

# Moreda Riviere Trefilerías

AGRICULTURAL  
FENCING



# MRT PRESENTATION

## MRT IN ESSENCE



**LEADER  
IN SPAIN**



**2 FACTORIES  
265.000 m<sup>2</sup>**



**400+  
EMPLOYEES**



**60+  
COUNTRIES**



**150+ YEARS  
OF EXPERIENCE**

Moreda Riviere Trefilerías (MRT) is the leading fencing manufacturer in Spain and one of the main references in Europe. MRT is member of AFA, the American Fence Association.



Respect and care of the environment are fundamental to the MRT ethos. But this is nothing new! As a pioneer in its sector since 1999, MRT holds ISO 14001:2015 certification for the manufacture of low carbon fences and wires.

## *Safety a priority*

MRT constantly strives to ensure an injury and illness-free work environment for everyone who participates in its activities. The Occupational Health and Safety Management System (SG-SST) has a whole series of programs implemented far beyond the legal requirements, emphasising the priority given to this key objective. For example, the efforts undertaken to completely eliminate the use of triglycidyl isocyanurate (TGIC) in the manufacture of its plasticized products led to the awarding of ISO 45001:2018 certification.



## *Our values*

*Honesty - Humility - Creative perseverance  
Groundbreaking approach - Teamwork - Passion*

## THE STRENGTH OF CELSA



5+ million  
tonnes  
produced  
annually



7+ million  
tonnes  
recycled  
annually



10,000+ direct  
and subcontracted  
professionals  
employed



6,000+  
million euros  
of annual  
turnover

We are part of the Celsa group, the leader in Europe for the production of circular steel with low CO<sub>2</sub> emissions. It produces steel in electric arc furnaces, using the most sustainable and energy-efficient technology from recycled ferrous scrap. Celsa is already a company with low-CO<sub>2</sub> emissions and the first producer of circular steel in Europe.



## VERTICAL INTEGRATION AND CIRCULARITY

The group is increasingly vertically integrated, both upstream and downstream. This integration throughout the steel production chain allows for synergies to be achieved more efficiently; both environmentally and energy-wise, with the facilities to implement continuous improvement with excellent traceability throughout.

MRT participates in this chain, transforming wire rod manufactured by group companies into wires and fences. Each wire rod already has its own Environmental Product Declaration (EPD) with good results. The wire rods used to manufacture products such as wire, nails, staples, rods, industrial panels, welded mesh, chain link, knotted mesh and wire fencing panels have at least 85% recycled material.



Wire diameter			Linear measure		Volume measure	
Ga	in	mm				
00	0,331	8,41	1 cm	0.3937 in	1 cm³	0.061 in³
0	0,307	7,79	1 in	2.54 cm	1 in³	16.39 cm³
1	0,283	7,19	1 m	3.28 ft	1 m³	35,314 ft³
1 ½	0,273	6,93	1 ft	30.48 cm	1 ft³	0.0283 m³
2	0,263	6,67	1 m	39.37 in	1 m³	1.308 yd³
2 ½	0,253	6,43	1 m	1.0936 yd	1 yd³	0.7646 m³
3	0,244	6,19	1 yd	0.9144 m	1 stere	0.2759 cord
3 ½	0,235	5,97	1 m	0.1988 rods	1 cord	3.624 steres
4	0,225	5,72	1 rod	5.029 m	1 lt	0.908 quarts dry
4 ½	0,216	5,49	1 km	0.621 mile	1 quart dry	1.101 lt
5	0,207	5,26	1 mile	1.609 km	1 lt	1.0567 quarts liq
5 ½	0,200	5,08	Square Measure		1 quart liq	0.9463 lt
6	0,192	4,88			1 lt	0.26417 gal
6 ½	0,185	4,70	1 cm²	0.155 in²	1 lt	0.113 pecks
7	0,177	4,50	1 in²	6.452 cm²	1 gal	37.85 lt
7 ½	0,170	4,32	1 m²	10.076 ft²	1 peck	88.1 lt
8	0,162	4,11	1 ft²	0.0929 m²	1 bushel	35.24 lt
8 ½	0,155	3,94	1 yd²	0.8361 m²	Weight measure	
9	0,148	3,77	1 acre	160 sq. rods		
9 ½	0,142	3,61	1 sq. rod	0.00625 acre	1 gr	0.03527 oz
10	0,135	3,43	1 hectare	2.47 acres	1 oz	28.35 gr
10 ½	0,128	3,25	1 acre	0.4047 hectare	1 kg	2.2046 lb
11	0,121	3,06	1 km²	0.386 sq. mile	1 lb	0.4536 kg
11 ½	0,113	2,87	1 sq. mile		1 met. ton	0.984 Eng. ton
12	0,106	2,68			1 Eng. ton	1.016 met.ton
12 ½	0,099	2,51				
13	0,092	2,32				
13 ½	0,086	2,18				
14	0,080	2,03				
14 ½	0,076	1,93				
15	0,072	1,83				
15 ½	0,067	1,70				
16	0,063	1,59				

