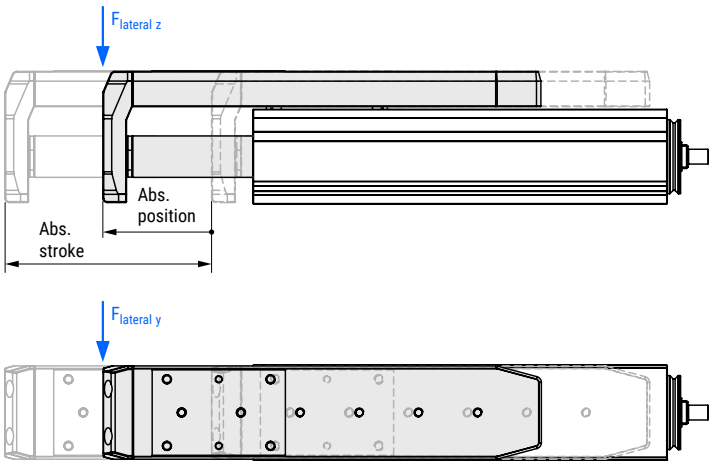
Mini electric slider MSCE

Operating conditions

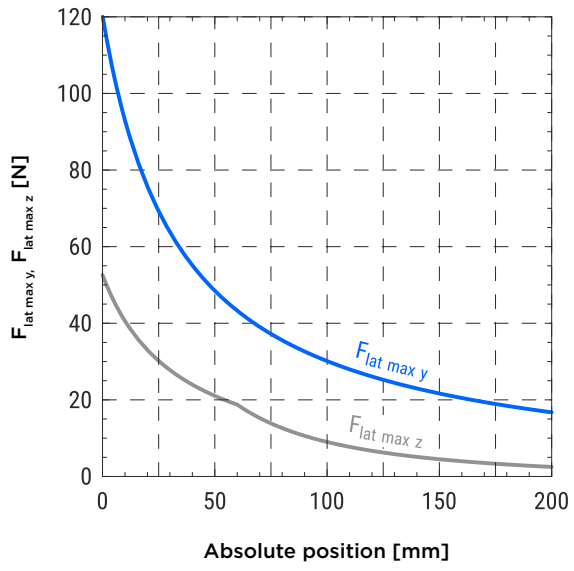
Ambient temperature	0 °C ~ +50 °C
Ambient temperature without a motor	0 °C ~ +60 °C
Protection class	IP40
Duty cycle	100 %
Maintenance	Life-time pre-lubricated

Maximum lateral loading as a function of the slide absolute position

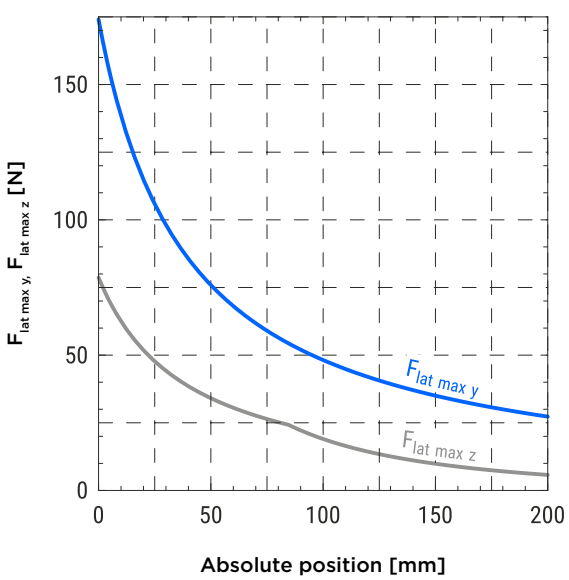
On the following diagrams, the maximum lateral loads acting on the front plate as a function of the slide absolute position are presented. Both lateral loads in y and z directions are considered.

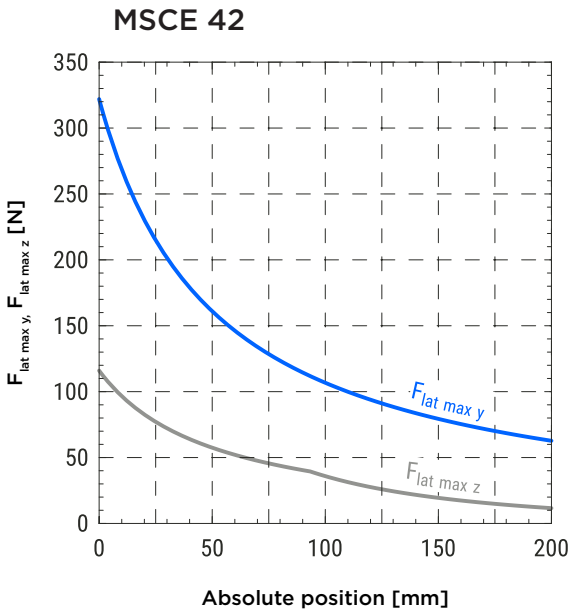


MSCE 25



MSCE 32

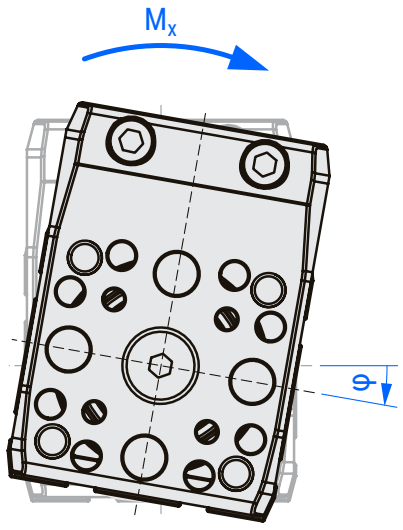




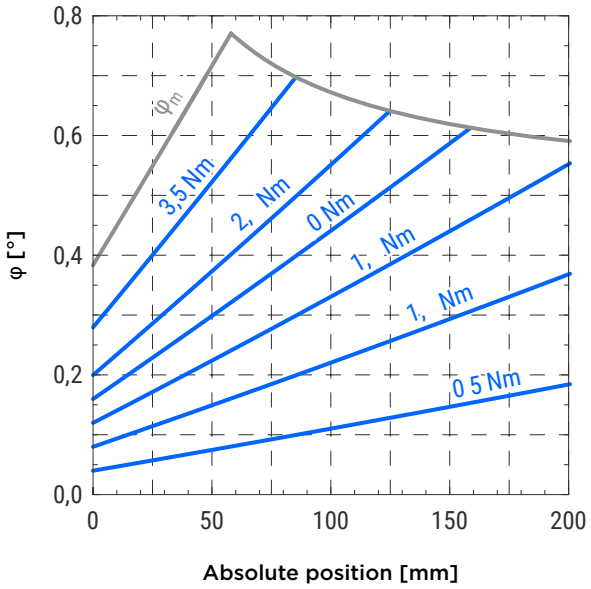
Angular deflections of the front plate as a function of the slide's absolute position

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.

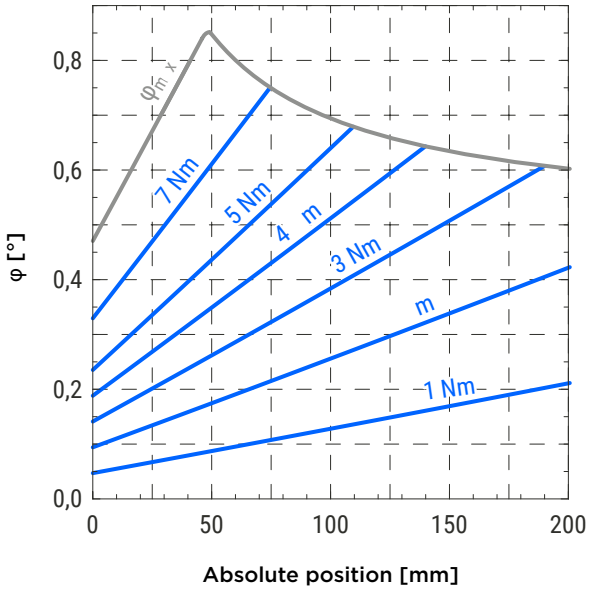
The maximum permissible angular deflection φ_{max} must not be exceeded.



