

**DETECTABLE**  
FASTENING  
SOLUTIONS







Advanced  
safety performance



## **ADVANCED** FASTENING SOLUTIONS

We **DEVELOP** and **PRODUCE** solutions dedicated to electrical installation and professional construction, combining our Italian and European **COMPETENCES**.  
The only multi-product and multi-solution offer for your profession.



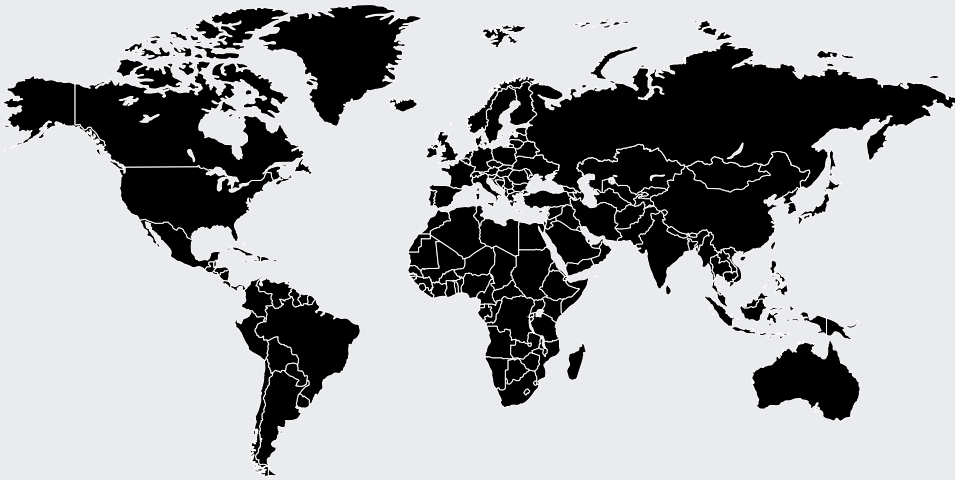


## THE STRENGTH OF A GLOBAL GROUP

**Elematic** is part of ITW, an **American MULTINATIONAL group** with over 100 years of history: the **IDEAL PARTNER** for every professional looking for innovative, differentiating, and high-quality products.



ILLINOIS TOOL WORKS



GLOBAL  
DIVERSIFIED  
MANUFACTURER

SEGMENTS

AUTOMOTIVE  
OEM

CONSTRUCTION  
PRODUCTS

SPECIALTY  
PRODUCTS

WELDING

POLYMERS  
& FLUIDS

FOOD  
EQUIPMENT

TEST & MEASUREMENT  
AND ELECTRONICS

## ITW TECHNOLOGIES TO IMPROVE FOOD AND PHARMA SAFETY AND QUALITY

As standards are coming under increasing scrutiny, companies must adhere to the stringent codes of practice before products land on retailers' shelves and consumers' homes.

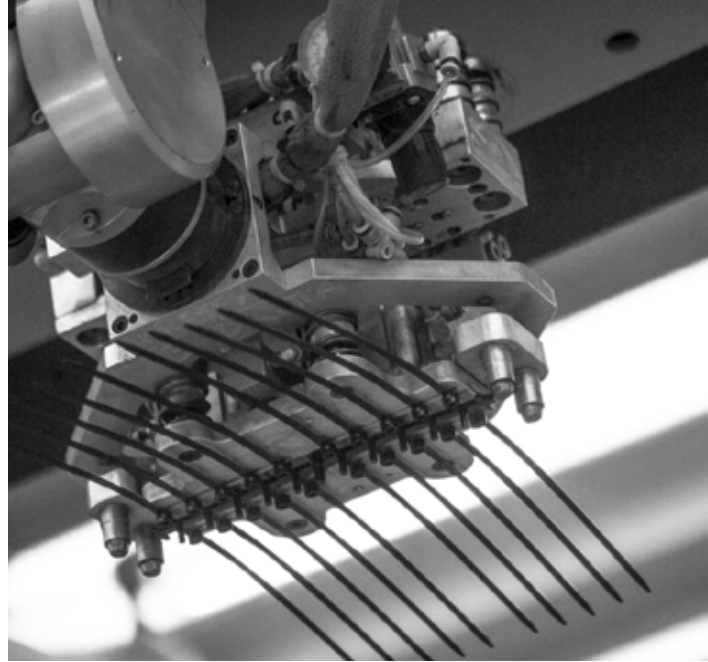
**ITW** industry-leading brands help global customers meeting the requirements of **HACCP** principles in the food industry and **GMP** guidelines in the pharmaceutical industry.



