

Alfa Laval TS6

Gasketed plate heat exchanger for a wide range of applications

Introduction

Alfa Laval Industrial line is a wide product range that is used in virtually all types of industry.

The relatively short plate makes this model suitable for duties with short temperature programs and when a low pressure drop is appreciated. A large range of plate and gasket types is available.

Applications

- Biotech and Pharmaceutical
- Chemicals
- Energy and Utilities
- Food, Dairy and Beverages
- Home and Personal care
- HVAC and Refrigeration
- Machinery and Manufacturing
- Marine and Transportation
- Mining, Minerals and Pigments
- Pulp and Paper
- Semiconductor and Electronics
- Steel
- Water and Waste treatment

Benefits

- High energy efficiency – low operating cost
- Flexible configuration – heat transfer area can be modified
- Easy to install – compact design
- High serviceability – easy to open for inspection and cleaning and easy to clean by CIP
- Access to Alfa Laval's global service network

Features

Every detail is carefully designed to ensure optimal performance, maximum uptime and easy maintenance. Selection of available features, depending on configuration some features may not be applicable:

- Corner guided alignment system
- Chocolate pattern distribution area
- Clip-on gasket
- Leak chamber
- Fixed bolt head
- Key hole bolt opening
- Lifting lug
- Lining



- Lock washer
- Tightening bolt cover

Alfa Laval 360° Service Portfolio

Our extensive service offering ensure top performance from your Alfa Laval equipment throughout its life cycle. The Alfa Laval 360 Service Portfolio include installation services, cleaning and repair as well as spare parts, technical documentation and trouble shooting. We also offer replacement, retrofit, integrity testing, monitoring and much more.

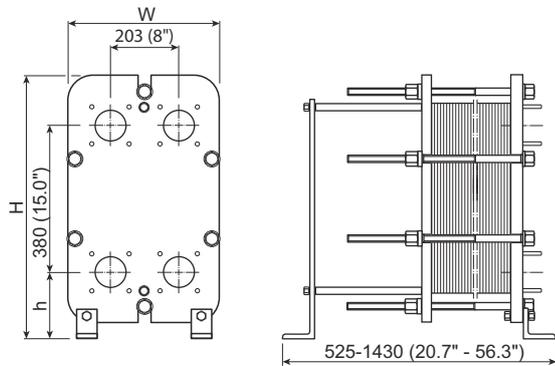
For information about our complete service offering and how to contact us - please visit www.alfalaval.com/service.

General remarks for technical information

- The global offering presented in this leaflet may not be available for all regions
- All combinations may not be configurable

Dimensional drawing

Measurements mm (inches)



Frame type	H	W	h
FG	704 (27.7")	400 (15.7")	188 (7.4")
FD	704 (27.7")	410 (16.1")	188 (7.4")

Technical data

Plates	Type	Free channel, mm (inches)
M	Single plate	4.0 (0.16)

Materials

Heat transfer plates	316/316L Ti
Field gaskets	NBR, EPDM, FKM, HeatSeal
Flange connections	Carbon steel Metal lined: stainless steel, titanium
Frame and pressure plate	Carbon steel, epoxy painted

Other materials may be available on request.

Operational data

Frame type	Max. design pressure barg (psig)	Max. design temperature °C (°F)
FG, pvcALS	16.0 (232)	180 (356)
FG, ASME	14.3 (207)	250 (482)
FG, PED	16.0 (232)	180 (356)
FD, pvcALS	24.5 (355)	200 (392)
FD, ASME	20.7 (300)	250 (482)
FD, PED	25.0 (362)	180 (356)

Extended pressure and temperature rating may be available on request.

