

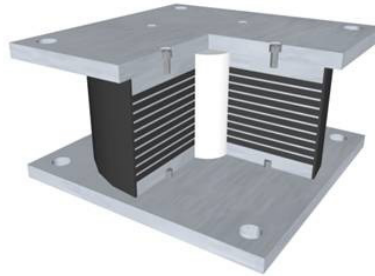


Seismic protection

LASTO[®]LRB

The tables below summarize the main dimensions for seismic design displacement. Values for further sets of input parameters can be provided upon request.

Important Note: This tables are intended only as a preliminary reference for the design of the isolator. The final design and technical details will be fully defined once all the parameters of the project are considered in the final design.



Legend

- d_{bd} Design seismic displacement
- D Rubber block diameter
- t_e Total rubber height
- H_B Total isolator's height
- N_{Sd} Maximum vertical service load
- N_{Ed} Maximum vertical seismic load
- F_1 Yield force
- F_2 Maximum horizontal force (at d_{bd})
- K_r Horizontal stiffness
- K_{eff} Effective stiffness
- K_v Vertical stiffness
- ξ Damping ratio

LASTO[®]LRB – $d_{bd} = 150$ mm

D (mm)	t_e (mm)	H_B (mm)	N_{Sd} (kN)	N_{Ed} (kN)	F_1 (kN)	F_2 (kN)	K_r (kN/mm)	K_{eff} (kN/mm)	K_v (kN/mm)	ξ (%)
500	96	219	58,50	3,100	240	500	1.84	3.34	1,356	29
600	112	241	98,50	5,250	260	580	2.27	4.05	2,115	28
700	128	263	14,250	8,400	280	630	2.71	4.69	2,987	28
800	144	319	18,200	12,600	330	800	3.14	5.34	3,936	26
900	152	345	26,750	16,750	350	880	3.58	5.89	4,938	26
1000	168	358	30,800	24,500	380	1000	4.21	6.75	6,258	25

LASTO[®]LRB – $d_{bd} = 200$ mm

D (mm)	t_e (mm)	H_B (mm)	N_{Sd} (kN)	N_{Ed} (kN)	F_1 (kN)	F_2 (kN)	K_r (kN/mm)	K_{eff} (kN/mm)	K_v (kN/mm)	ξ (%)
500	104	242	5,850	2,750	240	580	1.7	2.89	1,253	29
600	120	266	9,850	4,750	280	710	2.12	3.53	1,974	28
700	136	290	14,250	7,500	330	830	2.55	4.2	2,811	28
800	152	314	18,200	11,250	380	980	2.98	4.88	3,729	26
900	165	338	26,750	15,100	465	1170	3.41	6.59	4,703	26
1000	184	362	30,800	22,150	515	1280	3.84	6.42	5,713	25

LASTO[®]LRB – $d_{bd} = 250$ mm

D (mm)	t_e (mm)	H_B (mm)	N_{Sd} (kN)	N_{Ed} (kN)	F_1 (kN)	F_2 (kN)	K_r (kN/mm)	K_{eff} (kN/mm)	K_v (kN/mm)	ξ (%)
500	120	256	5,850	2,050	250	620	1.47	2.48	1,085	29
600	136	290	9,850	3,550	300	765	1.86	3.06	1,742	28
700	144	302	14,250	5,650	380	980	2.41	3.93	2,655	28
800	152	314	18,200	8,400	495	1240	2.98	4.96	3,729	26
900	168	338	26,750	11,250	580	1430	3.41	5.72	4,703	26
1000	184	362	30,800	16,500	670	1130	3.84	6.52	5,713	25



Seismic protection

LASTO®LRB – $d_{bd} = 300\text{mm}$

D (mm)	t_c (mm)	H_B (mm)	N_{Sd} (kN)	N_{Ed} (kN)	F_1 (kN)	F_2 (kN)	K_r (kN/mm)	K_{eff} (kN/mm)	K_v (kN/mm)	ξ (%)
500	136	290	4,450	1,550	270	660	1.3	2.19	957	29
600	152	314	7,400	2,650	330	830	1.67	2.77	1,559	28
700	160	326	10,750	4,250	400	1050	2.16	3.5	2,390	28
800	168	338	13,550	6,300	515	1325	2.69	4.41	3,374	26
900	184	362	20,100	8,450	620	1560	3.11	5.19	4,294	26
1000	192	374	23,050	12,400	740	1850	3.68	6.16	5,475	25

LASTO®LRB – $d_{bd} = 350\text{mm}$

D (mm)	t_c (mm)	H_B (mm)	N_{Sd} (kN)	N_{Ed} (kN)	F_1 (kN)	F_2 (kN)	K_r (kN/mm)	K_{eff} (kN/mm)	K_v (kN/mm)	ξ (%)
500	152	314	3,950	1,250	300	700	1.16	2.01	856	29
600	168	338	6,550	2,250	360	890	1.51	2.55	1,410	28
700	176	350	9,750	3,700	455	1140	1.97	3.27	2,172	28
800	184	362	12,200	5,600	560	1400	2.46	4.05	3,081	26
900	192	374	18,100	7,500	650	1690	2.98	4.83	4,115	26
1000	208	398	20,750	11,200	740	1930	3.4	5.52	5,054	25

LASTO®LRB – $d_{bd} = 400\text{mm}$

D (mm)	t_c (mm)	H_B (mm)	N_{Sd} (kN)	N_{Ed} (kN)	F_1 (kN)	F_2 (kN)	K_r (kN/mm)	K_{eff} (kN/mm)	K_v (kN/mm)	ξ (%)
500	160	326	3,600	1,250	315	755	1.1	1.89	814	29
600	176	350	5,950	2,150	420	990	1.45	2.49	1,346	28
700	192	374	8,750	3,450	515	1230	1.8	3.09	1,991	28
800	208	398	10,950	5,100	620	1500	2.17	3.73	2,725	26
900	216	410	16,250	6,750	690	1750	2.65	4.38	3,658	26
1000	224	422	18,750	10,100	760	2030	3.16	5.07	4,693	25

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