Application

Herculon Modified Type B (HLMB) Bearings (see Fig 2-1) have been developed to fulfil the need for a simple, low friction bearing on corbels and columns where a continuous slipjoint is inappropriate. They can be used under cast in-situ and post-tensioned slabs and beams.

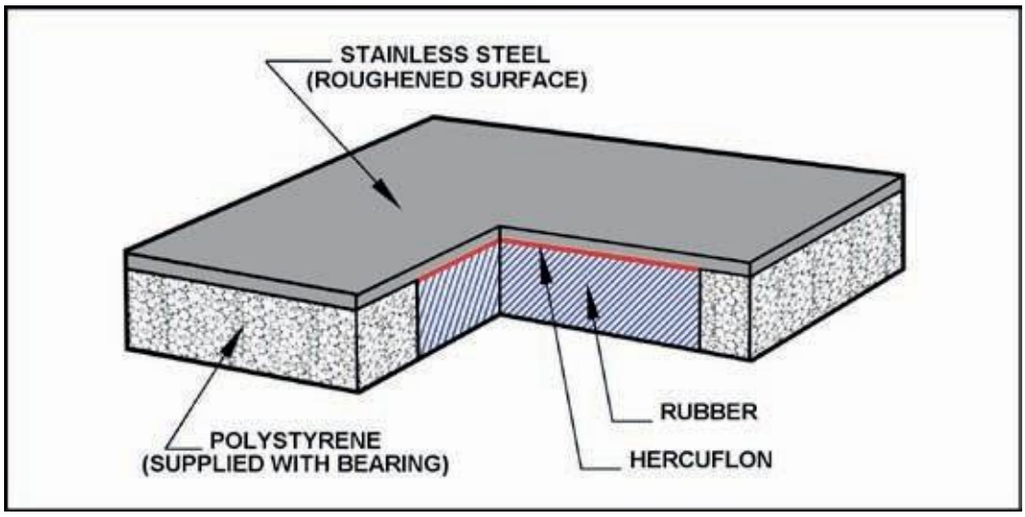

Fig 2-1 Herculon Modified Type B Bearing

Materials

HLMB bearings consist of a stainless steel top plate roughened on the upper surface and polished on the lower. This plate slides against a *Hercuflon* coated natural rubber pad that is bordered by polystyrene strips.

Types

There are two basic types of *HLMB* bearing available:

- Standard, and
- Seismic.

The seismic bearings are manufactured from the same materials as the standard bearings but they have greater all round expansion capacity (±50 mm) to accommodate the larger movements which occur during seismic shock.

Design

The following design limitations are recommended:

- Coefficient of friction 0.06.
- Expansion capacity up to ±20 mm (standard), up to ±50 mm (seismic).
- Maximum contact stress 3 MPa.
- Maximum temperature 80°C.
- Maximum rotation up to 0.006 radians.

⚠ NOTE

Non standard bearings can be manufactured to accommodate larger expansions and differing rotations. The standard bearings should not be used under precast elements, a modified version being available for this situation. If in any doubt, please contact our Technical Department.

Installation

Fig 2-2 shows a *HLMB* bearing being cast into an in-situ roof slab. Before leaving our factory the bearing pad is blocked with polystyrene strips and the whole bearing assembly is sealed with paper tape. This tape excludes dirt and dust from the *Hercuflon* face and should not be removed.

The *HLMB* bearings should be installed as shown in Fig 2-2 and in accordance with the following instructions:

1. Prepare concrete seatings with a nominal 10 mm thick mortar pad with a wood float finish so that the level does not vary more than 2 mm from a straight edge placed in any direction across the seating. The horizontal plane of the seating should vary no more than 3 mm from the elevations shown on the plans.

2. Place the bearing in the position shown on the plans and cut any strips of polystyrene required for blocking out around the bearing.

3. Remove the bearing and the loose polystyrene strips and brush off any dust or grit.

4. Apply *Hercules Adhesive Type HBA* and bond into position.

5. Cover the joins between the bearing and polystyrene strips with polythene sheet or masking tape to prevent the ingress of concrete during the pour.

