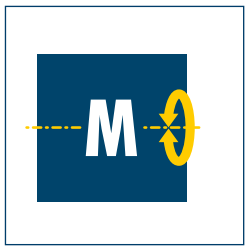
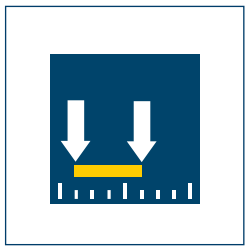
System HSB Rack and Pinion Drive

Range of stroke
up to 5,400 mm

Driving force
up to 4,500 N



Moment load
up to 4,000 Nm



Repeat accuracy
± 0.05 mm

Max. speed
Up to 1.5 m/s

Application example

Line gantry for handling crankshafts

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 rack and pinion drive B 180-AZS
6. 2-finger parallel gripper, PGN plus 160

Linear axis with rack and pinion drive

Boom module for which the motor is on the slide

Area of application

Applications for which it is necessary to secure waste; for example, for vertical uses

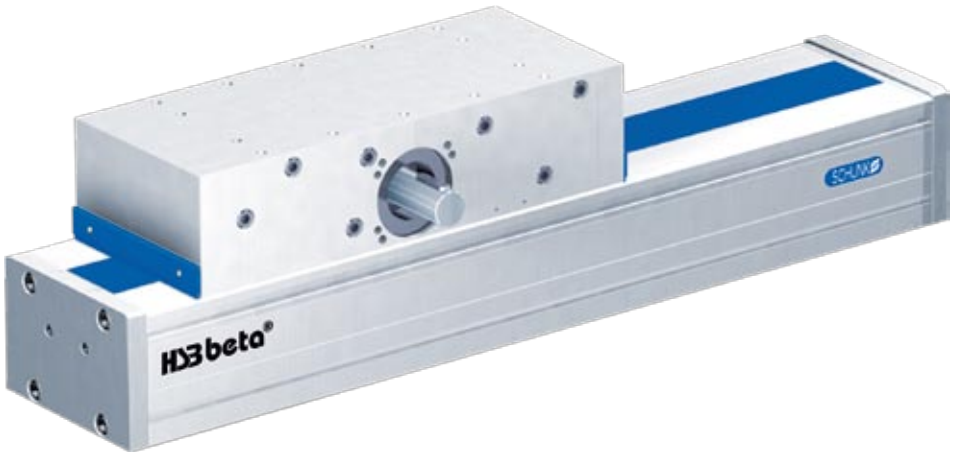
Your advantages and benefits

Reduced mass moved
due to stationary drive

Closed system
for maximum dirt resistance

Double profiled rail guide
for high moment load

Economical system
due to low maintenance and optimum size - performance ratio



General information about the series

Drive
free from play, sturdy rack and pinion drive

Profile guide
Aluminum press-drawn section with plastic tape cover and double profiled rail guide

