Technical catalogue

EUROCOOLER® SYSTEMS

First independent company

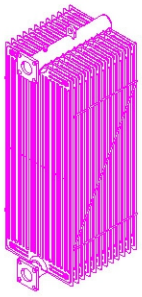
[EN]

Summary table

see technical data sheets pages 7 to 22

Reference	Description	Drawings	Vertical branch connection	Horizontal branch connection	Manifold Ø 88.9 mm	Sheet thickness 1 mm	Sheet thickness 1.2 mm	Cut-off corners on the right	Cut-off corners on the left	Double cut-off corners	Manifold Ø 108 mm	Dilatable
	Radiators with flanges											
EC FG 100	Radiator with flanges	■	■	■	■	■	■	■	■	■	■	■
EC FG 110	Radiator with flanges and cut-off corners on the right	■	■	■	■	■	■					■
EC FG 120	Radiator with flanges and cut-off corners on the left		■	■	■	■	■					■
EC FG 130	Radiator with flanges and double cut-off corners	■	■	■	■	■	■					■
EC FG 140	Radiator with flanges and a vertical branch connection	■			■	■	■	■	■	■	■	■
EC FG 150	Radiator with flanges and a horizontal branch connection	■			■	■	■	■	■	■	■	■
EC FR 100	Radiator with flanges and dropped manifold	■	■	■	■	■	■	■	■	■	■	■
EC FR 110	Radiator with flanges, dropped manifold and cut-off corners on the right		■	■	■	■	■	■				■
EC FR 120	Radiator with flanges, dropped manifold and cut-off corners on the left	■	■	■	■	■	■	■				■
EC FR 130	Radiator with flanges, dropped manifold and double cut-off corners	■	■	■	■	■	■	■				■
EC FA 100	Radiators with flanges and graduated panels at the front	■	■	■	■	■	■					■
EC FA 110	Radiators with flanges and graduated panels at the rear	■	■	■	■	■	■	■	■	■		■
EC FA 120	Radiators with flanges, graduated panels at the rear and cut-off corners on the right at the front	■	■	■	■	■	■					■
EC FA 130	Radiators with flanges, graduated panels at the rear and cut-off corners on the left at the front		■	■	■	■	■					■
EC FA 140	Radiators with flanges, graduated panels at the rear and double cut-off corners at the front		■	■	■	■	■					■
EC FG 200	Radiator with flanges and manifolds offset to the right	■	■	■	■	■	■					■
EC FG 210	Radiator with flanges and manifolds offset to the left		■	■	■	■	■					■
EC FR 200	Radiator with flanges and dropped manifolds offset to the right	■	■	■	■	■	■					■
EC FR 210	Radiator with flanges and dropped manifolds offset to the left		■	■	■	■	■					■
EC FTT 100	Tangential radiator with flanges	■	■	■	■	■	■	■	■	■	■	■
EC FTT 110	Tangential radiator with flanges and simple vertical branch connection	■			■	■	■	■	■	■	■	■
EC FTT 120	Tangential radiator with flanges and double horizontal branch connection	■			■	■	■	■	■	■	■	■
	Radiator without flanges											
EC RG 100	Radiator without flanges		■	■	■	■	■	■	■	■	■	■
EC RG 110	Radiator without flanges and cut-off corners on the right		■	■	■	■	■					■
EC RG 120	Radiator without flanges and cut-off corners on the left		■	■	■	■	■					■
EC RG 130	Radiator without flanges and double cut-off corners		■	■	■	■	■					■
EC RG 140	Radiator without flanges and a vertical branch connection		■	■	■	■	■	■	■	■	■	■
EC RG 150	Radiator without flanges and a horizontal branch connection		■	■	■	■	■	■	■	■	■	■
EC RR 100	Radiator without flanges and dropped manifold		■	■	■	■	■	■	■	■	■	■
EC RR 110	Radiator without flanges, dropped manifold and cut-off corners on the right		■	■	■	■	■	■				■
EC RR 120	Radiator without flanges, dropped manifold and cut-off corners on the left		■	■	■	■	■	■				■
EC RR 130	Radiator without flanges, dropped manifold and double cut-off corners		■	■	■	■	■	■				■
EC RA 100	Radiators without flanges and graduated panels at the front		■	■	■		■	■	■	■	■	■
EC RA 110	Radiators without flanges and graduated panels at the rear		■	■	■		■	■	■	■	■	■
EC RA 120	Radiators without flanges, graduated panels at the rear and cut-off corners on the right at the front		■	■	■		■					■
EC RA 130	Radiators without flanges, graduated panels at the rear and cut-off corners on the left at the front		■	■	■		■					■
EC RA 140	Radiators without flanges, graduated panels at the rear and double cut-off corners at the front		■	■	■		■					■
EC RG 200	Radiator without flanges and manifolds offset to the right		■	■	■	■	■	■				■
EC RG 210	Radiator without flanges and manifolds offset to the left		■	■	■	■	■	■				■
EC RR 200	Radiator without flanges and dropped manifolds offset to the right		■	■	■	■	■	■				■
EC RR 210	Radiator without flanges and dropped manifolds offset to the left		■	■	■	■	■	■				■
EC RTT 100	Tangential radiator without flanges		■	■	■	■	■	■	■	■	■	■
EC RTT 110	Tangential radiator without flanges and simple vertical branch connection				■	■	■	■	■	■	■	■
EC RTT 120	Tangential radiator without flanges and double horizontal branch connection				■	■	■	■	■	■	■	■

The Eurocooler range



EC FG 100
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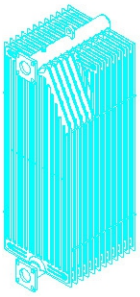

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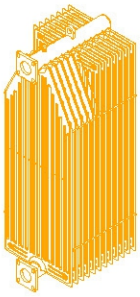

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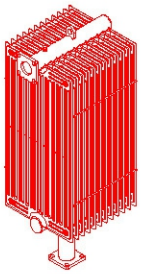

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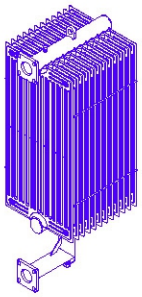

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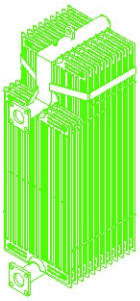

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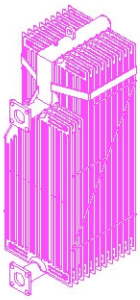

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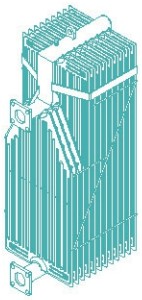

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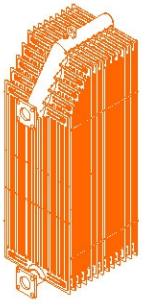

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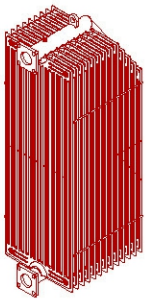

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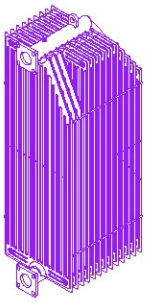

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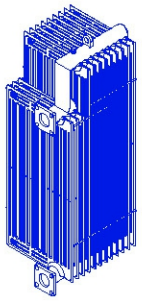

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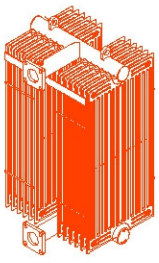

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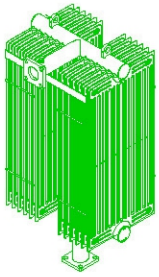

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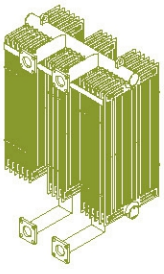

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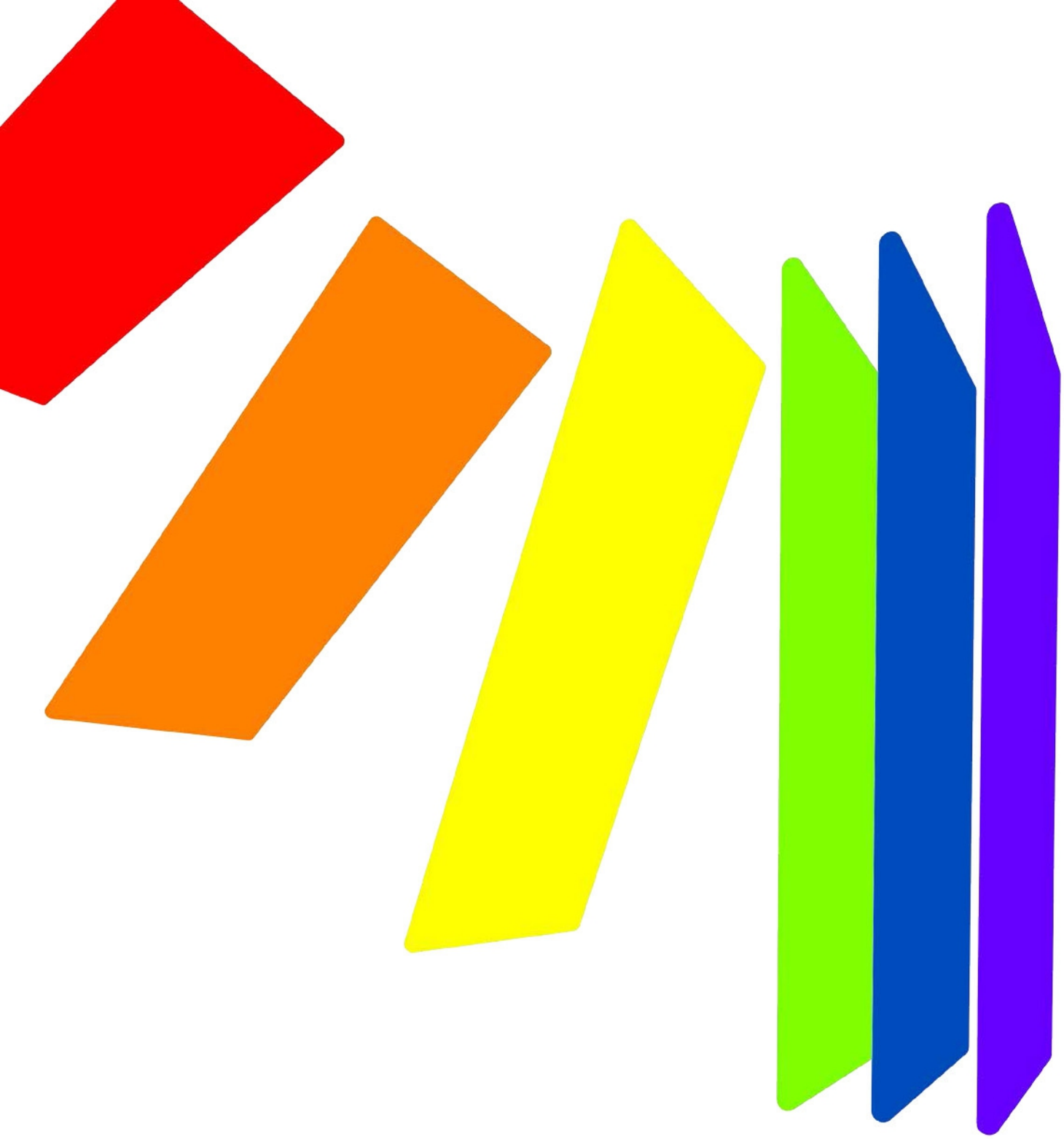


Contents

Eurocooler

Tomorrow, more than ever, partner of the world's largest transformer manufacturers.

