



MF + MC Linear Modules

Selection guide and model-specific product references

12 MF MODELS | 5 MC MODELS



MF series



MC series

Inside this guide

- Company and application overview
- MF and MC series comparisons
- 17 model-specific performance tables

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Haotian Weiye (Tianjin) International Trade Co., Ltd.

READING GUIDE

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ABOUT HTROBOT

From components to a working motion system

Linear motion components and multi-axis automation, with practical support from Tianjin.

Based in Tianjin, HTROBOT works with customers on industrial linear motion and multi-axis automation. Our range brings together linear modules, guides, ball screws, actuators and XYZ stages.

We connect component supply with application discussions for positioning, transfer and multi-axis equipment.

Tianjin, China

Haotian Weiye (Tianjin) International Trade Co., Ltd.



Building exterior

WORKSHOP AND PROCESS SCENES



Assembly workstations



Machining centre



Processing line

POSITIONING, TRANSFER AND HANDLING

Our product applications include positioning, transfer and handling in industrial equipment. Cooperation can start with an individual axis, a combination of components or a multi-axis platform.

DRAWINGS AND APPLICATION DISCUSSIONS

We support engineering-drawing and application discussions to clarify dimensions, mounting and the motion arrangement. Share the target travel, load, speed and operating environment, together with any existing drawings or reference images.

CONTACT

Start with a product or an application, then use the contacts on the last page for selection or a quotation.

SERIES OVERVIEW

MF series | Semi-enclosed screw-driven linear module

Semi-enclosed screw-driven linear modules for positioning, transfer and handling. Compare travel, lead-to-speed, load and repeatability on each model page.

Motor power and travel are listed for each model. Lead and maximum speed stay paired. Load ratings and other conditions are on the model pages.

Model	Motor power	Travel	Ball-screw lead : maximum speed (mm : mm/s)
MF7	100 W	800 mm	4: 200; 5: 250; 10: 500
MF10	200 W	1050 mm	5: 250; 10: 500; 16: 800
MF10T	200 W	1050 mm	5: 250; 10: 500; 16: 800
MF11	200/400 W	1050 mm	5: 250; 10: 500; 16: 800; 20: 1000
MF14	200/400 W	2000 mm	5: 250; 10: 500; 20: 1000
MF14S	200/400 W	2000 mm	5: 250; 10: 500; 20: 1000
MF14T	200/400 W	1000 mm	5: 250; 10: 500; 16: 800
MF17	750 W	2000	5: 250; 10: 500; 25: 1250
MF17H	750 W	2000 mm	5: 250; 10: 500; 25: 1250
MF22	1000 W	2000 mm	5: 250; 10: 500; 20: 1000; 32: 1600
MF135	400 W	1050 mm	5: 250; 10: 500; 16: 800; 20: 1000
MF135S	400 W	1050	5: 250; 10: 500; 16: 800; 20: 1000

SERIES OVERVIEW

MC series sealed linear modules for clean rooms

Sealed linear modules for clean rooms. Confirm the operating environment during selection; a cleanliness class is not stated. Compare travel, lead-to-speed, load and repeatability on each model page.

Motor power and travel are listed for each model. Lead and maximum speed stay paired. Load ratings and other conditions are on the model pages.

Model	Motor power	Travel	Ball-screw lead : maximum speed (mm : mm/s)
MC10	200 W	1050 mm	5: 250; 10: 500; 16: 800
MC14	400 W	2000 mm	5: 250; 10: 500; 20: 1000
MC17	750 W	2000 mm	5: 250; 10: 500; 25: 1250
MC22	750 W / 1000 W	2000 mm	5: 250; 10: 500; 20: 1000; 32: 1600
MC135	400 W	1050 mm	5: 250; 10: 500; 16: 800; 20: 1000

MF7

Semi-enclosed screw-driven linear module HTMF7

MF series

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PERFORMANCE BY BALL-SCREW LEAD

Table condition: 100 W output | 3,000 rpm

Ball-screw lead (mm)	Maximum speed (mm/s)	Horizontal load (kg)	Vertical load (kg)	Rated thrust (N)
4	200	38	15	425
5	250	30	12	340
10	500	20	9	170

For strokes over 550 mm reduce speed.

