

# HEAVY DUTY RFID TAG PIPE FRAC TAG



## APPLICATIONS

- High Value Metal Applications
- Aerospace Applications
- Military Applications
- Chemical Areas

## FEATURES

- Passive RFID UHF Tag
- Up to 2 m Reading Range
- HVP Rubber with Black Nylon-Coated Stainless Steel Rope, Aluminum Ferrel
- IP69K Protection Class
- ATEX Compliant

## RFID OPTIONS

- EPC Global Class1 Gen2; ISO 18000-6C
- ISO 17665
- ISO 11135

## PRODUCT DESCRIPTION

The Pipe Frac Tag from iDTRONIC provides automatic identification and tracking capabilities in an unique flexible rope designed for rugged or hazardous use-areas. It is compliant to the EU directives on explosion protection with ATEX. It covers equipment and protective systems intended for use in explosion-hazard atmospheres.

The Tag consists of HVP rubber with a black nylon-coated stainless steel rope and an aluminium ferrel for crimp-type retention and is particularly resistant against most acids, solvents and bases. It was designed for high temperatures from - 50 °C up to + 200 °C. Thanks to the IP69K Protection Class it has an excellent resistance against UV and continuous sea water immersion.

The RFID UHF Tag works in UHF Frequencies of EU: 865 – 869 MHz and US: 902 – 928 MHz and has a reading range of up to 2 meters. The supported Standards are EPC Global Class1 Gen2; ISO 18000-6C, ISO 17665 and ISO 11135. It is also US Patented # 7,928,922.

The rubber-covered tag is designed to be mounted to any metallic surface by wrapping, and then crimping, the black-nylon-coated cable around any pipe or round metal object into a threaded hole on valves, leased iron, metal pipes, metal returnable containers, metal canisters, metal pallets, high value metal items, aerospace applications, military applications.

## TECHNICAL DATA

\* *READING DISTANCE DEPENDS ON TAG TYPE AND ORIENTATION.*

ELECTRICAL SPECIFICATIONS	
Operating Frequencies	UHF (EU: 865 – 869 MHz   US: 902 – 928 MHz)
Interface Protocol	EPC Global Class1Gen2   ISO/IEC 18000-6C
Operating Mode	Passive
Reading Range	Real-world: 1 – 2 meters* Lab environment: 7 meters*
IC Types	<u>Standard:</u> Alien Higgs 3™ (128 Bytes) <u>Optional:</u> EM, Fujitsu, Impinj, NXP (Up to 240 Bytes)
Memory Content	Unique 96-bit number encoded
Extended Memory	512 Bytes
TID	Factory-programmed, non-changeable, unique 64-bit ID

MECHANICAL SPECIFICATIONS	
Dimensions	Overall Length: 830 mm Rubber Tag: 170 × ø 16 mm Cable: 660 × ø 3.175 mm
Weight	17 g
Housing Material	HVP Rubber (2,500 psi minimum) Elongation: 400 % minimum Durometer: Shore A 60-70
Housing Colour	Black
Cable Specifications	Black nylon-coated stainless steel rope Aluminum ferrel for crimp-type retention
Applicable Surfaces	Metal pipes, metal returnable containers, metal canisters, metal pallets, high value metal items, aerospace applications, military applications, valves and leased iron
Mounting Options	Wrapping to any metallic surface and then crimping, the black-nylon-coated cable around any pipe or round metal object

ENVIRONMENTAL SPECIFICATIONS	
Operating Temperature	- 50 °C to + 200 °C
Temperature Cycling Test	200 °C continuous, for 30 days
Protection Class	IP 69K
Weather Resistance	Excellent, incl. UV-resistance and continuous sea water immersion
Pressure Resistance	30,000 psi for 30 days
Drop Specifications	2 meters with 5 KG attached @ 100+ times (competition fails at 20) 2 meters with 8 KG attached @ 5+ times (competition fails immed.)
Chemical Resistance	<u>No physical or performance changes in:</u> - Salt water - NaOH - Sulfuric acid - Motor oil <u>Generally good against:</u> - Most solvents - Most acids and bases

APPLICABLE STANDARDS	
ISO 18000-6C	E.g.: Alien Higgs 2/3/4, Fujitsu Impinj Monza, NXP UCODE, etc.
ISO 17665	Sterilization of Health Care Products – Moist Steam
ISO 11135	Sterilization of Health Care Products – Ethylene Oxide
RoHS 2	2011/65/EU
US Patent Number	7,928,922
ATEX Compliant	

PERSONALIZATION OPTIONS
<ul style="list-style-type: none"> <li>• Tag Pre-Encoding</li> </ul>

## APPLICATION EXAMPLES

### CHEMICAL AREAS



The Pipe Frac Tag of iDTRONIC is especially suitable for harsh environments at chemical areas with high temperatures.

The robust housing of the Tag is very resistant to chemicals like salt water, NaOH, sulfuric acid, motor oil and most solvents, acids and bases.

It can be securely wrapped around pipes or other devices. It can be removed fast and without damaging after the using period.

### MILITARY AREAS



The Pipe Frac Tag can be used for military purposes within harsh environments under high pressures.

The RFID Tag is particularly resistant to the most common chemicals. The identification of pipes with metallic surfaces can be secured with this Pipe Frac Tag. High pressures within bomb-hazards withstands the tag till 30,000 psi.

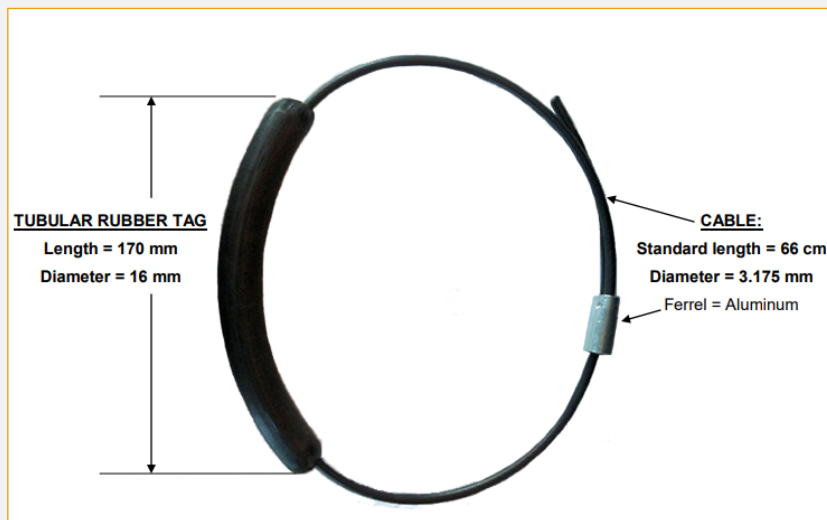
The Tag can be easily integrated on any pipe item by wrapping it around. It can be removed fast and without damaging after the using period.

## PRODUCT PICTURES

### PIPE FRAC TAG MOUNTED ON A PIPE



## MECHANICAL VIEWS



## ORDER CODES

VERSION	ORDER CODE
Alien Higgs 3™ (128 Bytes)	ST-UHF-TR-HD-101-ALIEN
EM (Up to 240 Bytes)	ST-UHF-TR-HD-101-EM
Fujitsu (Up to 240 Bytes)	ST-UHF-TR-HD-101-FU
Impinj (Up to 240 Bytes)	ST-UHF-TR-HD-101-IM
NXP (Up to 240 Bytes)	ST-UHF-TR-HD-101-NXP
Extended Memory: 512 Bytes	ST-UHF-TR-HD-101-EXM

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