Roman Presses in standard models ranging from 35 to 2,500 tons—offering size and capacity that no one else can deliver. As a result of the worldwide acceptance of Komatsu AC servo presses, the company further expands its servo technology division.

Roman demonstrates continued engineering excellence with a series of gap point presses to standard market ranging from 150 to 2,000 metric tons as well as standard models ranging from 200 metric tons as well as standard models ranging from 200 metric tons. This series of gap point presses brings new linear motor-controlled transfer feeders that deliver part quality. The plunger guide eliminates virtually all internal springing allowing higher gift tolerances and precision detail enforcement. This technology quality becomes an industry standard.

Komatsu: A Heritage of Innovation

High performance have been the hallmarks of Komatsu Press Division since its inception more than 75 years ago. Over the years, Komatsu has demonstrated a commitment to respond to customer demands and originate technologies and systems to meet the needs of a global marketplace. Today, Komats continues to build on its tradition of engineering excellence to create equipment that satisfies the complex demands of a competitive, highly technical and complex metal stamping industry.

Specifications subject to change without notice.

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Technological innovations that increase capacity, productivity and performance have been the hallmarks of Komatsu Press Division since its inception more than 75 years ago. Today, Komatsu has demonstrated a commitment to respond to customer demands and originate technologies and systems to meet the needs of a global marketplace. Today, Komatsu continues to build on its tradition of engineering excellence to create equipment that satisfies the complex demands of a competitive, highly technical and complex metal stamping industry.
Komatsu introduces the world’s first single point gap die cushion system, which allows transfer presses rated at 2,300 tons to maintain a 0.3% press height accuracy over the life of the slide motion. This principle is realized in the new “Free Motion” of the slide motion path and efficient AC servo drive systems, the former the result of the division’s seven slide drives. 

Komatsu demonstrates continued engineering excellence with a series of gap single-point gap press processes that standardize ranging from 35 to 200 metric tons as well as standard models ranging from 200 metric tons. As a result of the division’s seven slide drives, a hydraulic press originates technologies and systems to meet the needs of a global marketplace. Today, Komatsu continues to build on its tradition of engineering excellence to create equipment that satisfies the complex demands of a competitive, highly technical and complex metal stamping industry. 

**Komatsu: A Heritage of Innovation**

Komatsu leverages its technology and market capabilities to create equipment to serve the metalforming industry. In 1971, Komatsu Press Division introduces the first low-cost low-power press in the Japanese market. In 1973, Komatsu Press Division wins the Deming Prize for engineering excellence, the first Japanese press manufacturer to receive the coveted engineering award. This acknowledgment symbolizes Komatsu Press Division’s position as a worldwide industry leader. 

Komatsu Press Division introduces the Earning Point for engineering excellence, the first Japanese press manufacturer to recognize the need for comprehensive development and introduces new energy-efficient equipment. 

Komatsu’s Super series of single point gap die press processes bring advanced standardization to the industry with standard metal forming and of firm quality, including the development of improved tools for high-strength materials. 

In 1998, Komatsu introduces the world’s first single point gap die cushion system, which allows transfer presses rated at 2,300 tons to maintain a 0.3% press height accuracy over the life of the slide motion. This principle is realized in the new “Free Motion” of the slide motion path and efficient AC servo drive systems, the former the result of the division’s seven slide drives. 

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**High-end quality and productivity**

High-strength, low-alloy steel and other high-strength metals replace traditional mild steel in production of common stamped parts. Finally, the trend for use of high-strength steel in production continues in U.S. auto manufacturing. 

In 2016, Komatsu launches a comprehensive development process to bring about commercial-scale, low-cost technologies to the stamping industry. Komatsu engineers build on 30 years of experience in servo drive systems. 

**Specifications**

- **Presses:** Standard models ranging from 35 to 200 metric tons. 
- **Features:** Single-point gap die cushion automation to move the durable slide/extruder. 
- **Technology:** Fully-integrated AC servo technology and productivity advances of 200 metric tons. 
- **Features:** Independent slide motion control for each of the seven slides.

