



Expertise That's Always Within Reach

GRANCO CLARK's commitment to assuring maximum equipment performance has earned us a record of more successful extrusion installations than any other company in North America.

First, we work with you to recommend the right equipment for your particular needs, then we ensure a smooth acquisition from purchase order to manufacturing. Once the equipment is installed, we train your personnel for operation and commission for full production.

After installation, we follow up to make sure your equipment is performing at peak efficiency and that you're completely satisfied. We back all of your equipment with the industry's best warranty.

With **GRANCO CLARK**, you have peace of mind that your extrusion line is delivering the highest possible performance and productivity. You can count on us for continued service and support over the full life of your equipment.

24-Hour Parts Hot-line

Round-the-clock support just a phone call away

When you need replacement parts you can order them any day of the week, at any time, using **GRANCO CLARK's** 24-hour parts hot-line or e-mailing us at parts@grancoclark.com. Over 80% of component replacement parts are available for delivery the next day or sooner.

Simply call +1 (616) 794-2600 between 8 a.m. and 4:45 p.m. Eastern, Monday through Friday, or +1-855-GRANCO1 (+1-855-472-6261) after business hours or on weekends. Our parts specialists will key your order into an inventory computer system, answer questions about parts availability and shipping times, then ship your part(s) immediately when available.

If your equipment goes down, help is available immediately with **GRANCO CLARK's** broadband support. Diagnostics assistance is free during standard business hours with additional assistance available 24/7. We'll run diagnostics on your system via broadband and step you through any repairs.



Global Contacts



UNITED STATES



AUSTRALIA



BRAZIL



INDIA



ITALY

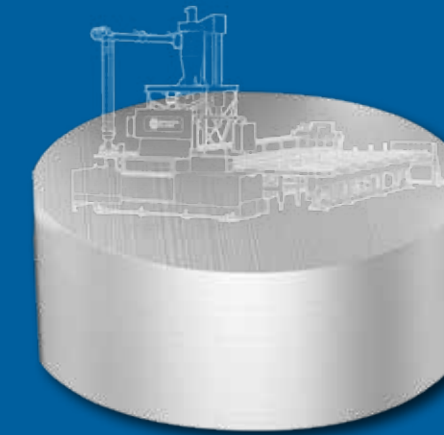
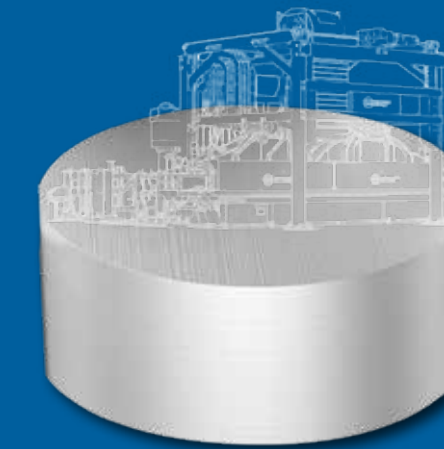
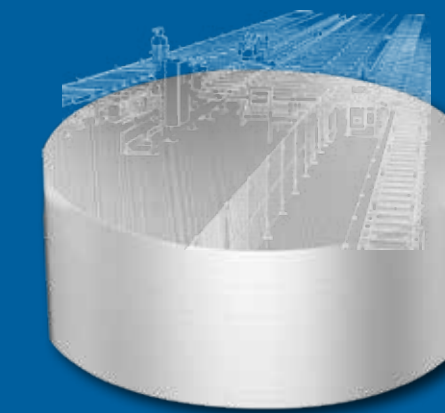
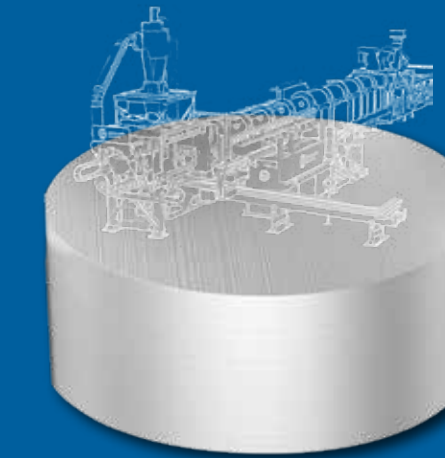


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BECOMING
 MORE
 EFFICIENT
 TOGETHER

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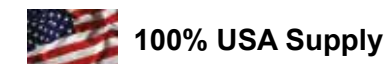
About Us

At **GRANCO CLARK**, we do more than just custom-design and manufacture robust equipment for the aluminum extrusion industry. We are a technology advocate that partners with our customers worldwide to help provide solutions to produce the best ROI.

With impressive capabilities, we provide long-lasting solutions, streamline workflow and maximize quality. Our in-house body of engineers brings industry expertise in multiple technologies. We welcome new ideas, and we rely on proven experiences. With 77 plus years of experience, we give piece of mind to our customers by providing safe, effective, innovative, custom solutions that make sense for their business.

Whether the needs are to upgrade existing or integrate new equipment into your line, or fully automated systems encompassed with the latest technology, our capabilities are scalable. As your advocate and partner, your business is our passion. We are committed to your company's success. At **GRANCO CLARK**, we will help you think, solve and create. Excellence is our standard.

We are **GRANCO CLARK**. *The right choice.*



77+ Years of experience

99 Employee-owners

22 Full-time engineers

92,000 Square-foot modern facility



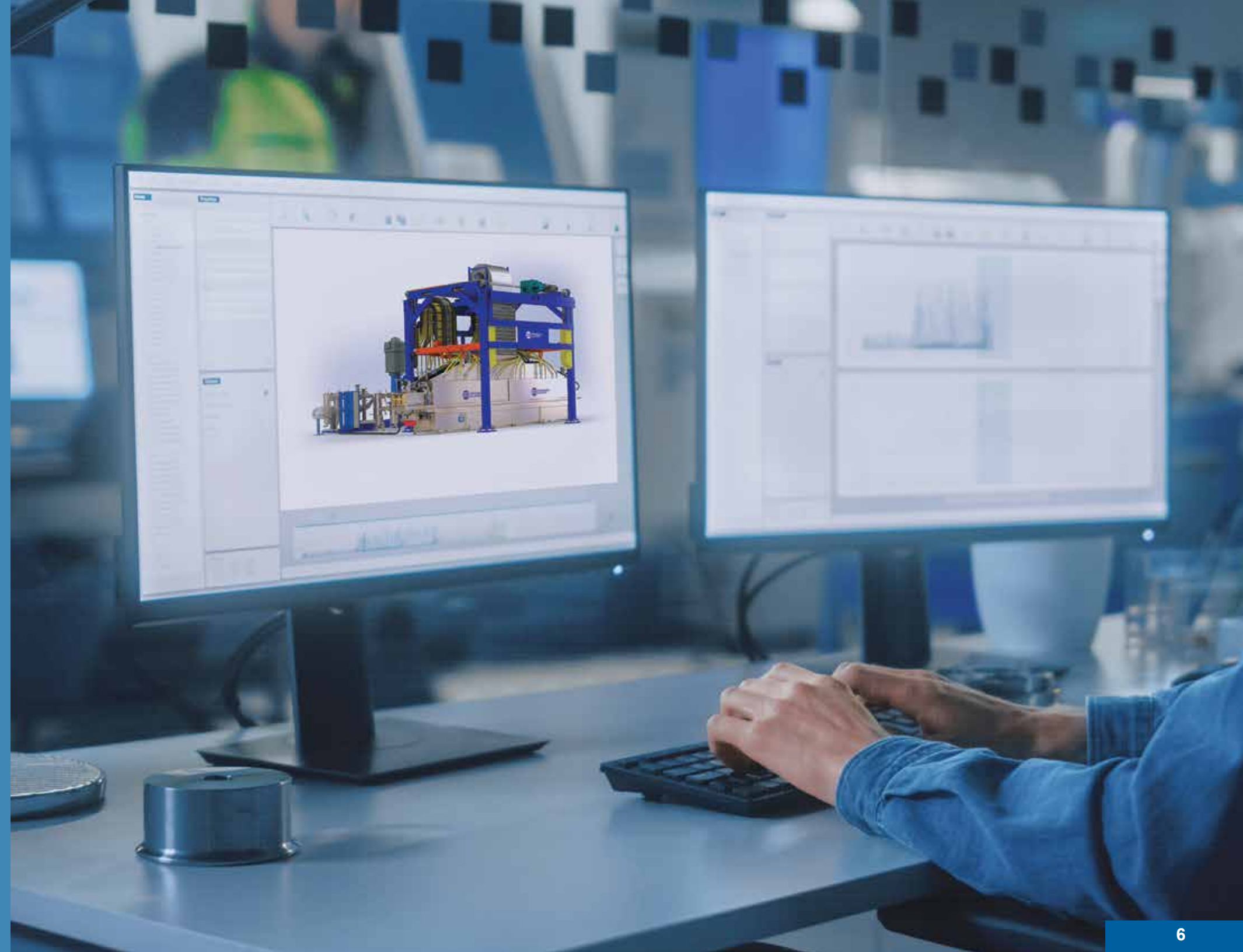
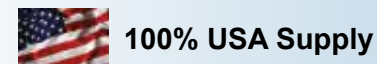
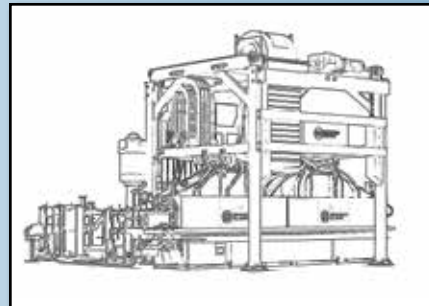
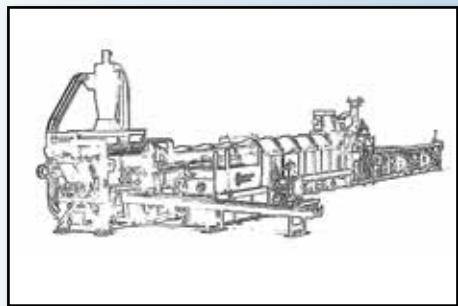


Engineering

Our engineering team at **GRANCO CLARK** takes pride in utilizing cutting-edge technology to design and develop custom equipment that meet the needs of clients worldwide.

