

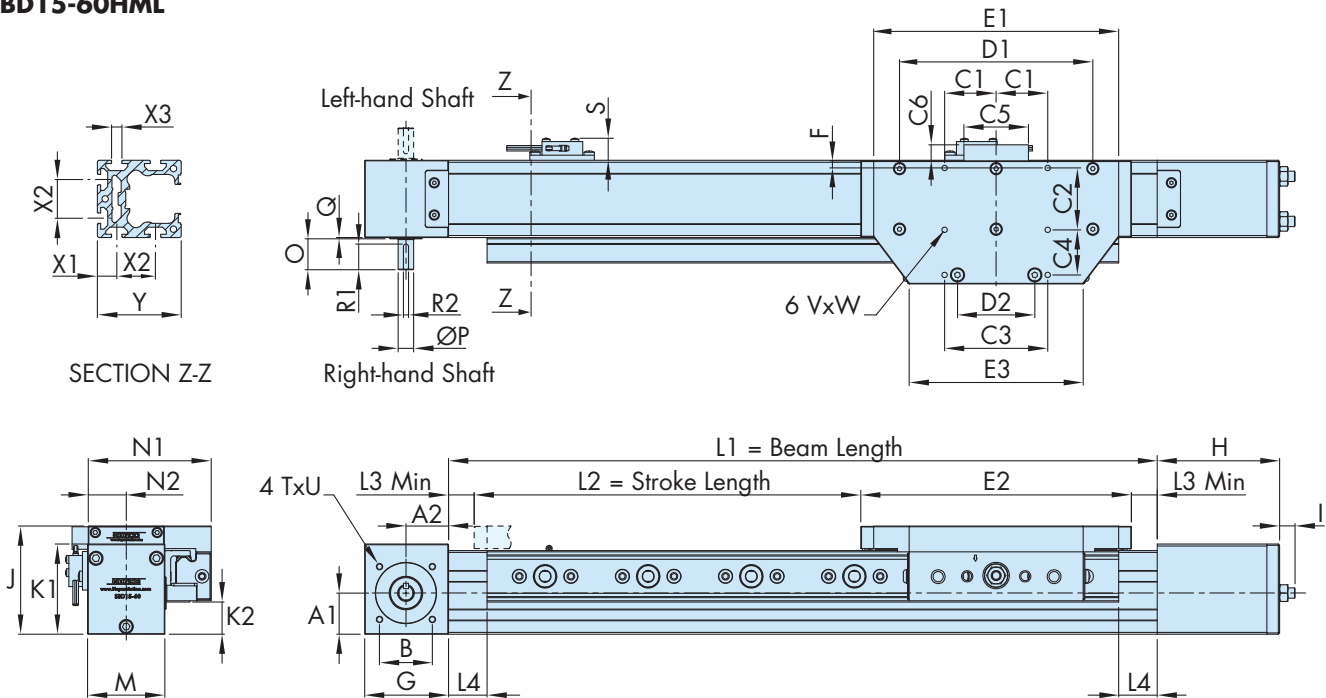
This data sheet interacts with
SBD & UtiliTrak
 Catalogue

SBD High Moment Load Option

Non-cleanroom SBD units are available with a high moment load option. These versions have a Bishop Wisecarver UtiliTrak® slide attached externally to the beam. This results in a much improved moment load capacity in the Ms direction. The main dimensions of the SBD high moment load units are shown below. Further details can be obtained from the 3D CAD files available from Hepco's technical department or at www.HepcoMotion.com.

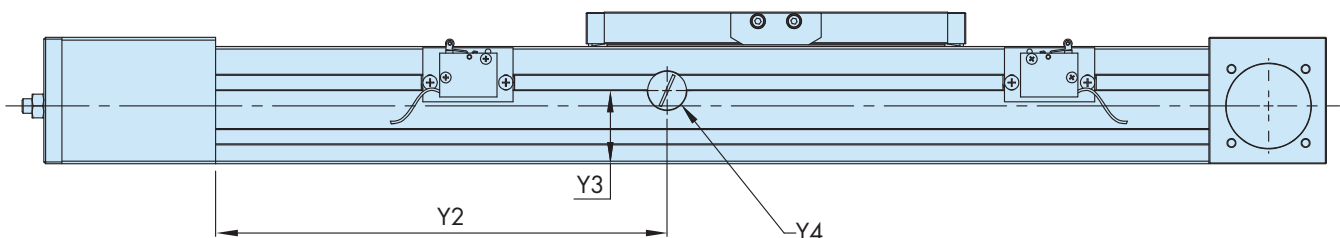
High moment load units are supplied with beam lengths in increments of 60mm up to 3660mm for SBD15-60, 60mm up to 3700mm for SBD20-80 and 80mm up to 3720mm for SBD30-100. The nominal stroke is calculated with the internal carriage against the buffers, but a clearance should be provided to allow for overrun.

