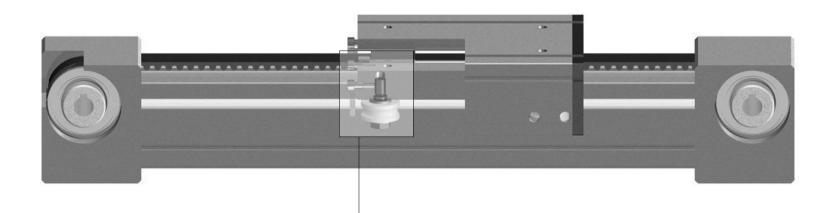
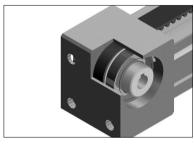
TPCmotion®

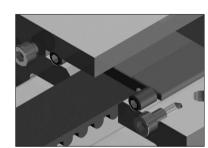
Timing belt driving linear module



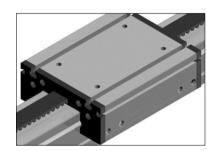


Possible to demonstrate system using various axis combination, and comfortable maintenance.
Long lifespan guaranteed by the application of strong wearing-resistant aluminum material.

Convenient attachment at rail side with nut groove.



Iron core reinforced RPP type belt allows high location precision under heavy torque and reduction of frictional noise during high speed conveyance, which shows greatly upgraded performance than classic timing belt.



MB 40/60/80/100 Basic slider block

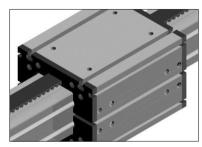
* Possible for producing in any lengths for slider along with customer requirements

* Possible to select the number of roller bearings along with customer specification

S : Standard slider

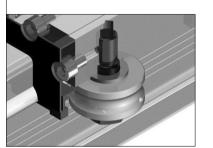
T : Standard slider + Roller 2

H: Standard slider + Roller 2



MB 40/60/80/100-D

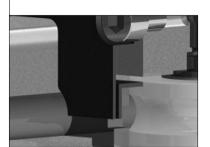
A structure which slider is mounted upper and lower side, suitable for heavy load rather than standard slider block and rail moving structure with fixing a slider.



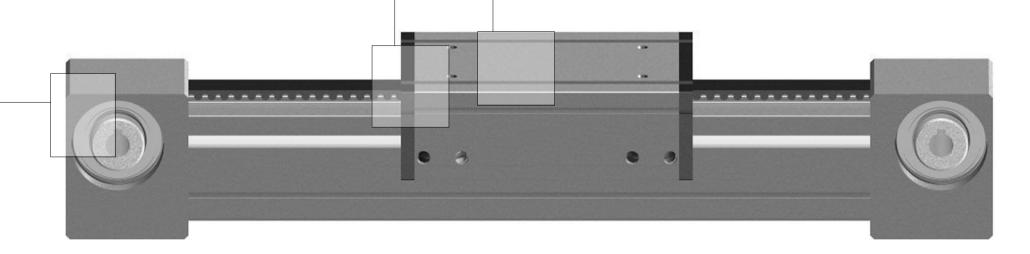
Adopting high quality bearing steel shaft, sound driving guarantee during high speed conveyance In application of chrome plated thermal

treatment bearing steel for return rod of driving part, which super finishing is processed, it shows strong performance for wearing at contact part.