**APPROVED  
CABLE TIES  
DETECTABLE**



**INSPECTION  
EQUIPMENT  
MANUFACTURING**



With over 40 years of experience, **Elematic** is a market leading manufacturer of fastening solutions. **Elematic** is the partner for operators that install and maintain equipment to **safeguard food, beverage, pharmaceutical** processing and other contamination-sensitive industries. Elematic is certified:



ISO 9001:2015



ISO 14001:2015



Since 1969, **LOMA SYSTEMS** designs, manufactures and supports inspection equipments, Metal Detectors, Checkweighers and X-ray inspection systems, to identify contaminants and product defects within Food & Beverage, packaging and pharmaceutical industries. Loma System is certified:



ISO 9001:2015



## METAL DETECTION INSPECTION TECHNOLOGY

Metal is one of the most commonly found contaminants in food and pharma industries. Metal can be introduced at all processing stages, as it is most used in the construction of machinery, handling equipment and ancillary utensils.

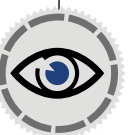
**Elematic detectable cable ties and accessories have been designed, produced and independently tested to guarantee effective and reproducible metal detectability properties.**





## X-RAY INSPECTION TECHNOLOGY

**X-ray detection is a fast-growing inspection method** used within food and pharma production factories, it provides improved safety and brand protection to strict retailer codes of practice. **X-ray offers a much wider detection range** for ferrous, non-ferrous, stainless steel and other foreign bodies such as glass, bones, ceramic, and plastic.



## VISUAL INSPECTION SYSTEMS

**Visual detection systems** can be implemented **to quickly identify and remove foreign bodies**. Elematic detectable cable ties and accessories are manufactured in blue colour to improve visual detection in on-line processing or packaging where there is no time for lengthy analytical testing in the event of a foreign body contamination.

# DETECTABILITY & INSPECTION PROCEDURE

## TEST PIECES

Performance testing of metal detection and X-ray inspection systems is an essential part of Elematic quality management.

**HACCP** principles in food, **GMP** guidelines in pharma, and **ISO 9000** quality management systems require that the systems installed at control points are routinely **QA** tested.

Test is achieved using full calibrated test pieces that come in different types, shapes and sizes based on industry specific needs, application requirements, codes of practice and internal processes.

- Stainless steel, ferrous & non-ferrous test sticks, flexible wands, balls & discs for metal detection.
- Stainless steel, glass, ceramic test wands for X-ray inspection.



## DETECTABILITY AT ELEMATIC

Our detectable product range has been **independently tested by RONDOTEST** a manufacturer-independent test standard for foreign body detectors in food and pharmaceutical industries.

RONDOTEST provides **precision test specimens for foreign body detectors** containing a new specimen genus representing a new test standard for metal and X-ray detection.

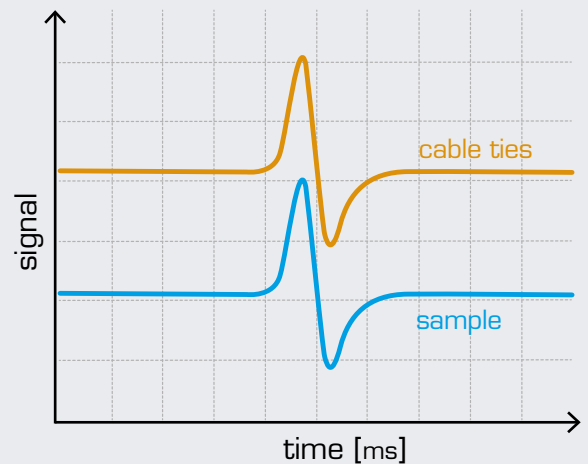
The precision test bodies from RONDOTEST provide comparable and reproducible measurement results. This assure performances regardless of new acquisition and technology changes.

