

Non-Adjustable Series Hydraulic Shock Absorbers

PMXT Mid-Bore Series

Overview



PMXT 1525/2150
Mid-Bore Series

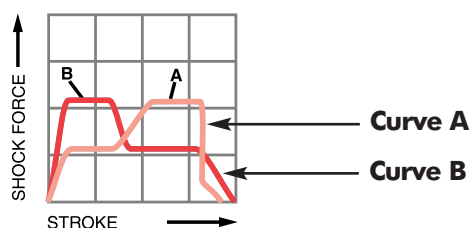
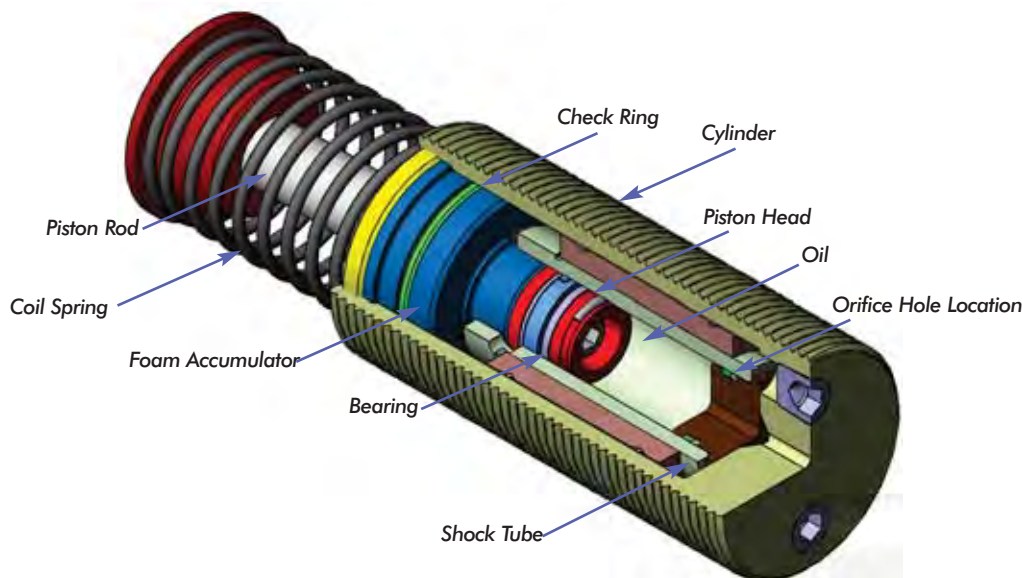
ITT Enidine non-adjustable hydraulic shock absorbers can accommodate varying energy conditions. This family of tamperproof shock absorbers provides consistent performance, cycle after cycle. Non-adjustable models are designed to absorb maximum energy within a compact envelope size.

The **PMXT Series** uses a self-compensating design to provide energy absorption in low velocity and high drive force applications. Models can accommodate a wide range of operating conditions with varying masses or propelling forces.

Features and Benefits

- Extensive non-adjustable product line offers flexibility in both size and energy absorption capacity to fulfill a wide range of application requirements.
- Tamperproof design ensures repeatable performance.
- Special materials and finishes can be designed to meet specific customer requirements.
- Incorporating optional fluids and seal packages can expand the standard operating temperature range from (–10°C to 80°C) to (–35°C to 100°C).
- Threaded cylinders provide mounting flexibility and increase surface area for improved heat dissipation.
- A select variety of surface finishes maintains original quality appearance and provides the longest corrosion resistance protection.
- ISO quality standards result in reliable, long-life operation.

ITT Enidine Non-Adjustable Multiple Orifice Shock Absorbers



Self-compensating damping maintains acceptable deceleration with conventional type damping characteristics. Self-compensating shock absorbers operate over a wide range of weights and velocities. These shock absorbers are well suited for high drive force, low velocity applications, and where energy conditions may change. **Curve A** shows the *shock force vs. stroke* curve of a self-compensating shock absorber impacted with a low velocity and high drive force. **Curve B** shows the *shock force vs. stroke* curve of a self-compensating shock absorber impacted with a high velocity and low drive force.

