

New lineup for MEGA TORQUE series

PRIMESTARS

MegaTorque

High-Accuracy Positioning Timing Belt

NEW

MegaTorque EX

High Torque Timing Belt

NEW

MegaTorque GII

MITSUBOSHI
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MegaTorque EX
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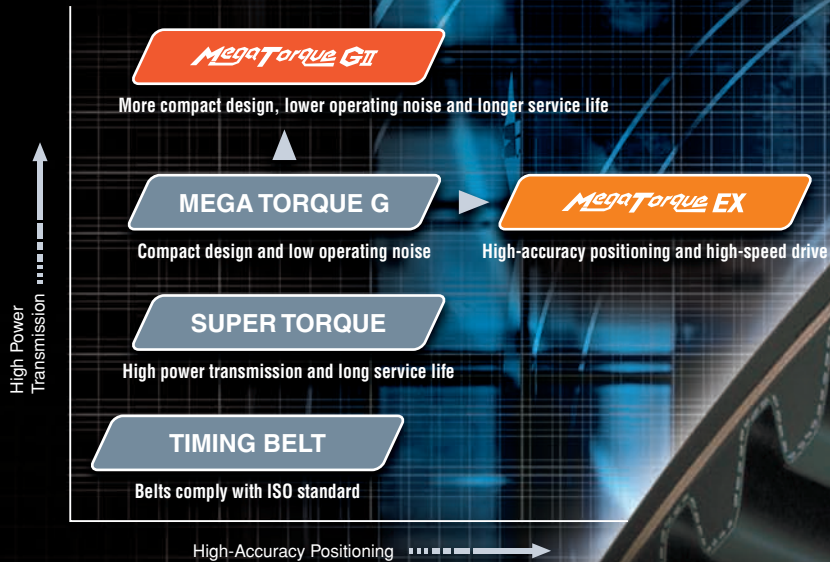
MITSUBOSHI
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MegaTorque GII
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MegaTorque GII



MITSUBOSHI



CONCEPT



Newly-Evolved MEGA TORQUE!!!

MegaTorque EX / GII

MegaTorque EX

- ▶ To improve positioning accuracy
- ▶ Utilization with quick acceleration, slowdown and high-speed drive
- ▶ To improve efficiency of system by increasing the weight of conveying goods
- ▶ To reduce the cost of using ball screws and linear motors

Application ● Semiconductors / LC manufacturing facilities ● Industrial robots ● Actuators etc.

MegaTorque GII

- ▶ To narrow the width of belts and pulleys
- ▶ To reduce the operating noise
- ▶ To reduce the frequency of maintenance

Application ● Injection molding machines ● Machine tools ● Press machines etc.

Product lineup

Belt type	SUPER TORQUE	MEGA TORQUE G	MegaTorque EX	MegaTorque GII
(MT)S3M	○		○	
(MT)S5M	○	○	○	
(MT)S8M	○	○		○
(MT)S14M	○	○		○

MegaTorque EX

● High Jumping Torque

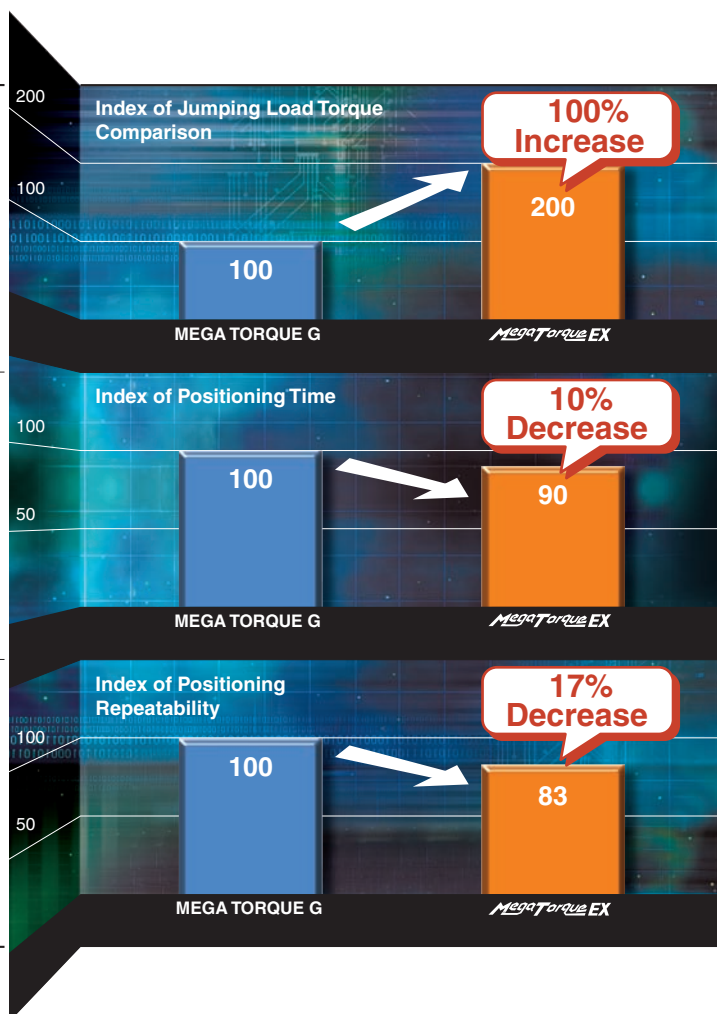
Adopting an ultrahigh-modulus special cord, it has a high jumping torque and prevents tooth jumping at quick acceleration and slowdown.