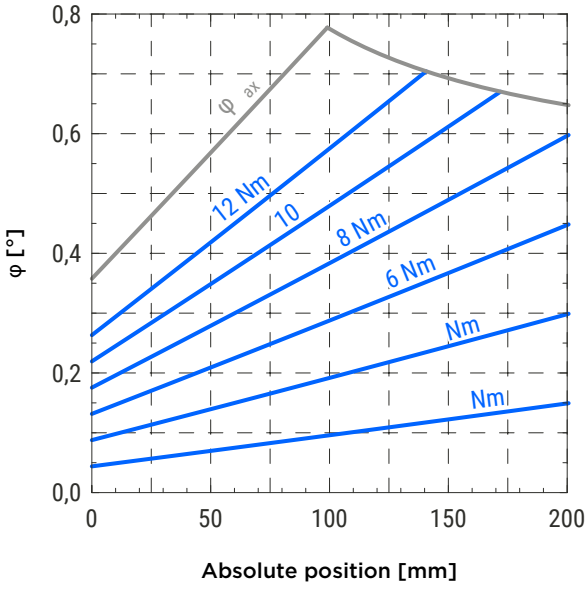
MSCE 25



MSCE 32



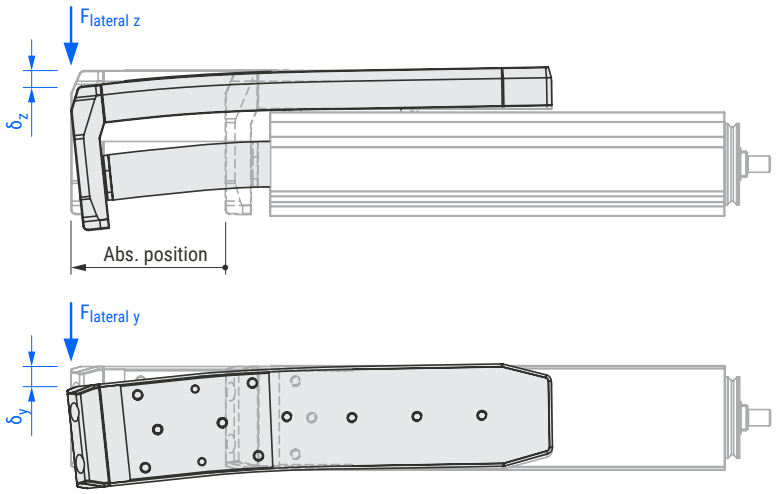
MSCE 45



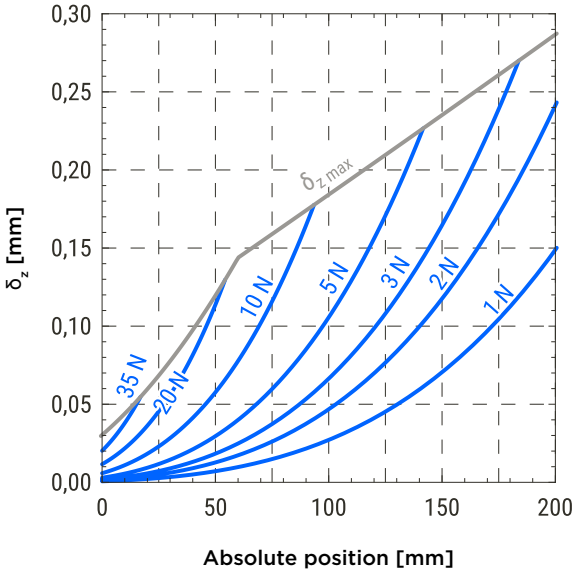
Deflections of the front plate as a function of the slide's absolute position

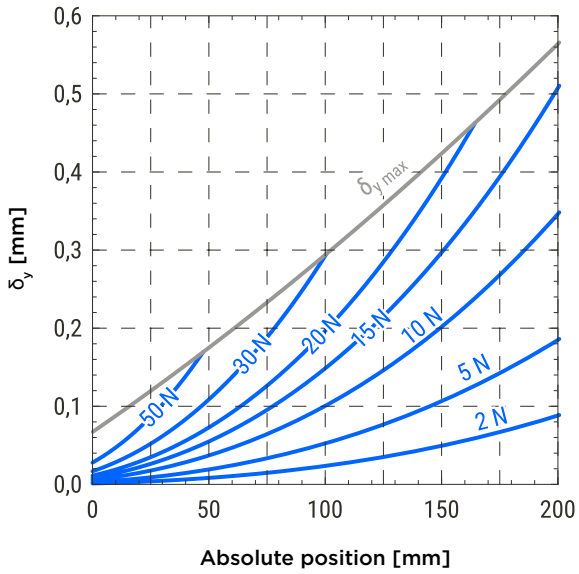
On the following diagrams, deflections of the front plate subjected to the different lateral loads at different absolute positions of the slide are presented. Both lateral loads in y and z directions are considered. Values on the curves represent the lateral load applied to the front plate.

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

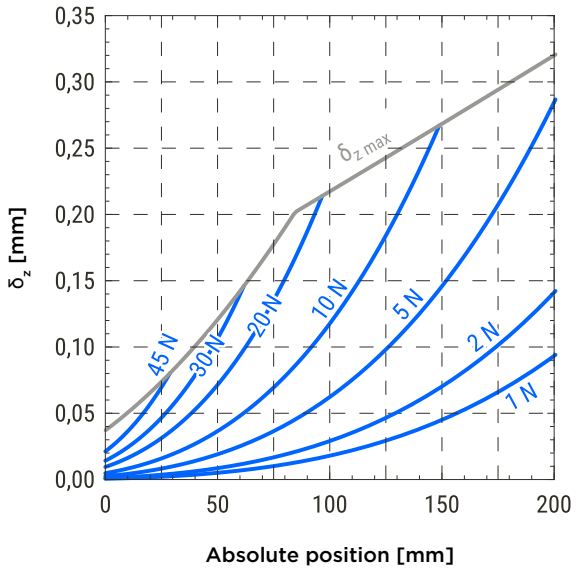


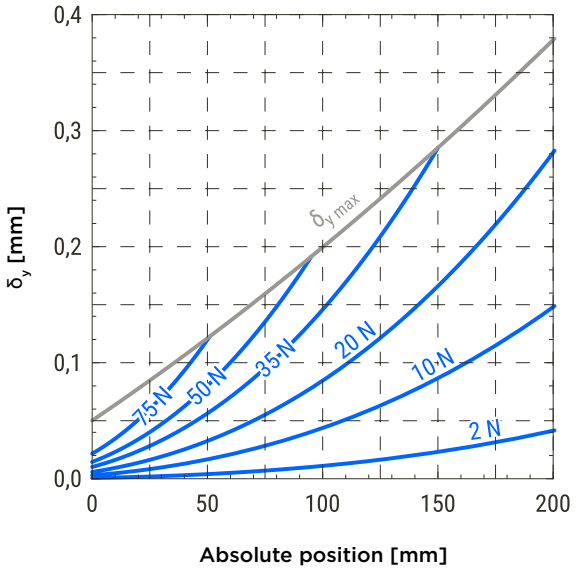
MSCE 25



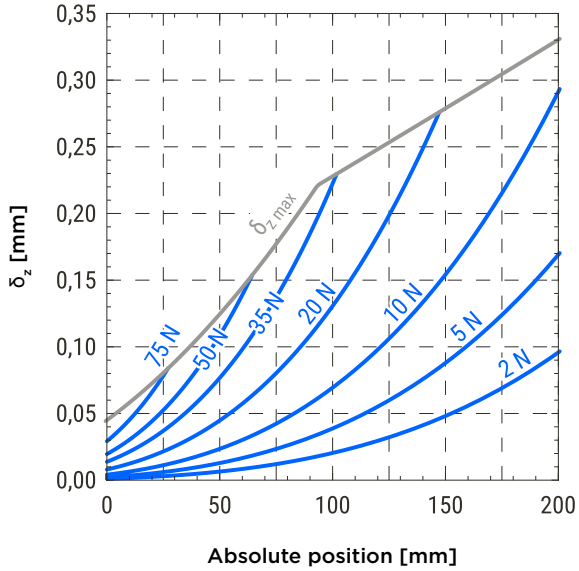


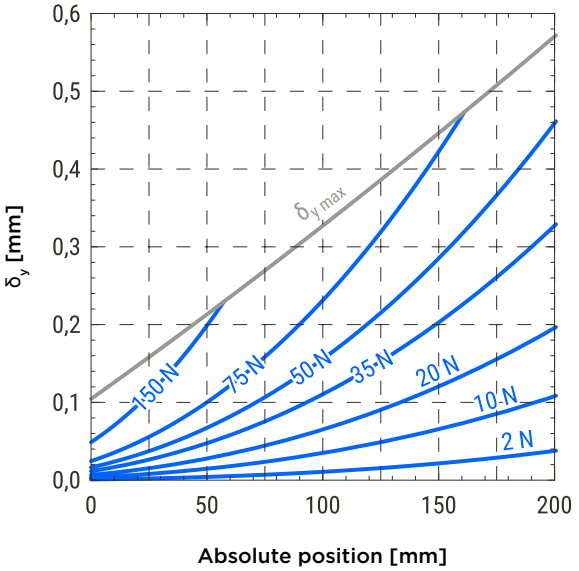
MSCE 32





MSCE 45

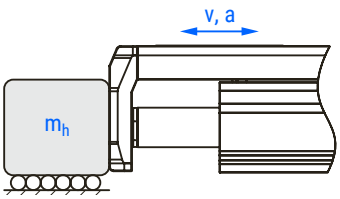




Maximum horizontal payload as a function of the travel speed and acceleration of the front plate

