

# SWIFT EVO 20 SMALL CAR SPECIFICATIONS

MEASURED VALUE		UNITS	ALUMINUM SWIFT EVO 20A	TITANIUM SWIFT EVO 20T
<b>Maximum Calibrated Load Ratings:</b>				
Fx		kN (lb)	21 (4,721)	30 (6,744)
Fy		kN (lb)	16 (3,597)	25 (5,620)
Fz		kN (lb)	21 (4,721)	30 (6,744)
Mx		kN-m (lb-ft)	4 (2,950)	6 (4,425)
My		kN-m (lb-ft)	5 (3,687)	8.5 (6,269)
Mz		kN-m (lb-ft)	4 (2,950)	6 (4,425)
Noise Level Peak to Peak (0-500 Hz)		N	4	6
Maximum Usable RPM		RPM	2400*	2400*
Maximum Operating Temperature (measured at the spindle hub)		°C (°F)	125 (257)	125 (257)
Shock Resistance; Each Axis		G	60	60
SWIFT Evo Environmental Protection Rating	IP67			
Input Voltage Required		VDC	10-28	
Input Power Required per Transducer		W	6	
Output Voltage Full Scale Calibrated Load		VDC	±10	
SAE J328 Half Axle Rating		kg (lb)	438 (965)	717 (1,580)
SAE Bending Moment Seen on Cell		kN-m (lb-ft)	3.1 (2,305)	4.5 (3,292)
Specification % (Typical Performance %)**				
Nonlinearity	Force	%FS	0.3 (0.15)	0.3 (0.15)
	Moment	%FS	0.5 (0.2)	0.5 (0.2)
Hysteresis	Force	%FS	0.2 (0.1)	0.2 (0.1)
	Moment	%FS	0.3 (0.2)	0.3 (0.2)
Crosstalk	Fy → Fx,Fz	%FS	0.4 (0.25)	0.4 (0.25)
	Fx ↔ Fz	%FS	0.5 (0.25)	0.5 (0.25)
	Fx,Fz → Fy	%FS	0.5 (0.3)	0.5 (0.3)
<b>Assembly Information:</b>				
Transducer		kg (lb)	3.1 (6.8)	4.8 (10.6)
Minimum Rim Size		mm (in)	304.8 (12)	304.8 (12)
Typical Lug Nut Bolt Circle Accommodated		mm	Up to 120	
Output Connector Type			BNC	
Auto Shunt Calibration			On Vehicle or Test Rig	
<b>Modal Properties: Frequency</b>				
With Tire & Rim	Mx, My	Hz	325	
	Fy	Hz	610	
Without Tire & Rim	Mx, My	Hz	980	
	Fy	Hz	1,575	

\*3000 rpm for tests lasting less than 30 minutes and 200 mph cooling air.  
\*\* "Typical Performance" listed is better than or equal to the median historical performance level.

## NOTES:

- Based on loads at the center of the transducer.
- Each SWIFT Evo transducer will be calibrated on an MTS calibration machine. MTS/PCB provides complete documentation of calibration values by serial number for each SWIFT Evo unit. Unique calibration values are stored electronically and transferred to the transducer interface box (Evo TI box) shipped with each SWIFT Evo system.
- Periodic recalibration services can be provided by MTS/PCB.
- MTS/PCB can manufacture rims designed in accordance with SAE J328 criteria.
- Proper rim design is essential for optimum performance.

**Specifications are subject to change without notice.**

**TYPICAL VS. SPECIFICATION**

