CHARACTERISTICS

Mini electric slider MSCE is a mini linear drive with an integrated linear guiding system and slide. By using an integrated precision ball screw drive, the rotary motion (rotation) of the drive shaft is converted to the linear motion (translation) of the slide with high mechanical efficiency and low internal friction.

High-performance features such as high speed, good positioning accuracy, and high repeatability are ensured through a precision ball screw drive and a linear guiding system.

A preassembled standard motor (in-line with a motor adapter and a coupling or in-parallel with a motor side drive and a timing belt) together with the standard drive, makes the system plug and play ready. Compact dimensions and optimally selected motor combinations cover a wide range of applications.

The aluminium base profile includes T-slots on the bottom for fixing the electric slider, as well as side slots for clamping fixtures and magnetic field sensors.

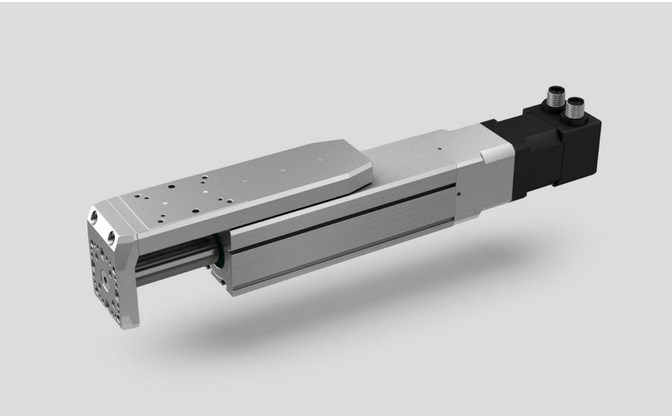
The aluminium slide and front plate of the electric slider allow a wide range of options for mounting the working tools and attaching additional accessories. There are prepared connection holes on the slide and front plate for an easy combination of the MSCEs to the multi-axis system, which makes this product highly flexible. There is also an option of the mini electric slider without the preassembled motor if an individual motor is required.

Positioning rod together with the rod seal ensures the protection of the ball screw drive from dust and other contamination.

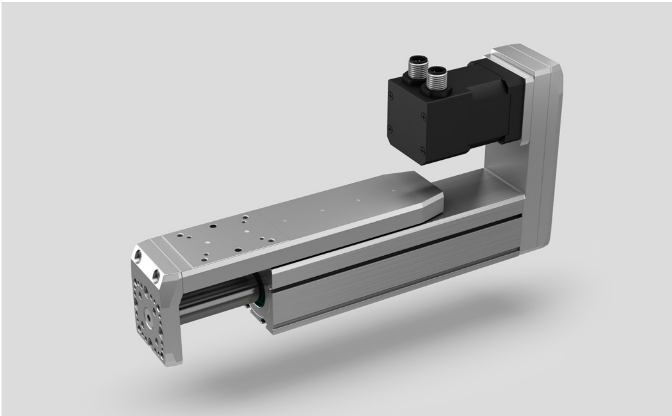
Excellent price-performance ratio and a quick delivery time, due to standard lengths, are ensured.

Each MSCE is optimally pre-lubricated and ready for a maintenance-free operating process. MSCE allows relatively high load capacities (axial, lateral, and torsional) and optimal cycles for moving the larger payloads at high speeds in both horizontal and vertical directions.

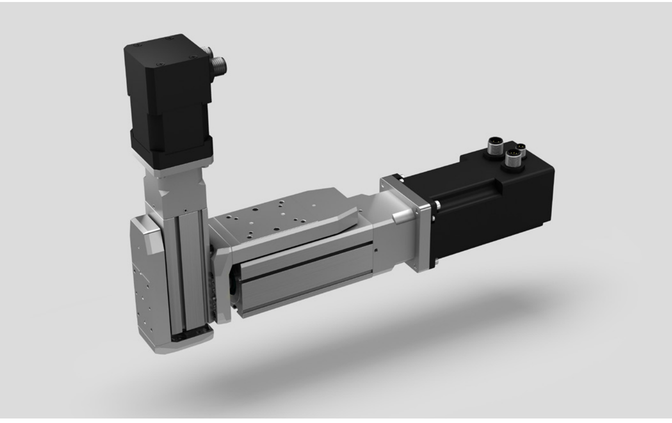
ⓘ The aluminium profiles are manufactured according to the medium EN 12020-2 standard



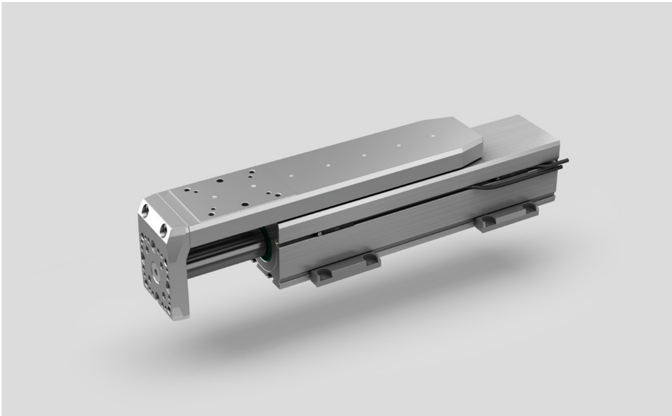
Motor adapter VK with a coupling and a motor



Motor side drive with a timing belt and a motor



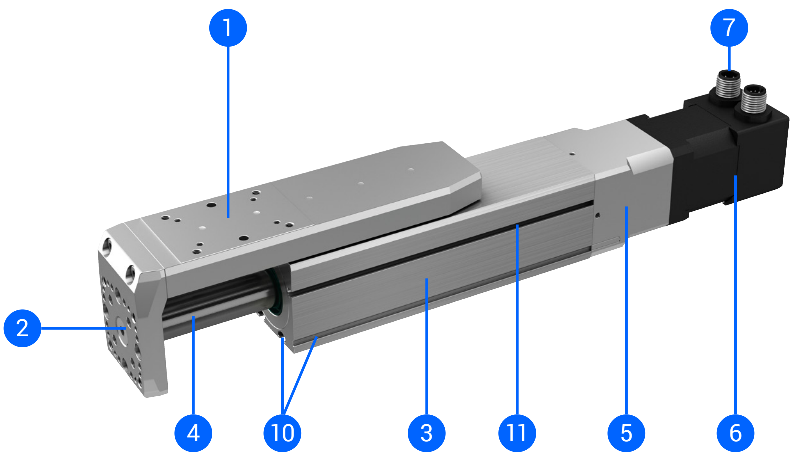
Multi-axis system



Accessories, MSCE without a preassembled motor

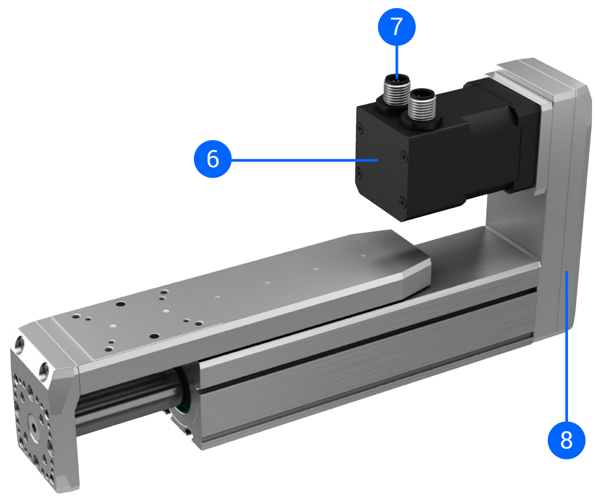
STRUCTURAL DESIGN

Combination with a standard motor and a motor adapter VK

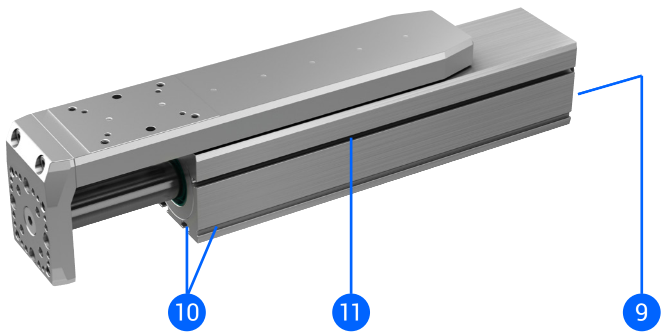


1 – Aluminium slide with an integrated linear guiding system
2 – Front plate
3 – Compact aluminium base profile
4 – Positioning rod
5 – Motor adapter VK with a coupling
6 – Preassembled motor (with/without a brake)
7 – Standard connectors (motor, encoder and a brake – optionally)
8 – Motor side drive with a timing belt
9 – Drive shaft of a precision ball screw drive
10 – Slots for mounting
11 – Slots for the magnetic field sensors (size 32 and 45) or mounting the sensor holder (size 25)

Combination with a standard motor and a motor side drive MSD



Without a motor



HOW TO ORDER

MSCE - 45 - 1003 - 150 - AB - AU - AA - AB - AA

Series:
MSCE

Size:
– 25
– 32
– 45

Ball screw size:
– MSCE 25: Ø6 × 2, Ø6 × 6
– MSCE 32: Ø8 × 2, Ø8 × 8
– MSCE 45: Ø10 × 3, Ø10 × 10

Absolute stroke [mm]:
(Absolute stroke = Effective stroke + 2 × Safety stroke)
– 25, 50, 75, 100, 125, 150, 175, 200

Motor type and size:
– Leave blank: Without a motor

A B

Motor type:
– A: Stepper motor without a brake
– B: Stepper motor with a brake

Motor size □:
– A: 28 mm (Available soon)
– B: 42 mm
– C: 56 mm

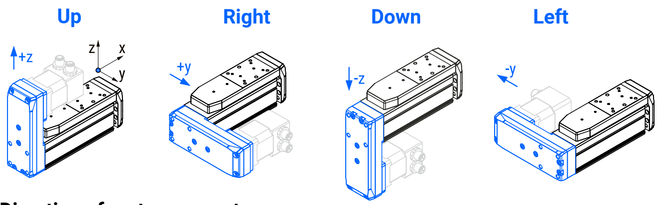
Available sizes:
– MSCE 25: 28
– MSCE 32: 28, 42
– MSCE 45: 42, 56

For more details please refer to the section "Electrical data → Motor types and sizes"

Motor mounting option:
– Leave blank: Without a motor

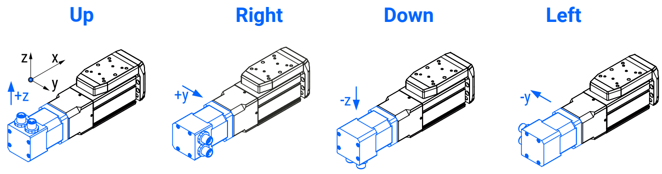
A U

Mounting option:
– A: With a motor adapter VK
– B: With a motor side drive MSD facing up
– C: With a motor side drive MSD facing right
– D: With a motor side drive MSD facing down
– E: With a motor side drive MSD facing left

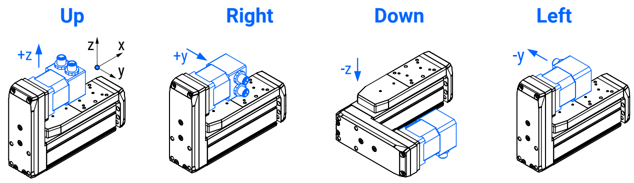


Direction of motor connectors:
– U: Connectors facing up
– R: Connectors facing right
– D: Connectors facing down
– L: Connectors facing left

In combination with a motor adapter VK



In combination with a motor side drive MSD



When using the motor side drive MSD, the connectors can not be facing the MSCE otherwise, the connectors and MSCE may collide. These combinations are: BD, CL, DU and ER.