TECHNICAL DETAILS

Repeatability grade
C: ±0.01 mm
P: ±0.008 mm

Ball-screw specification / diameter
12 mm

Overhang MP
80 Nm

Overhang MY
70 Nm

Stroke range
50-800 mm

Linear guide
9 x 6.5, 2 pcs

Overhang MR
65 Nm

Stroke increment
50 mm

MF10

Semi-enclosed screw-driven linear module HTMF10

MF series

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PERFORMANCE BY BALL-SCREW LEAD

Table condition: 200 W output | 3,000 rpm

Ball-screw lead (mm)	Maximum speed (mm/s)	Horizontal load (kg)	Vertical load (kg)	Rated thrust (N)
5	250	90	30	680
10	500	60	15	340
16	800	38	11	212

For strokes over 650 mm reduce speed.

TECHNICAL DETAILS

Repeatability grade

C: ± 0.01 mm
P: ± 0.008 mm

Minimum stroke

100 mm

Ball screw diameter

16 mm

Overhang MP

145 Nm

Overhang MY

145 Nm

Maximum stroke

1050 mm

Stroke interval

50 mm

Linear guide

12 x 8, 2 pcs

Overhang MR

118 Nm

MF10T

Semi-enclosed screw-driven linear module HTMF10T

MF series

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PERFORMANCE BY BALL-SCREW LEAD

Table condition: 200 W output | 3,000 rpm

Ball-screw lead (mm)	Maximum speed (mm/s)	Horizontal load (kg)	Vertical load (kg)	Rated thrust (N)
5	250	90	30	680
10	500	60	15	340
16	800	38	11	212

For strokes over 650 mm reduce speed.

TECHNICAL DETAILS

Repeatability grade

C: ± 0.01 mm
P: ± 0.008 mm

Minimum stroke

100 mm

Ball screw diameter

16 mm

Overhang MP

122 Nm

Overhang MY

124 Nm

Maximum stroke

1050 mm

Stroke interval

50 mm

Linear guide

15 x 10, 2 pcs

Overhang MR

136 Nm

MF11

MF11 - Semi-enclosed screw-driven linear module

MF series

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PERFORMANCE BY BALL-SCREW LEAD

Table condition: 200 W output

Ball-screw lead (mm)	Maximum speed (mm/s)	Horizontal load (kg)	Vertical load (kg)	Rated thrust (N)
5	250	65	15	694
10	500	40	10	347
16	800	26	6	217
20	1000	20	4	173

Other listed motor options are not covered by this table. For strokes over 650 mm reduce speed.

TECHNICAL DETAILS

Repeatability grade

C: ± 0.01 mm
P: ± 0.008 mm

Ball-screw specification / diameter

16 mm

Coupling dimensions

10x14/11 mm

Overhang MP

175 Nm

Overhang MY

174 Nm

Stroke increment

50 mm

Stroke range

100-1050 mm

Motor power

200/400 W

Linear guide

15x12.5 mm

Overhang MR

153 Nm

Sensor model (Outside)

EE-SX672

MF14

Semi-enclosed screw-driven linear module HTMF14

MF series

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PERFORMANCE BY BALL-SCREW LEAD

Table condition: 400 W output | 3,000 rpm

Ball-screw lead (mm)	Maximum speed (mm/s)	Horizontal load (kg)	Vertical load (kg)	Rated thrust (N)
5	250	113	43	1360
10	500	90	22	680
20	1000	60	12	340

Other listed motor options are not covered by this table. Above 700 mm stroke, reduce speed to limit ball-screw vibration.

TECHNICAL DETAILS

Repeatability grade

C: ± 0.01 mm
P: ± 0.008 mm

Ball-screw specification / diameter

20 mm

Linear guide

15 x 12.5, 2 pcs

Overhang MR

485 Nm

Stroke increment

50 mm

Stroke range

100-2000 mm

Motor power

200/400 W

Overhang MP

552 Nm

Overhang MY

551 Nm

MF14S

Semi-enclosed screw-driven linear module HTMF14S

MF series



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PERFORMANCE BY BALL-SCREW LEAD

Table condition: 400 W output | 3,000 rpm

Ball-screw lead (mm)	Maximum speed (mm/s)	Horizontal load (kg)	Vertical load (kg)	Rated thrust (N)
5	250	70	17	1360
10	500	47	12	680
20	1000	24	6	340

Other listed motor options are not covered by this table. For strokes over 750 mm reduce speed.

