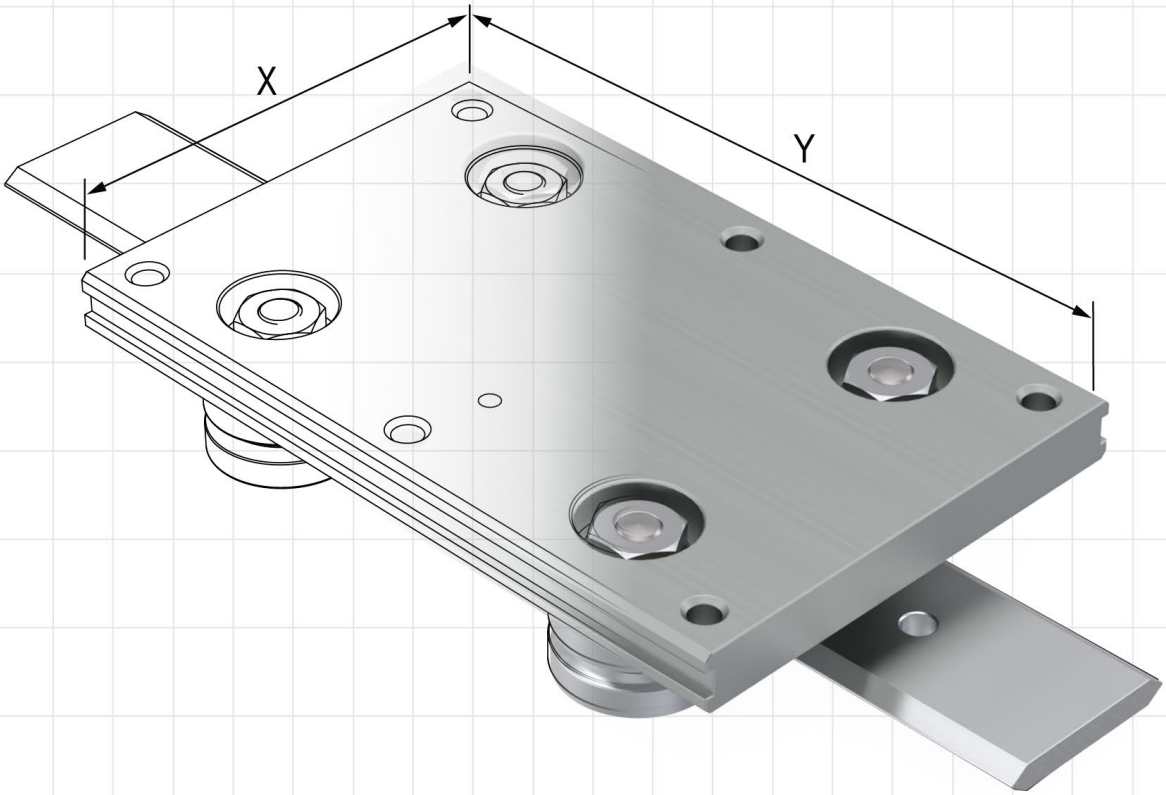
HepcoMotion®



SL2
TECHNICAL GUIDE

This guide interacts with the HepcoMotion website and SL2 catalogue

HepcoMotion.com

Where you see this clickable icon, save time on the design process by using our website's Product Configurator. Enter your application parameters and the configurator will recommend a custom solution to meet your needs:

Additional information can be viewed within the online SL2 catalogue when you click this icon:

To assist browsing this guide online, clicking wherever you see blue hypertext, page number, or a product icon in the page margins, will take you directly to the section required:

Cap Seals

Where other HepcoMotion product ranges are referred to, clicking on the title will take you to the catalogue in question:

HDS2 Heavy Duty Linear Guide

The full contents of the SL2 catalogue can be viewed or downloaded by clicking this icon:

SL2 Stainless steel linear guide

Smooth – Quiet – Corrosion resistant
Accurate – Fast – Suitable in harsh environments

A corrosion resistant, stainless steel linear guide system for use in food and medical industries or corrosive environments.

Contents

Refer also to Quick Reference icons in page margins

SL2 Catalogue
XX-XX
CAD

For an introduction to the SL2 product range, and examples of how the various products detailed in this Technical Guide can be used, please refer to the System Composition and Application Examples sections within the main **SL2 catalogue**.

Please refer to the Video section of the HepcoMotion website for a selection of How-To videos that complement the information provided in this section of the SL2 Technical Guide.

Through Fixing Type Bearings & Track Rollers

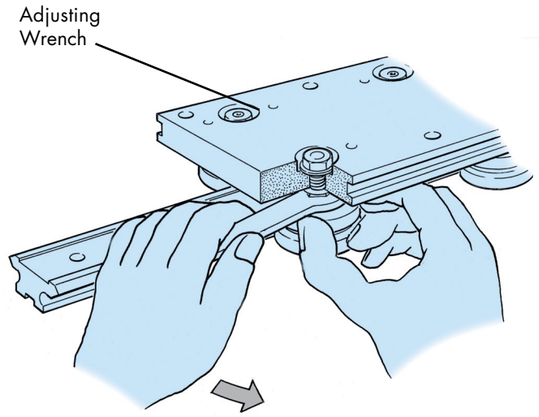
Having loosely assembled the components (minus load), the Concentric type Bearings should be fully tightened and the Eccentric type Bearings tightened just sufficiently to permit adjustment.

The Hepco Adjusting Wrench should then be engaged with hexagon flanges of the Eccentric type Bearings and gradually turned until the Slide (or Track) is captivated between each pair of Bearings such that there is no apparent play, but with minimal pre-load.

Each pair of Bearings should then be checked for correct pre-load by rotating one of them between forefinger and thumb with the Slide (or Track) stationary so that the Bearing skids against it. A degree of resistance should be felt, but the Bearing should turn without difficulty.

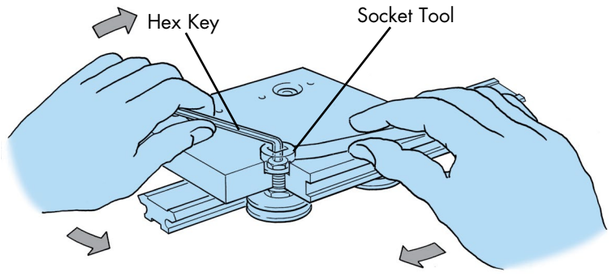
When all Eccentric type Bearings have been adjusted and tested in this manner, the fixing nuts should be fully tightened to the recommended torque settings as in the table on 📖 3, then checked again for pre-load as before.

Please note that too much pre-load will shorten the life of the system.



Alternative means of adjustment

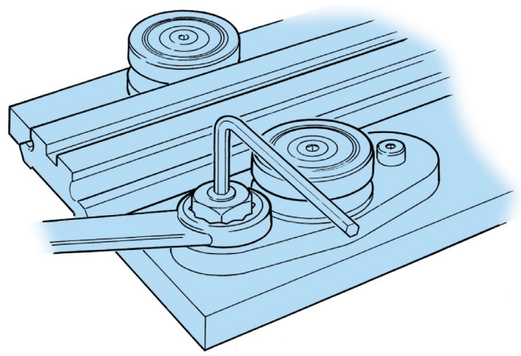
Eccentric type Bearings may also be adjusted using a standard hex key and Hepco Socket Tool. This method permits re-adjustment without first having to remove Cap Seals ; however, extreme care should be taken not to induce excessive pre-load, which can only be judged in this case, from the resulting friction of the system. Due to the reduced control associated with this method, it is only recommended when the Adjusting Wrench method is not possible.



Blind Hole Fixing Type Bearings & Track Rollers

Concentric type Blind Hole Fixing Bearings (or Concentric type Blind Hole Track Rollers) are simply screwed into tapped holes in the mounting surface and tightened down using the Hepco Adjusting Wrench.

Each Eccentric type Bearing (or Track Roller) should be located by means of the two screws provided and tightened just sufficiently to still enable adjustment via the eccentric hexagon bush. The same basic procedures, as outlined for the Through Fixing type, should be used to ensure that the correct level of pre-load is applied before finally tightening down the fixing screws.



Cap Seals

Fitting of Cap Seals should be carried out after Bearing adjustment has been completed.

To fit the Cap Seals over the Bearings, the Standard Carriage should be removed from the Slide, then the Cap Seals loosely assembled to the Carriage Plate utilising either the Through Hole Fixing facility, which is the default method for Hepco Carriages, or the Tapped Hole Fixing facility, which requires tapped holes to be provided in the Carriage Plate. Two sets of plastic inserts are included with each Cap Seal to cater for both methods.

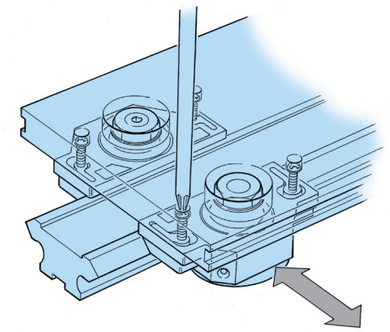
The Slide should be re-engaged with the Carriage and each Cap Seal adjusted in, until the felt wipers just make contact with the Slide 'V' surface until smearing of the lubricant is observed when the system is operated. When adjusting the Cap Seal using the Through Hole Fixing method, care should be taken to hold the plastic inserts to prevent them from moving whilst the screws are tightened.

Greater sealing effect, at the expense of increased friction, may be achieved by adjusting each Cap Seal body in further until its 'V' profile makes contact with the 'V' profile of the Slide.

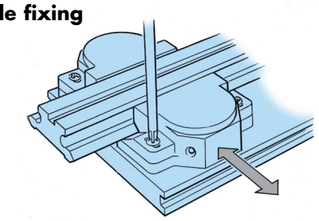
The fixing screws should be fully tightened and each Cap Seal charged with a No. 2 Lithium soap-based grease until grease is seen to overflow.

Male grease connector, part No. HF 4034 or complete gun is available from Hepco, if required.

Through hole fixing



Tapped hole fixing



Bearing/Track Roller Adjusting Tools and Tightening Torques

When ordering individual components for the first time, an Adjusting Wrench or Socket Tool should also be ordered - these are only available from Hepco.

Bearing/Roller Type	...13...	...18...	...25...	...34.w..	...54...
Adjusting Wrench	AT13	AT18	AT25	AT34	AT54
Socket Tool	-	RT6	RT8	RT10	RT14
Fixing Nut Torque	2Nm	7Nm	18Nm	33Nm	90Nm

Notes:

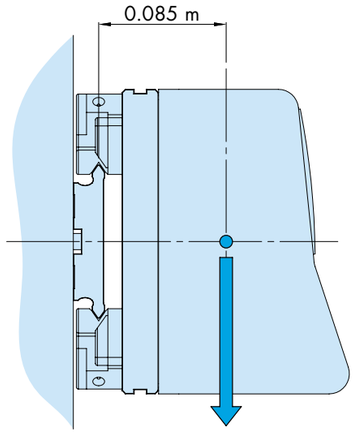
1. A guide to installation and adjustment of other Hepco components may be found on the relevant individual SL2 catalogue component pages.

The formula and values in the following examples are detailed in the Load/Life Calculations section of the SL2 catalogue.

Example Calculation 1

A machine control unit is mounted onto a Hepco AUSSM76240CSDRNS Carriage (Standard Carriage with fitted Cap Seals and Double Row Bearings), mounted onto an SSNM76 Double Edge Spacer Slide. The weight of the control unit and Carriage is 45 kg, and the centre of mass is central along the length of the Carriage, and 0.085m from the Slide 'V', as shown in the diagram.

The system is lubricated.



Calculating the Carriage life:

(Refer to 📖 34-35 of the Load/Life Calculations section within the SL2 catalogue.)

$L_1 = M = Mv = 0$

$L_2 = 45 \text{ kg} \times 9.81(\text{gravity}) = 441.5 \text{ N}$ $\quad Ms = 441.5 \times 0.085 = 37.5 \text{ Nm}$

$$L_F = \frac{L_1}{L_{1(max)}} + \frac{L_2}{L_{2(max)}} + \frac{Ms}{Ms_{(max)}} + \frac{Mv}{Mv_{(max)}} + \frac{M}{M_{(max)}}$$

$$L_F = \frac{0}{3600} + \frac{441.5}{6000} + \frac{37.5 \text{ Nm}}{129 \text{ Nm}} + \frac{0}{3000 \times D} + \frac{0}{1800 \times D} = 0.364$$

$$\text{Life} = \frac{\text{Basic Life}}{(0.03 + 0.97L_F)^3} = \frac{150}{(0.03 + 0.97 \times 0.364)^3} = \mathbf{2{,}668 \text{ km}}$$

Example Calculation 2

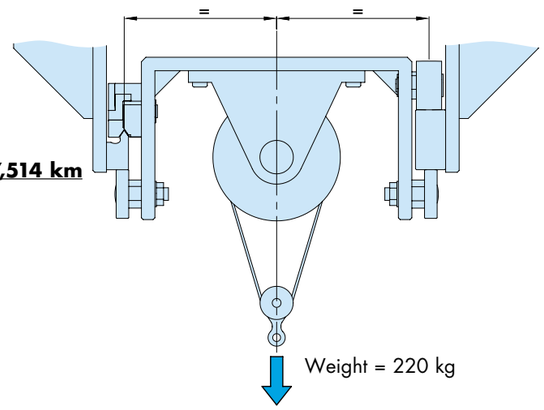
An overhead transfer system uses a combination of an SSNME Single Edge Spacer Slide and an SSFT4020 Flat Track on either side of a machine bay. 2 off LJ54CDR Bearings with CS54 Cap Seals run on the 'V' Slide. 2 off LR54C Track Rollers run on the Flat Track. A single SSLRN34E Narrow Track Roller is on the non-loaded side of both the 'V' Slide and Flat Track to retain the moving structure on the Slides.

A weight of 220 kg is located centrally on the structure, such that the load is equally distributed between the SSLJ34's and SSLR34's, each therefore experiencing a radial load of 9.81 x 55 = 540 N.

The system is lubricated.

Calculating the life of each LJ54CDR Bearing:

(Refer to 📖 34-35 of the SL2 catalogue.)



$L_A = 0$ $\quad L_R = 540 \text{ N}$

$$L_F = \frac{L_A}{L_{A(max)}} + \frac{L_R}{L_{R(max)}} = \frac{0}{900} + \frac{540}{3000} = 0.180$$

$$\text{Life} = \frac{\text{Basic Life}}{(0.03 + 0.97L_F)^3} = \frac{150}{(0.03 + 0.97 \times 0.180)^3} = \mathbf{17{,}514 \text{ km}}$$

Calculating the life of each LR54C Track Roller:

(Refer to page 📖 36 of the SL2 catalogue.)

$L_A = 0$ $\quad L_R = 540 \text{ N}$

$$L_F = \frac{L_R}{L_{R(max)}} = \frac{540}{2000} = 0.270$$

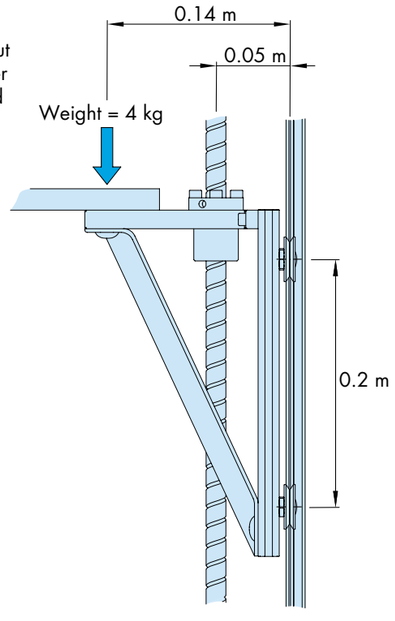
$$\text{Life} = \frac{1000}{L_F^3} = \frac{1000}{0.270^3} = \mathbf{50{,}805 \text{ km}}$$

From this it can be seen that the 'V' bearings are the life determining factor for the system as a whole.