SBD15-60HML



SBD Unit	A1	A2	B	C1	C2	C3	C4	C5	C6	D1	D2	E1	E2	E3	F	G	H	I	J	K1	K2	L1 (min)
SBD15-60HML	32	33	41	40	48	80	35	50	12.5	150	60	190	210	135	5.5	65	95	11	84	70	25	550

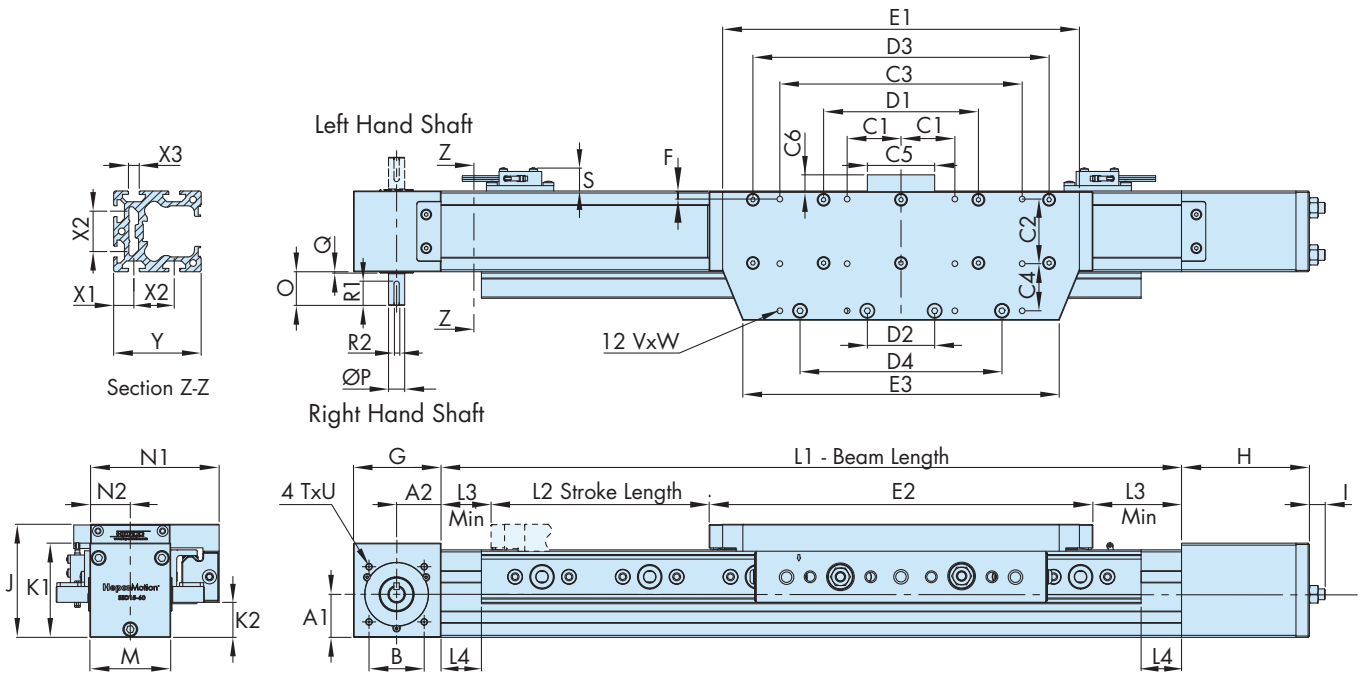
SBD Unit	L2 Nominal Stroke	L3 (min)	L4	M	N1	N2	O	P	Q	R1	R2	S	T x U	V x W	X1	X2	X3	Y	Y2	Y3	Y4
SBD15-60HML	L1-250	20	30	60	95.5	29.5	24	12	1	20	4	17	M5x10	M5x8	15	30	8	65	250	40.5	M15



Re-lubrication of the ball guide carriage block is via an access point in the side of the beam (see above), and closed off with a threaded plug. The lubrication interval depends on length of stroke, speed and duty. For further details regarding lubrication procedures please contact Hepco's technical department.