One of the key elements that sets us apart from our competitors is our use of the most advanced programs available. Our engineers are experts in the use of the latest software and tools, which allows us to create highly precise and efficient equipment that meet the most demanding specifications.

At **GRANCO CLARK**, we understand that each project presents unique challenges and requirements. That's why we take a customized approach to every project we undertake. We work closely with our clients to identify their needs and develop solutions that meet their specific requirements. Our team has extensive experience in the design and development of a wide range of custom equipment. We have the expertise and technology to handle projects of any size and complexity.



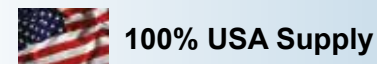


Manufacturing

At **GRANCO CLARK**, we understand the importance of having a talented team of employees to manufacture the best equipment in the world.

Our skilled team consists of certified welders, CNC machine operators, fabricators, mill operators and many others who have years of experience in their respective fields. Each member of our team is committed to providing the best craftsmanship possible to ensure our equipment meets our customers expectations. Every piece of equipment that leaves our facility undergoes a rigorous inspection process to ensure that it meets our high standards.

GRANCO CLARK's talented team of employees is what sets us apart. Our commitment to safety, advanced technology, and quality control ensures that our equipment is produced to the highest standards. If you are in need of equipment that is reliable, efficient, and built to last, look no further than **GRANCO CLARK**.





Preventative Maintenance Services

24 hour technical assistance

Your Connection to Continual Support

At **GRANCO CLARK**, we take pride in providing exceptional service and support to our valued customers. Our unwavering commitment to delivering top-notch assistance sets us apart from the competition. When you choose us, you can rest assured that you are in capable hands.

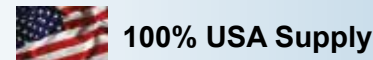
Our dedicated team of service professionals is always ready to go the extra mile to ensure your satisfaction. We understand that your time is valuable, which is why we strive to provide prompt and efficient support whenever you need it. Whether you have a question, concern, or require technical assistance, our knowledgeable experts are just a phone call away.

Service

Phone: +1-800-918+2600 (M-F 8 a.m. - 4:45 p.m. Eastern)
After-hours Emergency Service: +1-616-522-2165
Email: service@grancoclark.com

Parts

Phone: +1-616-794-2600 (M-F 8 a.m. - 4:45 p.m. Eastern)
After-hours and Weekends: +1-616-522-2165
Email: parts@grancoclark.com



Industry 4.0

Power in your Hands

Industry 4.0 is revolutionizing the industry for personnel at every level of the process.

Maintenance staff can now take advantage of predictive analytics that uses sensor and process data. This allows **GRANCO CLARK** equipment to notify them of potential process or equipment failures before they happen.

Production engineers have access to more process and equipment data than ever before. **GRANCO CLARK** systems archive and analyze this data, then present it to users in a graphical or table-based summary. This allows users to optimize their process to a level not previously possible without extensive manual data collection and analysis.

Management staff can now check on the status of any given facility, production line, or even individual equipment from a smartphone, tablet, or PC. **GRANCO CLARK** systems now feature apps that a customer can use to access this data globally if they choose.

We are investing heavily in providing an Industry 4.0 solution to the aluminum industry. Using data from sensor communication protocols such as IO-Link, we are collecting valuable diagnostic data of all sensing devices in real-time. Process data is constantly being monitored, with alert systems to notify personnel of any deviation using a variety of platforms. These include push notifications via text messages and in-app messaging with visual notifications. We are continuously improving the development of our Supervisory Control System (SCS) to archive and analyze this data.

With the development of our mobile applications, the resultant analysis is easily accessible using any device. This allows production, quality, and management personnel greater insight into the process, confidence in quality, with tracing and accountability for every step of that process anywhere in the world.

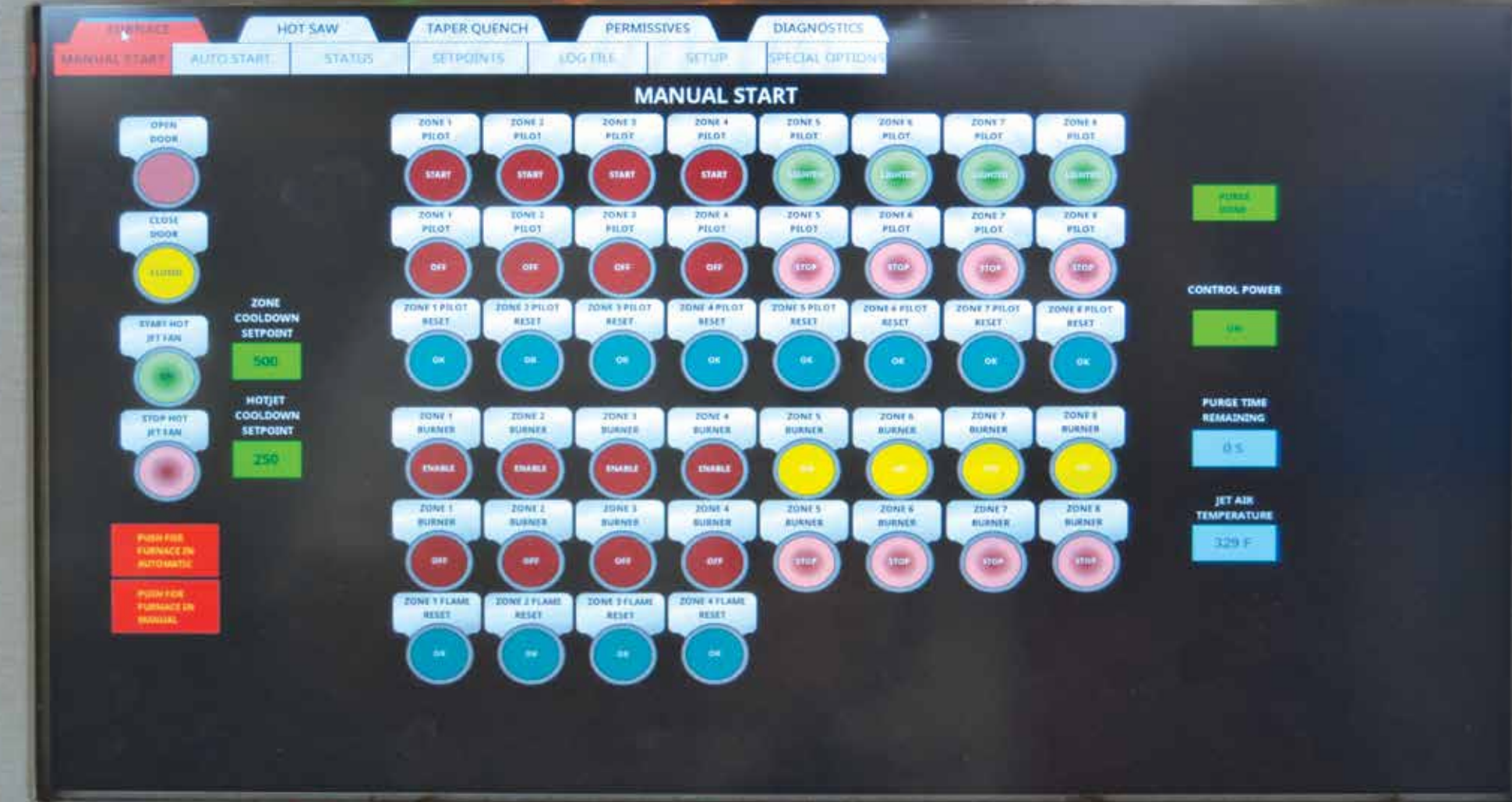
GRANCO CLARK is taking Industry 4.0 into account at every step in our process. We continue to look for more ways to gather and provide data to the customer with every new design.



SCS Extrude

First introduced in 1986, the **GRANCO CLARK** Supervisory Computer System (SCS) was developed to provide extruders with a completely integrated control system for automated extrusion lines.

SCS Extrude is a powerful software system that orchestrates the extrusion process. It enables communication among individual machines, while providing the office with real-time information. It executes production schedules by automatically loading equipment parameters and recipes. It also tracks and diagnoses faults and then logs production and downtime data.



Log Table and Log Pusher

Reduce Friction

The **GRANCO CLARK** Billet and Log Table loads precut stock from the Table to the Pusher, dramatically improving cycle times. While a billet or log is being pushed into a **GRANCO CLARK** Furnace, the loading section of the conveyor will lower, allowing low impact transfer from the table. Once the pusher head is in the “home” position, the load will be raised and the head will begin processing the new stock.

