

desde 1947



M.R.

GENERAL CATALOG

June, 2010



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Ingeniería y Construcciones Salas Hnos. Ltda.

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desde 1947



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HISTORIA

Nuestra historia comienza en Santiago de Chile, Sudamérica, en el año 1947, como un pequeño taller de electrotecnia dedicado a la reparación y fabricación de maquinaria agrícola e industrial.

Fundada por Andrés y Angel Salas, llegó pronto a ser una de las más importantes maestranzas metalmecánicas de Chile, dedicada de lleno a la fabricación y reparación de maquinarias de chancado para moliendas y para la industria minera.

HISTORY

Our company's history begins in 1947, in Chile, South America. We started as a small electro-mechanic workshop, dedicated to the manufacturing and repair of agricultural and manufacturing machinery.

Founded by Andrés and Angel Salas, it soon became one of the most important metal-mechanic workshops in Chile, fully dedicated to the manufacturing and repair of milling and mining crushing equipment.



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LABORATORY LINE ©



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SPECIFICATIONS

JAW CRUSHER - PILOT

LABORATORY EQUIPMENT

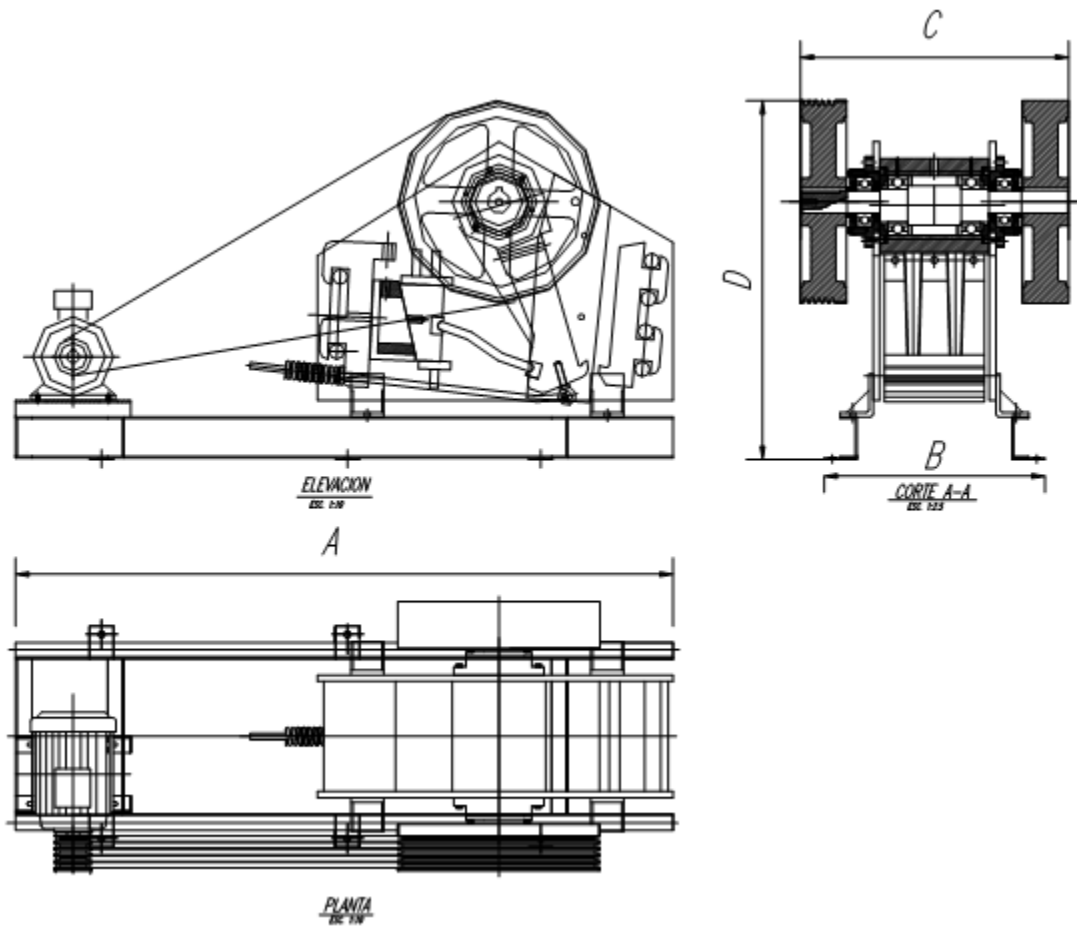
MOTOR				WEIGHT
MODEL				
4" X 6"	5 HP	350 RPM		560 KG
5" X 8"	7.5 HP	275 RPM		660 KG
4" X 12"	7.5 HP	275 RPM		1000 KG
8" X 12"	10 HP	250 RPM		1500 KG
10" X 16"	25 HP	250 RPM		2450 KG
10" X 20"	30 HP	225 RPM		3100 KG
15" X 24"	40 HP	200 RPM		5500 KG

THEORETIC OUTPUT CAPACITY MTPH – JAW OPENING SETTINGS

MODEL	¼"	½"	¾"	1"	1 ¼"	1 ½"	2"	2 ½"	3"
4" X 6"	0.75	0.8	1.2	1.5	2	2.5	4	5	---
5" X 8"	0.9	1.2	1.8	2	2.5	3	6	7	12
4" X 12"	1.5	1.6	2.4	3	4	5	8	10	---
8" X 12"	---	2	2.5	3	3.5	4	8	9	15
10" X 16"	---	---	5	7	8	10	16	20	30
10" X 20"	---	---	---	---	---	29	38	47	56
15" X 24"	---	---	---	---	---	36	45	54	63

THEORETIC OUTPUT CAPACITY MTPH – JAW OPENING SETTINGS – FLAT JAW - ½" LIMESTONE FEED

MODEL	1MM	2MM	3MM	4MM
5" X 8"	0.170	0.260	0.405	0.55
4" X 12"	0.340	0.520	0.810	1.1



JAW CRUSHER

LABORATORY EQUIPMENT

MODEL	A	B	C	D
4"X6"	1500 MM	432 MM	510 MM	900 MM
5"X8"	1500 MM	532 MM	575 MM	965 MM
4"X 12"	2000 MM	532 MM	510 MM	965 MM
8"X12"	2000 MM	672 MM	816 MM	1090 MM



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Robust **Cone Crusher** manufactured of ASTM A37 steel, has support base, sample reception hoppers and conic entry chute.

All motor moving parts are protected.

It includes motor and pulleys.

Models GR 10 and GR 12 selection depending on processing needs.

10:1 theoretic reduction rate.

SPECIFICATIONS

CONE CRUSHER - GYROLL

LABORATORY EQUIPMENT

MODEL	DIAMETER	MOTOR		WEIGHT
GR-10	10"	3 HP	650 RPM	200 KG
GR-12	12"	4 HP	750 RPM	250 KG

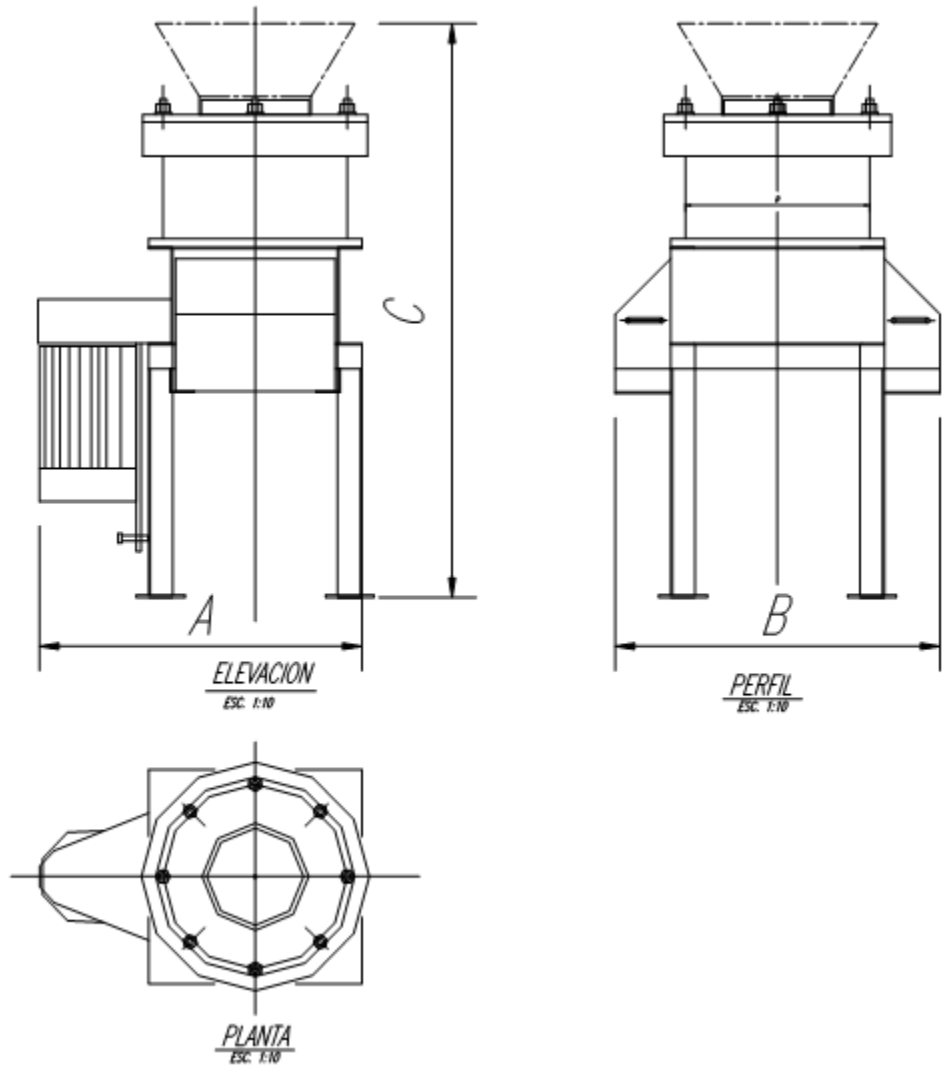
OPENING SETTINGS

MODEL	IN (MAX)	OUT (MIN)
GR-10	3/8"	#40
GR-12	7/16"	#35

10:1 REDUCTION RATE

THEORETIC OUTPUT CAPACITY MTPH – OPENING SETTINGS

MODEL	1.5 MM (1/16")	6 MM (1/4")	12 MM (1/2")
GR-10	0.150	0.225	0.3
GR-12	0.2	0.3	0.4



CONE CRUSHER

LABORATORY EQUIPMENT

MODEL	A	B	C
GR 10	666 MM	670 MM	1181 MM
GR 12	716 MM	720 MM	1230 MM



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Robust **Roller Crusher** with steel-manganese rollers, mounted over monoblock bearings.

It includes transmission belts, protective covers, removable sample reception hopper and lower box.

Mechanical setting adjustments.

It has T1 steel plate sidings in crusher zone.

Top working speed range: 237 to 260 rpm.

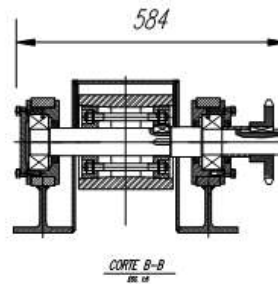
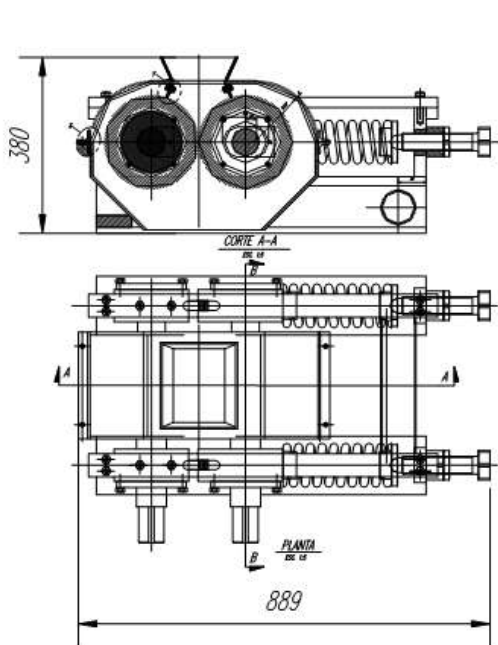
SPECIFICATIONS

ROLLER CRUSHER			LABORATORY EQUIPMENT		
MODEL	MOTOR	WEIGHT	WIDTH	HEIGHT	LENGTH
8"X8"	2 - 2 HP	260 RPM	450 KG	600 MM	1350 MM
10"X12"	2 - 3 HP	260 RPM	525 KG	700 MM	1350 MM

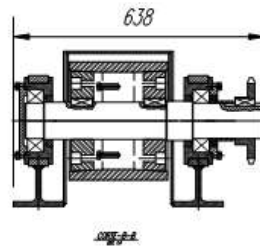
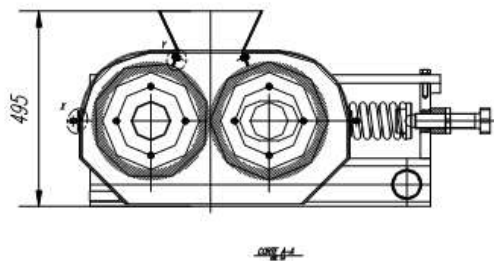
OPENING SETTINGS			THEORETIC OUTPUT CAPACITY MTPH
MODEL	IN (MAX)	OUT (MIN)	MTPH
8"X8"	1/2"	1/32"	2.5
10"X12"	3/4"	1/16"	4.0

THEORETIC OUTPUT CAPACITY MTPH – OPENING SETTINGS					
MODEL	0.5 MM	1 MM	1.5 MM	2.0 MM	2.5 MM
8"X8"	0.55	0.75	0.95	1.15	1.35
10"X12"	0.88	1.2	1.52	1.84	2.16

LIMESTONE FEED



Model 8x8



Model 10x12





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Ball Mill built over a tubular framed work table, includes control panel with RPM digital counter. Automatic stop.

