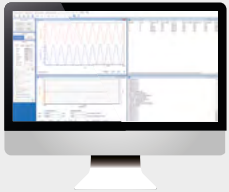



	HERO™ data acquisition device incl. signal conditioners
	CS Q-LEAP™ software <ul style="list-style-type: none"><li>shock calibration</li><li>more on demand</li></ul>
	Shock control unit for control via PC
	SE-221 high shock exciter with different Hopkinson titanium bars
	All-digital laser vibrometer incl. vibration isolation and positioning device for the laser head (IR-Laser required at amplitudes higher 100 000 g <sub>n</sub> )

Typical DUT

- PE accelerometer
- IEPE accelerometer
- PR accelerometer
- digital accelerometer with DTL-interface
- digital accelerometer with SPI, I2C and many other interfaces on request

Standards

- ISO 16063-13 Primary shock calibration using laser interferometry
- ISO 17025: General requirements for the competence of testing and calibration laboratories



Technical data

CS Q-LEAP™ P-SHOCK with SE-221






	High shock bar	Very high shock bar	Measurement uncertainty of shock-transfer-coefficient $S_{SH}^{2) 3)}$
Broad amplitude range	1000 g <sub>n</sub> ... 100 000 g <sub>n</sub> (9.8 km/s <sup>2</sup> ... 981 km/s <sup>2</sup> )	5000 g <sub>n</sub> ... 200 000 g <sub>n</sub> (49 km/s <sup>2</sup> ... 1961 km/s <sup>2</sup> )	
Pulse width <sup>1)</sup>	typical 23 μs ... 19 μs	typical 21 μs ... 17 μs	
DUT weight, max.	30 g (1.06 oz)	15 g (0.53 oz)	
Shock peak value	1 000 g <sub>n</sub> ... 20 000 g <sub>n</sub> (9.8 km/s <sup>2</sup> ... 196 km/s <sup>2</sup> )	5 000 g <sub>n</sub> ... 20 000 g <sub>n</sub> (49 km/s <sup>2</sup> ... 196 km/s <sup>2</sup> )	2.0 %
	20 000 g <sub>n</sub> ... 50 000 g <sub>n</sub> (196 km/s <sup>2</sup> ... 490 km/s <sup>2</sup> )	20 000 g <sub>n</sub> ... 50 000 g <sub>n</sub> (196 km/s <sup>2</sup> ... 490 km/s <sup>2</sup> )	3.0 %
	50 000 g <sub>n</sub> ... 100 000 g <sub>n</sub> (490 km/s <sup>2</sup> ... 981 km/s <sup>2</sup> )	50 000 g <sub>n</sub> ... 100 000 g <sub>n</sub> (490 km/s <sup>2</sup> ... 981 km/s <sup>2</sup> )	4.0 %
	–	100 000 g <sub>n</sub> ... 200 000 g <sub>n</sub> <sup>4)</sup> (981 km/s <sup>2</sup> ... 1961 km/s <sup>2</sup> )	8.0 %

- 1) The pulse duration depends on the damper material on the anvil and can change due to aging and wear. The values in the table are valid for new standard anvils delivered with the shock exciter. Wider shock pulses available with mitigator option.
- 2) Determined according to GUM (JCGM 100 „Evaluation of measurement data – Guide to the expression of uncertainty in measurement“) with k = 2 (coverage factor) for the best possible device under test (DUT). Other devices that are not assumed as ideal must be evaluated with individual contributions.
- 3) Shock-transfer-coefficient is calculated in the time domain by comparing of peak values
- 4) IR-Laser required at amplitudes higher 100 000 g<sub>n</sub>

Air supply	4 bar	air quality according to ISO 8573.1, Class 3
Dimensions Hopkinson bar	Length	approx. 3.5 m (137 in)
	Height	0.8 m ... 1.2 m (32 in ... 47 in)
	Width	approx. 1.0 m (39 in)



Key features

-  Shock amplitudes up to 200 000 g<sub>n</sub> (1961 km/s<sup>2</sup>)
-  HERO™ traceable to PTB (German National Metrology Laboratory)
-  wider impulses with mitigator option
-  Fly-Away operating mode
-  Integrated software for the generation of calibration certificates (print, PDF,...)  
Easy data exchange with applications like ERP systems or measuring equipment databases