In application of specially designed bolt combination, keeping set pressure between bearing and return rod

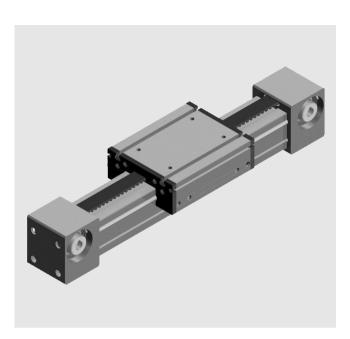


With mounting wool wiper on standard type, no hardening after long term utilization unlike rubber type wiper Keeping constant frictional resistance of wiper by spring in sealing



18 | www.TPCpage.co.kr

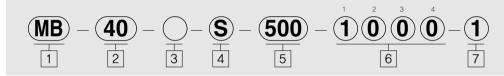




Features

- Combination of high speed motion linear guide and timing belt unit
- Optimized for multi-shaft combination system with quality and economic performance guaranteed
- Iron core reinforcing high tension timing belt applied
- Easy maintenance
- Responding to various customer requirements with providing various types

Order type



TYPE

2 Type number 30, 40, 60, 80, 100

3 Slider format

Non-symbo: Standard
D: Upper/lower slider

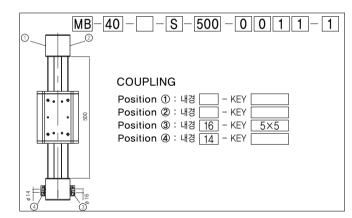
4 Slider types

- S: Standard slider
- T: Standard slider + Roller 2
- H: Standard slider + Roller 4

5 Rail length(mm)

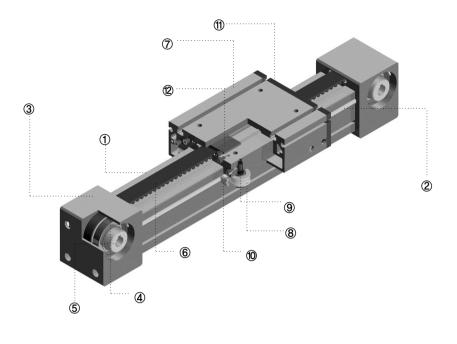
- 6 Coupling attachment type
- 0 : STANDARD 1 : COUPLING TYPE
- 2: SHAFT TYPE
- 7 Quantity

► Ordering of Module



▶ Accessory

(Model name : (Power :) (kw))	□ MSK (Sensor Bracket) □Photo Sensor □Proximity Sensor
☐ Reducer ☐ Pulley Reducer		☐ MBK (Mounting block) Quantity: EA
□Other (Name of company:)	
(Model name:)	□ Urethane stopper
(Reduction dear ratio :)	



► Specification of Components

No	Component name		Material	No	Component name	Material
1	R	ail	Aluminum alloy	7	Rail	Aluminum alloy
	Product No.	Shaft		8	Track roller	Bearing steel
	30	Ø4	Bearing steel			
	40	Ø6				
2	60	Ø10				
	80	Ø12				
	100	Ø16				
3	Pulley box		Aluminum alloy	9	Flat washer	-
4	Bearing		_	10	Wiper	FELT
5	Timing pulley		High carbon steel	11	Sealing	EP
6	Timing belt		Urethane	12	Belt clip	Carbon steel

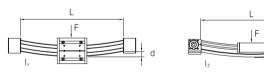
▶ Performance sheet

repeating accuracy	±0.05mm
Straightness of rail	0.35mm/m
Parallelism between shafts	±0.02mm/m
Tolerance of length	±0.5mm

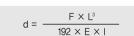
► Timing belt dimension and Rail size

Model No.	Length	Belt type	Belt width	Material of velt
30	3000	S3M	12	
40	4000	RPP5	15	
60	6000	RPP5	25	(Polyurethane With Steel cord)
80	6000	RPP8	30	Will older deray
100	6000	RPP8	50	