6. Pour concrete directly onto the roughened top surface of the stainless steel top plate.

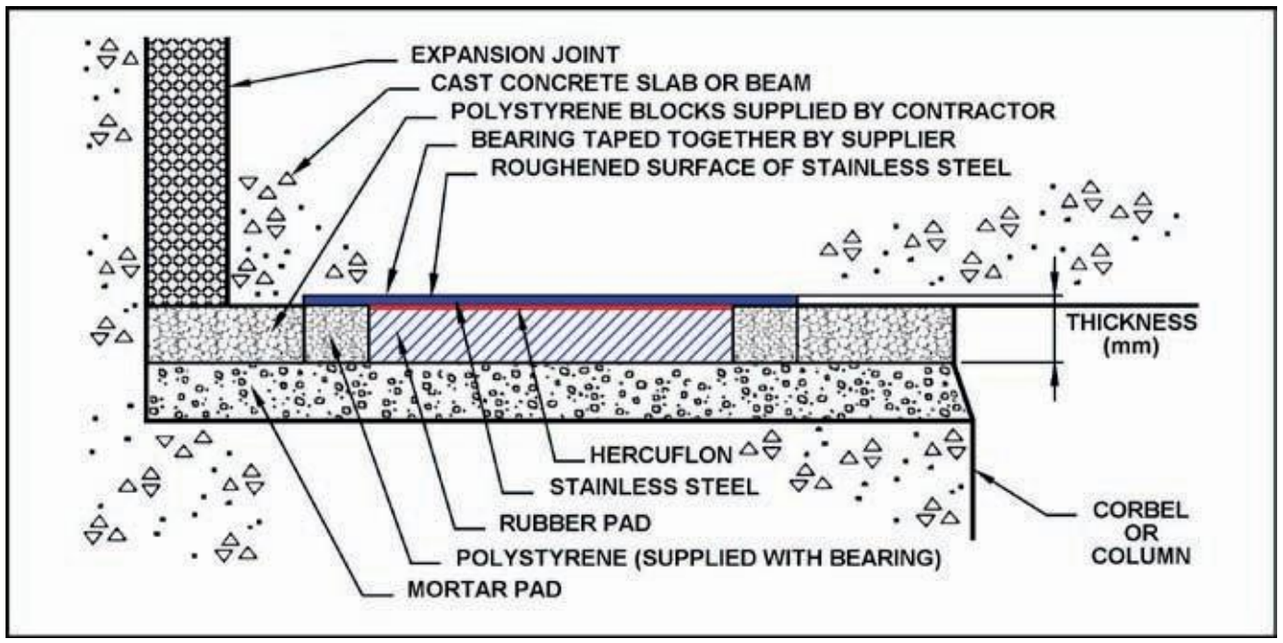

Fig 2-2 Installation of Herculon Modified Type B Bearing

Ordering

Table 2-1 (standard) and Table 2-2 (seismic) detail the range of sizes that are available. Fig 2-3 provides the dimension reference points reflected in the tables. Please contact our Technical Department if these sizes do not suit your requirements.

