



italkrane

THE HIGHEST LEVEL OF EXPLOSION PROTECTION

CHAIN HOISTS “YOYO” SERIES



italkrane s.r.l.

Italkrane was founded in Milan in 1962 by Enzo Banfi and Giovanni Penati who were until 2015 respectively the Managing Director and the Chairman of the Company. The object of the company is the design, construction and commercialisation of lifting and transport equipment. The founding members of the company already had a vast technical and commercial experience acquired during many years at responsible levels in a company at the time market leader in the sector. The founding members wanted to establish a factory which would be able to revolutionise the then currently out-dated techniques of production of bridge cranes and electric hoists and to make innovative, scrupulously designed machinery and equipment using new and advanced technologies. At the beginning, priority was given to the construction of electromechanical parts only with consulting services enabling the client himself to build the supporting metal structures in such a way that modern and efficient plant could be made. After five years, the company transferred its offices to a site outside Milan, where facilities were available for metal carpentry work and complete equipment could be supplied. The site in Bussero (15 Km east of Milan) comprises a modern factory and separate office-building studied to-give the greatest pleasure from an ecological point of view and to be perfectly in harmony with the surrounding habitat. Since 1962, Italkrane supports customers in every phase of the development and construction of machines through a team of experienced technicians and engineers able to solve any problem. Our experience, gained in over half a century of activity, is a guarantee of reliability and competence. Italkrane also supplies all the components necessary to produce the crane with the exception of the relative structures (available, on request, the technical drawings for the construction of the structures).

Italkrane elaborates and realizes customized projects to satisfy every customer need with efficient solutions.





The YoYo chain hoist program produced by Italkrane is characterized by its versatility, strength and reliability. Users, crane manufacturers and plant builders appreciate these qualities, confirmed by their daily use. This product stands out for its limited requirements in terms of maintenance and energy consumption. The application of the most advanced technologies used in design, choice of materials and production methods, combined with over 60 years' experience in lifting, is the best guarantee of an excellent product whose quality is recognized by the international market. The modular system allows numerous combinations of sub-assemblies for customized solutions. The YoYo series is available in 3 load capacity variants, for a load range from 500 kg to 5000 kg. The chain hoists can be used in the fixed version, with hook or suspension eye, with rigid suspension or with a push trolley. When supplied with an electric trolley, they are mounted on standard cranes, special cranes or in plant production. For exceptional requirements, our experts in the technical department can develop customized solutions. Even for applications in explosive atmospheres, you can always count on YoYo chain hoists. It is no coincidence that we are among the market leaders in hoisting technology and crane components suitable for operation in explosive areas. In fact, upon request, the entire chain hoist program is available in explosion-proof versions for Zone 1, Zone 21, Zone 2 and Zone 22.

Specifically, we offer:

- Wide range of chain hoists for lifting capacities from 500 kg to 5,000 kg.
- Easy inspection and maintenance of the chain drive thanks to the top-mounted drive shaft.
- Optional inverters for lifting and traversing.
- Extremely compact design for maximum space use.
- High mechanism classification according to FEM/ISO standards.
- Explosion-proof version conforming to ATEX, IEC Ex and EAC TR available as a choice.



	Class of mechanism M5 according to ISO 4301/1						
SIZE	YY1	YY1	YY1,6	YY1	YY2,5	YY1,6	YY2,5
Capacity (t)	0,5	1	1,6	2	2,5	3,2	5
N° Load chain	1	1	1	2	1	2	2
Lifting speed (m/1')	10	8	8	4	6	4	3
Lifting Power (kW) 1 speed.	1,50	1,50	3,00	1,50	3,00	3,00	3,00
Low lifting speed. (m/1')	2,5	2	2	1	1,5	1	0,75
Lifting power (kW). (2 speed)	1,1/0,25	1,1/0,25	2,2/0,55	1,1/0,25	2,6/0,7	2,2/0,55	2,6/0,7
Trolley speed (m/1')	20	20	20	20	20	20	20
Trolley speed (m/1')	10	10	10	10	10	10	10
Low trolley speed 2 sp. (m/1')	-	-	5	-	5	5	5
Low trolley speed 2 sp. (m/1')	-	-	2,5	-	2,5	2,5	2,5
Trolley power (kW) 1 speed	0,25	0,25	0,25	0,25	0,37	0,37	0,37
Trolley power (kW) 1 speed	0,18	0,18	0,18	0,18	0,25	0,25	0,25
Trolley power (kW) 2 speed	-	-	0,3/0,06	-	0,3/0,06	0,3/0,06	0,3/0,06
Trolley power (kW) 2 speed	-	-	0,18/0,03	-	0,3/0,06	0,3/0,06	0,3/0,06

