

## Integrated Assembly Servo Press

Coretec's Assembly Servo Press combines cost-effectiveness with advanced force and displacement control, featuring built-in monitoring and data collection. Embrace next-gen Assembly Servo Technology to boost efficiency and reduce scrap effortlessly.

### Market-Leading Servo Press: Now Superior

- ★ **Every Second Counts: Quick and Precise**
- ★ **Hourly Ease: Data Simplicity**
- ★ **Daily Savings: Energy Efficient**
- ★ **Lifetime Value: Built to Last**



### The Coretec Assembly Servo Press: Affordable Precision and Efficiency

## What Sets Coretec Servo Presses Apart?

### 1. Industry-Leading Control Capability

Coretec matches the precision of industry leaders, providing load repeatability of 0.5% and positional repeatability of 10 microns under identical load conditions. This level of control ensures projects are completed with utmost accuracy, embodying the pinnacle of quality without compromise.

### 2. Intuitive and Flexible Programming

Coretec's Auto-Generation Software offers the perfect balance between simplicity and versatility. It features a visual programming interface that's straightforward and accessible, generating easy-to-understand program code with helpful comments. This approach enables ease of use for beginners while offering experts the flexibility to tailor the code for specific applications.

### 3. Competitive Pricing That Stands Out

Coretec offers pricing that challenges the competition, maintaining quality while ensuring cost efficiency. Their efficient design and smart marketing strategies lead to significant cost savings. Supported by a network of dedicated local representatives across North America and Mexico, Coretec ensures comprehensive support tailored to your needs.

### 4. An Expanding Product Line to Meet Diverse Needs

Responding to evolving customer requirements, Coretec has broadened its product range to include more force options, stroke lengths, and specialized features such as adjustable holding times and clean room qualifications. This expanded product line is designed to meet a wide array of application requirements, offering solutions that grow alongside your business.

### Proudly Manufacturing Parts for the Following Companies



[Coretec Servo Press Tools and Controllers in Force ranges from 2kN up to 200kN & Displacement ranges of 100mm to 500mm](#)

## The Compact, Rugged Tool Design and Integrated Control

### Compact and Rugged Design for Maximum Efficiency

Coretec's innovative design merges mechanical strength with the compactness typically seen in hydraulic cylinders, offering a space-saving solution that doesn't compromise on power. With force ranges from 2000 N (450 lbs) to 200,000 N (45,000 lbs) and tool strokes extending from 100 mm to 400 mm, these presses are designed to operate in close proximity, maximizing your production floor's efficiency.

### Intelligent Functionality for Simplified Operations

Equipped with smart memory features, Coretec's press tools store essential data like model numbers and load values, simplifying the controller pairing and setup. This intelligent functionality optimizes control capabilities to enhance productivity, improve product quality, minimize scrap, and lower operating costs, all while reducing environmental impact.

### Self-Maintenance for Reliability and Optimized Performance

Coretec's tools monitor operation counts, thermal loading, and travel distances to ensure longevity and consistent performance. Alarm conditions maintain operation within designed criteria, preventing excessive force and thermal stress, thus guaranteeing high reliability, minimal downtime, and optimized cycle times.

### Durability and Longevity with High-Quality Components

By utilizing top-tier ball screws, planetary gears, integrated strain gauge force sensors, and guided anti-rotational rams, Coretec ensures unparalleled durability and performance. High-speed applications benefit from roller and ball thrust bearings, designed to withstand high forces, ensuring a long service life.

### Versatile Applications with a Range of Options

Offering force ranges starting at 2kN and extending up to 200kN, Coretec provides a versatile selection of servo press tools, including options for clean room environments. Whether your operation requires 100mm, 200mm, or up to 400mm strokes, there's a tool designed to meet your specific needs.

### **Sustainable Operation with Clean and Green Technology**

Coretec's presses operate with higher efficiency, using electrical energy only when activated, reducing operational costs and environmental impact. This cleaner operation benefits not only the environment but also your team by simplifying maintenance and eliminating the need for hydraulic equipment.

