



MJUNIT Belt Drive Linear Rail

Specialist for Belt Drive Linear
Slide Positioning System



Dongguan MJUNIT Precision Mechanical Co.,Ltd

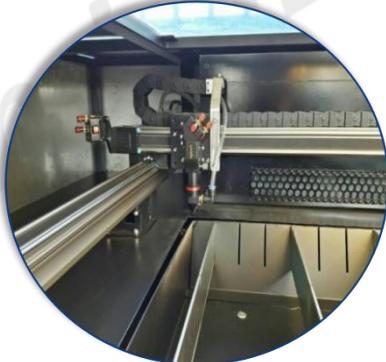
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Guangdong Province, China 523039

The MJUNIT Series of belt driven linear guides offers a number of profile sizes with multiple design configurations to meet different requirements. The linear guideway body consists of an anodized aluminum housing with a Chrome steel GCr15 shaft. Internally, there is a profile rail with shaft of low friction, noise and vibration.

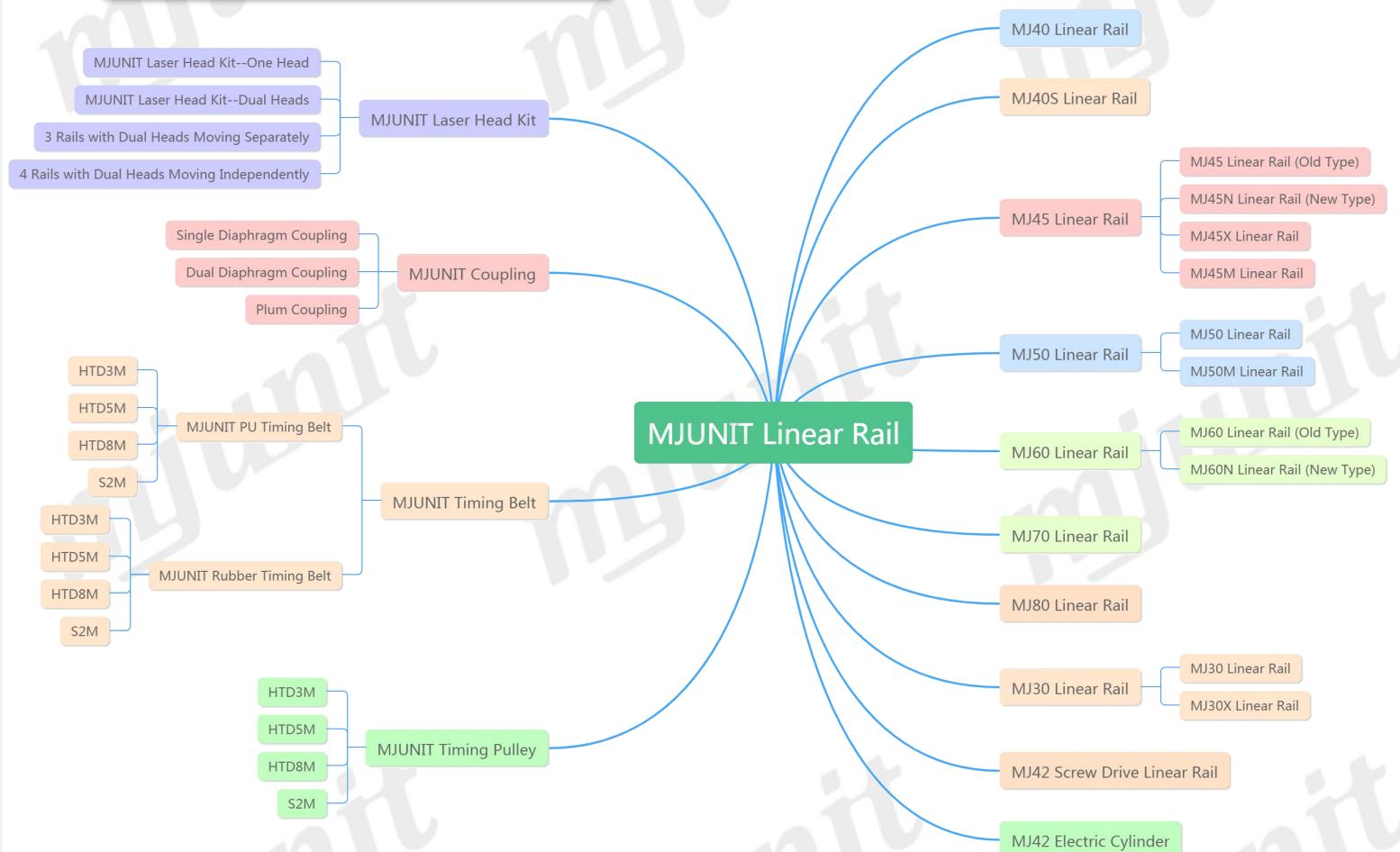
The mission of MJUNIT Linear modules is to deliver a wide range of high-quality motion control systems to meet any application need. Designed for easy configuration to make a complete motion system - from miniature precision for life sciences to heavy factory equipment - we are the place to go. MJUNIT rails are available in multiple configurations; These belt-drive stages are easy to integrate into tight machine envelopes. MJUNIT assemblies can do scanning, indexing and positioning, moving sensors, antennas, cameras, measure distance, also in aerospace, automation, commercial, even photography time-lapse device, laser cutting machine, glue dispenser, 3D printer, scanner, factory conveyor, laser engraving machine, cutting machine, etc, which is involved in machine design applications across all industries including plant assembly, packaging design, transportation, manufacturing, medical device development.

Special Properties:

- Compact size
- Maintenance-free
- High rigidity
- Hlgh speed
- Cost-effective
- Standard Off-the-Shelf Availability
- High Performance, Low Cost
- Limitless Scalability
- Multiple Carriages and Axes
- Quick Delivery



MJUNIT Linear Rail Contents



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- MJ30X Linear Rail

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- MJUNIT Coupling

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- MJUNIT Laser Head Kit

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- MJUNIT Rail Adjustment and Maintenance

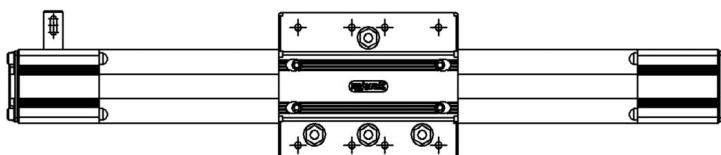
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- MJUNIT Rail Structure

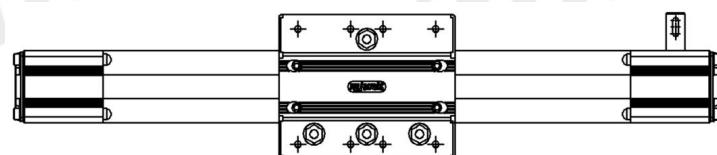
MJUNIT Linear Rail Model Rules

MJ45N - 1000 - L
 ↓ ↓
MJ Rail Type **Total Length**
 Including End Cap length **Shaft Direction**
 Left:L Right:R
 Double Sides:D
 Two Shafts on One Side:L+R

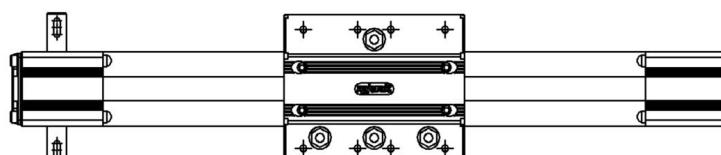
MJUNIT Linear Rail Shaft Direction



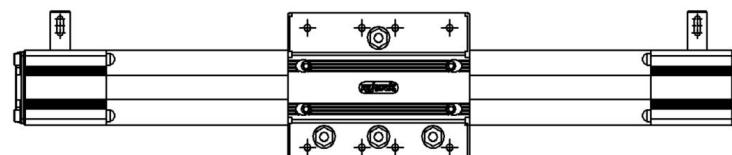
Left



Right

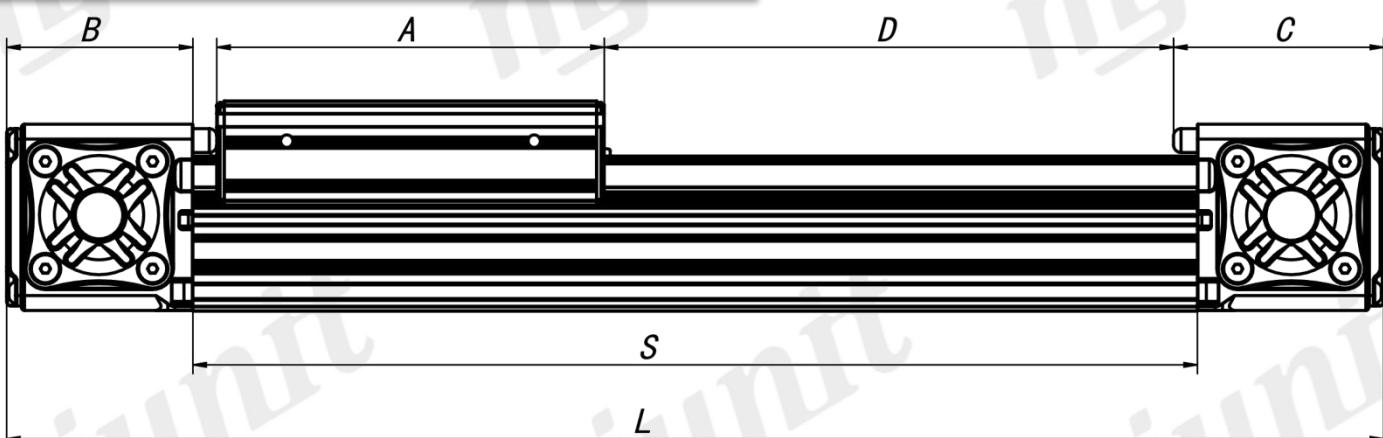


Double Sides



Two Shafts on One Side

MJUNIT Linear Rail Length Calculation



L : Total Length (Including End Cap Length)

S: Profile Length

A: Carriage Length

B: End Cap Length

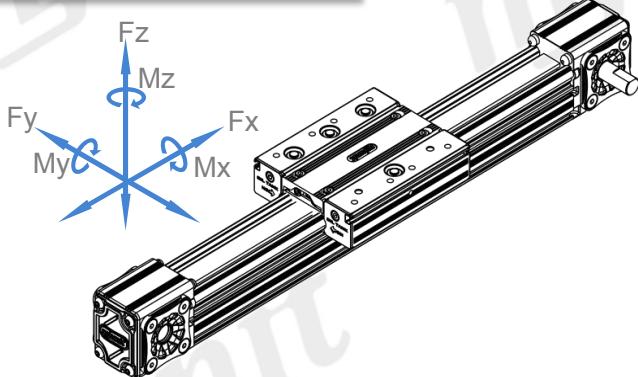
C: End Cap Length + Buffer Length

D: Stroke Length

Calculation:

D=L-A-2C (It is suggested to make the total length longer to ensure the carriage has enough travel length)

MJ40 Linear Rail



Profile : 40mmx40mm (1.57inx1.57in)

Material : Anodized Aluminum Housing with a Chrome Steel GCr15 shaft

Carriage Size : 104*110mm

Profile Length : ≤6000mm

Straightness/Distortion: ≤0.1mm/300mm

Positional Repeatability/M: 0.1mm

Applicable Torque: 0~2N.m

Velocity : 0~1000mm/s

Rail Type	MJ40	MJ40
Ralated Load	Static	Dynamic
Fx(N)	150	100
Fy(N)	100	80
Fz(N)	150	100
Mx(N.m)	10	8
My(N.m)	8	6
Mz(N.m)	20	15

Loading Capacity : 80N

Linear Travel Per Shaft Revolution: 72mm

Toothed Belt: PU + Steel Cord,

HTD3M,Width:15mm

Pulley Teeth: 24 Teeth

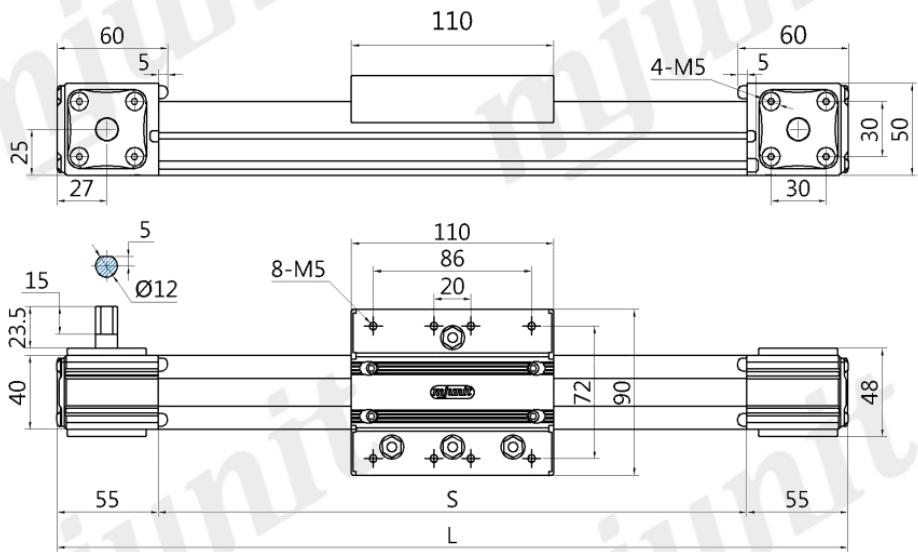
Gear-Teeth Type : HTD3M

Basic Weight (Carriage+end caps): 1000g

Additional Weight/100mm profile: 140g

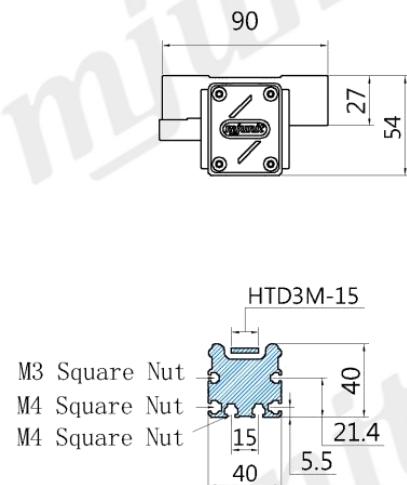
Applicable Motor Type (Without Motor): Nema 17/Nema 23/200w/400w Servo Motor

MJ40 Dimension

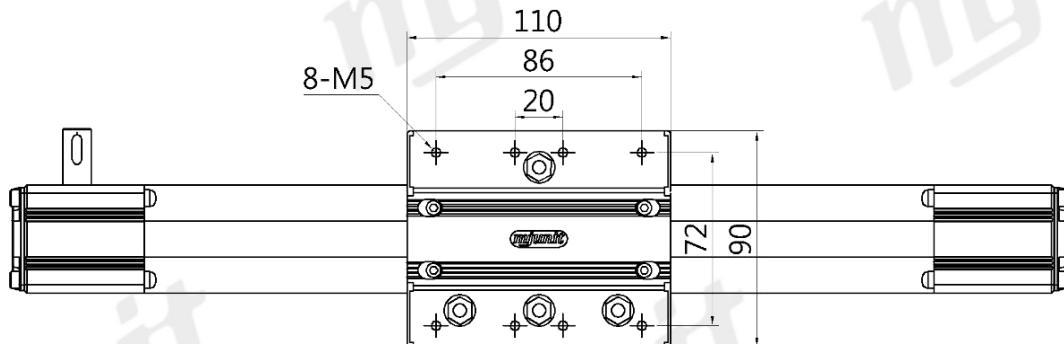


$$L=S+110\text{mm}$$

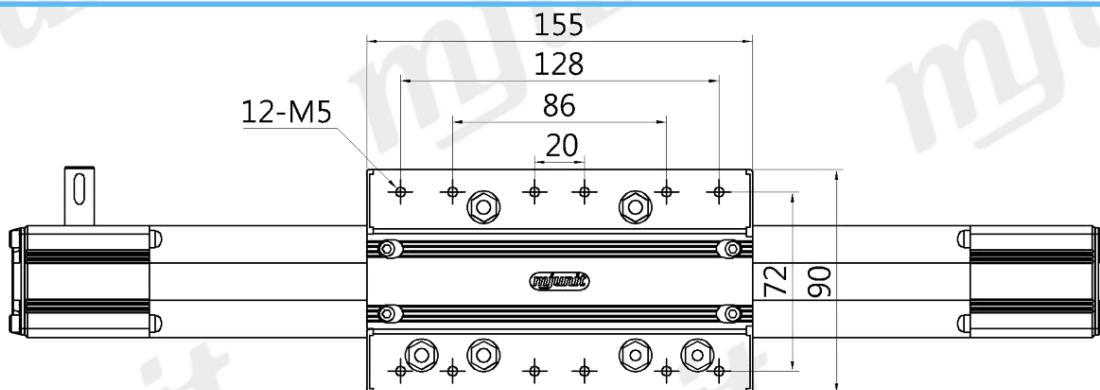
Applicable Total Length (L) =Stroke Length+250mm



