

Z3

Ball Screw Drive, Slide Guide

» Ordering key - see page 216
 » Accessories - see page 137
 » Additional data - see page 194

General Specifications

Parameter	Z3
Profile size (w × h) [mm]	188 × 150
Type of screw	ball screw with single nut
Sealing system	none
Screw supports	none
Lubrication	lubrication of screw and slide surfaces
Included accessories	none

Performance Specifications

Parameter	Z3
Stroke length (S max), maximum [mm]	1500
Linear speed, maximum [m/s]	1,25
Acceleration, maximum [m/s ²]	8
Repeatability [± mm]	0,1
Input speed, maximum screw diameter/lead [mm] 25/10, 25/25 screw diameter/lead [mm] 32/20 [rpm]	3000
Operation temperature limits [°C]	-20 – 70
Dynamic load (Fz), maximum screw diameter/lead [mm] 25/10, 25/25 screw diameter/lead [mm] 32/20 [N]	5000
Dynamic load torque (Mx), maximum [Nm]	2000 ¹
Dynamic load torque (My), maximum [Nm]	2000 ¹
Dynamic load torque (Mz), maximum [Nm]	330 ¹
Drive shaft force (Frd), maximum screw diameter/lead [mm] 25/10, 25/25 screw diameter/lead [mm] 32/20 [N]	1000
Drive shaft torque (Mta), maximum screw diameter/lead [mm] 25/10, 25/25 screw diameter/lead [mm] 32/20 [Nm]	45
Screw versions, diameter (do) / lead (p) [mm]	25/10, 25/25, 32/20
Weight [kg]	
of unit with zero stroke, ball screw ø 25 mm	21,14
of unit with zero stroke, ball screw ø 32 mm	22,65
of every 100 mm of stroke, ball screw ø 25 mm	4,20
of every 100 mm of stroke, ball screw ø 32 mm	4,50

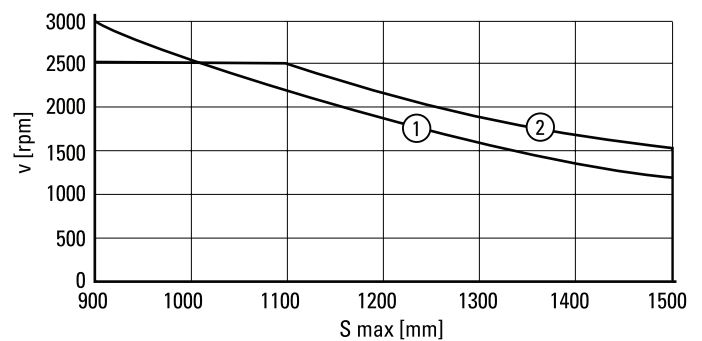
¹ Value for the complete unit

Idle Torque (M idle) [Nm]

Input speed [rpm]	Screw diameter/lead [mm]		
	do = 25 / p = 10	do = 25 / p = 25	do = 32 / p = 20
500	1,1	2,7	2,2

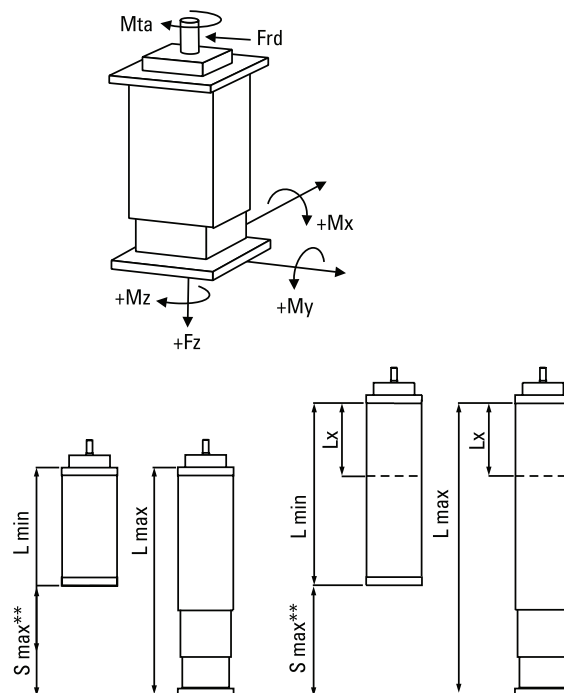
M idle = the input torque needed to move the lifting profiles without any load.

