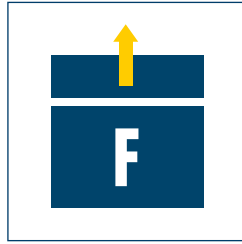


System HSB Toothed-belt Drive

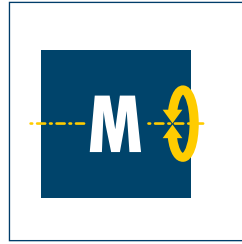
Linear Axes · Toothed-belt Drive



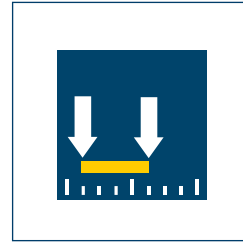
Range of stroke
up to 7,720 mm



Driving force
up to 10,000 N



Moment load
up to 3,600 Nm

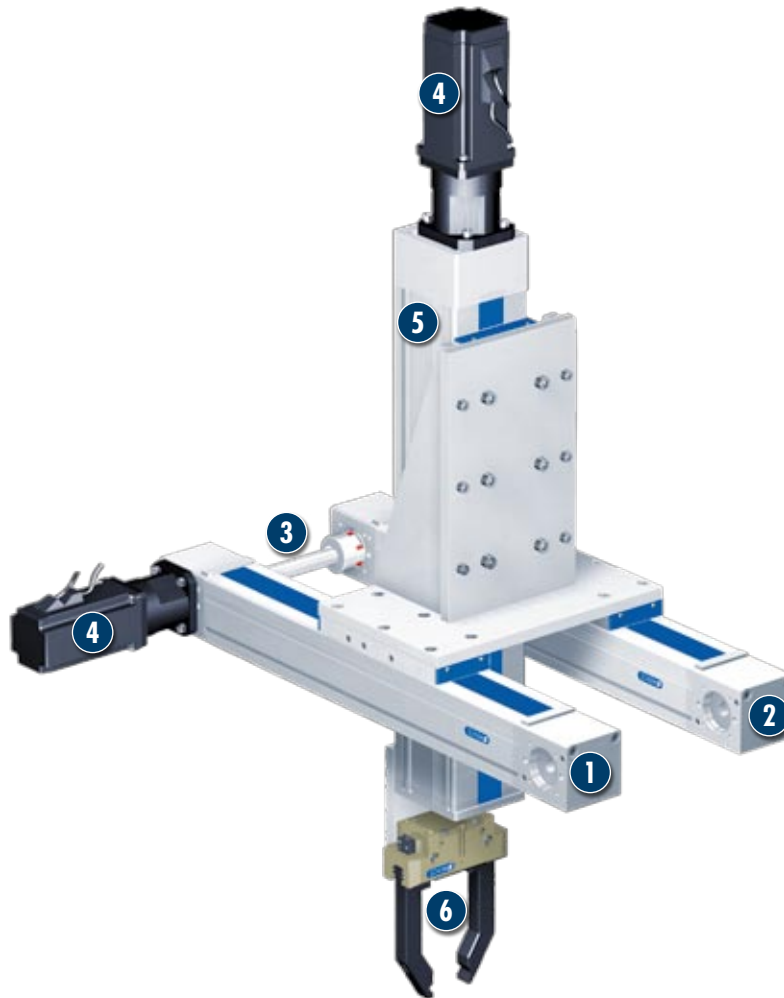


Repeat accuracy
+/- 0.08 mm



Max. speed
Up to 8 m/s

Application example



Loading gantry for automatic
tool loading

- 1** Toothed belt axis B 80-ZRS driving
- 2** Toothed belt axis B 80-ZRS synchronized
- 3** Connection shaft with claw coupling for synchronization
- 4** Servo motors with flange connection
- 5** Vertical axis with ball screw spindle B 110-SSS
- 6** 2-finger parallel gripper, PGN plus 80

Linear axis with toothed belt drive

The range includes 15 sizes. Depending on use, it is possible to choose between roller guide and profiled rail guide.

