

Data sheet

Plate heat exchanger

XGF100 -034, -035, -050, -066

Description



Danfoss XGF plate heat exchanger has been developed specifically for District Energy applications like District Heating and Cooling ensuring you a reliable high efficient plate heat exchanger fulfilling your needs.

Among others the XGF range include following features:

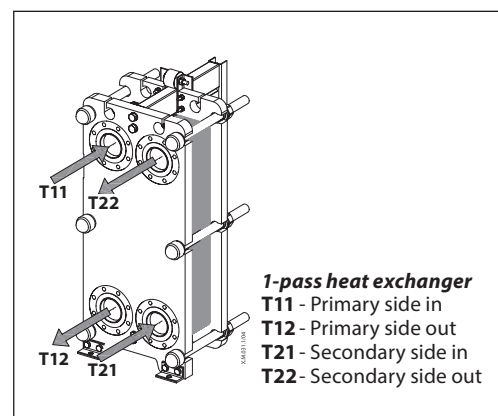
- Improved plate alignment system;
- Glue free gaskets with a robust attachment system;
- Enforced distribution area;
- Optimized distribution area ensures high efficiency and reduced risk of fouling.

Design and function

The heat exchangers are made of shape-pressed heat plates between which the flow channels are created. Gaskets between the plates separate the flow channels from each other so that the flows do not mix. The heavy turbulence and counter-flow principle enables efficient heat transfer. The task of the heat exchanger is to transfer heat from the primary to secondary flow through a heat transfer plate thus preventing the flows from mixing with each other. The plate heat exchanger with gaskets can be opened for cleaning and for replacement of plates and gaskets. The heat output can be changed by adding or removing plates.

The choice of heat exchanger is determined by the desired heat output, required temperatures and the permitted pressure losses.

The XGF100 gasketed hex range include 4 plate types in different length and same width. All plates are available in L and H type which can be combined to M type. This datasheet include a range of types, where standard code no's have been prepared, all in PN 16 variants in 1 pass. Standard codes have not been created for XGF100-066.



The complete range can be supplied in PN 25 and 2 pass variants. All variants can be calculated in Danfoss Calculation software "Hexact", where they will be shown without a standard code no. Unique code no's for these variants will be created when they are ordered. Please contact your local Danfoss Sales Office for offering and ordering.

Ordering

1-pass gasketed heat exchangers type XGF100

Picture	No. of plates (n)	100-034H	100-034M	100-034L	100-035H	100-035M	100-035L	100-050H
		Code No.						
	50	004H7001	004H7012	004H7023	004H7034	004H7045	004H7056	004H7067
	60	004H7002	004H7013	004H7024	004H7035	004H7046	004H7057	004H7068
	70	004H7003	004H7014	004H7025	004H7036	004H7047	004H7058	004H7069
	80	004H7004	004H7015	004H7026	004H7037	004H7048	004H7059	004H7070
	90	004H7005	004H7016	004H7027	004H7038	004H7049	004H7060	004H7071
	100	004H7006	004H7017	004H7028	004H7039	004H7050	004H7061	004H7072
	110	004H7007	004H7018	004H7029	004H7040	004H7051	004H7062	004H7073
	120	004H7008	004H7019	004H7030	004H7041	004H7052	004H7063	004H7074
	130	004H7009	004H7020	004H7031	004H7042	004H7053	004H7064	004H7075
	140	004H7010	004H7021	004H7032	004H7043	004H7054	004H7065	004H7076
	150	004H7011	004H7022	004H7033	004H7044	004H7055	004H7066	004H7077

Accessories - Insulations

Type coverage (plate nos)	No. of plates	Code No.	
Insulation set	XGF100-034	20->54	004H7105
	XGF100-035	20->34	
	XGF100-034	56->144	004H7106
	XGF100-035	36->92	
	XGF100-034	146->266	004H7107
	XGF100-035	94->168	

Type coverage (plate nos)	No. of plates	Code No.
Insulation set XGF100-050	20->54	004H7111
	56->144	004H7112
	146->266	004H7113
Insulation set XGF100-066	20->54	004H7114
	56->144	004H7115
	146->266	004H7116

Accessories - EPDM Gasket, sets of 10 & 250 (Pricelist is per 1 pc.)

