	54,2 °C	54,2 °C	0,95	22,0 °C	0,00	
Cold	23,0 °C	23,0 °C	23,0 °C	0,95	22,0 °C	0,00	

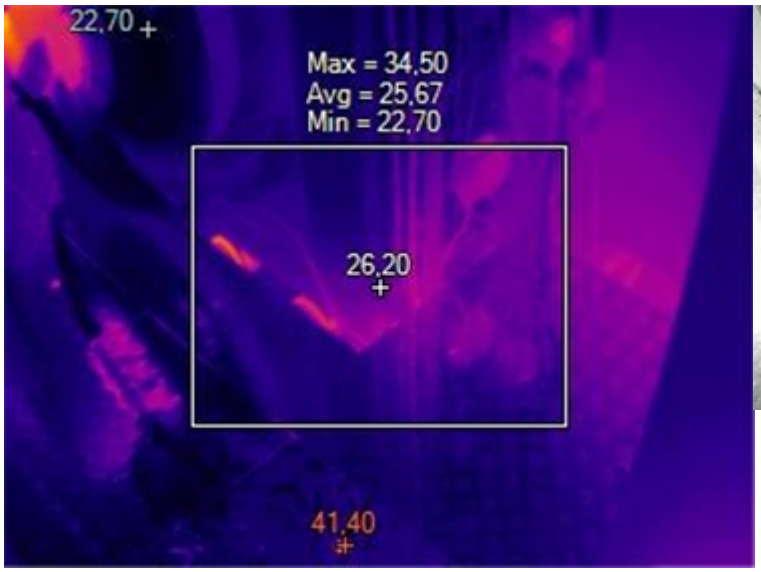




Image Info

Name	IR_00244.IS2
Emissivity	0,95
Background Temperature	22,00 °C
Calibration Range	-10,00 °C to 550,00 °C
Image Range	22,70 °C to 41,40 °C
Image Time	04/09/2024 11:30:33 AM

Marker Info

Marker Name	Maximum	Minimum	Average	Emissivity	BG Temp	Std.Dev	Delta-T
Centerpoint	26,2 °C	26,2 °C	26,2 °C	0,95	22,0 °C	0,00	
Centerbox	34,5 °C	22,7 °C	25,7 °C	0,95	22,0 °C	1,26	
Hot	41,4 °C	41,4 °C	41,4 °C	0,95	22,0 °C	0,00	
Cold	22,7 °C	22,7 °C	22,7 °C	0,95	22,0 °C	0,00	

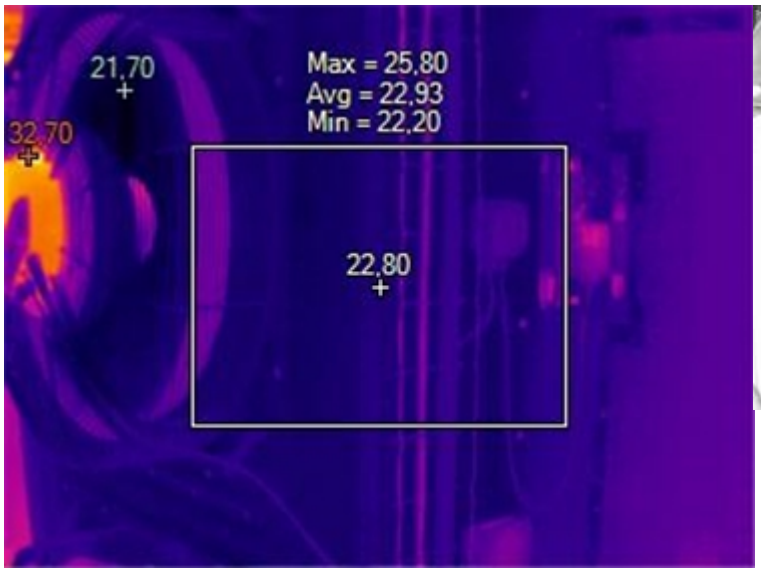




Image Info

Name	IR_00243.IS2
Emissivity	0,95
Background Temperature	22,00 °C
Calibration Range	-10,00 °C to 550,00 °C
Image Range	21,70 °C to 32,70 °C
Image Time	04/09/2024 11:30:27 AM

Marker Info

Marker Name	Maximum	Minimum	Average	Emissivity	BG Temp	Std.Dev	Delta-T
Centerpoint	22,8 °C	22,8 °C	22,8 °C	0,95	22,0 °C	0,00	
Centerbox	25,8 °C	22,2 °C	22,9 °C	0,95	22,0 °C	0,44	
Hot	32,7 °C	32,7 °C	32,7 °C	0,95	22,0 °C	0,00	
Cold	21,7 °C	21,7 °C	21,7 °C	0,95	22,0 °C	0,00	

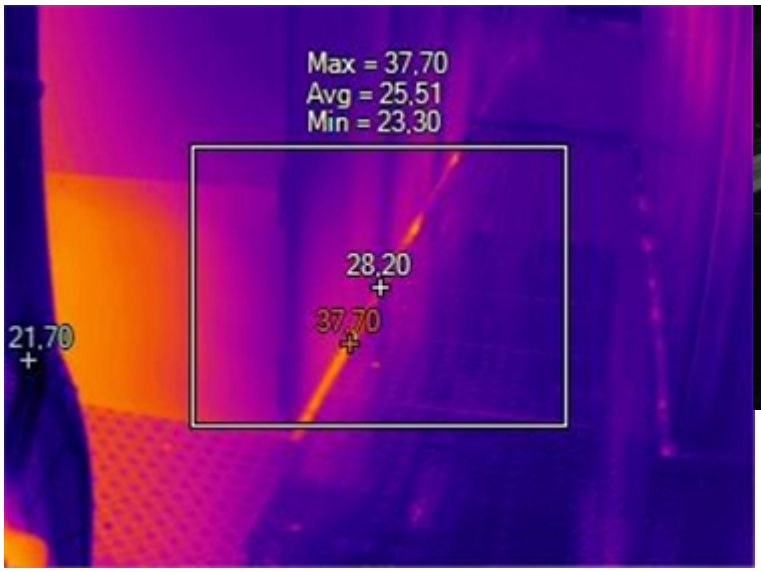




Image Info

Name	IR_00242.IS2
Emissivity	0,95
Background Temperature	22,00 °C
Calibration Range	-10,00 °C to 550,00 °C
Image Range	21,70 °C to 37,70 °C
Image Time	04/09/2024 11:30:17 AM

Marker Info

Marker Name	Maximum	Minimum	Average	Emissivity	BG Temp	Std.Dev	Delta-T
Centerpoint	28,2 °C	28,2 °C	28,2 °C	0,95	22,0 °C	0,00	
Centerbox	37,7 °C	23,3 °C	25,5 °C	0,95	22,0 °C	1,49	
Hot	37,7 °C	37,7 °C	37,7 °C	0,95	22,0 °C	0,00	
Cold	21,7 °C	21,7 °C	21,7 °C	0,95	22,0 °C	0,00	

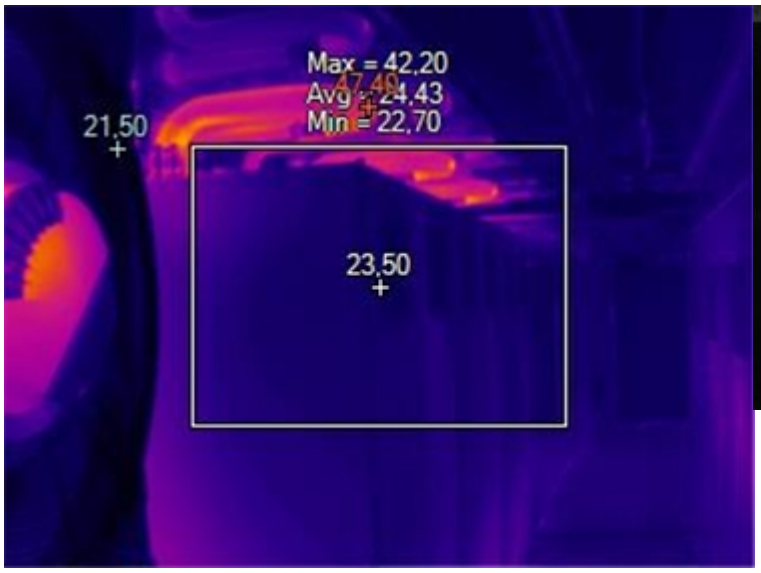




Image Info

Name	IR_00241.IS2
Emissivity	0,95
Background Temperature	22,00 °C
Calibration Range	-10,00 °C to 550,00 °C
Image Range	21,50 °C to 47,40 °C
Image Time	04/09/2024 11:30:12 AM

Marker Info

Marker Name	Maximum	Minimum	Average	Emissivity	BG Temp	Std.Dev	Delta-T
Centerpoint	23,5 °C	23,5 °C	23,5 °C	0,95	22,0 °C	0,00	
Centerbox	42,2 °C	22,7 °C	24,4 °C	0,95	22,0 °C	1,92	
Hot	47,4 °C	47,4 °C	47,4 °C	0,95	22,0 °C	0,00	
Cold	21,5 °C	21,5 °C	21,5 °C	0,95	22,0 °C	0,00	

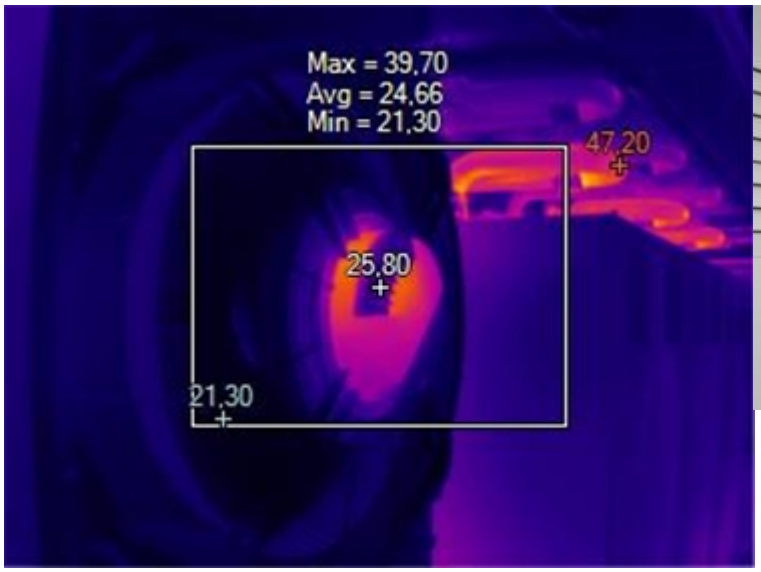




Image Info

Name	IR_00240.IS2
Emissivity	0,95
Background Temperature	22,00 °C
Calibration Range	-10,00 °C to 550,00 °C
Image Range	21,30 °C to 47,20 °C
Image Time	04/09/2024 11:29:44 AM

Marker Info

Marker Name	Maximum	Minimum	Average	Emissivity	BG Temp	Std.Dev	Delta-T
Centerpoint	25,8 °C	25,8 °C	25,8 °C	0,95	22,0 °C	0,00	
Centerbox	39,7 °C	21,3 °C	24,7 °C	0,95	22,0 °C	3,44	
Hot	47,2 °C	47,2 °C	47,2 °C	0,95	22,0 °C	0,00	
Cold	21,3 °C	21,3 °C	21,3 °C	0,95	22,0 °C	0,00	

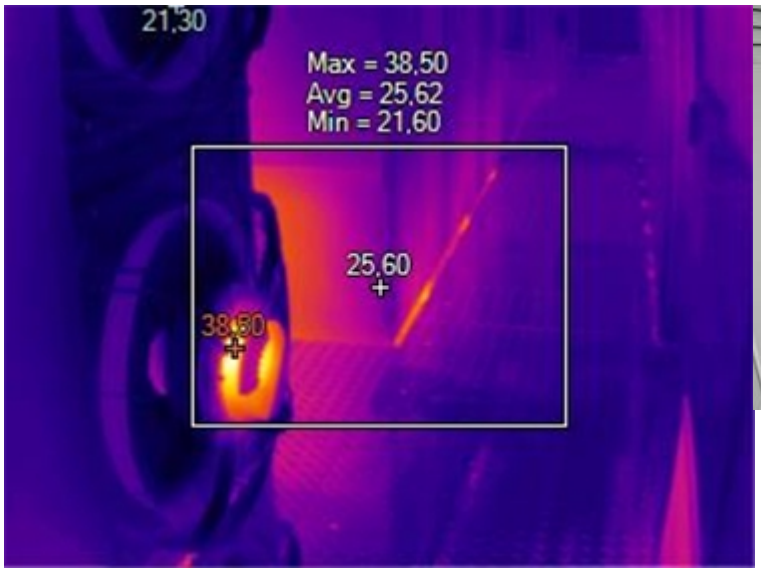




Image Info

Name	IR_00239.IS2
Emissivity	0,95
Background Temperature	22,00 °C
Calibration Range	-10,00 °C to 550,00 °C
Image Range	21,30 °C to 38,50 °C
Image Time	04/09/2024 11:29:27 AM

Marker Info

Marker Name	Maximum	Minimum	Average	Emissivity	BG Temp	Std.Dev	Delta-T
Centerpoint	25,6 °C	25,6 °C	25,6 °C	0,95	22,0 °C	0,00	
Centerbox	38,5 °C	21,6 °C	25,6 °C	0,95	22,0 °C	2,50	
Hot	38,5 °C	38,5 °C	38,5 °C	0,95	22,0 °C	0,00	
Cold	21,3 °C	21,3 °C	21,3 °C	0,95	22,0 °C	0,00	

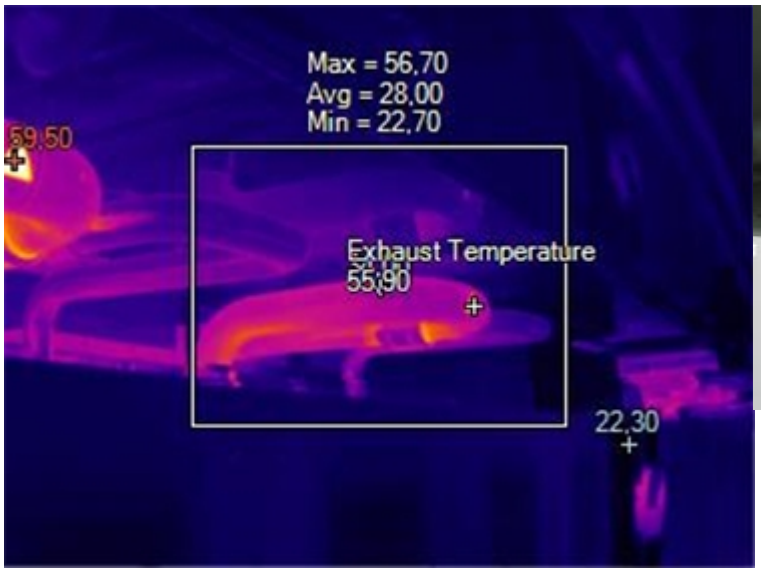




Image Info

Name	IR_00238.IS2
Emissivity	0,95
Background Temperature	22,00 °C
Calibration Range	-10,00 °C to 550,00 °C
Image Range	22,30 °C to 59,50 °C
Image Time	04/09/2024 11:29:09 AM

Marker Info

Marker Name	Maximum	Minimum	Average	Emissivity	BG Temp	Std.Dev	Delta-T
Centerpoint	34,0 °C	34,0 °C	34,0 °C	0,95	22,0 °C	0,00	
Centerbox	56,7 °C	22,7 °C	28,0 °C	0,95	22,0 °C	4,18	
Hot	59,5 °C	59,5 °C	59,5 °C	0,95	22,0 °C	0,00	
Cold	22,3 °C	22,3 °C	22,3 °C	0,95	22,0 °C	0,00	
Exhaust Temperature	55,9 °C	55,9 °C	55,9 °C	0,95	22,0 °C	0,00	

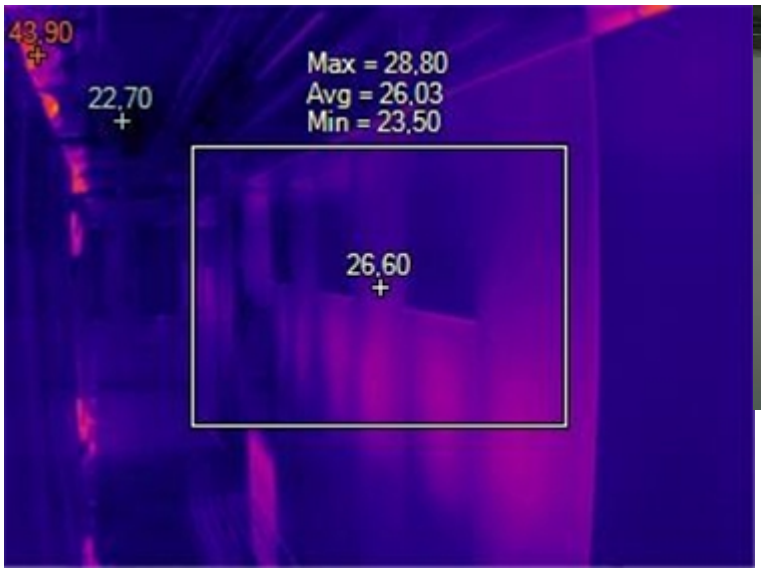




Image Info

Name	IR_00237.IS2
Emissivity	0,95
Background Temperature	22,00 °C
Calibration Range	-10,00 °C to 550,00 °C
Image Range	22,70 °C to 43,90 °C
Image Time	04/09/2024 11:29:01 AM

Marker Info

Marker Name	Maximum	Minimum	Average	Emissivity	BG Temp	Std.Dev	Delta-T
Centerpoint	26,6 °C	26,6 °C	26,6 °C	0,95	22,0 °C	0,00	
Centerbox	28,8 °C	23,5 °C	26,0 °C	0,95	22,0 °C	1,08	
Hot	43,9 °C	43,9 °C	43,9 °C	0,95	22,0 °C	0,00	
Cold	22,7 °C	22,7 °C	22,7 °C	0,95	22,0 °C	0,00	

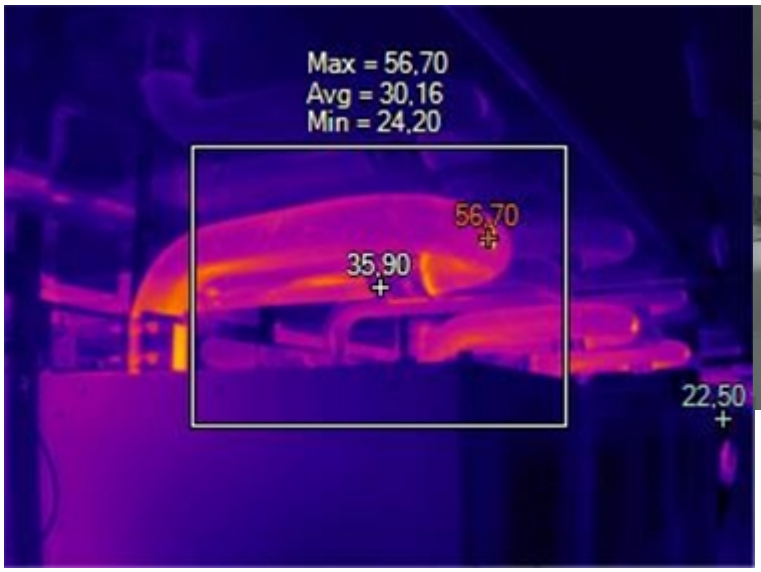




Image Info

Name	IR_00236.IS2
Emissivity	0,95
Background Temperature	22,00 °C
Calibration Range	-10,00 °C to 550,00 °C
Image Range	22,50 °C to 56,70 °C
Image Time	04/09/2024 11:28:50 AM

Marker Info

Marker Name	Maximum	Minimum	Average	Emissivity	BG Temp	Std.Dev	Delta-T
Centerpoint	35,9 °C	35,9 °C	35,9 °C	0,95	22,0 °C	0,00	
Centerbox	56,7 °C	24,2 °C	30,2 °C	0,95	22,0 °C	4,12	
Hot	56,7 °C	56,7 °C	56,7 °C	0,95	22,0 °C	0,00	
Cold	22,5 °C	22,5 °C	22,5 °C	0,95	22,0 °C	0,00	

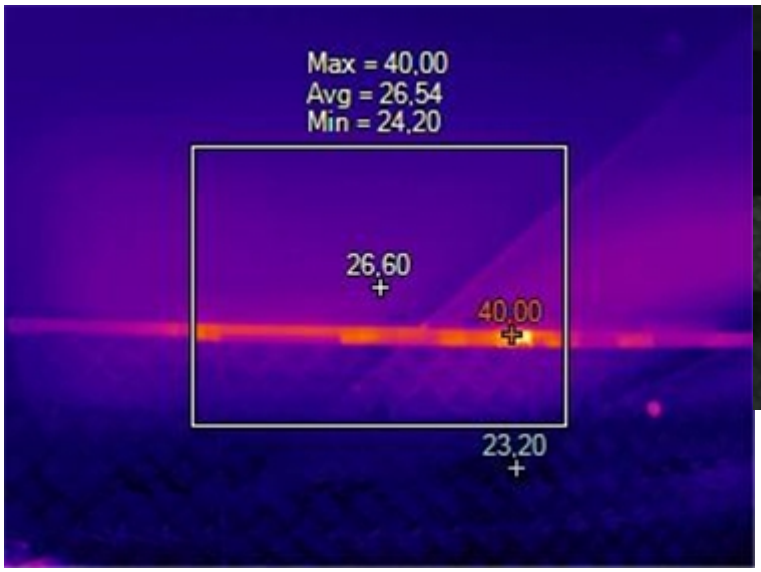




Image Info

Name	IR_00235.IS2
Emissivity	0,95
Background Temperature	22,00 °C
Calibration Range	-10,00 °C to 550,00 °C
Image Range	23,20 °C to 40,00 °C
Image Time	04/09/2024 11:28:41 AM