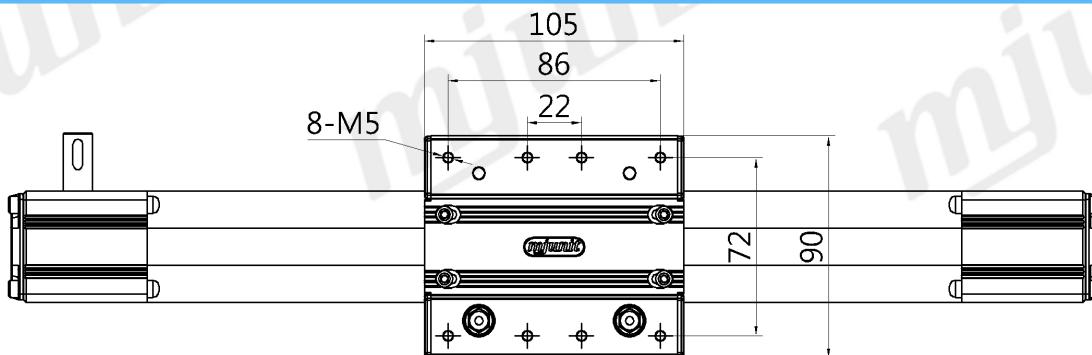
MJ40 Carriage Type



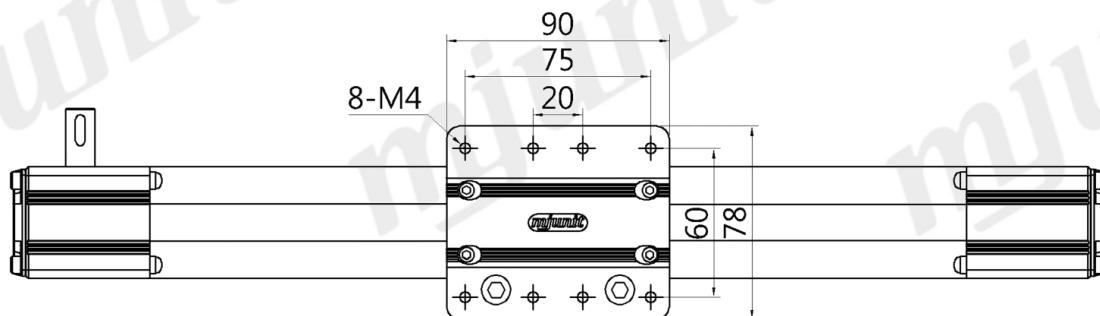
MJ40 carriage with 6pcs of bearings inside with 110mm length



MJ40 carriage with 8pcs of bearings inside with 155mm length, applicable for triangle bracket

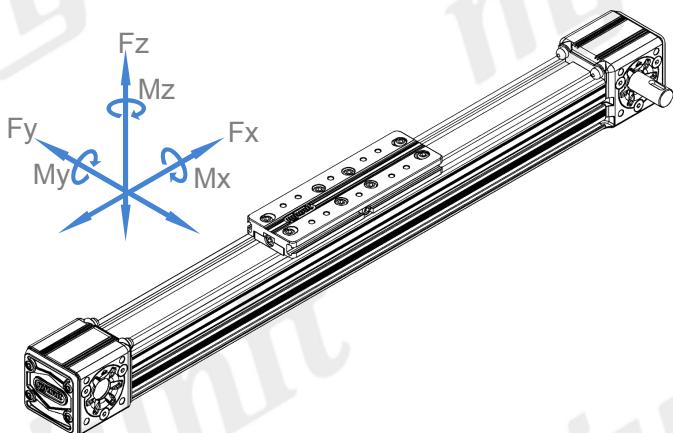


MJ40 normal carriage (4pcs of bearings inside with 104mm length)



MJ40 mini carriage with 4pcs of bearings inside with 90mm length

MJ40S Linear Rail



Profile : 40mmx36mm (1.57inx1.42in)

Material : Anodized Aluminum Housing with a Chrome Steel GCr15 shaft

Carriage Size : 128*40mm

Profile Length : ≤6000mm

Straightness/Distortion: ≤0.1mm/300mm

Positional Repeatability/M: 0.1mm

Applicable Torque: 0~2N.m

Velocity : 0~1000mm/s

Rail Type	MJ40S	MJ40S
Ralated Load	Static	Dynamic
Fx(N)	100	80
Fy(N)	80	60
Fz(N)	100	80
Mx(N.m)	8	6
My(N.m)	6	4
Mz(N.m)	15	10

Loading Capacity : 50N

Linear Travel Per Shaft Revolution: 72mm

Toothed Belt: PU + Steel Cord,

HTD3M,Width:15mm

Pulley Teeth: 24 Teeth

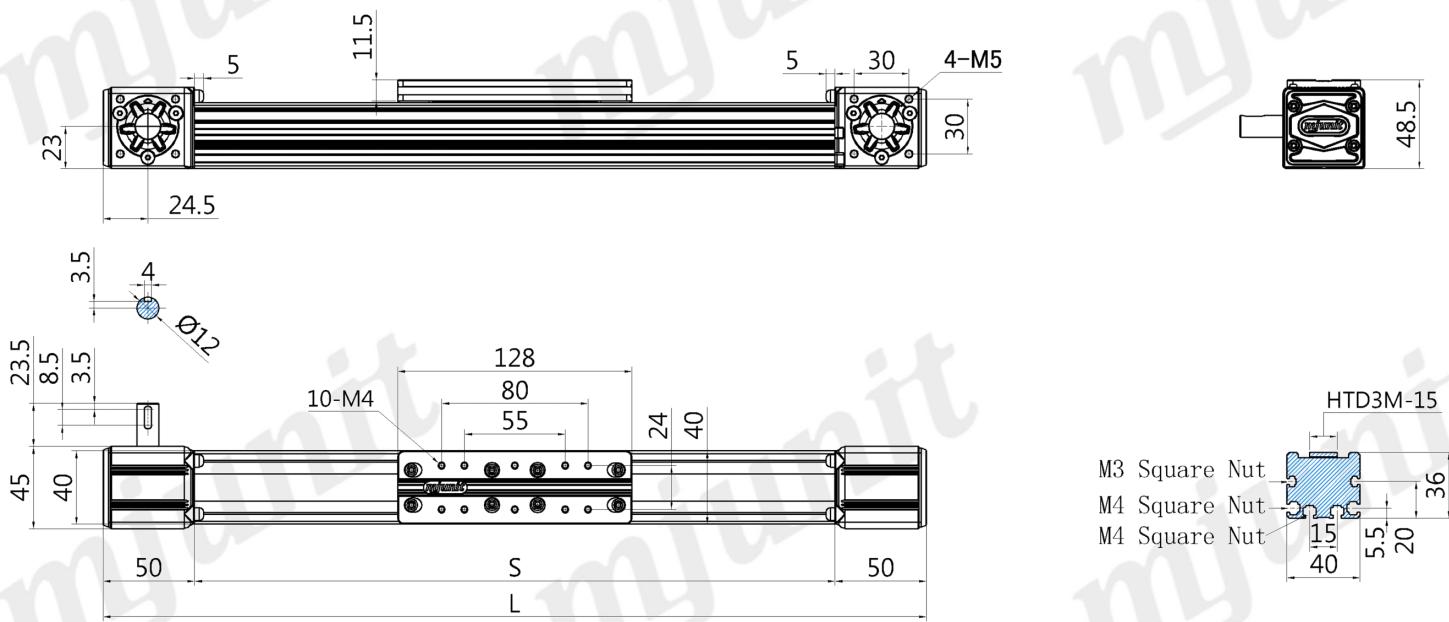
Gear-Teeth Type : HTD3M

Basic Weight (Carriage+end caps): 750g

Additional Weight/100mm profile: 190g

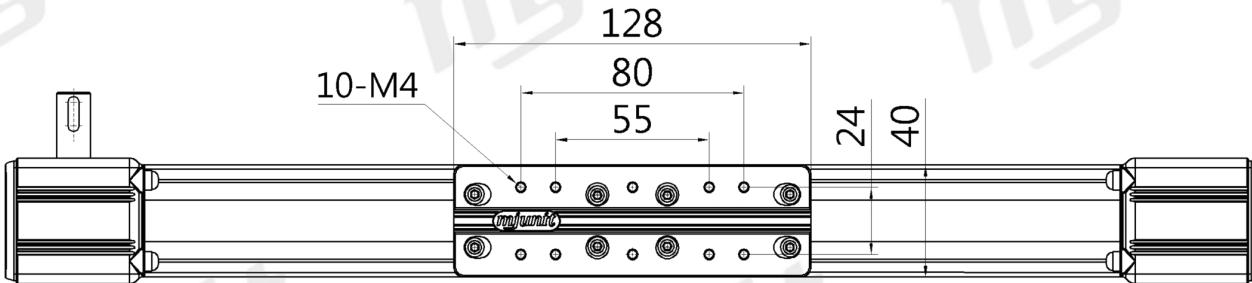
Applicable Motor Type (Without Motor): Nema 17/Nema 23/200w/400w Servo Motor

MJ40S Dimension

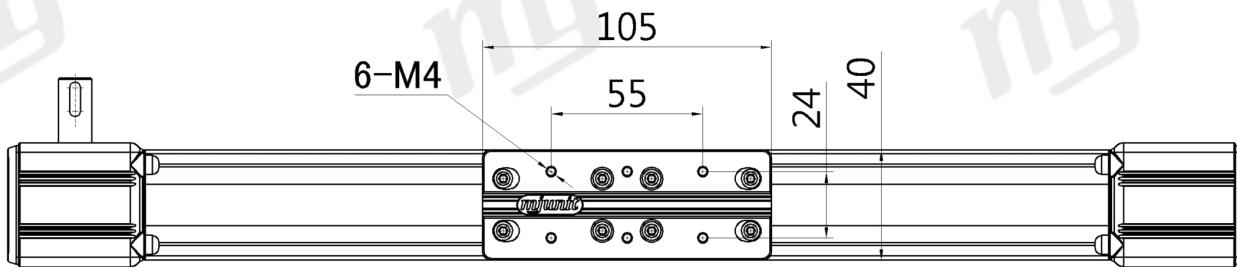


L=S+100mm

Applicable Total Length (L) =Stroke Length+250mm

MJ40S Carriage Type

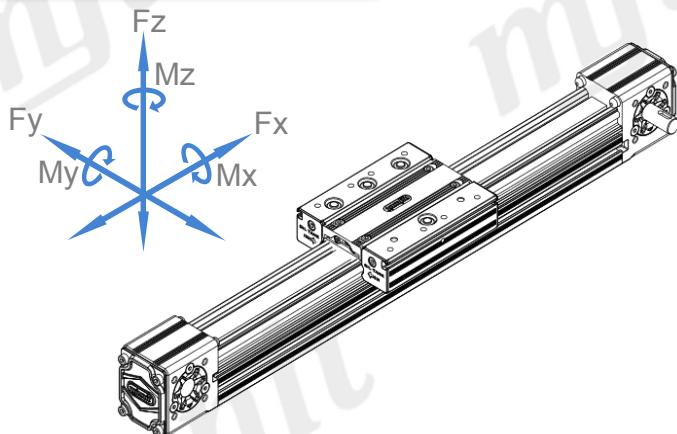
MJ40S standard carriage (4pcs of bearings inside with 128mm length)



MJ40S mini carriage (3pcs of bearings inside with 105mm length)



MJ45N Linear Rail



Profile : 45mmx45mm (1.77inx1.77in)

Material : Anodized Aluminum Housing with a Chrome Steel GCr15 shaft

Carriage Size : 104*90mm

Profile Length : ≤6000mm

Straightness/Distortion: ≤0.1mm/300mm

Positional Repeatability/M: 0.1mm

Applicable Torque: 0~3N.m

Velocity : 0~1000mm/s

Rail Type	MJ45N	MJ45N
Ralated Load	Static	Dynamic
Fx(N)	150	100
Fy(N)	100	80
Fz(N)	150	100
Mx(N.m)	10	8
My(N.m)	8	6
Mz(N.m)	20	15

Loading Capacity : 100N

Linear Travel Per Shaft Revolution: 72mm

Toothed Belt: PU + Steel Cord,

HTD3M,Width:15mm

Pulley Teeth: 24 Teeth

Gear-Teeth Type : HTD3M

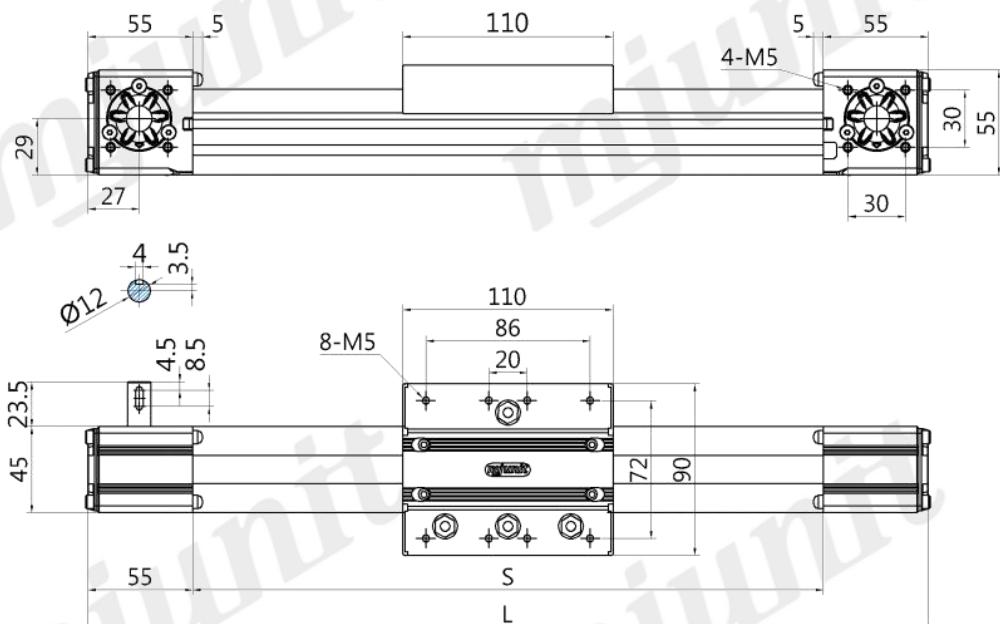
Basic Weight (Carriage+end caps): 1000g

Additional Weight/100mm profile: 195g

Applicable Motor Type (Without Motor): Nema

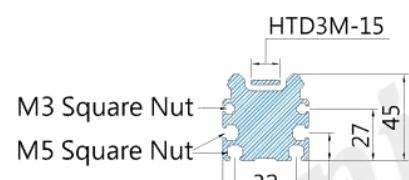
17/Nema 23/200w/400w Servo Motor

MJ45N Dimension

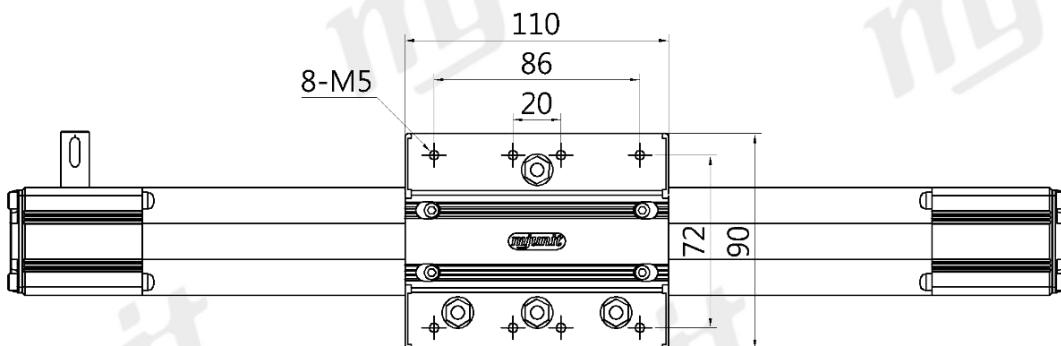


$$L=S+110\text{mm}$$

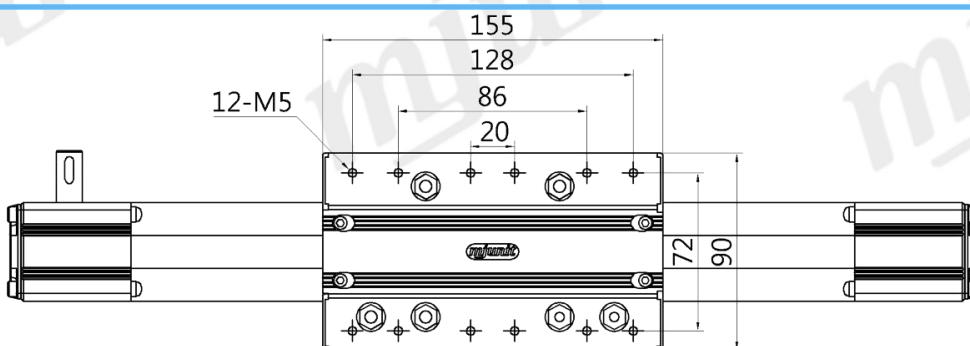
Applicable Total Length (L) =Stroke Length +250mm



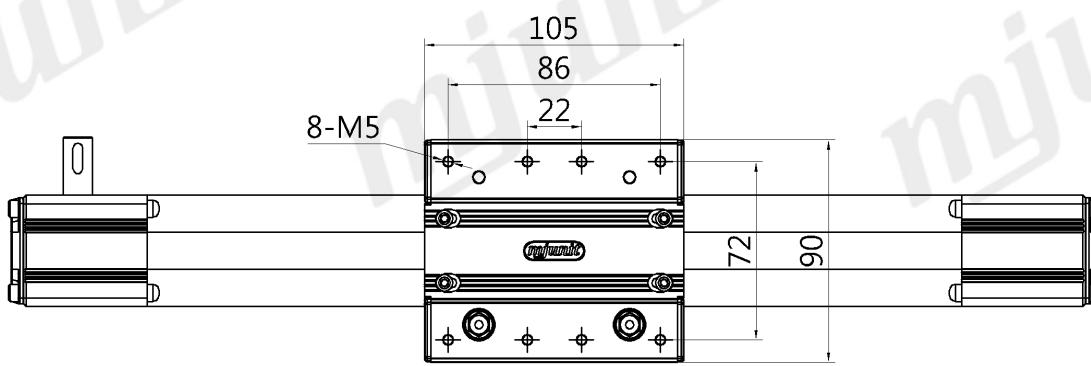
MJ45N Carriage Type



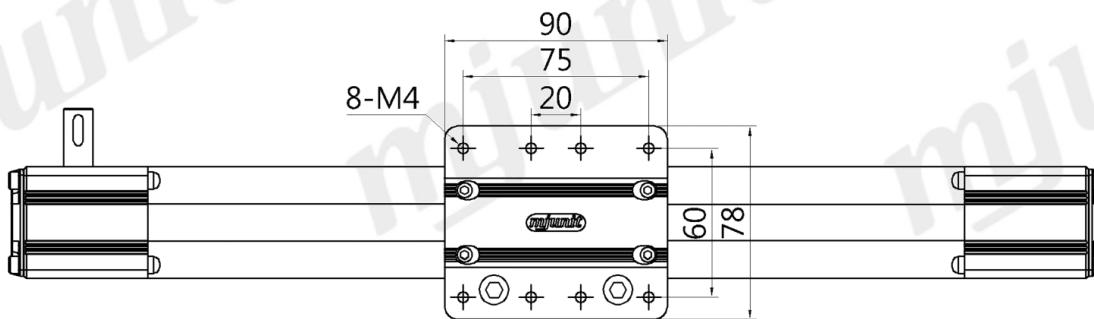
MJ45N carriage with 6pcs of bearings inside with 110mm length