When a new billet/log is loaded from the table in a lowered position, the roller bed will raise to allow the **GRANCO CLARK** Pusher to process the new billet/log.

Robust:

- Strong, engineered tube frame

Ready and Waiting:

- Loading in the lowered position allows the pusher head to simultaneously return to the home position
- New roller design eliminates marks on billets and logs.

Cleaner Logs Using Rollers:

- Significantly reduces friction and “scale” buildup



Log Washer

Extended Die Life

Improving the quality of logs for a superior extrusion begins with **GRANCO CLARK's** Log Washer. As logs pass through, they receive a high-pressure, 3000 psi water spray that removes contaminants. By doing this, it extends the life of your die and container, reducing maintenance.

The **GRANCO CLARK** Log Washer is constructed of stainless steel, with sealed bearings, brushes on ends for water containment (*no aluminum dust explosion hazard and no brush replacement*). No electronics or electrical devices near the spray makes this log washer superior to any other log washer on the market. (*It has a simple, sleek design and can be added to an existing line with minimal effort*).

Improving the Quality:

- High pressure spray removes surface contaminants
- Less Die Repair

Durability:

- Stainless Steel Construction
- Sealed Bearings



Log Washer



Hot-Jet Log and Billet Furnace

High Efficiency

GRANCO CLARK delivers the industries most efficient flame-impingement Aluminum Log and Billet Furnace. After all, we invented the flame-impingement furnace, the tunnel furnace, and the jet preheat furnace well over 50 years ago. We set a new standard in the extrusion industry. That design has continued to evolve, most notably by the addition of an energy-saving “hot-jet” preheat section. It is still the fastest, most energy-efficient way to heat billets and logs.

Hundreds of manufacturing plants around the world have **GRANCO CLARK** furnaces; some more than 30 years old and still on the job.

Flame-Impingement Furnace:

- One of the most energy efficient furnaces available
- Hot-Jet preheat section
- Thermal efficiency up to 88%

Improved Thermal Performance:

- New nozzle design
- New nozzle distribution
- Efficient hot air return

Low Maintenance Transport:

- Large diameter rollers in machined bearings
- 5 year maintenance-free warranty on new style rollers
- Easy "lift-out" replacement of bearings and rollers



Hot Billet Saw

Thin Kerf, Long Life Blades

The **GRANCO CLARK** Hot Billet Saw provides a major enhancement to consistent line throughput. Its servo controlled physical stop allows the heated billets to be cut to the exact length needed just before they enter the press.

A hot billet saw eliminates the need to maintain an expensive inventory of different length billets. Billets are cut to required size after heating. Hot-cutting also prevents a furnace full of wrong-sized billets.

Physical Stop Without Delay:

- Exact length billets
- Shock free pushback
- Stop functions as pushback - fast cycle times

Maximum Efficiency:

- Optional Integrated FusionBond® eliminates two-piece billets, reducing waste and increasing yields
- Industry-leading chip collection system

Enhanced Quality:

- Perfect square-cut Aluminum Log Saw
- Compensation cut

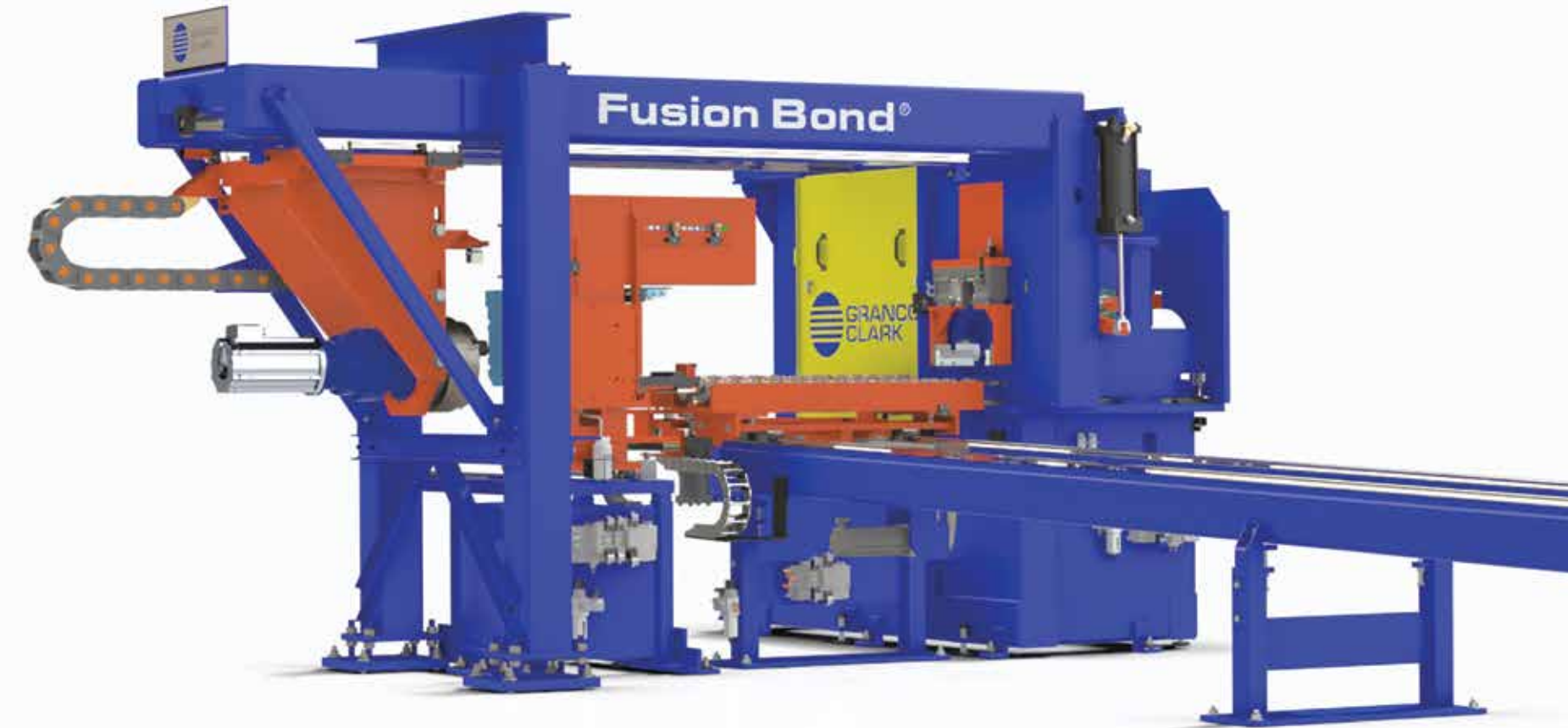


FusionBond®

Continuous Log

GRANCO CLARK FusionBond® reliably eliminates two-piece billets and the problems that can slow down your line, e.g., unusable profiles. The gaps and inconsistencies caused by alignment issues where the two pieces meet can be eliminated. Spot welding will not eliminate gaps and oxidation, and the welds often break during transport to the furnace. The FusionBond® produces a full face stronger bond compared to multi-point welds.

- Significantly reduce scrap
- High recovery
- Truly no scrap from logs
- Eliminate press billet handling issues, due to two piece
- Remove cast cut face oxidation
- No trapped air in container from bad cuts
- Elimination of two-piece billets
- Integrates with hot saw
- Pressure controlled rotation
- "Clean-up" cut before bonding
- Optional inert gas atmosphere
- Increased yield up to 4%



Billet Transfer

Direct Delivery

GRANCO CLARK provides a choice of billet transfer mechanisms to meet a variety of requirements. Each transfer system is custom-engineered to match the press delivery point and avoid all potential interferences.

Furnace-to-Press Billet Transfer Systems:

- Reliable billet transport from the heating system to the extrusion press
- Tray Style Transfer
- Overhead Style Transfer
- Saw to Press Loader
- Robotic Loading
- Customizable



Billet Taper Quench

Active Isothermal-Isopressure Extrusion

Isothermal extrusion—maintaining a constant exit temperature over the entire extrusion cycle is the overriding benefit of the Billet Taper Quench. It allows maximum extrusion speed for a given alloy profile and press tonnage. It eliminates variations in dimension and structure along the length of the extruded product.

