

SKE - Type B Bearing

Part of the Dixon
International Group Ltd
www.dig.co.uk

Laminated Elastomeric Bearing

The SKE - Type B Laminated Elastomeric bearings comply to the latest Eurocode EN1337-3. The bearing is made of a specially formulated natural rubber compound, which is separated by steel reinforcement to achieve the desired performance. The reinforcing plates in the bearings are chemically bonded to the elastomer which prevents any relative movement between the steel/elastomer. The hot vulcanization process is carried on, equally distributed between the rubber and steel layers and this is cured under uniform heat and pressure. Natural rubber has good resistance against change in temperature and other parameters such as ozone, UV and chemicals.

Steel Reinforced Elastomeric bearings are designed to meet ultimate limit provision and if they are designed for loads greater than 4000kN the size becomes larger. Overall thickness of such bearings depends on rotation and translation requirements, as these are achieved by deformation of elastomer and the sliding parts are completely avoided. There must be suitable distribution of compressive, shear and rotational stiffness within the bearing. Shape factor plays an important role to control stress in reinforcement and strain in elastomer by choosing the appropriate internal elastomer thickness. Elastomeric bearings are suitable for highway and railway bridges, as translation and rotation may occur about either axis where translation direction is not defined.



Each SK laminated elastomeric bearing is subjected to 'quick production test' before despatch to site. Compression and shear tests can be carried on bearings if a supporting test certificate is required. Strict quality control on every material and manufacturing process is monitored for complete traceability. A design service is also available to assist engineers in selecting standard and non-standard sizes of laminated elastomeric bearings.

Product Code

Typical reference: E300240(10.0)2437

E = SKE type bearing.
300 = Transverse dimension mm.
240 = Longitudinal dimension mm.
(10.0) = Internal rubber layer thickness mm.
2 = No. of internal rubber layers.
4 = Thickness of internal steel reinforcement plates mm.
3 = Upper and lower rubber 'cover' mm (3mm as standard).
7 = Edge rubber 'cover' mm (7.5mm as standard).



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Bearing Code	Plan Size (mm)	Max ULS Load	Comp. Stiffness	Shear Deflection	Shear Stiff. Free	Rotation	Rotational Stiff
E	Length x Width x Height (mm)	No Shear/No Rotation (kN)	(kN/mm)	(mm)	kN/mm	Rads	(kNm/rad)
E229152(06.0)1337	229 x 152 x 18	857	961	6	2.6	0.0097	576
E229152(06.0)2337	229 x 152 x 27	855	480	12	1.74	0.0125	288
E229152(06.0)3337	229 x 152 x 36	699	320	18	1.3	0.0139	192
E229152(08.0)1337	229 x 152 x 20	643	423	8	2.2	0.0169	243
E229152(08.0)2337	229 x 152 x 31	572	212	16	1.4	0.0216	121
E229152(08.0)3337	229 x 152 x 42	419	141	24	1.0	0.0238	81.1
E229152(10.0)1337	229 x 152 x 22	514	221	10	2.0	0.0261	125
E229152(10.0)2337	229 x 152 x 35	387	111	20	1.2	0.0333	62
E229152(10.0)3337	229 x 152 x 48	280	74	30	0.9	0.0366	42
E229152(12.0)1337	229 x 152 x 24	429	130	12	1.7	0.0373	72
E229152(12.0)2337	229 x 152 x 39	280	65	24	1.0	0.0475	36
E229152(12.0)3337	229 x 152 x 54	200	43	36	0.7	0.0522	24
E320165(06.0)1337	320 x 165 x 18	1610	2080	6	4	0.0080	1377
E320165(06.0)2337	320 x 165 x 27	1605	1040	12	2.6	0.0102	689
E320165(06.0)3337	320 x 165 x 36	1438	693	18	2.0	0.0112	459
E320165(08.0)1337	320 x 165 x 20	1208	933	8	3.4	0.0137	581
E320165(08.0)2337	320 x 165 x 31	1176	467	16	2.2	0.0173	290
E320165(08.0)3337	320 x 165 x 42	863	311	24	1.6	0.0190	194
E320165(10.0)1337	320 x 165 x 22	966	492	10	3.0	0.0211	297
E320165(10.0)2337	320 x 165 x 35	796	246	20	1.8	0.0265	149
E320165(10.0)3337	320 x 165 x 48	575	164	30	1.3	0.0290	99
E320165(12.0)1337	320 x 165 x 24	805	290	12	2.6	0.0300	172
E320165(12.0)2337	300 x 165 x 39	575	145	24	1.6	0.0377	86
E320165(12.0)3337	300 x 165 x 54	411	97	36	1.1	0.0412	57
E300240(06.0)1437	300 x 240 x 20	2822	4234	6	5.4	0.0043	8686
E300240(06.0)2437	300 x 240 x 30	2822	2117	12	3.6	0.0056	4343
E300240(06.0)3437	300 x 240 x 40	2822	1411	18	2.7	0.0063	2895
E300240(08.0)1437	300 x 240 x 22	2116	1956	8	4.6	0.0072	3664
E300240(08.0)2437	300 x 240 x 34	2116	978	16	2.9	0.0094	1832
E300240(08.0)3437	300 x 240 x 46	2116	652	24	2.2	0.0105	1221
E300240(10.0)1437	300 x 240 x 24	1693	1047	10	4.1	0.0110	1876
E300240(10.0)2437	300 x 240 x 38	1693	524	20	2.5	0.0143	938
E300240(10.0)3437	300 x 240 x 52	1512	349	30	1.8	0.0158	625