The design of a multi-orifice shock absorber features a double cylinder arrangement with space between the concentric shock tube and cylinder, and a series of orifice holes drilled down the length of the shock tube wall.

During piston movement, the check ring is seated and oil is forced through the orifices in the shock tube wall, into the closed cellular foam accumulator and behind the piston head.

As the piston head moves it closes off orifice holes, thus reducing the available orifice area in proportion to the velocity. After the load is removed the coil spring pushes the piston rod outward. This unseats the check ring and permits the oil to flow from the accumulator and across the piston head, back into the shock tube. This allows quick repositioning for the next impact.

Low Pressure multiple orifice shock absorbers can provide progressive or self-compensating damping, depending on the impact conditions.

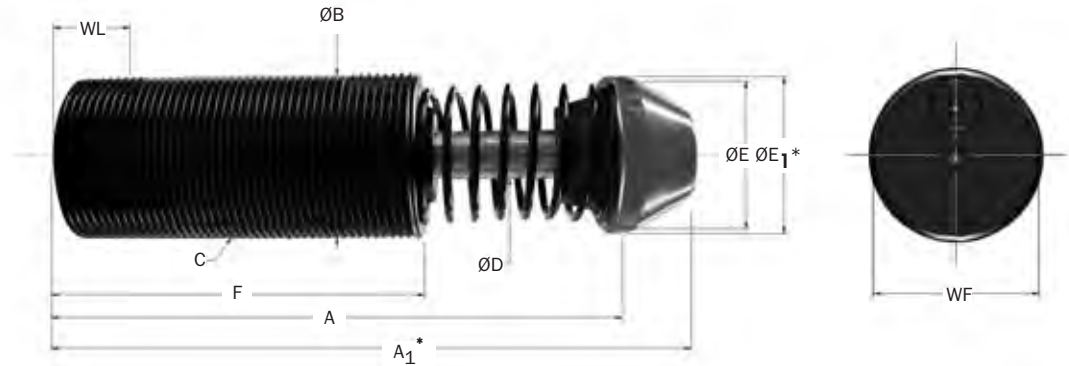
Non-Adjustable Series Hydraulic Shock Absorbers

PMXT Mid-Bore Series

PMXT 1525 → PMXT 2150 Series

Technical Data

Standard



*Note: A₁ and E₁ apply to urethane striker cap accessory.

Catalog No./Model	(S) Stroke mm	(E _T) Max. Nm/cycle	(E _T C) Max. Nm/h	(F _P) Max. Reaction N	Nominal Coil Spring Force		(F _D) Max. Propelling N	Mass Kg
					Extended N	Compressed N		
PMXT 1525	25,0	367,0	126 000	29 000	48,0	68,0	6 700	1,0
PMXT 1550	50,0	735,0	167 000	29 000	29,0	78,0	6 700	1,1
PMXT 1575	75,0	1 130,0	201 000	29 000	31,0	78,0	6 700	1,3
PMXT 2050	50,0	1 865,0	271 000	60 500	80,0	155,0	17 800	2,7
PMXT 2100	100,0	3 729,0	362 000	60 500	69,0	160,0	17 800	3,3
PMXT 2150	150,0	5 650,0	421 000	60 500	87,0	285,0	17 800	4,2

