
PazdelRío
ES COLOMBIA
The steel your project needs. Greater strength, greater confidence to BUILD.
PazdelRío
ES COLOMBIA
Catalog
PRODUCT

Who WE ARE?

We are the **foundation** of construction, supporting the country's **DEVELOPMENT** and **quality** of life.

Thousands of years ago, nature brought together iron ore, coal, and limestone deposits in the Cundiboyacense highlands—the perfect combination to produce exceptional steel. In 1948, Acerías PazdelRío was formally established as the first and only integrated steel mill in the country.

The economic liberalization of the 1990s brought difficult times, but the company's employees decided to acquire a significant ownership stake to prevent its closure.

In 2007, the incorporation of Brazil's Votorantim Group brought new vision and advanced technology to the company.

In 2022, Grupo Trinity and Structure once again raised the Colombian flag over the company, with the vision of building a century-long enterprise whose contribution will endure and benefit future generations.

Today, PazdelRío steel is present in everything from skyscrapers to everyday objects used by Colombians.

QUALITY
CERTIFICATIONS

SC 16861-1

CO-SC1686-1

Sale of sheets and plates. Production and sale of smooth round bars, deformed (reinforced) round bars, and hot-rolled wire rods for industrial, metalworking, and construction use.

Resolution 2003: 2022

Low-alloy steel deformed bars for concrete reinforcement.

NTC 2289: 2020

Low-alloy steel deformed bars for concrete reinforcement.

Resolution 1019:2024

Ribbed steel wire – Welded wire mesh made from ribbed steel wire.

NTC 5806:2019

Ribbed steel wire – Welded wire mesh made from ribbed steel wire.

NTC 330:2020

Carbon steel and alloy steel wire rod and wire.

NTC 161:2013

Smooth (plain) carbon steel bars and coils.

ENVIRONMENTAL DECLARATIONS

EPD INTERNATIONAL EPD SYSTEM

INTERNATIONAL ENVIRONMENTAL CERTIFICATION
for our three **FLAGSHIP PRODUCTS**

PazdelRío sets a new milestone in the national steel industry by becoming the first Colombian steel producer to obtain three Environmental Product Declarations (EPDs) for its products: reinforcing bar (rebar), coiled rebar, and wire rod.

These Environmental Product Declarations (EPDs) represent the highest level of international environmental certification, resulting from independent verification in Europe of PazdelRío's entire production process "from cradle to gate," meaning from raw material extraction to delivery of the finished product.

The three declarations were issued under the International EPD® System, a global framework that supports verified, comparable, and reliable Environmental Product Declarations widely recognized in international markets, particularly in Europe.

With this achievement, PazdelRío reaffirms its leadership as the first steel company in Colombia to obtain three EPDs simultaneously, strengthening its contribution to sustainable infrastructure development and to building a more responsible future for the country, delivering world-class products in quality, safety, and sustainability to all its projects.

REINFORCING BAR (REBAR)

ENVIRONMENTAL FOOTPRINT
0.850 t CO_2 eq/t Reinforcing Bar
EPD Code: EPD-IES-0007375:001
Publication date: 2025-12-18
Validity: 2030-12-18

COILED REBAR

ENVIRONMENTAL FOOTPRINT
0.774 t CO_2 eq/t Coiled Rebar
EPD Code: EPD-IES-0027649:001
Publication date: 2025-12-18
Validity: 2030-12-18

WIRE ROD

ENVIRONMENTAL FOOTPRINT
0.774 t CO_2 eq/t Wire Rod
EPD Code: EPD-IES-0007375:001
Publication date: 2025-12-18
Validity: 2030-12-18

Product with ICONTEC Quality Seal under NTC 2289 Standard and Seal with Technical Regulation Resolution 2003:2022.

RIBBED REBAR

The choice of those who **build safe and durable structures.**

USES

For concrete reinforcement in all types of constructions with earthquake-resistant design.

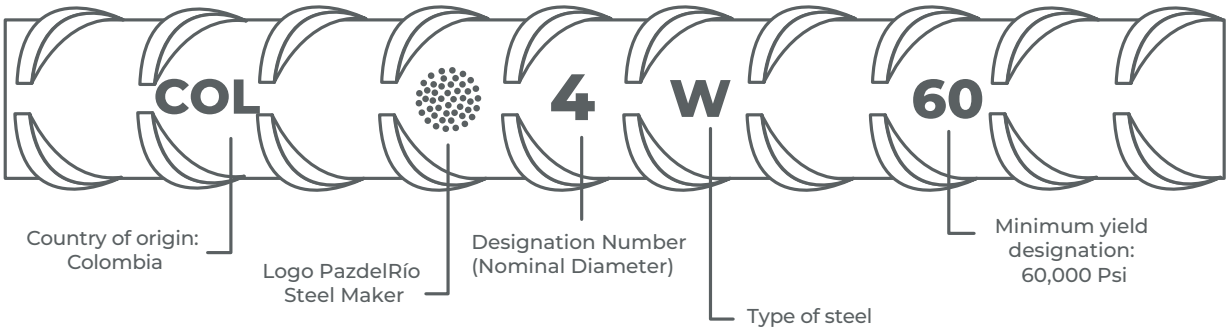
CHEMICAL COMPOSITION (Heat analysis)

