

# PTM-D,-D2 -DS,-DS2,

Restrained single and multiple spring isolator



PTM-D - 451M, 601M, 826M, 1101M, 1404M  
PTM-D2-176, 246, 351, 526, 751, 1051



PTM-D-1652M, 2202M, 2802M  
PTM-D2-1502, 2102



PTM-D-3304M, 4404M, 5604M  
PTM-D2-3004, 4204



PTM-DS-6606AM, 7506AM, 8406AM, 8808M, 10008M, 11208M  
PTM-DS2-4506AM, 6306AM, 8408AM

## Description

TOZEN PTM-D series vibration isolators consist of free standing laterally stable steel springs assembled into ductile iron housing assemblies fabricated to limit vertical movement of the isolated equipments when if equipment loads are reduced or if the equipments are subjected to large external forces. Spring elements are complete with an internal adjusting and leveling bolt. Holes are provided at the upper plate for bolting to supported equipment. A 10mm thick non-skid noise absorbing rubber pad is bonded at the bottom plate with holes for bolting to the structure. All the spring elements comply to JIS 2704 for semi-permanent use. To assure lateral stability, outside diameter of the spring elements do not less than 0.8 times of the compressed height of the spring at rated load. All the spring are designed to provide a minimum of 50% overload capacity.

PTM-D series vibration isolator are shipped with standard deflections of 25 and 50 mm, and available up to 50mm, with load capacities from 450 Kgs to 5,600 Kgs. Model PTM-D spring isolators are recommended for the isolation of vibration produced by equipment carrying a large fluid load which may be drained, such as boilers and chillers, and for the isolation of cooling towers, air cooled condensers, etc, where motion due to wind loads must be minimized.

## Application

Type PTM-D mounts are typically used to reduce the transmission of noise and vibration into supporting structures from equipments carrying a large fluid load that may be drained, such as boilers and for cooling towers, which also require hold down for wind loads.

## Specification

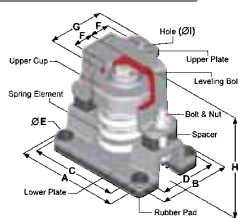
Vibration isolators for equipment which is subject to load vibrations and large external or torquing forces shall consist of laterally stable steel springs assembled into a ductile iron housing assembly designed to limit vertical movement of the supported equipment.

Housing assembly shall be of ductile iron members and consist of a load transfer plate at the top complete with holes, adjusting and leveling bolts, vertical restraints, isolation washers and a bottom plate with non-skid noise isolation pad and holes provided for anchoring to supporting structure.

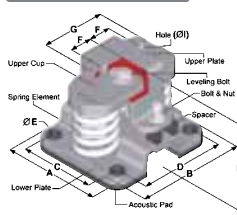
Spring elements shall have a outside diameter not less than 0.8 times to the compressed height of the spring rated load. All springs shall be designed to provide a minimum of 50% overload capacity.

## Dimensions

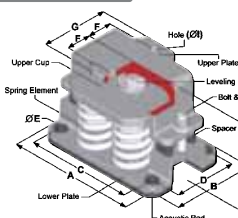
PTM-D - 451M, 601M, 826M, 1101M, 1404M  
PTM-D2-176, 246, 351, 526, 751, 1051



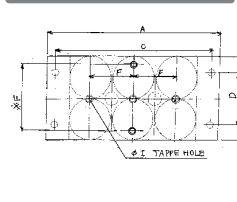
PTM-D-1652M, 2202M, 2802M  
PTM-D2-1502, 2102



PTM-D-3304M, 4404M, 5604M  
PTM-D2-3004, 4204



PTM-DS-6606AM, 7506AM, 8406AM, 8808M, 10008M, 11208M  
PTM-DS2-4506AM, 6306AM, 8408AM



## PTM-D TYPE

25mm DEFLECTION RESTRAINED SPRING ISOLATOR

MODEL	RATED CAPACITY		SPRING CONSTANT (kg/mm)	SPRING COLOR	OPERATING HEIGHT (H)	DIMENSION (mm)							
	(Kgs)	(Lbs)				A	B	C	D	ØE	F	G	ØI
PTM-D-450M	450	990	18	GREEN	170	172	121	137	86	16	30	88	14
PTM-D-601M	600	1320	24	SILVER									
PTM-D-826M	825	1815	33	BROWN									
PTM-D-1101M	1100	2420	44	BLUE									
PTM-D-1401M	1400	3080	56	BLUE+BROWN	170	190	200	136	156	20	40	118	18
PTM-D-1652M	1650	3630	66	BROWN									
PTM-D-2202M	2200	4840	88	BLUE									
PTM-D-2802M	2800	6160	112	BLUE+BROWN									
PTM-D-3304M	3300	7260	132	BROWN	185	255	167	211	1235	20	48.5	135	18
PTM-D-4404M	4400	9680	176	BLUE									
PTM-D-5604M	5600	12320	224	BLUE+BROWN									

NOTE-1: All springs are free standing and laterally stable. (Outside diameter do not less 0.8 times of compressed height)  
NOTE-2: All springs are designed to provide additional travel to solid of at least 50% rated load.  
NOTE-3: Please refer to relevant brochure or factory for greater deflection and loading