Marker Info

Marker Name	Maximum	Minimum	Average	Emissivity	BG Temp	Std.Dev	Delta-T
Centerpoint	26,6 °C	26,6 °C	26,6 °C	0,95	22,0 °C	0,00	
Centerbox	40,0 °C	24,2 °C	26,5 °C	0,95	22,0 °C	1,49	
Hot	40,0 °C	40,0 °C	40,0 °C	0,95	22,0 °C	0,00	
Cold	23,2 °C	23,2 °C	23,2 °C	0,95	22,0 °C	0,00	

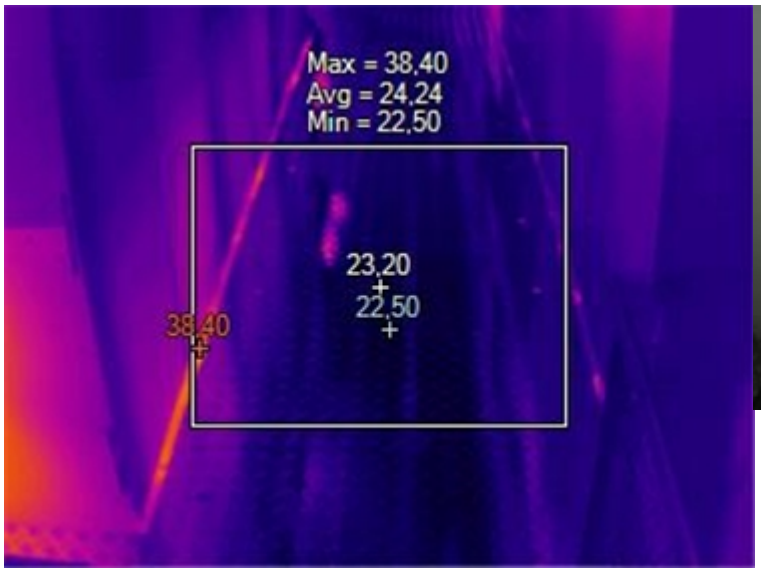




Image Info

Name	IR_00234.IS2
Emissivity	0,95
Background Temperature	22,00 °C
Calibration Range	-10,00 °C to 550,00 °C
Image Range	22,50 °C to 38,40 °C
Image Time	04/09/2024 11:28:29 AM

Marker Info

Marker Name	Maximum	Minimum	Average	Emissivity	BG Temp	Std.Dev	Delta-T
Centerpoint	23,2 °C	23,2 °C	23,2 °C	0,95	22,0 °C	0,00	
Centerbox	38,4 °C	22,5 °C	24,2 °C	0,95	22,0 °C	1,21	
Hot	38,4 °C	38,4 °C	38,4 °C	0,95	22,0 °C	0,00	
Cold	22,5 °C	22,5 °C	22,5 °C	0,95	22,0 °C	0,00	





Image Info

Name	IR_00233.IS2
Emissivity	0,95
Background Temperature	22,00 °C
Calibration Range	-10,00 °C to 550,00 °C
Image Range	21,10 °C to 30,70 °C
Image Time	04/09/2024 11:28:14 AM

Marker Info

Marker Name	Maximum	Minimum	Average	Emissivity	BG Temp	Std.Dev	Delta-T
Centerpoint	23,8 °C	23,8 °C	23,8 °C	0,95	22,0 °C	0,00	
Centerbox	30,7 °C	23,2 °C	25,4 °C	0,95	22,0 °C	1,64	
Hot	30,7 °C	30,7 °C	30,7 °C	0,95	22,0 °C	0,00	
Cold	21,1 °C	21,1 °C	21,1 °C	0,95	22,0 °C	0,00	





Image Info

Name	IR_00232.IS2
Emissivity	0,95
Background Temperature	22,00 °C
Calibration Range	-10,00 °C to 550,00 °C
Image Range	22,20 °C to 37,00 °C
Image Time	04/09/2024 11:28:09 AM

Marker Info

Marker Name	Maximum	Minimum	Average	Emissivity	BG Temp	Std.Dev	Delta-T
Centerpoint	23,2 °C	23,2 °C	23,2 °C	0,95	22,0 °C	0,00	
Centerbox	34,0 °C	22,8 °C	24,6 °C	0,95	22,0 °C	1,91	
Hot	37,0 °C	37,0 °C	37,0 °C	0,95	22,0 °C	0,00	
Cold	22,2 °C	22,2 °C	22,2 °C	0,95	22,0 °C	0,00	

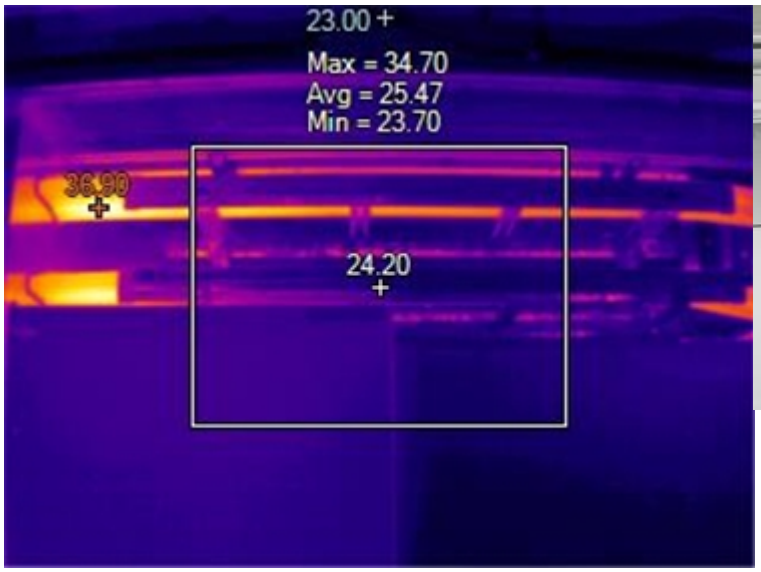




Image Info

Name	IR_00231.IS2
Emissivity	0.95
Background Temperature	22.00 °C
Calibration Range	-10.00 °C to 550.00 °C
Image Range	23.00 °C to 36.90 °C
Image Time	04/09/2024 11:27:56 AM
Asset Name	UC50 Aux AC Cabinet

Marker Info

Marker Name	Maximum	Minimum	Average	Emissivity	BG Temp	Std.Dev	Delta-T
Centerpoint	24.2 °C	24.2 °C	24.2 °C	0.95	22.0 °C	0.00	
Centerbox	34.7 °C	23.7 °C	25.5 °C	0.95	22.0 °C	1.52	
Hot	36.9 °C	36.9 °C	36.9 °C	0.95	22.0 °C	0.00	
Cold	23.0 °C	23.0 °C	23.0 °C	0.95	22.0 °C	0.00	

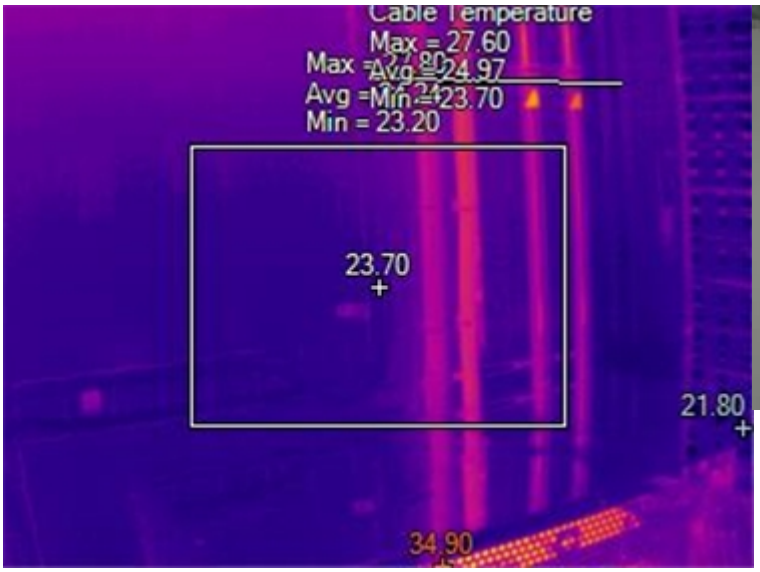




Image Info

Name	IR_00230.IS2
Emissivity	0.95
Background Temperature	22.00 °C
Calibration Range	-10.00 °C to 550.00 °C
Image Range	21.80 °C to 34.90 °C
Image Time	04/09/2024 11:27:50 AM
Asset Name	UC50 Aux AC Cabinet

Marker Info

Marker Name	Maximum	Minimum	Average	Emissivity	BG Temp	Std.Dev	Delta-T
Centerpoint	23.7 °C	23.7 °C	23.7 °C	0.95	22.0 °C	0.00	
Centerbox	27.8 °C	23.2 °C	24.2 °C	0.95	22.0 °C	0.90	
Hot	34.9 °C	34.9 °C	34.9 °C	0.95	22.0 °C	0.00	
Cold	21.8 °C	21.8 °C	21.8 °C	0.95	22.0 °C	0.00	
Cable Temperature	27.6 °C	23.7 °C	25.0 °C	0.95	22.0 °C	0.94	

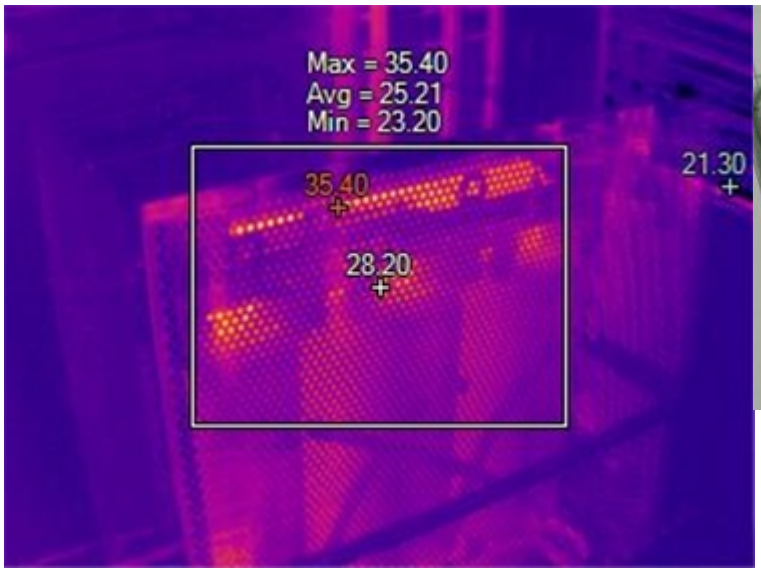




Image Info

Name	IR_00229.IS2
Emissivity	0.95
Background Temperature	22.00 °C
Calibration Range	-10.00 °C to 550.00 °C
Image Range	21.30 °C to 35.40 °C
Image Time	04/09/2024 11:27:38 AM
Asset Name	UC50 Aux AC Cabinet

Marker Info

Marker Name	Maximum	Minimum	Average	Emissivity	BG Temp	Std.Dev	Delta-T
Centerpoint	28.2 °C	28.2 °C	28.2 °C	0.95	22.0 °C	0.00	
Centerbox	35.4 °C	23.2 °C	25.2 °C	0.95	22.0 °C	1.37	
Hot	35.4 °C	35.4 °C	35.4 °C	0.95	22.0 °C	0.00	
Cold	21.3 °C	21.3 °C	21.3 °C	0.95	22.0 °C	0.00	

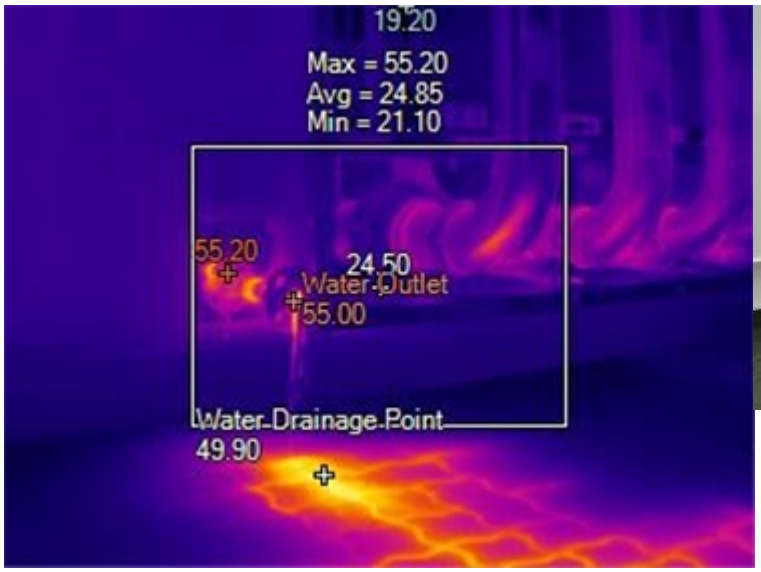




Image Info

Name	IR_00228.IS2
Emissivity	0.95
Background Temperature	22.00 °C
Calibration Range	-10.00 °C to 550.00 °C
Image Range	19.20 °C to 55.20 °C
Image Time	04/09/2024 11:26:59 AM
Asset Name	40ft Container Exterior

Marker Info

Marker Name	Maximum	Minimum	Average	Emissivity	BG Temp	Std.Dev	Delta-T
Centerpoint	24.5 °C	24.5 °C	24.5 °C	0.95	22.0 °C	0.00	
Centerbox	55.2 °C	21.1 °C	24.8 °C	0.95	22.0 °C	3.00	
Hot	55.2 °C	55.2 °C	55.2 °C	0.95	22.0 °C	0.00	
Cold	19.2 °C	19.2 °C	19.2 °C	0.95	22.0 °C	0.00	
Water Outlet	55.0 °C	55.0 °C	55.0 °C	0.95	22.0 °C	0.00	
Water Drainage Point	49.9 °C	49.9 °C	49.9 °C	0.95	22.0 °C	0.00	

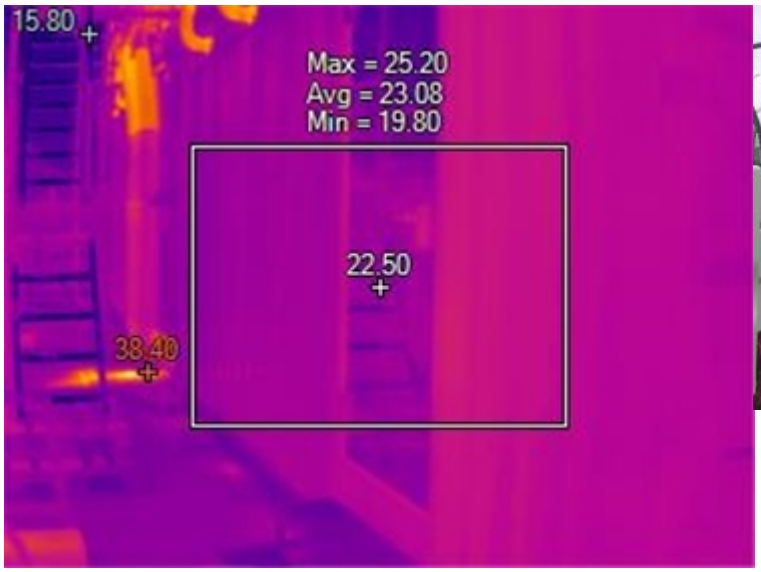




Image Info

Name	IR_00227.IS2
Emissivity	0.95
Background Temperature	22.00 °C
Calibration Range	-10.00 °C to 550.00 °C
Image Range	15.80 °C to 38.40 °C
Image Time	04/09/2024 11:26:38 AM
Asset Name	40ft Container Exterior

Marker Info

Marker Name	Maximum	Minimum	Average	Emissivity	BG Temp	Std.Dev	Delta-T
Centerpoint	22.5 °C	22.5 °C	22.5 °C	0.95	22.0 °C	0.00	
Centerbox	25.2 °C	19.8 °C	23.1 °C	0.95	22.0 °C	1.06	
Hot	38.4 °C	38.4 °C	38.4 °C	0.95	22.0 °C	0.00	
Cold	15.8 °C	15.8 °C	15.8 °C	0.95	22.0 °C	0.00	





Image Info

Name	IR_00226.IS2
Emissivity	0,95
Background Temperature	22,00 °C
Calibration Range	-10,00 °C to 550,00 °C
Image Range	18,20 °C to 54,70 °C
Image Time	04/09/2024 11:25:55 AM
Asset Name	40ft Container Exterior

Marker Info

Marker Name	Maximum	Minimum	Average	Emissivity	BG Temp	Std.Dev	Delta-T
Centerpoint	37,9 °C	37,9 °C	37,9 °C	0,95	22,0 °C	0,00	
Centerbox	50,7 °C	21,1 °C	26,1 °C	0,95	22,0 °C	5,37	
Hot	54,7 °C	54,7 °C	54,7 °C	0,95	22,0 °C	0,00	
Cold	18,2 °C	18,2 °C	18,2 °C	0,95	22,0 °C	0,00	

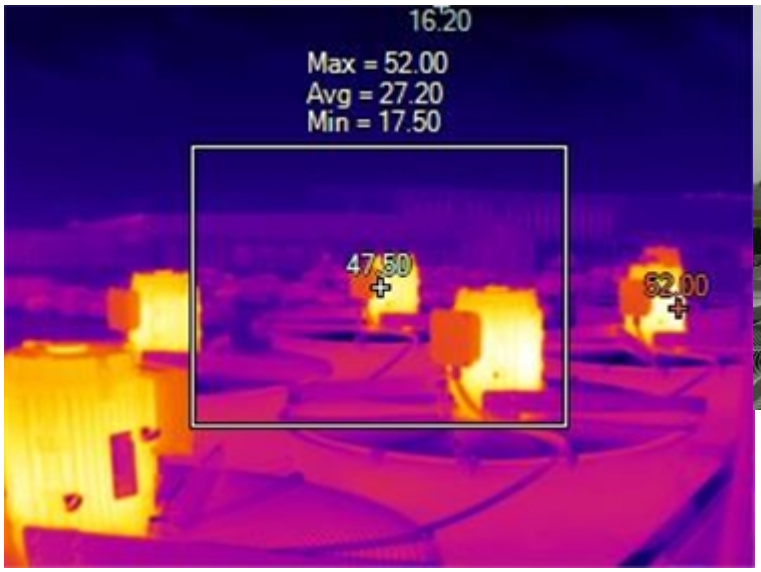




Image Info

Name	IR_00225.IS2
Emissivity	0.95
Background Temperature	22.00 °C
Calibration Range	-10.00 °C to 550.00 °C
Image Range	16.20 °C to 52.00 °C
Image Time	04/09/2024 11:25:34 AM
Asset Name	40ft Container Exterior

Marker Info

Marker Name	Maximum	Minimum	Average	Emissivity	BG Temp	Std.Dev	Delta-T
Centerpoint	47.5 °C	47.5 °C	47.5 °C	0.95	22.0 °C	0.00	
Centerbox	52.0 °C	17.5 °C	27.2 °C	0.95	22.0 °C	7.80	
Hot	52.0 °C	52.0 °C	52.0 °C	0.95	22.0 °C	0.00	
Cold	16.2 °C	16.2 °C	16.2 °C	0.95	22.0 °C	0.00	





Image Info

Name	IR_00224.IS2
Emissivity	0.95
Background Temperature	22.00 °C
Calibration Range	-10.00 °C to 550.00 °C
Image Range	20.70 °C to 39.50 °C
Image Time	04/09/2024 11:24:49 AM
Asset Name	40ft Container Exterior

Marker Info

Marker Name	Maximum	Minimum	Average	Emissivity	BG Temp	Std.Dev	Delta-T
Centerpoint	28.5 °C	28.5 °C	28.5 °C	0.95	22.0 °C	0.00	
Centerbox	39.5 °C	22.5 °C	30.9 °C	0.95	22.0 °C	4.68	
Hot	39.5 °C	39.5 °C	39.5 °C	0.95	22.0 °C	0.00	
Cold	20.7 °C	20.7 °C	20.7 °C	0.95	22.0 °C	0.00	

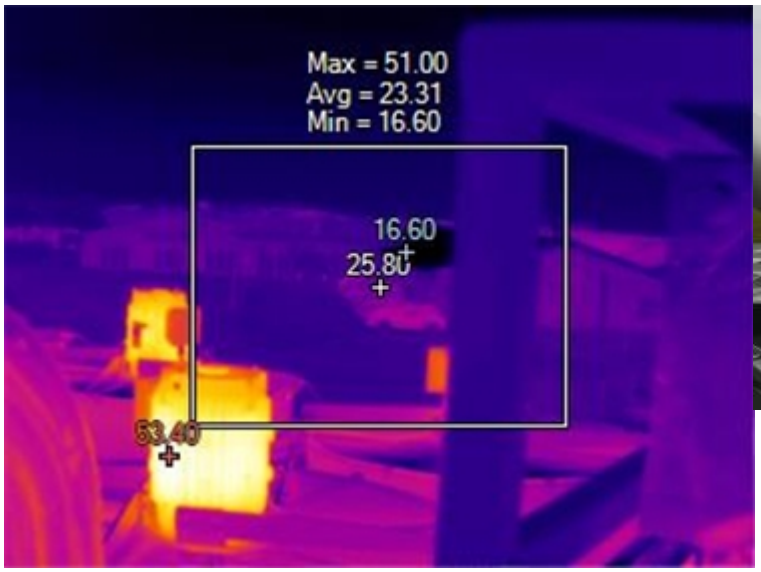




Image Info

Name	IR_00222.IS2
Emissivity	0.95
Background Temperature	22.00 °C
Calibration Range	-10.00 °C to 550.00 °C
Image Range	16.60 °C to 53.40 °C
Image Time	04/09/2024 11:23:50 AM
Asset Name	40ft Container Exterior

