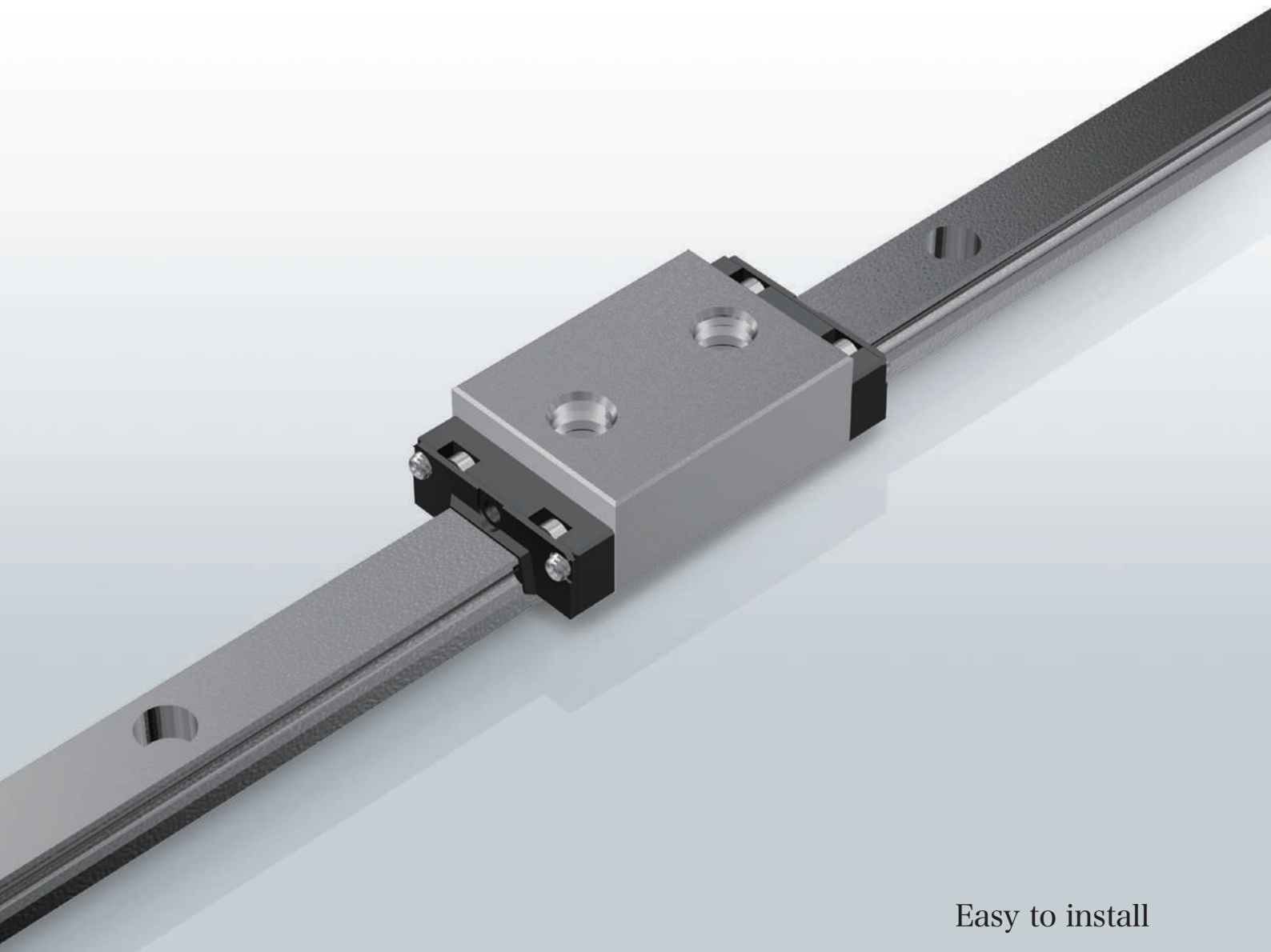
Utility Slide

UGR

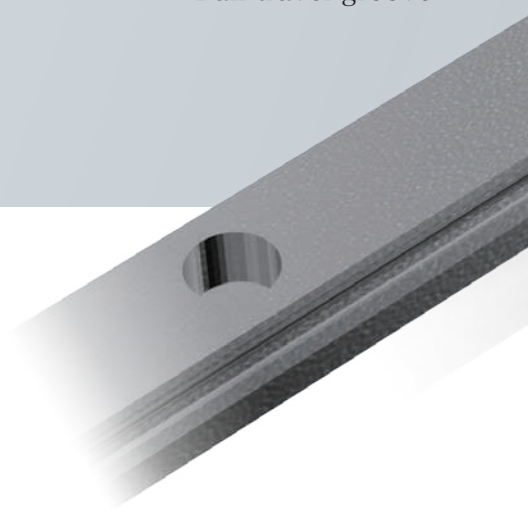


Easy to install

Compact slide rail with high permissible load

Ideal for use as the LM Guide component in residential and office fixtures

The Utility Slide UGR is
utilized in a wide variety of applications
such as residential and office fixtures.
The slim body can support large loads and
enables compact design of machines
with a high degree of design freedom.



Utility Slide

UGR

Feature 1 Stable movement

The rolling guide utilizes a ball circulation system.

Feature 2 Easy to install

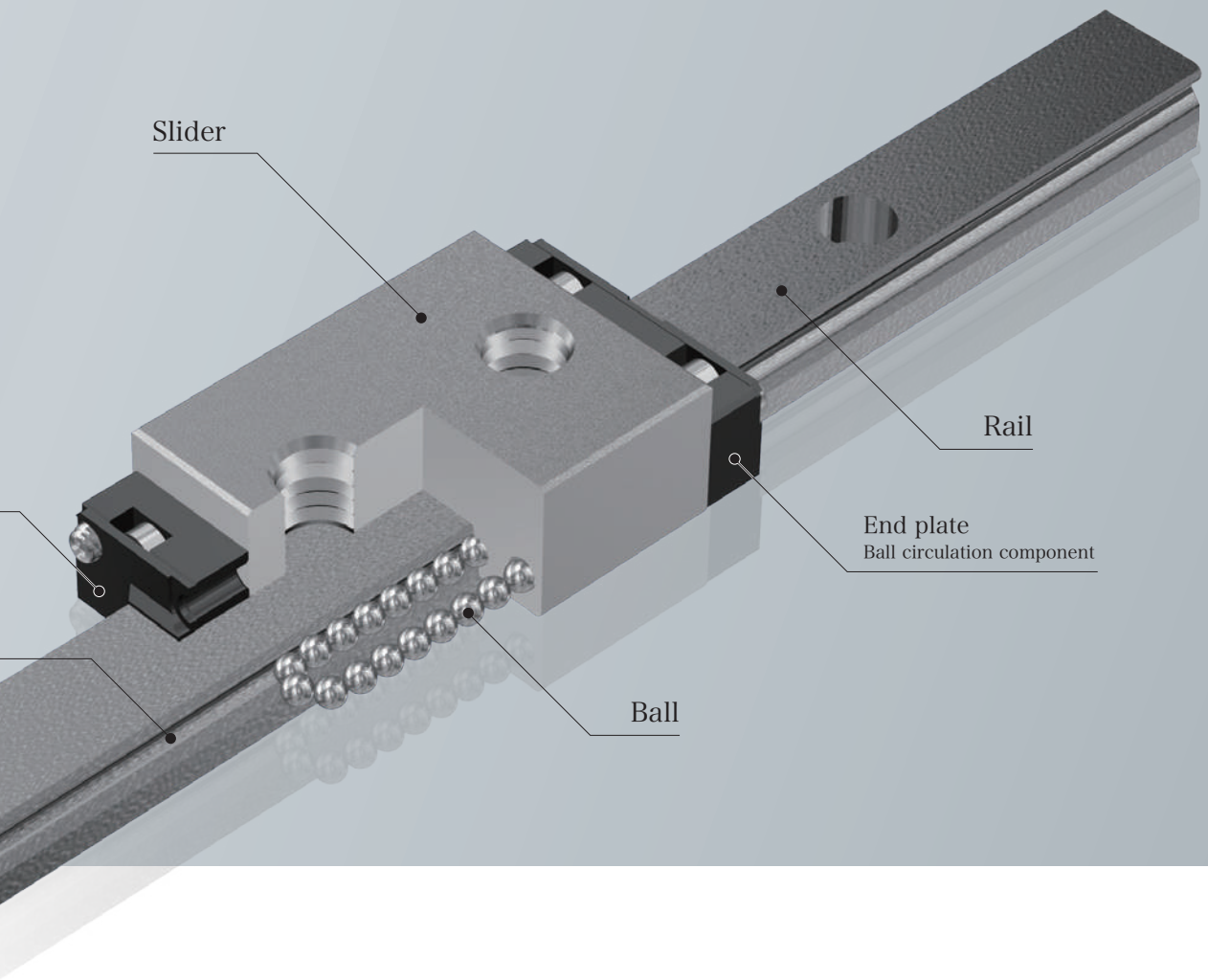
This product can be secured with bolts during installation. Mounting time is considerably reduced because clearance adjustment is unnecessary.

Feature 3 Compact and accommodates high loads

With a compact size of 20 mm (height) x 32 mm (width), each slider has a permissible load of 3430 N (radial direction). The quantity of sliders can be freely selected to suit the specifications, and rails can be manufactured at a maximum length of 2960 mm.

Feature 4 Capable of receiving a load in any direction

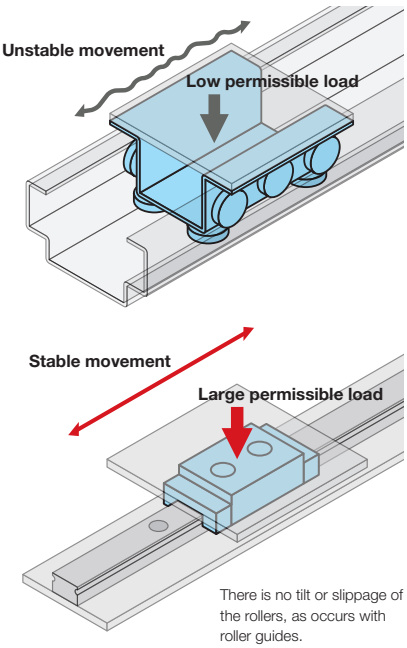
This product can be used in a variety of installation orientations such as horizontal, vertical, slanted, wall-mounted, and suspended.



Benefits of the Utility Slide

Comparison with a Roller Guide

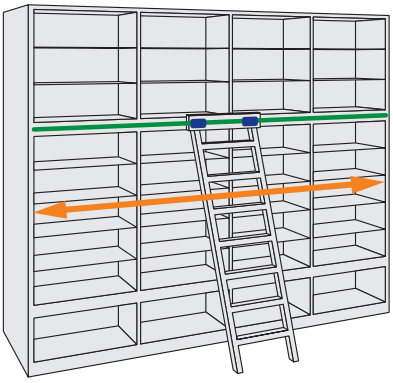
	Permissible load	Clearance adjustment
Roller guide	Permissible load is small compared to the size of the roller guide main unit.	Clearance adjustment is difficult, making movement heavy and resulting in large gaps.
Utility Slide UGR	Large permissible load and allows for compact designs.	Clearance adjustment is unnecessary. (Adjusted: maximum radial clearance +0.05 mm)



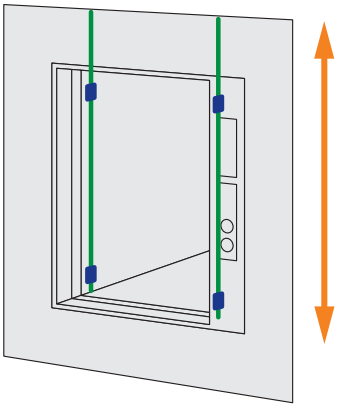
There is no tilt or slippage of the rollers, as occurs with roller guides.