MJ45N carriage with 8pcs of bearings inside with 155mm length ,
applicable for triangle bracket

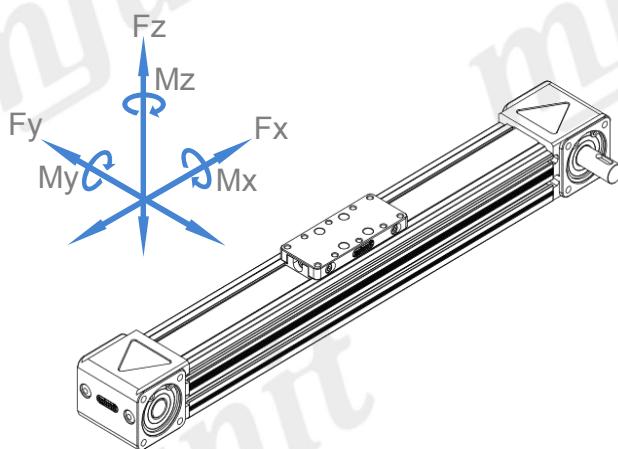


MJ45N normal carriage (4pcs of bearings inside with 105mm length)



MJ45N mini carriage with 4pcs of bearings inside with 90mm length

MJ45X Linear Rail



Rail Type	MJ45X	MJ45X
Ralated Load	Static	Dynamic
Fx(N)	150	100
Fy(N)	100	80
Fz(N)	150	100
Mx(N.m)	10	8
My(N.m)	8	6
Mz(N.m)	20	15

Profile : 45mmx35.5mm (1.77inx1.40in)

Material : Anodized Aluminum Housing
12mm Guideway

Carriage Size : 76*32mm

Profile Length : ≤1600mm

Straightness/Distortion: ≤0.1mm/300mm

Positional Repeatability/M: 0.1mm

Applicable Torque: 0~3N.m

Velocity : 0~1000mm/s

Loading Capacity : 100N
Linear Travel Per Shaft Revolution: 84mm

Toothed Belt: PU + Steel Cord, HTD3M, Width: 20mm

Pulley Teeth: 28 Teeth

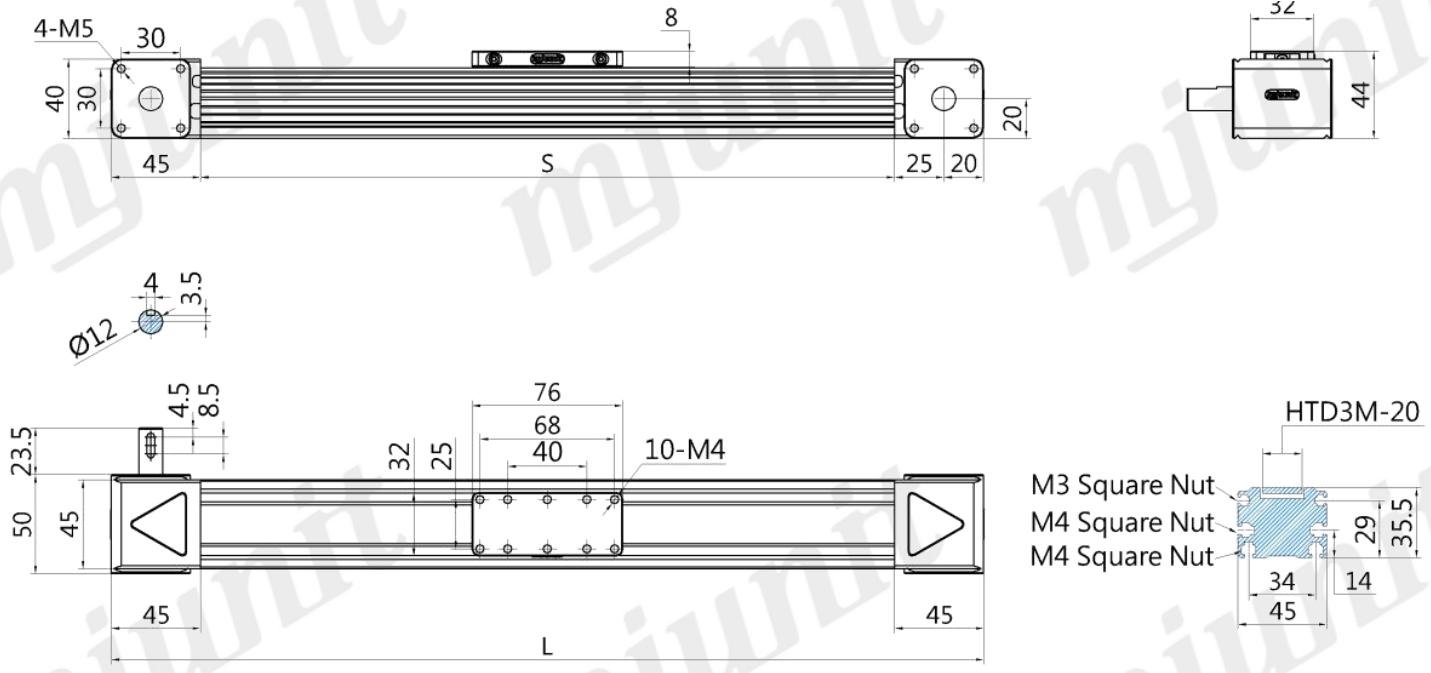
Gear-Teeth Type : HTD3M

Basic Weight (Carriage+end caps): 620g

Additional Weight/100mm profile: 200g

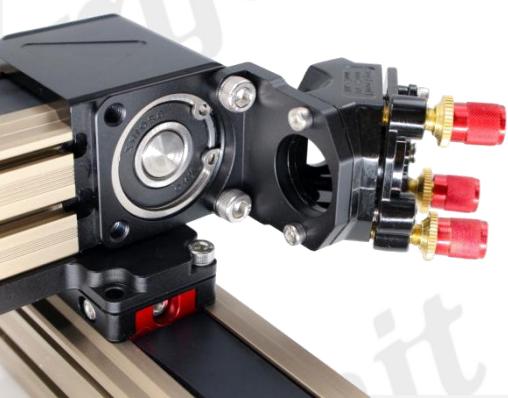
Applicable Motor Type (Without Motor): Nema 17/Nema 23/200w/400w Servo Motor

MJ45X Dimension

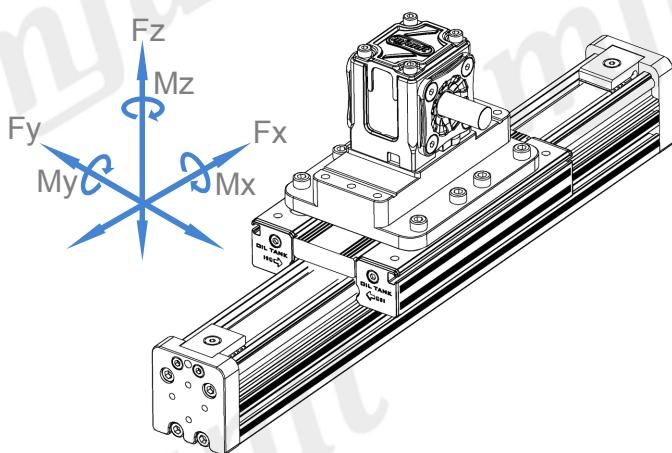


L=S+90mm

Applicable Total Length (L) =Stroke Length+200mm



MJ45M Linear Rail



Profile : 45mmx45mm (1.77inx1.77in)

Material : Anodized Aluminum Housing with a Chrome Steel GCr15 shaft

Carriage Size : 147*90mm

Profile Length : ≤6000mm

Straightness/Distortion: ≤0.1mm/300mm

Positional Repeatability/M: 0.1mm

Applicable Torque: 0~3N.m

Rail Type	MJ45M	MJ45M
Ralated Load	Static	Dynamic
$F_x(N)$	150	100
$F_y(N)$	100	80
$F_z(N)$	150	100
$M_x(N.m)$	10	8
$M_y(N.m)$	8	6
$M_z(N.m)$	20	15

Velocity : 0~1000mm/s

Loading Capacity : 100N

Linear Travel Per Shaft Revolution: 72mm

Toothed Belt: PU + Steel Cord, HTD3M, Width:15mm

Pulley Teeth: 24 Teeth

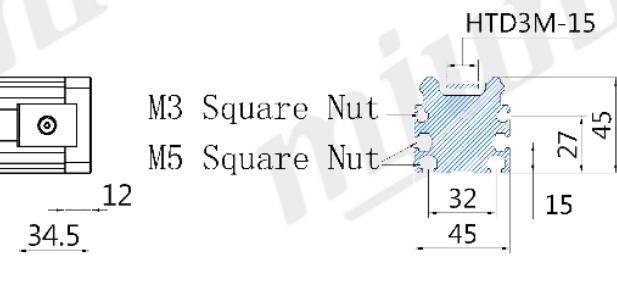
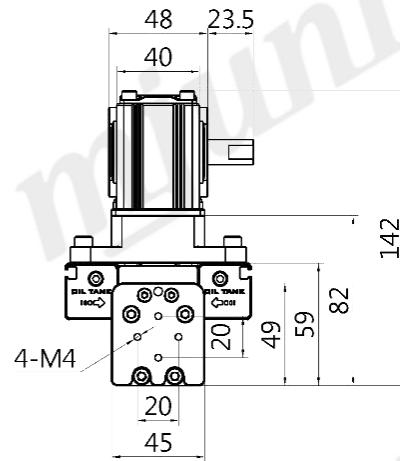
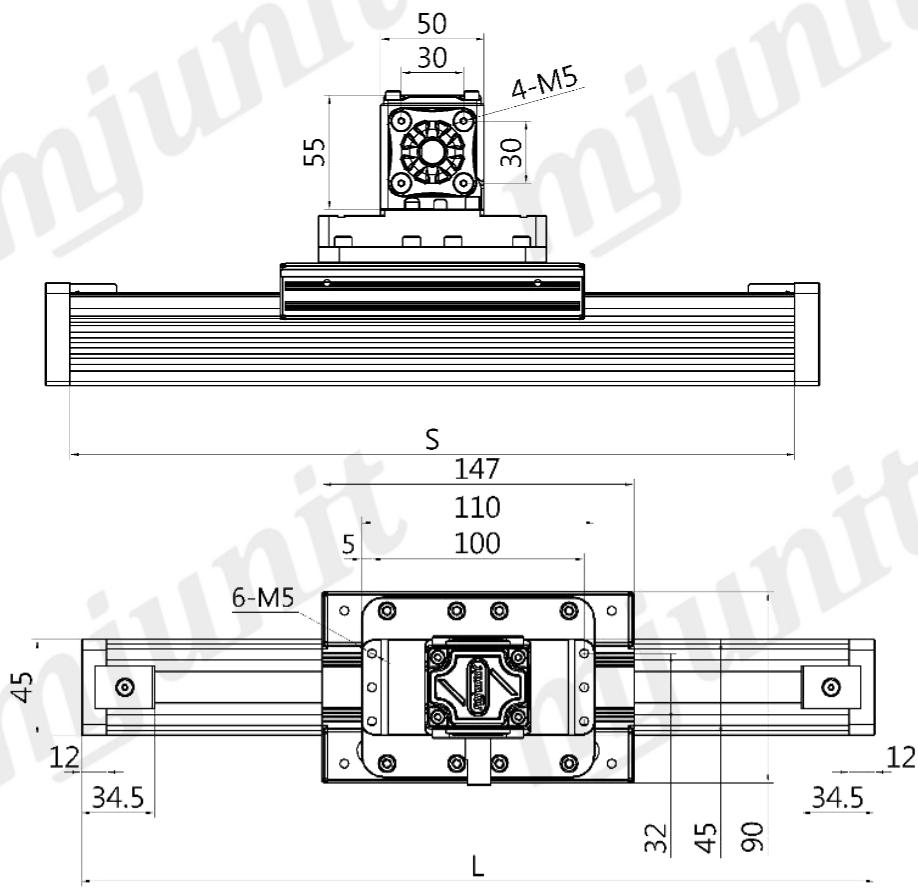
Gear-Teeth Type : HTD3M

Basic Weight (Carriage+end caps): 1520g

Additional Weight/100mm profile: 200g

Applicable Motor Type (Without Motor): Nema 17/Nema 23/200w/400w Servo Motor

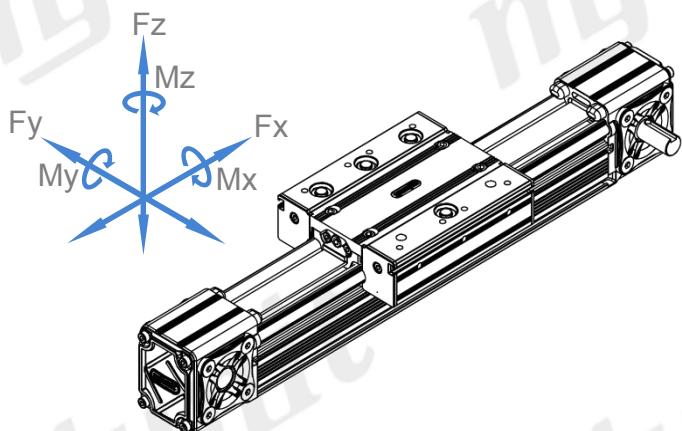
MJ45M Dimension



L=S+24mm

Applicable Total Length (L) =Stroke Length+250mm

MJ50 Linear Rail



Rail Type	MJ50	MJ50
Ralated Load	Static	Dynamic
Fx(N)	250	150
Fy(N)	150	110
Fz(N)	200	150
Mx(N.m)	15	12
My(N.m)	12	10
Mz(N.m)	30	25

Profile : 50mmx52mm (1.97inx2.05in)

Material : Anodized Aluminum Housing with a Chrome Steel GCr15 shaft

Carriage Size : 130*108mm

Profile Length : ≤6000mm

Straightness/Distortion: ≤0.1mm/300mm

Positional Repeatability/M: 0.1mm

Applicable Torque: 2~10N.m

Velocity : 0~1500mm/s

Loading Capacity : 150N

Linear Travel Per Shaft Revolution: 110mm

Toothed Belt: PU + Steel Cord, HTD5M, Width:20mm

Pulley Teeth: 22 Teeth

Gear-Teeth Type : HTD5M

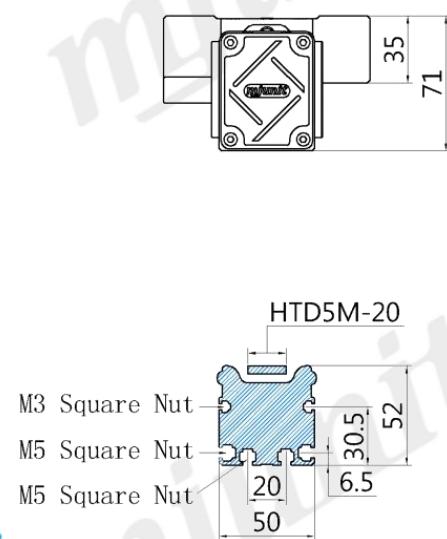
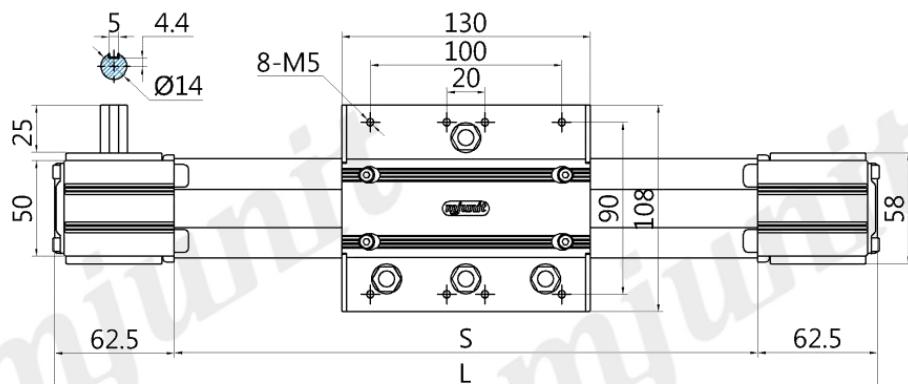
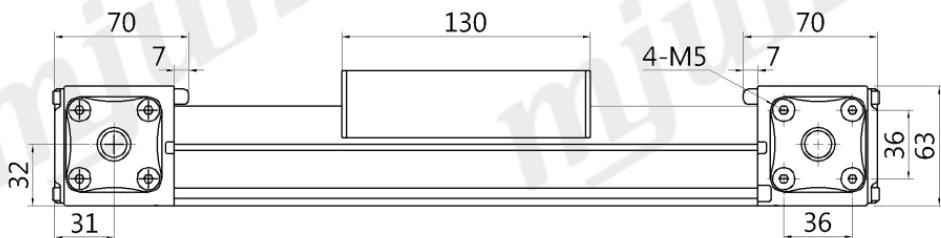
Basic Weight (Carriage+end caps): 2000g