Drive option:
– Leave blank: Without a motor or drive

A A

Drive type:
– A: Stepper

For more details please refer to the section "Electrical data → Drive types"

Drive protocol/control:
– A: EtherCAT
– B: Ethernet based communication
– C: Pulse-direction control

Drive-motor cables option:
– Leave blank: Without a motor or drive
– 00: Without the cables

A B

Cables type:
– A: Robotic with a straight plug
– B: Robotic with an angled plug

Cables Length:
– A: 3 m
– B: 5 m
– C: 10 m

For more details please refer to the section "Electrical data → Drive-motor cables"

Power and signal cables:
– Leave blank: Without a motor or drive

A A

Power cable:
– 0: Without a power cable
– A: With a power cable

Length of the cable = 2 m

For more details please refer to the section "Electrical data → Power and signal cables"

Signal cable:
– 0: Without a signal cable
– A: With a signal cable

Length of the cable = 2 m
Signal cable is mandatory for the following cases:
– If a motor with brake is used
– If a pulse-direction drive control is used
– If the limit switches are used

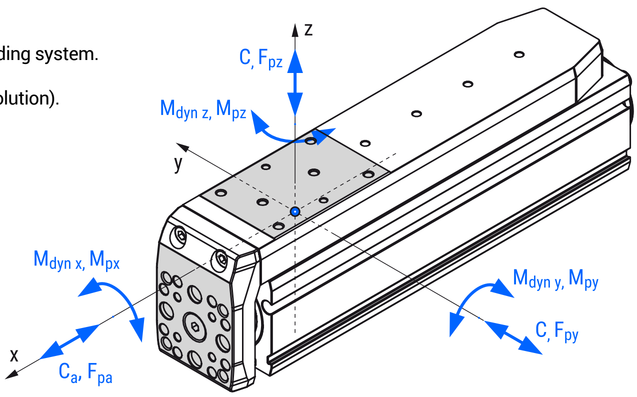
For more details please refer to the section "Electrical data → Power and signal cables"

TECHNICAL DATA

General technical data

MSCE	Ball screw[4]	Dynamic axial load capacity[1]	Dynamic load capacity[3]	Dynamic moments[3]			Max. permissible loads						Axial backlash (BS)[2]	Max. repeatability[5]	Absolute stroke
							Forces		Moments						
	d × l [mm]	C_a [N]	C [N]	$M_{dyn\ x}$ [Nm]	$M_{dyn\ y}$ [Nm]	$M_{dyn\ z}$ [Nm]	F_{py} [N]	F_{pz} [N]	M_{px} [Nm]	M_{py} [Nm]	M_{pz} [Nm]	[mm]	[mm]	[mm]
25	6 × 2	1900	1310	4,8	4,1		280	580	4,8	4,1	4,1	≤ 0,05	±0,015	25, 50, 75, 100, 125, 150, 175, 200
	6 × 6	1700												
32	8 × 2	2000	2135	10,0	6,8		860	860	10,0	6,8	6,8	≤ 0,06	±0,015	25, 50, 75, 100, 125, 150, 175, 200
	8 × 8	1500												
45	10 × 3	3500	3240	20,1	17,4		1000	1000	16,3	16,3	16,3	≤ 0,06	±0,015	25, 50, 75, 100, 125, 150, 175, 200
	10 × 10	3200												

[1] Dynamic axial load capacity of the ball screw drive.
This value is the basis for calculating the service life.
[2] Valid for ball screw drive in new condition.
[3] Dynamic load capacity and dynamic moments of the linear guiding system.
These values are the basis for calculating the service life.
[4] d = ball screw nominal diameter, l = ball screw lead (for one revolution).
[5] Valid for one-directional axial load.



Drive data

Combination with a standard motor and a motor adapter VK

MSCE + motor and VK	Ball screw	Motor		Max. permissible axial load[1, 2]	Max. permissible payload[1]		Max. travel speed[2]	Max. rotational speed	Max. acceleration
					Horizontal[2, 3]	Vertical[2]			
	d × l [mm]	Type	Size □ [mm]	F_{pa} [N]	m_{ph} [kg]	m_{pv} [kg]	v_{max} [m/s]	n_{max} [rev/min]	a_{max} [m/s²]
25	6 × 2	Stepper	28	170	57	14	0,100	3000	20
	6 × 6			90	13	7,3	0,300		
32	8 × 2		28	185	62	15	0,075	2240	20
			42	375	125	31	0,100	3000	
	8 × 8		28	45	6,4	3,4	0,229	1720	
			42	190	35	16	0,400	3000	
45	10 × 3		42	450	150	37	0,149	2980	20
			56	695	233	58	0,150	3000	
	10 × 10		42	125	21	10	0,485	2910	
			56	575	132	48	0,500	3000	

[1] This value depends on the selected motor, travel speed and acceleration of the slide (see the following diagrams).
[2] Valid for the entire stroke range.
[3] Valid for the payload to be pushed and supported by an external guiding (coefficient of friction 0,1 is taken into consideration).
Maximum unsupported payload (lateral load) is presented on the following diagrams.

Combination with a standard motor and a motor side drive MSD

MSCE + motor and MSD	Ball screw	Motor		Max. permissible axial load[1, 2]	Max. permissible payload[1]		Max. travel speed[2]	Max. rotational speed	Max. acceleration
					Horizontal[2, 3]	Vertical[2]			
	d × l [mm]	Type	Size □ [mm]	F_{pa} [N]	m_{ph} [kg]	m_{pv} [kg]	v_{max} [m/s]	n_{max} [rev/min]	a_{max} [m/s²]
25	6 × 2	Stepper	28	170	57	14	0,094	2810	20
	6 × 6			80	13	6,5	0,281	2810	
32	8 × 2		28	150	50	12	0,052	1560	20
			42	375	125	31	0,100	3000	
	8 × 8		28	35	6,6	2,5	0,173	1300	
			42	175	35	14	0,400	3000	
45	10 × 3		42	380	127	31	0,146	2920	20
			56	695	233	58	0,150	3000	
	10 × 10		42	115	19	9	0,457	2740	
			56	450	132	37	0,500	3000	

Without a motor

MSCE without a motor	Ball screw	Max. permissible axial load[2]	Max. permissible payload		Max. drive torque	No load torque	Max. permissible radial load on shaft	Max. travel speed[2]	Max. rotational speed	Max. acceleration
			Horizontal[2, 3]	Vertical[2]						
	d × l [mm]	F_{pa} [N]	m_{ph} [kg]	m_{pv} [kg]	M_p [Nm]	M_0 [Nm]	F_{pr} [N]	v_{max} [m/s]	n_{max} [rev/min]	a_{max} [m/s²]
25	6 × 2	170	57	14	0,06	0,03	25	0,150	4500	20
	6 × 6	90	30	7	0,10	0,03		0,450		
32	8 × 2	375	125	31	0,13	0,05	50	0,150	4500	20
	8 × 8	375	125	31	0,53	0,06		0,600		
45	10 × 3	695	233	58	0,37	0,08	100	0,225	4500	20
	10 × 10	695	233	58	1,23	0,10		0,750		

[1] This value depends on the selected motor, travel speed and acceleration of the slide (see the following diagrams).
[2] Valid for the entire stroke range.
[3] Valid for the payload to be pushed and supported by an external guiding (coefficient of friction 0,1 is taken into consideration). Maximum unsupported payload (lateral load) is presented on the following diagrams.

Operating conditions

Ambient temperature	0 °C ~ +50 °C
Ambient temperature without a motor	0 °C ~ +60 °C
Protection class	IP40
Duty cycle	100 %
Maintenance	Life-time pre-lubricated

Recommended values of loads:
All the data of the dynamic load capacities (linear guiding system and ball screw drive) stated in the tables above are theoretical without considering any safety factor. The safety factor depends on the application and its requested safety and service life.

We recommend a minimum dynamic safety factor of 5,0 or more. Please refer to pages 93 and 95, where the calculation of the safety factor of the ball screw drive and linear guiding system and how the applied load affects the service life are presented.

Mass and mass moment of inertia

MSCE without a motor	Ball screw	Moved mass*	Mass of the mini electric slider**	Mass moment of inertia
	d × l [mm]	$m_{m,\,MSCE}$ [kg]	m_{MSCE} [kg]	J_{MSCE} [10^{-2} kg cm^2]
25	6 × 2	0,10 + 0,0010 × Abs. stroke	0,20 + 0,0019 × Abs. stroke	0,29 + 0,0007 × Abs. stroke + 0,1013 × m_{load}
	6 × 6			0,36 + 0,0016 × Abs. stroke + 0,9119 × m_{load}
32	8 × 2	0,18 + 0,0013 × Abs. stroke	0,40 + 0,0032 × Abs. stroke	0,71 + 0,0026 × Abs. stroke + 0,1013 × m_{load}
	8 × 8			0,99 + 0,0047 × Abs. stroke + 1,6211 × m_{load}
45	10 × 3	0,36 + 0,0025 × Abs. stroke	0,88 + 0,0059 × Abs. stroke	2,81 + 0,0061 × Abs. stroke + 0,2280 × m_{load}
	10 × 10			3,63 + 0,0121 × Abs. stroke + 2,5330 × m_{load}

* The moved mass is already considered in the equation for calculating the mass of the mini electric slider m_{MSCE} and the mass moment of inertia J_{MSCE}. The moved mass includes the mass of the aluminium slide together with the front plate and positioning rod with the ball nut.
** For combination with standard motor and motor adapter VK or motor side drive MSD this mass m_{MSCE} should be increased by m_{VK+m} or m_{MSD+m} respectively, see the table below.

Abs. stroke	Absolute stroke	[mm]
m_{load}	Applied mass to be moved	[kg]

Additional mass of the electric slider when combining the motor with the motor adapter VK or the motor side drive MSD

MSCE	Motor		Motor without a brake		Motor with a brake	
			Mass of the motor and motor adapter VK	Mass of the motor and motor side drive MSD	Mass of the motor and motor adapter VK	Mass of the motor and motor side drive MSD
	Type	Size □ [mm]	m_{VK+m} [kg]	m_{MSD+m} [kg]	m_{VK+m} [kg]	m_{MSD+m} [kg]
25	Stepper	28	Available soon			
32		28				
		42	0,52	0,62	0,65	0,75
45		42	0,57	0,71	0,70	0,84
		56	1,31	1,49	1,50	1,68

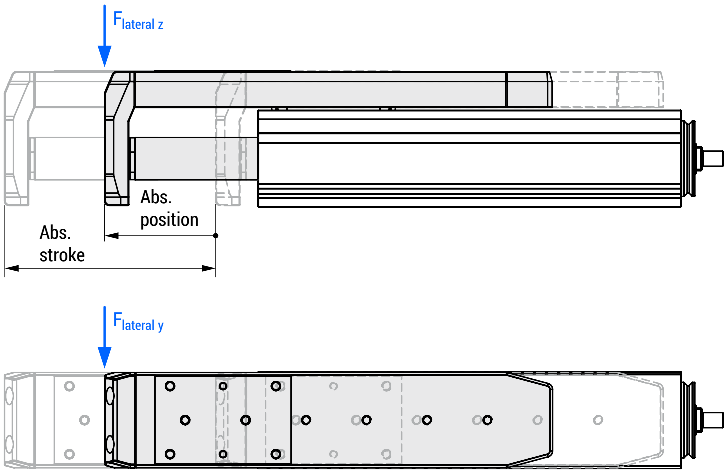
Planar moment of inertia

MSCE	Slide		Base profile	
	I_y [cm^4]	I_z [cm^4]	I_y [cm^4]	I_z [cm^4]
25	0,08	0,88	2,10	1,98
32	0,18	2,16	6,42	6,58
45	0,40	7,34	25,37	25,16

Holding torque of a motor brake

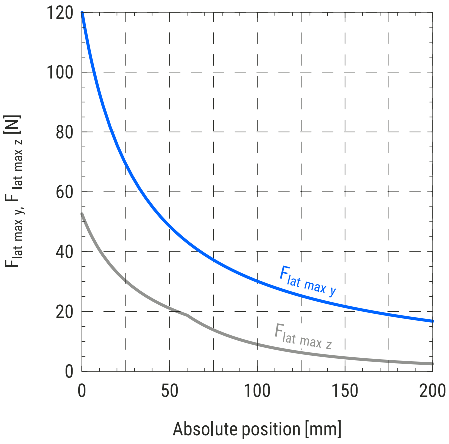
Motor		Holding torque (brake) [Nm]
Type	Size □ [mm]	
Stepper	28	Available soon
	42	0,4
	56	1,0

Maximum lateral loading as a function of the slide absolute position

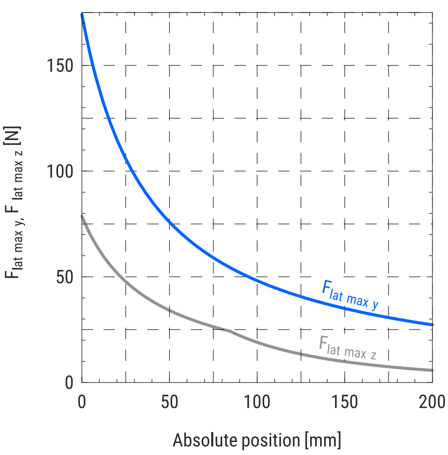


On the following diagrams, the maximum lateral loads acting on the front plate as a function of the slide absolute position are presented. Both lateral loads in y and z directions are considered.

