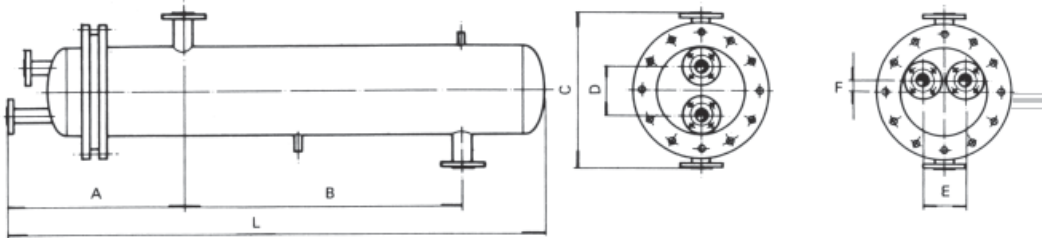


**Shell & Tube Heat Exchangers - Series FS14-17**

Serialised Units designed according to TEMA Code and in conformity with applicable Pressure Vessel Rules. These series are of U-Bundle floating type and bolted headers which allow for an easy plant maintenance. These series are ideal for heating or hot water generation with two phase fluids in a number of applications such as condensate recovery, hot water generation, steam flash recovery, tank heating, process heating, cooling of main and auxiliary lube circuits.



**Dimensions**

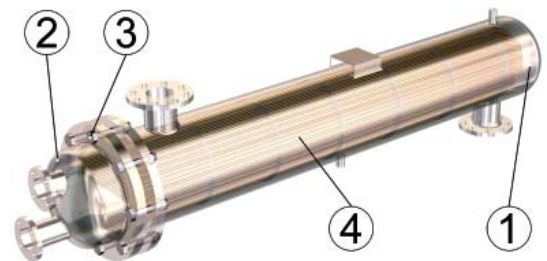


Model	L (mm)	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)	Connections		Weight
								Primary	Secondary	
FS-14	2.050	420	1.460	510	140	-	-	DN-65	DN-80	176
FS-15	2.050	420	1.460	510	140	-	-	DN-65	DN-80	192
FS-16	2.190	430	1.600	510	150	-	-	DN-80	DN-100	208
FS-17	2.400	435	1.800	510	150	-	-	DN-80	DN-100	210

Standard Design Pressure is PN 16 on the shell side and PN 6 on the tube side \* Pressure Testing to 1.5 times Design Pressure. Standard Flanges according to DIN 2502 PN 16 – welded to the shell. Other flange standards can be provided on request. Wall thickness refer to Design Pressure.

**Parts and Materials**

Part	Name	Material
1	Shell	Steel UNE / ISO 36011 – Galvanised finishing
2	Header	Steel UNE / ISO 36011 – Galvanised finishing
3	Fasteners	Steel B7
4	Tube Bundle	Seamless Steel tubes, mechanically expanded <b>Stainless Steel 304, 316, 316L / Copper</b>



**Performance Graphs**

The suitable Heat Exchanger is determined by the following factors: Power (Kcal/h), Inlet and outlet temperatures and Pressure Drop. The following table provides average performances of the standardised FS Series in typical application of heating and Hot Water Generation. It provides the performance in Kcal/h or Volume in L/hrs given the indicated parameters of the primary and secondary circuits.

**HEATING (70°C / 90°C and 80°C / 90°C) in kcal/h.**

Fluids	Water - Water								Steam - Water				
	Secondary Circuit 70° / 90°				Secondary Circuit 80° / 90°				70° / 90°		80° / 90°		
	180° 120°	170° 110°	150° 120°	130° 110°	120° 100°	180° 120°	150° 120°	130° 110°	120° 100°	1,5 (kg/cm2)	5 (kg/cm2)	1,5 (kg/cm2)	5 (kg/cm2)
FS-14	520.000	415.000	390.000	250.000	220.000	560.000	430.000	265.000	170.000	420.000	720.000	360.000	550.000
FS-15	580.600	520.000	485.000	310.000	272.000	632.000	490.000	328.000	220.000	520.000	860.000	470.000	630.000
FS-16	736.500	610.000	530.000	365.000	310.000	740.000	540.000	372.000	248.000	595.000	985.000	510.000	725.000
FS-17	860.000	680.000	640.000	430.000	395.000	880.000	660.000	435.000	296.000	670.000	1.200.000	560.000	810.000

**HOT WATER GENERATION in lts/h**

Models	10° - 60°			10° - 55°			10° - 50°			10° - 45°		
	90° / 80°	90° / 70°	85° / 70°	90° / 80°	90° / 70°	85° / 70°	90° / 80°	90° / 70°	85° / 70°	90° / 80°	90° / 70°	85° / 70°
FS-14	3.800	3.350	3.050	4.500	4.180	3.400	6.470	5.950	4.850	8.500	7.500	6.800
FS-15	4.500	4.000	3.580	5.800	5.100	4.100	7.930	7.200	5.700	11.700	9.280	8.100
FS-16	5.400	4.650	4.120	7.100	6.000	4.800	9.200	8.350	6.350	13.800	11.700	10.300
FS-17	6.200	5.400	4.730	8.050	6.800	5.400	11.700	9.400	7.700	16.200	13.200	11.860

Pressure Drop Graphs for primary and secondary circuits are available at our Technical Dept. Please consult your nearest PILAN distributor.

Other units to comply with different performances on request.