JANOME

Electro Press

JP-S Series

New Generation Servo Press

A space-saving Servo Press that's making built-in compact devices the industry standard•••

Electro Press

JP-S Series

New Generation Servo Press

Feature 1

Slim & Compact

The JP-S features a slim main unit design and space-saving controller unit ideal for installation in any factory system. Even where multiple presses are linked together, they take up only a small amount of space, making for easy and efficient inclusion in your production facility plans.

Feature 2

External Control

Using PLC commands, you can control the Electro Press via Digital Input/Output, Fieldbus or the Ethernet.

Feature 3

Ethernet-based Data Gathering

Using dedicated PC software you can quickly gather detailed position and load data. Traceability is assured through the saving of important quality control data including sensor judgment results.

Feature 4

Field Network Compatibility

Result data (such as final position/load, judgment position/load) from the PLC is conveyed by a field network for readout on a register. Users can choose from 6 network types: DeviceNet, PROFIBUS, CC-Link, CANopen, EtherNet/IP and PROFINET.

Feature 5

Extensive Lineup

Our lineup ranges from 5kN to 200kN with 8 different basic model types as well as new short stroke versions of our 50kN and 100kN types for inclusion in facilities with height or length limitations. We also offer clean room compatible models and high motor output specification types. Choose the ram stroke that is right for your application as well as a pressing or pulling type load cell. (Availabilty varies depending upon model.)

Feature 6

Ideal for Hydraulic/Pneumatic Press Replacement

The JP-S features low noise operation good for your working environment, and it consumes less energy than hydraulic and pneumatic presses. You can also reduce start-up costs by choosing the functions which meet your specific needs (for example, choose whether or not to include a load cell, etc.).

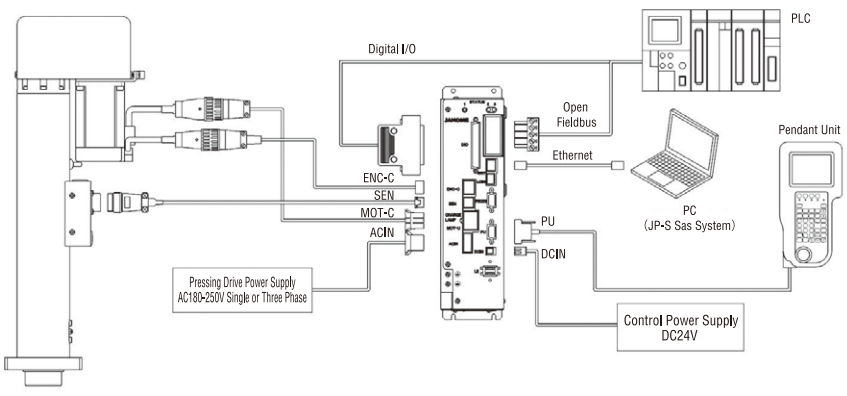
Feature 7

Various Control Modes and Sensor Functions

We combined the pressing parameters (such as speed and load) with the hold parameters (position, load, distance, time, etc.) to create 9 different pressing modes. You can set several pressing modes to the steps in one program, to create a multi-stage operation.
We also prepared several sensor judgment functions, including step judgments (judgments made while pressing), and load zone judgments (load judgments against any position range you set). You can set up to 16 step judgments for one step.

System Configuration

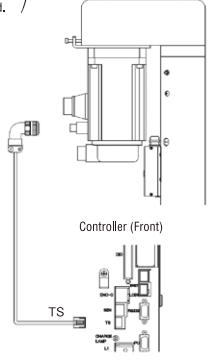
This is a simplified reference diagram of the JP-S1001 configuration.



Built-in Thermostat Model

In addition to the details on the left, the thermostat cable is also connected.

Compatible Models : JP-S3001-11, and models with a maximum pressing capacity of 50kN and above.



※In order to be able to immediately stop the press, be sure to install an external safety circuit (such as one to cut off the power to the press due to an emergency stop).
※For detailed information about power sources, etc., please refer to the Operation Manual.