%C máx	%Mn máx	%P máx	%S máx	%Si máx	%V*	%C.E. máx
0,30	1,50	0,035	0,045	0,50	0,016-0,023	0,55

%C máx	%Mn máx	%P máx	%S máx	%Si máx	%Nb	%C.E. máx
0,30	1,50	0,035	0,045	0,50	0,010-0,020	0,55

*V - Nb: Micro-alloying elements that refine the grain and allow a balance of mechanical properties that ensure the steel's seismic performance.

BAR IDENTIFICATION (Marking)



MECHANICAL PROPERTIES

Units	Yield Strength	Tensile strength
kgf/mm ²	42-55	56 mín
lbf/pulg ²	60,000 - 78,000	80,000 mín
MPa	420 - 540	550 mín

ELONGATION IN 200mm

Designation		% mín
No. eighths of an inch	2 a 6	14
	7 - 8 y 10	12
In mm	8.5 M - 9 M - 12M	14

DIMENSIONS

Bars in inches		Length
Designation	Inches	Meters
2	1/4	6, 9 y 12
3	3/8	6, 9 y 12
4	1/2	6, 9 y 12
5	5/8	6, 9, 12 y 14
6	3/4	6, 9, 12 y 14
7	7/8	6, 9, 12 y 14
8	1	6, 9, 12 y 14
10	1 ¼	6, 9, 12 y 14

Bars in millimeters		Length
Designation	Millimeters	Meters
8.5 M	8,0 mm	6, 9 y 12
9 M	9,0 mm	6, 9 y 12
12 M	12,0 mm	6, 9 y 12

Other lengths can be manufactured upon agreement between PazdelRío and the customer.

Did you know?

Our bars and coils are manufactured with micro-alloyed steel to ensure optimum structural performance (bending, weldability, ductility)

Product with ICONTEC Quality Seal under NTC 2289 and Standard Seal with Technical Regulation Resolution 2003:2022.

CORRUGATED COIL

More performance, less waste in your construction project.

USES

It is used in the manufacture of stirrups and other reinforcing elements from its configuration in bending machines. To achieve the best performance of PazdelRío coiled rebar, the bending suggestions indicated in the current earthquake resistance code must be followed.

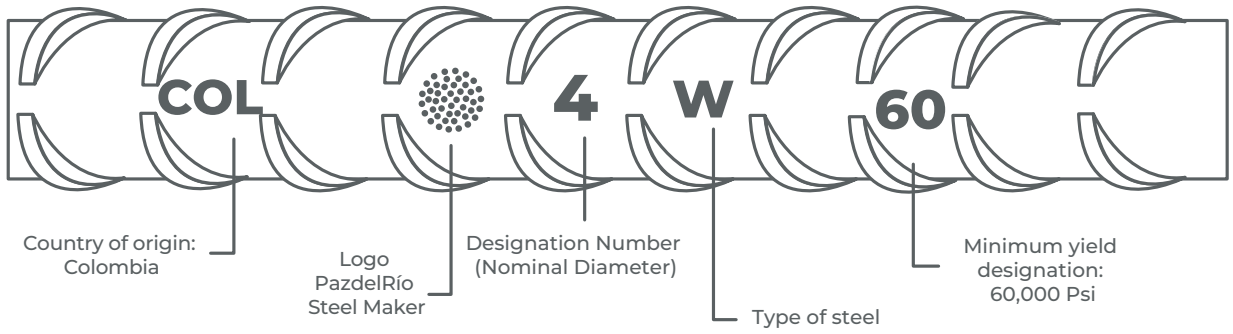
CHEMICAL COMPOSITION (Heat analysis)

%C máx	%Mn máx	%P máx	%S máx	%Si máx	%V*	%C.E. máx
0,30	1,50	0,035	0,045	0,50	0,016-0,023	0,55

%C máx	%Mn máx	%P máx	%S máx	%Si máx	%Nb	%C.E. máx
0,30	1,50	0,035	0,045	0,50	0,010-0,020	0,55

*V – Nb: Microalloying elements that refine the grain and allow a balance of mechanical properties that ensure the seismic resistance of the steel

COIL IDENTIFICATION



Did you know?

