





TRIO Modular Plant

High Efficiency Modular Solutions







At TRIO we strive to provide our customers with the most rugged, robust, and reliable equipment for the most demanding applications in the harshest environments.

We provide customized high value solutions according to our customers' needs, from single machines to stationary or portable plants, including turnkey projects.

Building Solutions Together



TRIO continues to expand as a world class designer & manufacturer of crushers, screens, washing equipment and conveyors for the aggregate, mining, recycling, and industrial minerals industries. The core goal of our company is to pursue product improvement, quality, and provide our customers with the most cost-effective equipment solutions.





TRIO is one of the market leaders in modular plant designs, offering a larger array of designs to choose from than any other OEM. This results in a rapid development time that is unmatched in the industry, from conception through commissioning.

All of our Modular Structures are pre-assembled prior to shipping. This pre-assembly includes installing the equipment, motors, hoppers and guards on the modular structure and test running to ensure proper fit and operation. The modular plant is then disassembled and all the parts are clearly marked to ensuresimple and efficient assembly in the field. This pre-assembly practice ensures a well-organized, labor saving installation with the most efficient timeline.

TRIO's modular plants are built using heavy duty, bolt-together structural steel members. Moderate customization is available to accommodate elevation requirements, tailored access points, maintenance platforms and other customer requested changes. Ourmodular structures are designed to be shipped using standard ocean containers making them very economical to transport to any destination.



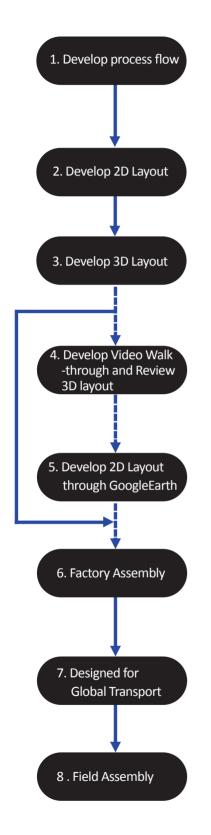












Intensive customer collaboration is a key ingredientwe use to develop an optimized process flow diagram. This is generally done with a mass balance flow program like Agg-Flow.

A 2D Visio plant layout is the next step in the development of a modular plant system. This 2D layoutprovides a clear illustration of the plant configuration and size.

A Sales 3D layout could be the next step to show additional details of a modular plant system. The 3D layout provides a closer look at the details in the plant design and helps the customer and TRIO evaluate the proposed plants functionality.

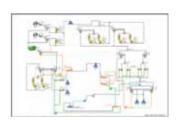
During a 3D review an additional videowalk -through is an option for large complex plant designs.

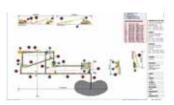
The final 3D option is to place the proposed plant design on the customers mine site, via Google Earth.

Every Modular structure is fully assembled and the equipment is run at operational speed to ensure proper fit and function.

Our modular structures are designed to be shipped in standard ocean containers, making them very economical to transport to any global destination.

The on-site field assembly, of a TRIO Modular Plant is simple and straight forward with the documentation we provide.





















Modular Feeding Solutions

TF Feeder Modules

Our TF feeders' incorporate robust steel coil springs and a thick feeder pan, fabricated and stress relieved with honey comb style reinforcement, capable of absorbing tremendous shock loads from loading equipment. The grizzly section removes undersize material and utilizes wear resistant materials with tapered openings in both dimensions preventing clogging and packing.



Grizzly Feeder Station							
Model	Model Main Equipment Size Max Feeding Size Capacit Model (MM) (MM) (MTPH						
MF4620	TF4620	1,124*6,000	700	370 - 535			
MF5220	TF5220	1,300*6,000	800	410 - 615			
MF5820	TF5820	1,475*6,000	900	450 - 700			
MF7224	TF7224	1,830*7,320	1,300	700-1,235			

 Data for marketing purposes subject to change with product upgrades. Please consult TRIO for your customized solutions.

EF Feeder Modules



Vibrating Pan Feeders are ideally suited for installation in surge tunnels and for surge bin applications. These variable speed feeders are designed with AR-lined bed and side plates, welded and stress-relieved steel frame, for continuous duty applications. With easy adjustment of the speed and eccentricity TRIO EF Series feeders can be optimized for material flow control in the most demanding applications.

