



This data sheet interacts with	
PRT2 Catalogue	
	48 - 49

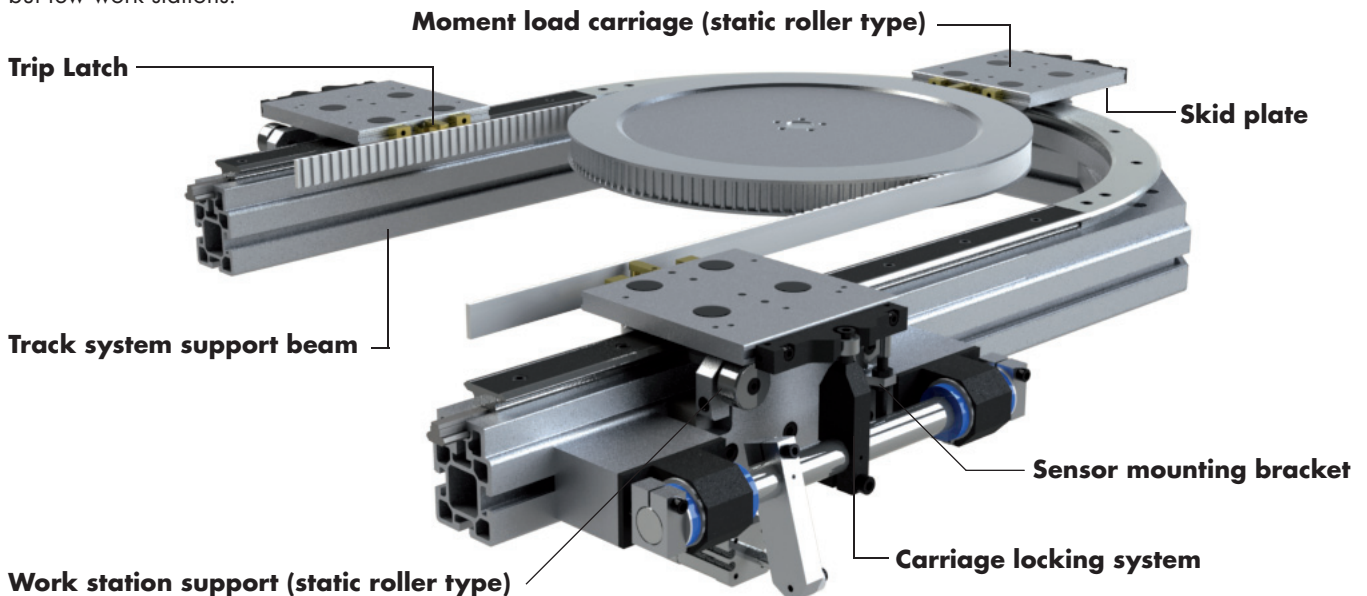
No. 5 Moment Load Carriages

HepcoMotion® moment load carriage systems provide extra support and rigidity in applications where high downwards or offset loads are anticipated, typically at work stations. It is also possible to arrange for continuous support of the carriages all around the circuit. Moment load carriages are a variation of the standard fixed centre carriages and are available in all 25 and 44 equivalent sizes. Carriages can be ordered complete with the carriage locking system and with either the fixed or trip latch belt connection facility.

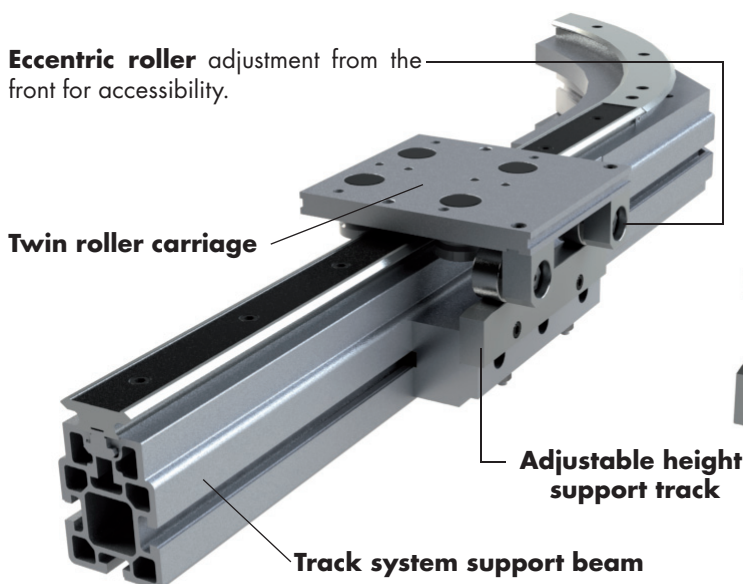
This datasheet provides details of the standard moment load carriages, along with information of the alternative design options that are available. Please contact Hepco to discuss application requirements so that a tailored solution can be provided.

Moment load carriages are available with two types of work station support, both designed to connect to the track system support beam.

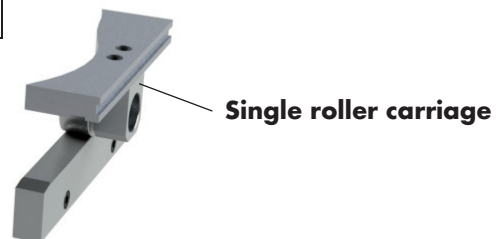
Static roller type: with eccentrically adjusted rollers attached to the framework bearing against a fixed skid plate on the underside of the carriage. This reduces the total number of rollers required and therefore the cost of a system with many carriages but few work stations.



Work station support (static roller type)
Eccentric rollers adjusted from the front for accessibility.