Over almost 80 years Eurocooler has carved out a position of force with the biggest manufacturers by bringing them its expertise and a response adapted to their needs in the field of cooling for transformers of all powers.
Since 1937, our teams have built up considerable knowledge and a rarely equalled command of the production, galvanisation and finishing processes.
If today we are the world's leading radiator specialist, it is because we have cultivated the qualities that account for our lasting success: flexibility, reactivity, commitment to our customers, traceability… these are the bywords that guide us in our daily actions.

Our capacities… your performance

Eurocooler offers a complete range of cooling radiators.
Our know-how is based on a particularly well-developed technical culture: stamping of light-gauge sheet, welding and surface treatment.

Envisaging energy differently

Confronted with the challenges of today and tomorrow, we are committed to the quality of our products, and to the perpetuating our cooperation with the biggest players in the business.
Certified ISO 9001 – TÜV, we guarantee that our processes meet current standards. Our traceability procedure guarantees the perfect identification of all the components necessary to the production of our coolers.

Well aware of the environmental stakes, we are at pains to improve the treatment of waste water and the smoke we emit, as well as sorting waste and striving to reduce noise. A special scheme has enabled us to optimise our management of solvents and hazardous products. Our aim is to move Eurocooler towards a global Quality Safety and Environment system and thus to engage in a policy of sustainable development.

General technical data

Our radiators are made as per the drawings and specifications of our customers. Each individual enquiry is studied. Generally, our radiators have the following characteristics:

Dimensional characteristics

- Centre distance: from 800 mm to 3 500 mm
  For larger centre distances, a branch connection can be made
- Number of panels: from 1 to 39
- Sheet thickness: 1 mm or 1.2 mm
- Manifold: Ø 88.9 or 108 mm, thickness 3.2 mm
- Drain valve: M12 according to standard DIN 42558 (see drawing page 23)
- Degassing: M6 according to standard DIN 42558 (see drawing page 23)
- Flange:
  - 150x150 for manifold Ø 88.9 (see drawing page 23)
  - 170x170 for manifold Ø 108 (see drawing page 23)
  - Without
  - Other models on request
- Lifting eye:
  - Eurocooler standard (see drawing page 23)
  - Other models on request
- Stiffener: Ø 8 as standard
- Possibility of adding accessories:
  - Bosses (all types)
  - Fan bracket
  - Drain valve
  - Degassing valve
  - Extra lifting eye
  - Probe pocket

Materials

Special steel sheet
Flange: S235
Stiffener: S235
Manifold: S235

Operating temperature

Our standard radiators can be used up to - 40° C, for temperatures up to - 60° C a special material must be used (available on request).

Surface treatment

Internal coating

On request:

- Specific internal paint
- Oil flushing
- Flushing and maintaining of pressure with hot oil
- Nitrogen inerting of radiator

External coating

> Before painting

- Shotblasting
- Hot galvanisation, 55 microns according to standard NF EN ISO 1461
- Pickling with phosphoric acid
- Degreasing and phosphatisation

> Painting

Primer coat:

- Dual component epoxy
- Water dilutable paint with micaceous iron oxide
- Zinc rich epoxy

Intermediate coat:

- Dual component epoxy with or without micaceous iron oxide
- Water dilutable paint with micaceous iron oxide
- Dual component epoxy with micaceous iron oxide

Final coat:

- Dual component epoxy
- Dual component epoxy with micaceous iron oxide
- Dual component polyurethane
- Dual component polyurethane with micaceous iron oxide
- Water dilutable paint
- Water dilutable paint with micaceous iron oxide

Quality control

Eurocooler is certified ISO 9001. Throughout the production cycle, the radiators are inspected after every operation.

- Dimensional inspection
- Tightness control and pressure to 2 bars
- Internal cleanliness
- Checking of coating thicknesses
- Final unit inspection

Standards used

Description	Standards
Transformer radiator, and accessories	EN 50216-6
Drain and degassing valves	DIN 42558
Galvanisation checks	NF EN ISO 1461
Paint system Anti-corrosion protection	ISO 12944-1 ISO 12944-2 ISO 12944-3 ISO 12944-4 ISO 12944-5 ISO 12944-6 ISO 12944-7 ISO 12944-8
Quality system	ISO 9001

ZERTIFIKAT ◆ CERTIFICATE ◆ 認證證書 ◆ СЕРТИФИКАТ ◆ CERTIFICADO ◆ CERTIFICAT

Management Service

CERTIFICATE

The Certification Body
of TÜV SÜD Management Service GmbH

certifies that

EUROCOOLER SYSTEMS
Rue François Slakta
70320 Corbenay
France

has established and applies
a Quality Management System for

Manufacturing and sales of transformer radiators.

An audit was performed, Report No. **70788505**.

Proof has been furnished that the requirements
according to

ISO 9001:2015

are fulfilled.

The certificate is valid from **2018-05-24** until **2021-02-13**.

Previous certificate valid until 2018-02-13.

Certificate Registration No.: **12 100 42576 TMS**.

Product Compliance Management
Munich, 2018-05-25

DAkkS Deutsche Akkreditierungsstelle D-ZM-14143-01-00

MS/01.03/2018

TÜV SÜD Management Service GmbH • Zertifizierungsstelle • Ridlerstrasse 65 • 80339 München • Germany
www.tuev-sued.de/certificate-validity-check

Expandable

Description

In a classical transformer, the conservator is used to admit the variation of volume caused by the difference of temperature of the oil during the operation of the transformer.

In case the usage of a conservator is not sufficient, or impossible (then we speak of a hermetical transformer), we will replace the classic radiators with expandable models which will ensure the same function.

For example, we can find them:

- In highly cold environment, to replace the conservator
- In highly hot environment, added with the conservator
- In an environment with a limited space

Kinds of radiators

All our radiators can be dilatable, including galvanized one.

Example

Radiator from 1600 mm x 29 panels filled with mineral oil

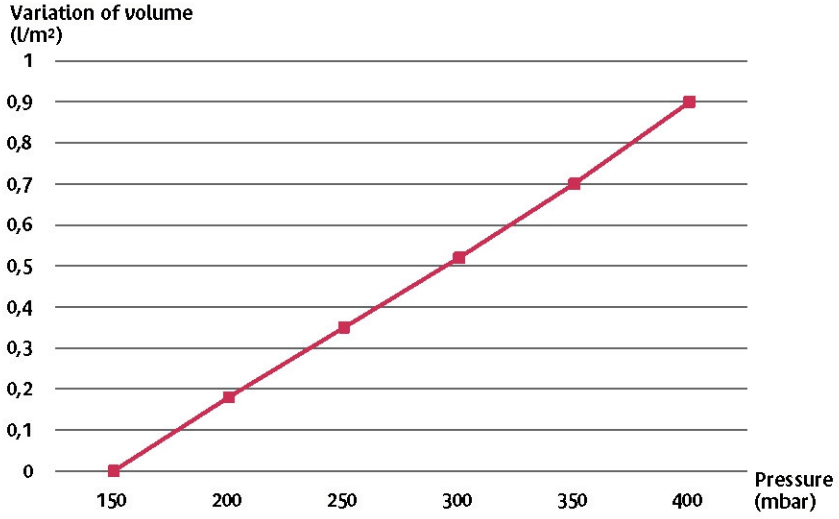
Volume at 20°C: 164 liters

Variation in volume of oil: 7,5% V/100° C

Oil volume at -20°C: 7,5/100 x 40/100 x 164 = - 4,92 liters

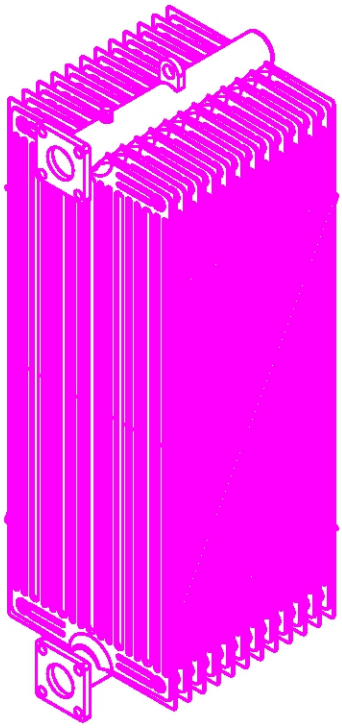
Oil volume at + 90°C: 7,5/100 x 70/100 x 164 = +8,61 liters