### TEST METHOD:

- Test of detectability with metal detectors by measuring the signals of 0.68g **granulate material**.
- Frequency of metal detector: 300 kHz.
- Measuring of amplitude and phase with metal detector.
- Evaluation of the equivalent metal ball by using precision test samples for detectability comparison.



### ELEMATIC DETECTABLE GRANULATE MATERIAL.



### Measuring of amplitude and phase with equivalent precision test sample.

TEST N°	PRODUCT	EQUIVALENT TEST-SAMPLE NON-FERROUS/FERROUS
1	Elematic 100x2.5 mm	4.5 mm/3.8 mm
2	Elematic 140x3.5 mm	4.5 mm/3.8 mm
3	Elematic 200x4.5 mm	4.5 mm/3.8 mm

## RANGE

### METAL CONTENT TIES

Elematic metal content ties have been designed, produced and independently tested to guarantee effective and reproducible metal detectability properties.

Our products contain **metal pigments** uniformly dispersed to make any fragment easily detectable. We offer a wide range of cable ties with metal detectability properties comparable to a ferrous sphere of 3.8 mm diameter.

### METAL CONTENT MOUNTS

Elematic metal content **mounts are ideal for extra strength in holding detectable series cable ties in position.**

They are available in blue colour for high visual detectability. All Elematic metal content mounts conform to **REACH** Directive (EC) no. 1907/2006 and are **DEHP-free** (Bis(2-ethyl|hexyl|phthalate), a plasticizer deemed to be toxic for reproduction).

Moreover, materials to produce cable ties and mounts are conform to **FDA** (Food and Drug Administration) directives.





## STAINLESS STEEL CABLE TIES

Elematic **COLSTEEL** range is designed for high temperature resistance and considerable mechanical loads often found in the food and pharmaceutical processing. **Made of stainless steel AISI 316 & 304** the COLSTEEL range has a **high corrosion** and **weather resistance**, performing extremely well in harsh environments and other industries.





## DETECTABLE CABLE TIES

The metal content tie is specifically designed for use in **food** and **pharmaceutical** processing industries.

A unique manufacturing process, involving the inclusion of a metallic oxide, enables even small *cut-off* sections to be detected by standard metal detecting equipment.

Ideally suited for the installation of cabling in and around the manufacturing process.



## FEATURES AND BENEFITS

### DETECTABLE BY X-RAY AND METAL DETECTOR

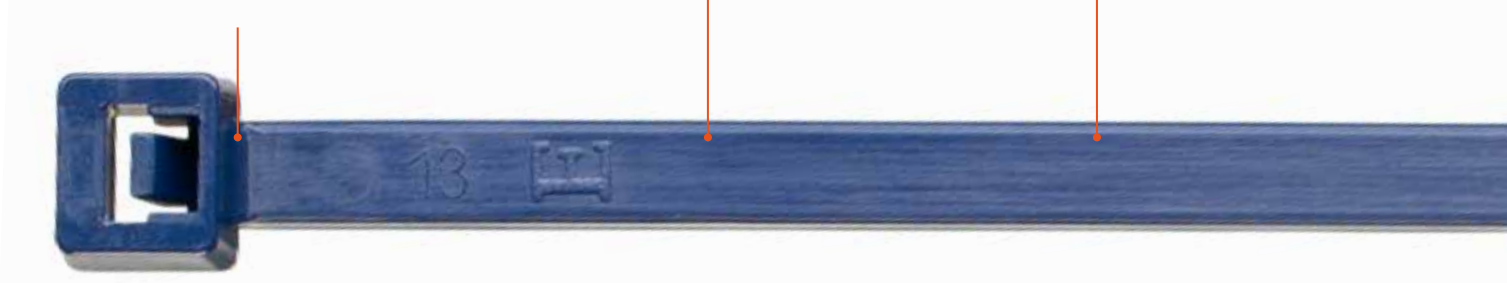
made of copolymer material added with iron oxide, providing magnetic properties throughout