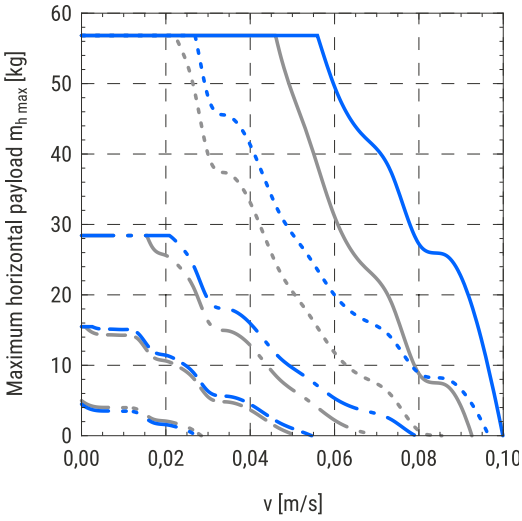
On the following diagrams, the maximum horizontal payloads applied to the front plate as a function of the travel speed for different accelerations, different ball screw leads, and different combinations of the standard motors are presented. Motor adapter VK and a motor side drive MSD are also considered.

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

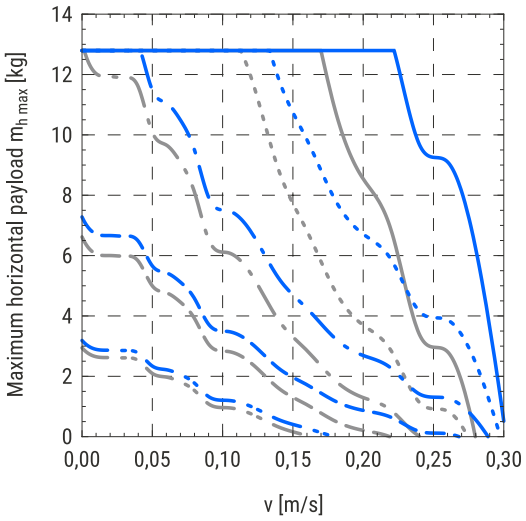


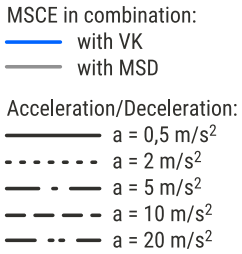
MSCE 25

6 × 2 with a stepper motor ☐28



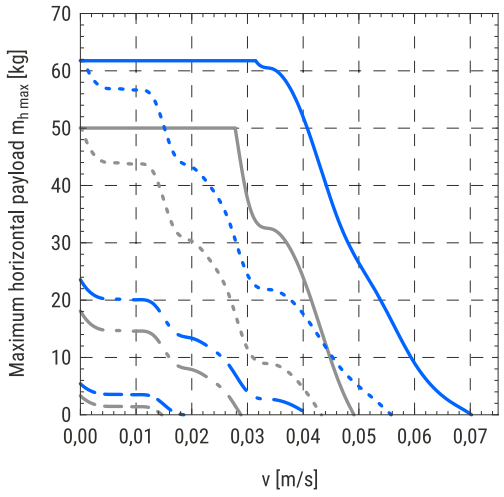
6 × 6 with a stepper motor ☐28



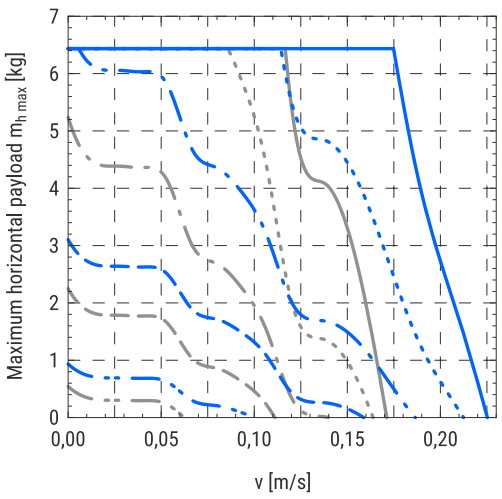


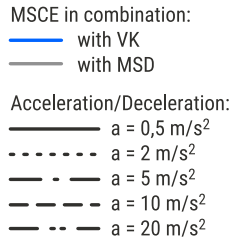
MSCE 32

8 × 2 with a stepper motor ☐28

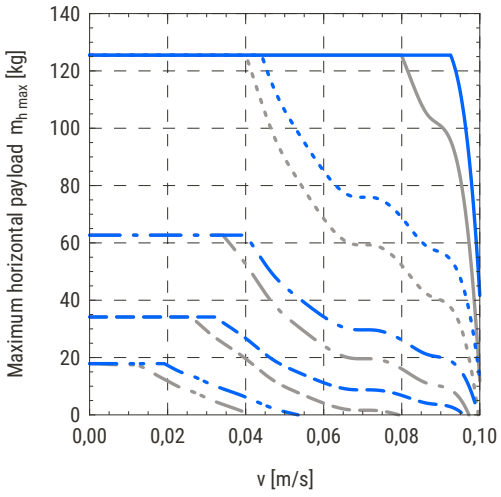


8 × 8 with a stepper motor ☐28