● High-damping Property

Adopting an ultrahigh-modulus special cord, it has a high-damping torque and reduces the convergence time of belt vibration. Thus, also reducing positioning time.

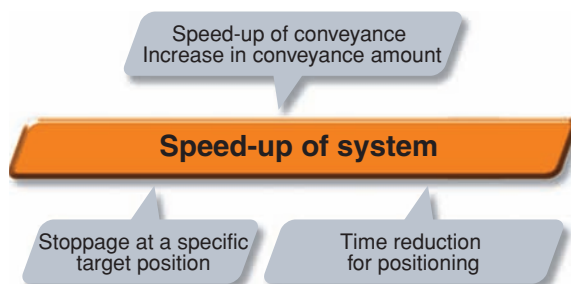
● High Positioning Repeatability

With its small belt elongation and use of an anti backlash special pulley, positioning accuracy and positioning repeatability are significantly improved.
※ A dedicated pulley required.

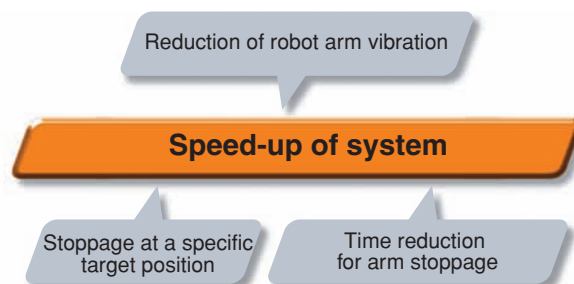


THE BEST APPLICATION AND EFFECTS

Linear drive application



Robot arm



Construction Material

Rubber	High hardness synthetic rubber
Cord	Ultrahigh-modulus special material
Fabric	Advanced abrasion-resistant nylon fabric
Pulley tooth profile	Anti backlash special pulley profile

Cord:
Ultrahigh-modulus
special material

Rubber:
High hardness
synthetic rubber

Fabric:
Advanced
abrasion-resistant
nylon

MegaTorque GII

● High Power Transmission Capacity

New material for cord reduces belt elongation, thus allowing high-load transmission. Since the power transmission capacity increases 50% compared to MEGA TORQUE G, it allows a compact design.