	Pan Feeder Station						
Model	Main Equipment Model	Size (MM)	Max Feeding Size (MM)	Capacity (MTPH)			
MEF2404	EF2404	600*1,200	200	110 - 160			
MEF3005	EF3005	762*1,524	260	160 - 240			
MEF3605	EF3605	895*1,524	260	240 - 360			
MEF3606	EF3606	895*1,829	260	240 - 360			
MEF4806	EF4806	1,200*1,892	330	460 - 650			
MEF6006	EF6006	1,524*1,892	500	500 - 700			

 Data for marketing purposes subject to change with product upgrades. Please consult TRIO for your customized solutions.



Apron Feeder Modules

Apron Feeders are slow moving, positive displacement feeders which can be widely applied in the mining, aggregate and industrial minerals industries. They offer customers a cost effective solution when feeding even the most difficult materials. These feeders are especially effective in applications that have large rock with sharp edges, materials that are sticky or hot materials.

Apron Feeder Modules						
Model Main Equipment Deck Width Gradation Capacity (MM) (MM) (MTPH)						
MAF18 Series	TAF18 Series	1,800	≤800	≤1,000		
MAF20 Series	TAF20 Series	2,000	≤900	≤890		
MAF24 Series	TAF24 Series	2,400	≤1,102	≤1,000		

- Inclined angel≤23°
- Data for marketing purposes subject to change with product upgrades. Please consult
- TRIO for your customized solutions





Modular Jaw Crusher Stations



TRIO has many years' of experience designing and manufacturing jaw crushers. Our CT-Series Jaw Crushers are the perfect combination of quality, reliability and outstanding performance.



We offer a complete range of jaw crushers that can be widely applied in the mining, aggregate, recycling and industrial mineral industries, offeringhigh performanceprimary crushing.

Our extensive range of pre-engineered primary crushing stations provide optimized solutions with numerous feed hopper designs and capacities that enable these stations to be matched with the customer's preferred loading and haulage equipment.



TRIO designs include both sloped side and rock box style hoppers in a variety of configurations. Safe and accessible work platforms are built with grated walkways, stairways, handrails, knee rails and toe plates. These features can be tailored to satisfy local dimensional requirements.



Optional hydraulic breaker modular support structures can be pair with these primary stations to effectively manage oversized feed. Operator control rooms or towers can also be supplied as stand-alone control modules or as extensions to overall plant motor control centers.

Model	Main Equipment Model	Size (MM)	Feeding Size	Discharge Size Range (MM)	Max Feeding Size (MM)	Capacity (MTPH)	Hopper Volume	Feeder	Hopper Size (MM)
MJ1252	CT1252	7,066*1,939*3,443	300*1,320	25-89	250	50-135	8M³ *	TF2012 single deck vibrating grizzly feeder	1,000*3,650
MJ2436	CT2436	9,850*2,120*5,073	610*910	76-178	500	120-349	6M³	TF4016 single deck vibrating grizzly feeder	1,000*4,875
MJ2042	CT3042	11,804*4,080*6,216	760*1,070	76-203	610	150-503	19.7M³	TF4026 vibrating grizzly feeder (single or double deck optional)	1,124*6,000
MJ3254	CT3254	15,340*7,470*9,623	800*1,370	50-180	650	240-780	51.5M³	TF5220 vibrating grizzly feeder (single or double deck optional)	1,300*6,000
MJ4254	CT4254	15,380*5,470*10,948	1,060*1,370	125-275	960	400-1,100	14M³	TF5820 vibrating grizzly feeder (single or double deck optional)	1,625*6,000
MJ4763	CT4763	18,314*8,704*12,759	1,200*1,600	150-300	1075	520-1,250	35M³	TF6420 vibrating grizzly feeder (single or double deck optional)	1,625*7,320

^{1.}Size=length* width*height
2.Data for marketing purposes subject to change with product upgrades

^{3.} Hydraulic hammer and lighting equipment can be installed according to customers' need.
4. Larger feeding hopper can be installed according to customers' need and working condition requirement.





