


--	--

Purchase Order Title:	CENTRIFUGAL PUMPS
Suppliers Name:	

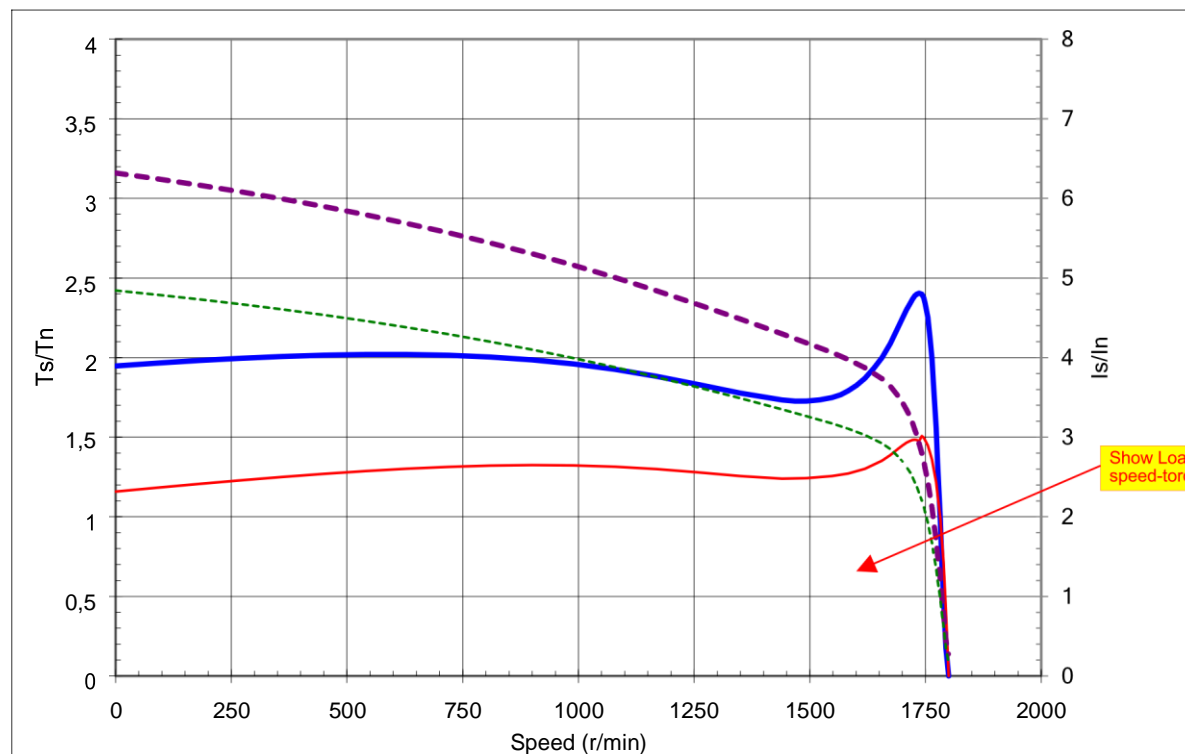
Document Description	MOTOR PERFORMANCE CURVES
Equipment:	cOOLING MEDIUM CIRCULATION PUMP

ABB Motors and Generators	Starting Curves		ABB
	Project	Location	
Department/Author	Customer name	Customer ref.	Item name
Our ref.	Rev/Changed b Date of issue	Saving ident	Pages 2 of 2

Type of pole	pole cage rotor		
Type/Frame	M3GP 315MLA 4		
Product code	Frequency (Hz)	60	
Rated output PN	200 kW	Rated current i	346 A
Type of duty	S1(IEC) 100%		

Jm _{rot} (kgm ²)	3,5	Voltage (V) 100%	400	Voltage (V) 80%	320V(80%)
Starting time (s)	1750	Starting time (s)	2	Starting time (s)	1,3
Speed (r/min)	1750	Speed (r/min)	1750	Speed (r/min)	1750
T _N (Nm)	1071	I _s /I _n	6,4	I _s /I _n	4,9
T _{ad} (N)		T _{max} /T _n	2,5	T _{mg} #T _n	1,6

Provide starting time at 100% and 80% Un



- Provide the following curves:
1. Performance curve (Efficiency, P.F., Current vs. kW)
 2. Stall time, Acceleration, lock rotor, vs. Current curve



Load characteristics (IEC 60034-2-1:2014)

All data subject to tolerances in accordance with IEC

the following motor and pump parameters

Name: Pump1

$T = T_1$
 $T = A_0 + A_1 \cdot \omega + A_2 \cdot \omega^2 + A_3 \cdot \omega^3$ (rpm > 0)

Synchronous RPM: _____ (rpm = 0, Break Away)

Rated Torque: _____ Nm

Moment of inertia: _____ J (kg m²)

Unit of Torque in: Nm

T0: _____ (rpm > 0)

A0: _____ P1: _____

A1: _____ P2: _____

A2: _____ P3: _____

A3: _____

1	Ra Armature resistance	T > T ₀
2	T Transient time constant	
3	T ₀ Sub-transient time constant	
4	H Inertia constant	see help
5	D Load damping factor	
6	X _s Steady-state armature reactance	X _s > X _t
7	X _t Transient motor reactance	X _t > X _s
8	X ₀ Sub-transient motor reactance	X ₀ > X _s
9	X _l Leakage reactance	
10	E1 First sample voltage	E1 < E2
11	Se[E1] Saturation factor at E1	Se[E1] < Se[E2]
12	E2 Second sample voltage	
13	Se[E2] Saturation factor at E2	
14	T Nominal pu on motor Torque Base	