

# Self-lubricator Standard Linear Guide

## LSD Series



### Order Information(Combined)

#### 1、LSD15/30

LSD □ 15 H N 1 X220 S20 A H-U-AM6-B-T-E

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩ ⑪ ⑫ ⑬ ⑭ ⑮

①Model Code	LSD:Self-lubricator Standard Linear Guide				
②Rail&Block surface treatment	Blank: without additional coating. (natural color) ★BB: Block and rail coated with black chrome				
③Rail Width	15:15mm      30:28mm				
④Block Style	H: Square type      F1: Flange type, Mounting from top F2: Flange type, Mounting from bottom F3: Flange type, Mounting from top or bottom				
⑤Block type	S: Short      N: Standard				
⑥Number of Block	1: One   2: Two [Note: Amount of block on a single set of linear guide]				
⑦Length of Rail	220:220mm .....[Defined by customer]				
⑧Position of first mounting hole	S□ : Distance from end of rail to the center of first mounting hole (It is recommended to be greater than minimum margin)				
⑨Preload	A: Standard clearance   B: Light Preload   C: Medium Preload				
⑩Accuracy	N : Normal      H : High      P : Precision				
⑪Rail type	LSD15:Blank: Top-mount(M4)		LSD15:U: Top-mount(M3)		
	LSD30:Blank: Top-mount(M6)		LSD30:U: Top-mount(M8)		
	LSD15	LSD30	LSD15		
	LSD30				
⑫Nipple /adapter type	LSD15: M4: M4 Nipple		LSD15: AM6: M4 to M6	LSD15: LM6: M4 to M6	
	LSD30: M6: M6 Nipple		LSD30: A01: M6 to PT1/8	LSD30: L01: M6 to PT1/8	
	LSD30: AM8: M6 to M8		LSD30: LM8: M6 to M8	LSD30: SM6: M6 Nipple	
	M4	M6	I type	L type	SM6
⑬Packing type	Blank: the block and rail are assembled B: block and rail are put separately				
⑭Rail type	Blank: Top-mount      T: Bottom-mount				
⑮Self-lubricator Standard Type	E:Self-lubricator Standard Type				

[Note ] For LSD-BB series, standard length of a rail is 3 m.

Please contact with our company if length of rail exceeds the maximum.

Add: Rail type indicated in ⑪ and ⑫ in ordering code cannot be selected at the same time, only one of them can be selected.





# Self-lubricator Standard Linear Guide

## LSD Series

### 2、LSD20/25/35

LSD □ 20 H N 1 X220 S20 A H - AM8-B - T-E

1 2 3 4 5 6 7 8 9 10 11 12 13 14

① Model Code	LSD:Self-lubricator Standard Linear Guide			
② Rail&Block surface treatment	Blank: without additional coating. (natural color) ★BB: Block and rail coated with black chrome			
③ Rail Width	20:20mm    25:23mm    35:34mm			
④ Block Style	H: Square type    F1: Flange type, Mounting from top F2: Flange type, Mounting from bottom F3: Flange type, Mounting from top or bottom			
⑤ Block type	S: Short    N: Standard			
⑥ Number of Block	1: One    2: Two [Note: Amount of block on a single set of linear guide]			
⑦ Length of Rail	220:220mm .....[Defined by customer]			
⑧ Position of first mounting hole	S□ : Distance from end of rail to the center of first mounting hole (It is recommended to be greater than minimum margin)			
⑨ Preload	A: Standard clearance    B: Light Preload    C: Medium Preload			
⑩ Accuracy	N : Normal    H : High    P : Precision			
⑪ Nipple /adapter type	M6:M6 Nipple	A01:M6 to PT1/8 AM8:M6 to M8	L01:M6 to PT1/8 LM8:M6 to M8	SM6: M6 Nipple
		I type 	L type 	SM6 
⑫ Packing type	Blank: the block and rail are assembled B: block and rail are put separately			
⑬ Rail type	Blank: Top-mount    T: Bottom-mount			
⑭ Self-lubricator Standard Type	E:Self-lubricator Standard Type			

[Note ] For LSD-BB series, standard length of a rail is 3 m.  
Please contact with our company if length of rail exceeds the maximum.

