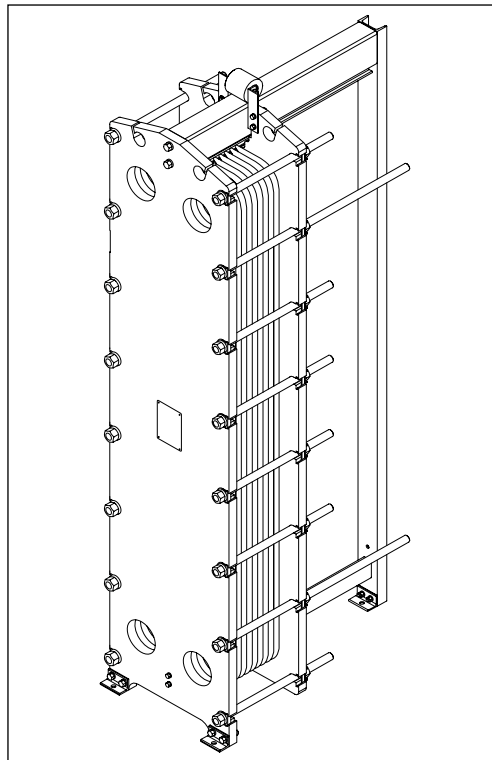


Data sheet

Gasketed Plate Heat Exchangers D110 (DN 150 / 6")

Description



Danfoss gasketed plate heat exchangers are the ideal choice for a wide range of applications across numerous market segments.

We have the largest plate portfolio in the world, and we customize each heat exchanger to meet your exact requirements. Innovative technologies and smart design make our gasketed plate heat exchangers a stellar investment.

Benefits:

- Customized solution that perfectly matches your requirements and lowers your energy consumption.
- High performance and a low pressure drop eliminate unnecessary burdens on your system and optimize overall system performance.
- The design results in a compact solution with a small footprint, simple installation, and easy access for maintenance.

Common applications:

- HVAC industry
- Marine/offshore industry
- Dairy/food/beverage industry
- Sugar industry
- Biogas industry
- Pulp and paper industry
- Heavy industry
- Mining industry
- Petrochemical industry
- Chemical industry

Main data:

- Min. temperature -20°C
- Max. temperature 180°C
- Max. working pressure 10 / 16 / 25 bar
- Water and different fluids, steam
- Connection size DN 150 or 6"

Approvals:

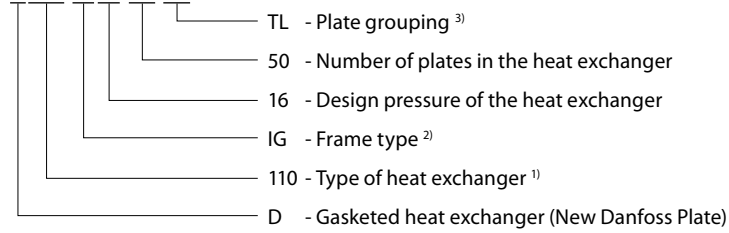
- Please contact your local Danfoss sales representative for an overview of the available approvals in your region

Construction standard:

- EN13445 (PED 2014/68/EU)
- ASME sec VIII, Div. 1

Naming of units

D110-IG16-50-TL



¹⁾ Type of heat exchanger:

D110 - ...
 Letter "D" - shows type of the attachment of gasket to plate: D-Lock
 Number "110" - is a size reference and plate family designation

²⁾ Description of frame types:

