Customer: Lenze BO

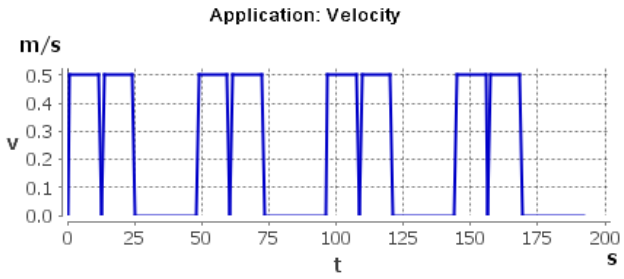
Contacts: Lenze
Phone:
E-mail:

Project:

Drive axis: Rollenförderer 3000kg 0,5m/s 0,5m/s²

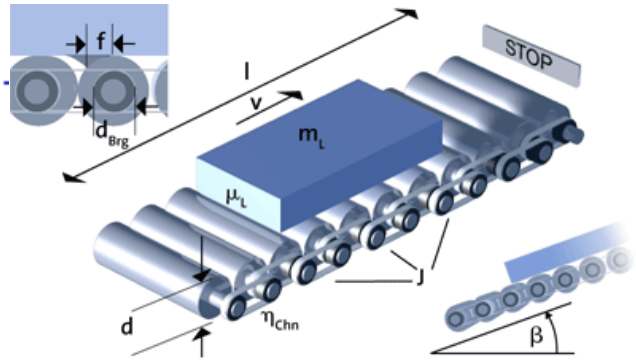
Kinematic key data

Cycle time	t	192 s
Max. velocity	v_{max}	0.500 m/s
Max. acceleration	a_{max}	0.500 m/s²
Max. mass in motion	$m_{sum,max}$	5200 kg



Roller conveyor

Diameter of the transport rolls	d	89.0 mm
Leverage of rolling friction	f	1.20 mm
Chain efficiency	η_{Chn}	0.990
Bearing diameter	d_{Brg}	100 mm
Number of wrapped chain turns	N_{Chn}	26
Moment of inertia of transport rollers	J	1.00E-04 kgm²
Angle of tilt	β	0 °
Coefficient of friction of load/roll		
Coefficient of friction of the bearing	μ_{Brg}	2.00E-03



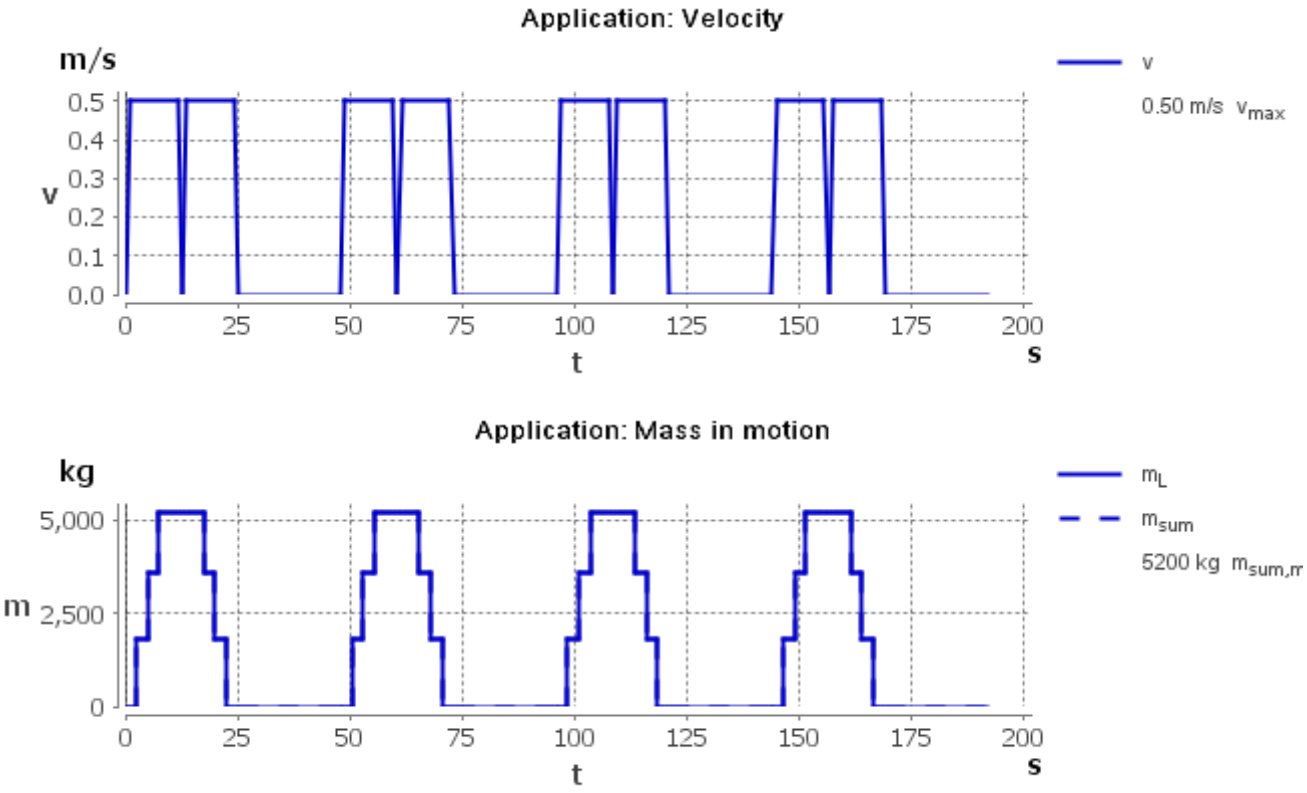
Electrical supply and ambient conditions

Electrical supply system		3AC 400 V 50 Hz
Max. motor/inverter ambient temperature	ϑ_{opr}	30 °C / 40 °C
Site altitude	h	1000 m

Calculated requirement of the application

Max. working point	opr_{max}	107 1/min / 236 Nm / 2.66 kW
Effective base process power of the application	$P_{rms,cto}$	0.604 kW
Moment of inertia application	J_{min} / J_{max}	1.00E-04 kgm² / 10.3 kgm²
Max. load-matching factor	$k_{J,max}$	8.4

Selected products	Rated data			Utilisation Thermal	Utilisation Maximum
Motor	1 x MSEMAXX080-32				
	P_N, n_N, M_N	1.36 kW / 2600 1/min / 5.00 Nm	M	60 %	
Gearboxes	1 x g500-B450 (Direct mounting)				
	i_G, $M_{per,out}$	19.8310 / 398 Nm	M	20 %	60 %
			n	32 %	51 %
Additional drive element	1 x Toothed belt --- (i=1.07)				
Integrated brake transistor					
Brake resistor	1 x 20W / 390Ω				
.					
Electromechanical brake	without brake				
Feedback	without				


Application: Velocity
m/s
v
0.5
0.4
0.3
0.2
0.1
0.0
0
25
50
75
100
125
150
175
200
t
s
v
0.50 m/s v_max
Application: Mass in motion
kg
m
5,000
2,500
0
0
25
50
75
100
125
150
175
200
t
s
m_L
m_sum
5200 kg m_sum,r