Modular Cone Crushers



TRIO's TC-Series Cone Crushers unitize a time proven design platform that has been optimized with robust mechanical components and labor saving user friendly operating features. The TC-Series Conesare a combination of quality, performance and reliability for secondary and tertiary crushing applications.

These crushers have large cone head diameters, which allow a medium-speed increase to equal the linear velocity and processing capacity of high-speed crushers in the market.



Our larger socket assembly delivers full support under both extreme and light load conditions, providing an extended crusher service lifeeven in the most difficult operating conditions.



TRIO's secondary and tertiary modular cone structures are supplied as stand-alone modules or matched with surge bins using pan or belt feeders. All TRIO cone modules includevibrationisolation, with a floating crusher sub-frame that supports the crusher, drive system and motor guard.

Our cone modules have convenient and easily accessible under crusher inspection access along with safe work platforms and stairways that can be tailored to satisfy local code requirements.





Model	Main Equipment Model	Size (MM)	Feeding Size Range (MM)	Discharge Size Range (MM)	Capacity (MTPH)
MTC26	тсз6н ѕ	2,985*1,400*4,870	100 - 180	9 - 40	27 - 186
MTC36	TC36H SH	2,985*1,400*4,870	40 - 75	3 - 22	27 - 136
	TC51H S	3,751*1,850*5,871	140 - 260	12 - 50	136 - 425
MTC51	TC51H SH	3,751*1,850*5,871	65 - 135	3 - 25	36 - 255
MTC66	TC66H S	4,661*1,650*7,522	210 - 370	19 - 63	132 - 565
IVITCOO	TC66H SH	4,661*1,650*7,522	70 - 150	5 - 25	105 - 380
MTC6	TC6	6,514*2,160*9,294	70 - 360	10 - 64	200 - 1,000
MTC84	TC84	6,514*2,215*9,360	70 - 460	10 - 64	300 - 1,500

- * Size=Length*width*height
- * S=standard SH=short head
- * Max feeding material size is 80% of the F.O.R (Feeding Opening Range) matching your liner selection.
- * All standard and short head models can be equipped with chambers for extra-coarse, coarse, medium and fine material
- * Data for marketing purposes subject to change with product upgrades. Please consult TRIO for your customized solutions.





Modular Primary and Secondary Impact Crushers



TRIO offers two configurations of horizontal shaft impactcrushers: The APP-Series for high-production primary crushing and the APS-Series forsecondary crushing or recycling applications. All of our horizontalimpactor's are equipped with solid cast steel or fabricated stress relieved rotors in 2,3 or 4 row blow bars configurations. Extra-heavy duty rotors provide the mass and strength necessary when crushing tough materials. These high capacity, large reduction ratio crushers are ideal for the aggregate, cement and limestone industries.



Our extensive range of pre-engineered modular primary and secondary impact crusher stations include. Numerous feed hopper designs and capacities that enable these stations to be matched with the customers' loading and haulage equipment. TRIO designs include both sloped side and rock box style hoppers.

Safe and accessible work platforms are built with grated walk ways, stairways, hand rails and toe plates that can be tailored to satisfy local dimensional requirements. Operator friendly stairs are provided to ensure user maintenance and service access.



Hydraulic breaker modular support structures are available in these primary stations to effectively manager oversize feed. Operator control rooms and towers can also be supplied as stand- alone control modules or as extensions or overall plant motor control centers.



Model	Main Equipment Model	Weight (KG)	Feed Hopper Weight (KG)	Feed Height (MM)	Length (MM)	Width (MM)	Capacity (MTPH)	Power (KW)	Rotor Size (MM*MM)
MIS3030	APS3030	3673	3300	4250	2956	1246	20-65	55	760*760
MIS4034	APS4034-F	9490	2069	5021	8593	4403	80-150	90-110	1,000*800
MIS4054	APS4054	6072	4692	5255	4002	1246	120-200	90-110	1,000*1,370

[•] Data for marketing purposes subject to change with product upgrades. Please consult TRIO for your customized solutions.