Example Applications

Stores

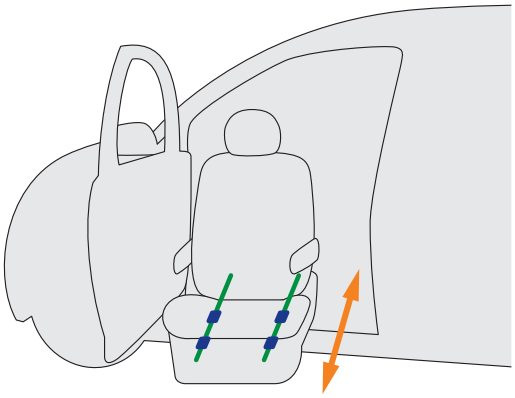


Sliding ladders for large shelves



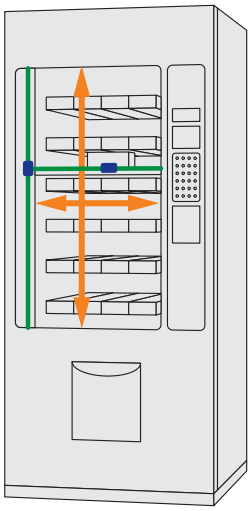
Small freight elevators

Assistive Devices

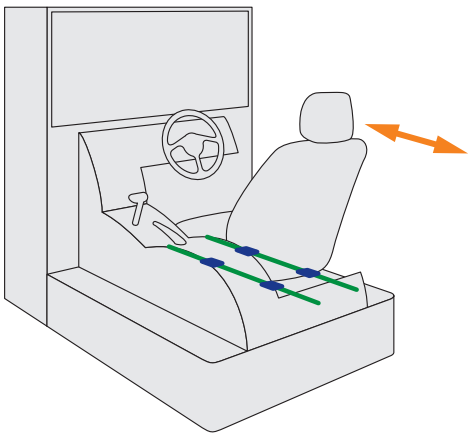


Lifting devices for assistive vehicles

Other Facilities

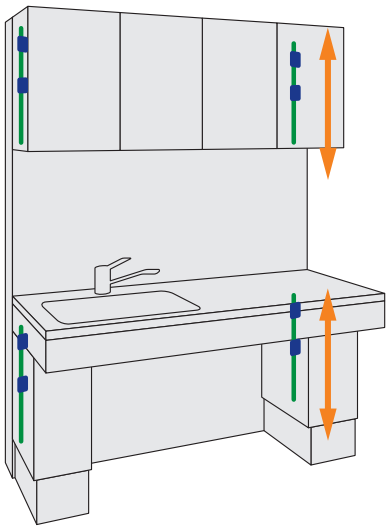


Automatic vending machines

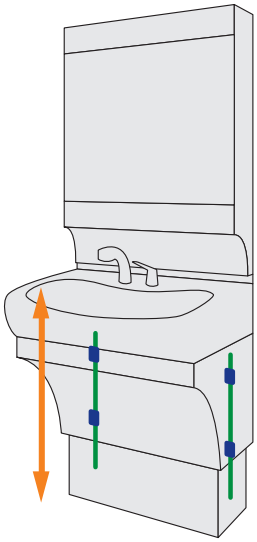


Driving games

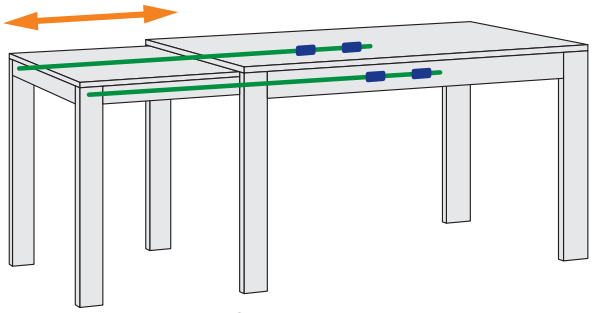
Housing



Kitchens with electronic lift systems

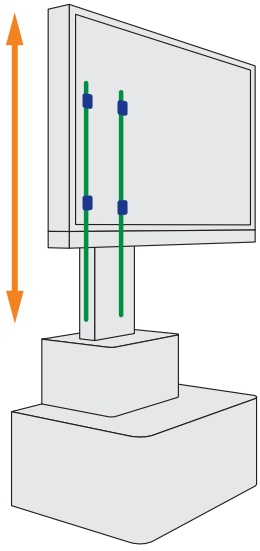


Sinks and vanities with electronic lifts



Sliding tables

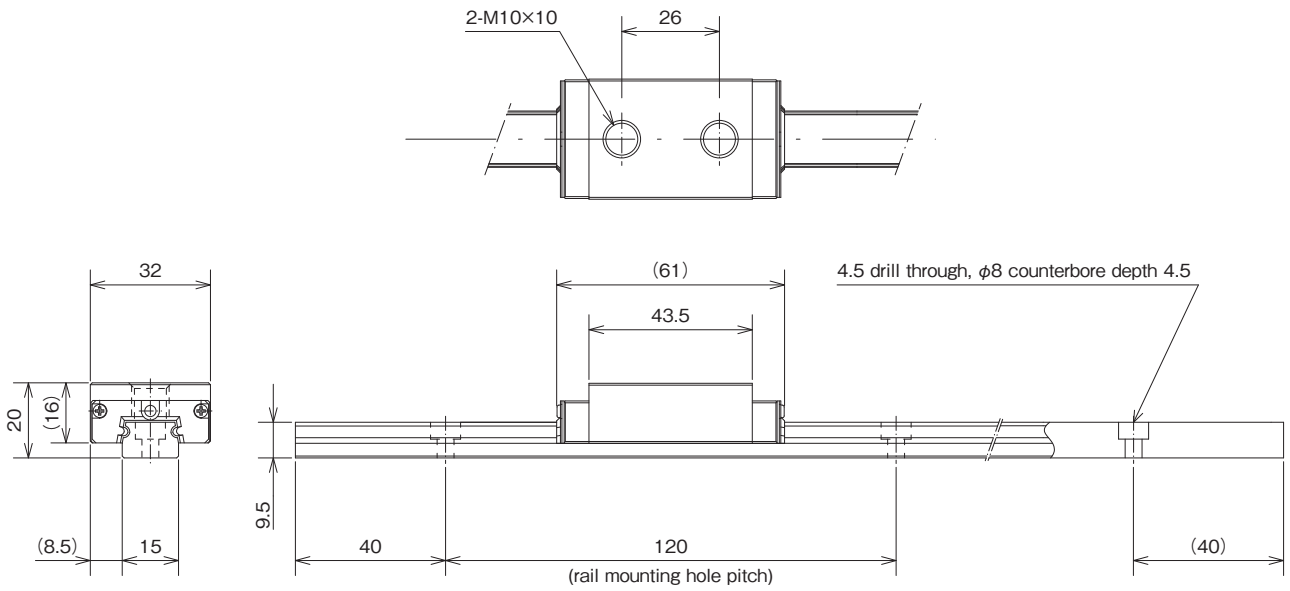
Offices



Flat-panel monitor lifting units

Movable shelving

External Dimensions



Unit: mm

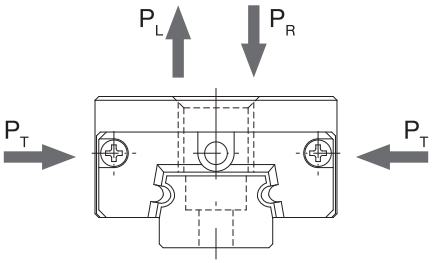
Model Number Coding

2 Slider quantity — **UGR** Model No. — **680** Rail length

Standard rail lengths: 200 mm, 440 mm, 680 mm, 920 mm

Note 1: The maximum rail length is 2960 mm. Please contact THK if you would like to order a nonstandard rail length.
Note 2: This product is not manufactured for use as a joint rail.

Permissible Load



Unit: N

Model	Permissible load		
	Radial direction (P_R)	Reverse radial direction (P_L)	Lateral direction (P_T)
UGR	3430	2700	2700

Note: Strength of bolts used for installation is not included.

Handling Precautions

Handling

- Do not disassemble the parts. This may result in debris entering the product and loss of functionality.
- If the slider is removed from the rail, balls will fall out. A stopper is installed to prevent the slider from coming off, but please exercise caution when handling.
- Tilting the slider or slide rail may cause it to fall by its own weight.
- Take care not to drop or strike the utility slide. Otherwise, it may cause injury or damage the unit. Even if there is no outward indication of damage, a sudden impact could prevent the unit from functioning properly.
- Be aware that the permissible load of the utility slide will vary depending on direction.
- Prevent foreign materials from getting inside the product. Otherwise, it may damage the ball circulation components or result in a loss of functionality.
- If foreign materials adhere to the product, replenish the lubricant after washing the product.
- Do not subject this product to harsh conditions, such as an abnormally hot, cold, damp, or dusty environment, or to intense, repeated motion that would cause it to heat up due to friction. Use of this product under such conditions can result in damage or loss of functionality. Please contact THK if the product will be used in harsh conditions.
- If the utility slide will be used in an inverted orientation, take preventive measures such as adding a safety mechanism to prevent items from falling. If the slider is damaged due to an accident, etc., balls may fall out, or the slider may become detached from the slide rail and fall down.

Lubrication

- A black lithium soap-based grease is applied to the slider and ball circulation components. Do not mix lubricants with different properties.

Storage

- When storing the utility slide, pack it as designated by THK and store it indoors away from extreme heat or cold and high humidity.

Disposal

- The product should be treated as industrial waste and disposed of appropriately.

