

④ The linear units do not include any safety stroke.
 $\text{Absolute stroke} = \text{Effective stroke} + 2 \times \text{safety stroke}$



$\varnothing 50\text{ H7}$
1,75 mm deep

$\varnothing 18\text{ h7}$
6 P9/h9

① Journal with or without
keyway.

40

40

6 P9/h9 DIN 6885 A

$\varnothing 50\text{ H7}$
1,75 mm deep

① The linear units do not include any safety stroke.
 Absolut stroke = Effective stroke + 2 x safety stroke.



Technical drawing of a shaft-hub assembly. The top view shows a hub with a central bore of diameter 50 mm and a keyway of width 10 mm. The hub has a total width of 100 mm. The shaft has a diameter of 50 mm and a keyway of width 10 mm. The shaft is secured with a lock nut (M6x1 - 6H, 7 mm deep) and a lock washer (DIN 6885 A). The shaft is secured with a lock nut (M6x1 - 6H, 7 mm deep) and a lock washer (DIN 6885 A). The shaft is secured with a lock nut (M6x1 - 6H, 7 mm deep) and a lock washer (DIN 6885 A).

① Journal with or without keyway.

Technical drawing of the REED switch assembly, showing front, side, and detail views.

Front View (A-A): Shows the overall dimensions of the assembly. The total width is 79 mm and the total height is 100 mm. The central rectangular area has a width of 80 mm and a height of 63 mm. The distance from the top edge to the center of the assembly is 80 mm. The distance from the bottom edge to the center of the assembly is 52 mm. The distance from the left edge to the center of the assembly is 18 mm. The distance from the right edge to the center of the assembly is 18 mm. The distance from the top edge to the bottom edge of the central area is 63 mm. The distance from the bottom edge of the central area to the bottom edge of the assembly is 18 mm.

Side View (B-B): Shows the profile of the assembly. The total height is 100 mm. The distance from the top edge to the center of the assembly is 80 mm. The distance from the bottom edge to the center of the assembly is 52 mm. The distance from the left edge to the center of the assembly is 18 mm. The distance from the right edge to the center of the assembly is 18 mm. The distance from the top edge to the bottom edge of the central area is 63 mm. The distance from the bottom edge of the central area to the bottom edge of the assembly is 18 mm.

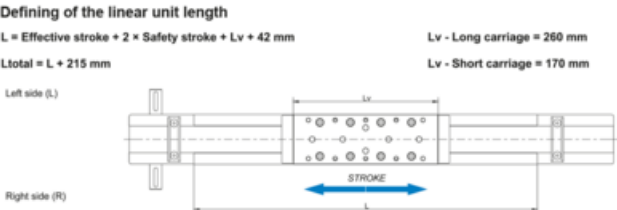
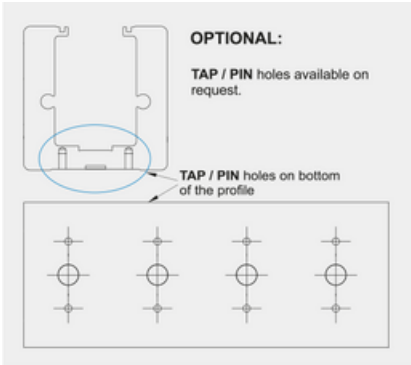
Detail View (C): Shows the REED switch component. The total width is 7 mm. The distance from the top edge to the center of the switch is 3.4 mm. The distance from the bottom edge to the center of the switch is 4.7 mm. The distance from the left edge to the center of the switch is 6.7 mm. The distance from the right edge to the center of the switch is 6.7 mm.

Detail View (D): Shows the DIN557 - M5 component. The total width is 8.5 mm. The distance from the top edge to the center of the component is 9 mm. The distance from the bottom edge to the center of the component is 5.2 mm. The distance from the left edge to the center of the component is 5 mm. The distance from the right edge to the center of the component is 5 mm.

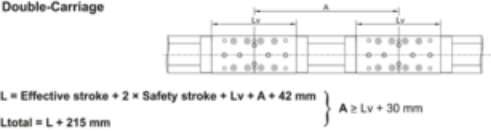
① All dimensions in mm. Drawings scales are not equal.

