

# 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.

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
- · Reinforced hanger
- T-bar roller
- CurveFlow<sup>TM</sup> distribution area
- Glued gasket
- PowerArc<sup>TM</sup> plate pattern divider



- ClipGrip<sup>TM</sup> gasket attachment
- Offset gasket groove
- OmegaPort<sup>TM</sup> 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.

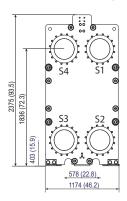
For information about our complete service offering and how to contact us, please visit www.alfalaval.com/service.

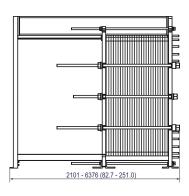
#### General remarks for technical information

- 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)





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

#### Technical data

| Plates                   | Туре         | Free channel, mm (inches)                        |
|--------------------------|--------------|--|
| Р                        | Single plate | 3.4 (0.13)                                       |
|                          |              |  |
| Materials                |              |  |
| Heat transfer plates     |              | 304/304L, 316/316L, 904L, 254                    |
|                          |              | C276, C2000                                      |
|                          |              | 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<br>temperature<br>°C (°F) |
|-------------------------|----------------------------------|---------------------------------------|
| FM, ALS                 | 10.3 (150)                       | 180 (356)                             |
| FM, Marine <sup>1</sup> | 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)                             |

 $<sup>^{\</sup>rm 1}$  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         |
|-------------------------|-----------------------------|
|                         | EN 1092-1 DN300 PN10        |
|                         | EN 1092-1 DN350 PN10        |
| FM, pvcALS              | ASME B16.5 Class 150 NPS 12 |
| rivi, pvcalo            | ASME B16.5 Class 150 NPS 14 |
|                         | JIS B2220 10K 300A          |
|                         | JIS B2220 10K 350A          |
|                         | EN 1092-1 DN300 PN10        |
| FM, PED                 | EN 1092-1 DN350 PN10        |
| rivi, FED               | ASME B16.5 Class 150 NPS 12 |
|                         | ASME B16.5 Class 150 NPS 14 |
|                         | EN 1092-1 DN200 PN10        |
| EM Marian 1             | ASME B16.5 Class 150 NPS 6  |
| FM, Marine <sup>1</sup> | JIS B2220 10K 300A          |
|                         | JIS B2220 10K 350A          |
|                         | EN 1092-1 DN300 PN16        |
|                         | EN 1092-1 DN350 PN16        |
| EC pyoAl C              | ASME B16.5 Class 150 NPS 12 |
| FG, pvcALS              | ASME B16.5 Class 150 NPS 14 |
|                         | JIS B2220 16K 300A          |
|                         | JIS B2220 16K 350A          |
| FG, Marine <sup>2</sup> |                             |
| EC ACME                 | ASME B16.5 Class 150 NPS 12 |
| FG, ASME                | ASME B16.5 Class 150 NPS 14 |
|                         | EN 1092-1 DN300 PN16        |
| EC DED                  | EN 1092-1 DN350 PN16        |
| FG, PED                 | ASME B16.5 Class 150 NPS 12 |
|                         | ASME B16.5 Class 150 NPS 14 |
|                         | EN 1092-1 DN300 PN25        |
|                         | EN 1092-1 DN350 PN25        |
| FD, pvcALS              | ASME B16.5 Class 300 NPS 12 |
| FD, PVCALS              | ASME B16.5 Class 300 NPS 14 |
|                         | JIS B2220 20K 300A          |
|                         | JIS B2220 20K 350A          |
| FD, ASME                | ASME B16.5 Class 300 NPS 12 |
| I D, ASIVIE             | ASME B16.5 Class 300 NPS 14 |
| FDc, ASME               |                             |
|                         | EN 1092-1 DN300 PN25        |
| FD, PED                 | EN 1092-1 DN350 PN25        |
| 10,10                   | ASME B16.5 Class 300 NPS 12 |
|                         | ASME B16.5 Class 300 NPS 14 |
| EC ACME                 | ASME B16.5 Class 400 NPS 12 |
| FS, ASME                | ASME B16.5 Class 400 NPS 14 |

 $<sup>^{\</sup>mbox{\scriptsize 1}}$  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.

 $<sup>^{\</sup>rm 2}$  Marine includes the standards: ABS, BV, CCS, DNV, ClassNK, KR, LR, and RINA.