Highest Quality Profiles:

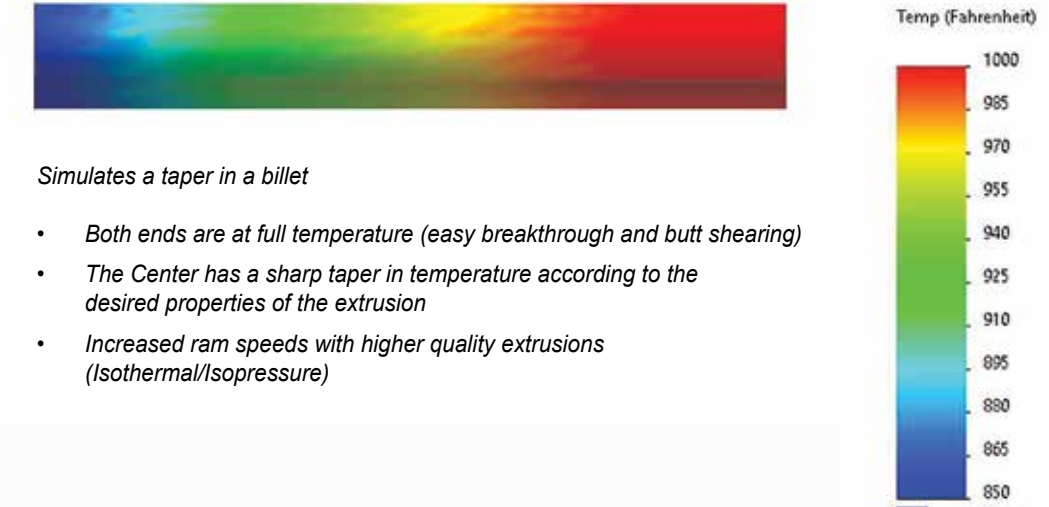
- Reduced dimensional variation
- Maintain consistent extrusion temperature
- Eliminates end-of-extrusion blisters

More Throughput:

- Taper heating allows faster press speeds
- No press delay

Isothermal Extrusion:

- Lowest acquisition cost
- No induction heater



Simulates a taper in a billet

- Both ends are at full temperature (easy breakthrough and butt shearing)
- The Center has a sharp taper in temperature according to the desired properties of the extrusion
- Increased ram speeds with higher quality extrusions (Isothermal/Isopressure)



High Impact Velocity Quench

Profile Quality

GRANCO CLARK has been supplying “High Impact Velocity” quenches since 1985. We documented the underlying science two decades ago in a seminar paper at the Extrusion Technology Symposium in 2004 (*ET-04*).

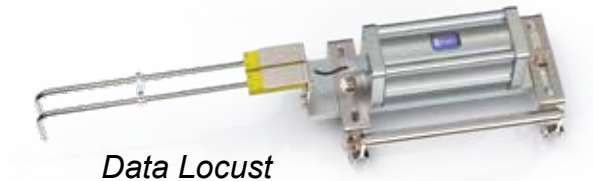
Cooling rate is determined by quench technology and profile thickness. For most crash box sections our systems can provide cooling rates of more than 200°F per second on enclosed hollows (*that is - quenching only the outside of the profile*).

GRANCO CLARK's High Impact Velocity Quench provides the maximum heat transfer available in a profile quench. Unlike flood quenches, the High Impact Velocity Quench penetrates the steam barrier surrounding the profile and puts water droplets directly on the aluminum. More importantly, the **GRANCO CLARK** High Impact Velocity Quench provides adjustability unlike any other, for a gain in profile quality.

With the **GRANCO CLARK** High Impact Velocity Quench, the speed of the cooling process is greatly increased—in fact, it can provide more than twice the cooling rate of a flood quench and three times the cooling rate of other spray quenches.

- Unmatched Cooling Rates
- FEA Analyses For Any Shape
- Performance Guarantee
- Eliminate Distortion with Progressive Quenching
- All Stainless Construction
- Crash Profiles meet standards for automakers
- Elimination of hydraulics

Introducing Data Locust: The Future of Data Collection. Data Locust is the revolutionary, first-of-its-kind data collection device that connects to an extrusion and travels through the quench. This allows the user to collect precise, real-time quenching data.



Air Quenching Systems

Highest Cooling Rates

Uniform, efficient cooling is essential for boosting profile quality, throughput and your bottom line. This is where **GRANCO CLARK's** experience in profile quenching stands above the rest.

We have a 45 year history of design innovations in profile quenches. No other manufacturer can match that level of experience. We offer a variety of quenching and cooling systems, which accommodate a wide range of performance requirements and budget parameters.

Overhead Cooling Duct System:

- With optional inside/outside air blend system

Integral Runout Cooling:

- Efficient air cooling in the extrusion run-out area

Cooling Table Systems:

- Individual fans
- Ducted arrangement



Electric Puller Systems

Increased Production

With a **GRANCO CLARK** puller you can convert more metal into profitable product. **GRANCO CLARK** offers four types of pullers: Single, Double, Twin and Twin/Twin—in order to meet varying operational requirements and budget parameters. All of our pullers deliver greater line efficiency and even, twist-free profiles. Drop away leadout rollers prevent marking of profiles. Wi-Fi communications reduce maintenance.

Pullers

- Single Puller
- Double Puler
- Twin Puller
- Twin/Twin Puller

Single Puller

When space or budget constraints don't allow for the use of our Double or Twin Pullers, **GRANCO CLARK's** Single Pullers can still improve your productivity. They produce even, twist-free profiles and reduce scrap about 3% over operation without a puller. Line efficiency is further enhanced when you combine our Single Puller with the **GRANCO CLARK** under-table Hot Extrusion Saw.

Double Puller - Flying Cut

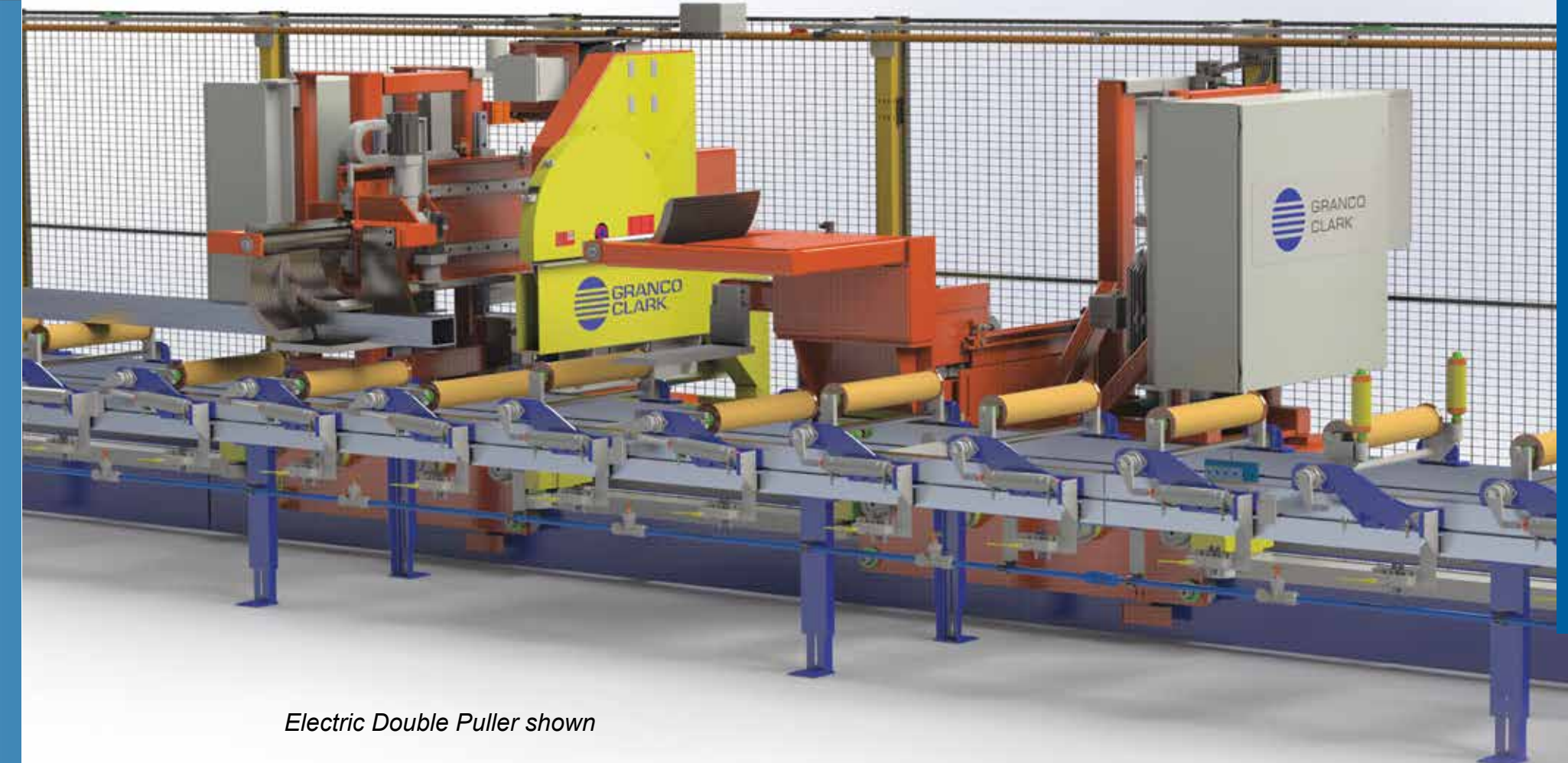
The **GRANCO CLARK** Double Puller features two puller heads on the same track, allowing it to seek the weld mark and cut profiles on the fly. This allows it to meet short press dead-cycle times.

Twin Puller

In addition to the Single and Double Puller, **GRANCO CLARK** offers Twin Pullers equipped with multiple operational programs. The Twin Puller includes two heads on separate tracks and an adjustable hot saw on a third track that cuts the profile during the dead cycle or on the fly.

Twin/Twin Puller

On the **GRANCO CLARK** Twin/Twin Puller, both puller heads feature a saw. This allows the profile to be cut on the weld mark on the fly, as with a double puller, and no additional third head or saw is required.