Utility Slide **UGR**

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NEW

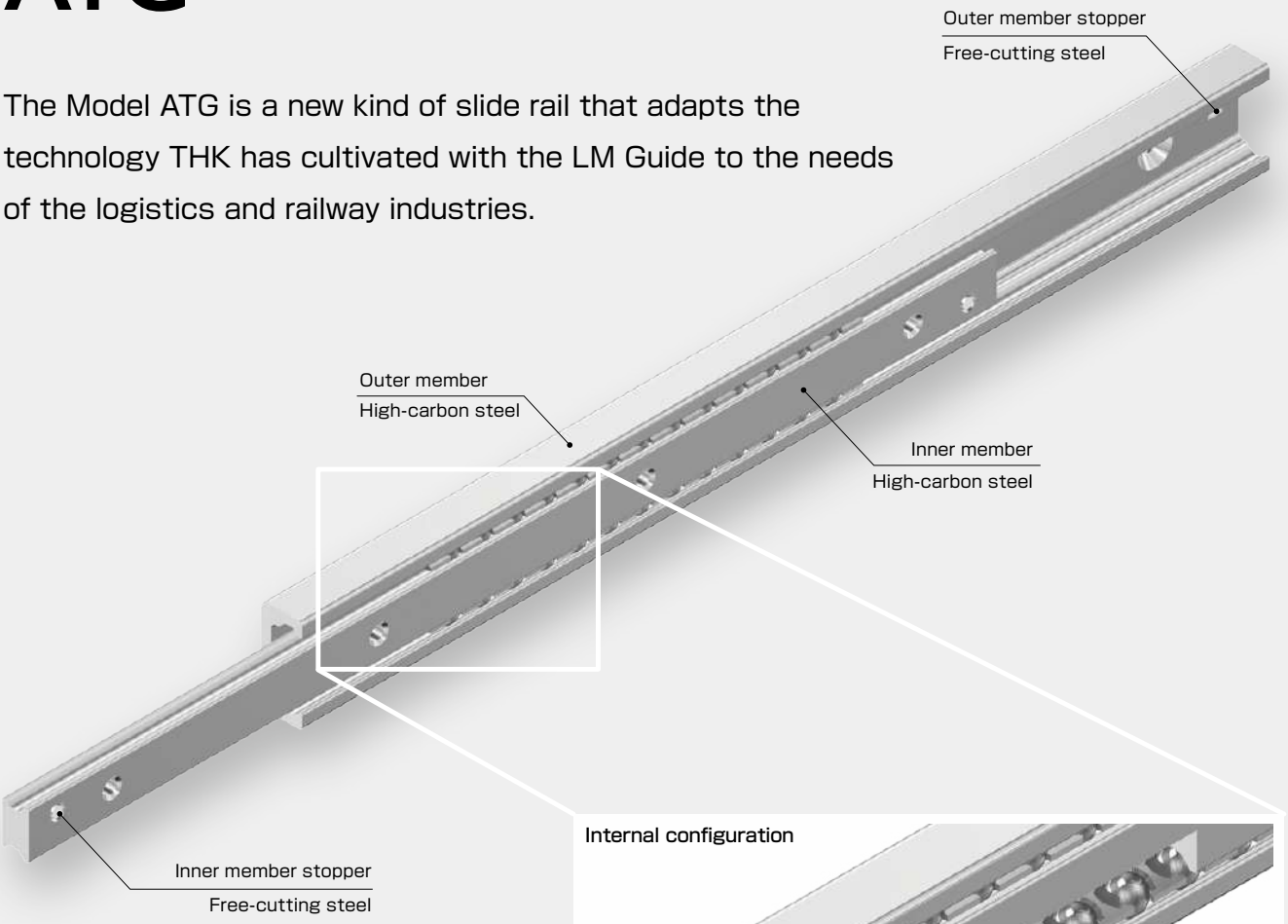
Utility Slide

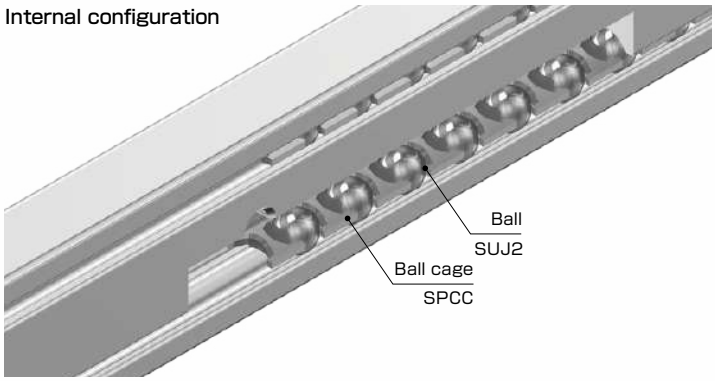
ATG

A new slide rail from THK that meets the needs of the logistics and railway industries

Utility Slide
ATG

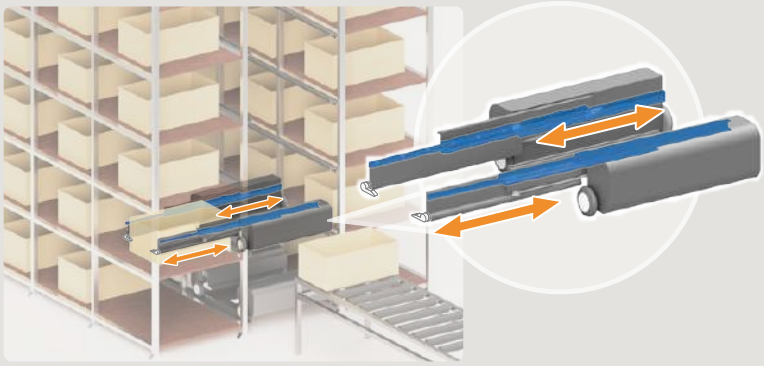
The Model ATG is a new kind of slide rail that adapts the technology THK has cultivated with the LM Guide to the needs of the logistics and railway industries.





The inner member slides inside the outer member, forming a structure that can extend and retract. The Model ATG also offers improved permissible load and service life compared to conventional slide rails.

Applicable Fields

Logistics	Railways
	
▲ Automated warehouse racks	▲ Railway vehicle doors

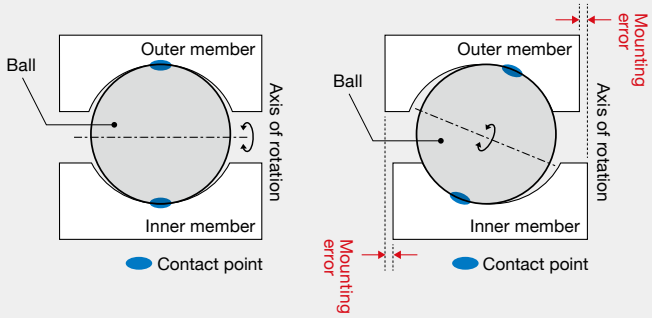
Feature 1 Improved Permissible Load and Extended Service Life

The Model ATG distinguishes itself from conventional slide rails by incorporating the same material used in the LM Guide for its inner and outer members, which is further heat-treated for enhanced strength and surface hardness. The result is a high load capacity, high durability, and improved permissible load and service life compared to conventional products.

Feature 2 Easy Adjustment

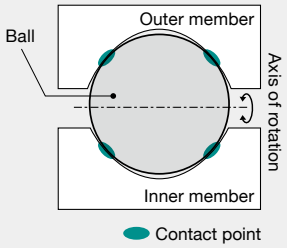
The circular arc grooves make the Model ATG excel at adjusting to slight mounting errors during installation.

2-Point Circular Arc Contact



- Circular arc grooves have the ability to absorb any mounting errors by shifting the point where the balls contact the groove.

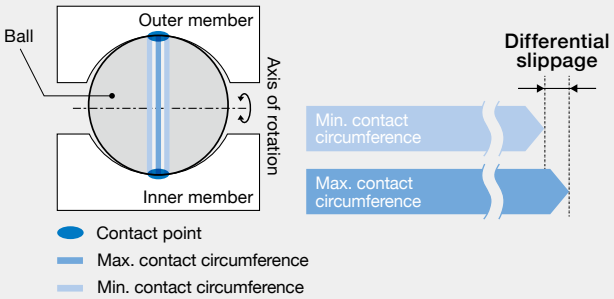
4-Point Gothic Arch Contact



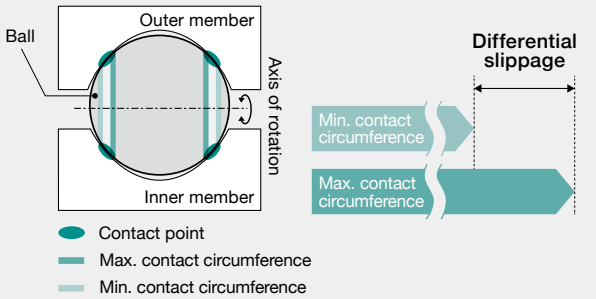
Feature 3 Helps Prevent Locking at the Stroke End

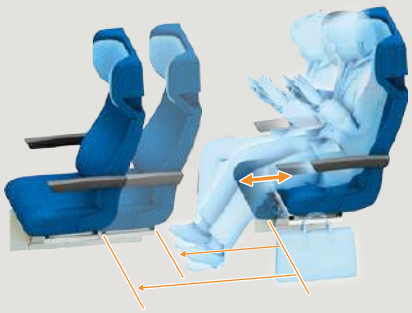
Thanks to its circular arc grooves, the Model ATG experiences less differential slippage than conventional (Gothic-arch groove) products, which helps keep ball cages from becoming misaligned. This in turn reduces locking at the stroke end and contributes to the stable running of equipment.

2-Point Circular Arc Contact

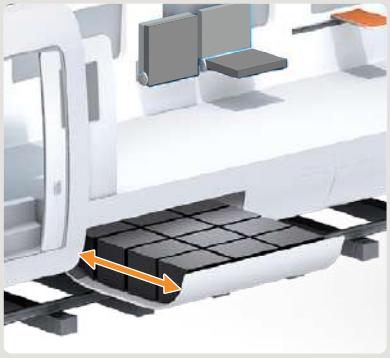


4-Point Gothic Arch Contact





▲ Passenger seating



▲ Storage space for railway vehicle maintenance

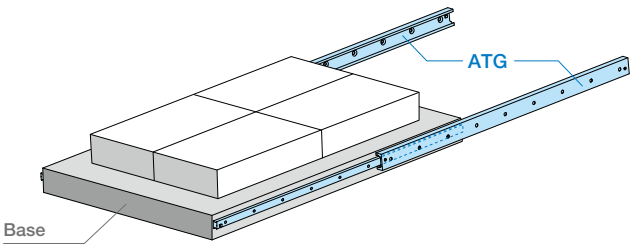
▲ Sliding steps for railway doors

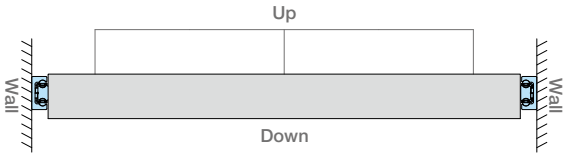
Product Specifications

Mounting Orientation

The Model ATG is intended to be used in a set with two slide rails mounted on a wall.

Note: Please consult THK if you are considering using only one slide rail or installing the product in something other than a wall-mounted orientation.





Front view

Basic Specifications

Item	Unit	Model No.			
		ATG22S	ATG28S	ATG35S	ATG43S
Product width	mm	22	28	35	43
Permissible load[1]	N/pair	1,690 to 3,920	3,410 to 6,600	5,150 to 9,740	6,490 to 13,470
Max. sliding resistance[2]	N	3	5	5	5
Operating temperature range[3]	°C	-15 to 100			
Grease	—	AFB-LF			
Heat treatment[4]	—	High-frequency induction hardening			
Surface treatment[5]	—	Trivalent chromate plating			

[1] See the Permissible Load section below for details on calculating the permissible load.

[2] This is the maximum sliding resistance value when the product has been assembled with zero clearance between the balls and the raceway grooves of the inner and outer members.

[3] Contact THK if the product will be used in an environment outside of the specified temperature range.

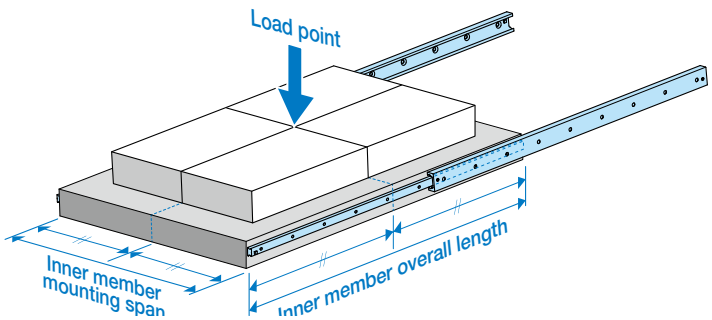
[4] Induction hardening is performed on the raceway grooves of the inner and outer members.

[5] Surface treatment applies to all components except for the balls.

Permissible Load

As shown in the figure below, the permissible load is calculated from the permissible surface pressure based on a load centered at a point halfway between the inner members and halfway down the length of an inner member extended the full length of its stroke (indicated by the load point arrow in the figure).

Note: Please do not install the Model ATG's inner members more than around 300 mm apart. If the distance between the installed inner members will be wider than 300 mm, factor in the load that will be caused by deflection of the mounting components. Contact THK for details.



Safety Factor

When the Model ATG is stationary or in motion, an unexpected external force may be applied due to vibrations, impacts, or inertia caused by starting and stopping. It is necessary to take a safety factor into account with regard to this type of applied load.

$$f_S = \frac{P_0}{P_C}$$

f_S: Safety factor
P_0: Permissible load (N)
P_C: Applied load (N)

Reference Values for the Safety Factor

Treat the safety factor values in the table to the right as the reference minimum values for the given operating conditions. When selecting the model and member length, make sure that the safety factor f_s obtained by dividing the permissible load by the applied load is a value greater than the applicable minimum value.

