

	HERO™ vibration controller incl. signal conditioners
	CS Q-LEAP™ software • pressure calibration of microphones using an acoustic coupler • pressure calibration of microphones using an acoustic calibrator or pistonphone • pressure calibration of sound level meters using an acoustic coupler • electrical calibration of sound level meters
	SQ-6 electro-acoustic coupler with power amplifier, incl. adapter set for most common microphone types
	References • Class 1 sound level calibrator with 94 dB and 114 dB at 1 000 Hz • ½" reference microphone WS2P with protective grid



Typical DUTs

- Measurement microphones with a diameter of ½" and ¼"
- Sound level meters / chains with a diameter of ½" and ¼"

* DUT = Device Under Test



Standards

- IEC 61094-5 for measurement microphones
- IEC 61672 for sound level meters / chains



Options (on request)

- Pistonphone as reference
- Determination and integration of the pressure / free field correction for sound level meters
- Extendable to low frequencies (below 20 Hz)



Key features



Calibration system for the frequency range 10 Hz ... 20 kHz (wider frequency range on request)



Traceable to PTB (German National Metrology Laboratory)



True pressure chamber calibration with an acoustic coupler (calculate freefield response by using pressure-freefield corrections factors)



Integrated sensor database, supporting TEDS



Integrated software for the generation of calibration certificates (print, PDF,...)
Easy data exchange with applications like ERP systems or measuring equipment databases

Technical Data

Sound field	Pressure chamber
Frequency range	10 Hz ... 20 kHz
Max. electrical power of sound source	2.4 W
Distortion factor (THD)	< 0.3 % at 94 dB < 0.5 % at 114 dB
Devices under test (DUTs)	½" and ¼" microphone capsules
Maximum sound pressure level ¹⁾	10 Hz ... 20 kHz 110 dB
	16 Hz ... 5 kHz 140 dB (148 dB ²⁾)
Dimensions (H × W × L)	60 mm × 60 mm × 42 mm (2.4 in × 2.4 in × 1.7 in)

All specifications are at room temperature unless otherwise specified.

1) Depending on DUT type and amplifier. Please also refer to the detailed performance plots in the SQ-6 datasheet.

2) On request; optional amplifier required

Preferred sound pressure level for calibration		(84, 94, 104, 114) dB, adjustable in the range of 64 dB ... 140 dB ²⁾	
Device Under Test (DUT)	Frequency range / Sound pressure level	Expanded uncertainty ¹⁾ Microphone calibration	Expanded uncertainty ¹⁾ Sound level meter calibration
Calibration method 1: comparison with reference standard microphone and acoustic coupler			
Measuring microphones with ½" diameter, sound level meters and measurement chains	10 Hz ... 5 000 Hz	0.20 dB	0.25 dB
	> 5 000 Hz ... 10 000 Hz	0.25 dB	0.30 dB
	> 10 000 Hz ... 20 000 Hz	0.45 dB	0.50 dB
Calibration method 2: absolute calibration with calibrator / pistonphone ³⁾			
Measuring microphones with ½" diameter, sound level meters and measurement chains	250 Hz / 124 dB ³⁾	0.20 dB ³⁾	0.25 dB ³⁾
	1 000 Hz / 94 dB	0.20 dB	0.25 dB
	1 000 Hz / 114 dB	0.20 dB	0.25 dB

1) Determined according to GUM (ISO Guide to the expression of uncertainty in measurement, 1995) with k = 2 (coverage factor)

2) 94 dB sound pressure level is the preferred value. The maximum sound pressure level depends on the frequency (see datasheet of coupler). At lower levels, the frequency band is limited, and noise-induced THD may increase.

3) Pistonphone working point at 250 Hz / 124 dB on request (see options)