The steel cylinder sits over bearings, 12" inside diameter, 12" long.

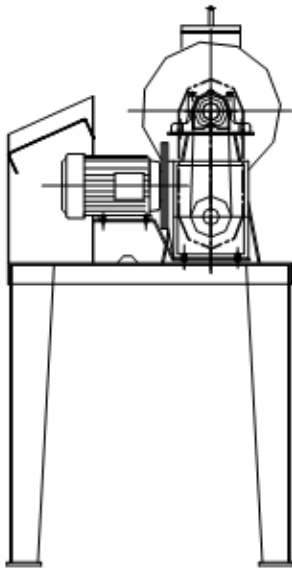
This mill includes: motor, pulleys and protections, as well as, a material receiving bin.

SPECIFICATIONS

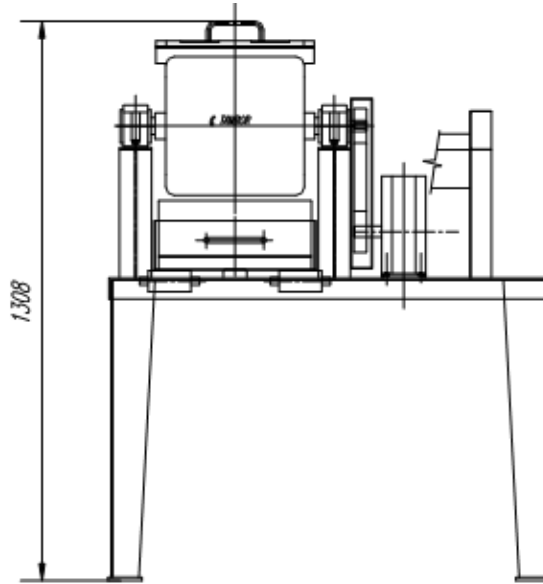
BALL MILL – FC BOND

LABORATORY EQUIPMENT

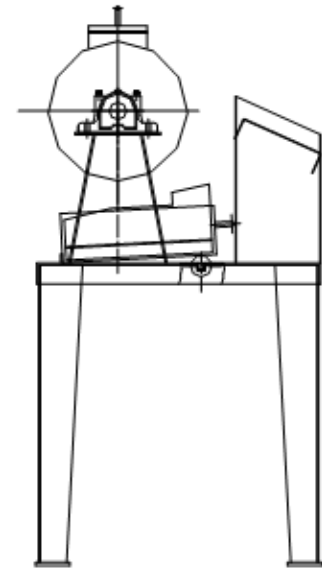
MOTOR		WEIGHT	WIDTH	LENGTH	HEIGHT
1 HP	ADJUSTABLE RPM	140 KG	1100 MM	1350 MM	900 MM



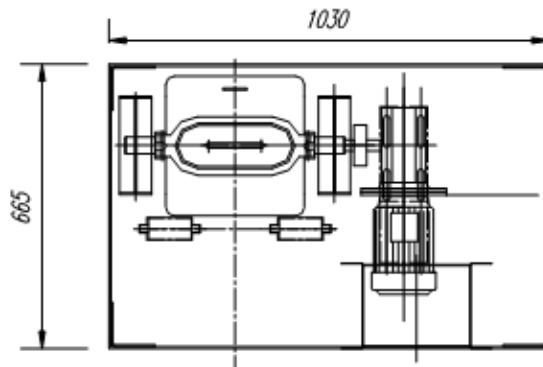
VISTA DERECHA
 ESC. 1:75



ELEVACION
 ESC. 1:75



VISTA IZQUIERDA
 ESC. 1:75



PLANTA
 ESC. 1:75

MODEL

1x1	1 ft x 1 ft
2x2	2 ft x 2 ft
3x3	3 ft x 3 ft
3x4	3 ft x 4 ft
4x4	4 ft x 4 ft
5x5	5 ft x 5 ft



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SPECIFICATIONS

VIBRATORY CUP MILL – STANDARD

LABORATORY EQUIPMENT

MODEL	MOTOR	WEIGHT	WIDTH	LENGTH	HEIGHT
STANDARD	1 HP 1200 RPM	225 KG	604 MM	700 MM	1300 MM

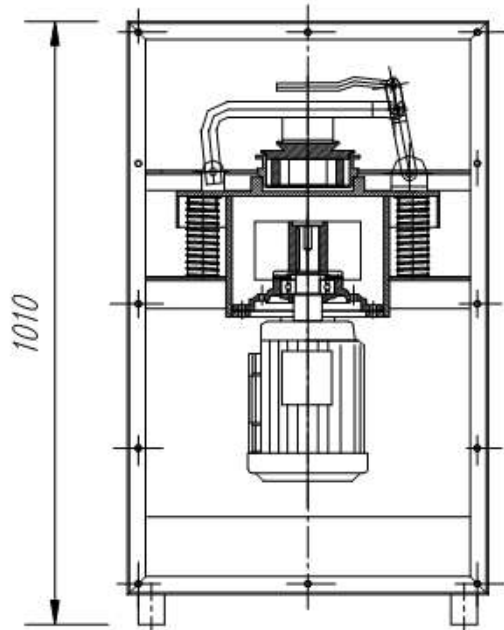
MODEL	CUP
STANDARD	125 CC

Our **Standard Vibratory Cup Mill** is designed for pulverization batch work.

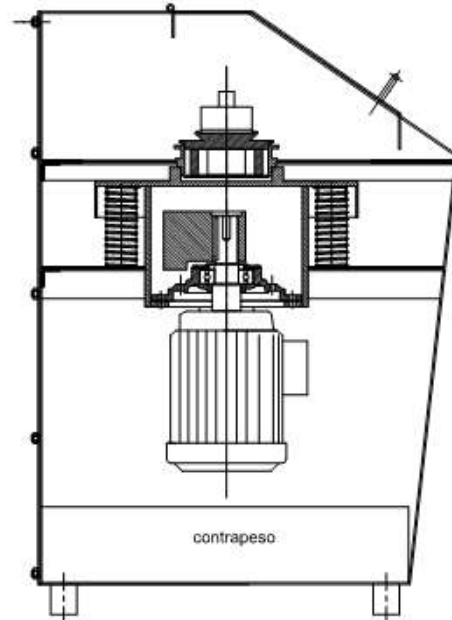
Includes a lateral electric control box.

Theoretic capacity of milling 95% of the product under 75 microns, within a process period of 2 to 3 minutes, subject to material properties.

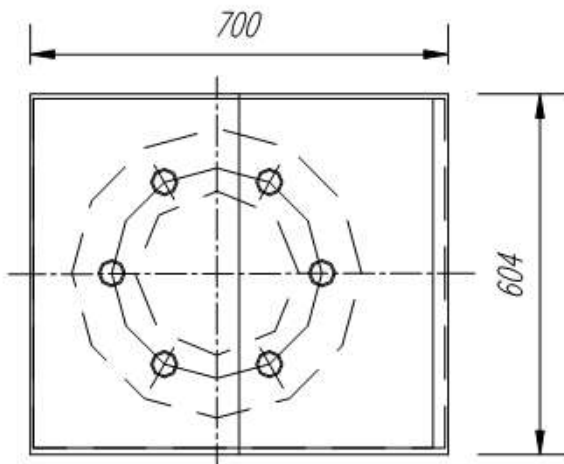
The Standard unit includes a 125 cc cup, with a mechanical seal system.



VISTA POSTERIOR
ESC. 1:10



ELEVACION
ESC. 1:10



PLANTA
ESC. 1:10



VIBRATORY CUP MILL – STANDARD

LABORATORY EQUIPMENT



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SPECIFICATIONS

VIBRATORY CUP MILL – HEAVY DUTY

LABORATORY EQUIPMENT

MODEL	MOTOR	WEIGHT	WIDTH	LENGTH	HEIGHT
HEAVY DUTY	3 HP 1200 RPM	250 KG	830 MM	830 MM	1565 MM

MODEL	CUP
HEAVY DUTY	250 CC

Our **Heavy Duty Vibratory Cup Mill** has been designed for continuous duty work under extreme conditions.

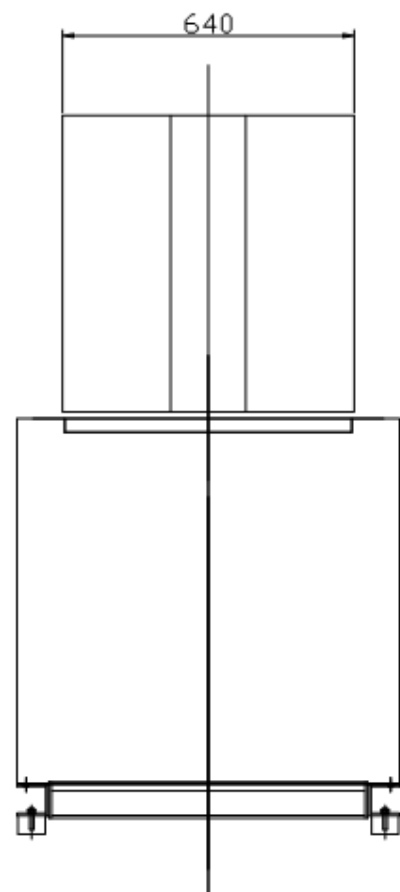
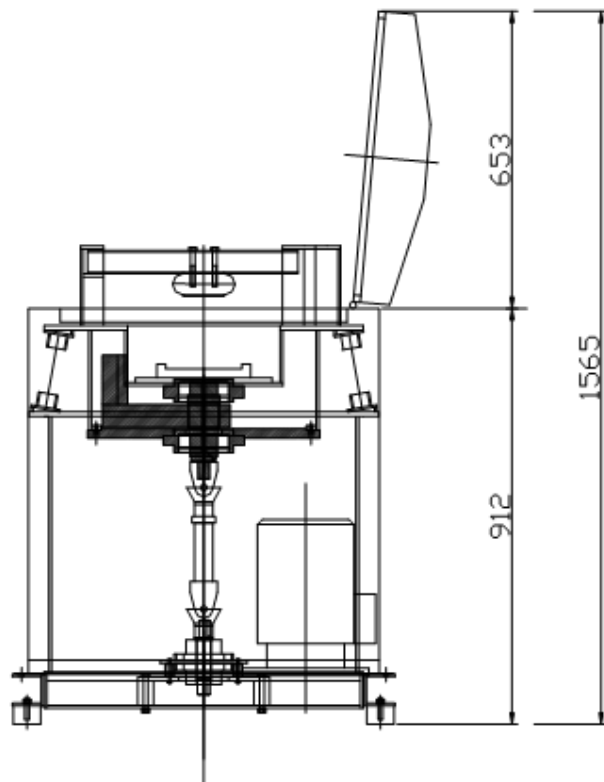
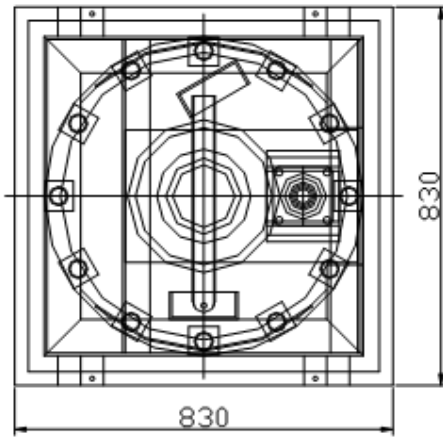
Conveniently located side control panel for ease of operation.

Theoretic capacity of milling 95% of the product under 75 microns, within a process period of 2 to 3 minutes, subject to material properties.

A strong unit which requires floor anchoring.

Transmission with cardan joint allowing a 24/7 work schedule.

This Heavy Duty unit has a 250 cc cup, but accepts up to a 500 cc cup, which needs compressed air to seal its cup.



VIBRATORY CUP MILL – HEAVY DUTY

LABORATORY EQUIPMENT



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Our **Denver Lab Pressure Filter** is designed to remove water from samples.

The amount of sample to be filtered in each step determines the filter's suitable size.

The filter has a relief-valve to release pressure before opening it.

The cylinder is manufactured in ASTM A37 steel with a trapezoidal screw coil. Clamps made of SAE 1045 drawn steel with thread and nuts.

Inside meshes and filters not included.

SPECIFICATIONS

PRESSURE FILTER – DENVER				LABORATORY EQUIPMENT		
MODEL	AREA	VOLUME	WEIGHT	WIDTH	LENGTH	HEIGHT
FDSAL08	58.4 SQ IN	3.0 GAL	50 KG	10"	13"	24"
FDSAL10	78.8 SQ IN	4.1 GAL	80 KG	13"	15"	28"



SPECIFICATIONS

SAMPLE SPLITTER – JONES

LABORATORY EQUIPMENT

MODEL	OPENING	WEIGHT	WIDTH	LENGTH	HEIGHT
CM 12	1/2"				
CM 16	5/8"				
CM 19	3/4"				
CM 25	1"				
CM 38	1 1/2"				
CM 50	2"				

Our **Jones Sample splitter** is designed for a rapid single-step reduction of large sample volumes.

Manufactured in two versions: stainless and ASTM A36 steel.

Opening sizes ranging from 1/2" to 3".

Each sample splitter has a feed hopper and two bins for the reception of processed samples, as shown in the picture.



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Laboratory Vibrating Screen made of A36 steel plate with steel supporting structure for handy ergonomic operation.

Uses a high frequency vibrating electric motor.

The equipment is mounted independently on springs.

Includes a feed chute at the top and an output chute at the bottom.

It has 2 trays, with a top register cover.

Epoxy paint finish.

