# Specification Sheet

**Project: 202507-1352**

Date: 09/07/25

Contact:
Direct Line:

Plate & Frame Heat Exchanger

Version: 4.19.11 (15/2/4)

| **Item:** | **Unit: F 4206-75-1-NH** |
|---|---|

| Technical data per HX | | Hot side | | | Cold side | |
|---|---|---|---|---|---|---|
| **Fluid** | | **Water** | | | **Water** | |
| Mass flow rate | [kg/s] | 21.44 | | | [kg/s] | 35.69 |
| Volume flow rate | [m³/h] | 77.260 | | | [m³/h] | 128.425 |
| Inlet temperature | [°C] | 16.00 | | | [°C] | 7.00 |
| Outlet temperature | [°C] | 11.00 | | | [°C] | 10.00 |
| Operating pressure | [barg] | 2.00 | | | [barg] | 2.00 |
| **Physical properties** | | In | Out | | In | Out |
| Dynamic viscosity | [cP] | 1.085 | 1.225 | | 1.358 | 1.257 |
| Density | [kg/m³] | 998.5 | 999.9 | | 1001 | 1000. |
| Specific heat capacity | [kJ/kgK] | 4.194 | 4.200 | | 4.204 | 4.201 |
| Thermal conductivity | [W/mK] | 0.621 | 0.618 | | 0.616 | 0.618 |

**P.H.E characteristic values**

| | | | | | | |
|---|---|---|---|---|---|---|
| Heat duty | [kW] | | 450.00 | | | |
| Eff. heat transfer area | [m²] | | 15.24 | | | |
| Log./Effective temperature difference | [K] | | 4.93 / 4.93 | | | |
| Heat transfer coeff. req./act. | [W/m²K] | | 5985 / 6544 | | | |
| Fouling factor total | [m²K/W] | | 0.0000143 | | | |
| Overdesign | [%] | | 9.33 | | | |
| Pressure loss | [kPa] | 15.049 | | | [kPa] | 48.550 |
| Channel Velocity | [m/s] | 0.57 / 0.81 | | | [m/s] | 0.93 / 1.33 |
| Connection Velocity | [m/s] | 2.53 | | | [m/s] | 4.20 |
| No. of passes in series | | 1 | | | | 1 |
| No. of plates total | | | 75 | | | |
| Mix of Channeltype | | | 22*HL + 15*LL | | | |

**Construction**

| | | | | | | |
|---|---|---|---|---|---|---|
| Weight Dry/Wet | | [kg] | | approx. 430/472 | | |
| Volume | | [dm³] | 20.838 | | | 20.838 |
| Design pressure | | [barg] | | 10.0 | | |
| Max. working temperature | | [°C] | | 110.00 | | |
| Material | | DIN | | | | |
| | Plates | AISI 316L / 1.4404 ( 0.50 mm ) | | | | |
| | Gaskets | NBR HT | | | | |
| | Frame | S 355 J2+N (Pressure Plates), max. plates: 80, Extensibility 7% | | | | |
| | Painting | Standard, RAL 5002, <= 150°C, | | | | |
| Connection | Hot side | F1 => F4 :<br>Rubber Liner, DN 100,<br>NBR, for flange PN 16, EN 1092-1 | | | | |
| | Cold side | F3 => F2 :<br>Rubber Liner, DN 100,<br>NBR, for flange PN 16, EN 1092-1 | | | | |
| Design Code | | AD-2000 | | | | |
| Inspection Code | | PED 2014/68/EU | | | | |

**Remark**

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Version: 4.19.11 (15/2/4)

| **Item:** | **Unit: F 4206-75-1-NH** |
|---|---|

| Technical data per HX | | Hot side | | | Cold side | |
|---|---|---|---|---|---|---|
| **Fluid** | | **Water** | | | **Water** | |
| Mass flow rate | | [kg/s] | 21.55 | | [kg/s] | 21.44 |
| Volume flow rate | | [m³/h] | 78.431 | | [m³/h] | 77.260 |
| Inlet temperature | | [°C] | 45.00 | | [°C] | 11.00 |
| Outlet temperature | | [°C] | 40.00 | | [°C] | 16.00 |
| Operating pressure | | [barg] | 2.00 | | [barg] | 2.00 |
| **Physical properties** | | | In | Out | In | Out |
| Dynamic viscosity | | [cP] | 0.599 | 0.655 | 1.225 | 1.085 |
| Density | | [kg/m³] | 988.2 | 990.3 | 999.9 | 998.5 |
| Specific heat capacity | | [kJ/kgK] | 4.175 | 4.177 | 4.200 | 4.194 |
| Thermal conductivity | | [W/mK] | 0.638 | 0.635 | 0.618 | 0.621 |

**P.H.E characteristic values**

| | | | | | |
|---|---|---|---|---|---|
| Heat duty | [kW] | | 450.00 | | |
| Eff. heat transfer area | [m²] | | 15.24 | | |
| Log./Effective temperature difference | [K] | | 29.00 / 29.00 | | |
| Heat transfer coeff. req./act. | [W/m²K] | | 1018 / 5100 | | |
| Fouling factor total | [m²K/W] | | 0.0007862 | | |
| Overdesign | [%] | | 400.98 | | |
| Pressure loss | [kPa] | 14.398 | | [kPa] | 13.667 |
| Channel Velocity | [m/s] | 0.57 / 0.83 | | [m/s] | 0.56 / 0.80 |
| Connection Velocity | [m/s] | 2.56 | | [m/s] | 2.53 |
| No. of passes in series | | 1 | | | 1 |
| No. of plates total | | | 75 | | |
| Mix of Channeltype | | | 22*HL + 15*LL | | |

