

Enquiry N°:  
Created by: JD

### SERVO MOTOR 089LDA15XFGCJG100620-SGV1

AGV Solution Motor + Gearbox + Wheel + Brake



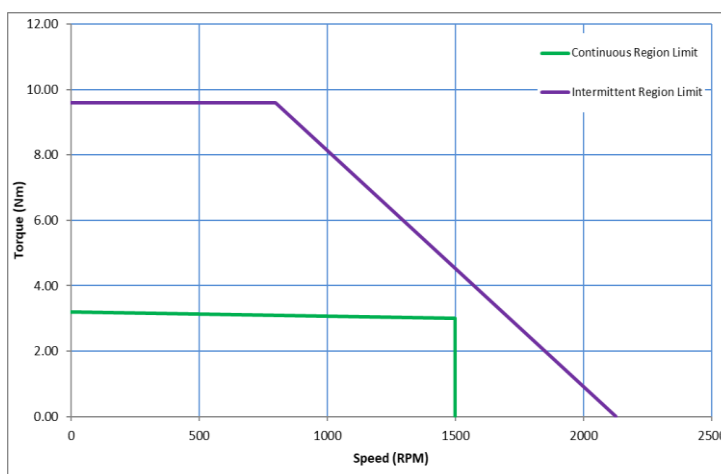
#### Definition

Type	Unimotor HD	
Frame Size (mm)	<b>089</b>	
Voltage	<b>L</b>	40-50V DC
Magnet type	<b>D</b>	D - High dynamic
Frame Length	<b>A</b>	
Speed (min-1)	<b>15</b>	1500 @ 48V
Brake	<b>X</b>	Braked
Connection type	<b>F</b>	Integrated Flying Cable
Output shaft	<b>G</b>	Integrated Gearbox Shaft
Feedback device code	<b>CJ</b>	CJ – Renco R35i encoder 4096 5PP push-pull comms
Inertia & thermistor	<b>G</b>	G – standard inertia + no thermistor
PCD (Gbox)	<b>100</b>	100 (Gear box)
Shaft Diameter	<b>620</b>	G BOX output
Insulation class	<b>F</b>	
UL Motor / UL Stator	<b>UL Stator</b>	

#### Nominal characteristics

Motor Ambient Operating Temperature (°C)	0 to 40	Motor Ambient Storage Temperature (°C)	-15 to 40
Motor Peak Torque (Nm)	9.6		
Motor Stall Torque (Nm)	3.2	Stall Current	13.6
Rated Torque (Nm)	3	Rated Current (A)	12.7
Rated Power (kW)	0.47		
Winding Thermal Time Constant (s)	85	Kt (Nm/A)	0.24
Number of Poles	10	Ke (V/kmin-1)	15.17
Maximum Cogging (Nm)	0.1	R (ph-ph) (Ohm)	0.26
Inertia Motor + GBox (kg.cm <sup>2</sup> )	~2.0	L (ph-ph) (mH)	1.64
Ingress Protection Level (IP)	54	Weight (kg) Motor + gearbox	6.5
Intermittent Torque (Nm)	4.8 (S3 Duty)		
Intermittent Power (kW)	0.7 (S3 Duty)	Intermittent Current (A)	20.25 (S3 Duty)
<b>Brake</b>	06 Type	Static Torque (N.m)	4
Release Time (ms)	<150ms	Backlash (°)	TBA
Brake Supply Voltage (V)	24	Brake Coil Power (W)	15