The trolley models

The different trolley models and options for the YoYo chain hoist cover a wide range of possible applications in crane and plant production. The trolleys are equipped with one travel speed as standard; as a choice, for sizes 1.6 and 2.5, we can supply two travel speeds.

Other speeds and variable frequency drives are available as optional. Our chain hoists are known worldwide for their flexibility and versatility. Their compact dimensions and extremely small attachments help to optimally use the available volume.

Suspension for the stationary version

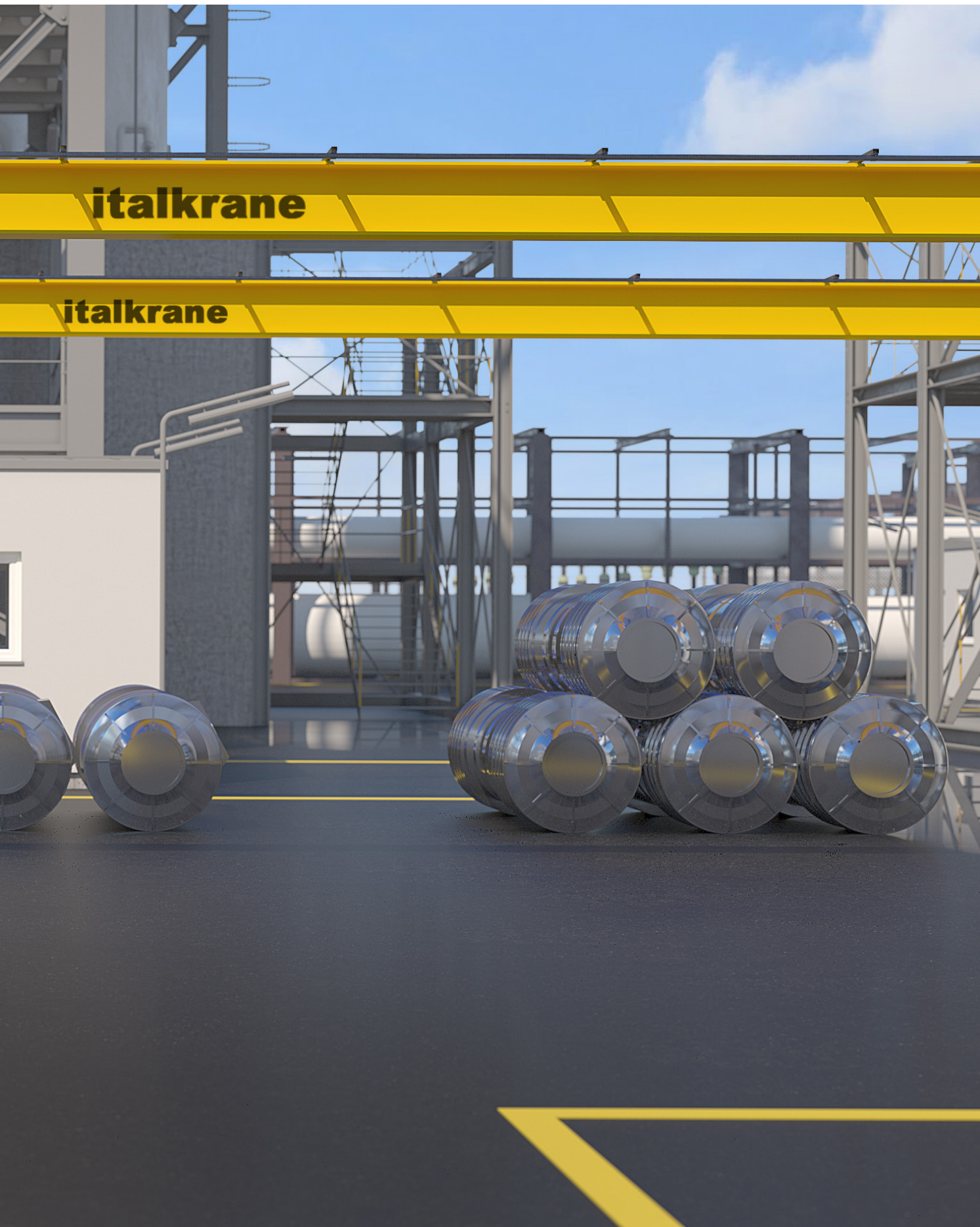
The standard stationary YoYo chain hoist is equipped with hook suspension. However, it is also possible to choose rigid suspension. If the YoYo chain hoist is to be permanently mounted, e.g., in plant production, we recommend the rigid suspension.

