

SUTHERLAND

WORLD CLASS PRESS ROOM SOLUTIONS
SINCE 1946

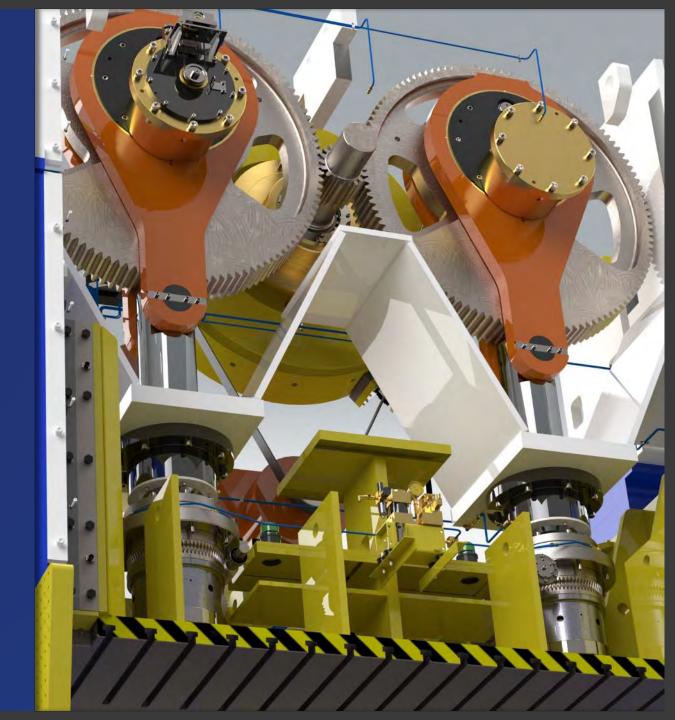




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ABOUT US









GENERATIONS OF INNOVATION

Since 1946, Sutherland Presses has been delivering world-class forming press solutions and services. We are a family-owned and operated business with three generations of industry-leading passion. The Sutherland brand continues to represent our commitment to personalized service and long-term accountability. We specialize in providing turnkey press solutions that are designed and built to meet the most rigorous metal- forming applications and demands. Our advanced controls, impeccable service, and reliable components continue to demonstrate our passion for innovation and our dedication to our customers. Every Sutherland Press build is approached with a "Controls First Philosophy." Designed, welded, heat treated, machined, assembled, tested and fully documented to meet or exceed the demanding JIS 1st Class standard and all key international standards.





THE SUTHERLAND ROADMAP

1946

Sutherland Presses established by generation one, Jack Sutherland.

1955

Jack Sutherland sells master steel coils in the U.S., sourced from NKK in Japan. 1960

Jack Sutherland imports the first 50 Pacific Rim presses ever sold in the USA, all built by Aida.

1980

Second generation, Mark Sutherland takes the helm.

1985

Sutherland Presses goes "Private Label" and begins sourcing from Taiwan.

1987

Sutherland Presses adds mechanical forge & hydraulic presses to the product range. 2001

Third generation, Jill Sutherland joins Team Sutherland.

2002

Sutherland Presses begins studying sources in mainland China.

2005

Sutherland Presses continues business in Taiwan and begins sourcing in mainland China.

2011

Mark Sutherland develops the first I-PRESS® & automation control system.

2014

- Sutherland's California press prep center in La Mirada is established.
- The next generation of I-PRESS® debuts with the I-PRESS PLUS®.

2015

Sutherland Presses introduces servo hydraulic presses controlled by I-PRESS HYDRO[®].

2016

I-PRESS FORGE® joins the family of press controls. Third Generation Jack Sutherland Wilson joins the team.

2017

Fortune 100 automotive stamper installs automated mechanical high speed stamping lines in Tennessee. As of 2020 they have over 22 press lines controlled by I-PRESS PLUS® line controllers.

2018

Japanese automotive OEM installs 600 ton stamping line in their Mexico plant controlled via our I-PRESS® & Automation controller.

2019

- Major international hand tool maker installs both hot & cold forge automated press lines controlled by I-PRESS FORGE® line controller. Refined eccentric plunger guided mechanical straight side presses with increased accuracy & low deflection rates. Tonnages from 300 to 1600 ton available.
- Jack Sutherland Wilson, generation three is appointed as President of Sutherland Presses.

