Customer: Lenze BO

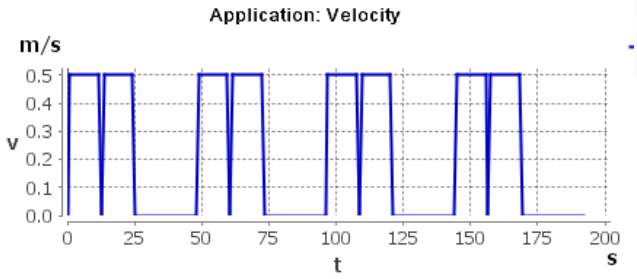
Contacts: Lenze
Phone:
E-mail:

Project:

Drive axis: Kettenförderer 5200kg, 0,5 ms 0,5ms²

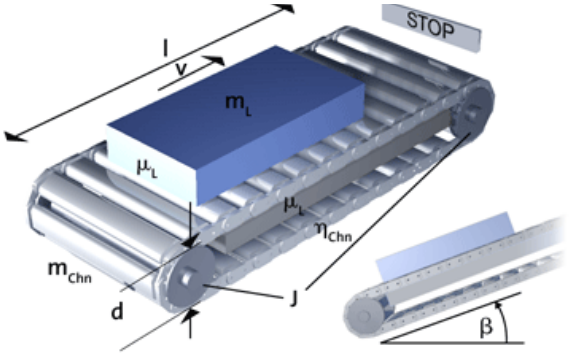
Kinematic key data

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	$m_{sum,max}$	5226 kg



Chain conveyor

Diameter of the drive roll	d	91.0 mm
Mass of the chain	m_{Chn}	26.0 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

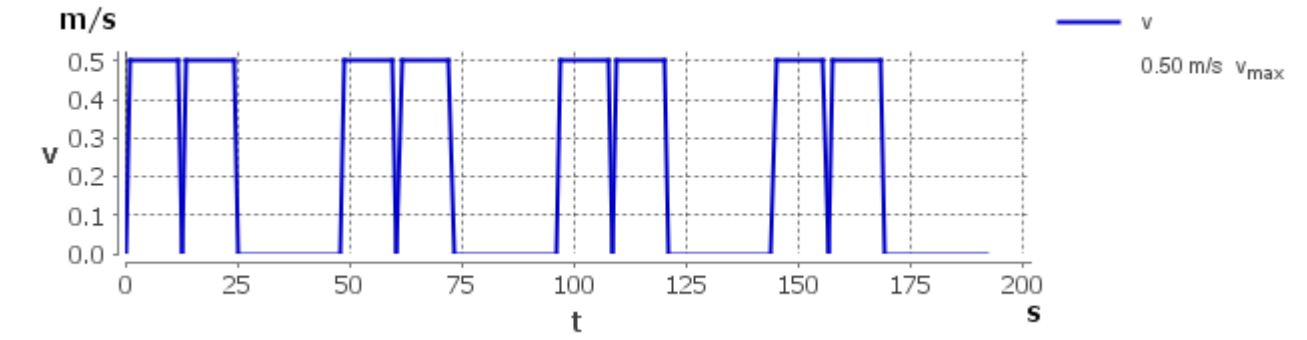
Electrical supply system		3AC 400 V 50 Hz
Max. motor/inverter ambient temperature	ϑ_{opr}	30 °C / 40 °C
Site altitude	h	1000 m

Calculated requirement of the application

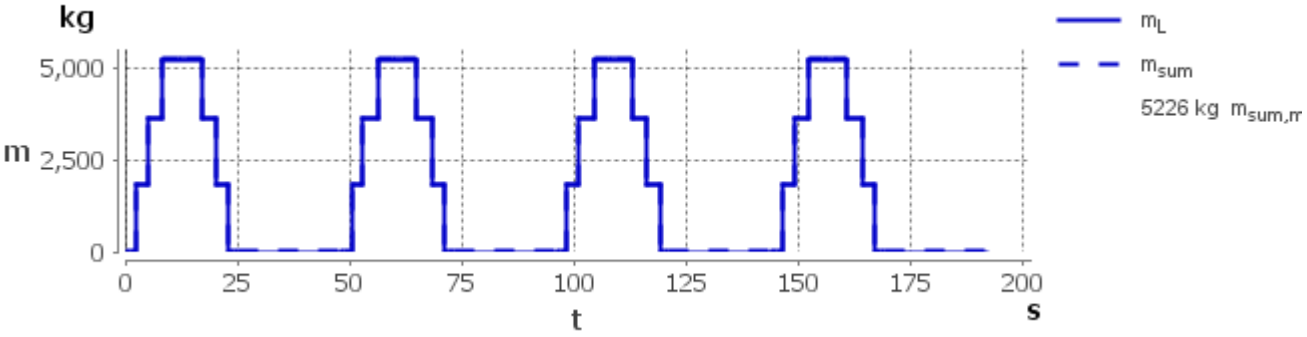
Max. working point	opr_{max}	105 1/min / 712 Nm / 4.60 kW
Effective base process power of the application	$P_{rms,cto}$	1.75 kW
Moment of inertia application	J_{min} / J_{max}	0.0565 kgm² / 10.8 kgm²
Max. load-matching factor	$k_{J,max}$	3.6

Selected products	Rated data			Utilisation Thermal	Utilisation Maximum
Motor	1 x m550-P100M4				
	P_N, n_N, M_N	3.9 kW / 2562 1/min / 14.5 Nm	M	53 %	
Gearboxes	1 x g500-S660 (Direct mounting)				
	i_G, $M_{per,out}$	21.9330 / 660 Nm	M	35 %	108 %
			n	35 %	51 %
Inverters	1 x E84DGxxB4024				
	I_N, I_{max}	9.50 A / 19.0 A	I	86 %	95 %
Integrated brake transistor			P	2.E-03 %	0.4 %
Electromechanical brake	without brake				
Feedback	without				

Application: Velocity



Application: Mass in motion



Application: Counterforce