► Max, deflection of rail

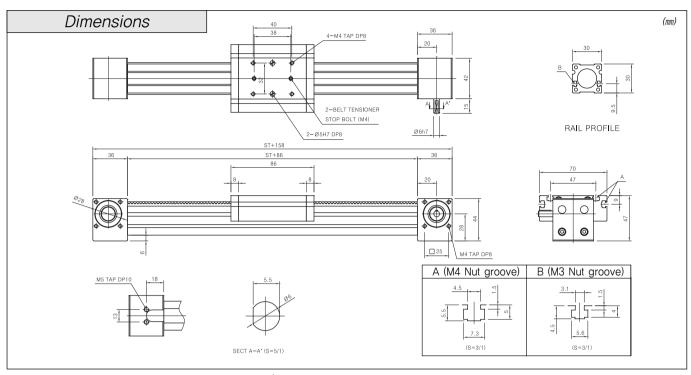


*Formula for deflection of rail is the same to the whole dimension,



- E: Young's modulus, aluminum 70,000N/mm²
- d : deflection [mm]
- F : 잭oad [N]
- L: free length [mm]
- I: 2' nd moment of area [mm4]

20 | www.TPCpage.co.kr

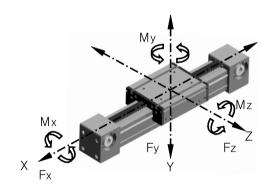


* Rails that esceed Max, rail length without joint also available on customer's request,

► Technical data

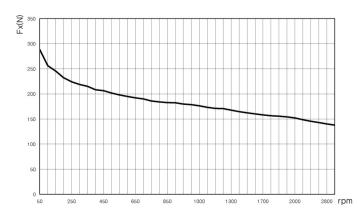
• Speed · · · · · · · · · · · · · · · · · ·	٠.	 Max. 3%
• Acceleration · · · · · · · · · · · · · · · · · ·		 Max. 20%
• Pulley P. C. D. · · · · · · · · · · · ·		 23.87mm
• Stroke per revolution · · · · · · · · · ·		 ≒75mm/rev.
• No-load torque · · · · · · · · · · · · ·		 0.22Nm
• 2'nd moment of area · · · · · · · · · ·		I _y =4.45×10 I _z =4.65×10
• Weights		
Basic weight with zero stroke · · · · ·		 1.0kg
Weight/100mm stroke · · · · · · · · · ·		 0.14kg

► Forces and moments

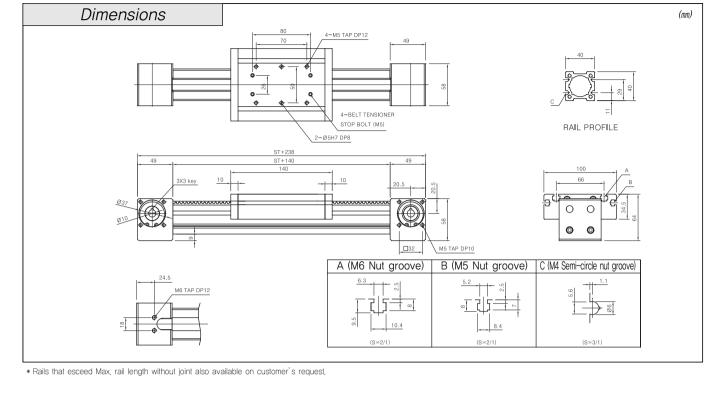


Slider Type	Forces/ Torques	Fx (N)	Fy (N)	Fz (N)	Mx (Nm)	My (Nm)	Mz (Nm)
MD20	STATIC	May 200	60	90	10	14	13
MB30	DYNAMIC	Max.280	55	85	5	7	6

^{*} Having bigger value in case of selecting slider special specification (T,H)



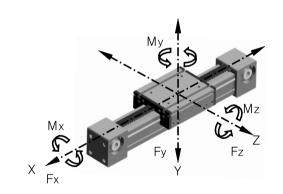
* Fx depends on speed, see respective chart.