**Construction**

| | | | | | |
|---|---|---|---|---|---|
| Weight Dry/Wet | | [kg] | | approx. 430/471 | |
| Volume | | [dm³] | 20.838 | | 20.838 |
| Design pressure | | [barg] | | 10.0 | |
| Max. working temperature | | [°C] | | 110.00 | |
| Material | | DIN | | | |
| | Plates | AISI 316L / 1.4404 ( 0.50 mm ) | | | |
| | Gaskets | NBR HT | | | |
| | Frame | S 355 J2+N (Pressure Plates), max. plates: 80, Extensibility 7% | | | |
| | Painting | Standard, RAL 5002, <= 150°C, | | | |
| Connection | Hot side | F1 => F4 :<br>Rubber Liner, DN 100,<br>NBR, for flange PN 16, EN 1092-1 | | | |
| | Cold side | F3 => F2 :<br>Rubber Liner, DN 100,<br>NBR, for flange PN 16, EN 1092-1 | | | |
| Design Code | | AD-2000 | | | |
| Inspection Code | | PED 2014/68/EU | | | |

**Remark**

# Construction sheet

**Project:**

Date: 09/07/25

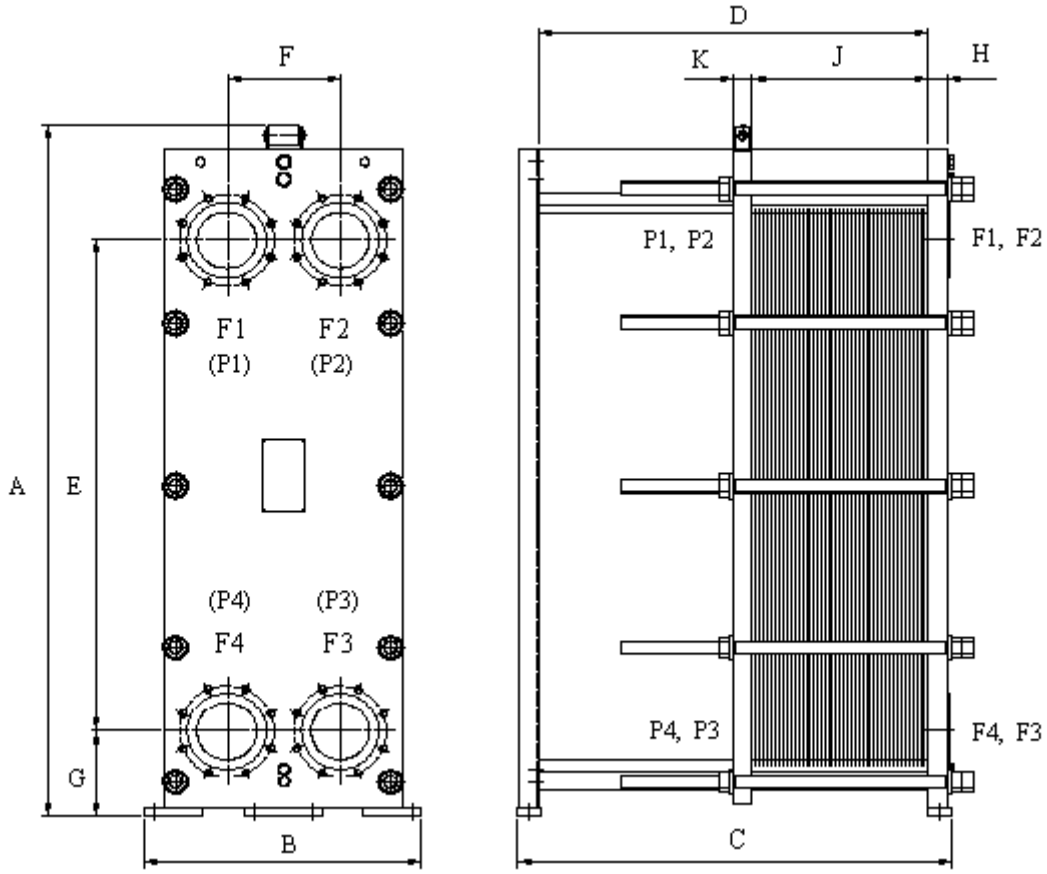
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| **Item:** | **Unit: F 4206-75-1-NH** |
|---|---|

**Dimensional sketch - not Certified**




| **Dimensions [appr. mm, inch], max. no. of plates 80** | | **:mm** | **:inch** |
|---|---|---|---|
| A: | Total height | :1157 | :45.6 |
| B: | Total width | :570 | :22.4 |
| C: | Total length | :616 | :24.3 |
| D: | Length of carrier bar | :495 | :19.5 |
| E: | Distance between connections, vertical | :719 | :28.3 |
| F: | Distance between connections,horizontal | :225 | :8.9 |
| G: | middlepoint of connection from the ground | :204 | :8.0 |
| H: | Thickness of frame plate | :30 | :1.2 |
| K: | Thickness of pressure plate | :25 | :1.0 |
| J: | Length of the plate-package | :232.5 | :9.2 |

**Connections**

Hot side: F1 => F4 :
Rubber Liner, DN 100,
NBR, for flange PN 16, EN 1092-1

Cold side: F3 => F2 :
Rubber Liner, DN 100,
NBR, for flange PN 16, EN 1092-1

Preliminary Dimensions