



Steam Quality Testing

Take the easy route to compliance

Assured and compliant results from the outset

To qualify plant/utility/clean/pure steam generators, steam distribution systems and steam supplies to autoclaves in accordance with cGMP (Orange Guide), HTM 01, HTM 2010: 1994, HTM 2031: 1997, EN 285: 2006, DIN 58950, AAMI ST79, ISO 14937:2000, ISPE Baseline Guide for Steam and Water and PDA Technical Report No. 1 - TR1.

Test your physical steam quality with assured and repeatable results in no time at all. The SQ1 does not require any validation – simply unpack and go.

You may be unfamiliar with steam quality testing or simply be tired of getting unreliable results from inferior and fragile equipment. The SQ1 will get you assured and repeatable results that you can have absolute confidence in and that will satisfy your Regulator/QA immediately!

KS & A are committed to providing you with the easiest routes available to compliant steam quality testing. We achieve this through robust equipment design, simple instructions and explanations, excellent training and a first class field service. We have supplied equipment, support and training/testing services to all the leading pharma/biotech companies in over 50 countries.

The equipment is not expensive and our expertise and experience is free, providing peace of mind, in an area unfamiliar to many. Our support is not restricted to the equipment we supply and we will provide advice on your own systems, in the event that non compliant results are found.

SQ1 STEAM TEST KIT

- non-condensable gas test
- dryness test
- superheat test
- pharma version
- unpack and go
- great support
- available ex-stock



Test Kit Contents

- non-condensable gas test condenser
- built in temperature gauge
- submersible cooling water pump & pipes
- burette & rubber filler
- 250 ml measuring cylinder
- insulated connection pipe
- three pitot tubes
- stainless steel vacuum flask
- connection tube and clips
- rubber bung with stainless steel dip tube
- superheat measurement tube with lagging
- detailed instruction manual and training materials
- calculations on CD
- robust carrying case - lightweight 40 x 50 x 23 cm & 10 kg

The standard test kit does not include an electronic balance, thermocouple recorder or temperature sensors – see below for details of the accessories we supply.

We supply the SQ1 in three versions:

- i. **SQ1 Pharma** – Supplied with ½” tri-clamp (tri-clover) connections. Typically used for welded clean/pure steam pipework systems that have tri-clamp (tri-clover) connections. **Ordering Reference: SQ1P Steam Quality Test Kit.**
- ii. **SQ1 Standard** – Supplied with ¼” BSP (or NPT for US) threaded connections. Typically used for either plant steam systems or steam systems having threaded steam pipework and fittings. **Ordering Reference: SQ1T Steam Quality Test Kit.**
- iii. **SQ1 F** – with specially made nominal ½” sanitary flanges for Fedegari sterilizers. **Ordering Reference: SQ1F Steam Quality Test Kit.**

[Contact us now for a personal quote and to find out how you can benefit](#)

Equipment specifications

Non-condensable gas test kit	0-20% N/C per 100ml condensed steam
Dryness test	Full range
Superheat test	Full range
4 mm steam supply tube	Max 14 BarG Steam
8mm Coolant supply tube	Max 3 BarG at 20 °C
Condensing unit (Steam side)	Max 5 BarG at 160 °C
Condensing unit (cooling side)	Max 4 BarG at 20 °C
Pitot Tubes	Max 6 BarG at 165 °C

SQ1 Accessories

Test Elbows

In order to test steam you will need to have the correct sample points fitted. For further information on test elbows, their dimensions and other installation data, click on this link [Installation/Test Point Information](#). We can also supply tri-clamp test elbows in a variety of sizes: ½" & ¾", 1" 1½", 2", 2½", 3" and 4" versions and orientations.

The quoted prices are for our **standard orientation elbows only**. Please contact us for quotes on other sizes, orientations or specials.



*Please note that the test elbow supplied for ½” applications uses ¾” pipe, which is necessary to fit ½” sample connections. This does not affect the performance of the tests or the results.

Electronic Balance

An electronic balance (0 - 3000g/discrimination 0.1g) is required for the dryness test, in addition to the test kit supplied. While most facilities have these available, the presence of a balance at the testing location increases productivity.

We supply a lightweight, rechargeable battery/mains, rugged precision compact balance specifically for this application.



Balance Thermal Printer

To complement the balance by providing a record of mass measurements. Supplied with power supply and communication cable.

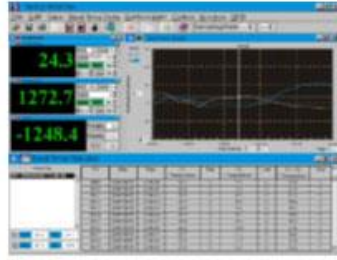


Handheld Temperature Meter/Logger and probes

While any data logger (Kaye or similar) may be used for the steam quality testing, we can also supply a dual input hand held high accuracy RTD temperature meter/logger with one Class A 3mm diameter 300 mm long stainless steel mineral insulated probe and one Class A 3mm diameter 100 mm long to conduct the dryness value and superheat tests. The meter offers a fast response and laboratory accuracy in a rugged hand held test tool. Has internal logging facility with Max/Min/Average calculations and Windows PC connectivity with USB cable and software included.



Keith Shuttleworth
&
Associates Limited



Optional Extra - Temperature Meter and Sensor Calibration

Calibration of the meter and both probes, as a system calibration, traceable to UKAS (www.ukas.org/).

Carrying Cases

A robust carrying case is available to store and transport the balance and temperature meter.



Keith Shuttleworth & Associates Ltd
Unit D5 Basepoint Business Centre, 110 Butterfield, Luton, LU2 8DL, United Kingdom
Telephone +44(0)1582 433723 Fax +44 (0) 2071173251
E-mail info@ksapharma.com Website ksapharma.com