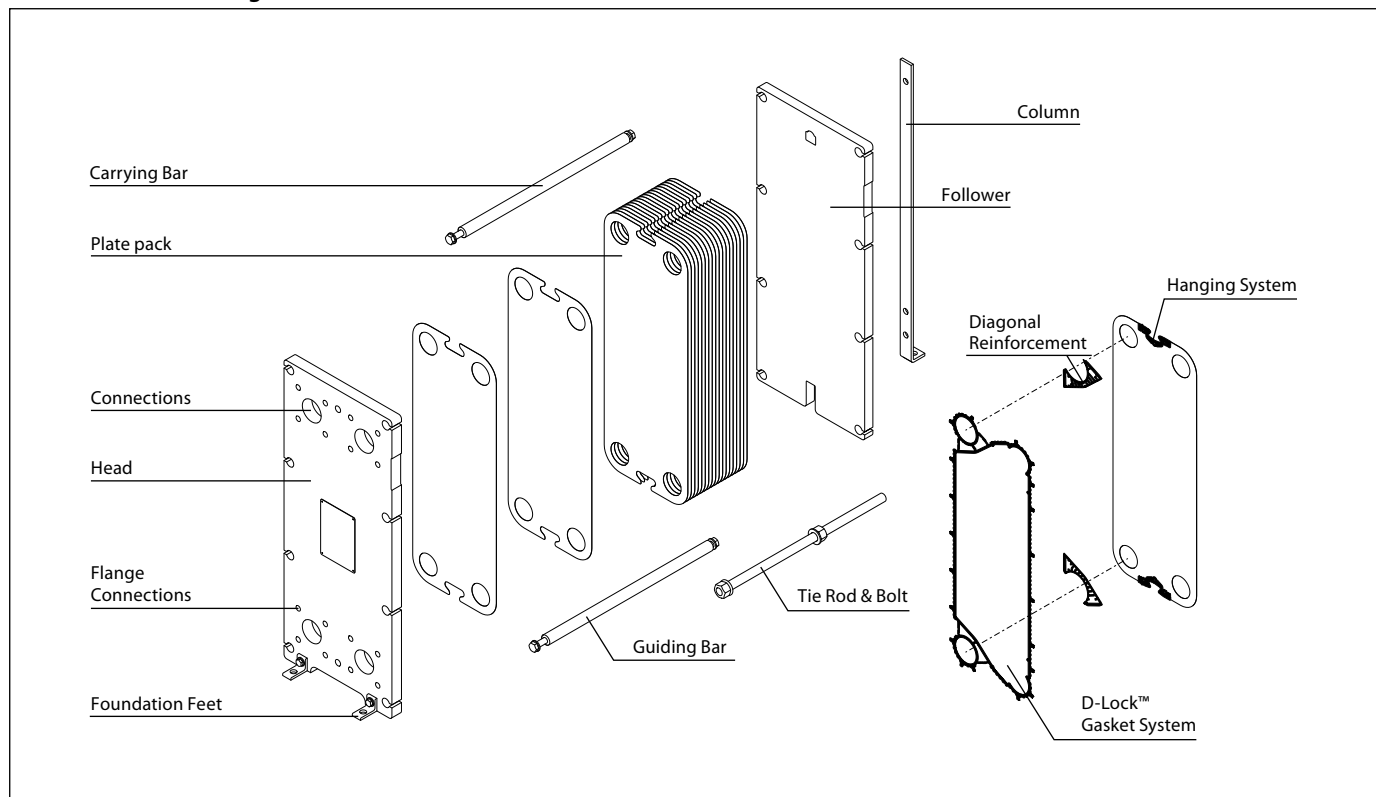
D110 is available with IS and DS frame types.

³⁾ Channel grouping:

TL - long thermal length
 TK - short thermal length

Heat exchanger design

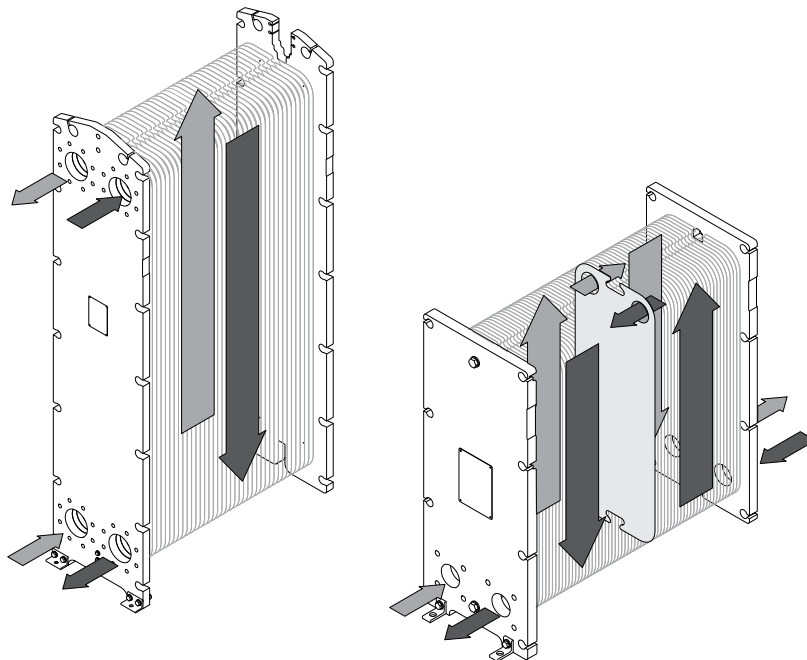
Gasketed heat exchangers consist of



Heat exchanger design
(continued)