Modular Vertical Shaft Impact Crushers



TRIO' s vertical shaft impact crushers utilize the mostadvance design platform, making it the VSI crusher with thewidest range of capabilities in the market. TV series crushersare tertiary or fine-stage crushers, which can be utilized inthe most demanding applications to process many types of ores, minerals and aggregates. These impact crushers can provide fine crushingsolutions for aggregate, manufactured sand, industrial mineral powders, or pre-grinding for ore milling circuits.

Our VSI crushers use high-speed rotors or heavy duty open tables. All TRIO VSI crushers are convertible between 3 styles of crushing chamber designs for maximum flexibility. Configuration options include open shoe table and anvil ring, enclosed rotor and anvil ring, and enclosed rotor and rock shelf. These configurations maximize flexibility and allow the crusher to be configured as needed for the highest performance possible.





Modular Vertical ShaftImpact Crusher Stations include feedboxes and discharge chutes that incorporate dust control plenums. Convenient accessible work platforms and stairways provide operator safetyand ensure simple service and maintenance.

Model	Main Equipment Model	Size (MM)	Main Frame Diameter (MM)	Max Feeding Size (MM)	Capacity (MTPH)	Rotor Size (MM)	Rotor Typer	Chamber Type
	TV85 - ROR - SD	3,816*1,225*5,936	2,100	50	150-250	890 or891	5 enclosed rotor (7 optional)	Rock Shelf
	TV85 - ROR - DD	3,816*1,225*5,936	2,100	50	150-250	813or891	5 enclosed rotor (7 optional)	Rock Shelf
N 41 /OF	TV85 - ROS - SD	3,816*1,225*5,936	2,100	38	100-250	890	6 enclosed rotor	Anvil Ring
MV85	TV85 - ROS - DD	3,816*1,225*5,936	2,100	38	100-300	890	6 enclosed rotor	Anvil Ring
	TV85 - SOS - SD	3,816*1,225*5,936	2,100	90	100-300	810or1,070	4 open shoe table (6 optional)	Anvil Ring
	TV85 - SOS - DD	3,816*1,225*5,936	2,100	90	100-400	810or1,071	4 open shoe table (7 optional)	Anvil Ring
	TV95 - ROR - SD	3,816*1,225*5,936	2,400	63	150-350	813or891	5 enclosed rotor (7 optional)	Rock Shelf
	TV95 - ROR - DD	3,816*1,225*5,936	2,400	63	220-450	813or891	5 enclosed rotor (7 optional)	Rock Shelf
MV95	TV95 - ROS - SD	3,816*1,225*5,936	2,400	63	100-350	890	6 enclosed rotor	Anvil Ring
MV95	TV95 - ROS - DD	3,816*1,225*5,936	2,400	63	180-600	890	6 enclosed rotor	Anvil Ring
	TV95 - SOS - SD	3,816*1,225*5,936	2,400	125	100-300	810or1,070	4 open shoe table (6 optional)	Anvil Ring
	TV95 - SOS - DD	3,816*1,225*5,936	2,400	125	100-500	810or1,071	4 open shoe table (7 optional)	Anvil Ring

^{*} Size=length*Width*Height

^{*} SD=single drive; DD=Double drive

^{*} ROR= rock on rock; ROS=rock on steel; SOS=steel on steel





Modular Inclined Screen Structures



TRIO's wide range of vibrating inclined screen sizes paired with an equally wide range of modular structure configurations results in a comprehensive selection of modular inclined screen stations. Standard configurations include feed boxes, rock ladder type or lined sloped discharge chutes and under-screen fines hoppers. Options include fixed or roll-away chutes with bolt-on alternate discharge points, wet-screen kits, slurry recovery hoppers, alternative tower heights, and stations that accommodate multiple screens.



Safe and accessible work platforms are built with grated walkways, stairways, hand rails, knee rails and toe plates that can be tailored to satisfy local dimensional requirements. Operator friendly stairs are provided to ensure user maintenance and service access.