### **Advanced Networking and Control for Unmatched Precision**

#### **High-Speed, Flexible Data Networking for Ultimate Traceability**

Each tool memorizes force sensor calibrations and characteristics for easy interchangeability, enhancing traceability and simplifying maintenance and operation.

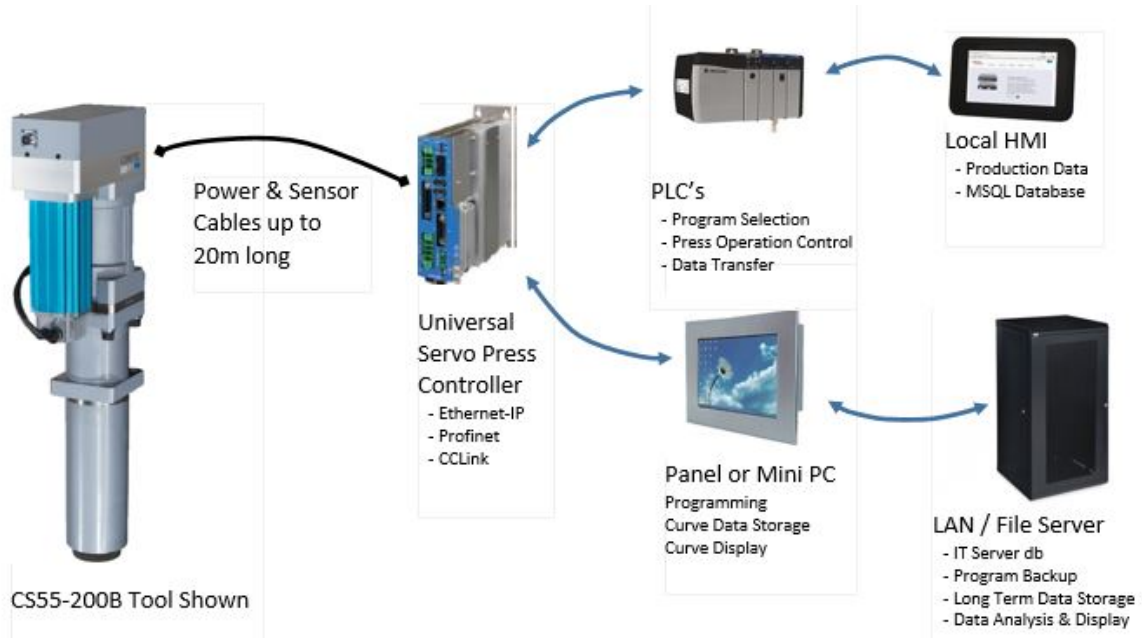
#### **Simple Programming with Extensive Control**

Coretec offers an automatic program creation tool for easy setup and operation, alongside a specialized language for describing complex motions, akin to robotic control systems. This provides a wide range of control functions, from ramp acceleration to tension retraction detection.

#### **Comprehensive Evaluation Methods for Detailed Analysis**

Evaluation of load, stroke, and load rate values ensures precise control over the press operation. Standard zone evaluation functions and graphical displays offer clear, actionable insights into your manufacturing processes.

[View Programming Videos on the CPS & WPS Servo Press Controllers.](#)



Interested in a complete manual press stand?



Press Station Control Package



C Frame Press Stand example



4 Post Press Stand (MS100-200)

## Control Capability at a Fraction of the Cost

In manufacturing automation, three keys to better processes stand out: Speed, Control, and Cost. The approach to press-fit assembly and monitoring has significantly changed. It's no longer enough to just press parts together and hope they fit correctly.



Traditionally, the industry has relied on pneumatic or hydraulic cylinders to provide the necessary force for assembling parts. These systems are cost-effective and common in assembly plants. They're straightforward to use and, despite needing regular maintenance, most facilities can manage them with their in-house resources.