Due to their weight and their physical characteristics, the PazdelRío Coiled Rebar is a competitive alternative that optimizes the figuration process.

MECHANICAL PROPERTIES

Units	Yield Strength	Tensile strength
kgf/mm ²	42-55	56 mín
lbf/pulg ²	60,000 - 78,000	80,000 mín
MPa	420 - 540	550 mín

ELONGATION

Designation		% mín
No. eighths of an inch	2 - 3 - 4	14
In mm	8.5 M - 9 M - 12 M	14

DIMENSIONS

COILS IN INCHES

Designation	Inch
2	1/4
3	3/8
4	1/2

COILS IN MILLIMETERS

Designation	Millimeters
8.5 M	8,5 mm
9 M	9,0 mm
12 M	12,0 mm

Did you know?

Over 80% of Colombian territory is vulnerable to earthquakes. This means that the construction industry must follow earthquake resistant design guidelines and materials.

Product with ICONTEC Quality Seal under NTC 330 Standard and ISO 9001: 2015 certification.

DRAWING WIRE ROD

Export type

Quality that transforms into **competitive products.**

USES

Production of fine wires such as: nails, staples, galvanized wire products, welded wire mesh, chains, calibrated wires, coated wires, electrodes, electric fences, displays, grills, among other products.

CHEMICAL COMPOSITION (Heat analysis)

Grade	%C	%Mn	%P máx	%S máx	%Si máx	%B
AISI 10B04	0,02- 0,06	0,35 máx	-	-	0,10	0,003 - 0,008
AISI 10B06	0,08 máx	0,25 - 0,45	0,04	0,05	0,10	0,003 - 0,008
AISI 1008	0,10 máx	0,30 - 0,50	0,04	0,05	0,12	-
AISI 1012	0,10 - 0,15	0,30 - 0,60	0,04	0,05	0,15	-
AISI 1015	0,13 - 0,18	0,30 - 0,60	0,04	0,05	0,15	-
AISI 10B22	0,18 - 0,23	0,70 - 1,00	0,04	0,05	0,25	0,003 - 0,008
AISI 10B45	0,43 - 0,50	0,60 - 0,90	0,04	0,05	0,25	0,003 - 0,007

ELECTRODE WIRE ROD

Grade	%C máx	%Mn	%P máx	%S máx	%Si máx	%B
AISI 1008	0,04 - 0,08	0,30 - 0,50 máx	0,025	0,020	0,04 - 0,08	-

Did you know?

Due to the balance in the chemical elements, Paz del Río electrode-quality wire rod was used in the welded construction of a refinery in the Middle East.

DIMENSIONS

Nominal diameter		Tolerance	
mm	Inches	Diameter mm	Oval mm
5,50	–	± 0,40	0,60
6,35	1/4	± 0,40	0,60
8,00	–	± 0,40	0,60
9,52	3/8	± 0,40	0,60
12,70	1/2	± 0,40	0,60

ICONTEC Quality Seal label NTC 161
standard ISO 9001:2015 Certifications.

PLAIN CARBON STEEL WIRE

Versatility and dimensional control in prefabricated products.

USE

The smooth hot-rolled plain carbon steel wire with a circular cross section and surface with no special projections or veins, is used in metalworking and construction as a reinforcing material.

DIMENSIONS

	Nominal Diameter		Resistance Permissible Variations	
Reference	**mm**	**Inches**	**Diameter (±) mm**	**Out – of - Round(±) mm**
5,5 M	5,5	-	0,3	0,4
1/4	6,35	1/4	0,3	0,4
8M	8	-	0,3	0,4
3/8	9,52	3/8	0,3	0,4
1/2	12,7	1/2	0,4	0,5

MECHANICAL PROPERTIES IN CONSTRUCTION USES

	Level Grade AH-28	
Characteristics	kgf/mm^2	MPa
Minimum fluid Mín Yield Strength	28	275
Minimum resistance Tensile Strength	49	480
% mínimum lengthening Elongation in 200 mm	11	

Product with Quality Seal NTC 5806 and Seal with Technical Regulation Resolution 1019:2024.

DEFORMED WIRE

More efficiency, **less waste**, and greater control on site.

USES

Manufacture of electro-welded mesh, prefabricated elements, reinforcement of generally non-structural concrete elements.

