Customer: Lenze BO

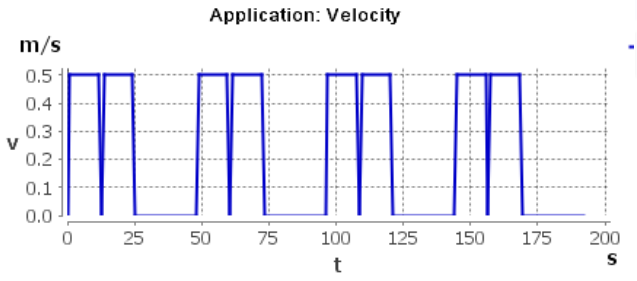
Contacts: Lenze
Phone:
E-mail:

Project:

Drive axis: Kettenförderer 2000kg, 0,5 ms 0,5ms²

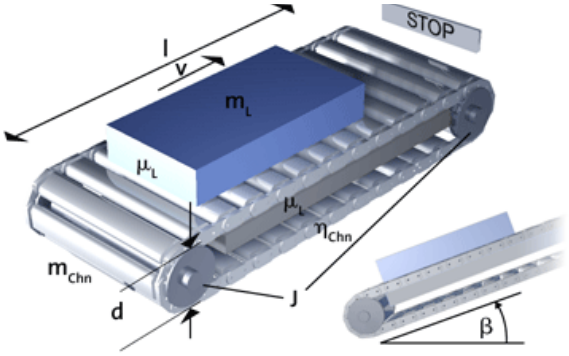
Kinematic key data

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	$m_{sum,max}$	4013 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

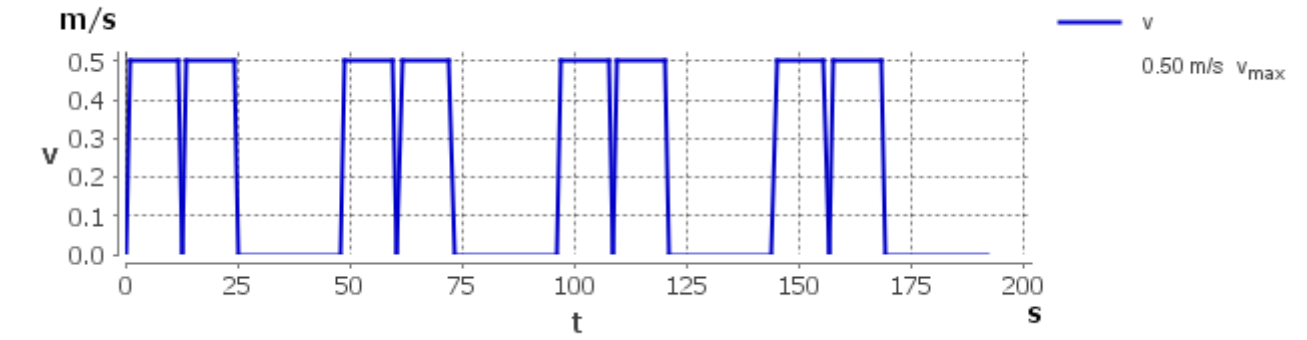
Electrical supply system		3AC 400 V 50 Hz
Max. motor/inverter ambient temperature	ϑ_{opr}	30 °C / 40 °C
Site altitude	h	1000 m

Calculated requirement of the application

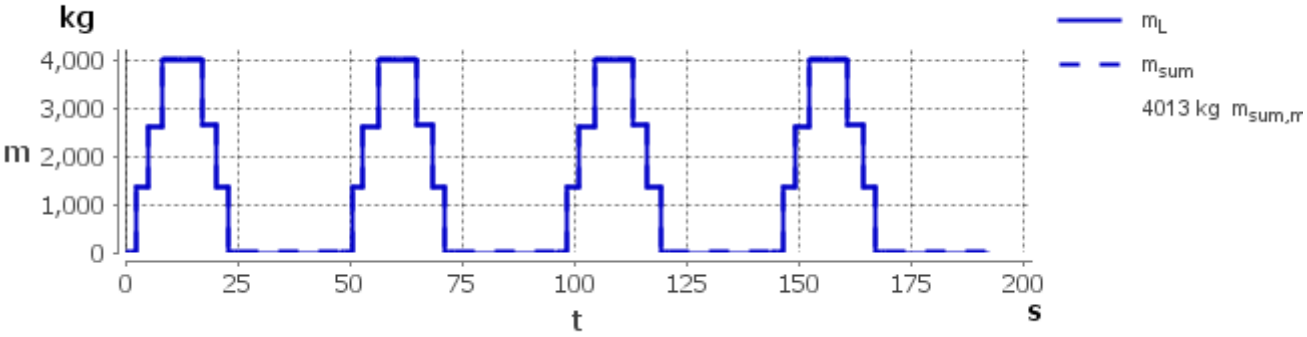
Max. working point	opr_{max}	105 1/min / 547 Nm / 3.54 kW
Effective base process power of the application	$P_{rms,cto}$	1.33 kW
Moment of inertia application	J_{min} / J_{max}	0.0296 kgm² / 8.31 kgm²
Max. load-matching factor	$k_{J,max}$	4.4

Selected products	Rated data			Utilisation Thermal	Utilisation Maximum
Motor	1 x m550-P90L4				
	P_N, n_N, M_N	2.6 kW / 2552 1/min / 9.9 Nm	M	58 %	
Gearboxes	1 x g500-B450 (Direct mounting)				
	i_G, $M_{per,out}$	22.8130 / 450 Nm	M	39 %	122 %
			n	34 %	53 %
Inverters	1 x E84DGxxB3024				
	I_N, I_{max}	7.30 A / 14.6 A	I	79 %	86 %
Electromechanical brake	without brake				
Feedback	without				

Application: Velocity



Application: Mass in motion



Application: Counterforce