

	<h2>HGS (INDIA) LIMITED</h2>	
<h3>SPECIFICATION SHEET - Energy sources Jack</h3>		
<p>Jacks are the lightest, most compact, and fastest energy sources in the world that ensure the operation of borehole sparker and electrodynamic sources used in geophysical surveys including cross-hole seismic testing (ASTM D4428/D4428M) and tomography (CST), high-resolution VSP, and reverse VSP or vertical seismoacoustic profiling (VSaP).</p> <p>Our convenient and intuitive Jack control panel allows flexibility in configuring the shooting mode. It is easy to program the cycle with the required number of shots and the period between them, the required energy and power consumption, as well as triggering from a seismic station or a synchronization system. Remote control unit JackPad duplicates the control panel and allows the seismic station operator to fully control the entire system. It is important to say that JackPad also provides additional safety of work.</p>		
<p>In Jack-500 and Jack-1200 models, pulse chargers provide a charge rate 500 J/s. More powerful versions are equipped with even faster chargers with a rate up to 3000 J/s and adjustable maximum power consumption. Thus, all energy sources Jack can work with compact portable 110 / 220 V generators (with power from 1 kW). Jack's design deploys a reliable thyristor key, that enables obtaining a really short high-voltage electric pulse.</p> <p>Compact size, light weight, shockproof and dustproof casing, intuitive user interface, remote control unit, as well as high charging rate make energy sources Jack the most modern and truly mobile devices compared to all the alternatives available on the market. Specialized energy sources MultiJack that support the latest shooting technologies, as well as a whole line of sources and other necessary equipment are available for marine high-resolution seismic surveys.</p>		



Main features:

- High power and charging rate
- Remote control unit
- Up to 3 times lighter and more compact than analogues
- Easy control and programming of cycles
- Power consumption control



Jack application areas:

- Borehole seismic surveys on land and in water areas using cross-hole seismic testing and tomography (CST), vertical seismic profiling (VSP), high-resolution VSP, reverse VSP, vertical seismoacoustic profiling (VSaP)
- Engineering surveys for the construction of highly sensitive facilities
- Search for karsts, fractured and deconsolidated zones, and mining geophysics
- Geotechnical monitoring of the soil foundation and determination of its load-bearing capacity, including in accordance with ASTM D4428 / D4428M standard
- Cracks location in concrete hydroelectric dams
- Mineral exploration



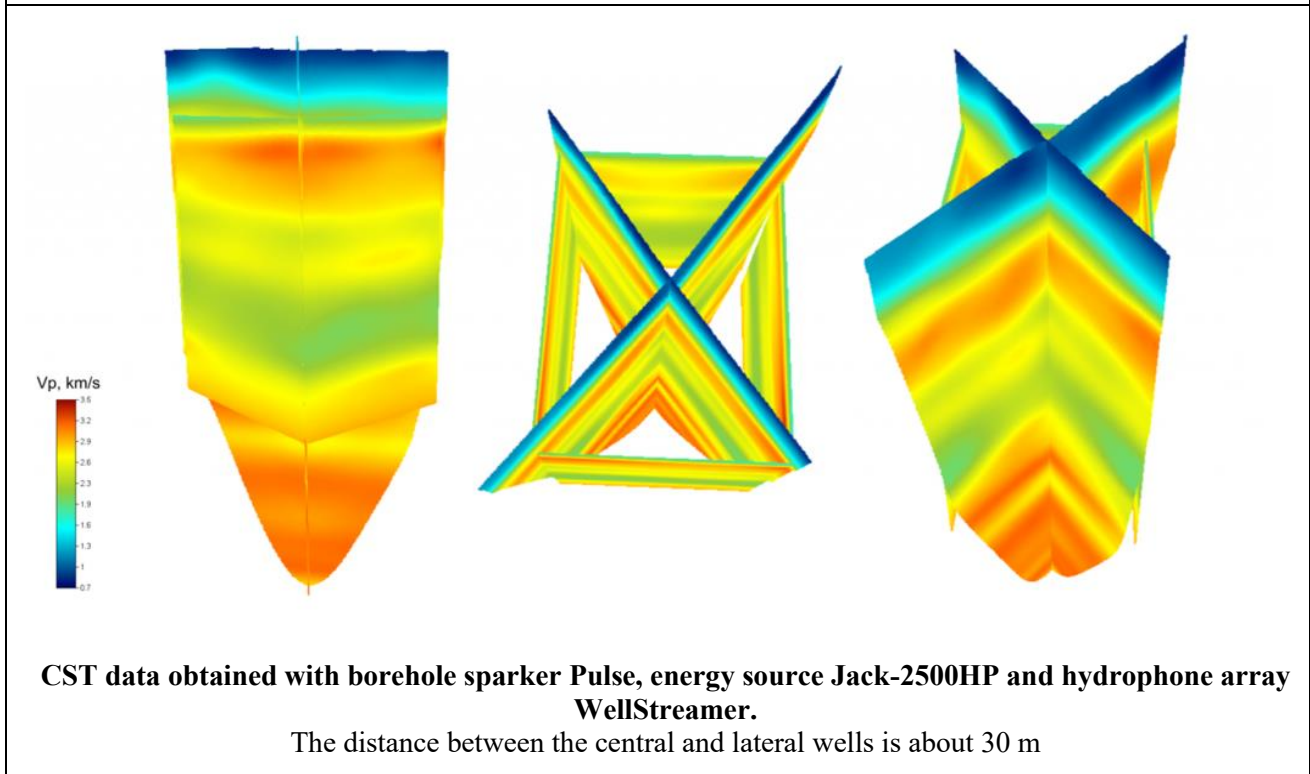
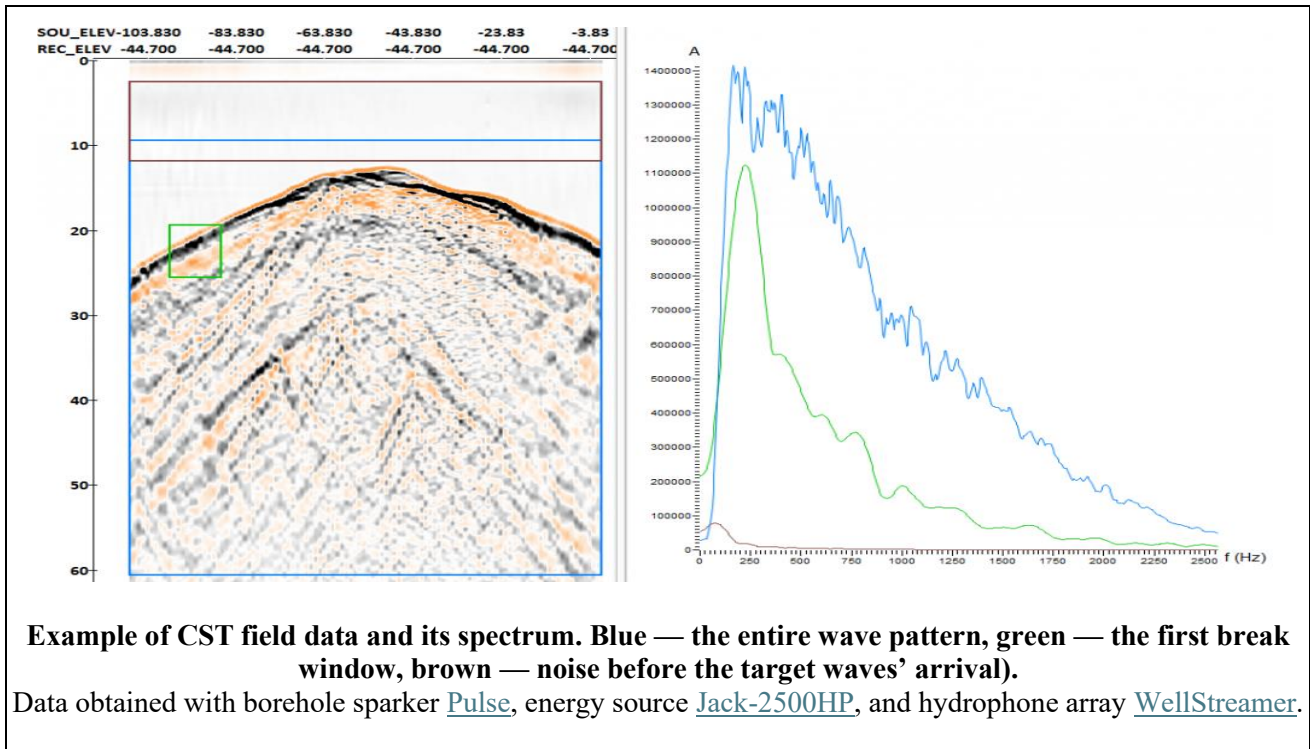
In addition to energy sources Jack the following items can be purchased:

- Remote control unit JackPad
- Borehole sources of pressure (P) waves (Pulse) or shear (S) waves of horizontal (SHock) and vertical (GeoSV) polarization
- High frequency seismic stations Sigma 4+ and DAQlink 5
- Borehole hydrophone array WellStreamer
- Single and multi-level 3C borehole probes with spring (GStreamer), pneumatic (GStreamer-P), and electromechanical (GStreamer-E) anchoring systems
- Winches and reels BGW / BGW light / RT-4S for cable lines
- Borehole inclinometers INCLIS
- Universal switchbox for source connection

Delivery set:

- Energy source Jack
- Synchronization connector (2 pcs.)
- Power cable
- Documentation kit





Specifications:	
Model	JackPad
Function	Remote Control of Jack
Maximum cable length	100 m
Overall dimensions	210 × 165 × 90 mm
Weight	1 kg

Model	Jack-500	Jack-1200	Jack-2500HP	Jack-5000HP	Jack-10000HP
Operating voltage	2-4 kV (standard) or 4-6 kV (option)				
Charger type	Pulse				
Trigger mode	External / periodic / programmable / manual				
Operating energy	50 – 500 J	300 – 1 200 J	300 – 2 500 J	300 – 5 000 J	300 – 10 000 J
Maximum charging rate up to 4 or 6 kV	500 J/s	500 J/s	1 500 J/s	3 000 J/s	3 000 J/s
Minimum period of operation at the minimum pulse energy	0.4 s	1.4 s	0.6 s	0.4 s	0.4 s
Minimum period of operation at the maximum pulse energy	1.2 s	2.7 s	1.8 s	1.9 s	3.6 s
Programmable number of pulses in a series	1 – 99 or infinite	1 – 99 or infinite	1 – 99 or infinite	1 – 99 or infinite	1 – 99 or infinite
Power requirements	100-127 or 220-240 V, 50/60 Hz				
Power consumption	1 kW	1 kW	1 / 2 / 3 kW	1 - 6 kW in 1 kW increments	1 - 6 kW in 1 kW increments
Overall dimensions	490 × 370 × 230 mm	540 × 410 × 270 mm	630 × 500 × 300 mm	580 x 590 x 690 mm	580 x 590 x 1000 mm
Weight	18 kg	22 kg	34 kg	99 kg	130 kg

Ordering information	
Item Description	HGS Part No.
Energy sources Jack	MK001475

Version 1.0



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