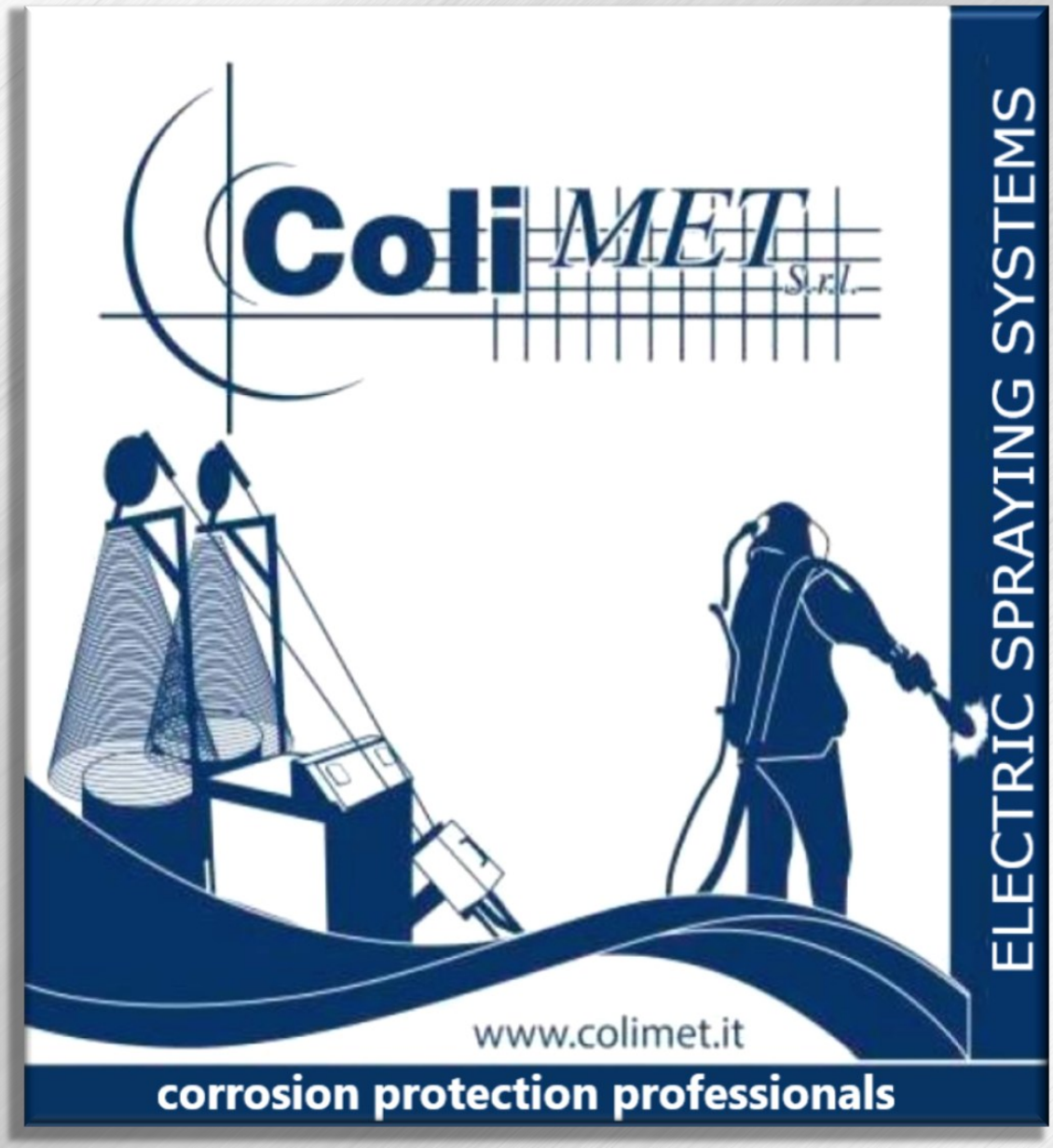
CATALOGUE

Arc-spray metallization equipment
and
Zinc and Zinc/Aluminium wires



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ARC-SPRAY METALLIZATION SYSTEMS

manual and automatic

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130A AAC Push

Zinc and Zn/Al wires

Three-phase generator

- protected by a silicon stabilizer. Voltmeter and ammeter are placed on the front of the generator. The selector and vernier can be adjusted according to operational needs. The compressed air is regulated by a switch. The current can vary from 25 Amp to 130 Amp by acting on the potentiometer. The generator is internally ventilated to ensure ample protection against short circuits caused by dust accumulation. it is Wheeled and equipped with brakes.
- On the back of the generatorthere is an additional **filter** that holds any micro-impurities present in the compressed air circuit

Light AAC gun (900 gr).

- perfectly balanced, it is connected to the generator by **3.5 m** cables and hoses. The wires are pushed to the arc by a power supply placed on the generator.

- "Closed" nozzles system to reduce the spray cone and avoid zinc waste. The wire diameter is 1.6 mm.
- Technical data of the gun applied to a powerful compressed air motor: 900-1.000 liters / minute with "closed" nozzles.

The **reel unwinder** is placed on the generator.

Technical data of 130A AAC generator	
Voltage	Three phase 50-60Hz - 400V
Continuous max output	8 kVA
Compressed air consumption	0,9 m^3/min at 5,5 bar
Dimensions	800 mm - 420 mm - h 400 mm excluding reel unwinder and push-feeder
Spray capacity at 130A	ca. 13 kg/h of Zn or 11,5 kg/h of Zn/Al

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130A AAC Push

the complete equipment

controls on the generator

operator working outside

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300A AAC Push - Pull

Zinc and Zn/Al wires

- The **generator** is connected to 380-440 volts AC with a four-terminal, three-phase cable. The rectifier is intrinsically ventilated, and heat dissipation occurs through convection.
- The very lightweight **gun** (900 g) is equipped with a copper nozzle system that can be "open" or "closed" under voltage, for wire diameters of 2.0, 2.3, and 2.5 mm, and an air atomization system.
- It is connected to the mobile **pull-feeder** (on a trolley) by a **3-meter** set consisting of two cables carrying the wires, a flexible air atomizing hose, and a control cable.
- The pull-feeder (with four knurled drive rollers) is mounted on a trolley that can be easily moved by the operator according to their work needs.
- The **push-feeder**, located in front of the generator, pushes the wires to the trolley.
- The push-pull system provides a total operating range of **3+8 m** (standard), allowing the generator and feeder to be placed in a dust-free area.
- The two drive motors operate synchronously, and the push-feeder motor is interlocked with the pull-feeder motor.
- The **wire feeder** can be supplied from spools and/or 250 kg drums.

Technical data of 300A AAC equipment	
Continuous max current	18 A
Continuous max output	10,8 kVA (100% ED)
Voltage	16-36 Volt (20 regulations) - Max: 36 Volt
Range	25 - 300 Amp
Compressed air consumpion	1.000 l/min at 5 bar
Spray capacity	30 kg/h of Zinc or 26 kg/h of Zinc/Aluminium

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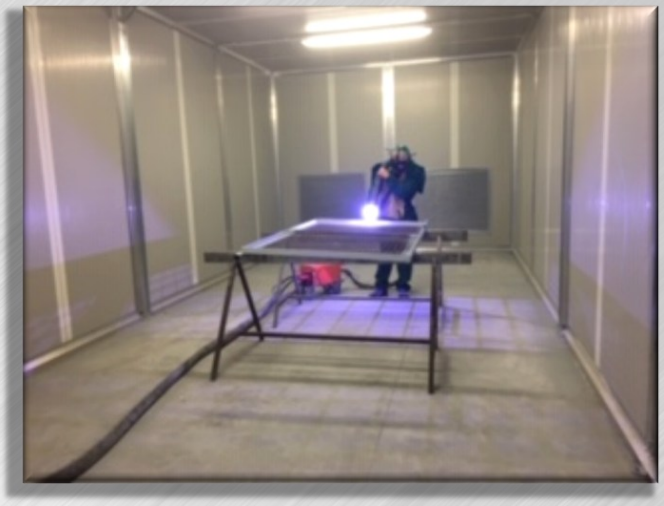
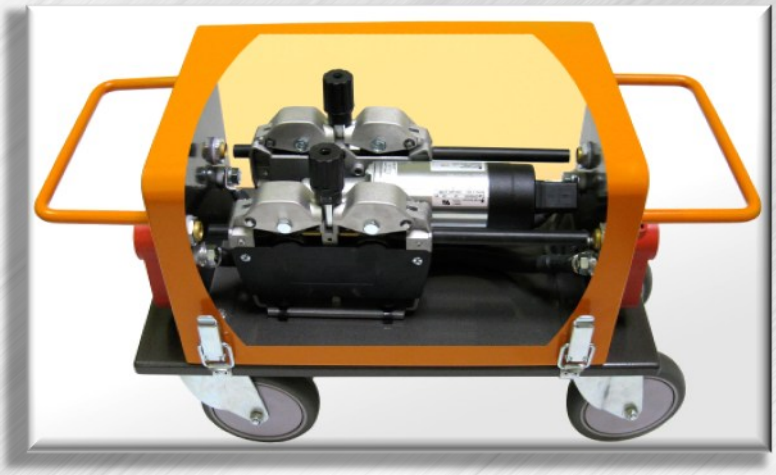
300A AAC S4 Push-Pull

Generator and drums outside the cabin



Pull-feeder and gun inside the cabin

Lightweight AAC gun



Pull-feeder S4 on trolley

Operators at work with protective masks

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300A AAC S4 Push

Zinc and Zn/Al wires

It has the same technical characteristics as the 300A AAC S4 Push-Pull configuration but is not equipped with the pull-feeder on a trolley. There is a set of **5 m cables** between the Push-feeder and the gun.

Complete AAC equipment
With drums at the back of the generator

Lightweight AAC gun

Worker with protective mask

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400A AntiCor

Zinc, Aluminium and Zn/Al wires

Generator

- is connected to 380-440 volts AC with a 4-phase three-phase connection cable. The rectifier is intrinsically ventilated, and heat dissipation occurs by convection.

Gun (weighing approx. 2,5 kg)

- is equipped with a system of closed or open nozzles under tension with a diameter of 2.3 mm and an air atomization system specifically designed to spray zinc.
- The pistol has a DC motor built into the safety system knob.
- It can spray both zinc and aluminum and their alloys wires.

Push-feeder

The gun is connected to the push-feeder placed on the console of the generator by a set of **8/10 m** of cables and flexible: 2 cables, air atomizer flexible hose and control cable.

Wire feeder

The 250 Kg drum feeder (located on the back of the generator) consists of two forks with return pulleys, isolated from each other, which slide the two wires into the guides directly to the push-feeder in front supply

Technical data of 400A AntiCor equipment	
Continuous max current	24 A
Continuous max output	14,2 kVA (100% ED)
Voltage	16-36 Volt (20 regulations) - Max: 36 Volt
Range	25 - 400 Amp
Compressed air consumption	1.000 l/min = 1,27 m3/min at 5,5 bar
Spray capacity	40 kg/h of Zinc or 9,6 kg/h of Aluminium

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400A AntiCor

AntiCOR equipment with reel unwinder on the power source

AntiCOR gun

Workers with protective masks

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600A AntiCor

Zinc, Aluminium and Zn/Al wires

- The **generator** is trailerable and easily portable. Convection cooling prevents dust from being sucked in, minimizing the possibility of short circuits caused by metal powders. All spray control instruments are located on the top of the generator and are easily visible even from a distance. The electrical cable and air hose connections, located on the front of the generator, are easily accessible. It is protected against current overloads, overheating, and compressed air pressure drops.
- The **gun**, safe and easy to handle, requires little maintenance. It is equipped with an open nozzle system or closed nozzle system that concentrates the jet and reduces overspray by approximately 20%. Wire diameter: 2.0 to 2.5 mm.
- The **closed system** allows for:
  - very fine and homogeneous coatings;
  - improved coating/substrate bonding;
  - reduced coating porosity.
- The gun is connected to the generator with a set of **8-10 meter** cables.
- Wire feeds from drums on the back of the generator or from reels.

Technical data of 600A AntiCor equipment	
Continuous max current	36 A
Continuous max output	21,4 kVA (100% ED)
Voltage	16-36 Volt (20 regulations) - Max: 36 Volt
Range	25 - 600 Amp
Compressed air consumption	1.500 l/min at 5,5 bar
Spray capacity	60 kg/h of Zinc 14,4 kg/h of Aluminium 53 kg/h of Zn/Al

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300A LD/U-2

for all metal wires – for wear-resistance, repair, furnishing

- The **generator** is connected to 380-440 volts with a 4-terminal three-phase connection cable. The rectifier is intrinsically ventilated, and heat dissipation occurs through convection.
- The compact **gun** has an air motor in the handle, allowing for high torque and safe wire feeding. It is completely insulated, preventing any contact between the wires in the gun due to dragging, abrasion, and metal dust. All parts are easily removable and replaceable by the operator. It can be equipped with a closed nozzle system to concentrate the jet. Wire diameters range from 1.6 mm to 2.5 mm.
- **Cable pack**, consisting of tubes and hoses, up to **7 m** long.
- **Wire feeder** from spools (located on the generator or on a stand).
- Additional activated **carbon filters** for purified air for the operator.

Principali caratteristiche tecniche dell'impianto 300A LD/U-2	
Continuous max current	18 A
Continuous max output	10,8 kVA (100% ED)
Voltage	16-36 Volt (20 regulations) - Max: 36 Volt
Range	25 - 300 Amp
Compressed air consumption	1.000 l/min
Spray capacity	30 kg/h of Zinc or 26 kg/h of Zinc/Aluminium

Wires	Max spray capacity [kg/h]	Covered surface at 100 µm [mq/h]
Zn	30	26,10
Al	9,6	26,06
Cr	15	14,58
Al/Br9Mn	11,5	21,78
Stainless Steel	13,5	13,50
NiCr	16	19,00

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300A AAC + LD/U-2

one generator for two guns - for spraying all metals

A single 300A generator equipped with AAC gun attachments for spraying Zinc and Zn/Al (anti-corrosion) and with LD/U-2 gun attachments for spraying Aluminium, Copper, Bronze, Brass, Nickel, Chrome, Corten, Stainless Steel, Molybdenum and all hard metals (anti-wear, anti-erosion, furniture and architecture).

Wires	Max spray capacity [kg/h]	Covered surface at 100 µm [mq/h]
Zn	30	26,10
Al	9,6	26,06
Zn/Al 85/15	26,5	33,97
Cu	15	13,65
Brass	15-16	22,00
Bronze	15-16	21,78
Cr	15	14,58
NiCr	16	19,00

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300A AAC + LD/U-2

AAC gun

- **Anti-corrosion**

For spraying Zn and Zn/Al15 wires.
Quick and lightweight

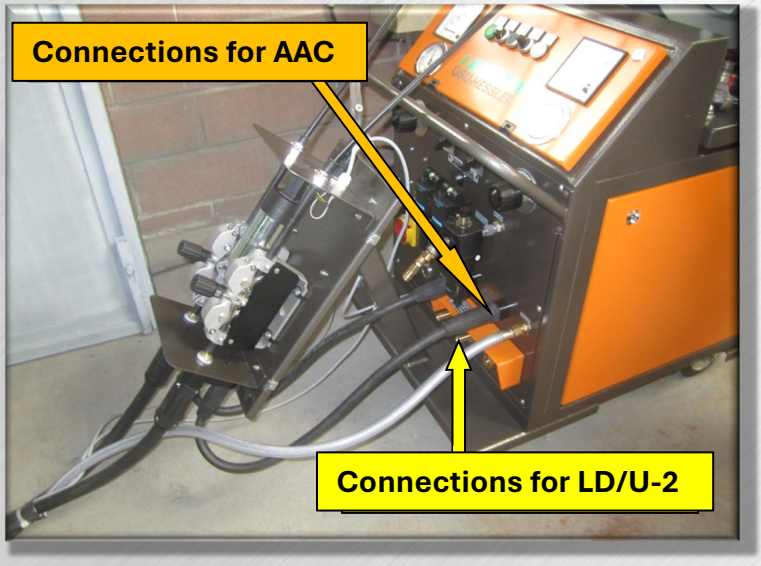
LD/U-2 gun

- **Anti-wear, anti-erosion, anti-friction and repair:**

Nickel/Chromium, Molybdenum, Aluminum wires, etc.

- **Architecture and furniture**:

Copper, Bronze, Brass, Corten, Stainless Steel wires, etc. also on non-metallic surfaces: wood, OSB, PVC, MDF, plexiglass, terracotta, concrete, glass, resins, etc.



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300A LD/U-2 EM

for all metal wires – for longitudinal welding coverage of tube lines

- **LD/U-2 EMD gun** Designed for integration into existing production lines or for retrofitting to robots. The gun is robust enough to withstand even heavy-duty operations. Complete insulation of both electrodes prevents any contact in the gun body caused by dragging, wire abrasion, or metal dust. All parts can be easily replaced by the operator in just a few minutes. A powerful DC motor ensures high torque and constant, reliable wire feed across a wide spraying range from 25 to 300 A. Depending on the user's requirements, the gun can be equipped with standard "open" or "closed" nozzles. Wire diameter: 1.60 mm.

Technical data of LD/U-2 EMD gun	
Dimensions	283 mm - 115 mm -h 162 mm
Weight	3.600 gr (excluding cables)
Compressed air consumption	1.100 - 1.500 l/min at 5,5 bar
Spray capacity at 300A	ca. 30 kg/h of Zn or 9,5 Kg/h of Al or 26 kg/h of Zn/Al

- The gun is connected to the generator by a set of cables and hoses from **3.5 to 6 meters**.
- **Wire feeders** from drums.
- **Three phase 300A Generator** with silicon rectifier and valve specifically designed for spraying Zn, Al, Cu, steel, etc. The ammeter and voltmeter are clearly visible on the console; dedicated illuminated switches indicate correct operation. The air flow to the gun can be continuously varied by acting on the flow regulator, thus determining the fineness of the coating. The current can be continuously varied from 25 to 300 A by acting on the potentiometer. In the event of overload or insufficient load, the system automatically and instantly shuts down. The generator is internally cooled by convection, to protect against short circuits created by metal powders. The generator has a compressed air filter to retain any oils or humidity.
- **Interface** with production line, to control switching on and off.

Technical data of LD/U-2 EM generator	
Voltage	Three phase 50-60 Hz - 380-400V
Range	Voltage 16-36 Volt - Current 25-300 A
Continuous max current	17 A
Compressed air consumption	1.000 l/min = 1,27 m3/min at 5,5 bar
Dimensions	887 mm - 600 mm
Weight	ca. 230 kg

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300A LD/U-2 EM

Equipment on tube line: LD/U-2 EMD gun with extension in the spray booth, 6-meter cables and generator with drum wire unwinders

LD/U-2 EMD gun

LD/U-2 EMD gun with extension

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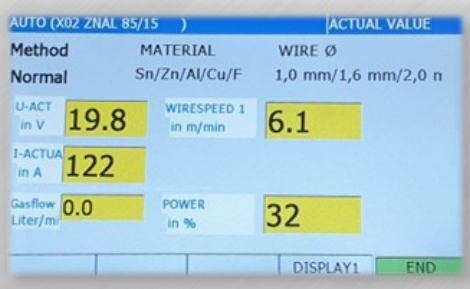
400A ADVANCED

for all metal wires – for longitudinal welding coverage of tube lines

- **LD/U-2 EMD gun** designed for integration into existing production lines or for retrofitting to robots. The gun is robust enough to withstand even heavy-duty operations. A powerful DC motor ensures high torque and consistent, reliable wire feed across a wide spraying range from 20 to 400 A. Depending on the user's requirements, the gun can be equipped with standard "open" or "closed" nozzles. Wire diameter: 1.60 mm.
- The gun is connected to the generator by a set of cables and hoses from 3.5 to 6 m.
- Wire feeders from drums.
- **Three phase 400A Generator** Fully programmable, it sets new and unparalleled standards in automatic spraying processes for both solid and cored metal wires: Zn, Al, copper, brass, steel, stainless steel, molybdenum, etc. The generator allows for continuous and automatic variation of all spraying parameters, ensuring the highest quality coatings with improved adhesion and an extremely fine grain structure. The motor's supply current can be automatically and continuously varied from 20 to 400 A (400 A/34 V at 100% duty cycle).
- **Interface** with production line.



- An **LCD display** provides access to an infinite number of voltage and amperage controls, regulating the wire feed capacity and influencing the fineness of the coating.

Technical data of Advanced generator	
Voltage	trifase 50 Hz 3 x 400V
Range	Voltage 16-34 Volt - Current 20-400 A
Continuous max output	19,8 kVA (100% ED)
Compressed air consumption	ca. 1,20 m^3/min at 5,5 bar
Spray capacity at 400A	40 kg/h of Zn 12,6 Kg/h of Al 35 kg/h of Zn/Al
Dimensions	887 mm - 600 mm
Weight	ca. 270 kg

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ZINC and ZINC/ALUMINIUM WIRES

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ZINC WIRES

Only special high-quality Zinc (HG) ingots ≥ 99.995% are accepted in the production of Zinc wire to ensure high purity, trouble-free operation, and high conductivity surface.

Standard diameters: 1,6 - 4,76 mm (EN ISO 14919:2023)

Standard: ISO 14919:2023 - ISO 1179:2005 (Z1 grade)

Chemical analysis	Cd+Pb %	Cu %	Sn %	Pb %	Fe %	Cd %	**Zn**
Nominal	< 0,0040	< 0,0010	< 0,0010	< 0,0030	< 0,0020	< 0,0030	**> 99,995 %**
Tipical	0,0016	0,0003	0,0002	0,0014	0,0002	0,0002	

Physical Features

- Density : 7,14 g/cm³
- Melting point : 419,58 °C
- Boiling point : 907 °C
- Electrical cnductivity : 0,166 106 /cm Ω
- Thermal conductivity : 1,16 W/cm K

Mechanical Properties

Hardness of Zn wire	**Soft**	**Medium**	**Hard**
Tensile strength [N/mm²]	< 100 ± 5	100-120 ±5	> 120 ±5
Elongation at rupture [%]	60 - 100%	40 - 80%	30 - 60%

Notes

Precautions before metallization:

- Remove corroded or worn material.
- Clean the surface.
- Round off and level the edges of the wires.

Clarifications:

The technical contents listed above, however accurate, must be understood to be closest to the known equivalent level

No liability is accepted for loss or damage resulting from the use of the aforementioned information.

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ZINC/ALUMINIUM WIRES

In manufacturing Zn/Al wire:

- Special High Grade (HG) Zinc ≥ 99,995% (EN 1179 "Z1")
- Aluminium 99,7%

Standard diameters: 1,2 - 6,4 mm (EN ISO 1419:2023)

Wire composition	Al [%]	Density [g/m³]	Melting range [°C]
Zn / Al 2	1,8 - 2,2	6,91	382 - 407
Zn / Al 4	3,5 - 4,5	6,70	383 - 387
Zn / Al 15	14 - 16	5,73	384 - 450

Packaging for Zn and Zn/Al wires

Reels
20 kg

Coils
25 kg

Drums
100-150-200-250 kg

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