

### FEATURES

The Magnesium Head Expander provides vertical test mounting surface larger than the one the shaker armature provides. It is fabricated with casting ZM5 (equivalent to AZ91) with top and bottom surface flatness and parallelism greater than 0.15mm. To protect the magnesium, all the bases of bolt counter bore holes are fitted with thick stainless steel washers, pressed into place. To prevent oxidation, the head expander's surface is anodized. Stainless inserts are used for the specimen mounting.

The magnesium has the characteristics of high specific stiffness and specific strength which prove singularly useful for fabricating the shaker head expander.

Due to the design of FEMA (Finite Element and Modal Analysis), the head expander can achieve higher useable frequency with low mass to make the shaker output force effective.

There are three kinds of top surface namely, octagon, round and square. Due to the flapping of the 4 corners of the square top surface, the 4 corners are cut resulting in an octagon shape to achieve higher uniformity.

Aluminum Alloy is also used to fabricate the head expander in case the testing needs higher useable frequency and the higher driven mass of the head expander is not a critical factor.

The useable frequency means the max controllable frequency when the control point is located at the center and transferring shaker's rated force. The controllable frequency depends on the location of the control point and force.



**OCTAGON HEAD EXPANDER SPECIFICATIONS**

Armature Diameter (mm)

HE Model	150		230/235		335/340		440/445/450		550		650/670	
HE300C	5	100	--		--		Mass (Mg) in kg				Height (mm)	
	2000						Useable Frequency (Hz)					
HE400C	9	150	12	150	--		--		--		--	
	2000		2000									
HE500C	18	200	21	200	22	150	--		--		--	
	1800		2000		2000							
HE600C	18	200	25	200	33	200	35	150	--		--	
	600		1600		2000		2000					
HE700C	24	250	36	250	45	200	45	200	--		--	
	1000		1000		1800		1500					
HE800C	--		45	250	48	250	55	250	86	250	--	
			1000		1300		1500		1800			
HE900C	--		50	250	70	300	68	270	90	250	--	
			600		1200		1200		1200			
HE1000C	--		55	250	90	300	135	350	140	350	150	350
			400		900		900		900		1200	
HE1200C	--		--		165	350	165	350	180	350	190	350
					400		500		500		450	
HE1500C	--		--		--		245	400	260	400	265	400
							400		400		500	

**ROUND HEAD EXPANDER SPECIFICATIONS**

Armature Diameter (mm)

HE Model	150		230/235		335/340		440/445/450		550		650/670	
HE300R	5	100	--		--		Mass (Mg) in kg				Height (mm)	
	2000						Useable Frequency (Hz)					
HE400R	10	150	10	100	13	50	--		--		--	
	2000		2500		2000							
HE500R	14	180	17	150	20	150	--		--		--	
	2000		2000		2000							
HE600R	20	250	20	150	24	150	25	120	--		--	
	800		1200		2000		2000					
HE700R	--		24	200	45	250	45	200	--		--	
			900		2000		2000					