Type	Code No.
Gasket for XGF100-034, I-pack 10 pcs	004H7120
Gasket for XGF100-034, I-pack 250 pcs	004H7121
Gasket for XGF100-035, I-pack 10 pcs	004H7122
Gasket for XGF100-035, I-pack 250 pcs	004H7123

Type	Code No.
Gasket for XGF100-050H, I-pack 10 pcs	004H7124
Gasket for XGF100-050H, I-pack 250 pcs	004H7125
Gasket for XGF100-066H, I-pack 10 pcs	004H7126
Gasket for XGF100-066H, I-pack 250 pcs	004H7127

Accessories - Plates for XG100 PN16, sets of 10 & 250 (Material 1.4404) (Pricelist is per 1 pc.)

Type coverage (plate nos)	Code No.
Plates for XGF100-034H PN16, I-pack 10 pcs	004H7130
Plates for XGF100-034L PN16, I-pack 10 pcs	004H7131
Plates for XGF100-034H PN16, I-pack 250 pcs	004H7132
Plates for XGF100-034L PN16, I-pack 250 pcs	004H7133
Plates for XGF100-035H PN16, I-pack 10 pcs	004H7134
Plates for XGF100-035L PN16, I-pack 10 pcs	004H7135
Plates for XGF100-035H PN16, I-pack 250 pcs	004H7136
Plates for XGF100-035L PN16, I-pack 250 pcs	004H7137

Type coverage (plate nos)	Code No.
Plates for XGF100-050H PN16, I-pack 10 pcs	004H7138
Plates for XGF100-050L PN16, I-pack 10 pcs	004H7139
Plates for XGF100-050H PN16, I-pack 250 pcs	004H7140
Plates for XGF100-050L PN16, I-pack 250 pcs	004H7141
Plates for XGF100-066H PN16, I-pack 10 pcs	004H7134
Plates for XGF100-066L PN16, I-pack 10 pcs	004H7135
Plates for XGF100-066H PN16, I-pack 250 pcs	004H7136
Plates for XGF100-066L PN16, I-pack 250 pcs	004H7137

Accessories - PN16, sets of 1 front and 1 back plate for 1 pass versions incl EPDM gaskets

Type	Code No.
XGF100-034H: spec. plates 1-pass versions, including gaskets. PN16	004H7146
XGF100-034L: spec. plates 1-pass versions, including gaskets. PN16	004H7148
XGF100-035H: spec. plates 1-pass versions, including gaskets. PN16	004H7149
XGF100-035L: spec. plates 1-pass versions, including gaskets. PN16	004H7151

Type	Code No.
XGF100-050H: spec. plates 1-pass versions, including gaskets. PN16	004H7152
XGF100-050L: spec. plates 1-pass versions, including gaskets. PN16	004H7154
XGF100-066H: spec. plates 1-pass versions, including gaskets. PN16	004H7155
XGF100-066L: spec. plates 1-pass versions, including gaskets. PN16	004H7157

Accessories - PN16, sets of 1 front, 1 back and 1 middle plates for 2 pass versions incl EPDM gaskets

Type	Code No.
XGF100-034H: spec. plates 2-pass version, including gaskets PN16	004H7158

Type	Code No.
XGF100-050H: spec. plates 2-pass version, including gaskets PN16	004H7164

Ordering (continuous)
Accessories - Plates for XG100 PN25, sets of 10 & 250 (Material 1.4404) (Pricelist is per 1 pc.)