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E300240(12.0)1437	300 x 240 x 26	1411	622	12	3.6	0.0157	1086
E300240(12.0)2437	300 X 240 x 42	1411	311	24	2.2	0.0202	543
E300240(12.0)3437	300 X 240 x 58	1080	207	36	1.5	0.0223	362
E455220(06.0)1437	455 x 220 x 20	4415	7037	6	7.5	0.0047	9606
E455220(06.0)2437	455 x 220 x 30	4415	3519	12	5.0	0.0061	4803
E455220(06.0)3437	455 x 220 x 40	4415	2346	18	3.8	0.0067	3202
E455220(08.0)1437	455 x 220 x 22	3311	3307	8	6.4	0.0079	4053
E455220(08.0)2437	455 x 220 x 34	3311	1654	16	4.1	0.0100	2026
E455220(08.0)3437	455 x 220 x 46	3232	1103	24	3.0	0.0110	1351
E455220(10.0)1437	455 x 220 x 24	2649	1788	10	5.6	0.0119	2075
E455220(10.0)2437	455 x 220 x 38	2649	894	20	3.5	0.0150	1038
E455220(10.0)3437	455 x 220 x 52	2155	596	30	2.5	0.0164	692
E455220(12.0)1437	455 x 220 x 26	2207	1067	12	5.0	0.0168	1201
E455220(12.0)2437	455 x 220 x 42	2155	533	24	3.0	0.0211	600
E455220(12.0)3437	455 x 220 x 58	1539	356	36	2.1	0.0230	400
E420300(06.0)1437	420 x 300 x 20	6758	11705	6	9.5	0.0028	41640
E420300(06.0)2437	420 x 300 x 30	6758	5852	12	6.3	0.0038	20820
E420300(06.0)3437	420 x 300 x 40	6758	3902	18	4.7	0.0043	13880
E420300(08.0)1437	420 x 300 x 22	5069	5696	8	8.1	0.0047	17567
E420300(08.0)2437	420 x 300 x 34	5069	2848	16	5.2	0.0061	8783
E420300(08.0)3437	420 x 300 x 46	5069	1899	24	3.8	0.0069	5856
E420300(10.0)1437	420 x 300 x 24	4055	3140	10	7.1	0.0071	8994
E420300(10.0)2437	420 x 300 x 38	4055	1570	20	4.4	0.0091	4497
E420300(10.0)3437	420 x 300 x 52	4055	1047	30	3.2	0.0101	2998
E420300(12.0)1437	420 x 300 x 26	3379	1896	12	6.3	0.0099	5205
E420300(12.0)2437	420 x 300 x 42	3379	948	24	3.8	0.0128	2603
E420300(12.0)3437	420 x 300 x 58	3276	632	36	2.7	0.0141	1735
E500320(06.0)1437	500 x 320 x 20	9694	17452	6	12	0.0025	72163
E500320(06.0)2437	500 x 320 x 30	9694	8726	12	8.0	0.0034	36082
E500320(06.0)3437	500 x 320 x 40	9694	5817	18	6.0	0.0038	24054
E500320(08.0)1437	500 x 320 x 22	7271	8712	8	10.3	0.0041	30444
E500320(08.0)2437	500 x 320 x 34	7271	4356	16	6.5	0.0054	15222
E500320(08.0)3437	500 x 320 x 46	7271	2904	24	4.8	0.0060	10148
E500320(10.0)1437	500 x 320 x 24	5817	4874	10	9.0	0.0062	15587
E500320(10.0)2437	500 x 320 x 38	5817	2437	20	5.5	0.0079	7794
E500320(10.0)3437	500 x 320 x 52	5817	1625	30	4.0	0.0088	5196
E500320(12.0)1437	500 x 320 x 26	4847	2970	12	8.0	0.0086	9020
E500320(12.0)2437	500 x 320 x 42	4847	1485	24	4.8	0.0110	4510
E500320(12.0)3437	500 x 320 x 58	4847	990	36	3.4	0.0122	3007