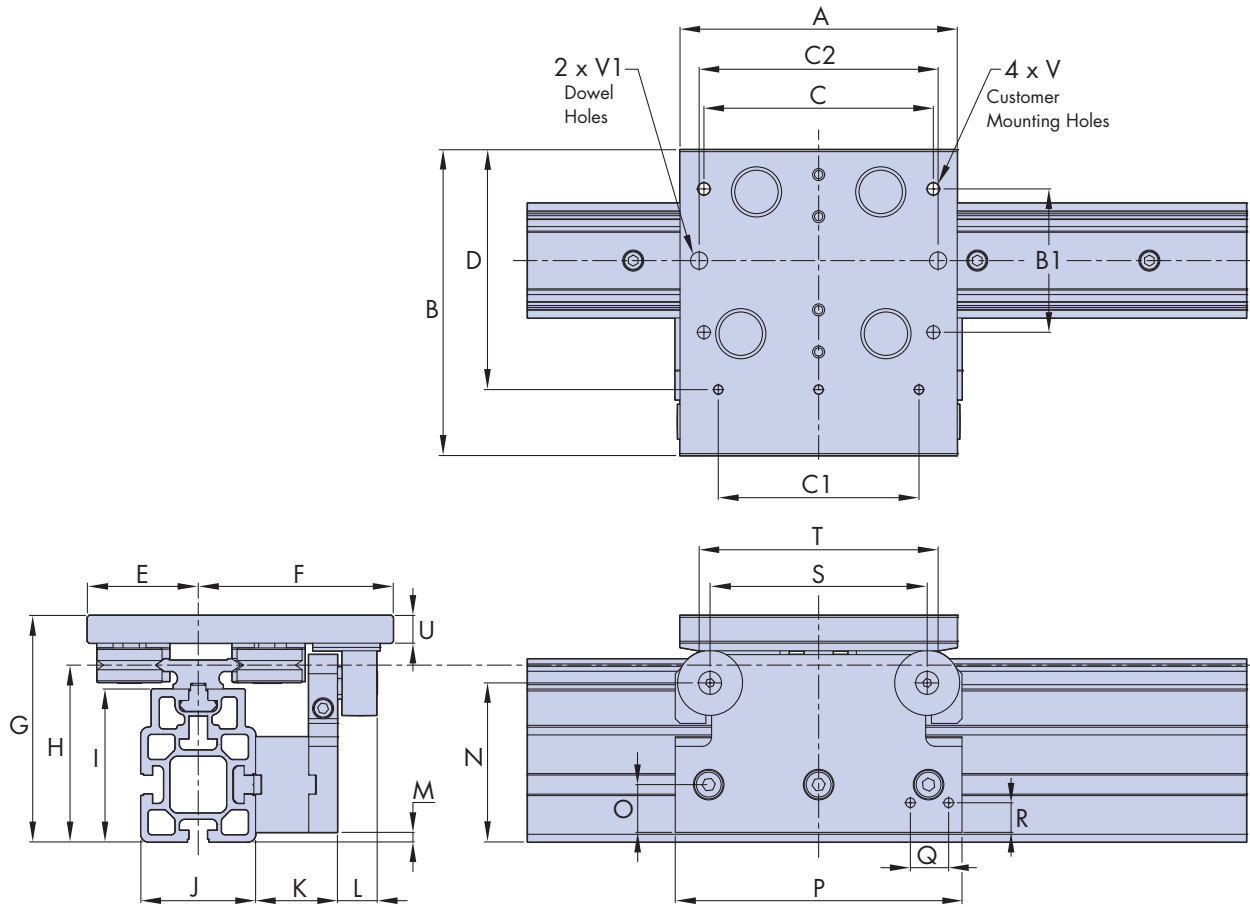


Dynamic roller type: with eccentrically adjusted rollers attached to the underside of the carriage, bearing on the adjustable height support track. The combination of these adjustable features facilitates set up where accuracy and alignment cannot be guaranteed or where continuous support for the carriage is required all around the circuit.



No. 5 Moment Load Carriages - Static Type

The main dimensions of the static type moment load carriages are shown below. For more information or advice to suit a particular application, please contact Hepco's technical department.



Part Number	A	B	B1	C	C1	C2	D	E	F	G	H	I	J
MLCS 25 159	95	120	50	85	60	80	94	40	80	110.5	90	80	60
MLCS 25 255	100	120	50	80	65	85	94	40	80	110.5	90	80	60
MLCS 25 351	105	120	50	85	70	90	94	40	80	110.5	90	80	60
MLCS 44 468	145	160	75	120	105	125	125.5	58	102	118.5	92.5	80	60
MLCS 44 612	150	160	75	125	105	130	125.5	58	102	118.5	92.5	80	60

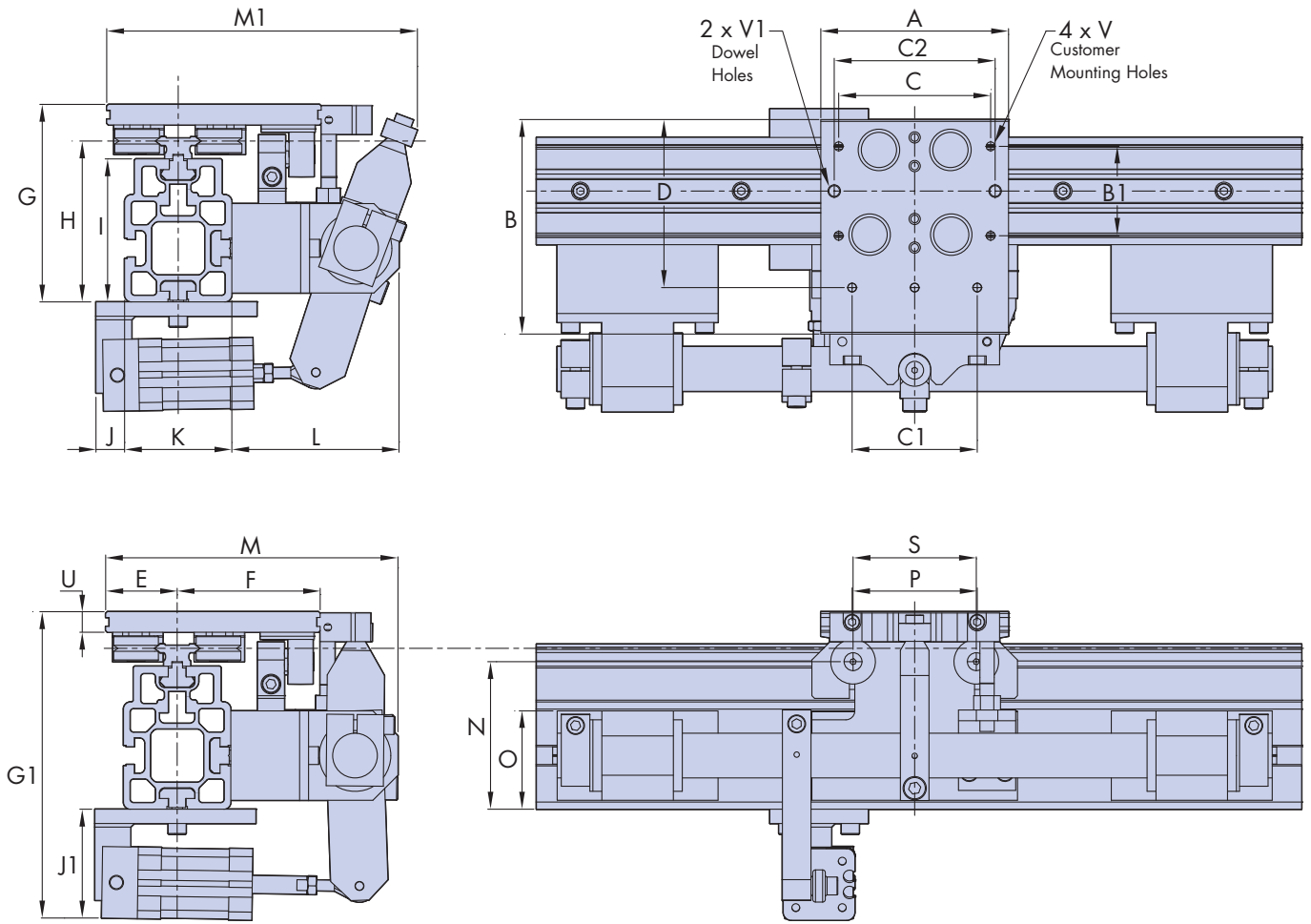
Part Number	K	L	M	N	O	P	Q	S	T	R	U	V	V1	Carriage Weight (kg)
MLCS 25 159	30	16.3	5	82	25	115	20	70	75	15.5	11.5	M6	6	0.65
MLCS 25 255	30	16.3	5	82	25	115	20	70	80	15.5	11.5	M6	6	0.67
MLCS 25 351	30	16.3	5	82	25	115	20	70	85	15.5	11.5	M6	6	0.69
MLCS 44 468	42.8	20.8	5	82.5	25	150	20	115	125	15.5	14.5	M8	8	1.52
MLCS 44 612	42.8	20.8	5	82.5	25	150	20	115	130	15.5	14.5	M8	8	1.56

