

ISO 9001 (品質)

ISO 14001 (環境)

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TSK Products Information

Linear Motion Products

The pioneer of a linear system



**End-machining is
standardized!**

Linear Shafts LS, LPS, LSS



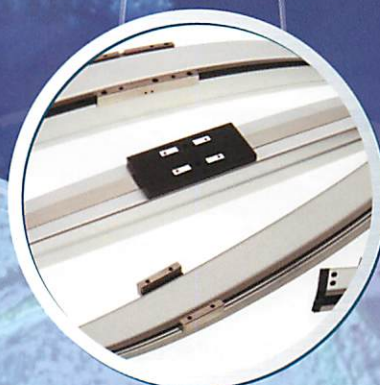
Wide Variety!

Linear Ball Bearings



New Products Release!

Reliable TSK LMB guides



**Comprehensive
linear motion Technology**

Linear Actuator



Extremely Precision!

FTBS Precision Ball Screw

Cost Effective

RBS Rolled Ball Screw

Takeuchi Precision Works Co.,Ltd.

Miniature Linear Guide LMBM Series

- The high rigidity is ensured by very precise grinding, though it is of small size and low traveling resistance.
- To cope various environment, stainless steel has been standardized for all models.
- As the result of advanced design and the focus on automated production system, the cost of TSK miniature linear guides are getting more competitive.
- Various selection such as preload and accuracy grade is available.

Standard Miniature Guide

LMBM

Very compact. Made of Stainless steel.

Size : 5, 7, 9, 12, 15, 20

※Size 5 is all LMBMS type.



Miniature Guide (Wide Type)

LMBM-W

Higher rigidity type of miniature guide

Size : 7W, 9W, 12W, 15W



Miniature Guide (Ball Retention Type)

LMBMR

Slide block is removable. More competitive pricing.

Size : 7, 9, 12 (Standard),

9W, 12W, 15W (Wide type)

Ball Retention,
Cost Advantage



Standard Linear Guide LMB Series

- The structure is made as simple as possible and contributes to the overall performance of withstanding load and moment.
- Various selection is standardized such as preload, accuracy grade and the size of block and rail.
- Unique TSK track design virtually eliminates differentials of slips or spin even in the preloaded condition, and it also allows smoother operation for longer periods.

Mid.load, Compact Rail with Short Block

HC

High rigidity at compact design.

Size : 15, 20, 25, 30, 35



Heavy load, Compact Rail with Normal Block

HC-L

Heavy load type with long slide block.

Size : 15, 20, 25, 30, 35, 45, 55



Heavy load, Standard Rail with Normal Block

HS-A, HS-T

Designed for heavy load with flanged carriage.

Size : 15, 20, 25, 30, 35, 45, 55, 65



HS-LA, HS-LT

Designed for extremely heavy load application with flanged carriage

Size : 25, 30, 35, 45, 55, 65



HS-R

Narrow design at heavy load capacity.

Size : 20, 25, 30, 35, 45, 55, 65



HS-LR

Compact design at extremely heavy load application.

Size : 25, 30, 35, 45, 55, 65



Cross Roller Slide TCR Series

- TSK cross roller slides is a compact, high accurate linear motion guide which is heat-treated and precisely ground under strict quality control.
- The needs and purposes of cross roller slide are expanding for precision equipments such as optical instruments, measuring machines and precision processing equipments

TCR-Z

Size : 1, 2, 3, 4, 6



Miniature Ground Ball Screw

- Accuracy grade C3 in accordance with JIS B1192 is standardized for all sizes.
- The compact nut design makes space saving design possible.
- The ball screw nut with the built-in wiper seals (made of resin) at both ends are standardized.
- By having the advantage of standardizing finished and unfinished shaft ends, TSK makes the shortest delivery possible.

Finished Shaft Ends
PBST



Unfinished Shaft Ends
RGPT



Unit : mm

TYPE	Outer Dia.	4	6	8	10	12	14	15	16	20
PBST	Lead	—	1 2	1 2 —	2 4 5 10	2 4 5 10 20	2 4 5	— — 10 — 20	— 4 16	— 10 20
RGPT	Lead	1	1 2	1 2 5 8	2 4 5 10	2 4 5 10 20	2 — 5	4 5 10 15 20	2 —	5 10 20

Precision Ground Ball Screw

- Accuracy grade C5 in accordance with JIS B1192 is standardized.
- Any other accuracy grades and any preload types can be selected.
- The built-in wiper brushes is equipped in the screw nut at both ends.
- By adopting preload with oversized balls and a spacer, TSK makes zero axial play possible.

Single Nut
FTBS



Double Nut
FTBSW



Unit : mm

TYPE	Outer Dia.	20	25	28	32	36	40	50
FTBS	Lead	4 5	4 5 10	6	5 6	—	—	—
FTBSW	Lead	—	—	—	10	10	10 12	10

Rolled Ball Screw

- Accuracy grade C10 in accordance with JIS B1192 is standardized.
- By standardizing and mass-producing shaft and nuts, TSK provides low prices and the shortest delivery possible.