Reference Values for the Safety Factor (f_S)

Machine type	Load conditions	Lower limit of fs
General industrial machinery (Automated warehouses, doors, etc.)	Without vibrations or impacts	1.0 to 3.5
	With vibrations or impacts	2.0 to 5.0

Lubrication

Standard Grease

AFB-LF Grease is a general-purpose grease that provides excellent extreme pressure and mechanical stability properties through the use of a refined mineral oil base oil and a lithium-based consistency enhancer.

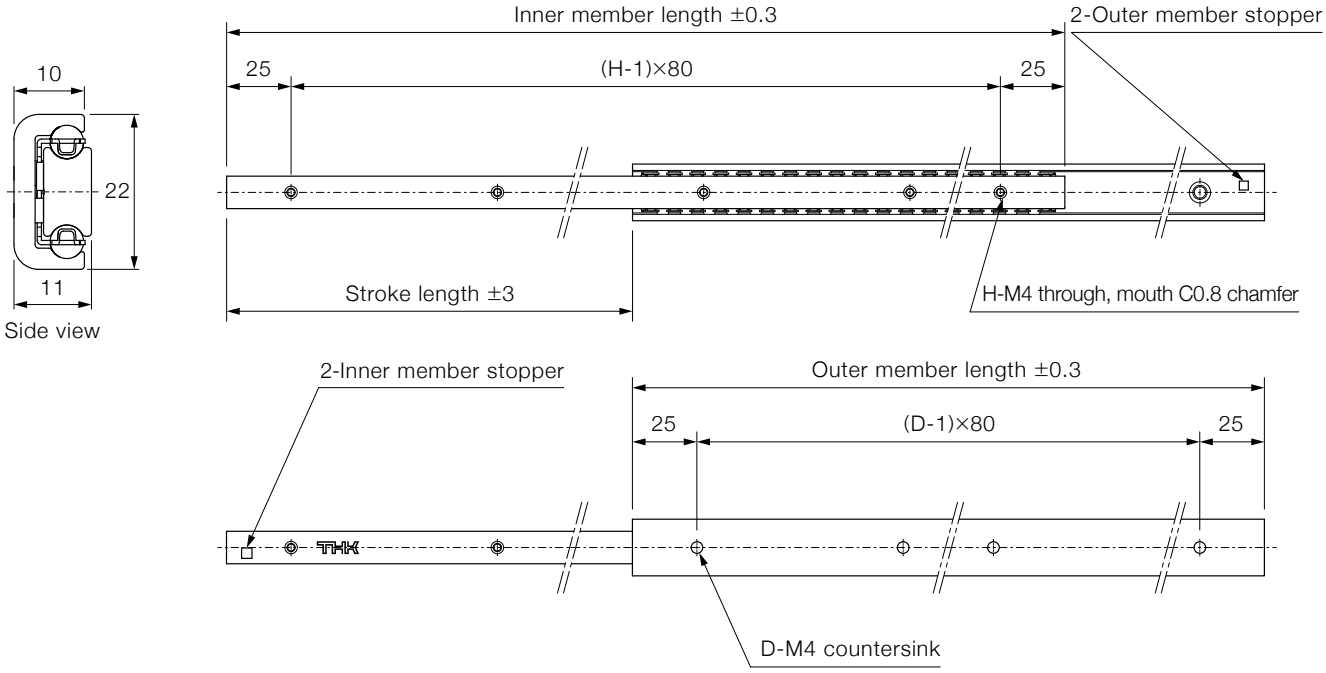
Note: Non-standard greases are also available. Contact THK for details.

AFB-LF Representative Physical Properties

Item		Representative property	Testing method
Consistency enhancer		Lithium-based	
Base oil		Refined mineral oil	
Base oil kinematic viscosity: mm^2/s (40°C)		170	JIS K 2220 23
Worked penetration (25°C, 60 W)		275	JIS K 2220 7
Mixing stability (100,000 W)		345	JIS K 2220 15
Dropping point: °C		193	JIS K 2220 8
Evaporation volume: mass% (99°C, 22 h)		0.4	JIS K 2220 10
Oil separation rate: mass% (100°C, 24 h)		0.6	JIS K 2220 11
Copper plate corrosion (B method, 100°C, 24 h)		Passed	JIS K 2220 9
Low-temperature torque: mN·m (-20°C)	Starting	130	JIS K 2220 18
	Rotational	51	
4-ball testing (welding load): N		3,089	ASTM D2596
Operating temperature range: °C		-15 to 100	
Color		Yellowish brown	

Dimensional Table

ATG22



Unit: mm

Model No. + Outer member length	Stroke length	Outer member length	Inner member length	No. of mounting holes		Permissible load N/set	Mass kg/set
				D	H		
ATG22S+130L	79.4	130	130	2	2	1,690	0.35
ATG22S+210L	114.4	210	210	3	3	2,920	0.57
ATG22S+290L	158.4	290	290	4	4	3,010	0.79
ATG22S+370L	202.4	370	370	5	5	3,120	1.01
ATG22S+450L	237.4	450	450	6	6	3,490	1.24
ATG22S+530L	281.4	530	530	7	7	3,500	1.46
ATG22S+610L	316.4	610	610	8	8	3,730	1.68
ATG22S+690L	351.4	690	690	9	9	3,920	1.91

Note: The permissible load and mass are the values for one set of two slide rails.
The outer member lengths in the table above are the standard lengths. Please contact THK if you would like to order a non-standard length or a special stroke length.

Model Number Coding

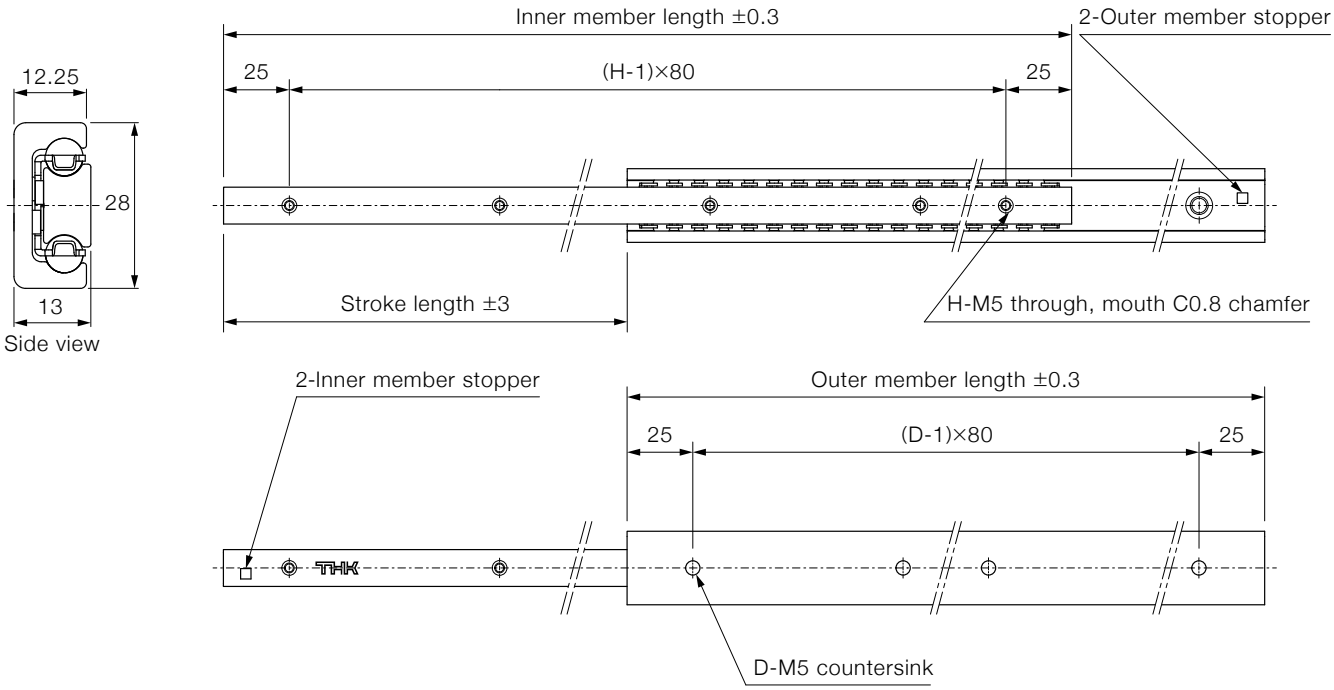
Select an option | Fixed symbol

ATG22S + 210L

ATG22S: Model No.
210L: Outer member length

Note: When ordering the Model ATG, specify the number of individual slide rails needed. The Model ATG can be ordered in any quantity of one or more.

ATG28



Unit: mm

Model No. + Outer member length	Stroke length	Outer member length	Inner member length	No. of mounting holes		Permissible load N/set	Mass kg/set
				D	H		
ATG28S+130L	75	130	130	2	2	3,410	0.50
ATG28S+210L	117	210	210	3	3	4,560	0.83
ATG28S+290L	149.5	290	290	4	4	6,000	1.15
ATG28S+370L	191.5	370	370	5	5	6,220	1.47
ATG28S+450L	233.5	450	450	6	6	6,370	1.80
ATG28S+530L	275.5	530	530	7	7	6,470	2.12
ATG28S+610L	317.5	610	610	8	8	6,540	2.44
ATG28S+690L	359.5	690	690	9	9	6,600	2.86

Note: The permissible load and mass are the values for one set of two slide rails.
The outer member lengths in the table above are the standard lengths. Please contact THK if you would like to order a non-standard length or a special stroke length.

Model Number Coding

Select an option Fixed symbol

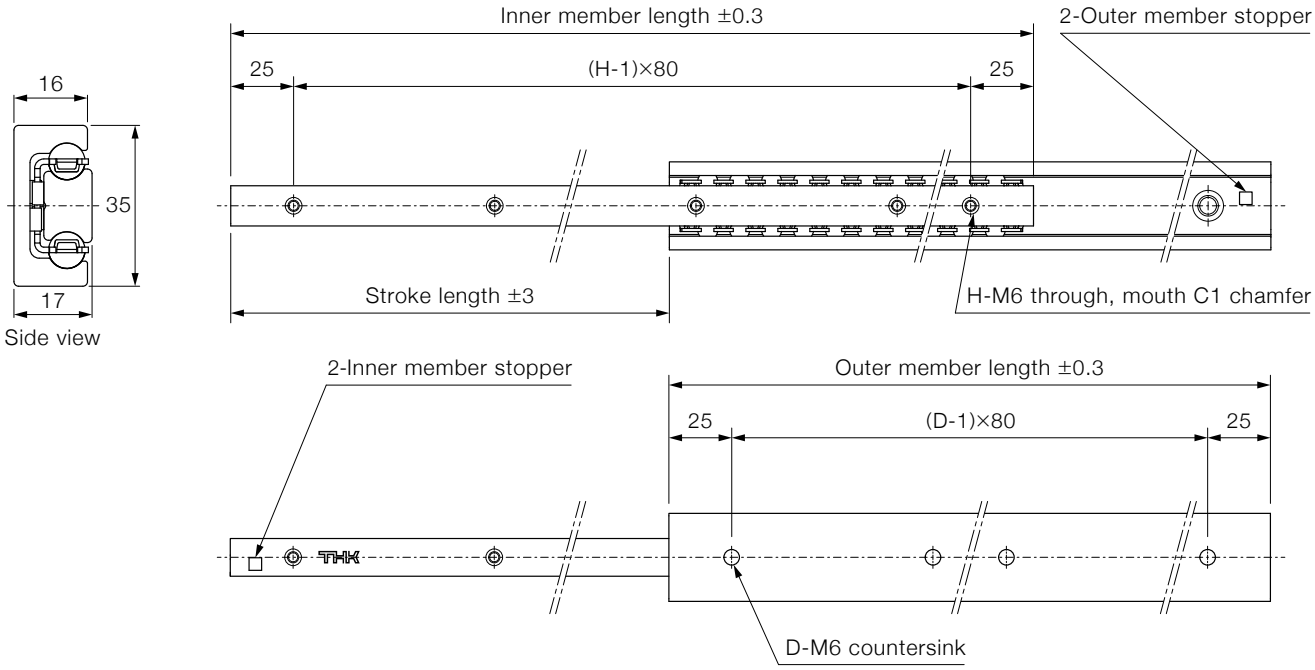
ATG28S + 210L

ATG28S: Model No.
210L: Outer member length

Note: When ordering the Model ATG, specify the number of individual slide rails needed. The Model ATG can be ordered in any quantity of one or more.