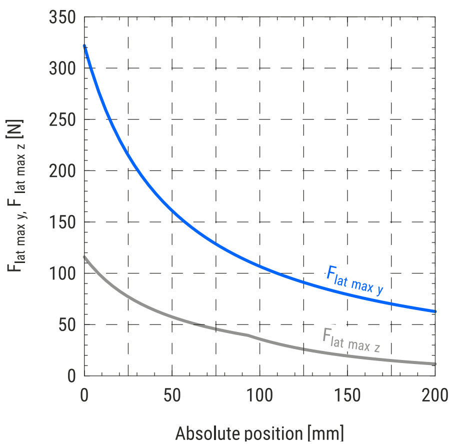
MSCE 25

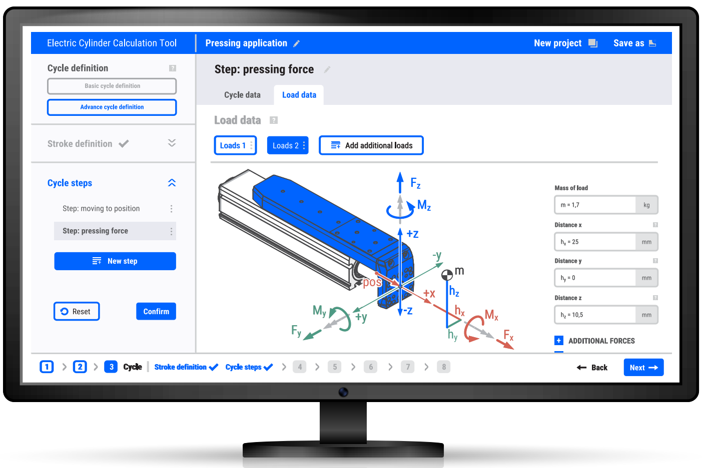


MSCE 32

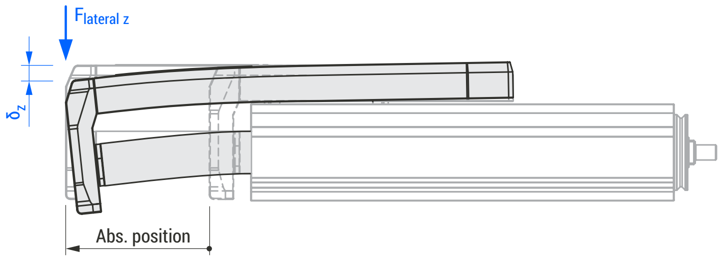


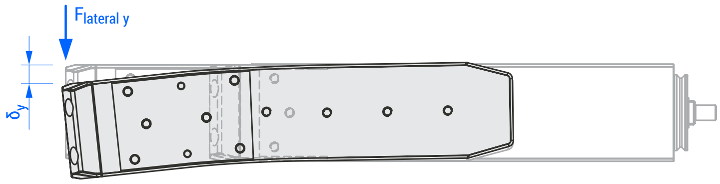
MSCE 45





Deflections of the front plate as a function of the slide absolute position

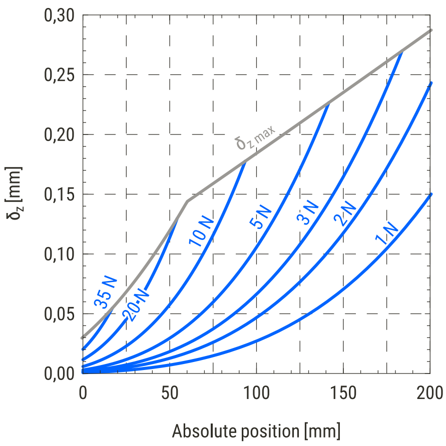


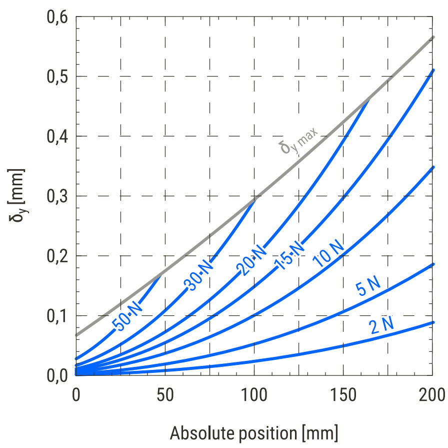


On the following diagrams, deflections of the front plate subjected to the different lateral loads at different absolute positions of the slide are presented. Both lateral loads in y and z directions are considered. Values on the curves represent the lateral load applied to the front plate.

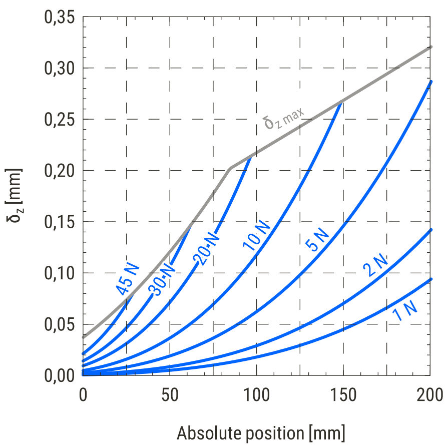
The maximum permissible deflection ($\delta_{z\ max}$ or $\delta_{y\ max}$) must not be exceeded.

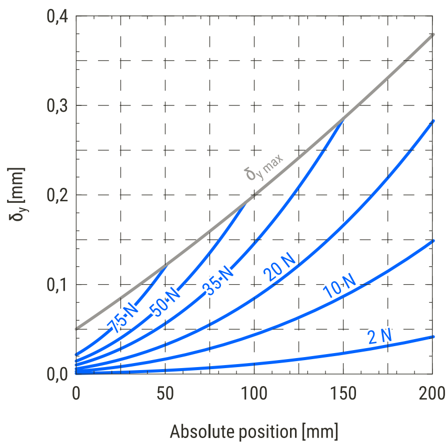
MSCE 25



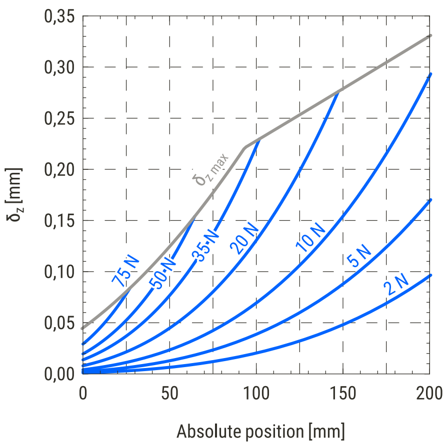


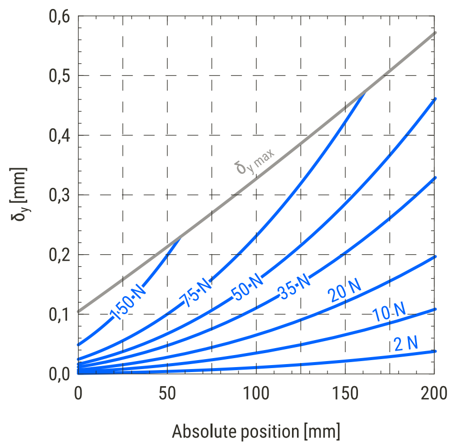
MSCE 32



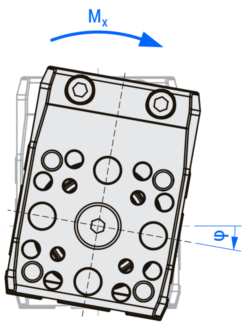


MSCE 45





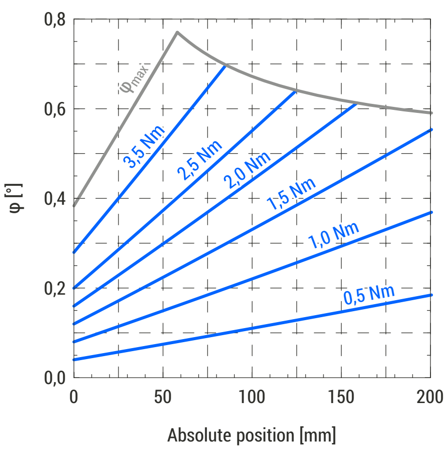
Angular deflections of the front plate as a function of the slide absolute position



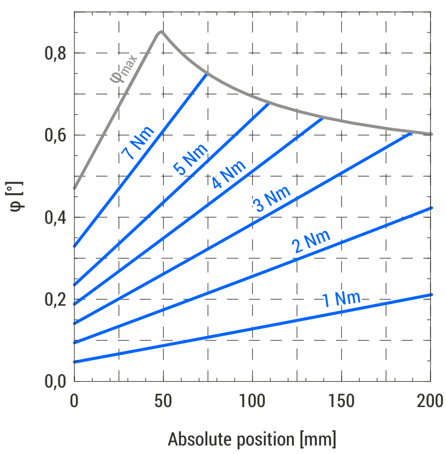
On the following diagrams, angular deflections of the front plate subjected to the different torsional moments at different absolute positions of the slide are presented. Values on the curves represent the moment about the x-axis applied to the front plate.

The maximum permissible angular deflection φ_{max} must not be exceeded.

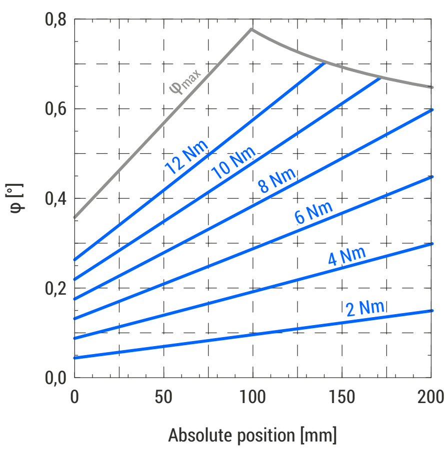
MSCE 25



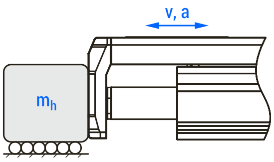
MSCE 32



MSCE 45



Maximum horizontal payload as a function of the travel speed and acceleration of the front plate

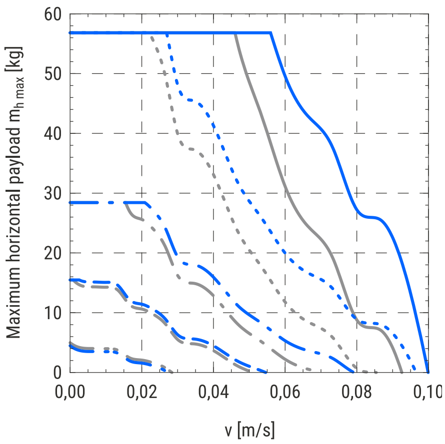


On the following diagrams, the maximum horizontal payloads applied to the front plate as a function of the travel speed for different accelerations, different ball screw leads, and different combinations of the standard motors are presented. Motor adapter VK and a motor side drive MSD are also considered..