DIMENSIONS

Designation by deformed wire size	Nominal Perimeter	Nominal Diameter	Nominal Area	Nominal Mass Unit	Minimum average height of elevations
	(mm)	(mm)	(mm^2)	g/m	(mm)
D 4,0	12,57	4	12,6	99	0,16
D 4,5	14,14	4,5	15,9	125	0,18
D 5,0	15,71	5	19,6	154	0,20
D 5,5	17,28	5,5	23,8	187	0,25
D 6,0	18,85	6	28,3	222	0,27
D 6,5	20,40	6,5	33,2	260	0,29
D 7,0	21,99	7	38,5	302	0,31
D 7,5	23,56	7,5	44,2	347	0,34
D 8,0	25,13	8	50,3	395	0,35
D 8,5	26,70	8,5	56,8	446	0,38

D 4,.0, D 4,5 and D 5,0 deformed wires can only be used for electrowelded wire mesh manufacture.

Product with Quality Seal NTC 5806 and Seal with Technical Regulation Resolution 1019:2024.

ELECTROWELDED MESH

Save time, **optimize costs,** and build with confidence.

USES

For reinforcement of walls and slabs mainly in industrialized construction systems, industrial floors. If they are manufactured from PazdelRío NTC 161 wire rod, the meshes can be used as reinforcement for concrete pipes