TECHNICAL DETAILS

Repeatability grade

C: ±0.01 mm
P: ±0.008 mm

Ball-screw specification / diameter

20 mm

Linear guide

15 x 12.5, 2 pcs

Overhang MR

153 Nm

Stroke increment

50 mm

Stroke range

100-2000 mm

Motor power

200/400 W

Overhang MP

175 Nm

Overhang MY

174 Nm

MF14T

Semi-enclosed screw-driven linear module HTMF14T

MF series

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PERFORMANCE BY BALL-SCREW LEAD

Table condition: 400 W output | 3,000 rpm

Ball-screw lead (mm)	Maximum speed (mm/s)	Horizontal load (kg)	Vertical load (kg)	Rated thrust (N)
5	250	113	30	1360
10	500	90	15	680
16	800	60	11	425

Other listed motor options are not covered by this table. For strokes over 700 mm reduce speed.

TECHNICAL DETAILS

Repeatability grade

C: ±0.01 mm
P: ±0.008 mm

Ball-screw specification / diameter

16 mm

Linear guide

15 x 12.5, 2 pcs

Overhang MR

189 Nm

Stroke increment

50 mm

Stroke range

100-1000 mm

Motor power

200/400 W

Overhang MP

112 Nm

Overhang MY

112 Nm

MF17

Semi-enclosed screw-driven linear module HTMF17

MF series

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PERFORMANCE BY BALL-SCREW LEAD

Table condition: 750 W output | 3,000 rpm

Ball-screw lead (mm)	Maximum speed (mm/s)	Horizontal load (kg)	Vertical load (kg)	Rated thrust (N)
5	250	165	60	2550
10	500	120	33	1275
25	1250	98	17	510

Above 800 mm stroke, reduce speed to limit ball-screw vibration.

TECHNICAL DETAILS

Repeatability grade

C: ±0.01 mm
P: ±0.008 mm

Ball screw diameter

25 mm

Overhang MP

785 Nm

Overhang MY

785 Nm

Stroke range

100-2000 mm

Linear guide

15 x 15, 2 pcs

Overhang MR

589 Nm

Stroke increment

50 mm

MF17H

Semi-enclosed screw-driven linear module HTMF17H

MF series

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PERFORMANCE BY BALL-SCREW LEAD

Table condition: 750 W output | 3,000 rpm

Ball-screw lead (mm)	Maximum speed (mm/s)	Horizontal load (kg)	Vertical load (kg)	Rated thrust (N)
5	250	165	60	2550
10	500	120	33	1275
25	1250	98	17	510

For strokes over 800 mm reduce speed.

TECHNICAL DETAILS

Repeatability grade

C: ± 0.01 mm
P: ± 0.008 mm

Ball-screw specification / diameter

25 mm

Overhang MP

1034 Nm

Overhang MY

1032 Nm

Stroke range

100-2000 mm

Linear guide

20 x 15.5, 2 pcs

Overhang MR

908 Nm

Stroke increment

50 mm

MF22

Semi-enclosed screw-driven linear module HTMF22

MF series



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PERFORMANCE BY BALL-SCREW LEAD

Table condition: 3,000 rpm

Ball-screw lead (mm)	Maximum speed (mm/s)	Horizontal load (kg)	Vertical load (kg)	Rated thrust (N)
5	250	195	95	3196
10	500	180	80	1598
20	1000	130	40	799
32	1600	98	25	499

Reduce speed when travel exceeds 900 mm.

TECHNICAL DETAILS

Repeatability grade

C: ± 0.01 mm

P: ± 0.008 mm

Maximum stroke

2000 mm

Stroke interval

50 mm

Motor power

1000 W

Minimum stroke

100 mm

MODEL-SPECIFIC TABLE

MF22 | Stroke, overall length and mass

Condition: Motor position B (lower)

Stroke S (mm)	Overall length L (mm)	Catalogue mass (kg)
100	550	25.5
150	600	26.5
200	650	27.5
250	700	28.5
300	750	29.5
350	800	30.5
400	850	31.5
450	900	32.5
500	950	33.5
550	1000	34.5
600	1050	35.5
650	1100	36.5
700	1150	37.5
750	1200	38.5
800	1250	39.5
850	1300	40.5
900	1350	41.5
950	1400	42.5
1000	1450	43.5
1050	1500	44.5
1200	1650	47.5
1400	1850	51.5
1600	2050	55.5
1800	2250	59.5
2000	2450	63.5

Overall length L = S + 450 mm.