**Features and Specifications**

- **Motor (KW):** (kw) 
- **Bolster Thickness (in.):** 
- **Shank Hole (Dia.):** (in.) 
- **Slide Dim. (L/R, F/B):** (in.) 
- **Shutheight (Max):** (in.) 
- **SPM (Max):** (in.) 
- **Cap. Ton (US):**
Komatsu introduces the world’s first matched servo press system, each slide being powered independently. Each slide has its own dedicated ac servo drive, together with hydraulic power units. The power units are high-pressure axial piston pumps that provide hydraulic power to each of the seven slides.

Komatsu’s “Free Motion” slide path brings the productivity of a new “Free Motion” slide path and efficient AC servo drive systems, the forging press models with that of modern toggle link drive of press. Brilliantly combining first standard hybrid AC servo system in support of customer needs.

Komatsu has delivered over 4,000 AC servo presses into the global market, fully-integrated AC servo technology and productivity advances of each of the seven slides.

**Specifications (inches) (“C” Frame) (“O” Frame)**

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<thead>
<tr>
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<td>H1F 35</td>
<td>27.6 x 15.7</td>
<td>13.8 x 11.8</td>
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<td>H1F 45</td>
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<td>3.7</td>
</tr>
</tbody>
</table>

Komatsu: A Heritage of Innovation

Technological innovations that increase capacity, productivity and performance have been the hallmarks of Komatsu Press Division since its inception more than 75 years ago. Over the years, Komatsu has demonstrated a commitment to respond to customer demands and originate technologies and systems to meet the needs of a global marketplace. Today, Komatsu continues to build on its tradition of engineering excellence to create equipment that satisfies the complex demands of a competitive, highly technical and complex metal stamping industry.

- In response to needs in the U.S. auto manufacturing market, Komatsu developed fully-automatic transfer press, which allowed it to create the industry’s first standard model in 1924.
- High-strength steel and other high-strength materials traditional to production of common stamped parts. Realizing the limitations of traditional materials, Komatsu launches a comprehensive development process to bring about radical changes in the industry.

In the SMS equipment business in the mining sector, Komatsu engineered the SMS Equipment business in the mining sector.

- The first super series of single point gap press brings pressure-based part stabilization to the industry with standard metal die design and specifications for industrial performance and reliability.

For further information visit: www.komatsu.com
The H1F press is designed as a system without routine tear downs for wear items (the concept first introduced by Komatsu with the H1F). This means your press can run longer and more efficiently, without the expensive breakdowns and delays that routine tear downs cause. It reduces downtime and the cost associated with it, which can result in significant savings over the long term.

The Komatsu Warranty

The Komatsu H1F press comes with a Two Year Unconditional Warranty, ensuring that your press is guaranteed to work as intended. This warranty covers all parts of the press, from the main frame to the smallest component, ensuring that you can focus on your production goals without worrying about unexpected breakdowns or repairs.

Standard Features

- T-stand for easy set-up and operation
- Precision oil-lubricated long 6-point gibs
- Available in optional solid side-frame design on 45-ton and above models
- Heavy plate, rigid frame construction
- U.S. standard bolster and slide machining
- Saves energy cost by reducing electricity consumption
- Reduces die tryout time and expense
- Increased die life
- Improved part quality
- Provides ability to dwell at position to allow timing
- Maintains constant working energy throughout stroke
- Ideal for progressive, transfer or manual die operations
- Complete turn-key Komatsu designed press

Programmability

The digital display shows the present and desired values of stroke height and velocity, allowing for advanced programming and customization. The H1F press is equipped with an intuitive, user-friendly interface that guides press operators in a logical series of steps, for faster, more reliable operation. Intuitive, user-friendly prompts guide press operators in a logical series of steps, for faster, more reliable operation.
The H1F Servo-driven Press: Designed for Superior Flexibility and Accuracy

- **Main Drive**
  - High performance, 3-speed AC servo motor

- **Drive Layout**
  - Combination of mechanical ratios allows for a standard motor size from a proven motor and control system—no proprietary motors or motor controller are used.

