

MOTOR SIZE

Linear

Inclination degree [°]	mass [kg]	linear unit per rev [mm]	η	friction	ratio [m] ⁻¹	F friction [N]	Counter weight [kg]	is dead weight?	Push pull [N]	Linear inertia	M friction [Nm]	Mr [Nm]	Gravity [Nm]
0	100	10	90.0%	0.01	628.3185	0	0	No	0	0.000253	0.017341	0	0

Trasmission

	motor	gearbox	belt	joint	other	Linear
ratio	1	1	1	1	1	1
η	100.0%	90.00%	90.0%	100.00%	90.0%	90.0%
inertia [kgm ²]	0.000265	0.0004	0	0	0	0.000253303
inertia [kgm ²]		0.00025	0	0	0	
inertia [kgm ²]		0.0006	0	0	0	
total Jr to motor		0.00125	0	0	0	0.000253303
total Jr/ η to motor		0.00125	0	0	0	0.00031272
M _{nom}	1.32 Nm		1.19 Nm	1.19 Nm	1.19 Nm	1.19 Nm
M _{max}	2.32 Nm		-0.94 Nm	-0.94 Nm	-0.94 Nm	-0.94 Nm
n _{nom}	2639.85 rpm		2639.85 rpm	2639.85 rpm	2639.85 rpm	2639.85 rpm
n _{max}	3000.00 rpm		3000.00 rpm	3000.00 rpm	3000.00 rpm	3000.00 rpm
P _{nom}	0.06 kW		0.06 kW	0.06 kW	0.06 kW	0.06 kW
P _{max}	0.73 kW		0.66 kW	0.66 kW	0.66 kW	0.66 kW

Moves

	Time [s]	Speed [m/min]	Accel [ms ⁻²]	Distance [mm]	Accel [rad/s ²]	Push / pull [N]	Gravity [Nm]	Accel motor [Nm]	Accel load [Nm]	Mr [Nm]	M Friction [Nm]	Mm	n motor [rpm]	Power [kW]	Reg. energy [kJ]
Accel	0.25	30	2000	62.5	1256.637	0	0	0.333009	1.963771495	0	0.021408	2.318189	3000	0.72828047	0.182
Traverse	1	30	0	500	0	0	0	0	0	0	0.021408	0.021408	3000	0	0.000
Decel	0.25	0	-2000	62.5	-1256.64	0	0	-0.33301	-1.963771495	0	0.021408	-2.27537	0	0.71482917	0.179
Accel	0.25	-30	-2000	-62.5	-1256.64	0	0	-0.33301	-1.963771495	0	-0.02141	2.318189	-3000	-0.72828047	-0.182
Traverse	1	-30	0	-500	0	0	0	0	0	0	-0.02141	0.021408	-3000	0	0.000
Decel	0.25	0	2000	-62.5	1256.637	0	0	0.333009	1.963771495	0	-0.02141	-2.27537	0	-0.71482917	-0.179
			0	0	0	0	0	0	0	0	0	0	0	0	0.000
			0	0	0	0	0	0	0	0	0	0	0	0	0.000
			0	0	0	0	0	0	0	0	0	0	0	0	0.000
			0	0	0	0	0	0	0	0	0	0	0	0	0.000
			0	0	0	0	0	0	0	0	0	0	0	0	0.000
			0	0	0	0	0	0	0	0	0	0	0	0	0.000
Total	3			0										Motor	Drive (reg)
Rms values		26.40	1.15		725.29	0.00	0.00	0.19	1.13	0.00	0.02	1.32	2639.85	0.06	0.000
Max		30.00	2.00		1256.64	0.00	0.00	0.33	1.96	0.00	0.02	2.32	3000.00	0.73	-0.728
Min		-30.00	-2.00		-1256.64	0.00	0.00	-0.33	-1.96	0.00	-0.02	-2.28	-3000.00	-0.73	

Motor type

	M _{s1} [Nm]	W _{s1} [kW]	M _{s6} [Nm]	W _{s6} [kW]	rpm
A2 ECMA 220V Series C11010	3.18	0.00	9.54	0.00	0
	3.18	0.99	9.54	2.97	3000
Jm	2.65 kgcm ²	1.91	0.99	3.18	2.97
		0.00	0.00	0.00	5000