The extremely low free height is an advantage. In addition, the rigid mounting prevents the chain hoist from swinging on the trolley.

Standard electric trolley

Extreme care has been taken in the design to minimize the size of the entire system, allowing for exceptional hook lift values, thanks to the reduced hook headroom respect to the sliding surface.







Specifically we offer:

- Very compact dimensions for maximum space use
- Specially developed solutions for limited installation space.
- The load is lifted stably and without swaying
- Reduced maintenance
- Guaranteed high quality thanks to certified in-house production.
- Optionally available with inverter for lifting and travelling and with radio remote control
- All models available in explosion-proof version conforming to ATEX, IECEx, CUTR

The technology

When making a choice as important as the selection of an essential component of our work, such as a chain hoist, on which the safety of our employees depends, it is important and comforting to know how reliable and tested are the technological choices enclosed in it, and that they will guarantee constant performance, high efficiency and long life over time.

Motors

- Class F motor insulation with class B delta. S4 service. Intermittency 40 % heavy duty.
- Powerful motors with high duty cycle and number of switching operations.
- Standard fan cooling.
- Dual speed and frequency-controlled versions available as options.
- Optional temperature control via thermistor.

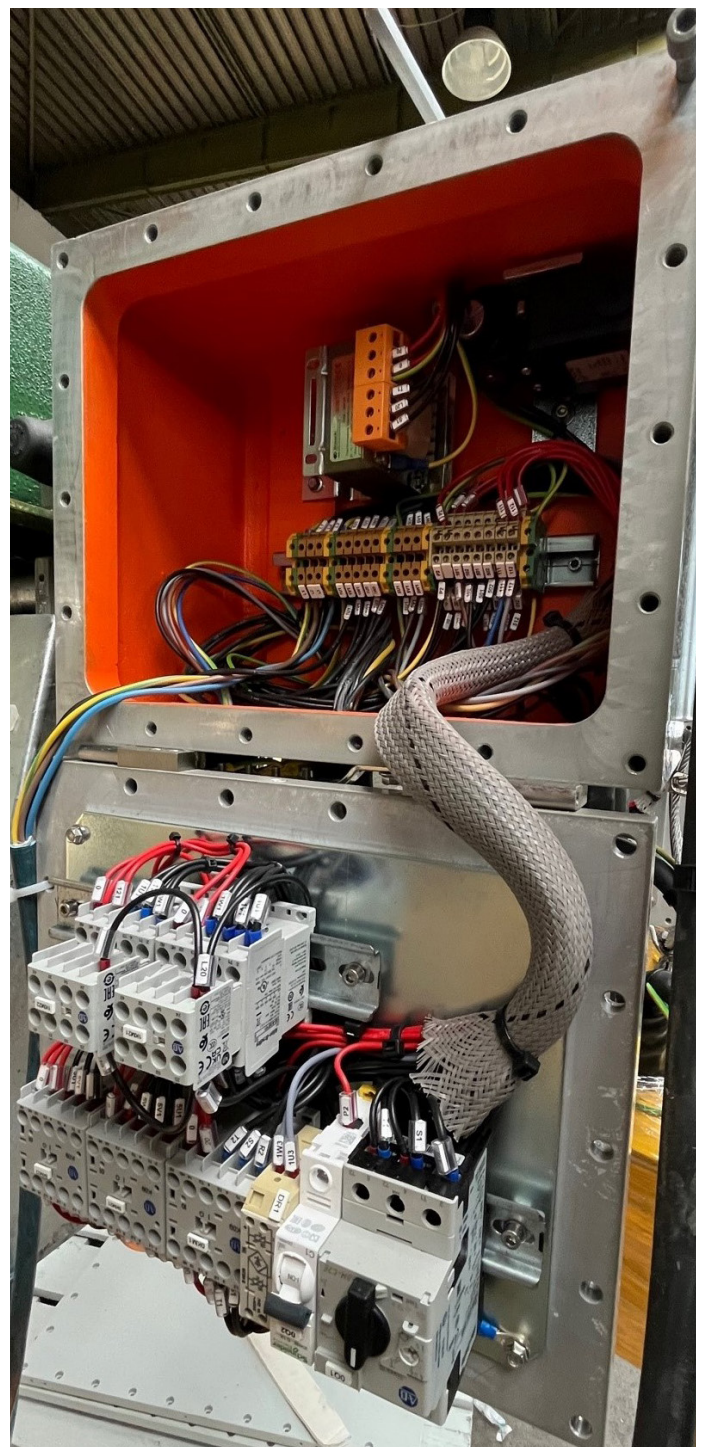
Brake

- Low-maintenance, asbestos-free, fail-safe electromagnetic disc brake.
- Oversized braking torque.
- Long service life; the movable brake discs wearing can be checked and measured.

- Fully enclosed brake, protected against moisture, vapors and dust from outside; ensures reliable long-term operation.
- Closed chain guide.
- Reliable operation even in severe applications.
- Wear-resistant, hardened chain sprocket in combination with optimized idler pulleys; guarantees low chain wear.

Switchgear and standard specifications

- All standard connection and control voltages are available.
- Clear and efficient contactor layout