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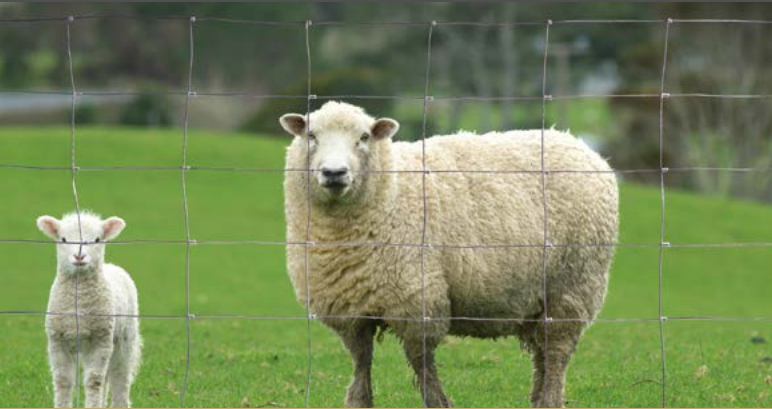
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# HJ MRT® FIELD FENCE



The HJ MRT® Field Fence is recommended for fencing farms. Remains perfectly straight and flat, even with cattle impacts.

Meets or exceeds ATSM-A-116.

Stock fencing characterized by its progressive mesh.

Horizontal wires come with crimps between each knot to add tension to the wire and assist with water run off.



Hinge joint

Available coatings:

- ♦ Galvanized Class I
- ♦ Galvanized Class III
- ♦ Galvanized Class III + ECOVER®
- ♦ ZnAl® (95% Zinc + 5% Aluminum)



ZnAl

There are three options to choose from: Light, Strong and Super Strong.



OPTION	HORIZONTAL EXTREME WIRES		HORIZONTAL INTERMEDIATE WIRES		VERTICAL WIRES	
	DIAMETER (Ga)	RESISTANCE (Kg/mm <sup>2</sup> )	DIAMETER (Ga)	RESISTANCE (Kg/mm <sup>2</sup> )	DIAMETER (Ga)	RESISTANCE (Kg/mm <sup>2</sup> )
LIGHT	12 ½	≥ 71	14 ½	≥ 71	14 ½	45- 55
STRONG	11	≥ 71	12 ½	≥ 71	12 ½	45- 55
SUPER STRONG	8 ½	≥ 71	11	≥ 71	11	45- 55

OPTION	STYLE	HEIGHT (IN)	STRANDS	STAY SPACING (IN)	LENGTH (FT)
LIGHT	726- 6	26	7	6	330
	726- 12	26	7	12	330-660
	832- 6	32	8	6	330
	832- 12	32	8	12	330-660
	939- 6	39	9	6	330
	939- 12	39	9	12	330-660
	1047- 6	47	10	6	330
	1047- 12	47	10	12	330-660
STRONG	726- 6	26	7	6	330
	726- 12	26	7	12	330-660
	832- 6	32	8	6	330
	832- 12	32	8	12	330-660
	939- 6	39	9	6	330
	939- 12	39	9	12	330-660
	1047- 6	47	10	6	330
	1047- 12	47	10	12	330-660
SUPER STRONG	632- 6	32	6	6	165
	632- 12	32	6	12	
	832- 6	32	8	6	
	832- 12	32	8	12	
	1156- 6	56	11	6	
	1156- 12	56	11	12	

# HJ MRT® HIGH TENSILE FIELD FENCE



The HJ MRT® High Tensile Field Fence is the ideal solution for fencing farms, highways and railroads, and it's resistant to cattle impacts.

The knot allows fencing to give under pressure and spring back into shape.

Meets or exceeds ATSM-A-116.

Stock fencing characterized by its progressive mesh.

