



**D.S. BROWN**  
A GIBRALTAR INDUSTRIES COMPANY

**Design Data**

**Bridges**

REV 01/12

Structural Bearing Assemblies  
**Versiflex™ HLMR Disc Bearing Assemblies Uni-Directional DMG Series - 10%**

**Design Basis:** AASHTO 17th Edition w/ Interims – Section 14

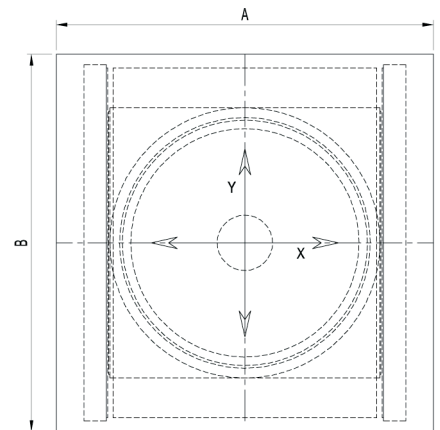
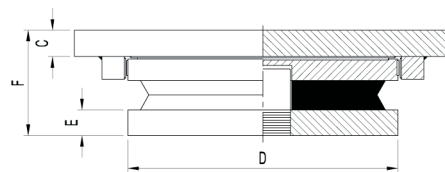
**Rotation:** 0.02 Radians

**Horizontal Capacity:** 10% of Vertical Capacity

**Movement:** X = ±0.063"

Y = As shown below

**Steel Strength:** Fy = 50 ksi



**DMG SERIES - 10%**

Model Number	Vertical Capacity (Klps)	Horizontal Capacity (Klps)	Movement						
			Y	A	B	C	D	E	F
DMG100	100	10	3	12.50	11.50	1.000	7.125	0.750	3.750
DMG200	200	20	3	15.25	14.00	1.000	9.375	0.750	4.250
DMG300	300	30	3	17.50	15.75	1.000	11.125	0.750	4.625
DMG400	400	40	3	19.00	17.50	1.000	12.500	0.750	4.750
DMG500	500	50	3	20.75	18.75	1.000	13.875	0.750	5.000
DMG600	600	60	3	22.25	20.25	1.000	15.000	0.875	5.375
DMG700	700	70	3	23.50	21.25	1.000	16.125	1.000	5.625
DMG800	800	80	3	24.75	22.50	1.000	17.125	1.000	5.875
DMG900	900	90	3	25.75	23.50	1.000	18.000	1.000	6.000
DMG1000	1000	100	3	27.00	24.50	1.000	19.000	1.125	6.375
DMG1250	1250	125	4	29.50	27.75	1.000	21.000	1.250	6.750
DMG1500	1500	150	4	31.75	29.75	1.000	22.875	1.375	7.250
DMG1750	1750	175	4	34.00	31.50	1.000	24.625	1.500	7.750
DMG2000	2000	200	4	36.00	33.25	1.000	26.125	1.500	8.000
DMG2250	2250	225	6	37.75	37.00	1.000	27.750	1.625	8.250
DMG2500	2500	250	6	39.75	38.50	1.250	29.250	1.750	9.000
DMG2750	2750	275	6	41.50	40.00	1.250	30.625	1.750	9.250
DMG3000	3000	300	6	43.00	41.50	1.250	32.125	1.875	9.625

**Bridge the World with Leading Infrastructure Solutions**

**Versiflex™ HLMR Disc Bearing Assemblies  
Uni-Directional DMG Series - 10%**

## Structural Bearing Assemblies

2 of 2

**DESIGN CONSIDERATIONS**

- A. Bearing assembly component dimensions are based on assumed structural conditions and a skew of 0°.
- B. Translational movements (Y) shown in the chart reflect total required structural movement. Bearing components are detailed to accommodate the structural movement plus a  $\pm 1"$  factor of safety.
- C. Sole plates are designed for a welded connection to a steel girder flange. Sole plate dimensions will vary for bolted connections to steel flanges and/or for bearings supporting concrete superstructure elements.
- D. Masonry plate information has been excluded from the bearing details. Masonry plate dimensions are based on the allowable bearing stress of the substructure unit and the anchorage requirements.

A recommended method of determining the masonry plate thickness is to use a 60° load distribution through the plate. The effective loaded area should be used to calculate the bending moment of the plate and the concrete bearing pressure.