Marker Info

Marker Name	Maximum	Minimum	Average	Emissivity	BG Temp	Std.Dev	Delta-T
Centerpoint	25.8 °C	25.8 °C	25.8 °C	0.95	22.0 °C	0.00	
Centerbox	51.0 °C	16.6 °C	23.3 °C	0.95	22.0 °C	5.36	
Hot	53.4 °C	53.4 °C	53.4 °C	0.95	22.0 °C	0.00	
Cold	16.6 °C	16.6 °C	16.6 °C	0.95	22.0 °C	0.00	

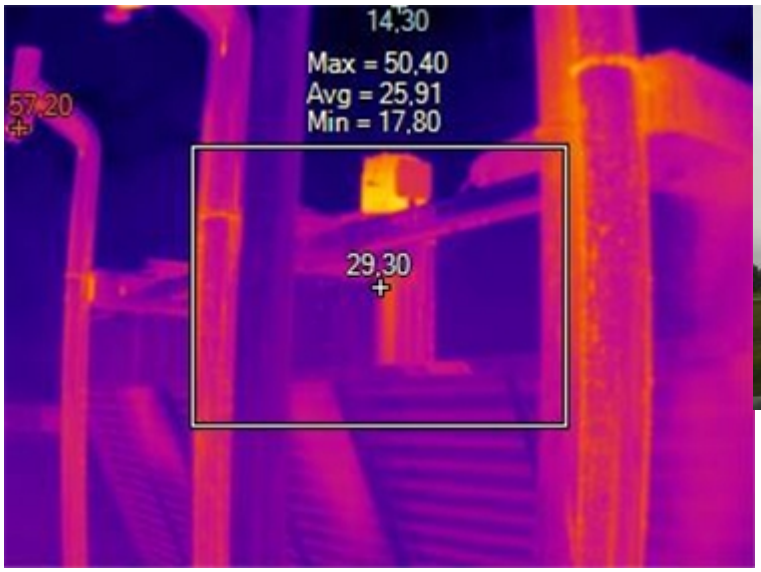




Image Info

Name	IR_00221.IS2
Emissivity	0,95
Background Temperature	22,00 °C
Calibration Range	-10,00 °C to 550,00 °C
Image Range	14,30 °C to 57,20 °C
Image Time	04/09/2024 11:23:38 AM
Asset Name	40ft Container Exterior

Marker Info

Marker Name	Maximum	Minimum	Average	Emissivity	BG Temp	Std.Dev	Delta-T
Centerpoint	29,3 °C	29,3 °C	29,3 °C	0,95	22,0 °C	0,00	
Centerbox	50,4 °C	17,8 °C	25,9 °C	0,95	22,0 °C	5,31	
Hot	57,2 °C	57,2 °C	57,2 °C	0,95	22,0 °C	0,00	
Cold	14,3 °C	14,3 °C	14,3 °C	0,95	22,0 °C	0,00	





Image Info

Name	IR_00220.IS2
Emissivity	0,95
Background Temperature	22,00 °C
Calibration Range	-10,00 °C to 550,00 °C
Image Range	13,10 °C to 36,20 °C
Image Time	04/09/2024 11:22:30 AM
Asset Name	40ft Container Exterior

Marker Info

Marker Name	Maximum	Minimum	Average	Emissivity	BG Temp	Std.Dev	Delta-T
Centerpoint	27,1 °C	27,1 °C	27,1 °C	0,95	22,0 °C	0,00	
Centerbox	34,2 °C	18,2 °C	25,2 °C	0,95	22,0 °C	2,26	
Hot	36,2 °C	36,2 °C	36,2 °C	0,95	22,0 °C	0,00	
Cold	13,1 °C	13,1 °C	13,1 °C	0,95	22,0 °C	0,00	





Image Info

Name	IR_00219.IS2
Emissivity	0.95
Background Temperature	22.00 °C
Calibration Range	-10.00 °C to 550.00 °C
Image Range	14.30 °C to 39.70 °C
Image Time	04/09/2024 11:22:14 AM
Asset Name	40ft Container Exterior

Marker Info

Marker Name	Maximum	Minimum	Average	Emissivity	BG Temp	Std.Dev	Delta-T
Centerpoint	28.5 °C	28.5 °C	28.5 °C	0.95	22.0 °C	0.00	
Centerbox	32.7 °C	15.3 °C	22.2 °C	0.95	22.0 °C	2.54	
Hot	39.7 °C	39.7 °C	39.7 °C	0.95	22.0 °C	0.00	
Cold	14.3 °C	14.3 °C	14.3 °C	0.95	22.0 °C	0.00	

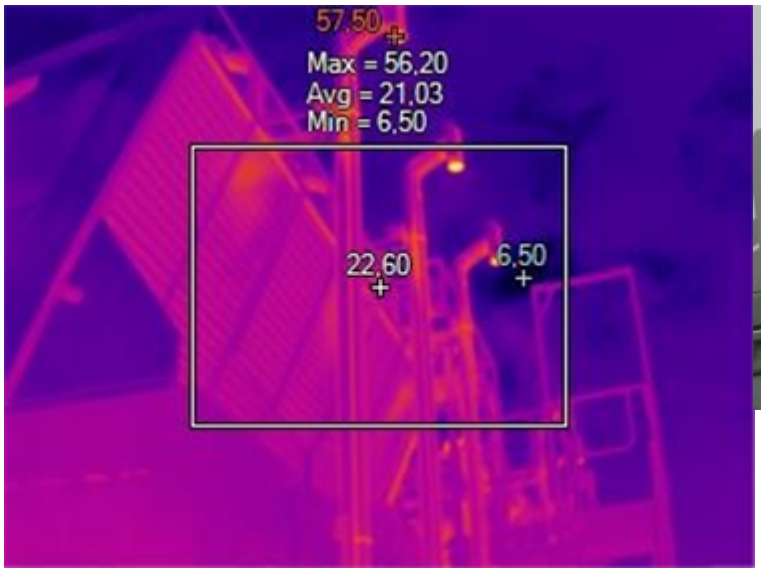




Image Info

Name	IR_00218.IS2
Emissivity	0,95
Background Temperature	22,00 °C
Calibration Range	-10,00 °C to 550,00 °C
Image Range	6,50 °C to 57,50 °C
Image Time	04/09/2024 11:21:25 AM
Asset Name	40ft Container Exterior

Marker Info

Marker Name	Maximum	Minimum	Average	Emissivity	BG Temp	Std.Dev	Delta-T
Centerpoint	22,6 °C	22,6 °C	22,6 °C	0,95	22,0 °C	0,00	
Centerbox	56,2 °C	6,5 °C	21,0 °C	0,95	22,0 °C	5,14	
Hot	57,5 °C	57,5 °C	57,5 °C	0,95	22,0 °C	0,00	
Cold	6,5 °C	6,5 °C	6,5 °C	0,95	22,0 °C	0,00	

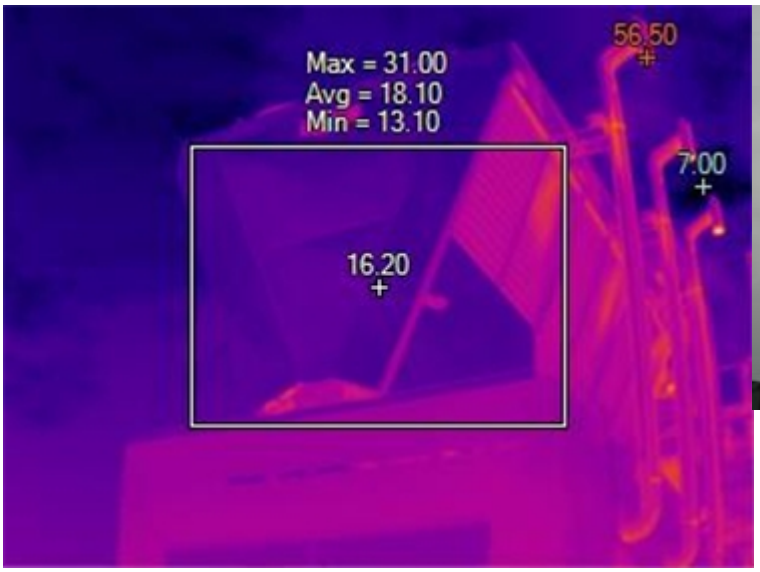




Image Info

Name	IR_00217.IS2
Emissivity	0.95
Background Temperature	22.00 °C
Calibration Range	-10.00 °C to 550.00 °C
Image Range	7.00 °C to 56.50 °C
Image Time	04/09/2024 11:21:15 AM
Asset Name	40ft Container Exterior

Marker Info

Marker Name	Maximum	Minimum	Average	Emissivity	BG Temp	Std.Dev	Delta-T
Centerpoint	16.2 °C	16.2 °C	16.2 °C	0.95	22.0 °C	0.00	
Centerbox	31.0 °C	13.1 °C	18.1 °C	0.95	22.0 °C	3.33	
Hot	56.5 °C	56.5 °C	56.5 °C	0.95	22.0 °C	0.00	
Cold	7.0 °C	7.0 °C	7.0 °C	0.95	22.0 °C	0.00	





Image Info

Name	IR_00216.IS2
Emissivity	0.95
Background Temperature	22.00 °C
Calibration Range	-10.00 °C to 550.00 °C
Image Range	18.20 °C to 144.30 °C
Image Time	04/09/2024 11:20:35 AM
Asset Name	40ft Container Exterior

Marker Info

Marker Name	Maximum	Minimum	Average	Emissivity	BG Temp	Std.Dev	Delta-T
Centerpoint	21.2 °C	21.2 °C	21.2 °C	0.95	22.0 °C	0.00	
Centerbox	23.7 °C	18.6 °C	21.9 °C	0.95	22.0 °C	0.96	
Hot	144.3 °C	144.3 °C	144.3 °C	0.95	22.0 °C	0.00	
Cold	18.2 °C	18.2 °C	18.2 °C	0.95	22.0 °C	0.00	

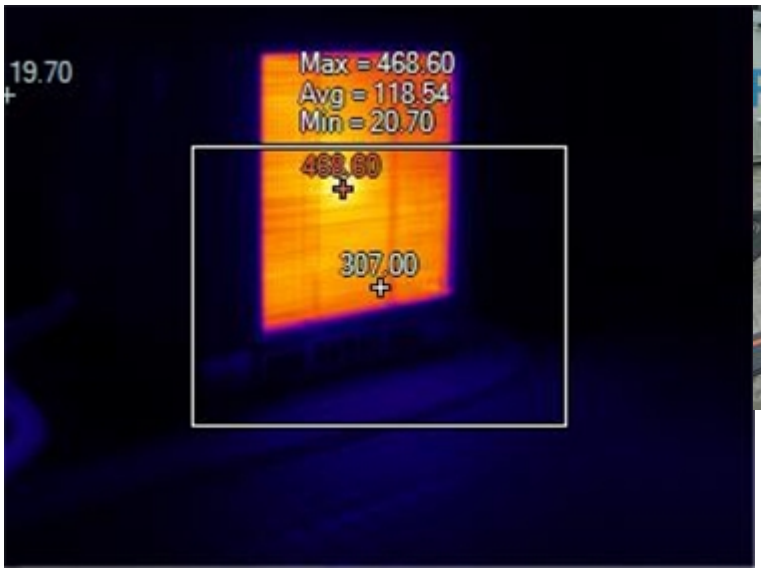




Image Info

Name	IR_00215.IS2
Emissivity	0.95
Background Temperature	22.00 °C
Calibration Range	-10.00 °C to 550.00 °C
Image Range	19.70 °C to 468.60 °C
Image Time	04/09/2024 11:19:20 AM
Asset Name	Test Equipemnt

Marker Info

Marker Name	Maximum	Minimum	Average	Emissivity	BG Temp	Std.Dev	Delta-T
Centerpoint	307.0 °C	307.0 °C	307.0 °C	0.95	22.0 °C	0.00	
Centerbox	468.6 °C	20.7 °C	118.5 °C	0.95	22.0 °C	129.65	
Hot	468.6 °C	468.6 °C	468.6 °C	0.95	22.0 °C	0.00	
Cold	19.7 °C	19.7 °C	19.7 °C	0.95	22.0 °C	0.00	

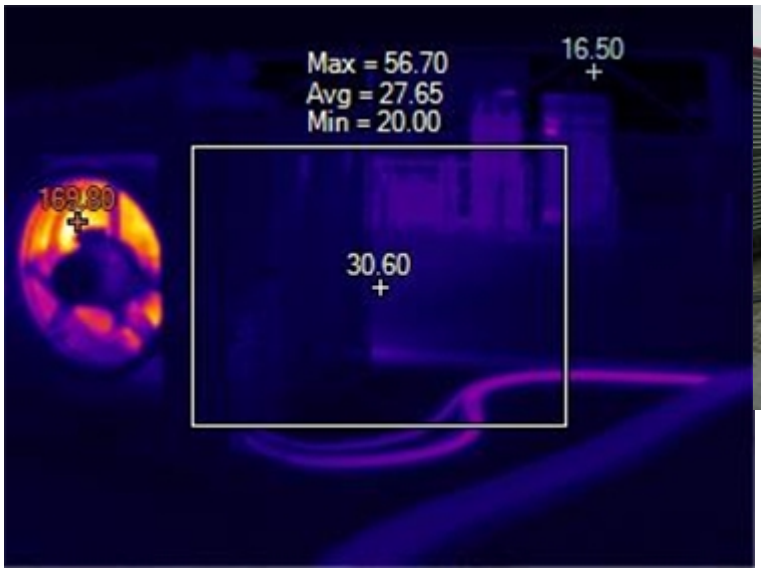




Image Info

Name	IR_00214.IS2
Emissivity	0.95
Background Temperature	22.00 °C
Calibration Range	-10.00 °C to 550.00 °C
Image Range	16.50 °C to 169.80 °C
Image Time	04/09/2024 11:18:48 AM
Asset Name	Test Equipemnt

Marker Info

Marker Name	Maximum	Minimum	Average	Emissivity	BG Temp	Std.Dev	Delta-T
Centerpoint	30.6 °C	30.6 °C	30.6 °C	0.95	22.0 °C	0.00	
Centerbox	56.7 °C	20.0 °C	27.6 °C	0.95	22.0 °C	6.06	
Hot	169.8 °C	169.8 °C	169.8 °C	0.95	22.0 °C	0.00	
Cold	16.5 °C	16.5 °C	16.5 °C	0.95	22.0 °C	0.00	

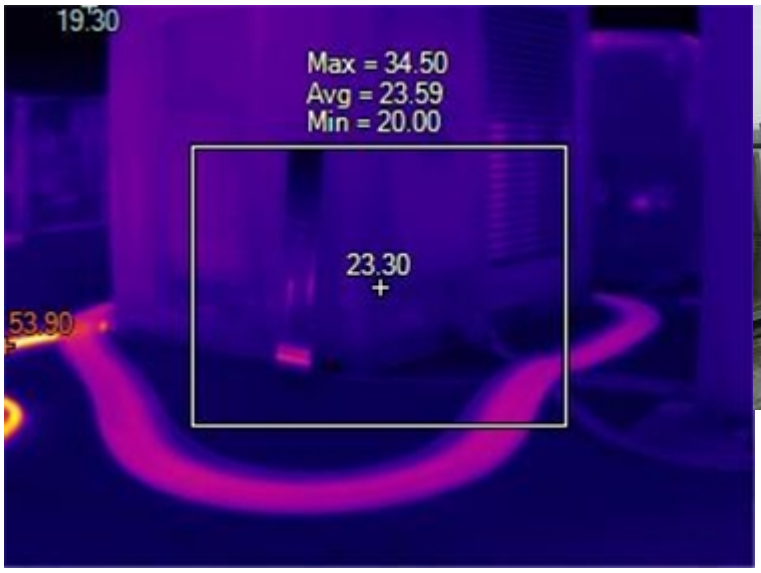




Image Info

Name	IR_00213.IS2
Emissivity	0.95
Background Temperature	22.00 °C
Calibration Range	-10.00 °C to 550.00 °C
Image Range	19.30 °C to 53.90 °C
Image Time	04/09/2024 11:18:26 AM
Asset Name	Test Equipemnt

Marker Info

Marker Name	Maximum	Minimum	Average	Emissivity	BG Temp	Std.Dev	Delta-T
Centerpoint	23.3 °C	23.3 °C	23.3 °C	0.95	22.0 °C	0.00	
Centerbox	34.5 °C	20.0 °C	23.6 °C	0.95	22.0 °C	1.81	
Hot	53.9 °C	53.9 °C	53.9 °C	0.95	22.0 °C	0.00	
Cold	19.3 °C	19.3 °C	19.3 °C	0.95	22.0 °C	0.00	

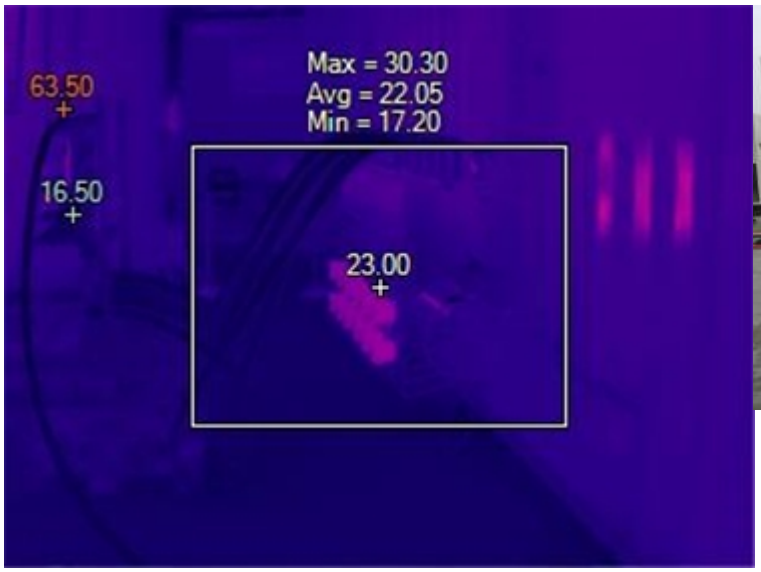




Image Info

Name	IR_00212.IS2
Emissivity	0.95
Background Temperature	22.00 °C
Calibration Range	-10.00 °C to 550.00 °C
Image Range	16.50 °C to 63.50 °C
Image Time	04/09/2024 11:18:08 AM
Asset Name	40ft Container Exterior

Marker Info

Marker Name	Maximum	Minimum	Average	Emissivity	BG Temp	Std.Dev	Delta-T
Centerpoint	23.0 °C	23.0 °C	23.0 °C	0.95	22.0 °C	0.00	
Centerbox	30.3 °C	17.2 °C	22.1 °C	0.95	22.0 °C	1.74	
Hot	63.5 °C	63.5 °C	63.5 °C	0.95	22.0 °C	0.00	
Cold	16.5 °C	16.5 °C	16.5 °C	0.95	22.0 °C	0.00	

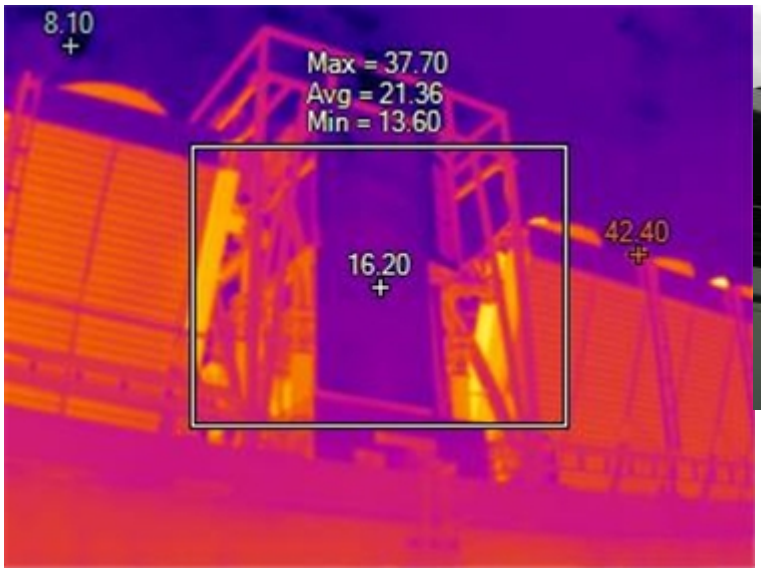




Image Info

Name	IR_00209.IS2
Emissivity	0.95
Background Temperature	22.00 °C
Calibration Range	-10.00 °C to 550.00 °C
Image Range	8.10 °C to 42.40 °C
Image Time	04/09/2024 11:17:23 AM
Asset Name	40ft Container Exterior

Marker Info

Marker Name	Maximum	Minimum	Average	Emissivity	BG Temp	Std.Dev	Delta-T
Centerpoint	16.2 °C	16.2 °C	16.2 °C	0.95	22.0 °C	0.00	
Centerbox	37.7 °C	13.6 °C	21.4 °C	0.95	22.0 °C	5.11	
Hot	42.4 °C	42.4 °C	42.4 °C	0.95	22.0 °C	0.00	
Cold	8.1 °C	8.1 °C	8.1 °C	0.95	22.0 °C	0.00	

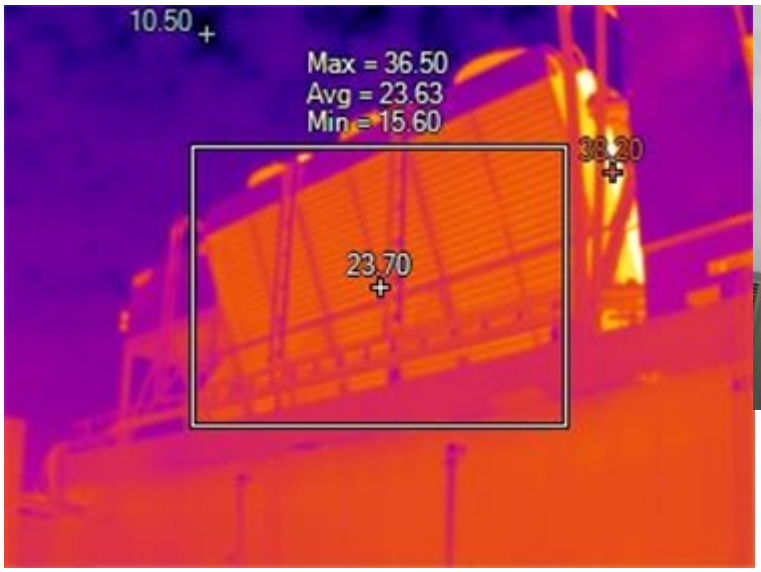




Image Info

Name	IR_00208.IS2
Emissivity	0.95
Background Temperature	22.00 °C
Calibration Range	-10.00 °C to 550.00 °C
Image Range	10.50 °C to 38.20 °C
Image Time	04/09/2024 11:16:35 AM
Asset Name	40ft Container Exterior

