



SC-300



TROI™

Tubular Silicone Pipe Tag

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1 PRODUCT DESCRIPTION

The patented (US Patent # 7,928,922) **TROI SC-300 Tubular Silicone Pipe** RFID tag provides automatic identification and tracking capabilities never-before available in such a unique package designed for rugged or hazardous use-areas.

The tubular silicone tag is designed to be mounted around any metallic pipe or round metal object. The **SC-300** can withstand unprecedented high temperature (consistent temperatures of 150 degrees Centigrade), high pressure and severe environmental conditions.

1.1 SPECIFICATIONS

Device type Passive RFID tag	UHF (Ultra High Frequency band)
Air interface protocol	EPCGlobal Class1Gen2 / ISO/IEC 18000-6C
Operational frequency	865 - 928 MHz
IC options	Standard: Alien Higgs 3 (others on request) Optional: EM, Fujitsu, Impinj, NXP (others on request)
EPC memory size	Standard: 128 bit Optional: Up to 240 bit
EPC memory content	Unique 96-bit number encoded
Extended memory	Standard: 512 bit
TID	Factory-programmed, non-changeable, unique 64-bit ID.
Read range	Real-world: 1 – 2 meters Lab environment: 7 meters
Applicable surfaces	Any metallic material
Tag material	Silicone
Tensile strength	8 Mpa
Durometer	Shore A: 50
Elongation	500%
Specific gravity	1.12 g/mL
Drop test to asphalt	2 meters with 5 Kg's attached; 250+ times (competition fails at 20) 2 meters with 8 Kg's attached; 150+ times (competition fails immediately) 2 meters with 18Kg's attached; 25+ times (competition fails immediately)
Standards compliancy	ATEX-compliant
Product RoHS compliant?	Yes
US Patent Number	7,928,922



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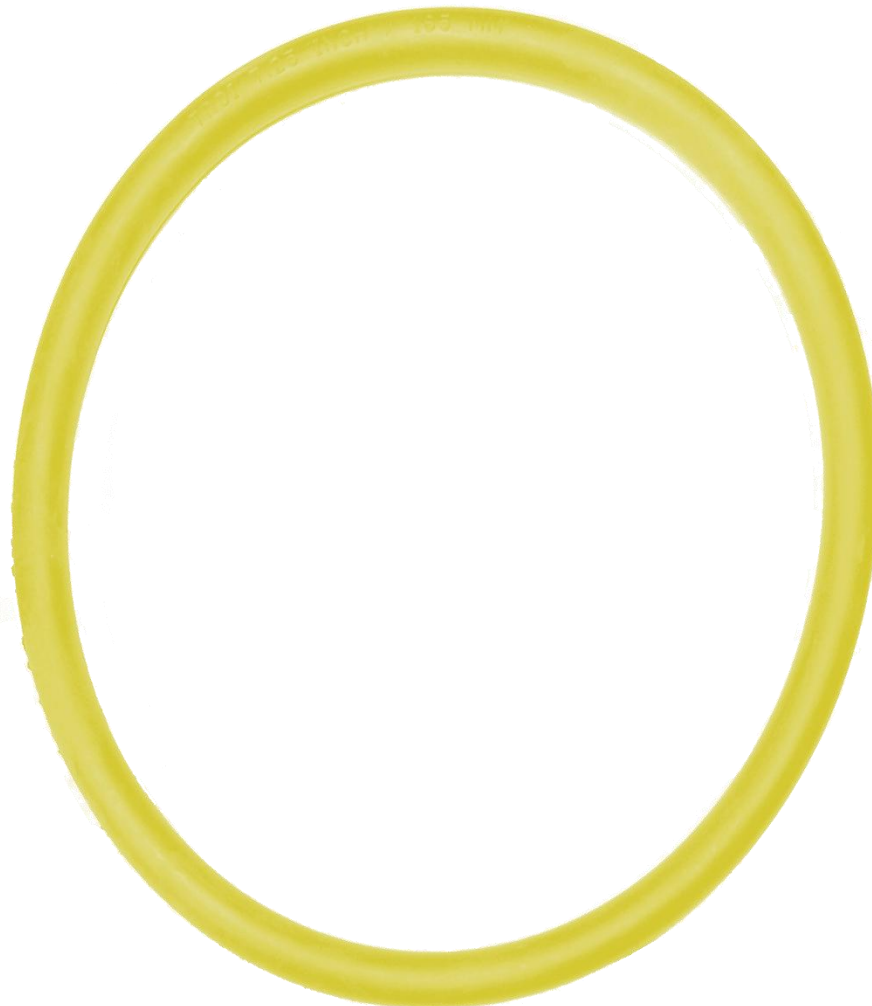
1.2 DIMENSIONS

Currently available SC-300 Tubular Silicone Pipe Tag **inner diameters:**

- 225.3 mm (8.87 inches)
- 184.15 mm (7.25 inches)
- 174.5 mm (6.87 inches)
- 110 mm (4.33 inches)

Average silicone ring tubular diameter: 12.5 mm (0.5 inches)

PLAN VIEW





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1.3 READ RANGE

	UHF max read-range on metal with 4W ERP
SC-300 (@ 915 MHz)	660.4 cm / 260 inches (6.63 m / 21.75 feet)

The read range listed above was obtained from a lab test environment. Actual test results may be different. Testing in actual use environments is strongly recommended.

1.4 ENVIRONMENTAL SPECIFICATIONS

Operating temperature	-46° C to +150° C* -51° F to +302 ° F*
Temperature Cycling Test With no negative affects	-46 deg C for 5 hours 225 deg C for 70 hours in air and distilled water 225 deg C for 70 hours in oil (IRM-901)
IP classification	IP68: - Complete protection against dust - Protection against continuous immersion in water (Tested for 5 hours in 1 m [3.3 ft] depth)
Weather resistance	Excellent, including UV-resistance and sea water immersion
Pressure resistance	RFID tag tested to 30,000 PSI for 30 days
Chemical resistance	No physical or performance changes in: - Salt water - NaOH (depending on concentration) - Sulfuric acid (depending on concentration) - Motor oil (tested in 168 hour exposure) Generally good against: - Most solvents - Most acids and bases

* **NOTE:** The RFID tag will not be functional if the tag is left at the maximum indicated temperatures such that the internal soak temperature exceeds +80 deg C. The RFID tag itself will (resume) function between -40 deg C and +80 deg C.



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1.5 SUPPORTED SERVICES

- Tag pre-encoding

For further details, please contact **TROI LLC**.

1.6 POSSIBLE APPLICATIONS

Metal surfaces

Metal surfaces	Metal valves, metal returnable containers, metal pallets, metal pipes, high value metal items, aerospace applications, military applications, etc.
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2 INSTALLATION INSTRUCTIONS

1. Simply stretch the **SC-300 Tubular Silicone Pipe Tag** over the item and you're done!





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3 APPLICATION / USE VIDEO LINK

From this link there are a number of other **TROI LLC** video's that show the SC-300 in use.

<http://www.youtube.com/watch?v=rr0tx7SqY8w&list=UU0r9GQH2wU2WUeYIR8mwssw&index=1>

4 CONTACTING TROI LLC

For additional information and technical support contact:

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ADVISORY

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