KL-Serie

Technical Datasheet



Two test leaks of the KL series, on the left with quick coupling KL-SSK, on the right with silencer KL-SHD.

Short Description

Capillary test leak with a defined standard flow rate from 0.002 NmL/min to 1.5 NL/min. Test leaks simulate a leak when adjusting or monitoring leak test equipment and serve as reference standards for leak test instruments. They are used in place of the part under test or in parallel with a leak-tight part under test.

Several designations are common for this component in leak testing: **calibrated leak**, **reference leak**, **master leak** and **leak standard** mean the same as test leak – an element with a known leak rate, for verifying known leakage limits or setting new ones.

Identification

Product name	KL-Serie
Design	capillary leak with filter
Supply	made to order
Document status	12.11.2026

Flow Rate and Calibration

Standard flow rate	0.002 NmL/min to 1.5 NL/min
Standard conditions	referred to 1,000 mbar, 20 °C and 0 % RH or 1,013.25 mbar, 0 °C and 0 % RH; other conditions upon request
Manufacturing tolerance	±5 % or ±10 % of nominal value, customer-specific upon request
Calibration uncertainty (air)	0.5 to 3 % of reading (k=2)*
Calibration certificate	factory or DAkkS certificate

* under calibration conditions. – The test leak is manufactured and calibrated for exactly one operating point. Not all flow / pressure combinations are possible – we check the design before the order confirmation. Calibrations at further operating conditions are available upon request.

Operating Conditions

Inlet pressure	max. 40 bar
Operating temperature	0 to +80 °C
Modes of operation	pressure or vacuum operation

Media Compatibility

Media	air and gases that are compatible with the wetted materials
Housing	stainless steel (1.4305)
Capillary	borosilicate glass
Seals	FPM
Filter	sintered bronze

Mechanical Design

Assembly	capillary, double-sealed inside the housing; a filter matching the capillary diameter protects it from contamination
Sniffer port	for checking the seals; it rules out a bypass flow
Width across flats	17 mm
Overall length	104 mm
Length between sealing surfaces	90 mm
Weight	approx. 80 g

Process Connections

Connection	G1/8" external thread on both sides
Seal	chambered O-ring
Sealing surface	15.7 mm diameter
Screw-in depth	7 mm

Accessories

KEY	ATTACHMENT ACCESSORIES
KL-SSK	Stäubli quick coupling
KL-GSV	straight quick-connect fitting
KL-SHD	silencer, as dirt protection

KEY	STORAGE
KL-AE2	aluminium case for at most two test leaks

DESIGN AND ADVICE

For the design of your test leak please contact us at **+49 7157 5387-0** or **info@tetratec.de**.