

# DATA SHEET

## Miniaturized Galaxie® Gearbox



SAG090A-060N-GNS			
Dimensions	Symbol	Unit	Value
Outer diameter	∅	mm	90
Length	L	mm	55.5
Hollow shaft diameter	∅H	mm	31
Weight	m	kg	1.5
<b>General technical data</b>			
Ratio	i	-	60
Nominal torque	T <sub>2N</sub>	Nm	70
Maximum torque	T <sub>2B</sub>	Nm	150
Emergency stop torque	T <sub>2Not</sub>	Nm	375
Nominal input speed (grease lubrication)	n <sub>1N</sub>	rpm	1200
Maximum input speed (grease lubrication)	n <sub>1max</sub>	rpm	4200
Idling torque @ n <sub>1N</sub> and 20 °C (after run-in)	T <sub>012</sub>	Nm	0.5
Moment of inertia	J <sub>1</sub>	kgcm <sup>2</sup>	1.23
Backlash	j <sub>t</sub>	arcmin	zero
<b>Torsional rigidity</b>			
Torsional rigidity *	C <sub>t21</sub>	Nm/arcmin   10 <sup>4</sup> Nm/rad	35   12.0
Torsional rigidity **	K <sub>3</sub>	Nm/arcmin   10 <sup>4</sup> Nm/rad	24   8.3
Torsional rigidity **	K <sub>2</sub>	Nm/arcmin   10 <sup>4</sup> Nm/rad	23   7.9
Torsional rigidity **	K <sub>1</sub>	Nm/arcmin   10 <sup>4</sup> Nm/rad	17   5.8
<b>Output bearing</b>			
Maximum tilting moment	M <sub>2kmax</sub>	Nm	150
Axial load	C <sub>a</sub>   C <sub>0a</sub>	kN	17.7   56.0
Radial load	C <sub>r</sub>   C <sub>0r</sub>	kN	13.5   22.4
<b>Accuracy</b>			
Hysteresis loss ***		arcmin	0.5
Lost motion ***		arcmin	0.3
Transmission accuracy		arcmin	< 1.5
Repeatability		arcmin	± 0.1
<b>Others</b>			
Max. permitted housing temperature	θ <sub>U</sub>	°C	0 to 80
Protection class		IP64	
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**Remark:** All specified values are liable to specific variabilities due to the tolerances of material properties and dimensions. The specified values are mean values at which a tolerance of ± 10 % of torque, rigidity, current inductance, resistance and speed is allowed.

\* Average gradient of the hysteresis in the range of 50 to 100% of T<sub>2B</sub>

\*\* K<sub>1</sub>: average gradient of hysteresis in the range below 10 Nm

K<sub>2</sub>: average gradient of hysteresis in the range between 10 and 25 Nm

K<sub>3</sub>: average gradient of hysteresis in the range over 25 Nm

\*\*\* in validation