Cross-contamination safe double wall plates

M-Serie/BaseLine/FrontLine Gemini Plate Heat Exchangers

Application
General cooling/heating for pharmaceutical, brewery and beverage applications when a mix-proof design is required. To secure the cross-contamination safe feature, water or water-like fluids are recommended.

Working principles
Channels are formed between the plates and the corner ports are arranged so that the two media flow through alternate channels. A unique distribution area provides an efficient flow over the plate surface. The heat is transferred through the plate between the channels, and a complete counter-current flow is created for the highest possible efficiency. The chevron corrugation of the plates provides the passage between the plates, supports each plate against the adjacent one and enhances turbulence. The high turbulence resulting in efficient heat transfer and high surface shear forces to minimise fouling and the build-up of biofilm. The plates are reversible and have a parallel flow, which means that only one type of gasket is needed.

Gemini plates
The Gemini plates consist of two plates with a small air gap in between. The Gemini double wall plates will give a cross-contamination safe design, as a crack in a plate will not result in mixing of the two media.

Standard materials

Plates
Stainless steel AISI 316
Thickness for all Front Gemini plates 2 x 0.4 mm

Gaskets
High temperature Nitrile-FDA Clip-on design.

Frame
Frame and pressure plate in solid or cladded stainless steel. All wetted parts in acid proof stainless steel. Other surfaces in various grades of stainless steel. Movable nuts on tightening bolts in chromium plated brass.

Technical specifications

Plate material
Stainless steel AISI 316/316L. Surface finish Ra<0.3 µm.
(in the cold formed area Ra<0,8 µm)

Gasket material
EPDM (FDA compliance and USP Class VI), Nitrile (FDA compliance).

Connections
Clamp, DIN, ISO, SMS, B.S., flanges, others on request.

Mechanical design pressure/temperature
10 barg/160 °C (depending on gasket material).

Pressure Vessel Codes
M-Series
PED and ASME

BaseLine
PED

Options
a. 3.1 according to EN 10204
b. Electro-polishing
c. Pressure test certificate
d. Protection sheet
e. Adjustable feet

All options are not available on all models