Critical Speed



1: screw diameter 25 mm
 2: screw diameter 32 mm

Definition of Forces and Stroke

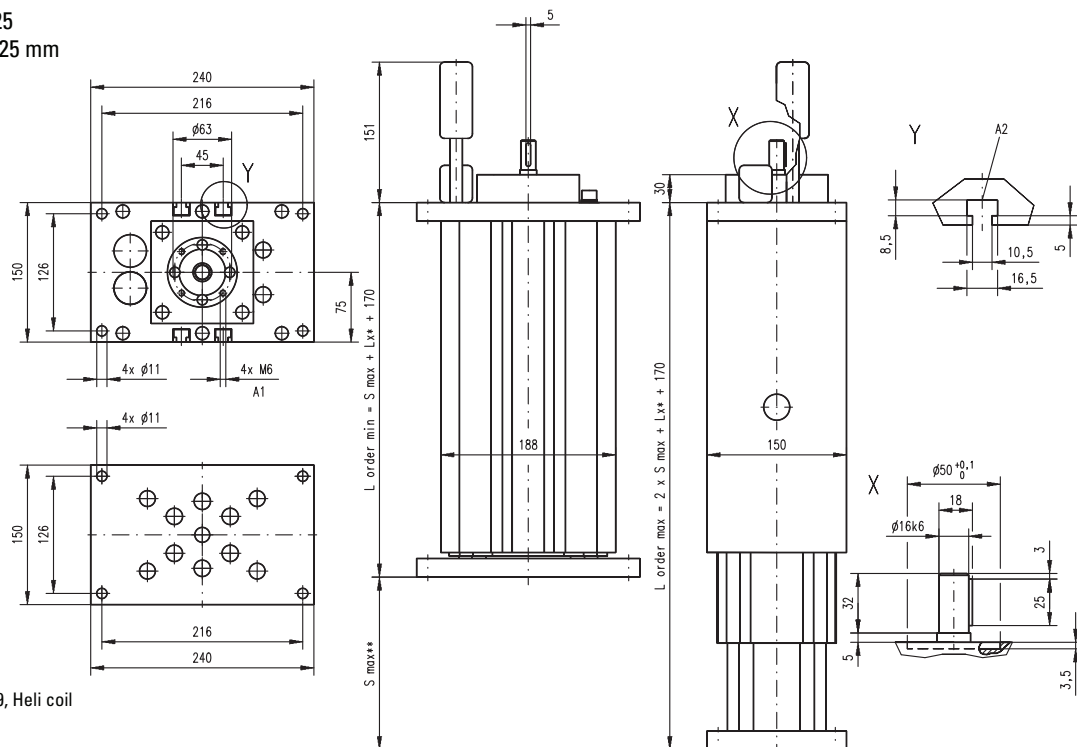


** S max = maximum stroke between the mechanical ends of the unit. The practical stroke is normally 100 mm shorter to avoid running into the ends of the unit.

Z3

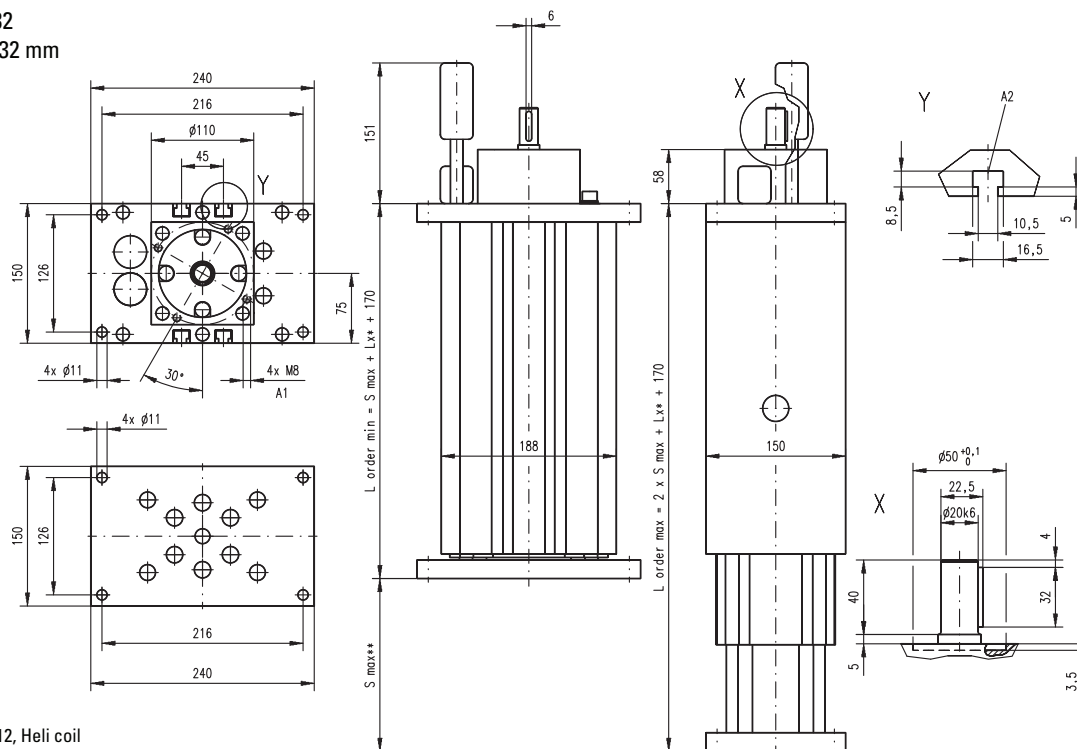
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MGZ3K25
screw $\varnothing 25$ mm



A1: depth 9, Heli coil
A2: T-slot

MGZ3K32
screw $\varnothing 32$ mm



A1: depth 12, Heli coil
A2: T-slot

Type of unit	Minimum retracted length (L min) [mm]	Maximum extended length (L max) [mm]
Standard	$L_{min} = S_{max} + 170$	$L_{max} = L_{min} + S_{max}$
Elongated*	$L_{min} = S_{max} + 170 + L_x$	$L_{max} = L_{min} + S_{max}$

* Elongated versions have an extra length (Lx) added to the total length of the unit which makes the unit longer but does not add any extra length to the stroke (S max).