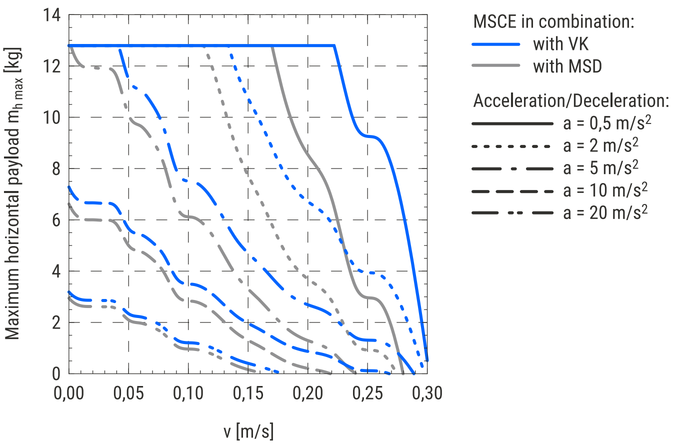
Curves are valid for the payload to be pushed and supported by an external guiding (coefficient of friction 0,1 is taken into consideration).

MSCE 25

6 × 2 with a stepper motor □28

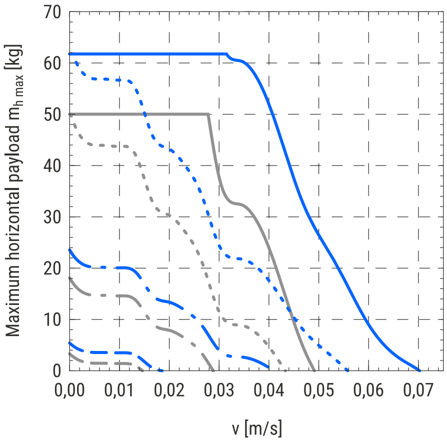


6 × 6 with a stepper motor □28

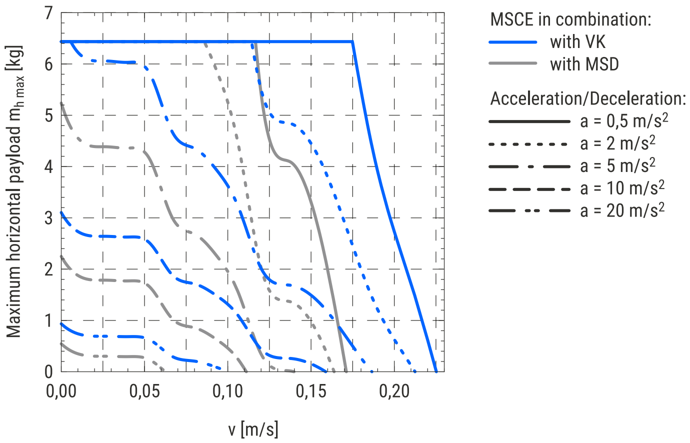


MSCE 32

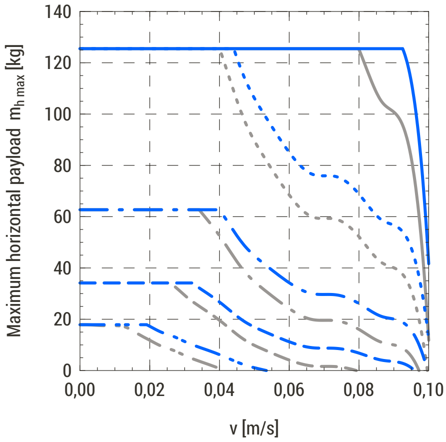
8 × 2 with a stepper motor □28



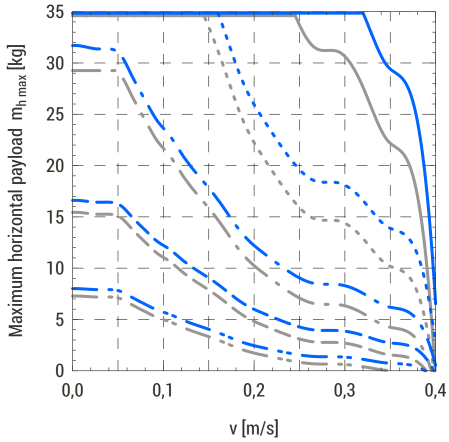
8 × 8 with a stepper motor □28



8 × 2 with a stepper motor □42



8 × 8 with a stepper motor □42

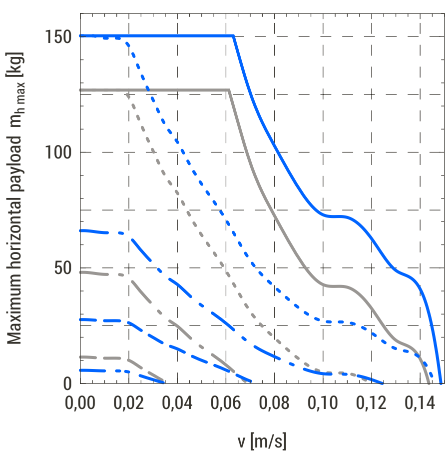


MSCE in combination:
with VK
with MSD

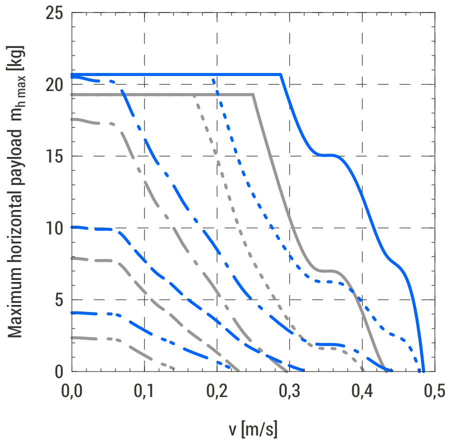
Acceleration/Deceleration:
a = 0,5 m/s²
a = 2 m/s²
a = 5 m/s²
a = 10 m/s²
a = 20 m/s²

MSCE 45

10 × 3 with a stepper motor □42



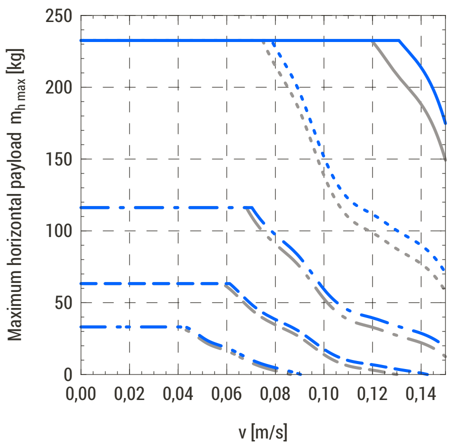
10 × 10 with a stepper motor □42



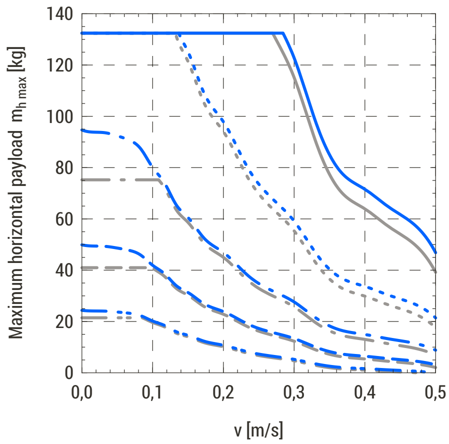
MSCE in combination:
with VK
with MSD

Acceleration/Deceleration:
a = 0,5 m/s²
a = 2 m/s²
a = 5 m/s²
a = 10 m/s²
a = 20 m/s²

10 × 3 with a stepper motor □56



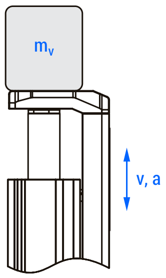
10 × 10 with a stepper motor □56



MSCE in combination:
with VK
with MSD

Acceleration/Deceleration:
a = 0,5 m/s²
a = 2 m/s²
a = 5 m/s²
a = 10 m/s²
a = 20 m/s²

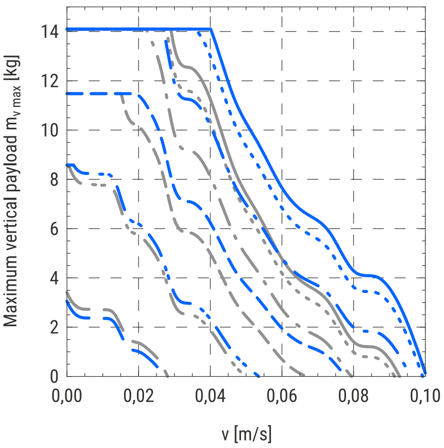
Maximum vertical payload as a function of the travel speed and acceleration of the front plate



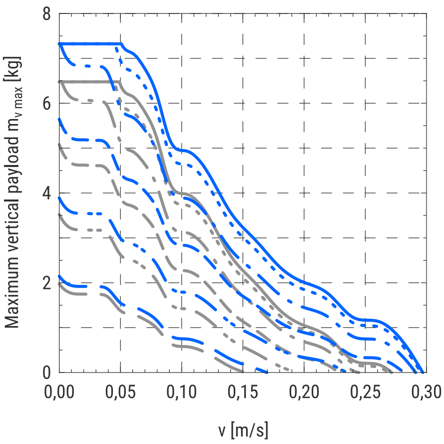
On the following diagrams, the maximum vertical payloads applied to the front plate as a function of the travel speed for different accelerations, different ball screw leads, and different combinations of the standard motors are presented. Motor adapter VK and a motor side drive MSD are also considered.

MSCE 25

6 × 2 with a stepper motor ☐28



6 × 6 with a stepper motor ☐28

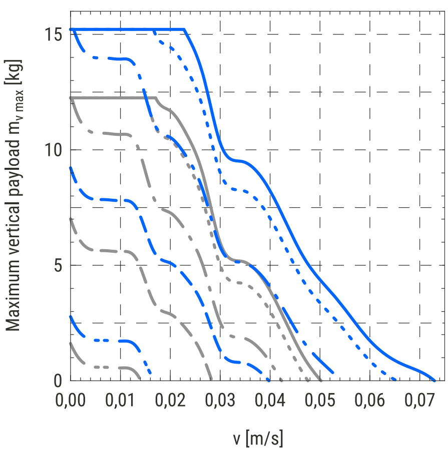


MSCE in combination:
- with VK
- with MSD

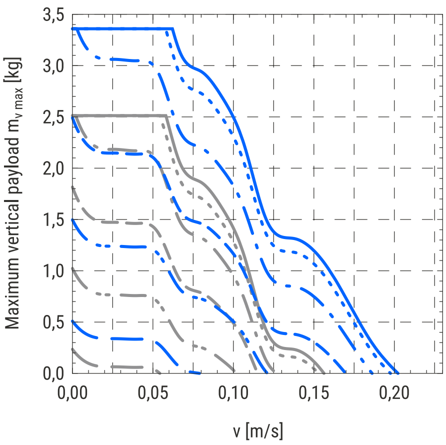
Acceleration/Deceleration:
- a = 0 m/s²
- a = 0,5 m/s²
- a = 2 m/s²
- a = 5 m/s²
- a = 10 m/s²
- a = 20 m/s²

MSCE 32

8 × 2 with a stepper motor ☐28



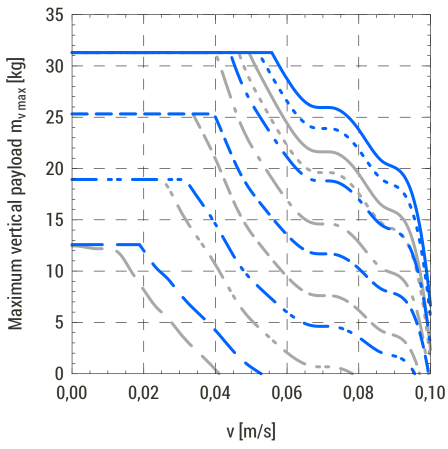
8 × 8 with a stepper motor ☐28



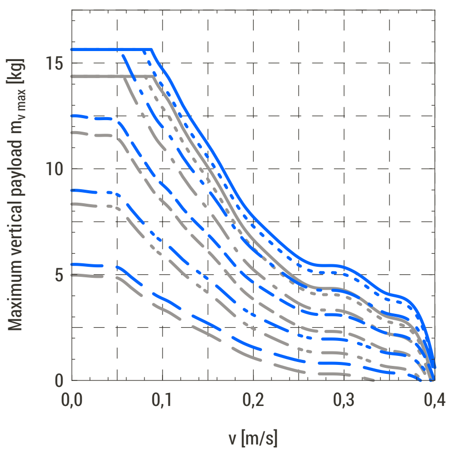
MSCE in combination:
- with VK
- with MSD