Marker Info

Marker Name	Maximum	Minimum	Average	Emissivity	BG Temp	Std.Dev	Delta-T
Centerpoint	23.7 °C	23.7 °C	23.7 °C	0.95	22.0 °C	0.00	
Centerbox	36.5 °C	15.6 °C	23.6 °C	0.95	22.0 °C	2.30	
Hot	38.2 °C	38.2 °C	38.2 °C	0.95	22.0 °C	0.00	
Cold	10.5 °C	10.5 °C	10.5 °C	0.95	22.0 °C	0.00	

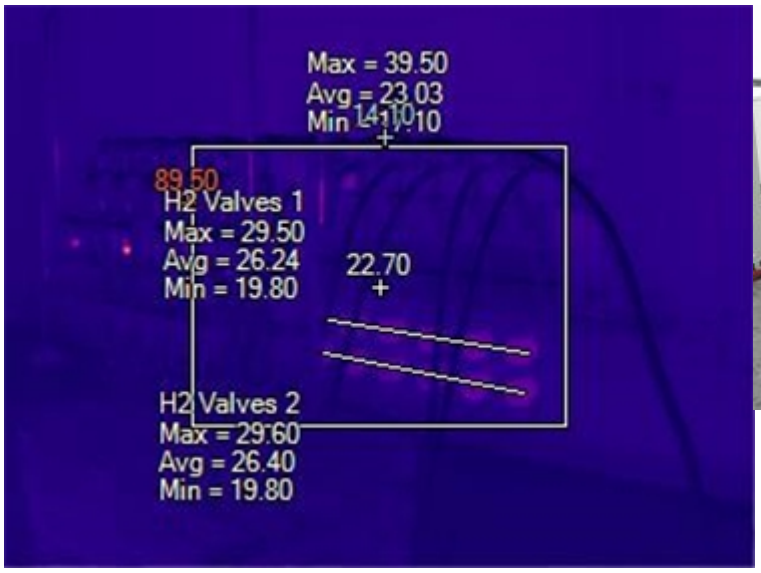




Image Info

Name	IR_00207.IS2
Emissivity	0.95
Background Temperature	22.00 °C
Calibration Range	-10.00 °C to 550.00 °C
Image Range	14.10 °C to 89.50 °C
Image Time	04/09/2024 11:16:21 AM

Marker Info

Marker Name	Maximum	Minimum	Average	Emissivity	BG Temp	Std.Dev	Delta-T
Centerpoint	22.7 °C	22.7 °C	22.7 °C	0.95	22.0 °C	0.00	
Centerbox	39.5 °C	17.1 °C	23.0 °C	0.95	22.0 °C	1.82	
Hot	89.5 °C	89.5 °C	89.5 °C	0.95	22.0 °C	0.00	
Cold	14.1 °C	14.1 °C	14.1 °C	0.95	22.0 °C	0.00	
H2 Valves 1	29.5 °C	19.8 °C	26.2 °C	0.95	22.0 °C	2.45	
H2 Valves 2	29.6 °C	19.8 °C	26.4 °C	0.95	22.0 °C	2.53	

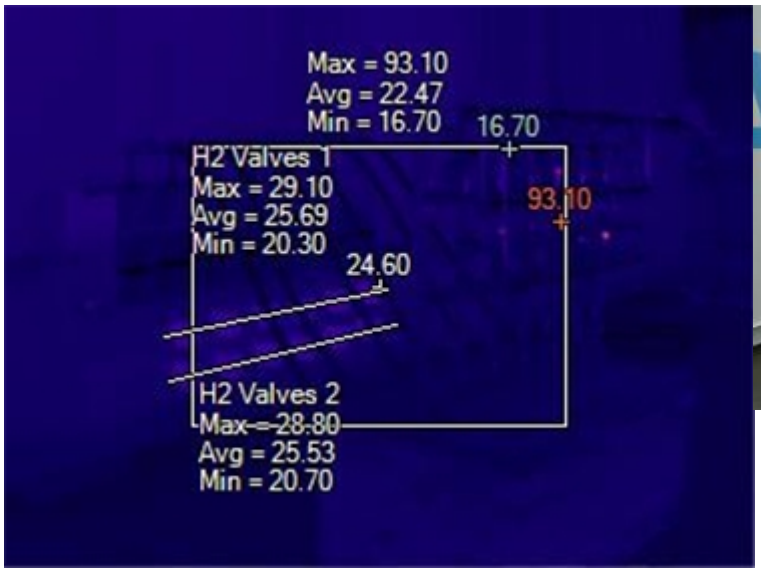




Image Info

Name	IR_00206.IS2
Emissivity	0.95
Background Temperature	22.00 °C
Calibration Range	-10.00 °C to 550.00 °C
Image Range	16.70 °C to 93.10 °C
Image Time	04/09/2024 11:16:09 AM
Asset Name	40ft Container Exterior

Marker Info

Marker Name	Maximum	Minimum	Average	Emissivity	BG Temp	Std.Dev	Delta-T
Centerpoint	24.6 °C	24.6 °C	24.6 °C	0.95	22.0 °C	0.00	
Centerbox	93.1 °C	16.7 °C	22.5 °C	0.95	22.0 °C	1.81	
Hot	93.1 °C	93.1 °C	93.1 °C	0.95	22.0 °C	0.00	
Cold	16.7 °C	16.7 °C	16.7 °C	0.95	22.0 °C	0.00	
H2 Valves 1	29.1 °C	20.3 °C	25.7 °C	0.95	22.0 °C	2.39	
H2 Valves 2	28.8 °C	20.7 °C	25.5 °C	0.95	22.0 °C	2.28	

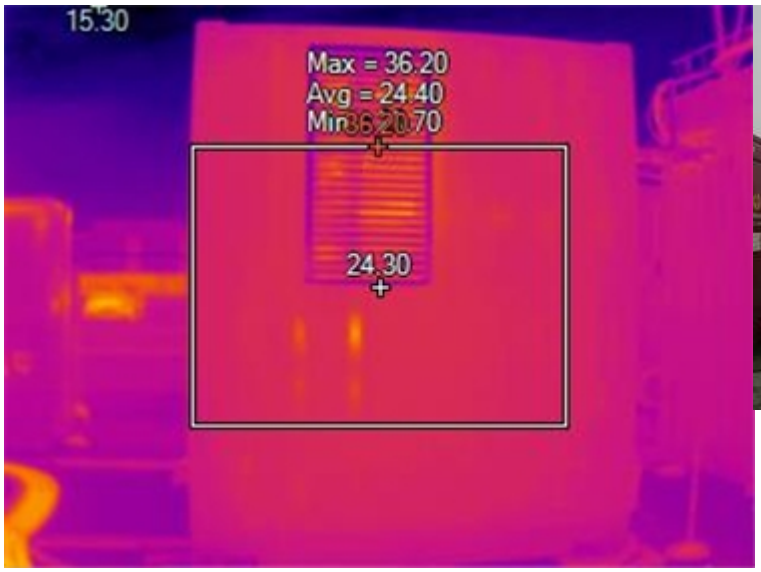




Image Info

Name	IR_00205.IS2
Emissivity	0.95
Background Temperature	22.00 °C
Calibration Range	-10.00 °C to 550.00 °C
Image Range	15.30 °C to 36.20 °C
Image Time	04/09/2024 11:15:41 AM
Asset Name	10ft Container Exterior

Marker Info

Marker Name	Maximum	Minimum	Average	Emissivity	BG Temp	Std.Dev	Delta-T
Centerpoint	24.3 °C	24.3 °C	24.3 °C	0.95	22.0 °C	0.00	
Centerbox	36.2 °C	20.7 °C	24.4 °C	0.95	22.0 °C	0.71	
Hot	36.2 °C	36.2 °C	36.2 °C	0.95	22.0 °C	0.00	
Cold	15.3 °C	15.3 °C	15.3 °C	0.95	22.0 °C	0.00	

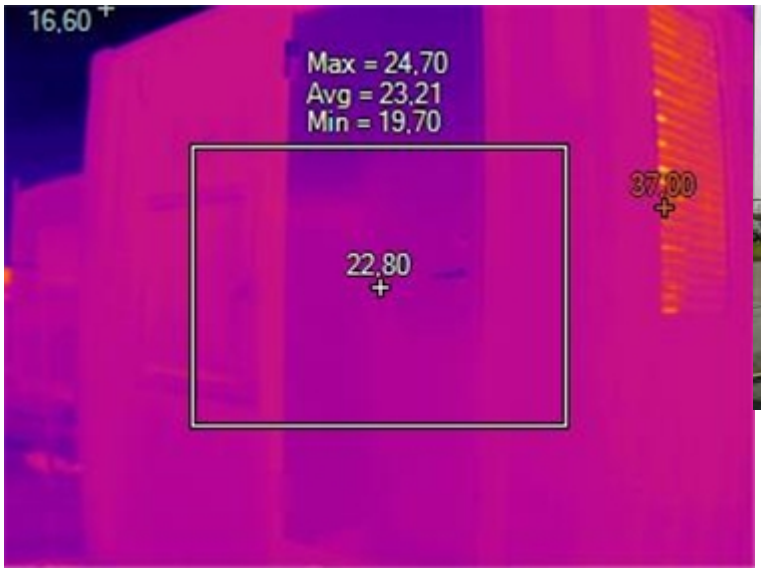




Image Info

Name	IR_00204.IS2
Emissivity	0,95
Background Temperature	22,00 °C
Calibration Range	-10,00 °C to 550,00 °C
Image Range	16,60 °C to 37,00 °C
Image Time	04/09/2024 11:15:27 AM
Asset Name	10ft Container Exterior

Marker Info

Marker Name	Maximum	Minimum	Average	Emissivity	BG Temp	Std.Dev	Delta-T
Centerpoint	22,8 °C	22,8 °C	22,8 °C	0,95	22,0 °C	0,00	
Centerbox	24,7 °C	19,7 °C	23,2 °C	0,95	22,0 °C	0,67	
Hot	37,0 °C	37,0 °C	37,0 °C	0,95	22,0 °C	0,00	
Cold	16,6 °C	16,6 °C	16,6 °C	0,95	22,0 °C	0,00	

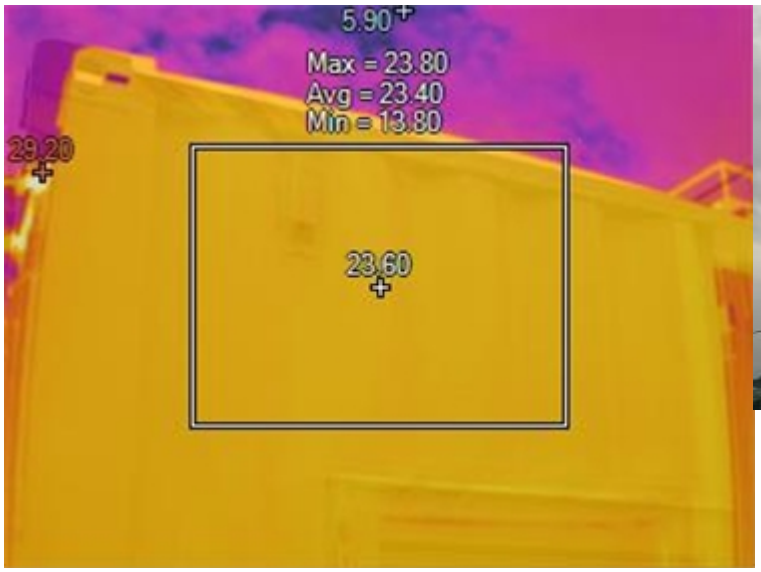




Image Info

Name	IR_00203.IS2
Emissivity	0.95
Background Temperature	22.00 °C
Calibration Range	-10.00 °C to 550.00 °C
Image Range	5.90 °C to 29.20 °C
Image Time	04/09/2024 11:15:10 AM
Asset Name	10ft Container Exterior

Marker Info

Marker Name	Maximum	Minimum	Average	Emissivity	BG Temp	Std.Dev	Delta-T
Centerpoint	23.6 °C	23.6 °C	23.6 °C	0.95	22.0 °C	0.00	
Centerbox	23.8 °C	13.8 °C	23.4 °C	0.95	22.0 °C	0.74	
Hot	29.2 °C	29.2 °C	29.2 °C	0.95	22.0 °C	0.00	
Cold	5.9 °C	5.9 °C	5.9 °C	0.95	22.0 °C	0.00	

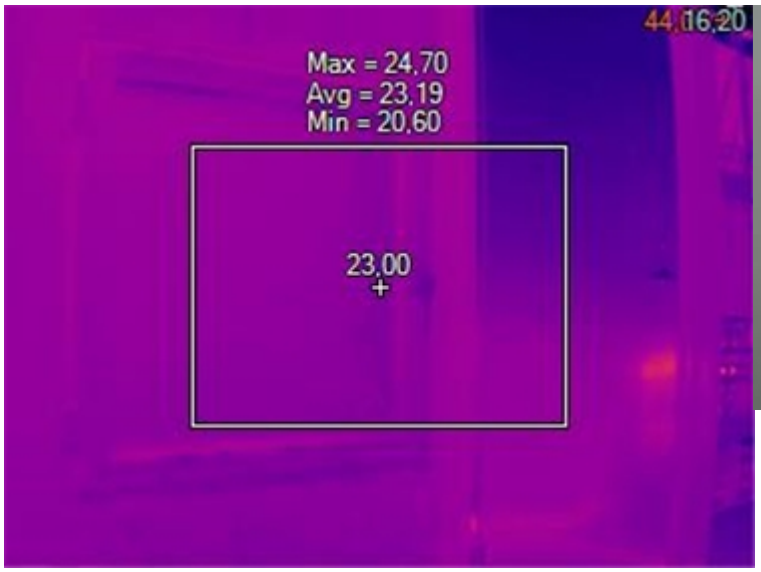




Image Info

Name	IR_00202.IS2
Emissivity	0,95
Background Temperature	22,00 °C
Calibration Range	-10,00 °C to 550,00 °C
Image Range	16,20 °C to 44,00 °C
Image Time	04/09/2024 11:15:01 AM
Asset Name	10ft Container Exterior

Marker Info

Marker Name	Maximum	Minimum	Average	Emissivity	BG Temp	Std.Dev	Delta-T
Centerpoint	23,0 °C	23,0 °C	23,0 °C	0,95	22,0 °C	0,00	
Centerbox	24,7 °C	20,6 °C	23,2 °C	0,95	22,0 °C	0,73	
Hot	44,0 °C	44,0 °C	44,0 °C	0,95	22,0 °C	0,00	
Cold	16,2 °C	16,2 °C	16,2 °C	0,95	22,0 °C	0,00	

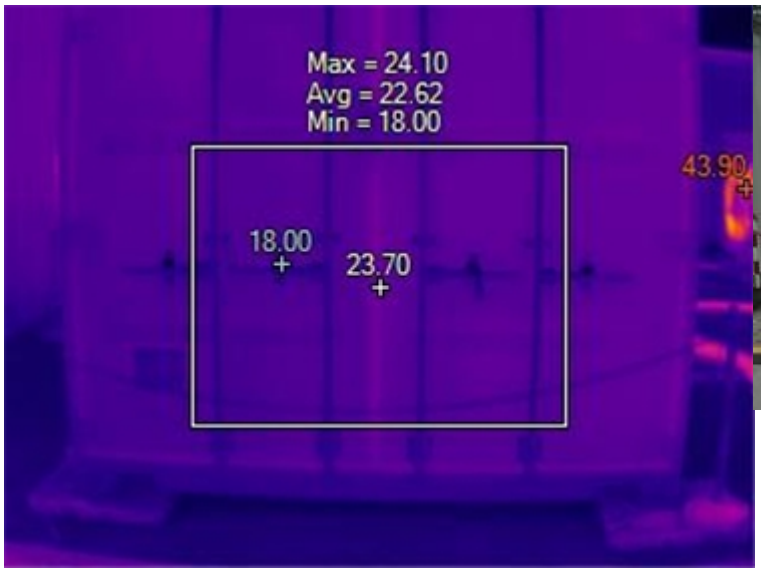




Image Info

Name	IR_00201.IS2
Emissivity	0.95
Background Temperature	22.00 °C
Calibration Range	-10.00 °C to 550.00 °C
Image Range	18.00 °C to 43.90 °C
Image Time	04/09/2024 11:14:23 AM
Asset Name	40ft Container Exterior

Marker Info

Marker Name	Maximum	Minimum	Average	Emissivity	BG Temp	Std.Dev	Delta-T
Centerpoint	23.7 °C	23.7 °C	23.7 °C	0.95	22.0 °C	0.00	
Centerbox	24.1 °C	18.0 °C	22.6 °C	0.95	22.0 °C	0.46	
Hot	43.9 °C	43.9 °C	43.9 °C	0.95	22.0 °C	0.00	
Cold	18.0 °C	18.0 °C	18.0 °C	0.95	22.0 °C	0.00	





Image Info

Name	IR_00200.IS2
Emissivity	0.95
Background Temperature	22.00 °C
Calibration Range	-10.00 °C to 550.00 °C
Image Range	9.80 °C to 35.70 °C
Image Time	04/09/2024 11:14:05 AM
Asset Name	40ft Container Exterior

Marker Info

Marker Name	Maximum	Minimum	Average	Emissivity	BG Temp	Std.Dev	Delta-T
Centerpoint	32.9 °C	32.9 °C	32.9 °C	0.95	22.0 °C	0.00	
Centerbox	35.7 °C	13.3 °C	21.7 °C	0.95	22.0 °C	5.19	
Hot	35.7 °C	35.7 °C	35.7 °C	0.95	22.0 °C	0.00	
Cold	9.8 °C	9.8 °C	9.8 °C	0.95	22.0 °C	0.00	

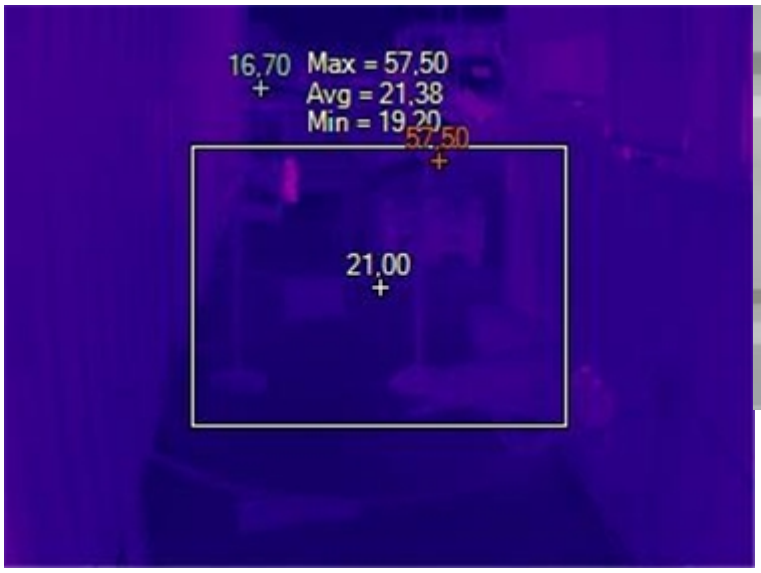




Image Info

Name	IR_00199.IS2
Emissivity	0,95
Background Temperature	22,00 °C
Calibration Range	-10,00 °C to 550,00 °C
Image Range	16,70 °C to 57,50 °C
Image Time	04/09/2024 11:13:51 AM

Marker Info

Marker Name	Maximum	Minimum	Average	Emissivity	BG Temp	Std.Dev	Delta-T
Centerpoint	21,0 °C	21,0 °C	21,0 °C	0,95	22,0 °C	0,00	
Centerbox	57,5 °C	19,2 °C	21,4 °C	0,95	22,0 °C	1,03	
Hot	57,5 °C	57,5 °C	57,5 °C	0,95	22,0 °C	0,00	
Cold	16,7 °C	16,7 °C	16,7 °C	0,95	22,0 °C	0,00	

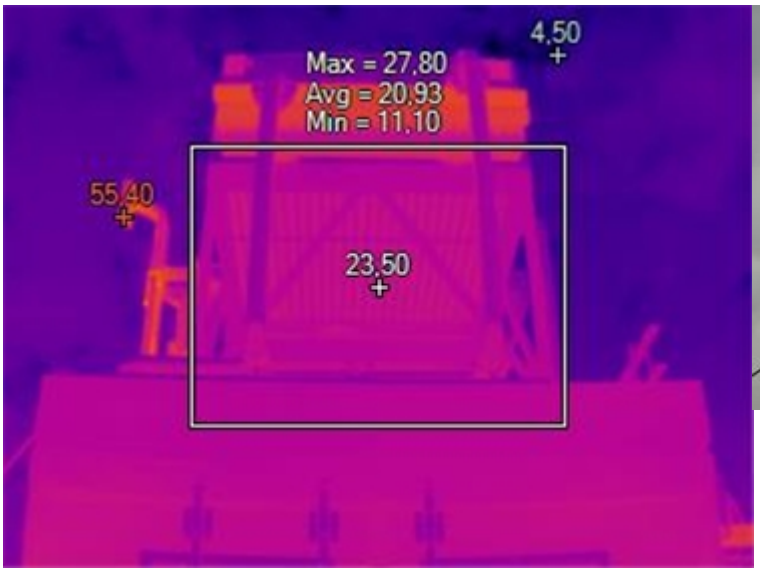




Image Info

Name	IR_00198.IS2
Emissivity	0,95
Background Temperature	22,00 °C
Calibration Range	-10,00 °C to 550,00 °C
Image Range	4,50 °C to 55,40 °C
Image Time	04/09/2024 11:13:37 AM
Asset Name	40ft Container Exterior

Marker Info

Marker Name	Maximum	Minimum	Average	Emissivity	BG Temp	Std.Dev	Delta-T
Centerpoint	23,5 °C	23,5 °C	23,5 °C	0,95	22,0 °C	0,00	
Centerbox	27,8 °C	11,1 °C	20,9 °C	0,95	22,0 °C	2,73	
Hot	55,4 °C	55,4 °C	55,4 °C	0,95	22,0 °C	0,00	
Cold	4,5 °C	4,5 °C	4,5 °C	0,95	22,0 °C	0,00	

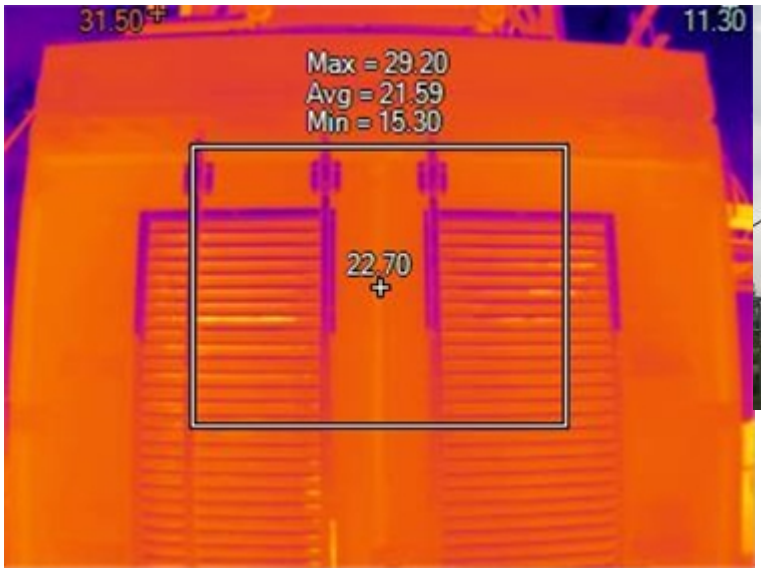




Image Info

Name	IR_00197.IS2
Emissivity	0.95
Background Temperature	22.00 °C
Calibration Range	-10.00 °C to 550.00 °C
Image Range	11.30 °C to 31.50 °C
Image Time	04/09/2024 11:13:10 AM
Asset Name	40ft Container Exterior

Marker Info

Marker Name	Maximum	Minimum	Average	Emissivity	BG Temp	Std.Dev	Delta-T
Centerpoint	22.7 °C	22.7 °C	22.7 °C	0.95	22.0 °C	0.00	
Centerbox	29.2 °C	15.3 °C	21.6 °C	0.95	22.0 °C	1.48	
Hot	31.5 °C	31.5 °C	31.5 °C	0.95	22.0 °C	0.00	
Cold	11.3 °C	11.3 °C	11.3 °C	0.95	22.0 °C	0.00	

Summary:

Date: 09/08/2024

Author: PBL

Ballard Power Systems Europe

Summary:

Thermograhic test of the Crosswind BLPH 1MW system

Entire power train included, from Fuel DCDC converters to AC output transformer.