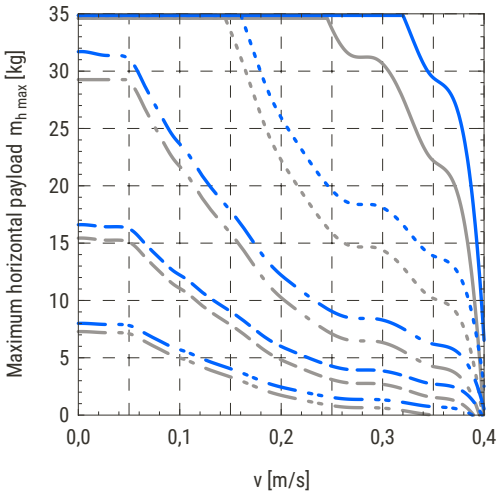


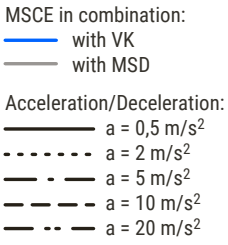


8 × 2 with a stepper motor ☐42



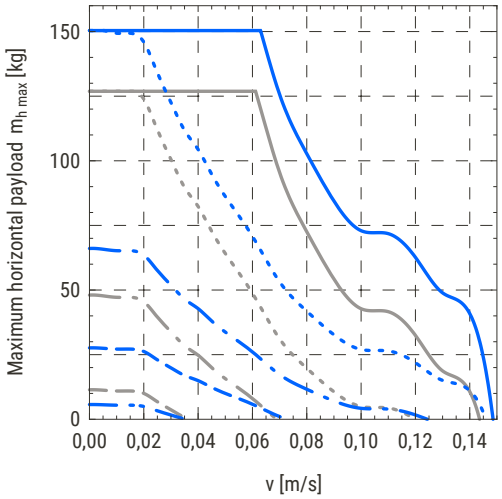
8 × 8 with a stepper motor ☐42



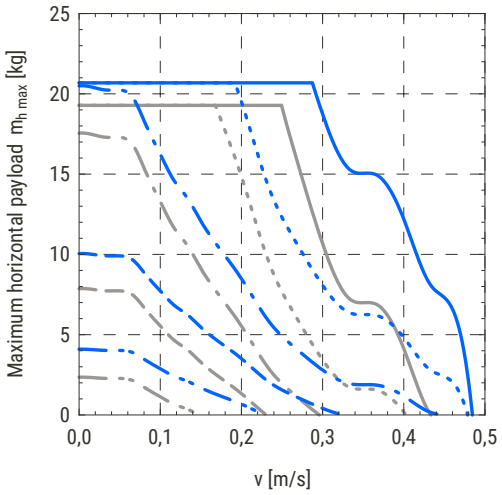


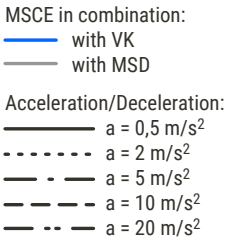
MSCE 45

10 × 3 with a stepper motor ☐42

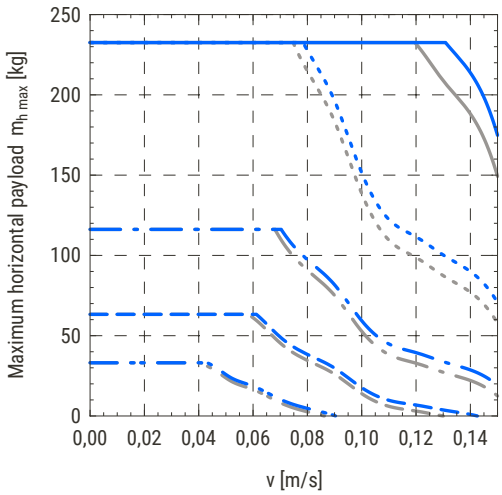


10 × 10 with a stepper motor ☐42

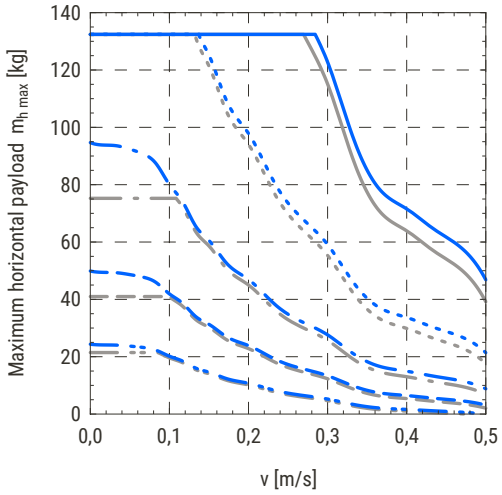


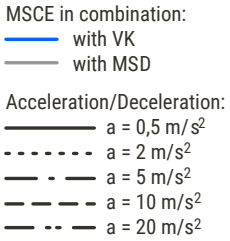


10 × 3 with a stepper motor ☐56



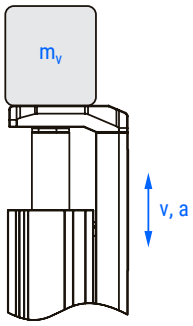
10 × 10 with a stepper motor ☐56





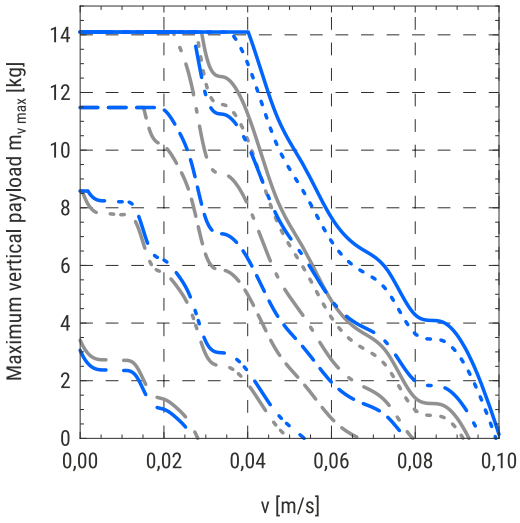
Maximum vertical payload as a function of the travel speed and acceleration of the front plate

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.