Note:

1. Bearing hole positions are the same as standard FCC carriage plates, please refer to 38-39 of the main catalogue for more details.

No. 5 Moment Load Carriages - Static Type

The static type moment load carriages are available with the carriage locking system. The main dimensions are shown below.



Part Number	A	B	B1	C	C1	C2	D	E	F	G	G1	H	I	J ¹
MLCS CLS 25 159	95	120	50	85	60	80	94	40	80	110.5	172	90	80	16
MLCS CLS 25 255	100	120	50	80	65	85	94	40	80	110.5	172	90	80	16
MLCS CLS 25 351	105	120	50	85	70	90	94	40	80	110.5	172	90	80	16
MLCS CLS 44 468	145	160	75	120	105	125	125.5	58	102	118.5	180	92.5	80	-
MLCS CLS 44 612	150	160	75	125	105	130	125.5	58	102	118.5	180	92.5	80	-

Part Number	J1	K	L	M	M1	N	O	P	S	U	V	V1	Carriage Weights (kg)
MLCS CLS 25 159	62	60	93.5	163.5	174	82	55	70	70	11.5	M6	6	0.86
MLCS CLS 25 255	62	60	93.5	163.5	174	82	55	70	70	11.5	M6	6	0.88
MLCS CLS 25 351	62	60	93.5	163.5	174	82	55	70	70	11.5	M6	6	0.91
MLCS CLS 44 468	62	60	116.25	204.25	217	82.5	55	102	115	14.5	M8	8	1.82
MLCS CLS 44 612	62	60	116.25	204.25	217	82.5	55	102	115	14.5	M8	8	1.86

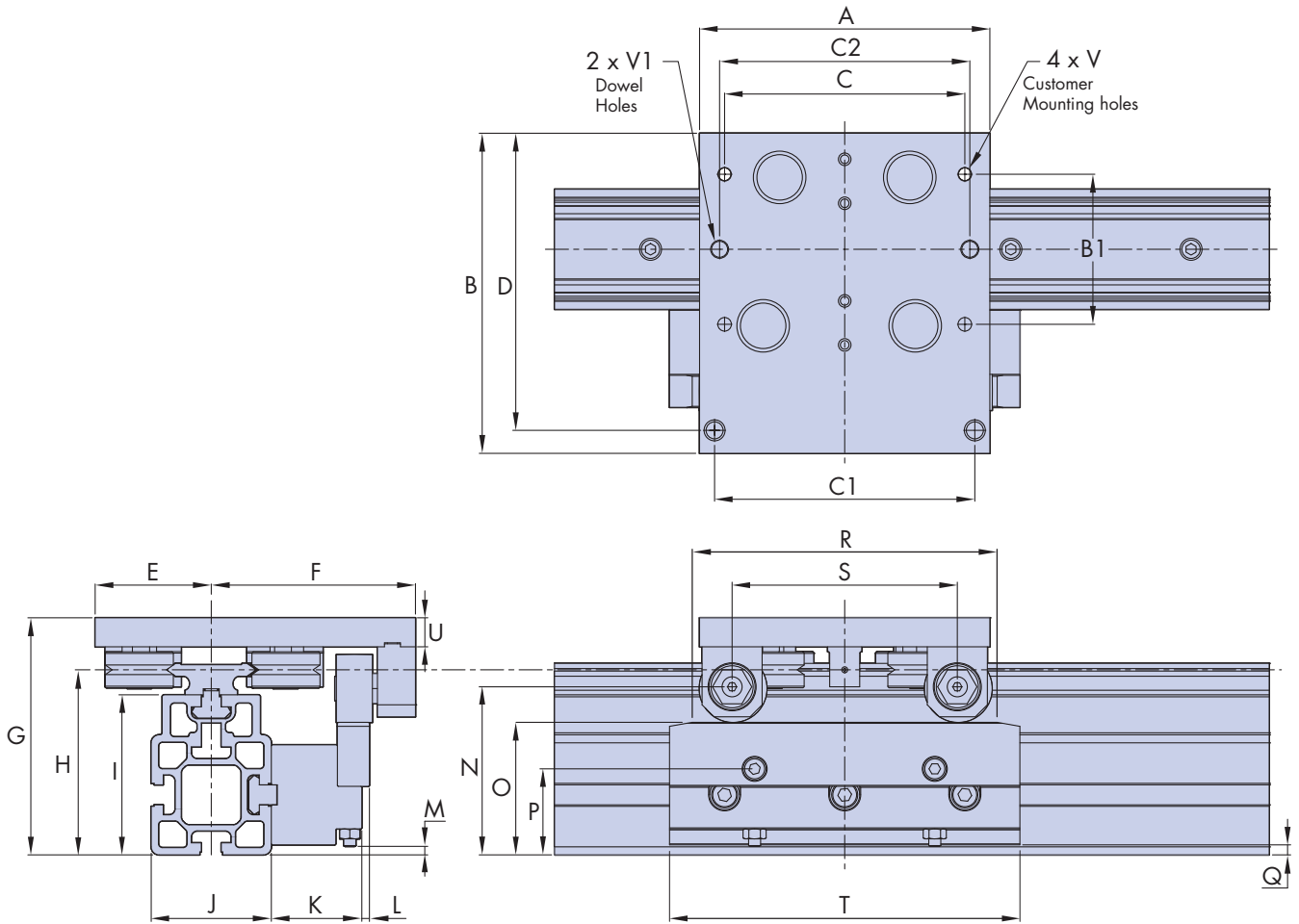
Note:

1. The cylinder is in line with the edge of the beam for the size 44.

2. Bearing hole positions are the same as standard FCC carriage plates, please refer to 38-39 of the main catalogue for more details.

No. 5 Moment Load Carriages - Dynamic Type

The main dimensions of the dynamic moment load carriages are shown below. For more information or advice to suit a particular application, please contact Hepco's technical department.



Part Number	A	B	B1	C	C1	C2	D	E	F	G	H	I	J	K
MLCD 25 159	95	120	50	85	55	80	111	40	80	110.5	90	80	60	30
MLCD 25 255	100	120	50	80	90	85	111	40	80	110.5	90	80	60	30
MLCD 25 351	105	120	50	85	95	90	111	40	80	110.5	90	80	60	30
MLCD 44 468	145	160	75	120	130	125	148.5	58	102	118.5	92.5	80	60	45.2
MLCD 44 612	150	160	75	125	135	130	148.5	58	102	118.5	92.5	80	60	45.2

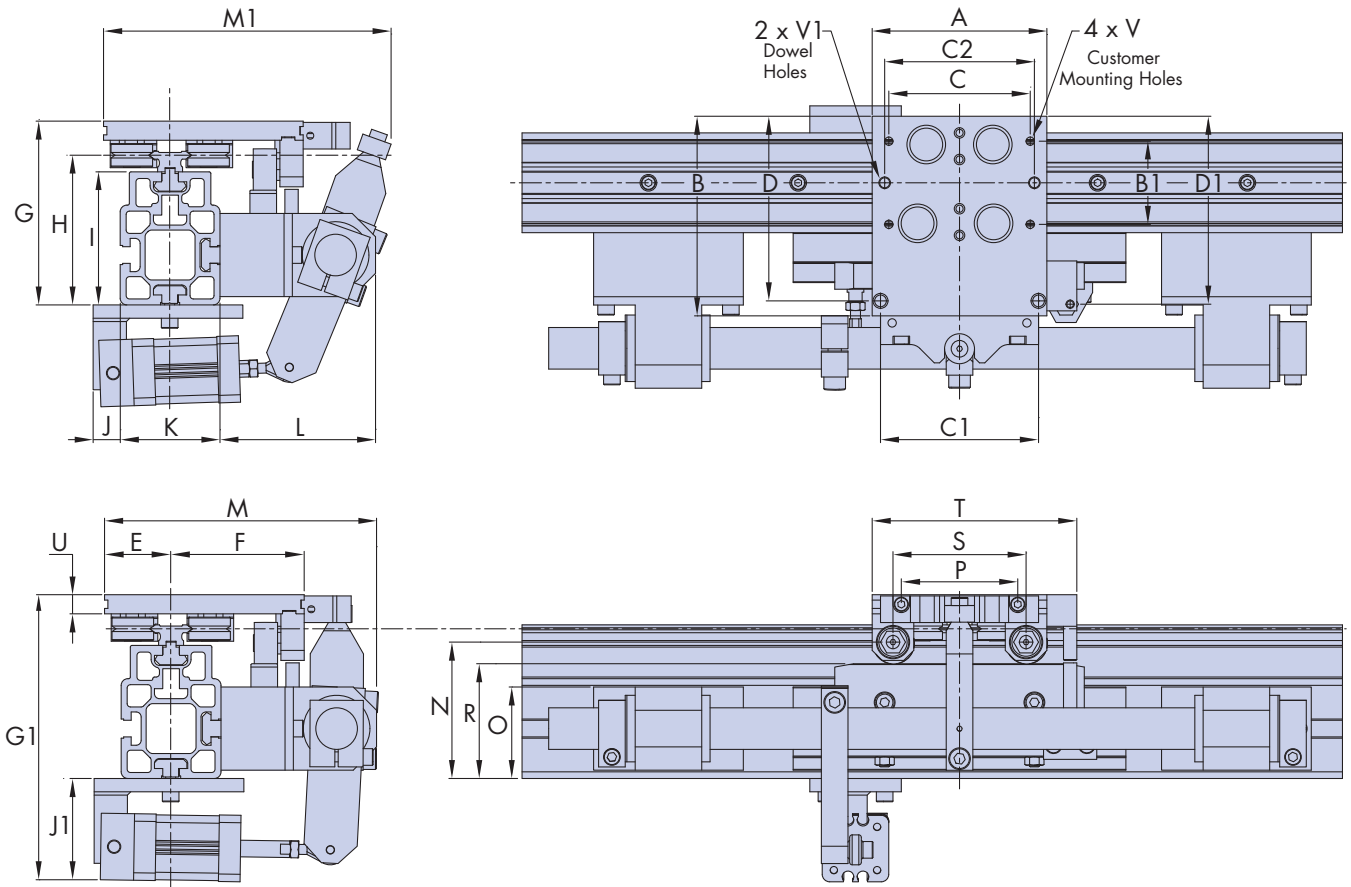
Part Number	L	M	N	O	P	Q	R ¹	S	T ¹	U	V	Ø V1 (K6)	Carriage Weights (kg)
MLCD 25 159	4	7	82	69	45.75	5	To Order	70	To Order	11.5	M6	6	0.72
MLCD 25 255	4	7	82	69	45.75	5	To Order	75	To Order	11.5	M6	6	0.73
MLCD 25 351	4	7	82	69	45.75	5	To Order	80	To Order	11.5	M6	6	0.75
MLCD 44 468	3.8	4	84	66.25	43	5	To Order	112.5	To Order	14.5	M8	8	1.73
MLCD 44 612	3.8	4	84	66.25	43	5	To Order	117.5	To Order	14.5	M8	8	1.76

Note:

1. The length of these components will vary with each application. Please contact Hepco's technical department for more details.
2. Bearing hole positions are the same as standard FCC carriage plates, please refer to 38-39 of main catalogue for more details.