Example Calculation 3

A machine vertical movement uses a Hepco AUSSS25180 Carriage without Cap Seals or Lubricators) mounted onto an SSNS25 Double Edge Spacer Slide. The Slide system is run in a dry condition and is raised and lowered by a ball screw, as shown. The total mass being raised and lowered is 4 kg.

The load F1 due to the weight of 4 kg x 9.81 = 39.2 N is balanced out by the force F2 of the ball screw, so no direct load is put onto the Slide system. There is a moment load in the M direction which is calculated by taking moments about the Slide 'V'.



Calculating the Carriage life:

(Refer to 📖 34-35 of the SL2 catalogue.)

$M = (39.2 \text{ N} \times 0.14 \text{ m}) - (39.2 \text{ N} \times 0.05 \text{ m}) = 3.53 \text{ Nm}.$

$L_1 = L_2 = Ms = Mv = 0$

$$L_F = \frac{0}{320} + \frac{0}{320} + \frac{0}{3.6} + \frac{0}{160 \times 0.12} + \frac{3.53}{160 \times 0.12} = 0.184$$

$$\text{Life} = \frac{\text{Basic Life}}{(0.03 + 0.97L_F)^2} = \frac{40}{(0.03 + 0.97 \times 0.184)^2} = \mathbf{920 \text{ km}}$$

Example Calculation 4

A testing machine has a horizontal table movement that uses 2 off SSNVE Single Edge Spacer Slides with 2 off SSBHJ18CNS and 2 off SSBHJ18ENS Blind Hole Standard Bearings. Lubrication is provided by 2 off SSLB20F Lubricators.

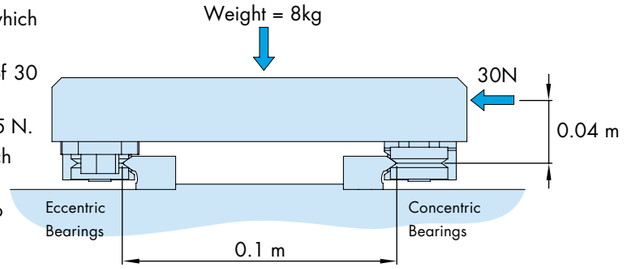
The table includes a casting, and the weight is 8 kg, which is centrally located with respect to the four Bearings.

When the table is moving, there is an external load of 30 N, which is exerted as shown in the diagram.

The weight of the table exerts a force 8 kg x 9.81 = 78.5 N.

This is equally shared between all four Bearings, so each sees an axial load of 19.6 N.

The external force of 30 N is shared by the two concentric Bearings. Each sees a radial load of 15 N.



The external force also exerts a turning moment which will be balanced by additional axial reaction forces on the Bearings.

Taking moments about the 'V' of the concentric side (ignoring the weight reactions which will cancel out) we get:

Counter- clockwise moment: $\quad 30 \text{ N} \times 0.04\text{m} = 1.2 \text{ Nm}.$

Clockwise moment: $\quad 2 \times (\text{reaction force on each eccentric Bearing}) \times 0.1 \text{ m}$

Since clockwise moment = counter-clockwise moment, then reaction force on each eccentric Bearing = $\frac{1.2 \text{ Nm}}{2 \times 0.1 \text{ m}} = 6 \text{ N}.$

Since there is no unbalanced vertical force, the axial reaction on each concentric Bearing will be equal and opposite, i.e. -6 N.

The load on each concentric and eccentric Bearing is therefore as follows:

Each Concentric Bearing: $\quad L_A = 19.6 - 6 = 13.6 \text{ N} \quad L_R = 15 \text{ N}$

Each Eccentric Bearing: $\quad L_A = 19.6 + 6 = 25.6 \text{ N} \quad L_R = 0$

Calculating the Bearing life:

(Refer to 📖 34-35 of the SL2 catalogue.)

$$L_F = \frac{L_A}{L_{A(max)}} + \frac{L_R}{L_{R(max)}}$$

$$L_F \text{ (for concentrics)} = \frac{13.6 \text{ N}}{95 \text{ N}} + \frac{15 \text{ N}}{160 \text{ N}} = 0.237 \qquad L_F \text{ (for eccentrics)} = \frac{25.6 \text{ N}}{95 \text{ N}} + \frac{0}{160 \text{ N}} = 0.269$$

The Bearing life for the more heavily loaded eccentric Bearings is calculated as shown below:

$$\text{Life} = \frac{\text{Basic Life}}{(0.03 + 0.97L_F)^3} = \frac{60}{(0.03 + 0.97 \times 0.269)^3} = \mathbf{2{,}437 \text{ km}}$$

Calculations - Deflection of Self-Supporting Slides

CAD

SL2 Catalogue

Slides

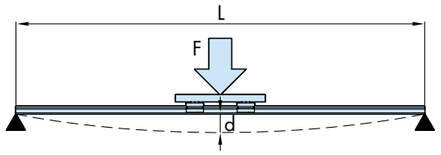
SL2 Catalogue

Application Examples

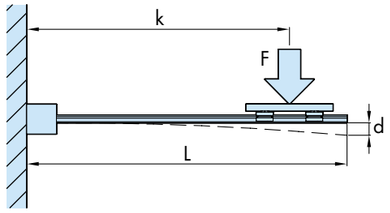
Flange Clamps 19

When SL2 Spacer Slides are used as self-supporting beams (as shown in Application Examples section of the SL2 catalogue), the Slides will deflect under load and their own weight. Care should be taken when designing an installation to take account of this deflection, by choosing a Slide that will give both adequate life and satisfactory stiffness for the duty.

The deflection of a Slide across a span (as shown, right) will be a maximum at the centre of the span when the load passes over this point. This maximum deflection is given by equation (1):



$$(1)^{*2,3} \quad d = \underbrace{\frac{FL^3}{48EI}}_{\text{Deflection due to the applied load}} + \underbrace{\frac{5L^4Qg}{384EI}}_{\text{Deflection due to the Slide or Slide Beam's weight}}$$



The deflection of a Slide acting as a cantilever will be a maximum at the free end when the load is at the outermost extremity of its stroke. This maximum deflection is given by equation (2)*1:

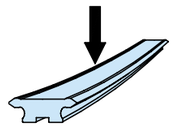
$$(2)^{*1,2\ \&\ 3} \quad d = \underbrace{\frac{FL^2(3L-k)}{6EI}}_{\text{Deflection due to the applied load}} + \underbrace{\frac{L^4Qg}{8EI}}_{\text{Deflection due to the Slide's weight}}$$

In the equations (1) and (2) above, L, k and d are the dimensions shown in the relevant diagrams (in mm) and F is the load applied (in Newtons). The term EI is the product of the Slide material's Young's modulus and the section moment of inertia, which is a constant, relating to the stiffness of the Slide section in a specific direction (see illustrations below).

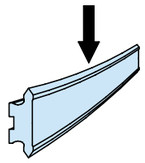
The term Q is the mass of the Slide in kg/mm and g is the acceleration due to gravity (=9.81m/s^2).

The values of EI and Q for the various sections are given in the table below:

Slide Part Number	EI (Section Stiffness - Nmm^2)		Q = Section Mass kg/mm
	Horizontal*3	Vertical*3	
SS NS 25...	4.2 x 10^8	1.2 x 10^9	0.0015
SS NM 44...	1.3 x 10^9	9.0 x 10^9	0.0035
SS NL 76...	1.1 x 10^{10}	7.0 x 10^{10}	0.010



Horizontal Bending



Vertical Bending

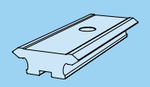
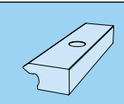
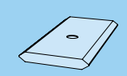
Notes:

1. The calculation for the deflection of a cantilevered Slide assumes that the Slide is held absolutely rigidly at one end. This is often difficult to achieve in practice, and it is usual to allow for additional deflection due to the compliance of the support. Hepco will supply such data on Flange Clamps, on request.
2. The deflections calculated are for static loads. In some situations, dynamic loading may increase the amount of bend.
3. For maximum stiffness, the Slide section should be arranged such that the bending mode with the higher value for EI resists bending. Care should be taken in such applications to ensure that offset loads do not cause excessive bending in the weaker perpendicular plane.

'Mix & Match' Component Compatibility

CAD

Customers can design a system to meet their exact requirements by combining components as indicated in the 'Mix & Match' compatibility table below:

	Part Number	'Mix & Match' Component Compatibility Chart ✓= Preferred choice ✓= Compatible × = Not Compatible													
		SS...J13...	SS...J18...	SS...J25...	SS...J34...	SS...J54...	SSCS18	SSCS25	SSCS34	SSCS54	SSLB12	SSLB20	SSLB25	SSLB44	SSLB76
	SS NMS 12...	✓	×	×	×	×	×	×	×	×	✓	×	×	×	×
	SS NV 20...	✓	✓	✓	✓	×	✓	×	×	×	✓	✓	✓	×	×
	SS NS 25...	✓	✓	✓	✓	×	✓	✓	×	×	✓	✓	✓	×	×
	SS NM 44...	✓	✓	✓	✓	✓	✓	✓	✓	×	✓	✓	×	✓	×
	SS NL 76...	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	×	×	✓
	SS NV E...	✓	✓	✓	✓	×	✓	×	×	×	✓	✓	×	×	×
	SS NS E...	✓	✓	✓	✓	×	✓	✓	×	×	✓	✓	✓	×	×
	SS NM E...	✓	✓	✓	✓	✓	✓	✓	✓	×	✓	✓	×	✓	✓
	SS NL E...	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	×	×	✓
	SS MS 12...	✓	✓	×	×	×	×	×	×	×	✓	×	×	×	×
	SS V 20...	✓	✓	✓	✓	×	✓	×	×	×	✓	✓	✓	×	×
	SS S 25...	✓	✓	✓	✓	✓	✓	✓	×	×	✓	✓	✓	✓	×
	SS S 35...	✓	✓	✓	✓	✓	✓	✓	×	×	✓	✓	✓	✓	×
	SS S 50...	✓	✓	✓	✓	✓	✓	✓	×	×	✓	✓	✓	✓	×
	SS M 44...	✓	✓	✓	✓	✓	✓	✓	✓	×	✓	✓	×	✓	✓
	SS M 60...	✓	✓	✓	✓	✓	✓	✓	✓	×	✓	✓	×	✓	✓
	SS M 76...	✓	✓	✓	✓	✓	✓	✓	✓	×	✓	✓	×	✓	✓
	SS L 76...	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	×	×	✓

SL2 can be ordered either as individual components or as factory assembled systems. For details on the extensive range of factory assembled Standard Carriages and Removable Carriages, please refer to the SL2 catalogue and this guide.

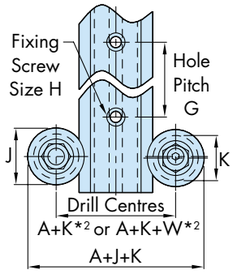
This section includes summary data on Slides, Bearings and Lubrication Devices. They allow customers to calculate the overall dimensions of a system (less the Carriage plate) and provide important reference dimensions including drilling details. The information can be determined for any combination of components as indicated in the Mix and Match table on 📖 7, enabling customers to design a system to meet their exact requirements.

'V' Slide Systems with Standard 'V' Bearing

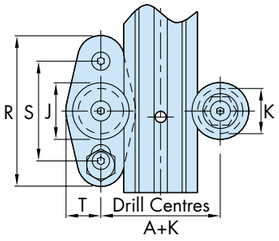
Please refer to the diagrams below and the tables 📖 9 when designing a system utilising the Standard Bearing programme. For systems which incorporate Track Rollers and/or Pinions, see 📖 10.

CAD models are also available online.

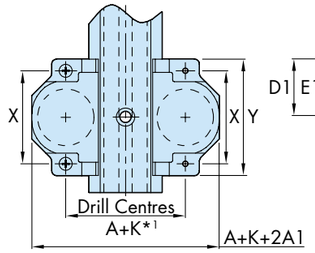
Slides with Through Hole Fixing Bearings



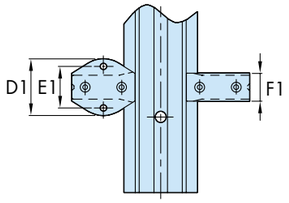
Slides with Blind Hole Fixing Bearings

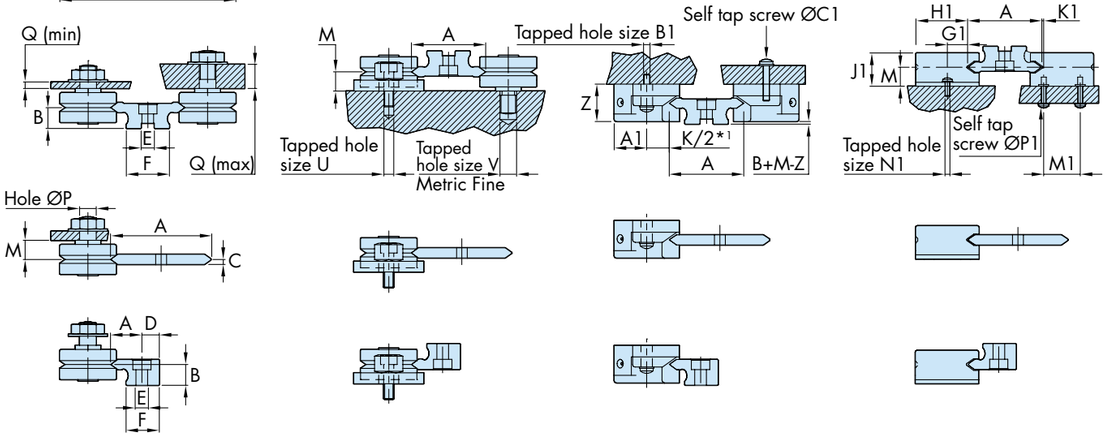


Slides with Cap Seals

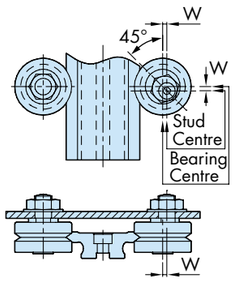


Slides with Lubricators



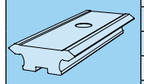
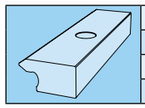
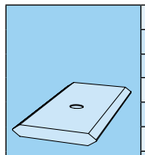


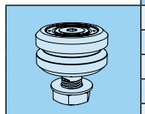
Drilling positions for double eccentric (DE) Bearings*3:

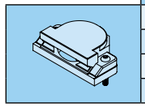


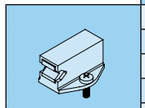
Notes:

1. The fixing screw positions for the size SSCS18 Cap Seal are not on the same centreline as the Bearing. When using the SSCS18, please add 3.8mm to A+K.
2. Drilling centres A+K apply to all Bearings with the exception of double eccentric (DE) type. If double eccentric Bearings are used with the intention of disengaging the Slide, then drilling centres A+K+W should be used. Double eccentric Bearings are designed to adjust in with the eccentric making a 45° angle to the Slide as shown above.

