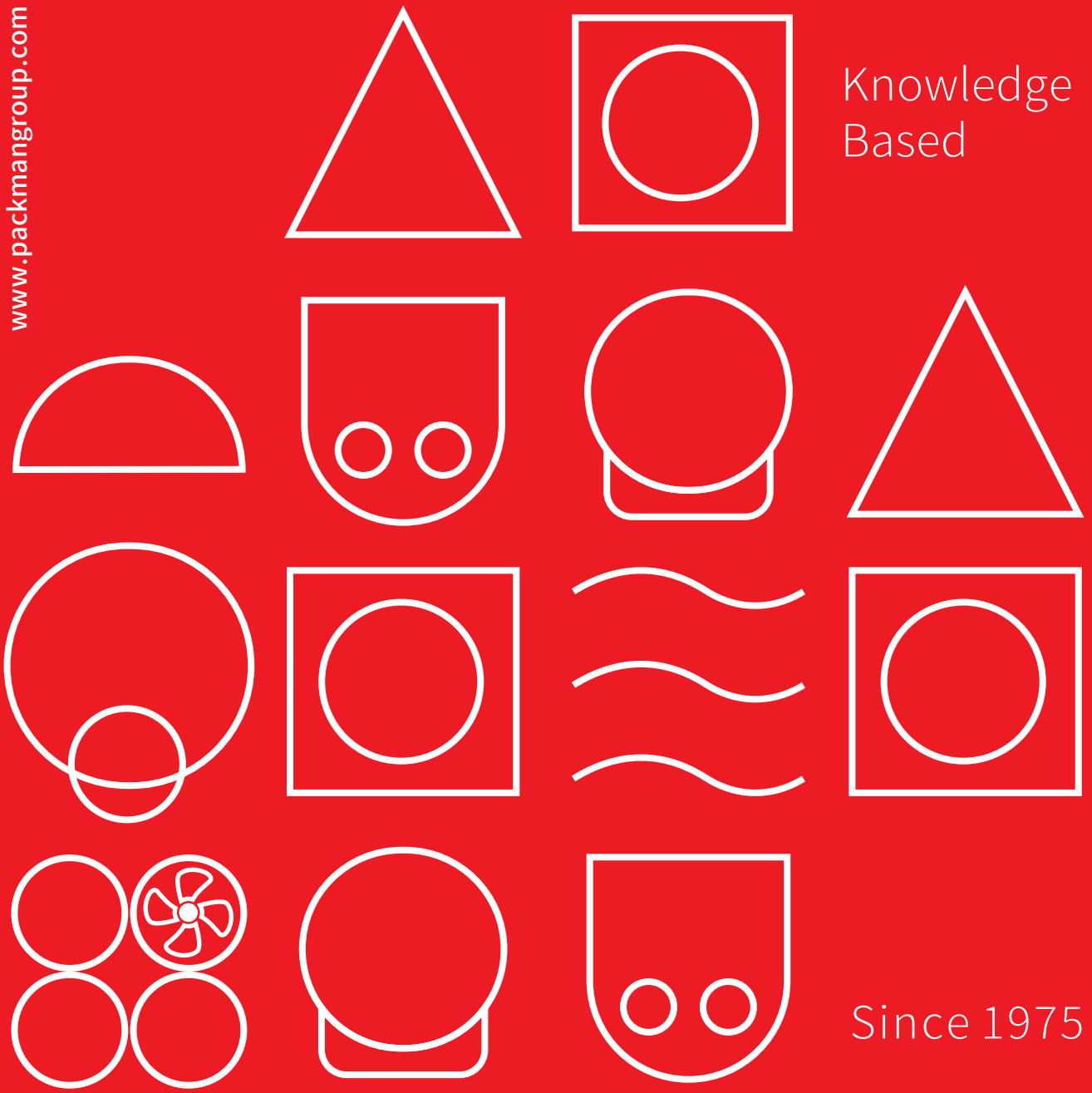


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Industrial Group

 Sample Cooler

powered by PACKMAN industrial group



Sample Cooler



Product Description

The Sample Cooler is a compact unit, specially designed as per ASME SEC VIII, Div-1 & ASME PTC-19.11 recommendations. To handle high pressure & high temperature applications. These coolers are designed for counter flow cooling to achieve very close temperature approach of the sample to coolant. These coolers are made of double helix coil which meets ASME D1192 requirements, fitted with a baffle for maximum efficiency. The shell is mounted through flanged connections and it can be removed without disturbing sample lines.

Sample coolers are used to take samples of water or steam from boilers at high temperature and pressure. The counter-current flow through the shell and coil condenses the steam and cools hot fluids efficiently to enable safe sampling. When hot pressurized liquids are being cooled the sample cooler prevents 'flashing-off' which can be dangerous and will result in an inaccurate sample. By utilizing corrosion resistant materials for the cooler, contamination is minimized, and service life maximized.

Boiler Water Applications

It is necessary to take regular samples of boiler water to test that a boiler is operating at the required TDS (total dissolved solids) level.

This should be done even if an automatic TDS control system is fitted since any automatic system should be checked at intervals.

When a sample of water is taken from a boiler its pressure reduces and flash steam is formed. If this flash steam were to escape to atmosphere without being condensed the resulting sample would show higher TDS levels than actually existed in the boiler water. To obtain accurate and safe samples it is therefore essential that sufficient cooling is carried out to fully condense any flash steam. The sample cooler reduces boiler water temperature to around 25 °C ready for immediate analysis.

