

STAR – Linear Sets with Standard Linear Bushings **A** or **B**

Overview

7055 808

Linear Sets

Tandem Linear Sets

Super Linear Bushings **A*
with self-alignment feature

Super Linear Bushings **B**
without self-alignment feature

Super Linear Bushings **A**
with self-alignment feature

**Aluminum
housing**

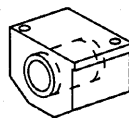
**Cast iron
housing**

Aluminum housing

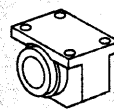
Closed type

For high-precision guidance with extreme ease of mounting. Version with fixed working bore diameter.

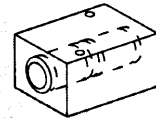
1035-...



1065-...



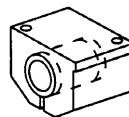
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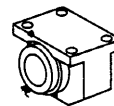
Adjustable type

For use when zero clearance or preload is required. The desired radial clearance is established by means of an adjusting screw. These Linear Sets are adjusted to zero clearance before delivery.

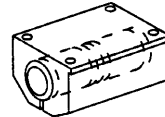
1036-...



1066-...



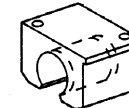
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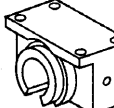
Open type

For long guideways when the shafts must be supported and high rigidity is required.

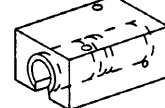
1037-...



1067-...



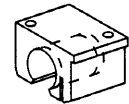
1087-...



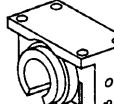
Open type, adjustable

For use when zero clearance or preload is required. The desired radial clearance is established by means of an adjusting screw. These Linear Sets are adjusted to zero clearance before delivery.

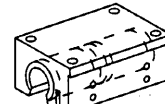
1038-...



1068-...



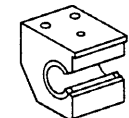
1034-...



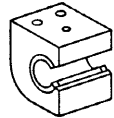
With side opening

Takes up forces from all directions without reduction of load capacity.

1071-...



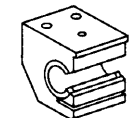
1073-...



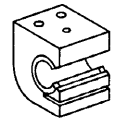
With side opening, adjustable

For use when zero clearance or preload is required. The desired radial clearance is established by means of an adjusting screw. These Linear Sets are adjusted to zero clearance before delivery.

1072-...



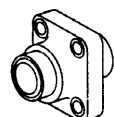
1074-...



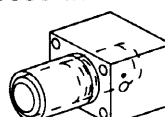
Flanged type

This element was developed as a complement to our Linear Set series for use in applications requiring the shaft to be arranged at right angles to the mounting base.

1081-...



1083-...



Advantages

High load capacity and rigidity

These Linear Sets afford high rigidity irrespective of the direction of load action and even when their high load-carrying capacities are utilized to the full.

Compact block design and ease of mounting in the aluminum version

The Super Linear Bushing is completely enclosed in the compact housing to protect it against all external impacts. Tapped through-holes make it possible to insert the screws from above or below. A fitting edge along the block facilitates lining up during installation and prevents misalignment of the assembly. Center-bores are provided for the user to drill locating pin holes for extra stability.

High precision and reliability

The housing design and the integral Super Linear Bushing ensure high precision and functional reliability.

Zero-clearance

The adjustable versions can be used to achieve zero clearance assemblies.

Operating temperatures

These Linear Sets are resistant to temperatures up to 100 °C.

Mounting instructions

Radial clearance

The radial clearance values given in the tables have been obtained by statistical methods and are representative of the values to be expected in actual practice. Adjustable types of Linear Sets are adjusted to zero clearance (when screwed down) on a shaft of diameter accurate to a tolerance of h5 (lower limit) before leaving the factory.

Vertical dimensions

The tables for Linear Sets contain tolerance values for the height dimension 'H'. These tolerance values have been obtained by statistical methods and are representative of the values to be expected in actual practice.

Screws

We recommend screws to DIN 912-8.8 for mounting Linear Sets.

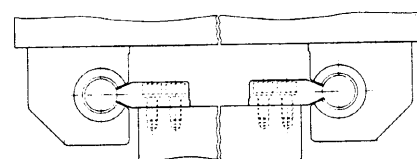
Lubrication

Whether grease is being applied for the first time or in-service, the shaft must always be inserted in the bushing. Add grease until the lubricant emerges.

Notes on mounting of Linear Sets with side opening

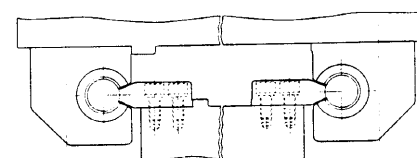
Without fitting edge

- Align first shaft mounted on shaft support rail and screw down support rail.
- Align second shaft to ensure parallelism and screw down support rail.
- Push Linear Sets onto shafts and screw down on the machine table.