► Technical data

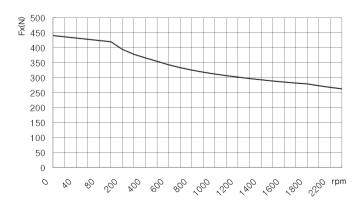
• Speed · · · · · · · Max, 4 1 %
• Acceleration · · · · · · · · · · · · · · · · · · ·
• Pulley P. C. D. · · · · · · · · · · · · · · · · · ·
 Stroke per revolution · · · · · · · · · · · · · · ÷100mm/rev.
• No-load torque · · · · · · · · · · · · · · · · · · 0.32Nm
• 2'nd moment of area · · · · · · · · · · · · · · · · I _J =1.4×10 ⁵ mm ⁴
$I_z=1.2\times10^5$ mm ⁴
Weights
Basic weight with zero stroke · · · · · · · · · 2.1kg
Weight/100mm stroke · · · · · · · · · · · · · · 0.3kg

► Forces and moments



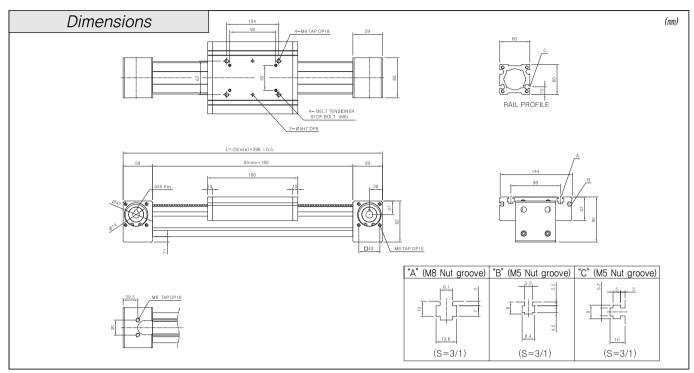
	Forces/ Torques	Fx (N)	Fy (N)	Fz (N)	Mx (Nm)	My (Nm)	Mz (Nm)
MD40	STATIC	140	900	1200	25	33	27
MB40	DYNAMIC	Max.440	650	700	20	22	15

^{*} Having bigger value in case of selecting slider special specification (T.H)



* Fx depends on speed, see respective chart.

22 | www.TPCpage.co.kr

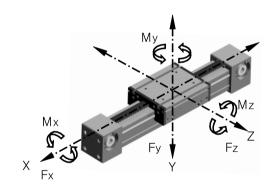


^{*} Rails that esceed Max, rail length without joint also available on customer's request.

► Technical data

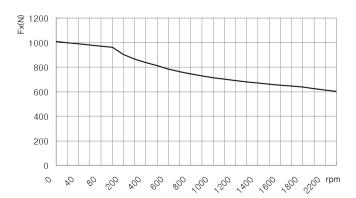
• Speed · · · · · · · Max. 5%
• Acceleration · · · · · · · · · · · · · · · · · Max. 20%
• Pulley P. C. D
• Stroke per revolution $\cdot\cdot\cdot\cdot\cdot\cdot\cdot\cdot\cdot$ = 130mm/rev
• No-load torque · · · · · · · · · · · · · · · · · · 0.61Nm
• 2'nd moment of area $\cdot\cdot\cdot\cdot\cdot\cdot\cdot\cdot\cdot\cdot$ $I_{\nu}=6.8\times10^{5}$ $I_{z}=6.7\times10^{5}$
• Weights
Basic weight with zero stroke