Horizontal wires come with crimps between each knot to add tension to the wire and assist with water run off.



Hinge joint

Available coatings:

- ♦ Galvanized Class III
- ♦ Galvanized Class III + ECOVER®
- ♦ ZnAl® (95% Zinc + 5% Aluminum)



ZnAl



There are three options to choose from: Light HT and HT.



OPTION	HORIZONTAL EXTREME WIRES		HORIZONTAL INTERMEDIATE WIRES		VERTICAL WIRES	
	DIAMETER (Ga)	RESISTANCE (Kg/mm <sup>2</sup> )	DIAMETER (Ga)	RESISTANCE (Kg/mm <sup>2</sup> )	DIAMETER (Ga)	RESISTANCE (Kg/mm <sup>2</sup> )
LHT	12 ½	≥ 107	14 ½	≥ 107	14 ½	45- 55
HT	12 ½	≥ 120	12 ½	≥ 120	12 ½	≥ 61

OPTION	STYLE	HEIGHT (IN)	STRANDS	STAY SPACING (IN)	LENGTH (FT)
LHT	726- 6	26	7	6	330
	726- 12	26	7	12	330-660
	832- 6	32	8	6	330
	832- 12	32	8	12	330-660
	939- 6	39	9	6	330
	939- 12	39	9	12	330-660
	1047- 6	47	10	6	330
	1047- 12	47	10	12	330-660
HT	726- 6	26	7	6	330
	726- 12	26	7	12	330-660
	832- 6	32	8	6	330
	832- 12	32	8	12	330-660
	939- 6	39	9	6	330
	939- 12	39	9	12	330-660
	1047- 6	47	10	6	330
	1047- 12	47	10	12	330-660

# FK MRT® FIX KNOT FIELD FENCE



Made with high tensile horizontal wires.

Class A - Heavy galvanized wires according to ATSM-A-116.

Progressive geometry as standard, non-progressive is an option.

Horizontal wires come with crimps between each knot to add tension to the wire and assist with water run off.



Fix Knot

Available coatings:

- ♦ Galvanized Class III
- ♦ Galvanized Class III + ECOVER®
- ♦ Galvanized Class III + ECOBLACK
- ♦ ZnAl® (95% Zinc + 5% Aluminum)



ZnAl



There are five options to choose from: Light, Medium Light, FK, Medium, Heavy



OPTION	HORIZONTAL EXTREME WIRES	HORIZONTAL INTERMEDIATE AND VERTICAL WIRES	KNOT WIRES
	DIAMETER (Ga)	DIAMETER (Ga)	DIAMETER (Ga)
LIGHT	12 ½	14	13 ½
MEDIUM LIGHT	11	14	13 ½
FK	12 ½	12 ½	13 ½
MEDIUM	11	12 ½	13 ½
HEAVY	10	12 ½	13 ½

OPTION	STYLE	HEIGHT (IN)	STRANDS	STAY SPACING (IN)	LENGTH (FT)
FK	842- 6	42	8	6	330' or 660'
	842- 12	42	8	12	
	1348- 6	48	13	6	
	1348- 12	48	13	12	
	1748- 6	48	17	6	
	949- 6	49	9	6	
	949- 12	49	9	12	
	2096- 6	96	20	6	
	2096- 12	96	20	12	
	23120-6	120	23	6	

# XK MRT® FIELD FENCE



Unobtrusive knot manufactured through a pressure bonded method to ensure optimal strength vs normal woven knots found on other variants of AG fence.

The horizontal and vertical wires are continuous. It guarantees resistance to impact and minimal long-term maintenance.

Line wires come with crimps between knots to add tension to the wire and assist with water run off.

Optional hinge joint can be added to help prevent burrowing or scaling.

Also "FreeEnd Roll" optional: 5.9" horizontal wires can be left at the end to link easily the rolls.

- ASTM A641, Zinc-Coated (Galvanized) Carbon Steel Wire.
- ASTM A856, Zinc-5 % Aluminum-Mischmetal Alloy-Coated Carbon Steel Wire.