Dimensional Table

ATG35



Unit: mm

Model No. + Outer member length	Stroke length	Outer member length	Inner member length	No. of mounting holes		Permissible load N/set	Mass kg/set
				D	H		
ATG35S+210L	128.7	210	210	3	3	5,150	1.33
ATG35S+290L	157.9	290	290	4	4	7,990	1.87
ATG35S+370L	199.8	370	370	5	5	8,610	2.40
ATG35S+450L	254.4	450	450	6	6	7,970	2.90
ATG35S+530L	283.6	530	530	7	7	9,320	3.44
ATG35S+610L	325.5	610	610	8	8	9,540	3.97
ATG35S+690L	367.4	690	690	9	9	9,740	4.50

Note: The permissible load and mass are the values for one set of two slide rails.
The outer member lengths in the table above are the standard lengths. Please contact THK if you would like to order a non-standard length or a special stroke length.

Model Number Coding

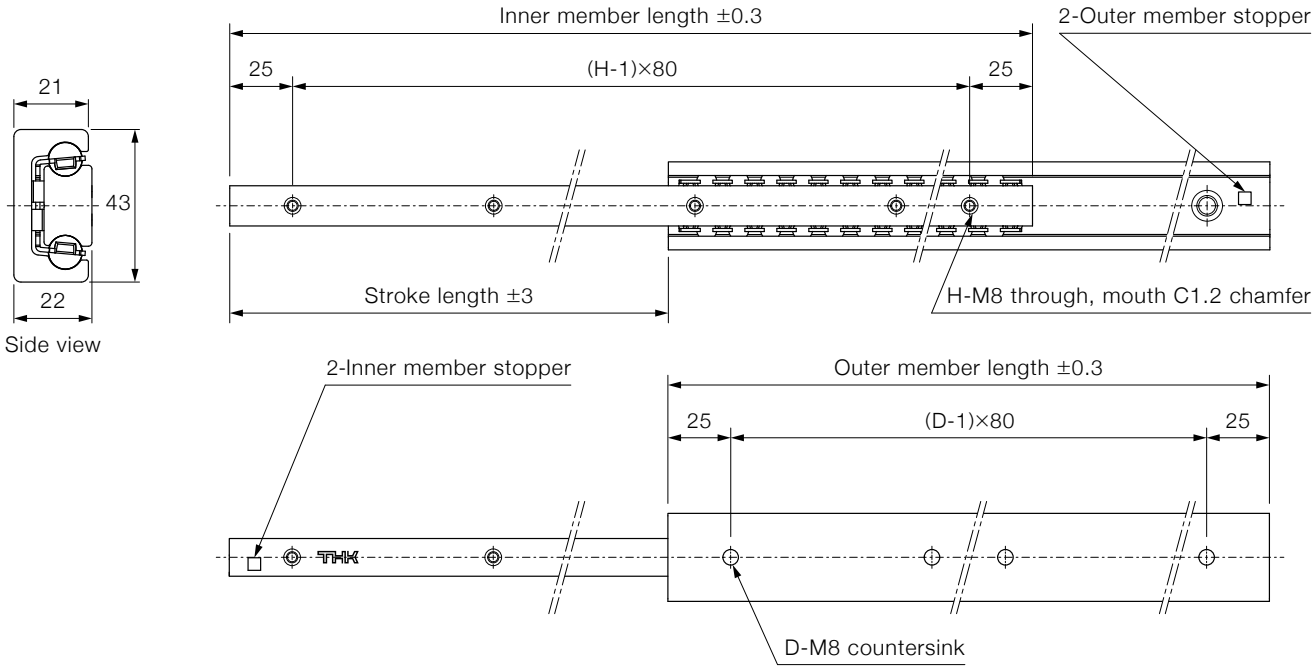
Select an option | Fixed symbol

ATG35S + 210L

ATG35S: Model No.
210L: Outer member length

Note: When ordering the Model ATG, specify the number of individual slide rails needed. The Model ATG can be ordered in any quantity of one or more.

ATG43



Unit: mm

Model No. + Outer member length	Stroke length	Outer member length	Inner member length	No. of mounting holes		Permissible load N/set	Mass kg/set
				D	H		
ATG43S+210L	132.6	210	210	3	3	6,490	2.22
ATG43S+290L	167.6	290	290	4	4	9,650	3.10
ATG43S+370L	217.6	370	370	5	5	9,810	3.96
ATG43S+450L	252.6	450	450	6	6	11,560	4.84
ATG43S+530L	287.6	530	530	7	7	12,890	5.72
ATG43S+610L	322.6	610	610	8	8	13,930	6.60
ATG43S+690L	372.6	690	690	9	9	13,470	7.44

Note: The permissible load and mass are the values for one set of two slide rails.
The outer member lengths in the table above are the standard lengths. Please contact THK if you would like to order a non-standard length or a special stroke length.

Model Number Coding

Select an option Fixed symbol

ATG43S + 210L

Model No. Outer member length

Note: When ordering the Model ATG, specify the number of individual slide rails needed. The Model ATG can be ordered in any quantity of one or more.

MEMO

Handling

(1) Do not disassemble the parts. This may result in loss of functionality.
(2) Take care not to drop or strike the product. Otherwise, it may cause injury or damage the unit.
Even if there is no outward indication of damage, a sudden impact could prevent the unit from functioning properly.
(3) Wear appropriate safety gear, such as protective gloves and safety shoes, when handling the product.
(4) Tilting the product may cause it to move under its own weight.
(5) Handling should be performed with care to avoid having one's hand caught between the inner and outer members and to prevent damage due to interference from bolts.

Use

(1) The outer member and inner member stoppers are not designed to handle impact loads. Be certain to provide external stoppers at the stroke ends.
(2) When installing this product, mount two slide rails on the wall as a set. Be certain to contact THK if you will be using only one slide rail or changing the mounting orientation to something other than what is indicated in the mounting orientation diagram.
(3) When installing a pair of these products together, ensure that both sides of the pair will remain parallel to one another at all times by adjusting the way they are mounted so as to obtain a rolling resistance of 15 N or less when they are not bearing a load.
(4) Prevent foreign material, such as cutting chips or coolant, from entering the product. Failure to do so could damage the product.
(5) If the product is used in an environment where cutting chips, coolant, corrosive solvents, or water may enter the product, use bellows or covers to prevent them from entering the product.
(6) If foreign materials such as cutting chips adhere to the product, replenish the grease after cleaning the product.
(7) Do not apply a load that exceeds the permissible load.
(8) Do not forcibly drive a pin, key, or other positioning device into the product. This could create indentations on the raceway and impair the product's function.
(9) Contact THK if the product will be used in an environment outside of the specified temperature range of -15°C to 100°C.
(10) Do not subject this product to harsh conditions such as damp or dusty environments or intense repeated motion that would cause it to heat up due to friction.
(11) The durability of the product varies depending on factors such as the dimensions of the drawer, travel distance, mounting conditions, environment, and operating frequency. Take these factors into account when making a selection.
(12) Ball cages may become misaligned due to factors such as a vertical mounting orientation or machine vibration.
To realign ball cages, remove any borne load, then fully open and close the product. During realignment, it will take more force to move because the balls will be sliding. Exceeding the stroke range may cause components to break.
(13) If the mounting material lacks sufficient rigidity or accuracy, the bearing load will be concentrated at one location and performance will dramatically decrease.
Therefore, carefully consider the rigidity and accuracy of the housing and base as well as the strength of the securing bolts.
(14) If this product breaks due to an accident or other cause, the inner member may come out of the outer member and fall.

Lubrication

(1) How often lubricant should be replenished varies depending on the operating conditions and environment. We recommend lubricating the system approximately every 100 km traveled (3 to 6 months). The final lubrication interval/amount should be set at the actual machine.
(2) To lubricate the product, apply lubricant directly to the raceway surface and execute a few preliminary strokes to ensure that the interior is fully lubricated.
(3) The viscosity of grease changes according to the temperature. Take note that the slide rail's sliding resistance may be affected by changes in viscosity.
(4) After lubrication, the sliding resistance of the product may increase due to the stirring resistance of the grease.
Be sure to let the grease break in fully before use.
(5) Excess grease may spatter after lubrication. Wipe off spattered lubricant as necessary.
(6) Grease deteriorates over time, which decreases its lubricity, so perform regular inspections and replenish lubricant based on frequency of use.

Storage

When storing this product, pack it as designated by THK and store it indoors in a horizontal position away from high or low temperatures and high humidity.
Please note that if the product has been kept in storage for an extended period, the lubricant inside may have deteriorated. Please ensure that you replenish the lubricant before use.

Disposal

The product should be treated as industrial waste and disposed of appropriately.

Utility Slide **ATG**

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International Sales Department Phone: +81-3-5730-3860

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Utility Slide

NEW

Advanced Wheel Guide

Utility slide that uses wheels in the raceway,
designed for the railway and logistics industries

A newly developed utility slide that offers smooth sliding motion and high-performance contamination protection

Utility Slide

Advanced Wheel Guide

Feature 1 Smooth Sliding Mechanism

Feature 2 Superior Contamination Protection and Durability

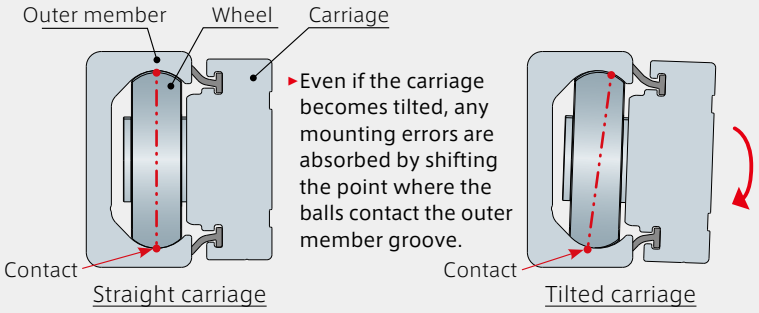
Feature 3 Environmentally Friendly

Utility Slide

Advanced Wheel Guide

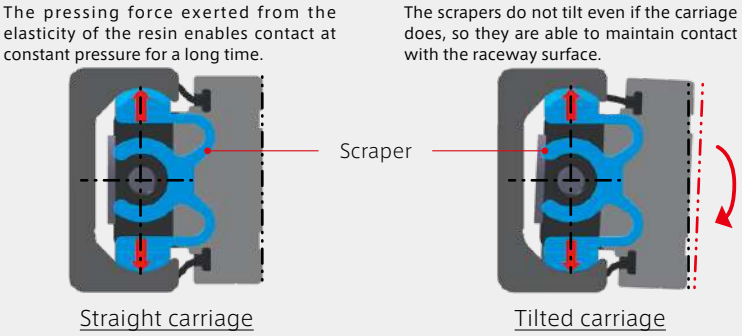
Feature 1 Smooth Sliding Mechanism

Adopting the circular arc groove contact structure technology developed with THK's LM Guide enables smooth sliding motion even on mounting surfaces with low accuracy, where the carriage may become tilted, thanks to the product's self-adjustment capability.