Table 2-1 Part Numbers for Standard Herculon Modified Type B Bearings

Part Number	Max. Vertical Working Load (kN)	Top Plate (mm) C x D (for ±20 mm expansion)	Rubber Pad (mm) A x B x E (for 0.006 rads rotation)	Overall Dimensions (mm) C X D x F (nominal)	Bearing Weight (kg)
HLMB/10	10	90 x 110 x 1.5	50 x 100 x 3	90 x 110 x 5	0.20
HLMB/25	25	115 x 160 x 1.5	75 x 150 x 6	115 x 160 x 8	0.35
HLMB/50	50	140 x 210 x 1.5	100 x 200 x 6	140 x 210 x 8	0.50
HLMB/75	75	160 x 250 x 1.5	120 x 240 x 6	160 x 250 x 8	0.70
HLMB/100	100	180 x 290 x 1.5	140 x 280 x 10	180 x 290 x 12	1.15
HLMB/125	125	195 x 320 x 1.5	155 x 310 x 10	195 x 320 x 12	1.40
HLMB/150	150	200 x 330 x 1.5	160 x 320 x 10	200 x 330 x 12	1.50
HLMB/175	175	210 x 350 x 1.5	170 x 340 x 10	210 x 350 x 12	1.65
HLMB/200	200	215 x 360 x 1.5	175 x 350 x 10	215 x 360 x 12	1.75
HLMB/225	225	230 x 390 x 1.5	190 x 380 x 10	230 x 390 x 12	2.05
HLMB/250	250	245 x 420 x 1.5	205 x 410 x 12	245 x 420 x 14	2.60
HLMB/275	275	255 x 440 x 1.5	215 x 430 x 12	255 x 440 x 14	2.90
HLMB/300	300	260 x 450 x 1.5	220 x 440 x 12	260 x 450 x 14	3.00
HLMB/325	325	265 x 460 x 1.5	225 x 450 x 12	265 x 460 x 14	3.10
HLMB/350	350	275 x 480 x 1.5	235 x 470 x 12	275 x 480 x 14	3.40
HLMB/375	375	285 x 500 x 1.5	245 x 490 x 12	285 x 500 x 14	3.65
HLMB/400	400	290 x 510 x 1.5	250 x 500 x 12	290 x 510 x 14	3.80
HLMB/425	425	295 x 530 x 1.5	255 x 520 x 12	295 x 530 x 14	4.00
HLMB/450	450	300 x 550 x 1.5	260 x 540 x 12	300 x 550 x 14	4.25
HLMB/475	475	310 x 570 x 1.5	270 x 560 x 12	310 x 570 x 14	4.55
HLMB/500	500	320 x 580 x 1.5	280 x 570 x 20	320 x 580 x 22	5.60
HLMB/525	525	330 x 590 x 1.5	290 x 580 x 20	330 x 590 x 22	5.90
HLMB/550	550	340 x 610 x 1.5	300 x 600 x 20	340 x 610 x 22	6.30
HLMB/575	575	345 x 620 x 1.5	305 x 610 x 20	345 x 620 x 22	6.50
HLMB/600	600	350 x 630 x 1.5	310 x 620 x 20	350 x 630 x 22	6.70

⚠ NOTE

Top plates are 1.5 mm thick stainless steel to AS 1449 (Grade 316)

***HERCUFLON* coating is 0.25 mm thick to AS 1195 (Grade B)**

Natural rubber pad is 60° durometer

Table 2-2 Part Numbers for Seismic Herculon Modified Type B Bearings

Part Number	Max. Vertical Working Load (kN)	Top Plate (mm) C x D (for ±50 mm expansion in all directions)	Rubber Pad (mm) A x B x E (for 0.006 rads rotation)	Overall Dimensions (mm) C X D x F (nominal)	Bearing Weight (kg)
HLMB(SE)/10	10	150 x 200 x 1.5	50 x 100 x 3	150 x 200 x 5	0.40
HLMB(SE)/25	25	175 x 250 x 1.5	75 x 150 x 6	175 x 250 x 8	0.70
HLMB(SE)/50	50	200 x 300 x 1.5	100 x 200 x 6	200 x 300 x 8	0.95
HLMB(SE)/75	75	220 x 340 x 1.5	120 x 240 x 6	220 x 340 x 8	1.20
HLMB(SE)/100	100	240 x 380 x 1.5	140 x 280 x 10	240 x 380 x 12	1.70
HLMB(SE)/125	125	255 x 410 x 1.5	155 x 310 x 10	255 x 410 x 12	2.00
HLMB(SE)/150	150	260 x 420 x 1.5	160 x 320 x 10	260 x 420 x 12	2.10
HLMB(SE)/175	175	270 x 440 x 1.5	170 x 340 x 10	270 x 440 x 12	2.30
HLMB(SE)/200	200	275 x 450 x 1.5	175 x 350 x 10	275 x 450 x 12	2.40
HLMB(SE)/225	225	290 x 480 x 1.5	190 x 380 x 10	290 x 480 x 12	2.75
HLMB(SE)/250	250	305 x 510 x 1.5	205 x 410 x 12	305 x 510 x 14	3.30
HLMB(SE)/275	275	315 x 530 x 1.5	215 x 430 x 12	315 x 530 x 14	3.60
HLMB(SE)/300	300	320 x 540 x 1.5	220 x 440 x 12	320 x 540 x 14	3.75
HLMB(SE)/325	325	325 x 550 x 1.5	225 x 450 x 12	325 x 550 x 14	3.90
HLMB(SE)/350	350	335 x 570 x 1.5	235 x 470 x 12	335 x 570 x 14	4.15
HLMB(SE)/375	375	345 x 590 x 1.5	245 x 490 x 12	345 x 590 x 14	4.45
HLMB(SE)/400	400	350 x 600 x 1.5	250 x 500 x 12	350 x 600 x 14	4.70
HLMB(SE)/425	425	355 x 620 x 1.5	255 x 520 x 12	355 x 620 x 14	4.90
HLMB(SE)/450	450	360 x 640 x 1.5	260 x 540 x 12	360 x 640 x 14	5.10
HLMB(SE)/475	475	370 x 660 x 1.5	270 x 560 x 12	370 x 660 x 14	5.45
HLMB(SE)/500	500	380 x 670 x 1.5	280 x 570 x 20	380 x 670 x 22	6.50
HLMB(SE)/525	525	390 x 680 x 1.5	290 x 580 x 20	390 x 680 x 22	6.80
HLMB(SE)/550	550	400 x 700 x 1.5	300 x 600 x 20	400 x 700 x 22	7.25
HLMB(SE)/575	575	405 x 710 x 1.5	305 x 610 x 20	405 x 710 x 22	7.60
HLMB(SE)/600	600	410 x 720 x 1.5	310 x 620 x 20	410 x 720 x 22	7.85