Hottest item found is DC fuses at 70-75 degrees, which is within expected range.

No items found with elevated temperatures

Some images of test setup is included, but not inside Crosswind scope.

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Image Info

Name	IR_00190.IS2
Emissivity	0.95
Background Temperature	22.00 °C
Image Range	14.50 °C to 53.50 °C
Camera Serial Number	TiS75+-23080231
Image Time	08/08/2024 16:39:16 PM
Asset Name	PowerTrain
Asset Group	PowerTrain > DA03 10ft Container > Crosswind BLPH

Marker Info

Marker Name	Maximum	Minimum	Average	Emissivity	BG Temp	Std.Dev	Delta-T
Centerpoint	36.0 °C	36.0 °C	36.0 °C	0.95	22.0 °C	0.00	
Centerbox	53.5 °C	19.5 °C	31.1 °C	0.95	22.0 °C	4.48	
Hot	53.5 °C	53.5 °C	53.5 °C	0.95	22.0 °C	0.00	
Cold	14.5 °C	14.5 °C	14.5 °C	0.95	22.0 °C	0.00	

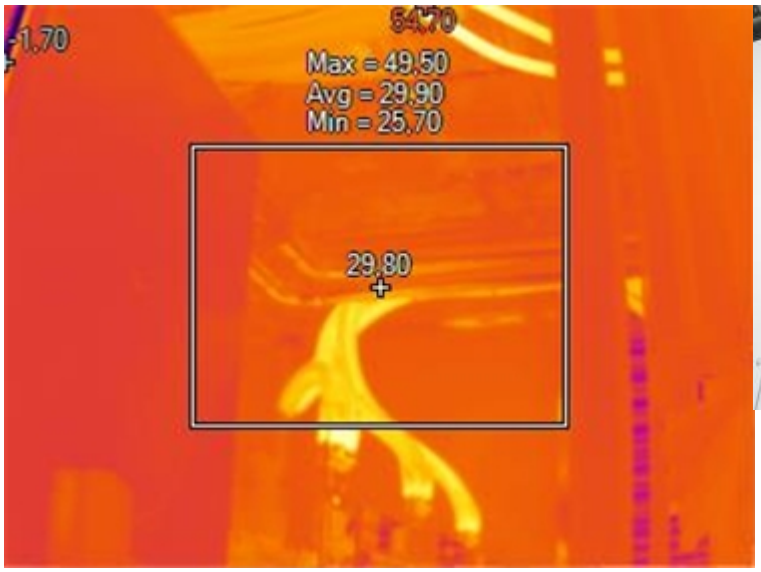




Image Info

Name	IR_00189.IS2
Emissivity	0,95
Background Temperature	22,00 °C
Image Range	-1,70 °C to 54,70 °C
Camera Serial Number	TiS75+-23080231
Image Time	08/08/2024 16:39:07 PM
Asset Name	PowerTrain
Asset Group	PowerTrain > DA03 10ft Container > Crosswind BLPH

Marker Info

Marker Name	Maximum	Minimum	Average	Emissivity	BG Temp	Std.Dev	Delta-T
Centerpoint	29,8 °C	29,8 °C	29,8 °C	0,95	22,0 °C	0,00	
Centerbox	49,5 °C	25,7 °C	29,9 °C	0,95	22,0 °C	4,28	
Hot	54,7 °C	54,7 °C	54,7 °C	0,95	22,0 °C	0,00	
Cold	-1,7 °C	-1,7 °C	-1,7 °C	0,95	22,0 °C	0,00	





Image Info

Name	IR_00188.IS2
Emissivity	0,95
Background Temperature	22,00 °C
Image Range	17,50 °C to 53,00 °C
Camera Serial Number	TiS75+-23080231
Image Time	08/08/2024 16:39:01 PM
Asset Name	PowerTrain
Asset Group	PowerTrain > DA03 10ft Container > Crosswind BLPH

Marker Info

Marker Name	Maximum	Minimum	Average	Emissivity	BG Temp	Std.Dev	Delta-T
Centerpoint	52,5 °C	52,5 °C	52,5 °C	0,95	22,0 °C	0,00	
Centerbox	53,0 °C	20,0 °C	30,7 °C	0,95	22,0 °C	5,37	
Hot	53,0 °C	53,0 °C	53,0 °C	0,95	22,0 °C	0,00	
Cold	17,5 °C	17,5 °C	17,5 °C	0,95	22,0 °C	0,00	

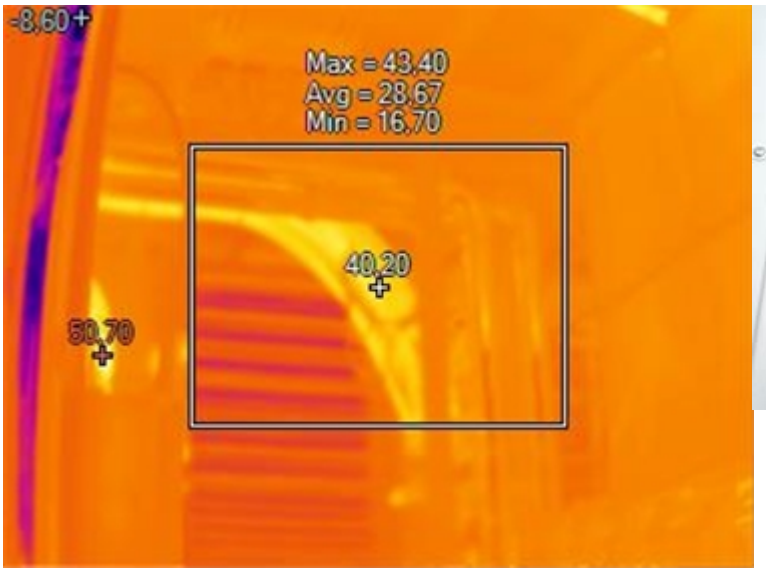




Image Info

Name	IR_00187.IS2
Emissivity	0,95
Background Temperature	22,00 °C
Image Range	-8,60 °C to 50,70 °C
Camera Serial Number	TiS75+-23080231
Image Time	08/08/2024 16:38:43 PM
Asset Name	PowerTrain
Asset Group	PowerTrain > DA03 10ft Container > Crosswind BLPH

Marker Info

Marker Name	Maximum	Minimum	Average	Emissivity	BG Temp	Std.Dev	Delta-T
Centerpoint	40,2 °C	40,2 °C	40,2 °C	0,95	22,0 °C	0,00	
Centerbox	43,4 °C	16,7 °C	28,7 °C	0,95	22,0 °C	5,00	
Hot	50,7 °C	50,7 °C	50,7 °C	0,95	22,0 °C	0,00	
Cold	-8,6 °C	-8,6 °C	-8,6 °C	0,95	22,0 °C	0,00	

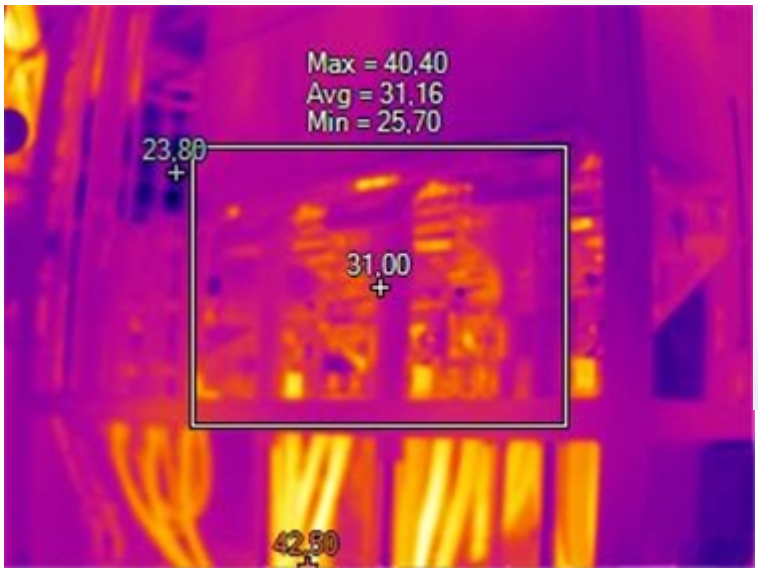




Image Info

Name	IR_00186.IS2
Emissivity	0,95
Background Temperature	22,00 °C
Image Range	23,80 °C to 42,50 °C
Camera Serial Number	TiS75+-23080231
Image Time	08/08/2024 16:38:30 PM

Marker Info

Marker Name	Maximum	Minimum	Average	Emissivity	BG Temp	Std.Dev	Delta-T
Centerpoint	31,0 °C	31,0 °C	31,0 °C	0,95	22,0 °C	0,00	
Centerbox	40,4 °C	25,7 °C	31,2 °C	0,95	22,0 °C	1,78	
Hot	42,5 °C	42,5 °C	42,5 °C	0,95	22,0 °C	0,00	
Cold	23,8 °C	23,8 °C	23,8 °C	0,95	22,0 °C	0,00	

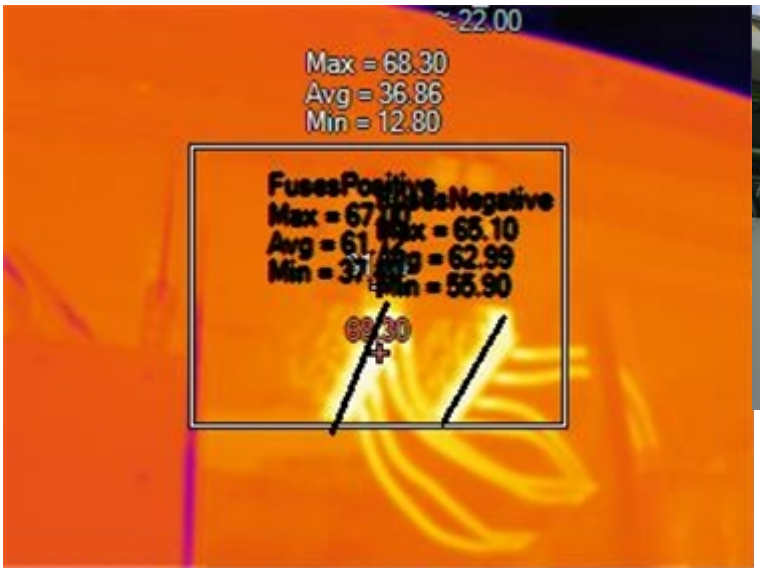




Image Info

Name	IR_00185.IS2
Emissivity	0.95
Background Temperature	22.00 °C
Image Range	~-22.00 °C to 68.30 °C
Camera Serial Number	TiS75+-23080231
Image Time	08/08/2024 16:38:21 PM
Asset Name	PowerTrain
Asset Group	PowerTrain > DA03 10ft Container > Crosswind BLPH

Marker Info

Marker Name	Maximum	Minimum	Average	Emissivity	BG Temp	Std.Dev	Delta-T
Centerpoint	31.0 °C	31.0 °C	31.0 °C	0.95	22.0 °C	0.00	
Centerbox	68.3 °C	12.8 °C	36.9 °C	0.95	22.0 °C	9.49	
Hot	68.3 °C	68.3 °C	68.3 °C	0.95	22.0 °C	0.00	
Cold	-22.0 °C	-22.0 °C	-22.0 °C	0.95	22.0 °C	0.00	
FusesPositive	67.0 °C	37.4 °C	61.1 °C	0.95	22.0 °C	8.12	
FusesNegative	65.1 °C	55.9 °C	63.0 °C	0.95	22.0 °C	1.76	

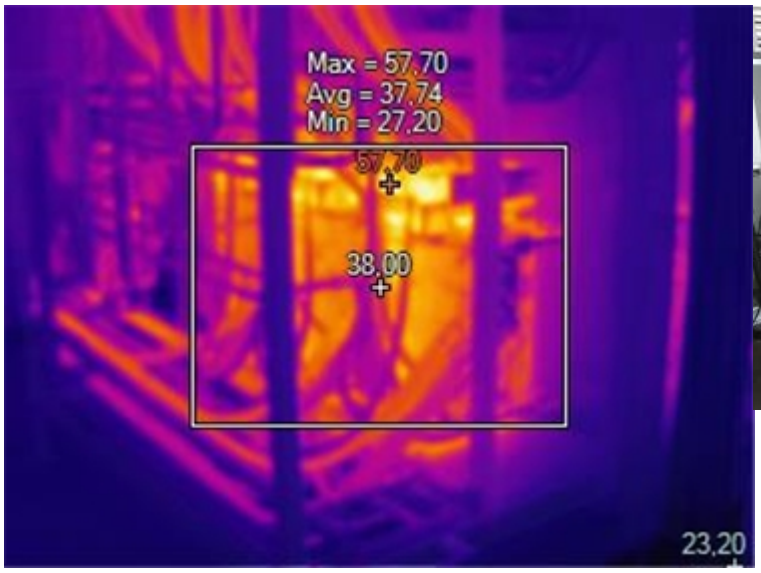




Image Info

Name	IR_00184.IS2
Emissivity	0,95
Background Temperature	22,00 °C
Image Range	23,20 °C to 57,70 °C
Camera Serial Number	TiS75+-23080231
Image Time	08/08/2024 16:38:12 PM
Asset Name	PowerTrain
Asset Group	PowerTrain > DA03 10ft Container > Crosswind BLPH

Marker Info

Marker Name	Maximum	Minimum	Average	Emissivity	BG Temp	Std.Dev	Delta-T
Centerpoint	38,0 °C	38,0 °C	38,0 °C	0,95	22,0 °C	0,00	
Centerbox	57,7 °C	27,2 °C	37,7 °C	0,95	22,0 °C	6,38	
Hot	57,7 °C	57,7 °C	57,7 °C	0,95	22,0 °C	0,00	
Cold	23,2 °C	23,2 °C	23,2 °C	0,95	22,0 °C	0,00	

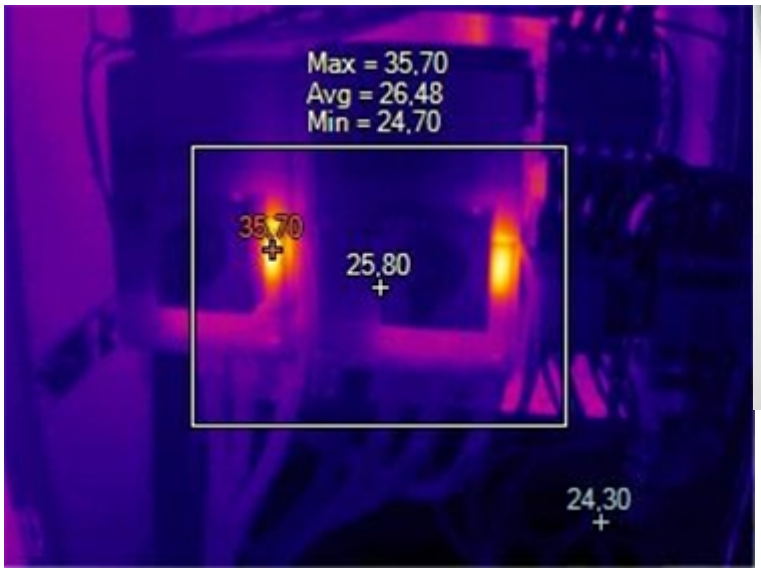




Image Info

Name	IR_00183.IS2
Emissivity	0,95
Background Temperature	22,00 °C
Image Range	24,30 °C to 35,70 °C
Camera Serial Number	TiS75+-23080231
Image Time	08/08/2024 16:36:24 PM
Asset Name	UC50 Aux AC Cabinet
Asset Group	UC50 Aux AC Cabinet > Crosswind BLPH

Marker Info

Marker Name	Maximum	Minimum	Average	Emissivity	BG Temp	Std.Dev	Delta-T
Centerpoint	25,8 °C	25,8 °C	25,8 °C	0,95	22,0 °C	0,00	
Centerbox	35,7 °C	24,7 °C	26,5 °C	0,95	22,0 °C	1,52	
Hot	35,7 °C	35,7 °C	35,7 °C	0,95	22,0 °C	0,00	
Cold	24,3 °C	24,3 °C	24,3 °C	0,95	22,0 °C	0,00	

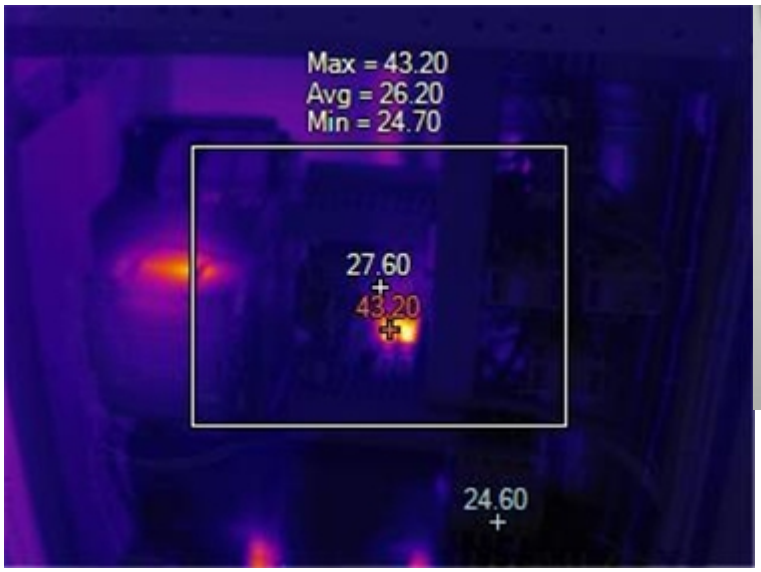




Image Info

Name	IR_00182.IS2
Emissivity	0.95
Background Temperature	22.00 °C
Image Range	24.60 °C to 43.20 °C
Camera Serial Number	TiS75+-23080231
Image Time	08/08/2024 16:36:15 PM
Asset Name	UC50 Aux AC Cabinet
Asset Group	UC50 Aux AC Cabinet > Crosswind BLPH

Marker Info

Marker Name	Maximum	Minimum	Average	Emissivity	BG Temp	Std.Dev	Delta-T
Centerpoint	27.6 °C	27.6 °C	27.6 °C	0.95	22.0 °C	0.00	
Centerbox	43.2 °C	24.7 °C	26.2 °C	0.95	22.0 °C	1.57	
Hot	43.2 °C	43.2 °C	43.2 °C	0.95	22.0 °C	0.00	
Cold	24.6 °C	24.6 °C	24.6 °C	0.95	22.0 °C	0.00	