Adding a load cell and a displacement sensor to the assembly ram, and connecting it to a signature analysis system like the Burster Digiforce 9310 or 9307, allows for precise process measurements. This setup, including the cylinder, hydraulic power pack, tooling, sensors, and instruments, has been the most economical solution for assembly operations.

However, these systems have a significant drawback. They lack the ability to control force, position, and speed in real time. Once the pressure is set, the press continues until it hits a hard stop, applying the preset force without the flexibility to adjust based on actual assembly conditions.

***To enhance the process, we need better tools.***

Coretec is leading the way in revolutionizing the industry. They provide the control and monitoring capabilities necessary to boost efficiencies, all at a cost that competes with traditional servo presses and monitoring solutions.

## Superior Control Starts with a Smart Design

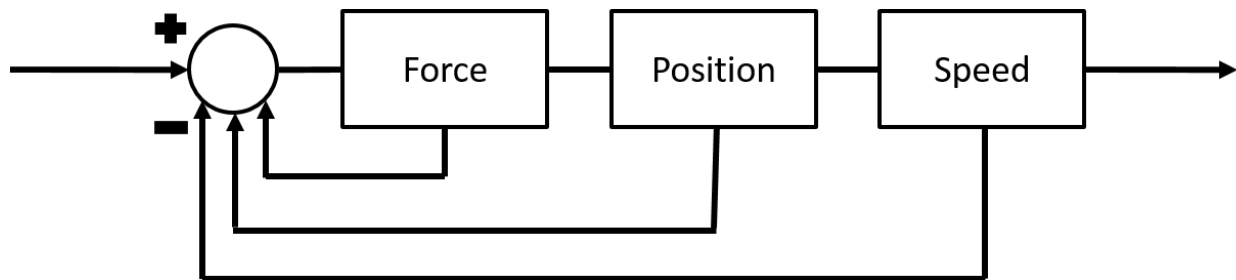
Ball screw servo presses operate using an electro-servo motor linked to a ball screw mechanism, translating rotational motion into linear force. While almost all electric motors are equipped with built-in encoders to manage displacement and speed, this approach addresses only a part of the assembly process control. To make accurate pass/fail decisions, understanding the forces involved in these processes is crucial.

The Coretec Integrated Servo Press stands out by incorporating a factory-integrated load cell and encoder. This integration enables real-time feedback to the controller, ensuring precise monitoring of the assembly process.

### *It's Time to Take Control of Your Assembly Process*

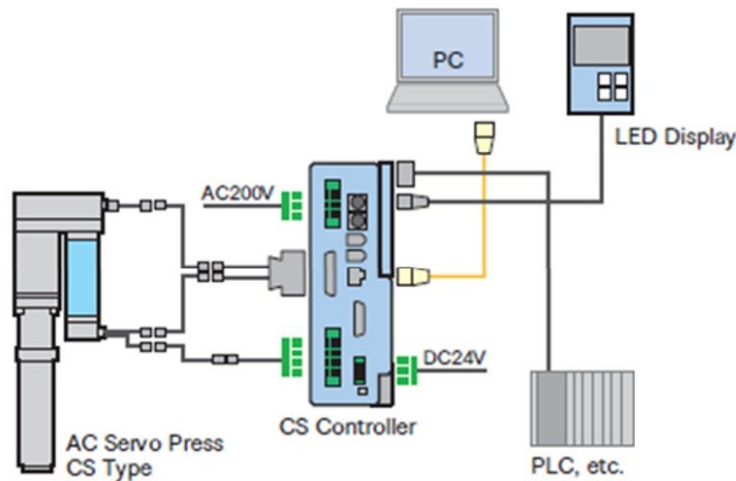
Merely monitoring the assembly process is no longer sufficient. A common challenge with servo presses capable of controlling Force, Displacement, and Speed is their significant initial investment. Coretec distinguishes itself through a straightforward and efficient design, highlighted by its patented planetary gear pack and custom-integrated load cell.

Coretec servo presses don't just offer unparalleled control—they also bring energy savings, space efficiency, and reduced maintenance requirements. With the ability to detect anomalies in-process, these presses can halt operations instantly, preventing the production of defective parts and safeguarding quality.

