

AutoTag Automatic RF Identification System



Tracking of carcasses and products by ID system

The AutoTag ID-system is an automatic identification system for trolleys, gambrels and hooks (transport units). The tags can also be mounted on trays. The system is based on Radio Frequency (RF) technology.

System description

The AutoTag is designed for use in the harsh environments of slaughterhouses and meat processing plants. AutoTag is used for tracking carcasses on the kill line and into the cooler, which enables collection of data and sorting of carcasses relative to product quality. When AutoTag is integrated with a grading system, e.g. the AutoFom™ or the NitFom™, it enables a reliable and automatic sorting onto rails. This provides control of each individual carcass on the kill line.

The AutoTag is able to read multiple "tags in field". If two hooks or gambrels are pushed together within the reading area, for instance at the scale, the AutoTag will read both tags one after the other.

The AutoTag consists of RFID tags (with small embedded radio transponders) mounted on the transport units, an antenna, a sensor and an ID-box/reading station.

Tags

An RFID tag contains a coil and a programmed silicon chip. The tags come in different sizes, and they are encapsulated to resist shock, moisture and dirt.

The tags are completely passive and are powered by inductive coupling between the antenna and the tag. Two kinds of tags are available: Read-only tags have a unique coding and read-write tags can be programmed according to customer requirements.

The tags require no maintenance and have a very long life span when mounted.

The tags are encapsulated in epoxy in a drilled hole in the transport unit. The position of the mounting allows the transport unit to move sideways without changing the relative position of the RFID tag to the antenna.

Why the AutoTag ID-system!

- Used for keeping track of individual carcasses and for automatic sorting into the cooler
- Extremely high read percentage
- Very durable and long life due to unique design
- Readable through water, mist and fog
- Food approved materials
- 200 units in operation world-wide
- Based on 20 years' RFID technology experience



ID Box/Reading Station

The distance between the antenna and the ID box may be up to 10 m. The reading station's interface box sends data at a transmission rate of 9600 Baud. Communication is a simple protocol using RS-232, RS-485 or RS-422.

Technical data

Supply voltage	100-240VAC/0.5A
Ingress protection	IP69K
Inputs	6
Outputs	6
RS-232	Yes
RS-485	Yes
RS-422	Yes
Profibus	Option
DeviceNet	Option
ProfiNet	Option
Ethernet/IP	Option
TCP/IP socket	Option

Technical data may be subject to changes

Tags

Type	LogiTag Unique - 120	LogiTag Unique - 160	LogiTag Q5 - 120
Diameter mm	12	16	12
Thickness mm	2	3	2
Weight g	0.6	1.1	0.6
Programmable	-	-	+
Magnetic	-	-	-
Operating range	-40°C to +85°C/ -40°F to 185°F	-40°C to +85°C/ -40°F to 185°F	-40°C to +85°C/ -40°F to 185°F
Peak	160°C/320°F, 35 h	160°C/320°F, 35 h	160°C/320°F, 35 h
Holding force	-	-	-
Information	40 bit (10 HEX digits) translate to 13 decimal digits	40 bit (10 HEX digits) translate to 13 decimal digits	Programmed unique compability 40 bit (10 HEX digits) translate to 13 decimal digits
Material	PPS and epoxy	PPS and epoxy	PPS and epoxy

Technical data may be subject to changes

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