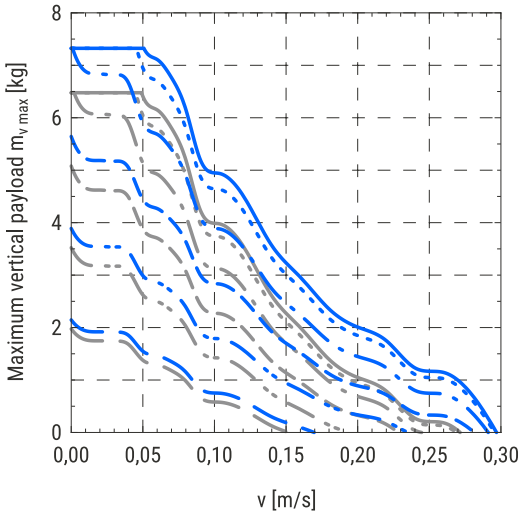


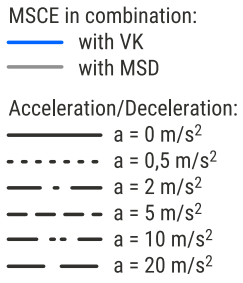
MSCE 25

6 × 2 with a stepper motor ☐28



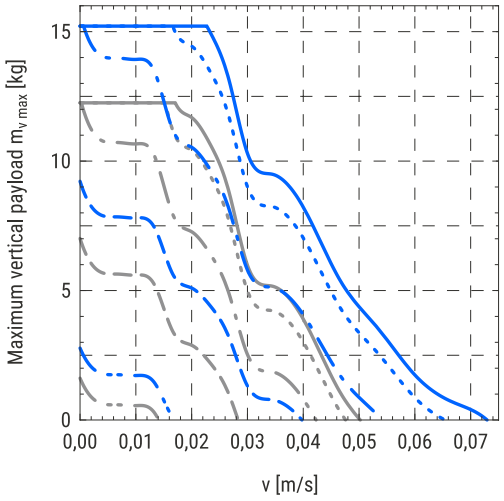
6 × 6 with a stepper motor ☐28



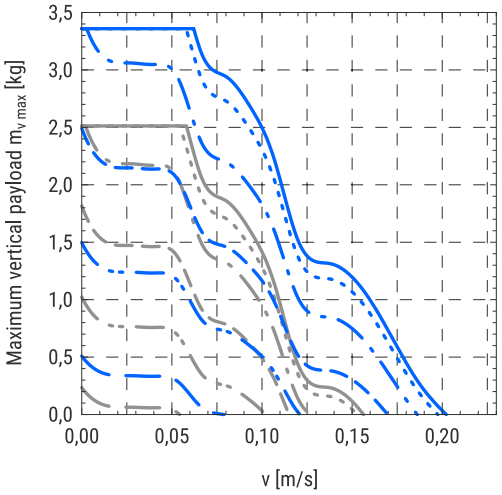


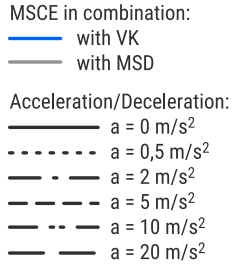
MSCE 32

8 × 2 with a stepper motor ☐28

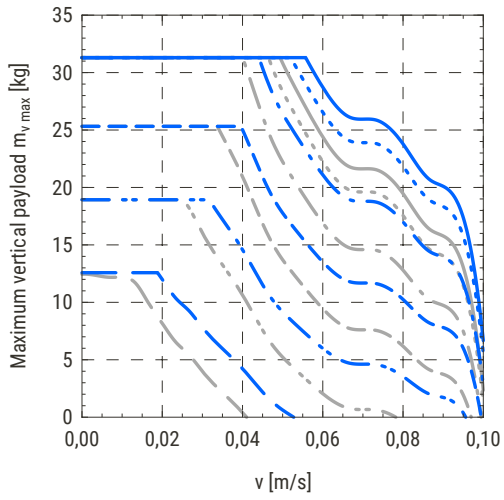


8 × 8 with a stepper motor ☐28

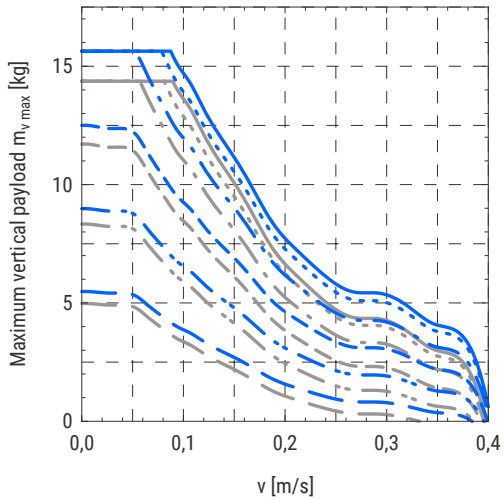


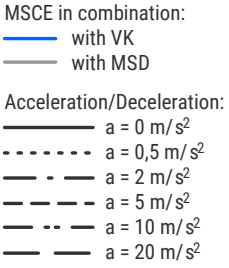


8 × 2 with a stepper motor ☐42



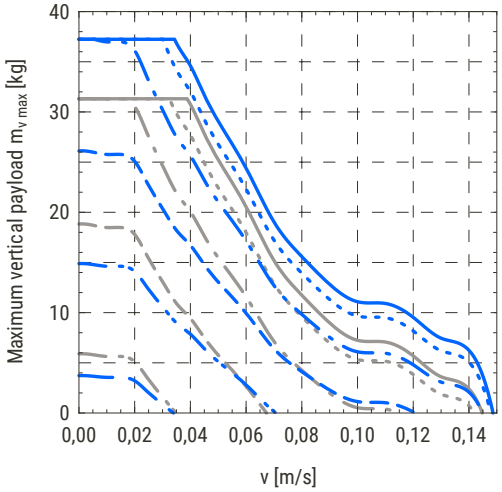
8 × 8 with a stepper motor ☐42



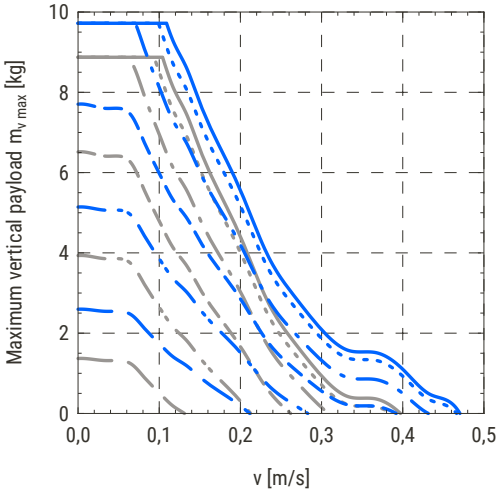


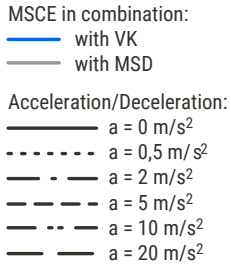
MSCE 45

10 × 3 with a stepper motor ☐42

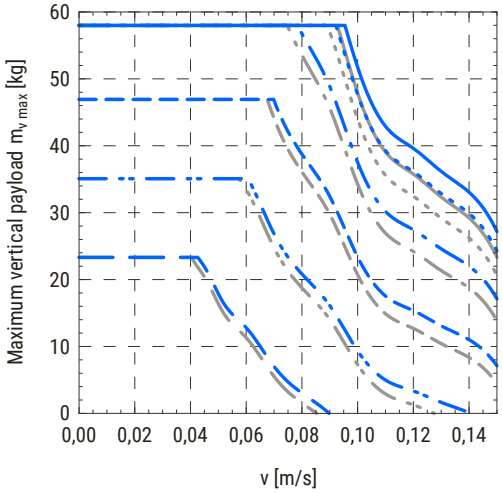


10 × 10 with a stepper motor ☐42

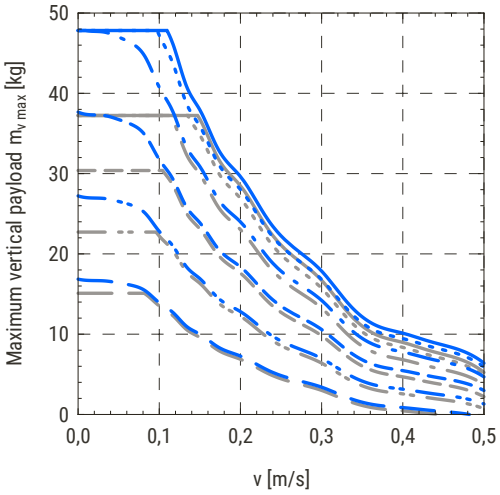


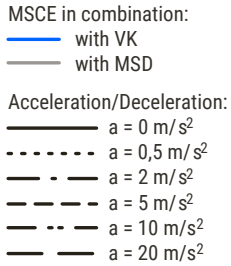


10 × 3 with a stepper motor ☐56



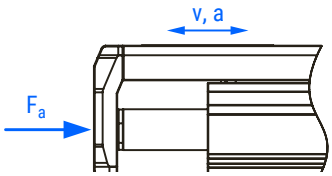
10 × 10 with a stepper motor ☐56





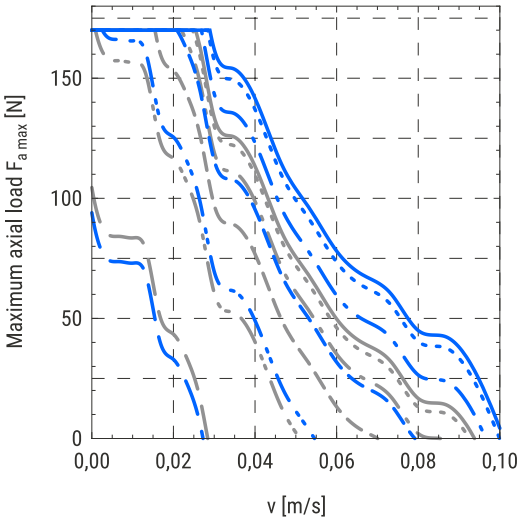
Maximum axial load as a function of the travel speed and acceleration of the front plate

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.