Flange connections

Frame type	Connection standard
FG, pvcALS	EN 1092-1 DN65 PN16
	JIS B2220 10K 65A
	JIS B2220 16K 65A
FG, Marine ¹	
FG, ASME	ASME B16.5 Class 150 NPS 3
FG, PED	EN 1092-1 DN65 PN16
	ASME B16.5 Class 150 NPS 3
FD, pvcALS	EN 1092-1 DN65 PN25
	JIS B2220 10K 65A
	JIS B2220 20K 65A
FD, ASME	ASME B16.5 Class 300 NPS 3
FDc, ASME	
FD, PED	EN 1092-1 DN65 PN25
	ASME B16.5 Class 300 NPS 3

¹ Marine includes the standards: ABS, BV, CCS, DNV, ClassNK, KR, LR, RINA, and RMRS.

Standard EN1092-1 corresponds to GOST 12815-80 and GB/T9124.1.

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Alfa Laval TS20

Gasketed plate heat exchanger for a wide range of applications

Introduction

Alfa Laval Industrial line is a wide product range that is used in virtually all types of industry.

The relatively short plate makes this model suitable for duties with short temperature programs and when a low pressure drop is appreciated. A large range of plate and gasket types is available.

Applications

- Biotech and Pharmaceutical
- Chemicals
- Energy and Utilities
- Food, Dairy and Beverages
- Home and Personal care
- HVAC and Refrigeration
- Machinery and Manufacturing
- Marine and Transportation
- Mining, Minerals and Pigments
- Pulp and Paper
- Semiconductor and Electronics
- Steel
- Water and Waste treatment

Benefits

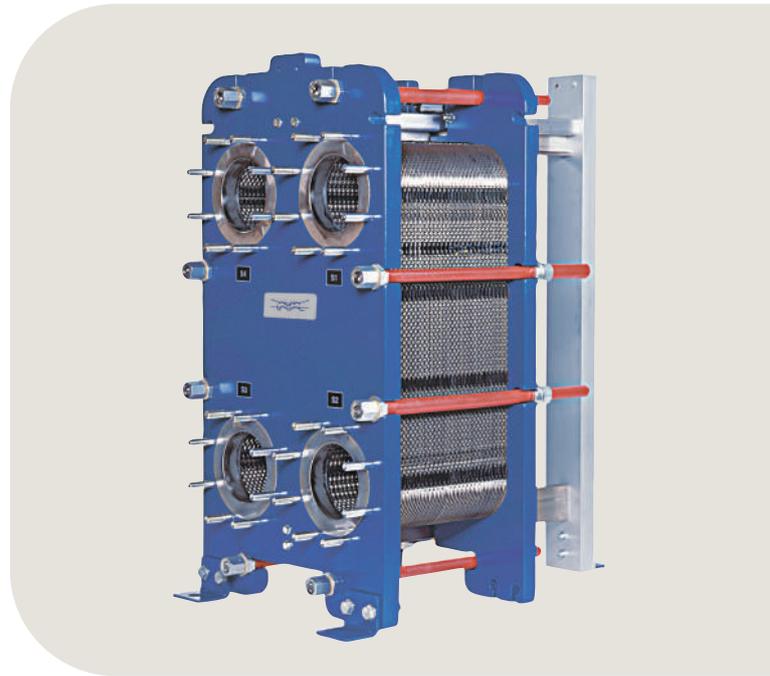
- High energy efficiency – low operating cost
- Flexible configuration – heat transfer area can be modified
- Easy to install – compact design
- High serviceability – easy to open for inspection and cleaning and easy to clean by CIP
- Access to Alfa Laval's global service network

Features

Every detail is carefully designed to ensure optimal performance, maximum uptime and easy maintenance. Selection of available features, depending on configuration some features may not be applicable:



- Five-point alignment
- Corner guided alignment system
- Chocolate pattern distribution area
- Glued gasket
- Clip-on gasket
- Leak chamber



- Bearing boxes
- Fixed bolt head
- Key hole bolt opening
- Lifting lug
- Lining
- Lock washer
- Pressure plate roller
- Tightening bolt cover