Multi-pass design

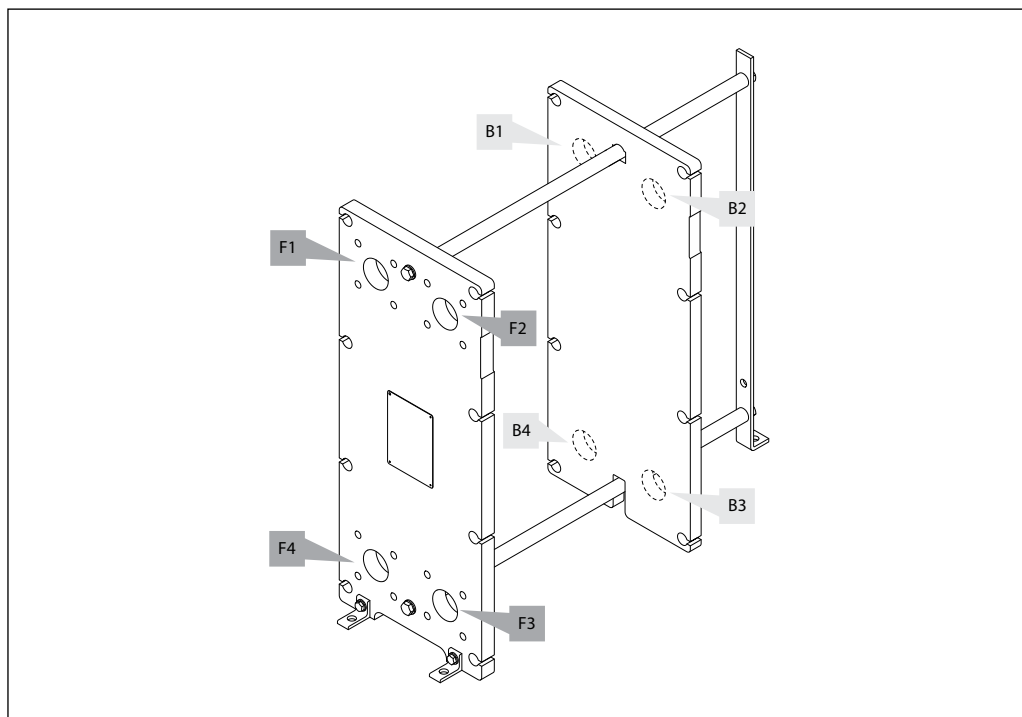
To the left: A single-pass solution with all connections on the head.
To the right: A multi-pass solution with connections on the follower and the head.



Connections

The heat exchanger may have connections on both front and back-end sides of the unit.

Connections on the head (front cover, fixed) are marked with F and connections on the follower (rear cover, movable) are marked with B. The numbers 1, 2, 3 and 4 designate the position of the connection on the end-plate from the top-left port clockwise.



Technical data

Heat exchanger **D110**

Type		D110
Max. working pressure	PN (bar)	10, 16, 25
Max. operating temperature	°C	Up to 180
Min. operating temperature		-20
Flow medium		Water and different fluids, steam
Volume / channel	l	3.2
Connection size		DN 150 / 6"
Connection type		DN 150/6" flanges. Carbon steel or rubberlined (other materials available on request)
Plate material		Stainless steel EN 1.4404 (AISI 316L), EN 1.4301 (AISI 304), titanium Gr.1 Other materials available on request
Plate thickness	mm	0.3; 0.4; 0.5
Gasket material		NBR, EPDM, Other materials available on request
Gasket attachment type		D-Lock (D)
Liners in connections		Stainless steel EN 1.4404 (AISI 316L), EN 1.4301 (AISI 304), SMO254, Hastelloy C276, titanium Gr.1
Frame		Painted frame, color RAL 3020 (RED)
Frame painting specification		Painting available for corrosion categories C2L, C4M, C5M

Accessories

Insulation

Recommended applications:

The insulation jacket for the plate heat exchanger is used in different applications with high temperatures and cooling systems.

