

C2F

HOT/WARM FORGING PRESSES



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Since its establishment in 1909, Kurimoto, Ltd. has earned renown for its dedication to customers and its commitment to excellence in the metal forming industry. Moreover, the company has been particularly successful in the hot and warm forging press market, where it has held the number one position in Japan for decades.

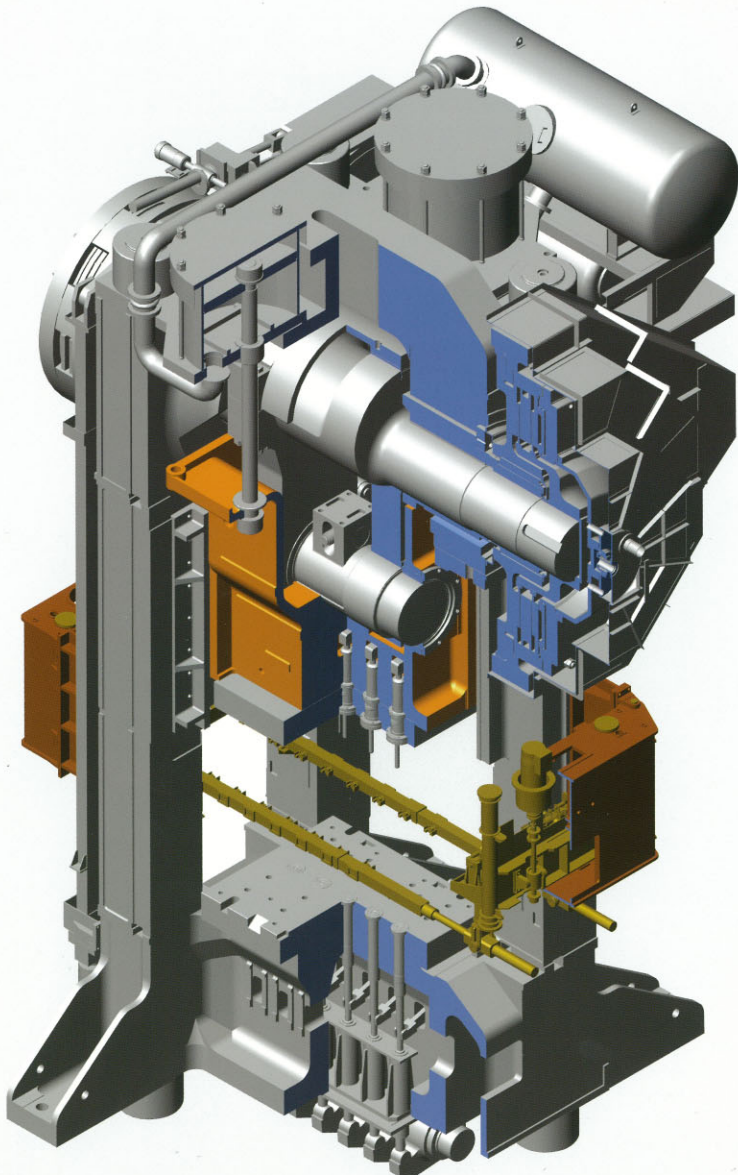
Our C2F Series of mechanical forging presses is designed and manufactured according to exacting custom specifications for specific customer needs. This innovative product line has contributed to cost reductions in both multi-product and mass production forging applications.

To complement the stable performance of the C2F Series, the main body of the press can be equipped with various optional features to accommodate cost and application requirements. And for stable, high-precision forging, the frame of the main body offers greater rigidity than those of other manufacturers.

The AC servo-driven Automatic Transfer System (TES Series) provides precise yet flexible transfer motion as well as optimum die lubrication. High-speed transfer with TES contributes significantly to reduced production costs and increased production efficiency in steel and nonferrous forging applications.

At Kurimoto, we welcome the opportunity to offer our vast experience in responding to customer inquiries for technical advice and engineering for automated forging press lines.

Features



1 High-Rigidity and High-Precision Structure

Designed for efficiency, the main components comprise upper and lower frames of cast steel (for presses exceeding 20,000kN) and an upright of welded steel plate (cast steel in some models). These frames are securely fastened together with four tie-rods, providing a robust frame structure. This approach minimizes thickness variations in forged products and maintains a high level of accuracy.

2 Wide Range of Allowable Eccentric Loads

The double conrod accommodates a wide range of allowable eccentric loads. Moreover, the rigid box-type slide travels in an eight-sided guide that provides the forging rigidity and gib accuracy to withstand inclination.