Type coverage (plate nos)	Code No.	Type coverage (plate nos)	Code No.
Plates for XGF100-034H PN25, I-pack 10 pcs	004H7170	Plates for XGF100-050H PN25, I-pack 10 pcs	004H7178
Plates for XGF100-034L PN25, I-pack 10 pcs	004H7171	Plates for XGF100-050L PN25, I-pack 10 pcs	004H7179
Plates for XGF100-034H PN25, I-pack 250 pcs	004H7172	Plates for XGF100-050H PN25, I-pack 250 pcs	004H7180
Plates for XGF100-034L PN25, I-pack 250 pcs	004H7173	Plates for XGF100-050L PN25, I-pack 250 pcs	004H7181
Plates for XGF100-035H PN25, I-pack 10 pcs	004H7174	Plates for XGF100-066H PN25, I-pack 10 pcs	004H7182
Plates for XGF100-035L PN25, I-pack 10 pcs	004H7175	Plates for XGF100-066L PN25, I-pack 10 pcs	004H7183
Plates for XGF100-035H PN25, I-pack 250 pcs	004H7176	Plates for XGF100-066H PN25, I-pack 250 pcs	004H7184
Plates for XGF100-035L PN25, I-pack 250 pcs	004H7177	Plates for XGF100-066L PN25, I-pack 250 pcs	004H7185

Accessories - PN25, sets of 1 front and 1 back plate for 1 pass versions incl EPDM gaskets

Type	Code No.	Type	Code No.
XGF100-034H: spec. plates 1-pass versions, including gaskets. PN25	004H7192	XGF100-050H: spec. plates 1-pass versions, including gaskets. PN25	004H7198
XGF100-034L: spec. plates 1-pass versions, including gaskets. PN25	004H7194	XGF100-050L: spec. plates 1-pass versions, including gaskets. PN25	004H7200
XGF100-035H: spec. plates 1-pass versions, including gaskets. PN25	004H7195	XGF100-066H: spec. plates 1-pass versions, including gaskets. PN25	004H7201
XGF100-035L: spec. plates 1-pass versions, including gaskets. PN25	004H7197	XGF100-066L: spec. plates 1-pass versions, including gaskets. PN25	004H7203

Accessories - PN25, sets of 1 front, 1 back and 1 middle plates for 2 pass versions incl EPDM gaskets

Type	Code No.	Type	Code No.
XGF100-034H: spec. plates 2-pass version, including gaskets PN25	004H7207	XGF100-050H: spec. plates 2-pass version, including gaskets PN25	004H7213

Accessories - Bracket

Picture	Code No.
	004H7223

NOTE: Bracket set is not included in HEX please order it separately.
Set contain 3 different pcs of bracket/legs with screws.

Technical data

Type		XGF100-34	XGF100-35	XGF100-50	XGF100-66
Max. working pressure PN	bar	16			
Max. operating temperature	°C	150			
Min. operating temperature		-10			
Flow medium		Circulation water/glycolic water up to 50 %			
Heat transfer area per plate, HTA	m ²	0,306	0,306	0,467	0,628
Max. no of plates		500			250
Volume/channel	ltr	0,3	0,7	0,7	1,5
Primary side volume		(n/2) - 1 × volume/channel			
Secondary side volume		(n/2) × volume/channel			
Connection type		Studded for flanges according to EN1092, directly on endplates			
Connection size		DN 100			
Plate thickness	mm	0,5 for PN16			
Materials					
Plate		Stainless steel EN1.4401			
Liners in connections		Stainless steel EN1.4401			
Gasket type		Glue free			
Gasket material		EPDM			

Insulation properties

Type		Aluminium stucco and mineral wool	
Heat conductivity, λ	W/mK	0,042	
Max temperature	Permanent	°C	150
	Short term peak		180
Wall thickness	mm	65	

Note:

For more details about insulation please contact your Danfoss sales representative.

Sizing

Dimensioning and selection of heat exchangers should be carried out in the Danfoss calculation software "Hexact". The software can be downloaded from hexact.danfoss.com.