2020

- Largest global automotive component supplier orders high tonnage servo hydro press for Mexico plant controlled by I-PRESS HYDRO® servo hydraulic line controller.
- Major home appliance maker installed servo hydraulic press automated tandem line in Tennessee and a stand alone press in Mexico plants controlled by I-PRESS HYDRO® servo hydraulic line controller.

2021

- Our controls first philosophy with I-PRESS® has proven to be a differentiator in the press industry. Our focus on presses encompasses three key areas, mechanical straight sides, servo hydraulic, hot, cold and cored forge presses.
- Sutherland Presses introduces the I-KNOW interactive knowledge base and the I-BUILD 360°-3D interactive press builder.

TODAY

You are here.





I-PRESS®



ABOUT

Sutherland Presses is proud to introduce I-PRESS®, the future of press control technology. With software-based controls and touchscreen displays, I-PRESS® represents our commitment to leading the industry with the latest in controls innovation. The metal forming industry is evolving to a new level of connectivity and automation, and I-PRESS® has been designed to bring your press operations into the 21st century.



WEBSITE LINK

<u>I-PRESS®</u>



ADDITIONAL RESOURCES

<u>I-KNOW Controls & Safety</u>

I-PRESS® Training Videos

<u>I-PRESS® HYDRO Controls & Safety</u>

Advantages of I-PRESS® 4.0 Software

Programmable Motion Profiles



I-PRESS®

THE FUTURE OF PRESS CONTROLS

FEATURES

- The world's most intuitive press control
- Built for automation and expandability
- Designed for Connected Enterprise
- Full suite of automation tools & safety features
- Full suite of safety features
- Easy integration with feeders, robots, & transfer systems
- Customizable to support special applications







I-PRESS®

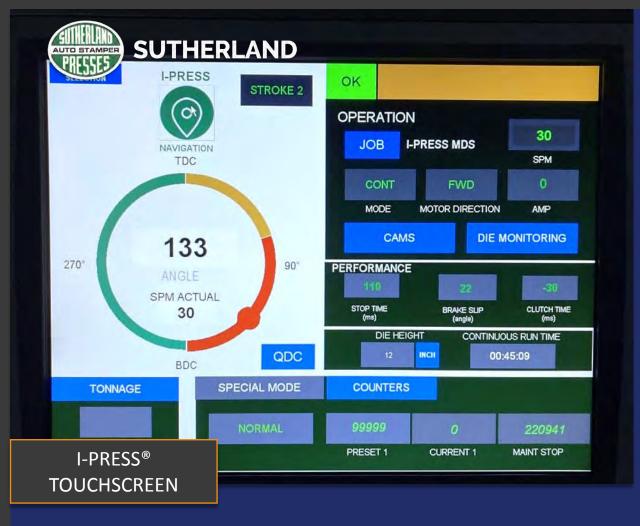
I-PRESS HYDRO®

I-PRESS FORGE®

CONTROLS FIRST PHILOSOPHY

Our "Controls First Philosophy" has changed the evaluation process for end users. With software-based controls and touchscreen displays, I-PRESS® represents our commitment to leading the industry with the latest in controls innovation. The metal forming industry is evolving to a new level of connectivity and automation, and I-PRESS® has been designed to bring your press operations into the 21st century. I-PRESS® comes standard on every new Sutherland press, and is available for retrofits.

I-PRESS is fully customizable, and is available for mechanical, hydraulic, and forge presses. I-PRESS HYDRO® gives precise control of tonnage at any point in the stroke, and I-PRESS FORGE® utilizes advanced temperature sensors for maximum press protection. Every feature is designed for intuitive operation and optimum safety. I-PRESS® can also integrate with enterprise networks, allowing data from the shop floor to be logged and analyzed to gain valuable insights, improve productivity, and reduce downtime.



THE ULTIMATE ALL-IN-ONE SOLUTION

I-PRESS® is built for customization and expandability. When new features or modifications are needed, there are no costly chip replacements, just unlock your upgrades directly from Sutherland.

"Sutherland Presses' I-PRESS® is the future of press control technology. Press control systems are no longer a black box on the shop floor with Sutherland. The I-PRESS® is intuitive for operators, feature rich, uses industry standard safety features, and customizable to customers' unique applications. More importantly, the I-PRESS® control system is shipped ready to integrate with user facilities' enterprise network. This gives customers access to valuable data from the shop floor, which enables them to log, analyze, and interpret information to make intelligent decisions. Ultimately, the I-PRESS® will improve productivity and reduce unplanned downtime."