Alfa Laval 360° Service Portfolio

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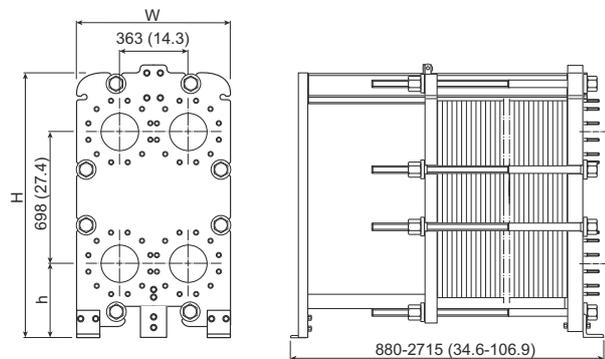
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General remarks for technical information

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Dimensional drawing

Measurements mm (inches)



Frame type	H	W	h
FM	1405 (55.3")	740 (29.1")	360 (14.2")
FG	1405 (55.3")	800 (31.5")	360 (14.2")
FS	1435 (56.5")	800 (31.5")	390 (15.4")

The number of tightening bolts may vary depending on pressure rating.

Technical data

Plates	Type	Free channel, mm (inches)
M	Single plate	4.0 (0.16)

Materials

Heat transfer plates	316/316L, 254 C276, C2000 Ni, Ti, TiPd
Field gaskets	NBR, EPDM, FKM, HeatSeal Carbon steel
Flange connections	Metal lined: stainless steel, Alloy C-276, titanium Rubber lined: NBR, EPDM
Frame and pressure plate	Carbon steel, epoxy painted

Other materials may be available on request.

Operational data

Frame type	Max. design pressure barg (psig)	Max. design temperature °C (°F)
FM, PED	10.0 (145)	210 (410)
FM, pvcALS	10.0 (145)	180 (356)
FG, pvcALS	16.0 (232)	180 (356)
FG, ASME	10.3 (150)	250 (482)
FG, PED	16.0 (232)	180 (356)
FS, ASME	31.7 (460)	250 (482)
FS, PED	30.0 (435)	210 (410)

Extended pressure and temperature rating may be available on request.

Flange connections

Frame type	Connection standard
FM, pvcALS	EN 1092-1 DN200 PN10
	ASME B16.5 Class 150 NPS 8
	JIS B2220 10K 200A
FM, PED	EN 1092-1 DN200 PN10
	ASME B16.5 Class 150 NPS 8
FG, pvcALS	EN 1092-1 DN200 PN10
	ASME B16.5 Class 150 NPS 8
	JIS B2220 10K 200A
FG, ASME	ASME B16.5 Class 150 NPS 8
	EN 1092-1 DN200 PN16
FG, PED	ASME B16.5 Class 150 NPS 8
	ASME B16.5 Class 300 NPS 8
FS, ASME	EN 1092-1 DN200 PN25
	EN 1092-1 DN200 PN40
FS, PED	ASME B16.5 Class 300 NPS 8

Standard EN1092-1 corresponds to GOST 12815-80 and GB/T9124.1.

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Alfa Laval TS35

Gasketed plate heat exchanger for a wide range of applications

Introduction

Alfa Laval Industrial line is a wide product range that is used in virtually all types of industry.

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Applications

- Biotech and Pharmaceutical
- Chemicals
- Energy and Utilities
- Food, Dairy and Beverages
- Home and Personal care
- HVAC and Refrigeration
- Machinery and Manufacturing
- Marine and Transportation
- Mining, Minerals and Pigments
- Pulp and Paper
- Semiconductor and Electronics
- Steel
- Water and Waste treatment

Benefits

- High energy efficiency – low operating cost
- Flexible configuration – heat transfer area can be modified
- Easy to install – compact design
- High serviceability – easy to open for inspection and cleaning and easy to clean by CIP
- Access to Alfa Laval's global service network

Features

Every detail is carefully designed to ensure optimal performance, maximum uptime and easy maintenance. Selection of available features, depending on configuration some features may not be applicable:



- Five-point alignment
- Reinforced hanger
- T-bar roller
- CurveFlow™ distribution area
- Glued gasket
- PowerArc™ plate pattern divider



- ClipGrip™ gasket attachment
- Offset gasket groove
- OmegaPort™ noncircular port holes
- Leak chamber
- Bearing boxes
- Fixed bolt head
- Key hole bolt opening
- Lifting lug
- Lining
- Lock washer
- Swing feet
- Tightening bolt cover

Alfa Laval service offering

Our vision is to be your trusted partner for service, driving sustainable performance together. The Alfa Laval portfolio of service offers for Plate Heat Exchangers from start-up of your operations, through operation, process improvements, and replacement. Throughout the lifecycle, we bring you more than 140 years of technical experience and innovative service

solutions tailored to your business needs. Easily accessible through our people all over the world.

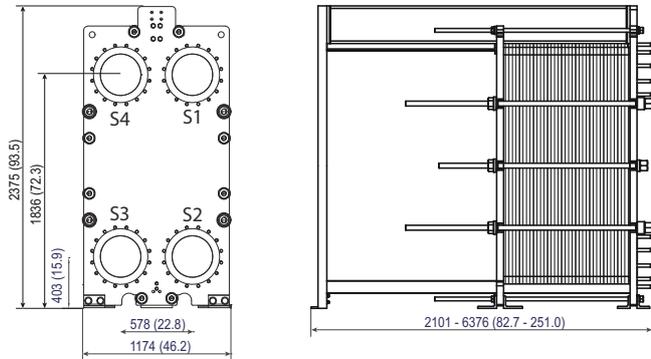
For information about our complete service offering and how to contact us, please visit www.alfalaval.com/service.

General remarks for technical information

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Dimensional drawing

Measurements mm (inches)



The number of tightening bolts may vary depending on pressure rating.

Technical data

Plates	Type	Free channel, mm (inches)
P	Single plate	3.4 (0.13)

Materials

	304/304L, 316/316L, 904L, 254 C276, C2000
Heat transfer plates	G30 Ti, TiPd Ti, TiPd
Field gaskets	NBR, EPDM, FKM, HeatSeal
Flange connections	Carbon steel Metal lined: stainless steel Alloy 316, titanium
Frame and pressure plate	Carbon steel, epoxy painted

Other materials may be available on request.

Operational data

Frame type	Max. design pressure barg (psig)	Max. design temperature °C (°F)
FM, ALS	10.3 (150)	180 (356)
FM, Marine ¹	15 (218)	150 (302)
FG, pvcALS	16.0 (232)	180 (356)
FG, ASME	10.3 (150)	250 (482)
FG, PED	16.0 (232)	180 (356)
FD, pvcALS	25.0 (362)	180 (356)
FD, ASME	20.7 (300)	250 (482)
FD, PED	25.0 (362)	180 (356)
FS, ASME	27.6 (400)	250 (482)

¹ Marine includes the standards: ABS, BV, CCS, ClassNK, DNV, KR, LR, and RINA.

Extended pressure and temperature rating may be available on request.