Electric Double Puller shown

Electric Stretchers

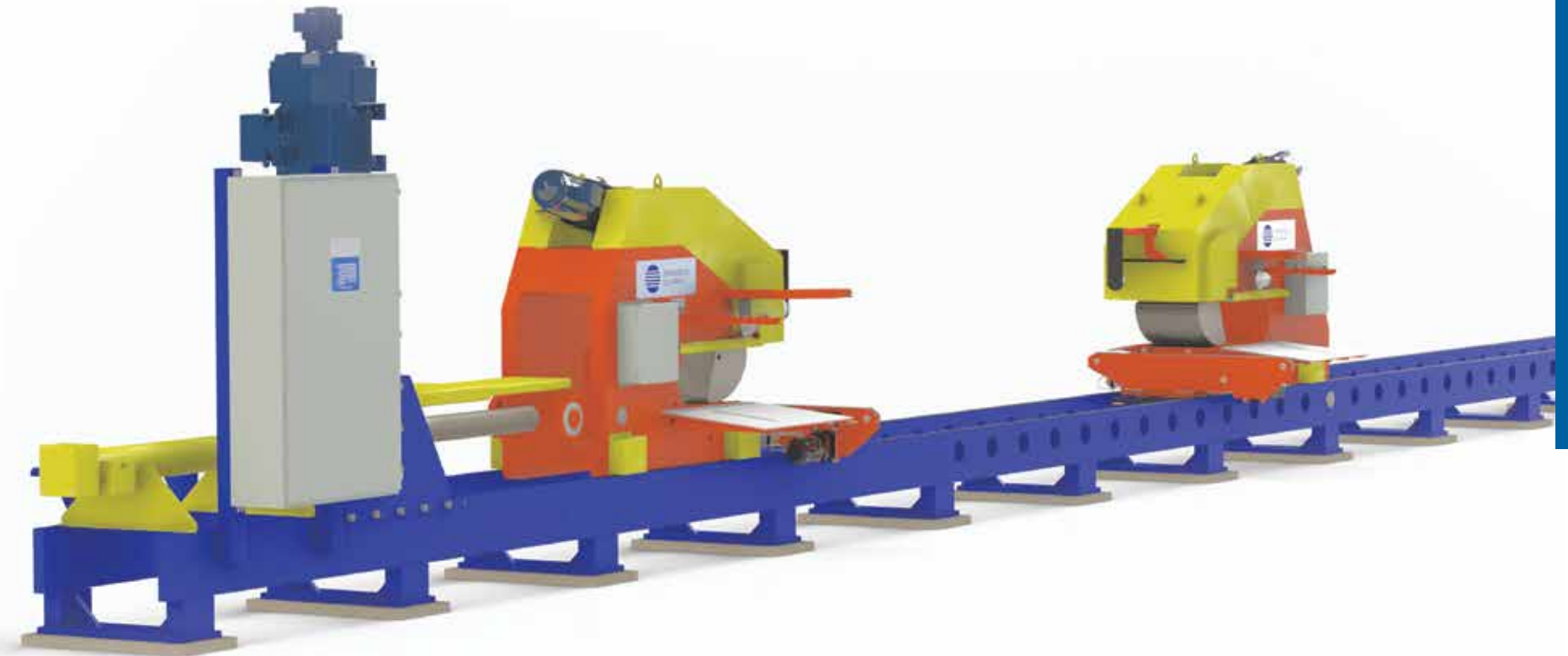
Precise, Accurate Stretching

Stretching is one of the most critical post-quenching operations in the extrusion process. Performing that function correctly often makes the difference between usable product and scrap. An overstretched profile will be out of tolerance. A profile that is not stretched past its yield point will not be straight. Both are destined to become scrap.

GRANCO CLARK Stretchers deliver precise, accurate stretching, which enhances profile quality and keeps scrap to a minimum. When used in conjunction with our belt systems, our Stretchers straighten and batch profiles for efficient downstream operations.

GRANCO CLARK Stretchers accommodate a broad range of requirements. Our Stretchers are available in cam-style and controlled vertical crush jaw designs. No-man operational mode offers labor savings and give you the flexibility you need to meet operational challenges.

- Efficient, accurate stretching
- State-of-the-art safety features, including area scanners, light curtains and two-handed safety controls
- Various jaw designs:—cam-style, controlled vertical crush
- No-man operational mode
- Controlled crush distance and pressure (CVC model)
- Increased usable product
- Maximum operator safety
- Accommodates various operational needs
- Flexibility to meet varying operational challenges
- Preservation of profile surface quality and dimensional integrity
- Elimination of slippage
- Recipe Control:
 - Stretch By Length
 - Stretch By Percent
 - Accurate Pre-Stretch Force Monitoring



Profile-Handling Equipment

Fully Automated Systems

Dents, scratches, chill marks. These are the consequences of outdated conveyors and walking beam systems that can damage profiles, increase scrap, and increase operating costs. Delivering a flawless product isn't just a lofty goal, it's what our customers deserve. That's the biggest reason for investing in **GRANCO CLARK's** automated profile-handling equipment.

With its superior degree of automation, our handling equipment will help you achieve maximum throughput. It will improve the overall surface quality of your product, reduce labor costs, scrap, physical effort and downtime. Your equipment is built to last, and to be serviced and repaired easily.

Runout Conveyors:

- Equipped to handle maximum extrusion speeds
- Integrated cooling

Runout Transfer Systems:

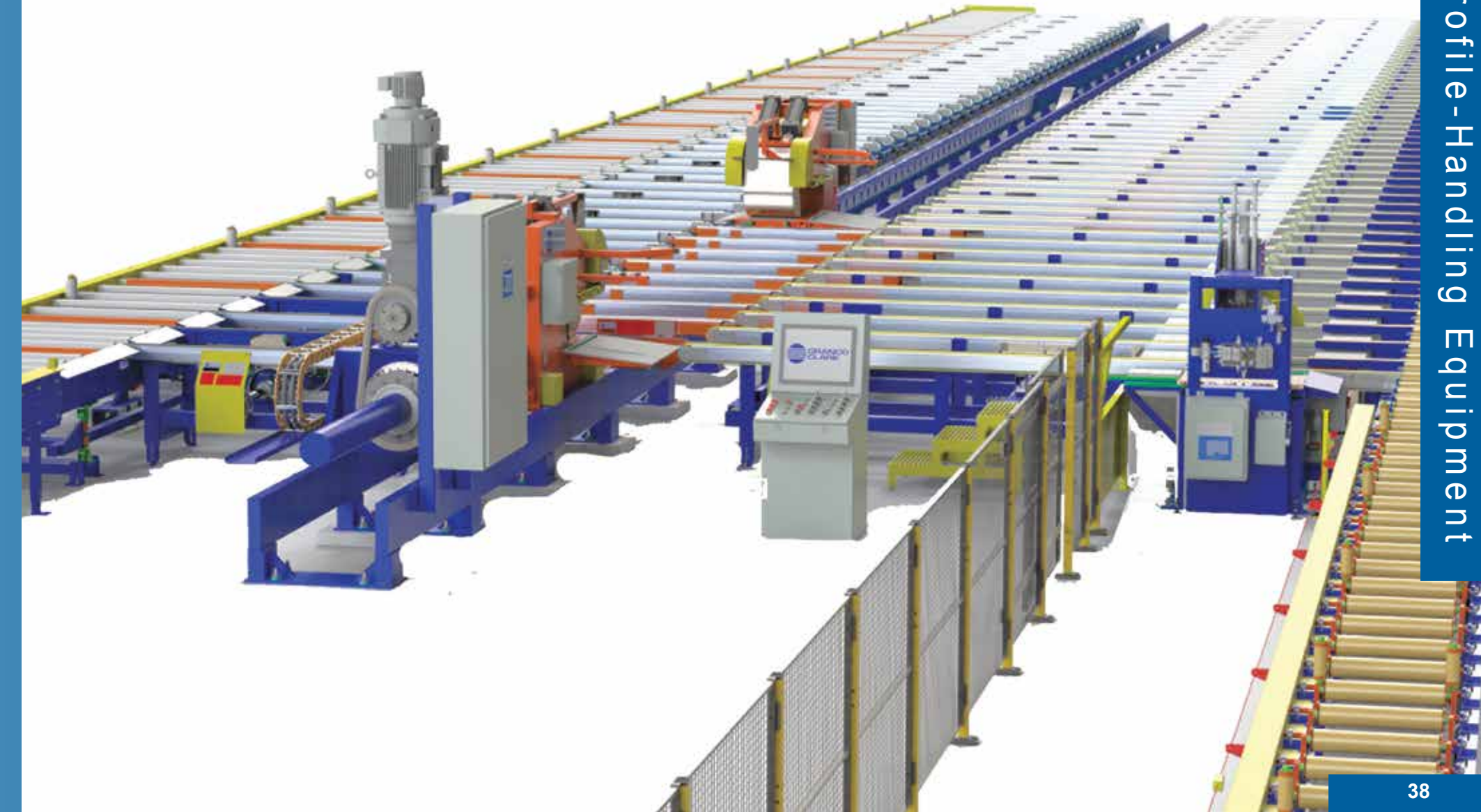
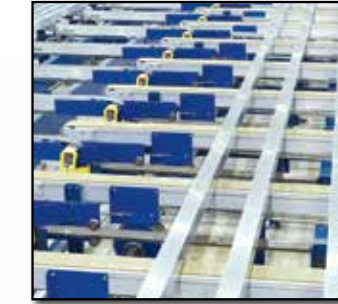
- A smooth transition from runout to cooling

Transfer and Cooling Table:

- Positive drive belts
- Gentle extrusion handling for best profile quality
- Quick change belt feature
- Industry supporting - extruded aluminum construction

Load/Unload:

- Smooth transport through the stretching cycle
- Batching



Saw and Gauge Systems

Superior Cut Tolerance

Cutting large batches of extrusions is one of the keys to reaching high levels of productivity. Most existing Cut-off Saws have a limited width capacity, and are therefore inefficient and unproductive.