No. 5 Moment Load Carriages - Dynamic Type

The dynamic type moment load carriages are also available with the carriage locking system. The main dimensions are shown below.



Part Number	A	B	B1	C	C1	C2	D	D1	E	F	G	G1	H	I	J ¹
MLCD CLS 25 159	95	120	50	85	55	80	111	113	40	80	110.5	172	90	80	16
MLCD CLS 25 255	100	120	50	80	90	85	111	113	40	80	110.5	172	90	80	16
MLCD CLS 25 351	105	120	50	85	95	90	111	113	40	80	110.5	172	90	80	16
MLCD CLS 44 468	145	160	75	120	130	125	148.5	148.5	58	102	118.5	180	92.5	80	-
MLCD CLS 44 612	150	160	75	125	135	130	148.5	148.5	58	102	118.5	180	92.5	80	-

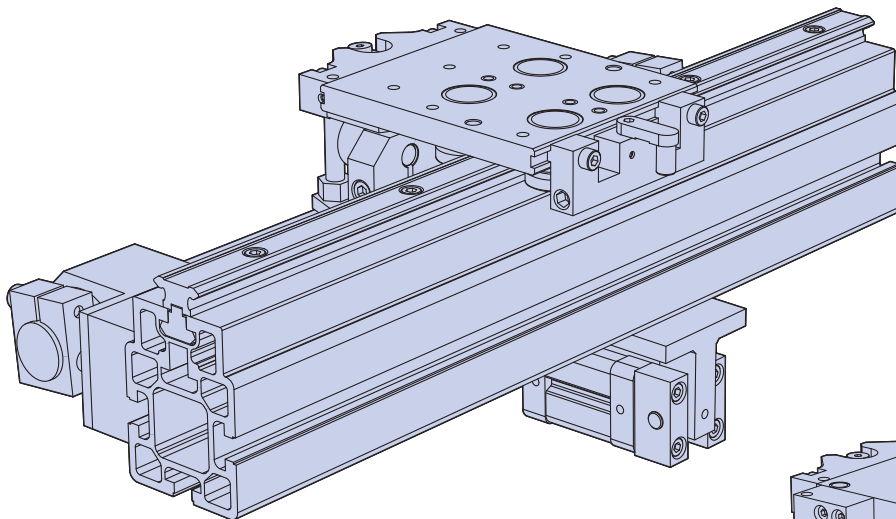
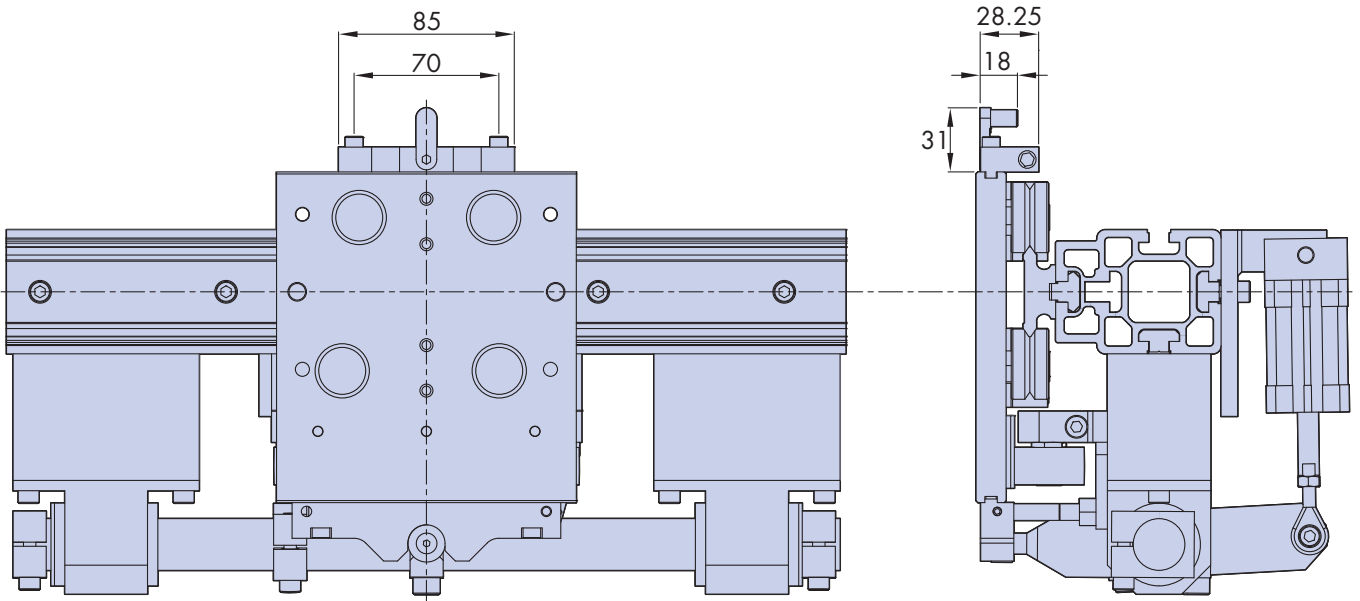
Part Number	J1	K	L	M	M1	N	O	P	R	S	T	U	V	Ø V1 (K6)	Carriage Weights (kg)
MLCD CLS 25 159	62	60	93.5	163.5	174	82	55	70	69	70	113	11.5	M6	6	0.96
MLCD CLS 25 255	62	60	93.5	163.5	174	82	55	70	69	75	118	11.5	M6	6	0.98
MLCD CLS 25 351	62	60	93.5	163.5	174	82	55	70	69	80	123	11.5	M6	6	1.0
MLCD CLS 44 468	62	60	116.25	204.25	217	84	55	102	66.25	112.5	163	14.5	M8	8	2.10
MLCD CLS 44 612	62	60	116.25	204.25	217	84	55	102	66.2	117.5	168	14.5	M8	8	2.11

Note:

1. The cylinder is in line with the edge of the beam for the size 44.
2. Bearing hole positions are the same as standard FCC carriage plates, please refer to 38-39 of main catalogue for more details.

