

Annex I

Specification/Level of test for Vibration Machine

Standard	Acceleration	Frequency	Displacement	Axis	No of Sweeps	Duration of test
IS16046		10to55Hz	0.76mmto1.52 mm	3	1Hz/minutes	5h
IS9000part8	1m/Sec2	1-35Hz	0.35mm	3		12hrs
	2m/Sec2	1-100Hz	0.75mm			
	5m/Sec2	5-35Hz	1.5mm			
	10m/Sec2	5-150Hz	3.5mm			
	20m/Sec2	5-350Hz	7.5mm			
	30m/Sec2	5-500Hz	10mm			
	50m/Sec2	5-2000Hz	15mm			
		7-300Hz				
		10-55Hz				
		10-150Hz				
		10-500Hz				
		10-2000Hz				
		10-5000Hz				
		55-500Hz				
		55-2000Hz				
		55-5000Hz				
		100-2000Hz				
IEC61298-3	1m/Sec2	10-150Hz	0.35mm	3	Octave/Minute	
	2m/Sec2	10-150Hz	0.75mm			
	20m/Sec2	10-1000Hz	0.15mm			
	50m/Sec2	10-1000Hz	0.35mm			
EN837-1	5m/Sec2	10-50Hz		3	Octave/Minute	6hrs
IS2848	0m/Sec2to30m/Sec2	10Hzto50Hz		3	Octave/Minute	150Hrs
IS616		10-55Hz	0.35mm		Octave/Minute	30minute
JSS 55555	28.3m/sec ²	10-1000Hz	AsperJSS55555	3		As per JSS 55555

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Annex II				
Specification/Level of test for Shock Machine				
Standard	Pulse Duration (m seconds)	Initial Average Acceleration	Peak Acceleration	Remarks
IS16046	3	75g	125g- 175g	
IS9000 part 7/Sec 1	11		150 m/sec ²	
	11		200 m/sec ²	
	18		200 m/sec ²	
	6		300 m/sec ²	
	11		300 m/sec ²	
	18		300 m/sec ²	
	11		400 m/sec ²	
	3		500 m/sec ²	
	11		500 m/sec ²	
	6		750 m/sec ²	
	11		1000 m/sec ²	
IS3624	80 to120/Minute		30 m/sec ²	

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Annex III

Specification/Level of test for Bump Machine

Standard	No.ofBump	PeakAcceleration	Duration ofPulse(seconds)	Velocity
IS9000 Part 7 Sec2	4000	100 m/sec ²	16	1.02m/s
		250 m/sec ²	6	0.96m/s
		400 m/sec ²	6	1.53m/s

Annex IV

CRITICAL SPECIFICATION OF VIBRATION MACHINE:

SINE TEST:

Frequency: 1 Hz to 5000 Hz

Maximum Displacement: 80 mm

Maximum Acceleration: 1 m/sec² to 50 m/sec²

Pay Load: 300 kg (operational)

SHOCK TEST:

Pulse Acceleration: 50 m/sec² to 1000 m/sec²

Pulse width: 0.2 msec to 20 msec

Velocity: 0.5 m/sec to 11 m/sec

BUMP TEST:

No of Bump: 4000

(The Bush of the machine should be suitable for this application)

Peak Acceleration: 100 m/sec², 250 m/sec² and 400 m/sec²

Velocity: 0.96 m/sec, 1.02 m/sec and 1.53 m/sec

Duration of Pulse: 3 ms to 16 msec

Note: You're requested to specify payload limitation for each test level (e.g.

Shock test: Acc: 750 m/sec², Pulse: 11 ms, UUT Weight: 30 kg

Different possibilities for conducting tests for which soft ware is provided.

1. Sine
2. Random
3. Shock
4. Sine on Random
5. Random on Random
6. Resonance Search
7. Recal
8. Low Frequency and High Displacement