Catalog No./Model	Damping Constant	A mm	A ₁ mm	C mm	D mm	E mm	E ₁ mm	F mm	WF mm	WL mm
PMXT 1525 IF	-1,-2,-3	5.68	6.37	(IF) 1 3/4-12 UN	.50	1.48	1.75	3.63	1.70	0.75
PMXT 1525 MF	-1,-2,-3	(144,0)	(162,0)	(MF) M45 x 1,5	(12,7)	(38,0)	(44,5)	(92,0)	(43,5)	(19,0)
PMXT 1550 IF	-1,-2,-3	7.68	8.37	(IF) 1 3/4-12 UN	.50	1.48	1.75	4.63	1.70	0.75
PMXT 1550 MF	-1,-2,-3	(195,0)	(213,0)	(MF) M45 x 1,5	(12,7)	(38,0)	(44,5)	(118,0)	(43,5)	(19,0)
PMXT 1575 IF	-1,-2,-3	9.68	10.37	(IF) 1 3/4-12 UN	.50	1.48	1.75	5.63	1.70	0.75
PMXT 1575 MF	-1,-2,-3	(246,0)	(264,0)	(MF) M45 x 1,5	(12,7)	(38,0)	(44,5)	(143,0)	(43,5)	(19,0)
PMXT 2050 IF	-1,-2,-3	8.90	9.55	(IF) 2 1/2-12 UN	.75	1.98	2.25	5.50	2.42	0.75
PMXT 2050 MF	-1,-2,-3	(226,0)	(243,0)	(MF) M64 x 2,0	(19,0)	(50,0)	(57,0)	(140,0)	(61,5)	(19,0)
PMXT 2100 IF	-1,-2,-3	12.90	13.55	(IF) 2 1/2-12 UN	.75	1.98	2.25	7.50	2.42	0.75
PMXT 2100 MF	-1,-2,-3	(328,0)	(345,0)	(MF) M64 x 2,0	(19,0)	(50,0)	(57,0)	(191,0)	(61,5)	(19,0)
PMXT 2150 IF	-1,-2,-3	17.97	18.62	(IF) 2 1/2-12 UN	.75	2.38	2.38	9.50	2.42	0.75
PMXT 2150 MF	-1,-2,-3	(956,0)	(473,0)	(MF) M64 x 2,0	(19,0)	(60,0)	(60,0)	(241,0)	(61,5)	(19,0)

Notes: 1. Dash numbers in page color are non-standard lead time items, contact ITT Enidine.
2. See page 59 for constant damping curves.
3. Urethane striker caps are available as accessories for models PM 1525 to PM 2150.

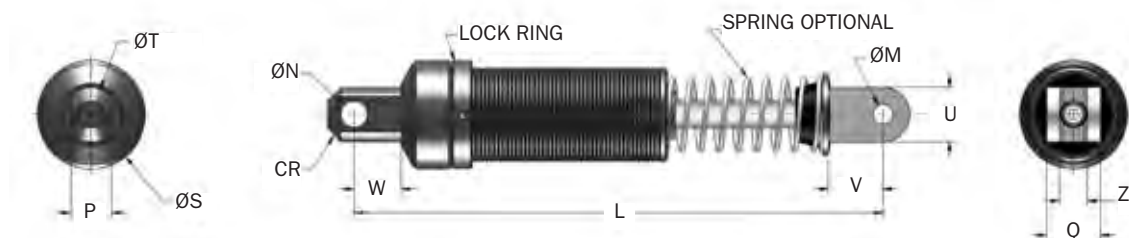
Non-Adjustable Series Hydraulic Shock Absorbers