- **Drive Control**
  - The press control system at all motion programming. Slide velocity is adjusted in percentage of actual press speed, plus crank angle.

- **Drive System and Control**
  - The SIT IV electronic press control unit is designed to provide the fastest, easiest, and most reliable solution.

- **SIT IV - System Integrated Terminal**
  - 35-80 kHz input frequency
  - 350 Hz output frequency
  - AC Servo technology with its proven reliability

- **Programmability**
  - The SIT IV control system engineering is as possible as the human input from press personnel and the full potential performance of the press.

**Standard Features**

- **Drive Layout**
  - Precision oil-lubricated long 6-point gibs
  - Precision plunger guide design

- **Precision Oil Lubrication**
  - Heavy plate, rigid frame construction
  - Air counter-balance system
  - Shock-resistant, pendant-mounted control

- **Pneumatic Load Monitors**
  - Reduces importance of die or part lubrication
  - Automatically maintain and adjust slide position

- **Reliability**
  - Increased die life
  - Improved part quality
  - Provides ability to dwell at position to allow timing

- **Accuracy and Reliability**
  - Maintains constant working energy throughout stroke
  - Ability to control slide velocity throughout the stamping work

- **Main Drive**
  - Accuracy within 1 micron

- **Main Drive**
  - Accuracy within 3 microns

- **Main Drive**
  - Maintains 350 Hz output frequency

- **Main Drive**
  - Increases energy efficiency by reducing electricity consumption

- **Main Drive**
  - Consistent slide position held within microns

- **Main Drive**
  - 3D position feedback

- **Main Drive**
  - Redundant hydraulic die lifters.

- **Main Drive**
  - End of forming process

- **Main Drive**
  - Slide motion (from actual operation)
The H1F Series-driven Presses

**Design Philosophy of Superior Flexibility and Accuracy**

- **Main Drive**: A system of high precision and accuracy, which is designed for high-speed and high-precision applications. It is equipped with a precision-guided main drive, ensuring smooth and accurate motion.
- **A.C. Servo Technology**: Incorporates modern, state of the art A.C. servo technology, which is ideal for progressive, transfer or manual die operations.
- **Reliability**: Redundant, AC Servo technology is used to provide a versatile, efficient and reliable solution. Our forging presses can be selected for each application, including push buttons for slide adjustment, providing increased ease of use.
- **Programmability**: Advanced electronics technology provides user-friendly operation. SIT IV® - System Integrated Terminal is available in one display, at the touch of a button. Customized touch keys for Komatsu designed press functions are provided, enabling users to customize their operation.
- **Hydraulic Overflow Protection**: An individual pressure for the press is provided, ensuring that the press can operate without any leakage or loss of hydraulic fluid. The Snoe Tube/Gate system is monitored continuously to prevent any hydraulic fluid from escaping, providing a safe and efficient operation.

**Optional Features**

- **Pre-machined, heavy-duty cast slide with adapter plates on both sides**
- **Heavy plate, rigid frame construction**
- **U.S. standard bolster and slide machining**
- **Saves energy cost by reducing electricity consumption**
- **Ability to program multiple motion paths before returning to normal operation**
- **Improved part quality**
- **Incorporates modern, state of the art A.C. servo technology**
- **Ideal for progressive, transfer or manual die operations**

**Main Drive**

- **Wear-resistant oils and stainless steel bushing**
- **Balanced die clamps available in either lever or cylinder type**
- **Monitors precise touch points**
- **End of forming process**
- **Slide motion (from actual operation)**

**Standard Features**

- **Main Drive**: High precision and accuracy, designed for high-speed and high-precision applications.
- **A.C. Servo Technology**: Incorporates modern, state of the art A.C. servo technology, which is ideal for progressive, transfer or manual die operations.
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The Komatsu H1F Hybrid AC Servo Presses

Features and Benefits

Main Drive

- Inverter Motor SM Servo Motor
- Drive Control
- For Slide Adjust

Accumulator

- Redundant
- Can be selected for each stamping operation

Accuracy

- Position and Velocity detector
- Motor encoder and actual slide position by the linear scale.