Acceleration/Deceleration:
- a = 0 m/s²
- a = 0,5 m/s²
- a = 2 m/s²
- a = 5 m/s²
- a = 10 m/s²
- a = 20 m/s²

8 × 2 with a stepper motor ☐42



8 × 8 with a stepper motor ☐42

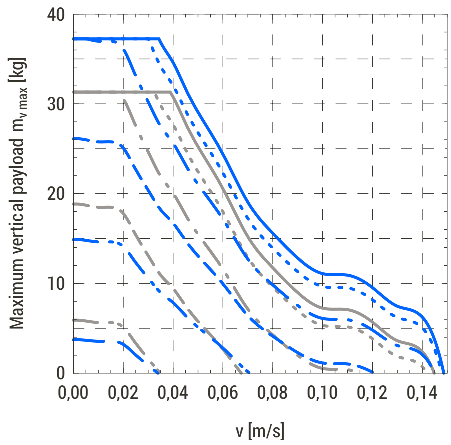


MSCE in combination:
- with VK
- with MSD

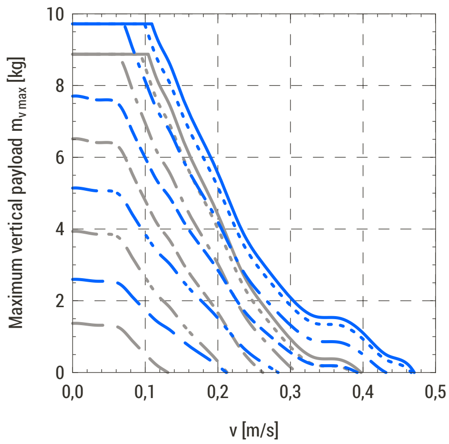
Acceleration/Deceleration:
- a = 0 m/s²
- a = 0,5 m/s²
- a = 2 m/s²
- a = 5 m/s²
- a = 10 m/s²
- a = 20 m/s²

MSCE 45

10 × 3 with a stepper motor ☐42



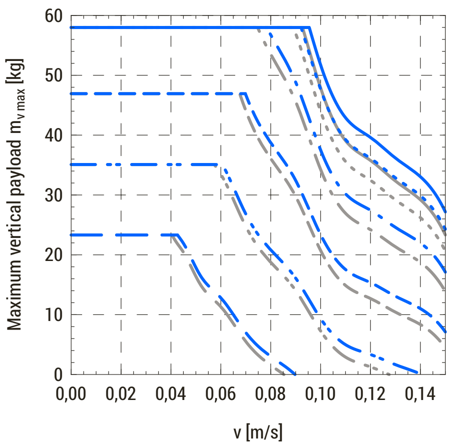
10 × 10 with a stepper motor ☐42



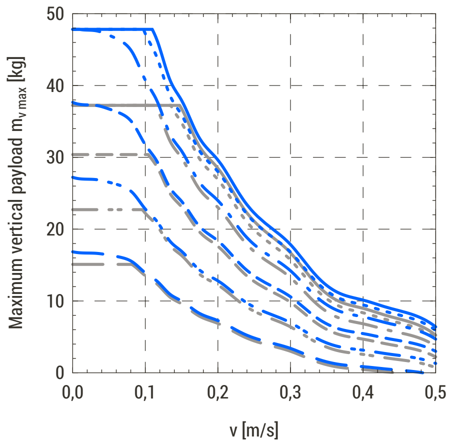
MSCE in combination:
- with VK
- with MSD

Acceleration/Deceleration:
- a = 0 m/s²
- a = 0,5 m/s²
- a = 2 m/s²
- a = 5 m/s²
- a = 10 m/s²
- a = 20 m/s²

10 × 3 with a stepper motor ☐56



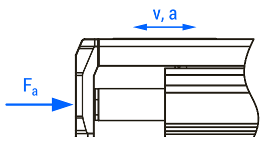
10 × 10 with a stepper motor ☐56



MSCE in combination:
- with VK
- with MSD

Acceleration/Deceleration:
- a = 0 m/s²
- a = 0,5 m/s²
- a = 2 m/s²
- a = 5 m/s²
- a = 10 m/s²
- a = 20 m/s²

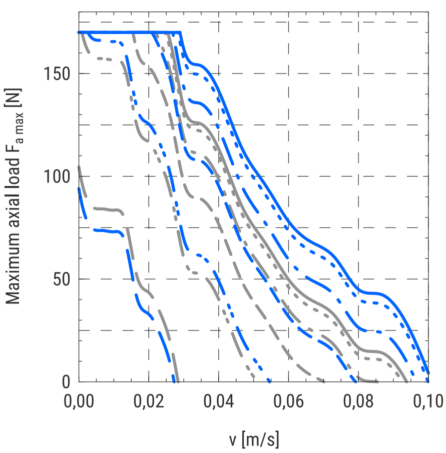
Maximum axial load as a function of the travel speed and acceleration of the front plate



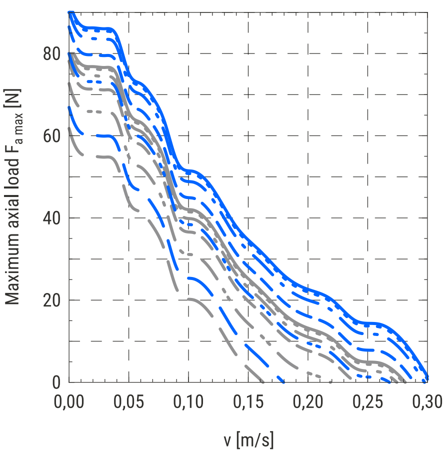
On the following diagrams, the maximum axial load applied to the front plate as a function of the travel speed for different accelerations, different ball screw leads and different combinations of the standard motors is presented. Motor adapter VK and a motor side drive MSD are also considered.

MSCE 25

6 × 2 with a stepper motor □28



6 × 6 with a stepper motor □28

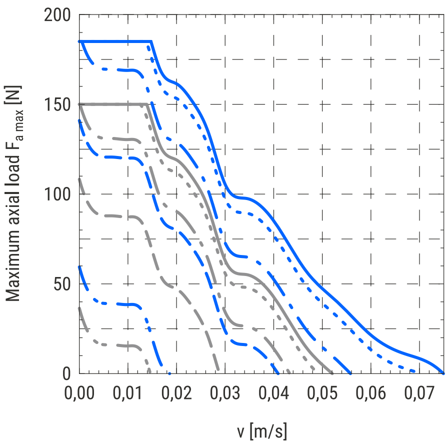


MSCE in combination:
- with VK
- with MSD

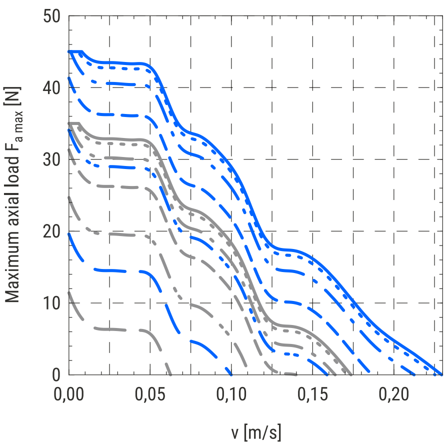
Acceleration/Deceleration:
- a = 0 m/s^2
- a = 0,5 m/s^2
- a = 2 m/s^2
- a = 5 m/s^2
- a = 10 m/s^2
- a = 20 m/s^2

MSCE 32

8 × 2 with a stepper motor □28



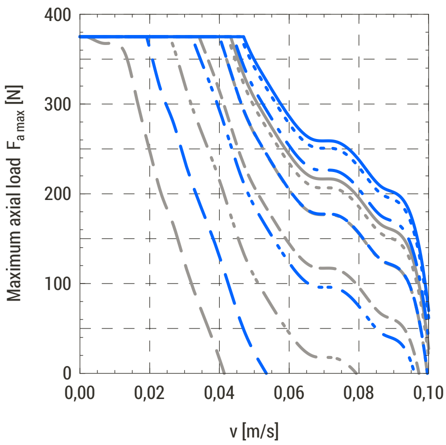
8 × 8 with a stepper motor □28



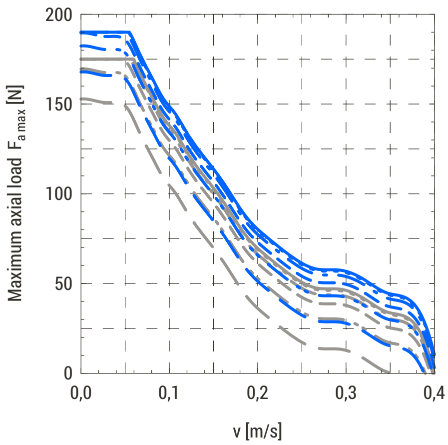
MSCE in combination:
- with VK
- with MSD

Acceleration/Deceleration:
- a = 0 m/s^2
- a = 0,5 m/s^2
- a = 2 m/s^2
- a = 5 m/s^2
- a = 10 m/s^2
- a = 20 m/s^2

8 × 2 with a stepper motor □42



8 × 8 with a stepper motor □42

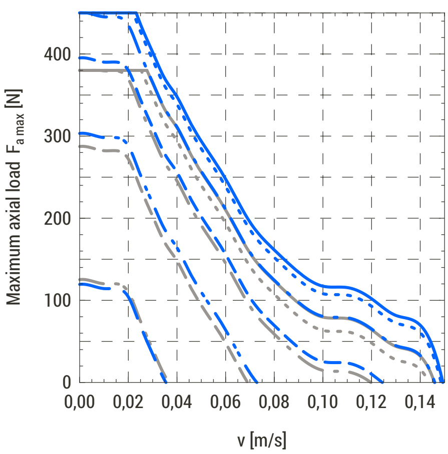


MSCE in combination:
- with VK
- with MSD

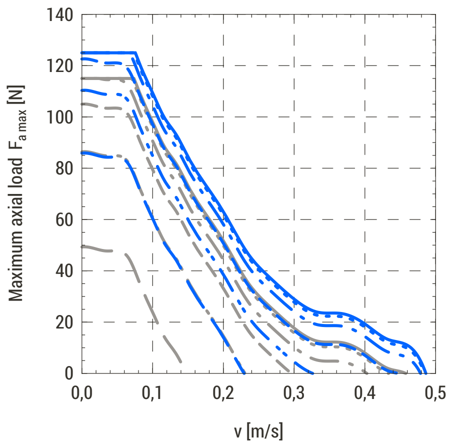
Acceleration/Deceleration:
- $a = 0\ m/s^2$
- $a = 0{,}5\ m/s^2$
- $a = 2\ m/s^2$
- $a = 5\ m/s^2$
- $a = 10\ m/s^2$
- $a = 20\ m/s^2$

MSCE 45

10 × 3 with a stepper motor □42



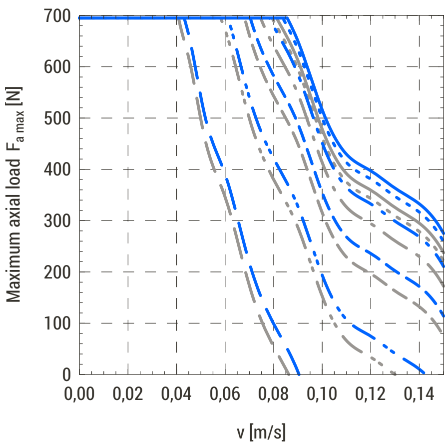
10 × 10 with a stepper motor □42



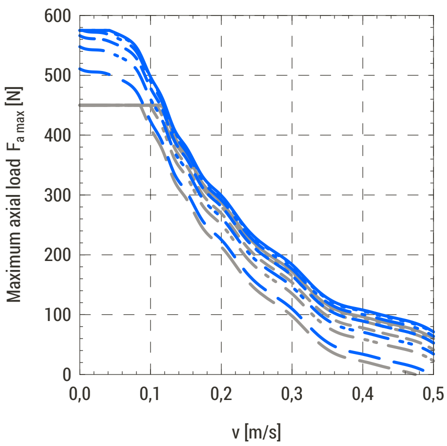
MSCE in combination:
- with VK
- with MSD

