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NSK MF Series Monocarrier





C-I MF Series Monocarrier®

C-I-1 Appearance

| Item | Appearance | Outline | Main application |
|-------------|---|---|--|
| Monocarrier |  | A single axis unit combines a ball screw, a linear guide and a support bearing unit for ease of design and assembly loads of a machine. Both MCM and MCH type Monocarriers equip with NSK K1 lubrication unit, which enables long term maintenance free operation, as the standard feature. | <ul style="list-style-type: none"> Automotive manufacturing equipment Manufacturing machine for semiconductors and liquid crystal displays Food processing / medical equipment Optical / glass working machines Telecommunication manufacturing equipment |
| |  | | |

C-I-2 MCM Type and MCH Type

| Item | Appearance | Outline | Main application |
|------|---|---|---|
| MCM |  | Light weight is the special feature of this type of Monocarrier. It suits well for a vertical axis of material handling robots. | <ul style="list-style-type: none"> Equipment that needs to reduce the weight: Substitution for pneumatic actuator Robots Transporting equipment Measuring machine Equipment for factory automation etc. |
| MCH |  | This type consists of a stiff rail so that it can be a structural beam. | <ul style="list-style-type: none"> Equipment that needs to reduce the weight: Substitution for pneumatic actuator Robots Transporting equipment Measuring machine Equipment for factory automation etc. |

C-I-3 Features

The Monocarriers help to save loads designing a machine and installation time as they are complete linear actuators. The MF Series are equipped with a highly efficient NSK K1 lubrication unit that enables a long time maintenance free operation. The rails and sliders are subjected to surface treatment, thus assuring remarkable antirust capability.

(1) Long-term maintenance free

- In the mechanical equipment where it is difficult to apply lubricant, long-term maintenance free operation is possible by using the NSK K1 lubrication unit in combination with grease.

Automotive parts processing equipment, etc.

(2) Causing no oil contamination in the ambience

- In the place where no oil contamination is permitted hygienically or in the mechanical equipment requiring a high degree of washing out, a satisfactory lubrication effect can be secured by a very small quantity of grease and NSK K1.

Food processing or medical equipment, Semiconductor and liquid crystal display manufacturing equipment

(3) Excellent rust preventive properties

- Since the rail and sliders are subjected to low temperature chrome plating as a standard, it is possible to prevent rusting in the normal storage and working conditions.

FA line

(4) Easy to design and install

- Since the rail, ball screw and nut, and support bearings are integrated into one unit, the users can significantly save design man-hour and installation time. (The mounting dimensions are all the same as those of the conventional type Monocarrier.)

(5) Light-weight and compact

- The minimum sectional dimensions can be realized due to the integrated structure. As compared with the conventional combined type single-axis table, the weight is also reduced by half.

(6) High rigidity

- Since the rail is of a shallow "U" shape, it is rigid although light in weight and can be used even in a cantilever. The linear guide slider is preloaded to minimize deflection.

(7) Long service life

- Since the Monocarrier is of the rolling bearing construction, it causes less friction, thus assuring a long service life.

(8) Smooth movement with high accuracy

- Since the Monocarrier consists of rolling elements, it is high in positioning accuracy.

(9) Equivalent load in all directions

- The contact angle of guide bearing is 45°, thus making it possible to support vertical and horizontal loads equally.

(10) Double-slider

- For the purpose of improving the moment load capacity or improving the straightness, the monoacARRIER of the double-slider specification is also available.

Select either one of following Monocarrier® types that features the characteristics described above.