MF135

Semi-enclosed screw-driven linear module HTMF135

MF series

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PERFORMANCE BY BALL-SCREW LEAD

Table condition: 400 W output

Ball-screw lead (mm)	Maximum speed (mm/s)	Horizontal load (kg)	Vertical load (kg)	Rated thrust (N)
5	250	110	33	1388
10	500	88	22	694
16	800	48	10	433
20	1000	40	8	347

For strokes over 750 mm reduce speed.

TECHNICAL DETAILS

Repeatability grade

C: ± 0.01 mm
P: ± 0.008 mm

Ball-screw specification / diameter

16 mm

Linear guide

15 x 12.5 mm

Overhang MR

485 Nm

Sensor model (Inside)

EE-SX674

Stroke increment

50 mm

Stroke range

100-1050 mm

Coupling dimensions

14 x 10 mm

Overhang MP

552 Nm

Overhang MY

551 Nm

Sensor model (Outside)

EE-SX672

MF135S

Semi-enclosed screw-driven linear module HTMF135S

MF series



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PERFORMANCE BY BALL-SCREW LEAD

Table condition: 400 W output

Ball-screw lead (mm)	Maximum speed (mm/s)	Horizontal load (kg)	Vertical load (kg)	Rated thrust (N)
5	250	70	17	1388
10	500	47	12	694
16	800	30	6	433
20	1000	24	4	347

No stroke-dependent speed reduction is listed.

TECHNICAL DETAILS

Repeatability grade

C: ±0.01 mm
P: ±0.008 mm

Ball screw diameter

16 mm

Linear guide

15x12.5 mm

Overhang MR

153 Nm

Sensor model (Inside)

EE-SX674

Stroke increment

50 mm

Stroke range

100-1050 mm

Coupling dimensions

14x10 mm

Overhang MP

175 Nm

Overhang MY

174 Nm

Sensor model (Outside)

EE-SX672

MC10

Sealed linear module for clean rooms HTMC10

MC series

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PERFORMANCE BY BALL-SCREW LEAD

Table condition: 200 W output | 3,000 rpm

Ball-screw lead (mm)	Maximum speed (mm/s)	Horizontal load (kg)	Vertical load (kg)	Rated thrust (N)
5	250	90	30	625
10	500	60	15	312
16	800	38	11	200

For strokes over 650 mm reduce speed.

TECHNICAL DETAILS

Repeatability grade

C: ± 0.01 mm
P: ± 0.008 mm

Ball-screw specification / diameter

16 mm

Overhang MP

145 Nm

Overhang MY

145 Nm

Stroke range

100-1050 mm

Linear guide

12 x 8, 2 pcs

Overhang MR

118 Nm

Stroke increment

50 mm

MC14

Sealed ball screw linear module for cleanroom applications.

MC series

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MC series illustration

PERFORMANCE BY BALL-SCREW LEAD

Ball-screw lead (mm)	Maximum speed (mm/s)	Horizontal load (kg)	Vertical load (kg)	Rated thrust (N)
5	250	110	33	1388
10	500	88	22	694
20	1000	40	8	347

Model-specific dimensions are not available.

TECHNICAL DETAILS

Repeatability grade

C: ± 0.01 mm
P: ± 0.008 mm

Ball screw diameter

20 mm

Guide count

2

Motor power

400 W

Movement distance

100-2000 mm

Body width

135 mm

Linear guide

15 x 12.5 mm

Stroke interval

50 mm

MC17

Sealed ball screw linear module for cleanroom applications.

MC series

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PERFORMANCE BY BALL-SCREW LEAD

Table condition: 3,000 rpm

Ball-screw lead (mm)	Maximum speed (mm/s)	Horizontal load (kg)	Vertical load (kg)	Rated thrust (N)
5	250	150	50	2563
10	500	120	40	1281
25	1250	80	25	480

Above 850 mm stroke, reduce speed.