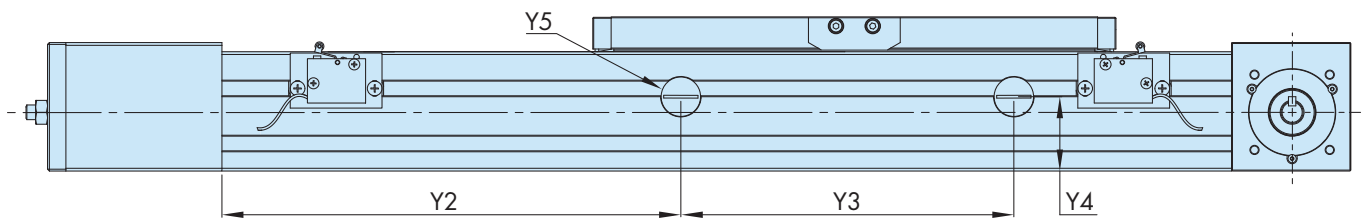
SBD High Moment Load Option

SBD15-60HML Long Carriage Option



SBD Unit	A1	A2	B	C1	C2	C3	C4	C5	C6	D1	D2	D3	D4	E1	E2	E3	F	G	H	I	J	K1	K2	L1 (min)
SBD15-60HMLB2	32	33	41	40	48	180	35	50	12.5	115	50	220	150	265	285	235	5.5	65	95	11	84	70	25	550

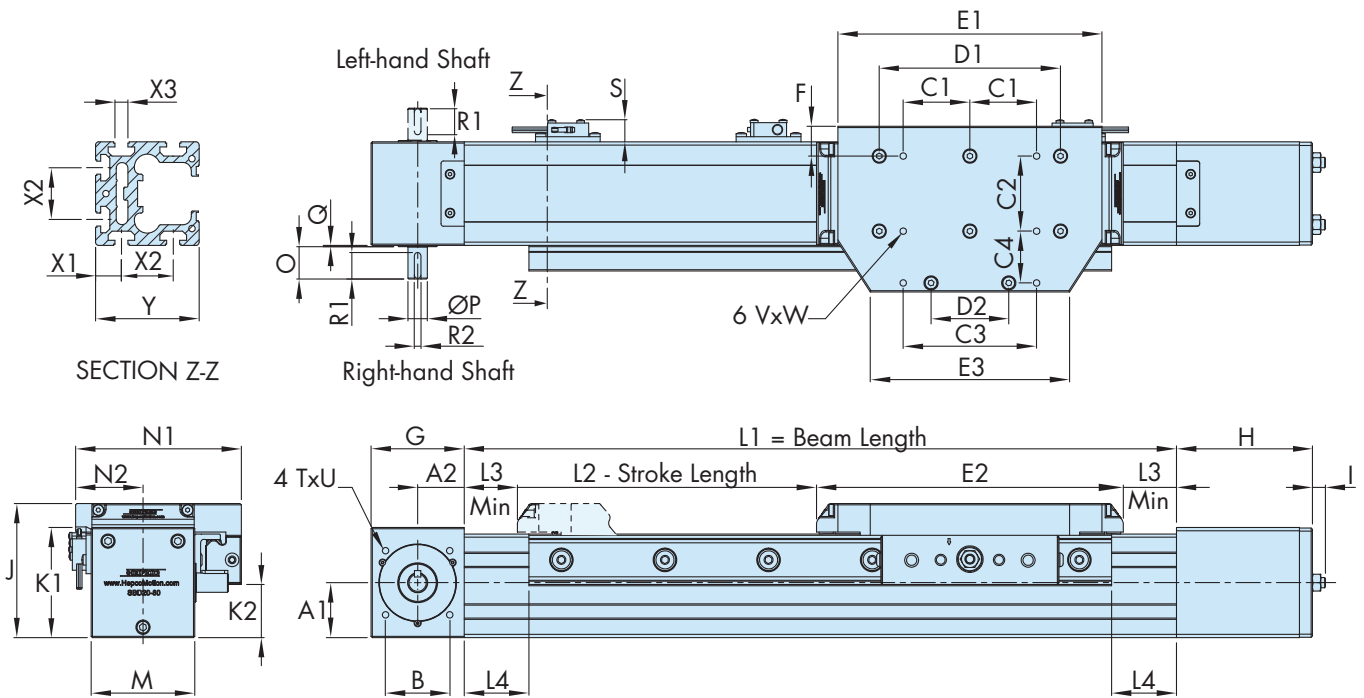
SBD Unit	L2 Nominal Stroke	L3 (min)	L4	M	N1	N2	O	P	Q	R1	R2	S	TxU	VxW	X1	X2	X3	Y	Y2	Y3	Y4	Y5
SBD15-60HMLB2	L1-325	20	30	60	95.5	29.5	24	12	1	20	4	17	M5x10	M5x8	15	30	8	65	250	181.4	40.5	M15