	Part Number	A	B	C	D	E	F	G	H
	SS NMS 12...	12.37	6.2	-	-	4	8.5	45	M3
	SS NV 20...	20.37	8	-	-	5	12	90	M4
	SS NS 25...	25.74	10	-	-	6	15	90	M5
	SS NM 44...	44.74	12.5	-	-	8	26	90	M6
	SS NL 76...	76.74	19.5	-	-	15	50	180	M12
	SS NV E...	9.69	8	-	6.5	4	12	90	M4
	SS NS E...	12.87	10	-	8.5	6	16	90	M5
	SS NM E...	18.87	12.5	-	10.5	8	20	90	M6
	SS NL E...	27.37	19.5	-	16	12	30	180	M10
	SS MS 12...	12.55	-	1.52	-	-	-	30	M3
	SS V 20...	20.37	-	2.14	-	-	-	90	M4
	SS S 25...	25.81	-	2.39	-	-	-	90	M6
	SS S 35...	35.81	-	2.39	-	-	-	90	M6
	SS S 50...	50.82	-	2.39	-	-	-	90	M6
	SS M 44...	44.81	-	3.14	-	-	-	90	M6
	SS M 60...	60.81	-	3.14	-	-	-	90	M8
	SS M 76...	76.81	-	3.14	-	-	-	90	M8
	SS L 76...	76.81	-	4.56	-	-	-	90	M10

	Part Number	J	K*1	M	N	P	Q (short axle) Min	Q (short axle) Max	Q (long axle) Min	Q (long axle) Max	R	S	T	U	V Metric Fine	W
	SS ...J13...	12.7	9.51	5.47	4.5	4	2.2	3	2.4	6.7	47.5	30	10	M3	M4x0.5	1.34
	SS ...J18...	18	14.0	6.75	5.6	6	2.4	3.4	2.5	10	54	38	12.3	M4	M6x0.75	1.84
	SS ...J25...	25	20.27	9.0	7.5	8	2.2	3.8	4.9	13	72	50	16	M5	M8x1	1.95
	SS ...J34...	34	27.13	11.5	9.7	10	5.2	6.6	5.9	14.8	90.5	60	21	M6	M10x1.25	2.55
	SS ...J54...	54	41.8	19.0	15.6	14	5.7	8.2	7.9	20.4	133	89.5	31	M8	M14x1.5	3.89

	Part Number	X	X1	Y	Z	A1	B1	C1	Use with Bearings
	SS CS 18	32.5	-	42	13.8	11	M2.5	3	SS ...J18...
	SS CS 25	44	-	55	18	16	M3	3.5	SS ...J25...
	SS CS 34	56	-	70	22.5	21	M4	4.5	SS ...J34...
	SS CS 54	80	-	98	36.5	31	M5	6	SS ...J54...

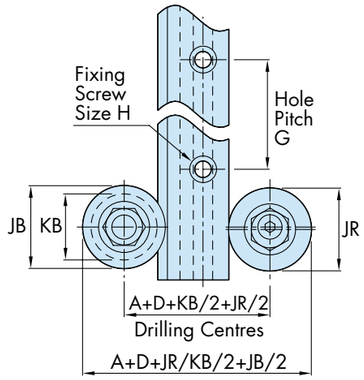
	Part Number	D1	E1	F1	G1	H1	J1	K1	M1	N1	P1	Use with Bearings
	SS LB 12	17	12	7	4.8	11.5	10	1.6	6.5	M2.5	2.5	SS ...J13...
	SS LB 20	19	13	8	7.3	19	12	0.8	13	M2.5	2.5	SS ...J18...
	SS LB 25	25	18	12	9	23	16.5	1	16	M3	3	SS ...J25...
	SS LB 44	34	25	17	11.8	31	20	0.8	22	M4	3	SS ...J34...
	SS LB 76	50	38	25	17.8	47	33.5	1.3	33	M5	3.5	SS ...J54...

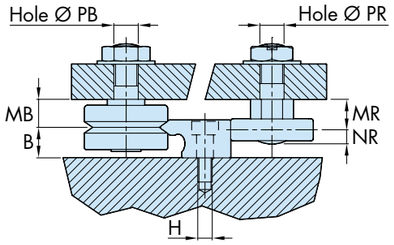
Systems with Track Rollers, Racks & Pinions

The section includes data on Single Edge Spacer Slides, Bearings, Track Rollers, Flat Tracks, Racks and Pinions to allow customers to calculate overall dimensions of a system and look up important dimensions, including drilling details.

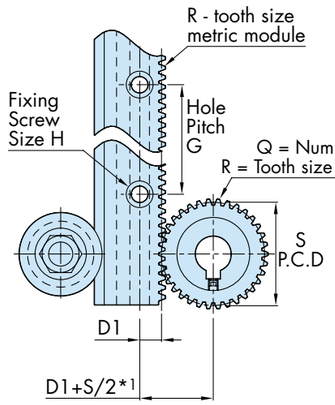
It is possible to run a Wide Track Roller on the rear face of the Single Edge Spacer Slide, but this option is not shown, as the Narrow Track Roller usually fits better. The extra load capacity of the Wide Track Roller will not usually be a benefit when used with the Single Edge Spacer Slide, as the soft back face can be damaged if used beyond the load capacity of the Narrow Track Roller.

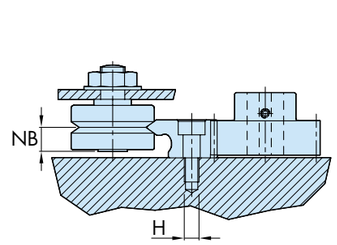
Single Edge Spacer Slide with 'V' Bearings and Track Rollers



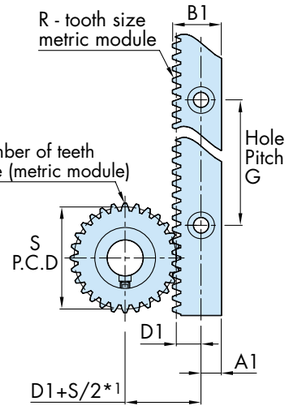


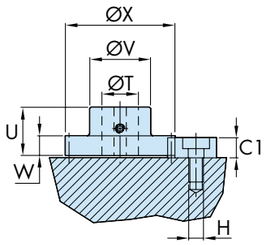
Single Edge Spacer Slide with 'V' Bearings and Pinions





Racks with Pinions





Part Number	A	B	C	D	D1*1	E	F	G	H
SS NV E...	9.69	8	10.0	6.5	5.8	4	12	90	M4
SS NS E...	12.87	10	12.25	8.5	7.4	6	16	90	M5
SS NM E...	18.87	12.5	15.5	10.5	9.25	8	20	90	M6
SS NL E...	27.37	19.5	24.0	16	14.1	12	30	180	M10

Part Number	A1	B1	C1	D1	G	H	S*1 Rack Module
SS R 07...	6.35	12.7	4	5.65	45	M4	0.7
SS R 10...	7.8	15.65	6.75	6.85	90	M5	1
SS R 15...	8.3	20	8.25	10.2	90	M6	1.5
SS R 20...	13.2	31.75	14	16.55	90	M10	2

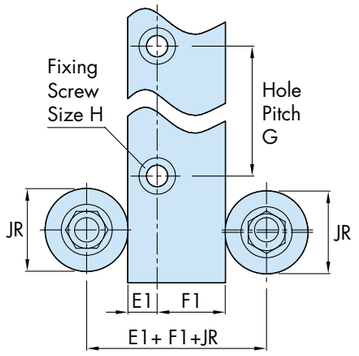
Part Number	E1	F1	G	G1	H
SS FT 24 12	7.5	16.5	45	12	M5
SS FT 32 16	8.75	23.25	90	16	M6
SS FT 40 20	12	28	90	20	M8

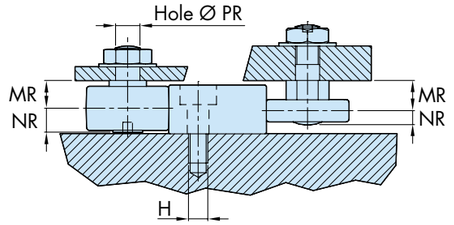
Part Number	Q No of Teeth	R mod	S	T	U	V	X	W
SS P07 W9 T28...	28	0.7	19.6	5	17	16	21	9
SS P07 W5 T28...	28	0.7	19.6	5	13	16	21	5
SS P10 W11 T42...	42	1	42	15	23	30	44	11
SS P10 W7 T42...	42	1	42	15	18.5	30	44	7
SS P125 W14 T34...	34	1.25	42.5	15	25.5	30	45	14
SS P15 W8 T28...	28	1.5	42	15	19.8	30	45	8
SS P20 W20 T27...	27	2	54	20	35	40	58	20
SS P20 W13 T27...	27	2	54	20	25	40	58	13

All sizes of Track Roller (in both narrow and wide formats) have a crown radius to avoid the problems that can occur if imperfect alignment concentrates the load on the edge of the Roller.

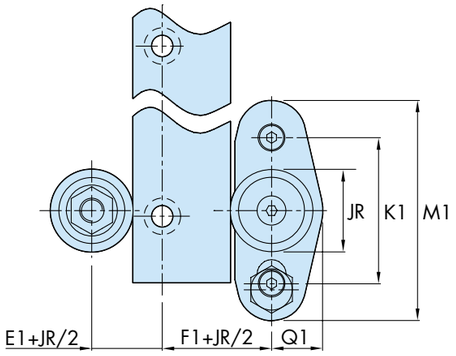
Any Track Roller can be used with any size of Flat Track or Single Edge Spacer Slide, subject to physical size constraints. Any Rack and Pinion combination can be used, subject to the tooth size matching, and other obvious size constraints.

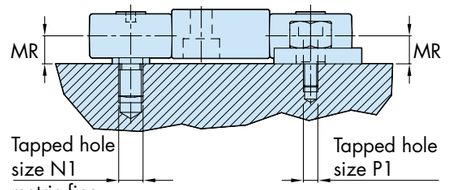
Flat Tracks with Through Hole Fixing Track Rollers

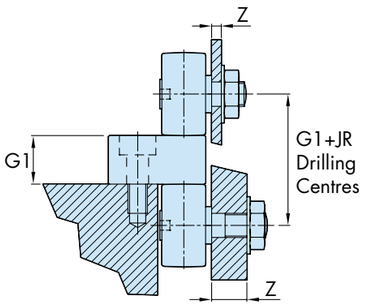




Flat Tracks with Blind Hole Fixing Track Rollers







Part Number	JB	KB	MB	NB	PB	Z (short axle) Min	Z (short axle) Max	Z (long axle) Min	Z (long axle) Max
SS ...J13...	12.7	9.51	5.47	4.5	4	2.2	3	2.4	6.7
SS ...J18...	18	14.00	6.75	5.6	6	2.4	3.4	2.5	10
SS ...J25...	25	20.27	9.0	7.5	8	2.2	3.8	4.9	13
SS ...J34...	34	27.13	11.5	9.7	10	5.2	6.6	5.9	14.8
SS ...J54...	54	41.76	19.0	15.6	14	5.7	8.2	7.9	20.4

Part Number	JR	MR	NR	PR	Z (short axle) Min	Z (short axle) Max	Z (long axle) Min	Z (long axle) Max	M1	K1	Q1	P1	N1 Metric Fine
SS ...R18...	18	6.75	5.6	6	2.4	3.4	2.5	10	54	38	12.25	M4	M6x0.75
SS ...R25...	25	9.0	7.5	8	2.2	3.8	4.9	13	72	50	16	M5	M8x1
SS ...R34...	34	11.5	9.7	10	5.2	6.6	5.9	14.8	90.5	60	21	M6	M10x1.25

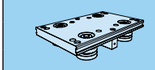
SS LRN18...	18	8	3.5	6	-	-	2.5	10
SS LRN25...	25	10	4.5	8	-	-	4.9	13
SS LRN34...	34	12.5	5.7	10	-	-	5.9	14.8

Note:

1. The calculated position of the Pinion relative to the Rack gives an approximate location only. Customers should make provision for the Pinion to be adjusted relative to the Rack to ensure that the best running condition is achieved.

Component Mass

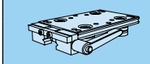
Standard Carriages



& Removable Carriages
(see equivalent Standard Carriages for Removable Carriage mass.)

Part Number	Mass (kg)
AUSS MS 12 50 NS	0.07
AUSS MS 12 75 NS	0.09
AUSS MS 12 100 NS	0.11
AUSS V 20 65 NS	0.21
AUSS V 20 100 NS	0.27
AUSS V 20 140 NS	0.34
AUSS S 25 80 NS	0.41
AUSS S 25 130 NS	0.54
AUSS S 25 180 NS	0.66
AUSS S 35 100 NS	0.53
AUSS S 35 150 NS	0.7
AUSS S 35 200 NS	0.86
AUSS S 50 110 NS	0.67
AUSS S 50 160 NS	0.89
AUSS S 50 220 NS	1.2
AUSS M 44 125 NS	1.1
AUSS M 44 175 NS	1.4
AUSS M 44 225 NS	1.6
AUSS M 60 150 NS	1.5
AUSS M 60 200 NS	1.8
AUSS M 60 280 NS	2.3
AUSS M 76 170 NS	1.8
AUSS M 76 240 NS	2.3
AUSS M 76 340 NS	3.1
AUSS L 76 200 NS	3.8
AUSS L 76 300 NS	4.8
AUSS L 76 400 NS	5.8

Carriage Locking Device



Part Number	Mass (kg)
SS BK 2525	0.2
SS BK 3525	0.3
SS BK 4434	0.4
SS BK 5025	0.6
SS BK 6034	0.8
SS BK 7634	1.5
SS BK 7654	1.5

Single Edge Spacer Slides

Part Number	Mass (kg/m)
SS NV E...	1.0
SS NS E...	1.6
SS NM E...	2.6
SS NL E...	6.0

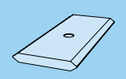
Double Edge Spacer Slides (Slide Only)

Part Number	Mass (kg/m)
SS NMS 12...	0.5
SS NV 20...	1.0
SS NS 25...	1.5
SS NM 44...	3.5
SS NL 76...	10

Double Edge Spacer Slides (With Rack)

Part Number	Mass (kg/m)
SS NV 20...R...	1.4
SS NS 25...R...	2.3
SS NM 44...R...	4.7
SS NL 76...R...	13

Double Edge Flat Slides



Part Number	Mass (kg/m)
SS MS 12...	0.23
SS V 20...	0.6
SS S 25...	0.8
SS S 35...	1.3
SS S 50...	1.7
SS M 44...	1.9
SS M 60...	2.7
SS M 76...	3.4
SS L 76...	5.0

Racks

Part Number	Mass (kg/m)
SS R 07...	0.37
SS R 10...	0.77
SS R 15...	1.2
SS R 20...	3.3

Flat Tracks

Part Number	Mass (kg/m)
SS FT 24 12	2.3
SS FT 32 16	4.0
SS FT 40 20	6.3

Standard Bearings

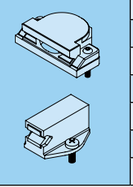
& Vacuum Bearings
(See equivalent Standard Bearing for Vacuum Bearing mass.)