► Forces and moments

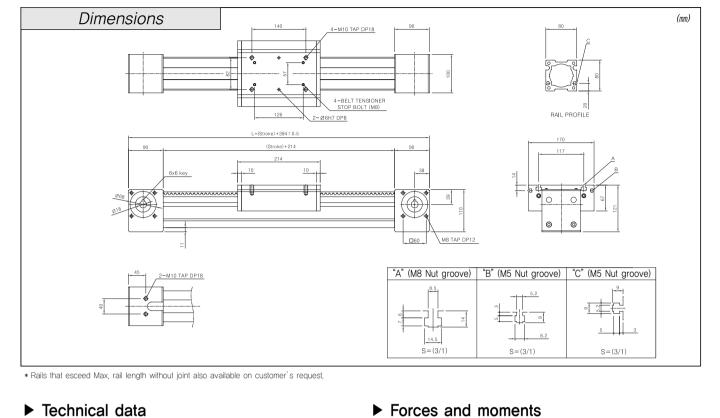


Slider Type	Forces/ Torques	Fx (N)	Fy (N)	Fz (N)	Mx (Nm)	My (Nm)	Mz (Nm)
MDCO	STATIC		1700	3000	67	130	96
MB60	DYNAMIC	Max.1000	1100	2000	43	105	76

^{*} Having bigger value in case of selecting slider special specification (T.H)

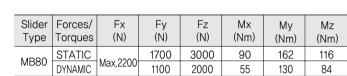


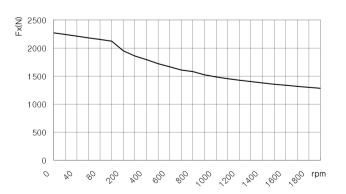
* Fx depends on speed, see respective chart.



► Technical data

• Speed · · · · · · · Max, 6 1%
• Acceleration · · · · · · · · · · · · · · · · · Max, 20%
• Pulley P. C. D. • • • • • • • • • • 61,12mm
• Stroke per revolution · · · · · · · · · · · · · · · ≒192mm/rev.
• No-load torque · · · · · · · · · · · · · · · · 0.93Nm
• 2'nd moment of area $\cdot\cdot\cdot\cdot\cdot\cdot\cdot\cdot\cdot.$ I_v = 21.1 \times 10 5 mm 4 I_z = 19.5 \times 10 5 mm 4
• Weights
Basic weight with zero stroke · · · · · · · · · · · 12.9kg Weight/100mm stroke · · · · · · · · · · · · · · · · 0.8kg

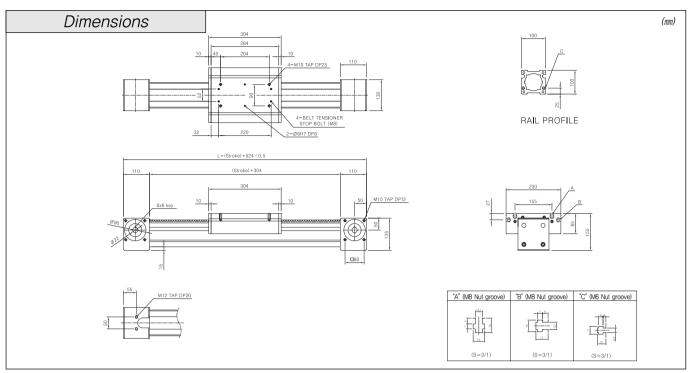




* Fx depends on speed, see respective chart.

24 | www.TPCpage.co.kr TPC Mechatronics Corp. | 25



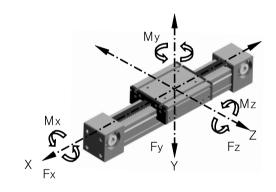


^{*} Rails that esceed Max, rail length without joint also available on customer's request,

► Technical data

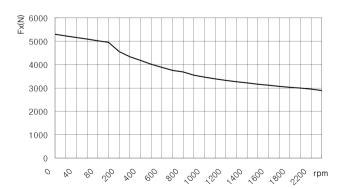
• Speed · · · · · · · · · · · · · · · · · ·	x. 10%
• Acceleration · · · · · · · · · · · · · · · · · · ·	x. 20%
• Pulley P. C. D. • • • • • • • • • • • • • • • • • 81.4	19mm
• Stroke per revolution $\cdot\cdot\cdot\cdot\cdot\cdot\cdot\cdot\cdot\cdot$ $=$ 2	56mm/rev.
• No-load torque · · · · · · · · · · · · · · · · · 1.44	1Nm
• 2'nd moment of area $\cdot\cdot\cdot\cdot\cdot\cdot\cdot$.	54.2×10⁵m 50.5×10⁵m
• Weights	