With fitting edge

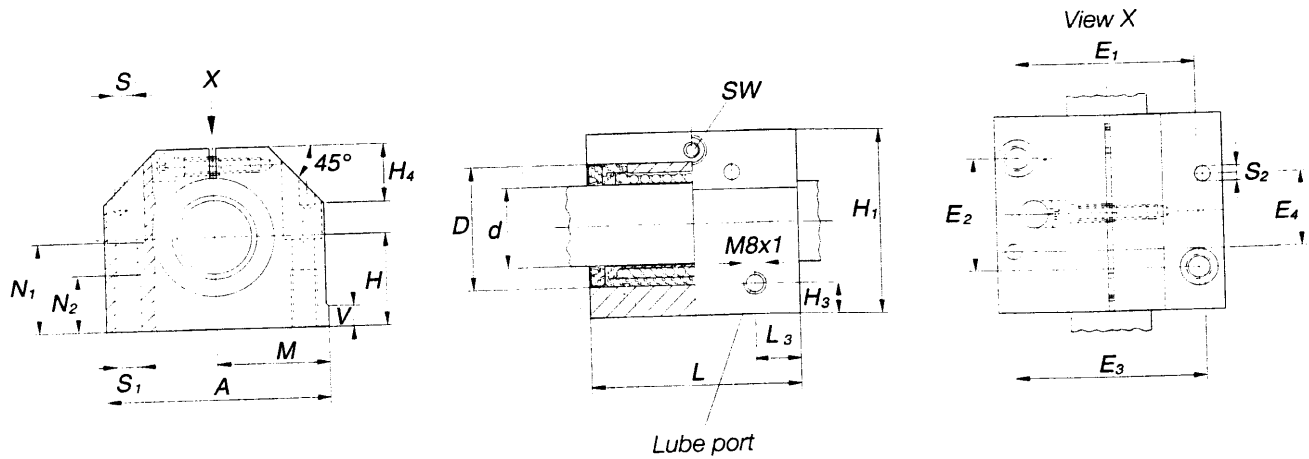
- Push first shaft mounted on shaft support rail into contact with fitting edge and screw down support rail.
- Align second shaft to ensure parallelism and screw down support rail.
- Push Linear Sets onto the shafts. Further assembly:



- a) With two fitting edges (one on machine base and one on table): Push the Linear Sets on the first shaft into contact with the fitting edge on the machine table and screw down. Screw down the Linear Sets on the second shaft to the machine table.

- b) With only one fitting edge (on the machine base): Screw Linear Sets down to the machine table.

Dimensions



Dimensions (mm)

| Ø d | D | H ¹⁾ +0.008 -0.016 | H ₁ | M ¹⁾ ±0.01 | A | L | E ₁ | E ₂ | E ₃ | E ₄ | S ²⁾ | S ₁ | S ₂ ³⁾ | N ₁ | N ₂ | H ₃ | L ₃ | V | SW | H ₄ |
|-----|----|-------------------------------------|----------------|--------------------------|-----|-----|----------------|----------------|----------------|----------------|-----------------|----------------|------------------------------|----------------|----------------|----------------|----------------|-----|-----|----------------|
| 10 | 19 | 16 | 31.5 | 20 | 40 | 36 | 29±0.15 | 20±0.15 | 31 | 29 | 4.3 | M5 | 4 | 15 | 11 | 10 | 10.5 | 5 | 2.5 | 10 |
| 12 | 22 | 18 | 35 | 21.5 | 43 | 39 | 32±0.15 | 23±0.15 | 34 | 32 | 4.3 | M5 | 4 | 16.5 | 11 | 10 | 10.5 | 5 | 2.5 | 10 |
| 16 | 26 | 22 | 42 | 26.5 | 53 | 43 | 40±0.15 | 26±0.15 | 42 | 35 | 5.3 | M6 | 4 | 21 | 13 | 10 | 11.5 | 5 | 3 | 13 |
| 20 | 32 | 25 | 50 | 30 | 60 | 54 | 45±0.15 | 32±0.15 | 50 | 45 | 6.6 | M8 | 5 | 24 | 18 | 10 | 13.5 | 5 | 4 | 16 |
| 25 | 40 | 30 | 60 | 39 | 78 | 67 | 60±0.15 | 40±0.15 | 64 | 20 | 8.4 | M10 | 6 | 29 | 22 | 10 | 15 | 6.5 | 5 | 20 |
| 30 | 47 | 35 | 70 | 43.5 | 87 | 79 | 68±0.15 | 45±0.15 | 72 | 30 | 8.4 | M10 | 6 | 34 | 22 | 11.5 | 16 | 8 | 5 | 22 |
| 40 | 62 | 45 | 90 | 54 | 108 | 91 | 86±0.15 | 58±0.15 | 90 | 35 | 10.5 | M12 | 8 | 44 | 26 | 14 | 18 | 10 | 6 | 28 |
| 50 | 75 | 50 | 105 | 66 | 132 | 113 | 108±0.20 | 50±0.20 | 108 | 42 | 13.5 | M16 | 10 | 49 | 34 | 12.5 | 22 | 12 | 8 | 37 |