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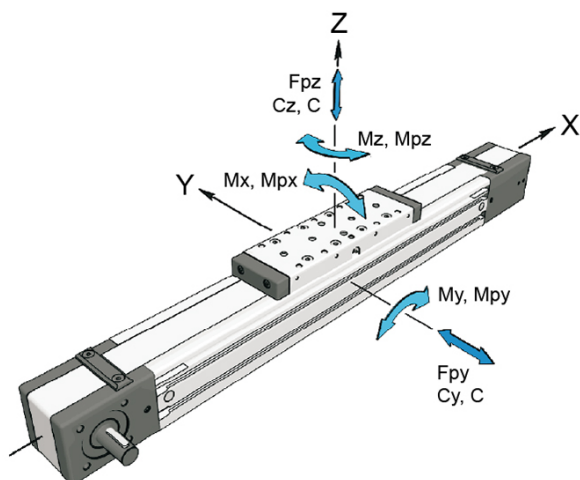
Linear Unit MRJ 80



Double-Carriage



General data



For lengths/stroke over the stated value in the table, please contact Rollco. Values for max. stroke are not valid for double carriage (equation of defining the linear unit length for particular size of the linear unit needs to be used).

For minimum stroke below the stated value in the table, please contact Rollco.

Recommended values of loads

All the data of static and dynamic moments and load capacities stated in the table are theoretical without considering any safety factor. The safety factor depends on the application and its requested safety. We recommend a minimum safety factor ($f_s = 5.0$).

Modulus of elasticity

$E = 70000 \text{ N / mm}^2$

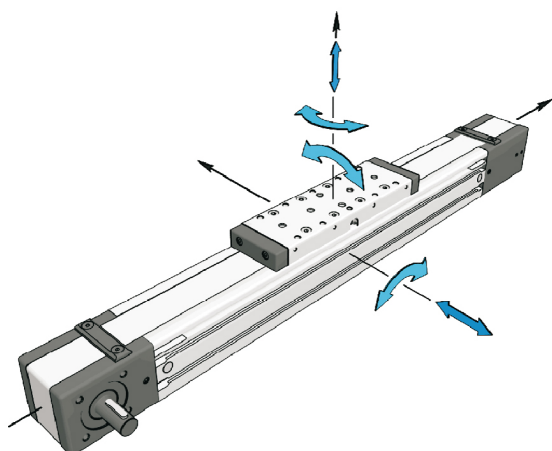
Designation	Carriage Length L_v (mm)	Load Capacity C_y (N)	Load Capacity C_z (N)	Dynamic Moment M_x (Nm)	Dynamic Moment M_y (Nm)
MRJ 80 L	260	17100	9000	198	511

Designation	Dynamic Moment M_z (Nm)	Dynamic Load Capacity C (N)	Static Load Capacity C_0 (N)	Max. Permissible Loads Forces F_{py} (N)	Max. Permissible Loads Forces F_{pz} (N)	Max. Permissible Loads Moments M_{px} (Nm)
MRJ 80 L	1145	17100	9000	3400	1760	39

Designation	Max. Permissible Loads Moments M_{py} (Nm)	Max. Permissible Loads Moments M_{pz} (Nm)	Moved Mass (kg)	Max. Repeatability (mm)	Max. Length L_{max} (mm)	Max. Stroke (mm)
MRJ 80 L	101	228	2.73	± 0.08	6000	5698

Designation	Min. Stroke (mm)
MRJ 80 L	0

General data double carriage



A - Distance between carriages.

Max. travel speed and max. acceleration of linear unit with the corrosion-resistant protection strip is 1,5 m/s and 50 m/s² respectively.

The stated values are for strokes up to 500 mm. No load torque value increases with stroke elongation.

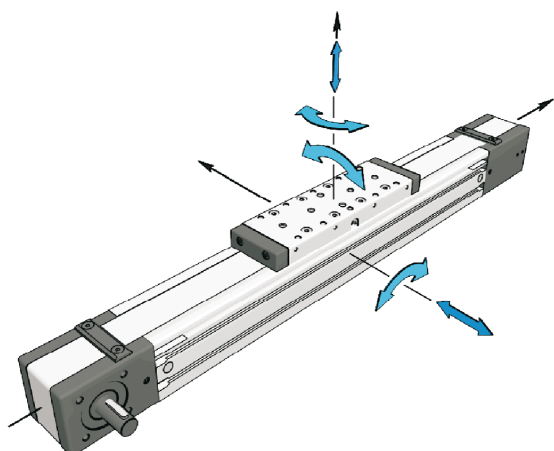
Max. acceleration (m/s²): 70

For acceleration over the stated value, please contact Rollco.