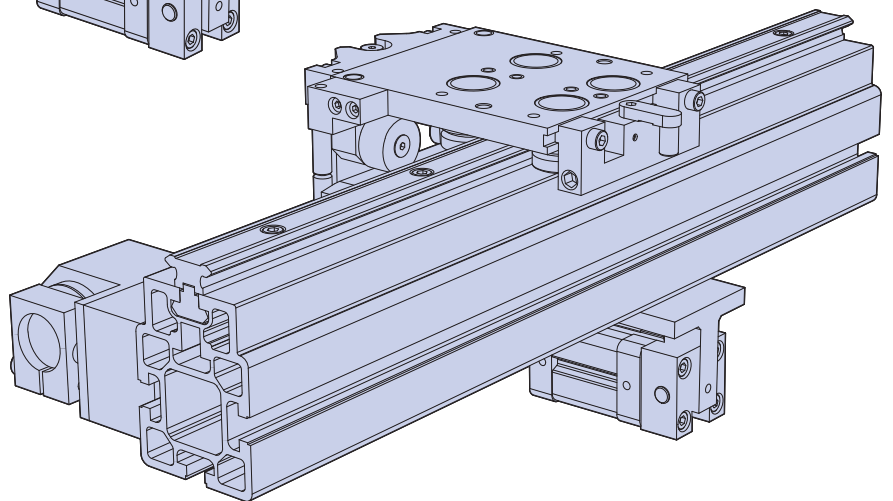
No. 5 Moment Load Carriages - Trip Latches

The static and dynamic moment load carriages can be supplied with trip latches, the dimensions are shown below. Customers are advised to order the timing belt complete and assembled with the trip latch drive components from Hepco.



Static type moment load carriage shown with trip latch attached.

Dynamic type moment load carriage shown with trip latch attached.

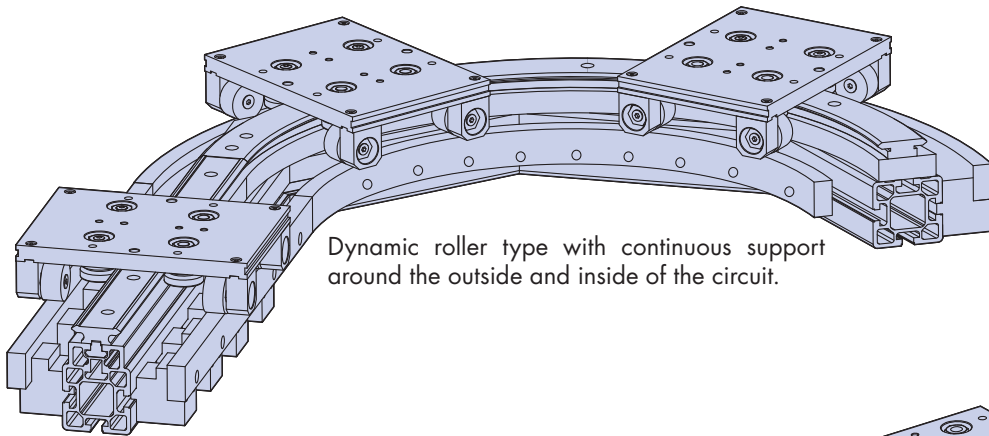


Notes:

1. The connection between belt and carriage may be subject to unacceptably high forces due to acceleration of the carriage at the transition between straight and curve. Customers are advised to seek technical assistance, which is available for systems incorporating complete moment load carriage assemblies supplied by Hepco.
2. Trip latches are the same size for all moment load carriages.
3. Single trip latches are shown above, twin and fixed latches are available for special order. Please contact Hepco's technical department for more information.

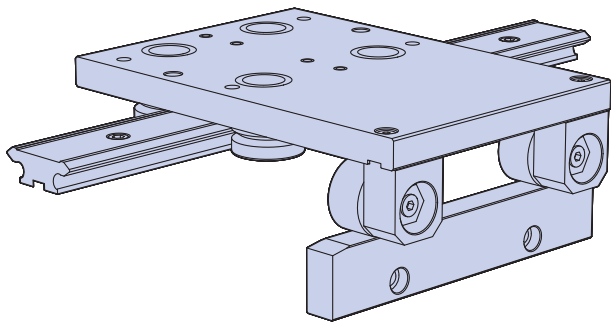
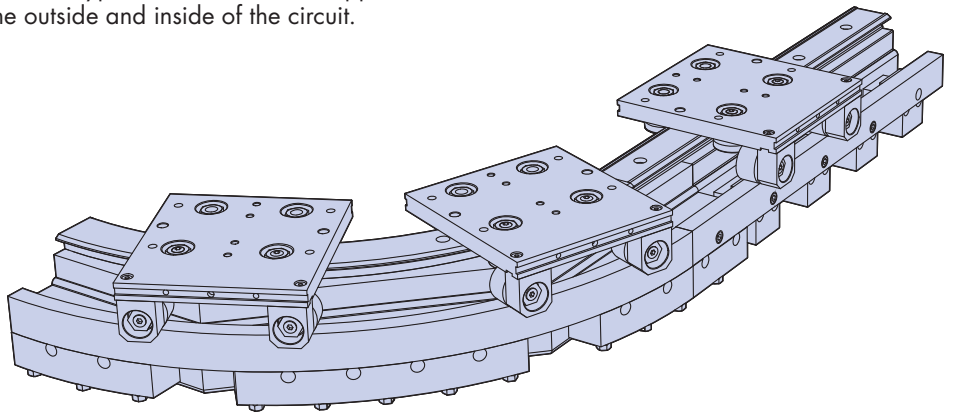
No. 5 Moment Load Carriages

Shown below are some of the variations that can be accommodated within the moment load carriage range. Customers own designs and special size carriages can also be supplied. Please contact Hepco's technical department for more information or advice to suit a particular application.

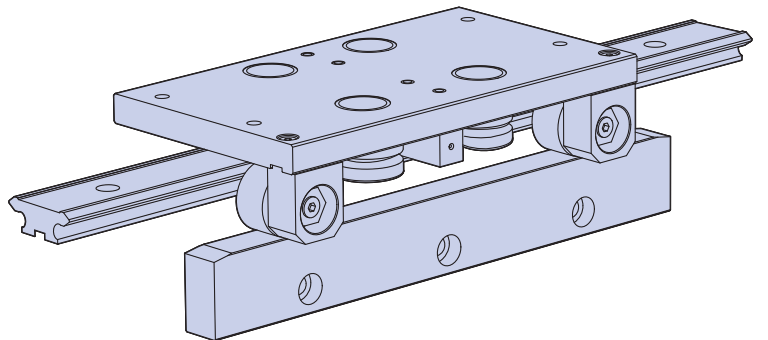


Dynamic roller type with continuous support around the outside and inside of the circuit.