Re-lubrication of the ball guide carriage block is via an access point in the side of the beam (see above), and closed off with a threaded plug. The lubrication interval depends on length of stroke, speed and duty. For further details regarding lubrication procedures please contact Hepco's technical department.

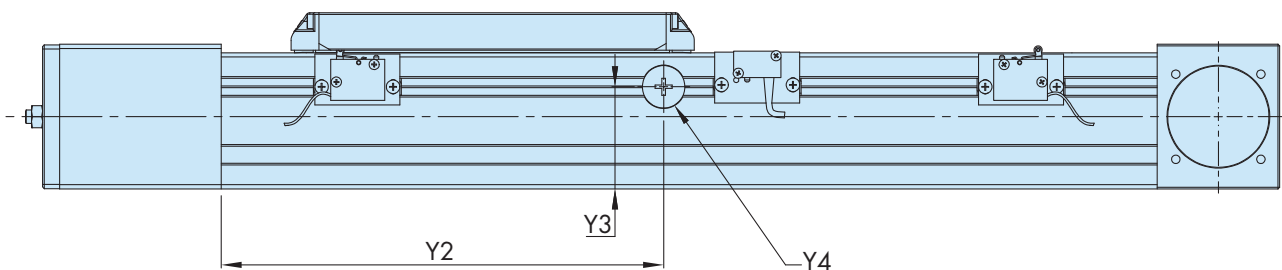
SBD High Moment Load Option

SBD20-80HML & SBD30-100HML



SBD Unit	A1	A2	B	C1	C2	C3	C4	D1	D2	E1	E2	E3	F	G	H	I	J	K1	K2	L1 (min)
SBD20-80HML	42.4	36	50	51.5	58	103	40	140	60	204	237	154	23	72	105	12	103.5	85	41	550
SBD30-100HML	51.6	48	65	65	76	130	52.5	180	92	235	268	190	24.5	96	145.5	13	123.5	105	42	580

