


	<p>HERO™ data acquisition device incl. signal conditioners</p>
	<p>CS Q-LEAP™ software</p> <ul style="list-style-type: none"> <li>• shock calibration</li> <li>• more on demand</li> </ul>
	<p>SE-221 shock exciter with different Hopkinson bars</p>
	<p>Shock control unit for control via PC</p>



## Typical DUT

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



## Standards

- ISO 16063 - 22: Shock calibration by comparison to a reference transducer
- ISO 17025: General requirements for the competence of testing and calibration laboratories



## Key features



Shock amplitudes up to 200 000  $g_n$  (1961 km/s<sup>2</sup>)



HERO™ traceable to PTB (German National Metrology Laboratory)



Calibration of shock accelerometers



Integrated sensor database



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



	High shock bar	Very high shock bar	Measurement uncertainty of shock-transfer-coefficient $S_{SH}^{2) 3)}$
<b>Broad amplitude range</b>	1000 $g_n$ ... 100 000 $g_n$ (9.8 km/s <sup>2</sup> ... 981 km/s <sup>2</sup> )	5 000 $g_n$ ... 200 000 $g_n$ (49 km/s <sup>2</sup> ... 1961 km/s <sup>2</sup> )	
<b>Pulse width<sup>1)</sup></b>	typical 23 $\mu s$ ... 19 $\mu s$	typical 21 $\mu s$ ... 17 $\mu s$	
<b>DUT weight, max.</b>	30 g (1.06 oz)	15 g (0.53 oz)	
<b>Shock peak value</b>	1 000 $g_n$ ... 20 000 $g_n$ (9.8 km/s <sup>2</sup> ... 196 km/s <sup>2</sup> )	5 000 $g_n$ ... 20 000 $g_n$ (49 km/s <sup>2</sup> ... 196 km/s <sup>2</sup> )	3.0 %
	20 000 $g_n$ ... 50 000 $g_n$ (196 km/s <sup>2</sup> ... 490 km/s <sup>2</sup> )	20 000 $g_n$ ... 50 000 $g_n$ (196 km/s <sup>2</sup> ... 490 km/s <sup>2</sup> )	4.0 %
	50 000 $g_n$ ... 100 000 $g_n$ (490 km/s <sup>2</sup> ... 981 km/s <sup>2</sup> )	50 000 $g_n$ ... 100 000 $g_n$ (490 km/s <sup>2</sup> ... 981 km/s <sup>2</sup> )	5.0 %
	–	100 000 $g_n$ ... 200 000 $g_n$ (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.
- 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

<b>Air supply</b>	4 bar	air quality according to ISO 8573.1, Class 3
<b>Dimensions Hopkinson bar</b>	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)