# Self-lubricator Standard Linear Guide

## LSD Series

### Butt-jointed Order Information

#### 1、LSD15/30

LSD □ 15 H N 1X2970 T 2940T2970 A H-U-AM6-B -T -E

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩ ⑪ ⑫ ⑬ ⑭ ⑮ ⑯ ⑰ ⑱

Butt-jointed end margin:1/2P ,  
Position of the first and last  
hole is defined by customer.

① Model Code	LSD:Self-lubricator Standard Linear Guide			
② Rail&Block surface treatment	Blank: without additional coating. (natural color) ★BB: Block and rail coated with black chrome			
③ Rail Width	15:15mm		30:28mm	
④ Block Style	H: Square type      F1: Flange type, Mounting from top F2: Flange type, Mounting from bottom F3: Flange type, Mounting from top or bottom			
⑤ Block type	S: Short      N: Standard			
⑥ Number of Block	1: One 2: Two [Note: Amount of block on a single set of linear guide]			
⑦ Length of first Rail	2970:2970mm .....[Defined by customer]			
⑧ Butt-jointed mark	T: Rail Butt-jointed mark(Butt-jointed end margin: 1/2P) [P is the standard hole distance]			
⑨ Length of second Rail	2940:2940mm .....[Defined by customer]			
⑩ Butt-jointed mark	Blank: two rails joint      T: Rail Butt-jointed mark (Butt-jointed end margin: 1/2P) [P is the standard hole distance]			
⑪ Length of third Rail	Blank: two rails joint 2970:2970mm..[Defined by the customer]			
⑫ Preload	A: Standard clearance    B: Light Preload    C: Medium Preload			
⑬ Accuracy	N : Normal      H : High			
⑭ Rail type	LSD15:Blank: Top-mount(M4)		LSD15:U: Top-mount(M3)	
	LSD30:Blank: Top-mount(M6)		LSD30:U: Top-mount(M8)	
	LSD15	LSD30	LSD15	LSD30
⑮ Nipple /adapter type	LSD15: M4: M4 Nipple		LSD15: AM6: M4 to M6	
	LSD30: M6: M6 Nipple		LSD30: A01: M6 to PT1/8	
⑯ Packing type	LSD30: M6: M6 Nipple		LSD30: L01: M6 to PT1/8	
	LSD30: M6: M6 Nipple		LSD30: LM8: M6 to M8	
⑰ Rail type	M4	M6	I type	L type
⑱ Self-lubricator Standard Type	Blank: the block and rail are assembled B: block and rail are put separately			
	Blank: Top-mount      T: Bottom-mount			
⑲ Self-lubricator Standard Type	Blank: Top-mount      T: Bottom-mount			
	E:Self-lubricator Standard Type			

[Note]For LSD-BB series, standard length of a rail is 3 m.

Maximum length of two-joint rail is 6 m. Maximum length of three-joint rail is 9 m.

Please contact with our company if length of rail exceeds the maximum.

Add : Number of joints cannot be more than 2 times(three rails at most).

For LSD15, maximum length of jointed rail is 11800mm.

For LSD30, it's 11880.

Customization is needed for joint times more than standard.

Add2 :Rail type indicated in ⑭ and ⑮ in ordering code cannot be selected at the same time, only one of them can be selected.

# Self-lubricator Standard Linear Guide





## LSD Series

### 2、LSD20/25/35

LSD □ 20 H N 1X2970T2940T2970A H-AM8-B-T-E

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17

Butt-jointed end margin:1/2P ,  
Position of the first and last  
hole is defined by customer.

