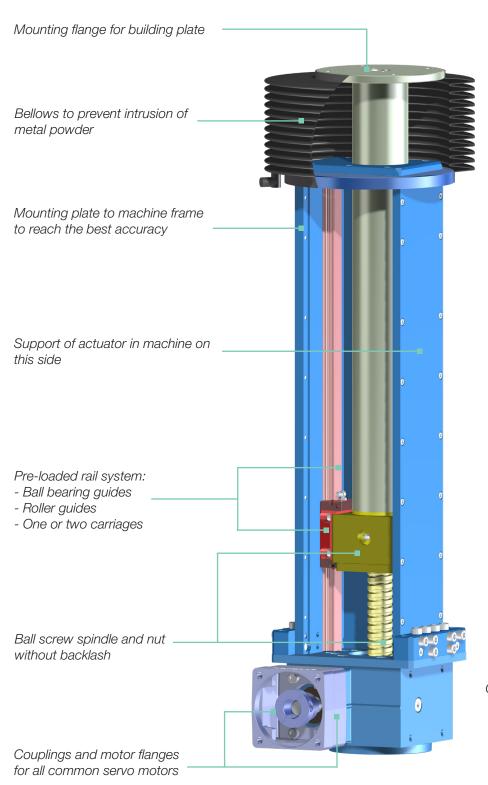




# Linear Actuators for Additive Manufacturing

#### Actuator with Integrated Rail System

Highest precision, defined stiffness by different carriages





#### Technical Data:

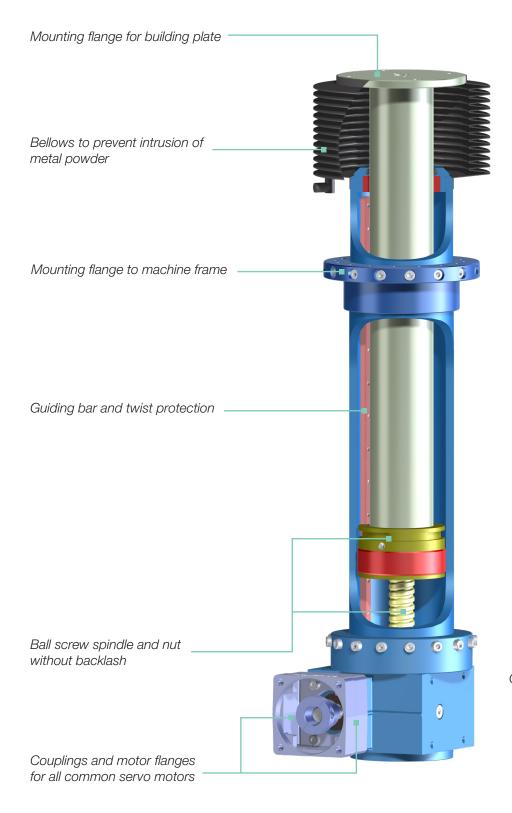
Max. axial force: 25 kN Other forces upon request

Working stroke: max. 1000mm Longer strokes upon request

Accuracy for 350mm stroke: Diagonal movement max. 0.04mm Turning movement max. 0.01mm Concentricity accuracy max. Ø 0.08mm

(Accuracy valid for equal load distributon)

Size: **HS25** Other sizes upon request



#### Technical Data:

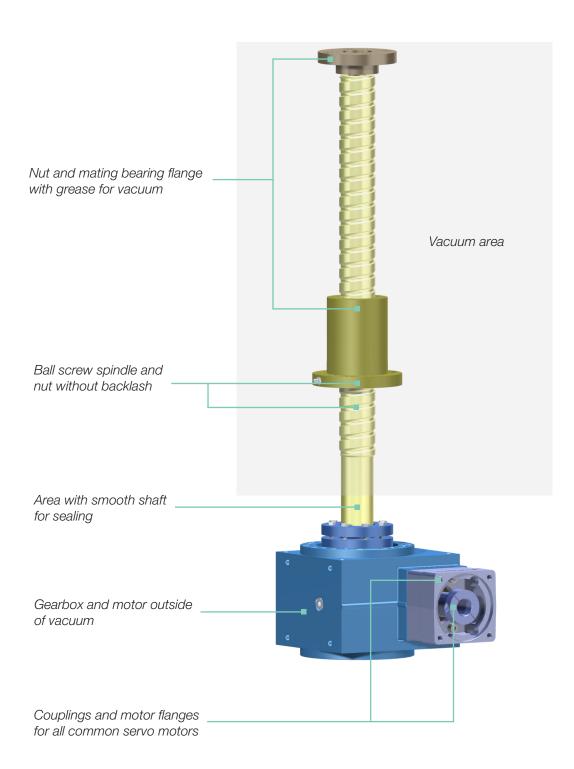
Max. axial force: 25 kN Other forces upon request