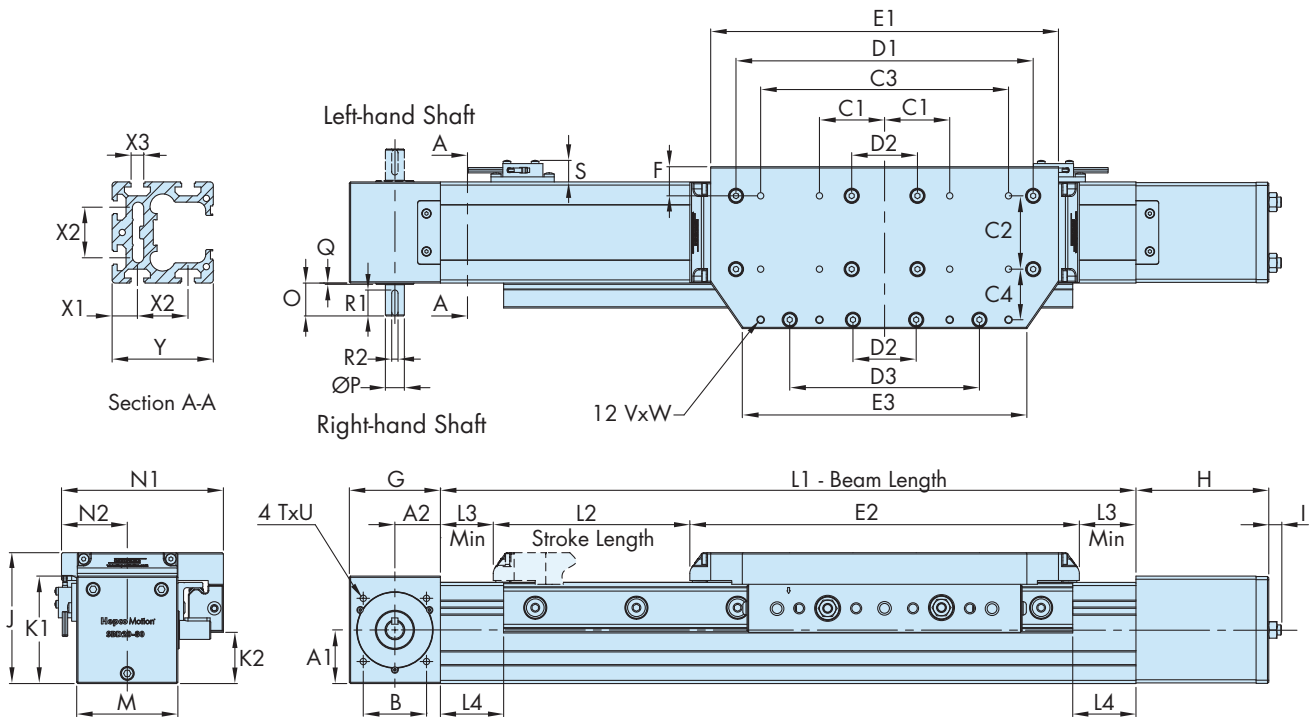
SBD Unit	L2 Nominal Stroke	L3 (min)	L4	M	N1	N2	O	P	Q	R1	R2	S	TxU	VxW	X1	X2	X3	Y	Y2	Y3	Y4
SBD20-80HML	L1-319	41	50	80	128	52	25	15	1	20.5	5	17	M6x15	M6x9.5	20	40	10	80	260	60	M20
SBD30-100HML	L1-365	48.5	60	100	162.5	62.5	36	20	1	25.5	6	17	M6x15	M8x9.5	30	40	10	100	260	70	M20



Re-lubrication of the ball guide carriage block is via an access point in the side of the beam (see above), and closed off with a threaded plug. The lubrication interval depends on length of stroke, speed and duty. For further details regarding lubrication procedures please contact Hepco's technical department.

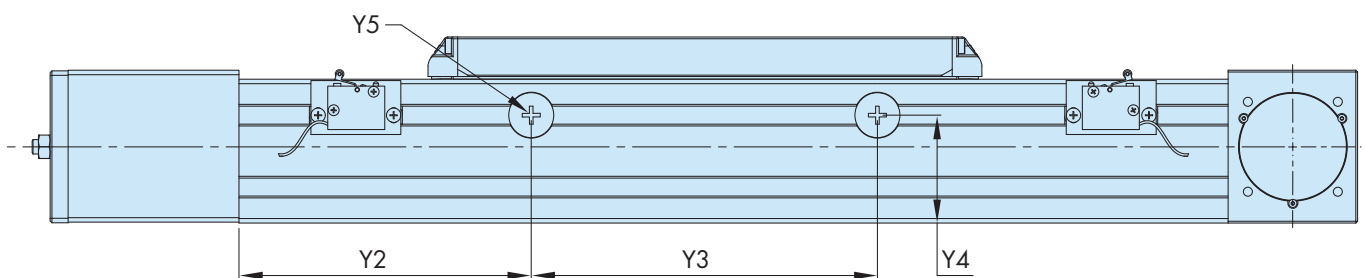
SBD High Moment Load Option

SBD20-80HML & SBD30-100HML Long Carriage Option



SBD Unit	A1	A2	B	C1	C2	C3	C4	D1	D2	D3	E1	E2	E3	F	G	H	I	J	K1	K2	L1 (min)
SBD20-80HMLB2	42.4	36	50	51.5	58	196	40	235	50	150	275	308	225	23	72	105	12	103.5	85	41	550
SBD30-100HMLB2	51.6	48	65	65	76	260	52.5	295	92	212	340	373	306	24.5	96	145.5	13	123.5	105	42	580

SBD Unit	L2 Nominal Stroke	L3 (min)	L4	M	N1	N2	O	P	Q	R1	R2	S	TxU	VxW	X1	X2	X3	Y	Y2	Y3	Y4	Y5
SBD20-80HMLB2	L1-390	41	50	80	128	52	25	15	1	20.5	5	17	M6x15	M6x9.5	20	40	10	80	162.5	192.5	60	M20
SBD30-100HMLB2	L1-470	48.5	60	100	162.5	62.5	36	20	1	25.5	6	17	M6x15	M8x9.5	30	40	10	100	164	252.5	170	M20



Re-lubrication of the ball guide carriage block is via an access point in the side of the beam (see above), and closed off with a threaded plug. The lubrication interval depends on length of stroke, speed and duty. For further details regarding lubrication procedures please contact Hepco's technical department.

