



# Plate heat exchanger

## Heating Insulation

### Standard design

The Alfa Laval heating insulation is delivered in sections (panels) in a separate box along with the heat exchanger. The system of panels ensures simple assembly and disassembly. Most insulation types are equipped with connecting spring locks in galvanized steel.

### Application

To insulate plate heat exchangers operating at temperatures up to 180 °C. The insulation saves energy and provides protection against the heat of the plate pack. It also assures a dry and comfortable working climate in the operating room. The graph below shows the effect (W) lost to the environment for un-insulated plate heat exchangers as function of the difference ( $\Delta t$ ) between the temperature inside the plate heat exchanger and the ambient temperature.

### Availability

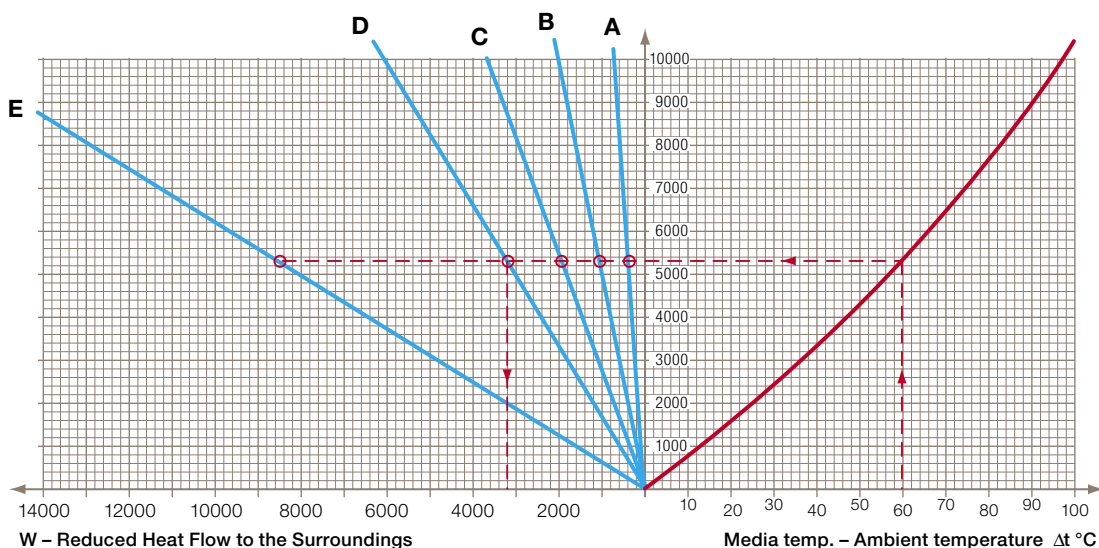
Heating insulations are available for most of the Alfa Laval plate heat exchangers. The table on the next page shows measurements for standard types.



- A = M3 60plts
- B = M6 100 plts
- C = M10 200 plts
- D = M15 150 plts
- E = MX25 300 plts

W = Heat released from different sizes of Alfa Laval plate heat exchangers.

$\Delta t$  = the difference between the average temperature inside the plate heat exchanger and the environment.



### Example: M15-BFG 150 plates

1\*M15-B AISI 316 0.50mm  
 Load=12927 LMTD=19.9 k=7045  
 Water T=110.0->70.0 1\*75 L S1->S2  
 Water T=90.2<-50.0 1\*75 L S4<-S3  
 Average temperature inside the PHE  $(110 + 70 + 50 + 90) / 4 = 80^{\circ}\text{C}$ .

Ambient temperature 20°C.  
 $\Delta t = 80 - 20 = 60^{\circ}\text{C}$   
 The heat released will then be 3200 W or 3.2 kW.  
 This is less than 0.3 promille of the total heat exchanged in the PHE.