Application	Heating	Cooling
Material	45 mm mineral wool Not flammable DIN EN 4102A2	40 mm PU-foam DIN 4102-1 B2
Outer cap	1 mm aluminium "Stucco" Embossed	
Internal insulation	0.05 mm aluminium foil	
Panel fixation	Plastic rivets	
Temperature	20 ... 200 °C	-50 ... -80 °C
U-value	0.55 W/m ² K	0.38 W/m ² K
Insulation class	3 ¹⁾	4 ¹⁾
Heat loss	17.1 W/m ²	-

Please note:

Inlet and outlet temperatures in the exchanger have been based on 90/50 – 30/70 °C.

¹⁾ *The loss of heating/cooling is stated per m² surface on the insulation jacket.*

The bottom of the heat exchanger is not insulated and this fact has been excluded.

A possible loss of ventilation, largely dependent on the mounting of the heat exchanger, has not been taken into account either.

Drip trays

A drip tray collects any remaining water after drainage (when the unit has been opened for inspection and maintenance), as well as the water that has condensed on the outside of the heat exchanger.

We offer two types of drip trays: an insulated version and an un-insulated version. Each drip tray is customized based on the unit in question and the targeted application.

Please reach out to your local sales responsible for exact information on the drip tray for your solution.

Spare parts

Spare parts for gasketed heat exchangers, such as plates, gaskets, frame parts can be ordered for maintenance, repair, increasing heat exchanger capacity, etc.

Please contact your local Danfoss or SONDEX® sales representative to provide you with information on spare parts available for gasketed heat exchangers.

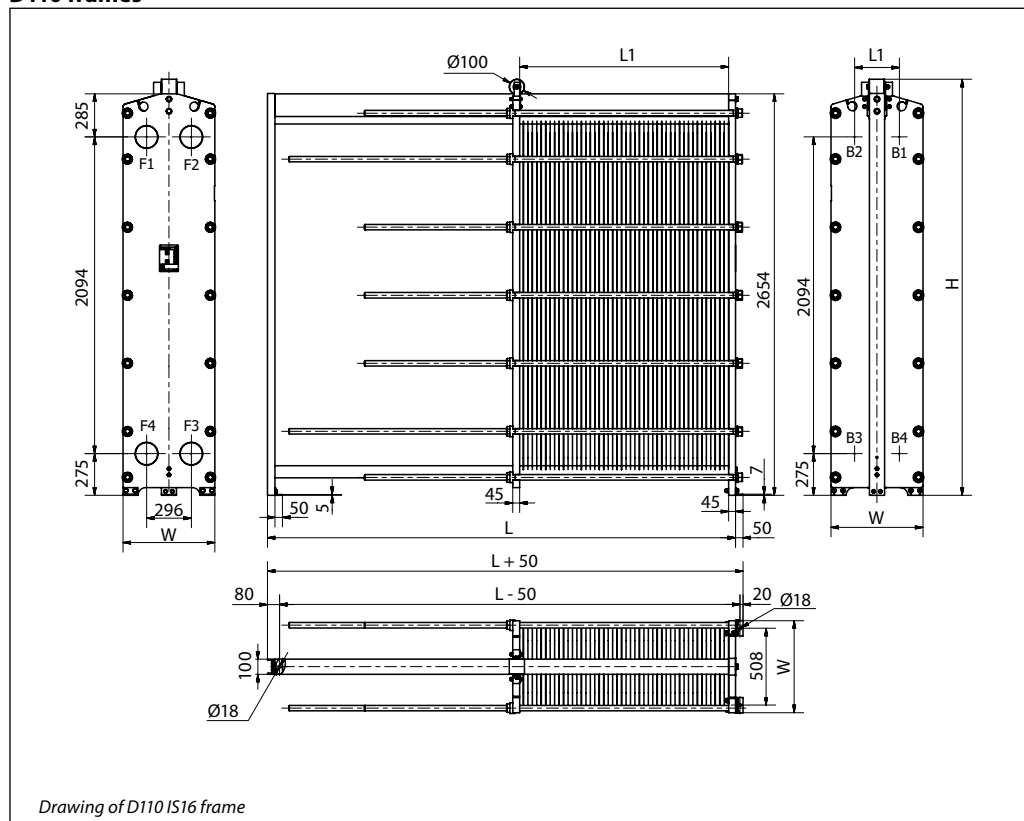
Selection and ordering

Please contact your local Danfoss sales representative for the selection and / or ordering of the heat exchangers, spare parts, and accessories.