PMXT Mid-Bore Series

PMXT 1525 CM → PMXT 2150 CM Series

Accessories

Clevis Mount

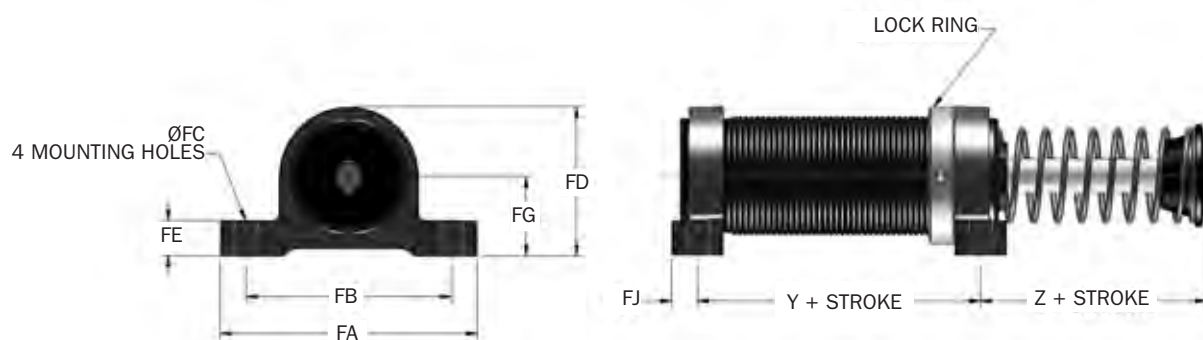


Catalog No./ Model	L mm	M +0.005/-0.000 (+0.13/-0.00) mm	N +0.005/-0.000 (+0.13/-0.00) mm	P +0.000/-0.010 (+0.00/-0.25) mm	Q +0.000/-0.010 (+0.00/-0.25) mm	S mm	T mm	U mm	V mm	W mm	Z +0.020/-0.000 (+0.51/-0.00) mm	CR mm	Mass Kg
Δ PMXT 1525 CM (S)	199	9,60	12,7	19,00	25,4	51	25	25	26	22	12,9	14,3	1,36
Δ PMXT 1550 CM (S)	250	9,60	12,70	19,00	25,4	51	25	25	26	22	12,9	14,3	1,45
Δ PMXT 1575 CM (S)	300	9,60	12,70	19,00	25,4	51	25	25	26	22	12,9	14,3	1,63
Δ PMXT 2050 CM (S)	306	19,07	19,07	31,70	38,0	73	38	38	35	26	16,0	23,0	3,72
Δ PMXT 2100 CM (S)	408	19,07	19,07	31,70	38,0	73	38	38	35	26	16,0	23,0	4,22
Δ PMXT 2150 CM (S)	537	19,07	19,07	31,70	38,0	73	38	38	35	26	16,0	23,0	5,08

Notes: 1. Δ = Non-standard lead time items, contact ITT Enidine.

2. (S) indicates model comes with spring.

Flange Foot Mount



Catalog No./ Model	Part Number	Model (Ref)	Y mm	Z mm	FA mm	FB mm	FC mm	FD mm	FE mm	FG mm	FJ mm	Size mm	Bolt Mass g	Kit Notes
FM M45 x 1,5	2F8637	PMXT 1500M Series	60,5	26,9	95,3	76,2	8,60	55,0	12,7	29,5	9,7	M8	370	3
FM M64 x 2	2F3010	PMXT 2000M Series	76,2	39,6	143,0	124,0	10,40	85,6	16,0	44,5	11,2	M10	1 050	1,3

Notes: 1. PM 2150 Z dimension is 2.69 in.

2. Shock absorber must be ordered separately from foot mount kit.

3. All foot mount kits include two foot mounts and lock ring.

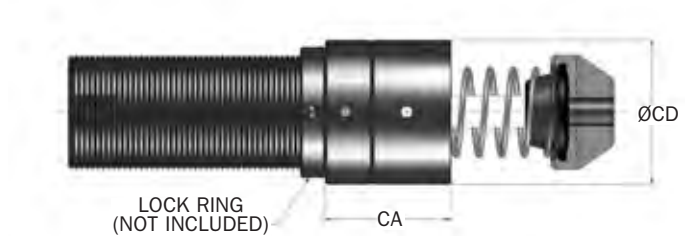
Non-Adjustable Series Hydraulic Shock Absorbers

PMXT Mid-Bore Series

PMXT 1525M → PMXT 2150M Series

Accessories

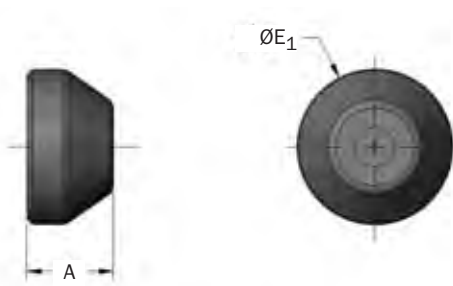
Stop Collar (SC)



Catalog No./Model	Part Number	Model Ref	CA mm	CD mm	Mass g
SC M45 x 1.5	8K8637	PMXT 1500M Series	49,0	56,5	340
Δ SC M64 x 2 x 2	M93010057	PMXT 2050M Series	89,0	76,0	936
Δ SC M64 x 2 x 4	M93011057	PMXT 2100M Series	114,0	76,0	1 191
Δ SC M64 x 2 x 6	M93012057	PMXT 2150M Series	143,0	76,0	1 475