① Model Code	LSD:Self-lubricator Standard Linear Guide			
② Rail&Block surface treatment	Blank: without additional coating. (natural color) ★BB: Block and rail coated with black chrome			
③ Rail Width	20:20mm	25:23mm	35:34mm	
④ Block Style	H: Square type                      F1: Flange type, Mounting from top F2: Flange type, Mounting from bottom F3: Flange type, Mounting from top or bottom			
⑤ Block type	S: Short    N: Standard			
⑥ Number of Block	1: One    2: Two [Note: Amount of block on a single set of linear guide]			
⑦ Length of first Rail	2970:2970mm .....[Defined by customer]			
⑧ Butt-jointed mark	T: Rail Butt-jointed mark (Butt-jointed end margin: 1/2P) [P is the standard hole distance]			
⑨ Length of second Rail	2940:2940mm .....[Defined by customer]			
⑩ Butt-jointed mark	Blank: two rails joint              T: Rail Butt-jointed mark (Butt-jointed end margin: 1/2P) [P is the standard hole distance]			
⑪ Length of third Rail	Blank: two rails joint    2970:2970mm..[Defined by the customer]			
⑫ Preload	A: Standard clearance    B: Light Preload    C: Medium Preload			
⑬ Accuracy	N : Normal                      H : High			
⑭ Nipple /adapter type	M6: M6 Nipple	A01: M6 to PT1/8 AM8: M6 to M8	L01: M6 to PT1/8 LM8: M6 to M8	SM6: M6 Nipple
		I type 	L type 	SM6 
⑮ Packing type	Blank: the block and rail are assembled B: block and rail are put separately			
⑯ Rail type	Blank: Top-mount              T: Bottom-mount			
⑰ Self-lubricator Standard Type	E:Self-lubricator Standard Type			

[Note]For LSD-BB series, standard length of a rail is 3 m.

Maximum length of two-joint rail is 6 m. Maximum length of three-joint rail is 9 m.

Please contact with our company if length of rail exceeds the maximum.

Add: Number of joints cannot be more than 2 times(three rails at most).

For LSD20/25, maximum length of jointed rail is 11800mm.

For LSD35, it's 11880.

Customization is needed for joint times more than standard.

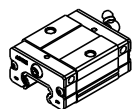
# Self-lubricator Standard Linear Guide

## LSD Series

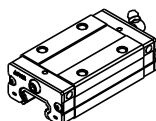
### 1. Block Order Information

LSD □ 15 BK - H N - H - D - AM6-E







① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩



S: Short



N: Standard

①Model Code	LSD:Self-lubricator Standard Linear Guide							
②Rail&Block surface treatment	Blank: Block without additional coating. (natural color) ★B: Block coated with black chrome							
③Rail Width	15:15mm	20:20mm	25:23mm	30:28mm	35:34mm			
④Block Code	BK: Block							
⑤Block Style	H: Square type                      F1: Flange type, Mounting from top F2: Flange type, Mounting from bottom F3: Flange type, Mounting from top or bottom							
⑥Block type	S: Short                      N: Standard							
⑦Accuracy	N : Normal                      H : High							
⑧Group code	SD                      SC                      SB                      B                      D [Note1]							
⑨Nipple /adapter type	15	M4	M4 Nipple		20 25 30 35	M6	M6 Nipple	
		AM6	M4 to M6	I type 		A01	M6 to PT1/8	I type 
		LM6	M4 to M6	L type 		AM8	M6 to M8	L type 
						L01	M6 to PT1/8	
						LM8	M6 to M8	
						SM6	M6 Nipple	
⑩Self-lubricator Standard Type	E:Self-lubricator Standard Type							

[Note1] When selecting rails and bearings, the different pairing codes can change the units preload, details see "preload pairing chart".