## Dimensions

Measurements in mm. Insulations for other models of Alfa Laval plate heat exchangers on request

PHE type	A <sub>max</sub>	L <sub>max</sub>	W <sub>max</sub>	H <sub>max</sub>
M10B / M10M	0-130	620	600	1205
FM	13 -230	740	600	1205
FG	231-350	880	600	1205
FD ASME	351-490	1020	600	1205
	491-630	1160	600	1205

M10B / M10M	0-130	620	600	1095
FD PED	131-230	740	600	1095
	231-350	880	600	1095
	351-490	1020	600	1095
	491-630	1160	600	1095

M15B / M15M	0-250	710	820	2250
FM	251-500	960	820	2250
FG	501-1000	1460	820	2250
FD	1001-1500	1960	820	2250
M3	0-80	280	310	545
FG	81-205	400	310	545
	206-275	480	310	545

M6/M6M	0-80	300	450	1005
FG	8 -130	350	450	1005
FD	131-180	400	450	1005
	181-230	450	450	1005
	231-280	500	450	1005
	281-350	570	450	1005
	351-420	640	450	1005
	421-490	710	450	1005

MX25B/MX25M	0-500	1080	1070	3200
FG	501-750	1330	1070	3200
FD	751-1000	1580	1070	3200
	1001-1250	1830	1070	3200
	1251-1500	2080	1070	3200
	1501-1750	2330	1070	3200
	1751-2000	2580	1070	3200

MX25B/MX25M	0-500	990	1070	2700
FMS	501-750	1240	1070	2700
FGS	751-1000	1490	1070	2700
	1001-1250	1720	1070	2700
	1251-1500	1990	1070	2700

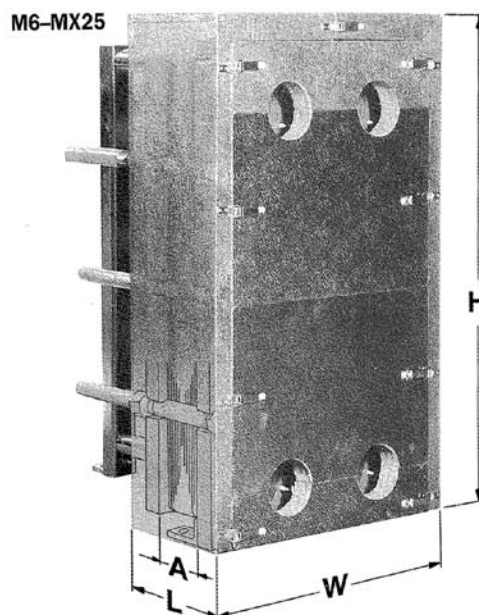
T20B/T20M	0-500	980	920	2400
FG	501-750	1230	920	2400
FS	751- 000	1480	920	2400
	1001-1250	1730	920	2400
	1251-1500	1980	920	2400
	1501-1750	2230	920	2400
	1751-2000	2480	920	2400

T5M	0-80	310	380	800
FG	81-130	480	380	800

TL10B	0-250	710	640	2100
FM	251-500	960	640	2100
FG	501-1000	1460	640	2100
FS	1001-1500	1960	640	2100

PHE type	A <sub>max</sub>	L <sub>max</sub>	W <sub>max</sub>	H <sub>max</sub>
TS20M	0-250	600	930	1600
FM	251-500	850	930	1600
FG	501-1000	350	930	1600
	1001-1200	1550	930	1600

TS6M	0 - 60	360	545	760
FG	61-160	460	545	760
	161 - 260	560	545	760
	261 - 400	700	545	760
	401 - 525	825	545	760



### Technical Specification

Item	All PHE types excl type M3	PHE type M3
	Alustucco	Alustucco
Plating	1 mm	1 mm
Insulation material	Mineral wool 65 mm	Mineral wool 40 mm
Panel fixation	Snap locks galvanized	Screws

### Particulars required for quotation

- A-measurement
- Tightening bolt length
- Type of connections
- Connection positions

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Alfa Laval reserves the right to change specifications without prior notification.

### How to contact Alfa Laval

Up-to-date Alfa Laval contact details for all countries are always available on our website at [www.alfalaval.com](http://www.alfalaval.com).

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