Feature 2 Superior Contamination Protection and Durability

Pairing side seals with newly developed scrapers designed to apply constant pressure enables the scrapers to maintain contact with the raceway surface for a long time, which grants superior contamination protection compared to existing slide rails. Additionally, both the outer member and the wheels have been heat-treated to provide boosted hardness and enhanced durability.



Feature 3 Environmentally Friendly

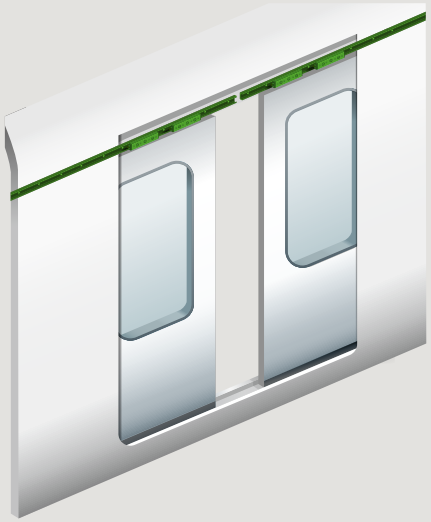
The newly developed grease tank creates an eco-friendly lubrication system that does not contaminate the surrounding area, since the right amount of grease is applied to the raceway.

Example Applications

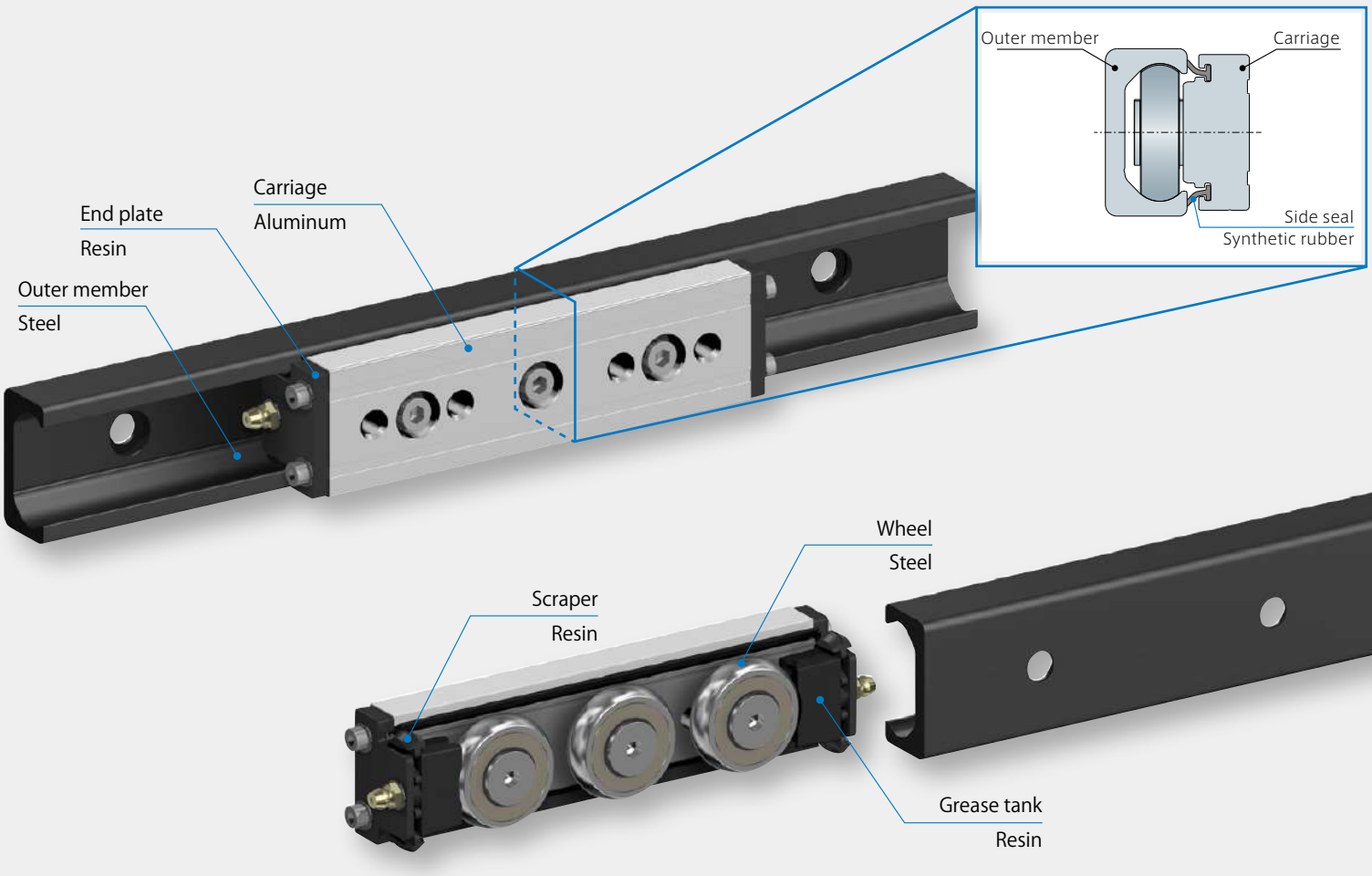
Railways

Railway vehicle doors

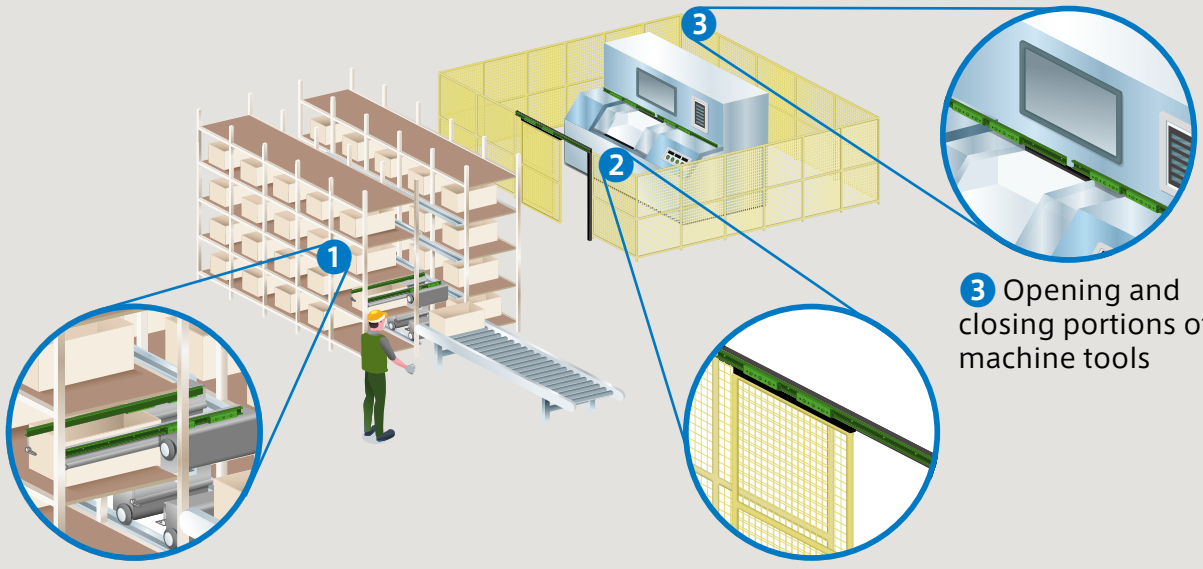
Exterior doors



Gangway doors



Logistics and Other



1 Automated warehouse racks

2 Protective fences

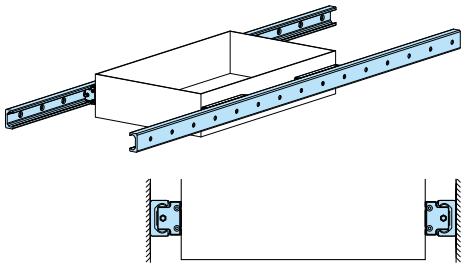
3 Opening and closing portions of machine tools

Product Specifications

Mounting Orientation

①Wall-mounting two units facing each other

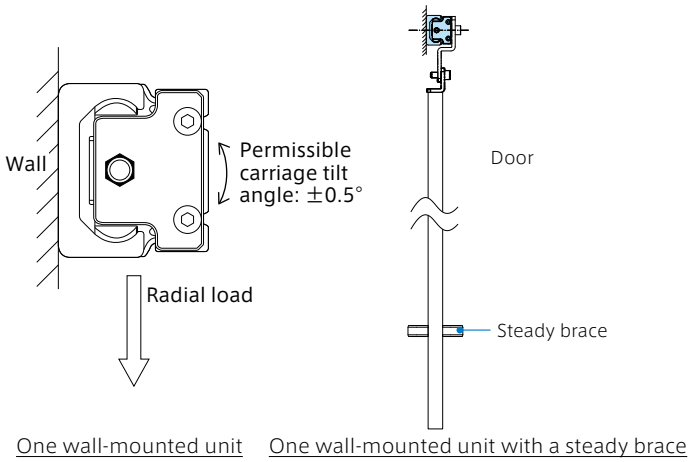
This product is typically wall-mounted with two units facing each other. It is possible for either the outer members to be fixed so the carriages move, or for the carriages to be fixed so the outer members move.



Installation example:
Two wall-mounted units facing each other

②Wall-mounting one unit

It is also possible to mount a single unit to a wall. Make the center of gravity be straight down from the center of the outer member's grooves, and prepare a steady brace so that the moment load is not borne in a rolling direction. We recommend using at least two carriages per outer member.



Installation example: One wall-mounted unit

If a mounting orientation other than method 1 or 2 above is required, contact THK.

Basic Specifications

Item	Unit	Model number			
		AWG18	AWG28	AWG35	AWG43
Product width	mm	18	28	35	43
Basic static load rating C_0[1]	N/pair	730 to 1,095	2,100 to 3,150	3,900 to 5,850	6,100 to 9,150
Radial clearance[2]	mm	0 to 0.02	0 to 0.04		
Permissible carriage tilt angle[3]	°	±0.5			
Operating temperature range[4]	°C	-15 to 80			
Grease	—	AFB-LF			

[1] It is typical for this product to be wall-mounted with two units facing each other. However, the basic static load rating given is the value for one carriage and one outer member.
[2] Contact THK if you want to use a product with a radial clearance outside of this range.
[3] Avoid applications where the carriage would be tilted more than 0.5°.
[4] This product contains components made of resin and rubber. Do not use this product at temperatures above 80°C.

Outer Member Standard Lengths

The standard lengths of the outer members for this product are shown in the table to the right.
When specifying a non-standard length, please also specify the number of holes to be drilled at the standard pitch. Additionally, please consider the distance between the mounting holes and the end surfaces when setting the G and g dimensions. Be aware that as the G and g dimensions increase, that portion becomes less stable, and the accuracy may be negatively affected. See the dimensional drawings and dimensional tables on pages 7, 8, and 9 for details about the G and g dimensions.
If a length in excess of the maximum length is desired, joint outer members will be used. Contact THK for details.

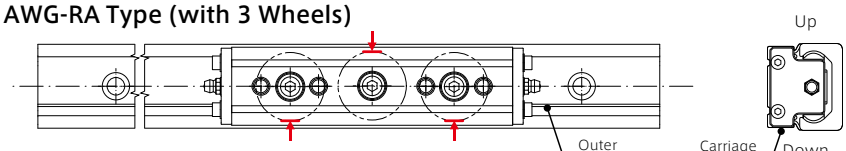
Unit: mm

Model No.	AWG18	AWG28	AWG35	AWG43
Outer member standard length (n: Number of mounting holes)	480 (6)			
	720 (9)			
	960 (12)			
	1,200 (15)			
Standard pitch	80			
G, g	40			

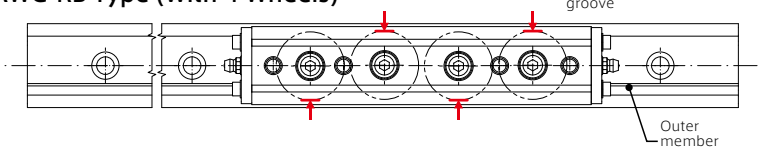
Wheel Contact Positions and Maximum Single Wheel Load P_{max}

The recommended installation method for this product is to mount it to a wall. The wheel contact positions in a wall-mounted application are shown in the figures to the right.
The radial and moment loads borne by each wheel will differ depending on the installation conditions and the center of gravity.
Both radial and moment loads are considered when calculating the maximum single wheel load (the load borne by any one wheel bearing a larger load than any of the others).
Please contact THK for details about how the maximum single wheel load is calculated.