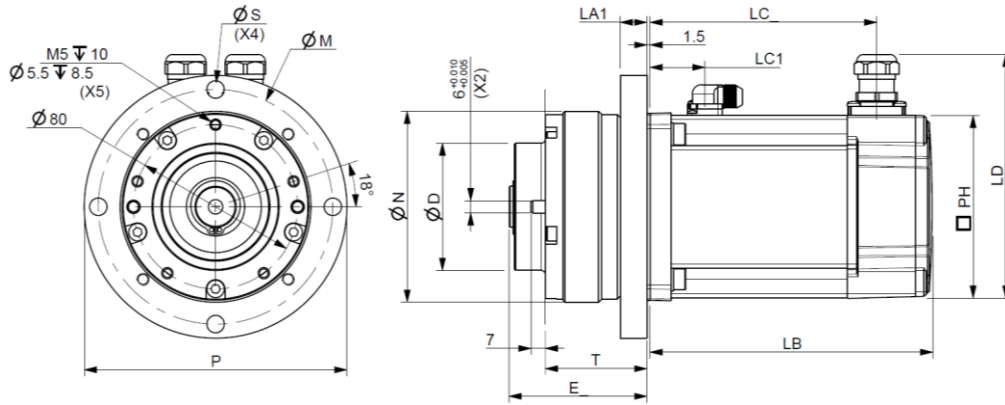
#### Motor Torque / speed graph



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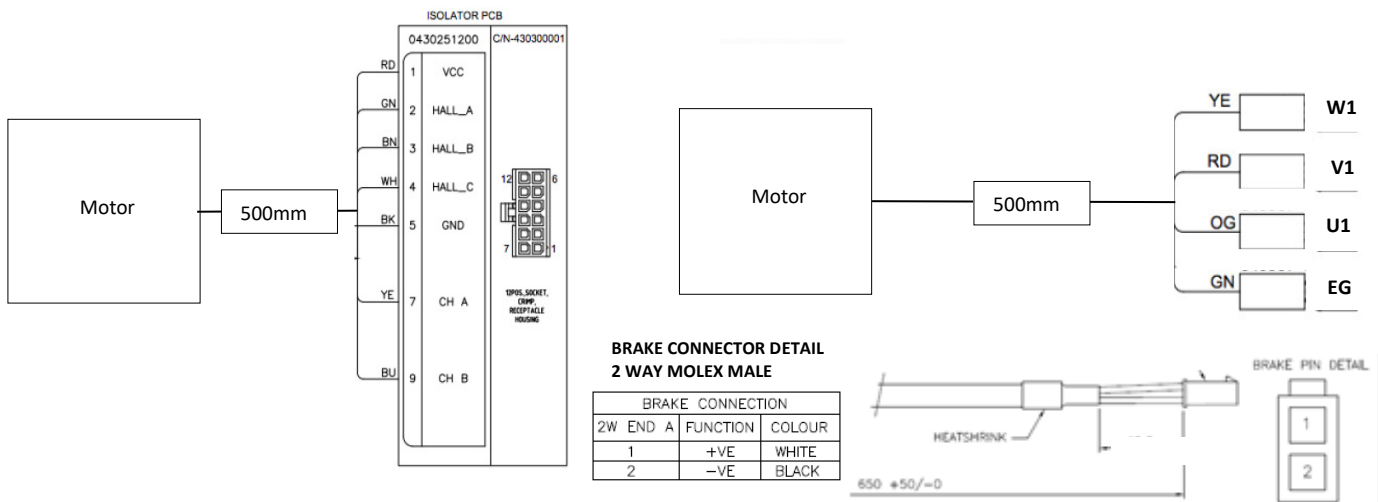
**Motors (° & mm)**



LB	Motor Total length	137.8±1
LC	Gland position	110.5±1
LA1	Flange thickness	13±0.1
T	Register Length	49.5±0.1
N	GBox Clearance Dia	93 h7
LD	Connector overall height	118
P	Flange GBox Dia	128
S	Fixing Hole Diameter	6.5
M	Fixing hole PCD	114.3
PH	Motor Housing Width	89±0.3
E	GBox Length	67.2
D	GBox Register Diameter	62±0.07
LC1	Brake Connector position	20.8±0.4
	Motor+Gbox Total Length	205
	Mounting Bolt	M6

**Motor electrical interface Flying leads option:**

Feedback device code:					Connection type:			
<b>CJ – Renco R35i encoder 4096 5PP push-pull comms</b>								
1	Red	Power	7	Yellow	CH A	1	U	Orange (x 1)
2	Green	HALL A	8		-	2	V	Red (x 1)
3	Brown	HALL B	9	Blue	CH B	3	W	Yellow (x 1)
4	White	HALL C	10			4	Earth	Green/Yellow (x 1)
5	Black	GND	11					
6	Red		12					
<b>Signal Cable (28 AWG): 500mm</b> (from gland to customer end) 12-Way MOLEX Connector 43025-1200					<b>Power Cable: 500mm</b> (from gland to customer end) 4 cores of 16 AWG UL wire, with polyolefin heat shrink sleeve Shrouded Spade terminals fitted to lead wires			

