



STEAM QM[®]-1
STEAM QUALITY MONITOR





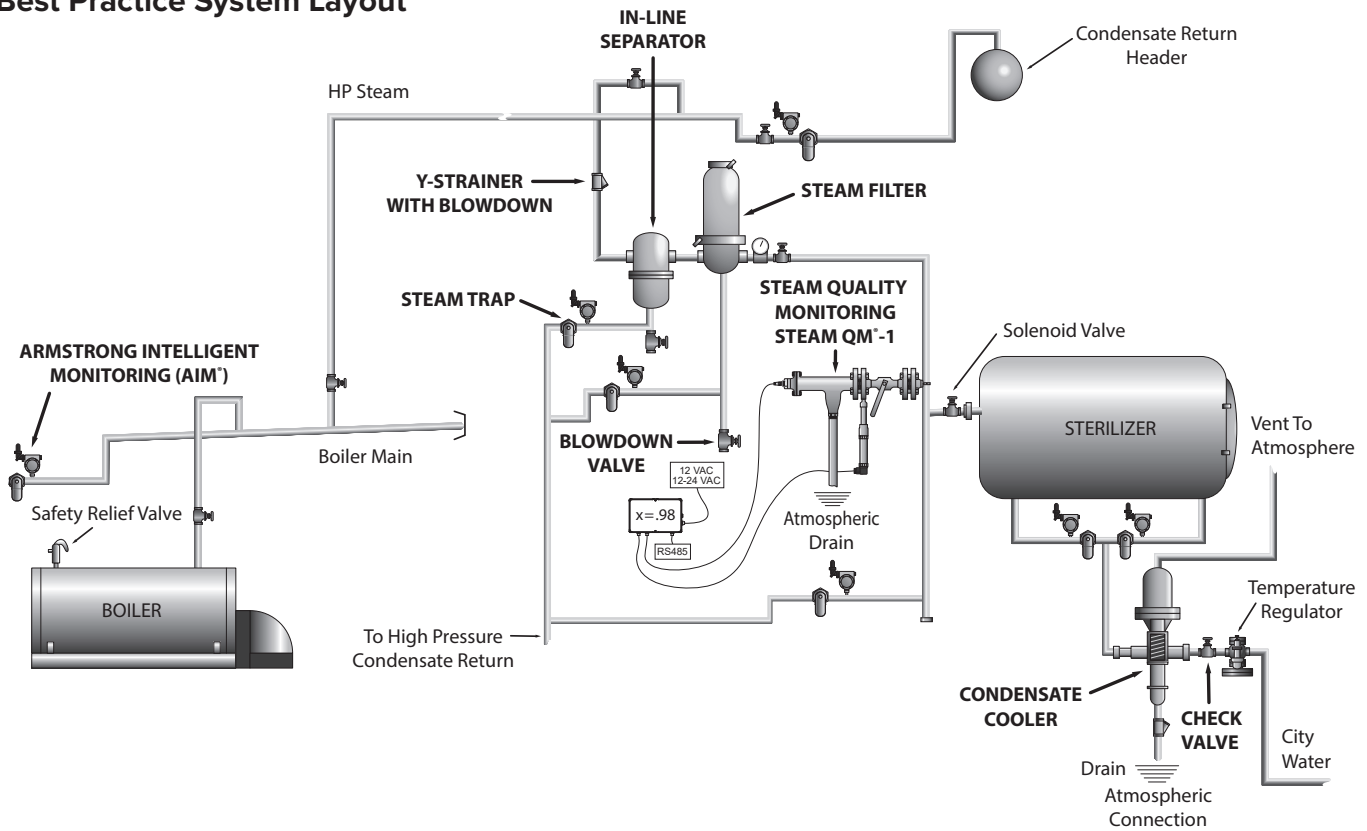
Armstrong® Steam QM[®]-1 – Steam Quality Monitor

Steam quality, or more specifically, steam dryness, is a critical factor to ensure proper sterilization of medical equipment. Most sterilizer manufacturers specify a minimum steam dryness fraction of 97% for steam entering an autoclave. With more than 3% condensate in the steam line the chances of a wet pack occurring increase. A wet pack is defined as any visible moisture identified on the pack after sterilization and drying. When a group of wet packs are identified in a cycle then it is referred to as a wet load.

According to the Association for the Advancement of Medical Instrumentation, medical instruments showing signs of moisture - or wet packs - should not be used in medical or surgical environments. Wet packs can act as a pathway for microorganisms, which can lead to hospital acquired infections.

The Steam QM[®]-1 from Armstrong International allows you to identify when steam quality drops below an acceptable dryness fraction; immediately alerting you to a potential contamination risk. When the Steam QM[®]-1 is applied according to the best practice piping layout illustrated below, you can feel confident the utility side of your sterilization process is operating as efficiently and effectively as possible.