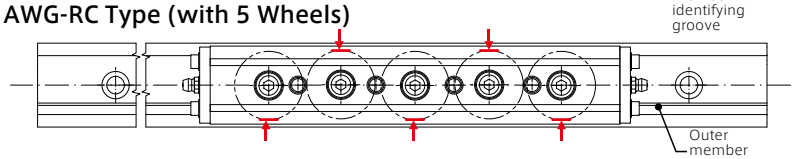
AWG-RA Type (with 3 Wheels)



AWG-RB Type (with 4 Wheels)



AWG-RC Type (with 5 Wheels)



Note: If the outer members will be fixed so the carriages move, install the product so that the identifying groove is on the bottom.

Wheel contact positions

Static Safety Factor

If this product experiences vibrations or impacts from sudden stops and starts, or if a large moment caused by an overhung load is applied to the product, the wheels may receive an unexpectedly large load.
When selecting a model, check the maximum single wheel load (whether stationary or in motion) and take the static safety factor into account.
Estimates for the static safety factor are shown in the table to the right.

Note: Please contact THK for details about calculating the static safety factor.

$$f_s = \frac{C_0}{P_{max}}$$

f_s: Static safety factor C_0: Basic static load rating (N) P_{max}: Maximum single wheel load (N)

Estimates of the Static Safety Factor (fs)

Machine type	Load conditions[1]	Lower limit of fs
General industrial machinery (Automated warehouses, doors, etc.)	Without vibrations or impacts	2
	With vibrations or impacts	5

[1] Vibrations and impacts are typically caused by factors such as acceleration and deceleration, sudden starting and stopping, and vibrations and impacts from an external machine.

Lubrication

The standard lubrication specification for this product is grease lubrication. The standard grease it uses is THK AFB-LF Grease. AFB-LF Grease is a general-purpose grease that provides excellent extreme pressure resistance and mechanical stability through the use of a refined mineral oil base oil and a lithium-based consistency enhancer.

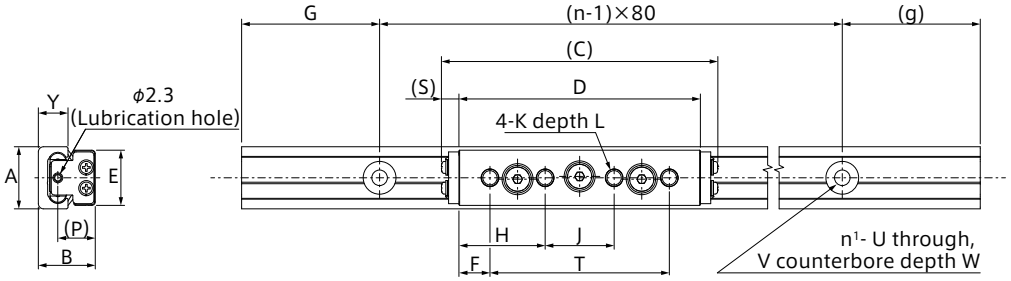
Note: Non-standard greases are also available. Contact THK for details.
Make sure to fill the grease tank with grease prior to use.

AFB-LF Representative Physical Properties

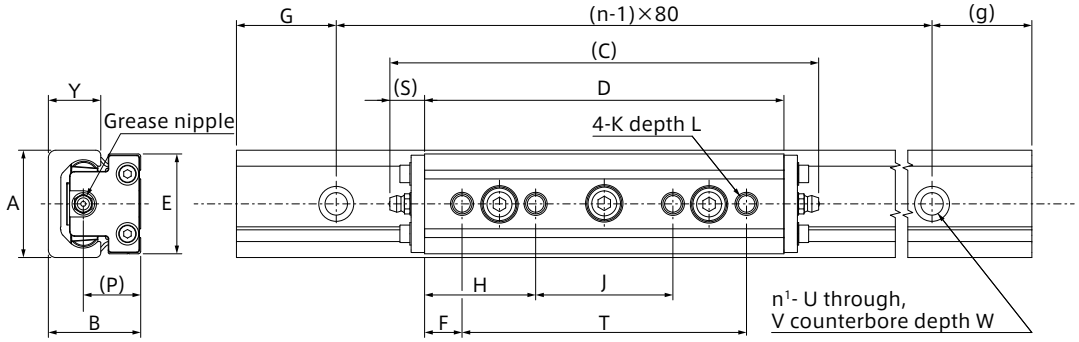
Item		Representative property	Testing method
Consistency enhancer		Lithium-based	
Base oil		Refined mineral oil	
Base oil kinematic viscosity: mm^2/s (40°C)		170	JIS K 2220 23
Worked penetration (25°C, 60 W)		275	JIS K 2220 7
Mixing stability (100,000 W)		345	JIS K 2220 15
Dropping point: °C		193	JIS K 2220 8
Evaporation amount: mass% (99°C, 22 h)		0.4	JIS K 2220 10
Oil separation rate: mass% (100°C, 24 h)		0.6	JIS K 2220 11
Copper plate corrosion (B method, 100°C, 24 h)		Passed	JIS K 2220 9
Low-temperature torque: mN·m (-20°C)	Starting	130	JIS K 2220 18
	Rotational	51	
4-ball testing (welding load): N		3089	ASTM D2596
Operating temperature range: °C		-15 to 100	
Color		Yellowish brown	

Dimensional Tables

AWG-RA Type (with 3 Wheels)



AWG18RA



AWG28, 35, 43RA

Unit: mm

Model No.	Outer dimensions			Carriage dimensions											Outer member dimensions					Basic static load rating C_0 (N)	Mass	
	A	B	C	D	S	E	F	T	H	J	K	L	P	Grease nipple	U	V	W	Y	G, g		Carriage (kg)	Outer member (kg/m)
AWG18RA	18	16.5	80.2	70	5.1	16	9	52	25	20	M5	6.9	10.9	—	4.5	9.5	1.7	8.6	40	730	0.03	0.55
AWG28RA	28	24	123.4	98	12.7	25	10	78	31.5	35	M5	11.7	15	A-M4 ×0.7	6	9.5	2.1	12.5	40	2,100	0.12	1.17
AWG35RA	35	30	146.6	120	13.3	32	10	100	37.5	45	M6	13.9	18.9	A-M6F	7	11	2.5	16	40	3,900	0.241	1.83
AWG43RA	43	37	171.8	144	13.9	40	15	114	44.5	55	M8	17	23	A-M6F	9	14	3.7	21	40	6,100	0.453	2.94

[1] Specify n, the number of mounting holes, based on the length of the outer member. (See Outer Member Standard Lengths on page 5 for n, the number of mounting holes, for each of the standard product lengths.)

Note: It is typical for this product to be wall-mounted with two units facing each other. However, the basic static load rating and mass given are the values for one carriage and one outer member.

The basic static load rating takes into consideration the number of wheels that can bear a radial load. (See Wheel Contact Positions and Maximum Single Wheel Load on page 6.)

The Model AWG18 comes with extra-low profile bolts for fixing the outer member in place. Please prepare low-profile bolts for Models AWG28 through 43. See the Fastening Torque Table on page 10 for details.

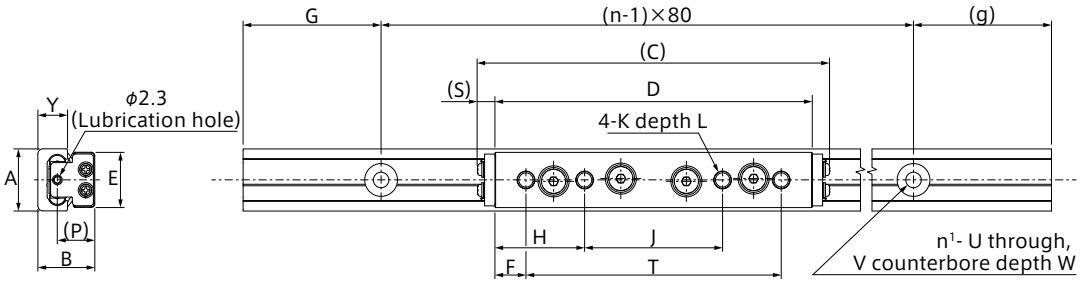
Model Number Coding

Select an option

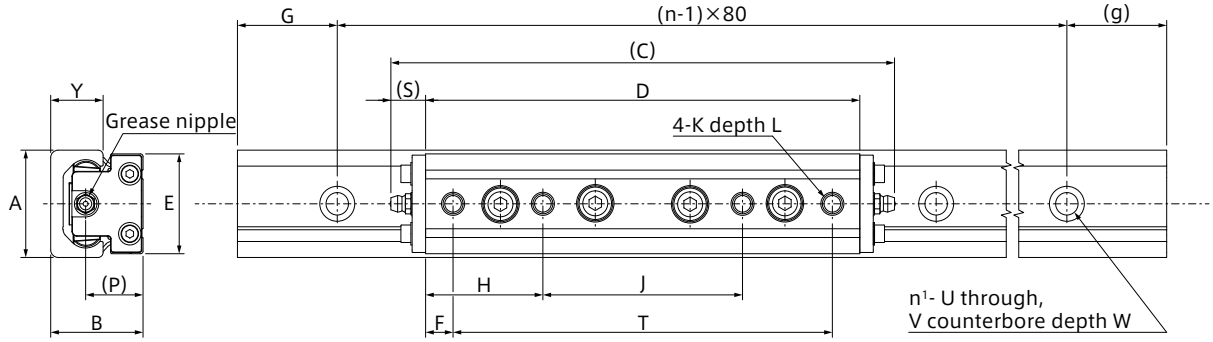
AWG43 RA 2 SS + 1200L

- **AWG43** — Model No.
  - AWG18
  - AWG28
  - AWG35
  - AWG43
- **RA** — Type of carriage
  - RA: With 3 wheels
  - RB: With 4 wheels
  - RC: With 5 wheels
- **2** — Number of carriages used per outer member
- **SS** — Seal symbol
  - No symbol: Without seal
  - SS: Side seals + scrapers
- **+ 1200L** — Outer member length (in mm)
  - Standard lengths: 480, 720, 960, 1200

AWG-RB Type (with 4 Wheels)



AWG18RB



AWG28, 35, 43RB

Unit: mm

Model No.	Outer dimensions			Carriage dimensions											Outer member dimensions					Basic static load rating C_0 (N)	Mass	
	A	B	C	D	S	E	F	T	H	J	K	L	P	Grease nipple	U	V	W	Y	G, g		Carriage (kg)	Outer member (kg/m)
AWG18RB	18	16.5	102.2	92	5.1	16	9	74	26	40	M5	6.9	10.9	—	4.5	9.5	1.7	8.6	40	730	0.04	0.55
AWG28RB	28	24	142.4	117	12.7	25	10	97	33.5	50	M5	11.7	15	A-M4 ×0.7	6	9.5	2.1	12.5	40	2,100	0.151	1.17
AWG35RB	35	30	165.6	139	13.3	32	9	121	39.5	60	M6	13.9	18.9	A-M6F	7	11	2.5	16	40	3,900	0.29	1.83
AWG43RB	43	37	201.8	174	13.9	40	11	152	47	80	M8	17	23	A-M6F	9	14	3.7	21	40	6,100	0.566	2.94

[1] Specify n, the number of mounting holes, based on the length of the outer member. (See Outer Member Standard Lengths on page 5 for n, the number of mounting holes, for each of the standard product lengths.)

