

# Xcite 1300 Torsional Series

The Xcite 1300T Torsional Series of modal exciters provides pure torque input into structures for modal parameter estimation without the bending mode coupling effects present when linear excitation is applied through moment arms. These systems are used in structure borne noise tests of structures such as automotive and truck transmissions, prop shafts, axles, differentials, and torsional engine dampers.

Additional applications of the 1300T Torsional Series are found in power generation where steam turbine rotor torsional resonances and their modal coupling with blade bending frequencies can be easily identified because of the pure torque excitation.

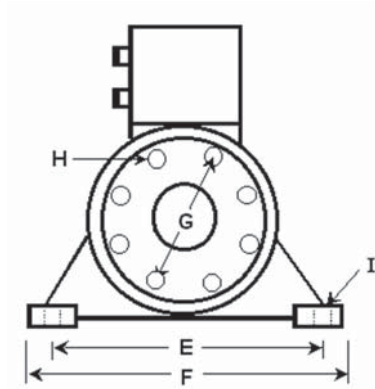
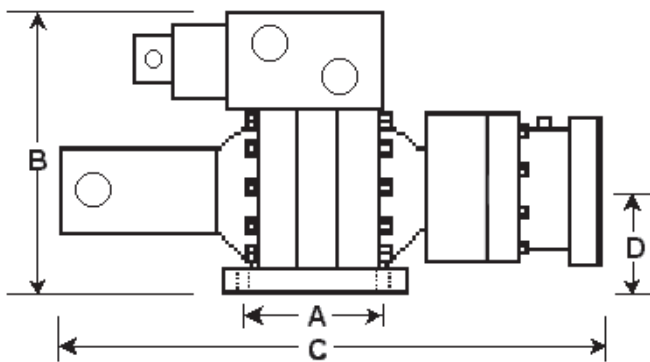


Hydraulic Power Supply  
Master Controller  
Exciter Head  
Static Torque  
Dynamic Torque  
Stroke  
Torque Cell  
RVDT  
Exciter Design

**Xcite 1300T-1 System**  
1302C 15 GPM (60 l/m)  
1304-Mod4  
1307-15-Tor  
20,000 in-lb (2,225 N-m)  
20,000 in-lb (2,225 N-m)  
100 deg (1.75 rad)  
50,000 in-lb (5,550 N-m)  
100 deg (1.75 rad)  
2 Vane Torsional

**Xcite 1300T-2 System**  
1302C 15 GPM (60 l/m)  
1304-Mod4  
1314-15-Tor  
2,000 in-lb (222 N-m)  
2,000 in-lb (222 N-m)  
100 deg (1.75 rad)  
5,000 in-lb (1,110 N-m)  
100 deg (1.75 rad)  
2 Vane Torsional

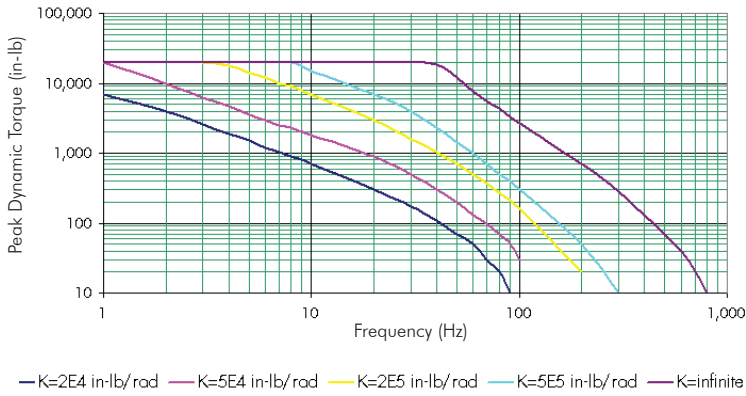
**Xcite 1300T-3 System**  
1302C 15 GPM (60 l/m)  
1304-Mod4  
1318-15-Tor  
6,000 in-lb (666 N-m)  
6,000 in-lb (666 N-m)  
100 deg (1.75 rad)  
15,000 in-lb (1,660 N-m)  
100 deg (1.75 rad)  
2 Vane Torsional