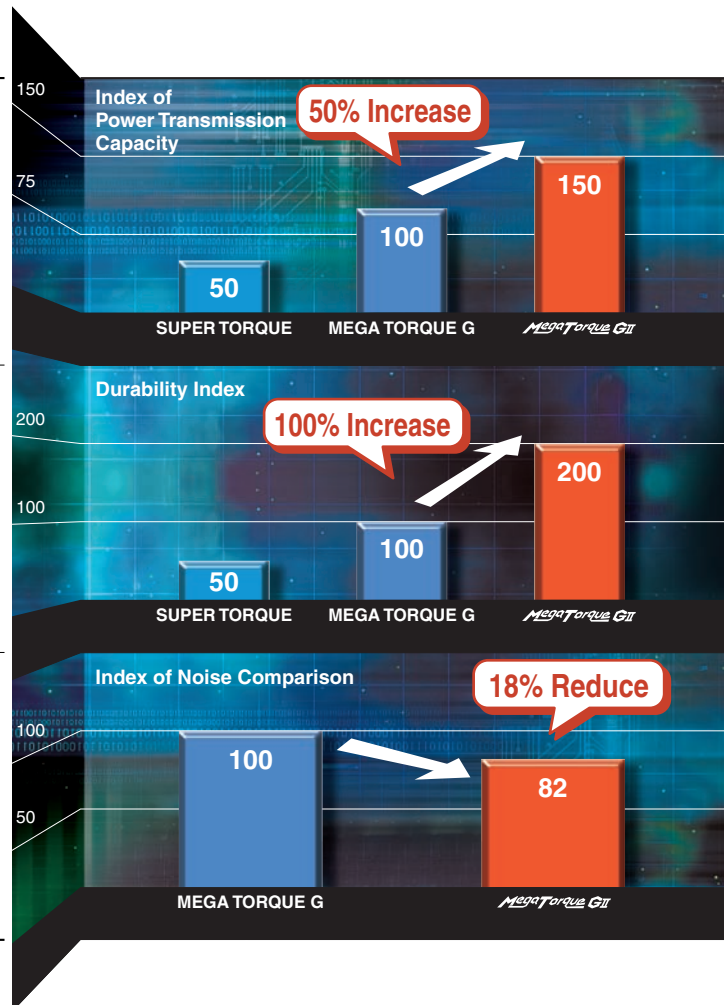
● Long Service Life

By using abrasion resistant and low friction processed fabric, durability under high-load condition has been improved. Therefore, use of **MegaTorque GII**, which has twice as much durability as MEGA TORQUE G, reduces the replacement frequency.

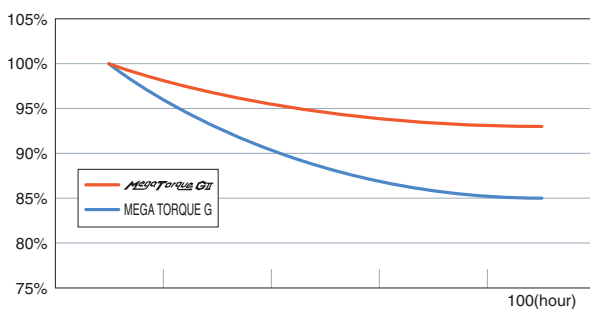
● Low Operating Noise

It reduces the operating noise about 18% when tested under the same condition by narrowing the belt width, using a special pulley and increasing the power transmission capacity.
※ A dedicated pulley required.

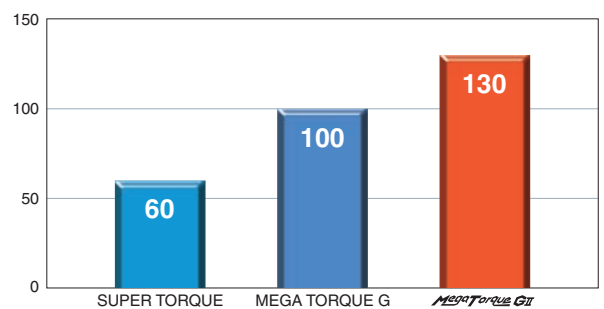
DATA



Index of Decrease of Tension



Index of Jumping Torque



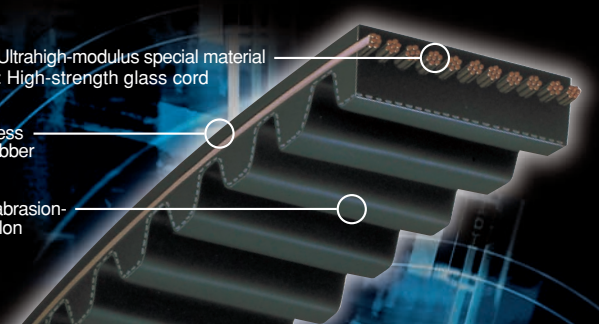
Construction Material

Rubber	High hardness synthetic rubber
Cord	MTS8M Ultrahigh-modulus special material MTS14M High-strength glass cord
Fabric	Advanced abrasion-resistant nylon fabric
Pulley tooth profile	Special pulley profile

Cord:
MTS 8M : Ultrahigh-modulus special material
MTS 14M : High-strength glass cord

Rubber:
High hardness synthetic rubber

Fabric:
Advanced abrasion-resistant nylon



MegaTorque EX

Product code

150 MTS5M 500 EX

Nominal
width
(15mm)

Belt type

Nominal
length
(500mm)

EX
Spec.