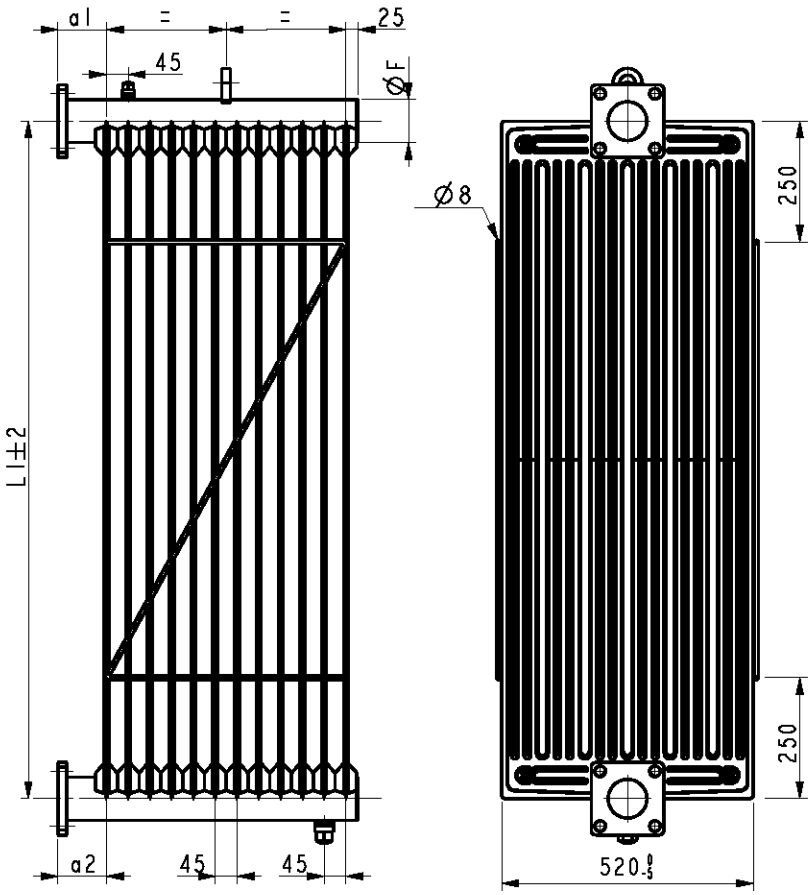
Variation of volume in function of the pressure in the lower header pipe



Europa radiator

EC FG 100





SPECIFICITIES

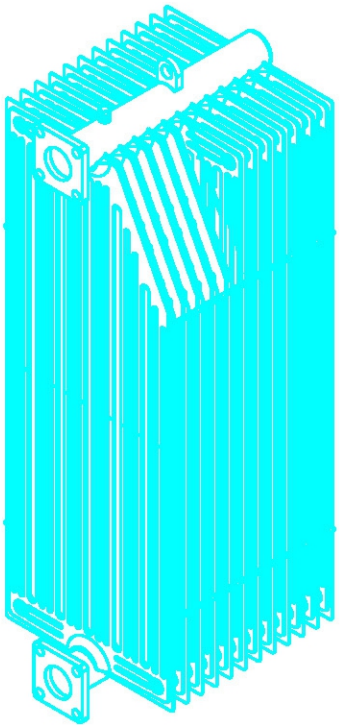
- Centre distance: from 800 mm to 3 500 mm
- Number of panels: from 1 to 39
- Manifold: Ø 88.9 mm or Ø 108 mm
- Sheet thickness: 1 mm or 1.2 mm
- External coating: on request

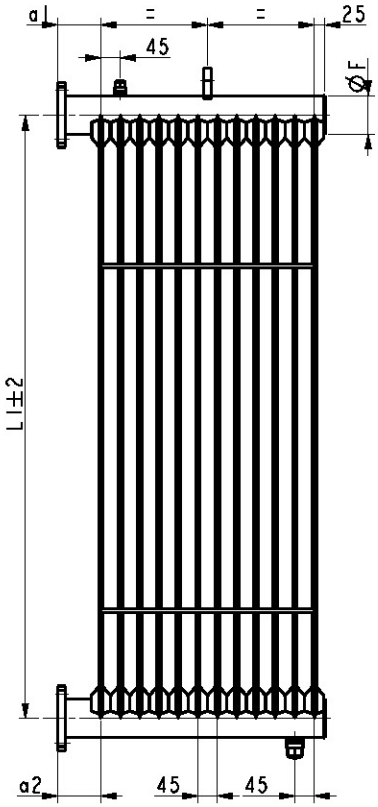
TECHNICAL OPTIONS

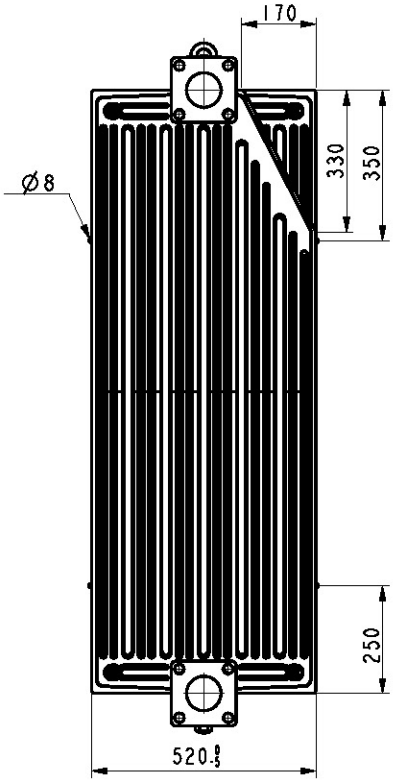
See table of technical details on inside front cover.

Europa radiator

EC FG 110







SPECIFICITIES

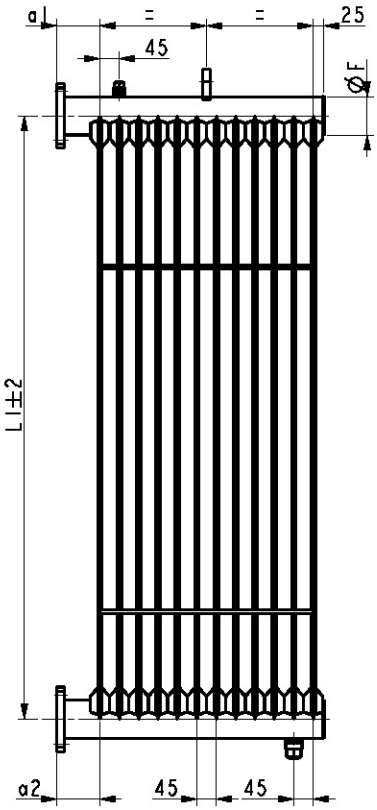
- Centre distance: from 800 mm to 3 500 mm
- Number of panels: from 1 to 39
- Manifold: Ø 88.9 mm or Ø 108 mm
- Sheet thickness: 1 mm or 1.2 mm
- Cut-off corners on left or right
- External coating: on request

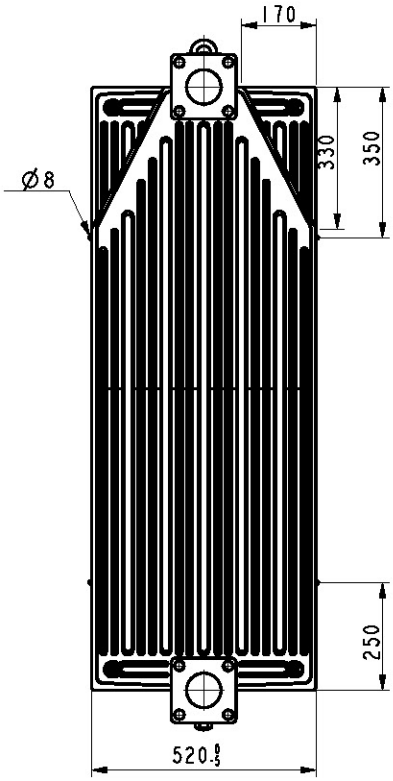
TECHNICAL OPTIONS

See table of technical details on inside front cover.

Europa radiator

EC FG 130





SPECIFICITIES

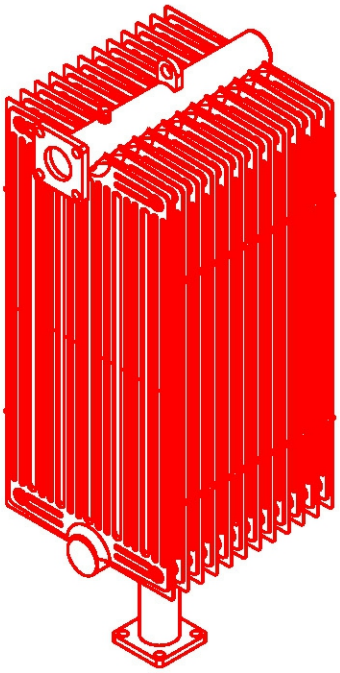
- Centre distance: from 800 mm to 3 500 mm
- Number of panels: from 1 to 39
- Manifold: Ø 88.9 mm or Ø 108 mm
- Sheet thickness: 1 mm or 1.2 mm
- External coating: on request

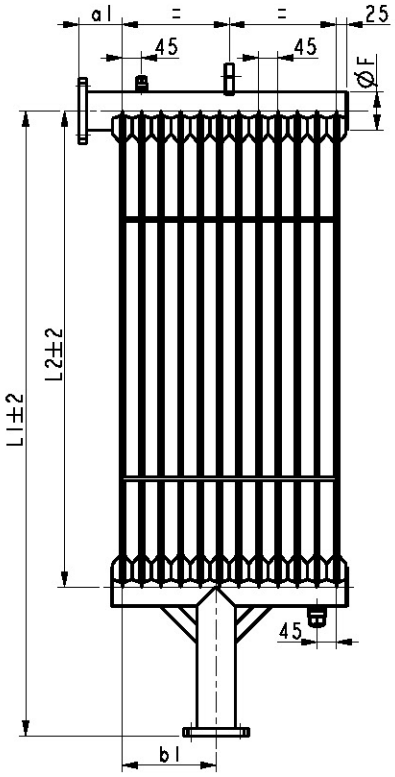
TECHNICAL OPTIONS

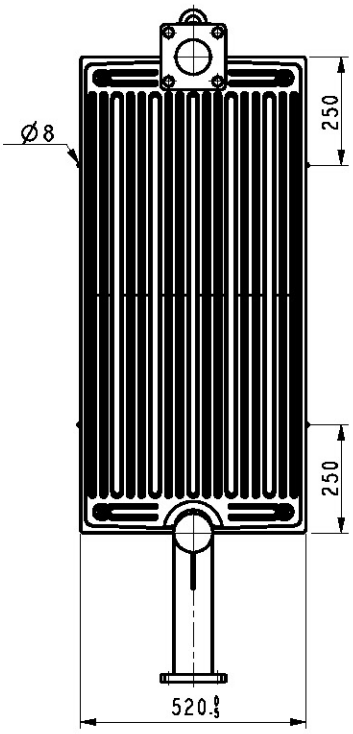
See table of technical details on inside front cover.