⚠ NOTE

Top plates are 1.5 mm thick stainless steel to AS 1449 (Grade 316)

***HERCUFLON* coating is 0.25 mm thick to AS 1195 (Grade B)**

Natural rubber pad is 60° durometer

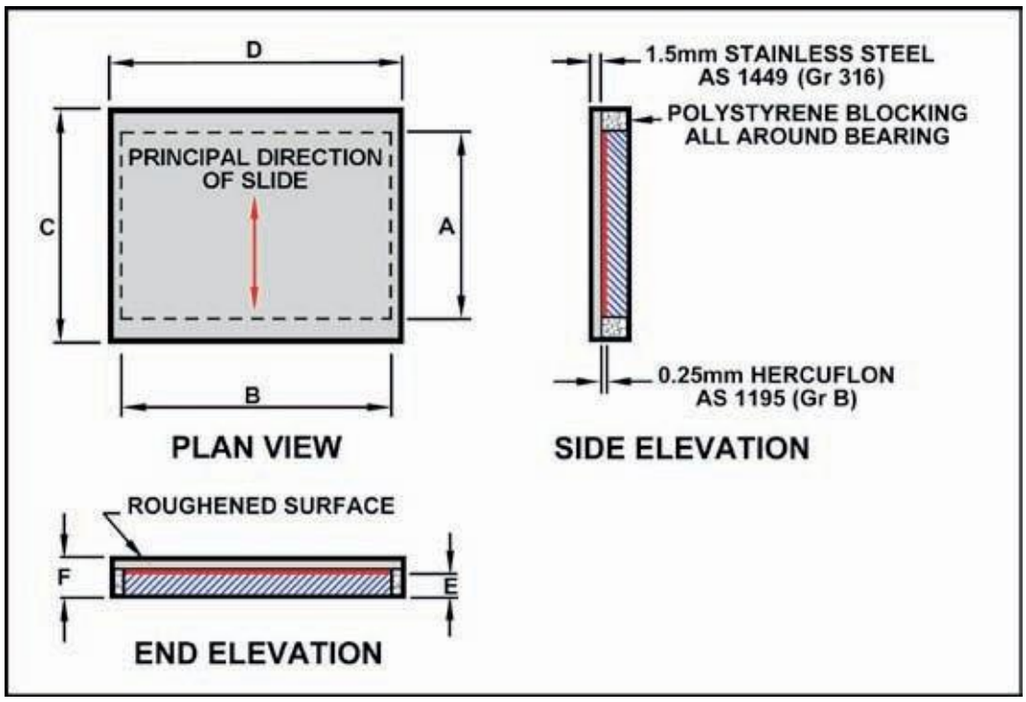

Fig 2-3 Dimension Reference Points