Part Number	Mass (kg)
SS SJ 13...NS	0.008
SS SJ 18...NS	0.019
SS SJ 25...NS	0.048
SS SJ 34...NS	0.115
SS SJ 54...NS	0.415
SS LJ 13...NS	0.008
SS LJ 18...NS	0.020
SS LJ 25...NS	0.051
SS LJ 34...NS	0.120
SS LJ 54...NS	0.425
SS BHJ 13 C...NS	0.007
SS BHJ 18 C...NS	0.018
SS BHJ 25 C...NS	0.043
SS BHJ 34 C...NS	0.105
SS BHJ 54 C...NS	0.390
SS BHJ 13 E...NS	0.027
SS BHJ 18 E...NS	0.045
SS BHJ 25 E...NS	0.105
SS BHJ 34 E...NS	0.235
SS BHJ 54 E...NS	0.800

Floating Bearings

Part Number	Mass (kg)
SS SFJ 25...NS	0.058
SS SFJ 34...NS	0.130
SS SFJ 54...NS	0.492
SS LFJ 25...NS	0.060
SS LFJ 34...NS	0.135
SS LFJ 54...NS	0.505

Lubrication Device



Part Number	Mass (kg)
SS CS 18	0.006
SS CS 25	0.013
SS CS 34	0.028
SS CS 54	0.078
SS LB 12	0.002
SS LB 20	0.003
SS LB 25	0.006
SS LB 44	0.016
SS LB 76	0.044

Pinions (Boss Type)

Part Number	Mass (kg)
SS P07 W9 T28	0.031
SS P07 W5 T28...	0.022
SS P10 W11 T42...	0.160
SS P10 W7 T42...	0.120
SS P125 W14 T34...	0.20
SS P15 W8 T28...	0.125
SS P20 W20 T27...	0.430
SS P20 W13 T27...	0.300

Wide Track Rollers

Part Number	Mass (kg)
SS SR 18...NS	0.020
SS SR 25...NS	0.050
SS SR 34...NS	0.120
SS LR 18...S	0.021
SS LR 25...NS	0.055
SS LR 34...NS	0.125
SS BHR 18 C...NS	0.019
SS BHR 25 C...NS	0.045
SS BHR 34 C...NS	0.110
SS BHR 18 E...NS	0.045
SS BHR 25 E...NS	0.105
SS BHR 34 E...NS	0.235

Narrow Track Rollers

Part Number	Mass (kg)
SS LRN 18...NS	0.016
SS LRN 25...NS	0.040
SS LRN 34...NS	0.085

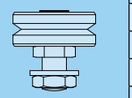
Vacuum Track Rollers

Part Number	Mass (kg)
SS LRN 25...	0.04
SS LRN 34...	0.085
SS LRN 54...	0.310

Flange Clamps

Part Number	Mass (kg)
SS SFC 25	0.120
SS SFC 44	0.220
SS SFC 76	0.500
SS LFC 25	0.405
SS LFC 44	0.630
SS LFC 76	1.430

Axial Stiffness Bearings



Part Number	Mass (kg)
SSSUJ 20...	0.018
SSSUJ 25...	0.042
SSSUJ 34...	0.097
SSSUJ 40...	0.172
SSLUJ 20...	0.019
SSLUJ 25...	0.046
SSLUJ 34...	0.102
SSLUJ 40...	0.181

CAD
SL2 Catalogue Standard Carriages
Locking Device 18
SL2 Catalogue Bearings
SL2 Catalogue Slides
SL2 Catalogue Track Rollers
SL2 Catalogue Flat Tracks
SL2 Catalogue Racks
SL2 Catalogue Pinion
SL2 Catalogue Lubrication Devices
Flange Clamps 19

Removable Carriages

Hepco Removable Carriages are available to suit all sizes of Double Edge Slides.

Carriage Plates are precision machined from aluminium alloy and are supplied clear anodised.

Carriages may be specified as **Assembled Units (AU SS Type)**, either factory set to the chosen Slide, or without Slide for self-adjustment.

The key feature of Removable Carriages is the incorporation of Double Eccentric Bearings. By slackening the Bearing axle fixing nuts and rotating the eccentric using the adjusting spanner, the Carriage can be disengaged from the Slide (see 📖 2). This can be a considerable advantage over Standard Carriages, which must either be run off the end of the Slide, or be disassembled to allow removal.

The following types of Bearing and lubrication device may be specified (refer also to availability table below right).

The Twin Bearing type which is the default choice, comprises two individual Bearings on a common axle. This offers some compliance, with smoother running, easy adjustment and greater tolerance of misalignment.

The Double Row Bearing type (DR) incorporates a one piece Bearing with two ball tracks. This offers higher load capacity, especially in the radial direction and is less susceptible to entrapment of debris.

The Nitrile Seal (NS) provides a higher degree of sealing against ingress of water or debris. A small increase in friction may result.

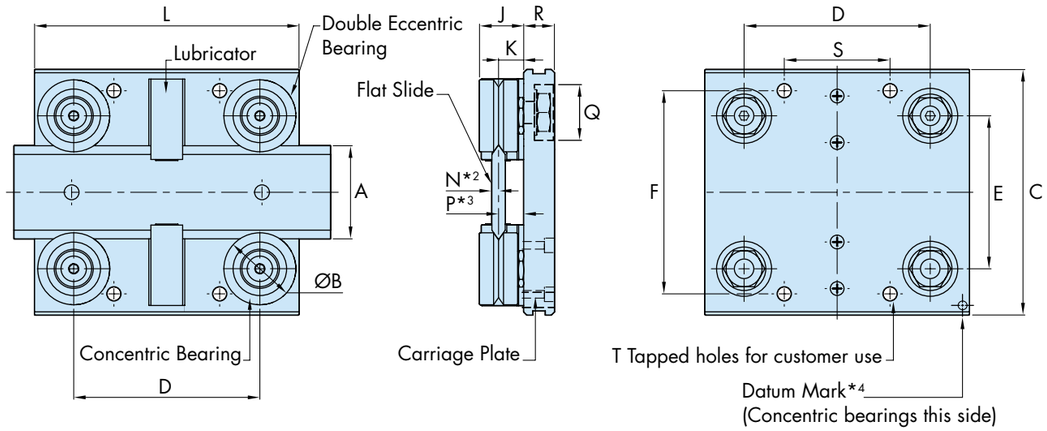
The Controlled Height Bearing option (CH) minimises variation between Bearings in respect of the important 'K' dimension. This is desirable in high precision applications*3.

The Lubricator option (LB) applies oil to the 'V' contact surfaces by means of lightly sprung felt pads which are charged with oil to give long intervals between re-lubrication. The Lubricator option is useful where the advantages of increased load and life are required but with lower friction compared to the Cap Seal.

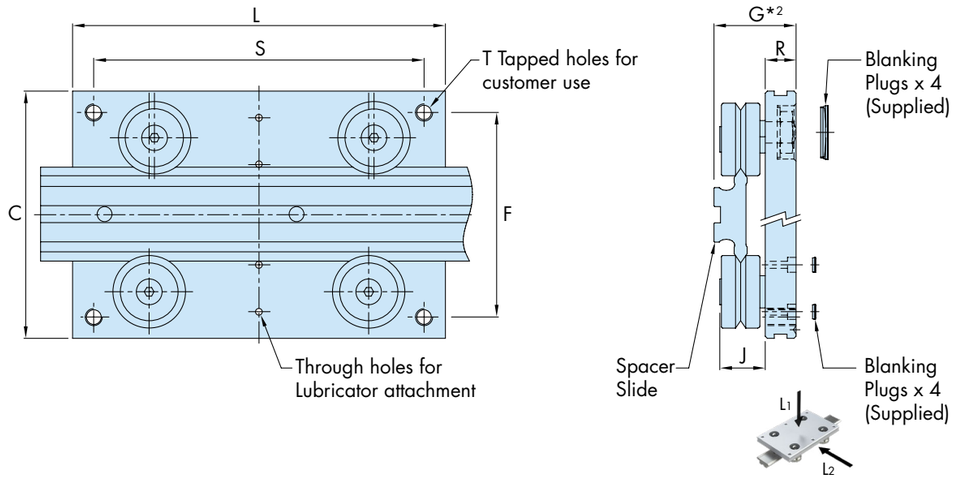
Lubricators are fixed with screws through the Carriage, so that they can be detached easily in the event of Carriage removal from the Slide.

See 📖 6 of the SL2 catalogue

Example: Short Removable Carriage with Lubricators on a Flat Slide



Example: Medium Removable Carriage on a Spacer Slide



Part Number	Use With		A ~	ØB	C	E	F	G*2	J	K	N*2	P*2,3	Q Ø x depth	R	Short Carriage L	Short Carriage D	Short Carriage S	Medium Carriage L	Medium Carriage D	Medium Carriage S	Long Carriage L	Long Carriage D	Long Carriage S	T	Max Load Capacity (N)*1 DR L1	DR L2	Twin L1	Twin L2
AU SS MS 12 R ...	SS NMS 12	SS MS 12	12	13	40	23.3	30	19	10.1	5.46	1.49	3.8	12.5 x 4.8	7.34	50	35	17	75	60	25	100	85	50	4xM4	-		240	240
AU SS V 20 R ...	SS NV 20	SS V 20	20	18	64	35.9	50	24.75	12.4	6.75	2.1	4.5	16 x 7	10	65	43	20	100	55	88	140	95	124	4xM5	760	1200	380	320
AU SS S 25 R ...	SS NS 25	SS S 25	25		80	48.3	65	30.5			2.36		22 x 8.4	11.5	80	51	24	135	74	120	180	120	164					
AU SS S 35 R ...	-	SS S 35	35	25	95	58.3	80	31.5	16.6	9		6.5	22 x 9.4	12.5	100	70	40	150	90	130	200	140	180	4xM6	1600	3000	960	960
AU SS S 50 R ...	-	SS S 50	50		112	73.3	95	33			2.34		22 x 10.9	14	110	80	50	160	100	140	220	160	200					
AU SS M 44 R ...	SS NM 44	SS M 44	44		116	74.8	96	38.5			3.08		25 x 8.7	14.5	125	88	50	180	103	160	225	153	206					
AU SS M 60 R ...	-	SS M 60	60	34	135	90.8	115	41	21.3	11.5	3.05	8.3	25 x 11	17	150	110	60	200	125	180	280	205	260	4xM8	3600	6000	3000	3000
AU SS M 76 R ...	-	SS M 76	76		150	106.8	130	42					25 x 12.5	18	170	130	80	240	165	220	340	265	320					
AU SS L 76 R ...	SS NL 76	SS L 76	76	54	185	123.0	160	58.5	34.7	19	4.56	14.3	32 x 13.5	20	200	140	90	300	198	270	400	298	370	4xM10	8000	10000	6000	6000

Notes:

1. Maximum loads quoted assume lubrication at the interface of Bearings and Slide. This can best be achieved by using Cap Seals or Lubricators. It is strongly recommended that load and life are determined using the methods shown in the Load/Life Calculations section of the SL2 catalogue. The Bearing static and dynamic load capacities (C & Co) often quoted by manufacturers are not the best basis for practical life calculations. C & Co figures are included on the Bearing pages for comparison.
2. Some dimensions will vary by the amount of the grinding allowance according to which grade of Slide is selected. All Carriages are compatible with all grades of Slide.
3. Controlled Height (CHK) Bearings are available in five bands, grouped in steps of 0.020mm from B1-0.050mm to B1+0.050mm, in respect of the B1 dimension given in the Standard Bearings section of the main SL2 catalogue. They are supplied in sets of up to 50 parts as standard, with larger sets on request. Customers requiring CHK Bearings within the same tolerance band, in respect of a number of Carriages, should state this on their order.
4. The datum mark identifies the reference edge used in manufacture. The concentric Bearings are always mounted on this side.

Ordering Details

2 x AUSSM44 180 R (LB) (DR) NS (CH) + Slide Part Number

- Number of Carriages set to specified Slide
- **AU**... = Part Number
- Carriage Length **L** = 180mm
- **R** = Removable Type Carriage
- Lubrication Option
  - **LB** = Lubricators
  - Leave blank if not required.
- **DR** = Double Row Bearings
  - Leave blank for Twin Bearings
- **NS** = Nitrile Sealed Bearings (Standard)
- **CH** = Controlled Height Bearings*4
  - Leave blank for standard tolerance
- Leave blank if Slide not required and Carriage will be supplied in a loose condition for self-adjustment

Availability of Carriage Options

Part Number	- Twin Bearings	DR Double Row	LB Lubricators	CHK Controlled Height
AU 12 13 R...	✓	×	✓	✓
AU 20 18 R...	✓	✓	✓	✓
AU 28 18 R...	✓	✓	✓	✓
Larger sizes	✓	✓	✓	✓

CAD
Component Mass 📖 12-13
SL2 Catalogue Slides
SL2 Catalogue Bearings
Lubricators 📖 17

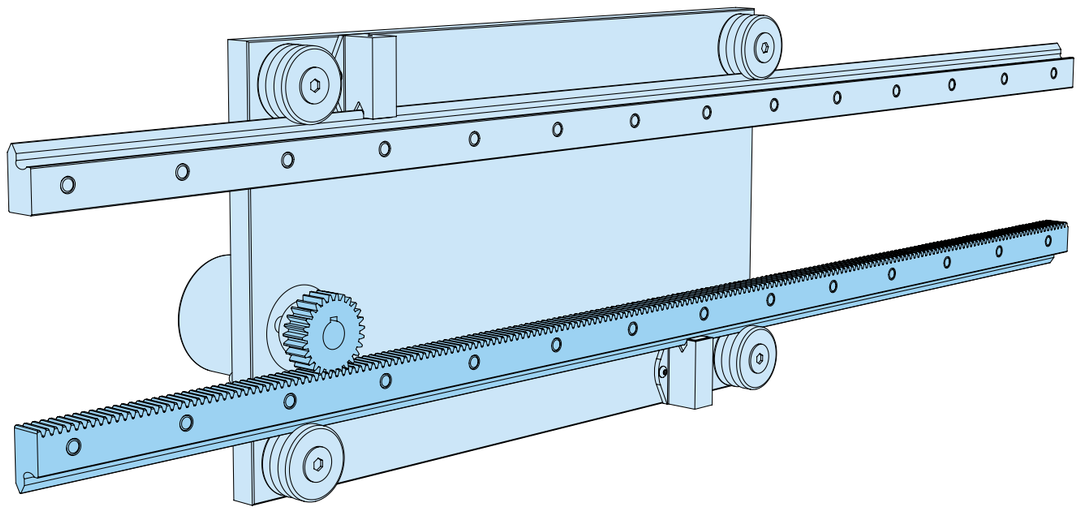
CAD
SL2 Catalogue Racks
SL2 Catalogue Slides
SL2 Catalogue Pinion

HepcoMotion Racks, Pinions, Drive Flanges and Gearboxes or AC Geared Motors can be used to construct a range of different custom Rack Driven system configurations.