TECHNICAL DETAILS

Repeatability grade

C: ± 0.01 mm
P: ± 0.008 mm

Ball screw diameter

25 mm

Guide count

2

Motor power

750 W

Allowable overhang moment MR

589 Nm

Stroke interval

50 mm

Movement distance

100-2000 mm

Body width

170 mm

Linear guide

20 x 17.5 mm

Allowable overhang moment MP

785 Nm

Allowable overhang moment MY

785 Nm

MC22

Sealed ball screw linear module for cleanroom applications.

MC series

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PERFORMANCE BY BALL-SCREW LEAD

Table condition: 1000 W output | 3,000 rpm

Ball-screw lead (mm)	Maximum speed (mm/s)	Horizontal load (kg)	Vertical load (kg)	Rated thrust (N)
5	250	195	95	3196
10	500	180	80	1598
20	1000	130	40	799
32	1600	98	25	499

Above 900 mm stroke, reduce speed. The performance table applies to the 1,000 W option; it does not give ratings for the 750 W option.

TECHNICAL DETAILS

Repeatability grade
C: ±0.01 mm
P: ±0.008 mm

Ball screw diameter
32 mm

Guide count
2

Ordering power options
750 W / 1000 W

Allowable overhang moment MR
1810 Nm

Stroke interval
50 mm

Movement distance
100-2000 mm

Body width
220 mm

Linear guide
23 x 22 mm

Allowable overhang moment MP
2052 Nm

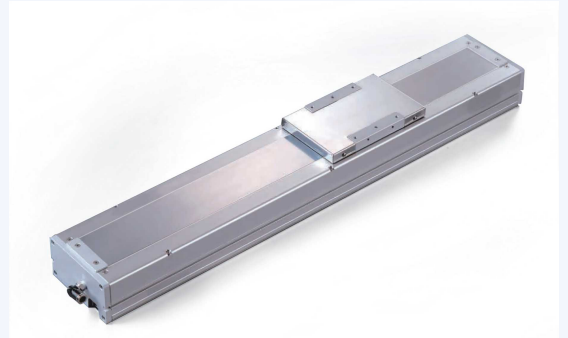
Allowable overhang moment MY
2052 Nm

MC135

Sealed linear module for clean rooms HTMC135

MC series

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PERFORMANCE BY BALL-SCREW LEAD

Table condition: 400 W output

Ball-screw lead (mm)	Maximum speed (mm/s)	Horizontal load (kg)	Vertical load (kg)	Rated thrust (N)
5	250	95	27	1388
10	500	75	18	694
16	800	44	7	433
20	1000	35	6	347

For strokes over 750 mm reduce speed.

TECHNICAL DETAILS

Repeatability grade
±0.01 mm

Ball-screw specification / diameter
16 mm

Coupling dimensions
14x10 mm

Overhang MP
552 Nm

Overhang MY
551 Nm

Sensor model (Outside)
EE-SX672

Stroke range
100-1050 mm

Ball screw grade
C7

Linear guide
15x12.5 mm

Overhang MR
485 Nm

Sensor model (Inside)
EE-SX674

Stroke increment
50 mm

APPLICATION SUPPORT

From product reference to an application

Positioning, transfer and handling

Our product applications include positioning, transfer and handling in industrial equipment. Cooperation can start with an individual axis, a combination of components or a multi-axis platform.

We connect component supply with application discussions for positioning, transfer and multi-axis equipment.

DRAWINGS AND APPLICATION DISCUSSIONS

We support engineering-drawing and application discussions to clarify dimensions, mounting and the motion arrangement. Share the target travel, load, speed and operating environment, together with any existing drawings or reference images.

SELECTION INPUTS

- Target travel
- Load
- Speed
- Operating environment
- Existing drawings or reference images

TALK TO HTROBOT

Contact HTROBOT for selection support or a quotation.

WEBSITE

www.htrobot.com

EMAIL

emmy@htrobot.com

PHONE

+86 152 0225 5004

ALIBABA STORE

tjhtwy.en.alibaba.com

Haotian Weiye (Tianjin) International Trade Co., Ltd.

Tianjin, China