



TB **Tecno-Beton**
IMPIANTI PER CAVE E MINIERE



QUARRY AND MINING PLANTS SECTOR



TB **Tecno-Beton**
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QUALITY AND INNOVATION
IN ALL PRODUCTION PHASES

THE MOST APPROPRIATE SOLUTION FOR YOUR PRODUCTION NEEDS

Based on vast experience gained over the years, **TECNO-BETON SRL** can meet all its clients' needs, from simple installation of a single machine (including the support structure), specifically designed to adapt to a pre-existing plant), to construction, installation and start-up of an entire crushing and sorting plant.

ALL THIS ALLOWS OUR CLIENTS TO OBTAIN A "TURN-KEY" SYSTEM, DESIGNED TO THEIR SPECIFIC NEEDS.

The machines and configuration of the plant are selected in close collaboration with the client and with the help of a series of computerised tools, among those versatile software capable of simulating operation of the plant itself.

By no means least, the storage and supply service of spare parts or consumable parts for all machinery installed makes TECNO-BETON SRL a complete supplier for all quarry needs.

TECNO-BETON SRL OFFICIAL DEALER OF:



ROHR-IDRECO

GUARANTEED QUALITY CERTIFICATION



OUR OBJECTIVES

- To offer quality and functional services and products.
- To offer customised and made-to-measure technological solutions.
- To offer an all-round service.
- To constantly improve and innovate our production.
- To build a loyal following with our clients based on mutual respect.

QUARRY AND MINING PLANTS

WE PROVIDE A COMPLETE RANGE OF MACHINERY FOR QUARRIES, IN WATER EXCAVATION, CRUSHING AND FINAL SORTING.

AGGREGATES PROCESSING

FEEDERS

Tecno-Beton offers every type of feeder.



TRANSPORT & STORAGE

Transport and storage are configured to design, according to the client's needs.



CRUSHING

Tecno-Beton provides all crushing machinery necessary for quarries.



SAND RECOVERY

Machines are available to separate sand from the wash water flow.



UNDERWATER EXCAVATION AND DREDGING

SCREENING AND WASHING

From inclined screens to high frequency ones for fine sorting, up to horizontal screens.



MOBILE GROUPS

A vast park of mobile groups is available sub-divided into various categories.



FLOATING GRAB DREDGES

Everything the client needs for floating grab excavation.



SUCTION DREDGES

Simple and financially beneficial, they can provide large production at low cost.



BUCKET LADDER DREDGES

Simple and financially beneficial, they can provide large production at low cost.



HYDRAULIC GRABS

Tecno-Beton proposes grabs up to 15 m³ capacity, whose reliability and strength is unrivalled.



FEEDERS

Feeders for primary, secondary and tertiary crushing. Machines for quarries, for (dry and wet) material, alluvium (gravel) and rocky material (stones) of all sizes.



VIBRATING FEEDERS

PROMOTE FLOW OF "TOUT VENANT" MATERIAL COMING FROM THE FEED HOPPER/RECEIVER.

It is composed of a vibrating channel coated in anti-wear rubber, activated by two sealed, electrical vibrators with an adjustable eccentric mass.

Available in widths up to 1200 mm.



RECIPROCATING FEEDERS

Machines suitable for feeding small or medium primary crushers where installation is not necessary of large apron feeders, or on extraction of wet and "sticky" material from the tunnel, under receiver build-up.

Available in widths up to 1300 mm.



APRON FEEDERS

In addition to the machinery manufactured by TECNO-BETON, apron feeders are also available manufactured by companies within ASTEC group for "heavy duty" applications and for large stones. These feeders are manufactured with forged aprons measuring up to 3 m wide and which can reach up to 15 m long.

BELT FEEDERS



These feeders are manufactured using a short conveyor with a low profile. Completely edged to avoid material falling from the sides, they are applied under silos or hoppers for material extraction. Structure completely galvanised with interchangeable, anti-wear rubber rails. Servo-ventilated engine installed for use with inverter.

Available with widths up to 1400 mm and customised length.

GRIZZLY FEEDERS



MACHINES SUITABLE FROM SEPARATING FINE PARTICLES FROM QUARRY DEBRIS, THEY ARE INSTALLED UPSTREAM OF THE PRIMARY CRUSHERS AND UNDER THE LOADING HOPPERS.

They are composed of a conveyor surface with an initial blind zone for material advancement, while the end barred section allows pre-screening of the material. Tecno-Beton production was integrated with that of KPI-JCI to obtain a broader range of feeders, which range from those for light use to large “heavy duty” stone feeders.