► Forces and moments



	Forces/ Torques	Fx (N)	Fy (N)	Fz (N)	Mx (Nm)	My (Nm)	Mz (Nm)
MB100	STATIC	Max.5300	3600	8000	300	770	422
	DYNAMIC		2200	6500	230	519	275

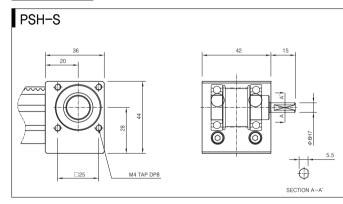
 $[\]boldsymbol{*}$ Having bigger value in case of selecting slider special specification (T.H)

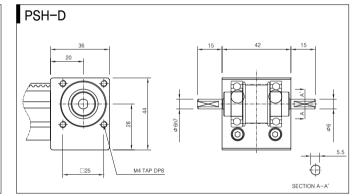


^{*} Fx depends on speed, see respective chart.

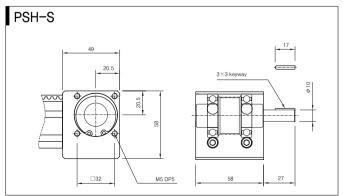
PULLEY OPTION ● PSH Type One body type pulley that having driving shaft ■ PCP Type This type pulley is joined with Jaw-coupling directly and supplied with coupling.

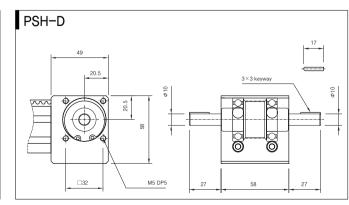
MB30





MB40

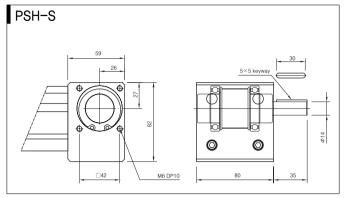


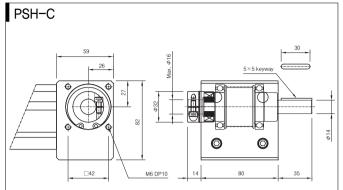


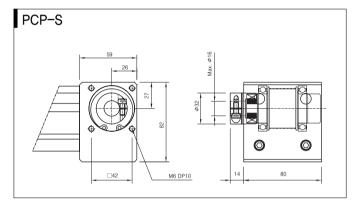
26 | www,TPCpage.co.kr

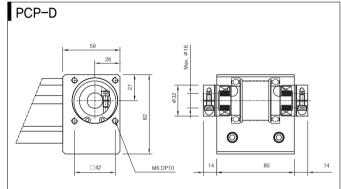


MB60

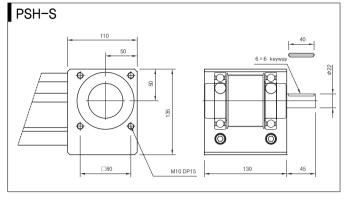


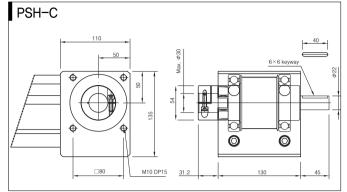


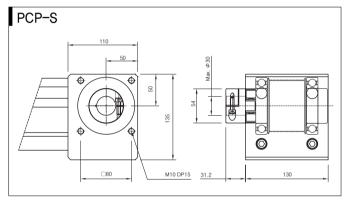


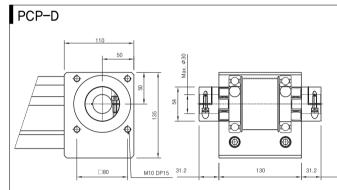


MB100









MB80