Best Practice System Layout



Steam QM[®]-1 Features

- Steam dryness monitoring
- Simple installation
- Reliable/repeatable accuracy
- Safe alternative to the traditional manual method of measuring steam quality
- RS485 connection for data logging using regulation compliant device; results may be remotely monitored via Modbus
- All stainless steel construction

Why measure steam dryness?

- Reduce wet packs in sterilization process by ensuring that dry steam is entering the sterilization autoclave
- Avoid water hammer
- Help ensure upstream steam system equipment effectiveness
- Monitor boiler carry over
- Avoid erosion in valves, regulators, etc.
- Control the desuperheater (dryness fraction used instead of pressure and temperature)

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Steam QM[®]-1 – Steam Quality Monitor

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Manual Versus Automatic

Until now steam dryness fraction measurement has been a time-intensive, unreliable and potentially unsafe process. Steam QM[®]-1 is more reliable. It is also safer than manual testing methods. When you compare Steam QM[®]-1 to manual testing methods the choice is clear:

Manual Method	Automatic Method
Description	
<ul style="list-style-type: none"> A sample of the steam is condensed during a limited time frame. Temperature and mass measurements allow calculation of the steam dryness. 	<ul style="list-style-type: none"> Reducing steam pressure to atmosphere allows measurement of steam dryness.
Disadvantages	
<ul style="list-style-type: none"> Time Consuming: Typically manual steam quality measurement requires two people, and can take up to one hour per measurement point. This does not include additional time required to complete necessary reports. Trending: Unable to trend steam dryness over a period of time. Unsafe: There are inherent safety risks involved in sampling live steam and condensate in a water receiver. Unreliable: Measurement results depend on the skill of the technician conducting the test. 	Advantages <ul style="list-style-type: none"> Quick and Easy: Steam QM[®]-1 is simple to install. Trending: Continuous measurements provide trending data over time. Safe: Once QM[®]-1 is installed it is much safer than manual measurement methods. Reliable: Steam QM[®]-1 is both reliable and accurate.

Steam QM [®] -1 Specifications	
Steam Operating Pressure Range	45-465 psig (3-32 barg)
Voltage	12 VAC or 15 - 24 VDC

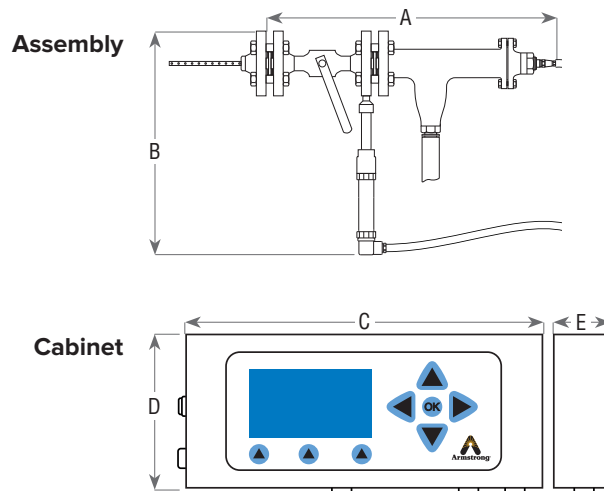
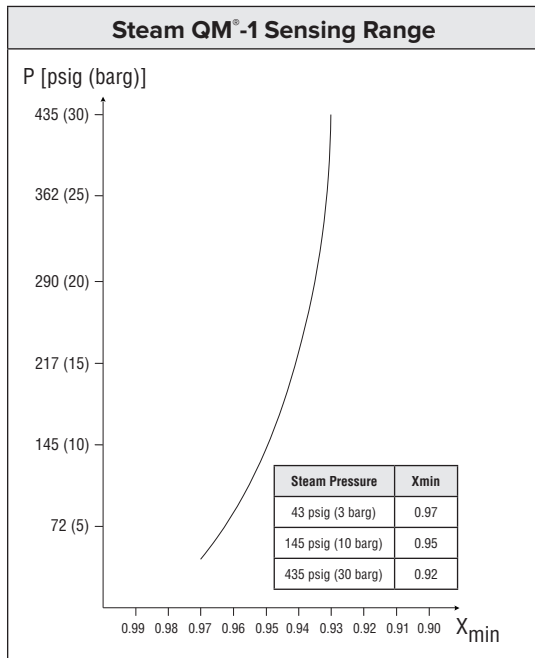
Steam QM [®] -1 Dimensions & Weight		
	in	mm
A – Assembly Width	20	500
B – Assembly Height	15	375
C – Cabinet Width	10	250
D – Cabinet Height	6.5	160
E – Cabinet Depth	2.5	60
Assembly Weight	20 lb	9 kg
Cabinet Weight	2 lb	0.9 kg

Steam QM[®]-1 Package Includes:

Insulation Cover & All Necessary Accessories

Optional Feature:

Data Logger



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