Additional Weight/100mm profile: 262g

Applicable Motor Type (Without Motor): Nema 23/Nema

34/400w/750w Servo Motor

MJ50 Dimension

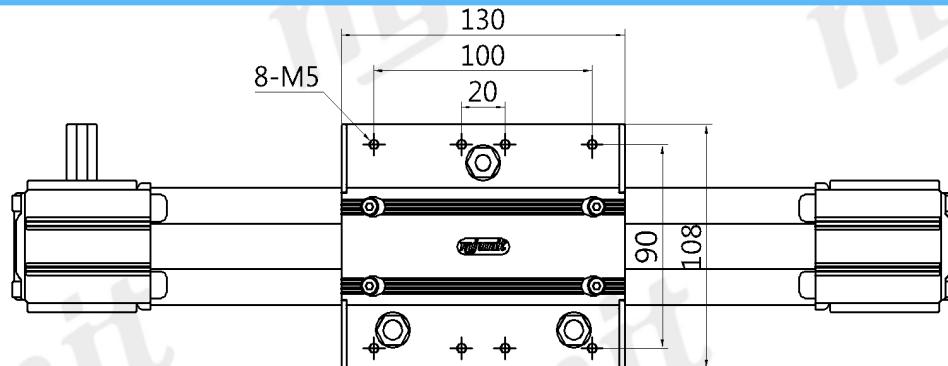


L=S+125mm

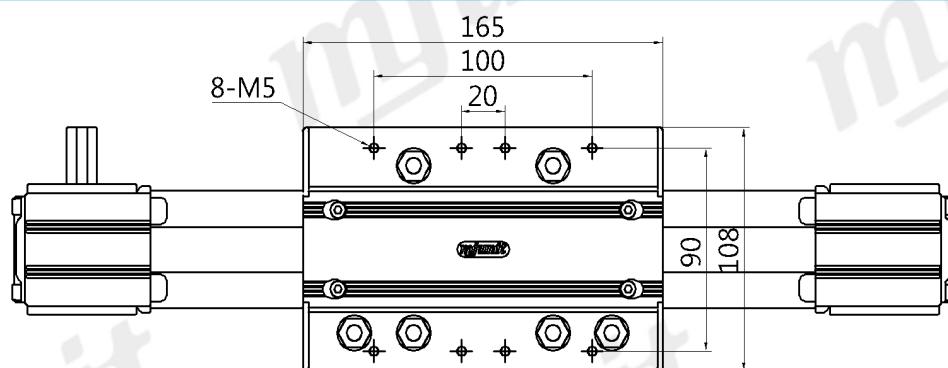
Applicable Total Length (L) =Stroke Length+300mm



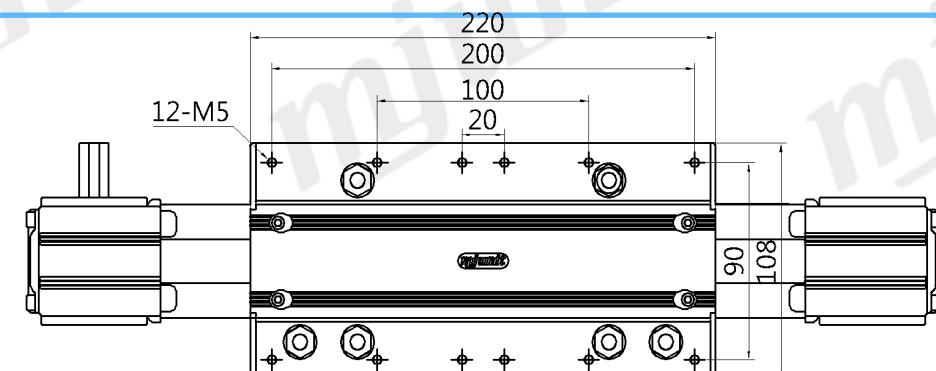
MJ50 Carriage Type



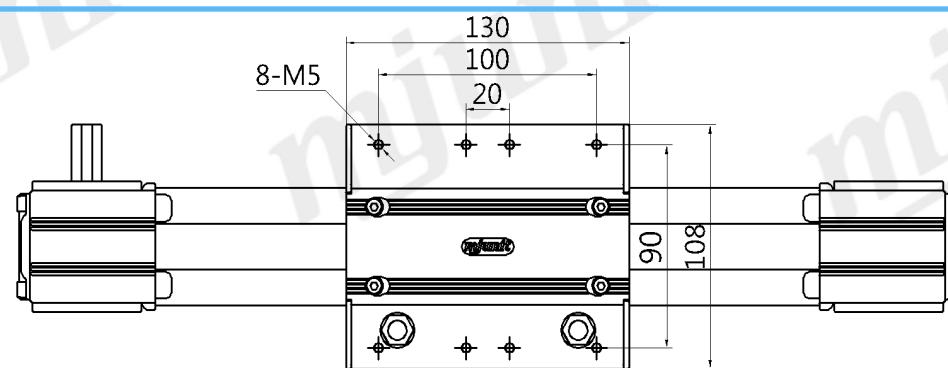
MJ50 carriage with 6pcs of bearing inside with 130mm length



MJ50 carriage with 8pcs of bearing inside with 165mm length

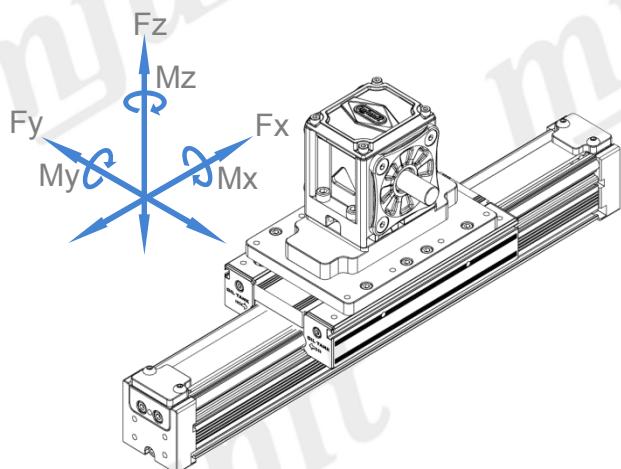


MJ50 carriage with 8pcs of bearing inside with 220mm length,
applicable for triangle bracket



MJ50 normal carriage (4pcs of bearing inside with 130mm length)

MJ50M Linear Rail



Profile : 50mmx52mm (1.97inx2.05in)

Material : Anodized Aluminum Housing with a Chrome Steel GCr15 shaft

Carriage Size : 185*108mm

Profile Length : ≤6000mm

Straightness/Distortion: ≤0.1mm/300mm

Positional Repeatability/M: 0.1mm

Applicable Torque: 2~10N.m

Velocity : 0~1500mm/s

Rail Type	MJ50M	MJ50M
Ralated Load	Static	Dynamic
Fx(N)	250	150
Fy(N)	150	110
Fz(N)	200	150
Mx(N.m)	15	12
My(N.m)	12	10
Mz(N.m)	30	25

Loading Capacity : 150N

Linear Travel Per Shaft Revolution: 125mm

Toothed Belt: PU + Steel Cord, HTD5M, Width: 25mm

Pulley Teeth: 25 Teeth

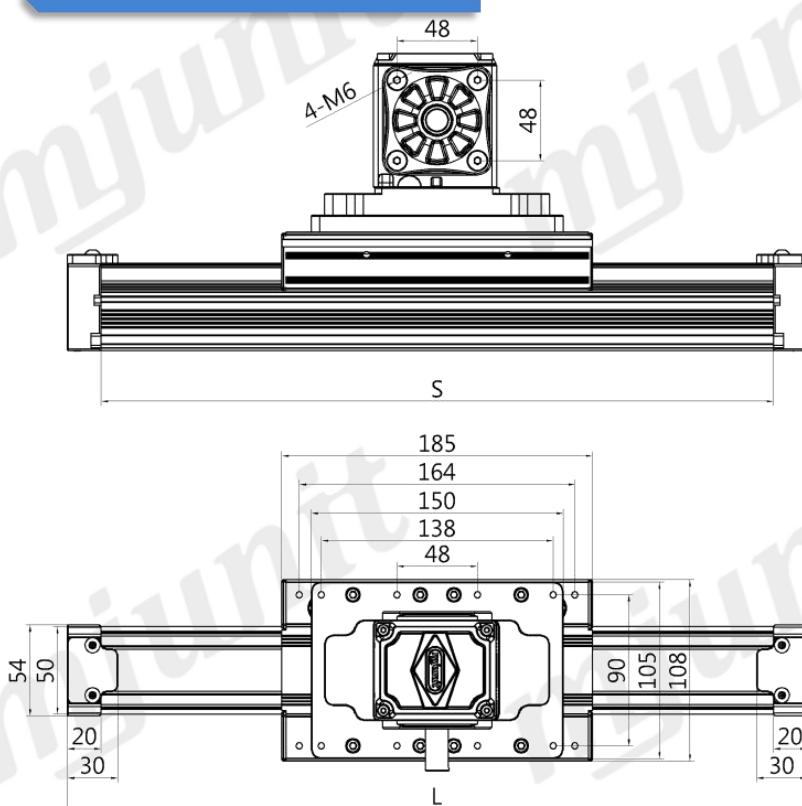
Gear-Teeth Type : HTD5M

Basic Weight (Carriage+end caps): 3430g

Additional Weight/100mm profile: 270g

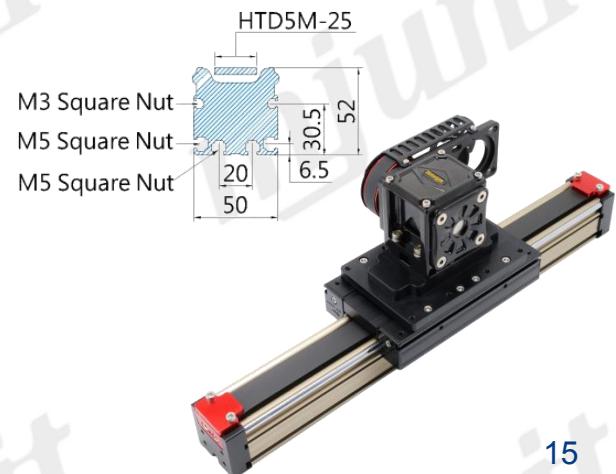
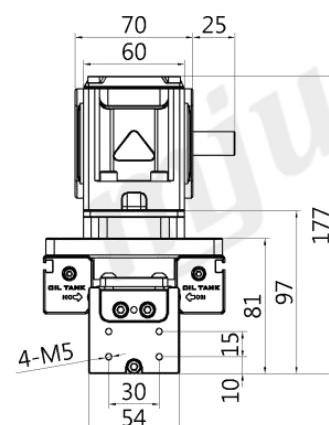
Applicable Motor Type (Without Motor): Nema 23/Nema 34/400w/750w Servo Motor

MJ50M Dimension

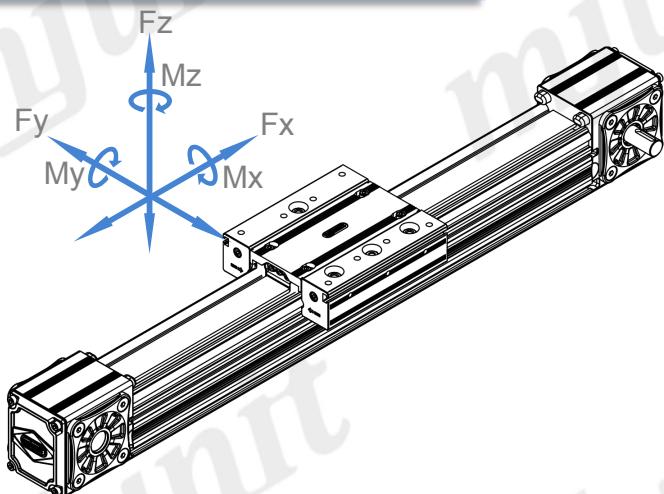


L=S+40mm

Applicable Total Length (L) =Stroke Length+300mm



MJ60N Linear Rail



Profile : 60mmx60mm (2.36inx2.36in)

Material : Anodized Aluminum Housing with a Chrome Steel GCr15 shaft

Carriage Size : 130*115mm

Profile Length : ≤6000mm

Straightness/Distortion: ≤0.1mm/300mm

Positional Repeatability/M: 0.1mm

Applicable Torque: 0~15N.m

Velocity : 0~1500mm/s

Rail Type	MJ60N	MJ60N
Ralated Load	Static	Dynamic
Fx(N)	300	200
Fy(N)	200	160
Fz(N)	300	200
Mx(N.m)	20	16
My(N.m)	16	12
Mz(N.m)	40	30

Loading Capacity : 300N

Linear Travel Per Shaft Revolution: 125mm

Toothed Belt: PU + Steel Cord, HTD5M, Width:25mm

Pulley Teeth: 25 Teeth

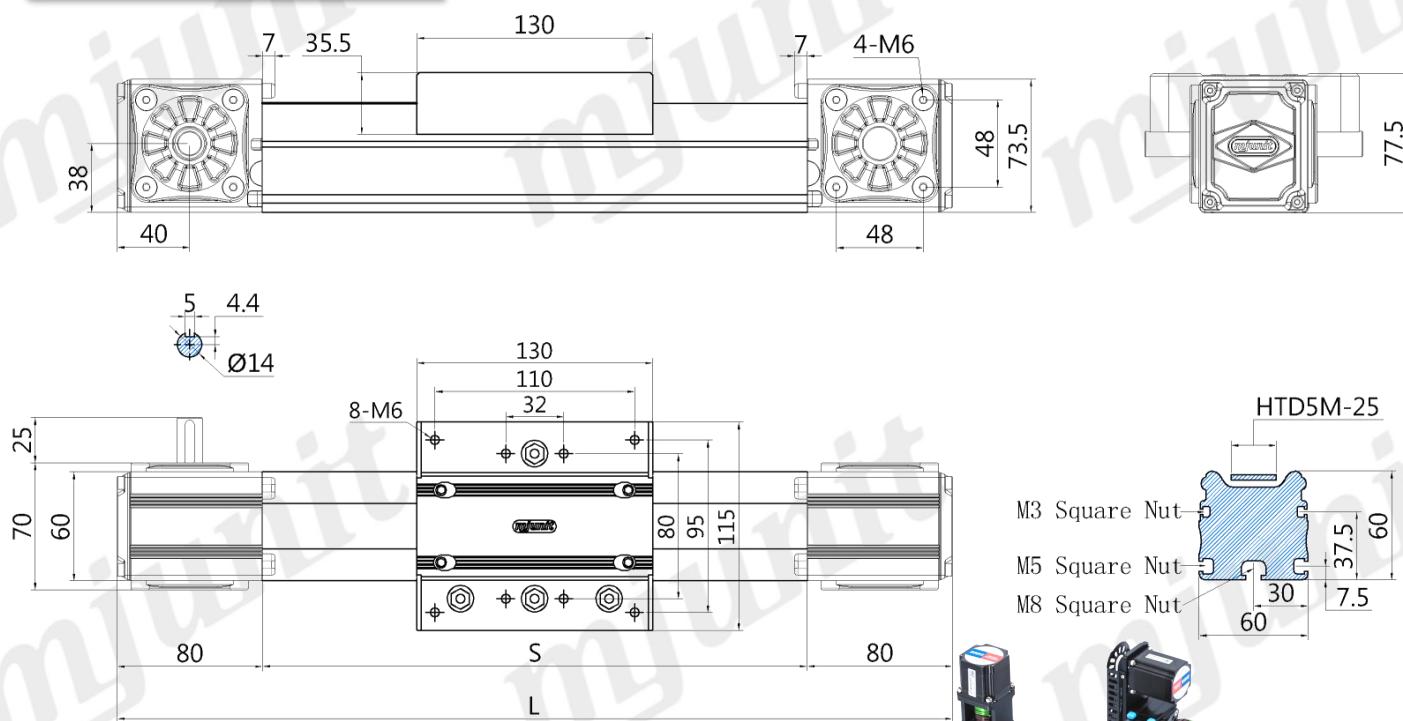
Gear-Teeth Type : HTD5M

Basic Weight (Carriage+end caps): 2500g

Additional Weight/100mm profile: 400g

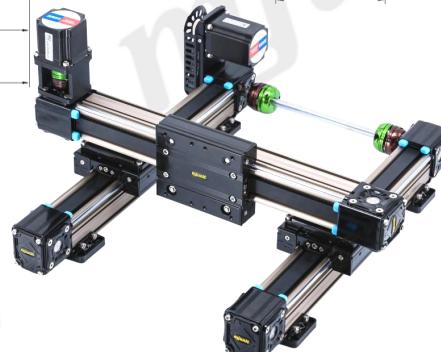
Applicable Motor Type (Without Motor): Nema 23/Nema 34/400w/750w Servo Motor

MJ60N Dimension

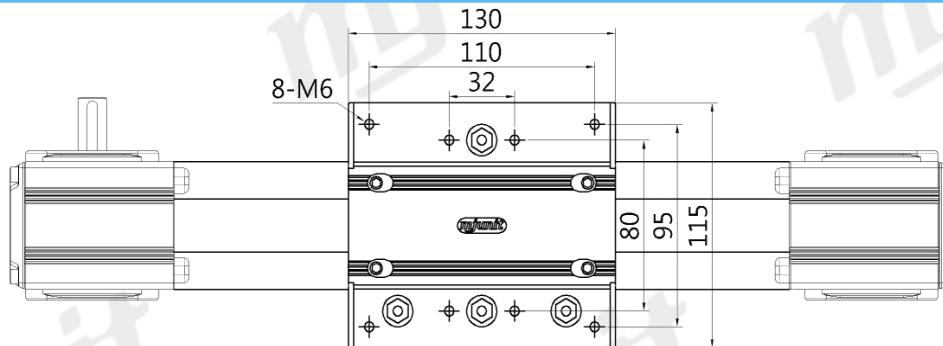


L=S+160mm

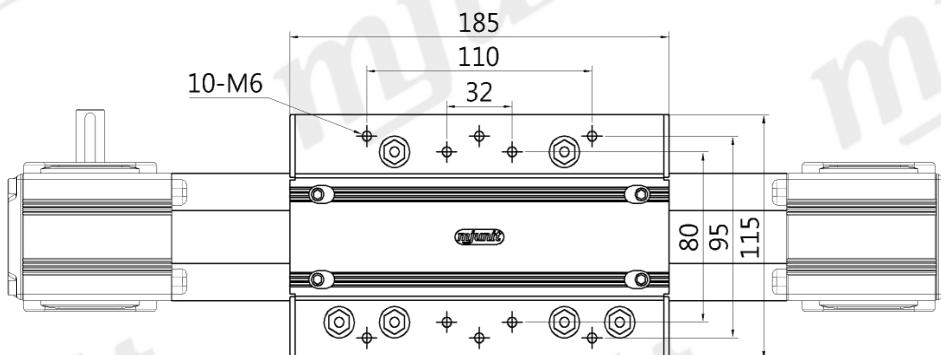
Applicable Total Length (L) =Stroke Length+350mm



