

BRUSHLESS MOTOR		
MGV950CAX		
ELECTRONIC DRIVE PARKER AC890SD		
890SD-433420H Servo Mode Quadratic		

<i>S1 power</i>	160	<i>kW</i>	<i>Ps1</i>
<i>S6 power</i>	160	<i>kW</i>	<i>Ps6</i>
<i>Low speed torque</i>	170	<i>N.m</i>	<i>M₀</i>
<i>Low speed S6 torque</i>	170	<i>N.m</i>	<i>M₀S6</i>
<i>Base speed (S1)</i>	8900	<i>rpm</i>	<i>Nb</i>
<i>Max speed</i>	16000	<i>rpm</i>	<i>Nmax</i>
<i>DC voltage supply when motor is loaded</i>	540	<i>V</i>	<i>Û</i>
<i>Permanent current at low speed</i>	383	<i>Arms</i>	<i>I₀</i>
<i>S6 current at low speed</i>	383	<i>Arms</i>	<i>I₀S6</i>
<i>Winding resistance(25°C) *</i>	0.00747	<i>Ω</i>	<i>Rb</i>
<i>Rotor inertia</i>	0.063	<i>kg.m²</i>	<i>J</i>
<i>Thermal time constant</i>	3.2	<i>min</i>	<i>Tth</i>
<i>Motor mass</i>	250	<i>kg</i>	<i>M</i>
<i>Cooling water flow (Tmax = 25 °C)</i>	16	<i>l/min</i>	

All data are given in typical values under standard conditions

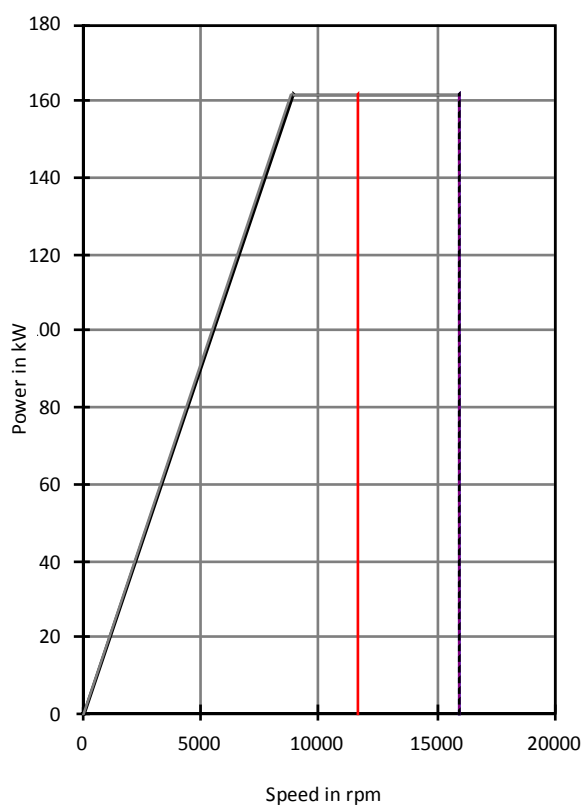
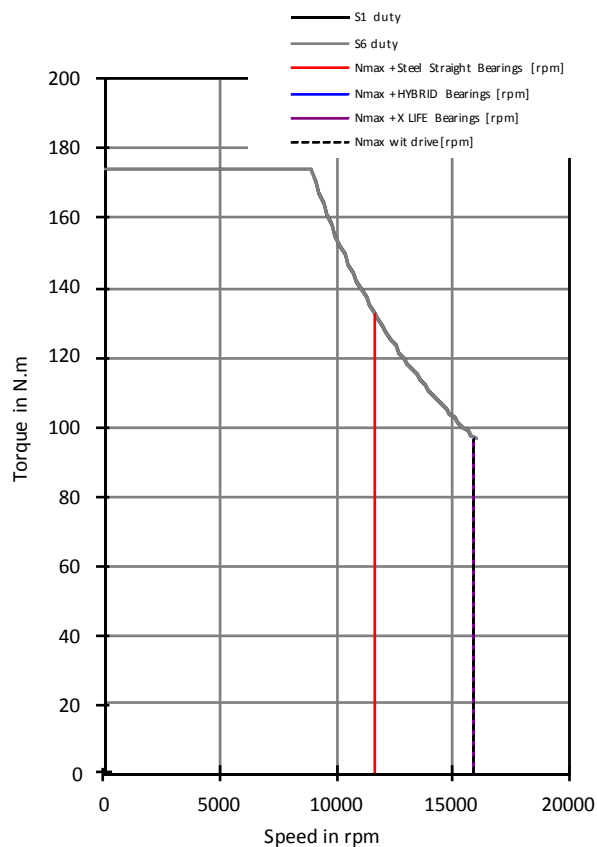
* Phase to phase

Voltages and currents given in RMS values

--> (Steel Straight Bearings limited to = 11700 rpm)

--> (Hybrid Bearings limited to = 16000 rpm)

--> (X LIFE Bearings limited to = 20000 rpm)



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890SD-433420H Servo Mode Quadratic			
Main caracteristics			
S1 power	160	kW	Ps1
S6 power	160	kW	Ps6
Low speed torque	170	N.m	M ₀
Low speed S6 torque	170	N.m	M ₀ S6
Base speed (S1)	8900	rpm	Nb
Max speed	16000	rpm	Nmax
DC voltage supply when motor is loaded	540	V	Ū
Permanent current at low speed	383	Arms	İ
S6 current at low speed	383	Arms	İS6
Mechanical parameters			
Rotor inertia	0.063	kg.m ²	J
Motor mass	250	kg	M
Maximum speed with Steel Straight Bearings	11700	rpm	N ₁
Maximum speed with Hybrid Bearings	16000	rpm	N ₂
Maximum speed with Steel Straight Bearings	20000	rpm	N ₃
Maximum speed with Drive	16000	rpm	Nmax
Maximum mechanical speed	20000	rpm	Nmec
Electrical parameters			
Number of poles	6		
Winding resistance(25°C) *	0.00747	Ohm	Rb
Back EMF voltage phase to phase / 1000 rpm	27.8	Vrms / 1000 rpm	ke
Back EMF voltage phase to phase / (rad/s)	0.265	Vrms / (rad/s)	ku
Torque constant	0.444	N.m / Arms	Kt
Short circuit Current	368	Arms	Icc
Inductance Lq phase to phase (Back EMF voltage axis) *	0.294	mH	Lq
Inductance Ld phase to phase *	0.278	mH	Ld
Optimal phasing at permanent current	20	electrical degree	ψo
Optimal phasing at S6 current	20	electrical degree	ψm
Thermal parameters			
Motor thermal resistance	0.0137	K/W	Rth
Motor thermal time constant	3.2	min	Tth
Winding thermal time constant	0.74	min	Tth w
Cooling water flow minimum(Tmax = 25 °C)	16	l/min	Wf
Thermal class	F	according to CEI 34-1	

All data are given in typical values under standard conditions

* Phase to phase

Voltages and currents given in RMS values

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