GRANCO CLARK's Extrusion Cut-off Saws are large-capacity, high-quality, high-performance saws that provide extremely close tolerances and an excellent cut surface finish. They are durable with low maintenance, and designed with safety in mind.

GRANCO CLARK's Extrusion Cut-off Saws provide superior cut tolerance, maximum throughput, and safe operation by means of a process that involves minimum manual intervention.

Superior Cut Tolerance:

- High-capacity, high-performance saw ensures throughput

Advanced Automation:

- Servo-controlled gauge head positioning

Safety:

- Floor mounted console or pedestal away from cutting area
- Electronically interlocked saw access doors
- Area Scanners

Substantial Gains:

- Wide table capacity maximizing throughput

Quality Considerations:

- Drop down arbor design
- Powered roller table
- Chip collector with dual slide gate air lock



Saw and Gauge



Profile Stacking System

Automate Your Off-Loading

GRANCO CLARK Stacking System are cost-effective and efficient solution for off-loading cut profiles from the gauge table to aging racks. It improves operator safety, reduces labor costs, and minimizes the risk of profile marking. With automated stackers and spacer insertion, the system is easy to use and will help you save time and money.

If you're looking for a way to streamline your manufacturing process and improve your bottom line, consider investing in the **GRANCO CLARK** Stacking System.

- Automated oven rack loading/unloading
- Automated spacer insertion
- Single or multiple batch processing
- Reduced labor and injury-related costs through elimination of manual handling
- Maintain profile surface quality
- Greater, more consistent throughput
- Automated Rack stacking, option Rack destacking



Cold Log and Billet Processing

Cold Log and Billet Cutting, Stacking and Banding

GRANCO CLARK Log and Billet Saw, Auto Bander and Robotic Stacker are game-changers for manufacturing companies that produce logs and billets. The system automates the entire process, from cutting the logs to stacking the billets, and banding them for transport. With this system in place, manufacturers can increase their productivity, reduce their labor costs, and improve the overall efficiency of their operations.

If you're looking for a solution to streamline your log and billet cutting process, the Log and Billet Saw, Auto Bander and Robotic Stacker are definitely worth considering.

- Rugged construction
- Fully enclosed saw blade
- Compensation and two-piece billet cutting
- Servo controlled measurement
- Integrated with loading and unloading tables
- Square cuts
- Longevity
- Dependability
- Increased safety for operator
- Low noise level
- Maximum usage of raw materials
- Reduced complexity of the equipment, cutting down on maintenance requirements
- Provides the information for accurate cut lengths
- Complete sawing system designed for ease of use and precise control
- Delivers a clean-cut, sharp-edged billet
- Robotic Stacking of Billets of All Diameters
- Automatic Fixture Accommodates All Bundle Configurations
- Band Logs and Billets
- Offload Bundles without Process Interruption



Age and Anneal Ovens

Automotive, CQI9 and AMS-2750 Compliant Ovens

GRANCO CLARK Age Ovens are designed to deliver rapid, complete aging of every profile in every batch. This translates into maximum profile quality and throughput with a dramatic reduction in scrap. We produce several different oven designs to balance performance requirements, space restrictions and budget parameters.

Our Age Ovens bring loads to temperature quickly, a nominal one to two hours. Due to high-volume airflow, they uniformly heat faster than competitive ovens.

Single End Flow Age Oven:

- Simple, low-maintenance design delivers uniform temperatures

Reversing End Flow Oven:

- Fast heat-up, excellent temperature uniformity

Double End Flow Age Oven:

- Faster heat-up with higher temperature uniformity

Side Flow Age Oven:

- Cross-flow circulation for highest thermal uniformity

Continuous Aging Oven:

- Continuous production flow for highest throughput

Rack Handling Systems:

- Minimum manpower requirements, maximum profile quality



Age and Anneal Ovens



Precision Finish Saw Systems

Highly Accurate Cut, Fast

The **GRANCO CLARK** Precision Finish Saw is a cut above the rest in the areas that matter: speed, accuracy, safety and ease of use. In addition, its exceptional reliability ensures consistent productivity.

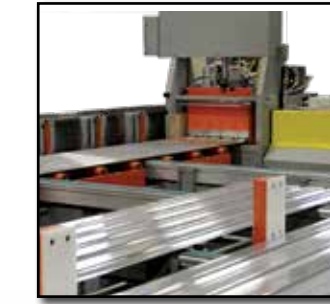
The **GRANCO CLARK** Precision Finish Saw is a computerized saw that can deliver a highly accurate cut faster than any saw of its kind in the industry. Its cut-lengths, straightness, and squareness are measured in thousandths of an inch.

Cutting stroke rates and back gauge advance and return movements are fast and can double productivity.

The **GRANCO CLARK** Precision Finish Saw cuts so fast, operators ask for a “pause saw” button to keep up.

Industry's Most Productive Saw:

- Exceptionally close tolerances combined with highest levels of productivity
- High speed plus large batch window
- Hitch feed provides maximum precision
- Tightest Tolerances



Infrared Die Ovens

Read Actual Die Temperature

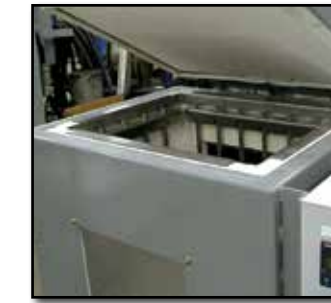
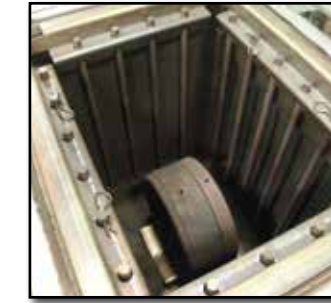
The **GRANCO CLARK** Infrared Die Oven provides the fastest die heating times available. It heats dies uniformly in less than 25 percent of the time required by traditional die ovens. While a typical die for a mid-size press takes approximately four hours in a convection oven, the **GRANCO CLARK** Infrared Die Oven brings the same die to desired temperature in less than 90 minutes.

This fast heat-up increases production flexibility, making it easier to adjust scheduling if a die breaks or when a rush order is received. Dies can be placed in the oven much closer to the time when they're actually needed, minimizing the time they spend at high temperature, extending die life.

All internals are protected against damage from die mishandling.

Oven	Maximum Die	Heating Time
1. Model 20	14" diameter, 7" thick	Up to 1.5 hours
2. Model 30	18" diameter, 10" thick	Up to 2 hours
3. Model 40	22" diameter, 12" thick	Up to 2.5 hours

Larger available for bigger presses.



Die Ovens

Accurate Temperatures

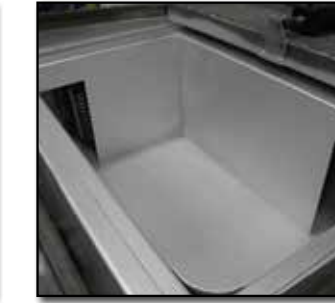
For the extrusion process to run smoothly, accurate temperatures are key. Nowhere is this more important than at the press. Not only must the billet be heated to the correct temperature, the die must be as well. A die that isn't at the proper temperature when it is needed will slow the operation down and add stress to the press.

With **GRANCO CLARK** Die Ovens, airflow and recirculation are engineered for quick and uniform heating. This results in less downtime, less strain on the press, and better surface quality for the extrusion.

One of the hallmarks of **GRANCO CLARK** Die Ovens is their durability. They feature strong shells that are extremely resistant to the impacts of die mishandling. You'll spend very little time maintaining them.

Whatever your operational and budgetary parameters are, there's a **GRANCO CLARK** die oven that will meet them.

- Quick Heat Up Times
- Convection, Radiant and Hybrids Available
- Many Configurations Available Top/Front/Bottom Load
- Safe and Cool Skin Temperatures



Additional Product Offerings

Streamline Your System

As a manufacturer, you always look for ways to improve your production process and increase efficiency. That's why having the right partner is crucial. With **GRANCO CLARK**, you get superior custom extrusion equipment and access to our additional product offerings that can take your manufacturing process to the next level.

One of **GRANCO CLARK'S** most exciting offerings is a complete extrusion press line, including the press itself. In addition to our complete press line, **GRANCO CLARK** also offers packaging lines, anodizing plants, and paint lines. These additional product offerings are a game-changer to our customers. By having everything you need in one place, you can streamline your production process and save valuable time and money. You won't have to go to multiple vendors to get the equipment you need to ensure that your products are of the highest quality. So if you're looking for a partner to help take your process to the next level, look no further than **GRANCO CLARK**.