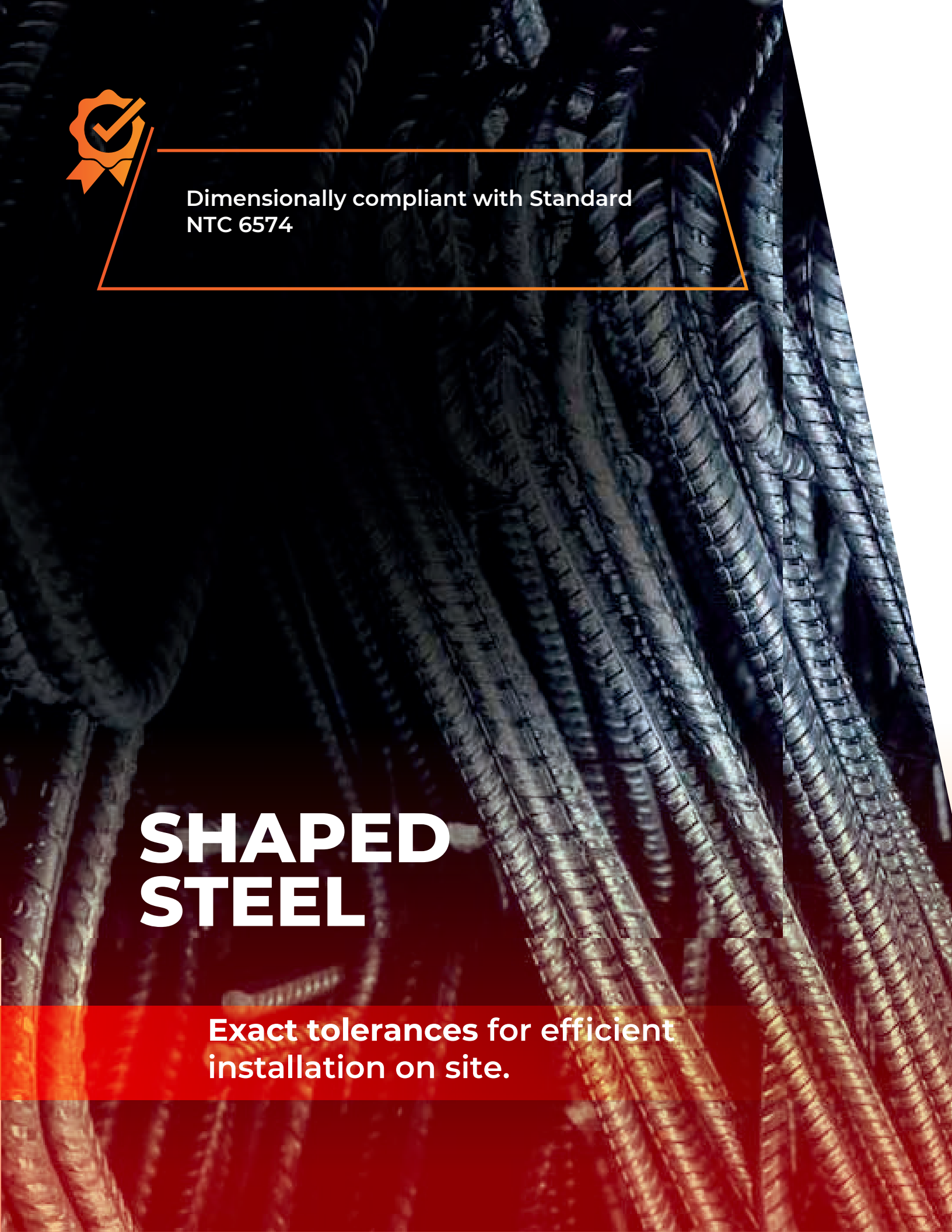
STANDARD ELECTROWELDED MESH DIMENSIONS

Designation	No. of deformed wires per mesh		Diameter		Separation		Edges Length Protrusions or extensions		Weight	Main Amount
	Length 6,00m	Transv 2,35m	Length mm	Trans mm	Length mm	Trans mm	Length mm	Trans mm	Nominal kg	Nominal cm^2/m linear
XY-084	16	24	4,0	4,0	150	250	125	50	15,1	0,84
XY-106	16	24	4,5	4,0	150	250	125	50	17,6	1,06
XY-131	16	24	5,0	4,0	150	250	150	50	20,4	1,31
XY-158	16	24	5,5	4,0	150	250	125	50	23,5	1,58
XY-221	16	24	6,5	4,0	150	250	125	50	30,6	2,21
XY-257	16	24	7,0	5,0	150	250	125	50	37,7	2,57
XY-335	16	24	8,0	5,0	150	250	125	50	46,6	3,35
XY-378	16	24	8,5	5,0	150	250	125	50	51,5	3,78
XX-050	10	24	4,0	4,0	250	250	125	75	11,5	0,50
XX-063	12	30	4,0	4,0	200	200	100	50	14,1	0,63
XX-084	16	40	4,0	4,0	150	150	75	50	18,8	0,84
XX-106	16	40	4,5	4,5	150	150	75	50	23,8	1,06
XX-131	16	40	5,0	5,0	150	150	75	50	29,3	1,31
XX-158	16	40	5,5	5,5	150	150	75	50	35,5	1,59
XX-188	16	40	6,0	6,0	150	150	75	50	42,2	1,88
XX-221	16	40	6,5	6,5	150	150	75	50	49,6	2,21
XX-257	16	40	7,0	7,0	150	150	75	50	57,4	2,57
XX-295	16	40	7,5	7,5	150	150	75	50	65,9	2,95
XX-335	16	40	8,0	8,0	150	150	75	50	75,1	3,35
XX-378	16	40	8,5	8,5	150	150	75	50	84,7	3,78

XX: When the main reinforcement is equal in both directions of the mesh plane.
XY: When the main reinforcement is placed at the longest length of the mesh plane.

¿SABÍAS QUÉ?

PazdelRío meshes meet all standard requirements, including weight per meter, which guarantees the structural strength of your designs. When purchasing, keep this variable in mind.



Dimensionally compliant with Standard NTC 6574

SHAPED STEEL

Exact tolerances for efficient installation on site.

USES

Transverse reinforcement for beams and columns, used in construction to tie or confine reinforcing steel, suitable to bear shear stress.

REQUIREMENTS FOR BENDING SHAPED STEEL

Type of shaping	Use	Nominal Bar Diameter (Db)	Minimum bending diameter
STIRRUPS (STRAPS)	Shaped bars for transverse reinforcement	No.2, No.3, No.4, No.5	4Db
		No.6, No.7, No.8	6Db
		No.10	8Db
FIGURE BARS	Shaped bars for longitudinal reinforcement	No.3, No.4, No.5, No. 6, No.7, No.8	6Db
		No.10	8Db

CUTTING AND BENDING SERVICE (C&B)

PazdelRío has three plants in Bogota, Cali and Medellin that provide nationwide coverage and machines to process the reinforcing steel for construction according to customer specifications. The process for both, cutting and sizing, as for bar bending is controlled.

Did you know?

The Cut & Bend (C&B) system adapts to any reinforcement shape and design with full flexibility.

Important note:

The National Government, through Resolution 2003: 2022, made it mandatory to use steel manufactured under the NTC 2289 standard throughout the entire Colombian territory.

For your safety and that of all Colombians, we invite you to use only this type of rebar from now on.

Remember that Colombia is a country with high seismic risk.

Use only life-saving rebar in your construction projects.

Bars complying with NTC 2289 must include the letter W in the marking, which means that the bar was manufactured under this standard.

TRUSSES

Lightweight solutions that
accelerate your construction.

What is a Truss?

A metallic structure that provides structural support, which is assembled by segments with defined geometry according to the specific application needs.

Manufacturing

- Trusses are manufactured using rebar and coiled rebar under ASTM A-706 (NTC-2289), profiles and plates of ASTM A-36 (NTC-1920) quality.
- They are manufactured according to customer's design.

Lattice Trusses

In tunnel excavation, lattice trusses become very important when shotcrete is used. Their perfect combination with the concrete acting as reinforcement helps –for equivalent support–, to significantly reduce the thickness of the shotcrete and therefore the total cost of the support. In addition, the time required for progress is shorter compared to the traditional method.

BOLTS

Strong joints that do not fail.

What is a Bolt?

A threaded rebar at one end, fitted with a plate and nut. Manufactured in different diameters and lengths according to customers' needs. Bars manufactured under NTC 2289 standard

ANCHOR BOLTS

These are fixed anchor bolts that can be consolidated by resin or by concrete grouting..

MATERIAL DIMENSIONS

Bolt

Length up to 12.0 m, manufactured according to drawing.
Diameter: Up to 1 1/4 ". Manufactured to drawing.
Threaded length: According to drawing.
Ordinary thread, pitch 8.

Plate

Thickness: 9mm, 3/8" and ½".
Section: 15 x 15 cm, or according to drawing.

Nut

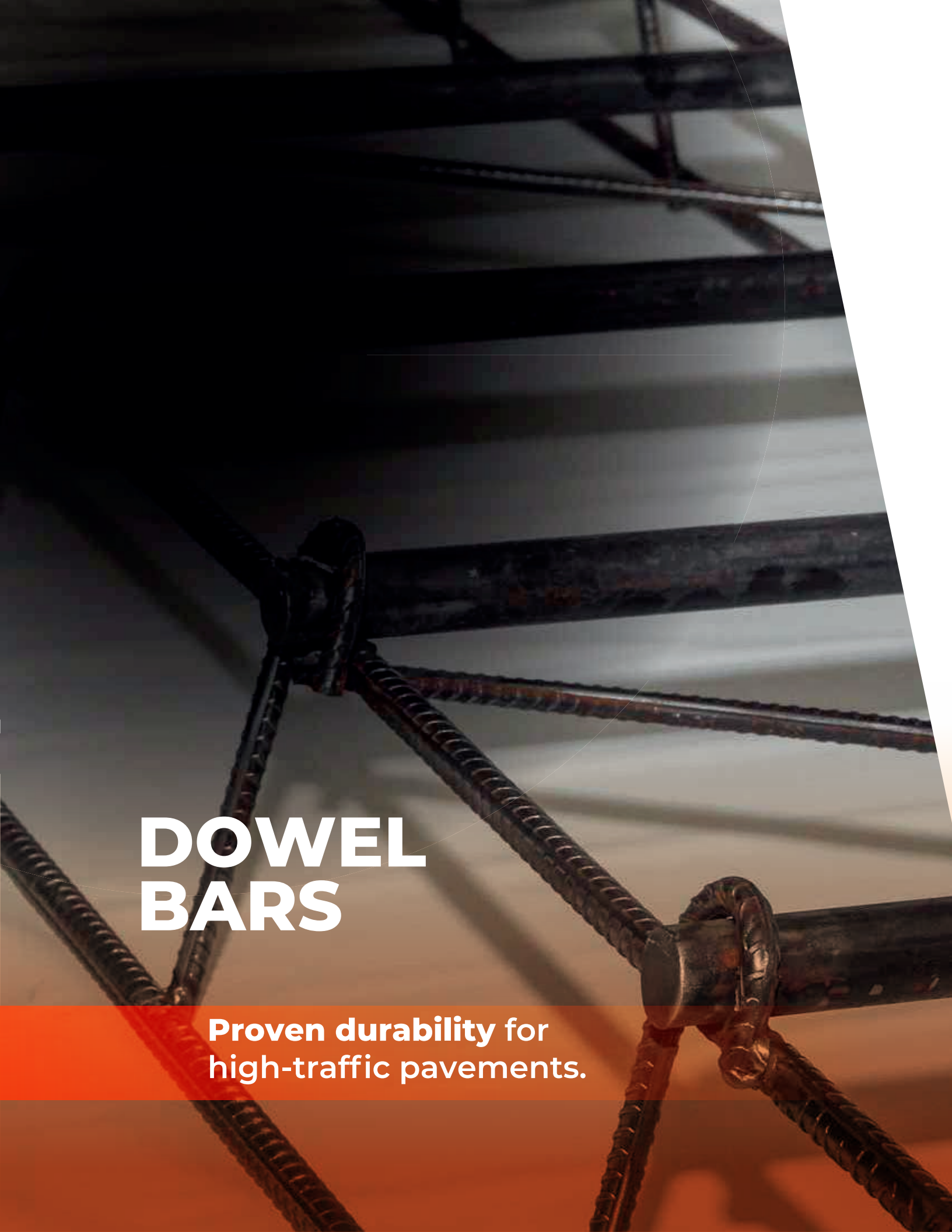
Diameter according to thread on bolt, ordinary thread pitch 8.

BOLTS

Earthquake resistant rebar under ASTM A-706 (NTC-2289). The use of rebar, compared to plain bar, offers better fixing and superior stress distribution.

Plate quality ASTM A-36 (NTC-1920).

PLATE



DOWEL BARS

Proven durability for high-traffic pavements.

What are Dowel Bars?