PACKMAN Sample Cooler Tank Properties

PACKMAN's Sample Cooler Tanks are made of S.S316L or in the case of a customer's emphasis they can be made of 17MN4 (which is suitable for boiler construction) with a certain thickness and without changing the price.



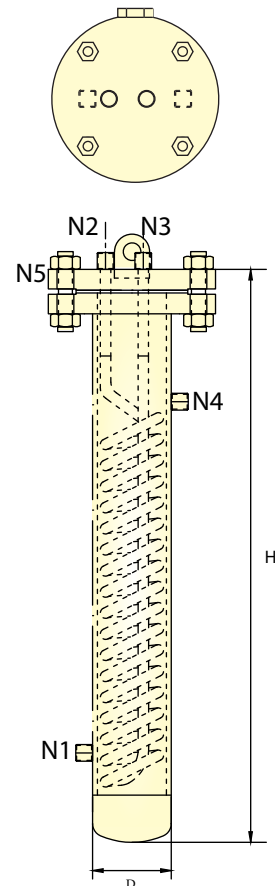
Manufacturing Standards

ASME Sec VIII, Div. 1 is used in the construction of sample cooler tanks.

Welding Procedure

Welding is done by using the Swedish ISBU submerged arc welding equipment. After constructing the tank and welding the lugs, the body of the tank is connected to the heads by welding with a submerged welding method. In addition, the head is welded internally and externally, which increases the lifetime and the strength of the heads. In the welding root pass, the TIG, argon or welding methods with the 6010 cellulose electrode is used. The EW7018 electrode is used in welding fill pass. The submerged method using EW7018 electrodes in the welding cover pass.

Model	Unit	Sample Cooler (Low Pressure)	Sample Cooler (High Pressure)
Technical Data			
Design Standard	-	ASME Section VIII	ASME Section VIII
Operating Pressure (Shell/ Tube)	barg	2/11	2/15
Operating Temperature (Shell/ Tube)	°C	25/185	25/200
Connection Size			
Cold Water Outlet (N1)	in	3/4	3/4
Steam Inlet (N2)	in	1/2	1/2
Condensate Outlet (N3)	in	1/2	1/2
Cold Water Inlet (N4)	in	3/4	3/4
Body Flange (N5)	in	3	4
Material			
Body	-	Carbon Steel or Stainless Steel	
Coil	-	copper	Stainless Steel
Vessel Dimentions			
Vessel Diameter (D)	mm	90	90
Total Height (H)	mm	650	650





PACKMAN GROUP

History

The Packman Company was founded in February 1975, and was soon afterwards registered in companies Registration Office. In early years the Packman construction and service branch focused on building installations. Different mega power plants were built by cooperating with Brown Boveri and Asseck companies in 1976.

The company started its official activities in construction of High-Pressure Vessels such as Hot-Water Boilers, Steam Boilers, Storage Tanks, Softeners and Heat Exchangers from 1984.

Packman Company is one of the first companies which supplied the high quality and standard hot water boilers to the customers.

Packman has exported its products to countries such as Uzbekistan, United Arab Emirates and other countries in the Middle East. It is one of the largest producers of hot-water and steam boilers in the Middle East.

Now we are proud to announce that the Packman industrial group has five major sub-brands that have product titles in all field of HVAC equipment and engineering services, and we do not know this success except with the help and support of our customers.

1. Construction Services Industry Association
2. Industry Association
3. Construction Companies' Syndicate
4. Technical Department Association
5. Mechanical Engineering Association
6. Engineering Standard Association

Departements:

Sales Deps:

- ∩ Power Plant & Petrochemical
- ∩ Industrial
- ∩ Hospitally Service
- ∩ Commercial & Residential
- ∩ Sport Complex & Pool

Technical Deps:

- ≡ Manufacturing R&D
- ≡ Innovation Center
- ≡ EPC Execute Unit
- ≡ Product Develop Unit
- ≡ Sales Engineering Dep.

Others:

- ≈ After Sales Service
- ≈ Project Control
- ≈ Financial Office
- ≈ Commercial Office
- ≈ Marketing Department





PACKMAN GROUP Brands



PACKMAN
Industrial Group

Designer & manufacturer of Condensing, Hot Water, Steam, Hot Oil & Waste Heat Boilers, Heat Exchangers, Autoclave Pressure & Storage Vessels & etc



GREENMAN
Green mindset, green future

Engineering & Designing Commercial Greenhouse Plant, CO2 Dosing System, Flue gas Condenser & Special HVAC Systems, Sustainable Agriculture & etc



ROMAN
Water solution

Designer & manufacturer Reverse Osmosis Plant & Package, Water Treatment, Softener & Filters and Chemical Dosing Systems & etc



RAADMAN
a look to the future

Designer & manufacturer of Industrial Mono & Dual Block Gas, LPG, Light & Heavy Oil Burners, Premixed & Postmixed Burners, Watertube burners, Process burners, Special application burners & Combustion Solutions & etc



CHILLMAN
Coolest hvac around

Designer & manufacturer of Air & Water Cooled Chillers, Air Handling Units, Fancoil, HVAC Equipment, Cold Storage Room & etc



1. Isfahan Factory



2. Vilashahr Factory



3. Parand Factory



4. Parand (2) Factory



5. Bonyad Factory



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