Two examples of other configurations are shown below:

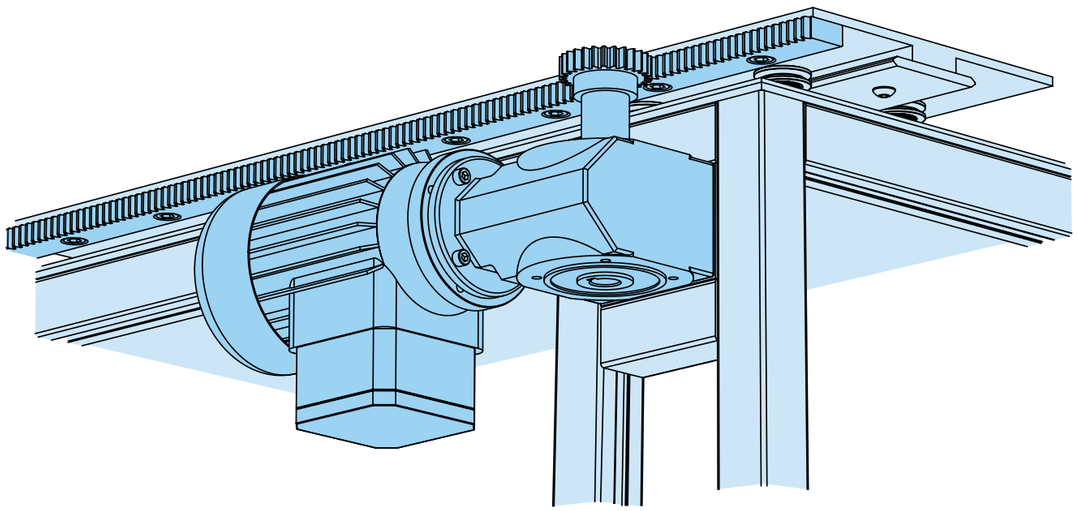
System with opposing Single Edge Spacer Slides

One Single Edge Spacer Slide has a rack cut into the back face, engaged with a Pinion.



System with driven Rack

A Hepco Drive Flange and hollow shaft motor driven worm gearbox are mounted to a fixed plate.



Our Technical Department will be pleased to assist with all aspects of specification and ordering.

CAD
Component Mass 12-13
SL2 Catalogue Slides
Removable Carriages 14-15

HepcoMotion plastic Compact Slide Lubricators are for use with Hepco SL2 Removable Carriages. They normally fit one each side of the Slide, between pairs of Bearings. However, any number may be fitted in any position according to requirements. Lubricators provide lubrication to the working surface of the Slide by means of spring loaded oil impregnated felt wipers.

System load capacity and life are greatly increased whilst retaining the low friction characteristics of dry running. Compact Lubricators may be specified as part of any Hepco SL2 Removable Carriage assembly or used within the customers' own design.

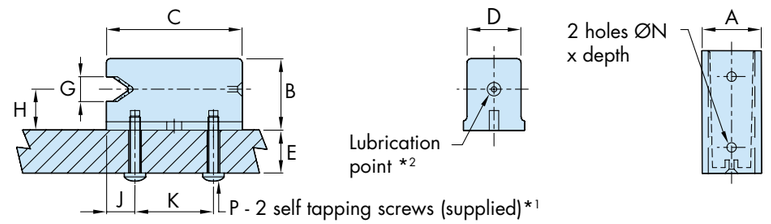
Lubricators are supplied with fasteners.

See 6 of the SL2 catalogue

Slide Lubricators for Standard Bearings for use on **Removable Carriages**

For all Bearing and Lubrication Device drilling centres, see page 9.

Compact type (...C)



Part Number	A	B	C	D	E		G	H	J	K	N	P*1
					max	min				±0.1		Thread x Length
SS LB 12 *3	7	10	13	5.2	3	2.5	3.1	5.46	3	6.5	1.7x2.5	M2.5x5
SS LB 20 *3	8	12	22.5	6.5	8	7.5	7.2	6.75	4.75	13	1.7x2.5	M2.5x10
SS LB 25	12	16.5	28	9.9	7.5	5.5	5.5	9	6	16	2.4x4.5	M3x10
SS LB 44	17	20	38	15	13.5	11.5	7	11.5	8	22	2.4x5.5	M3x16
SS LB 76	25	33.5	57	22.7	18.5	13	10	19	12	33	2.7x9	M3.5x22

Part Number	Use With	✓= Preferred choice, ✓= Compatible, ✕ = Not Compatible				
		Suitable for Slide Sections				
		MS	V	S	M	L
SS LB 12 *3	...J 13...	✓	✓	✓	✓	✓
SS LB 20 *3	...J 18...	✕	✓	✓	✓	✓
SS LB 25	...J 25...	✕	✓	✓	✕	✕
SS LB 44	...J 34...	✕	✕	✕	✓	✕
SS LB 76	...J 54...	✕	✕	✕	✕	✓

Ordering Details

SSLB44 C

Part number

Lubricator type:
C = Compact

Notes:
1. Two self tapping screws for plastic (size P) are supplied with each compact type Lubricator. These have a cross-recessed pan head and PT thread form.
2. Lubrication interval depends on length of stroke, duty and environmental factors. Replenish lubricant as necessary using a 68 viscosity EP mineral oil.
3. Sizes SSLB12 and SSLB20 have a true 'V' shape to enable them to engage with Slide thicknesses larger than their G dimensions.

Carriage Locking Device

HepcoMotion.com

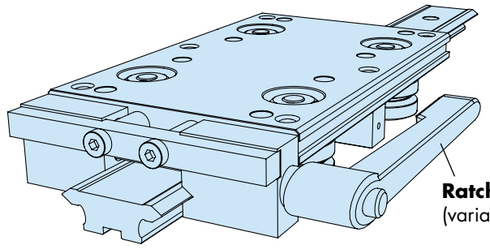
CAD

SL2 Catalogue

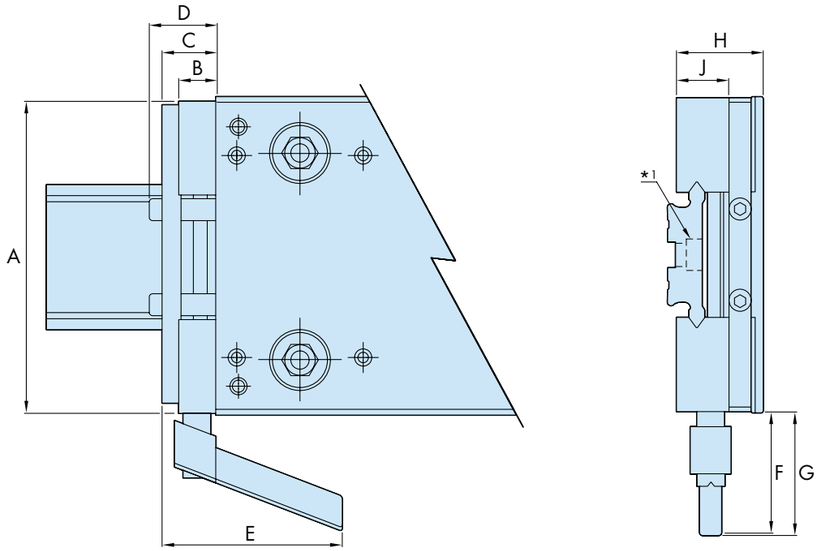
Standard Carriages

The HepcoMotion Carriage Locking Device has been designed to provide a safe and simple method of manually locking a Standard Carriage in position to facilitate processes where a secure, stationary platform is required.

It is available factory assembled in Standard Carriage format only for sizes AUSS2525 and above.



Ratchet locking lever
(variable position)



Part Number	Use With	A	B	C	D	E	F	G lever disengaged	H	J
SS BK 25 25	AUSS 25 25...	78	16	21.5	26.5	57	33.5	37.0	28.0	18.4
SS BK 35 25	AUSS 35 25...	88					31.0	34.5	29.0	
SS BK 50 25	AUSS 50 25...	103					30.0	33.5	30.5	
SS BK 44 34	AUSS 44 34...	116	16	23.5	29.5	83	51.5	55.0	35.0	22.4
SS BK 60 34	AUSS 60 34...	132					50.0	53.5	37.5	
SS BK 76 34	AUSS 76 34...	148					50.5	54.0	38.5	
SS BK 76 54	AUSS 76 54...	164	20	33.5	41.5	105	53.0	57.0	54.0	34.9

Ordering Details

AUSSS25 180 (CS) (DR) NS (CH) BK + Slide Part Number*1

Carriage Plate order details

BK = Carriage Locking Device option

Ordering Example: **2 x (3 x AUSSM60 200 LB DR NS BK + SSNM60 L3056)** (2 systems each with 3 Carriages per Slide)

Notes:

1. Due to the limited clearance between Locking Device components and the Slide, all Slides with Locking Devices must have counterbored holes.

Flange Clamps

CAD

kg

Component Mass 12-13

SL2 Catalogue

Slides

Flange Clamps enable the slide system to act as a self-supporting constructional element of the machine.

Manufactured from aluminium alloy, the clamps are then treated with a corrosion resistant coating certified by the U.S. Department of Agriculture. They are available for use with SSNS25, SSNM44, and SSNL76 section Spacer Slides only.

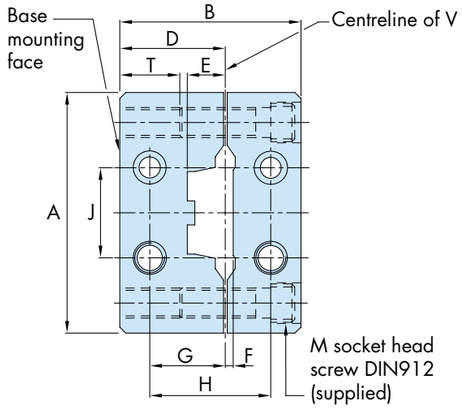
Short Flange Clamps (type SFC) enable the Slide to be supported between two opposing faces. The Long Flange Clamp (type LFC) enables short lengths of Slide to be supported from one end only. The machined base mounting facility may be utilised by customers wishing to space the slide system away from the mounting surface.

Please refer to the Deflection of Self Supporting Slides calculations section on 6.

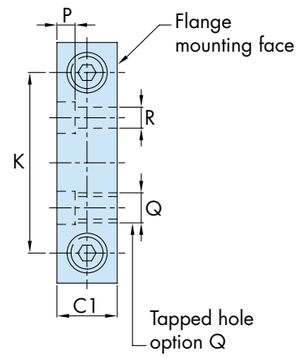
Assembly

Flange Clamps should be positioned proud of the ends of the Slide*1. Flange fixing screws should be located and slightly tightened, before clamping screws 'M' are fully tightened. Progressive tightening of each screw 'M' is recommended. Flange fixing screws may then be fully tightened.

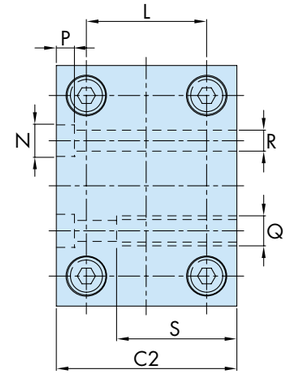
See Application Examples on 8, 9 & 11 of the SL2 catalogue



Short Flange Clamp (SFC)



Long Flange Clamp (LFC)



Part Number	Use With	A	B	C1	C2	D	E	F	G	H ±0.2	J ±0.2	K	L	M	N	P	Q	R	S	T	Weight/g S FC	Weight/g L FC
SS S/LFC 25	SS NS 25	60	54.6	15	55	29.8	9.8	1.8	20	34.6	20	45	35	M6x30	9.5	5	M8	6	35	17	120	405
SS S/LFC 44	SS NM 44	80	59.6	20	60	34.8	12.3	2.5	25	39.6	30	60	40	M8x30	11	6	M10	7	40	20	220	630
SS S/LFC 76	SS NL 76	120	74.6	25	75	44.8	19.3	4	30	49.6	55	95	50	M10x40	14	8	M12	9	45	23	500	1430

Ordering Details

SS S FC44 (Q)

Stainless Steel

Clamp Length
S = Short Type (use one at each end of Slide)
L = Long type (use for cantilever Slide mounting)

Q = tapped hole option is required*2
Leave blank for through hole fixing

Part Number (**44** = nominal Slide width in mm)

Notes:

1. For mounting Slides between opposing faces, Slides should be ordered 2mm shorter than the required span.
2. Standard drilled Flange Clamps will be reworked for customers requiring tapped hole option 'Q'.

Vacuum & High Temperature Bearings

CAD

Component Mass 12-13

SL2 Catalogue Bearings

SL2 Catalogue Track Rollers

SL2 Catalogue Load/Life Calculations

HepcoMotion Vacuum & Extreme Temperature Bearings and Track Rollers are designed for extreme environments. They are available in sizes from 18mm to 54mm in diameter, with a broad range of fixing styles, and with load capacities from 180N to 4,200N.

Hepco VACSS Vacuum & High Temperature Bearings are made entirely from stainless steel parts and are lubricated internally for life using Krytox LVP grease. They are suitable for use in high vacuums, at temperatures from -15°C to +210°C, and in the presence of oxygen. They are widely used in applications including semiconductor wafer manufacture, aerospace components, vapour deposition processes, LCD panel and plasma display manufacture and in vacuum evaporation equipment.

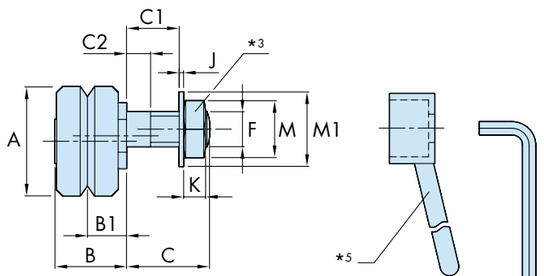
The Bearings have the same dimensions as SL2 Standard Bearings.

The J18 VACSS Bearings have a different construction to the larger sizes, using a one piece outer wheel into which two smaller Bearings are fitted. This size is not available in the low temperature LTSS version.

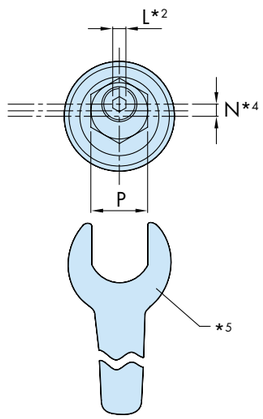
These Bearings can be supplied with alternative grease, without grease or without shields, on request.

Carriage plates to suit Vacuum & High Temperature Bearings are available on special request, please contact Hepco's Technical department to discuss your requirements.

