Sampling Systems

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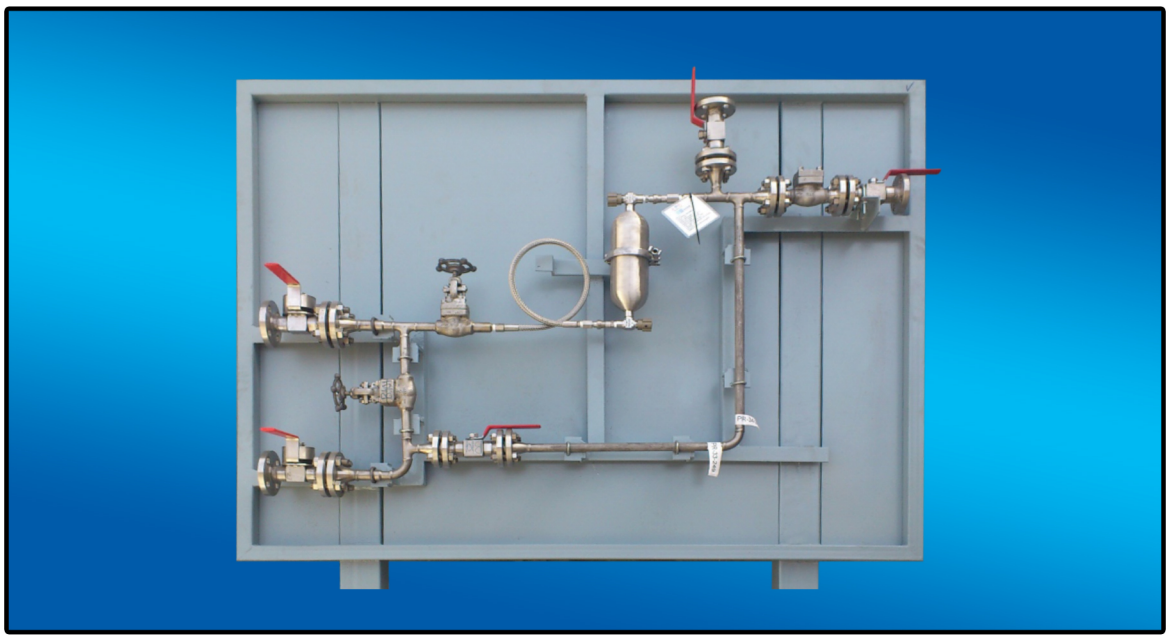
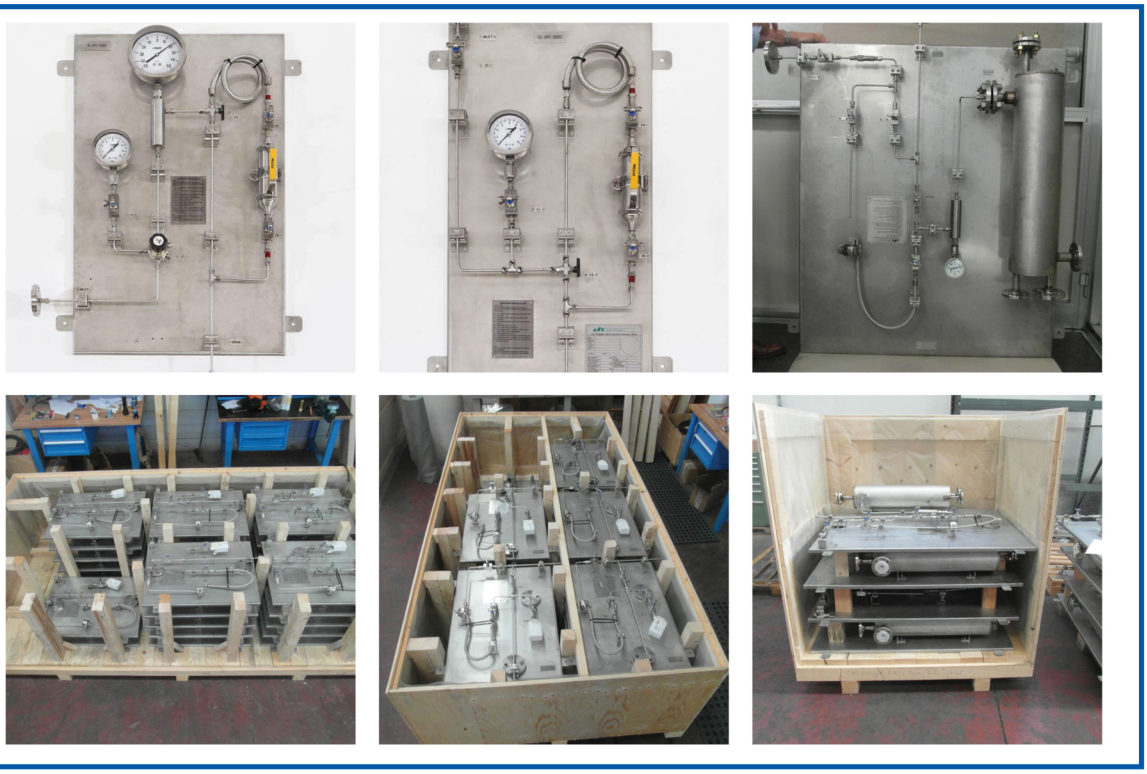


PAP sampling system, also known as sampler, is a kind of equipment used for representative sample collection from industrial processes. Due too the growing complexity of the industrial processes, the requirements for product analysis increase continuously, and the safety for sampling process is given more and more consideration. The simple and primitive sampling system has evolved into a safe and reliable closed-loop sampling system.