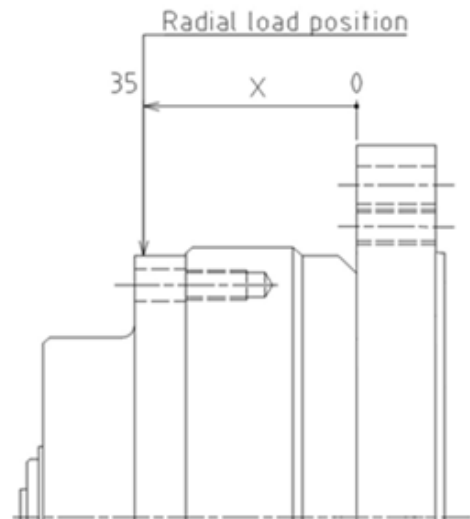
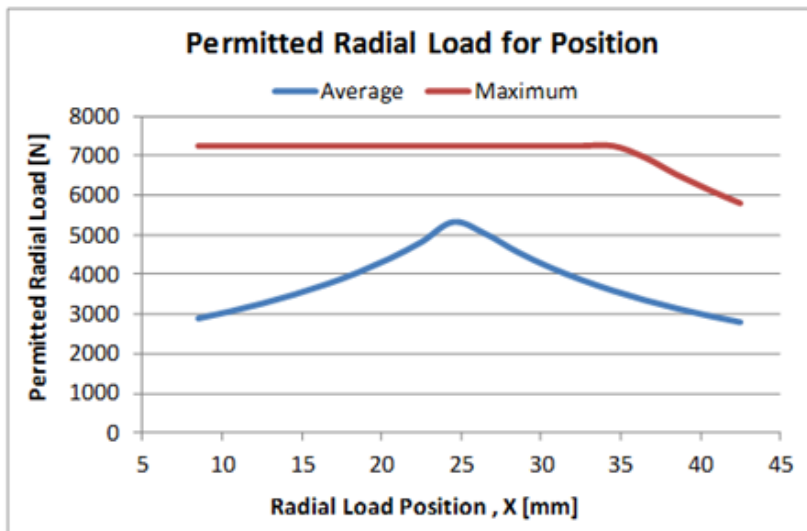
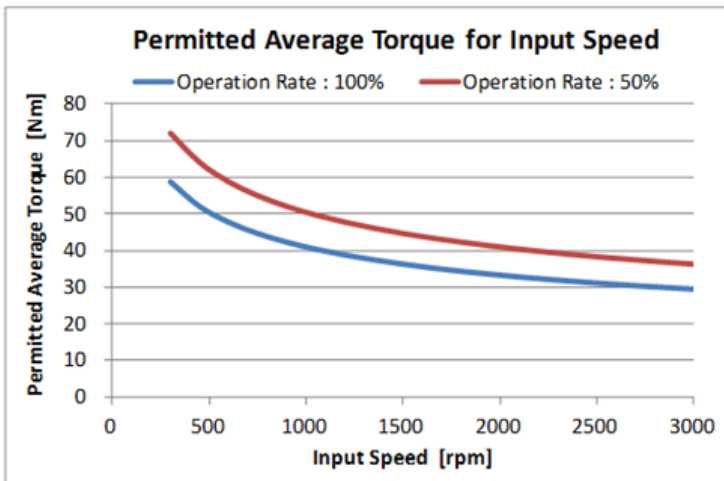


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**Gear Box characteristics**

Ratio	9	Backlash (arc/min)	≤7
Stages	1	Radial Load (Fr, N) @ Fa=0, Input Speed Nom	3500
Inertia (kg.cm <sup>2</sup> )	~0.2	Radial Load MAX (Fr, N)	7250
Weight (kg)	2.7	Axial Load (Fa, N) @ Fr=0, Input Speed Nom	2200
Efficiency	95%		

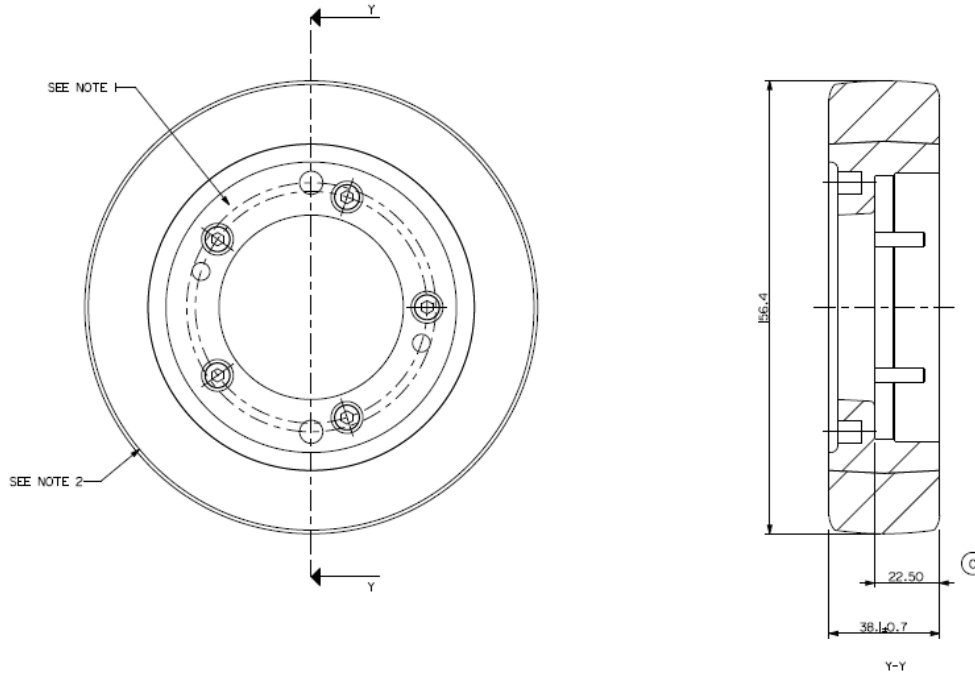


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### Wheel Specification



NOTES:

1. CORE INFORMATION
  - MATERIAL: HT200 CAST IRON.
  - FINISH: PAINT BLACK.
2. TYRE INFORMATION
  - MATERIAL: POLYESTER BASED POLYURETHANE
  - THERMOSET CASTABLE
3. M5 x 15 CAP HEX B2P MOUNTING BOLTS (X5)