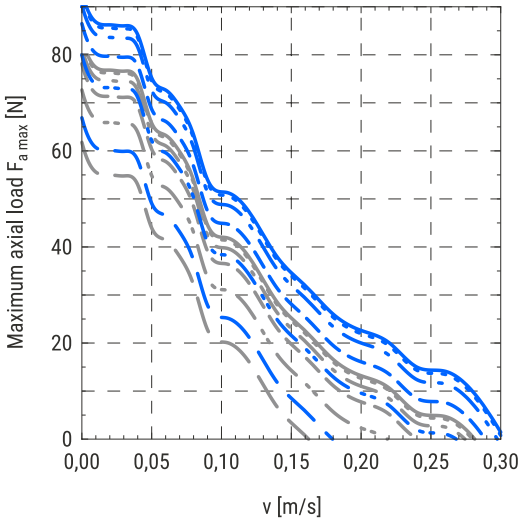


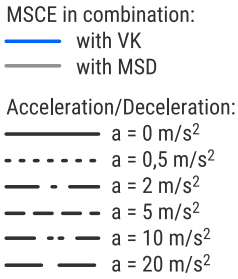
MSCE 25

6 × 2 with a stepper motor ☐28



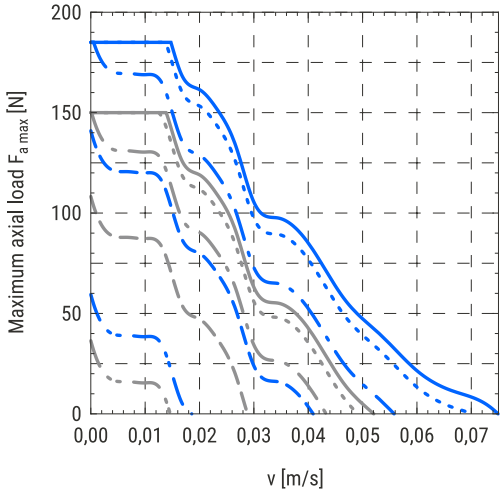
6 × 6 with a stepper motor ☐28



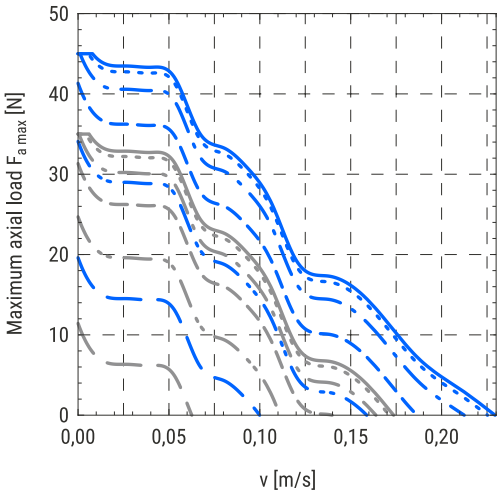


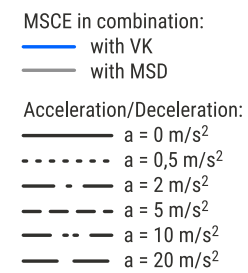
MSCE 32

8 × 2 with a stepper motor ☐28

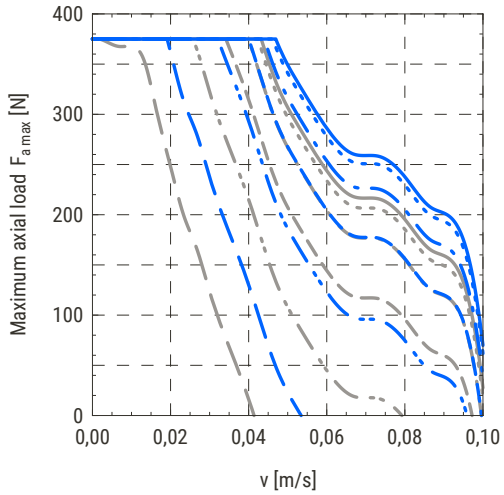


8 × 8 with a stepper motor ☐28

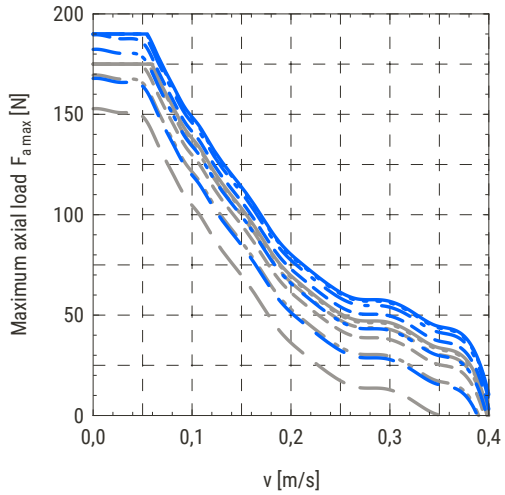


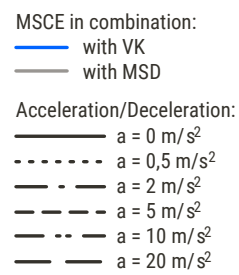


8 × 2 with a stepper motor ☐42



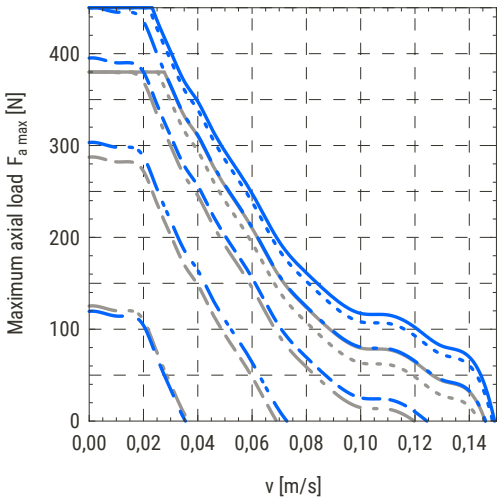
8 × 8 with a stepper motor ☐42



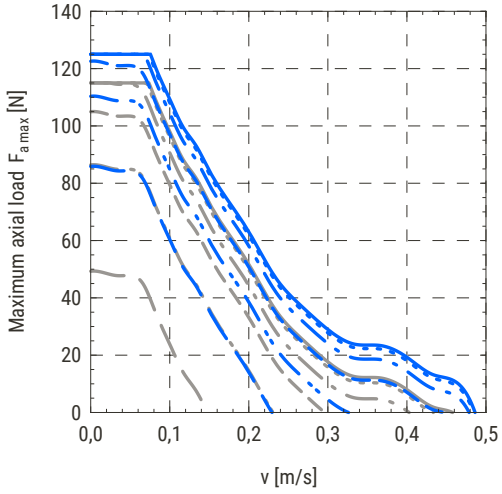


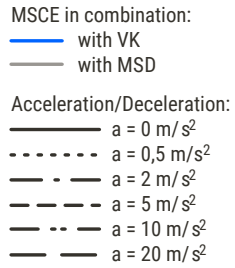
MSCE 45

10 × 3 with a stepper motor ☐42

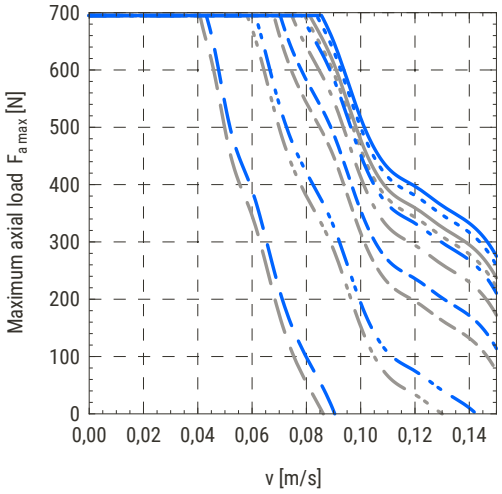


10 × 10 with a stepper motor ☐42

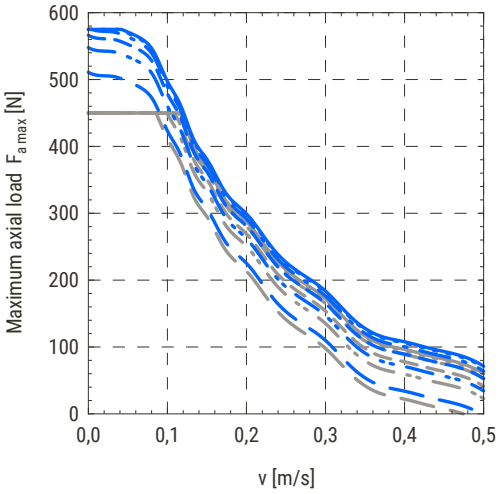


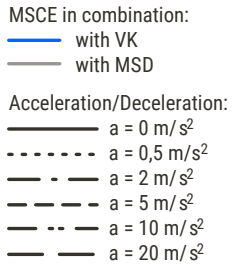


10 × 3 with a stepper motor ☐56



10 × 10 with a stepper motor ☐56



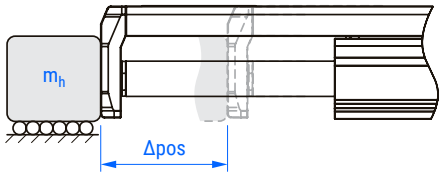


Maximum horizontal payload as a function of change of the position and positioning time of the front plate

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.

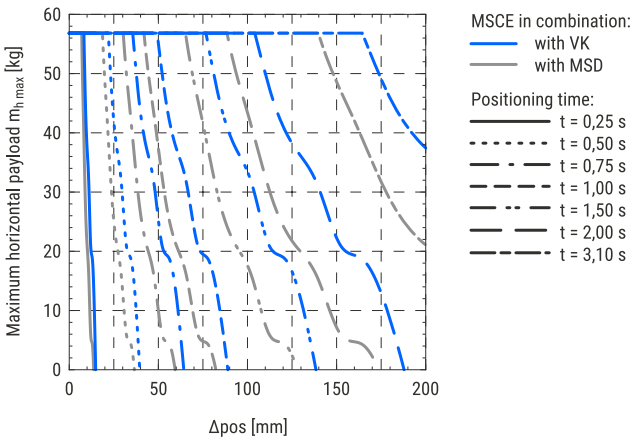
Diagrams depend on the ball screw leads and different combinations of the standard motors. Motor adapter VK and a motor side drive MSD are also considered.

