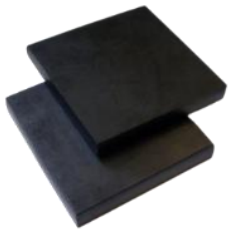
TECHNICAL DATA SHEET

UNREINFORCED ELASTOMERIC BEARINGS – PADS AND STRIPS

Elastomeric pads and strips are designed to provide a controlled distribution of load at the support, allowing horizontal displacements and rotations to be transferred to the support without inducing additional stresses in it. They protect the edges of reinforced concrete elements from spalling, while compensating for unevenness of the substrate and deviations from the horizontal plane.



Fields of application:
- Supports of precast and in-situ reinforced concrete structures;
- Supports of steel structures;
- Supports of other structures.

TYPE 10

TYPE 10 elastomeric pads and strips are manufactured from unreinforced elastomer of 70 Sh A hardness; the required dimensions are selected in accordance with the approved company standard up to a compressive stress of $\sigma_{R,d}$ = 21 N/mm^2. The design concept is based on the shape factor, taking into account cut-outs, holes and the required distances from the support edges in accordance with EN 1992.

INSTALLATION

Unreinforced strips and pads expand under load, so the width of the pad must be smaller than the bearing dimension of the structure. As a rule, we recommend a clearance of at least 25 mm (including chamfers) between the edge of the supporting structure and the elastomeric pad. Pads must be installed on surfaces that are flat and free of indentations and protrusions. Before installation, make sure that the surfaces of the elastomeric pad or strip are free of dirt, grease, solvents, ice or oil.

SIZES, SHAPES AND DIMENSIONAL TOLERANCES

The maximum product size is 1200 × 1200 mm. Standard pad and strip thicknesses are 10, 15 and 20 mm; other thicknesses are available on special order.

Tolerances:
- Hardness ± 5 Sh A;
- Length ± 5 mm;
- Width ± 3 mm;
- Thickness ± 1 mm.

Available pad shapes with:
- Chamfer;
- Rectangular hole;
- Notch;
- Slot;
- Rectangular cut-out;
- Round hole;
- Cut corner.

Technical information:
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TYPE 10 (t=10mm)

Thick. t, mm	Max. rot. α, ‰	Width b, mm	Maximum permissible design stress, $\sigma_{R,d}$ [N/mm^2]														
			Length l, mm														
			100	120	140	150	160	170	180	190	200	250	300	350	400	450	500
10	40.0	50	11.7	12.4	12.9	13.1	13.3	13.5	13.7	13.9	14.0	14.6	15.0	15.3	15.6	15.8	15.9
	40.0	60	13.1	14.0	14.7	15.0	15.3	15.5	15.8	16.0	16.2	16.9	17.5	17.9	18.3	18.5	18.8
	40.0	70	14.4	15.5	16.3	16.7	17.0	17.4	17.6	17.9	18.1	19.1	19.9	20.4	20.9	21.0	21.0
	40.0	80	15.6	16.8	17.8	18.3	18.7	19.0	19.4	19.7	20.0	21.0	21.0	21.0	21.0	21.0	21.0
	40.0	90	16.6	18.0	19.2	19.7	20.2	20.6	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0
	40.0	100	17.5	19.1	20.4	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0
	40.0	110	18.3	20.1	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0
	37.5	120	19.1	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0
	34.5	130	19.8	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0
	32.2	140	20.4	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0
	30.0	150	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0
	28.1	160	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0
	26.5	170	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0
	25.0	180	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0
	23.7	190	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0
	22.5	200	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0
	18.0	250	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0
	15.0	300	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0
	12.9	350	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0
	11.3	400	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0
	10.0	450	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0
	9.0	500	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0
	8.2	550	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0
	7.5	600	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0