Unit1, No.102, Karimkhan Zand St., Tehran, Iran Tel-Fax: +9821-88832570
www.Petro-Artan.com info@Petro-Artan.com

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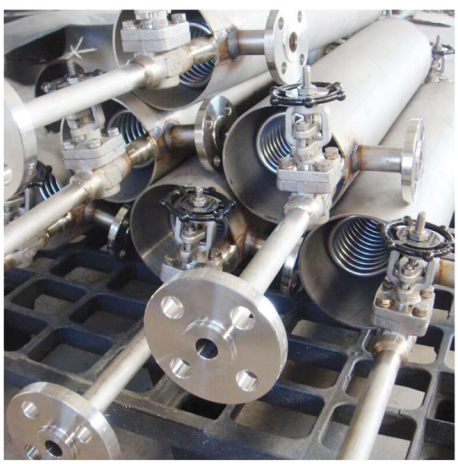
PAP Sample Coolers are small shell and tube heat exchangers that are used to cool the sample from a process stream to the required temperature conditions for safe and immediate analysis. It is one of the most critical components of a sampling system suitable for most applications in liquid, gas or steam process. The sample to be cooled flows through the tube side of the cooler, and the cooling fluid, usually water, flows through the shell side. The cooled sample then is taken to a laboratory for analysis or piped to in-line process instrumentation for continuous monitoring of properties such as conductivity, pH or other chemical constituents.

Sample coolers are not only used to cool samples but also to temper the sample to the appropriate temperature for the analysis being performed.

This is important as some analysis procedures can be affected by interference's directly or indirectly due to the fluid temperature. Allow the sample to run for a while before collection. This will ensure that a true sample is collected for analysis.



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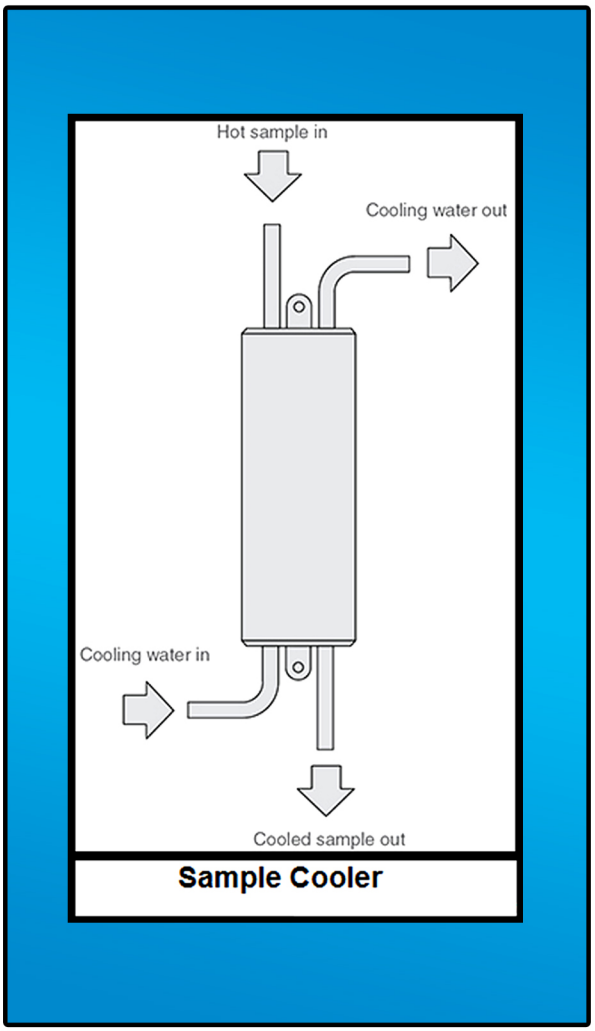
PAP Sample coolers are available in numerous sizes and configurations depending on the application that they will be used in.

Mainly sample cooler is constructed of a single, one-piece heat transfer tube, wound as a coil and housed in a cylindrical container known as shell. The process fluid stream is admitted to the coil from top. The cooling fluid is passed through the shell of the sample cooler in an opposite direction to the process fluid in order to ensure optimum efficiency. The cooling fluid absorbs the heat of process fluid, resulting in a drop in the process fluid temperature that is later collected as sample.

The shell is mounted through flanged connections and it can be removed without disturbing sample lines. The sample cooler should be installed as close as possible to the system take of point at a height to facilitate convenient operation. The sample cooler should be mounted in the vertical position.



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