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

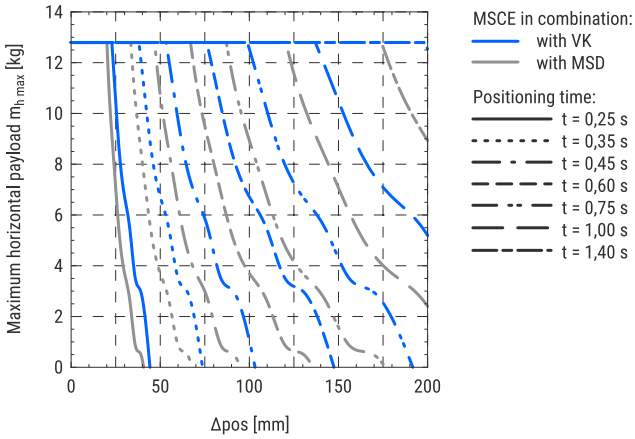


MSCE 25

6 × 2 with a stepper motor ☐28

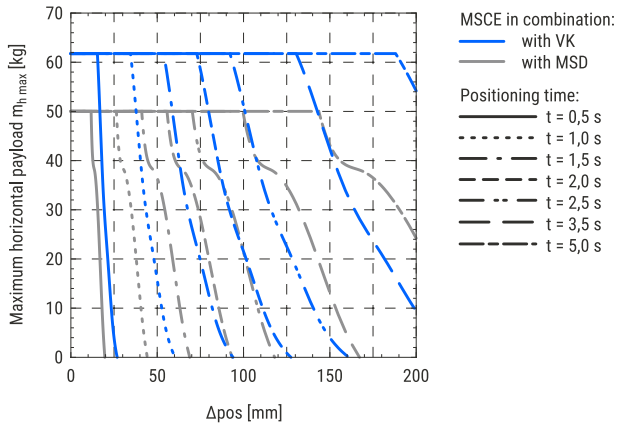


6 × 6 with a stepper motor ☐28

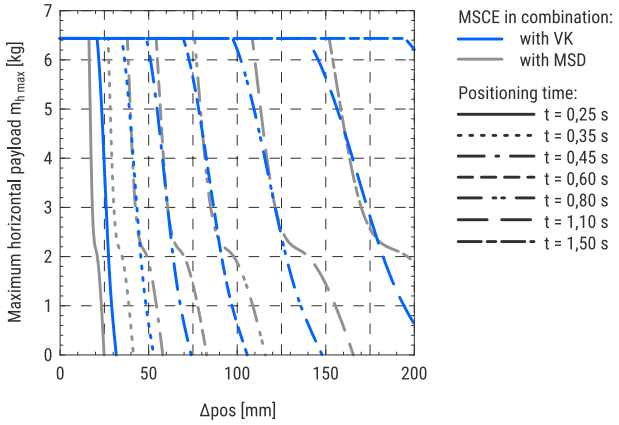


MSCE 32

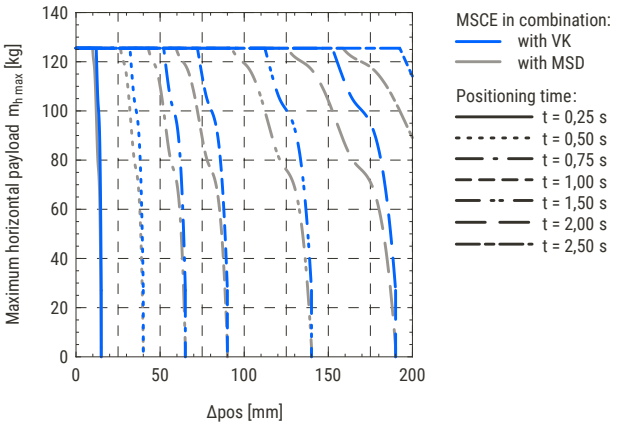
8 × 2 with a stepper motor ☐28



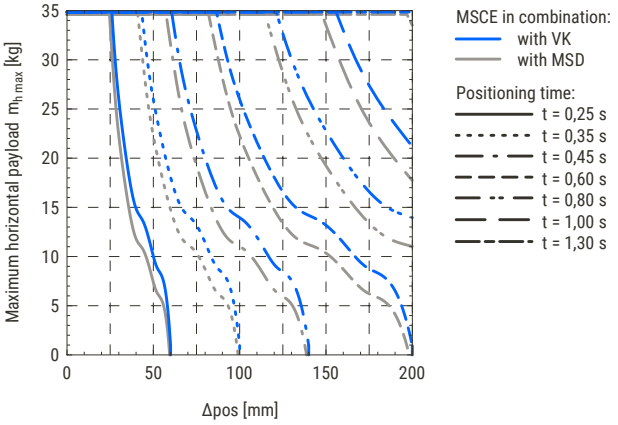
8 × 8 with a stepper motor ☐28



8 × 2 with a stepper motor ☐42

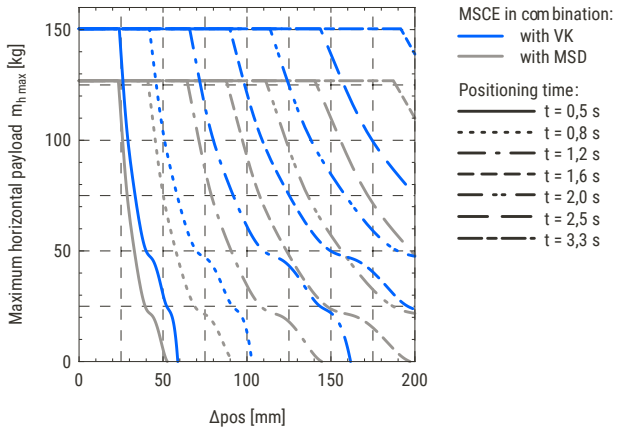


8 × 8 with a stepper motor ☐42

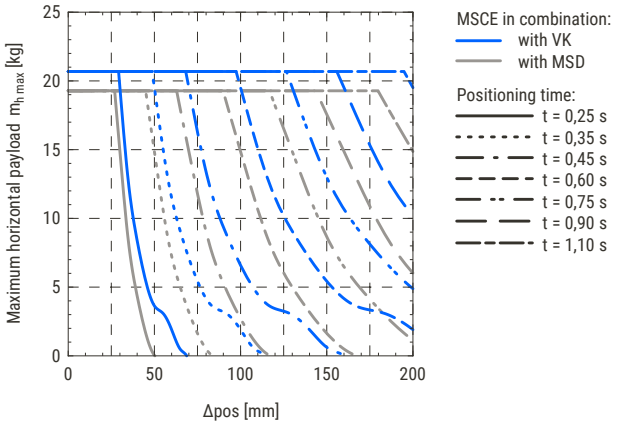


MSCE 45

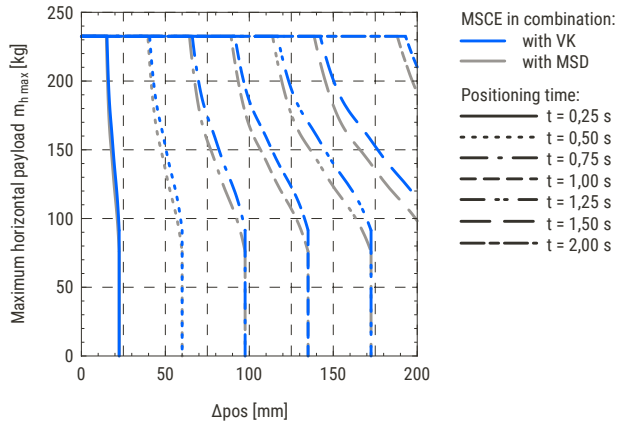
10 × 3 with a stepper motor ☐42



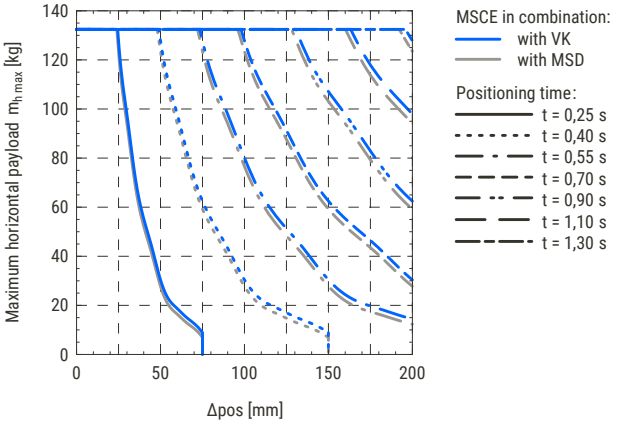
10 × 10 with a stepper motor ☐42



10 × 3 with a stepper motor ☐56



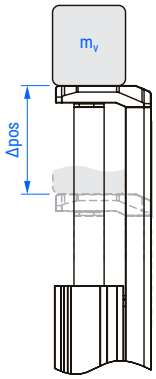
10 × 10 with a stepper motor ☐56



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

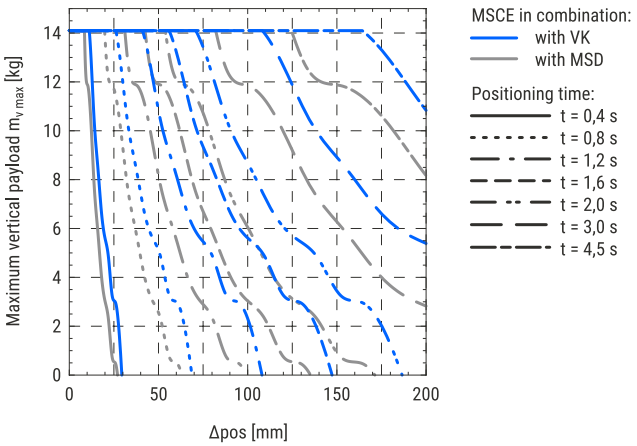
The following diagrams show the maximum payload that can be moved by a certain vertical distance within a positioning time frame. Acceleration/deceleration time of 100 ms is taken into account.

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.