- Large and easily accessible electrical box
- Optionally available with direct control
- Optionally available without control panel and/or contactor control
- Lifting limit switch equipped with safety contact (redundancy) on lifting.
- Degree of protection IP55, optionally IP66
- Anti-condensation heaters in the control panels
- Screws: GEOMET® 321 is used for corrosion protection of fasteners and all metal parts (a zinc flake technology.) High corrosion resistance: salt spray test according to ISO 9227/ASTM B117 Cyclic tests > 240 hours without white rust > 720 hours without red rust.
- Screws < M10 stainless steel grade A2 70
- For size 1 only, overload control is via clutch slipping, for the other sizes the load limiter is an electronic Watt-metric type



designed for the specific lifting requirements. It detects the load variation using the power absorbed by the motor as benchmark.

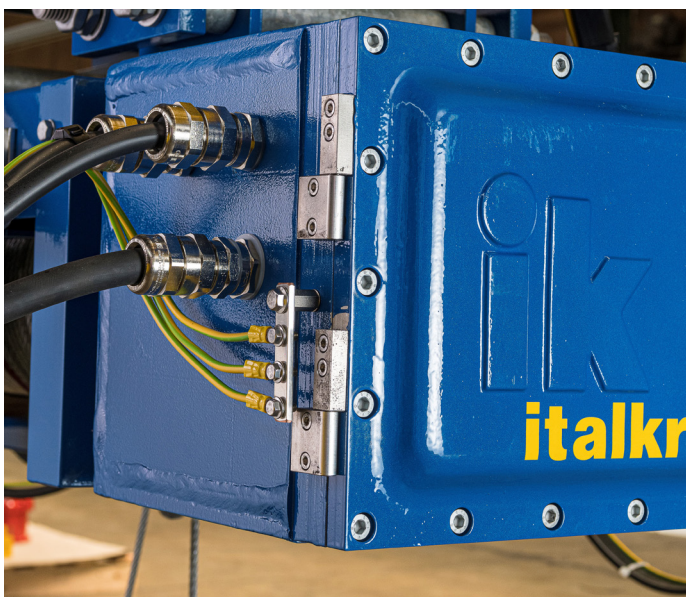
- Due to the linear trend of the power (P) throughout the working cycle of the motor, it is possible to detect, by means of a watt-metric relay, any load variation (RESISTANT TORQUE).
- Ex enclosure hinges made of AISI 304
- All cable glands for round cable, used in Ex machines, are made of chrome-plated brass and additionally protected by PVC sheaths (shroud)
- Benefits of sheathing application: reduce collection of foreign matter and dust. Ideal choice of protection in the presence of high fluid levels. Used to minimize the risk of dirt or foreign matter accumulating on the cable body. Additional protection and improved IP rating. Effective solution for weather and corrosion protection of a cable gland.
- Wheels in Ex/anti-spark design, made with rolling band in bronze/aluminum alloy of high thickness and wear-resistance.
- Bronze plated Ex machine hooks.
- Gearboxes designed to reduce the size of the hoist, with oversized gears and low noise thanks to oil-bath lubrication.
- One or two contact travel limit switches depending on the number of trollies.
- Chain: high-strength, surface-hardened, galvanized and over-sized load chain. High notch depth in the load sprocket for long service life. High ISO classification





according to FEM/ISO standards. Stainless steel load chain as a choice.

- Painting: paint cycle of corrosivity class C3 (Medium) according to ISO 12944:2018 and durability (H) high (>15-20 years) Dry film thickness (dft) min = 180 μm .
- Standard fasteners protected by Geomet 321 grade B coating.
- Other colors according to RAL table available as a choice.
- Chain bag: wide selection of chain bags made of sheet steel, fabric or stainless steel.
- Optionally also available without chain bag.



Engineering

Our engineers innovate and customize products to adapt the lifting and transport of loads to the increasingly complex and challenging demands of the market, even in explosive areas. Relying on the technological reliability of our proven product lines, we focus on the development of lifting technologies applied to standard and customized cranes, carefully designed and manufactured to the highest quality standards. Few other manufacturers can offer such a wide range of quality, cost-effective and customized products. Our ability and knowledge gained from over 60 years of experience in crane technology give us the flexibility to quickly develop and produce the best solution for your project.

Upon request, all non-standard chain hoists and customized solutions are available in explosion-proof versions for Zone 1, Zone 2, Zone 21 and Zone 22.



At your disposal you will have:

- Perfectly adapted and designed hoists to maximize your project.
- Over 60 years of experience and knowledge in each hoist.
- Short development times.
- Solutions that combine economy and technology thanks to the modular system.
- High reliability thanks to the use of tried and evaluated standard components.
- Guaranteed high quality thanks to certified in-house production.
- All customized solutions are available in explosion-proof versions according to ATEX, IECEX and CU TR standards.

Italkrane is known internationally as a specialist in explosion protection and is considered one of the world's references in this technology. The safety of people and machines running in potentially explosive gas and dust atmospheres is the main aim of our business, and we never compromise with it.

The experience and knowledge of many decades, our basic research and development and approvals obtained with INERIS and other Testing Institutes in many countries guarantee our competence. The hoisting technology used by Italkrane is among the safest available on the world market for all kinds of industrial activities such as: chemical, petrochemical, pharmaceutical, food industry, and for the electrical, offshore and natural gas liquefaction (LNG) industries.

The YoYo chain hoist program is based, without exception, on the proven modular range of IK components. All components of the explosion-proof hoists - from the brake to the controls and control pendant - are manufactured in-house.

This guarantees comprehensive, high-quality explosion protection, which users, crane manufacturers and plant builders around the world have been relying on for decades. The strict ATEX directives and IECEx standards for mechanical and electrical explosion protection are of course followed.

Advantages:

- Load capacity from 0.5 to 5 t.
- Fast and precise load positioning, without the need of continuous adjustments.
- The reduced dynamic loads extend the service life of the lifting motor and gearbox and protects the entire system.
- Standard speed range 1:4.
- Ambient temperature -50 °C to +55 °C.
- Protection according to IEC/EN 60529 IP55 IP66.
- Standard finish/painting color RAL 5010 and on request according to customer specification. Polyurethane finish, epoxy resin base (D.F.T. 240/320 µm and above).



ITALKRANE lifting equipment

Gru

Paranchi elettrici a fune

Argani

Macchine speciali

Paranchi a catena

Crane kit

Componenti

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