

# PTM-A,-A2,-A3

## Floor mounting single spring isolator

# -AM,-AM2,

## Heavy loading multiple spring isolator



PTM-A, A2, A3


PTM-AM-xxx2M,  
PTM-AM2-xxx2M

PTM-AM-xxx4M,  
PTM-AM2-xxx4M

### Description

TOZEN Model PTM-A & PTM-AM series isolators are unhooused, spring, vibration isolators, designed for high deflection. The PTM-A employs the use of a single spring element, while the PTM-AM employs multiple spring elements for heavier applications. These laterally stable steel spring isolators are constructed with a leveling device at the top of the isolator and a non-skid acoustical pad at the bottom. Both models are constructed with upper and lower ductile cast iron holding cups to hold the spring element. In addition, PTM-A & PTM-AM have a mounting base plate to allow the isolator to be bolted to a structure and a resilient washer as part of the nonskid acoustical pad. The resilient washer helps prevent the transmission of noise and vibration from the base plate and mounting bolt to the structure.

The design of the spring elements, within the isolators, complies with established standard JIS B2704, for semipermanent use. To assure lateral stability, the outside diameter of the spring element is greater than 80% of the height of the compressed spring element when at rated load. All the spring elements are designed to provide a minimum overloading capacity of 50%.

PTM-A & PTM-AM series vibration isolator are available in the standard deflections at 25 mm, and also available in deflections of 50 and 75 mm. Load capacity of the PTM-A isolators range from 25 to 1,400 Kgs (55 to 3080 lbs) and up to 5,600 Kgs (12320 lbs.) for PTM-AM isolators.

Tozen PTM-A & PTM-AM series of spring isolators are highly effective in the control of both high and low frequency vibrations produced by mechanical equipment, such as Reciprocating Air or Refrigeration Compressors, Pumps, Air Conditioning and Air Handling Equipment, Centrifugal and Axial Fans, Internal Combustion Engines and similar types of equipment.

### Application

PTM-A & PTM-AM series spring isolators are recommended for use in isolating floor mounted sources of noise and vibration located near critical quiet areas.

PTM-A series spring isolators are typically used to reduce the transmission of noise and vibration from low speed mechanical equipment into a building structure.

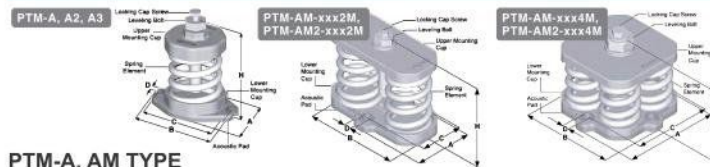
PTM-A & AM series spring isolators can be used in a wide range of applications involving the isolation of mechanical equipment, such as Reciprocating Air or Refrigeration Compressors, Close Coupled and Base Mounted Pumps, Package Air Handling and Refrigeration Equipment, Centrifugal Fans, Internal Combustion Engines and similar equipment.

### Specification

The vibration isolators shall be free standing, with laterally stable steel spring elements, without housings, snubbers or guides. The isolators shall be constructed with the ductile cast iron upper mounting cup and the ductile cast iron lower mounting cup to hold the spring element, and a non-skid acoustical pad is attached under the lower cup. The isolators shall be provided with an adjusting bolt, cap screw and washer in top of the isolator for leveling and attachment to the equipment. The spring elements of the isolator shall have an outside diameter greater than 80% of the height of the compressed spring element at rated load. All spring elements shall be designed to provide a minimum overloading capacity of 50%.

The isolators shall be selected to provide operating static deflection shown on the Vibration Isolation Schedule or as indicated by the project specifications. Isolators shall be color coded or otherwise identified to indicate load capacity.

### Dimensions



#### PTM-A, AM TYPE

25 mm DEFLECTION SINGLE & MULTIPLE SPRING VIBRATION ISOLATOR

MODEL	RATED CAPACITY		SPRING CONSTANT (kg/mm)	SPRING ELEMENT			OPERATING HEIGHT (H)	DIMENSION (mm)				LOCKING CAP SCREW (L.S.)	LEVELING BOLT (LB)
	(kgs)	(lbs)		SPRING COLOR	OD (mm)	FREE HEIGHT (mm)		A	B	C	D		
PTM-A-25S	25	55	1.0	WHITE	50	80	120	61	107	89	10	M10×32	M16×70
PTM-A-35S	35	77	1.4	YELLOW									
PTM-A-50S	50	110	2.0	ORANGE									
PTM-A-80S	80	176	3.2	VIOLET									
PTM-A-120S	120	264	4.8	RED									
PTM-A-175S	175	385	7.0	SILVER	75	100	150	88	136	117	13	M12×43	M22×80
PTM-A-225S	225	495	9.0	BROWN									
PTM-A-200M	200	440	8.0	VIOLET									
PTM-A-300M	300	660	12.0	RED									
PTM-A-450M	450	990	18.0	GREEN									
PTM-A-600M	600	1320	24.0	SILVER	75	100	144	112	198	75	14×18	M12×43	M22×80
PTM-A-825M	825	1815	33.0	BROWN									
PTM-A-1100M	1100	2420	44.0	BLUE									
PTM-A-1400M	1400	3080	56.0	BLUE+BROWN									
PTM-AM-1652M	1650	3630	66.0	BROWN									
PTM-AM-2202M	2200	4840	88.0	BLUE	75	100	152	197	197	161	14×18	M16×45	M30×90
PTM-AM-2802M	2800	6160	112.0	BLUE+BROWN									
PTM-AM-3304M	3300	7260	132.0	BROWN									
PTM-AM-4404M	4400	9680	176.0	BLUE									
PTM-AM-5604M	5600	12320	224.0	BLUE+BROWN									

NOTE-1: All springs are laterally stable and suitable for free standing application. (Outside diameter > 80% of deflection height)  
NOTE-2: Please refer to relevant brochure or our technical division for greater deflection and loading.