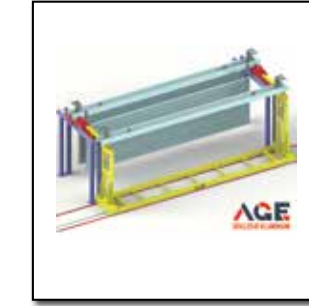
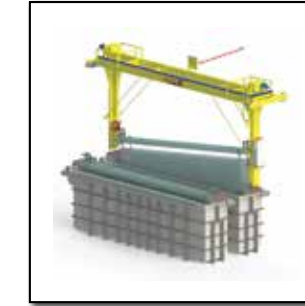
Anodizing Expertise

Fully Automated Anodizing

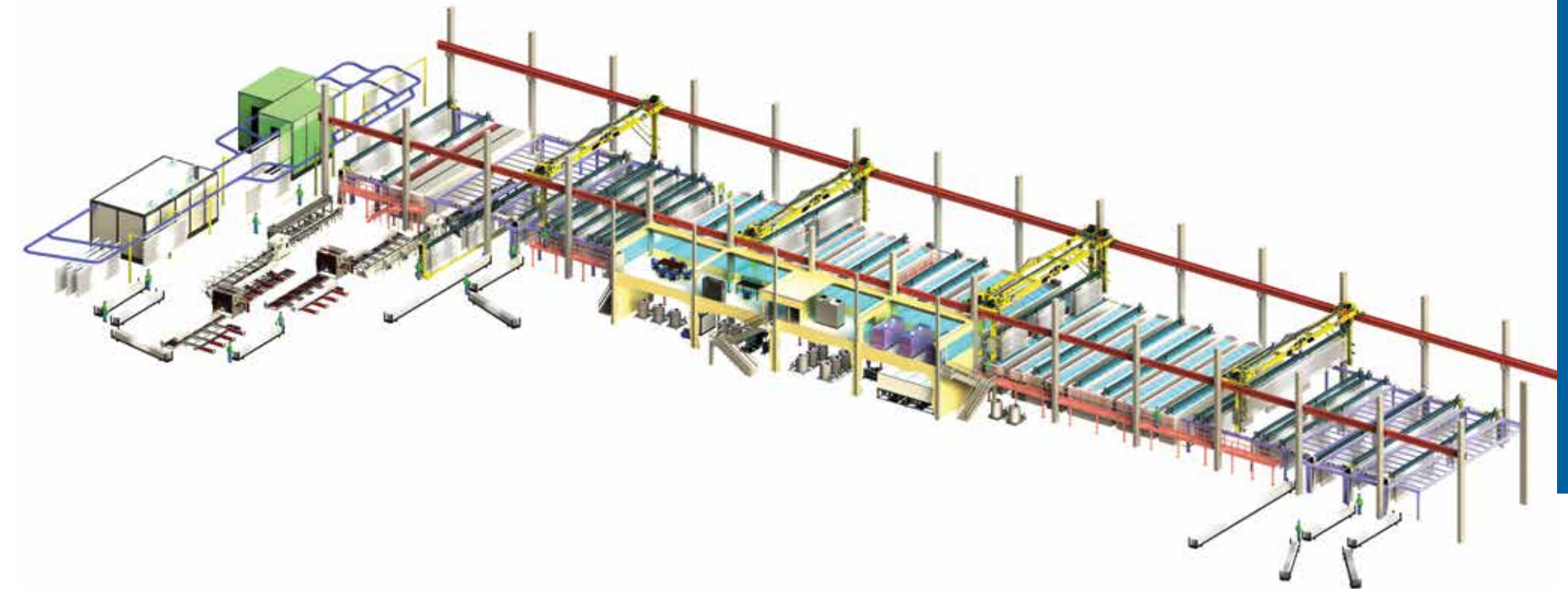
GAZZANI ENGINEERING, leaders in process automation.

Partnering with **GAZZANI ENGINEERING** to provide highly reliable equipment for automated handling systems and automation equipment for the aluminium anodizing plants.

Fully automated cranes for anodizing, transferring systems and process controls are **GAZZANI ENGINEERING** speciality, to provide to customers the maximum performances, repeatability, quality and productivity.



Partnered with

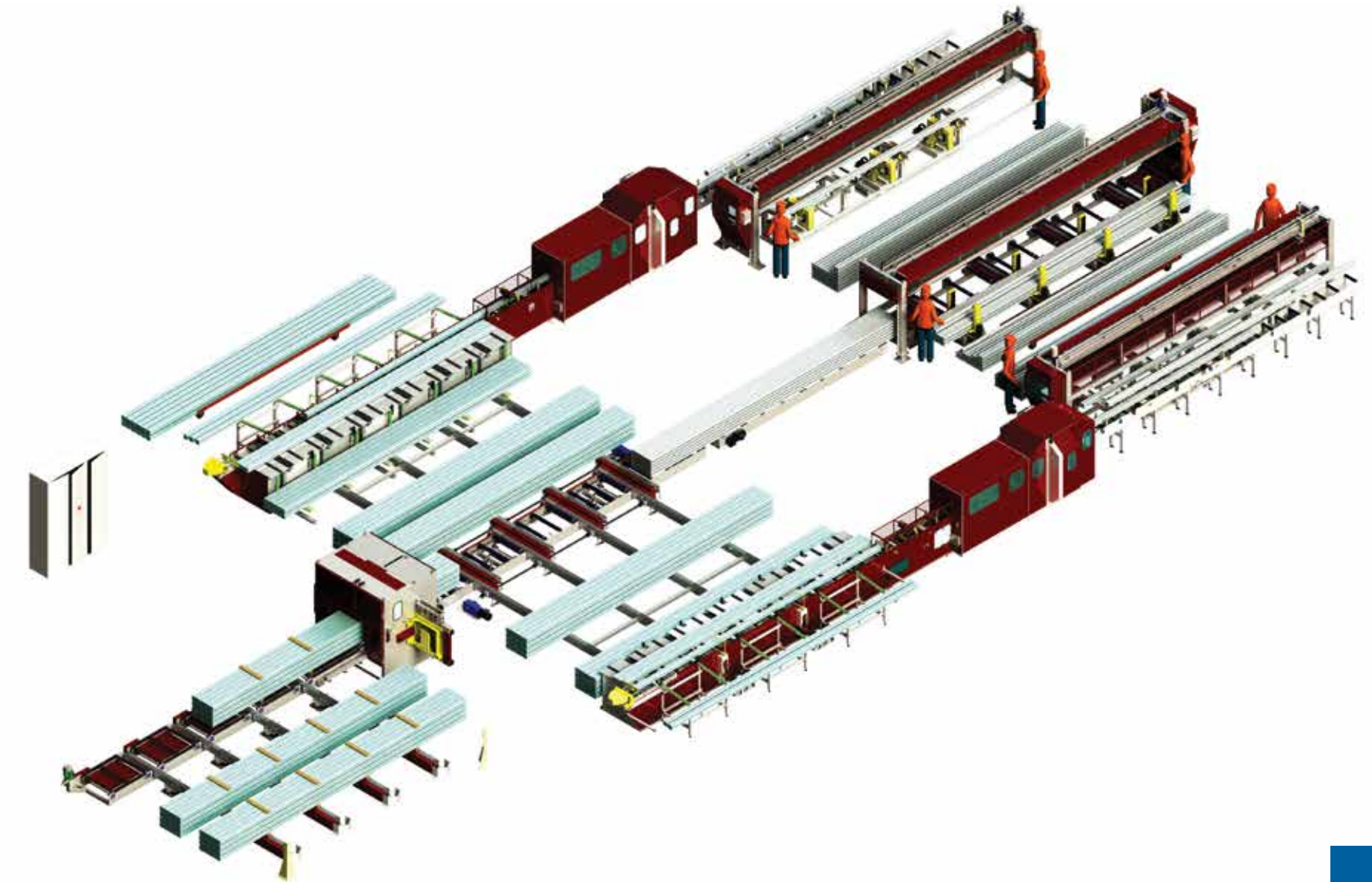


Automated Packaging Systems

Customized Packing Configuration

GAZZANI ENGINEERING will configure the proper layout for the profiles packaging based on requirements. **GAZZANI ENGINEERING** lines can work with different packing materials (stretch film, PE or paper) and reach configurable working speeds up to 48 meters/min.

- Adhesive tape machine for aluminium profiles
- PE Film Lamination Machine for Sheets
- Paper/PE sheet dispenser
- Various packaging lines solutions
- Bagging Machine - The Alternative Way