Choosing Your Model

Example :JP-S0501-00100BS-N0CCA-331

JP-S	0501	–	0	0	100	B	S	–	N	0	CC	A	–	3	3	1
JP-S	Load		Specs.	Variation	Stroke	Brake	Load Cell		DIO		Fieldbus	Regeneration Resistance *4		Main Unit Cable *5	Power Cable *7	Power Source Specs.
Main Unit:JP-S Controller:JP-SC	5kN:0501 10kN:1001 15kN:1501 20kN:2001 30kN:3001 50kN:5R01 100kN:10R1 200kN:20T1		Standard:0 CE:1 Clean:2	Standard:0 Special Configuration 1:1*1	100mm:100 150mm:150 200mm:200 250mm:250 300mm:300 350mm:350 400mm:400 450mm:450 500mm:500 *2 Refer below.	Yes:B No:0	Pressing:S Pulling:L None:0 *3 Refer below.		NPN:N PNP:P None:0		CC-Link:CC DeviceNet:DE PROFIBUS:PR CANopen:CO EtherNet/IP:EP PROFINET:PN None:00	External Attachment:A Built-in:B		3m:3 5m:5 10m:A 15m:B 20m:C None:0 ⋮ *6 Refer below.	3m:3 5m:5 10m:A None:0	5KN-20kN Single Phase:1 Three Phase :3 30kN-200kN Three Phase:3 *8 Refer below.

*2 Stroke: ●= Available

Stroke \ Model	JP-S 0501	1001	1501	2001	3001	5R01	10R1	20T1
100mm	●	●	●	●	●	●		
150mm	●	●						
200mm	●		●	●	●	●	●	●
250mm	●	●						
300mm			●	●	●	●		
350mm	●		●	●	●	●		
400mm			●	●	●	●	●	●
450mm			●					
500mm							●	

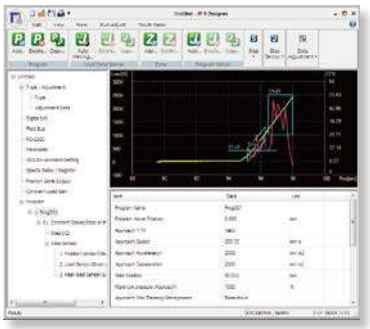
*1 Special Configuration 1: High Power Motor Specifications (equipped with a motor one size larger than standard)
JP-S0501/1001/2001, JP-S3001 (CE specification type only)
*2 Stroke: Refer to the Stroke Chart
*3 Pulling specifications are available for models up to 100kN.
*4 Regenerative resistance for the JP-S3001-11, and models with a maximum pressing capacity of 50kN and above are built-in only.
*5 Main Unit Cables(set of 3): Motor Cable, Encoder Connector Cable, Sensor・Load Cell Cable/Sensor Cable
※ The JP-S3001-11, and models with a maximum pressing capacity of 50kN and above include a thermostat cable.
*6 Main Unit Cable Lengths: for lengths greater than 20m as well as for robot cables, please contact us.
*7 Power Cables(set of 2): Controller Power Cable, Drive Power Cable
*8 Power supply for the JP-S2001 Special Configuration 1 Type is three phase only.

JP-S SaS System PC Software

●JP-S Designer

This software makes the following settings:

- Model Type/Adjustments
- Digital Input/Output(DIO)
- Fieldbus
- RS-232C
- Parameters
- JOG Environment Settings
- Special Relay/Special Register
- Position Zone Output
- Constant Load Gain
- Program

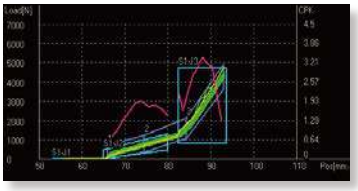


For these settings the software allows you to enter settings, display data, edit, save files and print. In addition, the software carries out bundle transmission and bundle reception to and from the press (excluding Model Type/Adjustments for reception) graph display and display screen changes (length & load values, language).

Graph Display

Reads sampling files* including time series data and displays run result data as a graph.