~Joe Carson Control Systems Integrator



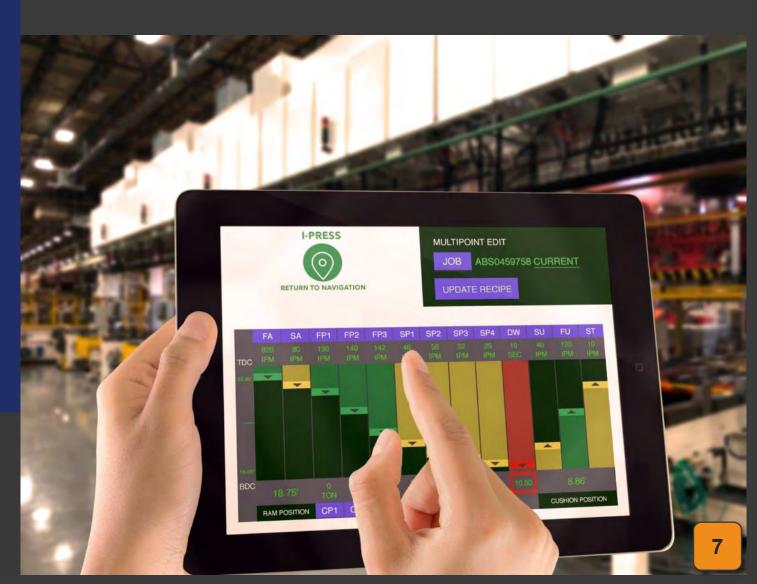


I-PRESS HYDRO® MULTIPOINT EDIT

Our I-PRESS HYDRO® MULTIPOINT EDIT SCREEN makes hydraulic press control and automation intuitive and precise. The I-PRESS HYDRO® is fully Connected Enterprise ready allowing you to monitor your operations on tablet and mobile devices from anywhere in the world.

Adjust DISTANCE, SPEED, PRESSURE and DWELL with the stroke of a finger.

TOUCHSCREEN HYDRAULIC PRESS CONTROL





SERVICE



ABOUT

With thousands of press lines in the field and up time the priority, we operate with a Pit Crew Mentality. Identify the problem, select the best skill set technicians and the closest global responder and solve the problem.



WEBSITE LINK

<u>SERVICE</u>



ADDITIONAL RESOURCES

Maintenance Manual

Daily Log

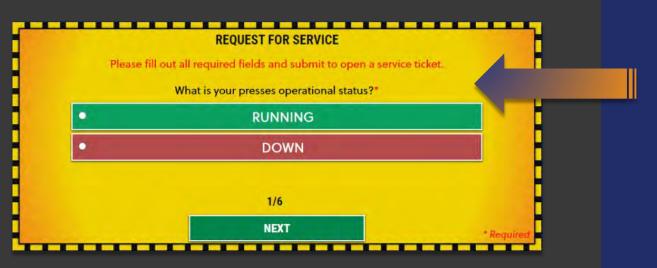
Weekly Log

Monthly Log

6 Month & Annual Log



SERVICE



Sutherland Presses are made with the highest quality parts to meet your high standards for performance and safety. Our Southern California Headquarters is fully stocked with all original spare and replacement parts. We also maintain a stock of all perishable name-brand components. Sutherland ensures the fastest possible availability for the parts you need, shipped anywhere in the world.



I-SERVE

With thousands of press lines in the field and up time the priority, we operate with a Pit Crew Mentality. Identify the problem, select the best skill set technicians and the closest global responder and solve the problem.



I-NEED

Sutherland Presses are made with the highest quality parts to meet your high standards for performance and safety. Our Southern California Headquarters is fully stocked with all original spare and replacement parts. We also maintain a stock of all perishable name-brand components. Sutherland ensures the fastest possible availability for the parts you need, shipped anywhere in the world.



I-PREVENT

Unlike traditional maintenance reports that take days to process, our PMP team employs a state-of-the-art Cloud-Based Reporting System that allows reports to be completed in real-time. Sutherland Technicians can collect photos and enter inspection results on-site directly into digital reports that are synced and made available to clients almost instantly.



