

## PLATE HEAT EXCHANGERS PAT

### DESCRIPTION

The ADCATherm PAT plate heat exchangers (gasketed and bolted), consist of a variable number of pressed heat transfer plates clamped together between a fixed and a movable pressure plate, all assembled in a metal frame.

### MAIN FEATURES

Compact and easy to install.  
Corrosion-resistant stainless steel plates.  
Highly efficient heat transfer.  
Flexible configuration, allowing increase of heat transfer area by adding extra plates.  
Low liquid content.  
Easily serviced due to gasketed and bolted design.

**OPTIONS:** Special designs and materials (titanium, special alloys, lined flanged connections, etc).  
Thermal insulation.  
Stainless steel frame.

**USE:** Steam, water, hot condensate and other fluids compatible with the construction.

**AVAILABLE MODELS:** PAT00 to PAT30.  
PATL00 to PATL50.  
PATR00 to PATR50.

**CONNECTIONS:** Female threaded ISO 228 or NPT.  
Flanged EN 1092-1 PN 10 or ASME B16.5 Class 150.  
Others on request.

**INSTALLATION:** Vertical installation. Horizontal installation on request.  
See IMI – Installation and maintenance instructions.



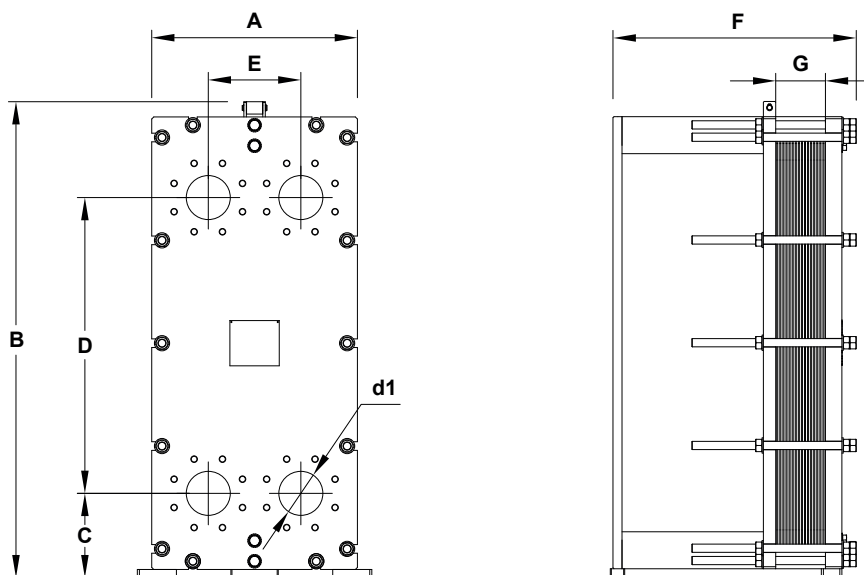
#### CE MARKING – GROUP 2 (PED – European Directive)

Non-standardized product designed acc. to requirements. Conformity assessment and CE marking are carried out case by case.

#### LIMITING CONDITIONS \*

|                               |                         |        |
|-------------------------------|-------------------------|--------|
| Maximum operating pressure    |                         | 10 bar |
| Maximum operating temperature | NBR seals               | 140 °C |
|                               | EPDM seals              | 150 °C |
|                               | TF-EPDM or TF-NBR seals | 150 °C |
|                               | EPDM-HT seals           | 180 °C |
|                               | FKM seals               | 180 °C |
| Minimum allowable temperature |                         | -20 °C |

\* Actual limiting conditions may vary depending on the requirements and final design.  
Design code: ASME VIII div. 1.



| DIMENSIONS (mm) |     |      |      |      |       |     |                  |          |                           |                             |
|-----------------|-----|------|------|------|-------|-----|------------------|----------|---------------------------|-----------------------------|
| MODEL           | A   | B    | C    | D    | d1    | E   | F<br>Min. - Max. | G *      | W **<br>(m <sup>2</sup> ) | W1 ***<br>(m <sup>2</sup> ) |
| PAT00           | 160 | 330  | 40   | 250  | 1"    | 60  | 120 - 200        | K x 2,45 | 0,864                     | 0,018                       |
| PAT01           | 300 | 835  | 200  | 535  | 2"    | 115 | 250 - 1600       | K x 3,20 | 23,93                     | 0,087                       |
| PAT10           | 400 | 1164 | 230  | 760  | 50    | 186 | 400 - 1300       | K x 2,70 | 53,8                      | 0,20                        |
| PAT30           | 578 | 1813 | 260  | 1316 | 100   | 280 | 700 - 2900       | K x 3,10 | 245                       | 0,49                        |
| PATL00          | 350 | 860  | 200  | 560  | 2"    | 160 | 200 - 400        | K x 4,10 | 6,12                      | 0,12                        |
| PATL10          | 440 | 1102 | 230  | 706  | 100   | 222 | 400 - 1300       | K x 4,50 | 28                        | 0,20                        |
| PATL30          | 620 | 1548 | 278  | 1023 | 150   | 300 | 700 - 3300       | K x 5,20 | 143,10                    | 0,45                        |
| PATL50          | 810 | 1936 | 320  | 1345 | 200   | 400 | 700 - 3300       | K x 5,20 | 332                       | 0,83                        |
| PATR00          | 220 | 440  | 68,5 | 308  | 11/4" | 102 | 200 - 300        | K x 3,20 | 2,19                      | 0,043                       |
| PATR10          | 460 | 1212 | 230  | 804  | 100   | 230 | 400 - 1800       | K x 3,20 | 96,9                      | 0,255                       |
| PATR30          | 630 | 1824 | 280  | 1302 | 150   | 309 | 700 - 2400       | K x 3,60 | 254,2                     | 0,62                        |
| PATR50          | 800 | 2222 | 320  | 1520 | 200   | 360 | 900 - 4100       | K x 4,00 | 512,87                    | 0,948                       |

\* Distance between pressure plates. K: number of heat transfer plates.

\*\* W: Maximum total surface area (m<sup>2</sup>).

\*\*\* W1: Surface area per plate (m<sup>2</sup>).

Remarks: Connections (d1) are sized according to the process conditions. For certified values, please consult the manufacturer.  
Other sizes and designs can be supplied on request.

| MATERIALS                |                                                                                                                                  |
|--------------------------|----------------------------------------------------------------------------------------------------------------------------------|
| DESIGNATION              | MATERIAL                                                                                                                         |
| Heat transfer plate      | ASME SA240 316L; ASME SA240 304L; Titanium ASME SB265 Gr. 1; Titanium ASME SB265 Gr. 11; Nickel ASME SB162; Hastelloy ASME SB575 |
| Frame and pressure plate | ASME SA516 Gr.60 or S355J2-N; ASME SA240 316; ASME SA240 304;                                                                    |
| * Gasket                 | NBR; EPDM; EPDM-HT; FKM; TF-EPDM; TF-NBR                                                                                         |
| Connection               | AISI 304 / 1.4301; AISI 316 / 1.4401; NBR; EPDM; Titanium                                                                        |
| Tightening bolt and nut  | AISI 304 / 1.4301; ASTM A193 Gr. B7                                                                                              |

\* Available spare parts.