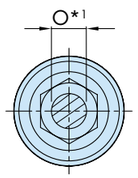
Through Fixing Type (SJ/LJ)



Eccentrics (E&DE)*3



Concentric (C)*3



Part Number	A	B	B1	C		C1		C2		D	E		F	G	H	I	J	K	L	M	M1	N*4		O*1	P
				SJ	LJ	SJ	LJ	SJ	LJ	±0.025			Metric Fine									...E	...DE	+0.0 -0.03	
... J 18 ...	18	12.4	6.75	7.4	14	3.4	10	2.4	2.5	14.00	7		M6 x 0.75	10	0.6	7.4	0.8	3.2	2.5	10	13	0.7	2.6	6	11
... J 25 ...	25	16.6	9	9.8	19	3.8	13	2.2	4.9	20.27	10		M8 x 1	14	0.5	9.8	1	5	3	13	17	0.75	2.75	8	13
... J 34 ...	34	21.3	11.5	13.8	22	6.6	14.8	5.2	5.9	27.13	12		M10 x 1.25	18	0.7	13.8	1.25	6	4	17	21	1	3.6	10	15
... J 54 ...	54	34.7	19	17.8	30	8.2	20.4	5.7	7.9	41.76	25		M14 x 1.5	28	1.6	17.8	1.6	8	6	22	28	1.5	5.5	14	27

Part Number	Q	R*4	S	S1	T	T1	T2	U ±0.1	U1	V	W	X		Y	Z	Adjusting Wrench*5	Socket Tool*5	Max Working Load Capacities (N)*6				Basic Life*6	
																		Lubricated		Dry		Lubricated	Dry
																		Axial	Radial	Axial	Radial		
... J 18 ...	2	1.2	8	10.5	10	4	8	38	54	11	24.5	M4		7	7	AT18	RT6	60	180	36	72	80	50
... J 25 ...	3	1.5	7	9	12	5	10	50	72	14	32	M5		8.5	10	AT25	RT8	240	450	80	160	50	70
... J 34 ...	4	2.0	9.5	8.5	17.5	6.5	12.5	60	90.5	17	42	M6		10	14	AT34	RT10	520	900	160	320	100	100
... J 54 ...	8	3.0	14.5	16.4	23.5	10.5	18.5	89.5	133	25	62	M8		13	20	AT54	RT14	1350	2400	360	720	250	150

Notes:

1. It is recommended that holes to suit Bearing mounting axles should be reamed to tolerance F6 for a sliding fit.
2. Eccentric Bearing fixing axles are supplied with hexagon sockets for adjustment as shown.
3. Nuts and washers are supplied with both concentric and eccentric SJ/LJ type Bearings.
4. 'N' is the eccentric offset due to the eccentric design (2 x N = total stroke). R dimension is both the eccentric offset of the adjusting nut and total stroke at the Bearing centreline.
5. For adjusting tool part numbers see table. For adjustment procedure and fixing nut tightening torques 3.
6. To calculate the load capacity and life of systems using these Bearings, please use the methods shown in the main SL2 catalogue.

Ordering Details

VAC SS SJ 25 C

Bearing Type
Choose from: **VAC** = Vacuum & High Temperature
or **LT** = Low Temperature

SS = Stainless steel

Fixing type
Choose from: **SJ** = Short Axle, **LJ** = Long Axle
& **BHJ** = Blind Hole Fixing

Journal type: **C** = Concentric (fixed)
E = Eccentric (adjustable)
or **DE** = Double Eccentric (adjustable SJ/LJ only)

25 = Bearing Diameter in mm
(Size 18 not available as LT grade)

Low Temperature Bearings

CAD

Component Mass 12-13

SL2 Catalogue Slides

SL2 Catalogue Standard Carriages

SL2 Catalogue Bearings

SL2 Catalogue Load/Life Calculations

Hepco LTSS Low Temperature Bearings are lubricated internally for life using AeroShell Grease 22, which is suitable for use at temperatures from -50°C to +150°C. This lubricant enables use in much colder conditions than the VACSS Bearings, for applications such as cold stores and specialised freeze dry equipment.

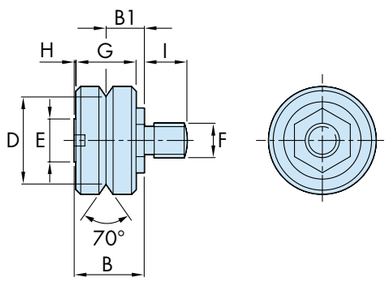
Through Hole Fixing type is available in two axle lengths covering most thicknesses of mounting plate. Both are available in **Concentric type (C)** which are fixed, **Eccentric type (E)**, adjustable, and **Double Eccentric type (DE)**, which have sufficient adjustment to enable a Carriage to be disengaged from the Slide.

Blind Hole Fixing type (BHJ) allows mounting into a solid machine base where through mounting holes are not possible, or where the thickness of the mounting plate is too great. The Blind Hole Fixing type is also useful where adjustment from the front is preferred or where access to the opposite side of the mounting hole is restricted. They are available in the fixed position **Concentric type (C)** and adjustable **Eccentric type (E)**.

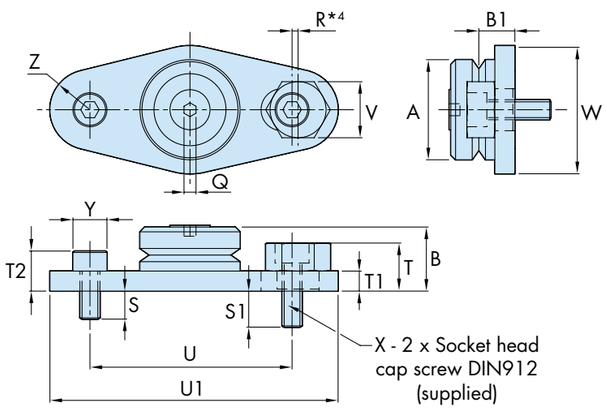
See Application Example on 8 of the SL2 catalogue

Blind Hole Fixing Type (BHJ)

Concentric (C)



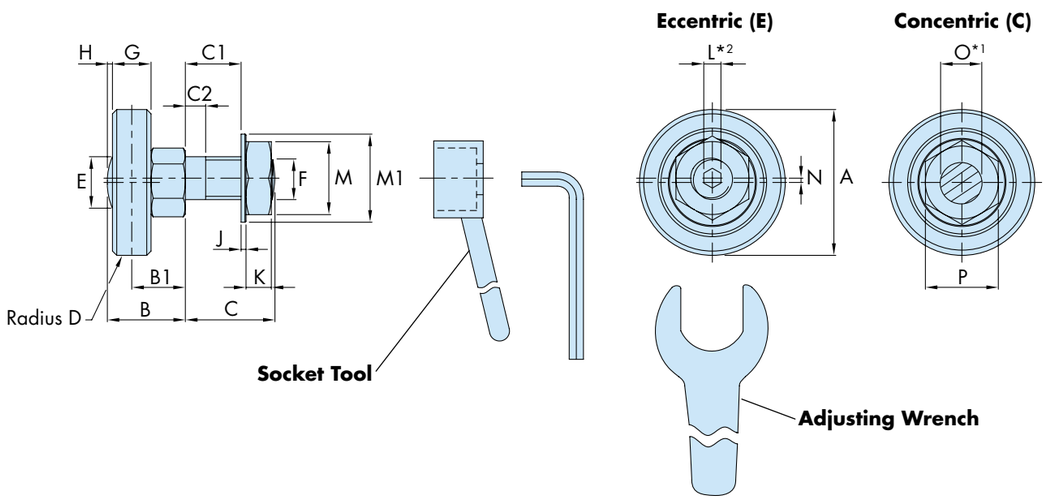
Eccentric (E)



Vacuum & Extreme Temperature Track Rollers

Vacuum & High Temperature and Low Temperature Track Rollers are available as fixed position Concentric type (C) and adjustable Eccentric type (E) on through hole fixing axles. They are available with 25mm, 34mm or 54mm diameters, and load capacities up to 4,200N. Track Rollers can be run with any suitable Flat Track, or can be used as cam followers.

Materials and greases are the same as are used on the VACSS Vacuum & High Temperature and LTSS Low Temperature 'V' Bearings shown on the previous pages.



Part Number	A	B	B1	C	C1	C2	D	E	F Metric Fine	G	H	J	K
... LRN 25 ...	25	14.5	10	19	13	5	500	10	M8x1	7	1	1	5
... LRN 34 ...	34	18.2	12.5	22	14.8	6	500	12	M10x1.25	9	1.2	1.25	6
... LRN 54 ...	54	29.5	21	30	20.4	8	500	23.5	M14x1.5	14	1.4	1.6	8

Part Number	L*2	M	M1	N	O*1 +0 -0.03	P	Adjusting Wrench	Socket Tool	Max Working Load Capacity*4	Roller Static and Dynamic Radial Load Capacities (N)*3	
										Co	C
... LRN 25 ...	3	13	17	0.75	8	13	AT25	RT8	800	1092	2632
... LRN 34 ...	4	17	21	1	10	15	AT34	RT10	1400	1905	4078
... LRN 54 ...	6	22	28	1.5	14	27	AT54	RT14	4200	5319	10965

Ordering Details

VAC SS LRN25 C

Bearing Type
Choose from: **VAC** = Vacuum & High Temperature
or **LT** = Low Temperature

SS = Stainless steel

C = Concentric (fixed) or **E** = Eccentric (Adjustable)

LRN = Indicates a Track Roller, **25** denotes the diameter in mm

Notes:

1. It is recommended that holes to suit Track Roller mounting axles should be reamed to tolerance F6 for a sliding fit.
2. Eccentric Track Roller fixing axles are supplied with hexagon sockets for adjustment as shown.
3. The quoted static and dynamic load capacities are based on industry standard calculations. These do not accurately reflect system performance, and are only provided for comparison with other systems.
4. To calculate the load capacity and life of systems using these Rollers, please use the methods provided in the Load/Life Calculations section of the SL2 catalogue.

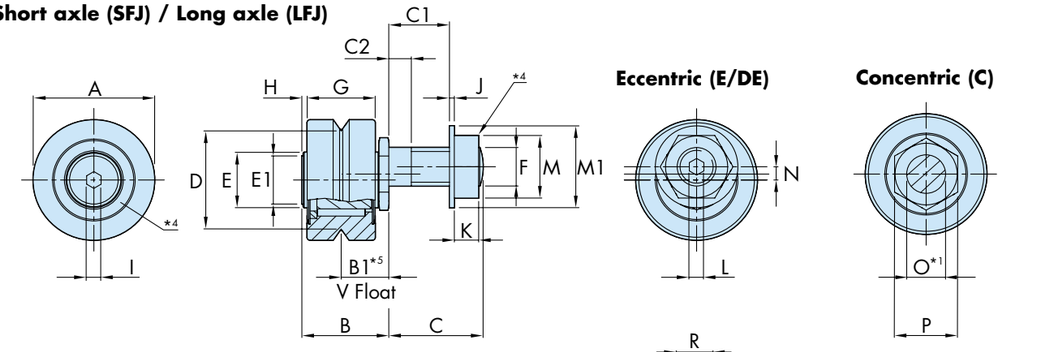
Floating Bearings

HepcoMotion Floating Bearings are designed to provide axial movement (float) of the 'V' position; this is especially useful where 'V' Slides are mounted in parallel. The axial movement compensates for parallelism tolerances between the opposing V's, reducing the potential of additional loading and helping to maintain a consistent running quality.

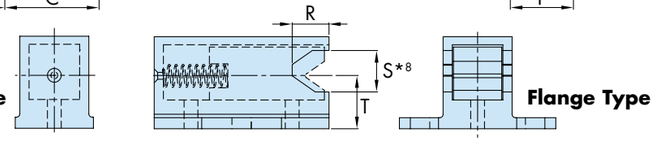
Floating Bearings are available in three basic sizes to work easily with the SL2 range. They are available in two axle lengths covering most thicknesses of Carriage or mounting plate, the short axle version being compatible with Hepco Carriage Plates. Both versions are available in **Concentric type (C)**, which are fixed providing a datum (in radial direction) for the system, **Eccentric (E)** and **Double Eccentric type (DE)** to enable system adjustment, with the DE version having sufficient stroke to permit disengagement from the Slide.

For more information, or to suit a specific application, please contact Hepco's Technical Department.

Short axle (SFJ) / Long axle (LFJ)



Floating Bearing Lubricator*6,7



Part Number	Use With			A	B	B1*5		C		C1		C2		D	E	E1	F
						Min	Max	SFJ	LFJ	SFJ	LFJ	SFJ	LFJ	±0.025			Metric Fine
SS ...FJ 25...	SS NS	SS S	SS LB 25...FB	25	17.6	9	10.5	9.8	19	3.8	13	3.4	4.9	20.27	11.5	10	M8 x 1
SS ...FJ 34...	SS NM	SS M	SS LB 44...FB	34	22.5	11.5	13.5	13.8	22	6	14	5.2	5.9	27.13	16	12	M10 x 1.25
SS ...FJ 54...	SS NL	SS L	SS LB 76...FB	54	35.6	19	21.6	17.8	30	8	20	5.7	7.9	41.76	28	25	M14 x 1.5

G	H Nominal	I	J	K	L	M	M1	N*3 Eccentric	N*3 Double Eccentric	O*1 +0/-0.03	P	R	S*8	T	Adjusting Wrench	Socket Tool	Max Working Load Capacity (N)*2	Bearing Radial Load Capacities (N)*2 Static (Co)	Bearing Radial Load Capacities (N)*2 Dynamic (C)
14	0.8	3	1	5	3	13	17	0.75	2.75	8	13	5.5	7.1	9	AT25	RT8	1500	6100	4900
18	1	4	1.25	6	4	17	21	1	3.6	10	15	8	9	11.5	AT34	RT10	3000	12500	11500
28	1.3	8	1.6	8	6	22	28	1.5	5.5	14	27	11.5	12.6	19	AT54	RT14	5000	28900	21500

Ordering Details

SS SFJ 25 C NS

SS = Stainless Steel
Fixing type
(Choose from: **SFJ** = Short Axle, **LFJ** = Long Axle)

NS = Nitrile Sealed Bearings

C = Concentric (fixed), **E** = Eccentric (adjustable)
or **DE** = Double Eccentric (for disengagement purposes)

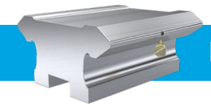
25 = Bearing diameter
(Choose from 25, 34 and 54)

Ordering Examples for Floating Bearing Lubricator:

SS LB 25 C FB — Compact type **(C)** Lubricator for 25mm diameter Floating Bearing
SS LB 44 F FB — Flanged type **(F)** Lubricator for 34mm diameter Floating Bearing

Notes:

1. It is recommended that holes to suit Bearing mounting axles should be reamed to tolerance F6 for a sliding fit.
2. The quoted static and dynamic load capacities use industry standard calculations and are only provided for comparison with other systems. Please use the Load/Life Calculation methods from the main SL2 catalogue. In all cases, Hepco Floating Bearings will have a life equal to or greater than the corresponding size of Double Row Standard Bearings. Floating Bearings are not designed to be axially loaded.
3. The 'N' dimension is the eccentric offset.
4. Fastenings are stainless steel.
5. The variation in the 'B1' dimension is the min/max axial movement of the 'V' centre also referred to as 'V float'.
6. Two machine screws with cross-recessed pan heads to DIN7985A are supplied for fixing the flanged type Floating Bearing Lubricator. Additionally, two self-tapping screws for plastic with PT thread form and cross-recessed pan heads are supplied for compact type Lubricators.
7. Lubrication interval depends on length of stroke, duty and environmental factors. Replenish lubricant as necessary using a 68 viscosity EP mineral oil.
8. Dimension S accomodates the 'V' float of the Floating Bearings.