SPECIAL VERSIONS

Tecno-Beton produces a range of “special” feeders because they are developed based on specific client requirements. They are typically customised changes to standard feeders.



THE NEED TO CREATE SPECIAL FEEDERS ARISES DURING THE PLANT DESIGN PHASE AND ARE DEVELOPED BY ENGINEERING A PRODUCT DESIGNED AD-HOC, THANKS TO THE SUPPORT OF THE COMPANY'S TECHNICAL OFFICE.

TRANSPORT AND STORAGE

The conveyor belts manufactured by Tecno-Beton cover a vast range of uses and are sub-divided based on the bearing structure of the conveyor itself: trellis, with low profile or with different profiles per span length. The width of the belt is between 500 mm and 1400 mm, while the length, power and structure can be completely customised to meet the client's requirements.



CONVEYOR BELTS

ALL METAL PARTS OF THE CONVEYOR BELT ARE MANUFACTURED IN HOT GALVANISED STEEL, TO ELIMINATE ANY PROBLEM OF CORROSION AND MAKE THE MACHINE LAST LONGER.

M series conveyors: the structure of this series is manufactured in a self-supporting trellis with interchangeable, modular elements. The welded and braced sides give high strength and you can choose the best solution based on the open spans required. A vast range of accessories (side rails, stone traps, sunshades, wind-proof ribs, gangways, drainage covers, etc.) ensure the conveyor is used to its best.

H series conveyors: manufactured in thick sheet metal, with the sides shaped to facilitate conveyance of material accidentally falling into the upper section towards the outside, they are designed for medium-long distances. The components of the conveyor are made of interchangeable modular elements. Also for this series there are accessories such as side rails, stone traps, sunshades, wind-proof ribs, gangways, drainage covers, etc.

BELTS AND HOPPERS

Tecno-Beton designs and manufactures hoppers and silos for all uses:

- feeding with dumpers, to feed large primary crushers;
- feeding with tipper trucks or wheel loaders;
- with hydraulically actuated protection grid;
- with automated unloading outlets with hydraulic opening system;

- equipped with systems to collect leaking water from the contained material;
- storage silos for end materials;
- receiver silos for crushing feeding.

The capacity reaches up to 100 m³ for hoppers and standard silos. However, it is possible to create structures tailored to the client's needs.

MOBILE GROUPS

Complete range of crushing and sorting systems assembled on tracks.

MOBILE GROUPS

They perfectly adapt to any use and cover every crushing need (from primary to tertiary, with impact crushers, cone and jaw crushers) and sorting (horizontal screens up to 1800x6000 mm² screening surfaces and high frequency screens with independent vibration surfaces).

All are equipped with dedicated loading hoppers and feeders that allow a multi-stage plant to be created, which is versatile and well balanced in terms of consumption and production capacity.



Equipped with fully computerised control systems that supervise correct functionality of the machine, and connected via remote control (as standard) that allows control of the devices on board (movement included) while staying a conveniently safe distance away.

All the units are equipped with an auxiliary jackhammer to allow overly large blocks to be crushed inbound of the crushers.

Perfect both for aggregate recovery and recycling of demolition debris (can be equipped with a magnetic conveyor for metals separation).

SCREENING AND WASHING

Vast range of screening machines for screening and washing machinery, innovative in the mining and washing sector of aggregate material.



HORIZONTAL SCREENS

The screens manufactured by KPI-JCI give the highest productivity, yet they have a compact height. The THREE-shaft design produces an oval movement of the screening surface that avoids clogging the mesh; additionally, this movement is adjustable in intensity and inclination to better adapt to the material which must be screened.

The combination of these factors ensures KPI-JCI horizontal screens are the longest lasting and most efficient in the world.

INCLINED SCREEN

The inclined screens offered range from the classic single shaft screens, manufactured by Tecno-Beton, to double shaft screens for heavy use. Production by our American partners, KPI-JCI and Telsmith, covers all types of inclined screens, from scalpers to finishing screens with dimensions up to 2400×7000 mm.

Produced using various inclinations and structural requirements, the screens proposed by Tecno-Beton cover the entire range of applications in the material sorting sector, with all types of screening surface: bars, wire, rubberised sheet metal or polyurethane.