#### PTM-A2, AM2 TYPE

50 mm DEFLECTION SINGLE & MULTIPLE SPRING VIBRATION ISOLATOR

MODEL	RATED CAPACITY		SPRING CONSTANT (kg/mm)	SPRING ELEMENT			OPERATING HEIGHT (H)	DIMENSION (mm)				LOCKING CAP SCREW (LS)	LEVELING BOLT (LS)
	(Kgs)	(Lbs)		SPRING COLOR	OD (mm)	FREE HEIGHT (mm)		A	B	C	D		
PTM-A2-25S	25	55	0.5	WHITE	75	120	170	88	136	117	13	M12×43	M22×80
PTM-A2-35S	35	77	0.7	YELLOW									
PTM-A2-50S	50	110	1.0	ORANGE									
PTM-A2-80S	80	176	1.6	VIOLET									
PTM-A2-125S	125	275	2.5	RED									
PTM-A2-175S	175	385	3.5	SILVER									
PTM-A2-250S	250	550	5.0	BROWN	90	145	195	101	155	130	13	M12×43	M22×115
PTM-A2-175M	175	385	3.5	ORANGE									
PTM-A2-245M	245	539	4.9	VIOLET									
PTM-A2-350M	350	770	7.0	RED									
PTM-A2-525M	525	1155	10.5	GREEN									
PTM-A2-750M	750	1650	15.0	SILVER									
PTM-A2-1050M	1050	2310	21.0	SILVER+BROWN	90	145	189	130	230	92	14×18	M14×43	M22×80
PTM-AM2-1502M	1500	3300	30.0	SILVER									
PTM-AM2-2102M	2100	4620	42.0	SILVER+BROWN									
PTM-AM2-3004M	3000	6600	60.0	SILVER									
PTM-AM2-4204M	4200	9240	84.0	SILVER+BROWN			196	244	244	203	14×18	M16×45	M30×90

NOTE-1: All springs are laterally stable and suitable for free standing application. (Outside diameter > 80% of deflection height)  
NOTE-2: Please refer to relevant brochure or our technical division for greater deflection and loading.

#### PTM-A3, TYPE

75 mm DEFLECTION SINGLE & MULTIPLE SPRING VIBRATION ISOLATOR

MODEL	RATED CAPACITY		SPRING CONSTANT (kg/mm)	SPRING ELEMENT		OPERATING HEIGHT (H)	DIMENSION (mm)				LOCKING CAP SCREW (L.S.)	LEVELING BOLT (LB)	
	(Kgs)	(Lbs)		SPRING COLOR	OD (mm)		FREE HEIGHT (mm)	A	B	C			D
PTM-A3-180S	180	396	2.4	ORANGE	90	170	220	101	155	130	13	M12×43	M22×115
PTM-A3-255S	255	561	3.4	VIOLET									
PTM-A3-375S	375	825	5.0	RED									

NOTE-1: All springs are laterally stable and suitable for free standing application. (Outside diameter > 80% of deflection height)  
NOTE-2: Please refer to relevant brochure or our technical division for greater deflection and loading.

### Installation instruction

- Block or lift up the equipment to a level so that the equipment's leg or base is 5 mm higher than isolator's operating height (see catalogue). If common base & height saving isolator bracket is used, keep 50-mm clearance between the base and floor. Maintain this height until piping installation is completed.
- Locate the spring isolator under the hole in equipment's leg or isolator's bracket. Connect locking cap screw and washer, but do not tighten.
- Transfer the equipment weight to the spring by taking two counter-clockwise turns on each leveling bolt around the unit until springs are compressed just enough to remove the blocks.
- Tighten the locking cap screw to lock the assembly.

**Note:** The contents of this catalogue are subject to change without notice.

**Agent : TOZEN Corporation**

### Remarks

- DO NOT install the equipment on the support of a free spring. This will cause an insufficient operating height for the spring isolator when the installation is completed.
- Weight of vertical piping and valves must be supported by the suspension hangers or supports.
- Install the flexible joint at the end of the installation, following the pre-extension instruction which may specified or suggested by the flexible joint manufacturer.
- Bolting down the isolator to the floor, in most cases, is not necessary as the non-slip rubber pad or mounting cup will prevent movement. Where bolting is required, avoid a direct metal contact between bolt and mounting, to prevent transmission of noise; the bolt shank shall be clear in the hole and a rubber washer used under the bolt head. Bolts shall only be tightened a half turn more than hand tight.