3 Easily Manipulated Slide-Adjusting Device

The dieheight adjusting device is mounted in the slide, eliminating problems such as entry of scale and die lubricant. The optional automatic dieheight adjustment provides for rapid adjustments during high-speed transfer by combining a hydraulic cylinder and eccentric wrist pin.

4 Revolutionary Stick Release Device

This device provides for easy stick release.

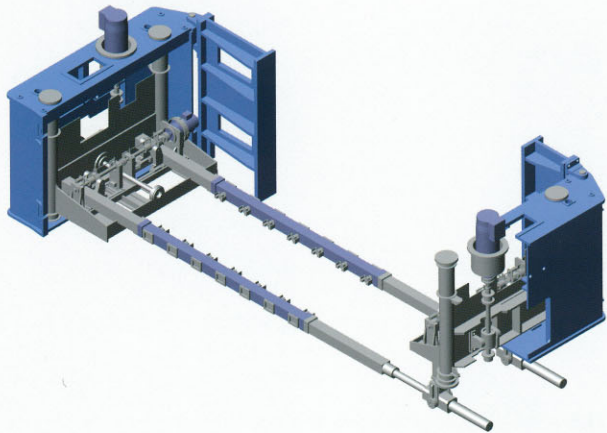
5 Easy Maintenance

The oil lubrication ensures that major mechanical components remain clean. Used lubricant is stored in reserve and can be reused after cleaning. (An optional oil circulating system is available.) The surface of the slide guide is made of hard plate for consistent, long-term accuracy. The brake incorporates block-type friction materials that are simple to use and offer a long service life.

6 Eco-Friendly, Energy-Saving Design

The main motor can be equipped with an optional vector inverter. The servo and inverter provide optimum control of the drive mechanism.

Peripheral Devices

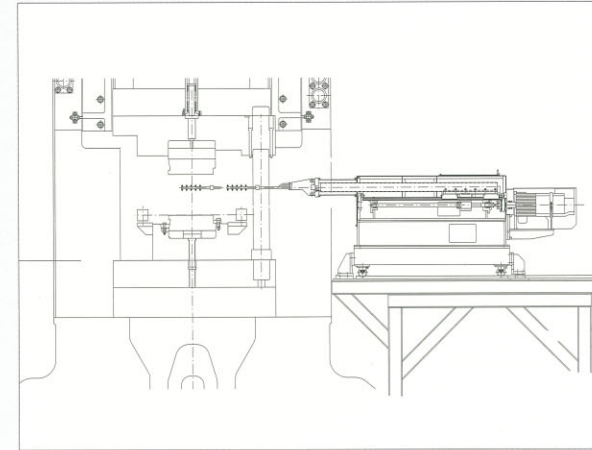
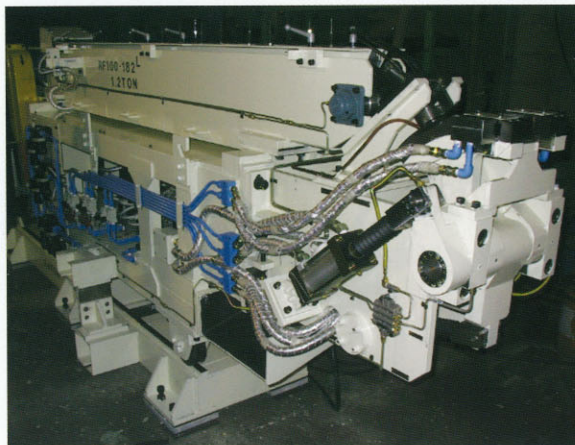


Automatic Transfer System

- The 5-axis AC servo performs various transfer motions at the required speed.
- The ballscrew ensures high-accuracy and high-speed transfer with less backlash.
- The servo control provides the optimum transfer motion for particular products and simplifies setting and selection of the die lubricant pattern.
- The simplified structure contributes to better maintainability.
- The suspended type allows for greater freedom for facility layouts while offering excellent operability and maintainability.
- Die changeover time is reduced.

Material Supply System

- Can be customized to accommodate specific products, transfer speeds and applications.
- Can be designed to incorporate an optional servo system.
- Accommodates optional design variations such as vertical-horizontal combination transfer.



Die Lubrication System

- The timing of the servo-driven movable nozzle is synchronized with the automatic transfer system. This ensures the most efficient die lubrication, thus extending die service life.
- The lubrication system allows for the supply and recovery of die lubricant for a cleaner environment.