Designation	Carriage version	Load Capacity Cy (N)	Load Capacity Cz (N)	Dynamic Moment Mx (Nm)	Dynamic Moment My (Nm)
MRJ 80 L	L2	34200	18000	396	9.0 × A (mm)

Designation	Dynamic Moment Mz (Nm)	Max. Permissible Loads Forces Fpy (N)	Max. Permissible Loads Forces Fpz (N)	Max. Permissible Loads Moments Mpx (Nm)	Max. Permissible Loads Moments Mpy (Nm)	Max. Permissible Loads Moments Mpz (Nm)
MRJ 80 L	17.1 × A (mm)	6800	3530	78	1.8 × A (mm)	3.4 × A (mm)

Drive data



Max. travel speed and max. acceleration of linear unit with the corrosion-resistant protection strip is 1,5 m/s and 50 m/s² respectively.

The stated values are for strokes up to 500 mm. No load torque value increases with stroke elongation.

Max. acceleration (m/s²): 70

For acceleration over the stated value, please contact Rollco.

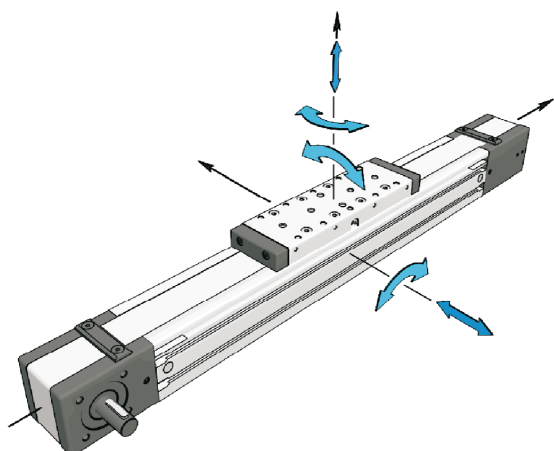
Mass calculation does not include mass of motor, reduction gear, switches and clamps.

Abs. stroke	Absolute stroke [mm]
A	Distance between carriages [mm]
nc	Number of carriages

Designation	Max. Drive Torque Ma (Nm)	No Load Torque with Strip (Nm)	No Load Torque without Strip (Nm)	Pulley Drive Ratio (mm/rev)	Pulley Diameter
MRJ 80 L	29.4	1.4	1.1	210	66.84

Designation	Belt Type	Belt Width	Max. Force Transmitted by Belt (N)	Specific Spring Constant Cspec (N)	Planar Moment of Inertia Iy (cm ⁴)	Planar Moment of Inertia Iz (cm ⁴)
MRJ 80 L	AT5	50	880	960000	129 .1	173.4

Mass and Mass moment



Max. travel speed and max. acceleration of linear unit with the corrosion-resistant protection strip is 1,5 m/s and 50 m/s² respectively.

The stated values are for strokes up to 500 mm. No load torque value increases with stroke elongation.

Max. acceleration (m/s²): 70

For acceleration over the stated value, please contact Rollco.

Mass calculation does not include mass of motor, reduction gear, switches and clamps.

Abs. stroke	Absolute stroke [mm]
A	Distance between carriages [mm]
nc	Number of carriages

Designation	Mass of Linear Unit (kg)	Mass Moment of Inertia (10 ⁻⁵ kg m ²)	Planar Moment of Inertia I _y (cm ⁴)	Planar Moment of Inertia I _z (cm ⁴)	Moved Mass (kg)
MRJ 80 L	8.2 + 0.0075 × (Abs. Stroke + (nc - 1) × A) + 2.73 × (nc - 1)	424.4 + 0.0391 × (Abs. Stroke + (nc - 1) × A) + 304.9 × (nc - 1)	129 .1	173.4	2.73