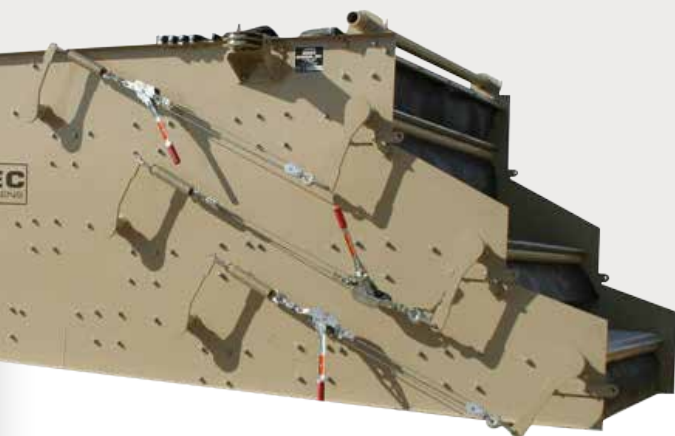
Designed by KPI-JCI to further improve the horizontal screens, they are a decisive step forward in screening technology.

They combine elliptical motion of the three-shaft system with the benefits obtained by differentiated inclination of the first screening metres.

By doing so, sorting efficiency is further increased, taking full advantage of the screen surface even from the last level.

HIGH FREQUENCY SCREEN

A true “revolution” introduced by Astec Mobile Screens. The vibrating units on these machines are hydraulic and the rotation speed of the eccentric weights reach 4500 rotations/minute, i.e. 4 times faster than traditional screens. This unique characteristic enables increased efficiency of the screen compared to a traditional screen with the same screening mesh. This leads to a considerable reduction in screen size, however the same production is guaranteed. In addition, these screens can screen material, without clogging, with humidity up to 8-9% on 3 mm mesh, compared to a maximum of 3-4% on a traditional screen, thereby guaranteeing “dry” screening even in unfavourable climatic conditions, such as fog or rain.



COMBO SCREEN



ROTATING SCREEN



The rotating screens manufactured by Tecno-Beton are characterised by high strength which, associated with very simple use, makes them perfect to use as pre-screens to prepare material for subsequent crushing and sorting steps. Encapsulated in a screened structure, which makes moving parts inaccessible, they can host screen surfaces in rubberised sheet metal or polyurethane, based on screening needs.

CRUSHING

Vast range of machines for primary, secondary and tertiary crushing of aggregates.



JAW CRUSHER

MAXIMUM PRODUCTIVITY AND INNOVATIVE DESIGN

- Capacity up to 1500t/h.
- Openings from 250mm to 1400mm.
- Hydraulic adjustment: allows zero time adjustment of jaw opening.
- Strong frame with easy to access zones.
- Forged eccentric movement, increasing the life of the bearings.
- Reversible wear parts to maximise consumption.
- Flywheel movement to reduce the power used and to improve fluidity of movement.
- Hydraulic protection from overloading and to avoid entrapment of metal parts.
- Welding with anti-stress heat treatment.

CONE CRUSHER

EXCELLENT TECHNOLOGY

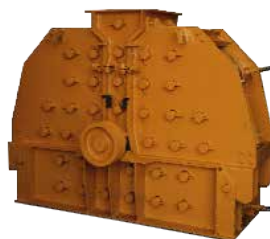


- Capacity up to 2200t/h.
- Power up to 900Hp.
- Both tertiary and secondary (with extra-wide camera, accepting pieces up to 310mm).
- Hydraulic opening system of the chamber for easy maintenance.
- Hydraulic protection against overloading and clogging.
- "No load anti-spin" system which enables production of a highly cubic product.
- Remote control of all the machine parameters using a dedicated touch screen, with forecast and compensation of wear.
- Large inlet for high performance.
- Dynamic adjustment also when loaded.

TERTIARY IMPACT CRUSHER

FINANCIALLY BENEFICIAL AND FUNCTIONAL

- Capacity up to 80t/h.
- Feeding up to 80mm.
- Opening using hydraulic pistons for total accessibility during maintenance and cleaning.
- Rotor with 2 fixed hammers.
- Double rotation direction.
- Reversible and adjustable hammers for total consumption of worn parts.
- Wear plates completely interchangeable.
- Adjustable impact plates for improved definition of the product particle size.



HSI IMPACTER

MAXIMUM RELIABILITY AND CONVENIENCE

- Capacity up to 1000t/h.
- Feeding up to 1000mm.
- Hydraulic adjustment of the casings position.
- Hydraulic opening for rapid and safe maintenance.
- Reversible and two-directional hammers for total consumption of worn parts.
- Rapid access windows to hammers which allow quick replacement, rotation and control.
- High inertia solid rotor for smooth operation.
- Casings with rapid interchangeable system and protected fastenings, to avoid wear of supports.

Available in Andreas or New-Holland configuration.



VERTICAL SHAFT IMPACTER (VSI)

TOTAL VERSATILITY

- Capacity up to 450t/h.
- Feeding up to 150mm.
- Three configurations available:
 - classic with casing to produce more sand;
 - totally autogenous, as a shape corrector;
 - semi-autogenous (intermediate);
 - easily interchangeable configurations;
 - reduction ratio up to 10:1;
 - reversible and adjustable wear parts to maximise consumption;
 - the highly efficient design reduces consumption;
 - hydraulic opening system of the crushing compartment;
 - reduced maintenance times allowing convenient access from above to wearing parts;
 - height adjustable feeder tube to limit consumption of wearing parts of the rotor;
 - single and dual engine configurations.

SAND RECOVERY



CYCLONE SYSTEMS

They are sand thickening systems using cyclones. Composed of a water-aggregates mixing collection tank and a pump that intakes from the tank, they feed a cyclone (Krebs make) which unloads the thickened sand onto a dewatering screen. The cyclone overflow can be sent to clarifying units or sent back to the collection tank. Design and manufacture of the cyclone systems are completely carried out by Tecno-Beton, therefore adapted to production requirements on request.

FINE MATERIAL WASHER



Manufactured by KPI-JCI in America, the fine material washer is a valid alternative to bucket wheels, guaranteeing large capacities and taking up less space. At the same time, they allow washing of material and elimination of light and floating parts (wood, roots, turf) thanks to the water backflow. The conveyor augers of the material can be covered in polyurethane plates or steel sheets, which are anti-wear, according to the application.

LOG WASHER



The log washers proposed by Tecno-Beton are used to separate the aggregate from the clay, which dissolves in water, and is sub-divided into two classes:

- Log washer manufactured by KPI-JCI in America made with a single or double spiral which scrubs the material submerged in a water flow; this mechanical action separates the aggregate from the clay.
- Scrubbers produced by Tecno-Beton Impianti. They are simple and efficient machines capable of separating the aggregate from the clay by overturning the water/aggregate mixture inside a washing cylinder.

DEWATERING SCREEN



Tecno-BetonImpianti manufactures horizontal dewatering screens, normally used to dewater sand arriving from the washing and sorting process. The screening surface is typically manufactured in polyurethane drainage panels and motion is driven by two synchronous electric vibrators.

Large dewatering screens with 2 or 4 vibrating parts, measuring up to 3000×8000 mm and with multiple screening surfaces, they are manufactured by Osborn (ASTEC group) and sold in Italy by Tecno-Beton.

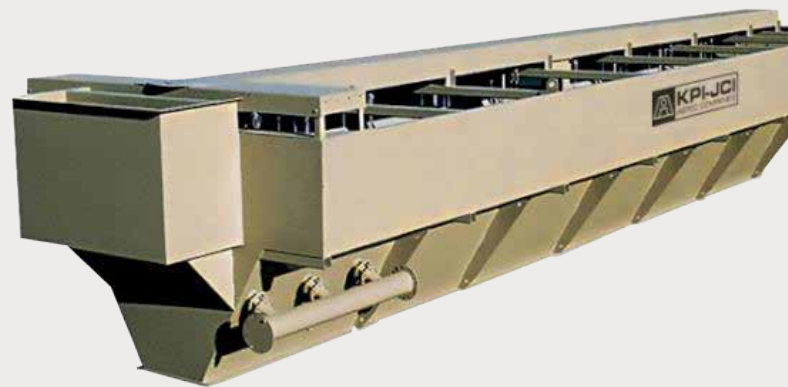
BUCKET WHEELS



SETTLING TANKS

The settling tanks classify the sand they process thanks to natural “settling” of particles of sand in a water flow. The water enters the tank from one of the two ends and flows towards the opposite end. During the journey, the suspended sand granules settle, starting with the largest up to the smaller ones. This is how sand distribution is obtained, with the “coarser” granules near the entrance and the “finer” ones near the exit.

The bottom of the tank contains tapered bulkheads for material collection, the bottom of which contains the valves to discharge deposited sand. By doing so, sand classification is obtained reaching particle sizes up to 100 micron.



Bucket wheels manufactured by Tecno-Beton offer a wide range of configurations:

- with single or double auger;
- with side or central unloading;
- single or double unloading;
- with optional washing of recovered material.

UNDERWATER EXCAVATION

EXCAVATION TECHNOLOGY



FLOATING GRAB DREDGES

Thanks to the experience of global leaders in excavation floating plants (ROHR), we can propose dredges with unrivalled performance and with a sophisticated, yet robust technological heart, which guarantees complete control at any time of excavation operations.

STRENGTHS LIE IN THE EXCELLENT QUALITY OF THE MATERIALS USED, RELIABILITY-FOCUSED DESIGN OF THE STRUCTURES WHICH CAN WITHSTAND EXTREME FORCES, ACCURATE ASSEMBLY EVEN OF THE SMALLEST DETAIL AND RAPID SUPPORT THROUGHOUT EUROPE.

TECNO-BETON SRL can also provide a transformation (from rope grabs to electro-hydraulic grabs) and modernisation service of existing dredges.

With hydraulic grabs up to 15m³ and roped up to 10m³. Winch up to 50t pulling

force, with a dual engine and central reducer that distributes the force over two rope winding drums and shortens the length of the shaft and traction, avoiding its bending under force.

Production up to 500m³/h (according to the excavation depth).

Excavation depths from 10 to 180m.

- Catamaran or closed configuration (in simple version or double grab version).
- Diagnostic system with GPS enabling orographic reconstruction of the excavation area.
- Fully automatic or completely manual functionality.
- Material washing and sand recovery system on board allowing clean material to be obtained without fine sand loss.
- Spare parts always in stock in the warehouse for immediate support.

HYDRAULIC GRABS

MAXIMUM EFFICIENCY

For underwater excavation to 180m deep.

- Capacity from 3 to 15m³.
- Reinforced pistons for strong, safe operation.
- Hydraulic, waterproof and atmospheric pressure system (avoids oil leaks).
- Integrated diagnostics system for working parameters: pressure and temperature of oil, grab inclination, closure percentage of valves.



- Complete servicing of used grabs with total regeneration of the mobile parts and the hydraulic system.
- Gathering and excavation configurations.
- "Long life" bushings and pins.

BUCKET LADDER DREDGES

Bucket ladder dredges are simple and financially beneficial machines capable of providing vast production at low cost (both energy and purchase). The range of machines manufactured by ROHR Bagger (for which Tecno-Beton Impianti has the Italian dealership) is sub-divided into two categories:

- tracked machines, which move on the edge of the quarry area, unloading the gathered material on the ground along the slope face;
- floating machines that assemble a chain of buckets capable of excavating while floating on the quarry lake (the material is brought to the ground using a chain of floating conveyors).



Available in various excavation capacities and configurations, they can reach a depth of 20 m.

SUCTION DREDGES

IDRECO manufactures suction dredges with proven high performance, capable of excavation to a depth of 200 m, using a series of technological measures forming part of the company's technical baggage, starting with pumps (with a suction diameter that can reach 750 mm) entirely manufactured and designed by IDRECO to obtain maximum head and capacity of the load.

The machines proposed are both diesel and electrically powered (as the client prefers) with an excavation head mainly built around a hydro-jets system (water jet cutter) making the structure of the machine lighter than milling, allowing contained purchasing and operating costs.



FLOATING BARGES



Intended to collect waste unloaded from the hydraulic grid of the dredge, it has a structure composed of floats equipped with inner divisions and a manhole for inspection. Opening and closure of the base are automatically activated using a hydraulic device that commands 2 pistons serviced by a pump controlled by the thrust engine. The floating barge is supplied with safety railings along the entire perimeter and around the material collection tank. Machine propulsion is ensured by a diesel engine that activates a hydraulic engine used for thrust and direction.

FLOATING CONVEYORS



Tecno-Beton manufactures the entire range of floating conveyors necessary to transport aggregates extracted by the dredge onto the ground. Based on configuration and use, they are divided into:

1. Standard floating conveyors:

- built with a trellis that rests on two floats placed on the ends;
- with a rotating slewing ring, it enables linkage of multiple belts to guarantee correct placement of the material from one conveyor to the next and at the same time enabling rotation of the connection point,
- normally composed of two side gangways to allow convenient maintenance on all sides;
- of standard length at 28 m, they can be manufactured with larger spans, according to client requirements.

2. Catamaran conveyors:

- they are conveyors resting on two, continuous parallel lines of floats, designed to cover long transport distances on water;
- they are equipped with a rotating slewing ring which enables linkage of multiple belts, both catamaran and standard type;
- equipped with gangways on both sides to guarantee safety during all maintenance phases;
- the length varies based on client requirements, up to 200 m.

3. Land-Water conveyors:

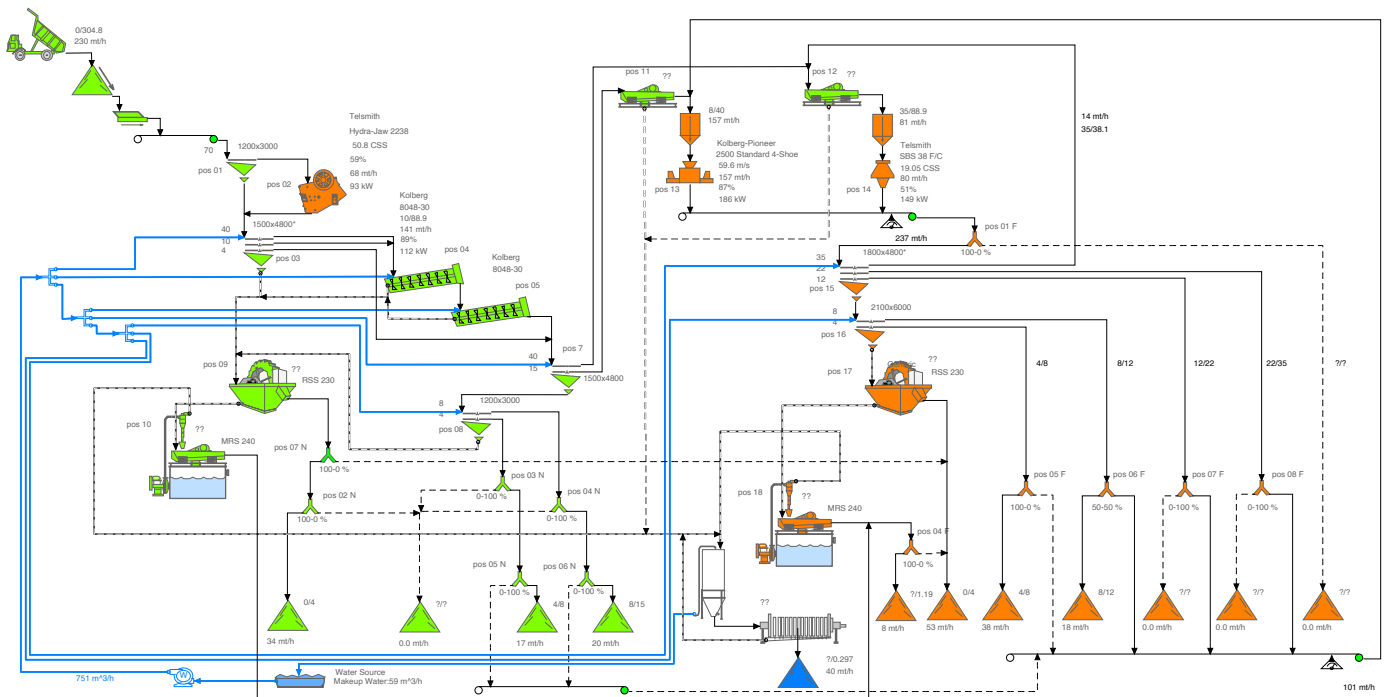
- they are used to connect the chain of floating conveyors to land;
- they are composed of a trellis with a 35m span with a support on the ground, on a rotating slewing ring and one on the opposite end on a float in the water.

All conveyors can be manufactured with widths up to 1400 mm.

CRUSHING AUTOMATIC CONTROL

ALL IN YOUR HANDS

- Complete control of the start-up, shut-down and emergency sequence of the plant.
 - Level sensors for hoppers, silos and crushers.
 - Speed sensors of the conveyors, filling sensors of the unloading openings.
 - Angular orientation sensors on the material flow deflectors.
 - Current absorption measurement of the machines with alarm thresholds and automatic safety intervention.
 - Belt weighing systems for efficient measurement of production.
- Display of plant parameters and control via the workstation in the air conditioned cabin.
- Memo of the necessary maintenance intervention, which can be defined by the user based on the count of hours the machine has worked.
 - Maintenance and instruction manuals of all the machines available on line, directly on screen.
 - Remove control of oil-pneumatic movements (bulkheads, overturning grids, feeders...) and electrical movements (slewing, inverter...).
 - Special functionalities can be installed at the client's request.
 - Functionality is fully automatic, semi-automatic with control of the previous start-ups and fully manual to allow testing and maintenance of specific machines.





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