### INSTALLATION

requires low insertion effort and pull-through force

### ROUNDED EDGES

for user safety and to prevent insulation damage



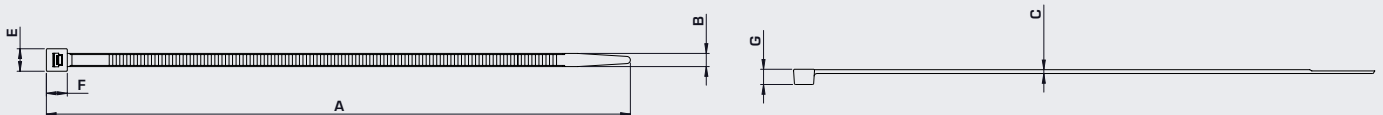
### PRODUCED IN BLUE COLOUR

for quick visual detection

### HIGH RESISTANCE

to aromatic solvents, oils, greases, and oil derivatives

## TECHNICAL DATA



Description	Nominal Dimensions							Code	
	Length (mm)	Width (mm)	Thickness (mm)	Head length (mm)	Head width (mm)	Head thickness (mm)	Bundle ø max (mm)		Bundle ø min (mm)
	A	B	C	E	F	G			
Detectable 2,5x98	98	2,5	1	4,7	4,7	3,9	1	21	<b>5203/C DTE</b>
Detectable 3,5x140	140	3,5	1,2	6,1	6,7	4,4	2	32	<b>5209/C DTE</b>
Detectable 3,5x200	200	3,5	1,2	6,1	6,7	4,4	2	50	<b>5214/C DTE</b>
Detectable 4,8x200	200	4,5	1,4	7,8	7,1	5,5	3	50	<b>5215/C DTE</b>
Detectable 4,5x290	290	4,5	1,4	7,7	7,1	5,2	3,5	78	<b>5217/ DTE</b>
Detectable 4,5x360	360	4,5	1,4	7,7	7,1	5,2	3,5	100	<b>5219/ DTE</b>
Detectable 7,5x365	365	7,5	1,8	12,8	11,3	7,5	8	100	<b>5227/ DTE</b>

Description	Tensile strength* (N)	Bag (pcs)	Box (pcs)	Code
Detectable 2,5x98	80	100	15.000	<b>5203/C DTE</b>
Detectable 3,5x140	180	100	7.000	<b>5209/C DTE</b>
Detectable 3,5x200	180	100	7.000	<b>5214/C DTE</b>
Detectable 4,8x200	220	100	4.000	<b>5215/C DTE</b>
Detectable 4,5x290	220	100	3.500	<b>5217/ DTE</b>
Detectable 4,5x360	220	100	3.000	<b>5219/ DTE</b>
Detectable 7,5x365	540	100	1.500	<b>5227/ DTE</b>

\* Please consider a suitable safety factor equal or above 2

Product intended exclusively for professional use. Our products use must strictly comply with the instructions and safety recommendations found in the data sheets and in the user manuals.

# DETECTABLE BASE MOUNTS

Mounts suited for extra strength, holding cable ties in high vibration areas commonly found in food manufacturing equipment and automated packaging machines.

The copolymer added with iron oxide provide magnetic properties throughout the mount.