Acceleration/Deceleration:
- $a = 0\ m/s^2$
- $a = 0{,}5\ m/s^2$
- $a = 2\ m/s^2$
- $a = 5\ m/s^2$
- $a = 10\ m/s^2$
- $a = 20\ m/s^2$

10 × 3 with a stepper motor □56



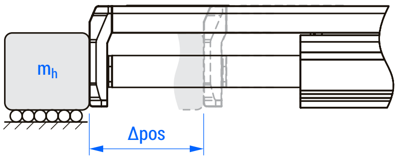
10 × 10 with a stepper motor □56



MSCE in combination:
- with VK
- with MSD

Acceleration/Deceleration:
- $a = 0\ m/s^2$
- $a = 0{,}5\ m/s^2$
- $a = 2\ m/s^2$
- $a = 5\ m/s^2$
- $a = 10\ m/s^2$
- $a = 20\ m/s^2$

Maximum horizontal payload as a function of change of the position and positioning time of the front plate



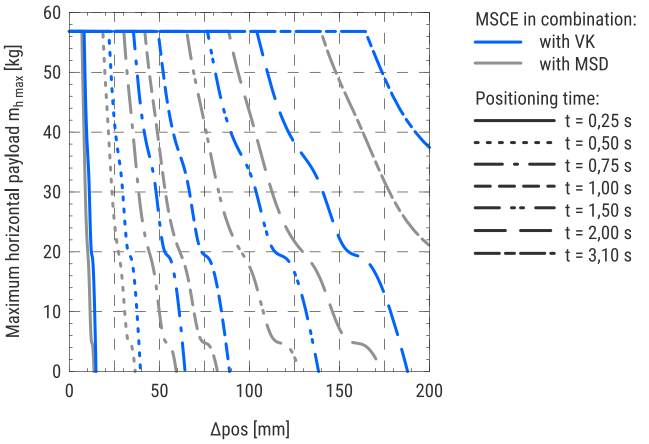
The following diagrams show the maximum payload that can be moved by a certain horizontal distance within a positioning time frame. Acceleration/deceleration time of 100 ms is taken into account.

Diagrams depend on the ball screw leads and different combinations of the standard motors. Motor adapter VK and a motor side drive MSD are also considered.

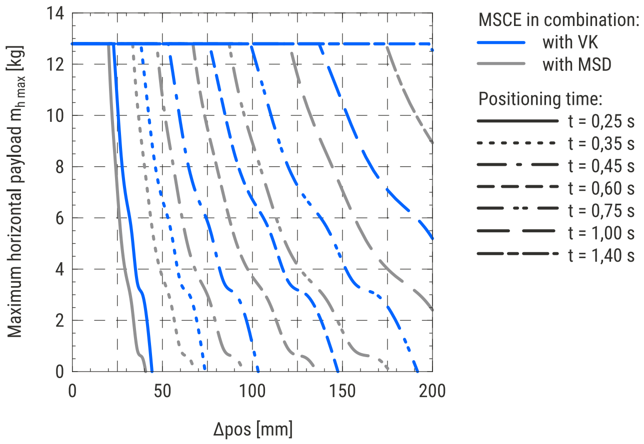
Curves are valid for the payload to be pushed and supported by an external guiding (coefficient of friction 0,1 is taken into consideration).

MSCE 25

6 × 2 with a stepper motor □28

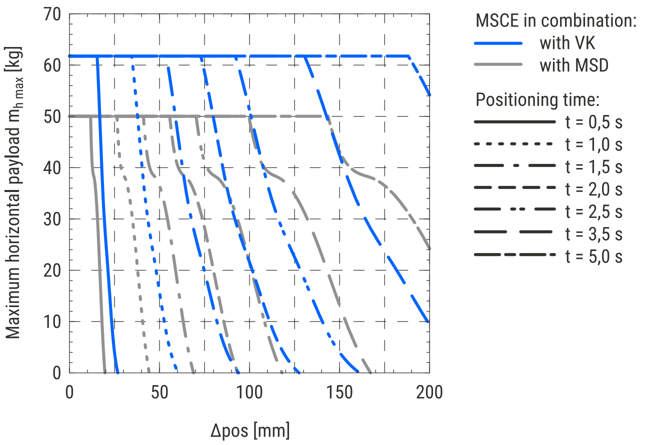


6 × 6 with a stepper motor □28

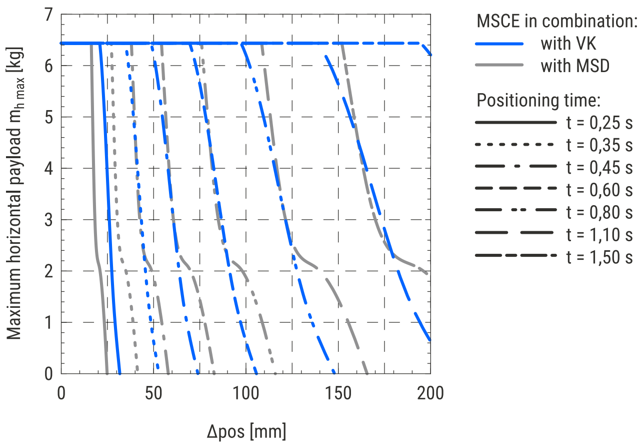


MSCE 32

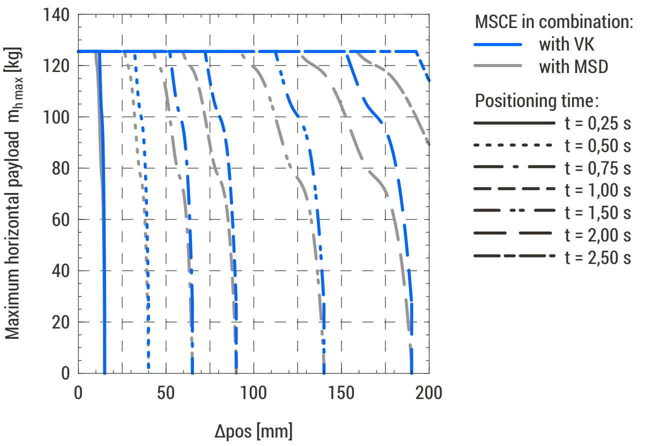
8 × 2 with a stepper motor □28



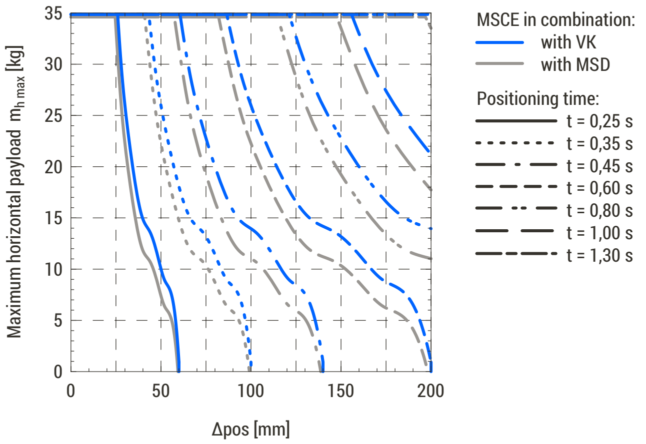
8 × 8 with a stepper motor □28



8 × 2 with a stepper motor □42

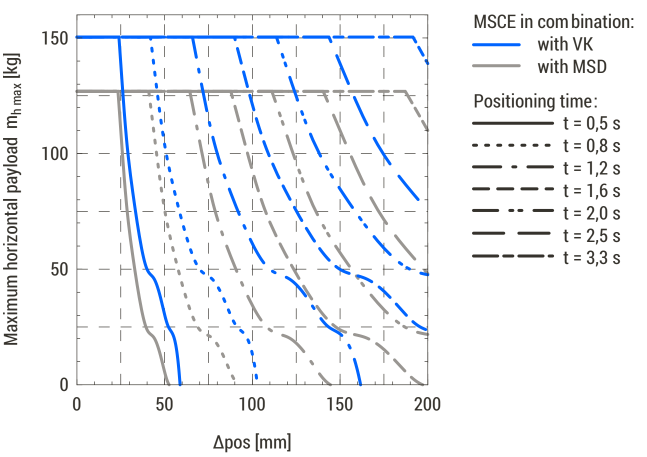


8 × 8 with a stepper motor □42

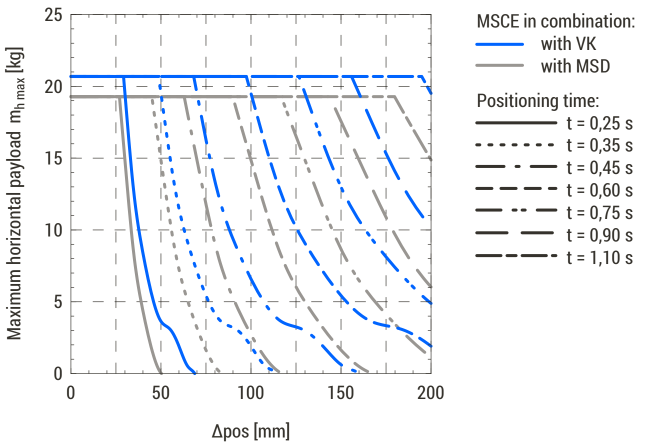


MSCE 45

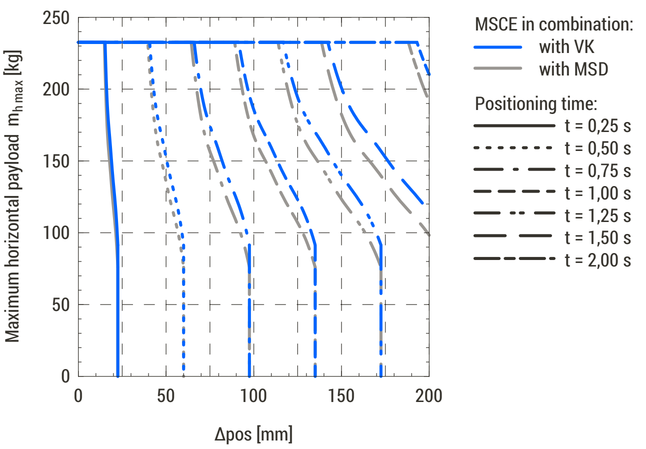
10 × 3 with a stepper motor □42



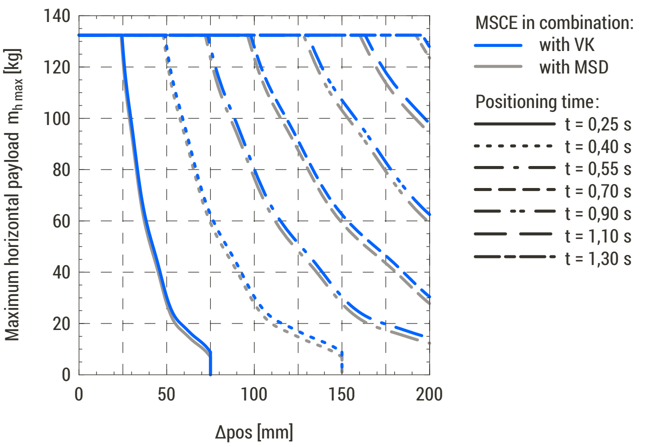
10 × 10 with a stepper motor □42



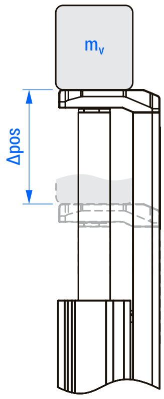
10 × 3 with a stepper motor □56



10 × 10 with a stepper motor □56



Maximum vertical payload as a function of change of the position and positioning time of the front plate

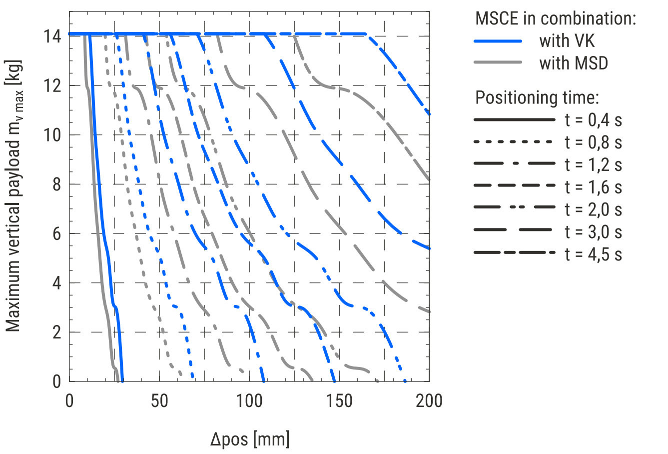


The following diagrams show the maximum payload that can be moved by a certain vertical distance within a positioning time frame. Acceleration/deceleration time of 100 ms is taken into account.