X Knot

Available coatings:

- ♦ Galvanized Class I
- ♦ Galvanized Class III
- ♦ Galvanized Class III + ECOVER®
- ♦ ZnAl® (95% Zinc + 5% Aluminum)



ZnAl

There are two options to choose from: XK MRT® and XK MRT® Heavy.  
And there are two conditions:

- High Tensile:



- Soft:



OPTION	CONDITION	TOP & BOTTOM WIRES (GA)	HORIZONTAL WIRES (GA)	VERTICAL WIRES (GA)	KNOT WIRES (GA)
XK MRT®	HT or Soft	12 ½	12 ½	12 ½	12 ½
XK MRT® Heavy	HT or Soft	10	12 ½	12 ½	12 ½

## NON CLIMB HORSE FENCE



CONDITION	TYPE	Nº OF LINE WIRES	HEIGHT (IN)	GEOMETRY (IN)	LENGTH (FT)
HT or Soft	1348	13	48"	4" x 2"	100', 200' or 300'
	1660	16	60"	4" x 2"	
	1972	19	72"	4" x 2"	

Other geometries available subject to minimum order.

## NON CLIMB SHEEP & GOAT FENCE



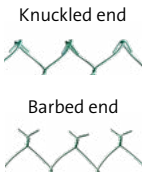
CONDITION	TYPE	Nº OF LINE WIRES	HEIGHT (IN)	GEOMETRY (IN)	LENGTH (FT)
HT or Soft	1348	13	48"	4" x 4"	100' or 330'
	1660	16	60"	4" x 4"	
	1972	19	72"	4" x 4"	

Other geometries available subject to minimum order.

# CHAIN LINK

The MRT chain link fence, featured by its diamond shaped, is an economical solution for all kind of applications.

- ◆ Knuckled and barbed end available.
- ◆ Compacted rolls with unrolling wire and paper protection.
- ◆ Flexibility when installing.
- ◆ Long rolls: 32.8' / 41' / 49.2' / 59' / 65.6' / 82'.
- ◆ Multiple coating possibilities including different PVC coating colors.



Meets or exceeds ASTM-A-641.

## GALVANIZED

ROLL	MESH SIZE (IN)*	POSSIBLE WIRE DIAMETERS (GA)	ROLL POSSIBLE HEIGHTS (FT)
Compacted roll	1½ x 1½ or 2 x 2	from 15 to 12	from 2½ to 8½
	2 x 2	11½	from 2½ to 8½
Non compacted roll**	1½ x 1½ or 2 x 2	1½ x 1½	from 2½ to 6½
		15	from 1½ to 10
		from 14 to 12	from 1½ to 13
		from 11½ to 9***	from 2½ to 10

\* Other dimensions available upon request.

\*\* Check conditions.

\*\*\* For 1½ x 1½ meshes only available in 11½ Ga.

## PVC COATED

ROLL	MESH SIZE (IN)*	POSSIBLE WIRE DIAMETERS (GA)	ROLL POSSIBLE HEIGHTS (FT)
Compacted roll	1½ x 1½ or 2 x 2	2 x 2	from 3¼ to 6½
		13	from 2½ to 8½
		12	
		11½	
Non compacted roll**	1½ x 1½ or 2 x 2	10½	from 1½ to 13
		12	
		11½	
		10½	
		9	from 2½ to 10
		7	

\* Other dimensions available upon request.

\*\* Check conditions.



ZnAl

# BARBED WIRE

## ERIZO® HARD BARBWIRE

The Erizo® Barbwire is recommended for cattle and livestock.

- Meets ASTM-A-121



ROLL LENGTH (FT)	1,320
WIRE	High tensile (tensile strength >142.000 psi) Barbwire coiled into two twisted wires
WIRE DIAMETER (GA)	15 ½
FINISH	Class III Galvanized / ECOVER® / ZnAl®
DISTANCE BETWEEN BARBS (IN)	3 - 5



**ZnAl**

## BRAVO® SOFT BARBWIRE

The Bravo® Barbwire is recommended for crop protection.

- Meets ASTM-A-121



ROLL LENGTH (FT)	328- 820
WIRE	Fixed position interlocking barb
WIRE DIAMETER (GA)	15
FINISH	Class I Galvanized / Class III Galvanized ECOVER® / ZnAl®
DISTANCE BETWEEN BARBS (IN)	3 - 6



**ZnAl**

# BARBLESS WIRE



The MRT barless wire is recommended for horses enclosures, in order to do not damage their thinner-skinned.

- Meets ASTM-A-121

ROLL LENGTH (FT.)	656
DIAMETER (GA)	12 ½
FINISH	Class III Galvanized





# ELECTRO-WELDED MESH



The MRT Electro-welded mesh is a great multipurpose solution, specially for small animal cages and lawn and garden fencing.