## LSD Series

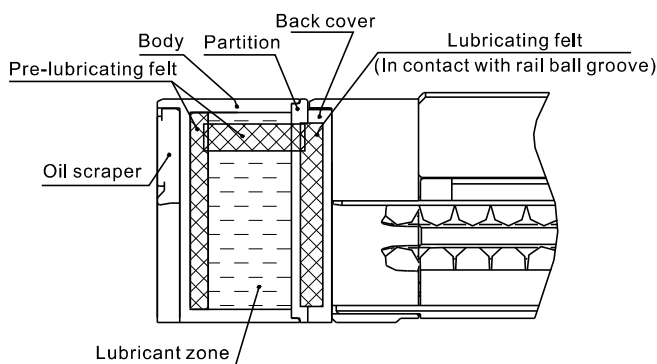
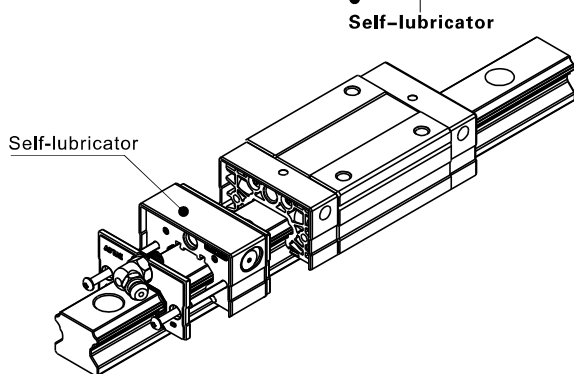
### Self-lubricator illustration

#### 1.Code and structure

AirTAC provides self-lubricator for applications e.g. limited spaces, or where grease maintenance is challenging.

If needed, please add the code "E" after the product model.

E.g. LSD15HN1X220S20AH-AM6 - B - T - E



### Product Features

- 1.Easy Maintenance and Long-Term Maintenance-Free Operation: In normal applications, basically no additional grease maintenance is required throughout lifespan of linear guide.
  - 2.Cost Savings: No additional lubrication is needed for the block, reducing labor and material costs.
  - 3.Flexible Use in Specific Environments: Equipped with a high-capacity grease tank, allowing the use of specific lubricants for specific environments.
  - 4.Dustproof Design: Built-in dustproof structure extends lifespan.
  - 5.Flexible in usage and installation: the assembling and disassembling of self-lubricator in integrity structure is convenient, can have it according to different working condition.
- [Note] Self-lubricator type block is not applicable for ultra-smooth application, as the higher viscosity of the lubricant in self-lubricator will increases friction by approximately 5~7N.

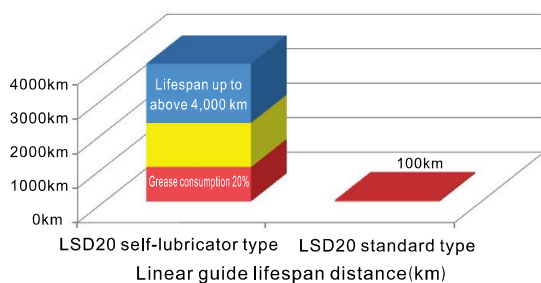
#### Durability test of self-lubricator

##### Test specification

Test specification	Model	Speed	Stroke	Lubricant type
Lubricating effect	LSD20	30m/min	1200mm	ISO VG680 high-quality extreme pressure lubricant

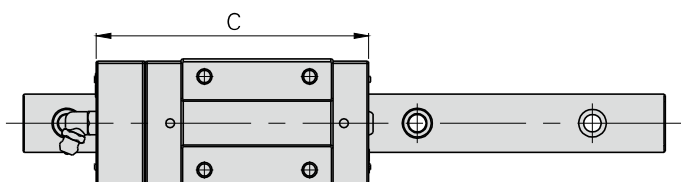
##### Test result

Test result shows that after running 1,000 km, only 20% of the grease is consumed, and the linear guide remains lubricated. The expected service life can possibly exceed 4,000 km.



When comparing each sub-series with the self-lubricator and the standard model, the length of block will change. Please refer to the table below for details.

