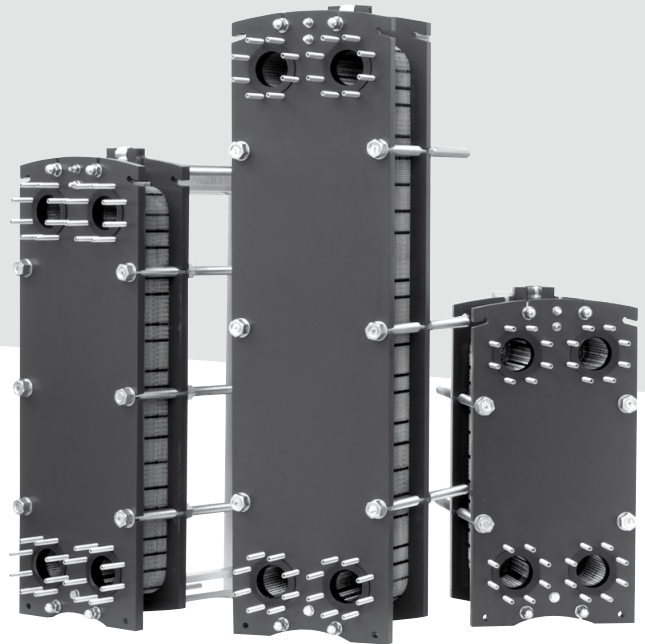


## ITEX

Gasketed plate  
heat exchanger



*Offers high  
heat  
transfer capacity  
Particularly suited  
to small temperature  
differences between the two fluids*



## USE

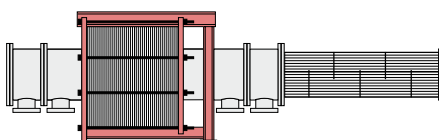
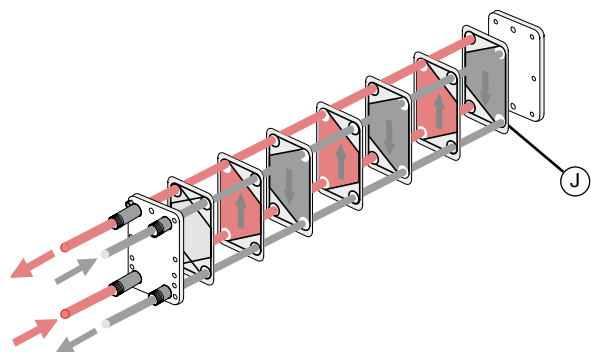
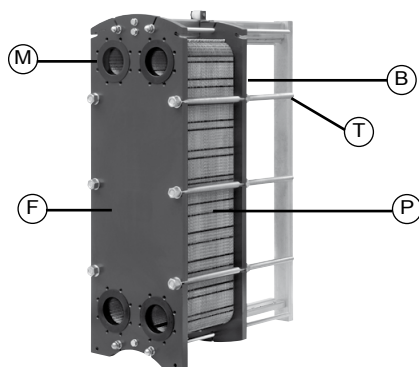
ITEX gasketed plate heat exchangers are particularly well suited to exchanges between two fluids, and therefore to a wide range of applications:

- Heat pump installations
- Water cooled chillers
- Heat recovery
- Heating and cooling sub-stations
- Domestic water heating
- Swimming pool heating
- Recovery on corrosive waste
- Geothermal energy recovery
- Industrial processes

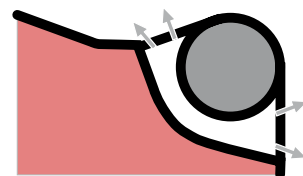
## DESCRIPTION

The unit is made of a set of stamped plates (**P**) and gaskets tightened between 2 plates, one fixed (**F**) and one movable (**B**), using compression bolts (**T**). The gaskets (**J**) create flow channels between the plates and prevent venting to the atmosphere. The fluid connection is provided by four pipes (**M**) either integrated in the plate(s) or separate.

**Note:** The 1 pass/1 pass selection is the only case in which the four pipes are on the same plate.



Compact footprint



Double gasket between fluids

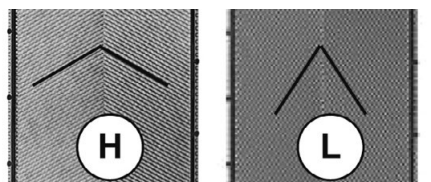
## HEATING SELECTION

Due to the range's extreme modularity, the selection has been optimised based on the thermal requirements and the allowable pressure drops for the fluids utilised. The importance of this factor must not be underestimated when selecting a heat exchanger, as it influences the choice and number of plates and thus the transfer area.