Working stroke: max. 500mm

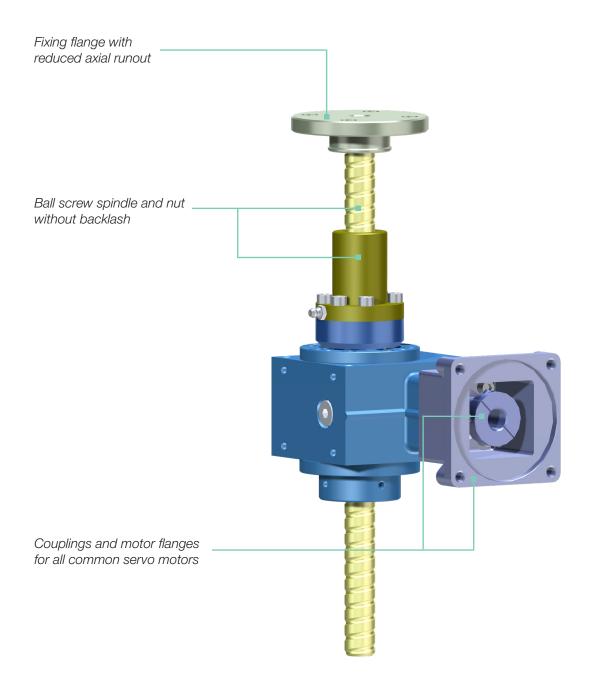
Accuracy for 350mm stroke: Diagonal movement max. 0.2mm Turning movement max. 0.2mm Concentricity accuracy max. Ø 0.5mm

(Accuracy valid for equal load distributon)

Size: **HS25** Other sizes upon request



Sizes: HS10, HS25, HS50 and HS100



Sizes: HS10, HS25, HS50 and HS100



#### **Technical Data**

#### General Data

Self-locking quality Max. duty cycle (depending on load and cycle) Ratio of gearbox Motors Brake required