Model	Main Equipment Model	Weight (KG)	Discharge Conveyor	Feed Height (MM)	Length (MM)	Width (MM)	Discharge Height(MM)
MSI4102	TIOSP4102	10,748		8,136	6,533	5,446	2,247
MSH4102	TIH4102A	2,566	•	4,709	4,665	2,158	1,522
MSI5142	TIO5142	13,844		8,901	7,742	7,894	1,506
MSI5143	TIO5143A	9,447		6,951			
MSI5162	TIO5162A	10,080		6,423	8,480	3,771	1,295
MSI5163	TIOSP5163	13,495		6,952	8,100	3,697	1,500
MSI6162	TIOSP6162	8,420		6,334	7,860	4,010	1,959
MSI6163	TIOSP6163	13,078		8,192	10,309	4,076	1,905
MSI6203	TIO6203A	15,551		9,436	11,220	5,467	950
MSI7203	TIO7203C	13,865	•	9,713	9,991	4,587	1,546
MSI7243	TI07243	12,797		8,501	9,717	4,300	1,208
MSHA8203	TIO8203FA	17,688	•	10,821	10,549	4,860	2,049
MSI8204	TIO8204A	20,434	•	10,276	11,649	4,896	1,582
MSI8243	TIO8243B	14,480	•	9,205	11,426	4,896	1,612

- * All models are able to install washing equipment
 * Flaps on discharge hopper and number of decks are optional subject to customers need and requirement
- Data for marketing purposes subject to change with product upgrades. Please consult TRIO for your customized solutions.

Modular Horizontal Screen Structures





TRIO's Horizontal Screens generate their power via 3 timed shafts with eccentric counterweights. The three shafts provide an aggressive oval stroke with adjustable amplitude, speed and operating angle. All of our horizontal screens can be installed into modular stations, providing customers with wide range of modular screening solutions. Standard configurations include feed boxes, rock ladder type or lined sloped discharge chutes and under-screen fines hoppers. Options include fixed or roll-away chutes with bolt-on alternate discharge points, wet-screen kits, slurry recovery hoppers, alternative tower heights, and stations that accommodate multiple screens.

Model	Main Equipment Model	Weight (KG)	Discharge Conveyor	Feed Height (MM)	Length (MM)	Width (MM)	Discharge Height(MM)
MSHP5162	TTHSP5162	8,643	•	4,676	8,159	4,220	1,620
MSH5162	TTH5162A	4,866		4,527	7,300	3,476	2,000
MSH5163	TTH5163B	9,182		6,415	9,394	4,313	1,400
MSHP6162	TTHSP6162F	9,782	•	5,244	8,955	4,588	1,667
MSH6202	TTH6202B	9,865	•	4,790	10,101	4,528	1,918
MSH6203	TTH6203B	9,800	•	5,196	10,101	4,528	1,668
MSH6203	TTH6203A	12,955 12,317		7,368	10,376	9,193	3,494
MSH7202	TTH7202A	10,576		5,665	9,319	4,993	1,600
MSH8202	TTH8202BL	29,314	•	8,009	10,019	13,385	5,301
MSH8203	TTH8203FT TTH8203FTL	50,368	•	10,891	10,510	11,242	4,220
MSHC8203	TTHC8203F*2	36,405	•	8,408	11,426	11,426	3,910
MSH9203	TTHM9203	14,906	•	7,965	10,031	8,715	1,800

- All models are able to install washing equipment Flaps on discharge hopper and number of decks are optional subject to customers need and requirement
- Data for marketing purposes subject to change with product upgrades. Please consult TRIO for your customized solutions.

www.trioproducts.com





Modular Washing Stations

TRIO log washers are ideal for scrubbing difficult materials. Tough insoluble clays, conglomerates, soil stone and cemented aggregates are difficult to clean in normal screw washers. The maximum feed size is up to 100mm. The log washer scours, breaks down and cleans the toughest materials, providing an excellentwashing solution.



Coarse material washers are ideal tools to clean, classify and dewater crushed stone and gravel nominally sized less than 2-1/2 (65mm) inches and larger than 3/8" (10mm). Theunits cast paddles provide a highly abrasive washing actionthat separates aggregates from dust, soluble clay, and organic particles producing high quality aggregate used in construction and concrete. These coarse washers feature a stable transmission, advanced blade designand reliable sealing system.