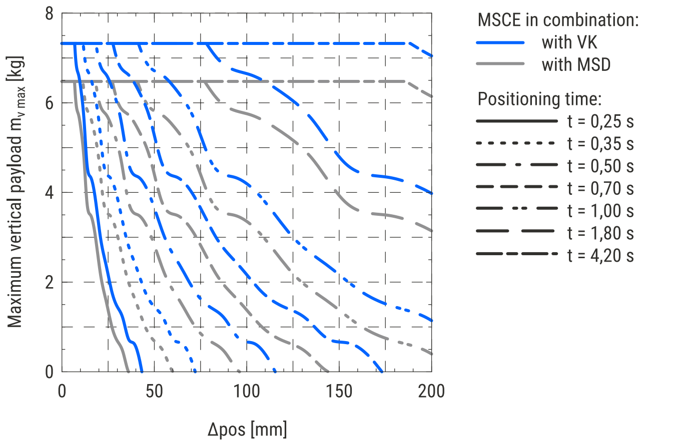
Diagrams depend on the ball screw leads and different combinations of the standard motors. Motor adapter VK and a motor side drive MSD are also considered.

MSCE 25

6 × 2 with a stepper motor □28

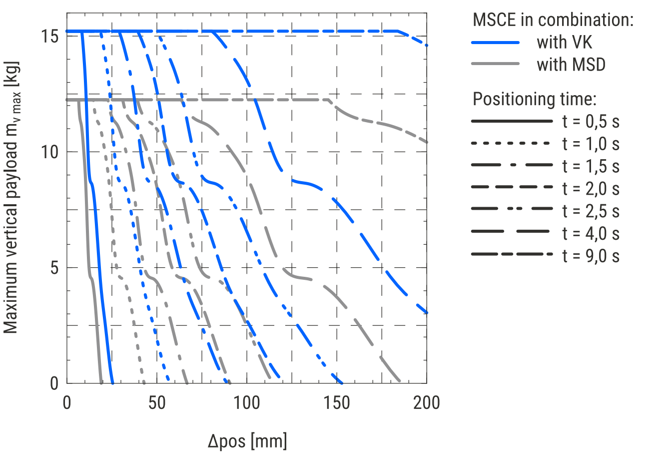


6 × 6 with a stepper motor □28

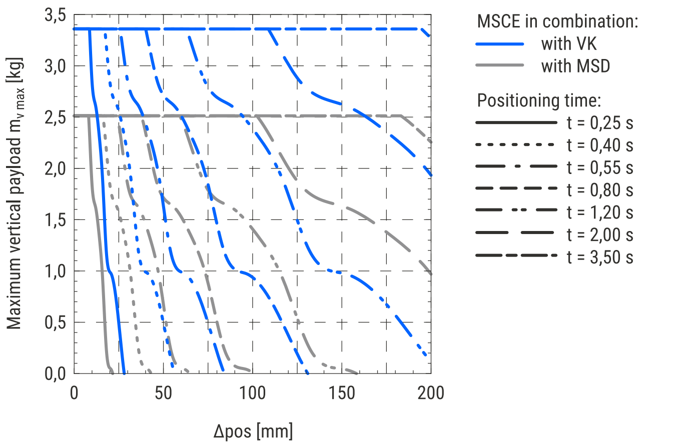


MSCE 32

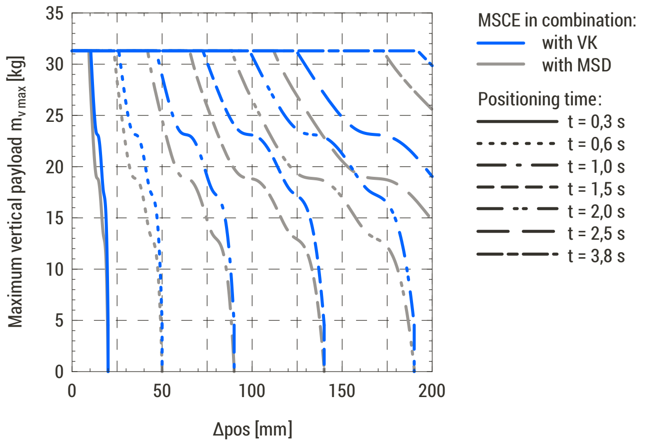
8 × 2 with a stepper motor □28



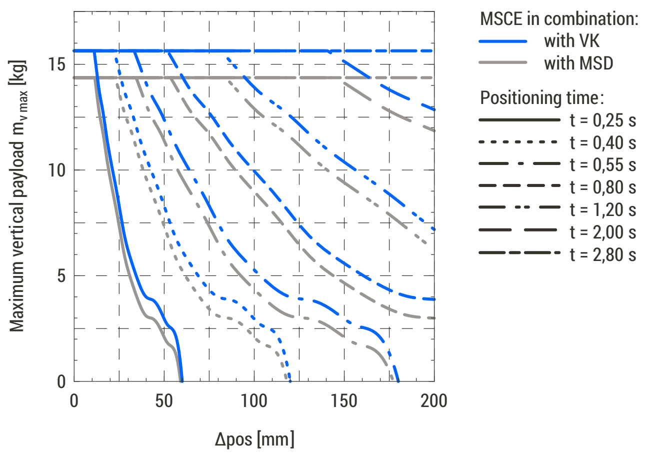
8 × 8 with a stepper motor □28



8 × 2 with a stepper motor □42

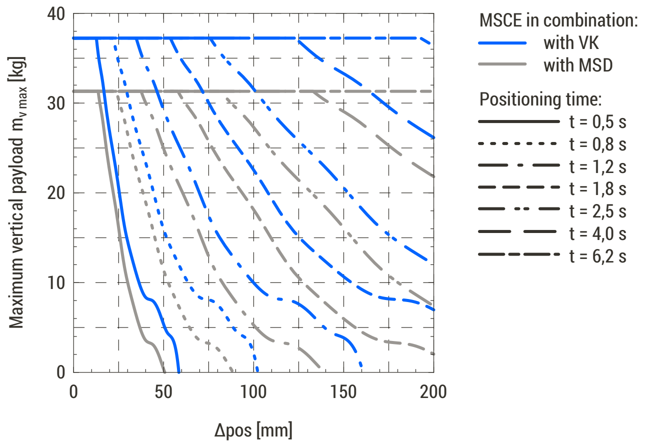


8 × 8 with a stepper motor □42

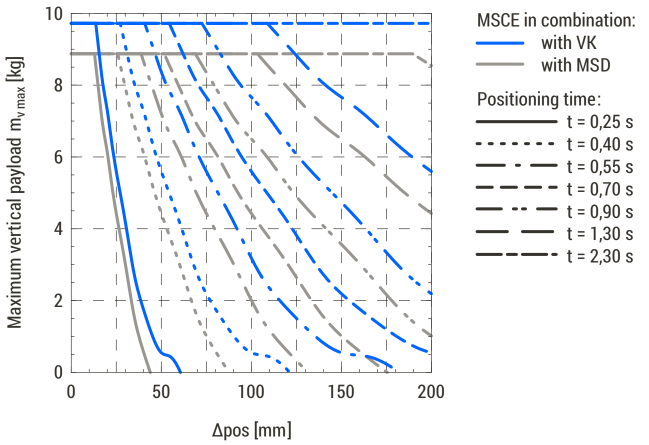


MSCE 45

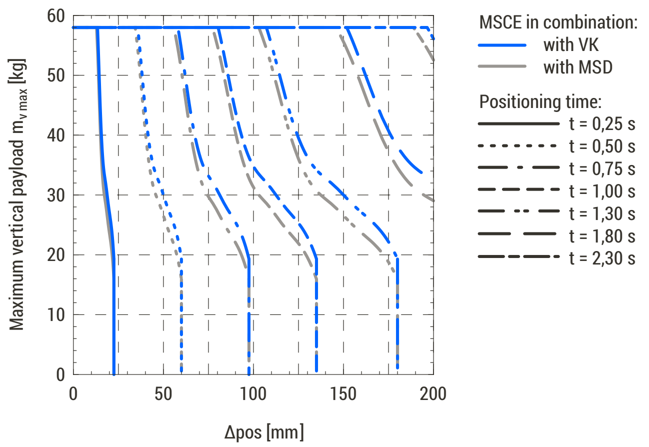
10 × 3 with a stepper motor □42



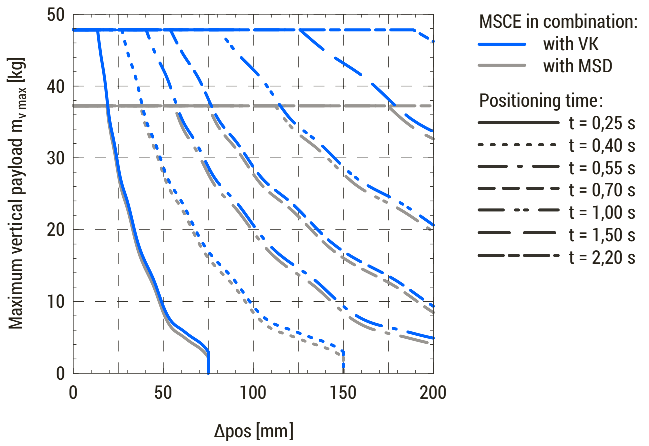
10 × 10 with a stepper motor □42



10 × 3 with a stepper motor □56



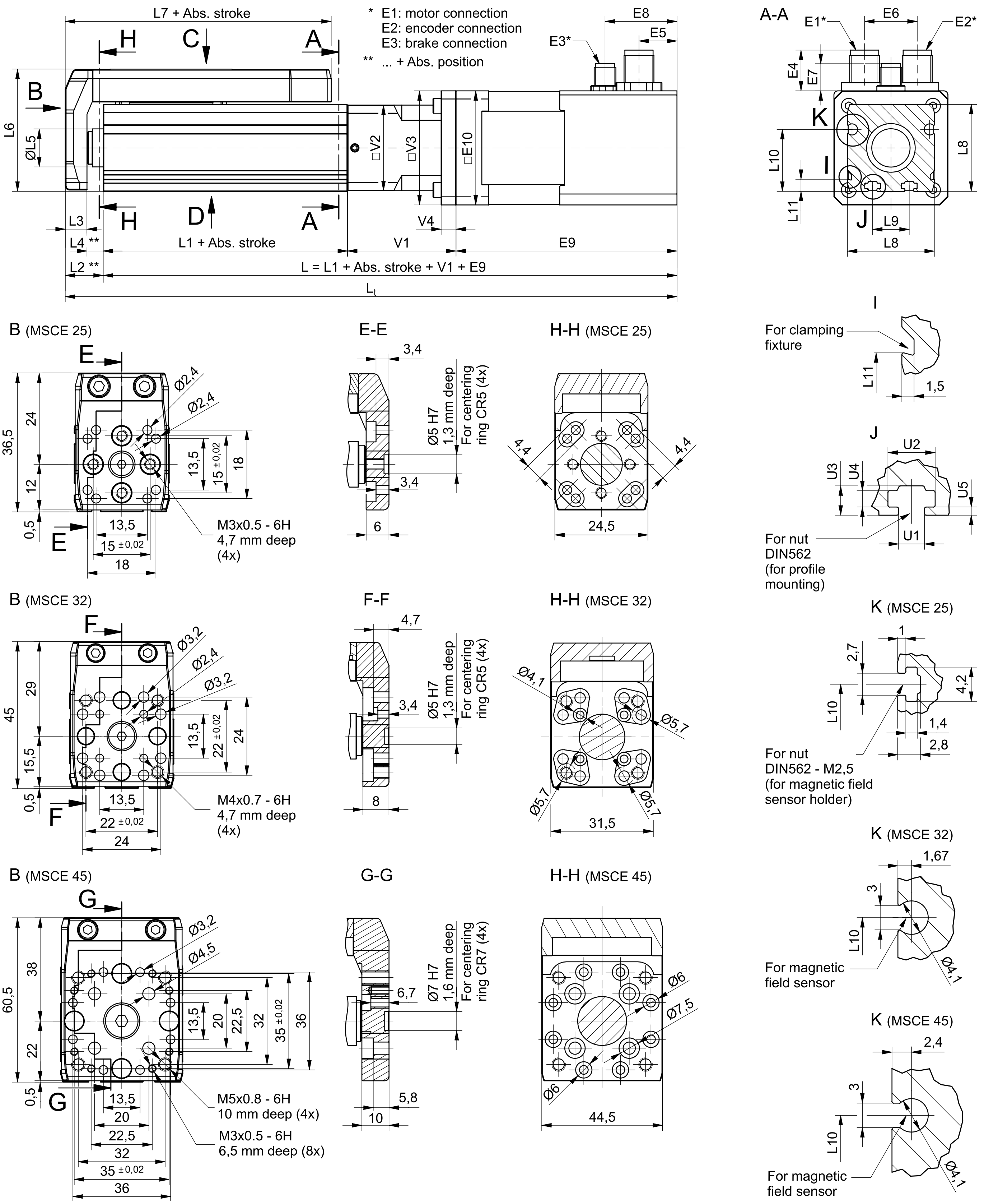
10 × 10 with a stepper motor □56



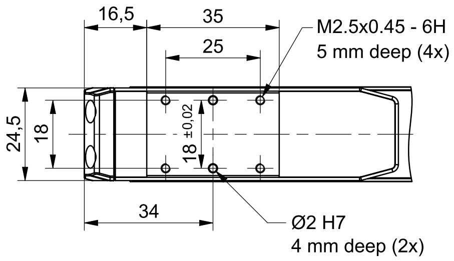
DIMENSIONS

All dimensions are in mm. The scale of the drawings may not be equal.

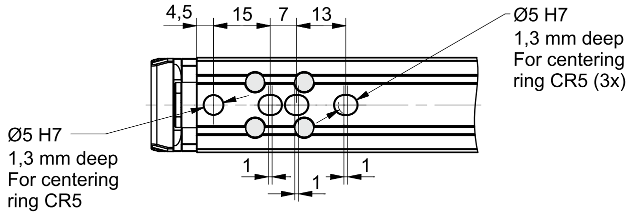
MSCE in combination with a standard motor and a motor adapter VK



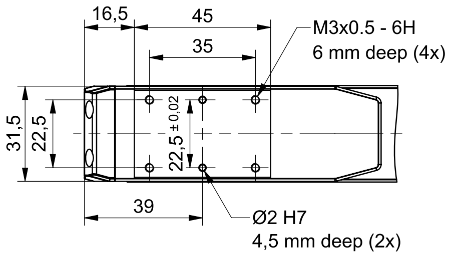
C (MSCE 25)



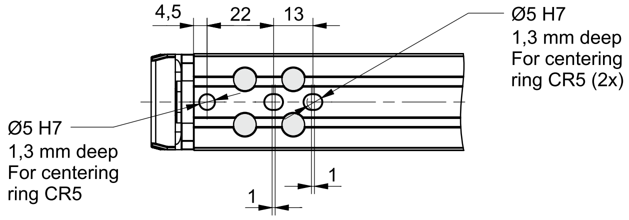
D (MSCE 25)



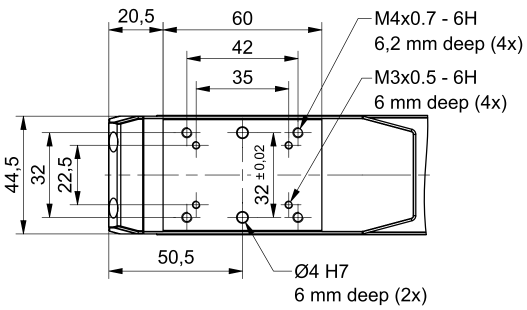
C (MSCE 32)



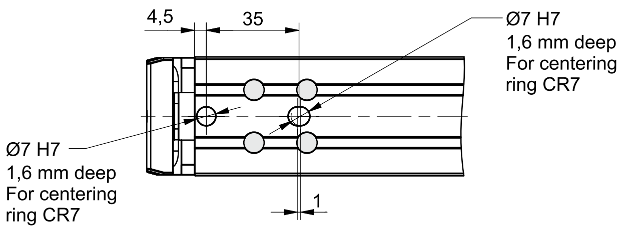
D (MSCE 32)



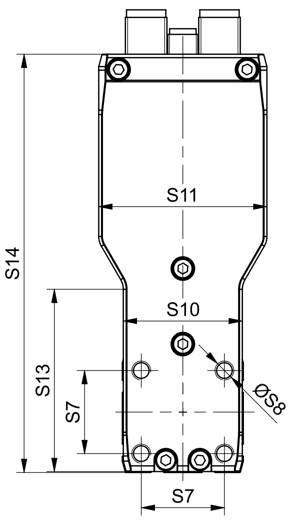
C (MSCE 45)

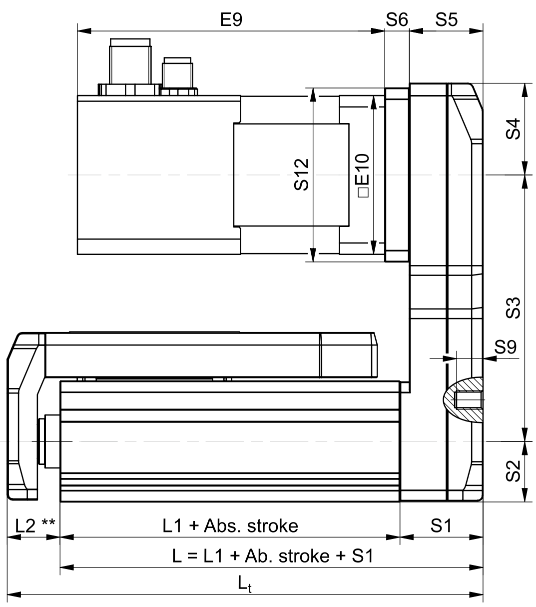


D (MSCE 45)

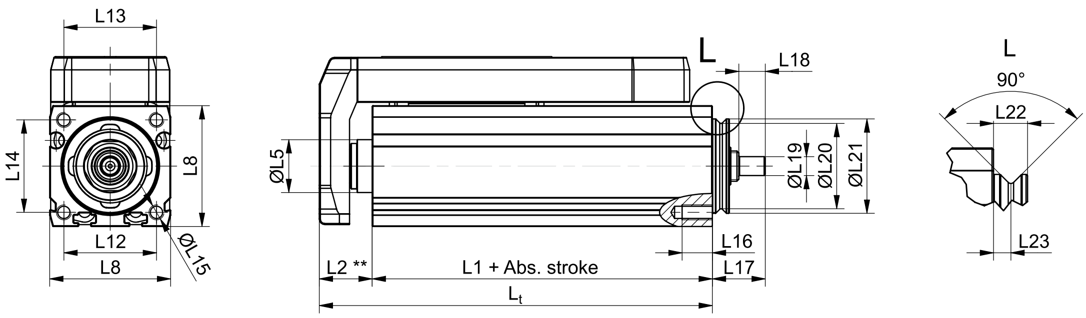


MSCE in combination with a standard motor and a motor adapter MSD





MSCE without a motor



MSCE dimensions

MSCE	L1	L2	L3	L4	ØL5	L6	L7	L8	L9	L10	L11	L12	L13	L14	ØL15	L16	L17	L18	ØL19 (h7)	ØL20	ØL21 (h7)
	[mm]																				
25	50	12	6	6	12	36,5	58	25	13,5	19,25	4,4	19	17	18	M2,5	8	14	7	5	17,6	20