Material
Natural anodized aluminum parts

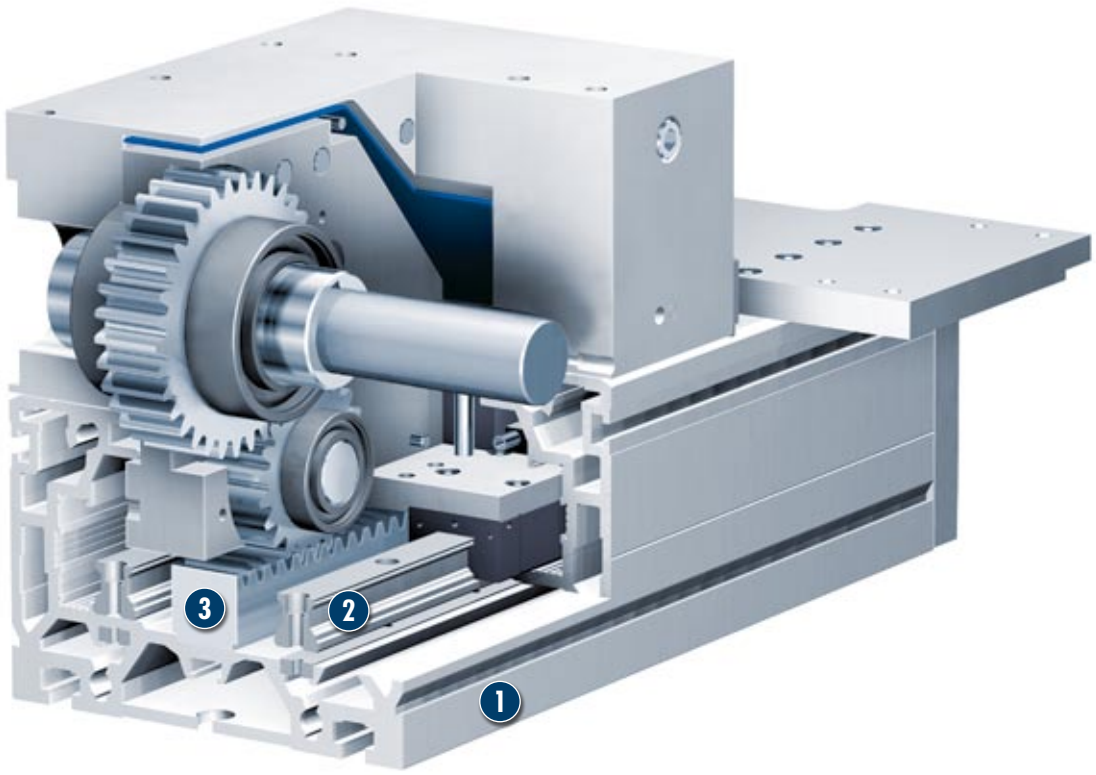
Operating temperature
From 10°C to 80°C

Warranty
24 months

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

System HSB Rack and Pinion Drive

Sectional diagram of function



1 Axis body as the support profile

2 Profiled rail guide

3 Rack and pinion over pinion

Description of function

The axis carriage is driven by a pinion on the rack and precisely guided by a double 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.

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

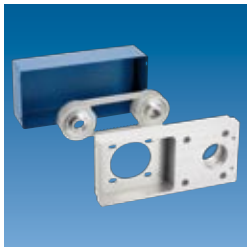
Accessories

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

Motor flanges

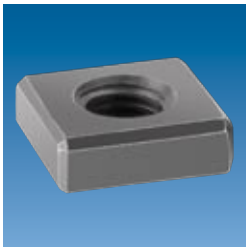
Motors

Angle belt drive



Bevel gear

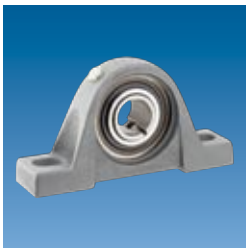
T-nut



Connection shafts

Mounting strips

Pedestal bearing



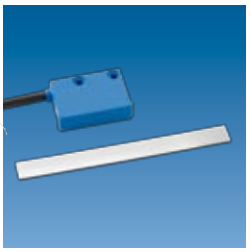
Inductive proximity switch

Mechanical roller switches

Drive controller

Cable set

Stroke measuring system



ⓘ 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.

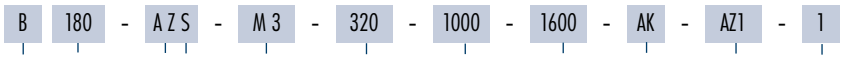
General information about the series

Static and dynamic basic load ratings

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 Rack and Pinion Drive

How to order - Rack and pinion drive



Product series

Size (version)

Drive
A = Driven slide
Z = Rack and pinion drive

Guidance system
S = Rail guide

Drive version
Module = 3

Stroke per pinion revolution

Distance traveled

Overall length

Cover
AK= Cover tape

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)