Our fine material sand screws are designed for dewatering, washing and classification of sand. With adjustable overflow weirs, the sand screws enable operators to controlthe depth of the head and velocity of overflow waste water. The large overflow feed box allows for the retention of finermesh minerals, or, if necessary, the removal of those particles. These fine material washers are built with a large 3-stage gearbox for reliable power transmission and effectively sealed to ensure long-term operation.

Fine Material Washer					
Single	Spiral	Doub	le Spiral		
Model Size (MM)		Model	Size (MM)		
TSW3625	915*7,620	TTSW3625	915*7,620		
TSW4432	1,115*9,700	TTSW4432	1,115*9,700		
TSW5434	1,370*10,010	TTSW5434	1,370*10,010		
TSW6636	1,676*10,670	TTSW6636	1,676*10,670		

Coarse Material Washer						
Single	: Spiral	Double	e Spiral			
Model	Size (MM)	Model	Size (MM)			
TBW3618	928*5,450	TTBW3618	928*5,450			
TBW4420	1,118*6,350	TTBW4420	1,118*6,350			
TCW3618	928*5,450	TTCW3618	928*5,450			
TCW4420	1,118*6,350	TTCW4420	1,118*6,350			

	Log Washer						
	Single	Spiral	Double	e Spiral			
	Model	Size (MM)	Model	Size (MM)			
LW3630 905*8,650		LW4430	1,120*8,650				
	LW3635	905*10.500	LW4435	1.120*10.500			

- * TBS Fine washer is configurated with blade and spiral
- Data for marketing purposes subject to change with product upgrades. Please consult TRIO for your customized solutions.



Modular Mounted Magnets

TRIO modular magnet stations are available for both manual and self-cleaning permanent magnets and electro-magnets. Alternative mounting heights and cable orchannel mounting systems facilitate installation of magnets in any location required in a plant.



Permanent Magnet									
Self-cleaning	CRP30	CRP36	CRP42	CRP48	CRP54				
Stationary	CRPS30	CRPS36	CRPS42	CRPS48					

Electro Magnet Self-cleaning Stationary									
Self-cleaning	CRP36	CRP42	CRP48	CR54	CR60	CR66			
Stationary	CRPS36	CRPS42	CRPS48		CRS54				

^{*} Adjustable with requirement and demand





Conveyors

TRIO manufactures a complete line of conveyors to meet the demanding needs of the mining, aggregate and industrial minerals industries. Our conveyor configurations include truss, channel, and combination frame styles for transfer conveyors, radial stackers, telescoping stackers, and jump or grasshopper conveyors. Overland and tunnel conveyors are available in truss, channel, and suspended catenary styles.

Our conveyors can be customized with many options including walkways, head platforms, e-stops, beltcleaners, backstops, folding heads, discharge chutes, CEMA B, C or D idlers. Other options include customer specified bearings, drive and belting.



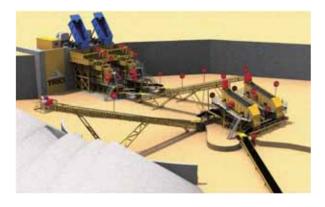




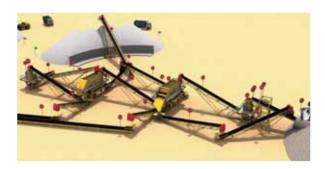


ATRIO

TRIO supplied the complete Modular crushing, screening and in-plant conveyor system for this Mega Dam Raise Project.



OurTotal Plant Solution methodwas used to build the largest modular aggregate plant installed in North America during 2010.



This plant operated at 1,100 STPHproducingaggregate for Roller Compacted Concrete used to raise an existing dam and make it one of the largest in the world.