A GLOBAL NETWORK OF CERTIFIED EXPERT SPECIALISTS

Sutherland's certified network of expert metal forming specialists maintains thousands of machines worldwide. Our technicians are vetted professionals in electrical, mechanical, and hydraulic systems. We've built a comprehensive international rapid response team without sacrificing our "pit crew" philosophy. We support our clients with a full range of services designed to ensure maximum efficiency and minimum downtime.

We are committed to helping you raise the bar for safety, productivity and efficiency in every aspect of your press lines – from rebuilds to control upgrades to customized solutions.





I-KNOW



ABOUT

Sutherland's interactive knowledge base incorporates a comprehensive collection of press related information with Sutherland's exclusive 360° 3D interactive press builder & model viewer.



WEBSITE LINK

<u>I-KNOW</u>



ADDITIONAL RESOURCES

<u>l-KNOW Servo Hydraulic</u>

I-KNOW Mechanical

I-KNOW Forge

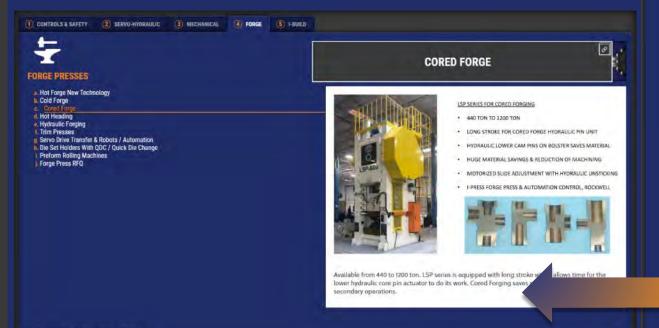
I-BUILD 3D Interactive Press Builder



I-KNOW

Interactive Knowledge Base

Sutherland's interactive knowledge base incorporates a comprehensive collection of press related information with Sutherland's exclusive 360° 3D interactive press builder & model viewer.





CONTROLS & SAFETY

PRESS CONTROLS & SAFETY

a Ease Of Use And Connectivity To External Devices, Industry 4.0

2 SERVO-HYDRAULIC 3 MECHANICAL

- b. Main Run Screen Mechanical
- s. Main Run Screen Servo Hydraulic
- Main Run Screen Forge
- e. Color Touch Screen Navigation
- f. Cams Programmable & Nameable Mechanical & Forge
- g, Carns Programmable & Nameable Servo Hydraulic
 b. Die Monitors Programmable & Nameable Mechanical & Force
- l. Die Monitors Programmable & Nameable Servo Hydraulic
- Tonnage Monitor Mechanical
- Tonnage Monitor / Pressure Setting Servo Hydraulic
- Job Memory / Faster Set Ups Mechanical
- m. Job Memory / Single Point Edit Servo Hydraulic
- a Performance Monitor / Single Point Edit Servo Hydraulic
- s. Single Point Edit Screen-Performance Monitor-Valve Sequence Video
- p. Job Memory / Multi Point Edit Serve Hydraulic
- # Performance Monitor / Multi Point Edit Servo Hydraulic
- Parts Counters / Batch Counters
- Fault History
- L Fault Diagnostics / Step X Step
- . Fault Library / Fault Grouping
- W QDC / Hydraulic Die Lifters
- ... QDC / Quick Die Change
- Lubrication Grease Type
- y Lubrication Recirculating Oil Type
- Light Curtain Safety Mute On Upstroke
- Maintenance Counter
- . Special Modes Of Operation
- ac. Clutch Brake Valve Reset
- Overrun Reset
- Re-Zero Encoder
- at. Feature Sets / Others Call Options
- ag. I-PRESS® Family Of Controls

MULTI POINT SETUP (SCREEN 9.1)