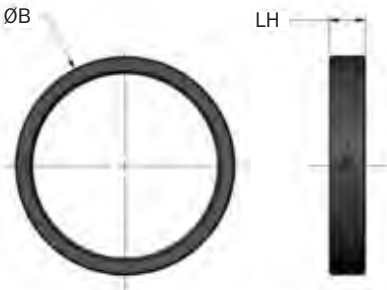
Note: Δ = Non-standard lead time items, contact ITT Enidine.

Urethane Striker Cap (USC)



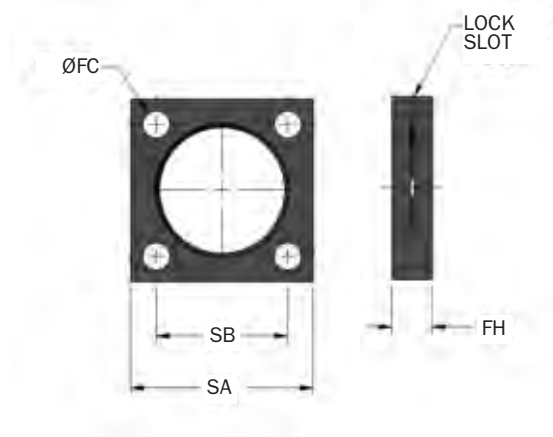
Catalog No./Model	Part Number	Model Ref	A mm	E ₁ mm	Mass g
UC 2940	C92940079	PMXT 1500M	24,5	44,5	14
UC 3010	C93010079	PMXT 2000M	24,0	57,0	23

Lock Ring (LR)



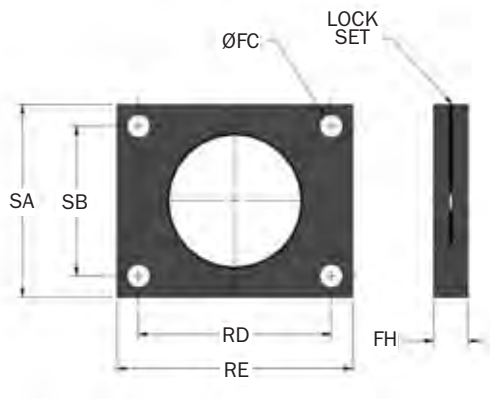
Catalog No./Model	Part Number	Model Ref	B mm	LH mm	Mass g
LR M45 x 1.5	F88637049	PMXT 1500M Series	57,2	9,5	75
LR M64 x 2	F83010049	PMXT 2000M Series	72,9	12,7	85

Square Flange (SF)



Catalog No./ Model	Part Number	Model Ref	FC mm	FH mm	SA mm	SB mm	Bolt Size mm	Mass g
SF M45 x 1.5	M48637129	PMXT 1500M Series	8,6	12,7	57,2	41,3	M8	140
SF M64 x 2	M43010141	PMXT 2000M Series	10,4	15,7	89	69,9	M10	570

Rectangular Flange (RF)