Compact Type
RBSK

Size : O.D.14~36mm



Compact Straight Type
RBSS

Size : O.D.14~36mm



Compact Square Type
RBSC

Size : O.D.14 ~ 36mm



Compact Type
RBS

Size : O.D.10 ~ 50mm



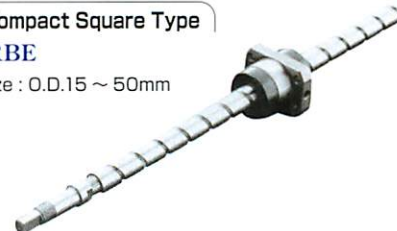
Compact Straight Type
RBH

Size : O.D.12 ~ 40mm



Compact Square Type
RBE

Size : O.D.15 ~ 50mm



Ball Screw Accessories

Ball Screw Support Unit
Flange type (Fix side)
RPUT-F



Ball Screw Support
Flange type (Support side)
RPUT-S



Ball Screw Support Unit
Square type (Fix side)
SPUT-F



Ball Screw Support Unit
Square type (Support side)
SPUT-S



Lock Nut
PLT



Lock Nut
NLT



COMPACT

LOW NOISE

STABLE

LONGER LIFE

ANTI CORROSION

- As for to six lines of balls smoothly circulate the narrow circuit to receive the load, the compact design is possible in line with the compact power supply and drive mechanism designs.
- As the retainer is made of resin material, it generates a minimum of noise during drive and gives the smoothest circulation of balls.
- Using the TSK linear Ball Bushing with TSK high precision ground shaft gives a precise, smooth linear motion to make the whole machine smaller and lighter in weight.
- As each portion of the linear bearing is made of carefully selected materials, hardened and precision machined under strict quality controls, the long life in use is guaranteed.
- Anti corrosion treatment (Electroless Nickel Plating or Raydent Treatment) is available for all type of TSK linear ball bushings.

Standard
TB



Most popular linear bearing for general use.

Standard Double type
TBW



Long type TB with the effective number of balls twice of the standard type. Minimal eccentricity to bear a large load.

Round Flange type
FTB



TB series with integrated round flange. Very easy to attach.

Round Flange Double type
FTBW



Long type FTB with the effective number of ball twice of the standard type.

Square Flange type
KTB



TB series with integrated square flange. Very easy to attach.

Square Flange Double type
KTBW



Long type KTB with the effective number of ball twice of the standard type.

Compact Flange type
CFTB



Unit type flange bearing which enables installation in a compact space, as two parallel portions of the flange are cut off.

Compact Flange Double type
CFTBW



Unit type flange bearing which consists of a compact flange and an outer case having double ball bearings. This type of flange ball bushing is highly efficient in supporting a high load and moment load.

Round Flange (Spigot-joint) type
FTBI



Unit type bearing in which a round flange is fixed near the middle of an outer case.

Round Flange (Spigot-joint) Double type
FTBIW



Unit type bearing in which a round flange is fixed near the middle of an outer case having two retainers inside.

Square Flange (Spigot-joint) type
KTBI



Unit type bearing in which a square flange is fixed near the middle of an outer case.

Square Flange (Spigot-joint) Double type
KTBIW



Unit type bearing in which a square flange is fixed near the middle of an outer case having two retainers inside.

Compact Flange (Spigot-joint) type
CFTBI



Unit type bearing in which a compact flange is fixed near the middle of an outer case.

Compact Flange (Spigot-joint) Double type
CFTBIW



Unit type bearing in which a compact flange is fixed near the middle of an outer case having two retainers inside.

Round Flange (Center Spigot-joint) Double type
FTBCW



Unit type bearing in which a round flange is fixed at the middle of an outer case having two retainers inside.

Square Flange (Center Spigot-joint) Double type
KTBCW



Unit type bearing in which a square flange is fixed at the middle of an outer case having two retainers inside.

Compact Flange (Center Spigot-joint) Double type
CFTBCW



Unit type bearing in which a compact flange is fixed at the middle of an outer case having two retainers inside.

Housing Unit type
TBH



TB series incorporated in aluminum alloy housing. Maximal efficiency in assembling with two attaching planes. The surface protected with anodic oxidation hard coating is maintaining the quality.

Housing Unit Double type
TBHW



Double linear ball bushing type incorporated in aluminum alloy housing. Effective when bear a large load. The surface protected with anodic oxidation hard coating is maintaining the quality.

Case Unit type
TBC



TB series incorporated in aluminum alloy case. They are easily mounted on the table with standard bolts. The surface protected with anodic oxidation hard coating is maintaining the quality.

Case Unit Double type
TBCW



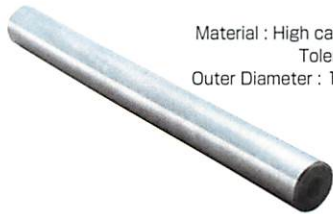
Double linear ball bushing type incorporated in aluminum alloy case. Effective when bear a large load. The surface protected with anodic oxidation hard coating is maintaining the quality.

Precision Linear Shaft

- TSK makes the shortest lead time and perfect quality assurance possible through the integrated production process.
- Over HRC60° hardness with minimum of 0.5mm hardness layer is standardized.
- Various end-machining and anti corrosion treatment are standardized.