Radial clearance (µm) Load capacities (N)⁴⁾

| Ø d | 1035- shaft | | 1036- shaft | dyn. C | stat. C ₀ |
|-----|----------------|------------|----------------|-----------|-------------------------|
| | h6 | h7 | | | |
| 10 | +36 +9 | +40 +11 | | 550 | 330 |
| 12 | +38 +10 | +43 +12 | | 770 | 420 |
| 16 | +38 +10 | +43 +12 | | 940 | 530 |
| 20 | +43 +11 | +49 +13 | | 1860 | 1050 |
| 25 | +43 +11 | +49 +13 | | 3640 | 2180 |
| 30 | +43 +11 | +49 +13 | | 4420 | 2790 |
| 40 | +50 +12 | +57 +14 | | 7590 | 4350 |
| 50 | +50 +12 | +57 +14 | | 11100 | 6470 |

adjusted to zero clearance on h5 shaft
(lower limit) when screwed down

- When screwed down, relative to shaft nominal dimension d.
- Mounting screws to DIN 912-8.8.
- Center-bores for locating pin holes.
- The load capacities stated are minimum values as the position and direction of load cannot always be precisely defined.

STAR – Linear Sets with Super Linear Bushings **A** or **B**

Linear Sets, 1035- closed type

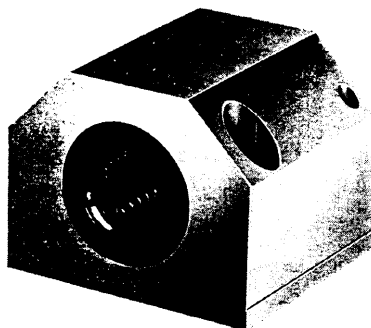
Linear Sets, 1036- adjustable

Structural design

- Precision Housing, lightweight series (aluminum)
- Super Linear Bushing with or without self-alignment feature
- external seals
- fully sealed
- lubricatable

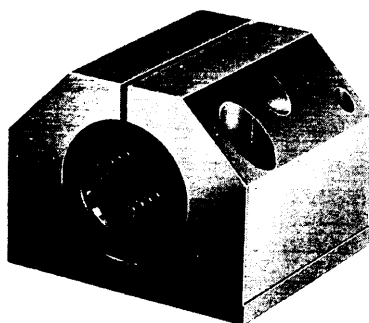
Ordering data

closed type



| Shaft Ø d (mm) | Part numbers | | Mass (kg) |
|----------------------|------------------------------------|------------------------------------|--------------|
| | with Super Linear Bushing A | with Super Linear Bushing B | |
| | lubricatable with two seals | lubricatable with two seals | |
| 10 | 1035-610-20 | 1035-810-20 | 0.10 |
| 12 | 1035-612-20 | 1035-812-20 | 0.13 |
| 16 | 1035-616-20 | 1035-816-20 | 0.20 |
| 20 | 1035-620-20 | 1035-820-20 | 0.34 |
| 25 | 1035-625-20 | 1035-825-20 | 0.65 |
| 30 | 1035-630-20 | 1035-830-20 | 0.97 |
| 40 | 1035-640-20 | 1035-840-20 | 1.80 |
| 50 | 1035-650-20 | 1035-850-20 | 3.00 |

adjustable



| Shaft Ø d (mm) | Part numbers | | Mass (kg) |
|----------------------|------------------------------------|------------------------------------|--------------|
| | with Super Linear Bushing A | with Super Linear Bushing B | |
| | lubricatable with two seals | lubricatable with two seals | |
| 10 | 1036-610-20 | 1036-810-20 | 0.10 |
| 12 | 1036-612-20 | 1036-812-20 | 0.13 |
| 16 | 1036-616-20 | 1036-816-20 | 0.20 |
| 20 | 1036-620-20 | 1036-820-20 | 0.34 |
| 25 | 1036-625-20 | 1036-825-20 | 0.65 |
| 30 | 1036-630-20 | 1036-830-20 | 0.97 |
| 40 | 1036-640-20 | 1036-840-20 | 1.80 |
| 50 | 1036-650-20 | 1036-850-20 | 3.00 |