Area of application

Economical axis applications with high demands for dynamics and smooth running. Even long stroke lengths can be realized with this drive system.

Your advantages and benefits

Complete modular system

with standard components for maximum availability

Closed system

for maximum dirt resistance

Profiled rail or roller guide

for optimum adaptation to the application

Economical system

due to ease of maintenance and optimum size - performance ratio



General information about the series

Drive

free from play, robust toothed belt drive, adjustable toothed belt tension

Profile guide

Aluminum press-drawn section with plastic tape cover, choice of profile rail or roller guide

Material

Natural anodized aluminum parts

Operating temperature

From 10°C to 80°C

Warranty

24 months

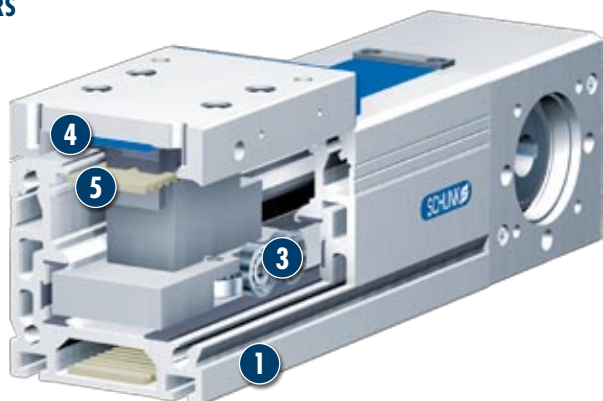
For production reasons, the colors may vary from those shown in the catalog.

System HSB Toothed-belt Drive

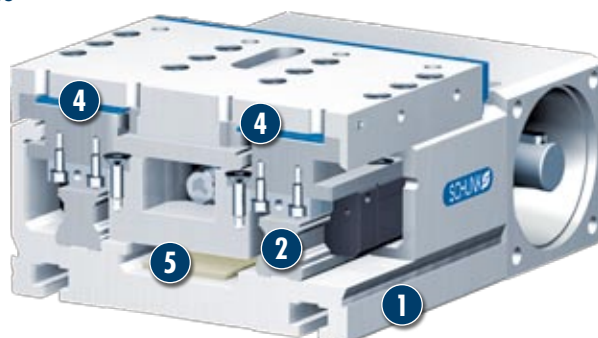
Linear Axes • **Toothed belt drive**

Sectional diagram of the functions

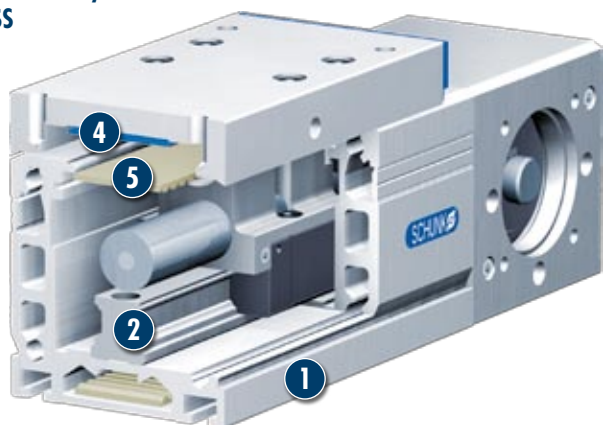
HSB beta® system
ZRS



HSB delta® system
ZSS



HSB beta® system
ZSS



- 1 Axis body as the support profile
- 2 Profiled rail guide
- 3 Roller guide
- 4 Covering tape made of plastic
- 5 Toothed drive belt

Description of function

The axis carriage is driven by a toothed belt and precisely guided by a roller or profiled rail guide. The covering tape runs through the axis carriage.

Options and special information

The servo motor can be connected to the pinion shaft by a flange and a coupling.