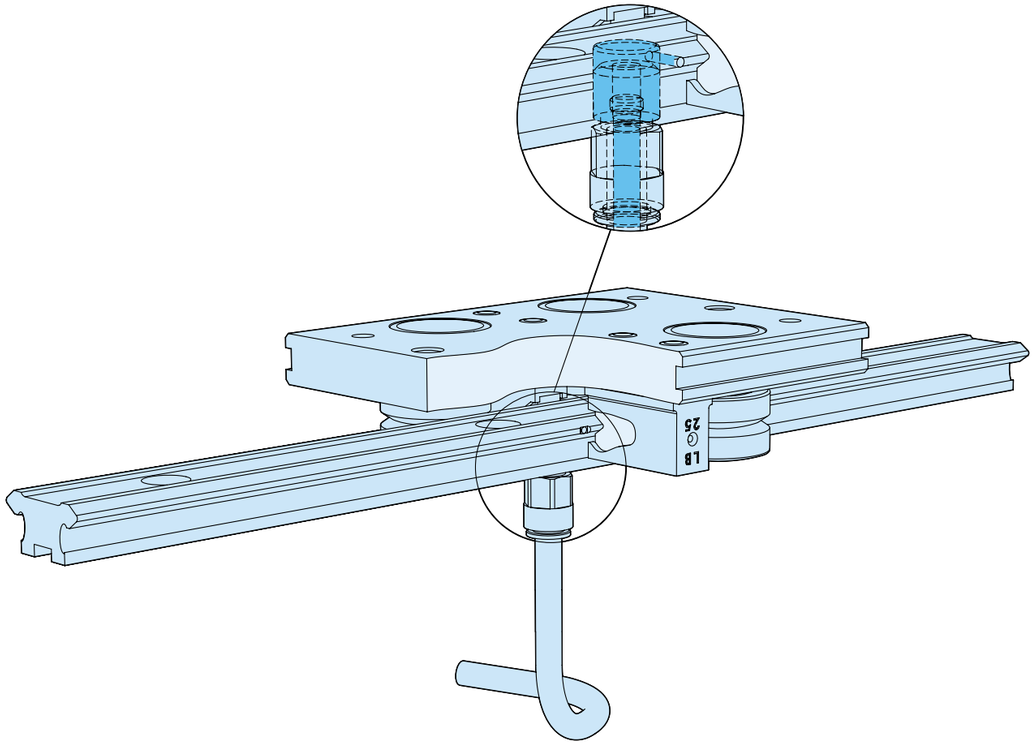


The HepcoMotion Bleed Lubrication facility enables a constant flow of lubricant to be channelled directly to the 'V' surfaces of the Slide. The lubricant is picked up and distributed by the Bearings whilst traversing the Slide. Lubricant distribution can be facilitated further by also fitting Hepco Cap Seals or Lubricators, which will be continuously charged with fresh lubricant and ensure an even spread over the working surfaces.

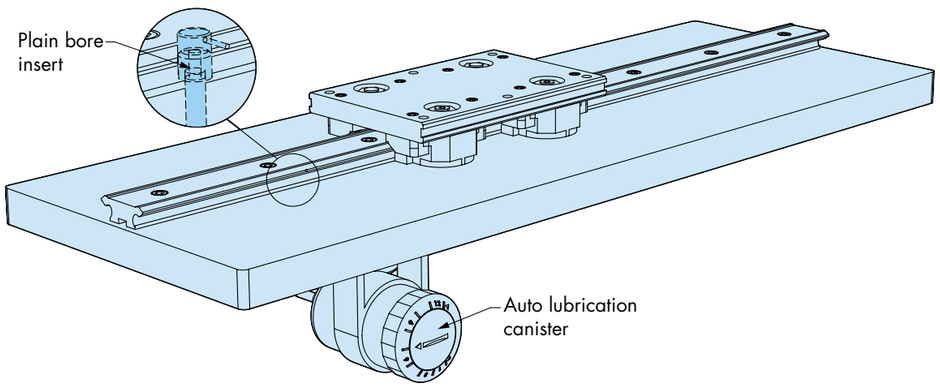
As the lubricant is provided via the Slide rather than the Lubricators or Cap Seals, the number of lubrication devices fitted to each Carriage can be reduced within a system. It is recommended that one in four Carriages is fitted with Lubricators or Cap Seals in any system using bleed lubrication. This will reduce friction and running costs.

Inserts are available with either an M5 thread or 4mm diameter bore with O-ring seal.

Connection can be made to a centralised lubrication system, pressure feed canister or an oil dispensing pump and controller, which can be programmed to meter a set dose of lubricant according to the distance travelled by the Carriage.



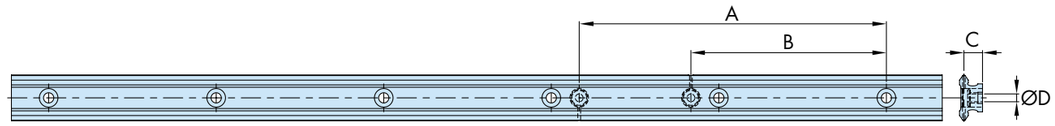
Below is an example of how the bleed lubrication facility can be incorporated into a typical application:



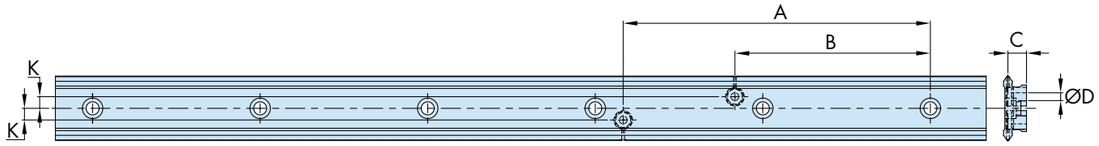
Double Edge Slides

Slides with dual bleed lubrication holes are shown below with details of their positions.

The Double Edge Slides are also available with single bleed lubrication holes, which can be positioned on either 'V'. Please specify at the time of ordering.



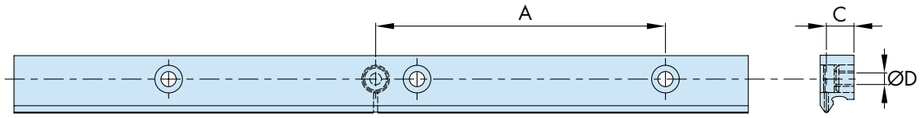
SSNV20 & SSNS25



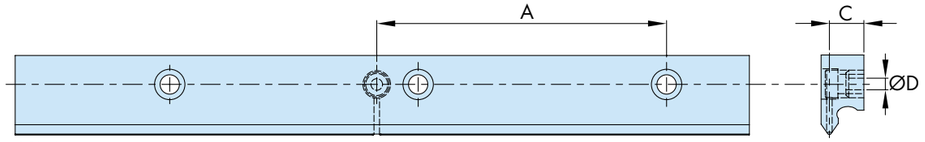
SSNM44 & SSNL76

Single Edge Slides

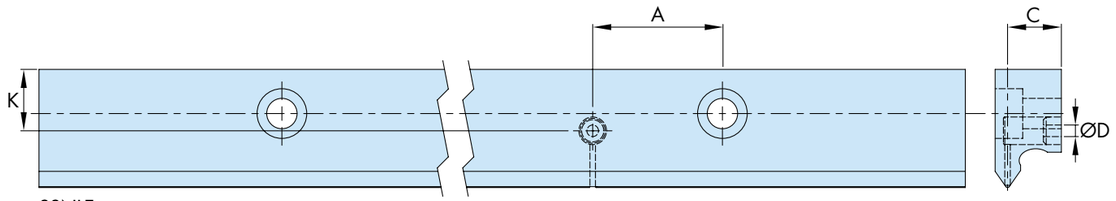
Single Edge Slides are also available with the bleed lubrication facility. Details of their positions are shown below.



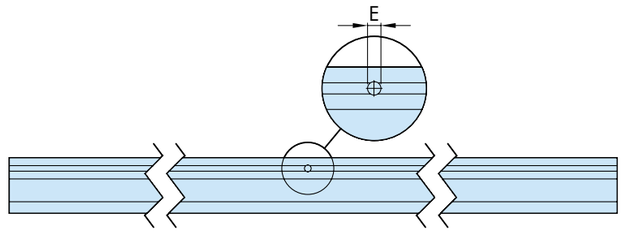
SSNSE

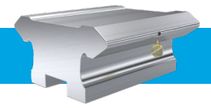


SSNME



SSNLE



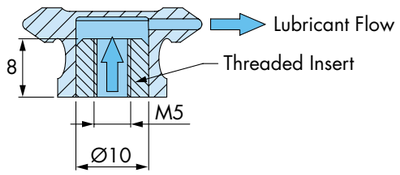


Bleed Lubrication Inserts

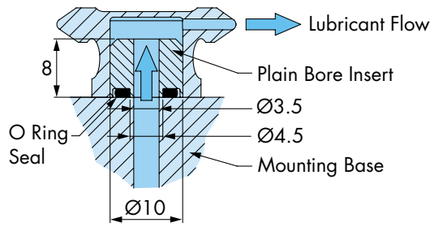
The plain bore insert has an O-ring seal between the mounting base and the Slide to stop lubricant escaping. The threaded version has an M5 male stud fitting through which the lubricant is pumped. Please refer to the diagrams below.

For more information please contact Hepco's technical department.

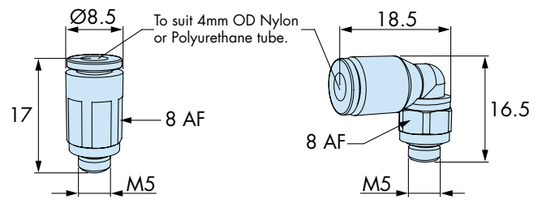
Threaded Insert (BLT)



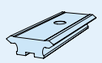
Plain Bore Insert (BLP)



Male Stud Connectors Straight Connector 90° Connector

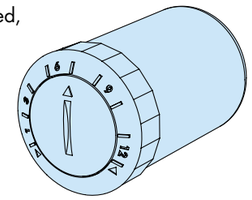


The tube used with the standard male stud fitting is 4mm diameter nylon or polyurethane tube. Alternative sizes of male stud fittings and tube are available on request. Please contact Hepco's technical department for more information.

Slide Part Number	For Use With	A*1,2	B*1,2	C	D*3	ØE	K
SSNMS12		Bleed lubrication unavailable					
SSNV20		435	375	8	M5 / Ø3.5	1.5	-
SSNS25		435	375	10	M5 / Ø3.5	1.5	-
SSNM44		435	375	12.5	M5 / Ø3.5	1.5	6.25
SSNL76		330	210	19.5	M5 / Ø3.5	2.0	18
SSNVE		Bleed lubrication unavailable					
SSNSE		375*4	-	10	M5 / Ø3.5	1.5	-
SSNME		375*4	-	12.5	M5 / Ø3.5	2.0	-
SSNLE		390*4	-	19.5	M5 / Ø3.5	2.0	22.25

Auto Lubrication Canister

This can be set to dispense the lubricant to the Slide at regular intervals and can be adjusted, depending on the application. Please specify at the time of ordering, if required.



Ordering Details

SSNS25 L1290 (C15) (D15) BLP (A430) (B380)

Slide Part Number

Bespoke values of **A** & **B** dimensions
Leave blank if standard*1,2,4

Bleed lubrication type:
BLP = plain bore insert, **BLT** = threaded insert

Ordering Example:

1 x SSNME L2336 BLP A400 — Single Edge Spacer Slide, 2336mm long, with custom hole position A
1 x SSNME L2336 BLP A1850 — Single Edge Spacer Slide, 2336mm long, with custom hole position A

Male Stud Connectors are available on request. Please use the ordering details below if required.

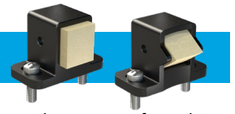
For Straight Male Stud Connectors use **31010419**

For 90° Male Stud Connectors use **31990419**

Notes:

1. Dimensions A and B are distances from the centre of the mounting hole positioned nearest to the right-hand end of the Slide.
2. Custom position bleed holes can be specified, but cannot be located more than 600mm from the end of the Slide. Mounting holes should be avoided.
3. Depends on whether a plain or threaded insert is used.
4. To order a symmetrical pair of Single Edge Spacer Slides with Bleed Lubrication, one of the Slides should be an opposite handed version, with an adjusted bleed hole position dimension A to reflect this. This is shown in the ordering example above.

Bearing Lubricators & Flat Track / Roller Lubricators



CAD

SL2 Catalogue — Standard Bearings

SL2 Catalogue — Track Rollers

SL2 Catalogue — Flat Tracks

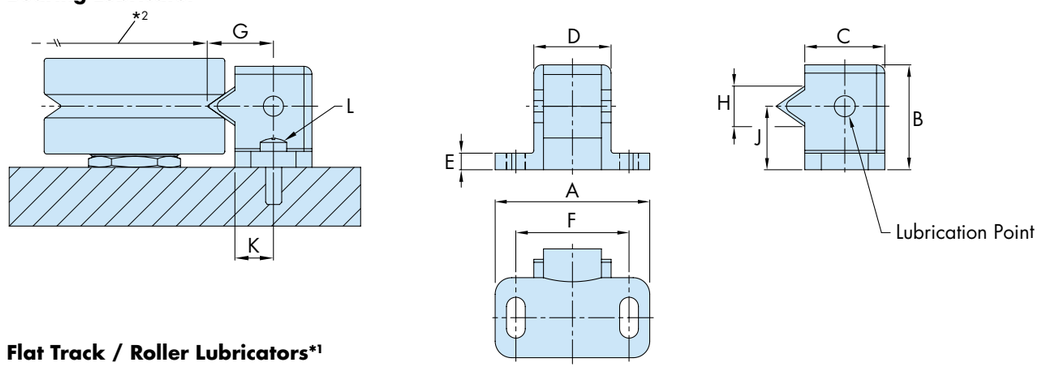
SL2 Catalogue — Slides

Component Mass 12-13

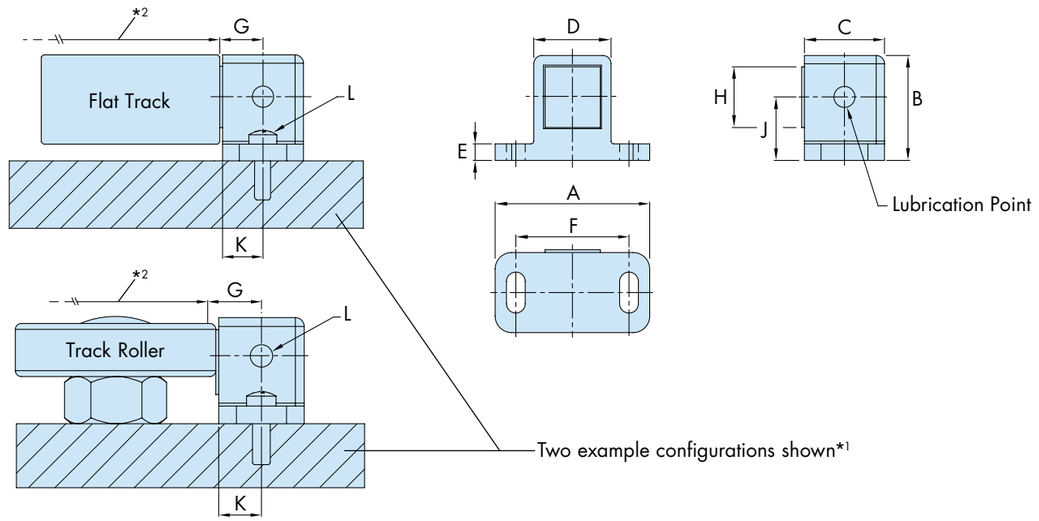
HepcoMotion Bearing Lubricators & Flat Track / Roller Lubricators*1 provide a simple and versatile means of applying lubricant to a system, and consist of a plastic housing incorporating a sprung loaded oil impregnated felt wiper.

Bearing Lubricators are an alternative to Slide Lubricators for lubricating 'V' Slide Systems with Standard Bearings.