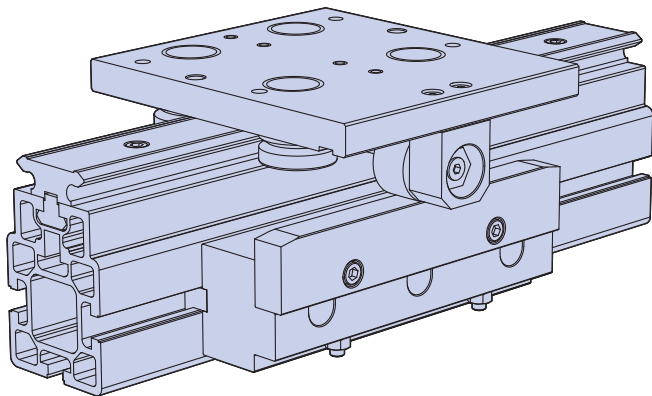
Dynamic roller type with continuous support around the outside of the circuit.



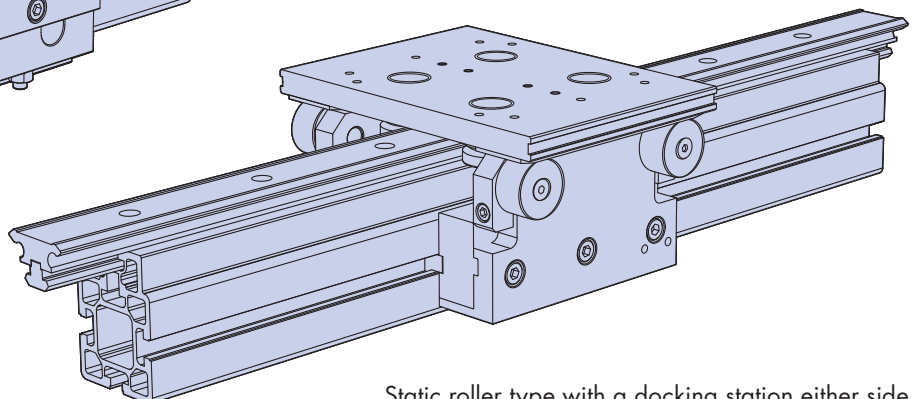
Dynamic roller type with an extra wide carriage



Dynamic roller type with an extra long carriage



Dynamic roller type with a single roller carriage



Static roller type with a docking station either side

No. 5 Moment Load Carriages - Load Capacities

HepcoMotion moment load carriage systems provide extra support and rigidity in applications where high direct L_1 or offset M_s loads are anticipated. Below is information regarding the load capacity of the standard static and dynamic moment load carriages, this information is based on a system set up with optimal load distribution. Capacities are based on the carriages fitted with Double Row bearings fitted with lubricators, as this will provide the maximum system capacity. Please contact Hepco's technical department for more information.

Moment load carriages detailed within this datasheet are designed to take additional moment loads M_s in one direction only, in the direction of the track rollers, typically to the outside of a track system. If a moment is applied in the opposite direction then these rollers will provide no additional benefit and capacities will be as stated on page 54 of the PRT2 catalogue.

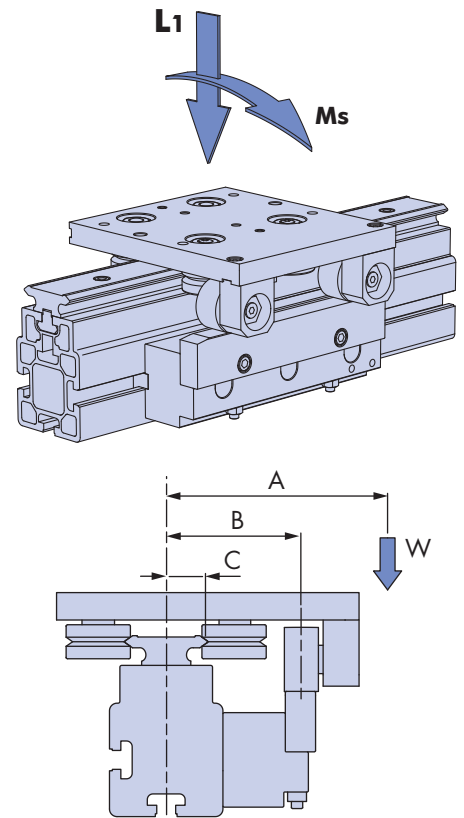
The carriage load capacities stated below, are valid when the load (W) is applied to the carriage at dimension (A), and when (A) falls between the following limits;

$$C < A < 2B$$

Where $A < C$ the additional benefit of the track rollers will be greatly reduced, to simplify calculations the system life should be calculated using the capacity figures stated on page 54 of the PRT2 catalogue.

Where $A > 2B$ carriage capacity will depend on a number of factors, please contact Hepco's technical department for more information.

Carriage Load Capacities



Carriage Part Number		Dimensions		Lubricated System (DR type bearings)				
				$L_1(max)$	$L_2(max)$	$M_s(max)$	$M_v(max)$	$M(max)$
				N	N	Nm	Nm	Nm
Static Type	FCC 25 159 MLCS LB DR CHK	69	12.3	4260	3000	64	64	33
	FCC 25 255 MLCS LB DR CHK	69	12.3	4260	3000	64	60	31
	FCC 25 351 MLCS LB DR CHK	69	12.3	4260	3000	64	63	33
	FCC 44 468 MLCS LB DR CHK	84.5	20	8790	6000	188	210	120
	FCC 44 612 MLCS LB DR CHK	84.5	20	8790	6000	188	220	130
Dynamic Type	FCC 25 159 MLCD LB DR CHK	57	12.3	4260	3000	45	64	33
	FCC 25 255 MLCD LB DR CHK	57	12.3	4260	3000	45	60	31
	FCC 25 351 MLCD LB DR CHK	57	12.3	4260	3000	45	63	33
	FCC 44 468 MLCD LB DR CHK	71.5	20	8790	6000	128	210	120
	FCC 44 612 MLCD LB DR CHK	71.5	20	8790	6000	128	220	130