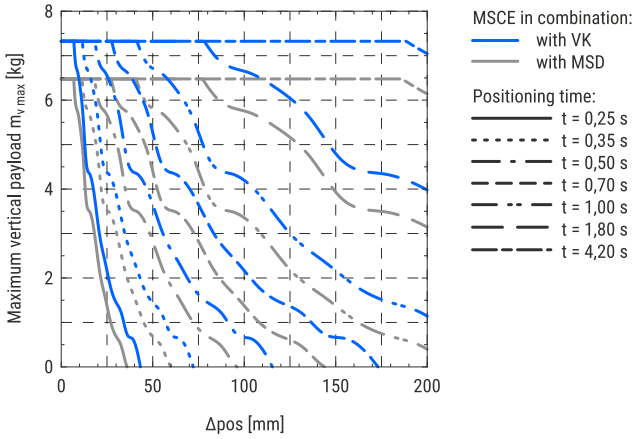


MSCE 25

6 × 2 with a stepper motor ☐28

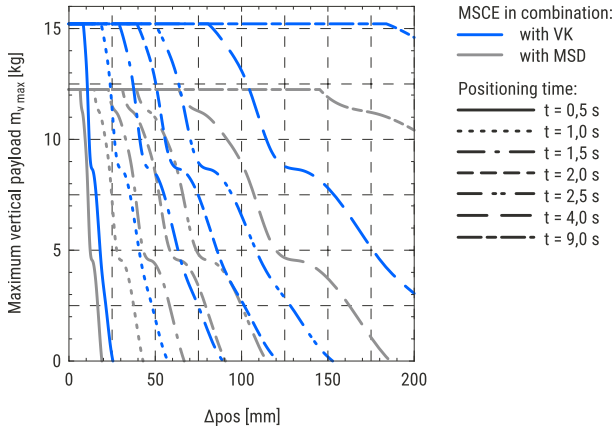


6 × 6 with a stepper motor ☐28

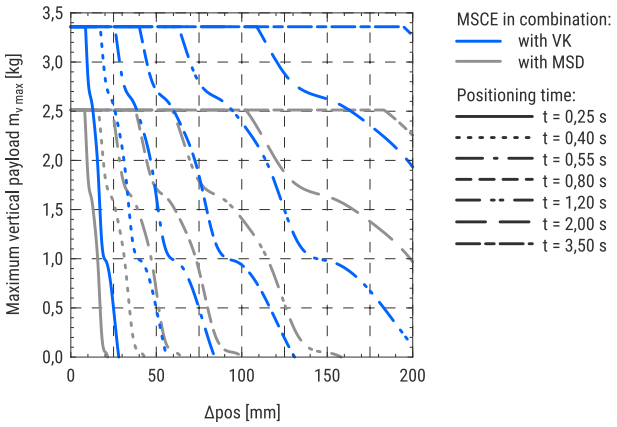


MSCE 32

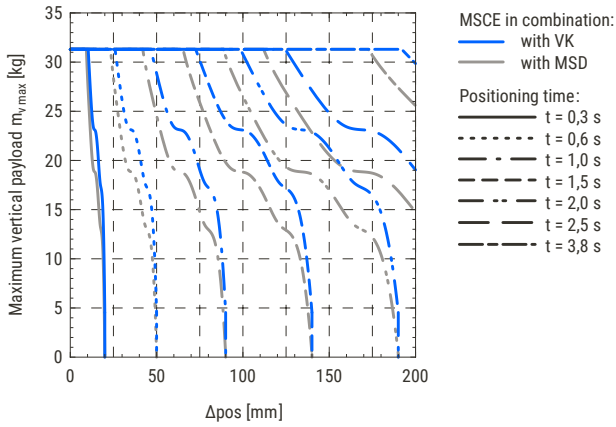
8 × 2 with a stepper motor ☐28



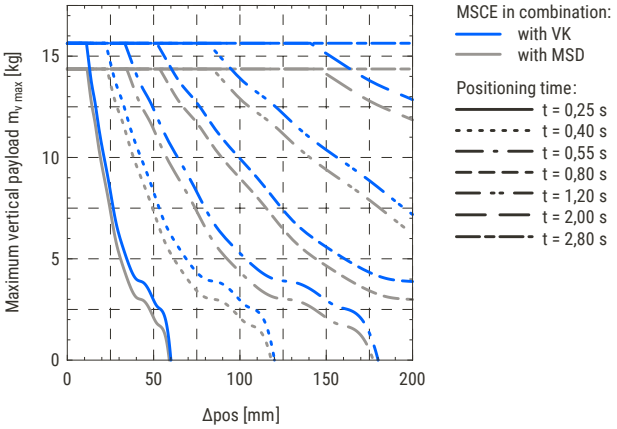
8 × 8 with a stepper motor ☐28



8 × 2 with a stepper motor ☐42

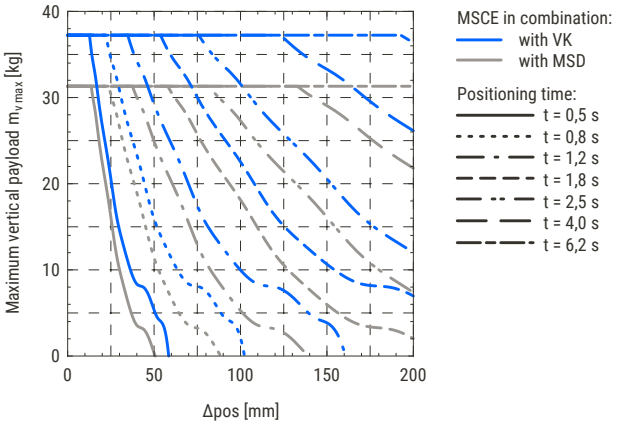


8 × 8 with a stepper motor ☐42

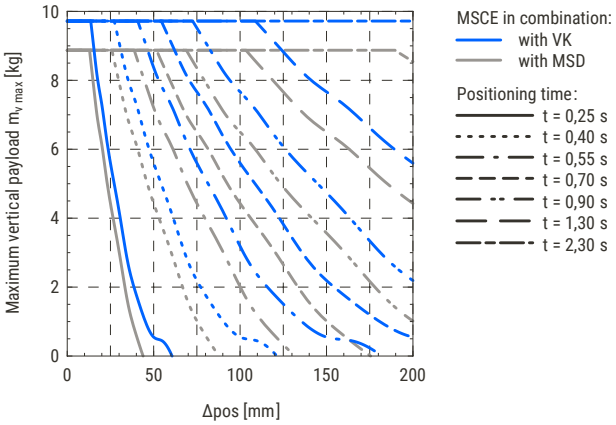


MSCE 45

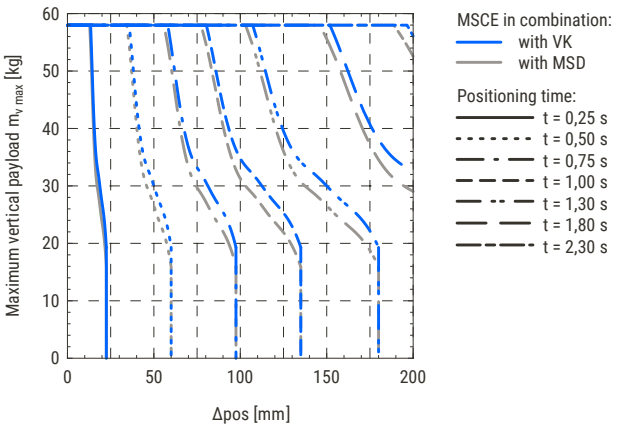
10 × 3 with a stepper motor ☐42



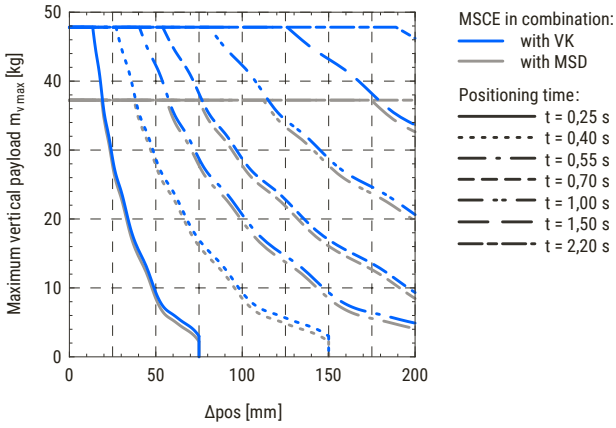
10 × 10 with a stepper motor ☐42



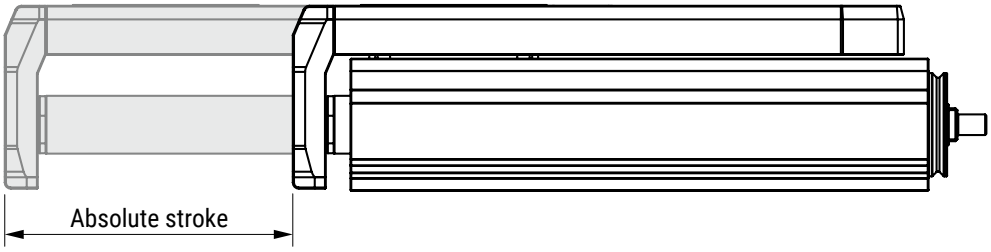
10 × 3 with a stepper motor ☐56



10 × 10 with a stepper motor ☐56



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
Lt = 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]