Europa radiator

EC FG 140







SPECIFICITIES

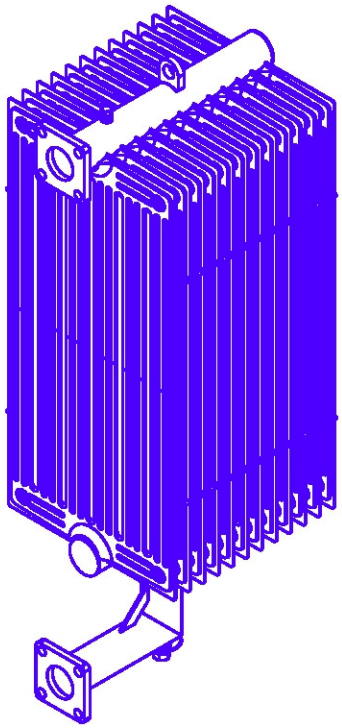
- Centre distance: from 800 mm to 3 500 mm
- Number of panels: from 1 to 39
- Manifold: Ø 88.9 mm or Ø 108 mm
- Sheet thickness: 1 mm or 1.2 mm
- External coating: on request

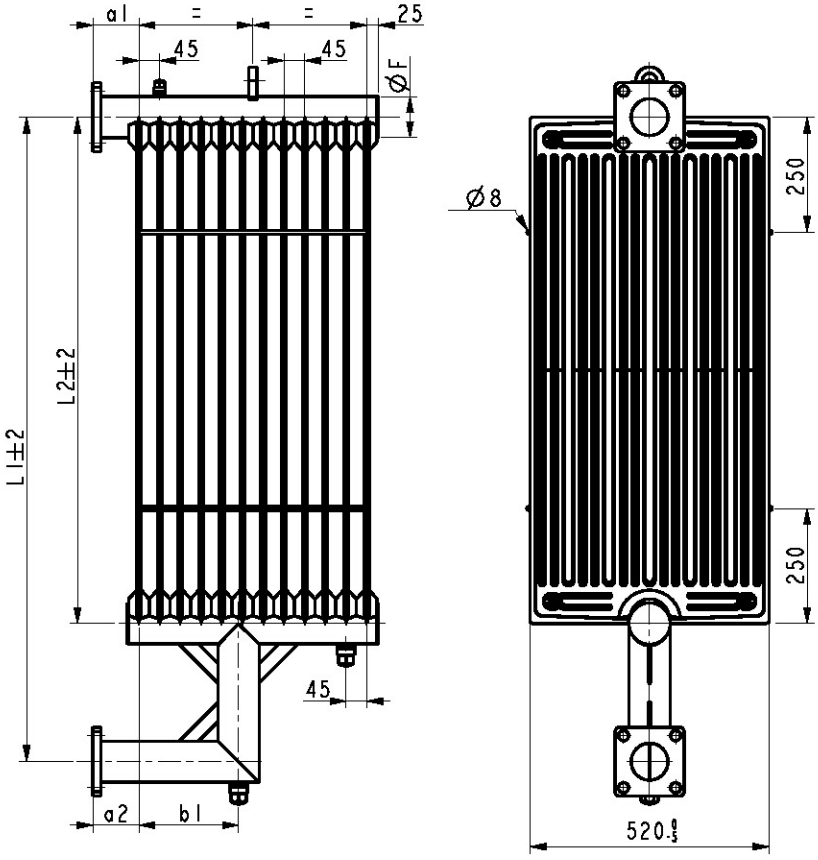
TECHNICAL OPTIONS

See table of technical details on inside front cover.

Europa radiator

EC FG 150





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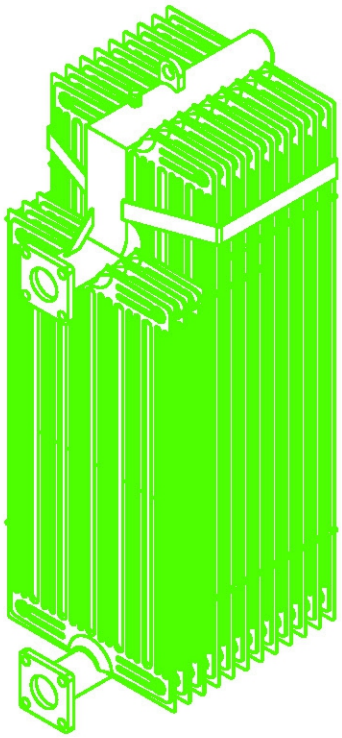
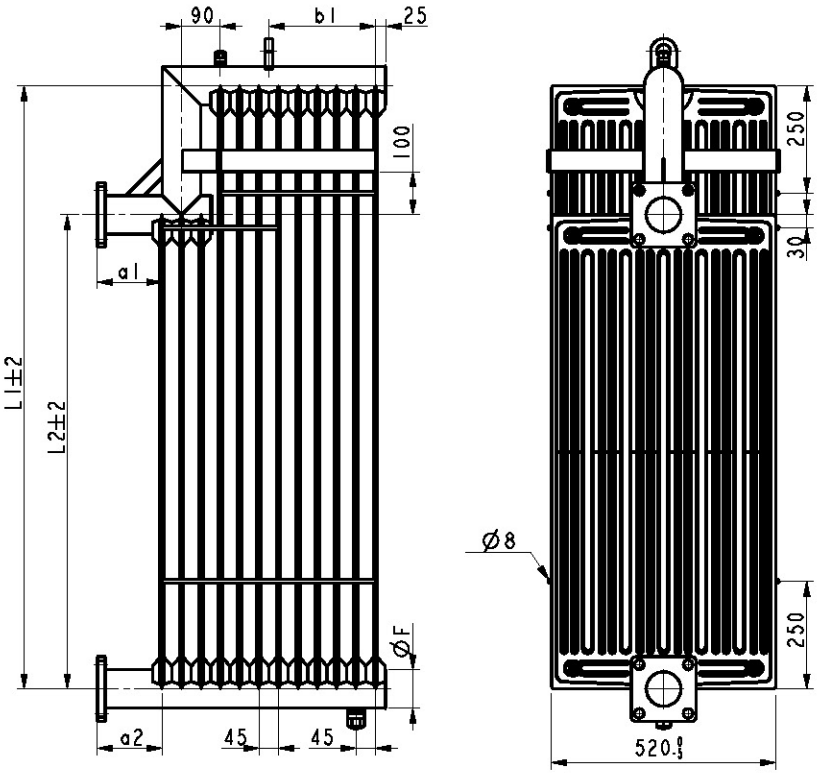
Europa radiator

EC FR 100





SPECIFICITIES

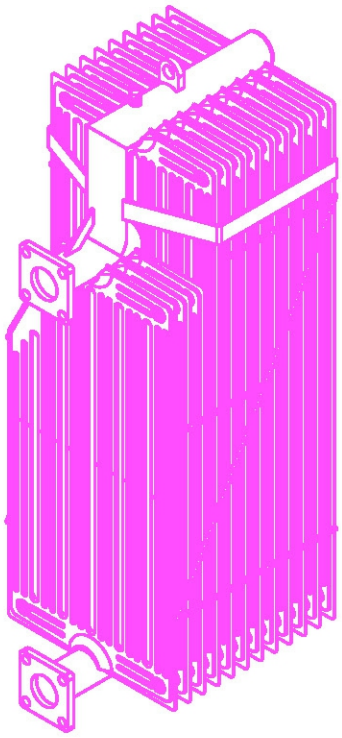
- Centre distance: from 800 mm to 3 500 mm
- Number of panels: from 1 to 39
- Number of low panels: from 1 to 39
- Manifold: Ø 88.9 mm or Ø 108 mm
- Sheet thickness: 1 mm or 1.2 mm
- External coating: on request

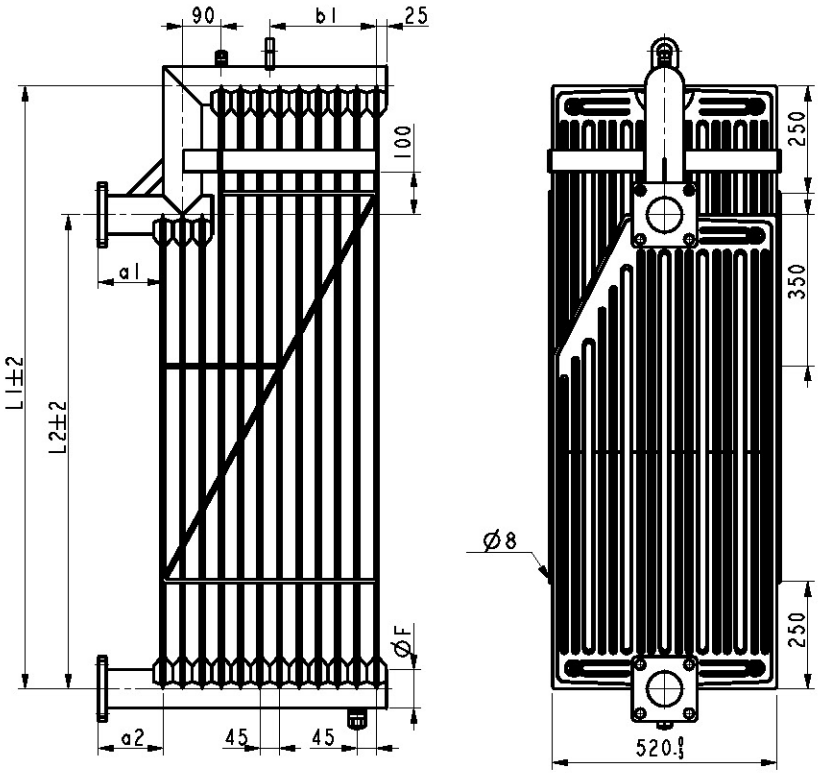
TECHNICAL OPTIONS

See table of technical details on inside front cover.