Flange connections

Frame type	Connection standard
FM, pvcALS	EN 1092-1 DN300 PN10
	EN 1092-1 DN350 PN10
	ASME B16.5 Class 150 NPS 12
	ASME B16.5 Class 150 NPS 14
	JIS B2220 10K 300A JIS B2220 10K 350A
FM, PED	EN 1092-1 DN300 PN10
	EN 1092-1 DN350 PN10
	ASME B16.5 Class 150 NPS 12
	ASME B16.5 Class 150 NPS 14
FM, Marine ¹	EN 1092-1 DN200 PN10
	ASME B16.5 Class 150 NPS 6
	JIS B2220 10K 300A JIS B2220 10K 350A
FG, pvcALS	EN 1092-1 DN300 PN16
	EN 1092-1 DN350 PN16
	ASME B16.5 Class 150 NPS 12
	ASME B16.5 Class 150 NPS 14
FG, Marine ²	JIS B2220 16K 300A JIS B2220 16K 350A
	ASME B16.5 Class 150 NPS 12
FG, ASME	ASME B16.5 Class 150 NPS 14
	EN 1092-1 DN300 PN16
FG, PED	EN 1092-1 DN350 PN16
	ASME B16.5 Class 150 NPS 12
	ASME B16.5 Class 150 NPS 14
FD, pvcALS	EN 1092-1 DN300 PN25
	EN 1092-1 DN350 PN25
	ASME B16.5 Class 300 NPS 12
	ASME B16.5 Class 300 NPS 14
FD, ASME	JIS B2220 20K 300A JIS B2220 20K 350A
	ASME B16.5 Class 300 NPS 12
FDc, ASME	ASME B16.5 Class 300 NPS 14
	EN 1092-1 DN300 PN25
FD, PED	EN 1092-1 DN350 PN25
	ASME B16.5 Class 300 NPS 12
	ASME B16.5 Class 300 NPS 14
FS, ASME	ASME B16.5 Class 400 NPS 12
	ASME B16.5 Class 400 NPS 14

¹ Marine includes the standards: ABS, BV, CCS, DNV, ClassNK, KR, LR and RINA.

² Marine includes the standards: ABS, BV, CCS, DNV, ClassNK, KR, LR, and RINA.

Standard EN1092-1 corresponds to GOST 12815-80 and GB/T9124.1.

Extended connections are available for ASME B16.5 Class 150, Class 300, Class 400 size NPS 14.

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Alfa Laval TS45

Gasketed plate heat exchanger for a wide range of applications

Introduction

Alfa Laval Industrial line is a wide product range that is used in virtually all types of industry.

Designed for high throughput, this model delivers excellent thermal performance. A large selection of plate and gasket types is available.

Applications

- Biotech and Pharmaceutical
- Chemicals
- Energy and Utilities
- Food, Dairy and Beverages
- Home and Personal care
- HVAC and Refrigeration
- Machinery and Manufacturing
- Marine and Transportation
- Mining, Minerals and Pigments
- Pulp and Paper
- Semiconductor and Electronics
- Water and Waste treatment

Benefits

- High energy efficiency – low operating cost
- Flexible configuration – heat transfer area can be modified
- Easy to install – compact design
- High serviceability – easy to open for inspection and cleaning and easy to clean by CIP
- Access to Alfa Laval's global service network

Features

Every detail is carefully designed to ensure optimal performance, maximum uptime and easy maintenance. Selection of available features, depending on configuration some features may not be applicable:



- Five-point alignment
- T-bar roller
- CurveFlow™ distribution area
- ClipGrip™ gasket attachment
- Offset gasket groove
- OmegaPort™ noncircular port holes
- Leak chamber
- FlexFlow™ plate design



- Bearing boxes
- Fixed bolt head
- Key hole bolt opening
- Lifting lug
- Lining
- Lock washer
- Tightening bolt cover

Alfa Laval 360° Service Portfolio

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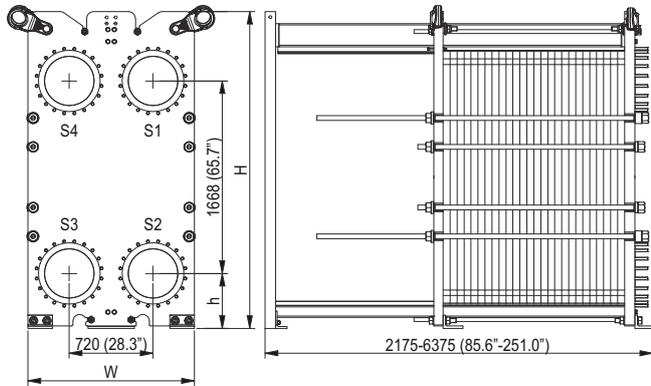
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General remarks for technical information

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Dimensional drawing

Measurements mm (inches)