- NAYIGATION BUTTON: Pressing this takes you to navigation screens. Depending on password level for operator or supervisor, more or less screens are accessible.
- 2. JOB: Press to go to "job memory" screen.
- 3. JOB NUMBER: Displays current 10 digit alphanumeric job that is selected.
- 5. OK MONITOR: Green display shows that all systems are functioning and no faults are present.
- UPDATE RECIPE: After you have set the dm 1 to 16 best suited for the job, and then press return to job memory screen.
- 7. CYCLE TIME: Displays the total cycle time in seconds.
- 8. TOGGLE % / IPM: This button toggles between "%" and "Ipm". This will change the way the speed of each part of the stroke is being displayed. "%" = percentage out of max speed max speed is different for each part of the cycle change to ipm for better accuracy or refer to machine specs. Ipm inch per minute. See screen 9.2: #23 6. #24 for more details.
- FA: Fast approach is used to move the ram at maximum speed from tdc towards bdc before hitting the material.
- 10. SA: Slow approach once close to the material, use slow approach for the last couple of inches of the approach before touching the material.
- 11. FP1: Fast press 1 is when the ram comes in contact with the material. Speed of press can be changed to desired value.
- 12. FP2: Fast press 2 use this cycle if you'd like to press at a different speed than fp1.
- 13. FP3: Fast press 3 use this cycle if you'd like to press at a different speed than fp2.
- SPI: Slow press 1- is used for the last part of the downwards stroke for a more accurate and gentle stop.
- 15. SP2: Slow press 2 use this cycle if you'd like to slow press at a different speed than sp1.
- 16. SP3: Slow press 3 use this cycle if you'd like to slow press at a different speed than sp2
- 17. SP4: Slow press 4 use this cycle if you'd like to slow press at a different speed than sp3
- 18. DW: Dwell time is used wan you need a dwelling period at the bottom of the stroke.
 - slow movement upwards after the material has been pressed.
 - high speed to minimize cycle time.
- , ar, slow top is used for it
- 22. TOP: Press here to programmable your top set point. After pressing, you can set by current position or by entering a distance in inches from tdc. Red position bar moves according to ram receibbre.
- BOTTOM: Press here to programmable your bottom set point. After pressing, you can set be current position or by entering a distance in inches from tdc. Red position bar move ram position.
- INDIVIDUAL STROKE LENGTH: This number is how many inches from tdc is each stroke.

DISCOVER NEW PRESS & PRESS CONTROL TECHNOLOGY



I-BUILD





FEATURES

- 360° 3D view of press models
- Isolated lubrication system view
- Isolated pneumatic system view
- Isolated drive system view
- Installation procedurals





MECHANICAL PRESSES



ABOUT

Sutherland has been a leader in Mechanical Presses for over 75 years. We offer a full range of Mechanical Presses up to 2500-ton capacities, with gap frames, straight sides, single, double and four point configurations to serve a wide variety of applications. All our presses are built to exceed JIS First Class standards, the highest standard in the world for industrial machinery.



WEBSITE LINK

Mechanical Stamping Presses



ADDITIONAL RESOURCES

SP 660-ton installation video

I-KNOW Mechanical

<u>I-BUILD 3D Interactive Press Builder</u>



MECHANICAL PRESSES

FEATURES

- I-PRESS® and automation control
- Robust fabricated steel frames are stress relieved
- Exceeds JIS / Japanese Industrial First-Class Standards
- Effective preventative maintenance programs





The New KS2 APEX SERIES, Center Drive with Left to Right Crankshafts. The KS2 incorporates a new and improved crown and drive design. The opening in the top center / apex has been made larger for ease of drive installation and future maintenance. With the main drive gear box in the center, the left to right crankshaft journals push the connecting rods further apart. This has advantages with large die area and off-center load conditions. We have been installing center drive straight sides since 1985, and all presses exceed JIS 1st class standards. The I-PRESS® AB PLUS press and automation controller comes standard on all Sutherland presses.

The **EHW SERIES** represents the most heavy-duty presses available, engineered under demanding standards to deliver unmatched power and precision on the toughest jobs. The EHW is built with a tie rod design frame, using thick steel members to ensure reliable stability. Complementing the sturdy frame is an advanced drivetrain, featuring a back-to front drive with an eccentric gear drive and double pitmans. These pitmans align and equalize the tonnage on the pitman journals. The lower sections of the pitmans are connected to plunger guide suspension points for precise, vertical, non-rotational tonnage delivery. This unique drivetrain ensures higher rating points and faster speeds without compromising on raw power.