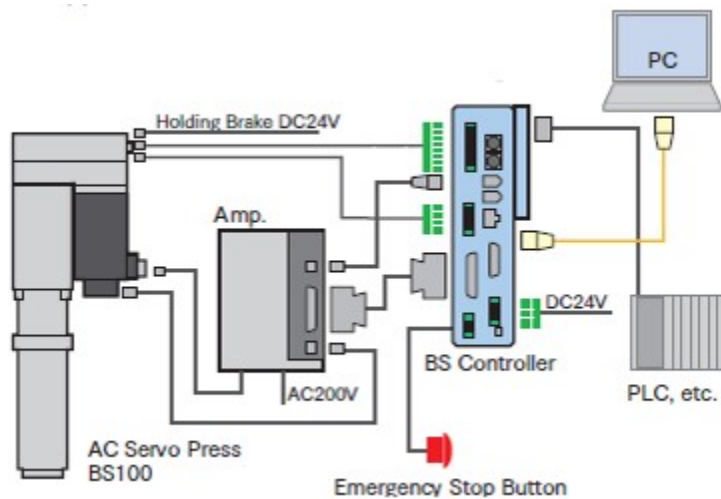


## System Overview

- Tool with Load Cell, Encoder
- All Interconnecting Cables
- Controller with Digital I/O, Profinet, EthernetIP, DeviceNET, etc.
- Configuration and Data Collection Software
- Optional PC for Data Collection of up to 32 Presses



CS & GS System Overview (5kN to 80kN Force Capacity)



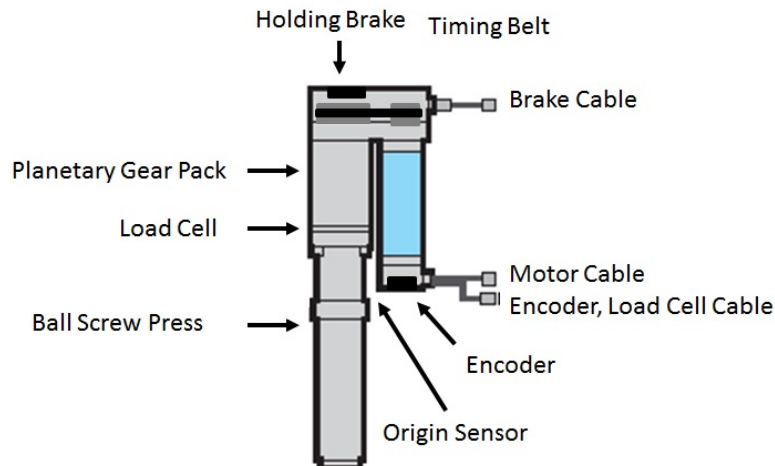


## MS System Overview (100kN and 200kN Force Capacity)

### Intelligent Tool Design

Coretec's Press Tool simplifies assembly processes by arriving fully assembled and integrated. With the amplifier and chip built in, the system requires no manual calibration—the Controller instantly recognizes the connected Tool. This design ensures ease of use and streamlines production, embodying Coretec's commitment to efficient, intelligent manufacturing solutions.

***Cut Down Your Integration Time. Maintain Less Parts.***



### Compact Controller Design

- PC independent Control and Evaluation
  - PC is for Data Collection
  - PLC provides Control and Data Collection of key parameters
- “Knows” which Servo Press Tool is connected
- Power Requirements
  - 220 VAC 3ph for motor
  - 24 VDC supply for controller
- Comprehensive PLC Interface Options
  - Digital I/O, EthernetIP, Profibus, Profinet, CC-Link DeviceNet

- Key Parameters can be read/set PLC via Fieldbus Comm Port  
(i.e. live load, peak force, final stroke, part serial number, program limits, pass/fail criteria, etc.)

