



Manufacturer of Bridge Components

## Building Materials

### STRIP BEARINGS

#### Structural Movements control Guide

### FR Series Elastomeric Strip Bearing

(Replaces old FR10 products)

**Based on BS 5400 –Part 9**

(In Conformance to) **60 IRHD**

Structural movements, due to various forces such as longitudinal, transverse and rotational, can effectively cause problems to structures such as building, bridge, tunnel, etc. One highly effective and efficient methods of dealing with these forces is the use of Elastomeric Bearing Strips. One of the key advantages of these strips is to isolate vibration in the structure; in line with this, it is important to note that natural rubber is very low in deformation over a constant load. This system, in contrast with other potential solutions, is inexpensive, with comparatively minimal effort required when it comes to installation.

The following table gives some information on the selection of FR Series:

Type	Width mm	Height mm	Maximum Vertical Load KN	Minimum Vertical Load KN	Maximum Shear Deflection (Along the Width) mm	Vertical Deflection mm	Horizontal Force Exerted (On Structure) KN	Rotation (Across the With) Rad
FR100-5	100	5	800	269	3.5	0.092	81	0.0027
FR150-5	150	5	1200	403	3.5	0.044	121	0.0009
FR200-5	200	5	1600	536	3.5	0.027	161	0.0004
FR250-5	250	5	2000	671	3.5	0.019	201	0.0002
FR300-5	300	5	2400	806	3.5	0.014	242	0.0001
FR100-10	100	10	400	269	7	0.7	81	0.0220
FR150-10	150	10	875	403	7	0.4	121	0.0071



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FR200-10	200	10	1500	536	7	0.2	161	0.0033
FR250-10	250	10	2000	671	7	0.2	201	0.0018
FR300-10	300	10	2400	806	7	0.1	242	0.0011
FR100-15	100	15	270	269	10	2.5	81	0.074
FR150-15	150	15	580	403	10	1.2	121	0.0240
FR200-15	200	15	990	536	10	0.7	161	0.0110
FR250-15	250	15	1500	671	10	0.5	201	0.0061
FR300-15	300	15	2000	806	10	0.4	242	0.0038
FR100-20	100	20	200	269	14	5.9	81	0.175
FR150-20	150	20	580	403	14	2.8	121	0.0569
FR200-20	200	20	750	536	14	1.7	161	0.0261
FR250-20	250	20	1120	671	14	1.2	201	0.0145
FR300-20	300	20	1550	806	14	0.9	242	0.0091
FR100-25	100	25	160	269	17.5	11.43	81	0.3430
FR150-25	150	25	350	403	17.5	5.6	121	0.1111
FR200-25	200	25	595	536	17.5	3.4	161	0.0510
FR250-25	250	25	890	671	17.5	2.4	201	0.0283
FR300-25	300	25	1240	806	17.5	1.8	242	0.0177
FR100-30	100	30	135	269	21	19.7	81	0.5928
FR150-30	150	30	291	403	21	9.6	121	0.1920
FR200-30	200	30	500	536	21	5.9	161	0.0882
FR250-30	250	30	745	671	21	4.1	201	0.0490
FR300-30	300	30	1030	806	21	3.1	242	0.0307



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**Please Note That:**

- Total Vertical Deflection of a bearing may vary  $\pm 15\%$  of the Estimation which is given above and where this parameter is critical to design of the structure, the stiffness of the bearing should be ascertained by tests.
- The Friction Coefficient in calculations is considered to be 0.3. This value can be varied where the seating material of the bearings are some material other than steel or concrete.
- Maximum allowable rotation in the above table is calculated to avoid the uplift even in the minimum permitted vertical load.
- AssaFlex Engineering Department will be pleased to tailor Bearings to meet your needs and requirements in a more cost effective manner, if we have knowledge and specifications of your project.