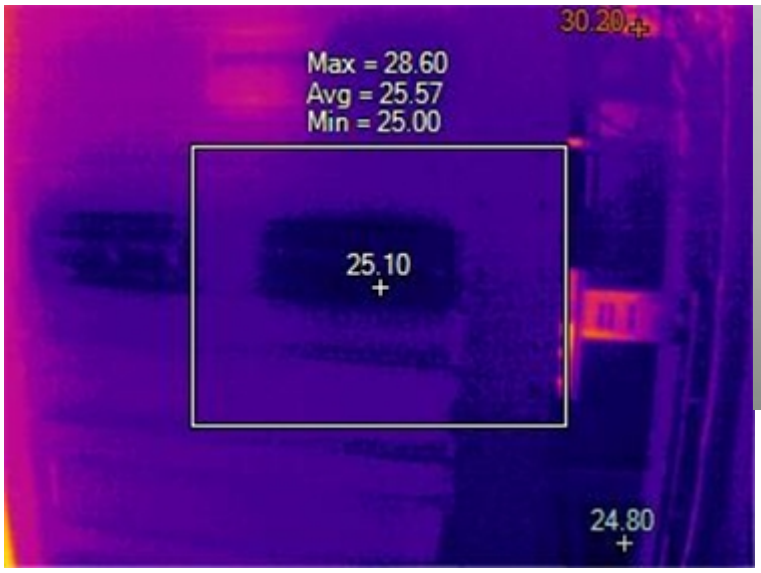




Image Info

Name	IR_00181.IS2
Emissivity	0.95
Background Temperature	22.00 °C
Image Range	24.80 °C to 30.20 °C
Camera Serial Number	TiS75+-23080231
Image Time	08/08/2024 16:36:10 PM
Asset Name	UC50 Aux AC Cabinet
Asset Group	UC50 Aux AC Cabinet > Crosswind BLPH

Marker Info

Marker Name	Maximum	Minimum	Average	Emissivity	BG Temp	Std.Dev	Delta-T
Centerpoint	25.1 °C	25.1 °C	25.1 °C	0.95	22.0 °C	0.00	
Centerbox	28.6 °C	25.0 °C	25.6 °C	0.95	22.0 °C	0.27	
Hot	30.2 °C	30.2 °C	30.2 °C	0.95	22.0 °C	0.00	
Cold	24.8 °C	24.8 °C	24.8 °C	0.95	22.0 °C	0.00	

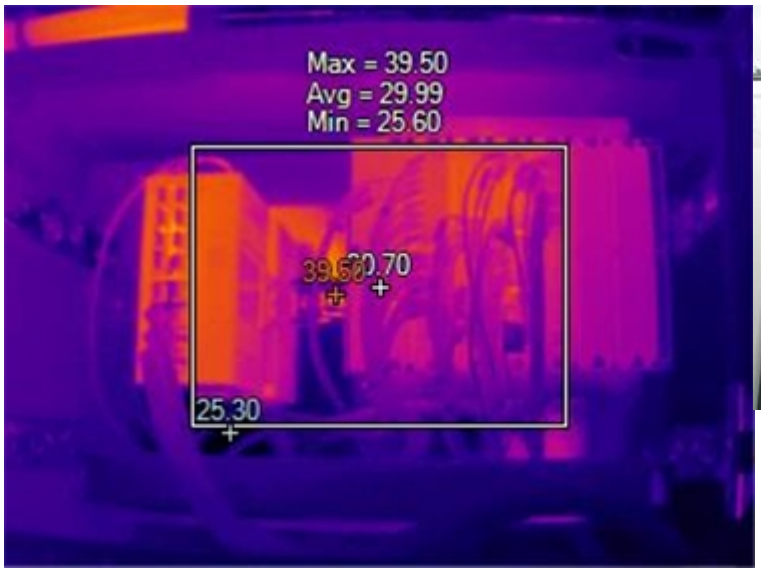




Image Info

Name	IR_00180.IS2
Emissivity	0.95
Background Temperature	22.00 °C
Image Range	25.30 °C to 39.50 °C
Camera Serial Number	TiS75+-23080231
Image Time	08/08/2024 16:36:04 PM
Asset Name	UC50 Aux AC Cabinet
Asset Group	UC50 Aux AC Cabinet > Crosswind BLPH

Marker Info

Marker Name	Maximum	Minimum	Average	Emissivity	BG Temp	Std.Dev	Delta-T
Centerpoint	30.7 °C	30.7 °C	30.7 °C	0.95	22.0 °C	0.00	
Centerbox	39.5 °C	25.6 °C	30.0 °C	0.95	22.0 °C	1.76	
Hot	39.5 °C	39.5 °C	39.5 °C	0.95	22.0 °C	0.00	
Cold	25.3 °C	25.3 °C	25.3 °C	0.95	22.0 °C	0.00	

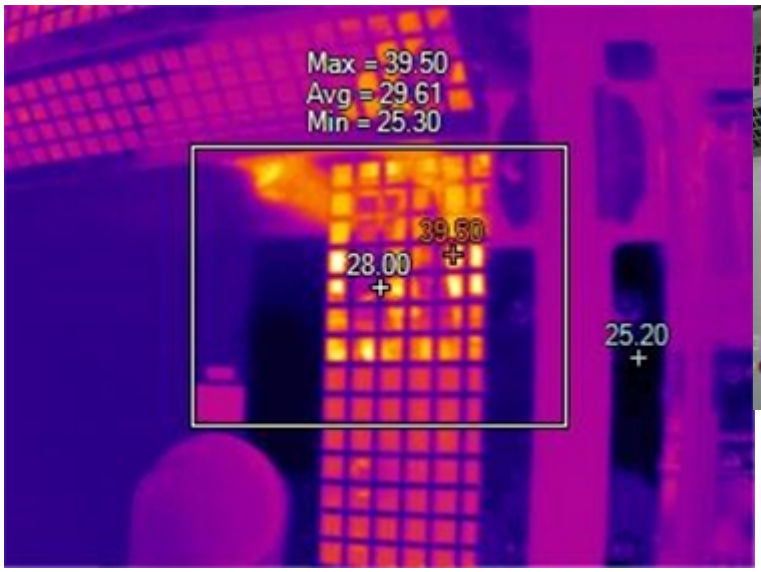


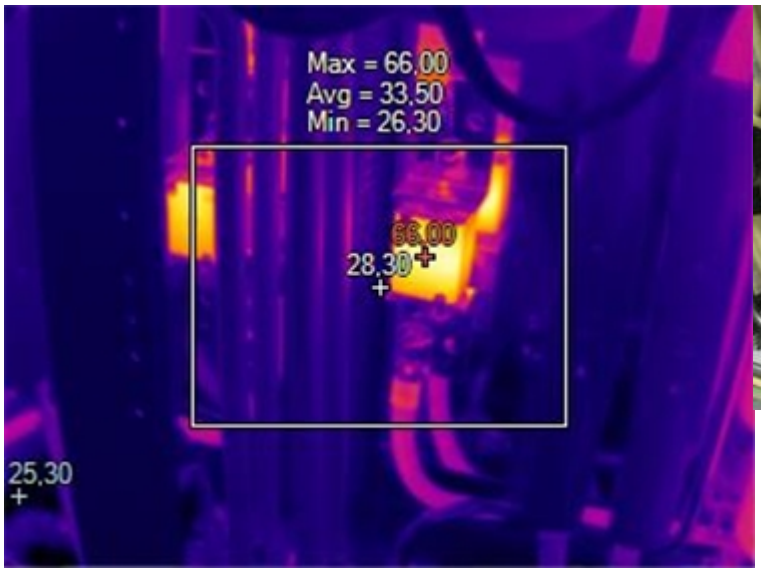


Image Info

Name	IR_00179.IS2
Emissivity	0.95
Background Temperature	22.00 °C
Image Range	25.20 °C to 39.50 °C
Camera Serial Number	TiS75+-23080231
Image Time	08/08/2024 16:35:14 PM
Asset Name	DCDC Converter 6
Asset Group	DCDC Converter 6 > UC06 DCDC Cabinet #6 > Crosswind BLPH

Marker Info

Marker Name	Maximum	Minimum	Average	Emissivity	BG Temp	Std.Dev	Delta-T
Centerpoint	28.0 °C	28.0 °C	28.0 °C	0.95	22.0 °C	0.00	
Centerbox	39.5 °C	25.3 °C	29.6 °C	0.95	22.0 °C	2.95	
Hot	39.5 °C	39.5 °C	39.5 °C	0.95	22.0 °C	0.00	
Cold	25.2 °C	25.2 °C	25.2 °C	0.95	22.0 °C	0.00	



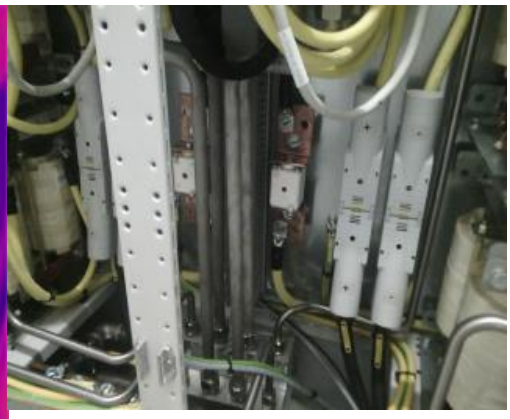
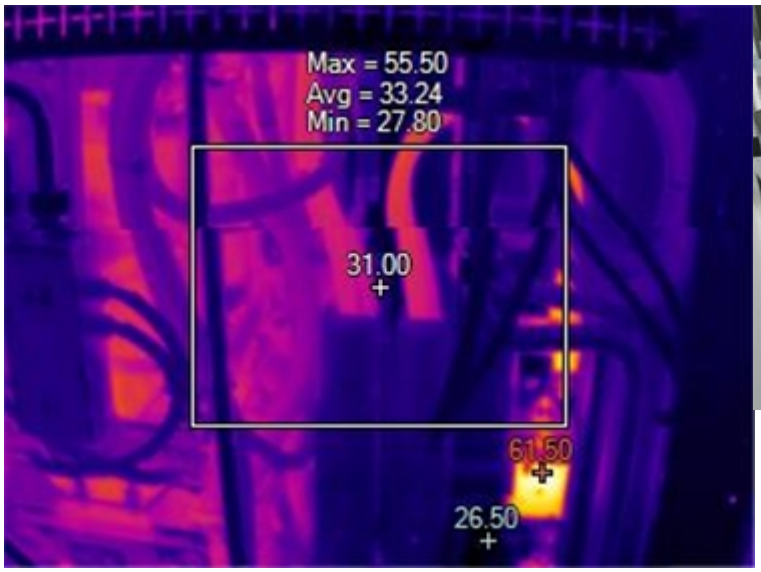


Image Info

Name	IR_00178.IS2
Emissivity	0,95
Background Temperature	22,00 °C
Image Range	25,30 °C to 66,00 °C
Camera Serial Number	TiS75+-23080231
Image Time	08/08/2024 16:35:07 PM
Asset Name	DCDC Converter 6
Asset Group	DCDC Converter 6 > UC06 DCDC Cabinet #6 > Crosswind BLPH

Marker Info

Marker Name	Maximum	Minimum	Average	Emissivity	BG Temp	Std.Dev	Delta-T
Centerpoint	28,3 °C	28,3 °C	28,3 °C	0,95	22,0 °C	0,00	
Centerbox	66,0 °C	26,3 °C	33,5 °C	0,95	22,0 °C	8,35	
Hot	66,0 °C	66,0 °C	66,0 °C	0,95	22,0 °C	0,00	
Cold	25,3 °C	25,3 °C	25,3 °C	0,95	22,0 °C	0,00	



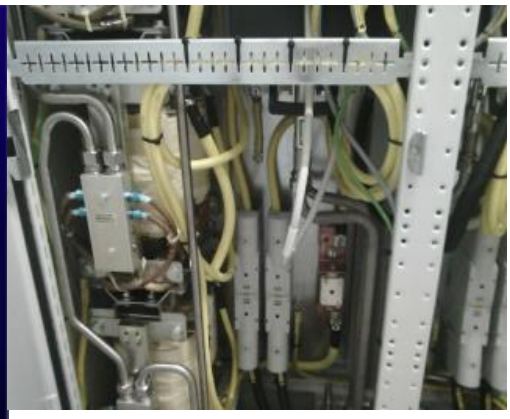


Image Info

Name	IR_00177.IS2
Emissivity	0.95
Background Temperature	22.00 °C
Image Range	26.50 °C to 61.50 °C
Camera Serial Number	TiS75+-23080231
Image Time	08/08/2024 16:35:01 PM
Asset Name	DCDC Converter 6
Asset Group	DCDC Converter 6 > UC06 DCDC Cabinet #6 > Crosswind BLPH

Marker Info

Marker Name	Maximum	Minimum	Average	Emissivity	BG Temp	Std.Dev	Delta-T
Centerpoint	31.0 °C	31.0 °C	31.0 °C	0.95	22.0 °C	0.00	
Centerbox	55.5 °C	27.8 °C	33.2 °C	0.95	22.0 °C	4.10	
Hot	61.5 °C	61.5 °C	61.5 °C	0.95	22.0 °C	0.00	
Cold	26.5 °C	26.5 °C	26.5 °C	0.95	22.0 °C	0.00	





Image Info

Name	IR_00176.IS2
Emissivity	0,95
Background Temperature	22,00 °C
Image Range	26,20 °C to 44,00 °C
Camera Serial Number	TiS75+-23080231
Image Time	08/08/2024 16:34:54 PM
Asset Name	DCDC Converter 6
Asset Group	DCDC Converter 6 > UC06 DCDC Cabinet #6 > Crosswind BLPH

Marker Info

Marker Name	Maximum	Minimum	Average	Emissivity	BG Temp	Std.Dev	Delta-T
Centerpoint	34,5 °C	34,5 °C	34,5 °C	0,95	22,0 °C	0,00	
Centerbox	44,0 °C	27,1 °C	34,3 °C	0,95	22,0 °C	3,56	
Hot	44,0 °C	44,0 °C	44,0 °C	0,95	22,0 °C	0,00	
Cold	26,2 °C	26,2 °C	26,2 °C	0,95	22,0 °C	0,00	

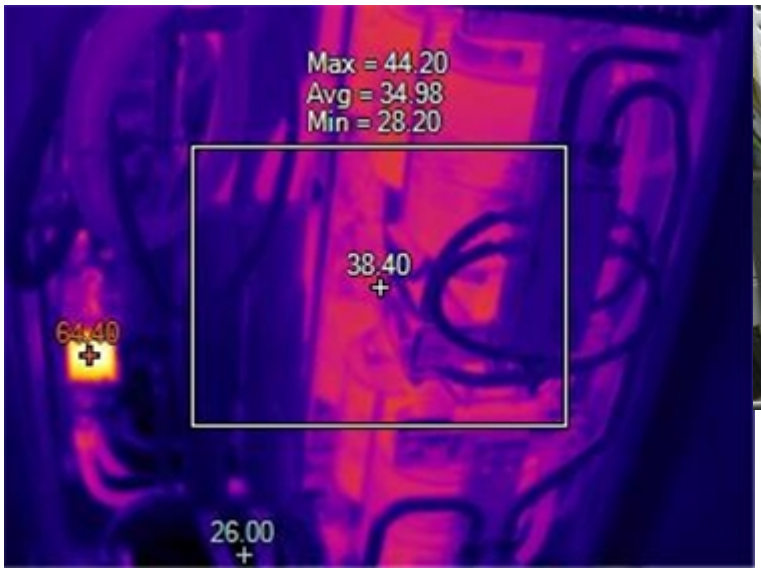




Image Info

Name	IR_00175.IS2
Emissivity	0.95
Background Temperature	22.00 °C
Image Range	26.00 °C to 64.40 °C
Camera Serial Number	TiS75+-23080231
Image Time	08/08/2024 16:34:45 PM
Asset Name	DCDC Converter 6
Asset Group	DCDC Converter 6 > UC06 DCDC Cabinet #6 > Crosswind BLPH

Marker Info

Marker Name	Maximum	Minimum	Average	Emissivity	BG Temp	Std.Dev	Delta-T
Centerpoint	38.4 °C	38.4 °C	38.4 °C	0.95	22.0 °C	0.00	
Centerbox	44.2 °C	28.2 °C	35.0 °C	0.95	22.0 °C	4.79	
Hot	64.4 °C	64.4 °C	64.4 °C	0.95	22.0 °C	0.00	
Cold	26.0 °C	26.0 °C	26.0 °C	0.95	22.0 °C	0.00	





Image Info

Name	IR_00174.IS2
Emissivity	0.95
Background Temperature	22.00 °C
Image Range	27.50 °C to 43.50 °C
Camera Serial Number	TiS75+-23080231
Image Time	08/08/2024 16:34:39 PM
Asset Name	DCDC Converter 6
Asset Group	DCDC Converter 6 > UC06 DCDC Cabinet #6 > Crosswind BLPH

Marker Info

Marker Name	Maximum	Minimum	Average	Emissivity	BG Temp	Std.Dev	Delta-T
Centerpoint	32.0 °C	32.0 °C	32.0 °C	0.95	22.0 °C	0.00	
Centerbox	43.5 °C	27.7 °C	34.0 °C	0.95	22.0 °C	3.99	
Hot	43.5 °C	43.5 °C	43.5 °C	0.95	22.0 °C	0.00	
Cold	27.5 °C	27.5 °C	27.5 °C	0.95	22.0 °C	0.00	

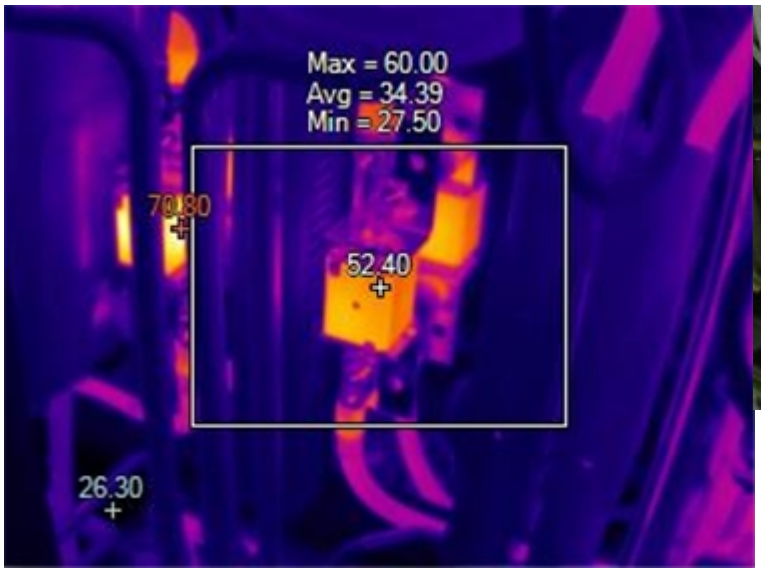


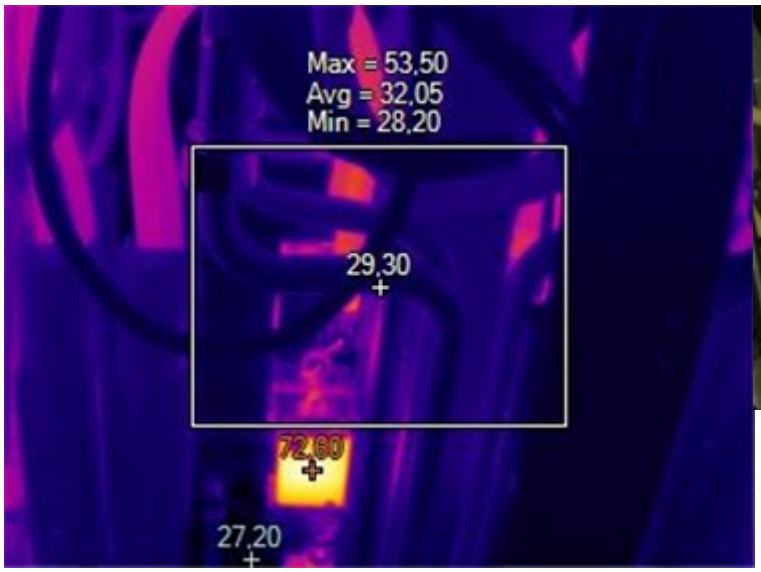


Image Info

Name	IR_00173.IS2
Emissivity	0.95
Background Temperature	22.00 °C
Image Range	26.30 °C to 70.80 °C
Camera Serial Number	TiS75+-23080231
Image Time	08/08/2024 16:33:43 PM
Asset Name	DCDC Converter 5
Asset Group	DCDC Converter 5 > UC05 DCDC Cabinet #5 > Crosswind BLPH

Marker Info

Marker Name	Maximum	Minimum	Average	Emissivity	BG Temp	Std.Dev	Delta-T
Centerpoint	52.4 °C	52.4 °C	52.4 °C	0.95	22.0 °C	0.00	
Centerbox	60.0 °C	27.5 °C	34.4 °C	0.95	22.0 °C	7.82	
Hot	70.8 °C	70.8 °C	70.8 °C	0.95	22.0 °C	0.00	
Cold	26.3 °C	26.3 °C	26.3 °C	0.95	22.0 °C	0.00	



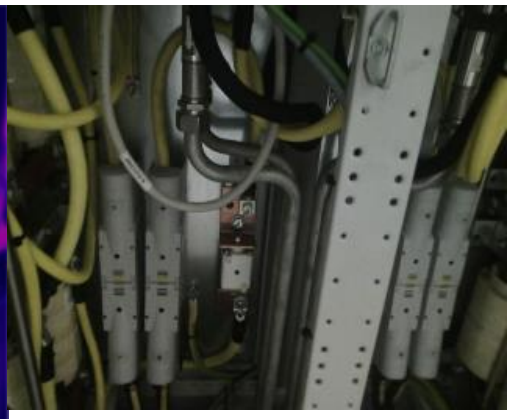


Image Info

Name	IR_00172.IS2
Emissivity	0,95
Background Temperature	22,00 °C
Image Range	27,20 °C to 72,60 °C
Camera Serial Number	TiS75+-23080231
Image Time	08/08/2024 16:33:34 PM
Asset Name	DCDC Converter 5
Asset Group	DCDC Converter 5 > UC05 DCDC Cabinet #5 > Crosswind BLPH