Pulley code

EX 24 MTS5M 0250 -A

EX
Spec.

Number
of teeth

Belt type

Nominal
pulley width

Pulley type

* Pulley is customized (order-made).

MTS3M (3mm pitch)

Product code	Number of teeth
MTS3M 240	80
MTS3M 270	90
MTS3M 300	100
MTS3M 330	110
MTS3M 360	120
MTS3M 390	130
MTS3M 420	140
MTS3M 450	150
MTS3M 480	160

Product code	Number of teeth
MTS3M 510	170
MTS3M 540	180
MTS3M 570	190
MTS3M 600	200
MTS3M 660	220
MTS3M 720	240
MTS3M 780	260
MTS3M 1035	345
MTS3M 1521	507

MTS5M (5mm pitch)

Product code	Number of teeth
MTS5M 300	60
MTS5M 325	65
MTS5M 350	70
MTS5M 400	80
MTS5M 435	87
MTS5M 450	90
MTS5M 500	100
MTS5M 525	105
MTS5M 550	110
MTS5M 575	115
MTS5M 600	120

Product code	Number of teeth
MTS5M 650	130
MTS5M 690	138
MTS5M 700	140
MTS5M 750	150
MTS5M 800	160
MTS5M 850	170
MTS5M 900	180
MTS5M 950	190
MTS5M 1000	200
MTS5M 1780	356
MTS5M 3835	767

MegaTorque GII

Product code

600 MTS8M 1000 G2

Nominal
width
(60mm)

Belt type

Nominal
length
(1000mm)

G2
Spec.

Pulley code

G2 24 MTS8M 0600 -A

G2
Spec.

Number
of teeth

Belt type

Nominal
pulley width

Pulley type

* Pulley is customized (order-made).

MTS8M (8mm pitch)

Product code	Number of teeth
MTS8M 632	79
MTS8M 720	90
MTS8M 800	100
MTS8M 848	106
MTS8M 896	112
MTS8M 912	114
MTS8M 920	115
MTS8M 944	118
MTS8M 952	119
MTS8M 984	123
MTS8M 1000	125
MTS8M 1056	132
MTS8M 1080	135
MTS8M 1120	140
MTS8M 1128	141
MTS8M 1136	142
MTS8M 1160	145
MTS8M 1184	148
MTS8M 1200	150
MTS8M 1216	152
MTS8M 1224	153
MTS8M 1248	156
MTS8M 1256	157
MTS8M 1280	160
MTS8M 1296	162
MTS8M 1304	163
MTS8M 1320	165
MTS8M 1360	170
MTS8M 1384	173
MTS8M 1400	175
MTS8M 1424	178
MTS8M 1440	180
MTS8M 1480	185
MTS8M 1488	186
MTS8M 1520	190
MTS8M 1552	194
MTS8M 1600	200

Product code	Number of teeth
MTS8M 1640	205
MTS8M 1648	206
MTS8M 1680	210
MTS8M 1696	212
MTS8M 1728	216
MTS8M 1760	220
MTS8M 1776	222
MTS8M 1800	225
MTS8M 1816	227
MTS8M 1832	229
MTS8M 1880	235
MTS8M 1912	239
MTS8M 1960	245
MTS8M 2000	250
MTS8M 2040	255
MTS8M 2048	256
MTS8M 2064	258
MTS8M 2104	263
MTS8M 2120	265
MTS8M 2160	270
MTS8M 2240	280
MTS8M 2272	284
MTS8M 2304	288
MTS8M 2376	297
MTS8M 2400	300
MTS8M 2496	312
MTS8M 2600	325
MTS8M 2800	350
MTS8M 2920	365
MTS8M 2944	368
MTS8M 3048	381
MTS8M 3200	400
MTS8M 3272	409
MTS8M 3440	430
MTS8M 3680	460
MTS8M 3904	488
MTS8M 4400	550

MTS14M (14mm pitch)