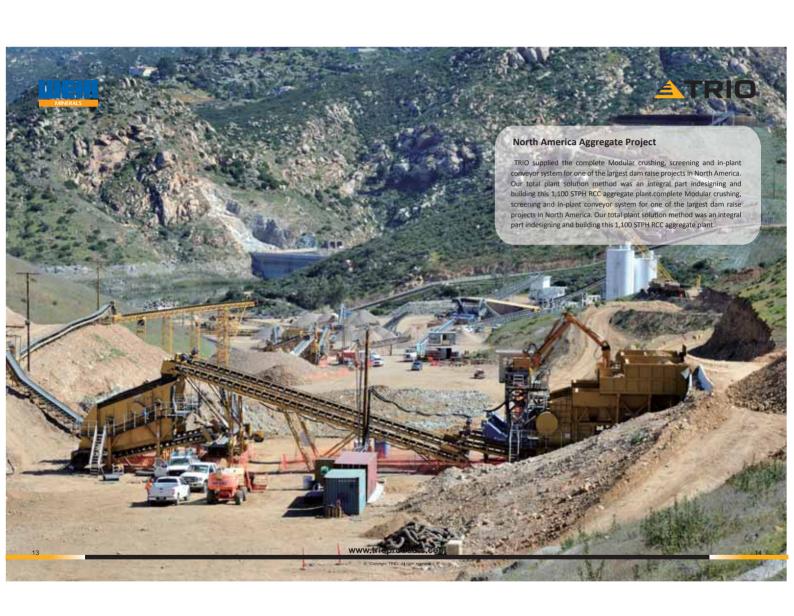








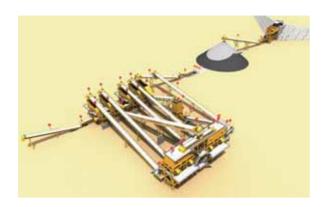












Another illustration of our Total Plant Solutions methodis this iron ore processing plant. TRIO supplied the modularprimary, secondary and tertiary crushing stations andhorizontal screeningmodules.



This plant design began a with mass balance flow diagram, then progressed through both 2D and 3D plant layouts and was completed with comprehensive set of engineered drawings.





The project included amagnet separation station, conveyors inmultiple configurations and the central control room forefficient operation and supervisory control.





All modular stations were manufactured and pre-assembled in theirentirety before shipping directly to the job site, insuring an accurate and efficient on site assembly in this remote and hostile environment.





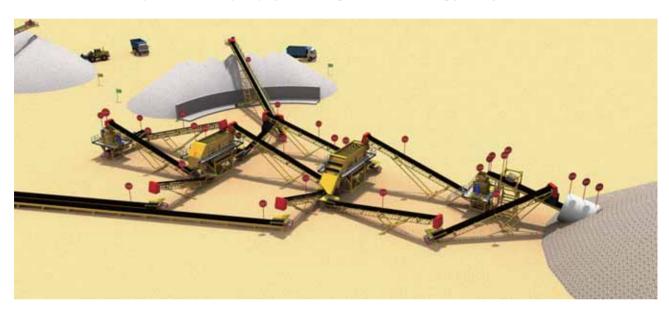




Comprehensive Optimized Solutions

TRIO can provide not only key single machines, but also complete crushing, screening, washing, and material conveying solutions. We take your budget, working environment, capacity and product gradation requirements into consideration to provide a customized solution. Our optimized solutions include machine model selection, operating simulation, and on-site layout drawing.

These outstanding designs, engineering and manufacturing capabilities, together with complete after-sales service, will ensure the successful implementation of your project, creating value and achieving your objectives.





Worldwide Parts and Service Support

From Europe to mid-Asia, Africa to America, China to Australia, no matter what you order (a complete system, single machine, or a spare part). TRIO will provide you with professional service and support.

Combined with off-the-shelf availability, global distribution and superior quality, TRIO replacement parts and skilled service personnel make TRIO a valued partner in the global mining and aggregate industries.

All TRIO products are assembled and test run in our factory to ensure reliable performance. We also provide professional training for customer maintenance and operations personnel to insure smooth and efficient plant operations along with safe and simple maintenance.





CRUSHERS

CT Series Jaw Crusher TC Series Cone Crusher APS& APP Series Impact Crusher TV Series VSI Crusher

Screens

TIH, TIO&TIOSP Series Inclined Screen TTH Series Horizontal Screen TBSS& TBSD Series Banana Screen

Portable Plants

Track mounted portable plants
Wheel mounted portable plants

Plant Solutions

'Turn-key' projects

TRIO - US

Corporate Office
12823 Schabarum Ave.
Irwindale, CA 91706
United States
Tel +1 626 851 3966
Fax +1 626 851 9526
productinfo@trioproducts.com



www.trioproducts.com