Bearing Lubricator



Flat Track / Roller Lubricators*1



Part Number	For Use with			A	B	C	D	E	F	G	H	J	K	L
SS BLB 25	SS ... J 25 ...	-	-	28	16	10.5	13.5	3	20.5	9.46	5.90	9	5.25	M3
SS RLB 25		SS ... R 25 ...	SS FT 32 16							7.25	11			
SS NRLB 25		SS LRN 25 ...	SS FT 32 16		14.5									
SS BLB 34	SS ... J 34 ...	-	-	28	19	14.5	14	3	20.5	12.46	7.30	11.5	7.25	M3
SS RLB 34		SS ... R 34 ...	SS FT 40 20							9.25	11			
SS NRLB 34		SS LRN 34 ...	SS FT 40 20		18									
SS BLB 54	SS ... J 54 ...	-	-	42	32	18	21.5	5	32	18	12.6	19	9	M4
SS RLB 54		SS ... R54 ...	-							11	21			
SS NRLB 54		SS LRN 54 ...	-		29									

Ordering Details

Part Number — **SS BLB 34**

Notes:
1. Wide Track Roller Lubricators can be used with both Wide Track Rollers and Flat Tracks. Narrow Track Roller Lubricators can be used with both Narrow Track Rollers and Flat Tracks.
2. For drilling centres, see Data & Dimensions for Assembled Systems section 10-11.

Controlled Height Bearings - CHK

CAD

Component Mass 12-13

SL2 Catalogue — Standard Carriages

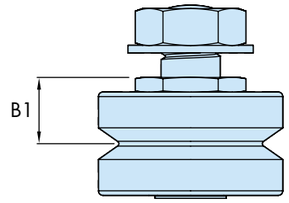
SL2 Catalogue — Standard Bearings

HepcoMotion Controlled Height Bearings (CHK) are designed to minimise the variation in the 'V' height of Standard Bearings. This is desirable in high precision applications, and in Carriages using Double Row type Bearings.

Controlled Height (CHK) Bearings are available in five incremental ±0.010mm bands, spanning a total of ±0.050mm in respect of the B1 dimension. They are supplied in sets of up 50 parts as standard, with larger sets on request.

CHK Bearings of differing bands should not be mixed in any Carriage assembly. In applications with multiple Carriages, it is recommended that Bearings with adjacent tolerance bands are used in Carriages that will be assembled next to each other.

To aid identification, Bearings are supplied with a colour coded mark located in the hexagon recess on the underside of the Bearing, as shown below.



Identification Colours:

Red **Orange** **Yellow** **Green** **Blue**

Identification Colour	B1 Tolerance	
	Band	B1
Red	A	-0.05 -0.03
Orange	B	-0.03 -0.01
Yellow	C	-0.01 +0.01
Green	D	+0.01 +0.03
Blue	E	+0.03 +0.05

Ordering Details*1

Bearing Part Number — **SS LJ 25 C (DR) (NS) (CHK)**

CHK... = Controlled Height option

Notes:
1. A set of Bearings will be supplied within a single band. Bearings within a specific band are available on request.

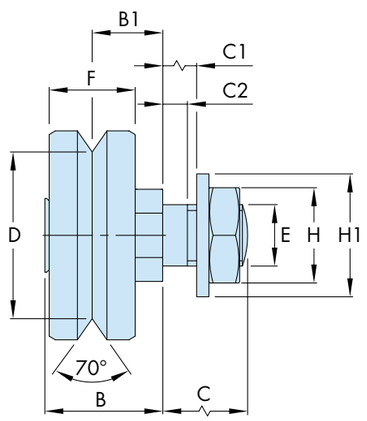
Axial Stiffness Bearings

HepcoMotion Axial Stiffness Bearings have been developed for applications where system height needs to be more resistant to deflections and vibrations. They are stiffer under axial (L1) loading and are also more resistant to any relaxation in system preload than a similar system using standard Hepcomotion **DR** bearings. This makes them well suited to precise applications, particularly busy ones.

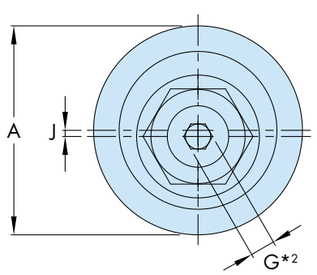
Load and life performance meets the published specification for the similar size of **DR** bearings, but the **DR** type should remain the first choice for heavily loaded systems.

Axial stiffness bearings are interchangeable with standard SL2 bearings. They are available in sizes 25 and 34 only and are supplied with nitrile seals as standard.

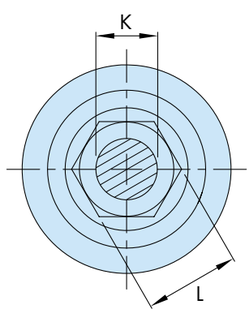
Through Fixing Type



Eccentric (E)



Concentric (C)

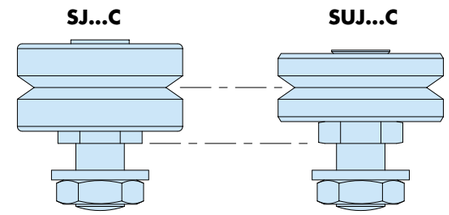


Part Number	A	B	B1	C		C1		C2		D	E	F	G	H	H1	J		K*1	L
				Short Axle	Long Axle	Short Axle	Long Axle	Short Axle	Long Axle	±0.025	Metric Fine					...E...	...DE...	+ 0.00 − 0.03	
SS...UJ 25...	25	15.5	9	9.8	19	3.8	13	3.4	4.9	20.27	M8x1	11	3	13	17	0.75	2.75	8	13
SS...UJ 34...	34	19.2	11.5	13.8	22	6.6	14.8	5.2	5.9	27.13	M10x1.25	14	4	17	21	1	3.6	10	15

To help facilitate bearing type selection, key attributes of Hepco Twin, Double Row and Axial Stiffness bearings are compared in the chart below:

Bearing Type	Max Working Load Axial	Max Working Load Radial	Speed	Smoothness	Tolerance to Misalignment	Mass	System Height	Tolerance to Debris	Stiffness Under Axial Load
Twin									
Double Row									
Axial Stiffness									

Visual Comparison



Load / Life Calculations

The maximum axial (LA) and radial (LR) working load capacities, in Newtons, for all sizes of Hepco AS type bearings, are given in the table below. Values are based on shock-free duty.

All bearings are greased internally for life. Customers should provide lubrication to the interface between bearings and slide. This can be achieved using Hepco Slide Lubricators or Cap Seals. Lubrication maximises load capacity and life.

To calculate system life, the load factor LF should first be calculated by using the equation below and capacities in the table provided.
LF should not exceed 0.5 for any combination of loads on Axial Stiffness bearings.

Life, in kilometres, can then be calculated using the second equation. The value for Basic Life is also taken from the table.

Part Number	Maximum Working Load (N)		Basic Life (km)
	LA(max)	LR(max)	
... SS ... UJ 25 ...	290	1080	70
... SS ... UJ 34 ...	570	1600	425

$$L_F = \frac{L_A}{L_{A(max)}} + \frac{L_R}{L_{R(max)}} \leq 0.5$$

$$\text{Life (km)} = \frac{\text{Basic Life}}{(0.03 + 0.97L_F)^3}$$

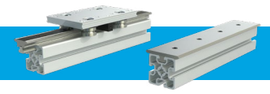
Ordering Details

(SS) (R) SUJ 25 C DR NS

SS = Stainless Steel Version
R = DE version only
Fixing type. Choose from:
SUJ = Short Axle, **LUJ** = Long Axle,
Part Number (~ Bearing Diameter in mm)
C = Concentric (fixed), **E** = Eccentric (adjustable)
DE = Double Eccentric
Double Row Bearing
(As standard for Axial Stiffness bearings)
Nitrile Sealed Bearing
(As standard for Axial Stiffness bearings)

Notes:
1. It is recommended that holes to suit Bearing mounting axles should be reamed to tolerance F6 for a sliding fit.
2. All eccentric Through Fixing type Bearing axles are supplied with sockets for adjustment.
3. Please see the 'Mix & Match' Component Compatibility section for preferred choices of Slide to use with each Bearing.

CAD
Component Mass 12-13
SL2 Catalogue Bearings
SL2 Catalogue Slides
SL2 Catalogue Standard Carriages



CAD

SL2 Catalogue
Slide Lubricators

SL2 Catalogue
Bearings

SL2 Catalogue
Slides

SL2 Catalogue
Racks

Component Mass
12-13

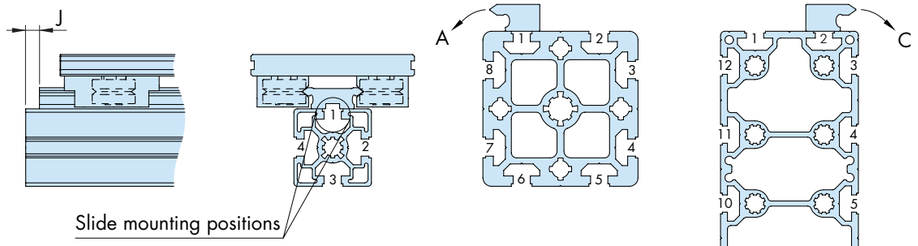
T-Nut Strip provides location of Spacer Slide and retention of fixing screw position in the event of disassembly.

Compatibility Table - SL2 Spacer and Flat Slides with MCS Profiles

Width	Height	Slide Part Number		
20	20	SS NV 20		
20	40		SS NV 20 R	
40	20			SS NVE
				SS NVE
30	30	SS NS 25		
30	60		SS NS 25 R	
30	90			SS NSE
60	30	SS NM 44		
90	30		SS NM 44 R	
				SS NME
40	40	SS NS 25		
40	80		SS NS 25 R	
80	40			SS NSE
80	80	SS NM 44		
80	160		SS NM 44 R	
160	80			SS NME
				SS NLE*2
160	80	SS NL 76*1,2		
			SS NL 76 R*1,2	
45	45	SS NS 25		
45	60		SS NS 25 R	
45	90			SS NSE
60	45	SS NM 44		
60	60		SS NM 44 R	
90	90			SS NME
				SS NLE*2
60	45	SS NL 76*2		
60	60		SS NL 76 R*2	

Width	Height	Slide Part No			
20	20	SS S 35	✓	✓	✓
20	40				
30	30	SS M 44	✓	✓	
30	60	SS S 50	✓	✓	✓
30	90				
60	30	SS M 76	✓	✓	✓
40	20	SS S 50	✓	✓	
40	40	SS S 50	✓	✓	
40	80	SS M 60	✓	✓	✓
		SS M 76	✓	✓	✓
		SS L 76*2	✓	✓	✓
45	45	SS M 60	✓	✓	✓
45	60	SS M 76	✓	✓	✓
45	90	SS L 76*2	✓	✓	✓
60	45	SS M 76	✓	✓	✓
60	60	SS L 76			

✓ = Fits with all grades of Slide



Ordering Details

8081 - H2200 - J50 - 2C / SSNM44 - L806 - (R) - (C) / 1x AUSSM44 180 CS DR

- Profile Size — Using profile part no. e.g. **0-132-8081**
- Profile Length **H**
- Slide position **J** — Leave blank for self assembly
- Slide mounting position number — **C** for clockwise or **A** for anti-clockwise facing of Single Edge Slide. Leave blank if not required
- Slide part number
- Slide Length **L**
- **R**=Rack mounted to SL2 Spacer Slide SL2 Flat Slide mounting to special order
- **C**=Counterbored option for flush surface on SL2 Flat Slides
- Carriage reference for example only. Please specify from SL2 catalogue

1. SSNL76 Spacer Slides can only be attached to the two centre most positions of the 160mm wide face of the 80 x 160 profile.
2. Slide hole centres and fixing screw sizes and types will vary from those specified in the SL2 catalogue.

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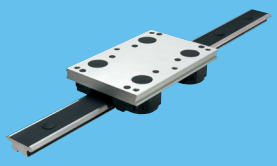
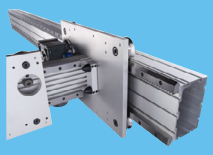
HepcoMotion®

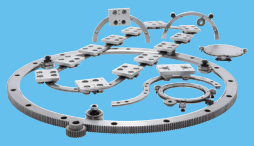
ADVANCED LINEAR SOLUTIONS



GV3 - Simple Select®
Linear Guidance and Transmission System



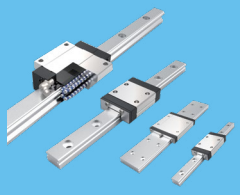
HDS2
Heavy Duty Slide System



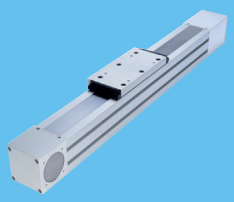
PRT2
Ring Slides and Track System

HDRT
Heavy Duty Ring Slides and Track System

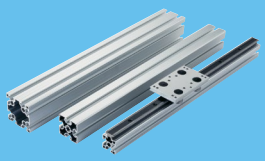
SL2
Stainless Steel Based Slide System



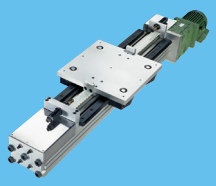
HLG
Hepco Ball Guides



SBD
Sealed Belt Drive

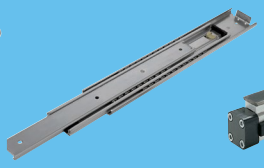


MCS
Aluminium Frame and Machine Construction System

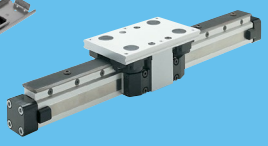


HDLS
Heavy Duty Driven Linear System

DLS
Linear Transmission and Positioning System

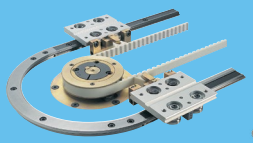


HTS
Telescopic Ball Bearing Slides



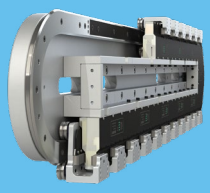
HPS
Powerslide-2 Guided Rodless Cylinder

MHD
Heavy Duty Track Roller Guidance System

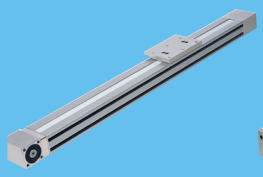


DTS
Driven Track System

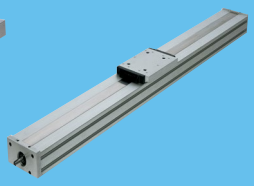
Hepco Ball Screws



GFX
Guidance for Beckhoff XTS

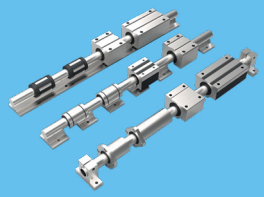


PDU2
Profile Driven Unit



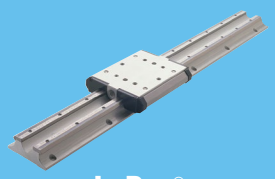
PSD120
Profile Screw Driven Unit

Shaft
Precision Steel and Aluminium Shaft

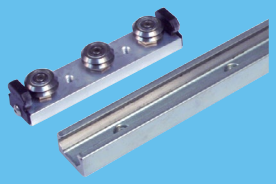


Ball Bushings
Linear Bearing System

DUALVEE®
Single Edge Slide System



LoPro®
Aluminium Based Slide System



UtiliTrak®
Lightweight U Channel Guideway

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