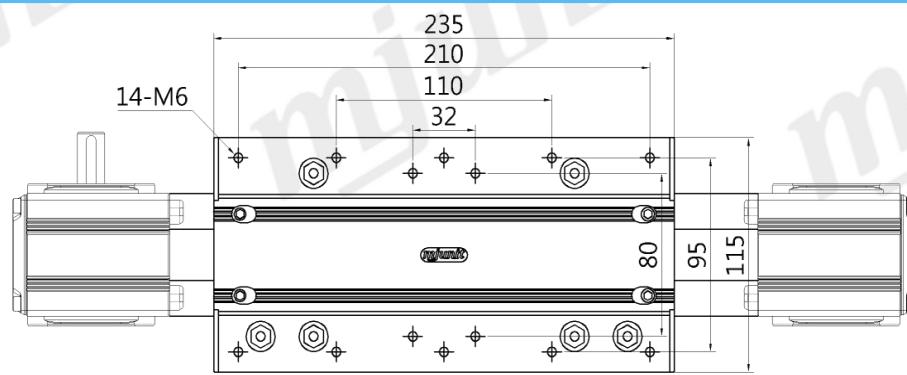
MJ60N Carriage Type



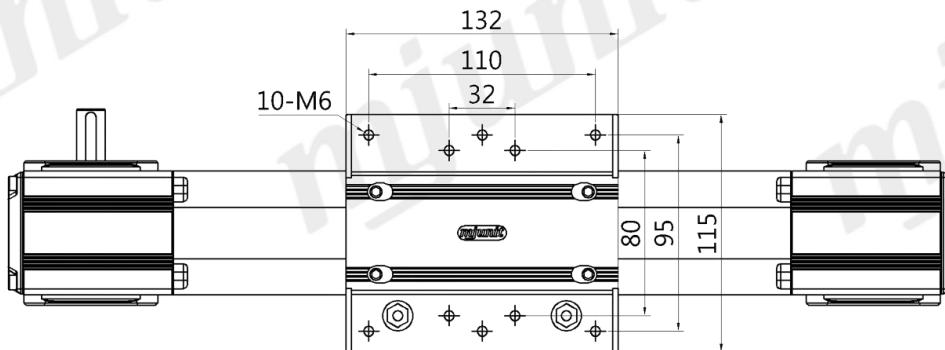
MJ60N carriage with 6pcs of bearings inside with 130mm length (Default)



MJ60N carriage with 8pcs of bearings inside with 185mm length

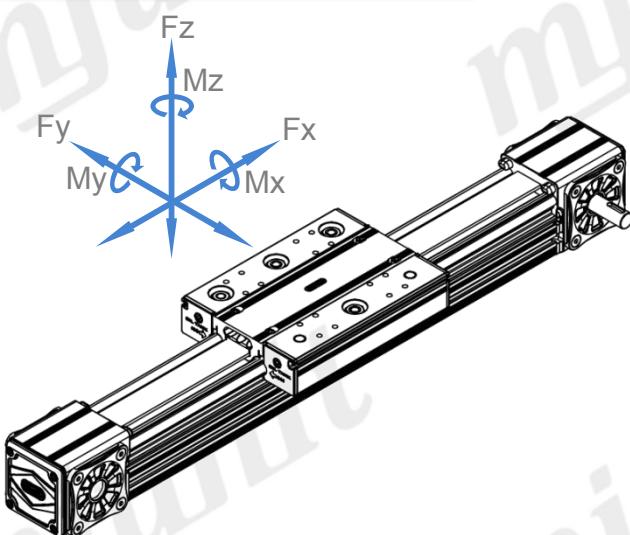


MJ60N carriage with 8pcs of bearings inside with 235mm length,
applicable for triangle bracket



MJ60N carriage(4pcs of bearings inside with 132mm length, not recommended)

MJ70 Linear Rail



Profile : 70mmx67.5mm (2.76inx2.66in)

Material : Anodized Aluminum Housing with a Chrome Steel GCr15 shaft

Carriage Size : 200*146mm

Profile Length : ≤6000mm

Straightness/Distortion: ≤0.1mm/300mm

Positional Repeatability/M: 0.1mm

Applicable Torque: 4~30N.m

Velocity : 0~1500mm/s

Rail Type	MJ70	MJ70
Ralated Load	Static	Dynamic
Fx(N)	600	500
Fy(N)	300	230
Fz(N)	400	300
Mx(N.m)	30	24
My(N.m)	20	18
Mz(N.m)	50	45

Loading Capacity : 1000N

Linear Travel Per Shaft Revolution: 176mm

Toothed Belt: PU + Steel Cord, HTD8M, Width:30mm

Pulley Teeth: 22 Teeth

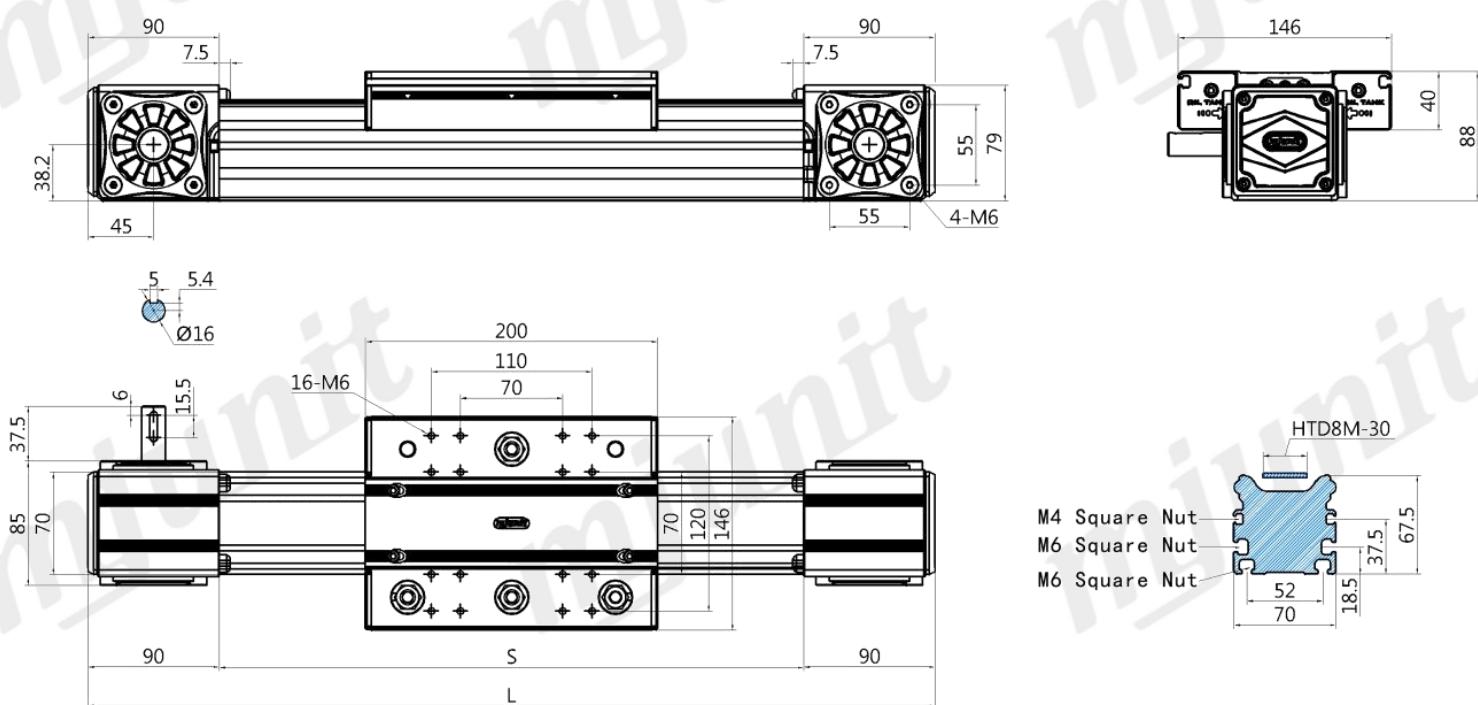
Gear-Teeth Type : HTD8M

Basic Weight (Carriage+end caps): 5500g

Additional Weight/100mm profile: 520g

Applicable Motor Type (Without Motor): Nema 34/Nema 42/750w/1000w Servo Motor

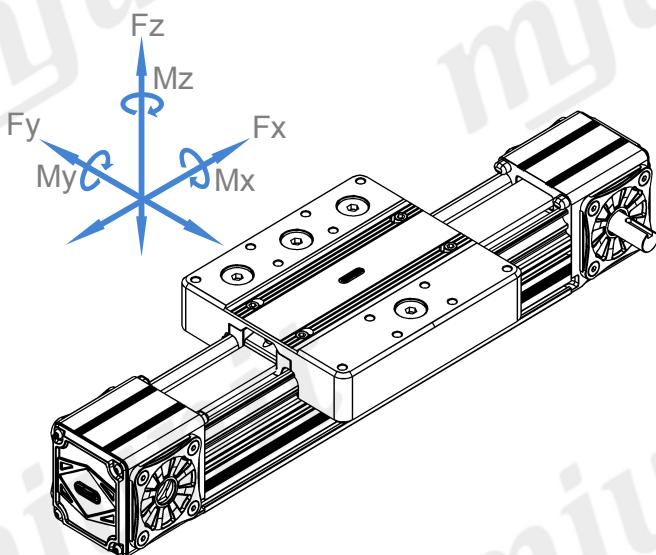
MJ70 Dimension



L=S+180mm

Applicable Total Length (L) =Stroke Length+450mm

MJ80 Linear Rail



Rail Type	MJ80	MJ80
Ralated Load	Static	Dynamic
Fx(N)	1000	800
Fy(N)	400	300
Fz(N)	600	400
Mx(N.m)	40	32
My(N.m)	32	24
Mz(N.m)	80	60

Profile : 80mmx80mm (3.15inx3.15in)

Material : Anodized Aluminum Housing with a Chrome Steel GCr15 shaft

Carriage Size : 200*182mm

Profile Length : ≤6000mm

Straightness/Distortion: ≤0.1mm/300mm

Positional Repeatability/M: 0.1mm

Applicable Torque: 4~30N.m

Velocity : 0~1500mm/s

Loading Capacity : 1000N

Linear Travel Per Shaft Revolution: 176mm

Toothed Belt: PU + Steel Cord, HTD8M, Width:35mm

Pulley Teeth: 22 Teeth

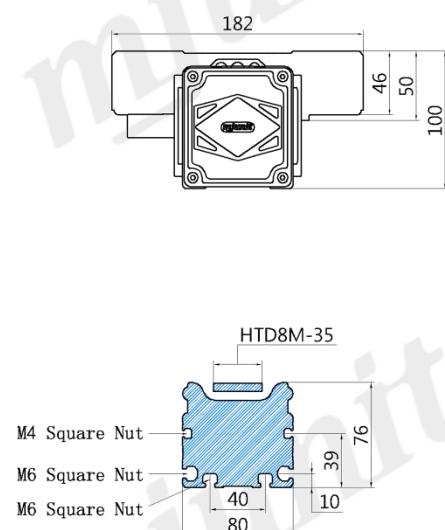
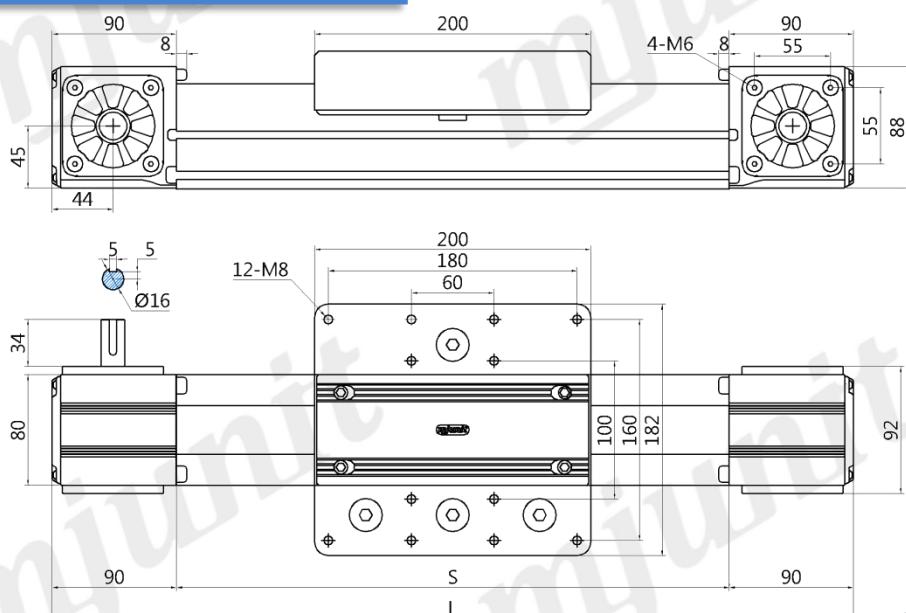
Gear-Teeth Type : HTD8M

Basic Weight (Carriage+end caps): 6000g

Additional Weight/100mm profile: 700g

Applicable Motor Type (Without Motor): Nema 34/Nema 42/750w/1000w Servo Motor

MJ80 Dimension

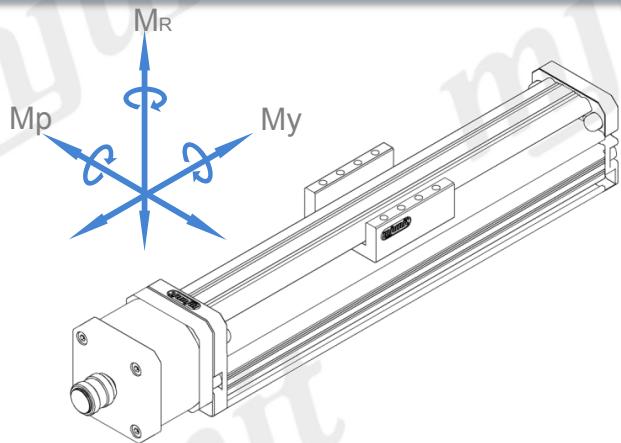


L=S+180mm

Applicable Total Length (L) =Stroke Length+450mm



MJ42 Screw Drive Linear Rail



Profile : 42mmx48mm (1.65inx1.89in)

Material : Anodized Aluminum Housing+linear guide rail+ nema 17 step motor

Carriage Size : 45*41mm

Available stroke length: 50mm,100mm,150mm, 200mm, 250mm, 300mm

Straightness/Distortion: $\leq 0.1\text{mm}/300\text{mm}$

Positional Repeatability/M: 0.02mm

Velocity : 0~20mm/s

Rail Type	MJ42 Rail
Static Load C(kN)	3.7
Dynamic Load C(kN)	5.8
MR (N.m)	38
MP (N.m)	36
MY (N.m)	36

Loading Capacity : 100N

Linear Guideway: MGN12H

Screw: Diameter 8mm

Linear Travel Per Shaft Revolution: 4/2mm

Nema 17 Step Motor Data:

Torque: 0.3N.m

Step Angle: 1.8

Current: 0.8A

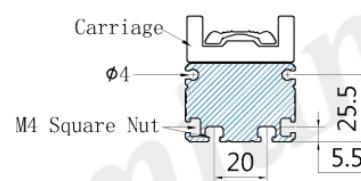
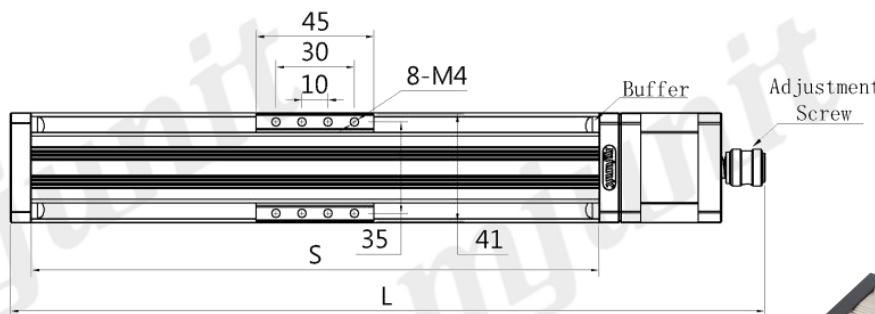
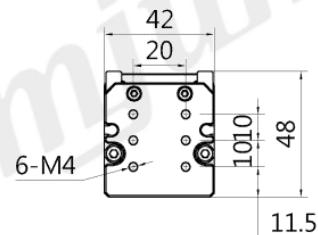
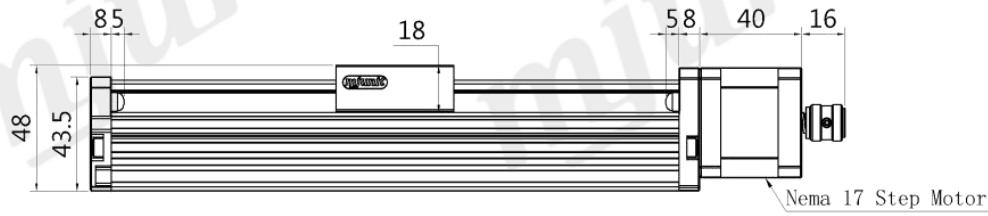
Resistance: 7.5 ohms