Note: It is typical for this product to be wall-mounted with two units facing each other. However, the basic static load rating and mass given are the values for one carriage and one outer member.

The basic static load rating takes into consideration the number of wheels that can bear a radial load. (See Wheel Contact Positions and Maximum Single Wheel Load on page 6.)

The Model AWG18 comes with extra-low profile bolts for fixing the outer member in place. Please prepare low-profile bolts for Models AWG28 through 43. See the Fastening Torque Table on page 10 for details.

Model Number Coding

Select an option

AWG43 RB 2 SS + 1200L

Model No.
AWG18
AWG28
AWG35
AWG43

Type of carriage
RA: With 3 wheels
RB: With 4 wheels
RC: With 5 wheels

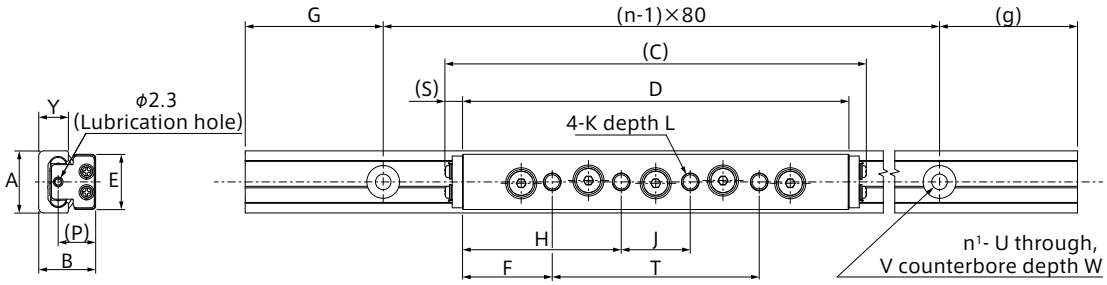
Number of carriages used per outer member

Seal symbol
No symbol: Without seal
SS: Side seals + scrapers

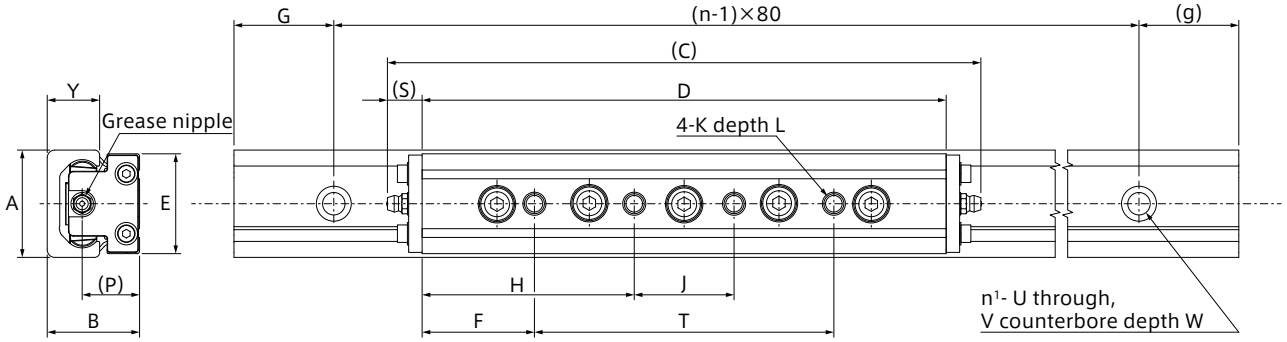
Outer member length (in mm)
Standard lengths: 480
720
960
1200

Dimensional Tables

AWG-RC Type (with 5 Wheels)



AWG18RC



AWG28, 35, 43RC

Unit: mm

Model No.	Outer dimensions			Carriage dimensions											Outer member dimensions					Basic static load rating C_0 (N)	Mass	
	A	B	C	D	S	E	F	T	H	J	K	L	P	Grease nipple	U	V	W	Y	G, g		Carriage (kg)	Outer member (kg/m)
AWG18RC	18	16.5	122.2	112	5.1	16	26	60	46	20	M5	6.9	10.9	—	4.5	9.5	1.7	8.6	40	1,095	0.05	0.55
AWG28RC	28	24	167.4	142	12.7	25	33.5	75	58.5	25	M5	11.7	15	A-M4 ×0.7	6	9.5	2.1	12.5	40	3,150	0.183	1.17
AWG35RC	35	30	195.6	169	13.3	32	39.5	90	69.5	30	M6	13.9	18.9	A-M6F	7	11	2.5	16	40	5,850	0.353	1.83
AWG43RC	43	37	237.8	210	13.9	40	45	120	85	40	M8	17	23	A-M6F	9	14	3.7	21	40	9,150	0.687	2.94

[1] Specify n, the number of mounting holes, based on the length of the outer member. (See Outer Member Standard Lengths on page 5 for n, the number of mounting holes, for each of the standard product lengths.)

Note: It is typical for this product to be wall-mounted with two units facing each other. However, the basic static load rating and mass given are the values for one carriage and one outer member.

The basic static load rating takes into consideration the number of wheels that can bear a radial load. (See Wheel Contact Positions and Maximum Single Wheel Load on page 6.)

The Model AWG18 comes with extra-low profile bolts for fixing the outer member in place. Please prepare low-profile bolts for Models AWG28 through 43. See the Fastening Torque Table on page 10 for details.

Model Number Coding

Select an option

AWG43 RC 2 SS + 1200L

Model No.
AWG18
AWG28
AWG35
AWG43

Type of carriage
RA: With 3 wheels
RB: With 4 wheels
RC: With 5 wheels

Number of carriages used per outer member

Seal symbol
No symbol: Without seal
SS: Side seals + scrapers

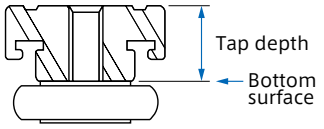
Outer member length (in mm)
Standard lengths: 480
720
960
1200

Handling

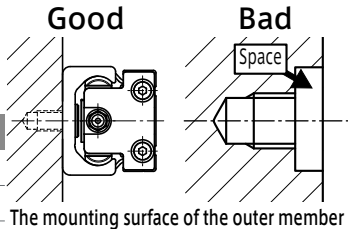
(1) Tilting a carriage or outer member may cause it to fall by its own weight.
(2) Please use at least two people to move any product weighing 20 kg or more, or use a cart or another method of conveyance.
(3) Do not disassemble the parts. This may result in loss of functionality.
(4) Do not apply a load that exceeds the permissible load.

Use

(1) When installing this product, wall-mount two units facing each other. If mounting a single unit on its own, please prepare a steady brace. If a mounting orientation other than the aforementioned is required, contact THK.
(2) Placing a hand inside the outer member's mounting holes may lead to the hand being caught between the carriage and outer member and cause injury.
(3) When using joint products, confirm that the sliding resistance of the joint portion will not fluctuate before mounting.
(4) Do not apply an impact to the product when mounting. Doing so can impair the function of wheels and other elements.
(5) Prevent foreign materials, such as cutting chips or coolant, from entering the product. Failure to do so could damage the product.
(6) Do not use the product at temperatures above 80°C. If used above this temperature, there is a risk that the resin and rubber parts may deform or become damaged.
(7) If particles, liquids, or other substances adhere to the product, replenish the lubricant after cleaning the product.
(8) Wear appropriate safety gear, such as protective gloves and safety shoes, when handling the product.
(9) Do not stand on this product or its packaging. Do not apply a strong impact to this product.
(10) If a stopper is added to prevent the carriage from coming off at the edge of the outer member, make sure that the stopper does not make contact with the carriage.
(11) If this product breaks due to an accident or other cause, the carriage may come off of the outer member and fall. For the safe use of this product, take precautions such as adding a mechanism to prevent carriages from falling. Please use a mechanism that is structured in a way that it does not touch the product directly, because if an impact load is applied to an end plate or grease nipple, it may break and cause a malfunction.
(12) For the carriage securing bolts, select a length that will leave some clearance between the tip of the bolt and the bottom of the tap hole so that the bolts don't break through the lower surface of the hole. If the tip of a bolt breaks through the bottom surface of the tap hole, it can make contact with the wheels and damage them.
(13) If the mounting material lacks sufficient rigidity or accuracy, the bearing load will be concentrated at one location and performance will dramatically decrease. Therefore, carefully consider the rigidity and accuracy of the housing and base as well as the strength of the securing bolts.
(14) If the product will be used in a location with a lot of vibration, we recommend using a locking agent on the mounting screws.
(15) If significant sliding resistance occurs along the stroke, it may be a result of how rough the mounting surface is, so it may be necessary to reexamine its machining accuracy.
(16) If this product is used with a large displacement in the rolling direction, it may not seal as well. If you want to improve its ability to form a seal, please contact THK.
(17) If there are open spaces on the mounting surface for the outer member, the axial force of the screws may cause damage to the seating surface. Mount the outer member to a surface that does not have open spaces.
(18) Use the Tightening Torque Table on this page when securing outer members and carriages.



Cross-section detail of the tapped area



The mounting surface of the outer member

Tightening Torque Table

Model No.		Screw size	Type of fastener used	Tightening torque	Notes
AWG18	Outer member	M4	Extra-low profile hexagonal-socket-head type bolt[1]	1.5 N·m	Strength grade: 5.8
	Carriage	M5	Bolt chosen by customer[2]	3.7 N·m	Recommended strength grade: 8.8 to 10.9
AWG28	Outer member	M5	Low-profile hexagonal-socket-head type bolt	5 N·m	Recommended strength grade: 10.9
	Carriage	M5	Bolt chosen by customer	3.7 N·m	
AWG35	Outer member	M6	Low-profile hexagonal-socket-head type bolt	8.4 N·m	
	Carriage	M6	Bolt chosen by customer	6.4 N·m	
AWG43	Outer member	M8	Low-profile hexagonal-socket-head type bolt	19.1 N·m	
	Carriage	M8	Bolt chosen by customer	15 N·m	

[1] For the Model AWG18, use the included extra-low profile bolts (M4×8L) for fixing the outer member in place. If using bolts other than these, make sure that they are M4 extra-low profile hexagonal-socket-head bolts. Using other bolts can result in the bolts and the wheels making contact, which may cause damage.
[2] The tightening torque of the chosen bolt is for when the effective engagement length is 4.5 mm to 6.9 mm.

Lubrication

(1) Do not mix different lubricants. Even lubricants containing the same type of thickening agent may, if mixed, interact negatively due to disparate additives or other ingredients.
(2) The consistency of lubricant changes according to the temperature. Please keep in mind that the product's sliding resistance may be affected by changes in viscosity. After lubrication, the sliding resistance of the product may increase due to the stirring resistance of the lubricant. Be sure to perform a warming-up operation and allow the lubricant to break in sufficiently before operating the machinery.
(3) Excess lubricant may spatter after lubrication. Wipe off spattered lubricant as necessary.
(4) Lubricant deteriorates over time, which decreases its lubricity, so perform regular inspections and replenish lubricant based on frequency of use.
(5) How often lubricant should be replenished varies depending on the operating conditions and environment. We recommend lubricating the system approximately every 100 km traveled (3 to 6 months). The final lubrication interval/amount should be set at the actual machine.

Storage

When storing the slide rail, pack it as designated by THK and store it indoors in a horizontal position away from high or low temperatures and high humidity. Please note that if the product has been kept in storage for an extended period, the lubricant inside may have deteriorated. Please ensure that you replenish the lubricant before use.

Disposal

The product should be treated as industrial waste and disposed of appropriately.

Utility Slide **Advanced Wheel Guide**

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