Marker Info

Marker Name	Maximum	Minimum	Average	Emissivity	BG Temp	Std.Dev	Delta-T
Centerpoint	29,3 °C	29,3 °C	29,3 °C	0,95	22,0 °C	0,00	
Centerbox	53,5 °C	28,2 °C	32,0 °C	0,95	22,0 °C	3,91	
Hot	72,6 °C	72,6 °C	72,6 °C	0,95	22,0 °C	0,00	
Cold	27,2 °C	27,2 °C	27,2 °C	0,95	22,0 °C	0,00	



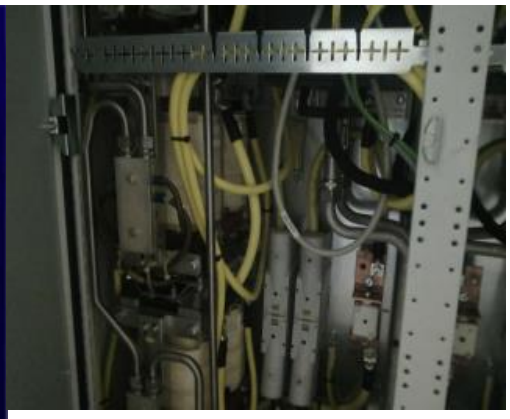


Image Info

Name	IR_00171.IS2
Emissivity	0.95
Background Temperature	22.00 °C
Image Range	26.30 °C to 71.50 °C
Camera Serial Number	TiS75+-23080231
Image Time	08/08/2024 16:33:25 PM
Asset Name	DCDC Converter 5
Asset Group	DCDC Converter 5 > UC05 DCDC Cabinet #5 > Crosswind BLPH

Marker Info

Marker Name	Maximum	Minimum	Average	Emissivity	BG Temp	Std.Dev	Delta-T
Centerpoint	34.5 °C	34.5 °C	34.5 °C	0.95	22.0 °C	0.00	
Centerbox	44.2 °C	27.7 °C	34.6 °C	0.95	22.0 °C	3.91	
Hot	71.5 °C	71.5 °C	71.5 °C	0.95	22.0 °C	0.00	
Cold	26.3 °C	26.3 °C	26.3 °C	0.95	22.0 °C	0.00	





Image Info

Name	IR_00170.IS2
Emissivity	0,95
Background Temperature	22,00 °C
Image Range	25,80 °C to 44,70 °C
Camera Serial Number	TiS75+-23080231
Image Time	08/08/2024 16:33:18 PM
Asset Name	DCDC Converter 5
Asset Group	DCDC Converter 5 > UC05 DCDC Cabinet #5 > Crosswind BLPH

Marker Info

Marker Name	Maximum	Minimum	Average	Emissivity	BG Temp	Std.Dev	Delta-T
Centerpoint	32,0 °C	32,0 °C	32,0 °C	0,95	22,0 °C	0,00	
Centerbox	44,2 °C	28,3 °C	33,5 °C	0,95	22,0 °C	3,59	
Hot	44,7 °C	44,7 °C	44,7 °C	0,95	22,0 °C	0,00	
Cold	25,8 °C	25,8 °C	25,8 °C	0,95	22,0 °C	0,00	

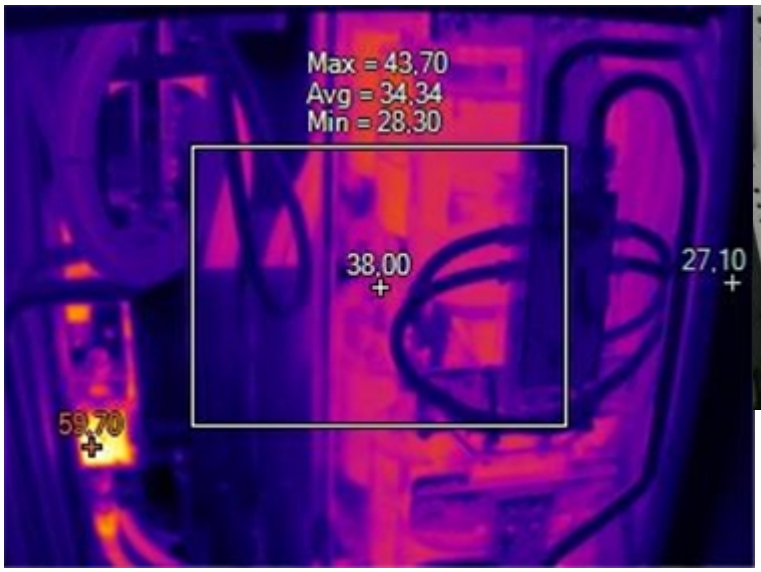




Image Info

Name	IR_00169.IS2
Emissivity	0,95
Background Temperature	22,00 °C
Image Range	27,10 °C to 59,70 °C
Camera Serial Number	TiS75+-23080231
Image Time	08/08/2024 16:33:13 PM
Asset Name	DCDC Converter 5
Asset Group	DCDC Converter 5 > UC05 DCDC Cabinet #5 > Crosswind BLPH

Marker Info

Marker Name	Maximum	Minimum	Average	Emissivity	BG Temp	Std.Dev	Delta-T
Centerpoint	38,0 °C	38,0 °C	38,0 °C	0,95	22,0 °C	0,00	
Centerbox	43,7 °C	28,3 °C	34,3 °C	0,95	22,0 °C	4,34	
Hot	59,7 °C	59,7 °C	59,7 °C	0,95	22,0 °C	0,00	
Cold	27,1 °C	27,1 °C	27,1 °C	0,95	22,0 °C	0,00	

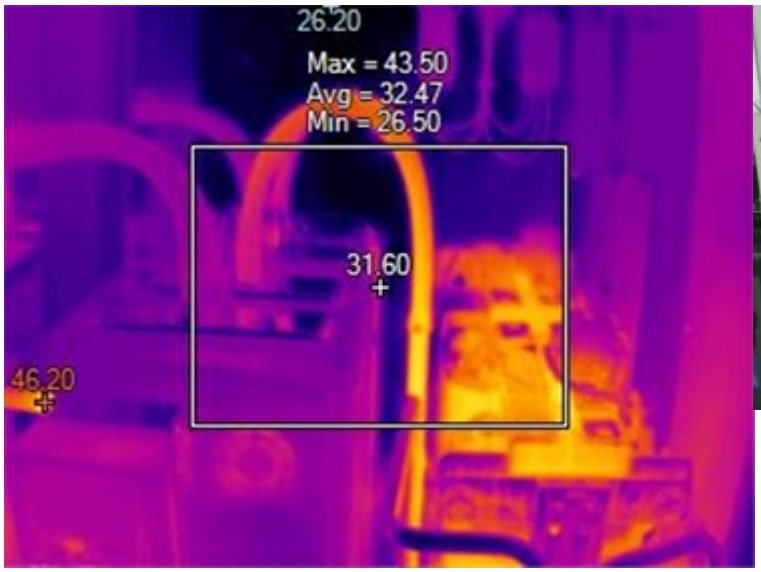




Image Info

Name	IR_00168.IS2
Emissivity	0.95
Background Temperature	22.00 °C
Image Range	26.20 °C to 46.20 °C
Camera Serial Number	TiS75+-23080231
Image Time	08/08/2024 16:33:07 PM
Asset Name	DCDC Converter 5
Asset Group	DCDC Converter 5 > UC05 DCDC Cabinet #5 > Crosswind BLPH

Marker Info

Marker Name	Maximum	Minimum	Average	Emissivity	BG Temp	Std.Dev	Delta-T
Centerpoint	31.6 °C	31.6 °C	31.6 °C	0.95	22.0 °C	0.00	
Centerbox	43.5 °C	26.5 °C	32.5 °C	0.95	22.0 °C	4.14	
Hot	46.2 °C	46.2 °C	46.2 °C	0.95	22.0 °C	0.00	
Cold	26.2 °C	26.2 °C	26.2 °C	0.95	22.0 °C	0.00	

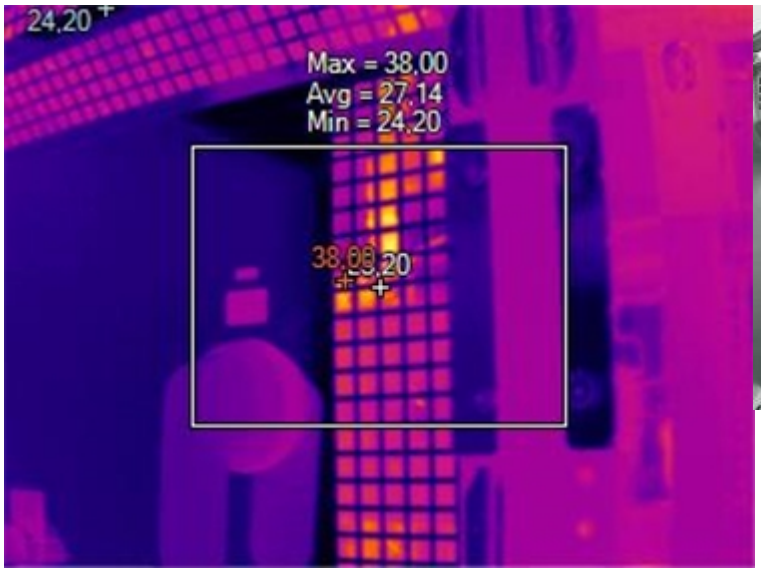




Image Info

Name	IR_00167.IS2
Emissivity	0,95
Background Temperature	22,00 °C
Image Range	24,20 °C to 38,00 °C
Camera Serial Number	TiS75+-23080231
Image Time	08/08/2024 16:32:09 PM
Asset Name	DCDC Converter 4
Asset Group	DCDC Converter 4 > UC04 DCDC Cabinet #4 > Crosswind BLPH

Marker Info

Marker Name	Maximum	Minimum	Average	Emissivity	BG Temp	Std.Dev	Delta-T
Centerpoint	25,2 °C	25,2 °C	25,2 °C	0,95	22,0 °C	0,00	
Centerbox	38,0 °C	24,2 °C	27,1 °C	0,95	22,0 °C	1,86	
Hot	38,0 °C	38,0 °C	38,0 °C	0,95	22,0 °C	0,00	
Cold	24,2 °C	24,2 °C	24,2 °C	0,95	22,0 °C	0,00	





Image Info

Name	IR_00166.IS2
Emissivity	0.95
Background Temperature	22.00 °C
Image Range	25.70 °C to 42.90 °C
Camera Serial Number	TiS75+-23080231
Image Time	08/08/2024 16:32:01 PM
Asset Name	DCDC Converter 4
Asset Group	DCDC Converter 4 > UC04 DCDC Cabinet #4 > Crosswind BLPH

Marker Info

Marker Name	Maximum	Minimum	Average	Emissivity	BG Temp	Std.Dev	Delta-T
Centerpoint	32.7 °C	32.7 °C	32.7 °C	0.95	22.0 °C	0.00	
Centerbox	42.9 °C	25.7 °C	32.0 °C	0.95	22.0 °C	3.97	
Hot	42.9 °C	42.9 °C	42.9 °C	0.95	22.0 °C	0.00	
Cold	25.7 °C	25.7 °C	25.7 °C	0.95	22.0 °C	0.00	





Image Info

Name	IR_00165.IS2
Emissivity	0.95
Background Temperature	22.00 °C
Image Range	24.50 °C to 43.70 °C
Camera Serial Number	TiS75+-23080231
Image Time	08/08/2024 16:31:56 PM
Asset Name	DCDC Converter 4
Asset Group	DCDC Converter 4 > UC04 DCDC Cabinet #4 > Crosswind BLPH

Marker Info

Marker Name	Maximum	Minimum	Average	Emissivity	BG Temp	Std.Dev	Delta-T
Centerpoint	30.7 °C	30.7 °C	30.7 °C	0.95	22.0 °C	0.00	
Centerbox	43.7 °C	27.2 °C	32.8 °C	0.95	22.0 °C	3.63	
Hot	43.7 °C	43.7 °C	43.7 °C	0.95	22.0 °C	0.00	
Cold	24.5 °C	24.5 °C	24.5 °C	0.95	22.0 °C	0.00	





Image Info

Name	IR_00164.IS2
Emissivity	0,95
Background Temperature	22,00 °C
Image Range	26,20 °C to 43,50 °C
Camera Serial Number	TiS75+-23080231
Image Time	08/08/2024 16:31:49 PM
Asset Name	DCDC Converter 4
Asset Group	DCDC Converter 4 > UC04 DCDC Cabinet #4 > Crosswind BLPH

Marker Info

Marker Name	Maximum	Minimum	Average	Emissivity	BG Temp	Std.Dev	Delta-T
Centerpoint	30,3 °C	30,3 °C	30,3 °C	0,95	22,0 °C	0,00	
Centerbox	43,5 °C	26,7 °C	32,6 °C	0,95	22,0 °C	4,36	
Hot	43,5 °C	43,5 °C	43,5 °C	0,95	22,0 °C	0,00	
Cold	26,2 °C	26,2 °C	26,2 °C	0,95	22,0 °C	0,00	





Image Info

Name	IR_00163.IS2
Emissivity	0,95
Background Temperature	22,00 °C
Image Range	25,30 °C to 43,00 °C
Camera Serial Number	TiS75+-23080231
Image Time	08/08/2024 16:31:43 PM
Asset Name	DCDC Converter 4
Asset Group	DCDC Converter 4 > UC04 DCDC Cabinet #4 > Crosswind BLPH

Marker Info

Marker Name	Maximum	Minimum	Average	Emissivity	BG Temp	Std.Dev	Delta-T
Centerpoint	32,5 °C	32,5 °C	32,5 °C	0,95	22,0 °C	0,00	
Centerbox	43,0 °C	25,7 °C	32,2 °C	0,95	22,0 °C	3,73	
Hot	43,0 °C	43,0 °C	43,0 °C	0,95	22,0 °C	0,00	
Cold	25,3 °C	25,3 °C	25,3 °C	0,95	22,0 °C	0,00	

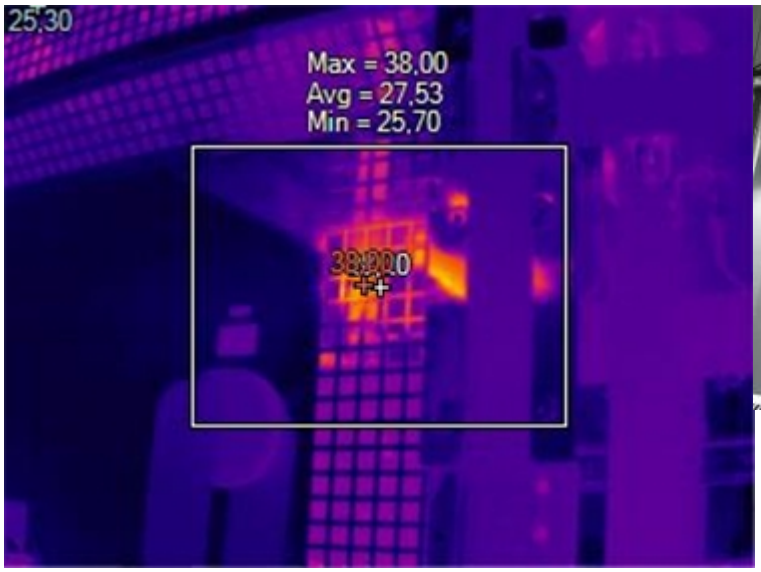




Image Info

Name	IR_00162.IS2
Emissivity	0,95
Background Temperature	22,00 °C
Image Range	25,30 °C to 38,00 °C
Camera Serial Number	TiS75+-23080231
Image Time	08/08/2024 16:30:34 PM
Asset Name	DCDC Converter 3
Asset Group	DCDC Converter 3 > UC03 DCDC Cabinet #3 > Crosswind BLPH

Marker Info

Marker Name	Maximum	Minimum	Average	Emissivity	BG Temp	Std.Dev	Delta-T
Centerpoint	28,2 °C	28,2 °C	28,2 °C	0,95	22,0 °C	0,00	
Centerbox	38,0 °C	25,7 °C	27,5 °C	0,95	22,0 °C	1,61	
Hot	38,0 °C	38,0 °C	38,0 °C	0,95	22,0 °C	0,00	
Cold	25,3 °C	25,3 °C	25,3 °C	0,95	22,0 °C	0,00	

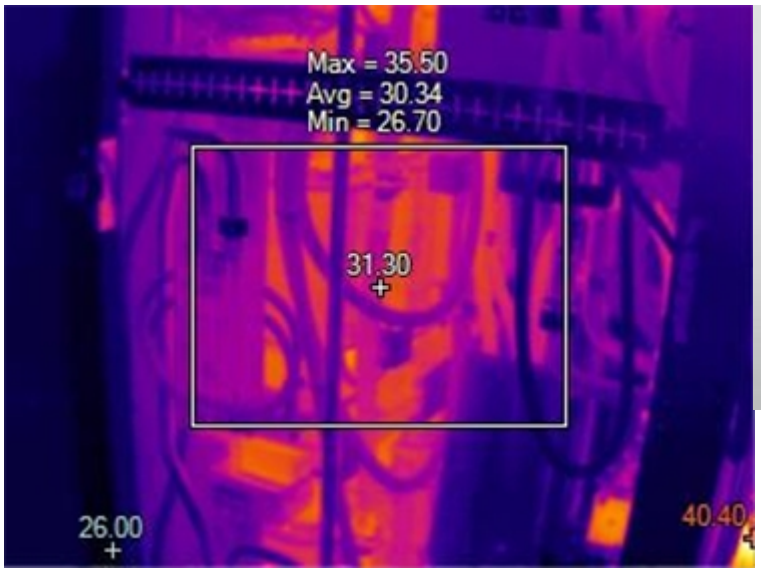




Image Info

Name	IR_00161.IS2
Emissivity	0.95
Background Temperature	22.00 °C
Image Range	26.00 °C to 40.40 °C
Camera Serial Number	TiS75+-23080231
Image Time	08/08/2024 16:30:22 PM
Asset Name	DCDC Converter 3
Asset Group	DCDC Converter 3 > UC03 DCDC Cabinet #3 > Crosswind BLPH

Marker Info

Marker Name	Maximum	Minimum	Average	Emissivity	BG Temp	Std.Dev	Delta-T
Centerpoint	31.3 °C	31.3 °C	31.3 °C	0.95	22.0 °C	0.00	
Centerbox	35.5 °C	26.7 °C	30.3 °C	0.95	22.0 °C	1.65	
Hot	40.4 °C	40.4 °C	40.4 °C	0.95	22.0 °C	0.00	
Cold	26.0 °C	26.0 °C	26.0 °C	0.95	22.0 °C	0.00	





Image Info

Name	IR_00160.IS2
Emissivity	0.95
Background Temperature	22.00 °C
Image Range	25.60 °C to 36.50 °C
Camera Serial Number	TiS75+-23080231
Image Time	08/08/2024 16:30:16 PM
Asset Name	DCDC Converter 3
Asset Group	DCDC Converter 3 > UC03 DCDC Cabinet #3 > Crosswind BLPH

Marker Info

Marker Name	Maximum	Minimum	Average	Emissivity	BG Temp	Std.Dev	Delta-T
Centerpoint	28.5 °C	28.5 °C	28.5 °C	0.95	22.0 °C	0.00	
Centerbox	36.5 °C	26.7 °C	29.9 °C	0.95	22.0 °C	1.97	
Hot	36.5 °C	36.5 °C	36.5 °C	0.95	22.0 °C	0.00	
Cold	25.6 °C	25.6 °C	25.6 °C	0.95	22.0 °C	0.00	





Image Info

Name	IR_00159.IS2
Emissivity	0.95
Background Temperature	22.00 °C
Image Range	25.20 °C to 41.00 °C
Camera Serial Number	TiS75+-23080231
Image Time	08/08/2024 16:30:07 PM
Asset Name	DCDC Converter 3
Asset Group	DCDC Converter 3 > UC03 DCDC Cabinet #3 > Crosswind BLPH

Marker Info

Marker Name	Maximum	Minimum	Average	Emissivity	BG Temp	Std.Dev	Delta-T
Centerpoint	27.7 °C	27.7 °C	27.7 °C	0.95	22.0 °C	0.00	
Centerbox	41.0 °C	25.8 °C	29.5 °C	0.95	22.0 °C	2.41	
Hot	41.0 °C	41.0 °C	41.0 °C	0.95	22.0 °C	0.00	
Cold	25.2 °C	25.2 °C	25.2 °C	0.95	22.0 °C	0.00	





Image Info

Name	IR_00158.IS2
Emissivity	0,95
Background Temperature	22,00 °C
Image Range	25,10 °C to 34,40 °C
Camera Serial Number	TiS75+-23080231
Image Time	08/08/2024 16:30:02 PM
Asset Name	DCDC Converter 3
Asset Group	DCDC Converter 3 > UC03 DCDC Cabinet #3 > Crosswind BLPH

Marker Info

Marker Name	Maximum	Minimum	Average	Emissivity	BG Temp	Std.Dev	Delta-T
Centerpoint	31,7 °C	31,7 °C	31,7 °C	0,95	22,0 °C	0,00	
Centerbox	34,4 °C	26,2 °C	30,1 °C	0,95	22,0 °C	1,63	
Hot	34,4 °C	34,4 °C	34,4 °C	0,95	22,0 °C	0,00	
Cold	25,1 °C	25,1 °C	25,1 °C	0,95	22,0 °C	0,00	