Reinforcing structure for rigid concrete pavements. In concrete pavements, the dowel bars ensure the right combination between the concrete stiffness and the flexibility of the steel certified for slab splicing.

1

Dowel Bars allow for effective transfer of loads between the ends of adjacent slabs reducing early degradation by providing just the right splice flexibility *.

2

They ensure the preservation of the topographic axes demarcated for the pavement path by restricting the movement of the slabs.

Technical characteristics

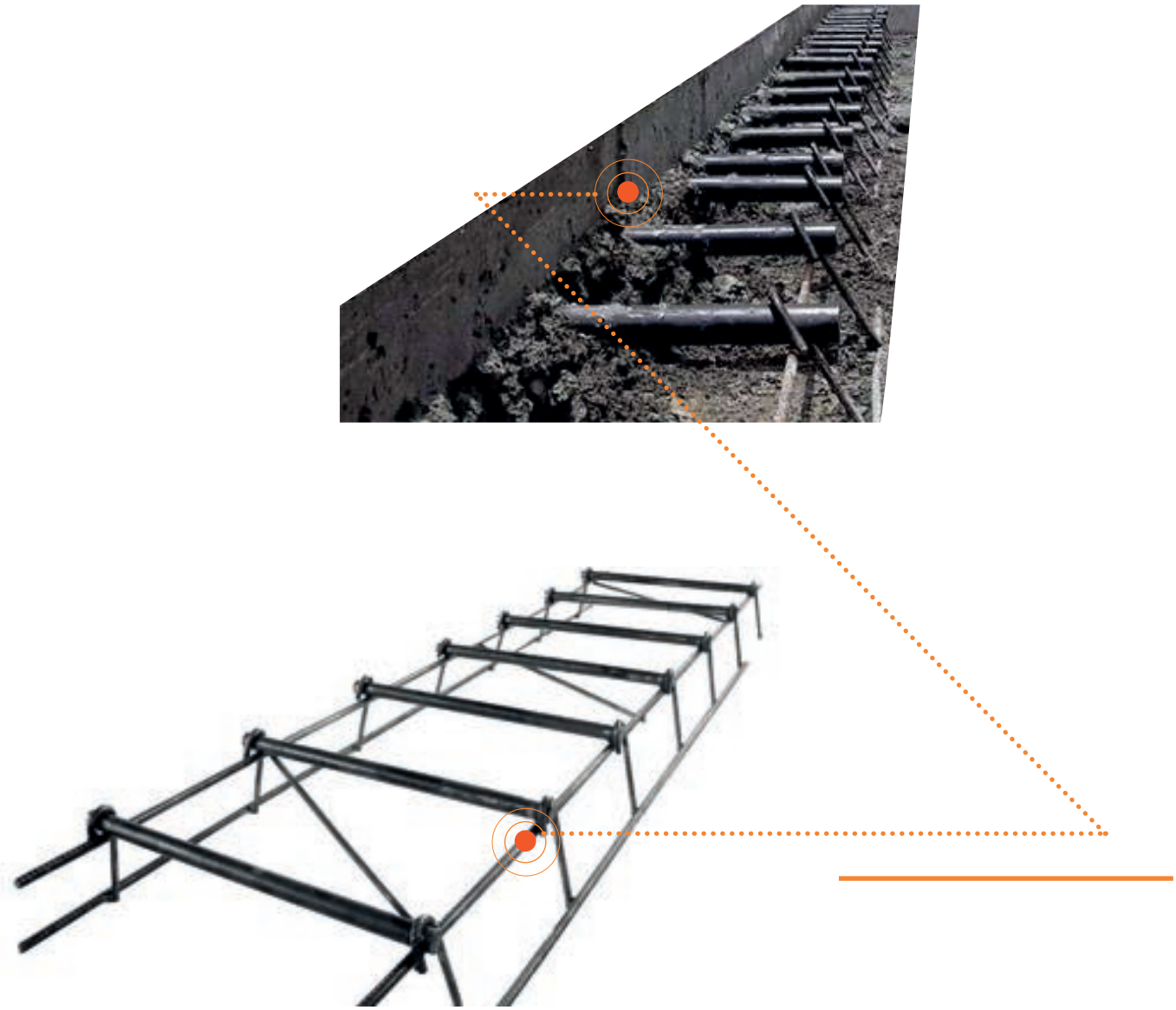
Dimensions:
Dowel diameter, length and spacing according to approved structural drawings.

Dowel pins or bars:
Plain NTC 161 steel in diameters from 5/8 to 1 ¼".

Lateral supports or support basket:
PazdelRío Grade 60 rigid reinforcing steel bodies.