Thick. t, mm	Max. rot. α, ‰	Width b, mm	Maximum permissible design load, $F_{d,max}$ [kN]														
			Length l, mm														
			100	120	140	150	160	170	180	190	200	250	300	350	400	450	500
10	40.0	50	58	74	90	98	107	115	123	132	140	182	225	268	311	354	398
	40.0	60	79	101	123	135	147	158	170	182	194	254	315	376	438	500	563
	40.0	70	101	130	160	175	191	207	222	238	254	335	417	500	584	662	735
	40.0	80	124	161	200	219	239	259	279	299	320	420	504	588	672	756	840
	40.0	90	149	194	242	266	290	315	340	359	378	473	567	662	756	851	945
	40.0	100	175	229	286	315	336	357	378	399	420	525	630	735	840	945	1050
	40.0	110	202	265	323	347	370	393	416	439	462	578	693	809	924	1040	1155
	37.5	120	229	302	353	378	403	428	454	479	504	630	756	882	1008	1134	1260
	34.5	130	257	328	382	410	437	464	491	519	546	683	819	956	1092	1229	1365
	32.2	140	286	353	412	441	470	500	529	559	588	735	882	1029	1176	1323	1470
	30.0	150	315	378	441	473	504	536	567	599	630	788	945	1103	1260	1418	1575
	28.1	160	336	403	470	504	538	571	605	638	672	840	1008	1176	1344	1512	1680
	26.5	170	357	428	500	536	571	607	643	678	714	893	1071	1250	1428	1607	1785
	25.0	180	378	454	529	567	605	643	680	718	756	945	1134	1323	1512	1701	1890
	23.7	190	399	479	559	599	638	678	718	758	798	998	1197	1397	1596	1796	1995
	22.5	200	420	504	588	630	672	714	756	798	840	1050	1260	1470	1680	1890	2100
	18.0	250	525	630	735	788	840	893	945	998	1050	1313	1575	1838	2100	2363	2625
	15.0	300	630	756	882	945	1008	1071	1134	1197	1260	1575	1890	2205	2520	2835	3150
	12.9	350	735	882	1029	1103	1176	1250	1323	1397	1470	1838	2205	2573	2940	3308	3675
	11.3	400	840	1008	1176	1260	1344	1428	1512	1596	1680	2100	2520	2940	3360	3780	4200
	10.0	450	945	1134	1323	1418	1512	1607	1701	1796	1890	2363	2835	3308	3780	4253	4725
	9.0	500	1050	1260	1470	1575	1680	1785	1890	1995	2100	2625	3150	3675	4200	4725	5250
	8.2	550	1155	1386	1617	1733	1848	1964	2079	2195	2310	2888	3465	4043	4620	5198	5775
	7.5	600	1260	1512	1764	1890	2016	2142	2268	2394	2520	3150	3780	4410	5040	5670	6300

Intermediate values may be obtained by interpolation. The values in the table do not account for holes.

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TYPE 10 (t=15mm)

Thick. t, mm	Max. rot. α, ‰	Width b, mm	Maximum permissible design stress, $\sigma_{R,d}$ [N/mm^2]														
			Length l, mm														
			100	120	140	150	160	170	180	190	200	250	300	350	400	450	500
15	40.0	70	9.6	10.3	10.9	11.1	11.4	11.6	11.8	11.9	12.1	12.8	13.2	13.6	13.9	14.1	14.3
	40.0	80	10.4	11.2	11.9	12.2	12.4	12.7	12.9	13.1	13.3	14.1	14.7	15.2	15.6	15.8	16.1
	40.0	90	11.1	12.0	12.8	13.1	13.4	13.7	14.0	14.3	14.5	15.4	16.2	16.7	17.1	17.5	17.8
	40.0	100	11.7	12.7	13.6	14.0	14.4	14.7	15.0	15.3	15.6	16.7	17.5	18.1	18.7	19.1	19.4
	40.0	110	12.2	13.4	14.4	14.8	15.2	15.6	15.9	16.3	16.6	17.8	18.8	19.5	20.1	20.6	21.0
	40.0	120	12.7	14.0	15.1	15.6	16.0	16.4	16.8	17.2	17.5	18.9	20.0	20.9	21.0	21.0	21.0
	40.0	130	13.2	14.6	15.7	16.3	16.7	17.2	17.6	18.0	18.4	20.0	21.0	21.0	21.0	21.0	21.0
	40.0	140	13.6	15.1	16.3	16.9	17.4	17.9	18.4	18.8	19.2	20.9	21.0	21.0	21.0	21.0	21.0
	40.0	150	14.0	15.6	16.9	17.5	18.1	18.6	19.1	19.6	20.0	21.0	21.0	21.0	21.0	21.0	21.0
	40.0	160	14.4	16.0	17.4	18.1	18.7	19.2	19.8	20.3	20.7	21.0	21.0	21.0	21.0	21.0	21.0
	39.7	170	14.7	16.4	17.9	18.6	19.2	19.8	20.4	20.9	21.0	21.0	21.0	21.0	21.0	21.0	21.0
	37.5	180	15.0	16.8	18.4	19.1	19.8	20.4	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0
	35.5	190	15.3	17.2	18.8	19.6	20.3	20.9	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0
	33.8	200	15.6	17.5	19.2	20.0	20.7	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0
	27.0	250	16.7	18.9	20.9	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0
	22.5	300	17.5	20.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0
	19.3	350	18.1	20.9	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0
	16.9	400	18.7	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0
	15.0	450	19.1	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0
	13.5	500	19.4	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0
	12.3	550	19.7	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0
	11.3	600	20.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0