32	65	14	8	6	14	45	73	32	13,5	22,8	4,4	24,5	24,5	24,5	M3	8	14	7	5	22,6	25
45	80	18	10	8	18	60,5	91	45	20	30,5	4,4	34	34	34	M4	10	16	8	8	31,6	34

MSCE	L22	L23	U1	U2	U3	U4	U5
	[mm]						
25	4,5	2,3	2,2	4,2	2,8	1,4	1
32	4,5	2,3	3,2	5,8	3,6	2	1
45	4,5	2,3	4,2	7,5	4,7	2,5	1,2

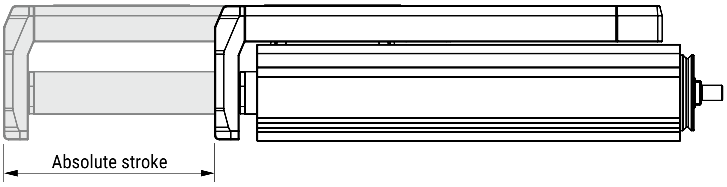
Motor adapter VK and a motor side drive MSD dimensions

MSCE	Motor		V1	□V2	□V3	V4	S1	S2	S3 (±0,5)	S4	S5	S6	S7	ØS8	S9	S10	S11	S12	S13	S14
	Type	Size □ [mm]	[mm]																	
25	Stepper	28	36	24,5	28	5,5	22	12,5	52,5	18,25	19,5	5,5	18	M4	6	24,5	31,5	34	38,5	83,25
32		28	36	31,5	31,5	0	22	16,0	52,5	18,25	19,5	5,5	22	M5	7	31,5	31,5	34	0	86,75
		42	40	31,5	42	5,5	22	16,0	70,5	24,25	19,5	6,5	22	M5	7	31,5	44,5	46	48	110,75
45		42	42	44,5	44,5	0	27,5	22,5	81,0	24,75	24,5	6,5	32	M6	7	44,5	44,5	46	0	128,25
		56	46	44,5	56,4	9,5	27,5	22,5	88,5	33,25	24,5	6,0	32	M6	7	44,5	59,5	59,5	64,5	144,25

Motor dimensions

Motor			E1	E2	E3	E4 (±1)	E5 (±0,3)	E6	E7 (±1)	E8 (±0,3)	E9 (±1)	□E10
Type	Size □ [mm]	Brake	[mm]									
Stepper	28	–	Available soon									
	28	with										
	42	–	M12 5-pole	M12 8-pole	–	14	14	19,5	–	–	70,4	42,3
	42	with	M12 5-pole	M12 8-pole	M8 3-pole	14	14	19,5	9	27	106,4	42,3
	56	–	M12 5-pole	M12 8-pole	–	14	13,4	23	–	–	98	56,4
	56	with	M12 5-pole	M12 8-pole	M8 3-pole	14	52,4	23	9	12	138	56,4

Absolute stroke and length of the MSCE definition



Absolute stroke definition

Absolute stroke = Effective stroke + 2 × Safety stroke

The electric slider MSCE does not include any safety stroke.

Length definition

L_t = L + L2 + Abs. position

Length L and L_t are defined as it is presented on the dimensional drawings above, where lengths of a motor, motor adapter VK, and motor side drive MSD are also considered.

Abs. stroke	Absolute stroke	[mm]
Abs. position	Absolute position	[mm]
L	Length	[mm]
L_t	Total length	[mm]

ACCESSORIES