SBD High Moment Load Option

Technical Information

The nominal load capacities for high moment load SBD units, (based on ball guide and Utilitrak load capacities), and a typical load corresponding to 10 000km*1 travel are included in the table below for each of the 5 direct and moment loading directions*2.

SBD Unit	L1		L2		Ms		Mv		M	
	Nominal	Typical @10 000km	Nominal	Typical @10 000km	Nominal	Typical @10 000km	Nominal	Typical @10 000km	Nominal	Typical @10 000km
SBD15-60HML	8500N	727N	8500N	727N	233Nm	52Nm	41Nm	3.5Nm	41Nm	3.5Nm
SBD15-60HMLB2	13600N	1163N	13600N	1163N	277Nm	62Nm	350Nm	30Nm	350Nm	30Nm
SBD20-80HML	21200N	1813N	21200N	1813N	286Nm	64Nm	175Nm	14.9Nm	175Nm	14.9Nm
SBD20-80HMLB2	33920N	2900N	33920N	2900N	340Nm	76Nm	1150Nm	98Nm	1150Nm	98Nm
SBD30-100HML	52100N	4455N	52100N	4455N	814Nm	173Nm	755Nm	64Nm	755Nm	64Nm
SBD30-100HMLB2	68800N	5882N	68800N	5882N	968Nm	206Nm	2990Nm	255Nm	2990Nm	255Nm

The table below includes the parameters necessary to calculate the performance and duty of the SBD system.

Parameter			SBD15-60HML		SBD20-80HML		SBD30-100HML	
			Standard	Long	Standard	Long	Standard	Long
Mass of carriage	Mc	kg	1.7	2.8	2.2	3.6	4.9	7.9
Mass of belt per m	Mb	kg/m	0.09		0.12		0.34	
Mass of SBD Unit	Mu	kg	8xL+4	8xL+ 5.4	12.2xL+6.4	12.2xL+8	21.1xL+ 14.8	21.1xL+18.4
Pulley radius	r	cm	1.91		2.39		3.5	
Drive efficiency			0.9		0.9		0.9	
Break away friction	Fba	N	24	28	29		46	
Coefficient of friction	μ		0.01		0.01		0.01	
Beam moment of inertia*3	Ix-x	mm ⁴	560000		1500000		3700000	
	Iy-y		600000		1800000		4600000	
Max linear force (belt)	Fmax	N	700		1000		3300	
Linear movement per shaft rev		mm	120		150		220	
Belt tooth pitch		mm	5		5		10	
Carriage basic load rating (dynamic)	C	N	16500	26400	21200	33920	52100	68800

Ordering Details

SBD = Product Range ————— **SBD** **15-60** **HML** **L1750** **C1** **RS** **B2**

Size of Unit: Choose **15-60**, **20-80** or **30-100** —————

HML = High Moment Load Option —————

Beam Length: Beam lengths are available in increments of 60mm from 550mm for 15-60 and 20-80, and increments of 80mm from 580mm for 30-100 —————

Unit Type: **C1** = Corrosion Resistant; Leave **blank** for standard units. —————

Drive Shaft: **LS** for Left hand, **RS** for Right hand; **DS** for double shaft —————

Long Carriage Option with twin bearing blocks: **B2** —————

Notes:

- The tabulated load figures above for 10 000km assume a value for variable load factor fv=2 which is suitable for most applications.
- For load & life calculations please refer to page 8 of the main SBD catalogue
- The beam moment of inertia figure is used in the calculation of beam deflection, with a high figure corresponding to a stiff beam. For further guidance on beam deflection please visit www.HepcoMotion.com/sbdatauk and select datasheet No. 3 SBD beam deflection calculations.

HepcoMotion®, Lower Moor Business Park,
Tiverton Way, Tiverton, Devon, England EX16 6TG

Tel: +44 (0) 1884 257000

Fax: +44 (0) 1884 243500

E-mail: sales@hepcotion.com

www.HepcoMotion.com