## Simple Programming

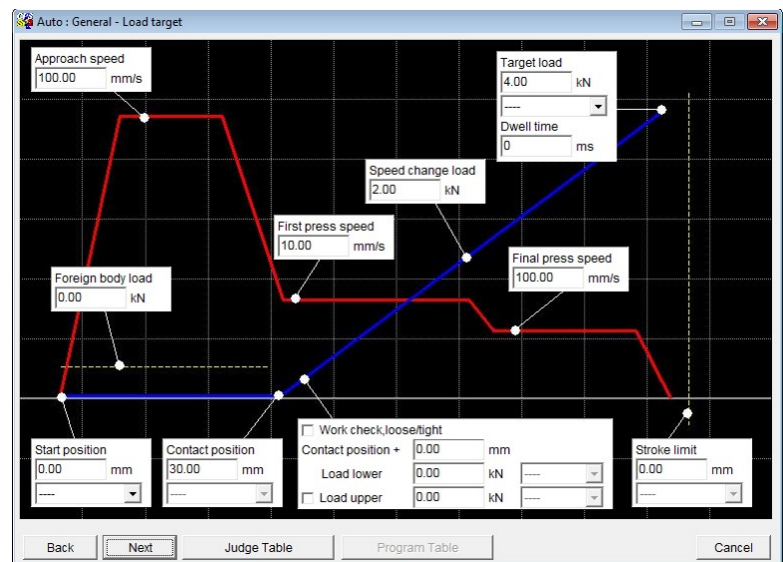
Despite the advanced functionality Coretec offers, programming the system remains straightforward. The software includes an Auto Program Generation function that uses a visual method to create programs, suitable for a wide range of applications.

Even simple pressing applications can be configured in less than 5 minutes. For more complex needs, there's flexibility to create custom routines incorporating timers, handshaking, I/O, math, and relative positions.

### *Auto Program Generation: Where Capability and Simplicity Meet*

Define your approach speed, contact position, press fit, final force, positions, etc. using the graphical interface and SP Configurator creates the programs for you.

- Stroke Target
- Force Target
- Dwell at end of stroke
- Constant Load Pressing
- Backlash Inspection
- Double Taps
- Relative Position
- Covers most applications, yet allows custom programs.

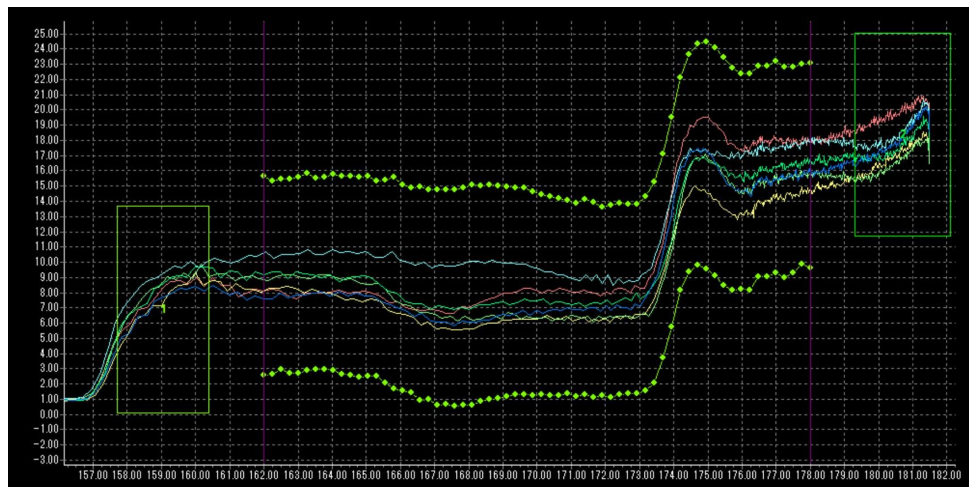


[Instruction Videos on the CPS & WPS Servo Press Controller Programming.](#)

## Signature Analysis

Accurate control is essential, yet it's just the beginning. Modern quality control standards increasingly require Force vs. Displacement Monitoring, underscoring the critical need for effective signature analysis in assembly processes.