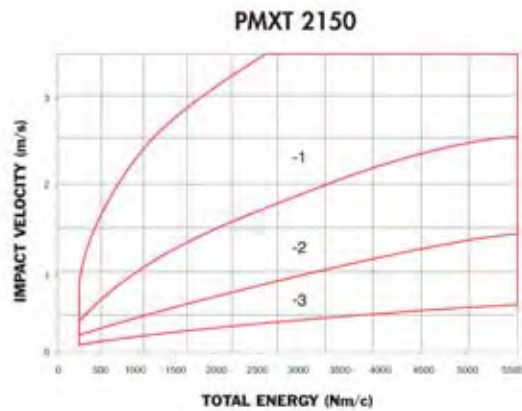
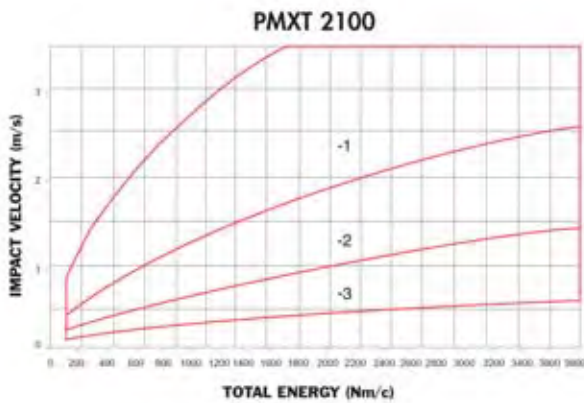
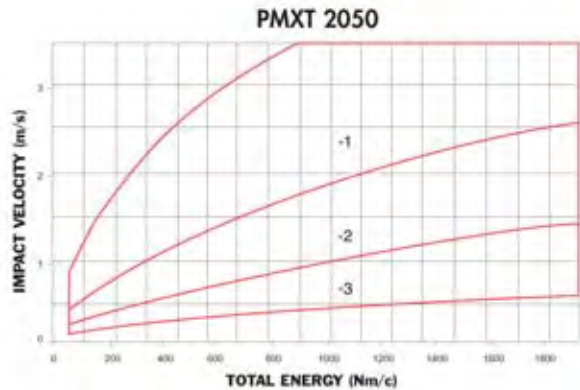
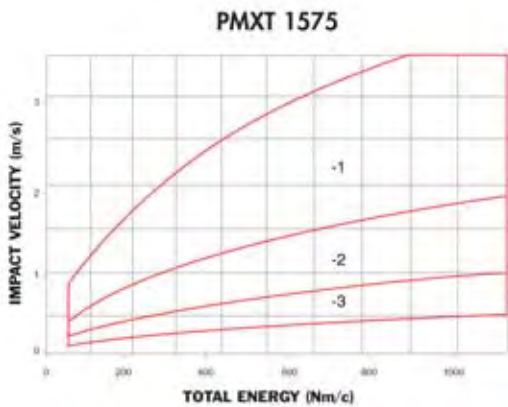
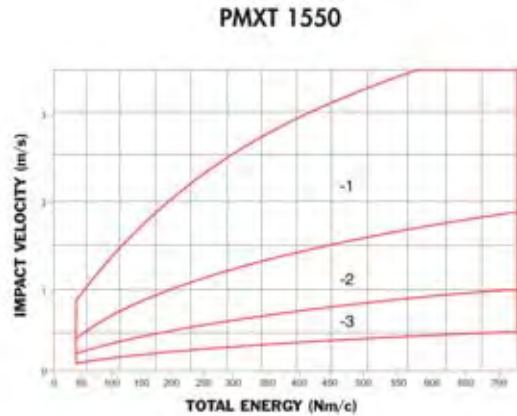
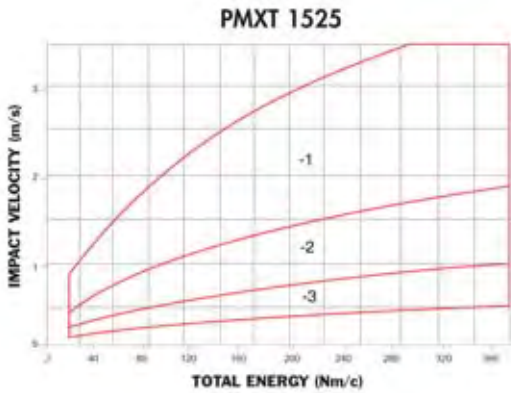
Catalog No./ Model	Part Number	Model Ref	FC mm	FH mm	RD mm	RE mm	SA mm	SB mm	Bolt Size mm	Mass g
RF M45 x 1.5	M58637129	PMXT 1500M Series	8,6	12,7	60,5	76,2	57,2	41,4	M8	260

Non-Adjustable Series Hydraulic Shock Absorbers

PMXT Mid-Bore Series

PM 120/125 → PMXT 2150 Series

Sizing Curves



Note: Minimum impact velocity for PM models is 0,1 m/sec