Thick. t, mm	Max. rot. α, ‰	Width b, mm	Maximum permissible design load, $F_{d,max}$ [kN]														
			Length l, mm														
			100	120	140	150	160	170	180	190	200	250	300	350	400	450	500
15	40.0	70	67	87	107	117	127	138	148	159	169	223	278	333	389	445	501
	40.0	80	83	108	133	146	159	173	186	200	213	283	354	425	498	571	644
	40.0	90	99	130	161	177	194	210	227	244	261	347	436	526	617	709	801
	40.0	100	117	153	191	210	230	250	270	290	311	417	525	635	747	859	972
	40.0	110	134	177	221	244	268	291	315	340	364	490	620	752	886	1021	1155
	40.0	120	153	202	253	280	307	335	363	391	420	568	720	876	1008	1134	1260
	40.0	130	171	227	286	317	348	380	412	445	478	649	819	956	1092	1229	1365
	40.0	140	191	253	320	355	390	426	463	500	538	733	882	1029	1176	1323	1470
	40.0	150	210	280	355	394	434	474	515	557	600	788	945	1103	1260	1418	1575
	40.0	160	230	307	390	434	478	523	569	616	664	840	1008	1176	1344	1512	1680
	39.7	170	250	335	426	474	523	573	624	676	714	893	1071	1250	1428	1607	1785
	37.5	180	270	363	463	515	569	624	680	718	756	945	1134	1323	1512	1701	1890
	35.5	190	290	391	500	557	616	676	718	758	798	998	1197	1397	1596	1796	1995
	33.8	200	311	420	538	600	664	714	756	798	840	1050	1260	1470	1680	1890	2100
	27.0	250	417	568	733	788	840	893	945	998	1050	1313	1575	1838	2100	2363	2625
	22.5	300	525	720	882	945	1008	1071	1134	1197	1260	1575	1890	2205	2520	2835	3150
	19.3	350	635	876	1029	1103	1176	1250	1323	1397	1470	1838	2205	2573	2940	3308	3675
	16.9	400	747	1008	1176	1260	1344	1428	1512	1596	1680	2100	2520	2940	3360	3780	4200
	15.0	450	859	1134	1323	1418	1512	1607	1701	1796	1890	2363	2835	3308	3780	4253	4725
	13.5	500	972	1260	1470	1575	1680	1785	1890	1995	2100	2625	3150	3675	4200	4725	5250
	12.3	550	1086	1386	1617	1733	1848	1964	2079	2195	2310	2888	3465	4043	4620	5198	5775
	11.3	600	1200	1512	1764	1890	2016	2142	2268	2394	2520	3150	3780	4410	5040	5670	6300

Intermediate values may be obtained by interpolation. The values in the table do not account for holes.

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TYPE 10 (t=20mm)