***A Better Process need superior control and 100% process monitoring***



Dial in, Drag and Drop Interface allows you to:

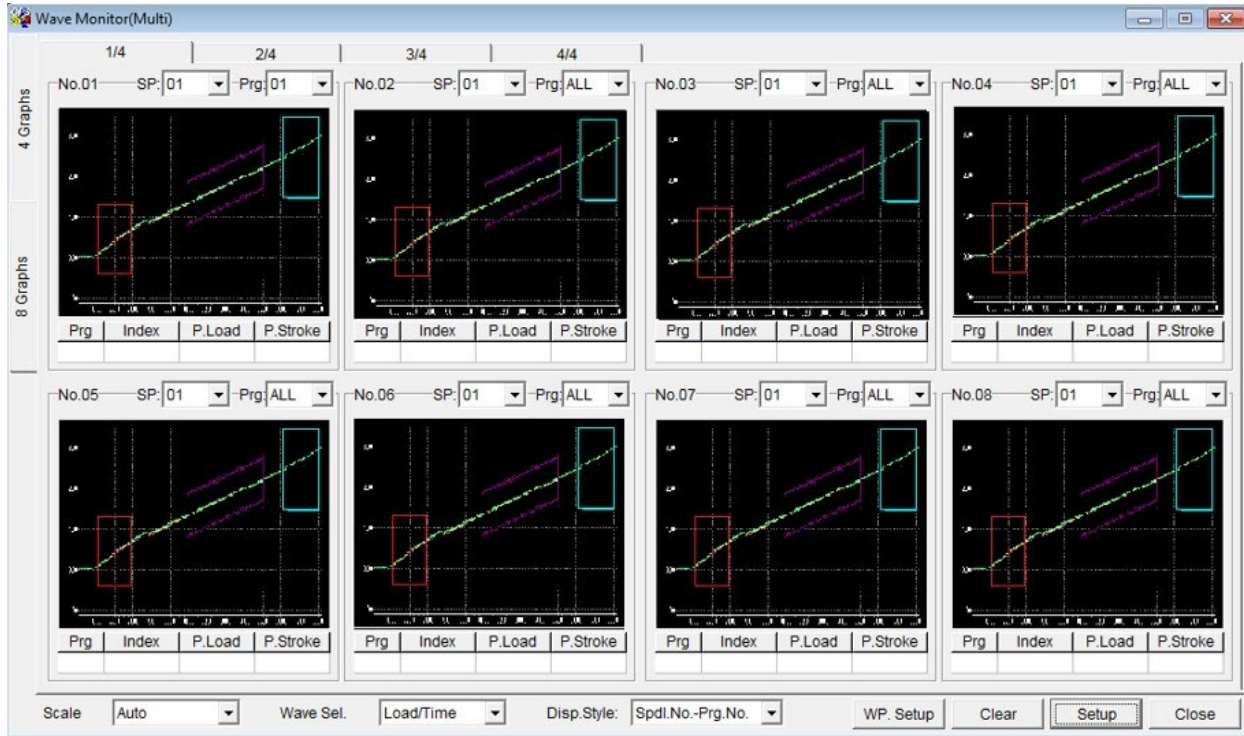
- Limits (e.g. Peak Force, Final Stroke, User Definable, etc.)
- Up to 32 Zones (Tolerance Envelopes)
- Up to 4 Frames (Windows)

## Plug and Play Data Collection

Modern manufacturing demands leave no room for uncertainty, necessitating 100% data collection. Coretec simplifies this with software that autonomously gathers data from up to 32 presses using Ethernet TCP/IP.

The system not only collects numerical and graphical data efficiently but also associates model and serial numbers with specific presses, streamlining quality assurance processes.

*Part Tracking is here to stay, it might as well be easy*



## Applications

### Pressing Rotor into Pump Assembly

Here we are pressing a shaft into a rotor housing. Notice how the gripper positions the shaft and the press pauses when it comes to touch it. The press is checking the part in *real time* to see if it is too loose or too tight. After the press communicates this to the PLC, the PLC retracts the gripper before the press finishes the part. This demonstrates some of the handshaking capabilities, as well as the value of live feedback.