Green: Time Series Data
Aqua: Step Judgment Parameters
Purple: Load Zone Judgment** Parameters
Red: CPK (Process Capability Index)

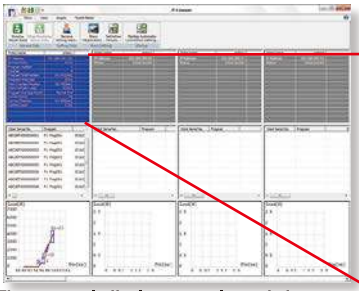


* Sampling File…a file containing pressing result data from JP-S Sampler.
** Load Zone Judgments can be generated automatically.

●JP-S Sampler (Optional)

This software is for bringing run result data (quality control data/ time series data) onto the PC and saving the sampling files in (.csv) text format.
JP-S Sampler can gather run result data from multiple Electro Presses.

※The number of connectable Electro Presses can vary depending upon the work environment.

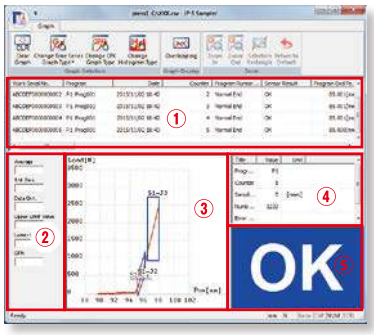


The run result displays are color-coded.
Run result and judgment are both OK: blue
Run result and judgment are NG: red

<Enlarged Monitor Screen>

Press Name	MyPress
IP Address	192.168.200.180
Setting Data	Not exist
Program Number	71
Counter	4
Program End Position	0.001[mm]
Program End Load	64[N]
Work Contact Position	38.876[mm]
Work Contact Load	204[N]
Program Running R...	Normal End
Sensor Result	OK
Current Position	41.796[mm]
Current Load	2516[N]

<Detailed Display Screen>



①Quality Control Data Display Area
- One display line for each shot; screen shows time and date for program running / shot made / run result / judgment as well as each step's end position / end load / each judgment value, etc., and you can save the data.

②CPK Display Area
- CPK details shown on a CPK graph

③Graph Display Area
- You can switch among time series graphs, histograms and CPK displays for items such as position・load, time・position, time・load, time・speed, etc.

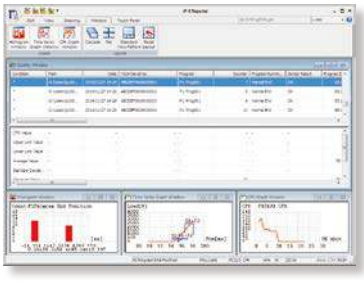
④Time Series Data Header Display Area
- Data headers for the most recent pressing results

⑤OK/NG Display Area

With the histogram, you can choose from among "Program", "Load Zone Judgment", "Step" and "Step Judgment", and see variations in the data with one glance.

●JP-S Reporter (Optional)

This software displays the run result data taken by JP-S Sampler and creates result analyses and reports (HTML format) JP-S Reporter reads in sampling files and setting data and displays quality control lists, quality control statistical lists, histograms, time series graphs and CPK graphs.



JP-S Reporter can also automatically take quality control data and quality control statistical data .csv files, and save time series graph, pictogram and CPK graph data screens to create and display result reports.

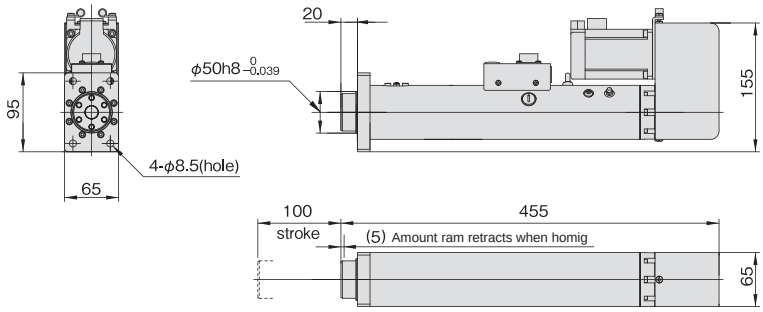
≪Operating Environment≫
The following operating environment is needed to run the JP-S SaS System Software:
Windows® 7 / Windows® 8.1 / Windows® 10 / Windows® Embedded Standard 7 WS7P

Electro-Press Dimensions

The dimensions shown here are for reference purposes only. For more details, please contact us.