Thick. t, mm	Max. rot. α, ‰	Width b, mm	Maximum permissible design stress, $\sigma_{R,d}$ [N/mm^2]														
			Length l, mm														
			100	120	140	150	160	170	180	190	200	250	300	350	400	450	500
20	40.0	100	8.8	9.5	10.2	10.5	10.8	11.0	11.3	11.5	11.7	12.5	13.1	13.6	14.0	14.3	14.6
	40.0	110	9.2	10.0	10.8	11.1	11.4	11.7	11.9	12.2	12.4	13.4	14.1	14.6	15.1	15.5	15.8
	40.0	120	9.5	10.5	11.3	11.7	12.0	12.3	12.6	12.9	13.1	14.2	15.0	15.6	16.2	16.6	16.9
	40.0	130	9.9	10.9	11.8	12.2	12.6	12.9	13.2	13.5	13.8	15.0	15.9	16.6	17.2	17.7	18.1
	40.0	140	10.2	11.3	12.3	12.7	13.1	13.4	13.8	14.1	14.4	15.7	16.7	17.5	18.1	18.7	19.1
	40.0	150	10.5	11.7	12.7	13.1	13.5	13.9	14.3	14.7	15.0	16.4	17.5	18.4	19.1	19.7	20.2
	40.0	160	10.8	12.0	13.1	13.5	14.0	14.4	14.8	15.2	15.6	17.1	18.3	19.2	20.0	20.7	21.0
	40.0	170	11.0	12.3	13.4	13.9	14.4	14.9	15.3	15.7	16.1	17.7	19.0	20.0	20.9	21.0	21.0
	40.0	180	11.3	12.6	13.8	14.3	14.8	15.3	15.8	16.2	16.6	18.3	19.7	20.8	21.0	21.0	21.0
	40.0	190	11.5	12.9	14.1	14.7	15.2	15.7	16.2	16.6	17.1	18.9	20.4	21.0	21.0	21.0	21.0
	40.0	200	11.7	13.1	14.4	15.0	15.6	16.1	16.6	17.1	17.5	19.4	21.0	21.0	21.0	21.0	21.0
	36.0	250	12.5	14.2	15.7	16.4	17.1	17.7	18.3	18.9	19.4	21.0	21.0	21.0	21.0	21.0	21.0
	30.0	300	13.1	15.0	16.7	17.5	18.3	19.0	19.7	20.4	21.0	21.0	21.0	21.0	21.0	21.0	21.0
	25.7	350	13.6	15.6	17.5	18.4	19.2	20.0	20.8	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0
	22.5	400	14.0	16.2	18.1	19.1	20.0	20.9	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0
	20.0	450	14.3	16.6	18.7	19.7	20.7	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0
	18.0	500	14.6	16.9	19.1	20.2	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0
	16.4	550	14.8	17.2	19.5	20.6	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0
	15.0	600	15.0	17.5	19.9	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0

Thick. t, mm	Max. rot. α, ‰	Width b, mm	Maximum permissible design load, $F_{d,max}$ [kN]														
			Length l, mm														
			100	120	140	150	160	170	180	190	200	250	300	350	400	450	500
20	40.0	100	88	115	143	158	172	187	203	218	233	313	394	476	560	644	729
	40.0	110	101	133	166	183	201	219	237	255	273	368	465	564	664	766	868
	40.0	120	115	151	190	210	230	251	272	293	315	426	540	657	775	895	1016
	40.0	130	129	170	215	238	261	285	309	334	358	486	619	755	893	1033	1174
	40.0	140	143	190	240	266	293	320	347	375	404	550	702	858	1016	1177	1340
	40.0	150	158	210	266	295	325	356	387	418	450	615	788	965	1145	1329	1514
	40.0	160	172	230	293	325	358	392	427	462	498	683	877	1076	1280	1487	1680
	40.0	170	187	251	320	356	392	430	468	507	547	753	968	1191	1420	1607	1785
	40.0	180	203	272	347	387	427	468	510	553	597	824	1063	1311	1512	1701	1890
	40.0	190	218	293	375	418	462	507	553	600	648	897	1160	1397	1596	1796	1995
	40.0	200	233	315	404	450	498	547	597	648	700	972	1260	1470	1680	1890	2100
	36.0	250	313	426	550	615	683	753	824	897	972	1313	1575	1838	2100	2363	2625
	30.0	300	394	540	702	788	877	968	1063	1160	1260	1575	1890	2205	2520	2835	3150
	25.7	350	476	657	858	965	1076	1191	1311	1397	1470	1838	2205	2573	2940	3308	3675
	22.5	400	560	775	1016	1145	1280	1420	1512	1596	1680	2100	2520	2940	3360	3780	4200
	20.0	450	644	895	1177	1329	1487	1607	1701	1796	1890	2363	2835	3308	3780	4253	4725
	18.0	500	729	1016	1340	1514	1680	1785	1890	1995	2100	2625	3150	3675	4200	4725	5250
	16.4	550	814	1138	1504	1702	1848	1964	2079	2195	2310	2888	3465	4043	4620	5198	5775
	15.0	600	900	1260	1669	1890	2016	2142	2268	2394	2520	3150	3780	4410	5040	5670	6300

Intermediate values may be obtained by interpolation. The values in the table do not account for holes.

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