Braking unit

t _B	0.25 s	P _{elAve}	0.02978455 kW
ED	8.3%	R _{B max}	9696.30275 Ω
P _{Bmax}	0.059569 kW	R _B	75 Ω
k	0	I _B	10.1333333 A
P _{el}	0.059569 kW	t _{CH}	0.00 s

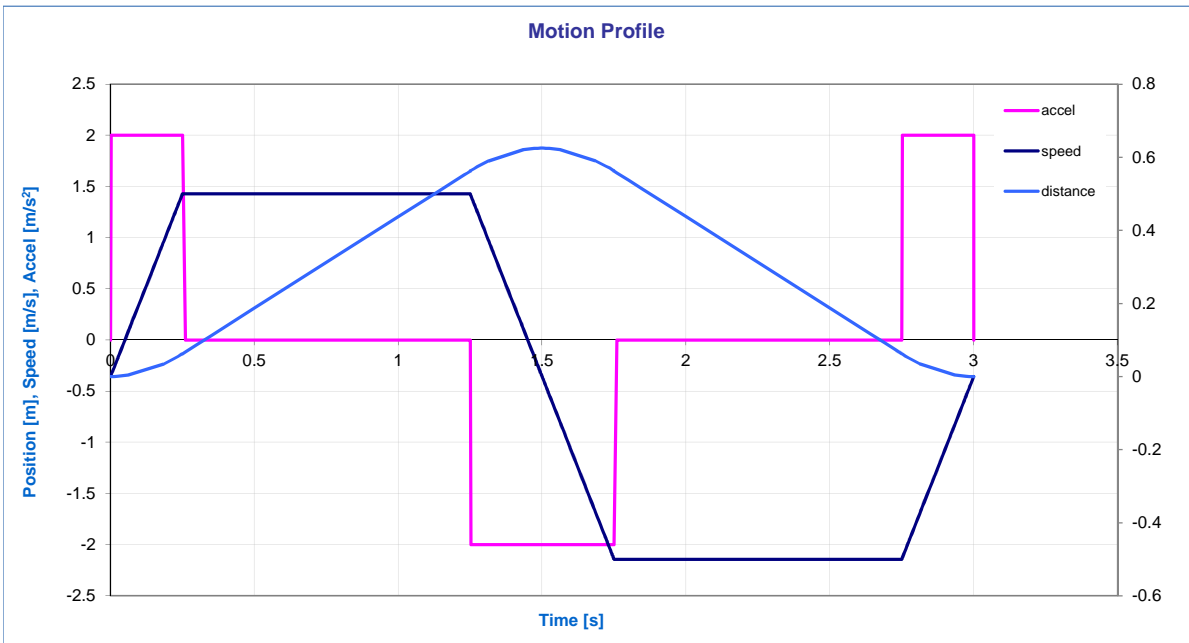
Globals match to motor

Jr/Jm	5.672841			
	application	motor	application	motor
M _{nom}	1.32	3.18 Nm	P _{nom}	0.06 0.99 kW
M _{max}	2.32	9.54 Nm	P _{max}	0.72828 2.97 kW
n _{nom}	2639.85	3000 rpm	P _{max rigen}	-0.73 kW
n _{max}	3000.00	5000 rpm		

Current ratio	628.32 m ⁻¹	M _{nom}	1.32 Nm
Best ratio 1/ τ_{opt}	582.79 m ⁻¹	M _{max}	2.31818873 Nm
Max ratio 1/ τ_{opt}	1047.20 m ⁻¹	Mr	0 Nm
Efficiency η	81.0%	M _{acc max}	0.33300882 Nm
Jr	0.001503 kgm ²	M _{Friction}	0.02140841 Nm
Jr+Jm	0.001768 kgm ²	M _{Gravity}	0%
Acc _{lin}	2000 m/s ²	M _{Push pull}	0 Nm

Osservazioni

Dati di progetto:



Motor Type A2 ECMA 220V Series C11010