## FEATURES AND BENEFITS

### MAGNETIC AND X-RAY DETECTABLE

perfect for food and pharma  
grade detection

### HACCP

usable as part  
of HACCP process

### NO CONTAMINATION

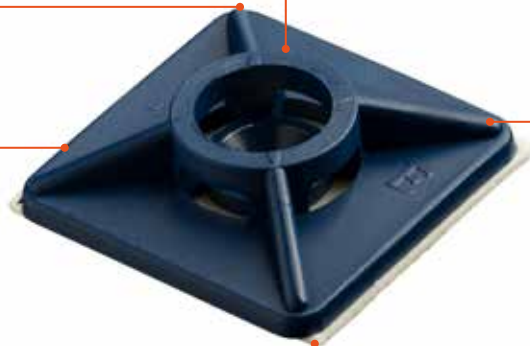
greatly reduced risk of  
contamination within  
food products

### SIMPLE TO INSTALL

with a screw or bolt

### 4-WAY ENTRY

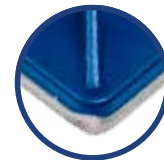
for a quicker and more  
flexible installation



**FOR  
APPLICATION  
WITH SCREWS**

### SECURE FIXING SOLUTION

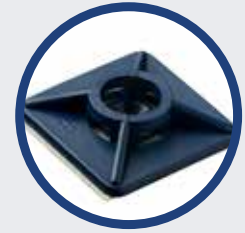
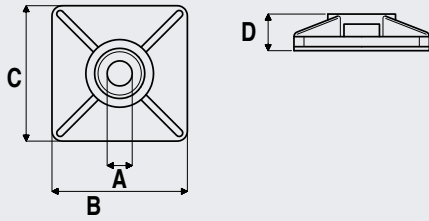
for routing cables, tubes  
and hoses



**RUBBER  
ADHESIVE  
BASE**







## DETECTABLE TWO-WAY MOUNTING BASE

Description	∅ hole (mm)	Length (mm)	Width (mm)	Height (mm)	Tensile strength (kg)	Tensile strength (N)	Max. cable tie width (mm)	Color	Pack (pcs.)	Code
	A	B	C	D						
Detectable two-way mounting base 4,8x27x27	4,8	27	27	6,5	18,36	180	4,8	●	100	<b>5473DT RBE</b>

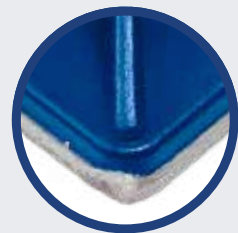
## MOUNTING BASE ADHESIVITY

Maximum static load recommended	Rubber base adhesive
Dimensions 19x19 mm	<b>125 gr</b>
Dimensions 27x27 mm	<b>300 gr</b>

## ADHESIVE PROPERTIES

Type of support	Rubber base - Polyethylene
Density	<b>85 Kg/cm<sup>3</sup></b>
100 hour static shear adhesion*	<b>0,7 kg/cm<sup>2</sup></b>
Tensile strength	<b>10 kg/cm<sup>2</sup></b>
U.V. Resistance	not recommended
Working temperature	-40 °C ÷ 60 °C
Recommended application temperature	18 °C ÷ 35 °C
Stocking temperature	18 °C ÷ 30 °C
Shelf life	12 months
Use	immediate application

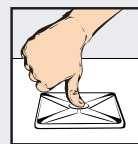
\* On degreased and dry galvanized metal surface



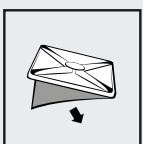
## INSTALLATION INSTRUCTIONS



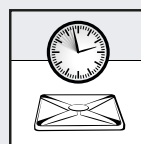
1. Clean the surface using an appropriate cleaner and wait until completely dried.



3. Apply the base on the surface pressing down for few seconds.



2. Peel off the protective film avoiding touching the adhesive.



4. For the best results wait time indicated in the technical table.



## COLSTEEL CABLE TIES

The Colsteel cable ties are ideal for all applications that require high strength, reliability and high temperature or fire resistance.

The Colsteel range of stainless steel cable ties can be used in food and pharmaceutical processing industries and it is also suitable for machine building.