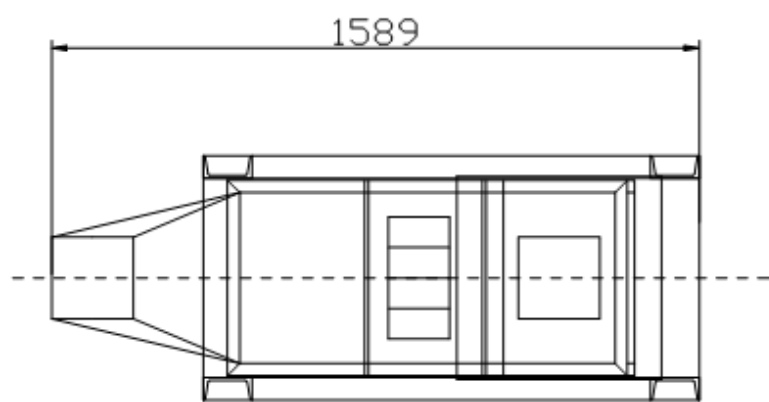
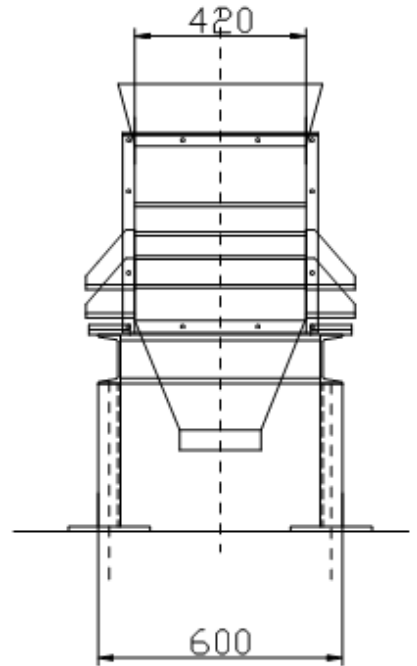
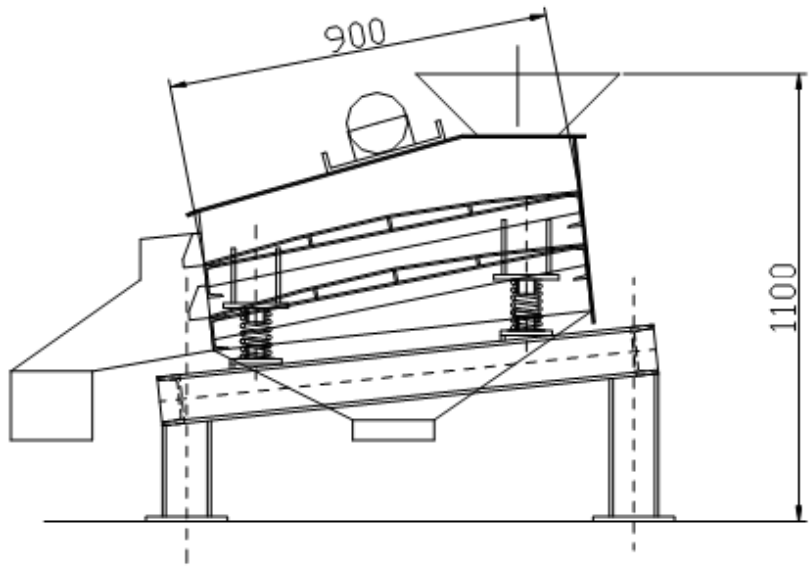
Decks included, sizes according to customer requirements.

SPECIFICATIONS

VIBRATING SCREEN – 420X900

LABORATORY EQUIPMENT

MODEL	MOTOR	WEIGHT	WIDTH	LENGTH	HEIGHT
420X900	3 HP 2800 RPM	150 KG	600 MM	1600 MM	1100 MM



VIBRATING SCREEN – 420X900

LABORATORY EQUIPMENT



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Lab Vibrating Sieve Screen, made of A36 steel plate with box and tray holder system, including 6 tray decks.

It has a manual hydraulic pump, an eccentric shaft mounted on bearings and a transmission driven by a V-belt.

Epoxy paint finish.

It includes 2", 1 1/2", 1", 3/4", 1/2", 3/8" trays.

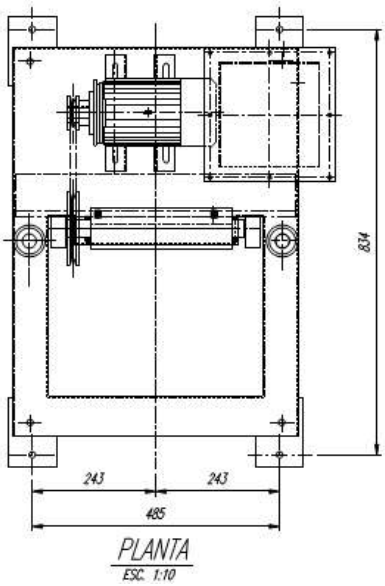
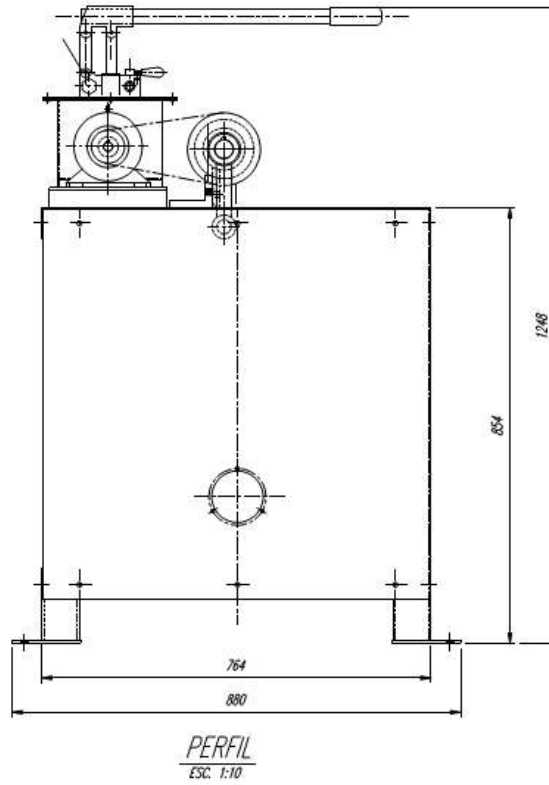
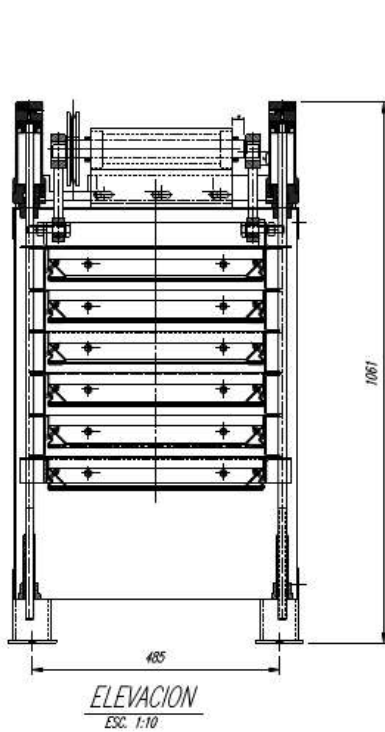
It also includes a reception tray for fine grain material (bottom level).

SPECIFICATIONS

VIBRATING SCREEN – SIEVE

LABORATORY EQUIPMENT

MODEL	MOTOR	WEIGHT	WIDTH	LENGTH	HEIGHT
SIEVE	1.5 HP 630 RPM	150 KG	600 MM	800 MM	1200 MM



VIBRATING SCREEN – SIEVE

LABORATORY EQUIPMENT



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Air Drying Oven for samples.

Temperature control between 30 °C and 300 °C.

It includes an electric blower forced ventilation system for moisture removal, a control panel and 8 trays of 11" x 15".

The oven's insides are made of stainless steel, as well as, the trays' supports.

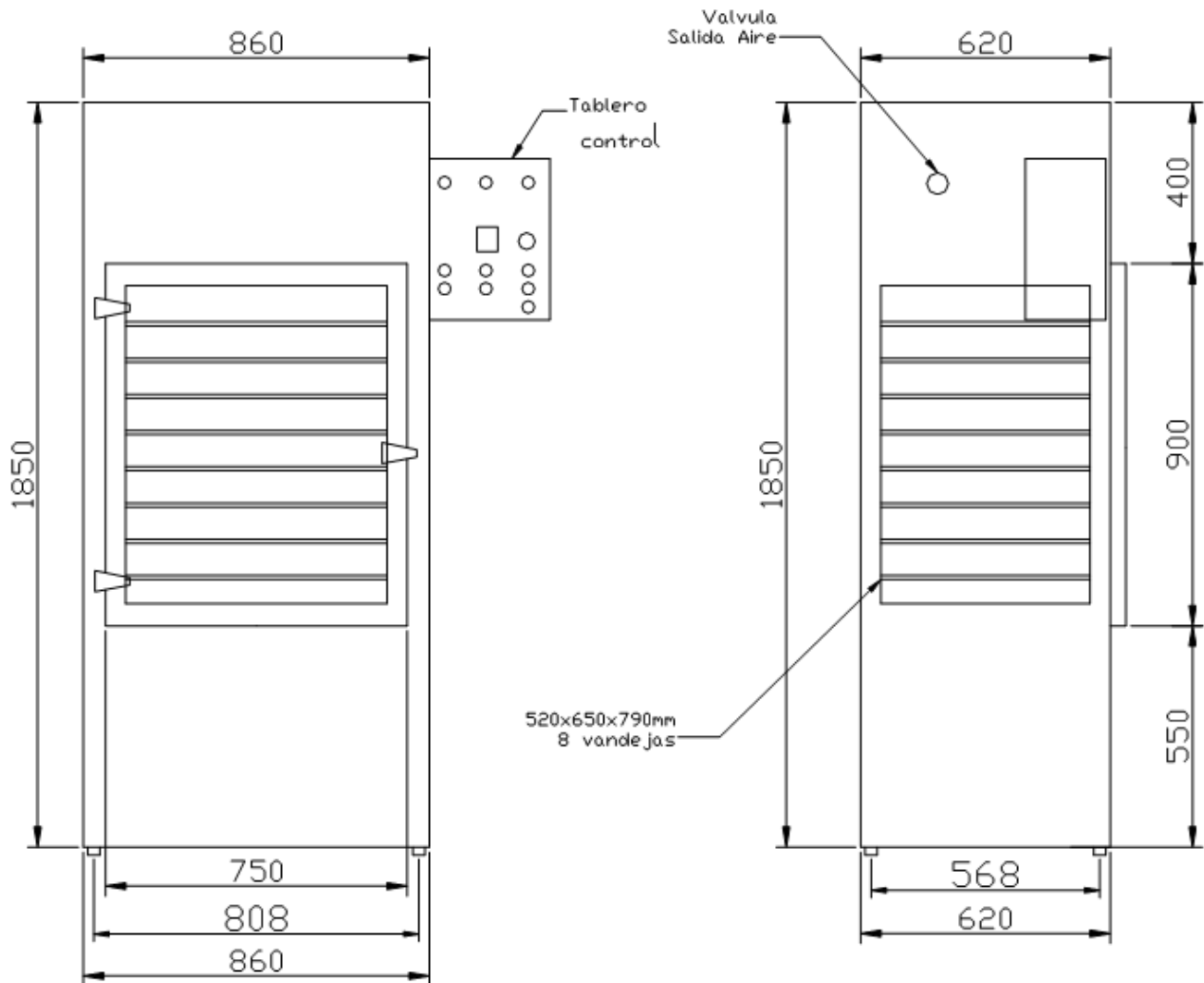
SPECIFICATIONS

AIR DRYING OVEN - 600X800

LABORATORY EQUIPMENT

MODEL	MOTOR		WEIGHT	WIDTH	LENGTH	HEIGHT
600X800	2 HP	RPM	150 KG	1100* MM	650 MM	1850 MM

* WIDTH INCLUDES CONTROL PANEL



AIR DRYING OVEN – 600X800

LABORATORY EQUIPMENT



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Our Flotation Cells are designed for simplicity of operation.

The Standard Salas Cell to Cell Flotation Machine is a durable piece of equipment, made to last for many years.

It has three main parts: a tank, a control panel assembly, and mechanisms for agitation and aeration.

Manufactured in ASTM A36 steel , protections for V-belts and all movable parts.