① On request, SCHUNK can supply complete drive solutions including motor, gears, controller, and cables.

Accessories

Accessories from SCHUNK – the suitable companion for the best functionality, reliability, and controlled production for all automation components.

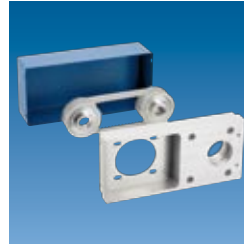
Motor flanges



Motors



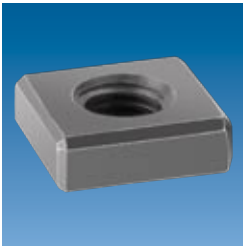
Angle belt drive



Bevel gear



T-nut



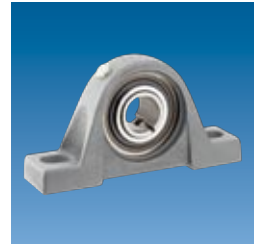
Connection shafts



Mounting strips



Pedestal bearing



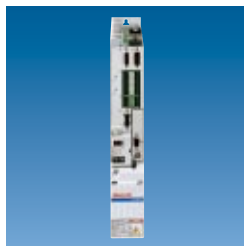
Inductive proximity switch



Mechanical roller switches



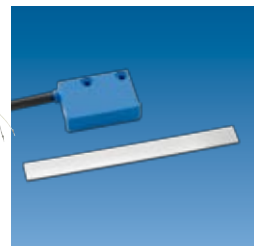
Drive controller



Cable set



Stroke measuring system



① Please see the side views at the end of the respective size for information concerning specific sizes, availability, designation, and ID numbers. Further information on pedestal bearings, connection shafts and bevel gears can be found in the "OPTIONS for System HSB" section of the catalog.

General information about the series

Static load / basic load ratings

For linear units with roller guides, with static loads the static basic load rating (C_{st0}) must be taken into account.

An overview of the static and dynamic basic load ratings for the systems can be found in the "Technical data for installed guides" tables

System HSB Toothed-belt Drive

Linear Axes · Toothed-belt Drive

How to order - Toothed belt drive

B 80 ZRS - 32 AT5 - E - 220 - 1000 - 1420 - AK - AZ1 - 1

Product series B = Beta, D = Delta

Size (version)

Drive

Z = Toothed belt drive
A = Driven slide (type B)

Guidance system

R = Roller guide (type B)
S = Rail guide
G = Sliding guide (type B)

Design version

S = Standard

Drive version

Toothed belt width and tooth pitch

Stroke per revolution

Distance traveled

Overall length

Cover

AK= Cover tape

Accessories

BL 1,2,3,5 and 6 = Mounting strip

EMS / EMB = Mechanical limit switch attached (S - Siemens, B - Balluff)

E02 / E010 = Inductive limit switch, opener with 2m / 10 m cable attached

ES2 / ES10 = Inductive limit switch, closer with 2m / 10 m cable attached

NS ① = T-nut M4

NS ② = T-nut M5

NS ③ = T-nut M6

NS ④ = T-nut M8, 6 thick

NS ⑤ = T-nut M8, 8 thick

NS ⑥ = T-nut M10

NS ⑦ = T-nut M3

NS ⑧ = T-nut M5

NS ⑨ = T-nut M4, 4.5 thick

NS ⑩ = T-nut M6, 6 thick

NS ⑪ = T-nut M4, 3.5 thick

NS ⑫ = T-nut M3, 4.5 thick

RM 2 = T-nut M4

RM 4 = T-nut M5

RM 6 = T-nut M6

AZ 1 = Short drive shaft, attachment side C

AZ 2 = Short drive shaft, attachment side D

AZ 6 = Long drive shaft, attachment side C and D

Special design

0 = Standard

1 = Special (specification in plain text)

Additional accessories (separate item)

MGK = Motor flange and coupling (from dimension sheet)

URT = Angle belt drive (from dimension sheet)