Modal Sledge Hammers

Models 2303, 2304 and 2305

- **Rugged Construction**
- **Four Interchangeable Faces**
- **IEPE (ISOTRON®)**
- **1, 3, and 12 Pound Heads**

Not actual size

ENDEVCO MODEL 2303 2304 2305

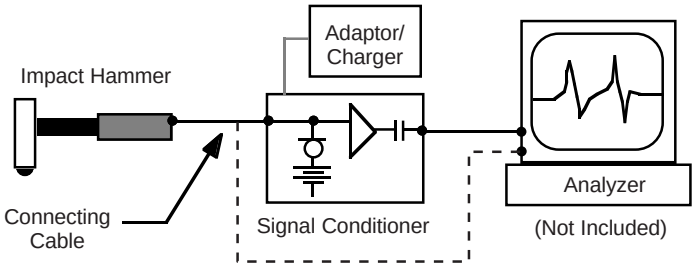
DESCRIPTION

Endevco's Instrumented sledge hammers provide a convenient and economical means of exciting large structures. The one and three pound hammers are designed for exciting such structures as machinery, shafts, large beams, pipelines, storage tanks and other large structures. The 12-pound hammer can be used on larger structures including bridges, buildings, decks and floors.

The Modal Hammer excites the structure with a constant force over a frequency range of interest. Four interchangeable tips are provided which determine the width of the input pulse and thus the bandwidth. Typical force spectra produced with different tips are shown on the right.

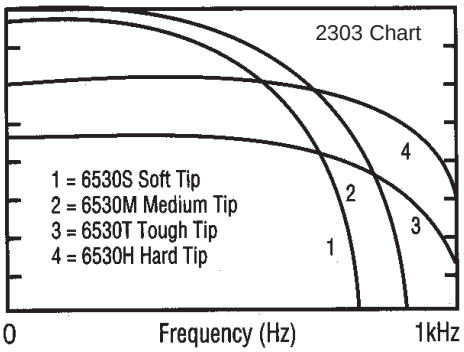
Each hammer is constructed with a hardwood handle and a cast iron head. The electrical cable is routed internally and terminates to a BNC connector on the end of the handle.

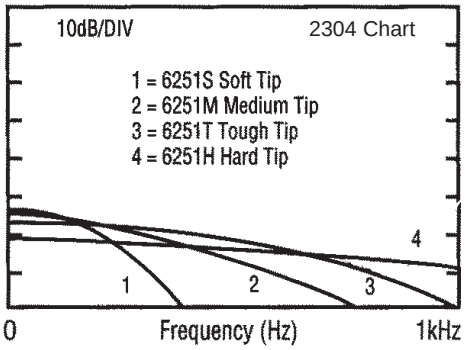
The hammer features an ISOTRON impedance converter providing an IEPE output which is compatible with most FFT analyzers and data acquisition systems. ENDEVCO's 4416B single channel signal conditioner or the model 133 three channel conditioner are recommended for use with this hammer series.. To excite smaller structures, see the 2301 and 2302 hammers.

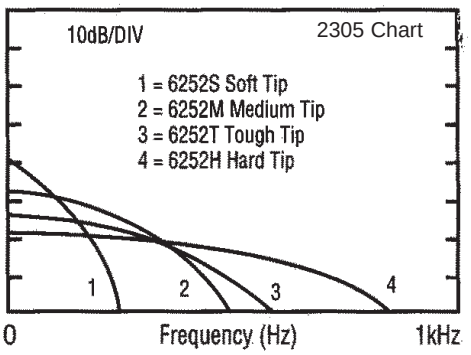


Directly into FFT Analyzer IEPE Input

Input Frequency Responses







ENDEVCO
MODEL
2303
2304
2305

Modal Sledge Hammers

SPECIFICATIONS

The following performance specifications are typical values, referenced at +75°F (+24°C), 4 mA, and 100 Hz, unless otherwise noted.

MODEL 2303, 2304 and 2305 SLEDGE HAMMERS	Units	2303	2304	2305
RANGE, full scale	lbf (K)	5000(22240)	5000(22240)	5000(22240)
SENSITIVITY, typical	mV/lbf	1.0	1.0	1.0
	mV/N	0.227	0.227	0.227
MAXIMUM FORCE, typical	lbf (N)	8000(35584)	8000(35584)	8000(35584)
RESONANCE FREQUENCY	kHz	50	50	75
FREQUENCY RANGE, max.	kHz	10	10	15
HEAD WEIGHT	lb (grams)	1.0(454)	3.0(1362)	12(5448)
IMPACT TIP DIAMETER	inches (cm)	1.0(2.5)	2.0(5.0)	3.0(7.5)
OVERALL LENGTH	inches (cm)	11.7(30)	15.2(39)	35.3(90)
DC OUTPUT BIAS	Vdc		9 to 12	
OUTPUT IMPEDANCE	Ohms		<100	
FULL SCALE OUTPUT	V		±5	
SUPPLY VOLTAGE	Vdc		18 to 30	
SUPPLY CURRENT	mA		2 to 20	
TEMPERATURE RANGE	°F (°C)		-100 to 250 (-73 to 121)	
SENSOR MATERIAL			17-4 PH S.S.	
HANDLE MATERIAL			Hardwood	
CONNECTOR			BNC	

ACCESSORIES

Included

	2303	2304	2305
Tip, Tough	EHM1664	EHM1654	EHM1658
Tip, Soft	EHM1665	EHM1655	EHM1659
Tip, Hard	EHM1666	EHM1656	EHM1660
Tip, Medium	EHM1667	EHM1657	EHM1661
Carrying Case			

NOTES

1. Maintain high levels of precision and accuracy using Endevco's factory calibration services. Call Endevco's inside sales force at 800-982-6732 for recommended intervals, pricing and turn-around time for these services as well as for quotations on our standard products.

Endevco complete Modal Front End System

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