The transfer area is also influenced by other factors, such as the height to width ratio, and the angle and depth of the chevron patterns.

## ADVANTAGES

- Excellent transfer coefficient, giving a reduced surface area.
- Very low pinch point temperatures possible.
- High corrosion resistance.
- Compact footprint.
- Easy to install and maintain.
- Low-capacity circuits and fluid retention volume.
- Possibility of surface area extension.
- Unit can be cleaned in-place using a circulation system (NEP or CIP).
- Max. differential pressure = max. operating pressure.



Different patterns

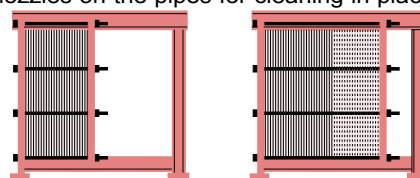
## PRECAUTIONS

Do not damage the exchanger gaskets:

- Prevent overheating, water hammer and overpressure, and limits on-off cycles.
- Do not use 1/4-turn valves.
- Use with steam between 0 and 3 bar (effective) (Except for PWB 46 & PWB 76).
- Provide a control system adapted to the requirements and which takes the low capacity of the circuits into account..

Keep the plates clean to guarantee thermal efficiency:

- Filter fluids containing suspended particles.
- Ensure the fluids are constantly circulating in the exchanger to prevent any build-up or scale.
- Install nozzles on the pipes for cleaning in place.



Plates can be added and removed easily

## RANGE

		PWB 2+			PWB 4+			PWB 8+			PWB 7			PWB 16			PWB 26			PWB 10			PWB 21			PWB 41				
Width	mm	145									245									320										
Height	mm	305			455			740			527			857			1202			584			848			1375				
Connections diameter		DN32 1"1/4									DN50 2"									DN65 2"1/2										
Corrugation angle		H/L									H/L									H/L										
Max. water flowrate		m³/h		19									63									80								
PS=> Max working pressure		bar		10	16	25	10	16	25	10	16	25	10	16	25	10	16	25	10	16	25	10	16	25	10	16	25			

		PWB 27			PWB 30			PWB 45			PWB 46			PWB 76			PWB 40			PWB 60			PWB 90			PWB 65			PWB 99		
Width	mm	320			425			427			427			500			500			500			678			668					
Height	mm	1071			877			1322			1325			1770			1055			1503			1951			1340			1825		
Connections diameter		DN80 3"			DN100 4"			DN100 4"			DN100 4"			DN150 6"			DN150 6"			DN150 6"			DN200 8"			DN200 8"					
Corrugation angle		H/L			H/L			H/L			H/L			H/L			H/L			H/L			H/L			H/L			H/L		
Max. water flowrate	m³/h	110			240			240			240			380			380			380			800			730					
PS=> Max working pressure	bar	10	16	25	10	16	25	10	16	25	10	16	25	10	16	25	10	16	10	16	10	16	10	16	10	16	10	16	10	16	

- Plate thickness : 0,4mm - 0,5mm - 0,6mm - 0,7mm (Except for PWB46 & PWB76) - availability according to model, material, pressure
- Plate material : 304 stainless steel - 316L stainless steel - 254 SMO (Except for PWB46, PWB76 & PWB99) - Titanium (Except for PWB46 & PWB76).
- Gasket material : NBR - EPDM Prx - FPM (Except for PWB46 & PWB76)
- Frame material : Carbon steel - Stainless steel (Except for PWB46 & PWB76)
- The ITEX range is built with plug-in gaskets and lateral circulation (parallel flow).

## FL INSULATION

Option DN 32 - DN50 - DN65

### Description

FL is the thermal insulation jacket designed to combine thermal insulation performance, compactness and versatility in heating and cooling applications of our plate heat exchangers up to size DN65 (2"1/2).

Made of closed cell expanded elastomer with and external PVC protection layer it's highly flexible and soft-touch.

Supplied as a four pieces kit, it can be easily and quickly assembled thanks to practical hook and loop closure system.