Mounting

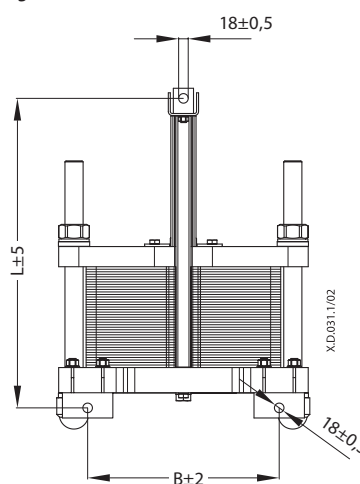
The heat exchanger must be mounted in vertical position. Prepare the foundation for the heat exchanger if necessary, always according to local regulations. It is recommended that all pipes connected to the heat exchanger are equipped with shut-off valves for maintenance purposes.

The pipes to be connected must be mounted so that the strain caused by the thermal expansion, for instance, does not harm the heat exchanger. The pipes must be equipped with brackets to prevent any torsional stress concentration at the heat exchanger's pipe connections. It is recommended that the heat exchanger is equipped with insulation.

A safety valve must be installed between the heat exchanger and the shut-off valves on the secondary side of the heat exchanger. If the safety valve is not installed, thermal expansion of fluid might destroy the heat exchanger when the shut-off valves are closed.

All XGF100 are supplied with brackets for mounting.

PN 16 mounting, dimensions and weight



XGF100-34

Plate range	L	B	Weight (kg)
	mm		
10-54	614	380	363 + 1,278 × n
56-144	914		377 + 1,278 × n
146-266	1314		395 + 1,278 × n
268-356	1614		415 + 1,278 × n
358-508	2114		436 + 1,278 × n

XGF100-35

Plate range	L	B	Weight (kg)
	mm		
10-34	614	380	363 + 1,337 × n
36-92	914		377 + 1,337 × n
94-168	1314		395 + 1,337 × n
170-226	1614		415 + 1,337 × n
226-322	2114		436 + 1,337 × n