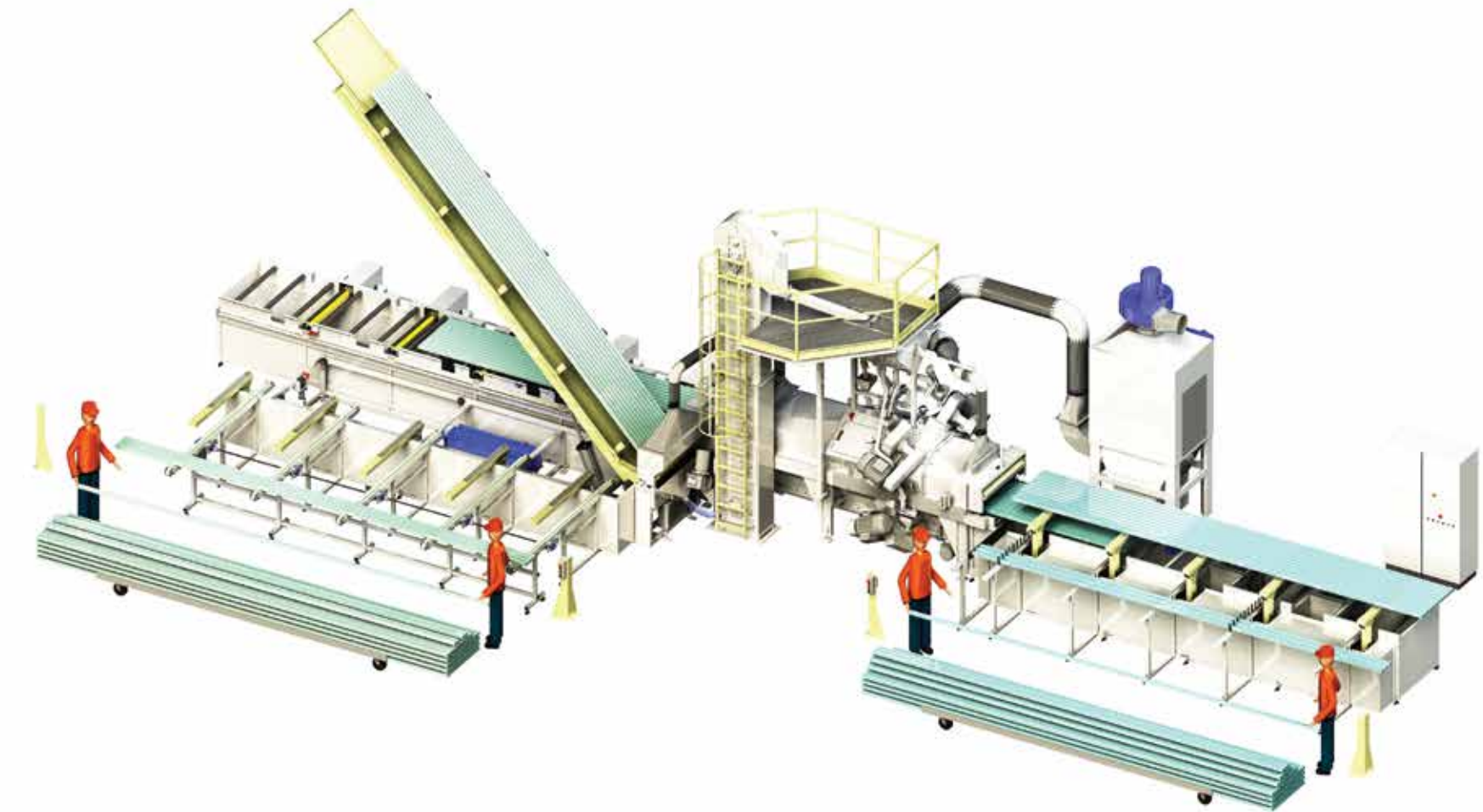
Mechanical Finishing Systems

Eliminates Costly Scrap

GAZZANI ENGINEERING Shot Blasting Machine.

Shot blasting machine for mechanical matte finishing of aluminium profiles by stainless steel microspheres.

- Total elimination of surface defects and imperfections due to the extrusion process
- Drastic reduction of mud production during the anodizing process of the aluminum, with further decrease of the elimination cost of the wastage
- Substantial increase of production in the anodizing cycle of the profiles
- Removal of the natural oxidation hues on the extruded profiles, caused by atmosphere agents during a long-lasting storage of the profiles themselves before being treated (painted or anodized)





Pick your press, we will do the rest

GRANCO CLARK has always been and will continue to be on the front lines of cutting edge technology.

GRANCO CLARK has a reputation for manufacturing the most dependable and durable equipment in the business. Those aren't our words; we hear them from customers who have plenty of industry experience and research their purchases very carefully. Quality equipment is the starting point. You can't make a great system from mediocre components.

New Technologies

Innovation is another key focus of GRANCO CLARK. The most important new technology and the most productive refinements of existing components have come from GRANCO CLARK. Many, like our Hot-Jet Log and Billet Furnace, have become industry standards.

Hydraulic Free

GRANCO CLARK's ALL NEW Non-Hydraulic System have many of the hydraulic motions replaced by pneumatics. This will include the Log Lift, Log Pusher, Pullers, Stretchers, Hot Saw, ECS Saw and many others. Hydraulic Free systems are quiet, quick, powerful and boast incredible new features.

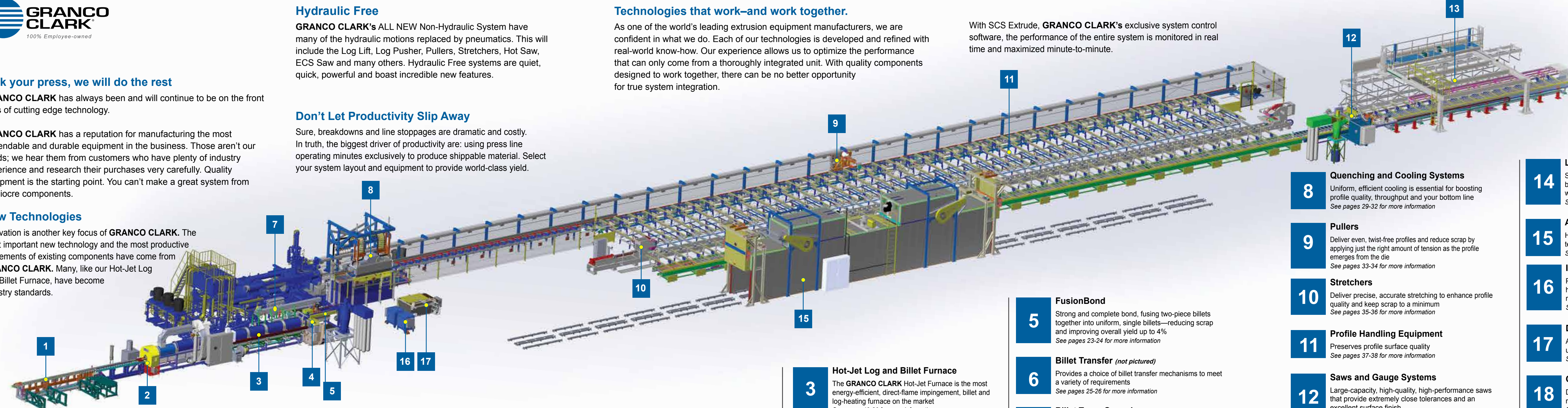
Don't Let Productivity Slip Away

Sure, breakdowns and line stoppages are dramatic and costly. In truth, the biggest driver of productivity are: using press line operating minutes exclusively to produce shippable material. Select your system layout and equipment to provide world-class yield.

Technologies that work—and work together.

As one of the world's leading extrusion equipment manufacturers, we are confident in what we do. Each of our technologies is developed and refined with real-world know-how. Our experience allows us to optimize the performance that can only come from a thoroughly integrated unit. With quality components designed to work together, there can be no better opportunity for true system integration.

With SCS Extrude, GRANCO CLARK's exclusive system control software, the performance of the entire system is monitored in real time and maximized minute-to-minute.



1 Log Table and Log Pusher
Logs are loaded in a lowered position allowing the pusher head to retract to the "home" position improving cycle times
See pages 15-16 for more information

2 Log Washer
High pressure - 3000 psi spray removes surface contaminants with water recovery and reuse with filtration
See pages 17-18 for more information

3 Hot-Jet Log and Billet Furnace
The GRANCO CLARK Hot-Jet Furnace is the most energy-efficient, direct-flame impingement, billet and log-heating furnace on the market
See pages 19-20 for more information

4 Hot Billet Saw
The GRANCO CLARK Hot Saw delivers square, even cuts to ensure profile consistency (optional Log Shear)
See pages 21-22 for more information

5 FusionBond
Strong and complete bond, fusing two-piece billets together into uniform, single billets—reducing scrap and improving overall yield up to 4%
See pages 23-24 for more information

6 Billet Transfer (not pictured)
Provides a choice of billet transfer mechanisms to meet a variety of requirements
See pages 25-26 for more information

7 Billet Taper Quench
Uses a narrow ring of water nozzles to rapidly extract heat from the billet to create the optimum temperature gradient to achieve high-quality profiles at maximum extruding speeds
See pages 27-28 for more information

8 Quenching and Cooling Systems
Uniform, efficient cooling is essential for boosting profile quality, throughput and your bottom line
See pages 29-32 for more information

9 Pullers
Deliver even, twist-free profiles and reduce scrap by applying just the right amount of tension as the profile emerges from the die
See pages 33-34 for more information

10 Stretchers
Deliver precise, accurate stretching to enhance profile quality and keep scrap to a minimum
See pages 35-36 for more information

11 Profile Handling Equipment
Preserves profile surface quality
See pages 37-38 for more information

12 Saws and Gauge Systems
Large-capacity, high-quality, high-performance saws that provide extremely close tolerances and an excellent surface finish
See pages 39-40 for more information

13 Profile Stacking System
Enhance throughput and reduces labor costs
See pages 41-42 for more information

14 Log and Billet Auto Bander and Stacker (not pictured)
Stack billets of all diameters. Automatic fixture accommodates all bundle configurations. Band logs and billets. Offload bundles without process interruption
See pages 43-44 for more information

15 Age and Anneal Ovens
High-volume air systems bring oven loads up to temperature quickly (nominal one to two hours)
See pages 45-46 for more information

16 Infrared Die Ovens
Provides the fastest die heating times available. It heats dies uniformly in less than 25 percent of the time required by traditional die ovens
See pages 49-50 for more information

17 Die Ovens
Airflow and recirculation are engineered for quick and uniform heating
See pages 51-52 for more information

18 Cold Billet Saw System (not pictured)
Delivering the right length billet to the press at the right time is essential to an efficient operation
See pages 43-44 for more information

19 Precision Saw (not pictured)
A cut above the rest in the areas that matter: speed, accuracy, safety and ease of use
See pages 47-48 for more information

Full-Line Snap Shot



Fly-Through Video