### Range

**DN 32:** PWB 2+, PWB 4+ and PWB 8+ models.

**DN 50:** PWB 7, PWB 16 and PWB 26 models

**DN 65:** PWB 10, PWB 21 models.

### Advantages

- Minimized energy losses and condensation, higher level of safety and comfort
- Easy and quick installation, reduced installation costs.
- Lightweight and highly flexible material: easy to adapt on site to any product's configuration and to fulfill different customer's needs.
- Reduced transport and stockage costs

### Dimensions

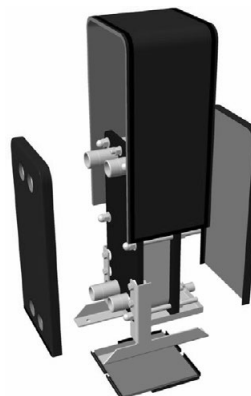
DN 32				
PWB 2+	L	H	W	h
Max. 29 plates	280	450	130	125
Max. 49 plates	380	450	130	125
Max. 75 plates	580	450	130	125
PWB 4+	L	H	W	h
Max. 29 plates	280	595	130	125
Max. 49 plates	380	595	130	125
Max. 75 plates	580	595	130	125
PWB 8+	L	H	W	h
Max. 29 plates	280	865	130	125
Max. 49 plates	380	865	130	125
Max. 75 plates	580	865	130	125
Max. 101 plates	580	865	130	125

DN 65				
PWB 10	L	H	W	h
Max. 41 p.	490	900	233	251
Max. 71 p.	630	900	233	251
Max. 101 p.	770	900	233	251
Max. 151 p.	1000	900	233	251
PWB21	L	H	W	h
Max. 41 plates	490	1160	233	251
Max. 71 plates	630	1160	233	251
Max. 101 plates	770	1160	233	251
Max. 151 plates	1000	1160	233	251

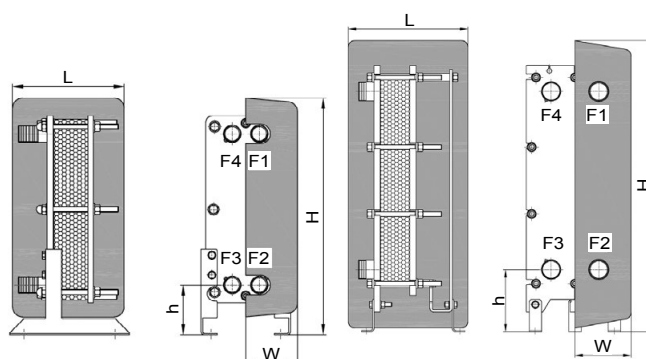
All dimensions are given in mm. The dimensional tolerance is compatible with the accuracy permitted by the thermoforming process.

### Technical specifications

- Operating temperature limits: -10°C / + 110°C
- Thermal conductivity coefficient ( $\lambda$ -value):  $\leq 0,038 \text{ W/(m}\cdot\text{k)}$  at 40°C (EN12667).
- Insulating material is Black closed-cell flexible elastomeric foam (FEF).
- Fire reaction: B – s3, d0 (EN 13501-1).



DN 50				
PWB 7	L	H	W	h
Max. 41 plates	472	858	185	250
Max. 71 plates	612	858	185	250
Max. 101 plates	752	858	185	250
Max. 151 plates	982	858	185	250
PWB 16	L	H	W	h
Max. 41 plates	472	1188	185	250
Max. 71 plates	612	1188	185	250
Max. 101 plates	752	1188	185	250
Max. 151 plates	982	1188	185	250
Max. 251 plates	1442	1188	185	250
PWB 26	L	H	W	h
Max. 41 plates	472	1533	185	250
Max. 71 plates	612	1533	185	250
Max. 101 plates	752	1533	185	250
Max. 151 plates	982	1533	185	250
Max. 251 plates	1442	1533	185	250



## PANEL INSULATION

Option DN 65 - DN 80 - DN 100 - DN 150 - DN 200

### ■ Description

This insulation is specially designed for the HVAC applications performed by our jointed plate heat exchangers.

It has a modular, self-supporting structure created from insulating panels (45 mm thick) anchored together using hook fasteners and coupled so as to minimise thermal bridges.

The distinctive sandwich structure of the insulating panels, obtained by combining polyurethane foam with sheet aluminium, offers the assembly a high degree of thermal insulation, good structural rigidity and a usable surface finish. Provided as a kit, it is quick and easy to assemble with no special tools needed.

### ■ Advantages

- The exchanger is completely contained within the insulation: this not only minimises condensation and heat loss, but also provides a high level of safety and comfort to operators working around the exchanger.
- Quick and easy access to the heat exchanger for inspection.
- Low installation costs.

### ■ Technical specifications

- External finish of the panels: smooth sheet aluminium, pre-painted in RAL 2306 (0.5 mm thick).
- Insulating material: rigid polyurethane foam with a high percentage of closed cells (more than 95 %) and a density of 48 kg/m<sup>3</sup>.
- Initial thermal conductivity ( $\lambda$ ) of the insulating material: 0.024 W/m°C (value measured at an average temperature of 10 °C as per ISO standard 8302).
- Operating temperature range: -10 ° / +130 °C.
- Material fire rating: B – 2 s, d 0 (in accordance with UNI EN 13501-1 :2007).