Bearing Steel type LS

Material : High carbon steel
Tolerance : g6
Outer Diameter : 1 ~ 60mm



Stainless Steel type LSS

Material : High carbon stainless steel
Tolerance : g6
Outer Diameter : 5 ~ 60mm



Bearing Steel hollow type LPS

Material : High carbon steel
Tolerance : g6
Outer Diameter : 6 ~ 60mm



30° Trapezoidal Feed Screw

- O.Diameter : 10 ~ 40mm
- All sizes are always in stock.
- Short time delivery even with end-machining

Straight Nut STM



Flange Nut TTM



30° Trapezoidal Feed Screw Shaft TM



Compact Flange Nut KTM,KTM-OH



Case Nut CTM



Metric Coarse Screw

- O.Diameter : M6 ~ M36
- All sizes are always in stock.
- Short time delivery even with end-machining

Metric Coarse Screw Shaft M



Round Flange Nut FNM



Straight Nut SNM



Ball Slide Unit

- As high precision balls run between the track set on the fixed part and that on the moving part, with each track consisting of paralleled, four and smooth.
- As balls and shafts are made of stainless steel, and anodic oxidation coating are formed on the surfaces of aluminum base and table, anti corrosion is effectively expected.
- As setscrews for adjusting clearance are set in the side of the table, the preload can be applied to the movement of the table.



Ball Slide Unit TBS

Stroke : 13 ~ 100mm

Cam Follower

- TSK Cam Follower is a compact and mighty bearing composed of both the set-in needle bearing and stud. An outer ring contacting the surface of a counterpart rotates smoothly and can do high speed rotation, too.



Cam Follower TCF

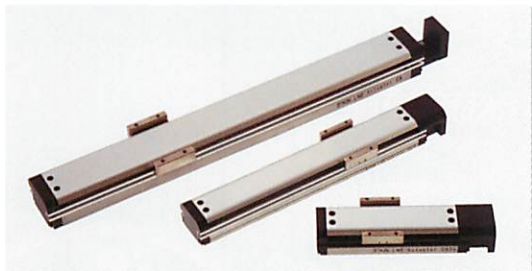
Stud Diameter : 6mm ~ 30mm
Outer Dia of Outer ring : 16mm ~ 80mm

TSK Linear Actuator Products

Compact Linear Actuator

CA Series

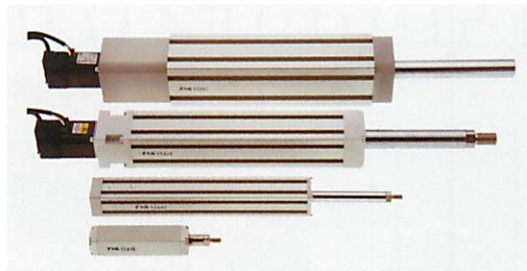
- By adopting U shaped track,higher rigidity is realized.
- The size of body is miniaturized by new design integrating the ball screw nut and LMB linear guide.This makes machine design as compact as possible.
- Rail length, stroke and accuracy grade can be designated.
- Max rail length : 940mm
- Model Number : CA26,CA33,CA46



Electrical Cylinder

ECA Series

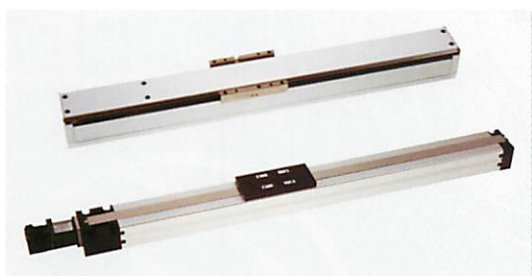
- By using precise ball screw,the performing life is much longer.
- As air supply unit such as air compressor is not necessary,the operation has been easier.
- As the number of parts is minimized,cost reduction is successfully achieved.
- Max rail length : 1,000mm
- Model Number : ECA30,40,60,80



Other Linear Actuators

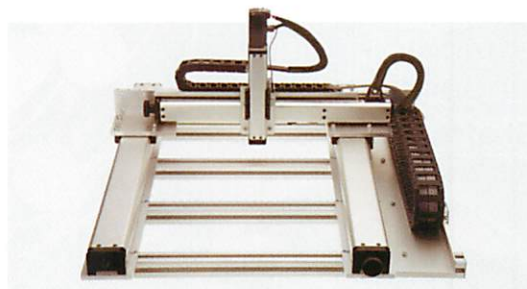
TCA Series

- With reducing the number of parts structuring,the design is more compact.
- The self lubricating plate is equipped on the sliding parts for long maintenance period.
- Model Number : TCA1212,1520



TSK Multiple Axes Stage

- TSK offers X-Y axes stage by using TSK linear actuators to fit your application needs such as speed, revolution and accuracy.



★The size of motor bracket can be designated.

- Contents of this catalog are subject to change without prior notice and any obligation on the parts of the manufacturer.
- Please feel free to inquire the specific catalogs for all products in this catalog to the following contact address.

(Manufacturer)

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URL:<http://www.tsklmb.com>

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