No up to 100 %<sup>1)</sup> 3.0, 6.75 and 29 3-phase AC- and servomotors

Yes

Gearbox		HS 10		HS	HS 25	
Non-rotating spindle Ballscrew drive		20x10	20x20	32x10	32x20	
Max. load during travel	[kN]	9	<b>20220</b> 5	25	25 <sup>2)</sup>	
Max. static load	[kN]	9	9	35	25	
Max. input speed	[min <sup>-1</sup> ]	500		50		
Max. traveling speed Dyn. load capacity C	[mm/s] [kN]	275 11.9	555 11.9	275 36.6	555 27.5	
Byn. Iodd oupdolfy O	[KK]	11.0	11.0	00.0	21.0	
Rotating Spindle						
Ballscrew drive Max. load during travel	[kN]	<b>32x10</b> 10	<b>32x20</b> 5	<b>40x10</b> 25	<b>40x20</b> 25 <sup>2)</sup>	
Max. static load	[KN] [kN]	18	18	45	25 <sup>_,</sup> 45	
Max. input speed	[min <sup>-1</sup> ]	500			5000	
Max. traveling speed	[mm/s]	275	555	275	555	
Dyn. load capacity C	[kN]	36.6	27.5	92.6	75.2	
Lifting Cylinder						
Ballscrew drive		25x10	25x20	40x10	40x20	
Max. load during traveling	[kN]	10	5	25	25 <sup>2)</sup>	
Max. static load	[kN]	18	13	45	45	
Max. input speed Max. traveling speed	[min <sup>-1</sup> ] [mm/s]	275	555	275	555	
Dyn. load capacity C	[hin/s] [kN]	19.8	14.9	64.7	75.2	
,,,, .						
Gearbox		HS 50			HS 100	
Gearbox		HS	50	HS	100	
Gearbox Non-Rotating Spindle		HS	50	HS	100	
Non-Rotating Spindle Ballscrew drive		40x10	40x20	50)	<b>‹20</b>	
Non-Rotating Spindle Ballscrew drive Max. load during traveling	[kN]	<b>40x10</b> 50	<b>40x20</b> 50 <sup>3)</sup>	<b>50</b> ) 10	<b>:20</b> 0 <sup>4)</sup>	
<b>Non-Rotating Spindle</b> Ballscrew drive Max. load during traveling Max. static load	[kN]	<b>40x10</b> 50 90	<b>40x20</b> 50 <sup>3)</sup> 65	<b>50</b> ) 10 16	<b>(20</b> 0 <sup>4)</sup> 60	
Non-Rotating Spindle Ballscrew drive Max. load during traveling Max. static load Max. input speed	[kN] [min <sup>-1</sup> ]	<b>40x10</b> 50 90 40	<b>40x20</b> 50 <sup>3)</sup> 65 00	<b>50</b> ) 10 16 30	<b>x20</b> 0 <sup>4)</sup> 60 00	
<b>Non-Rotating Spindle</b> Ballscrew drive Max. load during traveling Max. static load	[kN]	<b>40x10</b> 50 90	<b>40x20</b> 50 <sup>3)</sup> 65	<b>50</b> ) 10 16	<b>c20</b> 0 <sup>4)</sup> 50 00 30	
Non-Rotating Spindle Ballscrew drive Max. load during traveling Max. static load Max. input speed Max. traveling speed Dyn. load capacity C	[kN] [min <sup>-1</sup> ] [mm/s]	<b>40x10</b> 50 90 40 220	<b>40x20</b> 50 <sup>3)</sup> 65 000 440	<b>50</b> ) 10 16 30 33	<b>c20</b> 0 <sup>4)</sup> 50 00 30	
Non-Rotating Spindle Ballscrew drive Max. load during traveling Max. static load Max. input speed Max. traveling speed Dyn. load capacity C Rotating Spindle	[kN] [min <sup>-1</sup> ] [mm/s]	<b>40x10</b> 50 90 40 220 92.6	<b>40x20</b> 50 <sup>3)</sup> 65 000 440 75.2	<b>50)</b> 10 16 30 33 19	<b>x20</b> 0 <sup>4)</sup> 50 00 30 35	
Non-Rotating Spindle Ballscrew drive Max. load during traveling Max. static load Max. input speed Max. traveling speed Dyn. load capacity C Rotating Spindle Ballscrew drive	[kN] [min <sup>-1</sup> ] [mm/s] [kN]	<b>40x10</b> 50 90 220 92.6 <b>50x20</b>	<b>40x20</b> 50 <sup>3)</sup> 65 000 440 75.2 <b>63x20</b>	50) 10 16 30 33 19 63x20	<b>x20</b> 0 <sup>4)</sup> 50 00 30 35 <b>80×20</b>	
Non-Rotating Spindle Ballscrew drive Max. load during traveling Max. static load Max. input speed Max. traveling speed Dyn. load capacity C Rotating Spindle	[kN] [min <sup>-1</sup> ] [mm/s]	<b>40x10</b> 50 90 40 220 92.6	<b>40x20</b> 50 <sup>3)</sup> 65 000 440 75.2	<b>50)</b> 10 16 30 33 19	<b>x20</b> 0 <sup>4)</sup> 50 00 30 35	
Non-Rotating Spindle Ballscrew drive Max. load during traveling Max. static load Max. input speed Max. traveling speed Dyn. load capacity C Rotating Spindle Ballscrew drive Max. load during traveling	[kN] [min <sup>-1</sup> ] [mm/s] [kN]	<b>40x10</b> 50 90 40 220 92.6 <b>50x20</b> 50 <sup>3)</sup> 90	<b>40x20</b> 50 <sup>3)</sup> 65 000 440 75.2 <b>63x20</b> 50 <sup>3)</sup>	50) 10 16 30 33 15 63x20 100 <sup>4)</sup>	<b>x20</b> 0 <sup>4)</sup> 50 00 30 35 <b>80x20</b> 100 <sup>4)</sup> 180	
Non-Rotating Spindle Ballscrew drive Max. load during traveling Max. static load Max. input speed Max. traveling speed Dyn. load capacity C Rotating Spindle Ballscrew drive Max. load during traveling Max. static load	[kN] [min <sup>-1</sup> ] [mm/s] [kN] [kN] [kN] [min <sup>-1</sup> ] [mm/s]	<b>40x10</b> 50 90 40 220 92.6 <b>50x20</b> 50 <sup>3)</sup> 90 40 440	40x20 50 <sup>3)</sup> 65 440 75.2 63x20 50 <sup>3)</sup> 90 000 440	50) 10 16 30 33 15 63x20 100 <sup>4)</sup> 180 30 330	<b>20</b> 0 <sup>4)</sup> 50 00 30 55 <b>80×20</b> 100 <sup>4)</sup> 180 00 330	
Non-Rotating Spindle Ballscrew drive Max. load during traveling Max. static load Max. input speed Max. traveling speed Dyn. load capacity C Rotating Spindle Ballscrew drive Max. load during traveling Max. static load Max. input speed	[kN] [min <sup>-1</sup> ] [mm/s] [kN] [kN] [kN] [min <sup>-1</sup> ]	<b>40x10</b> 50 90 40 220 92.6 <b>50x20</b> 50 <sup>3)</sup> 90 40	<b>40x20</b> 50 <sup>3)</sup> 65 440 75.2 <b>63x20</b> 50 <sup>3)</sup> 90	50) 10 16 30 33 15 63x20 100 <sup>4)</sup> 180 30	<b>x20</b> 0 <sup>4)</sup> 50 00 30 95 <b>80x20</b> 100 <sup>4)</sup> 180 00	