For contact information please visit <https://www.danfoss.com/en/contact-us>.

Dimensions (continued)
Non-sanitary applications

D110 frames



Number of plates ¹⁾	L (frame length) (mm)	W (mm)	H (mm)	Weight max, empty ²⁾ (kg)	Connection type
D110 IS10					
7 – 43 ³⁾	695	608 (23.94")	2750 (108.27")	1328	DN 150 flange or 6"
44 – 119 ³⁾	1095			1794	
120 – 175 ³⁾	1395			2168	
176 – 213 ³⁾	1595			2423	
214 – 308 ³⁾	2095			3027	
309 – 402 ³⁾	2595			3643	
403 – 496 ³⁾	3095			4267	
497 – 685 ³⁾	4145			5619	
686 – 874 ³⁾	5145			6849	
875 – 1062 ³⁾	6145			8116	
D110 IS16					
7 – 42 ³⁾	695	608 (23.94")	2750 (108.27")	1445	DN 150 flange or 6"
43 – 117 ³⁾	1095			1918	
118 – 174 ³⁾	1395			2286	
175 – 211 ³⁾	1595			2535	
212 – 306 ³⁾	2095			3138	
307 – 400 ³⁾	2595			3755	
401 – 494 ³⁾	3095			4372	
495 – 683 ³⁾	4195			5806	
684 – 872 ³⁾	5195			7036	
873 – 1060 ³⁾	6195			8302	

¹⁾ the indicated maximum number of plates is based on the minimum plate thickness allowable for the PN level of the unit;

²⁾ the maximum weight of the empty unit with the maximum allowable number of plates;

³⁾ the indicated maximum number of plates is for units without intermediate frames. Adding an intermediate frame reduces the maximum allowable number of plates in the unit.

Dimensions (continued)
Non-sanitary applications

D110 frames

Number of plates ¹⁾	L (frame length) (mm)	W (mm)	H (mm)	Weight max, empty ²⁾ (kg)	Connection type
D110 IS25					
7 – 41 ³⁾	705	640 (25.20")	2754 (108.42")	1703	DN 150 flange or 6"
42 – 116 ³⁾	1105			2182	
117 – 173 ³⁾	1405			2563	
174 – 210 ³⁾	1605			2823	
211 – 305 ³⁾	2105			3435	
306 – 399 ³⁾	2605			4079	
400 – 493 ³⁾	3105			4721	
494 – 682 ³⁾	4155			6203	
683 – 871 ³⁾	5155			7457	
872 – 1059 ³⁾	6155			8771	
D110 DS10					
7 – 43 ³⁾	690	627 (24.68")	2754 (108.42")	1269	DN 150 flange or 6"
44 – 119 ³⁾	1090			1732	
120 – 175 ³⁾	1390			2094	
176 – 213 ³⁾	1590			2321	
214 – 308 ³⁾	2090			2918	
309 – 402 ³⁾	2590			3504	
403 – 496 ³⁾	3090			4104	
D110 DS16					
7 – 42 ³⁾	690	627 (24.68")	2750 (108.27")	1330	DN 150 flange or 6"
43 – 118 ³⁾	1090			1793	
119 – 175 ³⁾	1390			2148	
176 – 212 ³⁾	1590			2391	
213 – 307 ³⁾	2090			2986	
308 – 401 ³⁾	2590			3575	
402 – 495 ³⁾	3090			4181	

¹⁾ the indicated maximum number of plates is based on the minimum plate thickness allowable for the PN level of the unit;
²⁾ the maximum weight of the empty unit with the maximum allowable number of plates;
³⁾ the indicated maximum number of plates is for units without intermediate frames. Adding an intermediate frame reduces the maximum allowable number of plates in the unit;



Danfoss A/S

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