## PANEL INSULATION

### ■ Dimensions

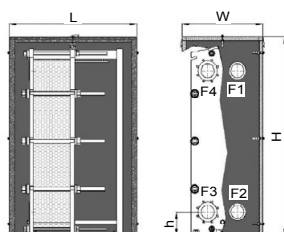
DN 65				
PWB41	L	H	W	h
Max. 41 p.	842	1637	554	171
Max. 71 p.	842	1637	554	171
Max. 101 p.	982	1637	554	171
Max. 151 p.	1212	1637	554	171
Max. 251 p.	1701	1637	554	171

DN 80				
PWB27	L	H	W	h
Max. 41 p.	842	1357	554	198
Max. 71 p.	842	1357	554	198
Max. 101 p.	982	1357	554	198
Max. 151 p.	1212	1357	554	198
Max. 251 p.	1701	1357	554	198

DN 100				
PWB30	L	H	W	h
Max. 101 plates	1074	1180	678	198
Max. 201 plates	1574	1180	678	198
Max. 301 plates	2074	1180	678	198
Max. 401 plates	2574	1180	678	198
PWB45 & PWB46	L	H	W	h
Max. 101 plates	1074	1625	678	198
Max. 201 plates	1574	1625	678	198
Max. 301 plates	2074	1625	678	198
Max. 401 plates	2574	1625	678	198
PWB76	L	H	W	h
Max. 101 plates	1074	2090	678	198
Max. 201 plates	1574	2090	678	198
Max. 301 plates	2074	2090	678	198
Max. 401 plates	2574	2090	678	198

DN 150				
PWB40	L	H	W	h
Max. 101 plates	1074	1433	757	256
Max. 201 plates	1574	1433	757	256
Max. 301 plates	2074	1433	757	256
Max. 401 plates	2574	1433	757	256
Max. 551 plates	3374	1433	757	256
PWB60	L	H	W	h
Max. 101 plates	1074	1881	757	256
Max. 201 plates	1574	1881	757	256
Max. 301 plates	2074	1881	757	256
Max. 401 plates	2574	1881	757	256
Max. 551 plates	3374	1881	757	256
PWB90	L	H	W	h
Max. 101 plates	1074	2374	757	256
Max. 201 plates	1574	2374	757	256
Max. 301 plates	2074	2374	757	256
Max. 401 plates	2574	2374	757	256
Max. 551 plates	3374	2374	757	256
Max. 701 plates	4204	2374	757	256

DN200				
PWB65	L	H	W	h
Max. 151 plates	1504	1764	957	285
Max. 251 plates	2104	1764	957	285
Max. 351 plates	2504	1764	957	285
Max. 551 plates	3404	1764	957	285
PWB99	L	H	W	h
Max. 151 plates	1504	2263	957	285
Max. 251 plates	2104	2263	957	285
Max. 351 plates	2504	2263	957	285
Max. 551 plates	3404	2263	957	285



All dimensions are given in mm. The dimensional tolerance is compatible with the accuracy permitted by the thermoforming process.

The dimensions of the hooks on the closure panels are not included. Add 30 mm to sides W and L, 15 mm to side H.

## CONDENSATE DRAIN PAN

Option for all sizes

### ■ Description

The recovery pan is designed to drain not just the water forming condensation on the exchanger, but also any fluid which could come from an accidental leak around the exchanger, or during opening for maintenance.

Its use is recommended in all applications which carry a risk of condensation and those which carry a risk of environmental pollution.

The pan is made from stainless steel and is designed to be installed underneath the exchanger.