Non-Rotating Spindle Ballscrew drive Max. load during traveling Max. static load Max. input speed Max. traveling speed Dyn. load capacity C Rotating Spindle Ballscrew drive Max. load during traveling Max. static load Max. input speed Max. traveling speed	[kN] [min <sup>-1</sup> ] [mm/s] [kN] [kN] [kN] [min <sup>-1</sup> ] [mm/s]	<b>40x10</b> 50 90 40 220 92.6 <b>50x20</b> 50 <sup>3)</sup> 90 40 440	40x20 50 <sup>3)</sup> 65 440 75.2 63x20 50 <sup>3)</sup> 90 000 440	50) 10 16 30 33 15 63x20 100 <sup>4)</sup> 180 30 330	<b>20</b> 0 <sup>4)</sup> 50 00 30 55 <b>80×20</b> 100 <sup>4)</sup> 180 00 330	
Non-Rotating Spindle Ballscrew drive Max. load during traveling Max. static load Max. input speed Max. traveling speed Dyn. load capacity C Rotating Spindle Ballscrew drive Max. load during traveling Max. static load Max. input speed Max. traveling speed Dyn. load capacity C Llfting Cylinder Ballscrew drive	[kN] [min <sup>-1</sup> ] [mm/s] [kN] [kN] [min <sup>-1</sup> ] [mm/s] [kN]	40x10 50 90 40 220 92.6 50x20 50 <sup>3)</sup> 90 40 440 160 502	40x20 50 <sup>3)</sup> 65 440 75.2 63x20 50 <sup>3)</sup> 90 440 248	50) 10 16 30 33 15 63x20 100 <sup>4)</sup> 180 30 330 248 63x20	<b>x20</b> 0 <sup>(4)</sup> 50 00 30 35 <b>80x20</b> 100 <sup>(4)</sup> 180 00 330 359 <b>80x20</b>	
Non-Rotating Spindle Ballscrew drive Max. load during traveling Max. static load Max. input speed Max. input speed Dyn. load capacity C Rotating Spindle Ballscrew drive Max. load during traveling Max. static load Max. input speed Max. traveling speed Dyn. load capacity C Llfting Cylinder Ballscrew drive Max. load during traveling	[kN] [min <sup>-1</sup> ] [mm/s] [kN] [kN] [min <sup>-1</sup> ] [mm/s] [kN]	40x10 50 90 40 220 92.6 50x20 50 <sup>30</sup> 90 40 440 160 502 502 502 502 502 502 502 50	40x20 50 <sup>3</sup> ) 65 440 75.2 63x20 50 <sup>3</sup> ) 90 440 248 x20 10 <sup>3</sup> )	50) 10 16 30 33 15 63x20 100 <sup>4)</sup> 180 30 330 248 63x20 100 <sup>4)</sup>	<b>20</b> 0 <sup>4)</sup> 50 00 30 55 <b>80x20</b> 100 <sup>4)</sup> 180 00 330 359 <b>80x20</b> 100 <sup>4)</sup>	
Non-Rotating Spindle Ballscrew drive Max. load during traveling Max. static load Max. input speed Max. input speed Dyn. load capacity C Rotating Spindle Ballscrew drive Max. load during traveling Max. static load Max. input speed Max. traveling speed Dyn. load capacity C Llfting Cylinder Ballscrew drive Max. load during traveling Max. static load	[kN] [min <sup>-1</sup> ] [mm/s] [kN] [kN] [min <sup>-1</sup> ] [mm/s] [kN] [kN]	40x10 50 90 40 220 92.6 50x20 50 <sup>30</sup> 90 40 440 160 50 50 50 50 50 50 50 50 50 5	40x20 50 <sup>3)</sup> 65 440 75.2 63x20 50 <sup>3)</sup> 90 440 248 x20 10 <sup>3)</sup> 10	50) 10 16 30 33 15 63x20 100 <sup>4)</sup> 180 30 330 248 63x20 100 <sup>4)</sup> 180	<b>x20</b> 0 <sup>4)</sup> 50 00 30 35 <b>80x20</b> 100 <sup>4)</sup> 180 00 330 359 <b>80x20</b> 100 <sup>4)</sup> 180	
Non-Rotating Spindle Ballscrew drive Max. load during traveling Max. static load Max. input speed Max. input speed Dyn. load capacity C Rotating Spindle Ballscrew drive Max. load during traveling Max. static load Max. input speed Max. traveling speed Dyn. load capacity C Llfting Cylinder Ballscrew drive Max. load during traveling Max. static load Max. input speed	[kN] [min <sup>-1</sup> ] [mm/s] [kN] [kN] [min <sup>-1</sup> ] [kN] [kN] [kN] [kN]	40x10 50 90 40 220 92.6 50x20 50 <sup>30</sup> 90 40 440 160 50 50 40 40 40 40 50 40 50 40 50 40 50 50 40 50 50 40 50 50 40 50 50 50 40 50 50 50 50 40 50 50 50 40 50 50 50 50 50 50 50 50 50 5	40x20 50 <sup>3)</sup> 65 440 75.2 63x20 50 <sup>3)</sup> 90 440 248 x20 10 <sup>3)</sup> 10 10 10 10 10 10 10 10 10 10	50) 10 10 30 33 15 63x20 100 <sup>4)</sup> 180 330 248 63x20 100 <sup>4)</sup> 180 300 330 248 63x20 100 <sup>4)</sup> 180 300 300 300 300 300 300 300 3	<b>20</b> 0 <sup>4)</sup> 50 00 30 55 <b>80×20</b> 100 <sup>4)</sup> 180 00 330 359 <b>80×20</b> 100 <sup>4)</sup> 180 00	
Non-Rotating Spindle Ballscrew drive Max. load during traveling Max. static load Max. input speed Max. input speed Dyn. load capacity C Rotating Spindle Ballscrew drive Max. load during traveling Max. static load Max. input speed Max. traveling speed Dyn. load capacity C Llfting Cylinder Ballscrew drive Max. load during traveling Max. static load	[kN] [min <sup>-1</sup> ] [mm/s] [kN] [kN] [min <sup>-1</sup> ] [mm/s] [kN] [kN]	40x10 50 90 40 220 92.6 50x20 50 <sup>30</sup> 90 40 440 160 50 50 40 40 40 40 40 40 40 40 40 4	40x20 50 <sup>3)</sup> 65 440 75.2 63x20 50 <sup>3)</sup> 90 440 248 x20 10 <sup>3)</sup> 10	50) 10 16 30 33 15 63x20 100 <sup>4)</sup> 180 30 330 248 63x20 100 <sup>4)</sup> 180	<b>x20</b> 0 <sup>4)</sup> 50 00 30 35 <b>80x20</b> 100 <sup>4)</sup> 180 00 330 359 <b>80x20</b> 100 <sup>4)</sup> 180	