General recommendations for the use of dowel bars prior to c oncrete pouring

1. Verify that the dowel bars are in the correct position (half the height of the slab or as per approved drawings) with one half on each side of the dowel.
2. Apply at least one of the dowel bars halves with a lubricating material previously approved by the supervisor to prevent the steel from becoming stuck to the concrete.
3. The lubricant must be applied evenly, creating a thin film without any build-up.
4. Pour the concrete from the lowest possible height and ensure adequate vibration with the corresponding tools.



The builder is responsible for ensuring the alignment of the dowel bars in the transverse joints according to acceptable limits in order to achieve good performance.

*The images correspond to suggested designs. However, they may change according to specific requirements.

We want to share with you how PazdelRío operates, we do not guarantee any result nor do we assume any liability during application.

NTC 2043 MESH

Naturally ductile

Ductility that protects your investment.

WELDED GRIDS WITH RIBBED REBAR FOR GRADE 60 CONCRETE REINFORCEMENT

TECHNICAL CHARACTERISTICS

Following new trends in the selection of reinforcing steels for walls, especially in buildings constructed using industrialized systems, PazdelRío presents to the construction sector welded grids manufactured from certified ribbed rebar as a structural reinforcement alternative to traditional welded wire meshes under NTC 5806.

The grids developed by PazdelRío are industrialized elements manufactured in rectangular panels similar to a mesh, designed to increase the wall's response to seismic events by increasing the ductility of the reinforcing steel according to standard NTC 2289-2020.

Application:

- Structural walls
- Industrial floors

MECHANICAL PROPERTIES ACCORDING TO NTC 2289 AND NTC 2043

Ductility: 14% min

Units	Yield Strength	Tensile Strength
kgf / mm^2	42 - 55	56 mín
lbf / pul^2	60,000 - 78,000	80,000 mín
MPa	420 - 540	550 mín

The success of the grids manufactured by PazdelRío is based on strict control of heat input during the welding process, safeguarding the steel properties required by NTC 2289, while maintaining the steel seismic coefficient (Rt/fy) at a minimum of 1.25.

WELDED GRIDS

TECHNICAL SPECIFICATIONS
Technical – Commercial Aspects

- Minimum width to be offered: 1.20 m
- Minimum quantity per line: 10 units
- Mesh bar diameter: No. 2 (6.35 mm) for now

TECHNICAL DOCUMENTATION PROVIDED:

- Raw material compliance results according to NTC 2289-2020.
- Compliance results for the longitudinal and transverse bars of the welded grid according to NTC 2289-2020.
- Welded joint test

Offered Dimensions:

SPACING / LONG X TRANSV / 15X10 / 15X15 / 15X20

DUCTILE GRID – SPECIAL FORMAT

Designation	No. of Bars per Panel		Bar Diameter		Spacing		Longitudinal Grafill Wires		Transversal Grafill Wires		Transversal Section Area	Main Reinforcement	Secondary Reinforcement	Nominal Panel Weight
	Transv	Long	Long	Transv	Transv	Long	Inicial	Final	Inicial	Final	Nominal	Long	Transv	
	2,35	3,00	mm	mm	m	m	m	m	m	m	cm2	cm2/m	cm2/ml	kg
XY-317	16	23	6,35	6,35	0,15	0,10	0,05	0,70	0,075	0,075	0,317	3,17	2,11	26,5
XX-211	16	16	6,35	6,35	0,15	0,15	0,05	0,70	0,050	0,050	0,317	2,11	2,11	21,3
XY-159	16	12	6,35	6,35	0,15	0,20	0,05	0,70	0,075	0,075	0,317	1,59	2,11	18,33

DUCTILE GRID STANDAR FORMAT

Designation	No. of Bars per Panel		Bar Diameter		Spacing		Longitudinal Grafill Wires		Transversal Grafill Wires		Transversal Section Area	Main Reinforcement		
	Long	Transv	Long	Transv	Long	Transv	Inicial	Final	Inicial	Final	Nominal	Long	Transv	
	6,00	2,35	mm	mm	m	m	m	m	m	m	cm2	cm2/ml	cm2/ml	kg
XX-211	16	40	6,35	6,35	0,15	0,15	0,075	0,075	0,075	0,075	0,317	2,11	2,11	39,0

DIMENSIONAL TOLERANCES

Width tolerance: +/- 25.4 mm (1 inch).
Tolerance in the spacing between bars: +/- 6.35 mm (1/4 inch).

PazdelRío
ES COLOMBIA

Follow us on our social networks

@Acerias PazdelRio S.A | @PazdelRioSA | @aceriaspazdelrio | @aceriaspazdelrio | @PazdelRio

Calle 100 No 13-21 Piso 15, Bogotá
Teléfono: (57) (1) 651 7300
Planta Industrial, Km 6 Vía Nobsa – Belencito
Nobsa, Boyacá, Colombia.
www.pazdelrio.com.co