Europa radiator

EC FR 120





SPECIFICITIES

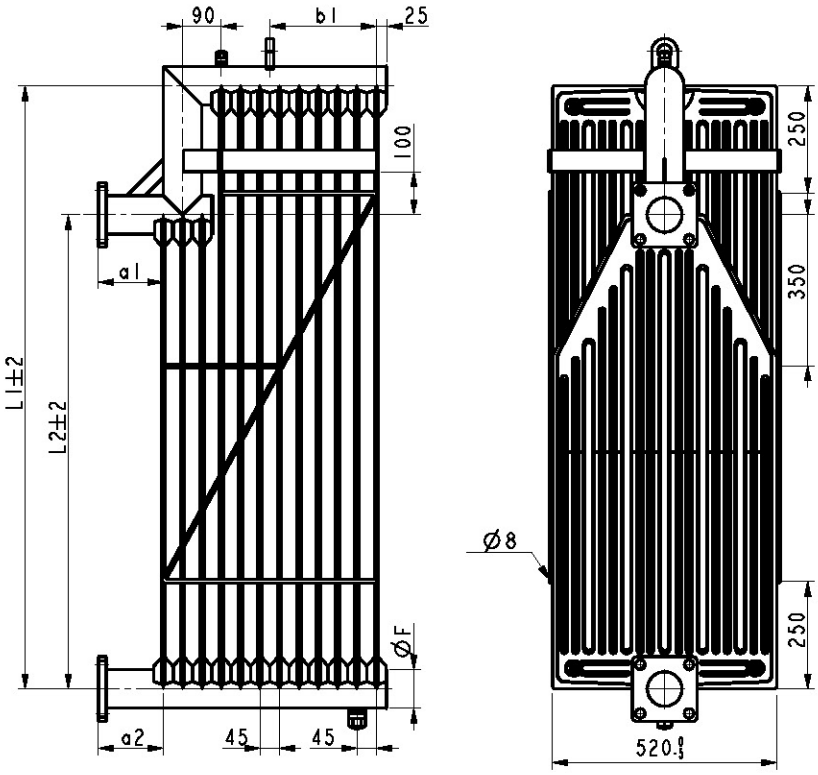
- Centre distance: from 800 mm to 3 500 mm
- Number of panels: from 1 to 39
- Number of low panels: from 1 to 39
- Manifold: Ø 88.9 mm or Ø 108 mm
- Sheet thickness: 1 mm or 1.2 mm
- Cut-off corners on left or right
- External coating: on request

TECHNICAL OPTIONS

See table of technical details on inside front cover.

Europa radiator

EC FR 130



SPECIFICITIES

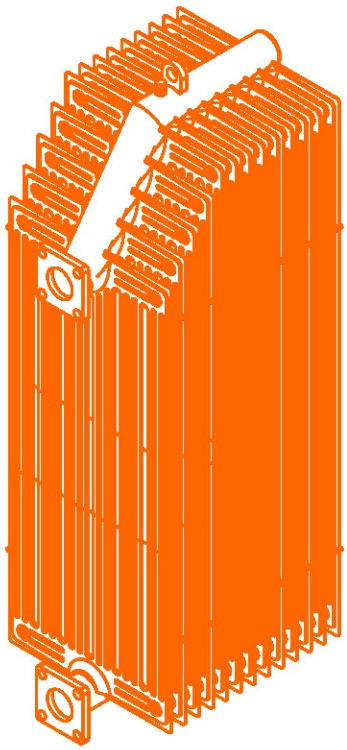
- Centre distance: from 800 mm to 3 500 mm
- Number of panels: from 1 to 39
- Number of low panels: from 1 to 39
- Manifold: Ø 88.9 mm or Ø 108 mm
- Sheet thickness: 1 mm or 1.2 mm
- External coating: on request

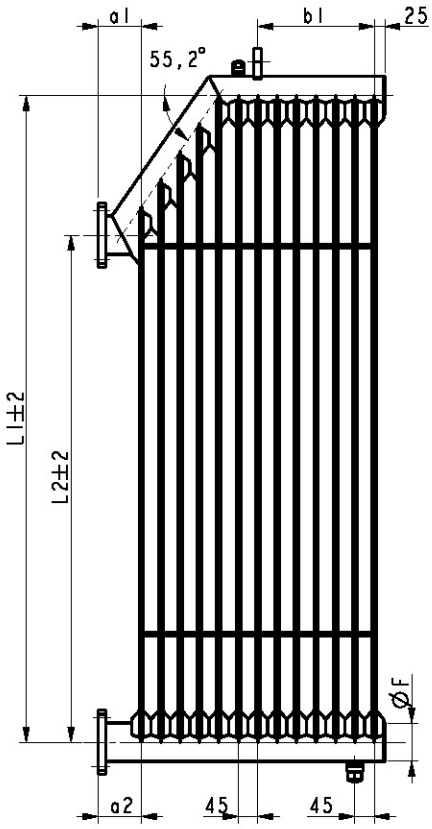
TECHNICAL OPTIONS

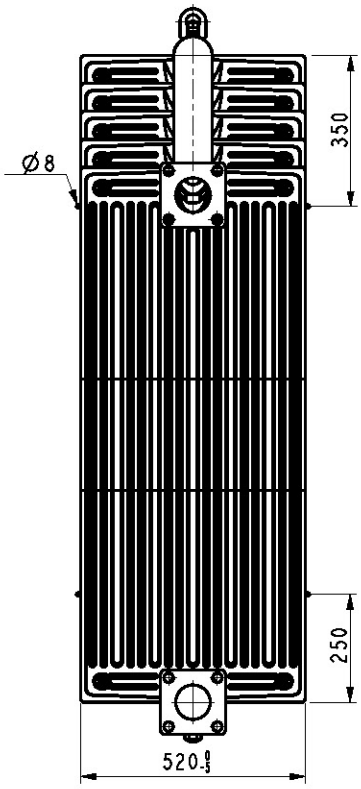
See table of technical details on inside front cover.

Europa radiator

EC FA 100







SPECIFICITIES

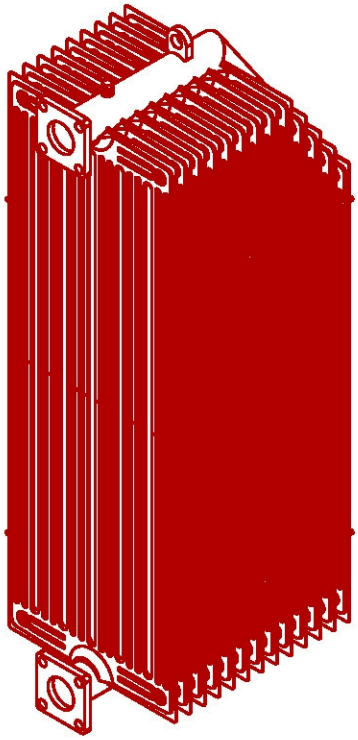
- Centre distance: from 800 mm to 3 500 mm
- Number of panels: from 1 to 39
- Number of graduated sections: from 1 to 18
- Manifold: Ø 88.9 mm
- Sheet thickness: 1 mm or 1.2 mm
- External coating: on request

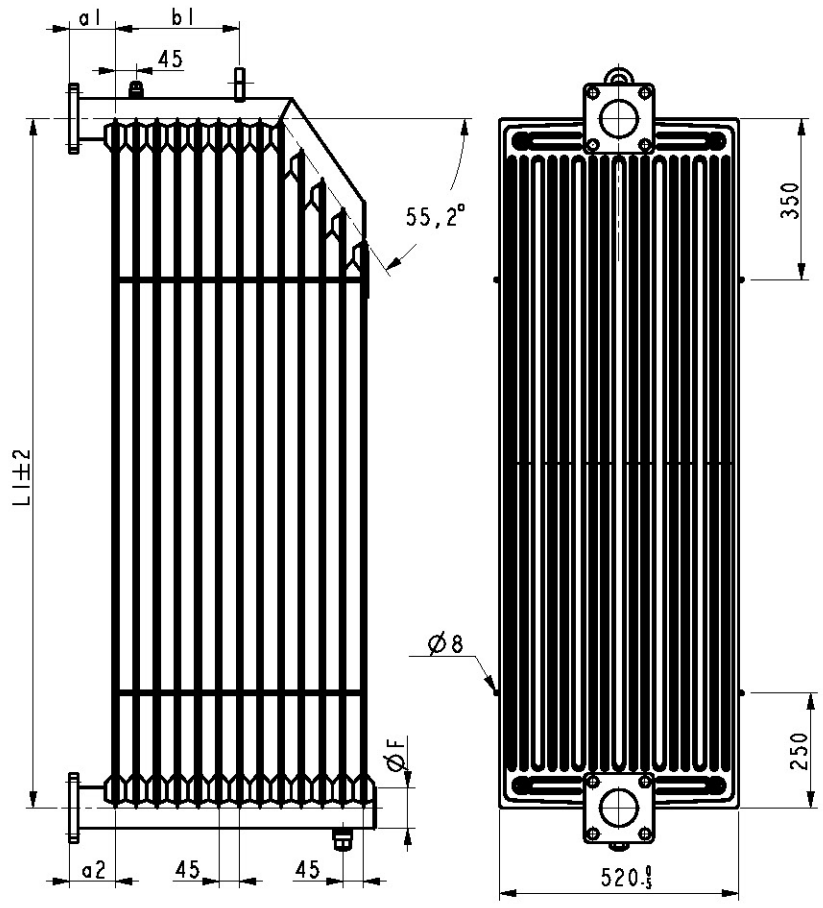
TECHNICAL OPTIONS

See table of technical details on inside front cover.

Europa radiator

EC FA 110





SPECIFICITIES

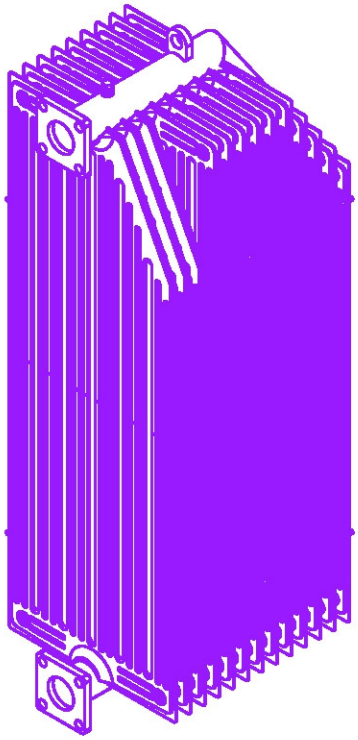
- Centre distance: from 800 mm to 3 500 mm
- Number of panels: from 1 to 39
- Number of graduated sections: from 1 to 18
- Manifold: Ø 88.9 mm
- Sheet thickness: 1 mm or 1.2 mm
- External coating: on request

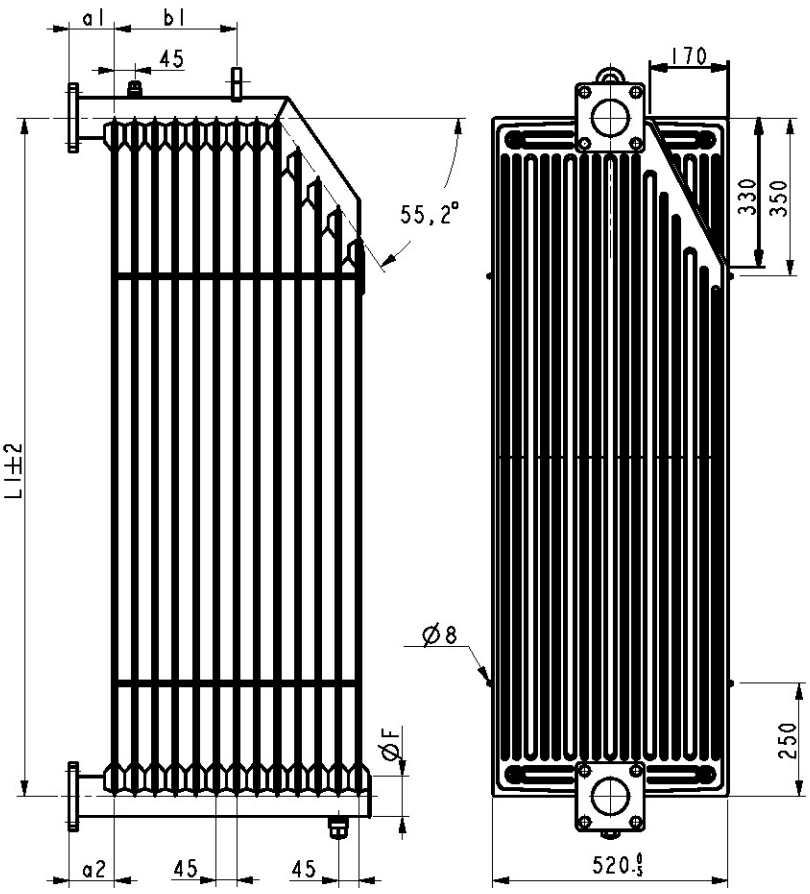
TECHNICAL OPTIONS

See table of technical details on inside front cover.