Inductance: 8.1 mH

Basic Weight (50mm stroke length): 740g

Additional Weight/+50mm stroke: 100g

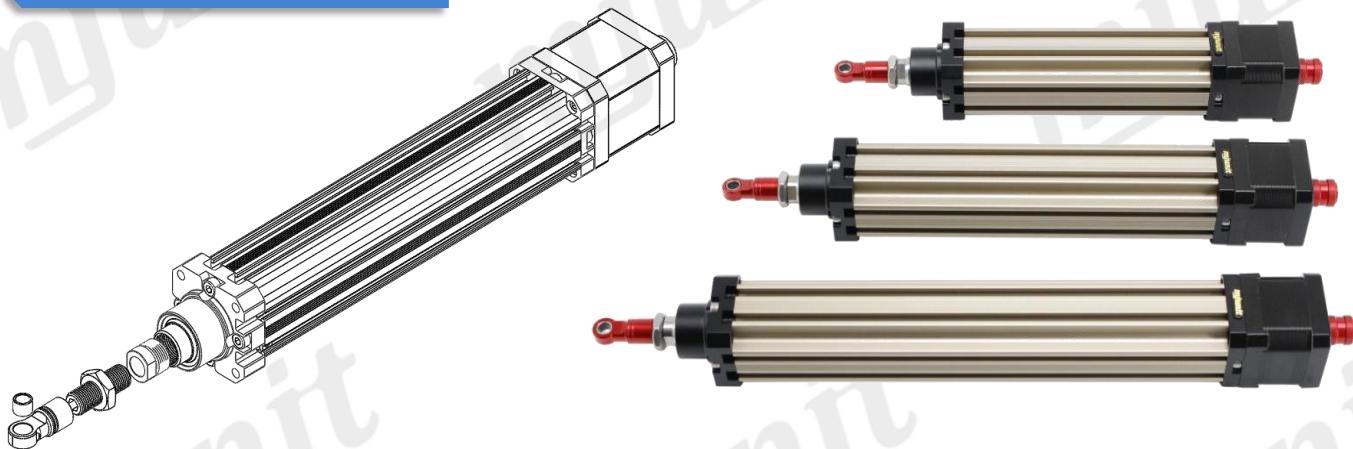
MJ42 Screw Drive Linear Rail Dimension



$L=S+72\text{mm}$

Applicable Total Length (L) =Stroke Length+140mm,
available stroke length: 50mm,100mm,150mm,
200mm, 250mm, 300mm

MJ42 Electric Cylinder



Profile : 42mmx42mm (1.65inx1.65in)

Material : Anodized Aluminum Housing

Available stroke length: 50mm,100mm,150mm, 200mm, 250mm, 300mm

Straightness/Distortion: $\leq 0.1\text{mm}/300\text{mm}$

Positional Repeatability/M: 0.02mm

Velocity : 0~20mm/s

Loading Capacity : 100N

Screw: Diameter 8mm

Linear Travel Per Shaft Revolution: 4mm

Nema 17 Step

Motor Data:

Torque: 0.3N.m

Step Angle: 1.8

Current: 0.8A

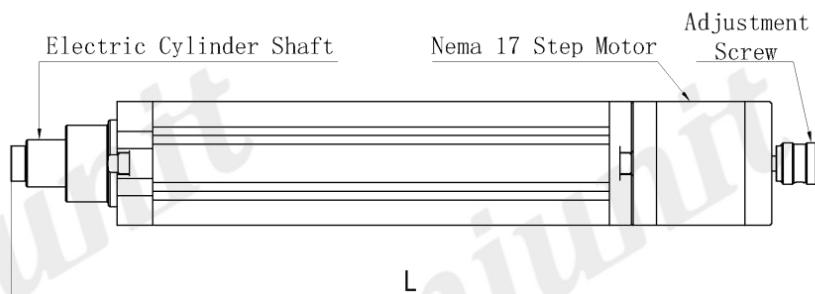
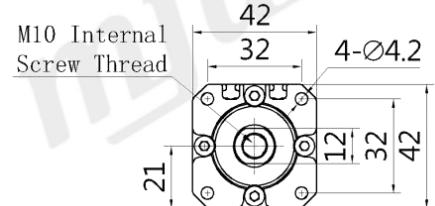
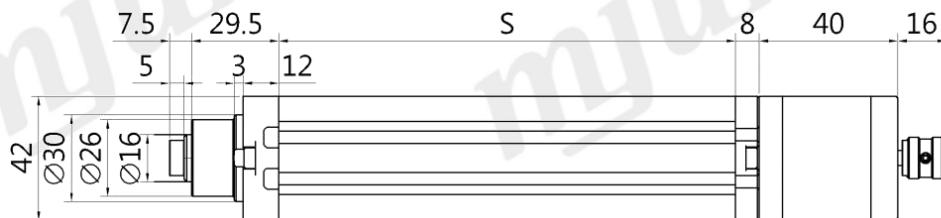
Resistance: 7.5 ohms

Inductance: 8.1 mH

Basic Weight (50mm stroke length): 650g

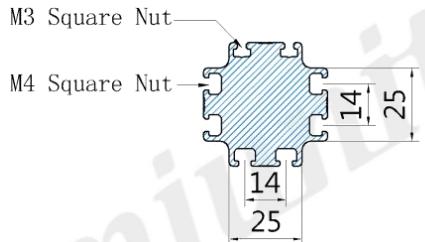
Additional Weight/+50mm stroke: 120g

MJ42 Electric Cylinder Dimension

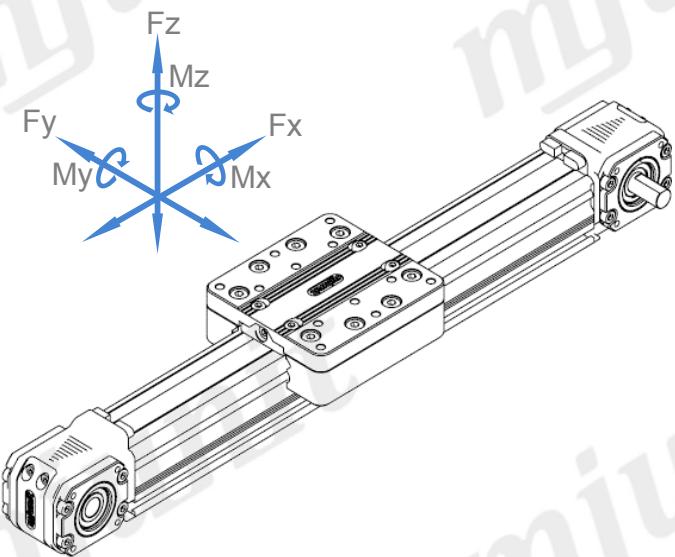


$$L = S + 102\text{mm}$$

Applicable Total Length (L) =Stroke Length+135mm,
available stroke length: 50mm,100mm,150mm, 200mm, 250mm, 300mm



MJ30 Linear Rail



Profile : 30mmx30mm (1.18inx1.18in)

Material : Anodized Aluminum Housing with a Chrome Steel GCr15 shaft

Carriage Size : 70*65mm

Profile Length : ≤4000mm

Straightness/Distortion: ≤0.1mm/300mm

Positional Repeatability/M: 0.1mm

Applicable Torque: 0~1N.m

Rail Type	MJ30	MJ30
Rated Load	Static	Dynamic
Fx(N)	75	50
Fy(N)	50	40
Fz(N)	75	50
Mx(N.m)	5	4
My(N.m)	4	3
Mz(N.m)	10	7

Velocity : 0~500mm/s

Loading Capacity : 10N

Linear Travel Per Shaft Revolution: 80mm

Toothed Belt: PU + Steel Cord, S2M, Width:12mm

Pulley Teeth: 40 Teeth

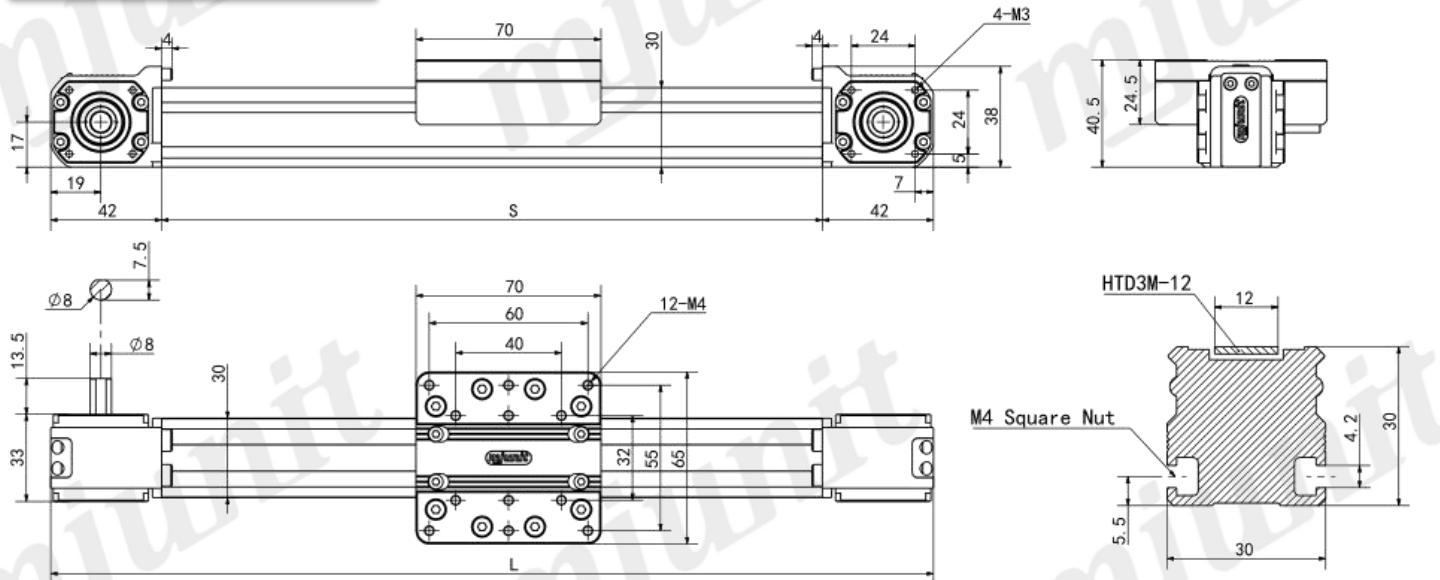
Gear-Teeth Type : S2M

Basic Weight (Carriage+end caps): 220g

Additional Weight/100mm profile: 110g

Applicable Motor Type (Without Motor): Nema 17/100w Servo Motor

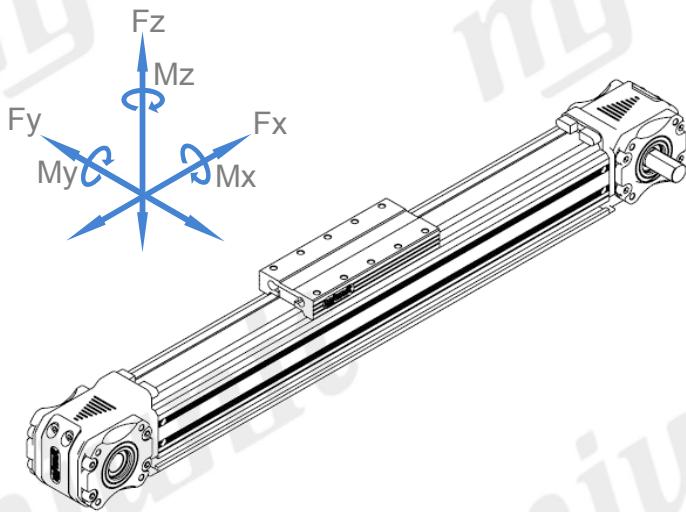
MJ30 Dimension



L=S+84mm

Applicable Total Length (L) =Stroke Length+200mm

MJ30X Linear Rail



Profile : 30mmx30mm (1.18inx1.18in)

Material : Anodized Aluminum Housing with a Chrome Steel GCr15 shaft

Carriage Size : 70*30mm

Profile Length : ≤1500mm

Straightness/Distortion: ≤0.1mm/300mm

Positional Repeatability/M: 0.1mm

Applicable Torque: 0~1N.m

Velocity : 0~500mm/s

Rail Type	MJ30X	MJ30X
Ralated Load	Static	Dynamic
Fx(N)	75	50
Fy(N)	50	40
Fz(N)	75	50
Mx(N.m)	5	4
My(N.m)	4	3
Mz(N.m)	10	7

Loading Capacity : 10N

Linear Travel Per Shaft Revolution: 80mm

Toothed Belt: PU + Steel Cord, S2M,Width:12mm

Pulley Teeth : 40 Teeth

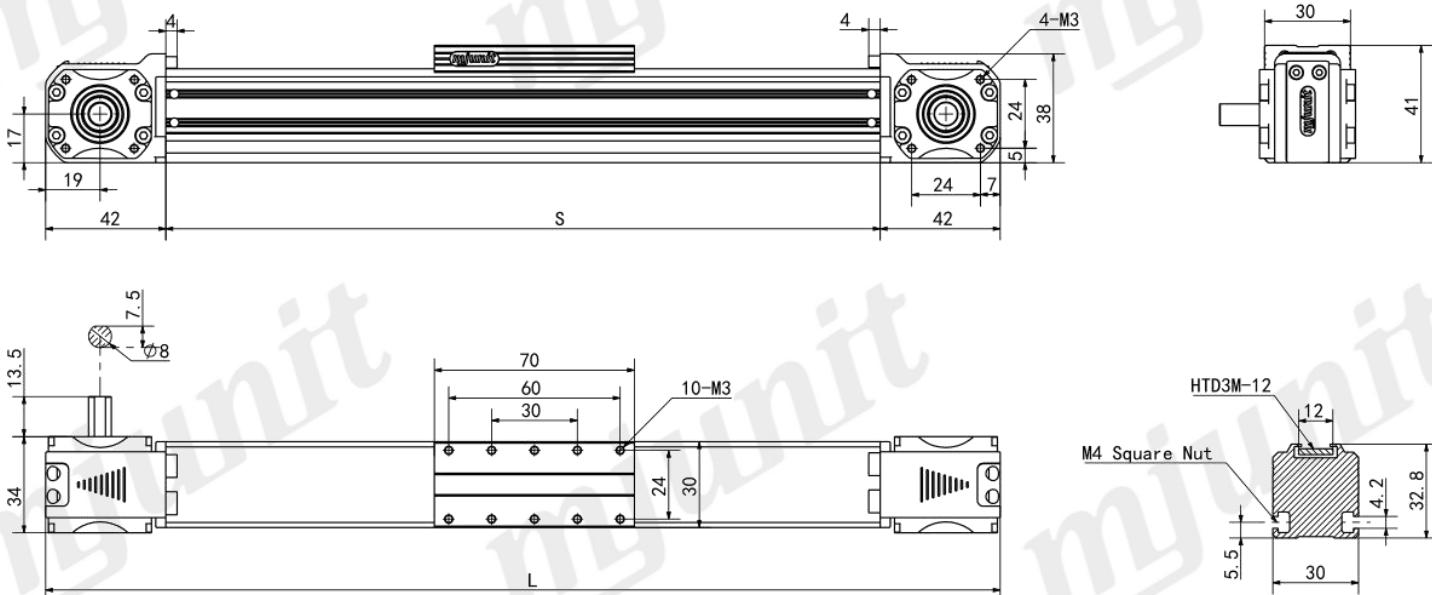
Gear-Teeth Type : S2M

Basic Weight (Carriage+end caps): 400g

Additional Weight/100mm profile: 125g

Applicable Motor Type (Without Motor): Nema 17/100w Servo Motor

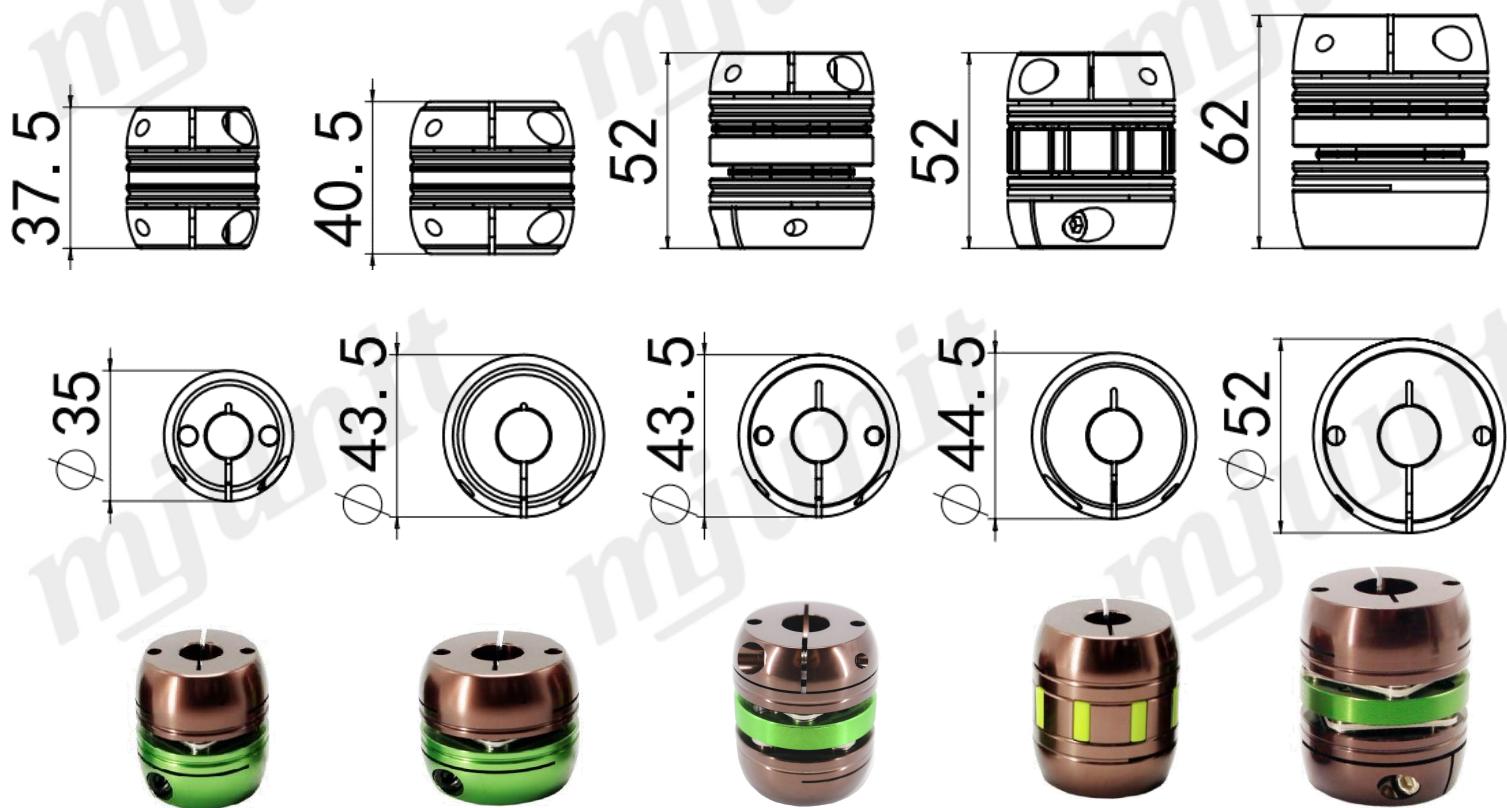
MJ30X Dimension



$$L=S+84\text{mm}$$

Applicable Total Length (L) =Stroke Length+200mm

MJUNIT Coupling



MJUNIT35

MJUNIT43

MJUNIT44

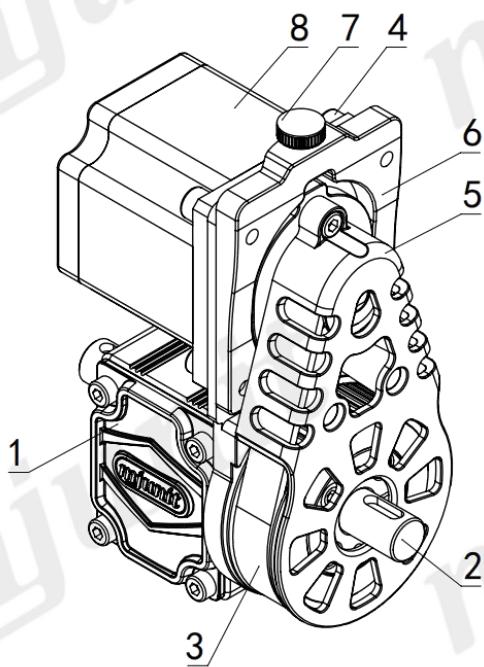
MJUNIT45

MJUNIT52

Type	Dimension (mm)	Hole Size (mm)	Applicable Torque (N.m)	Revolutions Per Minute (r/min)	Weight(g)	Applicable Rails
MJUNIT35	35x37.5	5~14	≤4	≤5000	80	MJ40, MJ45, MJ50
MJUNIT43	43.5x40.5	8~20	≤12	≤5000	120	MJ50, MJ60
MJUNIT44	43.5x52	8~16	≤12	≤5000	160	MJ50, MJ60
MJUNIT45	44.5x52	12~22	≤20	≤5000	150	MJ50, MJ60, MJ70, MJ80
MJUNIT52	52x62	12~22	≤20	≤5000	290	MJ60, MJ70, M80