## FEATURES AND BENEFITS

### BALL LOCKING MECHANISM

a very low insertion effort and infinitely calibrated closing

### FIRE RESISTANT

high temperatures

### MAXIMUM RESISTANCE

to ultraviolet rays exposure and corrosion



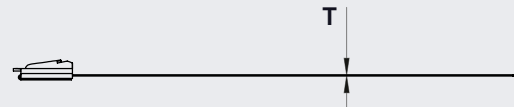
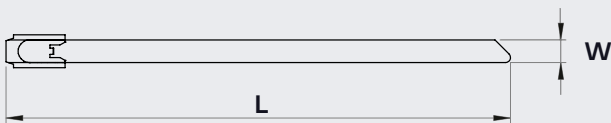
### TOTAL-SMOOTH PROFILES

avoid any damage

### HIGH MECHANICAL STRENGTH

for safety and high performance

## TECHNICAL DATA



## RANGE

Description	Nominal dimensions			ø Bundle max (mm)	Tensile strength		Laboratory test result (N)	Code
	Length (mm)	Width (mm)	Thickness (mm)		(Kg)	(N)		
	L	W	T					
Colsteel 4,6x127 - AISI 304	127	4,6	0,25	25	90	900	1200÷1300	<b>6701</b>
Colsteel 4,6x201 - AISI 304	201	4,6	0,25	51	90	900	1200÷1300	<b>6703</b>
Colsteel 4,6x266 - AISI 304	266	4,6	0,25	69	90	900	1200÷1300	<b>6706</b>
Colsteel 4,6x362 - AISI 304	362	4,6	0,25	102	90	900	1200÷1300	<b>6708</b>
Colsteel 4,6x521 - AISI 304	521	4,6	0,25	152	90	900	1200÷1300	<b>6710</b>
Colsteel 4,6x838 - AISI 304	838	4,6	0,25	254	90	900	1200÷1300	<b>6712</b>
Colsteel 7,9x201 - AISI 304	201	7,9	0,25	51	200	2000	2400÷2500	<b>6719</b>
Colsteel 7,9x266 - AISI 304	266	7,9	0,25	69	200	2000	2400÷2500	<b>6720</b>
Colsteel 7,9x362 - AISI 304	362	7,9	0,25	102	200	2000	2400÷2500	<b>6722</b>
Colsteel 7,9x521 - AISI 304	521	7,9	0,25	152	200	2000	2400÷2500	<b>6724</b>
Colsteel 7,9x838 - AISI 304	838	7,9	0,25	254	200	2000	2400÷2500	<b>6726</b>
Colsteel 7,9x1.067 - AISI 304	1067	7,9	0,25	304	200	2000	2400÷2500	<b>6728</b>
Colsteel 4,6x201 - AISI 316	201	4,6	0,25	51	90	900	1200÷1300	<b>6753</b>
Colsteel 4,6x266 - AISI 316	266	4,6	0,25	69	90	900	1200÷1300	<b>6756</b>
Colsteel 4,6x362 - AISI 316	362	4,6	0,25	102	90	900	1200÷1300	<b>6758</b>
Colsteel 7,9x201 - AISI 316	521	4,6	0,25	152	90	900	1200÷1300	<b>6760</b>
Colsteel 4,6x52 - AISI 316	201	7,9	0,25	51	200	2000	2400÷2500	<b>6769</b>
Colsteel 7,9x201 - AISI 316	266	7,9	0,25	69	200	2000	2400÷2500	<b>6770</b>
Colsteel 7,9x362 - AISI 316	362	7,9	0,25	102	200	2000	2400÷2500	<b>6772</b>

**Raw material** stainless steel INOX AISI 304 and 316

**Working temperature** -80°C ÷ 538°C

**Self-extinguishing** Not inflammable

**REGISTERED OFFICE**

**ITW Construction Products Italy srl**  
Viale Regione Veneto 5 35127 Padova Z.I. (PD) - Italy

**COMMERCIAL OFFICE**

Via Lombardia, 10 30030 Cazzago di Pianiga (VE) - Italy

T. (+39) 041 51 35 511

F. (+39) 041 51 35 568

**PRODUCTION**

Cable ties:

Via Edison, 23 35010 Cadoneghe (PD) Italy

Fixing systems:

Viale Regione Veneto, 5 35127 Padova Z.I. (PD) Italy

[info@itw-italy.com](mailto:info@itw-italy.com)  
[www.itw-italy.com](http://www.itw-italy.com)