Sutherland's **SP2 SERIES** Double Point Straight Side Presses are the perfect match for virtually any application. These presses are built to last, with crankshafts rated at 150% capacity, keyed release HOLPs rated at 110% of press capacity, and tie rod frame designs for maximum strength and rigidity. The SP2 has been engineered for versatility, and can be outfitted with a variety of drives, including eccentric geared, single or double geared, and crank or link motion. With large bed sizes ranging from 72" to 240" left-to-right, the SP2 is a super-duty press ready to take on the toughest jobs.

The **CRS SERIES** is engineered to deliver high performance in a tightly packaged design. With a low-ceiling monoblock frame design, the CRS can be installed quicker in less floor space than other presses of the same tonnage. This robust frame is fully heat-treated and stress-relieved after welding, providing a homogenous steel structure with superior strength and durability.

CRS's drivetrain incorporates counter-rotating main gears to eliminate side thrust loads, and 8-point full length slide guides to ensure precise movement and excellent position repeatability. This combination directs the tonnage towards the center of the tooling, extending tooling life and allowing for higher quality production.





SERVO-HYDRO PRESSES



ABOUT

Sutherland's Servo Hydraulic presses are custom-built to deliver outstanding precision and reliable operation to a wide variety of applications. Our combination of active fluid management and advanced servo motors adjusts fluid volume and motor speed to match the workload required, optimizing press performance while greatly reducing energy consumption.



WEBSITE LINK

Servo Hydraulic Presses



ADDITIONAL RESOURCES

<u>l-KNOW Servo Hydraulic</u>

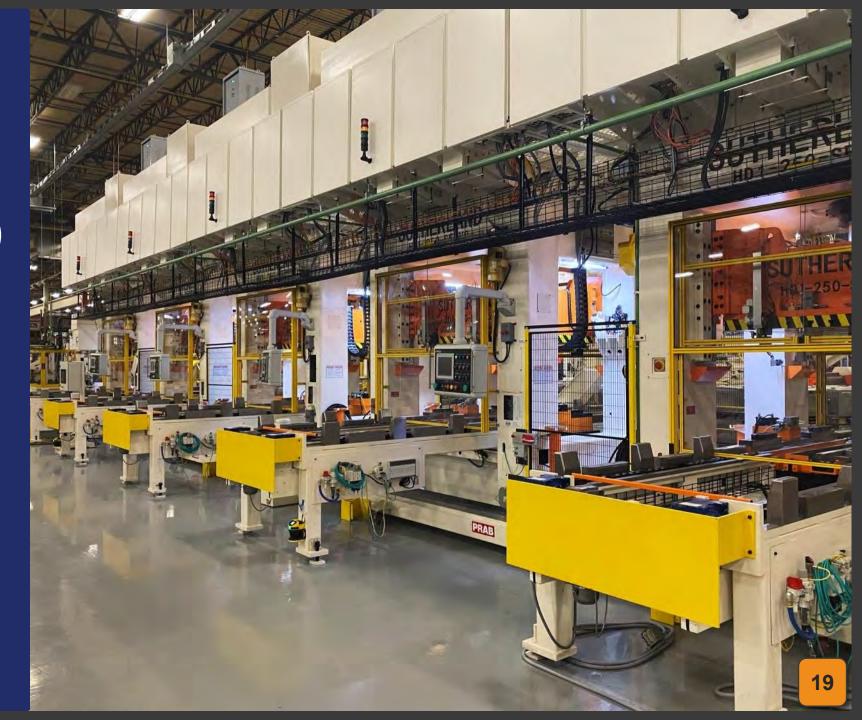
I-BUILD 3D Interactive Press Builder



SERVO-HYDRO PRESSES

FEATURES

- I-PRESS HYDRO® press and automation control
- Superb application versatility
- Easy to create program motion profiles
- Optimal press performance/energy consumption curve





Sutherland's **SERVO FORMING** presses offer outstanding energy efficiency compared to similar mechanical presses. Unlike traditional variable angle pump displacement presses, servo forming hydraulic presses can dynamically adjust the tonnage from 10% to 100% at any point during the stroke cycle, allowing for efficient yet flexible forming. With the onboard I-PRESS HYDRO® control and our Multi-Point Edit screen, you can adjust speeds, distances, pressures and dwell time throughout the stroke. For less complex jobs, users can select our Single Point Edit screen for fast set ups. SERVO FORMING presses can be used for many applications, from blanking, forming, deep draw, transfer and composite forming.