*Know a bad part ahead of time, and don't bother making it.*

## Suspension Bushing Press

One of the most common applications, a bushing press for suspension control arms.

*Let us bring you tomorrow's technology, at today's budget.*

## Press Tool / Model Specifications

### Specifications

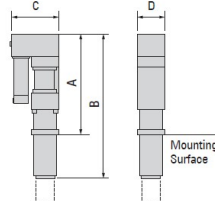
Model	CS05	CS10	CS20	CS30	GS35	GS50	CS55	CS80	MS02	MS10M	MS30M	MS50	MS100	MS200
Max. instantaneous force (kN)	5	10	20	30	35	50	55	80	2	10	30	50	100	200
Applicable force (kN)*1	3	7	14	21	35	40	45	70	1.5	7	21	45	70	150
Max. stroke (mm)	100/250		100/200/350		200/400		100/200/350		100	100/250	100/200/350			100/200
Special stroke (mm)	150		400	400/500	100		400/500		200	150	400/500			300
Max. speed (mm/s)*2	300	180	270	240	320	215	200	135	225	100	130	250	150	110
Controller model	WPS-SP30 or WPS-SP75				WPS-SP75				WPS-MSJ4 + Amplifier					
Load cell accuracy	±1.5% @FS (Repeatability ±0.5% @FS)*3													
Positional repeatability	±0.01mm *3													
Max. power supply capacity (kVA)	0.75		3.5		4.2				0.3	0.9	3.5	5.5	7.5	10
Brake holding load (kN)	0.6	1.1	3.7	4.1	1.8	2.6	2.5		0.5	1.1	4.1	1.8	2.5	23.4

\*1: This is the applied force in consideration of the mechanical life. \*2: Coretec recommends using CS and GS models at 75% or less of the maximum speed. A maximum press fitting speed of 30 mm/s is recommended for all models. \*3: Under the same conditions \* Please feel free to inquire about specifications for models not indicated above.

## Press Tool / Model Dimensions

### Dimensions

Model No.	A (mm)	B (mm)	C (mm)	D (mm)	Weight (kg)
CS05-100B	335	466	150	65	13
CS05-250B		671			18
CS10-100B		466			13
CS10-250B		671			18
CS20-100B	390	511	200	80	24
CS20-200B		651			28
CS20-350B		851			34
CS30-100B		556			32
CS30-200B	398	681	215	94	36
CS30-350B		861			42
GS35-200BK		760			66
GS35-400BK		1000			82
GS50-200BK	487	760	260	118	66
GS50-400BK		1000			82
CS55-100BK		781			76
CS55-200BK		861			82
CS55-350BK	535	1041	290	135	96
CS80-100BK		781			76
CS80-200BK		861			82
CS80-350BK		1041			96



Model No.	A (mm)	B (mm)	C (mm)	D (mm)	Weight (kg)
MS02-100B	162	262	108	48	3.5
MS10M-100BK	335	466	152	65	13
MS10M-250BK		671			18
MS30M-100B	415	573	215	94	33
MS30M-200B		698			37
MS30M-350B		878			43
MS50-100BK		781			79
MS50-200BK	535	861	290	135	85
MS50-350BK		1041			99
MS100-100B		781			84
MS100-200B		861			90
MS100-350B	721	1041	451	228	104
MS200-100B		1146			170
MS200-200B		1246			184

### Tool Model Notations

Series name **GS 35 M - 400 B**

CS,GS,MS

Max. force (kN)  
02,05,10,20,30,35,  
50,55,80,100,200  
(Refer to the specifications)

M: Load holding type

B: With holding brake  
C: No load cell (MS200 only)  
K: No origin sensor  
A: Absolute type (MS series only)

Max. stroke (mm)  
100,200,250,350,400  
(Refer to the specifications)