Position Detector

- Air
- Designed for high precision and less die wear.

Plunger Guide System

- Plunger Guide Non-Plunger Guide
- Eccentric Circle
- Length of the slide
- Guide
- Gib and Slide
- Thrus
- Load from Gib
- Screw

Hydraulic Downstroke Protection

- Independent and includes the press and die
- Can be selected for each stamping operation
- Can be tampered with or adjusted to menu control option

ATE Package

- 1-lot (pre-set), re-settable
- 4 - Electronic rotary cams
- Digital Total Counters
- Operator "T-stand" control interface houses all switches and buttons.

SIT IV - System Integrated Terminal

- Single pendant
- Integrated Circuits are used for all control circuits
- All information necessary for press set-up, start-up, operation and control unit is designed to provide the fastest, easiest, and most accurate for press operations. Automatic operation setting and die set-up...
Today presses, the company further expands its servo two-point and four-point straightside frames excellence with a series of single-point servo Komatsu demonstrates continued engineering a hydraulic press. mechanical press with the motion control of brings together the productivity of a forging press models with that of modern new “Free Motion” of the slide motion path of the toggle link drive of press. Brilliantly combining Komatsu introduces the world’s worldwide acceptance for the company’s innovative technologies and products. Komatsu has delivered over 4,000 AC servo presses into the global market, system in  support of customer needs. fully- integrated AC servo technology market, making Komatsu the first to offer a AC servo die cushion automation to feeders, high-speed tandem-line loader/ brings new linear motor-controlled transfer its AC servo presses. The division quickly automation devices that enhance the Komatsu creates its Automation Technology each of the seven slides. features independent slide motion control for servo-controlled, multi-slide transfer press Komatsu produces the world’s first modular, technology and productivity advances of specifications subject to change without notice

| Model | Capacity (US) | Shut Height (Max) | Slide Adjust | Shank Hole (Dia.) | Bolster Dim. (L/R, F/B) | Bolster Thickness (in.) | Motor (KW) | BC | AD | AC | AL | Z | H1F35 | H1F45 | H1F60 | H1F80 | H1F100 | H1F120 |
|-------|---------------|------------------|--------------|------------------|----------------------|------------------------|-------------|----|----|----|----|---|--------|--------|--------|--------|--------|--------|--------|
|       |               |                  |              |                  |                      |                        |             | 2.3 | 3.0 | 3.9 | 4.0 | 3.6 | 3.6    | 4.33   | 4.73   | 5.12   | 5.51   | 5.86   |
|       |               |                  |              |                  |                      |                        |             | 3.15| 2.6 | 2.6 | 2.4 | 2.6 | 3.9    | 2.9    | 3.15   | 2.9    | 3.15   | 2.9    | 3.15   |
|       |               |                  |              |                  |                      |                        |             | 3.4| 3.4| 3.4| 3.4| 3.4 | 3.4    | 3.4    | 3.4    | 3.4    | 3.4    | 3.4    | 3.4    |
|       |               |                  |              |                  |                      |                        |             | 3.8| 3.8| 3.8| 3.8| 3.8 | 3.8    | 3.8    | 3.8    | 3.8    | 3.8    | 3.8    | 3.8    |
|       |               |                  |              |                  |                      |                        |             | 4.0| 4.0| 4.0| 4.0| 4.0 | 4.0    | 4.0    | 4.0    | 4.0    | 4.0    | 4.0    | 4.0    |

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