<sup>1)</sup> Duty cycles over 50% upon request.

<sup>2)</sup> For i=3  $F_{max} = 15$ kN <sup>3)</sup> For i=3  $F_{max} = 30$ kN <sup>4)</sup> For i=3  $F_{max} = 80$ kN

## HS - High Performance Screw Jack Gearbox



- Sizes: HS10, HS25, HS50 and HS100
- Load capacity: 5 to 100 kN
- Travelling speed: up to 550mm/s
- Design with ball-screw spindle drive
  - Rotating spindle
  - Non-rotating spindle
  - Lifting cylinder

TS - Standard Screw Jack Gearbox



- Sizes: TS2, TS5, TS10, TS25, TS50 and TS100
- Load capacity: 2 to 100 kN
- Travelling speed: up to 25mm/s
- Design with trapezoidal spindle drive:
  - Rotating spindle
  - Non-rotating spindle

### EH - High Thrust Linear Actuator



- Sizes: EH4 and EH8
- Load capacity: 30 to 160 kN
- Travelling speed: Trapezoidal spindle drive: up to 83mm/s Ballscrew spindle drive: up to 230mm/s
- Design with trapezoidal spindle drive:
  Non-rotating spindle
- Design with ball screw spindle drive:
  - Rotating spindle
  - Lifting cylinder





# Servo Drive Systems

Further information: www.atlantadrives.com



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