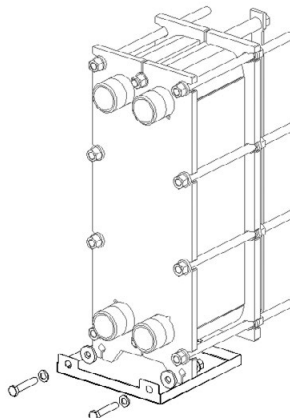
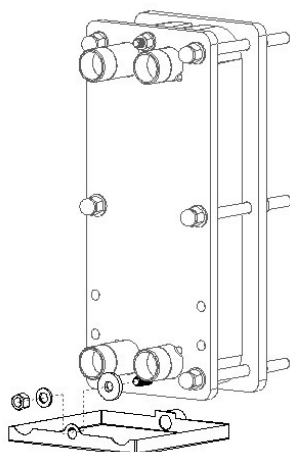
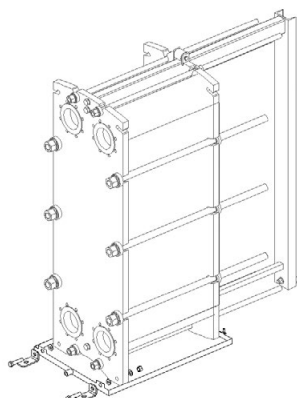
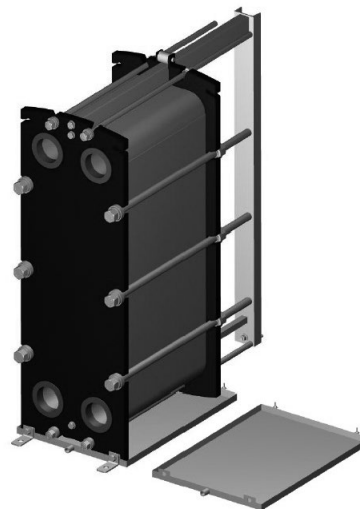
It is positioned and secured to the exchanger using a system of screws, nuts and washers.

### ■ Advantages

- Recovery and drainage of all traces of condensation which could form on the external surface of the exchanger.
- Recovery and drainage of any fluids which could accidentally escape from the exchanger: ensuring the safety of personnel and of the environment.

### ■ Technical specifications

- Stainless steel panels (AISI 304).
- $\frac{3}{4}$ " sleeve (internal tapping) for drainage of the collected fluids.





## DOUBLE-WALL PLATES

PWB4+ PWB8 PWB16

### ■ Description

Double-wall plates consist of two identical heat transfer plates embossed together and then joined by laser welding around the inlet and outlet portholes.

Such kind of coupling generates a thin air gap between the two plates that, in case of welding or plate's failure, prevents fluids intermixing and brings to an external leakage visually detectable. Suitable for all the heat transfer processes where cross-contamination is to avoid, the double-wall plates are the right solution for all those HVAC applications where a higher level of safety is recommendable and/or required by local rules.

### ■ Benefits

Minimize the risk of fluids intermixing.

Allow visual detection from the outside of any internal leak.

Offer all the advantages of Gasketed Plate Heat

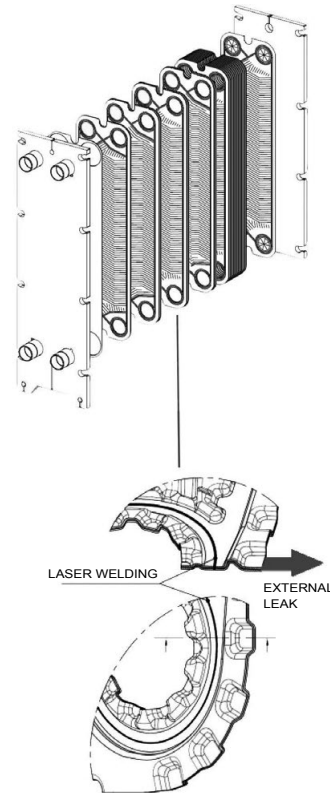
Exchanger technology: maximum heat transfer, compact design and easy maintenance.

### ■ Technical data

Material of plates: AISI 316L

Design standard: PED 2014/68/EU up to risk cat. IV

Pressure design / test (g): up to 16 / 26 bar



## PLATE PACK PROTECTION

ALL MODELS

### ■ Description

The Plate Pack Protection is a safeguard device specifically designed to protect personnel in case of unexpected leakage. Strongly recommended in case of hazardous services, it should be always used when temperatures are over 60°C also when handling uncritical media.

The Plate Pack Protection consists of two or more metal sheets shaped to cover the plate pack and to fit the plate heat exchangers. On smaller units the sheets cover the plate pack enveloping the frame plates. On larger units the sheets are fitted between the tightening bolts and the plate pack.

Supplied as a kit, it is easily and quickly assembled without the use of tools nor screws or bolts.

### ■ Benefits

Higher level of safety for those who work around the heat exchanger.

Protection of the plate pack in case of aggressive or polluted environment.

Quick and easy access to the heat exchanger for inspection.

Low installation costs.

### ■ Technical data

Material of construction: Stainless steel AISI 304 (thickness 1 mm).

### ■ Main dimensions

Each Plate Pack Protection is factory-tailor-made to fit to the specific plate heat exchanger.