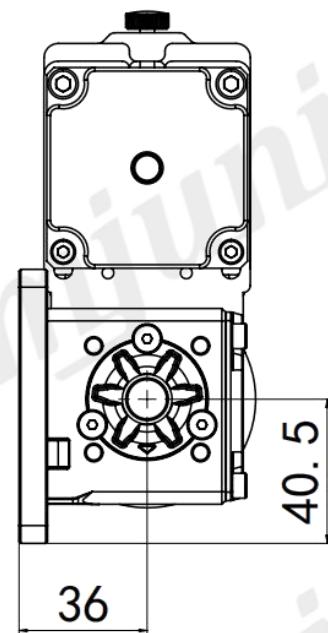
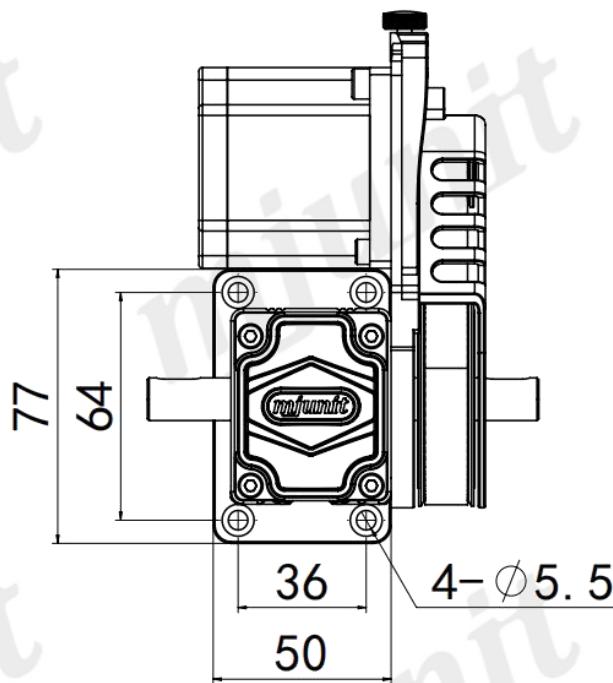
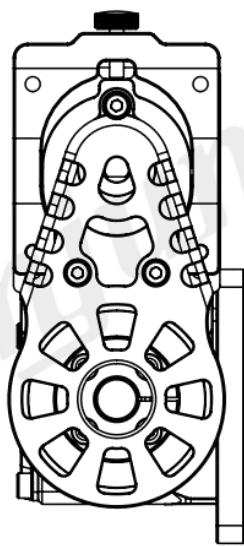
MJUNIT Middle Timing Pulley Reducer (1:3)



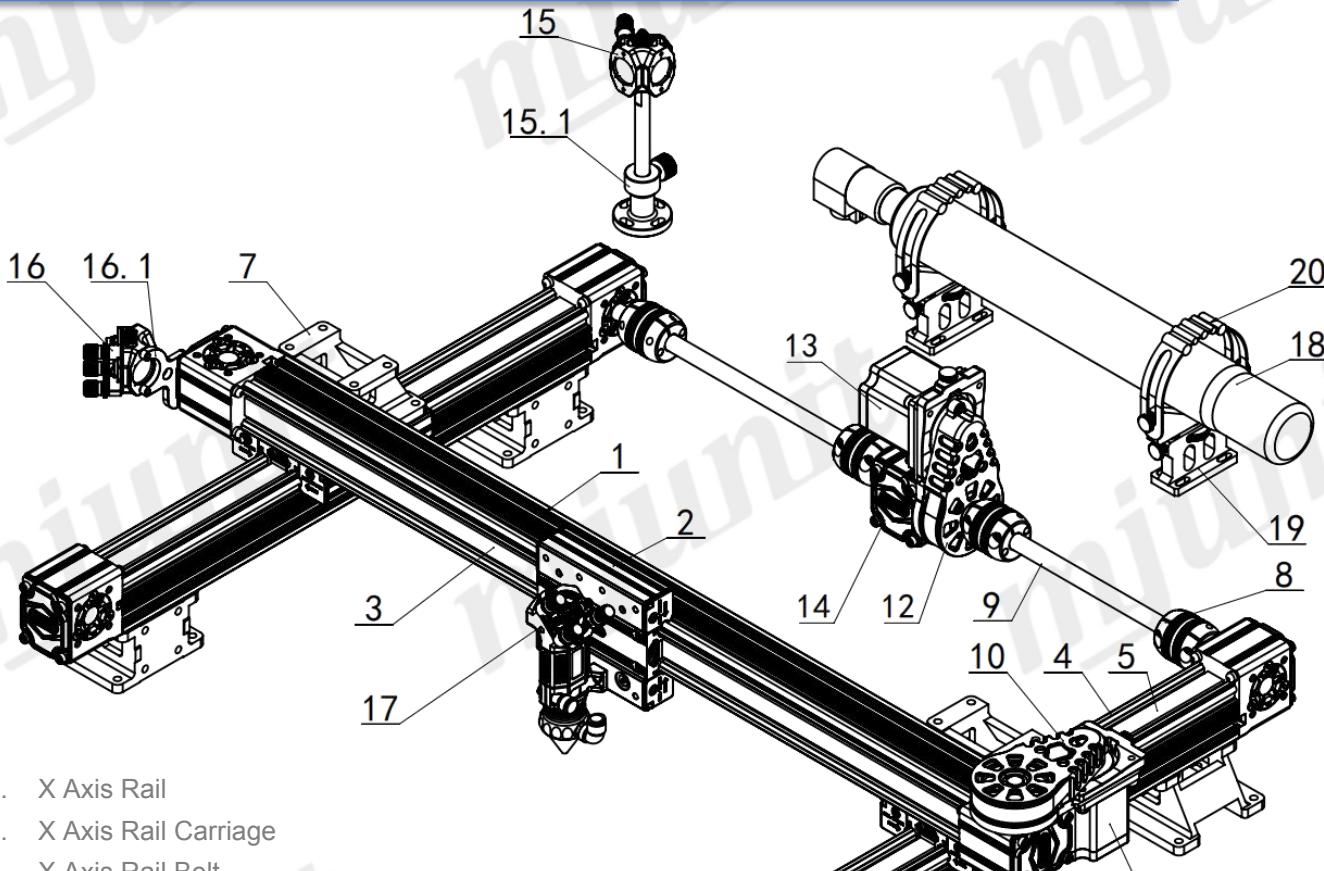
- Support Base Bracket
 - Shaft Diameter 12mm
 - Timing Pulley Reducer 1:3
 - Motor Connection Bracket
 - Cover
 - Tension Adjustment Bracket
 - Tension Adjustment Screw
 - Nema 23 Motor (Exclude)
- Only Applicable for Nema 23 Motor
- Big Pulley 60 Teeth,
Small Pulley 20 Teeth,
Circled Belt HTD3M-249.
- Width: 12mm



Dimension



Linear Rail Unit for One Head Laser Machine (Large Working Size)



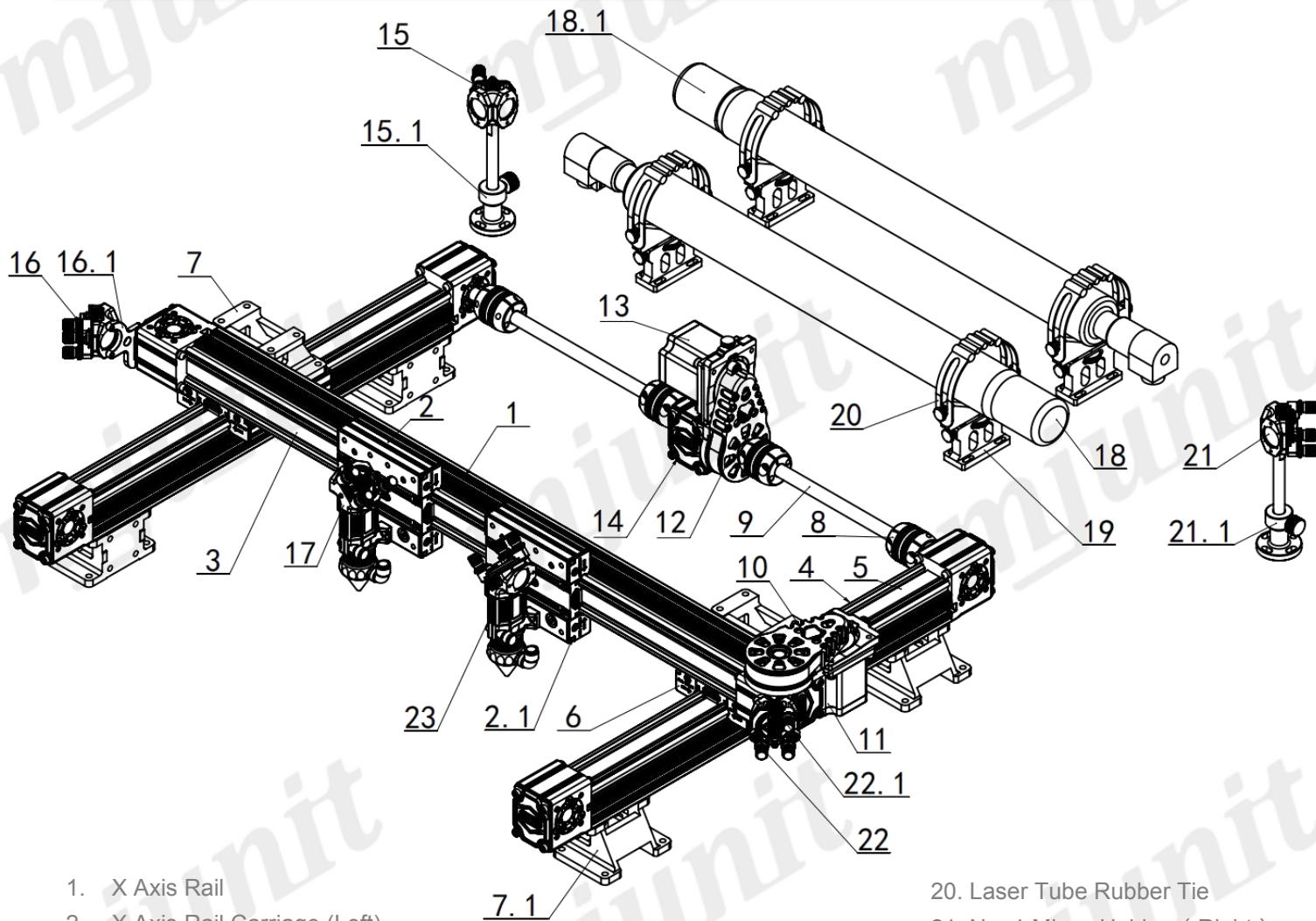
1. X Axis Rail
2. X Axis Rail Carriage
3. X Axis Rail Belt
4. Y Axis Rail
5. Y Axis Rail Belt
6. Y Axis Rail Carriage
7. XY connection 47mm Mounting Bracket
- 7.1 47mm Mounting Bracket
8. 12-12 Coupling
9. 12mm Coupling Rod
10. X Axis Timing Pulley Reducer(1:3/1:2.5)
11. X Axis Motor (Exclude)
12. Y Axis Timing Pulley Reducer(1:3/1:2.5)
13. Y Axis Motor (Exclude)
14. Support Base Bracket
15. No. 1 Mirror Holder (Left)
- 15.1. No. 1 Mirror Holder Bracket



16. No. 2 Mirror Holder (Left)
- 16.1 No. 2 Mirror Holder Bracket
17. Laser Head (Left)
18. Laser Tube (Exclude)
19. Laser Tube Bracket
20. Laser Tube Rubber Tie



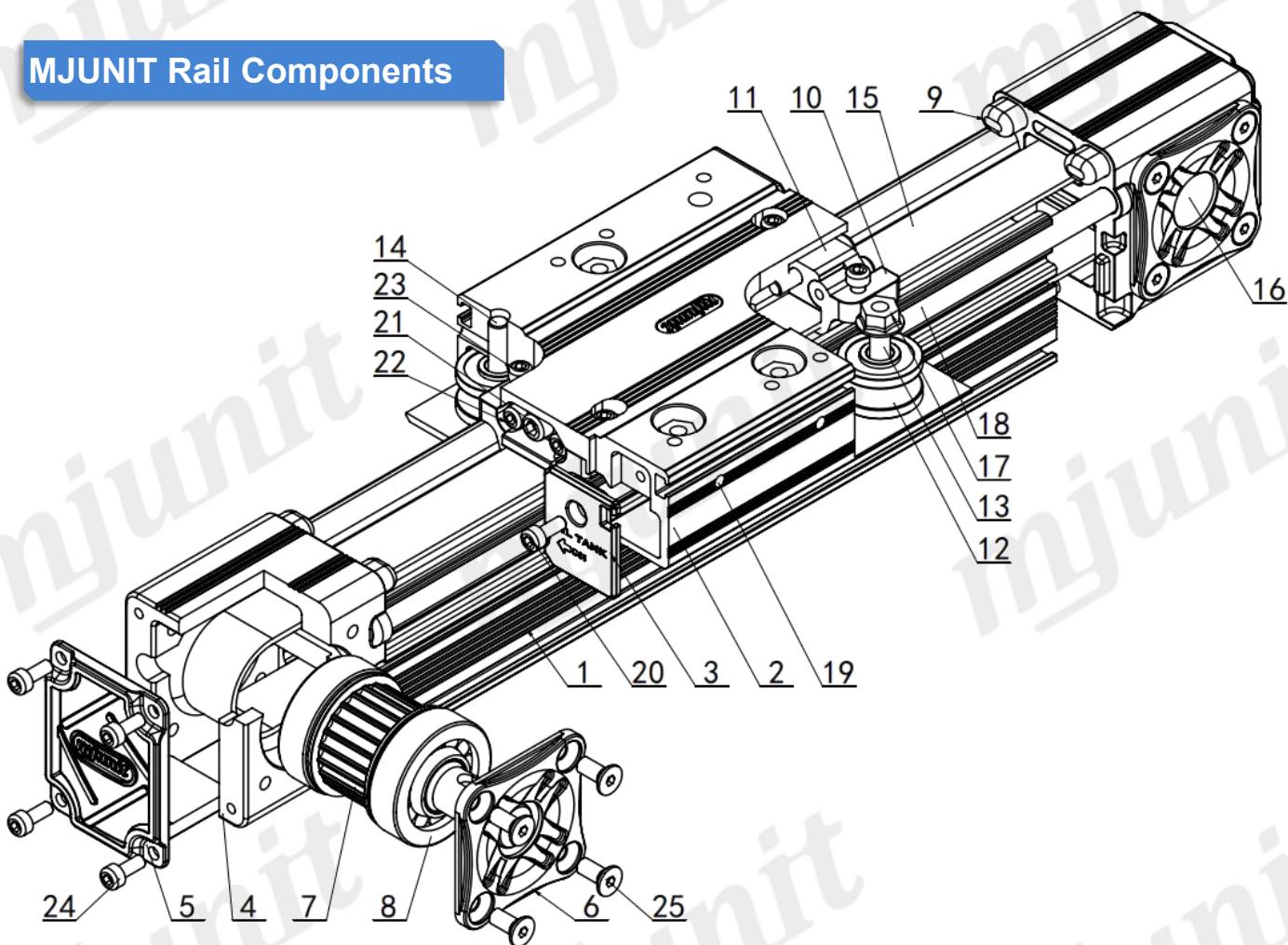
Linear Rail Unit for Dual Head Laser Machine (Large Working Size)



