Customer: Lenze BO

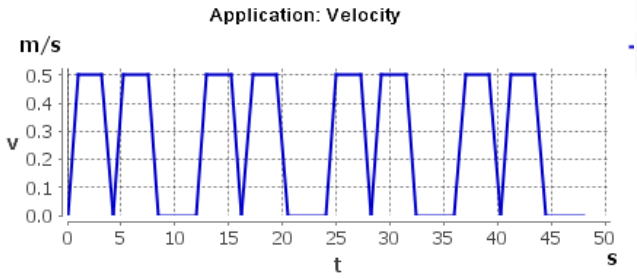
Contacts: Lenze
Phone:
E-mail:

Project:

Drive axis: Kettenförderer 1000kg, 0,5 ms 0,5ms²

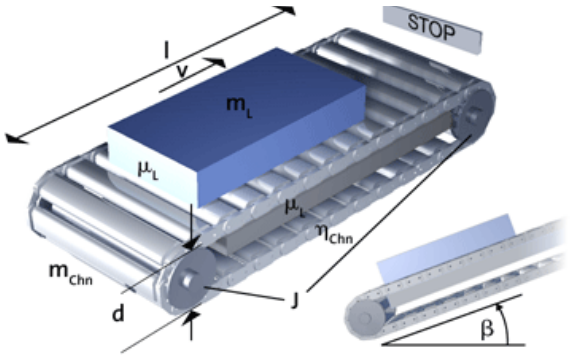
Kinematic key data

Cycle time	t	48.0 s
Max. velocity	v_{max}	0.500 m/s
Max. acceleration	a_{max}	0.500 m/s²
Max. mass in motion	$m_{sum,max}$	1313 kg



Chain conveyor

Diameter of the drive roll	d	91.0 mm
Mass of the chain	m_{Chn}	13.0 kg
Coefficient of friction chain/bearing	μ_{Gdn}	0.120
Chain efficiency	η_{Chn}	0.950
Additional force	F_{add}	0 N
Angle of tilt	β	0 °
Coefficient of friction of load/chain		
Moment of inertia of rollers	J_{sum}	2.64E-03 kgm²



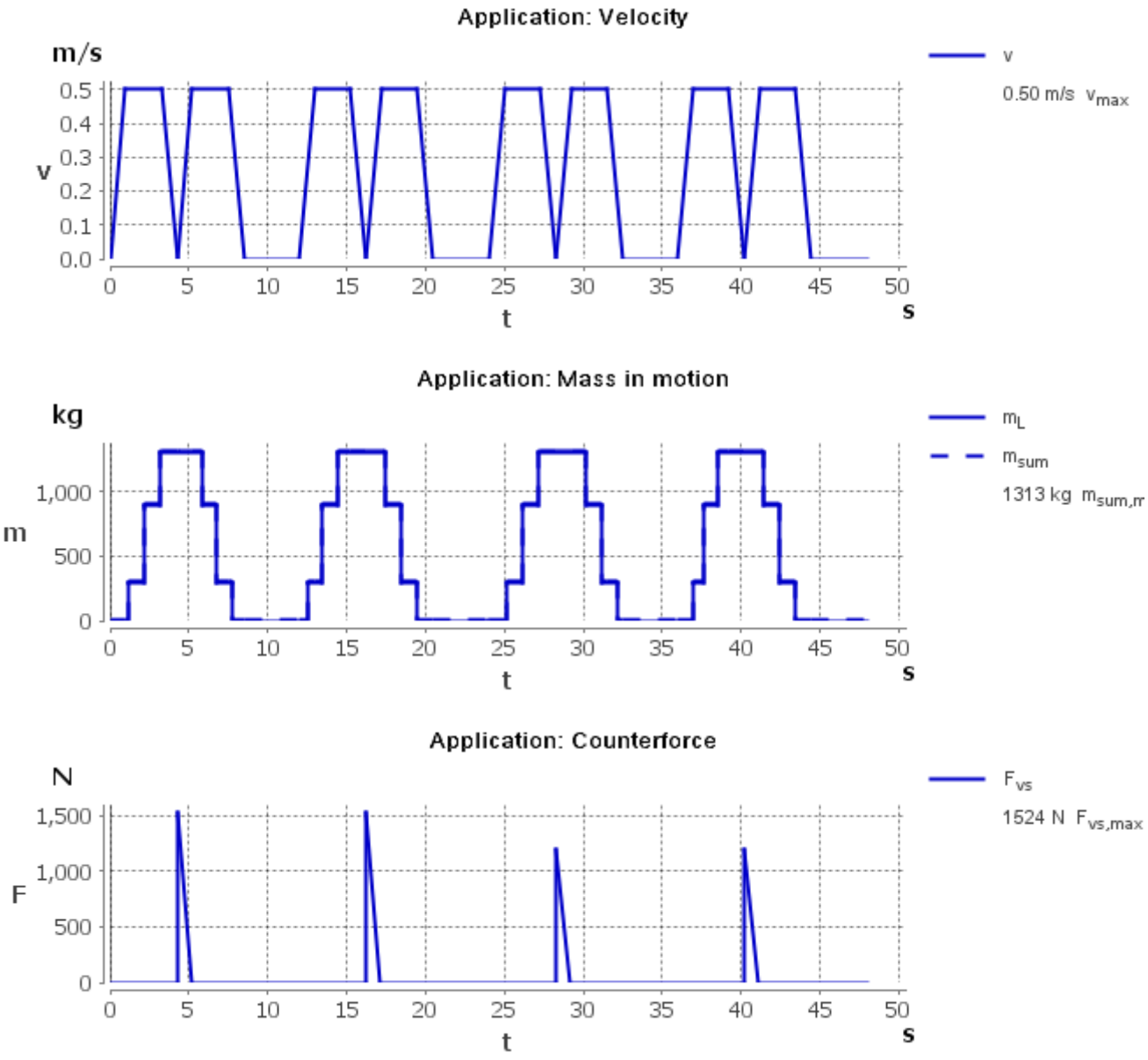
Electrical supply and ambient conditions

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}	105 1/min / 178 Nm / 1.16 kW
Effective base process power of the application	$P_{rms,cto}$	0.556 kW
Moment of inertia application	J_{min} / J_{max}	0.0296 kgm² / 2.72 kgm²
Max. load-matching factor	$k_{J,max}$	1.9

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	49 %	
Gearboxes	1 x g500-B240 (Direct mounting)				
	i_G, $M_{per,out}$	23.4500 / 240 Nm	M	27 %	74 %
			n	32 %	55 %
Brake resistor	1 x E84DZEW220R				
.			P	1 %	0.7 %
Electromechanical brake	without brake				
Feedback	without				


Application: Velocity
m/s
v
0.5
0.4
0.3
0.2
0.1
0.0
0
5
10
15
20
25
30
35
40
45
50
t
s
v
0.50 m/s v_max
Application: Mass in motion
kg
m
1,000
500
0
t
s
m_L
m_sum
1313 kg m_sum,m
Application: Counterforce
N
F
1,500
1,000
500
0
t
s
F_vs
1524 N F_vs,max