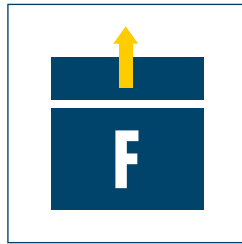


# System HSB Ball Screw Drive

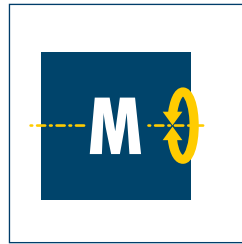
## Linear Axes · Ball Screw Drive



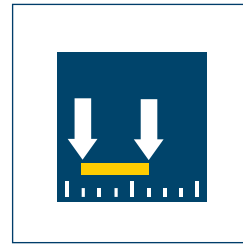
**Range of stroke**  
up to 5,120 mm



**Driving force**  
up to 18,000 N



**Moment load**  
up to 12,000 Nm



**Repeat accuracy**  
 $\pm 0.03$  mm



**Max. speed**  
Up to 2.5 m/s

## Application example



Positioning system for sinter blank processing

- 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 ball screw drive

The range includes 17 sizes. Depending on use, it is possible to choose between roller guide and profiled rail guide.

### Area of application

Axis applications with high demands for precision and driving force.

### Your advantages and benefits

#### Complete modular system

with standard components for maximum availability

#### Closed system

for maximum dirt resistance

#### Ball screw supports

allow higher moving speeds with longer stroke lengths

#### Profiled rail or roller guide

for optimum adaptation to the application

#### Economical system

due to low maintenance and optimum size - performance ratio



### General information about the series

#### Drive

Ball screw spindle drives with one-piece nut with clearance and large spindle pin for maximum force transmission. Optionally available with limited clearance, pre-loaded with no clearance by ball sorting or double nut pre-loaded without clearance and also trapezoidal threaded spindles

#### Profile guide

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

#### Material

Natural anodized aluminum parts

#### Operating temperature

From 10°C to 80°C

#### Warranty

24 months

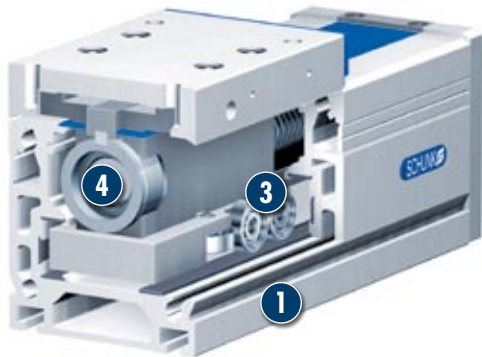
For production reasons, the colors may vary from those shown in the catalog.