Europa radiator

EC FA 120





SPECIFICITIES

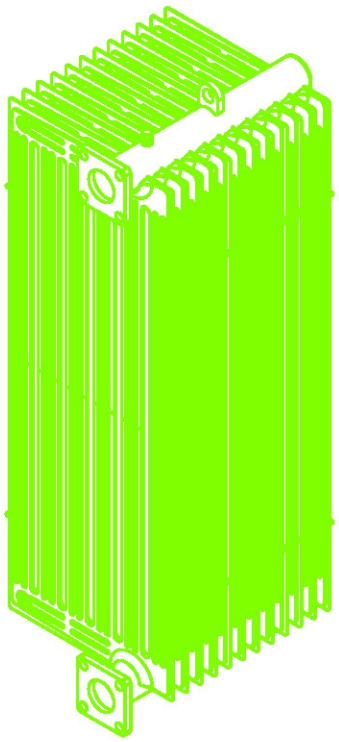
- Centre distance: from 800 mm to 3 500 mm
- Number of panels: from 1 to 39
- Number of graduated sections: from 1 to 18
- Manifold: Ø 88.9 mm
- Sheet thickness: 1 mm or 1.2 mm
- Cut-off corners on left or right
- External coating: on request

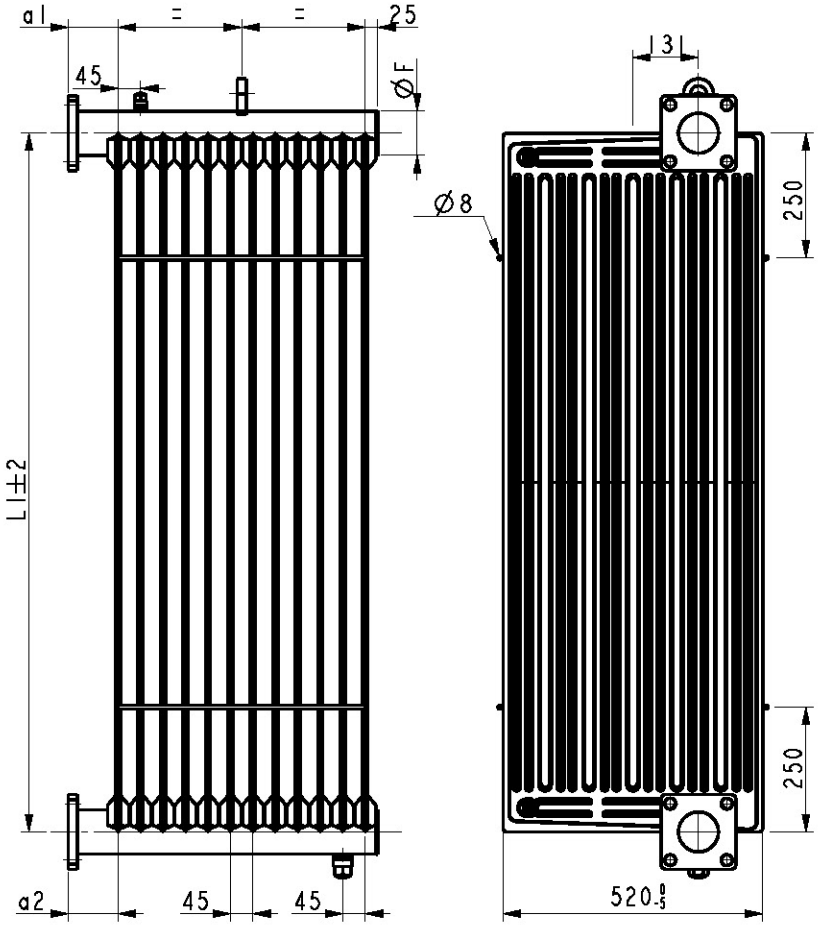
TECHNICAL OPTIONS

See table of technical details on inside front cover.

Europa radiator

EC FG 200





SPECIFICITIES

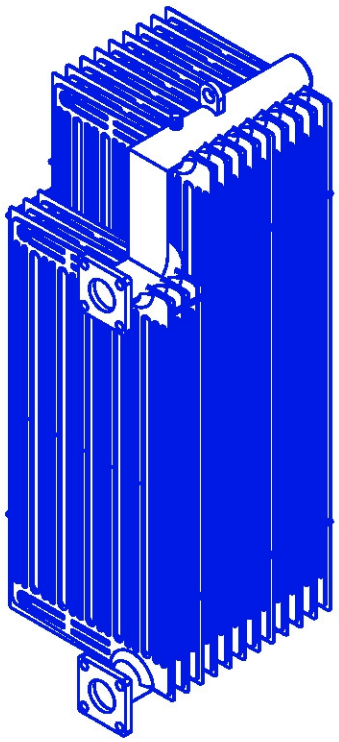
- Centre distance: from 800 mm to 3 500 mm
- Number of panels: from 1 to 39
- Offset to the left or right
- Offset reversible or not
- Manifold: Ø 88.9 mm
- Sheet thickness: 1 mm or 1.2 mm
- External coating: on request

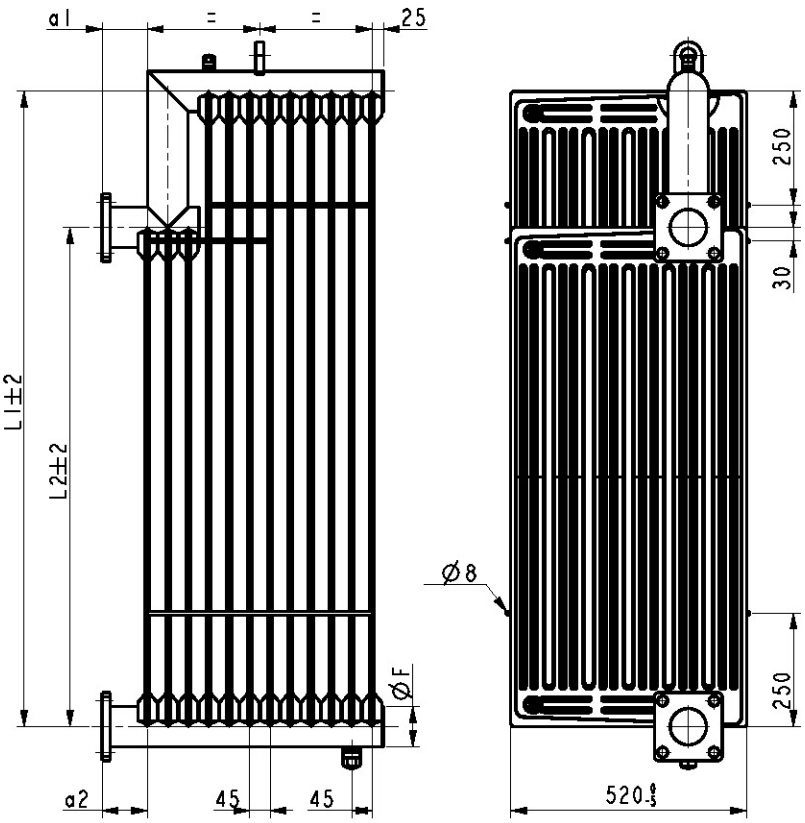
TECHNICAL OPTIONS

See table of technical details on inside front cover.

Europa radiator

EC FR 200





SPECIFICITIES

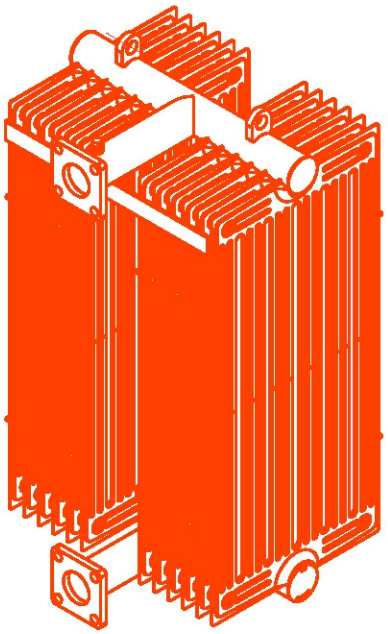
- Centre distance: from 800 mm to 3 500 mm
- Number of panels: from 1 to 39
- Offset to the left or right
- Manifold: Ø 88.9 mm
- Sheet thickness: 1 mm or 1.2 mm
- External coating: on request

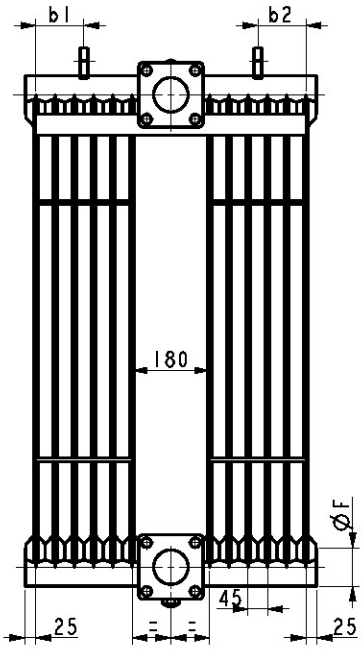
TECHNICAL OPTIONS

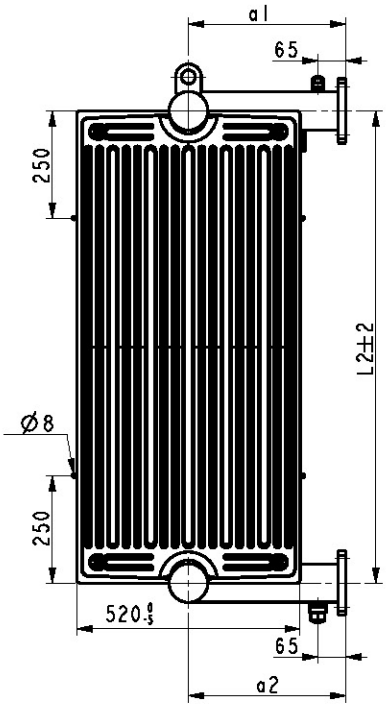
See table of technical details on inside front cover.