- Meets ASTM-A-641

MESH (IN)	$\frac{1}{4} \times \frac{1}{4}$ - $\frac{1}{2} \times \frac{1}{2}$ - $\frac{3}{8} \times \frac{3}{8}$ - $\frac{1}{2} \times \frac{1}{2}$ - $\frac{5}{8} \times \frac{5}{8}$ - $\frac{3}{4} \times \frac{3}{4}$ - $1 \times \frac{1}{2}$ 1 x 1 - 2 x 1 - 2 x 2 - 4 x 2
WIRE (GA)	from 22 $\frac{3}{4}$ to 11 $\frac{1}{4}$
HEIGHT (IN)	from 20 to 80
ROLL (FT.)	16.4 - 82 - 98.4
FINISH	Class I Galvanized / Class III Galvanized / PVC Coated



# WIRE NETTING



The MRT wire netting is recommended for use in small animal enclosures, cage construction. This type of netting provides predator-proof protection for domestic fowl and gardens. It is galvanized before weaving.

MESH (IN)	½ - ¾ - 1 - 1¼ - 1½ - 2
HEIGHT (IN)	19.7 - 39.4 - 59.1 - 78.74
ROLL (FT.)	32.8 - 164
FINISH	Comercial Class / PVC Coated





The MRT FENCE STAPLES have plenty of holding power. The sharp point makes them easy to drive into wood and to be held securely in place.

- ♦ The hooks distance is wider, enabling to secure thicker wires/cables.
- ♦ Extra holding power on wood posts.
- ♦ Easy to handle and install.
- ♦ U staple design does not scratch on wire coating.
- Meets FF-N-105B

LENGTH (IN)	1 - 1.18 - 1.38 - 1.58
DIAMETER (GA)	11½ - 11 - 10¼ - 10 - 9 - 8½
CARDBOARD BOX (LB)	11 - 22 - 44 (plastic buckets) 39.68 (6 packs of 6.61)



Double hook Barbed Staple



Barless Staple



**ZnAl**

# WIRE



We have 150 years of experience in wire drawing and we have a wide range of steel wires produced in our own factories.

As wire drawers, we can manufacture an enormous variety of wires in many formats, diameters or compositions.

## Composition

Our range of products include low and high carbon steel wires, both of them in soft and hard variations, you can choose the correct wire for every single use.



## Diameters

We can make diameters from 21 Ga to 00% Ga. We have the perfect solution whether it is for a single coil for installing a vineyard or as a starting point to manufacture your own wire derivate products.

## Coil format

Several coil formats and weights are available. Small coils from 1.10 Lbs to 110 Lbs and large ones from 771.62 Lbs to 3,086.47 Lbs so you can use them or cut them according to your needs.

## Coatings

We manufacture wire in seven different coatings:



Galvanized Class I



Galvanized Class III



Super heavy galvanized



Galvanized + PVC coated by extrusion



Galvanized Class III + ECOVER®



Galvanized Class III + ECOBLACK



ZnAl® (Zinc + aluminum)

# SPECIAL COATINGS

# ZnAl

ZnAl® coating is a combination of 95% Zinc and 5% Aluminum that increases its durability. The aluminum oxide that builds up over time sticks better to the surface than zinc oxide, reducing the covering mass loss. Tests show it can resist up to 1,000 hours in a salt spray chamber before red rusting starts.



The ECOVER® is a covering applied to Class III galvanized wire, made of a passivated metallic coating, based in Titanium (Ti) and Chromium (Cr<sup>3+</sup>), adds an excellent resistance against corrosion and a better integration with nature thanks to its color. The product used to make the ECOVER® enhances low friction properties of the wire coefficient, improving its transformation into netting. This treatment does not use any Hexavalent Chromium during the process.

Beginning of red rusting in salt spray chamber



And now, the ECOBLACK coating is also available, with same characteristics but black color.



# MORE PRODUCTS

At the MRT we have a wide range of fencing products such as panels, posts, railings, gates, meshes and a complete range of accessories to complement your fencing. All in order to offer you the best solution for your farm, ranch, industry, home or garden. We control the totality of the production stages.

We can offer one of the best painting treatments available, the microcrystalline phosphatation. This allows MRT to guarantee the highest quality in our treatments.



The MRT warranty is proof of our high quality, certifying the resistance to corrosion of our range of powder coated panel fences. ECOVER® products can get up to 25 years of warranty.



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