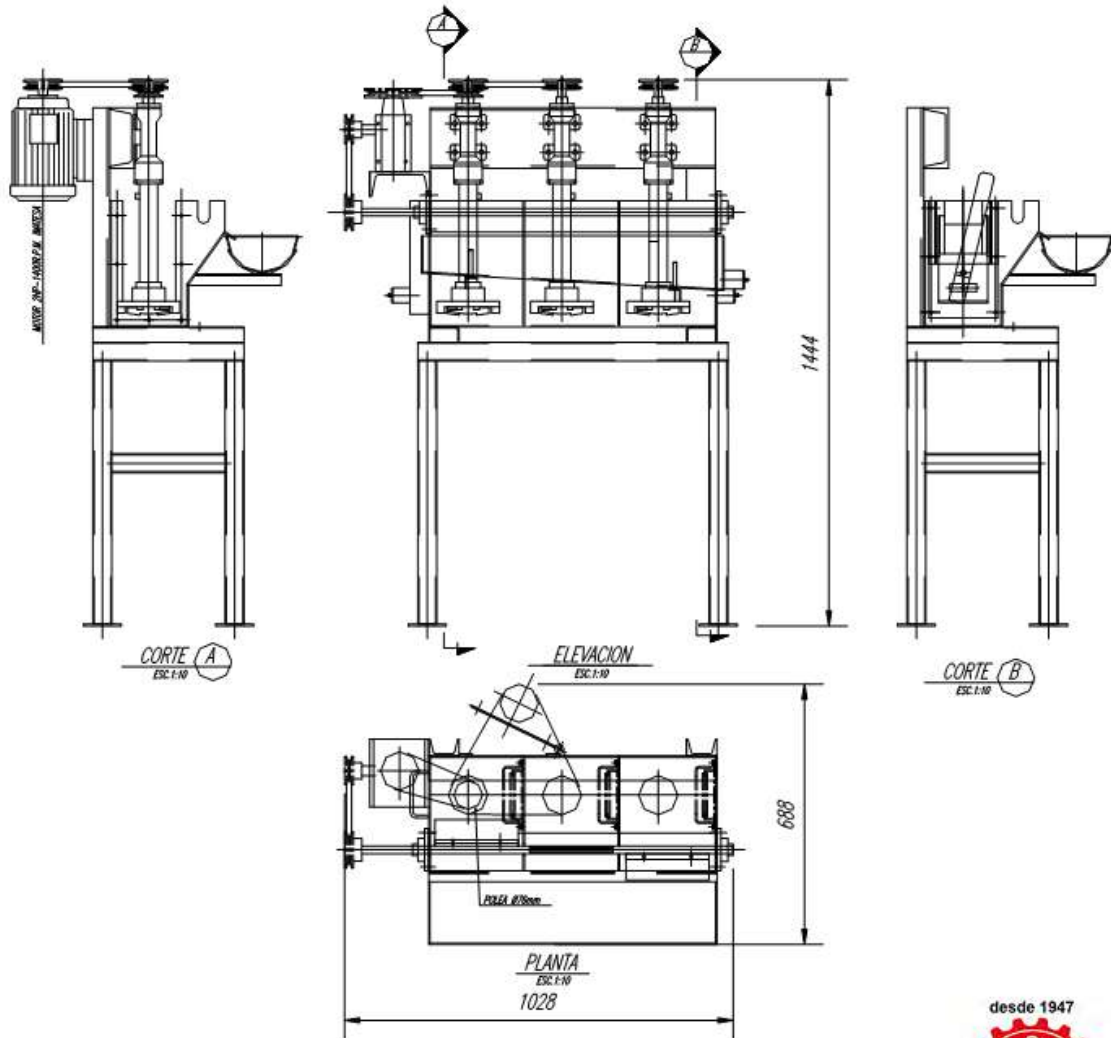
Epoxy paint finish.

SPECIFICATIONS

FLOTATION CELLS – DENVER				LABORATORY EQUIPMENT	
MODEL	MOTORS			CELLS	VOLUME
CFSAL05	3	1.5 HP	1500 RPM	6	0.70 CU FT
CFSAL07	3	3 HP	1500 RPM	6	1.90 CU FT
CFSAL08	3	3 HP	1500 RPM	6	2.75 CU FT



D05 MODEL

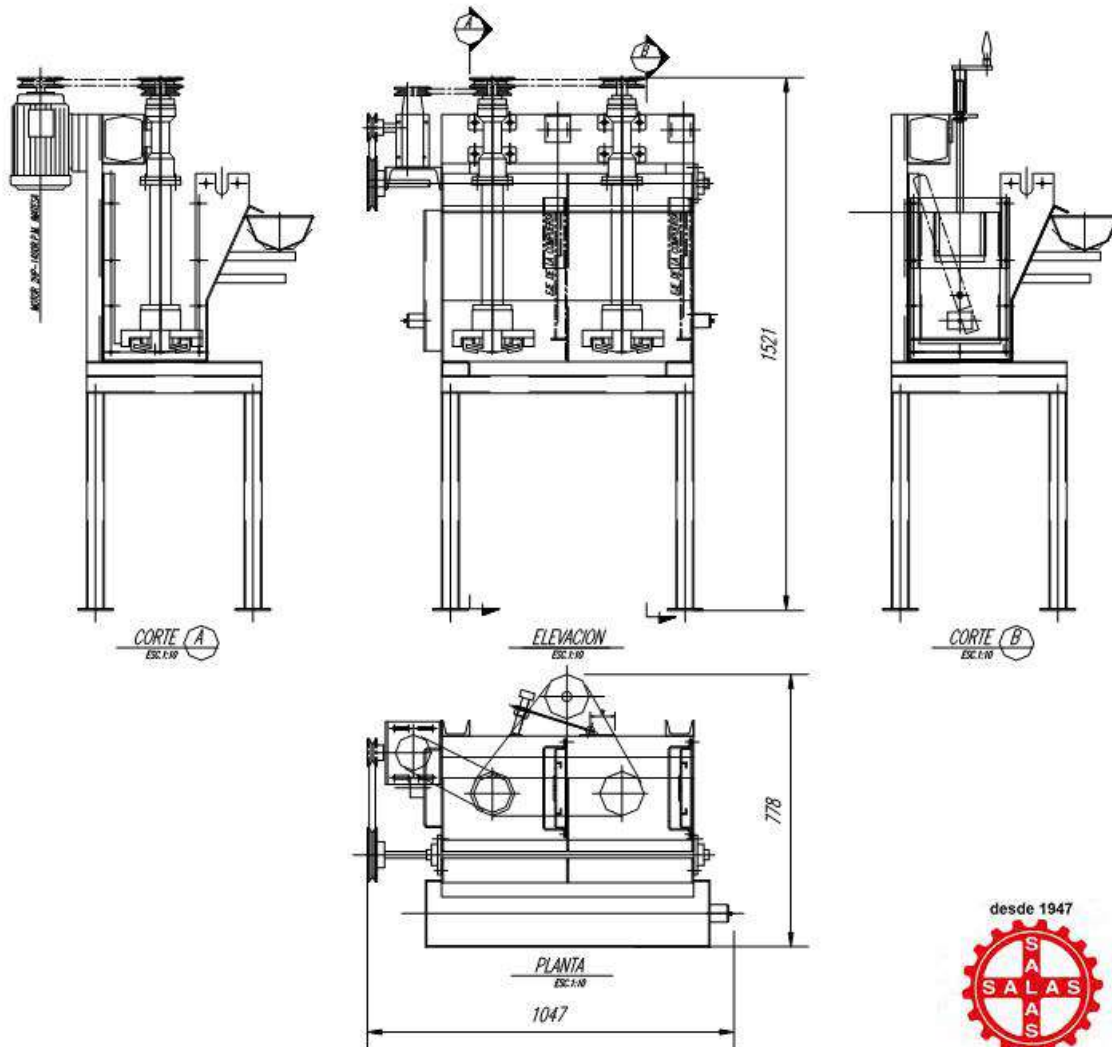




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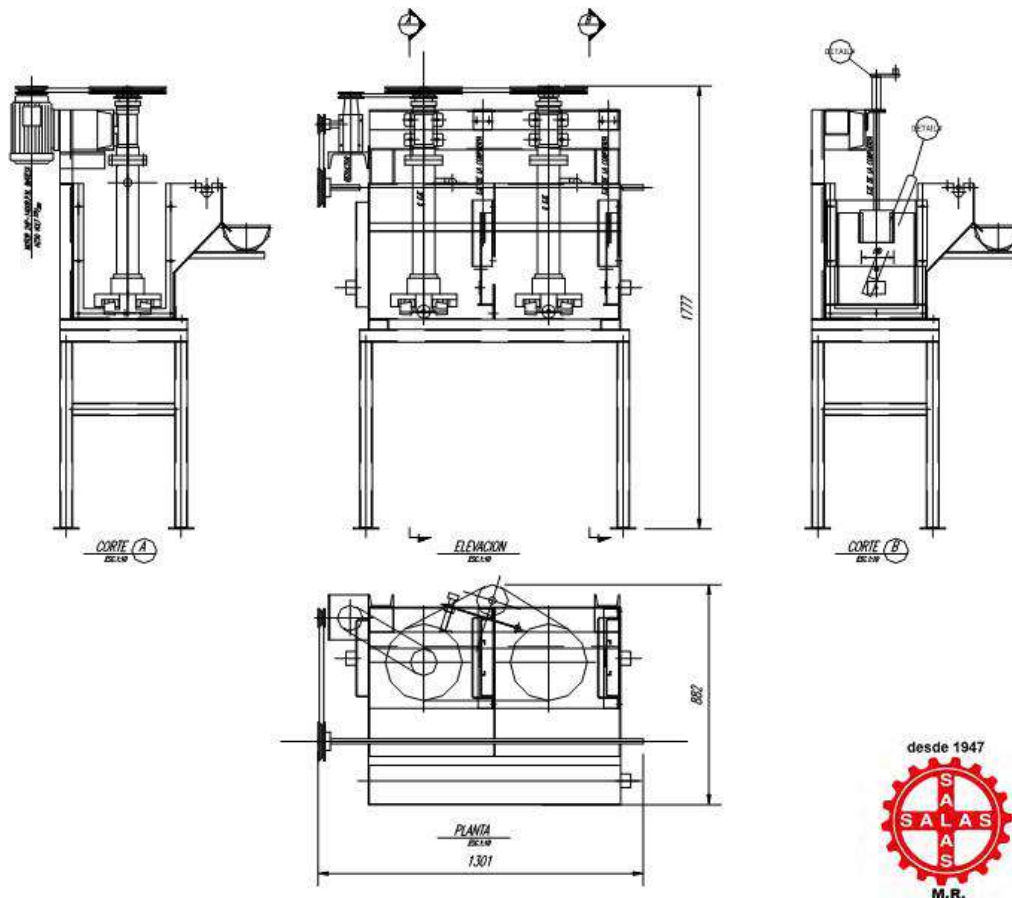
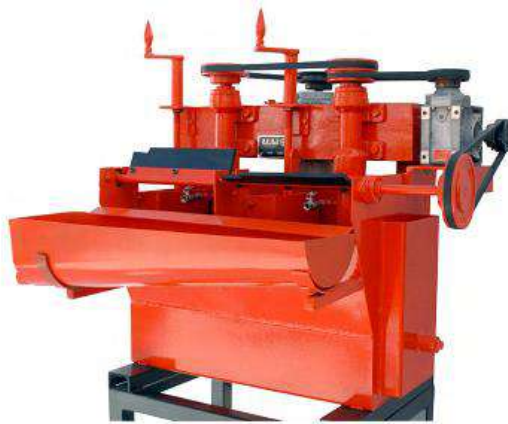
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D07 MODEL





D08 MODEL



FLOTATION CELLS – DENVER

LABORATORY EQUIPMENT



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SAMPLE CROSS CUTTER

LABORATORY EQUIPMENT

Sample Cross Cutter with a straight track, length according to process or customer specification.

Manufactured with ASTM A36 steel plates, thickness according to design.

Powered by either an electric or hydraulic motor reducer. Includes an electromechanism to move sampling cup.

Cup moves with cross carriage, which has speed adjustments and includes return sensors at the ends.

Includes sampling “bottom dump” type cup with speed and capacity according to design, stainless steel (interchangeable) liners.

Design reinforced for continuous heavy duty operation.

The Cutter box is sealed against dust, including a pressurized air intake from the top. The kit includes an electric panel box.

Design. Unit shown is for reference, but varies according to customer requirements.

SP-10 and epoxy paint finish.



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Secondary (or tertiary) Sample Cutter, with a cone shaped hopper made of A-36 steel .

Constant paddle speed, 90 degree flow cutter with exits for samples and rejects, paddle opening size set by design, quick discharge system.

Creeper motor, 3 Phase. Includes electric control panel.

Image shown varies according to model size. Standard models sizes for 16", 20", 24", 28" and 40" diameter.

SP-10 finish treatment with Epoxy paint coating.

SECONDARY SAMPLE CUTTER – VEZIN

LABORATORY EQUIPMENT



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il

re with

v, 380

SPECIFICATIONS

CONDITIONER

LABORATORY EQUIPMENT

MODEL	VOLUME	DISCHARGE
COND 15	15 LT	06-10-15-20 LT
COND 150	150 LT	100-130-150 LT



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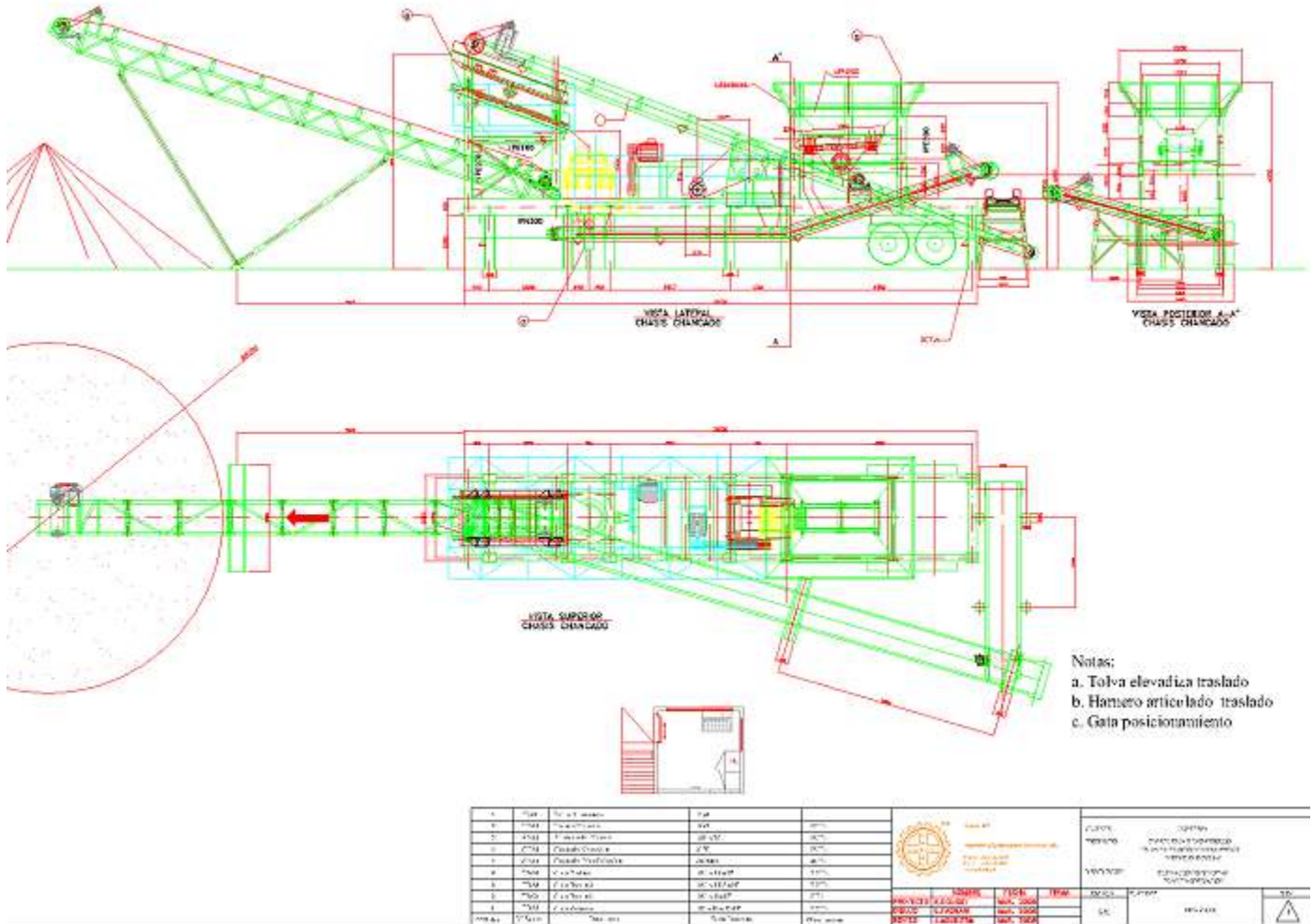
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INDUSTRIAL LINE



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PRIMARY TEST PLANT – SPENCE

INDUSTRIAL EQUIPMENT

Engineering, design and manufacture of a processing plant for copper minerals, a primary test plant mounted on wheels.

The **Spence Mobile Test Plant** is mounted on a chassis on wheels, including a feed hopper, vibrator feed, inclined vibrator screen, and jaw and cone crushers mounted on same portable chassis.

The plant includes conveyors needed for the inner crushing processes, considering a circuit from the cone to the screen, output from jaw to the screen, and final product output conveyor from the cone.



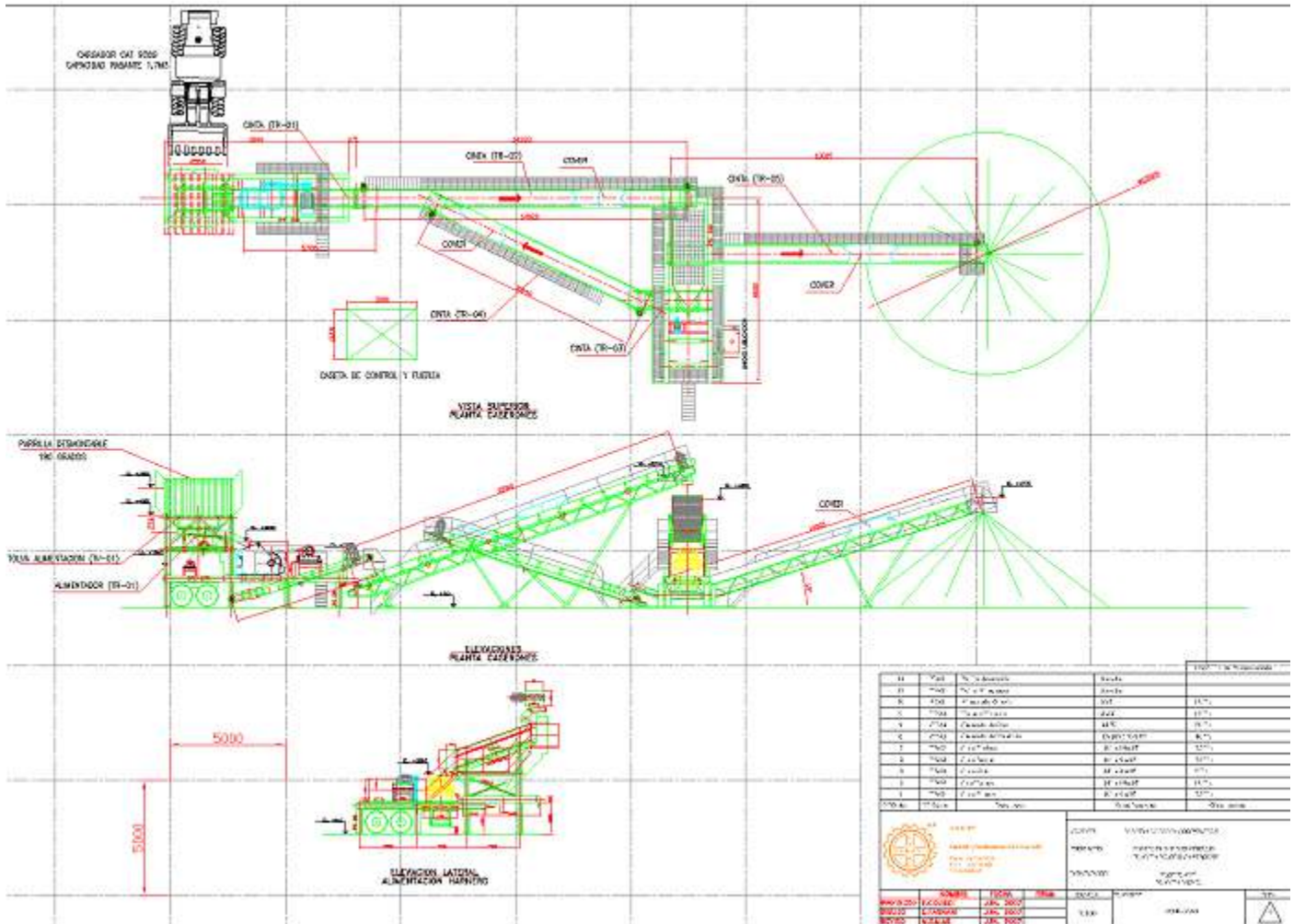
PRIMARY TEST PLANT – SPENCE

INDUSTRIAL EQUIPMENT



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PRIMARY TEST PLANT – LUMINA COPPER

INDUSTRIAL EQUIPMENT

Engineering, design and manufacturing of a copper mineral processing plant, a primary test plant mounted on wheels

The **Lumina Mobile Test Plant** is mounted on a two wheel chassis.

The primary portable chassis has a feed hopper, vibrator feeder and jaw crusher.

The secondary portable chassis has an inclined vibrator cone crusher over the same portable chassis.

The plant includes all conveyors needed for the inner processes of crushing, considering a closed circuit from the cone to the screen, an output from jaw to screen and final product conveying from the cone delivery.



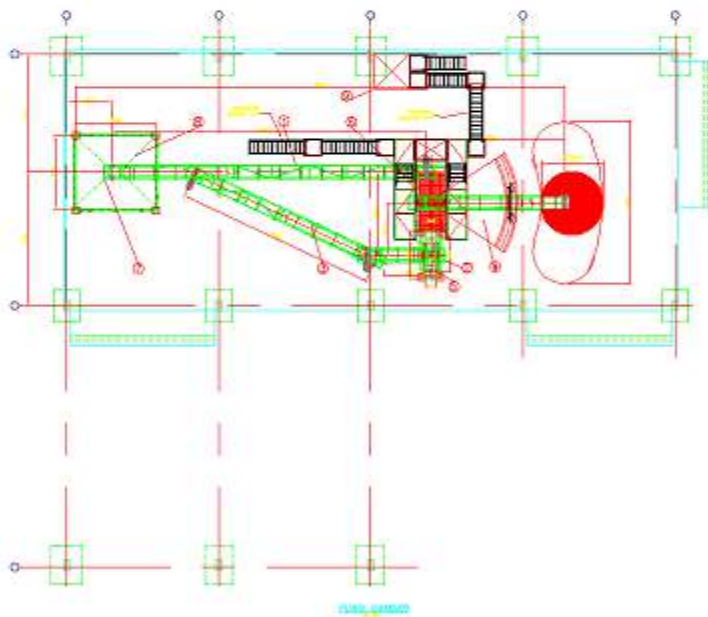
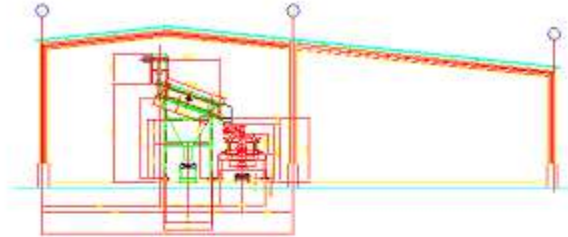
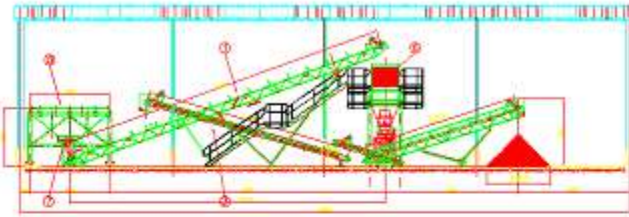
PRIMARY TEST PLANT – LUMINA COPPER

INDUSTRIAL EQUIPMENT



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1	004	Caja Control	2m x 3m x 25m	
2	003	Tela Vibratoria	4m x 5m x 3,5m x 35m	
3	004	Abrascador Vibratorio	27" x 47"	7 Hp
4	005	Bandas Vibratorias	4 x 10, 1,00	17 Hp
5	001	Molino - Molineta	1000 x 1000 x 12"	77 Hp - 1 Hp
6	002	Cinta Producta	20' x 9m 10"	7,5 Hp
7	003	Cinta Producta 2	20' x 13m 10"	7,5 Hp
8	007	Cinta Producta 1	20' x 4m 10"	5 Hp
9	004	Cinta Abrascadora Rápida	20' x 10m 10"	10 Hp
R-004		10' Puente		
		Tubo de	Papel de	Detalle
		C I B O P F A S O C I A D O S P A S P T INGENIERIA Y CONSTRUCCIONES S.A. PROYECTO: "PROYECTO PLANTA ESCORIA 30" DISEÑADOR: "PLANT Y EQUIPAMIENTO"		
		NOMBRE FECHA FIRMA FOLIO PLANO Nº PROYECTO E. CASAS OCT. 2007 S.B. TRUCPOGOL 107		
		DIBUJO C. FERRARI OCT. 2007 S.B. TRUCPOGOL 107		

PROCESS PLANT – MOLYMET

Engineering, design and manufacture of a stationary molybdenum slag process plant.

INDUSTRIAL EQUIPMENT

Includes a control cabin, product conveyors, vibrator feeder and an inclined vibratory screen along with a hammer mill.



PROCESS PLANT – MOLYMET

INDUSTRIAL EQUIPMENT



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Capacity to grind 200 MTPH under ½” size.

The **Agglomeration Drum** is manufactured with A36 steel plates. Includes input hopper, discharge box, inspection door and gas exhaust.

Inside coating of vulcanized neoprene with lifters. Direct wheel drive system provided with commercial tires.

It includes a guiding wheel set to prevent axial displacements and a

manually operated adjustment system for angle inclinations (between 3 and 9 degrees).

It has a drive system with a velocity reducer and adjustments through a frequency variator. It has water and acid sprinkler piping lines.

Supports, platforms, decks and gangways are quoted separately.

Epoxy paint finish.

SPECIFICATIONS

AGGLOMERATION DRUM

INDUSTRIAL EQUIPMENT

MODEL	MOTOR		WEIGHT	WIDTH	LENGTH	HEIGHT
2100X6200	3 HP	ADJUSTABLE RPM	-	2500 MM	6500 MM	3500 MM

* OTHER SIZES UPON REQUEST



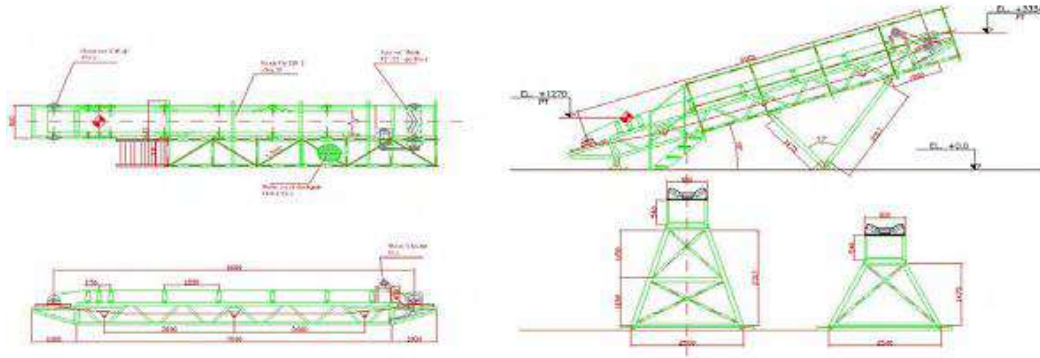
AGGLOMERATION DRUM

INDUSTRIAL EQUIPMENT



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NOTA:CEPA TIPO TUERA

		CLIENTE: EMPRESA S.A. (NOMBRE CLIENTE) PROYECTO: INSTALACION Y OPERACION DEL TRAMO DE BELTA INCLINADA OBSERVACION: CANTO Y PUNTO DE ENTREGA	
MODELO: F-001 FECHA: JUN 2007 DISEÑADO: M. SALAS	PLAN: F-001 ESCALA: 1:50 AUT. SALAS	PLAN: F-001 ESCALA: 1:50 AUT. SALAS	PLAN: F-001 ESCALA: 1:50 AUT. SALAS

CONVEYORS

INDUSTRIAL EQUIPMENT

Conveyor structures and motorization on conveyor ends according to engineering design.

Swivel transmission reducers, according to design, with back stop breaks.

Conveyor driven through head and tail pulley shafts with belt tensioners, with hydraulic or gravitational tension system. Drives with electrical motors.

Auto-cleaning tail end drum, with steel shaft resting on seatings with grease lubrication.

Pylon belt with 2 or 3 ply according to design, covered and with vulcanized joints.

Roller stations follow Cema C or B specs, including load, return and impact rollers.

Depending on design, conveyor belts may be coated, have rounded edges and vulcanized

joints. Idler stations may also include Cema type load idlers, return and impact rollers. May include transfer chutes, scrapers and cleaners.

According to purpose, conveyor widths may vary, and diverse belt tensors are used: counterweight, gravitational, or mechanical. Belt widths vary from 18", 20", 24", 30", 36", 42", to 48" and wider.

Epoxy paint finish. Structures are easily assembled in the field and have added supports for electrical conduits.

Station supports are specially designed to allow easy replacements.

Optional items include walk ways, hand rails, electrical signs and alarms systems.

Custom requirements are welcome.



CONVEYORS

INDUSTRIAL EQUIPMENT



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OVERLAND CONVEYOR

Tapered belt edges and all joints vulcanized. Modular Modular “bed frame” structures made from hot rolled steel forms, according to each project’s engineering design.

These “bed frames” are mounted over reinforced concrete sleepers, which may be independently adjusted.

Drive system mounted over prefab concrete bases which may be adjusted to field terrain irregularities.

Tensor system for head and tail pulleys based on gravitational counterweight.

Standard 380 V, 50 Hz, IP-55 motor, other configurations by customer request.

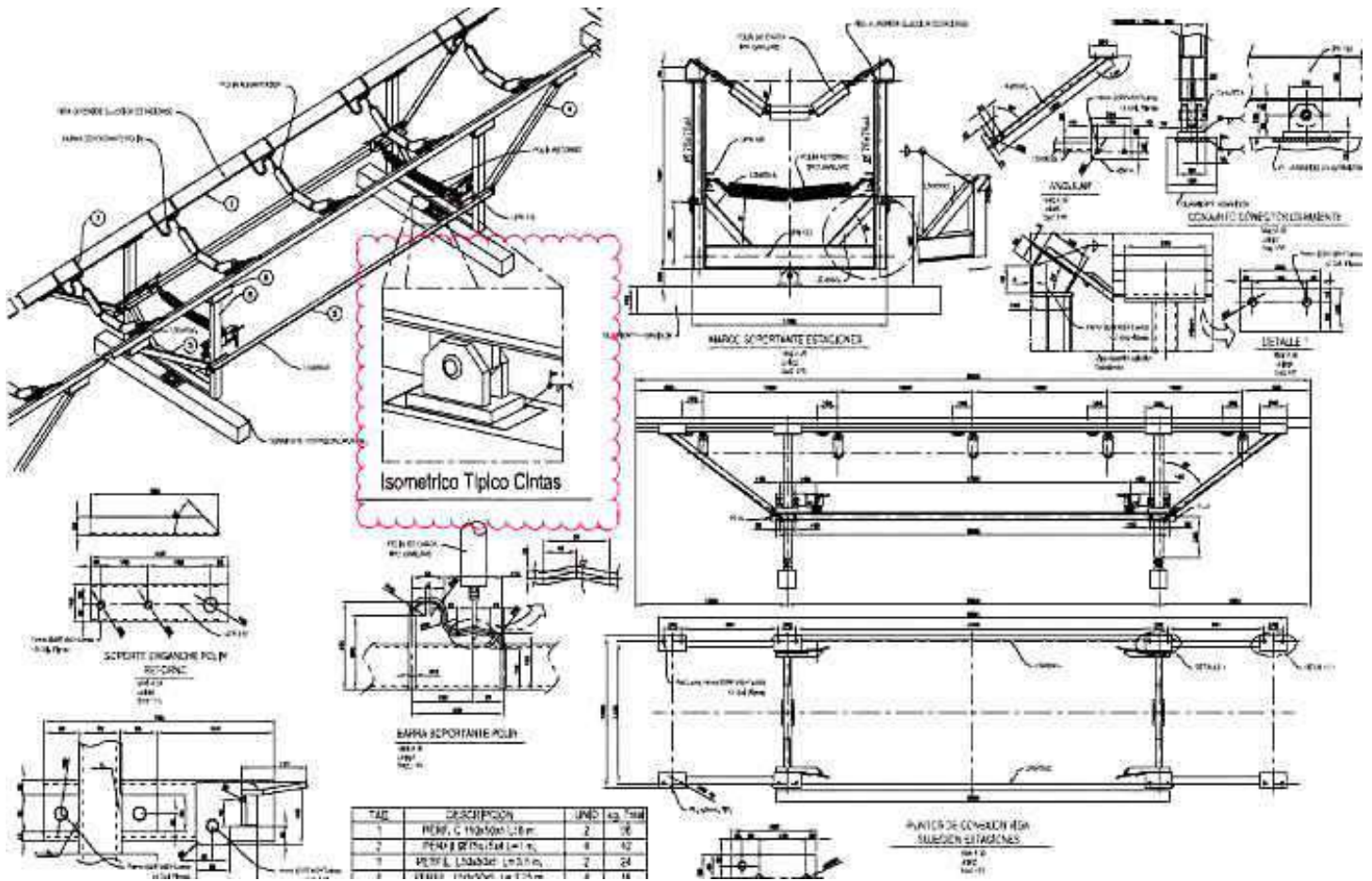
INDUSTRIAL EQUIPMENT

Covered Pylon Rubber Belts with 3 or more layers, depending on design. Tapered belt edges and all joints vulcanized.

Garland Idler stations meet Cema B or C type specifications, including load, impact and return idlers.

Belt widths according to design. Mechanical steel cleaning, antioxidant primer and polyurethane finish is standard.

Options: We provide side supports for electrical wiring, on one or both sides, steel or FRP covers for dust control, chutes, cleaners, electrical safety devices and electrical controls.



OVERLAND CONVEYOR

INDUSTRIAL EQUIPMENT



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MOBILE STACKING CONVEYOR

INDUSTRIAL EQUIPMENT

Our heavy duty Mobile Stacking Conveyor is designed to transport 2,400 MTPH of copper ore (with a density of 1,760 Kg/m³), moving at a speed of 3.5 meters per second.

This is a rugged and strong piece of equipment weighting 23 Tons, with an overall length of 27.4 meters, 25.2 meters from drum to drum end and a 42 inch wide belt.

It can discharge from a height of 3.5 m up to a maximum of 6.6 m.

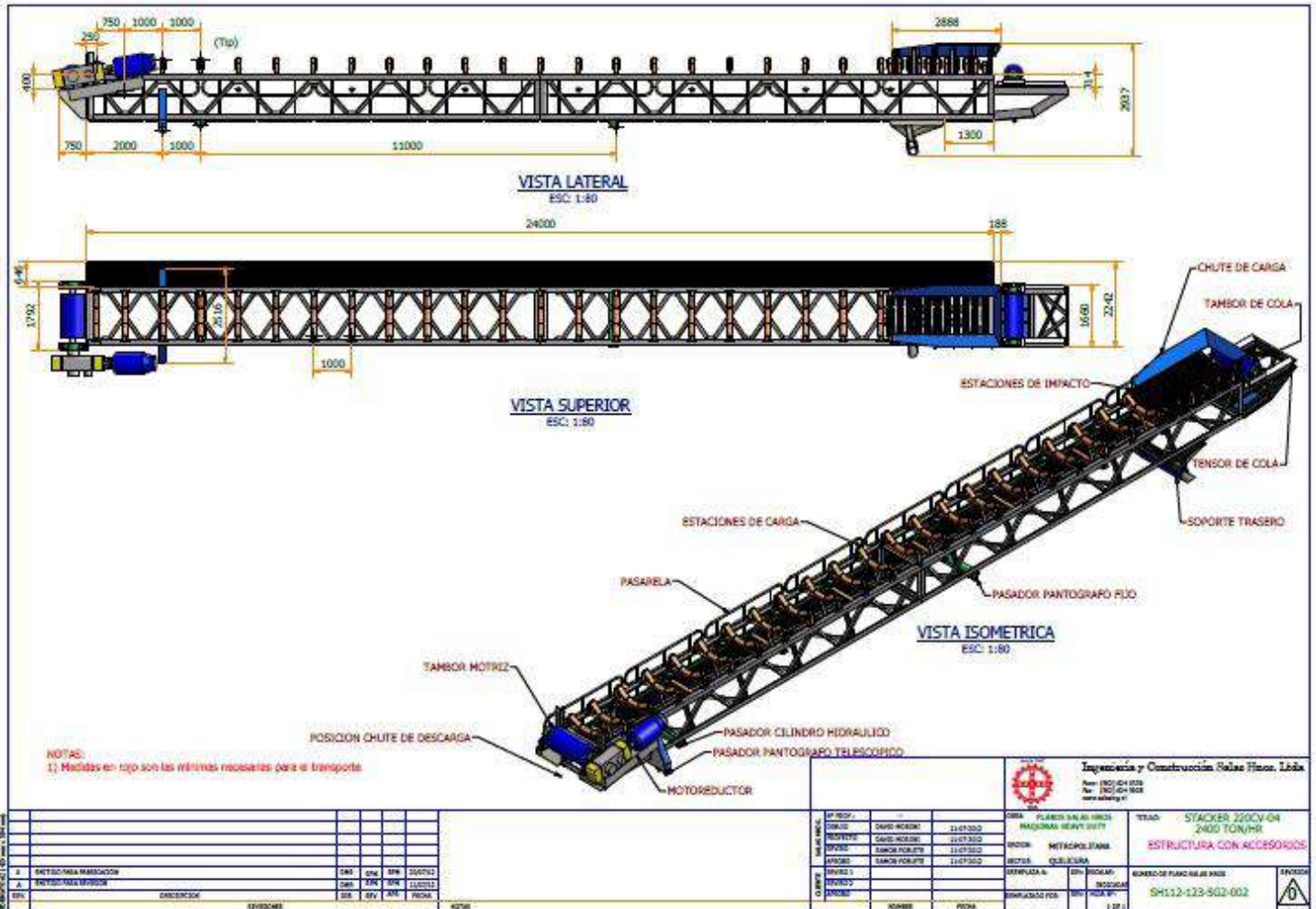
Its rollers meet CEMA D5 specifications.

The main belt is held by a 24 inch drive roller and a 20 inch roller at either end.

Primary polyurethane and secondary tungsten scrapers are provided, as well as, a rubber Martin® Belt Cleaner.

The conveyor has a hydraulic lifting system, with a cutting edge remote deflector and pin activation control.

A safety platform and ladder framework is provided standard with the conveyor.



MOBILE STACKING CONVEYOR

INDUSTRIAL EQUIPMENT



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VIBRATING SCREEN – INCLINED

INDUSTRIAL EQUIPMENT

Vibrating Screen body made of ASTM A56 steel with top folded borders. Four spring supports to accommodate spiral springs, one or two per support, depending on the model.

Trays made of Sandvik tubes. Huck bolts used in side connectors. Vibrating unit with an eccentric shaft sitting on self-aligning roller bearings within side boxes, grease lubricated.

Vibration amplitude adjusted through counterweights mounted on external flywheels.

Depending on the model, the vibratory unit may accommodate one or two shafts.

Standard units come with 380 V – 50 Hz, IP-55 motors mounted on a pivoting base, including V belt, but are supplied according to customer specifications.

Prepared for steel mesh (not included).

Options: Polyurethane (or rubber) panel preparation, supporting structure, side-walks, hand rails, stairs, chutes, or showers.

Antioxidant primer plus synthetic paint finish is standard, optional paint treatment by customer request.



VIBRATING SCREEN – HORIZONTAL

INDUSTRIAL EQUIPMENT

Vibrating Screen frame made of ASTM A-56 steel.

Four coil spring supports (one or two coils per spring support, depending on the model).

Heavy duty decks. Laterals assembled with Huck bolts.

Vibratory unit has two eccentric shafts seated on lateral boxes with spherical roller bearings, oil lubricated.

Vibration amplitude regulated by counter

weights and pinions.

Electrical motor mounted on basculating base.

Includes pulleys. Decks prepared for steel, urethane or rubber screen panels. Neither Mesh nor panels included.

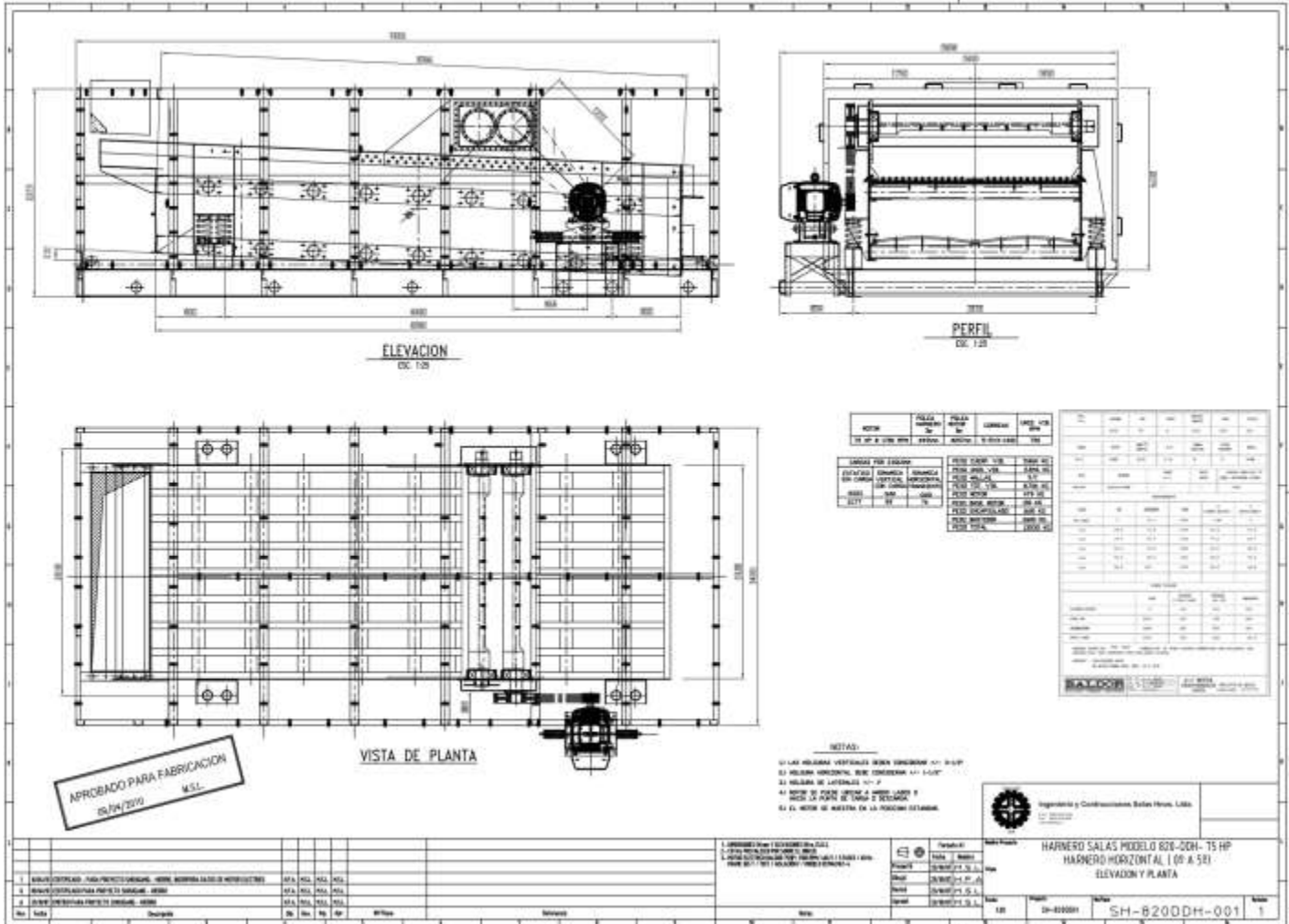
Epoxy paint finish.

Options: Support structure, walkway, protections, hand rails, in/out chutes, water spray systems.



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VIBRATING SCREEN – HORIZONTAL

INDUSTRIAL EQUIPMENT



VIBRATING SCREEN – HORIZONTAL – HD 8X20
ENCAPSULATED

INDUSTRIAL EQUIPMENT



VIBRATING SCREEN – HORIZONTAL – HD 10X24

INDUSTRIAL EQUIPMENT

VIBRATING FEEDER

SALAS BRAND. UNITS HAVE 1 SHAFT WITH ELECTRIC MOTOR.

MODEL	MOTOR	OBSERVATIONS
24"X 4'	5.5 HP	
36"X 6'	10 HP	
36"X 8'	15 HP	
36"X10'	25 HP	
RECIPROCATING 70 M3PH	5 HP	W/ CHUTE
RECIPROCATING 70 M3PH	5 HP	W/O CHUTE

VIBRATING SCREEN – INCLINED

INCLINED, MOUNTED OVER STATIONARY CHASSIS. ELECTRIC MOTOR, SPRINGS, BELTS, PULLEYS AND PROTECTIONS INCLUDED.

MODEL	DECKS	MOTOR	OBSERVATIONS
3' X 8'	2	5.5 HP	
	3	5.5 HP	
3' X 10'	2	5.5 HP	
	3	5.5 HP	
4' X 10'	2	7.5 HP	
	3	7.5 HP	



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5' X 16'	2	20 HP	
	3	20 HP	
6' X 16'	2	30 HP	
	3	40 HP	
6' X 20'	2	30 HP	PIVOTING BASE
	3	40 HP	PIVOTING BASE
8' X 20'	2	30 HP	PIVOTING BASE
	3	40 HP	PIVOTING BASE
5' X 16'	2	30 HP	2 SHAFTS, HORIZONTAL
	3	30 HP	2 SHAFTS, HORIZONTAL
6' X 16'	2	40 HP	2 SHAFTS, HORIZONTAL
	3	40 HP	2 SHAFTS, HORIZONTAL
6' X 20'	2	40 HP	2 SHAFTS, HORIZONTAL
	3	40 HP	2 SHAFTS, HORIZONTAL



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SCREENING PLANT

Grizzly bar over hopper, adjustable angle with mechanical system (hydraulic option).

Feed hopper capacities by model from 3 to 7 m³, built in A-36 steel plate.

Vibratory feeder under hopper, adjustable angle, AR wear plate for feeder, vibratory unit with eccentric shaft and external weights, spherical roller bearings, powered by electrical motor.

Conveyor belt for output material to the screen, with widths by model, including frame structure, Cema type Pylon belt idler stations, with cleaners, powered by electric motor shaft mounted speed reductor (optional: hydraulic lifting system).

Inclined Screen box made of ASTM A-56 steel. Four spring supports for coil springs (one or two coils per spring support, by model). Heavy duty decks. Lateral assembly with Huck bolts. Vibratory unit with eccentric shaft resting on

INDUSTRIAL EQUIPMENT

lateral boxes with spherical roller bearings, grease lubricated. External, side mounted counterweights regulate vibration amplitude. Electrical motor mounted on basculating base. Includes pulleys.

Decks prepared for steel, urethane or rubber panels. (Mesh nor panels included).

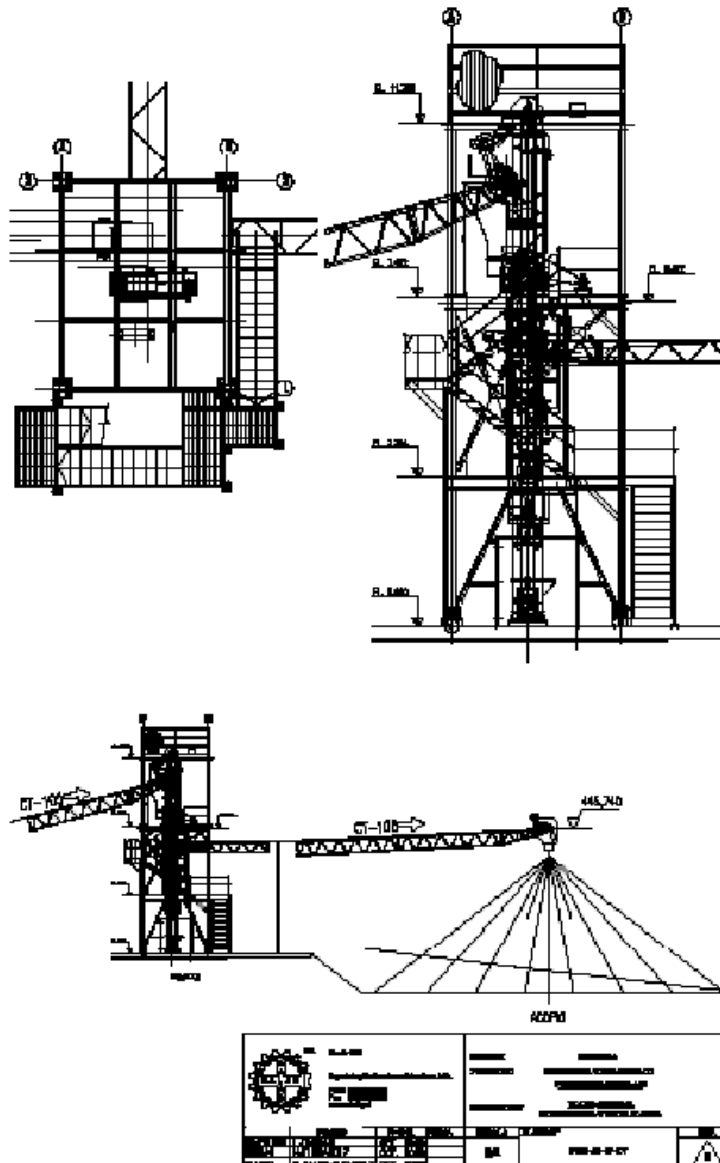
Transfer and discharge chute, manufactured in A-36 steel plates with edge reinforcement angles.

Plant Electric command box has plant operation lock system.

Axle system equalized, air brakes and tires mounted on chassis, with regulation lights, kingpin for road travel, and manual jacks.

Options: Support structure, walkway, protections, hand rails, in/out chutes, water spray systems.

Epoxy paint finish.



SAMPLE TOWER

Stationary **Sampling Tower** for copper mineral, complete 3 level structure, staircase, galvanized steel prepainted cover and support structures for chutes and sample equipment.

INDUSTRIAL EQUIPMENT

Sample equipment includes: pitman crushers, cone crushers, Vezin rotatory samplers, sample cutter in feed belt and sample reception installation.



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SAMPLE TOWER

INDUSTRIAL EQUIPMENT



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SPIRAL CLASSIFIER

INDUSTRIAL EQUIPMENT

MODEL	OVERFLOW ¹	DRAG MATL ²	SPIRAL	LENGTH	WEIGHT
6"	300 PPH	950 PPH	30-65 RPM	1676 MM	245 KG
9"	700 PPH	1800 PPH	22-46 RPM	2007 MM	480 KG
12"	1400 PPH	3500 PPH	15-30 RPM	2210 MM	795 KG
16"	2650 PPH	6000 PPH	12-24 RPM	3010 MM	1215 KG

¹ POUNDS PER HOUR DRY SOLID OVERFLOW CAPACITY BASED ON #65 MESH WITH 2.7 TON/M3 SPECIFIC GRAVITY OF MATERIAL.

² POUNDS PER HOUR DRY SOLID DRAG MATERIAL FLOW IS BASED ON AVERAGE SPIRAL VELOCITY.

Hopper made of A36 steel plate.

Floor support in structural sections.

Screw speed, diameter and length according to model, with manganese anvil system (optional polyurethane), bolts fastening anvil system, lower and external support to bolt hopper, SNA type with grease

lubrication.

Includes electric motor with IP-54 protection, 3 Ph, F class, with pendular reducer, pulleys, V-belts and motor protection.

Reference performance according to table.



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Hopper made of A36 steel plate.

Floor support in structural sections.

Screw speed, diameter and length according to model, with manganese shoe system (optional polyurethane), bolts fasten shoe system, lower and external support to bolt hopper, SNA type with pillow block grease lubrication.

Includes electric motor, 3 Ph, F class, with shaft mounted reducer, pulleys, V-belts and motor protection.

Reference performance according to table.

SCREW SAND WASHER

SCREW SAND WASHER				INDUSTRIAL EQUIPMENT			
MODEL		MOTOR		WEIGHT	100 M ¹	150 M ¹	200 M ¹
24" X 24'	50 MTPH	7.5 HP	32 RPM	2950 KG	400 GPM	200 GPM	100 GPM
	38 MTPH	5 HP	24 RPM	2950 KG	400 GPM	200 GPM	100 GPM
	25 MTPH	5 HP	16 RPM	2950 KG	400 GPM	200 GPM	100 GPM
30" X 24'	75 MTPH	7.5 HP	25 RPM	3800 KG	500 GPM	250 GPM	150 GPM
	60 MTPH	7.5 HP	19 RPM	3800 KG	500 GPM	250 GPM	150 GPM
	50 MTPH	7.5 HP	13 RPM	3800 KG	500 GPM	250 GPM	150 GPM
36" X 28'	100 MTPH	7.5 HP	20 RPM	5660 KG	600 GPM	300 GPM	150 GPM
	75 MTPH	5 HP	15 RPM	5660 KG	600 GPM	300 GPM	150 GPM
	50 MTPH	5 HP	12 RPM	5660 KG	600 GPM	300 GPM	150 GPM
44" X 32'	175 MTPH	7.5 HP	17 RPM	7420 KG	700 GPM	350 GPM	200 GPM
	130 MTPH	5 HP	14 RPM	7420 KG	700 GPM	350 GPM	200 GPM
	85 MTPH	5 HP	10 RPM	7420 KG	700 GPM	350 GPM	200 GPM

¹ GALONS PER MINUTE OF WATER CONSUMED.



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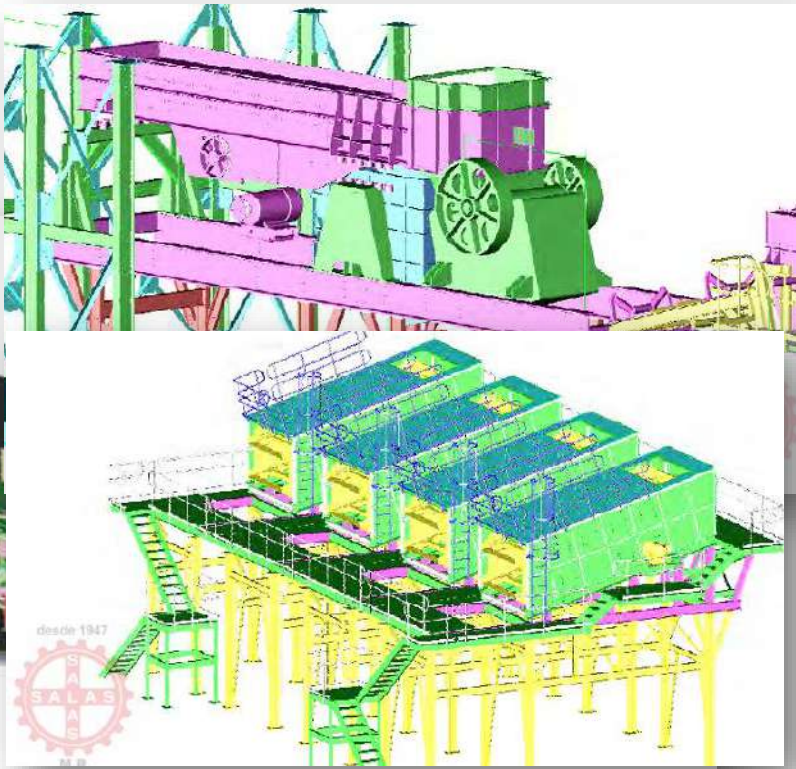
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M.R.

LI ENGINEERING RIO



CRUSHING PROCESS DESIGN

Crushing plant process design based on state of the art simulation technology, using either AGGFLOW software or 3D CAD drawings.

We have a highly qualified and experienced engineering in-house staff, working with the

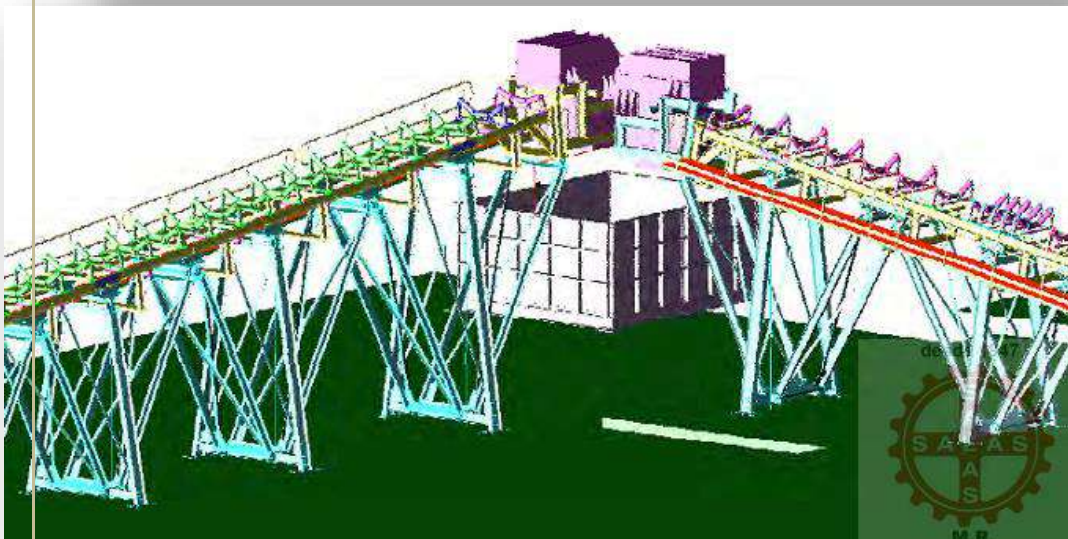
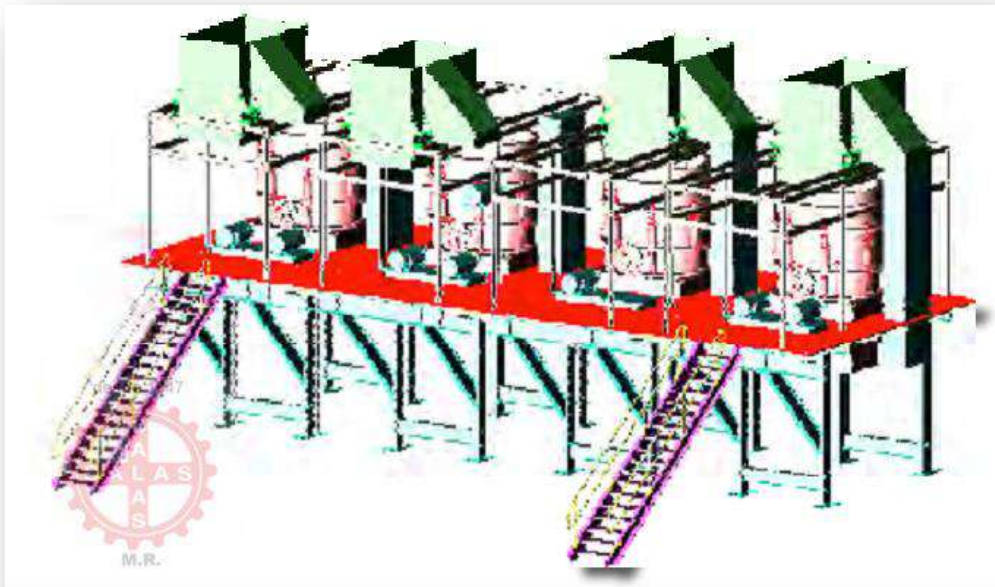
ENGINEERING

best software tools available, to help you achieve success with your project. Both, from a design perspective, as well as, from the savings preserved, thanks to the 3D modeling of your plant, which minimizes surprises during field assembly of the different components.



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3D STRUCTURE DESIGN

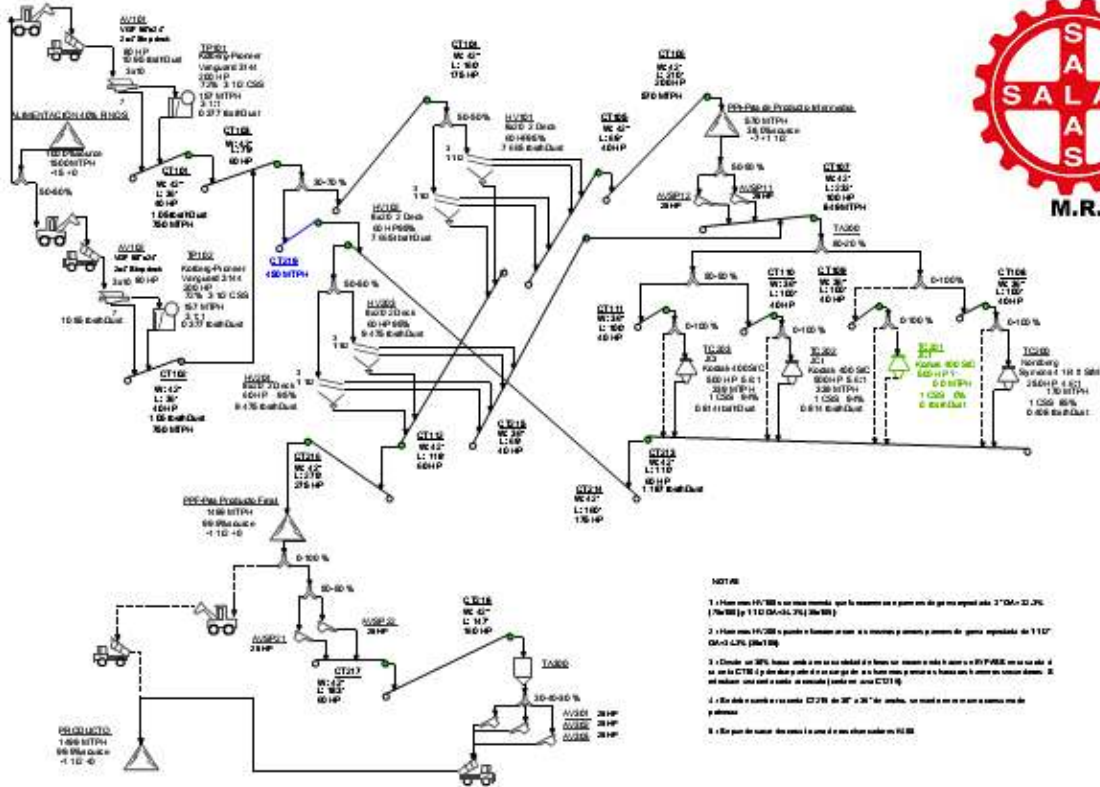
Each component of your plant is drawn and simulated in three dimensions, to assure a total matchup of all the different parts, from project model to field setup —to avoid costly mistakes.

ENGINEERING

Further, 3D modeling simulations allows the comparison of different solutions for your crusher plant, by testing their performance under different conditions.



desde 1947



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Crusher output gradations, tons per hour of products and screen calculations may change due to variations in operating conditions and application of the crushing and screening equipment. This information does not constitute an expressed or implied warranty or guarantee, but shows results of test crushing of samples provided by customers or book values published by manufacturers. This is guideline information only.

rev A_SH608-BCF-1-AGG-010
site: Proyecto Mixto Radomiro Tomic: versión J3_KPI_con PPI+PPF_40% FINOS
prepared by: MSALAS date: July/10/2008

CRUSHING PLANT – BCF RADOMIRO TOMIC

ENGINEERING

The **Radomiro Tomic Crushing Plant** was designed to process 1,250 MTPH of copper ore at total gross production capacity.

manufacturing, component technical specs, operations and rules manuals, and 3D scale models of the whole plant.

Complete design, from equipment selection and lay-outs of the plant to detailed mechanic structures, civil works, and electrical engineering specs.

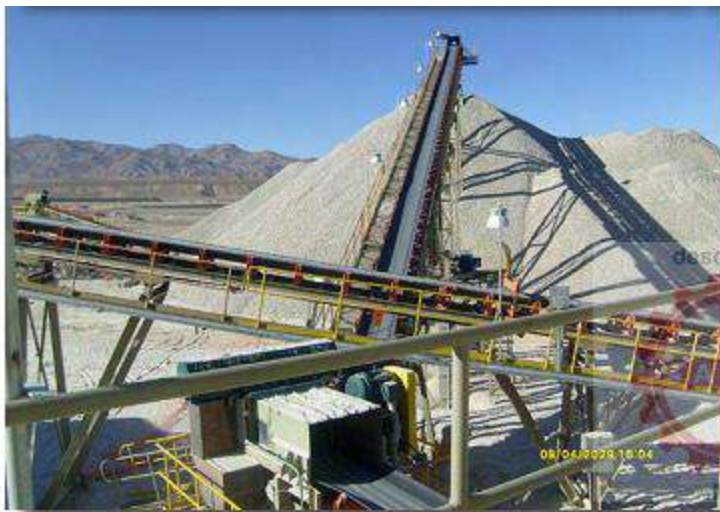
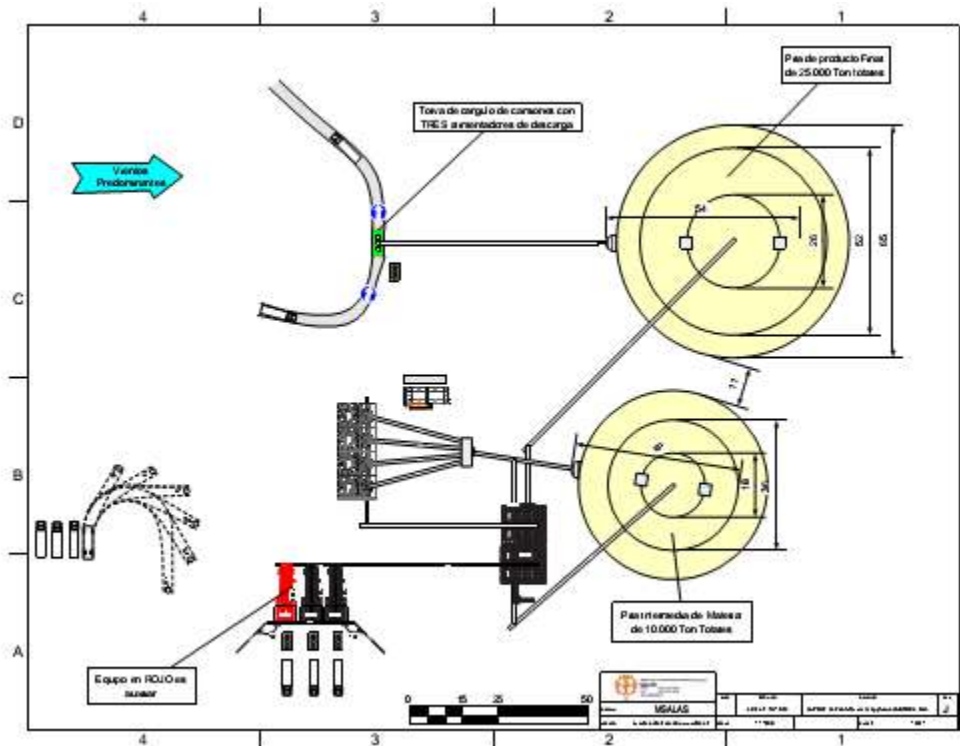
The job further included purchasing assistance of the crushing equipment required, as well as, for the preparation of the bidding documentation of the different components of the plant.

It includes engineering structural calculation documents, structural drawing details for



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CRUSHING PLANT – BCF RADOMIRO TOMIC

ENGINEERING



CRUSHING PLANT – BCF RADOMIRO TOMIC

ENGINEERING



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REPRESENTATIONS ©



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BRANDS

REPRESENTATIONS

Our company is proud to represent a wide variety of excellent equipment and tools geared towards the mining industry.

This association allows us to offer a diverse assortment of equipment for primary crushing, as well as, secondary, tertiary and quaternary grinding.

Our offer covers the whole gamut of Jaw crushers, cone with vertical and horizontal

impact, and roller crushers, sand washers, inclined vibrating screens, horizontal, and high frequency screens.

Plants and equipment mounted over wheels or auto-propelled crawler-tracks, of high quality, durability and second to none toughness, with a presence in the market of over 100 years.



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LINE SERVICE TORIO



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REPAIR – EMERGENCY – INSPECTION

Our company has more than 60 years of servicing the mining industry and others, having within its facilities the equipment and skilled staff to repair your crushing equipment.

We can handle your service needs for cone crushers, jaw crushers, roller crushers, impact crushers, ball mills, vibratory screens, sand washers, screens, conveyors, crushing mobile plants, among others.

+562 6

Salas Hermanos is a guarantee of quality in technical service for your crushing equipment.

SERVICE

Among the many services that our company provides, we may highlight:

- metrology,
- field measurements,
- field technical reports,
- 24-hour technical assistance,
- in addition to repair services at our workshop facilities.



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