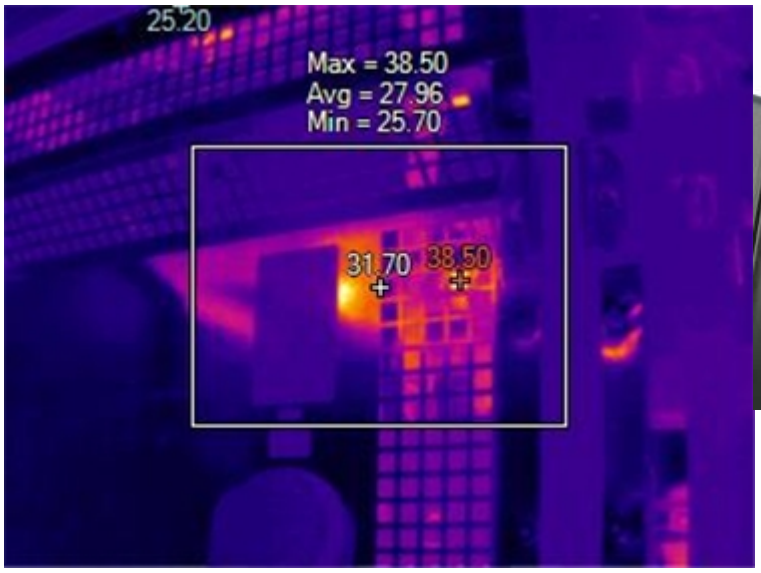




Image Info

Name	IR_00157.IS2
Emissivity	0.95
Background Temperature	22.00 °C
Image Range	25.20 °C to 38.50 °C
Camera Serial Number	TiS75+-23080231
Image Time	08/08/2024 16:28:25 PM
Asset Name	DCDC Converter 2
Asset Group	DCDC Converter 2 > UC02 DCDC Cabinet #2 > Crosswind BLPH

Marker Info

Marker Name	Maximum	Minimum	Average	Emissivity	BG Temp	Std.Dev	Delta-T
Centerpoint	31.7 °C	31.7 °C	31.7 °C	0.95	22.0 °C	0.00	
Centerbox	38.5 °C	25.7 °C	28.0 °C	0.95	22.0 °C	1.71	
Hot	38.5 °C	38.5 °C	38.5 °C	0.95	22.0 °C	0.00	
Cold	25.2 °C	25.2 °C	25.2 °C	0.95	22.0 °C	0.00	





Image Info

Name	IR_00156.IS2
Emissivity	0,95
Background Temperature	22,00 °C
Image Range	25,80 °C to 35,70 °C
Camera Serial Number	TiS75+-23080231
Image Time	08/08/2024 16:28:13 PM
Asset Name	DCDC Converter 2
Asset Group	DCDC Converter 2 > UC02 DCDC Cabinet #2 > Crosswind BLPH

Marker Info

Marker Name	Maximum	Minimum	Average	Emissivity	BG Temp	Std.Dev	Delta-T
Centerpoint	31,7 °C	31,7 °C	31,7 °C	0,95	22,0 °C	0,00	
Centerbox	34,0 °C	27,1 °C	29,9 °C	0,95	22,0 °C	1,34	
Hot	35,7 °C	35,7 °C	35,7 °C	0,95	22,0 °C	0,00	
Cold	25,8 °C	25,8 °C	25,8 °C	0,95	22,0 °C	0,00	





Image Info

Name	IR_00155.IS2
Emissivity	0,95
Background Temperature	22,00 °C
Image Range	25,30 °C to 35,50 °C
Camera Serial Number	TiS75+-23080231
Image Time	08/08/2024 16:28:08 PM
Asset Name	DCDC Converter 2
Asset Group	DCDC Converter 2 > UC02 DCDC Cabinet #2 > Crosswind BLPH

Marker Info

Marker Name	Maximum	Minimum	Average	Emissivity	BG Temp	Std.Dev	Delta-T
Centerpoint	29,8 °C	29,8 °C	29,8 °C	0,95	22,0 °C	0,00	
Centerbox	35,5 °C	27,2 °C	29,7 °C	0,95	22,0 °C	1,43	
Hot	35,5 °C	35,5 °C	35,5 °C	0,95	22,0 °C	0,00	
Cold	25,3 °C	25,3 °C	25,3 °C	0,95	22,0 °C	0,00	





Image Info

Name	IR_00154.IS2
Emissivity	0.95
Background Temperature	22.00 °C
Image Range	24.70 °C to 34.40 °C
Camera Serial Number	TiS75+-23080231
Image Time	08/08/2024 16:28:00 PM
Asset Name	DCDC Converter 2
Asset Group	DCDC Converter 2 > UC02 DCDC Cabinet #2 > Crosswind BLPH

Marker Info

Marker Name	Maximum	Minimum	Average	Emissivity	BG Temp	Std.Dev	Delta-T
Centerpoint	31.0 °C	31.0 °C	31.0 °C	0.95	22.0 °C	0.00	
Centerbox	34.4 °C	25.8 °C	29.5 °C	0.95	22.0 °C	1.64	
Hot	34.4 °C	34.4 °C	34.4 °C	0.95	22.0 °C	0.00	
Cold	24.7 °C	24.7 °C	24.7 °C	0.95	22.0 °C	0.00	





Image Info

Name	IR_00153.IS2
Emissivity	0.95
Background Temperature	22.00 °C
Image Range	25.20 °C to 34.40 °C
Camera Serial Number	TiS75+-23080231
Image Time	08/08/2024 16:27:54 PM
Asset Name	DCDC Converter 2
Asset Group	DCDC Converter 2 > UC02 DCDC Cabinet #2 > Crosswind BLPH

Marker Info

Marker Name	Maximum	Minimum	Average	Emissivity	BG Temp	Std.Dev	Delta-T
Centerpoint	30.3 °C	30.3 °C	30.3 °C	0.95	22.0 °C	0.00	
Centerbox	33.5 °C	26.5 °C	29.6 °C	0.95	22.0 °C	1.38	
Hot	34.4 °C	34.4 °C	34.4 °C	0.95	22.0 °C	0.00	
Cold	25.2 °C	25.2 °C	25.2 °C	0.95	22.0 °C	0.00	

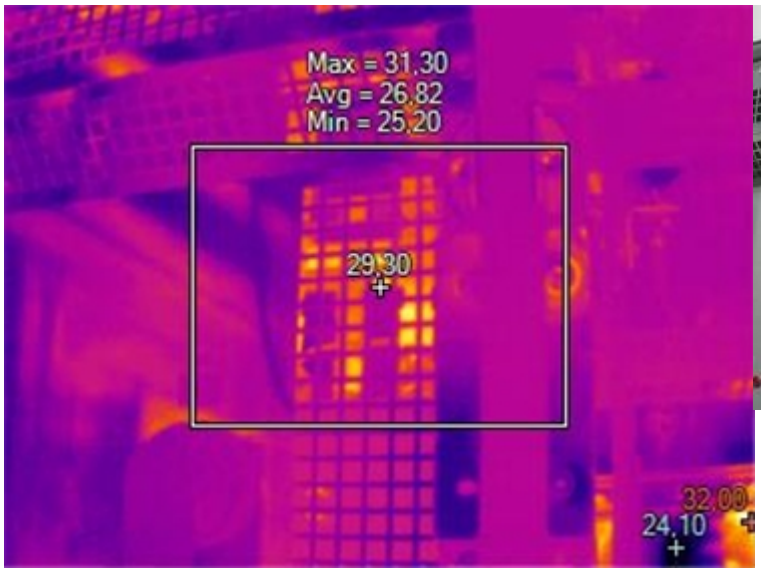




Image Info

Name	IR_00152.IS2
Emissivity	0,95
Background Temperature	22,00 °C
Image Range	24,10 °C to 32,00 °C
Camera Serial Number	TiS75+-23080231
Image Time	08/08/2024 16:26:45 PM
Asset Name	DCDC Converter
Asset Group	DCDC Converter > UC01 DCDC Cabinet #1 > Crosswind BLPH

Marker Info

Marker Name	Maximum	Minimum	Average	Emissivity	BG Temp	Std.Dev	Delta-T
Centerpoint	29,3 °C	29,3 °C	29,3 °C	0,95	22,0 °C	0,00	
Centerbox	31,3 °C	25,2 °C	26,8 °C	0,95	22,0 °C	0,81	
Hot	32,0 °C	32,0 °C	32,0 °C	0,95	22,0 °C	0,00	
Cold	24,1 °C	24,1 °C	24,1 °C	0,95	22,0 °C	0,00	

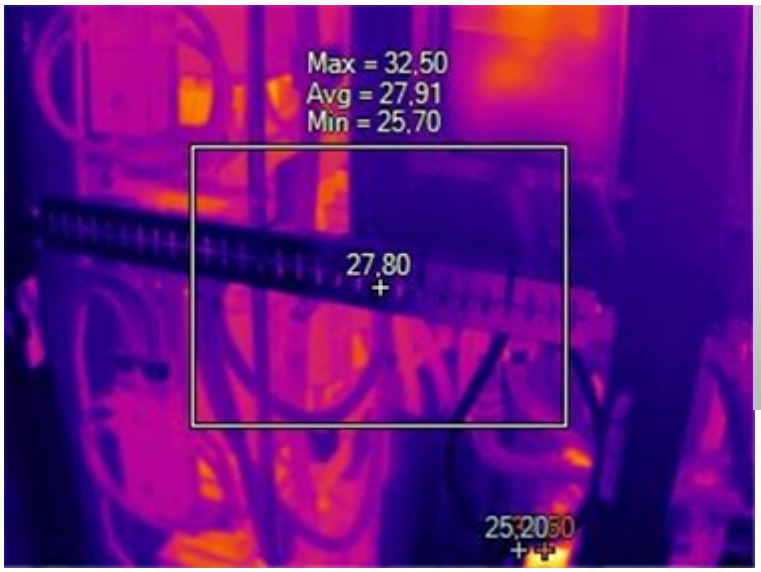




Image Info

Name	IR_00151.IS2
Emissivity	0,95
Background Temperature	22,00 °C
Image Range	25,20 °C to 37,50 °C
Camera Serial Number	TiS75+-23080231
Image Time	08/08/2024 16:26:31 PM
Asset Name	DCDC Converter
Asset Group	DCDC Converter > UC01 DCDC Cabinet #1 > Crosswind BLPH

Marker Info

Marker Name	Maximum	Minimum	Average	Emissivity	BG Temp	Std.Dev	Delta-T
Centerpoint	27,8 °C	27,8 °C	27,8 °C	0,95	22,0 °C	0,00	
Centerbox	32,5 °C	25,7 °C	27,9 °C	0,95	22,0 °C	1,36	
Hot	37,5 °C	37,5 °C	37,5 °C	0,95	22,0 °C	0,00	
Cold	25,2 °C	25,2 °C	25,2 °C	0,95	22,0 °C	0,00	

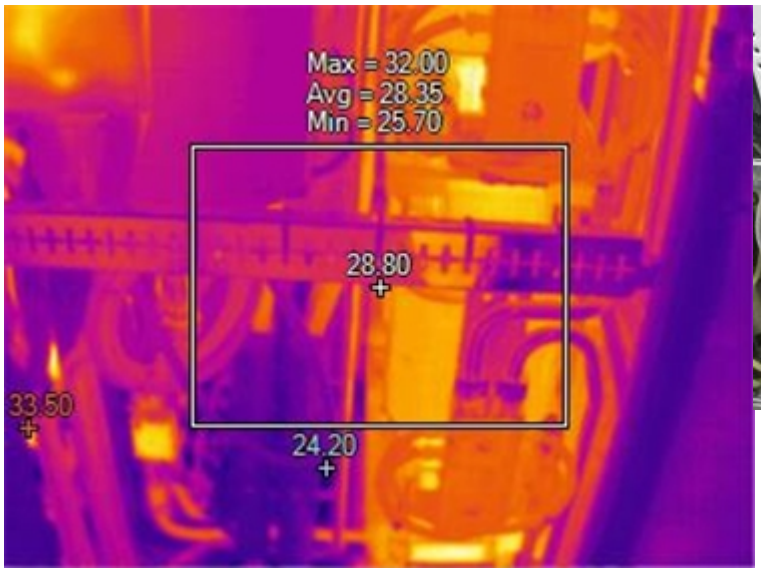




Image Info

Name	IR_00150.IS2
Emissivity	0.95
Background Temperature	22.00 °C
Image Range	24.20 °C to 33.50 °C
Camera Serial Number	TiS75+-23080231
Image Time	08/08/2024 16:26:26 PM
Asset Name	DCDC Converter
Asset Group	DCDC Converter > UC01 DCDC Cabinet #1 > Crosswind BLPH

Marker Info

Marker Name	Maximum	Minimum	Average	Emissivity	BG Temp	Std.Dev	Delta-T
Centerpoint	28.8 °C	28.8 °C	28.8 °C	0.95	22.0 °C	0.00	
Centerbox	32.0 °C	25.7 °C	28.3 °C	0.95	22.0 °C	1.47	
Hot	33.5 °C	33.5 °C	33.5 °C	0.95	22.0 °C	0.00	
Cold	24.2 °C	24.2 °C	24.2 °C	0.95	22.0 °C	0.00	





Image Info

Name	IR_00149.IS2
Emissivity	0,95
Background Temperature	22,00 °C
Image Range	25,30 °C to 34,20 °C
Camera Serial Number	TiS75+-23080231
Image Time	08/08/2024 16:26:21 PM
Asset Name	DCDC Converter
Asset Group	DCDC Converter > UC01 DCDC Cabinet #1 > Crosswind BLPH

Marker Info

Marker Name	Maximum	Minimum	Average	Emissivity	BG Temp	Std.Dev	Delta-T
Centerpoint	29,1 °C	29,1 °C	29,1 °C	0,95	22,0 °C	0,00	
Centerbox	34,2 °C	26,3 °C	28,3 °C	0,95	22,0 °C	1,49	
Hot	34,2 °C	34,2 °C	34,2 °C	0,95	22,0 °C	0,00	
Cold	25,3 °C	25,3 °C	25,3 °C	0,95	22,0 °C	0,00	





Image Info

Name	IR_00148.IS2
Emissivity	0.95
Background Temperature	22.00 °C
Image Range	25.00 °C to 33.50 °C
Camera Serial Number	TiS75+-23080231
Image Time	08/08/2024 16:26:16 PM
Asset Name	DCDC Converter
Asset Group	DCDC Converter > UC01 DCDC Cabinet #1 > Crosswind BLPH

Marker Info

Marker Name	Maximum	Minimum	Average	Emissivity	BG Temp	Std.Dev	Delta-T
Centerpoint	27.1 °C	27.1 °C	27.1 °C	0.95	22.0 °C	0.00	
Centerbox	33.0 °C	26.0 °C	28.5 °C	0.95	22.0 °C	1.51	
Hot	33.5 °C	33.5 °C	33.5 °C	0.95	22.0 °C	0.00	
Cold	25.0 °C	25.0 °C	25.0 °C	0.95	22.0 °C	0.00	





Image Info

Name	IR_00147.IS2
Emissivity	0.95
Background Temperature	22.00 °C
Image Range	20.60 °C to 448.20 °C
Camera Serial Number	TiS75+-23080231
Image Time	08/08/2024 16:24:21 PM
Asset Name	Test Equipemnt
Asset Group	Test Equipemnt > Test Equipment > Crosswind BLPH

Marker Info

Marker Name	Maximum	Minimum	Average	Emissivity	BG Temp	Std.Dev	Delta-T
Centerpoint	52.2 °C	52.2 °C	52.2 °C	0.95	22.0 °C	0.00	
Centerbox	356.8 °C	24.7 °C	49.4 °C	0.95	22.0 °C	37.85	
Hot	448.2 °C	448.2 °C	448.2 °C	0.95	22.0 °C	0.00	
Cold	20.6 °C	20.6 °C	20.6 °C	0.95	22.0 °C	0.00	

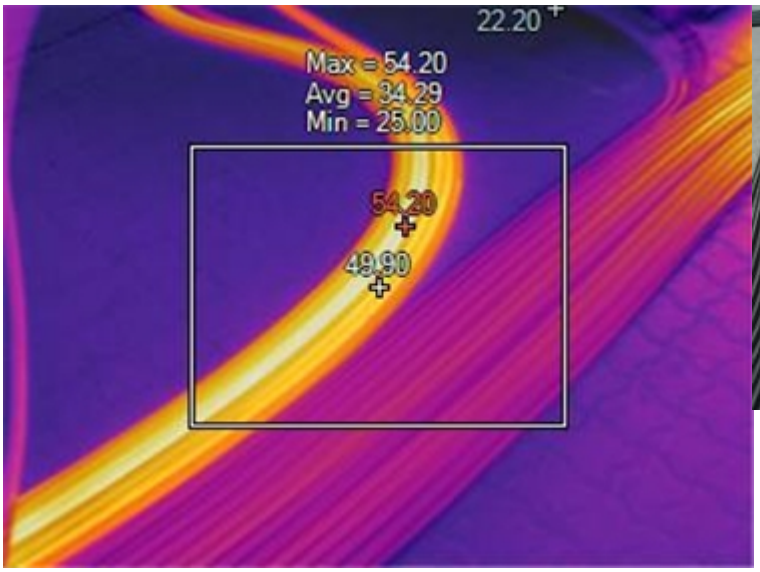




Image Info

Name	IR_00146.IS2
Emissivity	0.95
Background Temperature	22.00 °C
Image Range	22.20 °C to 54.20 °C
Camera Serial Number	TiS75+-23080231
Image Time	08/08/2024 16:24:03 PM
Asset Name	Test Equipemnt
Asset Group	Test Equipemnt > Test Equipment > Crosswind BLPH

Marker Info

Marker Name	Maximum	Minimum	Average	Emissivity	BG Temp	Std.Dev	Delta-T
Centerpoint	49.9 °C	49.9 °C	49.9 °C	0.95	22.0 °C	0.00	
Centerbox	54.2 °C	25.0 °C	34.3 °C	0.95	22.0 °C	8.06	
Hot	54.2 °C	54.2 °C	54.2 °C	0.95	22.0 °C	0.00	
Cold	22.2 °C	22.2 °C	22.2 °C	0.95	22.0 °C	0.00	

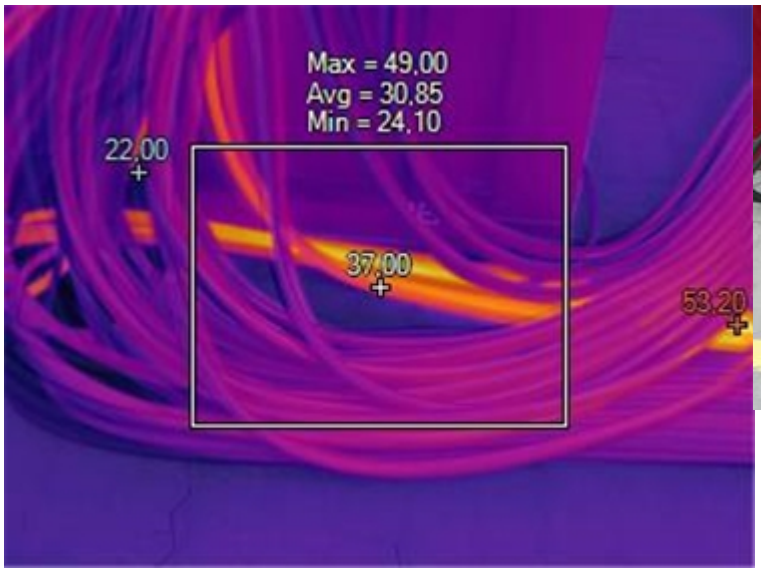




Image Info

Name	IR_00145.IS2
Emissivity	0,95
Background Temperature	22,00 °C
Image Range	22,00 °C to 53,20 °C
Camera Serial Number	TiS75+-23080231
Image Time	08/08/2024 16:23:52 PM

Marker Info

Marker Name	Maximum	Minimum	Average	Emissivity	BG Temp	Std.Dev	Delta-T
Centerpoint	37,0 °C	37,0 °C	37,0 °C	0,95	22,0 °C	0,00	
Centerbox	49,0 °C	24,1 °C	30,9 °C	0,95	22,0 °C	4,13	
Hot	53,2 °C	53,2 °C	53,2 °C	0,95	22,0 °C	0,00	
Cold	22,0 °C	22,0 °C	22,0 °C	0,95	22,0 °C	0,00	

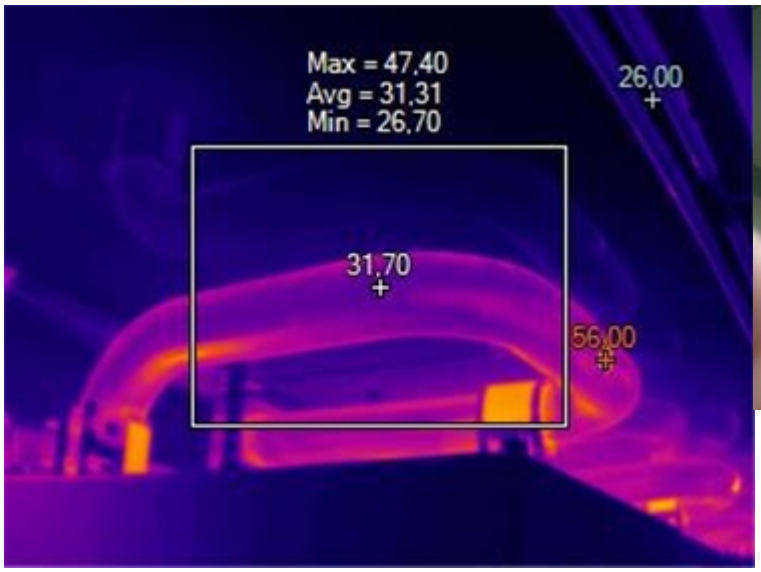




Image Info

Name	IR_00143.IS2
Emissivity	0,95
Background Temperature	22,00 °C
Image Range	26,00 °C to 56,00 °C
Camera Serial Number	TiS75+-23080231
Image Time	11/07/2024 12:56:17 PM

Marker Info

Marker Name	Maximum	Minimum	Average	Emissivity	BG Temp	Std.Dev	Delta-T
Centerpoint	31,7 °C	31,7 °C	31,7 °C	0,95	22,0 °C	0,00	
Centerbox	47,4 °C	26,7 °C	31,3 °C	0,95	22,0 °C	3,73	
Hot	56,0 °C	56,0 °C	56,0 °C	0,95	22,0 °C	0,00	
Cold	26,0 °C	26,0 °C	26,0 °C	0,95	22,0 °C	0,00	

Summary: