SWIFT® Evo 20 SMALL CAR SPECIFICATIONS

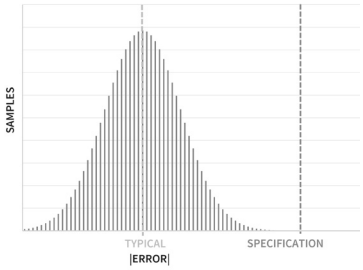
MEASURED VALUE		UNITS	ALUMINUM SWIFT Evo 20A	TITANIUM SWIFT Evo 20T
Maximum Calibrated Load Ratings:				
Fx		kN (lb)	21 (4,721)	30 (6,744)
Fy		kN (lb)	16 (3,597)	25 (5,620)
Fz		kN (lb)	21 (4,721)	30 (6,744)
Mx		kN-m (lb-ft)	4 (2,950)	6 (4,425)
My		kN-m (lb-ft)	5 (3,687)	8.5 (6,269)
Mz		kN-m (lb-ft)	4 (2,950)	6 (4,425)
Noise Level Peak to Peak (0-500 Hz)		N	4	6
Maximum Usable RPM		RPM	2400*	2400*
Maximum Speed (15 in. rolling radius)		kph (mph)	240 (150)	240 (150)
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			2.7 (2,000)	7.3 (5,416)
			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)
Assembly Weight Information:				
Transducer		kg (lb)	3.0 (6.7)	4.8 (10.5)
Hub Adapter		kg (lb)	1.0 (2.3)	1.0 (2.3)
Slip Ring Assembly		kg (lb)	0.5 (1.2)	0.5 (1.2)
15” x 6” Modified Rim		kg (lb)	4.1 (9.0)	4.1 (9.0)
Modified Lug Nuts (Qty 5)		kg (lb)	0.5 (1.1)	0.5 (1.1)
Sensor Mounting Fasteners		kg (lb)	0.4 (0.8)	0.4 (0.8)
Total Weight		kg (lb)	9.6 (21.1)	11.3 (24.9)
Reference Weight of Standard Unmodified 15” x 6” Rim and Lug Nuts		kg (lb)	10.0 (22.1)	10.0 (22.1)
Weight Differential***		kg (lb)	-0.4 (-1.0)	1.3 (2.8)
Minimum Rim Size		mm (in)	304.8 (12)	304.8 (12)
Typical Lug Nut Bolt Circle Accomodated		mm	98 to 150	
Output Connector Type			BNC	
Auto Shunt Calibration			On Vehicle or Test Rig	
Modal Properties: Frequency				
With Tire & Rim	Mx, My	Hz	325	
	Fy	Hz	610	
Without Tire & Rim	Mx, My	Hz	980	
	Fy	Hz	1,575	

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



CE

*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.
*** Weight differential is calculated based on typical OEM alloy wheels versus rim and hub adaptors designed according to J328 load cases.