Product code	Number of teeth
MTS14M 1008	72
MTS14M 1120	80
MTS14M 1190	85
MTS14M 1246	89
MTS14M 1288	92
MTS14M 1400	100
MTS14M 1470	105
MTS14M 1540	110
MTS14M 1610	115
MTS14M 1652	118
MTS14M 1708	122
MTS14M 1750	125
MTS14M 1778	127
MTS14M 1806	129
MTS14M 1890	135
MTS14M 1932	138
MTS14M 2002	143

Product code	Number of teeth
MTS14M 2100	150
MTS14M 2198	157
MTS14M 2240	160
MTS14M 2310	165
MTS14M 2380	170
MTS14M 2450	175
MTS14M 2506	179
MTS14M 2590	185
MTS14M 2660	190
MTS14M 2800	200
MTS14M 3150	225
MTS14M 3500	250
MTS14M 3556	254
MTS14M 3850	275
MTS14M 4004	286
MTS14M 4508	322
MTS14M 5012	358

※ *MegaTorque EX* and *MegaTorque GII* require a dedicated pulley NOT compatible with other pulley designs.

※When making a belt selection, contact our company.



Safety Precautions

Please read all the warnings!

- Please take all necessary precautions when using our products. Also, please review relevant product catalog and design documents, etc.

Use



Danger

- If you expect that a belt will fail and idle, free-run, or stop the system, thus causing a fatal or severe accident, please provide an extra safety device.
- Do not use a belt as a lifting or towing tool.



Warning

- If you expect that static electricity will come from the power transmission belt system, thus causing fire or malfunction of the controller, set a neutralization apparatus in the system.



Caution

- Do not use a belt as an insulator. Contact us for information on insulation properties, which vary in belt type.
- For a belt that touches food directly, use one that complies with the applicable food hygiene law of your country.
- Do not modify a belt, or its quality and performance could deteriorate.

Function & Performance



Caution

- Do not use a belt beyond its capacity or for an application other than that specified by the catalog, design documents, etc. This can cause premature failure of the belt.
- If water, oil, chemical, paint, dust, etc. sticks to a belt or pulley, its power transmission could deteriorate and the belt may fail.
- A synchronous (toothed) belt makes louder noise during high-speed rotation. If this occurs, use a soundproof cover.

Storage & Transportation



Warning

- To store a heavy belt, use a suitable jig or stopper to prevent accidents such as belt toppling or tumbling.



Caution

- Use suitable equipment to carry/handle a heavy belt or pulley. Otherwise, back injury may result.
- Do not put weight on or bend a belt forcibly to carry or store it. Otherwise, it will produce defects or scratches to the belt, resulting in damage.
- Store the belt in low humidity and a temperature range of -10°C to 40°C. Do not expose belts to direct sunlight.

Mounting & Operation



Danger

- Install a safety cover over rotating components including belt and pulley. Otherwise, hair, gloves and clothing can become entangled in the belt or pulley. If a belt or pulley breaks, fragments may cause injuries.
- Take the following precautions to maintain, inspect and replace a belt.
 - 1) Turn off power and wait until the belt and pulley have stopped completely.
 - 2) Secure machinery so that it may not move during belt removal.
 - 3) Use caution : Do not unintentionally turn on power.



Caution

- Use the same type of belts or pulleys per OEM specification. Use of a different type may cause premature failure.
- Misalignment of the pulleys can damage the belt and result in flange failure. Make proper adjustments to system.
- Loosen the belt tension when changing belts. Do not force or stretch a belt over the flange. Do not use a screw driver or other sharp objects into when replacing the belt as this will result in damage.
- Apply the appropriate belt tension as specified by the relevant catalog and design documents, etc. Inappropriate tension could result in damage of the belt and shaft.
- Take the following precautions to modify the pulley in use:
 - 1) Remove burrs and maintain proper pulley angle;
 - 2) Secure accurate dimensions after modification;
 - 3) Maintain the pulley strength after modification.
- Before assembling the flange with the pulley, check for foreign materials between the pulley and flange. Fasten the flange with a caulking tool and so on. Inappropriate installation could result in the flange coming off.

Handling of Used items



Caution

- Do not burn belt, or hazardous gas could be produced.

The information contained herein is for information purposes only, and does not enlarge, amend or imply any warranty other than provided by the manufacture with the product. Any use of the product not in conformance with the manufacture's instruction must be dangerous.



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