- 1. X Axis Rail
- 2. X Axis Rail Carriage (Left)
- 2.1 X Axis Rail Carriage (Right)
- 3. X Axis Rail Belt
- 4. Y Axis Rail
- 5. Y Axis Rail Belt
- 6. Y Axis Rail Carriage
- 7. XY connection 47mm Mounting Bracket
- 7.1 47mm Mounting Bracket
- 8. 12-12 Coupling
- 9. 12mm Coupling Rod
- 10. X Axis Timing Pulley Reducer(1:3/1:2.5)
- 11. X Axis Motor (Exclude)
- 12. Y Axis Timing Pulley Reducer(1:3/1:2.5)
- 13. Y Axis Motor (Exclude)
- 14. Support Base Bracket
- 15. No. 1 Mirror Holder (Left)
- 15.1. No. 1 Mirror Holder Bracket (Left)
- 16. No. 2 Mirror Holder (Left)
- 16.1 No. 2 Mirror Holder Bracket (Left)
- 17. Laser Head (Left)
- 18. Laser Tube (Left, Exclude)
- 18.1 Laser Tube (Right, Exclude)
- 19. Laser Tube Bracket
- 20. Laser Tube Rubber Tie
- 21. No. 1 Mirror Holder (Right)
- 21.1 No. 1 Mirror Holder Bracket (Right)
- 22. No. 2 Mirror Holder (Right)
- 22.1 No. 2 Mirror Holder Bracket (Right)
- 23. Laser Head (Right)



MJUNIT Rail Components



- | | | |
|--|-------------------------------|-----------------------------------|
| 1. Rail profile | 10. Belt Clip A | 19. Eccentric Shaft Tighten Screw |
| 2. Carriage | 11. Belt Clip B | 20. Carriage Oil Tank Screw |
| 3. Carriage Oil Tank | 12. Carriage Bearing | 21. Belt Tighten Screw |
| 4. End Cap | 13. Eccentric Shaft Screw | 22. Belt Location Screw |
| 5. End Cap Cover | 14. Concentric Shaft Screw | 23. Belt Clip Tighten Screw |
| 6. End Cap Cover for Pulley with Bearing | 15. Belt | 24. End Cap Screw |
| 7. Action Pulley | 16. Drive Pulley | 25. Bearing Cover Screw |
| 8. Pulley Bearing | 17. Eccentric Shaft Screw Nut | |
| 9. Buffer | 18. Carriage Slide Shaft | |



MJUNIT Linear Rail Maintenance and Adjustment Manual

•Belt Tighten Adjustment

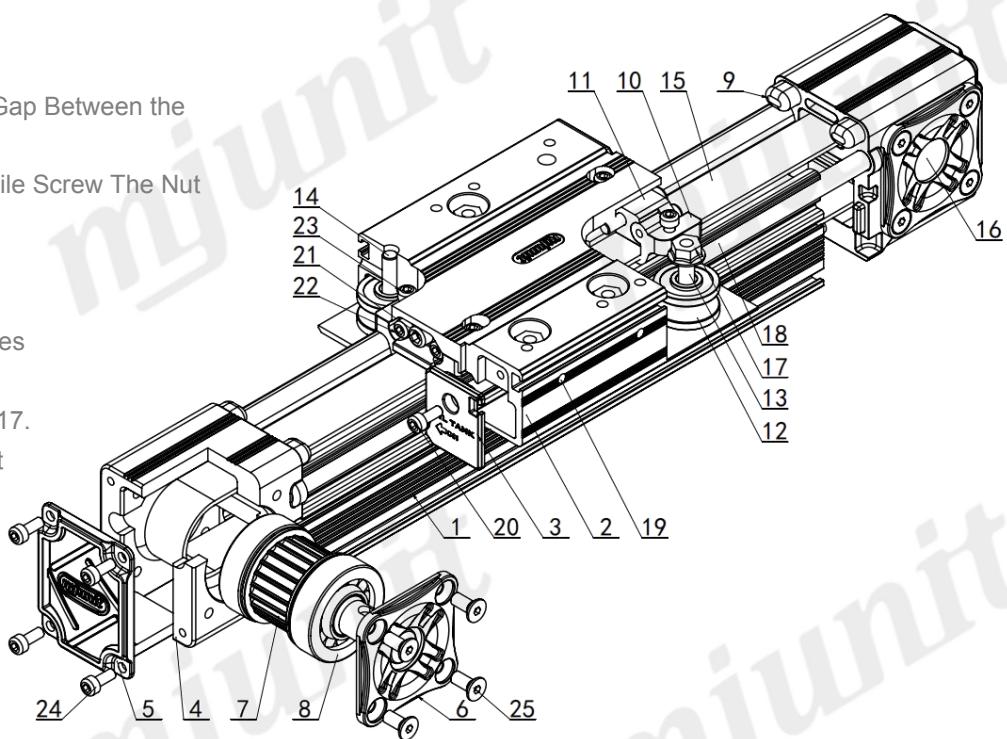
1. Unscrew 23
2. Adjust Screw 21 to Tighten the Belt
3. Tighten the Screw 23
(If the Belt is still loose, take the Belt Clip out, and readjust the the Belt Clip to the Postion, Repeat the Step 2 & 3)

•Carriage Tighten Adjustment

1. Unscrew19
2. Unscrew17
3. Adjust the Screw 13 , to tighten the Gap Between the Carriage and the Rail.
4. Keep the Screw 13 Postion, Meanwhile Screw The Nut 17.
- 5.Tighten the Screw 19.

•Replace Carriage Bearings

1. Take out of the Belt Clip at the 2 Sides of Carriage
2. Lossen Locknut 19, Take out of nut 17.
3. Disassemble 3pcs of Eccentric Shaft Screw 13
4. Take the Carriage out, Replace the Bearings.
5. Install the Carriage to Rail.
6. Put Eccentric Shaft Screw 13 in Position
7. Readjust the Gap Between the Carriage and Rail, Tighten the Screw 19.
9. Put Belt Clip in Position, Readjust Belt Tighteness, Tighten the Screw 23.



•Change Belt, Pulley, Shaft Direction

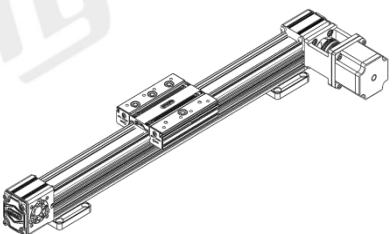
1. Remove Two Sides Belt Clip.
2. Remove End Cap Cover 5.
3. Take the Belt out (if Change Belt)
4. Remove the Cover for End Cap Pulley with Bearing 6.
5. Take the Pulley with Bearings out (if Change the Pulley with Bearing, or Change Shaft Direction)
6. Reverse the Step 5, 4, 3, 2, 1.
7. Readjust the Belt Tighteness, Tighten the Screw 23.



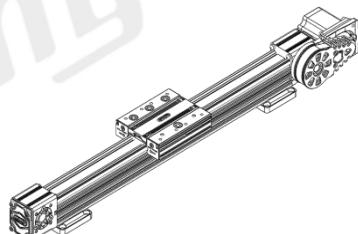
•Maintenance

1. MJUNIT Linear Rail has the Self Lubrication and Self Cleaning System, Please Put Lubricate oil of 5-10 drops to Carriage Slide Shaft at Each Side, with Oil Type 5W-40 Recommended, for Every One~Two weeks time regularly.
2. Move the Carriage Several Times on Sliding Shaft to Make the Oil Enter into The Oil Tank inside of Carriage, Which is Used for Lubricatiing the Slide Shaft and Anti-Corrosion Purpose.
3. Cleaning the Belt and Pulley from Time to Time. Remove the Dust and Various Objects attached to Rail .

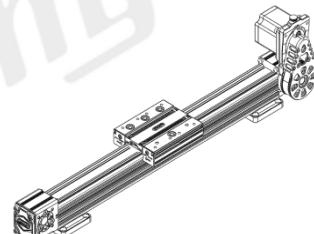
MJUNIT Rail Structure



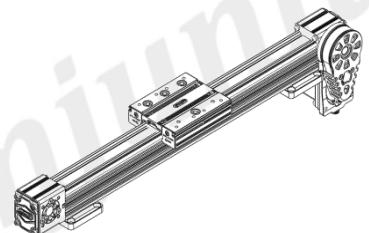
One Rail with Direct Mount



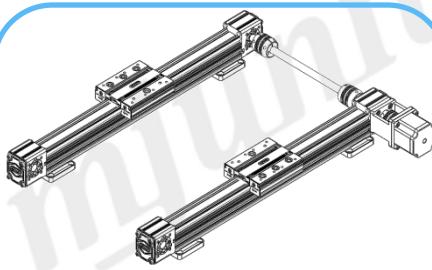
One Rail with Reducer Motor at Side



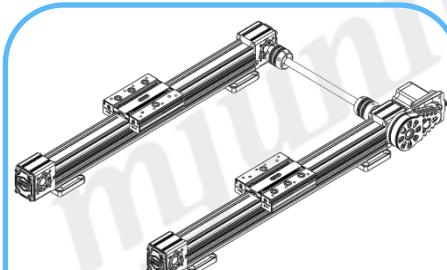
One Rail with Reducer Motor on Top



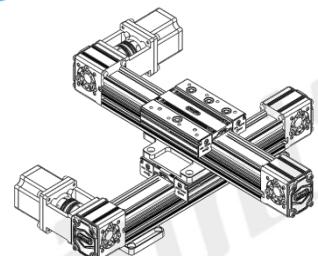
One Rail with Reducer Motor at Bottom



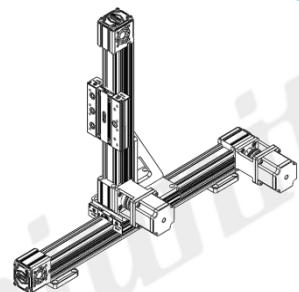
X Axis with 2 Rails (Direct Mount)



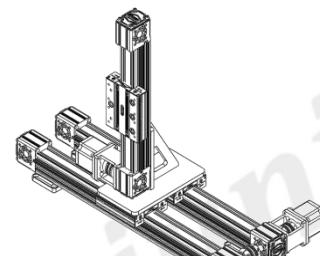
X Axis with 2 Rails (Reducer)



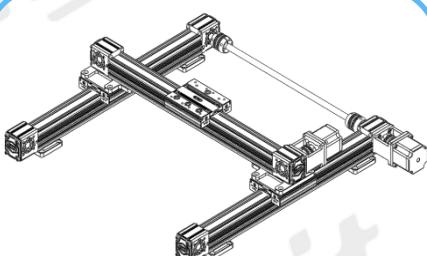
xy 2 Rails



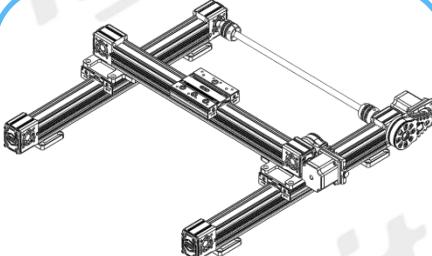
xz 2 Rails



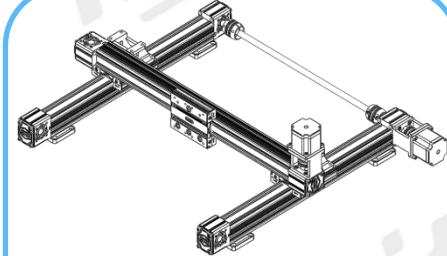
xz 3 Rails



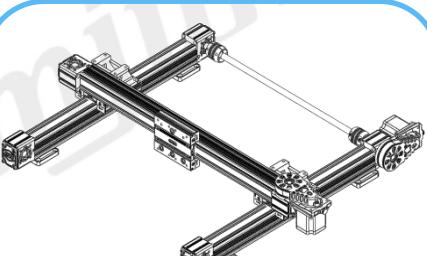
xy 3 Rails with Carriage Flat (Direct Mount)



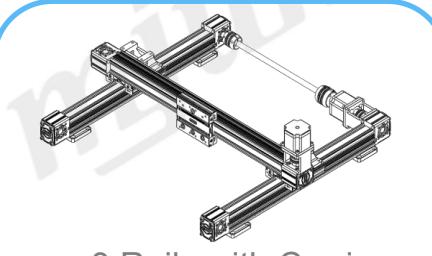
xy 3 Rails with Carriage Flat (Reducer)



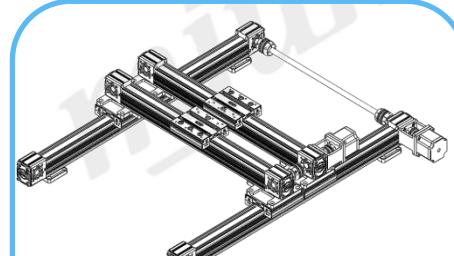
xy 3 Rails with Carriage Vertical (Direct Mount)



xy 3 Rails with Carriage Vertical (Reducer)

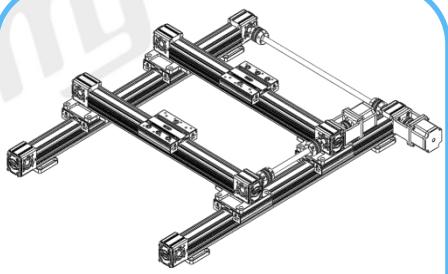


xy 3 Rails with Carriage Vertical (Direct Mount, Y Axis Motor Double Shafts)

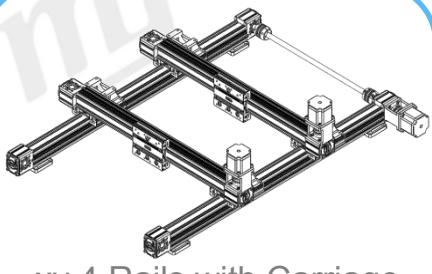


xy 4 Rails

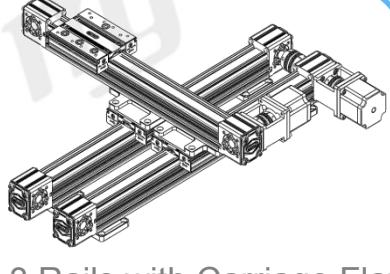
MJUNIT Rail Structure



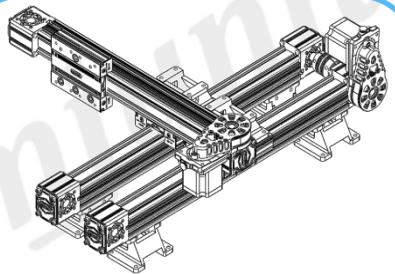
xy 4 Rails



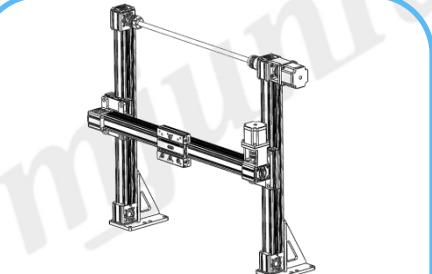
xy 4 Rails with Carriage Vertical



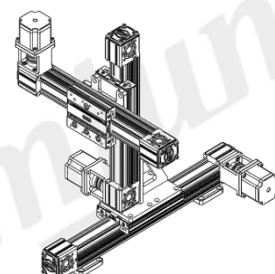
xy 3 Rails with Carriage Flat
(Cantilever, Direct Mount)



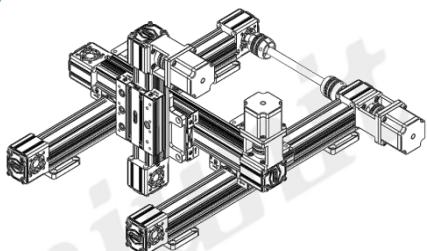
xy 3 Rails with Carriage
Vertical (Cantilever, Reducer)



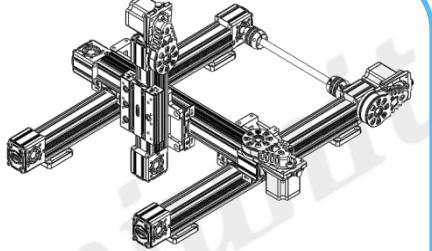
xz 3 Rails with Carriage
Flat (Direct Mount)



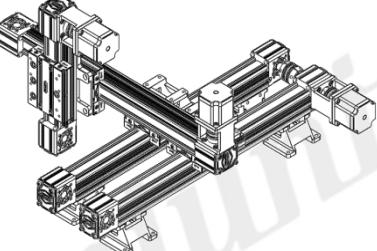
xyz 3 Rails



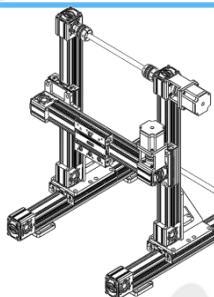
xyz 4 Rails (Direct Mount)



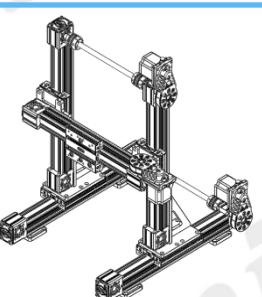
xyz 4 Rails (Reducer)



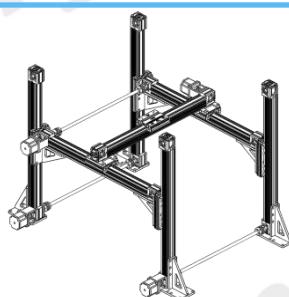
xyz 4 Rails (Cantilever)



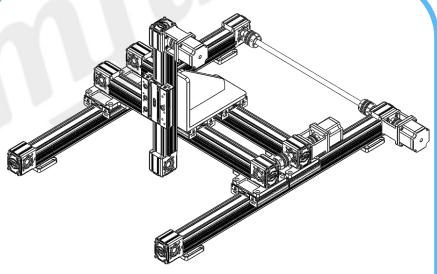
xyz 5 Rails (Direct Mount)



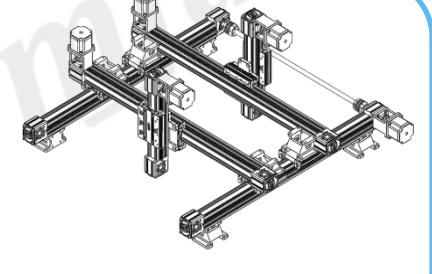
xyz 5 Rails (Reducer)



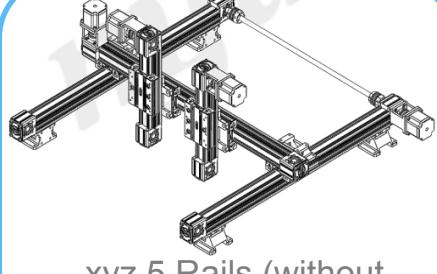
xyz 7 Rails



xyz 5 Rails (1pc of z Rail)



xyz 6 Rails



xyz 5 Rails (without
Triangle Bracket)



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