

Enquiry N°:

Created by/Checked by: WT/HO/JD

**SERVO MOTOR 142LDA20XFGCJG165900-SGV2**

**142LDA20XFGCJG165900-SGV2**



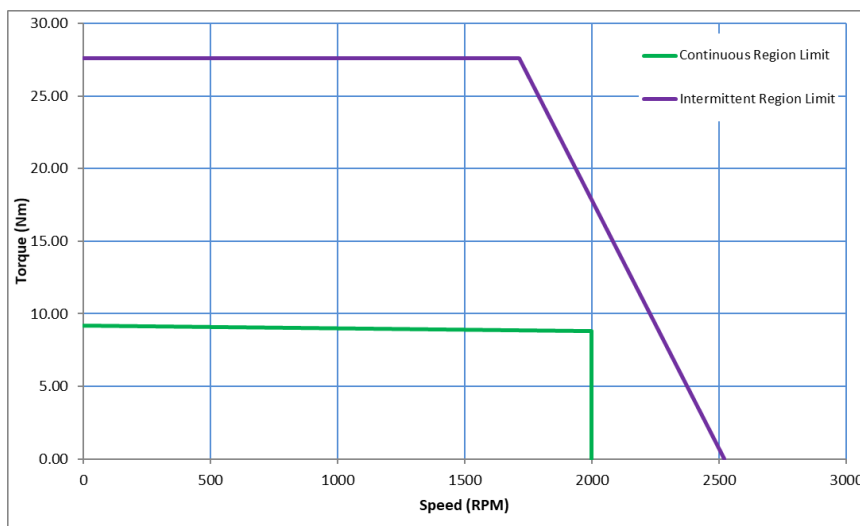
**Definition**

Type	Unimotor HD	
Frame Size (mm)	<b>142</b>	
Voltage	<b>L</b>	40-50 Vdc
Magnet type	<b>D</b>	High Dynamic
Frame Length	<b>A</b>	
Speed (min <sup>-1</sup> )	<b>20</b>	2000
Brake	<b>X</b>	Braked
Connection type	<b>F</b>	Power and Signal flying leads (0.5 m)
Output shaft	<b>G</b>	Gearbox output
Feedback device code	<b>CJ</b>	Renco R35i encoder 4096 5PP push-pull comms
Inertia & thermistor	<b>G</b>	Standard Inertia + no thermistor
PCD (Gearbox)	<b>165</b>	165 (FF 165/90)
Shaft Diameter (Gearbox)	<b>900</b>	90 mm register diameter
Insulation class	<b>F</b>	
UL Motor / UL Stator	<b>UL Stator</b>	

**Nominal characteristics**

Motor Ambient Temperature (°C)	40	Drive Fsw (kHz)	12
Motor Peak Torque (Nm)	27.6	Stall Current (A)	44.0
Motor Stall Torque (Nm)	9.2	Rated Current (A)	41.1
Rated Torque (Nm)	8.6	Kt (Nm/A)	0.209
Rated Power (kW)	1.8	Ke (V/kmin <sup>-1</sup> )	12.8
Winding Thermal Time Constant (s)	235	R (ph-ph) (Ohm)	0.02
Number of Poles	10	L (ph-ph) (mH)	0.22
Typical Cogging (Nm)	0.05		
Inertia (kg.cm <sup>2</sup> ) (Motor + Gearbox)	≈ 86	Weight (kg) (Motor + Gearbox)	≈ 15
Ingress Protection Level (IP)	IP54		
Brake		Static Torque (Nm)	16.0
Release Time (ms)	105	Backlash (°)	0.38
Brake Supply Voltage (V)	24	Brake Coil Power (W)	17.5

**Torque / speed graph**





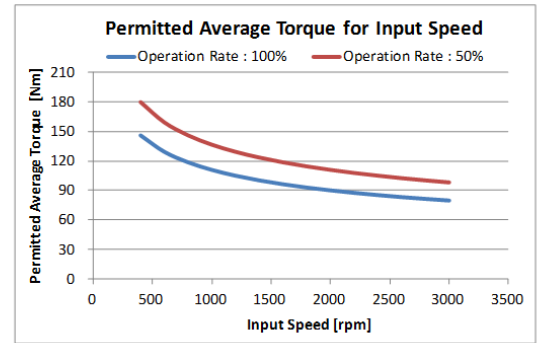
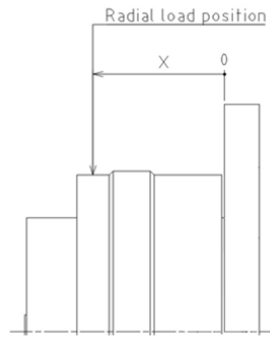
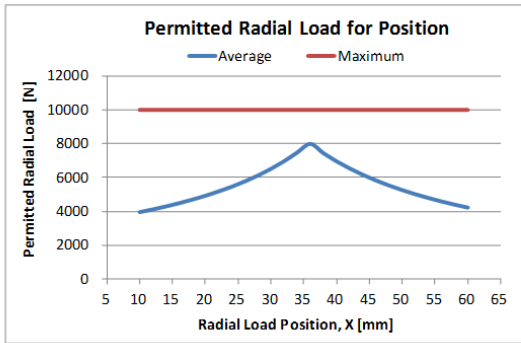
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**Gearbox characteristics**

Manufacturer	Shimpo	Backlash (arc/min)	≤ 8
Type	Inline Planetary	Radial Load (Fr, N) @ Fa=0, Input Speed Nom	6900
Part No.	VRLZ-120-9-340	Radial Load MAX (Fr, N)	10000
Ratio	9	Axial Load (Fa, N) @ Fr=0, Input Speed Nom	3800
Stages	1	Output Torque Nominal (Nm)	90
Inertia (kg.cm <sup>2</sup> )	≈ 72	Output Torque Max (Nm)	225
Weight (kg)	6.6	Input Speed Nom (rpm)	2000
Efficiency	95%	Input Speed Max (rpm)	3000



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### Wheel Specification