Europa radiator

EC FTT 100







SPECIFICITIES

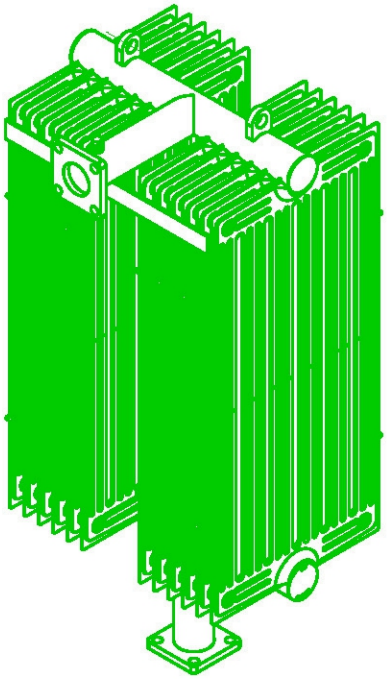
- Centre distance: from 800 mm to 3 500 mm
- Number of panels: from 1 to 72
- Manifold: Ø 88.9 mm or Ø 108 mm
- Sheet thickness: 1 mm or 1.2 mm
- External coating: on request

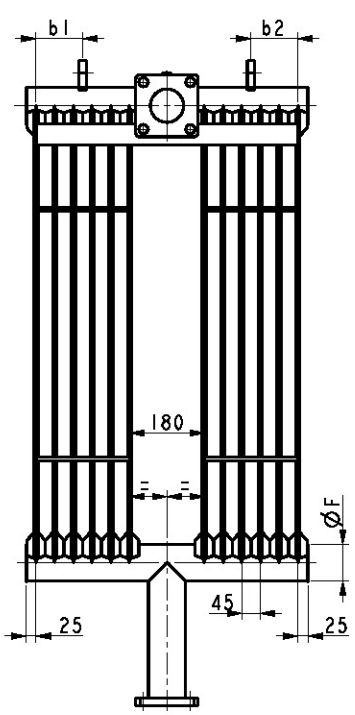
TECHNICAL OPTIONS

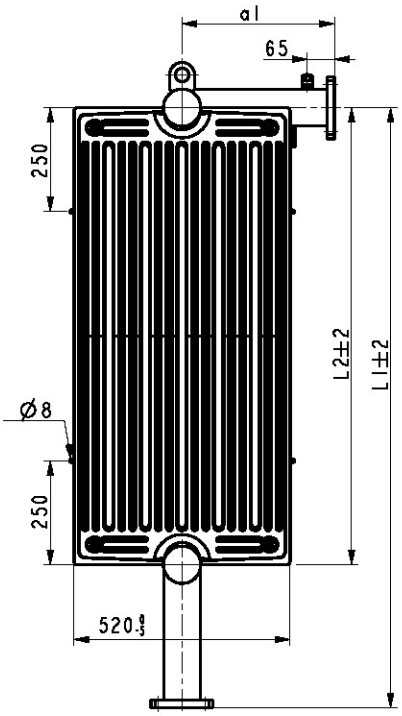
See table of technical details on inside front cover.

Europa radiator

EC FTT 110







SPECIFICITIES

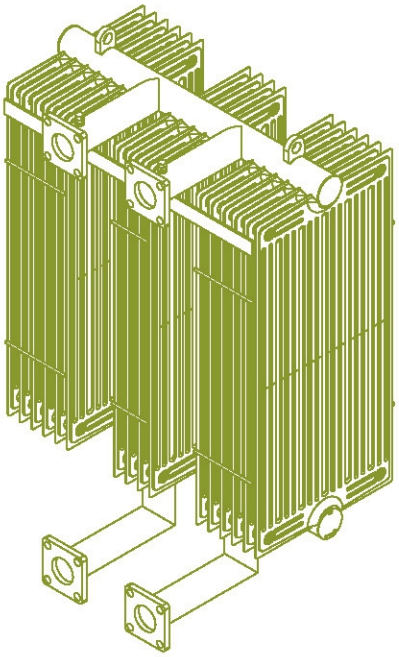
- Centre distance: from 800 mm to 3 500 mm
- Number of panels: from 1 to 72
- Manifold: Ø 88.9 mm or Ø 108 mm
- Sheet thickness: 1 mm or 1.2 mm
- External coating: on request

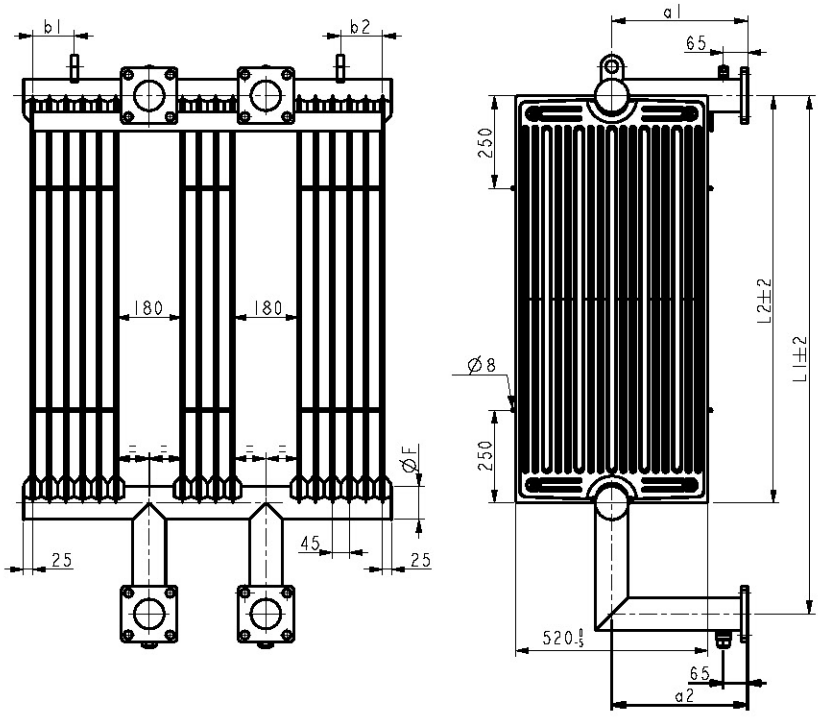
TECHNICAL OPTIONS

See table of technical details on inside front cover.

Europa radiator

EC FTT 120





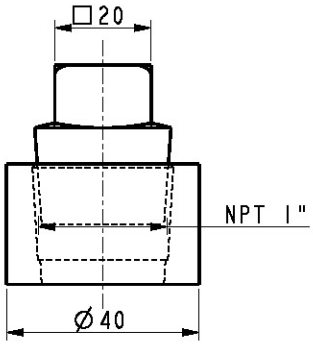
SPECIFICITIES

- Centre distance: from 800 mm to 3 500 mm
- Number of panels: from 1 to 72
- Manifold: Ø 88.9 mm or Ø 108 mm
- Sheet thickness: 1 mm or 1.2 mm
- External coating: on request

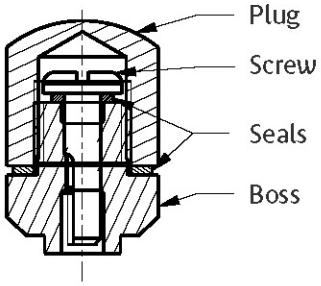
TECHNICAL OPTIONS

See table of technical details on inside front cover.