We have years of experience in customizing hydraulic presses for MOLDED **COMPOSITES**. These carefully layered materials are the ideal choice for aerospace and automotive applications due to their ability to achieve high strength at very low weights. When your components have zero tolerance for failure, you need the time-tested reliability and uncompromising attention to detail that goes into a Sutherland hydraulic press. **COMPOSITE** formers like the I-PRESS® control include custom screens and features which can be added to control mold temperatures, part extraction and the ability to record data to remote devices.





At Sutherland, we know **SERVO TANDEM PRODUCTION LINES** better than anyone. Our engineers have designed multi-stage processes for a huge variety of applications, and our presses are built with automation and transfers in mind from the very start. We're ready to work with you from the initial planning stage through to the custom design, installation, and operation of the most efficient and reliable press lines available today.

MULTI-PRESS HYDRO SOLUTIONS





FORGE PRESSES



ABOUT

Sutherland's hot, warm, and cold forge presses are built for the most intensive applications in metal forging, all the way from shaping massive multi-ton parts to hot heading aerospace bolts. Our wide range of forge presses can incorporate eccentric, knuckle joint drives, link drives or hydraulics. This flexibility allows us to help you consistently achieve the perfect press production stroke for your most demanding jobs.



WEBSITE LINK

Forge Presse



ADDITIONAL RESOURCES

<u>-KNOW Forge</u>



FORGE PRESSES

FEATURES

- I-PRESS FORGE® press and automation control
- Heat-treated, stress-relieved frames
- Patented motorized slide adjustment
- Eccentric shafts rated at 200% overload
- Exceeds JIS / Japanese Industrial First-Class Standards





Hydraulic Cold and Warm Forging can be accomplished with a great degree of control over forging speeds. With our manifold fluid management system and limited piping, we can regulate position, speeds and pressures for the best result of material flow and calibrating accuracy.

The **FPG SERIES** has the backbone to tackle the toughest jobs. With a robust steel frame, eccentric shafts rated at 200% overload capacity, 8-point full-length slide guides, and thermal bearing sensors, the FPG is built to last. Single and multi-station die holders are available, along with an "unsticking" device under the slide adjustment screw. We have also introduced our FPG-X model with X angle slide guidance which allows for thermal expansion while still running very close tolerance slide guides.





The **FP SERIES** can address any forge application, featuring single and multi-station die holders with hydraulic ejectors and an "unsticking" device. With fully guarded high and low-speed gears, high compression bronze bushings, and massive pitman slide connections, the FP drivetrain is designed to endure a wide range of challenging jobs. Our FP SERIES is designed for flatter and wider forgings. When taller and thicker forgings are required, it may be suggested that you move up to the FPG or FPG-X models.

The KNP SERIES is ready for any cold or net shape forging application and is available with either link or knuckle joint drives. A heat-treated, stress-relieved steel frame with 8-point full-length slide guides and an encoder-based slide position monitor ensure precise position repeatability. For easy part ejection of single or multi-station dies, the press can be equipped with both an upper and lower cam-controlled air ejection system, along with a keyed "unsticking" device near the BCD. To further ensure trouble-free operation, the KNP SERIES features automatic grease lubrication, recirculating oil systems, electronically monitored lubrication distribution blocks, and Bijur automatic air counter-balance oilers.





COME VISIT US

To see our complete lineup of presses and I-PRESS® control system, we invite you to visit our website. We have solutions from tonnage capacities of 100 to 4,000 tons.

I-PRESS® CONTROLS

SERVO-HYDRAULIC

MECHANICAL

FORGE









SUTHERLAND







Let's Grow Together

Our team is never content to sit still, and we all share a passion for breaking new ground in the metal forming world. We believe in aggressively pursuing new technologies that have the potential to carry manufacturing into the next century and beyond.



SUTHERLAND CONTACT& RESOURCES

SALES

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TECHNICAL

KNOWLEDGE BASE

sutherlandpresses.com/i-know

I-PRESS® CONTROLS

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PRESS MAINTENANCE TIPS

<u>sutherlandpresses.com/press-</u> maintenance-tips

TESTIMONIALS

TESTIMONIALS

sutherlandpresses.com/testimonials

VIDEO GALLERY

<u>sutherlandpresses.com/video</u>

NEWS

sutherlandpresses.com/news