Frame type	H	W	h
FD	2745 (108.1")	1430 (56.3")	476 (18.7")
FG	2745 (108.1")	1430 (56.3")	476 (18.7")
FM	2745 (108.1")	1430 (56.3")	476 (18.7")

Technical data

Plates	Type	Free channel, mm (inches)
M	Single plate	3.95 (0.155)
M	Single plate	N/A

Materials

Heat transfer plates	304, 316, 254, Ti
Field gaskets	NBR, EPDM, FKM, HeatSeal
Flange connections	Carbon steel Metal lined: stainless steel, Alloy 254, titanium
Frame and pressure plate	Carbon steel, epoxy painted

Other materials may be available on request.

Operational data

Frame type	Max. design pressure barg (psig)	Max. design temperature °C (°F)
FM, PED		
FM, pvcALS	11.0 (159)	200 (392)
FG, pvcALS	18.0 (261)	200 (392)
FG, ASME	10.4 (151)	250 (482)
FG, PED	18.5 (268)	200 (392)
FD, pvcALS	24.0 (348)	200 (392)
FD, ASME	21.4 (310)	250 (482)

Extended pressure and temperature rating may be available on request.

Flange connections

Frame type	Connection standard
FM, pvcALS	EN 1092-1 DN450 PN10
	EN 1092-1 DN500 PN10
	ASME B16.5 Class 150 NPS 18 JIS B2220 10K 450A
FG, pvcALS	EN 1092-1 DN450 PN16
	ASME B16.5 Class 150 NPS 18 JIS B2220 16K 450A
FG, ASME	ASME B16.5 Class 150 NPS 18
FG, PED	EN 1092-1 DN450 PN16
	ASME B16.5 Class 150 NPS 18
FD, pvcALS	EN 1092-1 DN450 PN25
	ASME B16.5 Class 150 NPS 18
	ASME B16.5 Class 300 NPS 18 JIS B2220 20K 450A
FD, ASME	ASME B16.5 Class 300 NPS 18

Standard EN1092-1 corresponds to GOST 12815-80 and GB/T9124.1.

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Alfa Laval TS50

Gasketed plate heat exchanger for a wide range of applications

Introduction

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Applications

- Biotech and Pharmaceutical
- Chemicals
- Energy and Utilities
- Food, Dairy and Beverages
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- HVAC and Refrigeration
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- Marine and Transportation
- Mining, Minerals and Pigments
- Pulp and Paper
- Semiconductor and Electronics
- Steel
- Water and Waste treatment

Benefits

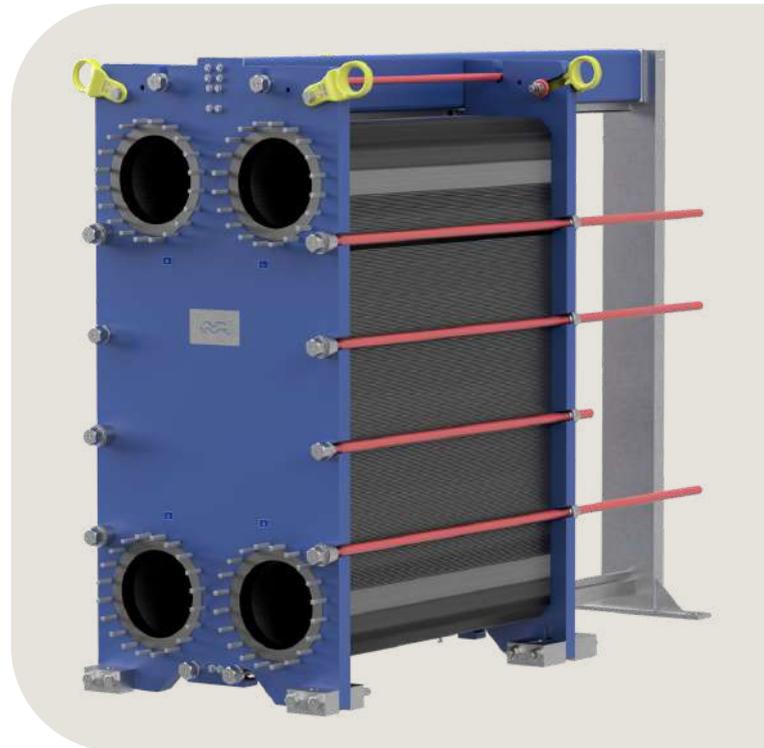
- High energy efficiency – low operating cost
- Flexible configuration – heat transfer area can be modified
- Easy to install – compact design
- High serviceability – easy to open for inspection and cleaning and easy to clean by CIP
- Access to Alfa Laval's global service network