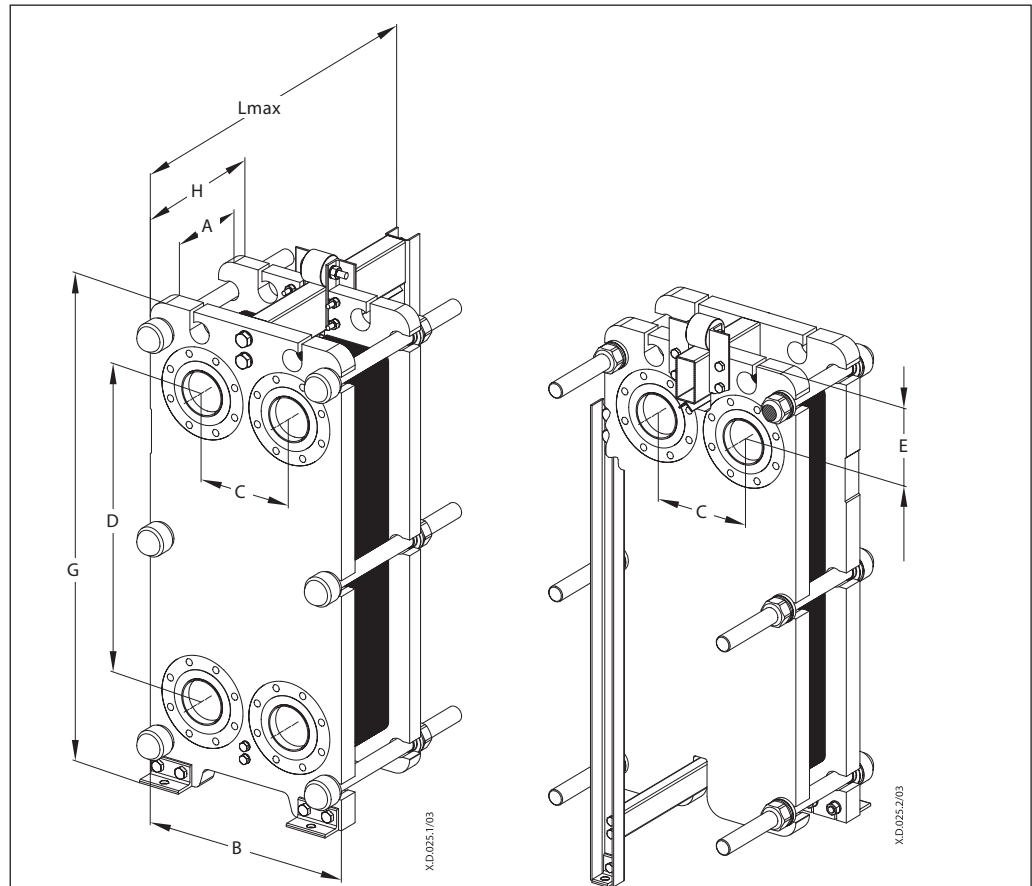
XGF100-50

Plate range	L	B	Weight (kg)
	mm		
10-54	604	395	493 + 1,915 × n
56-144	904		504 + 1,915 × n
146-266	1304		523 + 1,915 × n
268-356	1604		544 + 1,915 × n
358-508	2104		566 + 1,915 × n

XGF100-66

Plate range	L	B	Weight (kg)
	mm		
10-54	604	395	634 + 2,572 × n
56-144	904		650 + 2,572 × n
146-266	1304		660 + 2,572 × n
268-356	1604		673 + 2,572 × n
358-508	2104		687 + 2,572 × n

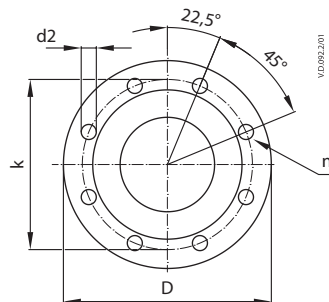
Dimensions



Type	PN	A	H	B	C	D	E	G	L _{max}
		mm							
XGF100-034	16	2,5 × n	A + 90	495	225	720	184	1108	654-2154
XGF100-035		4 × n							
XGF100-050		2,5 × n	A + 80	510		1138	187	1603	
XGF100-066		2,5 × n							
XGF100-034	25	2,6 × n	A + 100	495	235	720	184	1108	654-2164
XGF100-035		4,1 × n							
XGF100-050		2,6 × n	A + 100	510		1138	187	1603	
XGF100-066		2,6 × n							

Dimension for mounting flanges on front end plate. Counterflanges for front and back end plate are not supplied with the hex.

2 pass hex include 4 connections on the front end plate and 2 connections on the back endplate. The connections on the front end plate are same as connections on back endplate, as specified here.



Type	PN	D	k	d2	n
		mm			
XGF 100	16	220	180	M16	8
	25	235	190	M20	8

Flanges according to EN1092.

Dimensions (continuous)

Insulation

Type	PN	max NOP	Isolation code	G	B	H	Weight (kg)
				mm			
XGF100-034	16 and 25	54	004H7105	1225	634	490	25
		144	004H7106			720	29
		266	004H7107			1020	38
		356	004H7900			1240	44
		508	004H7901			1640	52
XGF100-035		34	004H7105	1225	634	490	25
		92	004H7106			720	29
		168	004H7107			1020	38
		226	004H7900			1240	44
		322	004H7901			1640	52
XGF100-050	16	54	004H7111	1670	650	480	40
		144	004H7112			720	55
		266	004H7113			1040	75
		356	004H7902			1280	90
		508	004H7903			1680	100
	25	54	004H7906			480	40
		144	004H7907			720	55
		266	004H7908			1040	75
		356	004H7909			1280	90
		508	004H7910			1680	100
XGF100-066	16	54	004H7114	2080	650	480	55
		144	004H7115			680	70
		266	004H7116			1000	95
		356	004H7904			1200	115
		508	004H7905			1600	145
	25	54	004H7911			480	55
		144	004H7912			680	70
		266	004H7913			1000	95
		356	004H7914			1200	115
		508	004H7915			1600	145