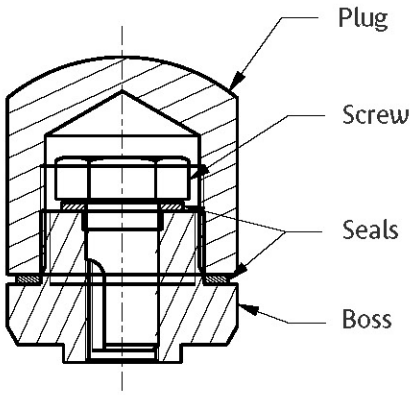
Accessories



DRAIN 1 NPT



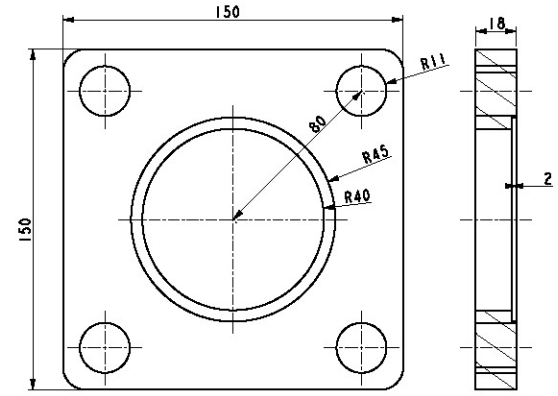
DEGASSING VALVE ACCORDING TO DIN42558



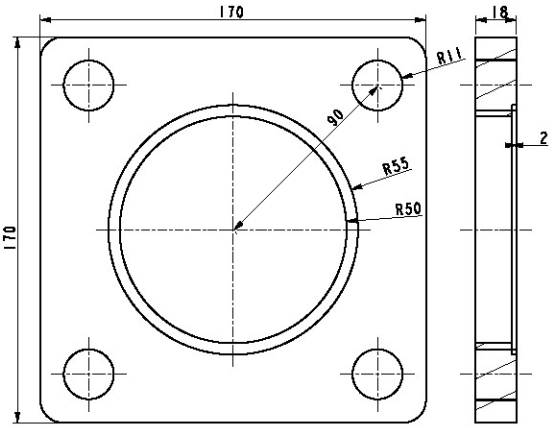
DRAIN VALVE ACCORDING TO DIN42558

STANDARD FLANGES

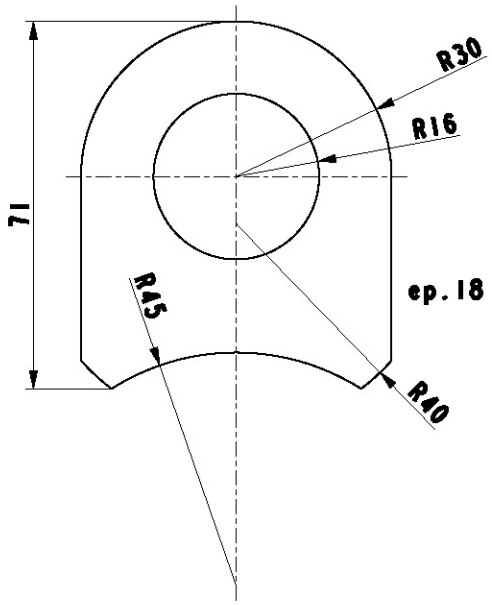
Manifold Ø 88.9



Manifold Ø 108

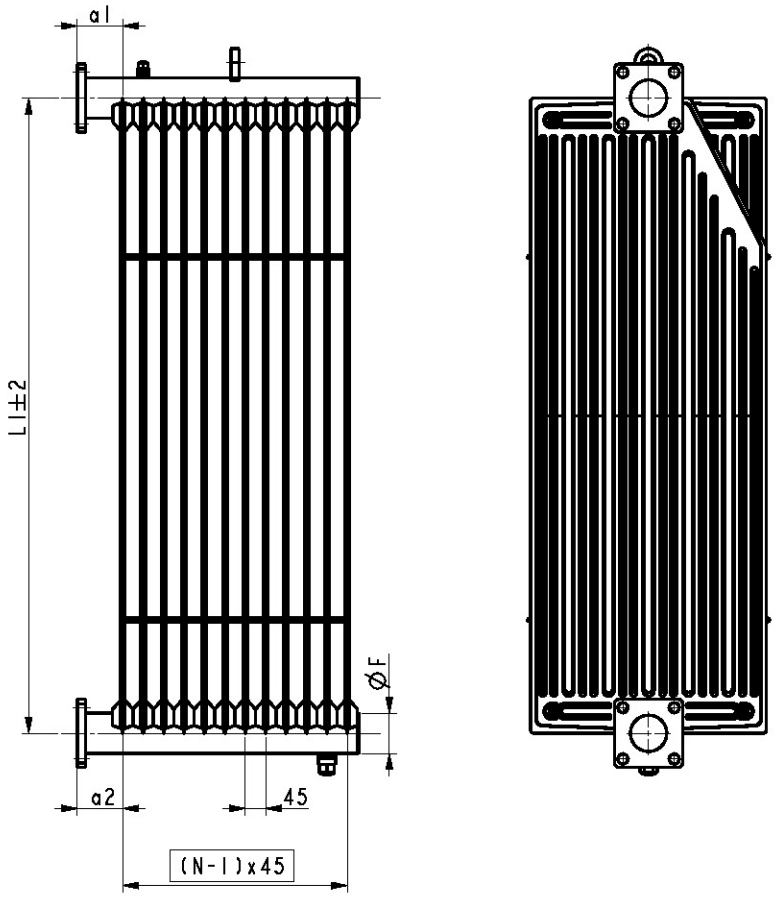


LIFTING EYE



Example of an order

EC xx xxx (According to the Eurocooler radiators)



ORDER DETAILS

L1: centre distance of radiator ..... (mm)

A1: upper manifold offset ..... (mm)

A2: lower manifold offset ..... (mm)

ØF: manifold diameter ☐ DN80 ☐ DN100

Offset: ☐ yes ☐ no

N: number of panels .....

Cut-off corners: ☐ yes ☐ no
☐ left ☐ right ☐ double
☐ front ☐ rear

Sheet thickness: ☐ 1 mm ☐ 1.2 mm

Dilatable: ☐ yes ☐ no

Corrosiveness category
☐ C1 ☐ C2 ☐ C3 ☐ C4 ☐ C5I ☐ C5 M

Durability: ☐ Limited ☐ Average ☐ High

Galvanisation: ☐ yes ☐ no
Thickness: ..... µm

Recommended paint systems Eurocooler: ☐
Other: ☐

Packaging/Logistics

We are able to ship our radiators all over the world.

We adapt the packaging of the radiators to the means of transport and the destination. Each radiator is identified in accordance with the customer's specifications.

Our commitments

Our know-how is internationally recognised by the biggest names in the profession. For you, we abide by the following principles:

> **Reactivity:** we can respond to all demands within 48 hours.

> **Flexibility:** we offer a complete range of radiators with all the options you need.

> **Quality:** we undertake to deliver our products in accordance with your specifications and always within the timeframe confirmed.

EUROCOOLER® SYSTEMS

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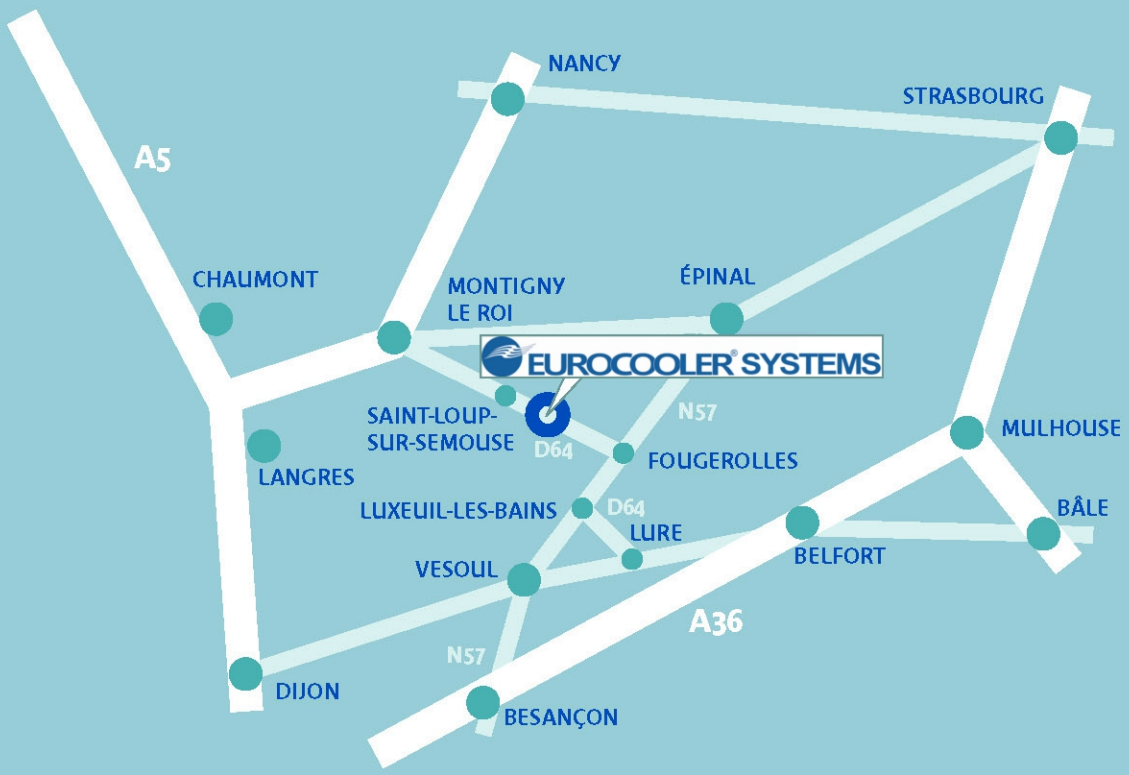
Fax: +33 (0) 384 933 155

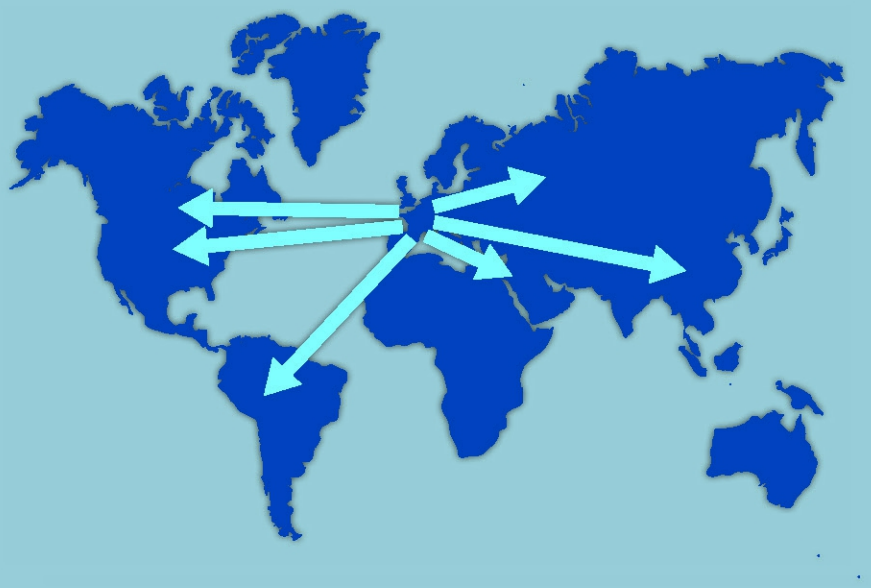
www.eurocooler.com

Sales Department
contact@eurocooler.com


NANCY
STRASBOURG
A5
CHAUMONT
MONTIGNY
LE ROI
ÉPINAL
EUROCOOLER SYSTEMS
SAINT-LOUP-
SUR-SEMOUSE
D64
N57
MULHOUSE
LANGRES
FOUGEROLLES
LUXEUIL-LES-BAINS
D64
LURE
BÂLE
BELFORT
VESOUL
A36
N57
DIJON
BESANÇON

Cooling your transformers

Located in Haute-Saône, Eurocooler has developed thanks to its command of its manufacturing processes.
Today Eurocooler is a team who is permanently undergoing trainning; it is also a company that exports 95% of its turn-over to the five continents.
A complete range for transformers with powers from 100 KVA from 1 500 MVA.
Unique know-how.
A stated ambition: to develop the performances of our industrial plant, to become the experts and the major partner of the world's major transformer manufacturers.



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