## PTM-DS TYPE

25mm DEFLECTION RESTRAINED SPRING ISOLATOR

MODEL	RATED CAPACITY		SPRING CONSTANT (kg/mm)	SPRING COLOR	OPERATING HEIGHT (H)	DIMENSION (mm)							
	(Kgs)	(Lbs)				A	B	C	D	ØE	F	G	ØI
PTM-DS-4956MA	4950	10890	198	BROWN	205	420	175	380	100	20	110	-	M16 X 3
PTM-DS-6606MA	6600	14520	264	BLUE									
PTM-DS-7506MA	7500	16500	300	BLUE+WHITE									
PTM-DS-8406MA	8400	18480	335	BLUE+BROWN									
PTM-DS-8808M	8800	19360	352	BLUE	205	475	175	435	100	20	115	-	M16 X 2 (3RF)
PTM-DS-10008M	10000	22000	400	BLUE+WHITE									
PTM-DS-11208M	11200	24640	448	BLUE+BROWN									

NOTE-1: All springs are free standing and laterally stable. (Outside diameter do not less 0.8 times of compressed height)  
NOTE-2: All springs are designed to provide additional travel to solid of at least 50% rated load.  
NOTE-3: Please refer to relevant brochure or factory for greater deflection and loading  
NOTE-4: PTM-DS is carbon steel type.

## PTM-D2 TYPE

50mm DEFLECTION RESTRAINED SPRING ISOLATOR

MODEL	RATED CAPACITY		SPRING CONSTANT (kg/mm)	SPRING COLOR	OPERATING HEIGHT (H)	DIMENSION (mm)							
	(Kgs)	(Lbs)				A	B	C	D	ØE	F	G	ØI
PTM-D2-176	175	385	3.5	ORANGE	210	190	130	152	95	15	38	106	16
PTM-D2-246	245	539	4.9	VIOLET									
PTM-D2-351	350	770	7	RED									
PTM-D2-526	525	1155	10.5	GREEN									
PTM-D2-751	750	1650	15	SILVER	210	232	196	167	152	20	42	120	16
PTM-D2-1051	1050	2310	21	SILVER+BROWN									
PTM-D2-1502	1500	3300	30	SILVER									
PTM-D2-2102	2100	4620	42	SILVER+BROWN									
PTM-D2-3004	3000	6600	60	SILVER	220	300	200	260	182	20	66.5	170	20
PTM-D2-4204	4200	9240	84	SILVER+BROWN									

NOTE-1: All springs are free standing and laterally stable. (Outside diameter do not less 0.8 times of compressed height)  
NOTE-2: All springs are designed to provide additional travel to solid of at least 50% rated load.  
NOTE-3: Please refer to relevant brochure or factory for greater deflection and loading

## PTM-DS2 TYPE

50mm DEFLECTION RESTRAINED SPRING ISOLATOR

MODEL	RATED CAPACITY		SPRING CONSTANT (kg/mm)	SPRING COLOR	OPERATING HEIGHT (H)	DIMENSION (mm)							
	(Kgs)	(Lbs)				A	B	C	D	ØE	F	G	ØI
PTM-DS2-4506MA	4500	9900	90	SILVER	250	450	207	380	132	20	110	-	M16 X 3
PTM-DS2-6306MA	6300	13860	126	SILVER+BROWN									
PTM-DS2-8408MA	8400	18480	168	SILVER+BROWN	250	540	207	500	132	20	147 (3RF)	-	M16 X 3

NOTE-1: All springs are free standing and laterally stable. (Outside diameter do not less 0.8 times of compressed height)  
NOTE-2: All springs are designed to provide additional travel to solid of at least 50% rated load.  
NOTE-3: Please refer to relevant brochure or factory for greater deflection and loading  
NOTE-4: PTM-DS is carbon steel type.

## Installation instruction

- Check that the internal leveling nut is adjusted up to underside of the upper plate.
- Lift or block up the equipment to 5mm higher than isolator's operating height (see catalogue) and slide the isolators into position and adjust the leveling nut until the upper plate is in contact with equipment base. Insert fastening screws (if used) through the equipment base into top of the mounting and tighten.
- Check alignment of the base so that restraining bolts are central with clearance holes in the restraining bracket.
- 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 blocks.
- Adjust restraining nuts to give 2-3mm clearance between the restrain washer and the underside of the restraining bracket. Check the leveling again after the system is filled with water.
- Tighten the lock nut to lock the assembly.

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

Agent : TOZEN Corporation

## Remarks

- When the equipment are not subject to raise to the required height, height saving bracket may be attached to the equipment. The height of bracket connection from the bottom of the base shall be 50mm less than the isolator's operating height or to keep a 50mm clearance between the ground and equipment.
- DON'T install the equipment on the support of free spring, it would cause an insufficient operating height for the spring isolator when the installation is completed.
- Weight of vertical piping and valves shall be taken over by the suspension hangers or support.
- Install the flexible joint at final, follow the pre-extension instruction which may specified or suggested by the flexible joint manufacturer.
- Where bolting is required, avoid a direct metal contact between bolt and mounting, to prevent transmission of acoustical frequencies; 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.