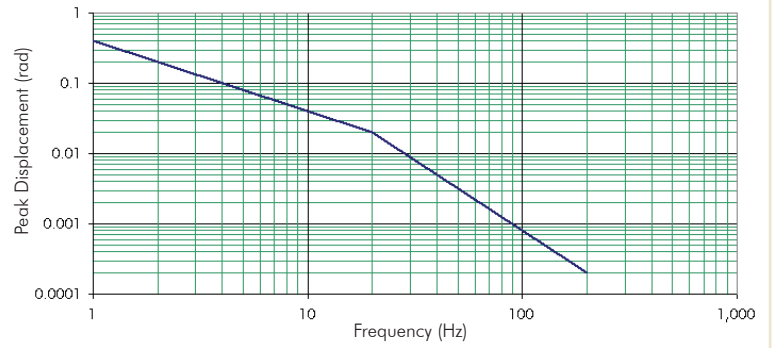
Exciter Head	A		B		C		D		E		F		G		H		I	
	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in(dia)	mm(dia)	in(dia)	mm(dia)
1307-15-Tor	6.12	155.4	12.38	314	23.50	597	4.61	117.3	10.12	257.0	12.00	305	4.25	107.9	0.39	9.9	0.78	19.8
1314-15-Tor	3.25	82.6	8.50	215	15.50	394	2.50	63.5	5.50	127.7	6.50	163	3.50	88.9	0.33	8.3	0.41	10.4
1318-15-Tor	4.62	117.3	9.69	242	15.81	395	3.38	85.8	7.50	190.5	9.00	225	4.25	107.9	0.39	9.9	0.53	13.4

## Xcite 1300T-1 Torsional System 1307-15-Tor Exciter Head

Peak Dynamic Torque vs. Frequency

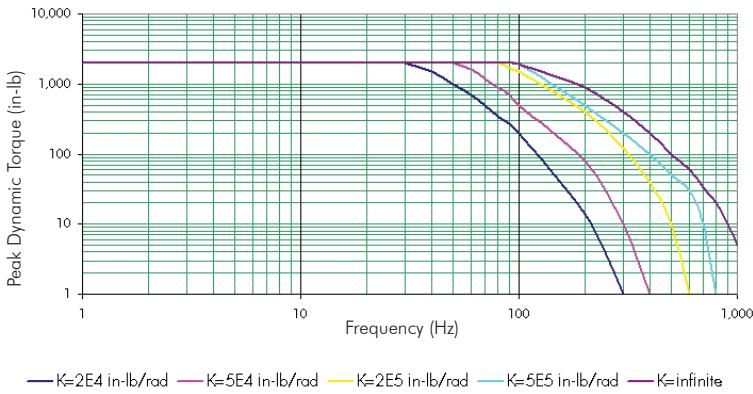


Peak Displacement vs. Frequency

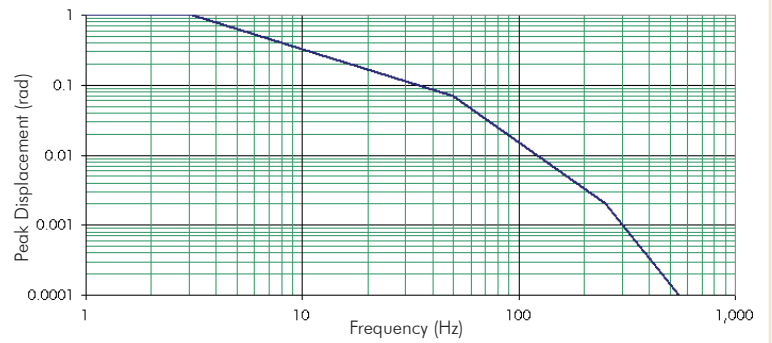


## Xcite 1300T-2 Torsional System 1314-15-Tor Exciter Head

Peak Dynamic Torque vs. Frequency

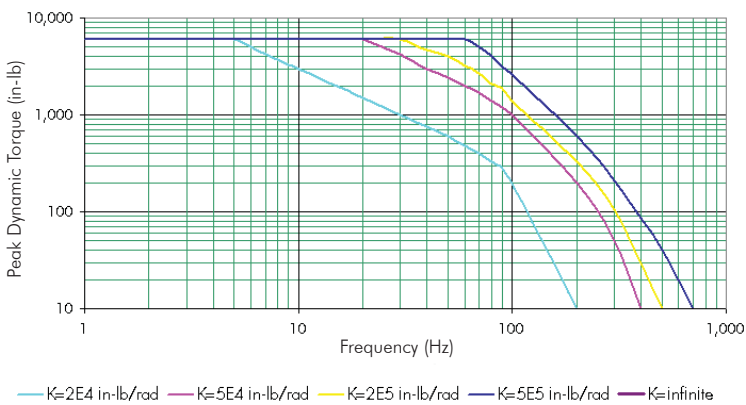


Peak Displacement vs. Frequency



## Xcite 1300T-3 Torsional System 1318-15-Tor Exciter Head

Peak Dynamic Torque vs. Frequency



Peak Displacement vs. Frequency