# System HSB Ball Screw Drive

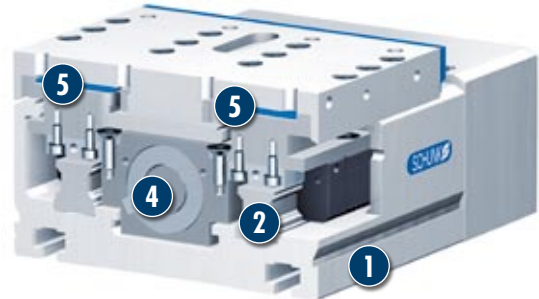
## Linear Axes • Ball Screw Drive

### Sectional functional diagrams

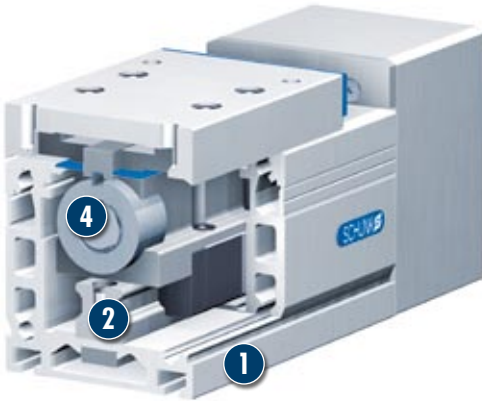
HSB beta® system  
SRS



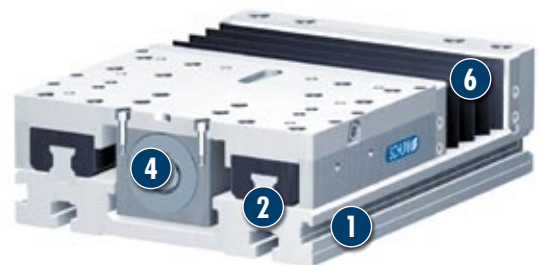
HSB delta® system  
SSS



HSB beta® system  
SSS



HSB alpha® system



1 Axis body as the support profile

2 Profiled rail guide

3 Roller guide

4 Ball screw spindle/  
Trapezoidal threaded spindle

5 Covering tape made of plastic

6 Bellow cover, plastic

### Description of function

The axis carriage is driven by a ball screw spindle 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 motor 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.

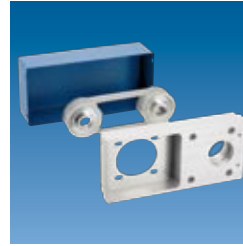
**Motor flanges**



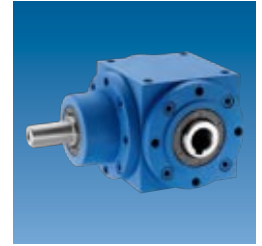
**Motors**



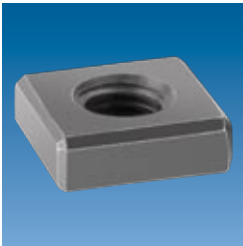
**Angle belt drive**



**Bevel gear**



**T-nut**



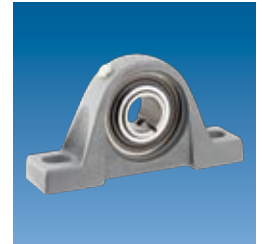
**Connection shafts**



**Mounting strips**



**Pedestal bearing**



**Inductive proximity switch**



**Mechanical roller switches**



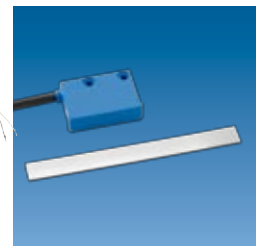
**Drive controller**



**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

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

# System HSB Ball Screw Drive

## Linear Axes · Ball Screw Drive

### How to order - Ball screw spindle drive

B 80 - SRS - M - 2020 - 1000 - 1430 - 2SA - 2ES2 - 0

**Product series B = Beta, D = Delta**

**Size**

**Drive**

S = Spindle

**Guidance system**

R = Roller guide: type B

S = Rail guide

G = (Auxiliary) sliding guide: type B

**Design version**

S = Standard

**Drive type**

M = Single nut (ball screw)

MM = Double nut (ball screw)

TM = Trapezium nut; TR = Gunmetal nut

**Drive version**

Diameter and pitch (ball screw)

Diameter x pitch (trapezoidal thread)

**Distance traveled**

**Overall length**

**Spindle supports (SA)**

(Number)

**Accessories**

BL3 = 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 (3) = T-nut M6

NS (6) = T-nut M10

RM 2 = T-nut M4

RM 6 = T-nut M10

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)

KRG = Directly attached bevel gears

Cover tape is standard for ball screw spindle drive.

### How to order - Linear table with ball screw spindle drive

A 20 B - 225 - M - 2505 - 1000 - 1660 - FB - 2EMS - 0

**Product series**

**Size**

**Drive type**

M = Single nut (ball screw)  
 MM = Double nut (ball screw)  
 TR = Gunmetal nut (trapezium thread)

**Drive version**

Diameter and pitch (ball screw)  
 Diameter x pitch (trapezoidal thread)

**Distance traveled**

**Overall length**

**Cover**

FB = Bellow; ALPHA type only

**Accessories**

EMS / EMB = Mechanical limit switch attached (S - Siemens, B - Balluff)  
 EO2 / EO10 = Inductive limit switch, opener with 2m / 10 m cable attached  
 ES2 / ES10 = Inductive limit switch, closer with 2m / 10 m cable attached

**Special design**

0 = Standard  
 1 = Special (specification in plain text)

MGK = Motor flange and coupling (from dimension sheet)

URT = Angle belt drive (from dimension sheet)