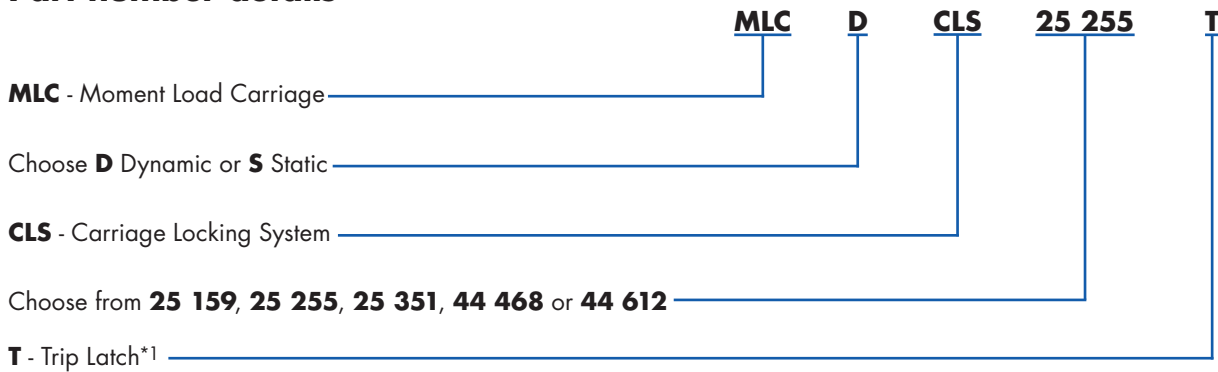
System Life

Static moment load carriages - are designed to provide additional support to the carriage, at a point where an additional load is applied, to a static carriage. Providing the additional load is applied in a controlled manner i.e. no a shock loads, and does not exceed the maximum figures stated in the table above, this additional load will have minimal effect on the system life.

Dynamic moment load carriage - are designed to provide additional support of the carriage, over a know distance of travel, whether that is a single station, slide straight or around and entire track system. The system life will depend on the application conditions, speed, direction and period of load. Please contact Hepco's technical department for more information, or a detailed system life calculation.

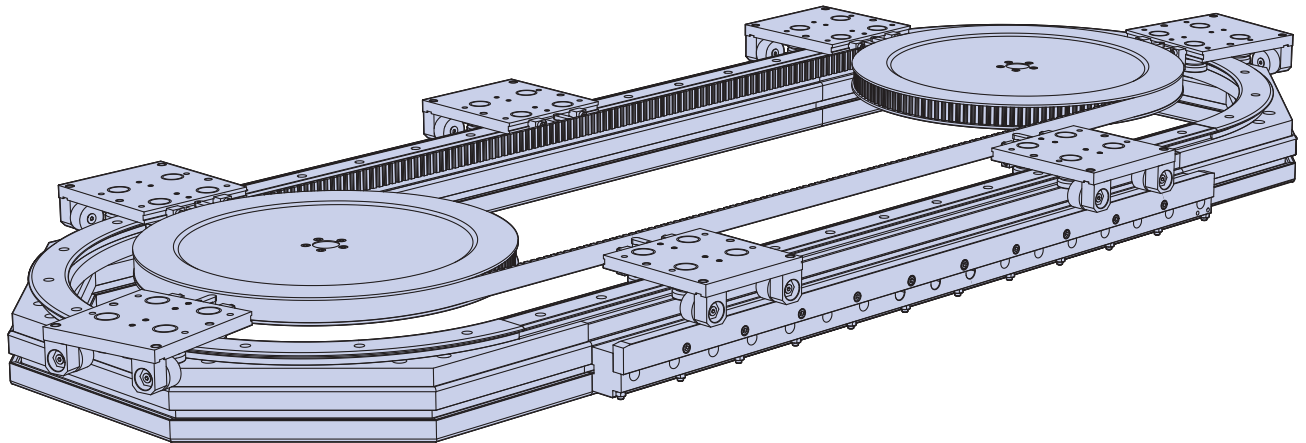
Selection of Moment Load Carriages

Part number details

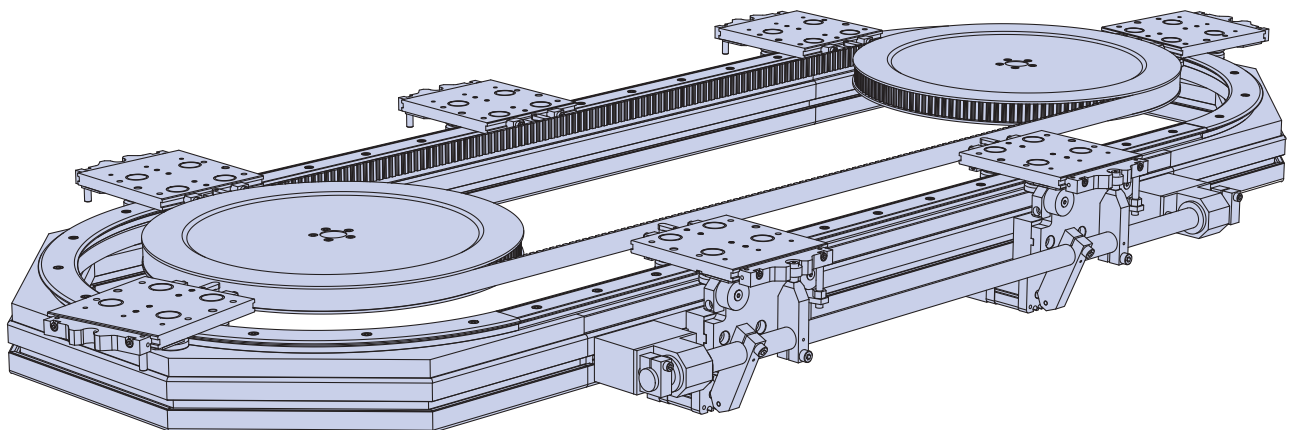


It is recommended to discuss your application with Hepco's technical department so a tailored solution can be provided to suit your needs. Below are two examples of complete track systems using moment load carriages and the carriage locking system. These are shown to assist communication, please contact Hepco to discuss in more detail.

Track system using dynamic type moment load carriage plates with continuous support along the straight section.



Track system assembly using static type moment load carriage plates with two workstations.



1. If ordering carriages with trip latches please be advised that the belt attachment components and screws will be supplied loose.
2. Drive pulleys and all corner connecting support components, are available for sizes 25-351 and 44-612 only.

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