[AC Servo Type Die Lubrication Device]

Quick Die Changer (QDC) System

We offer a variety of systems including the T-type, V-type and I-type to accommodate diverse facility layouts.



We can meet a variety of customer needs.

- Examples:
- Measures to prevent marring of products during carryout
 - Robotized automation
 - Enhanced functions through retrofitting of existing presses
 - Vibration prevention measures
 - Variable knockout

Presses for Special Applications

Long-Stroke Automated Forging Press

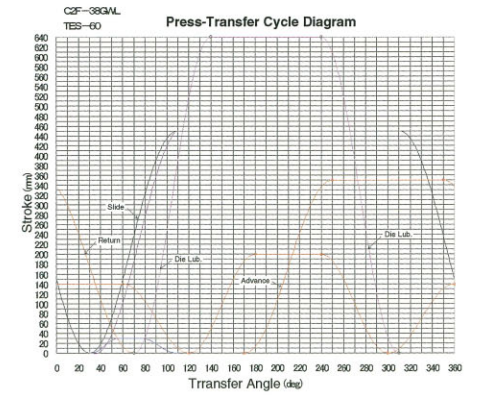
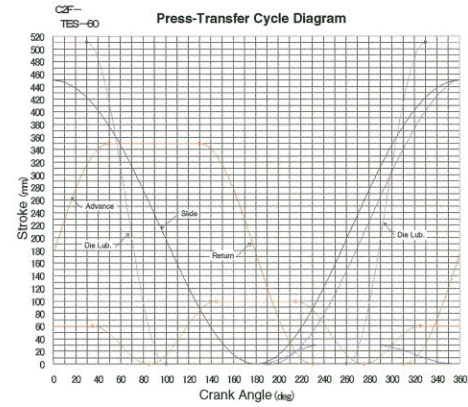
Accommodates high-speed forging of parts such as shafts for automotive CVTs (continuously variable transmissions).



40,000kN Long-Stroke Automated Press with optional Multi-Mode function

Multi-Mode

This single press incorporates two different ram motions for transfer master mode and press master mode.



Nonferrous Metal Forging Press

Accommodates mass production forging of nonferrous materials such as aluminum.



Press Specifications (Typical examples)

Warm Forging Press

A warm forging press is capable of forming at temperatures in the midrange between hot and cold forging. The ram speed setting of a press changes with the forging temperature. When forging complex product shapes at temperatures around 700°C or higher, the longer the contact time between material and die, the shorter the die life as a result of premature heat deformity and heat cracking.

For this reason, crank presses with faster ram speeds have become more popular than knuckle joint presses for such applications.

Thanks to its high rigidity, Kurimoto's C2F series has proven its performance in warm forging applications, which require high precision, as well as in hot forging applications. As industry demand continues to increase for long-stroke warm forging press applications such as the outer races of automotive CVJs (constant velocity joints), Kurimoto's warm forging press is continuing to earn praise in the industry.



	C2F-16	C2F-20	C2F-25	C2F-30	C2F-40G
Capacity (MN)	16	20	25	30	40
Dieheight (mm)	900	950	1050	1100	1100
Stroke length (mm)	320	320	320	360	400
Stroke rate (rpm)	60	60	60	50	45
Slide adjustment (mm)	10	10	10	10	10
Adapter size (mm×mm)	1030×1100	1200×1200	1200×1300	1200×1300	1600×1400
Bolster size (mm×mm)	1150×1200	1350×1200	1350×1300	1350×1500	1800×1600
Press height (mm)	6300	6600	7200	7400	9000

	C2F-20GWL	C2F-25W	C2F-35GWL	C2F-40GWL	C2F-55G
Capacity (MN)	20	25	35	40	55
Dieheight (mm)	1400	1200	1320	1450	1370
Stroke length (mm)	700	320	450	550	400
Stroke rate (rpm)	40	60	45	40	45
Slide adjustment (mm)	10	10	10	10	10
Adapter size (mm×mm)	1700×1360	1700×1200	1900×1760	1900×1760	1720×1600
Bolster size (mm×mm)	1860×1400	1800×1300	2200×1810	2200×1810	1900×1600
Press height (mm)	7600	7200	8600	9000	9800

Notes :

1. The specifications shown above are typical examples and are subject to change.
2. All models shown can be ordered with an optional automatic transfer system.
3. The dieheight is the distance between the upper surface of the bolster at the lower limit of the stroke and the lower surface of the slide at the maximum slide adjustment.
4. The bolster and slide sizes are indicated as right-to-left×front-to-back.

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