Features

Every detail is carefully designed to ensure optimal performance, maximum uptime and easy maintenance. Selection of available features, depending on configuration some features may not be applicable:



- Five-point alignment
- Reinforced hanger
- Chocolate pattern distribution area
- T-bar roller
- Glued gasket
- Base-ad gasket
- Leak chamber



- Bearing boxes
- Fixed bolt head
- Key hole bolt opening
- Lifting lug
- Lining
- Lock washer
- Pressure plate roller
- Tightening bolt cover

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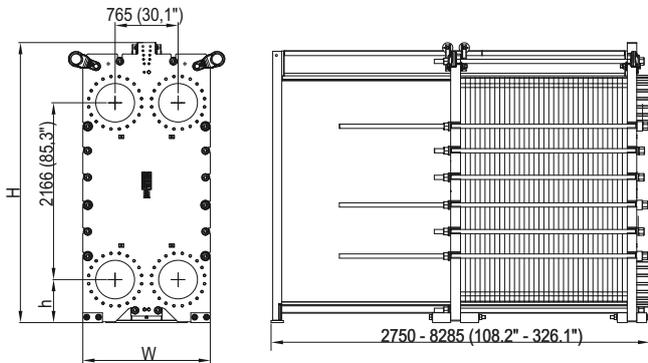
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General remarks for technical information

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Dimensional drawing

Measurements mm (inches)



Frame type	H	W	h
FM	3330 (131.1")	1550 (61.0")	467 (18.4")
FG	3530 (138.9")	1550 (61.0")	467 (18.4")
FD	3530 (138.9")	1550 (61.0")	467 (18.4")

The number of tightening bolts may vary depending on pressure rating.

Technical data

Plates	Type	Free channel, mm (inches)
M	Single plate	3.9 (0.15)

Materials

Heat transfer plates	316, Ti
Field gaskets	NBR, EPDM, HNBR
Flange connections	Carbon steel
	Metal lined: stainless steel, titanium
Frame and pressure plate	Carbon steel, epoxy painted

Other materials may be available on request.

Operational data

Frame type	Max. design pressure barg (psig)	Max. design temperature °C (°F)
FM, PED		
FM, pvcALS	11.0 (159)	200 (392)
FG, ASME	10.6 (153.7)	250 (482)
FG, PED	20.0 (290)	250 (482)
FD, ASME	21.4 (310)	250 (482)
FD, PED	31.3 (453.9)	250 (482)

Extended pressure and temperature rating may be available on request.

Flange connections

Frame type	Connection standard
FM, pvcALS	EN 1092-1 DN500 PN10
	ASME B16.5 Class 150 NPS 20
	JIS B2220 10K 500A
FG, ASME	HG/T 20615 Class 150
	ASME B16.5 Class 150 NPS 20
FG, PED	EN 1092-1 DN500 PN10
	EN 1092-1 DN500 PN16
	ASME B16.5 Class 150 NPS 20
FD, ASME	ASME B16.5 Class 150 NPS 20
	ASME B16.5 Class 300 NPS 20
FD, PED	EN 1092-1 DN500 PN25
	ASME B16.5 Class 300 NPS 20

Standard EN1092-1 corresponds to GOST 12815-80 and GB/T9124.1.

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