- Block dimension comparison (only dimension C is different from the standard, the rest remains the same)

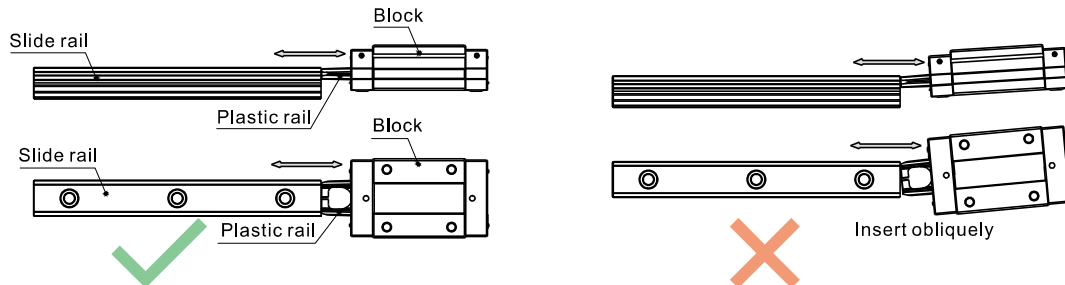


Model	Type	Length C(mm)	
		Standard (Blank)	Self-lubricator Standard Type
LSD15□S	Short	40,5	55
LSD15□N	Standard	57	71.5
LSD20□S	Short	46	62
LSD20□N	Standard	65	81
LSD25□S	Short	59	75
LSD25□N	Standard	83	99
LSD30□S	Short	68,5	84,5
LSD30□N	Standard	97	113
LSD35□S	Short	73,5	89,5
LSD35□N	Standard	106.5	122.5

### Precautions on use

#### 1. Block disassembly

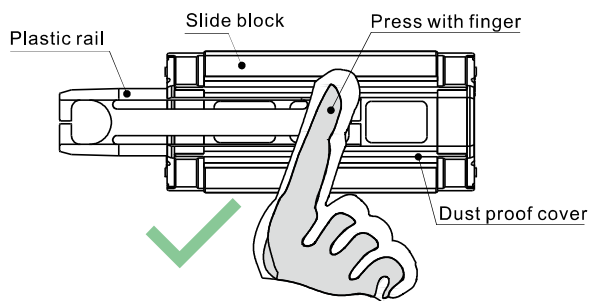
With ball retainers and a dustproof cover, normally the balls are prevented from falling out when block is removed from rail. However, if obliquely insert rail into blocks or quickly assembled or disassembled, there is a risk for balls of falling out. Please carefully assemble the linear guide or use plastic rails to assist.



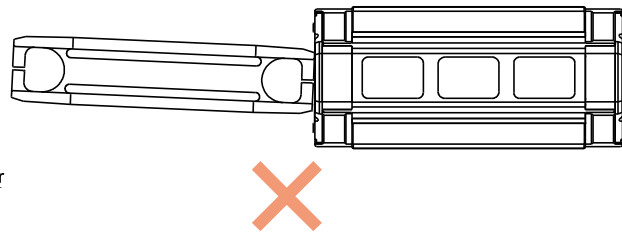
#### 2. Plastic rail installation

A plastic rail is equipped for block set. Please do not remove plastic rail whenever it is not necessary.

If plastic rail falls out and needs to be reinstalled, press the dustproof covers with fingers and install slowly to prevent balls from falling out due to misalignment of plastic rail.



Press the dust-proof covers and insert plastic rail in alignment.



Without pressing dust-proof covers or insert plastic rail obliquely.

#### 3. Caution

- Parts may slide out if linear guide is put unevenly. Please be careful.
- Hitting or dropping linear guide could have huge effect on accuracy and lifespan even though appearance may remain intact. Please be careful.
- Do not disassemble linear guide as external objects may enter blocks and cause accuracy problem.

#### 4. Lubrication

- Linear guide have been treated with anti-rust oil during production. Before use, wipe the rail and treat it with lubrication.
- Do not mix lubricating oil (grease) with different properties.
- After lubrication, move block back and forth for the length of three blocks long and repeat at least 2 times to ensure there is a grease file on rail.

#### 5. Use

- The operating environment temperature should not exceed 80°C, and the maximum temperature should not exceed 100°C.
- Do not separate blocks from rail whenever it is not necessary. If you need to separate them, please use plastic rails to prevent steel balls from falling out.

#### 6. Storage

- When storing blocks, rails or linear guide set, please be sure that anti-rust oil is well applied and product is well sealed as well as placed horizontally. Avoid humidity and high temperatures environment.