JP-S0501-100, JP-S1001-100

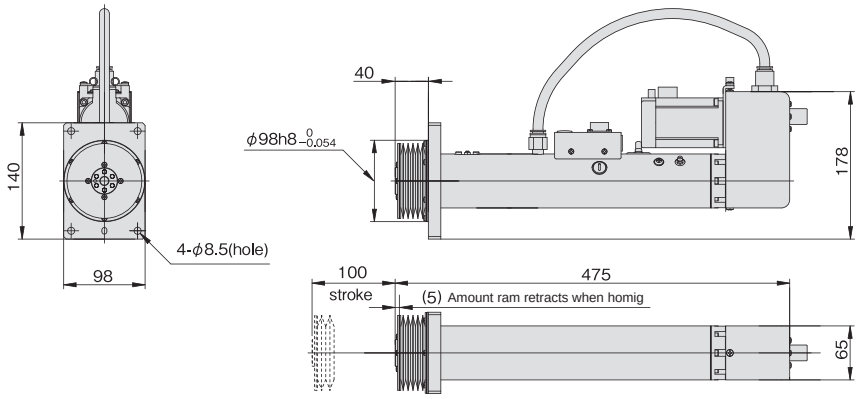
Unit:mm



JP-S1001-20-100 (Clean Room Compatible)

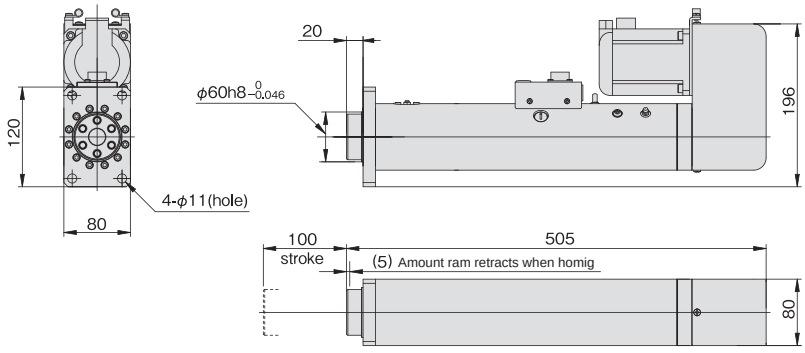
The Clean Room Type is not CE declared for import into the EEA.

Unit:mm



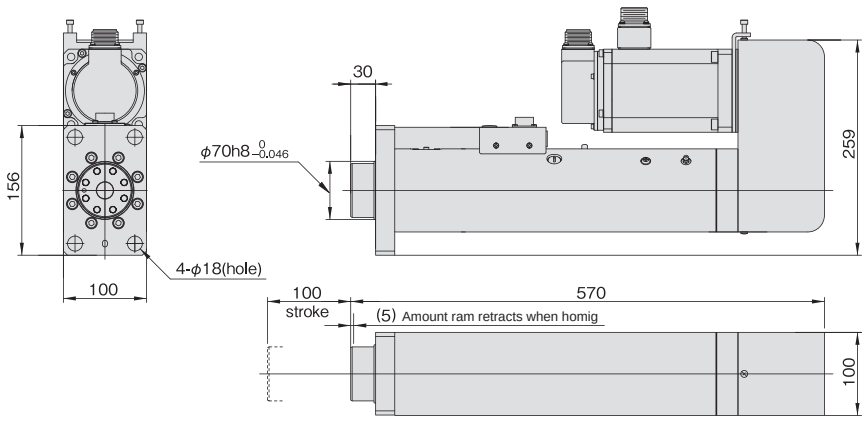
JP-S1501-100, JP-S2001-100

Unit:mm



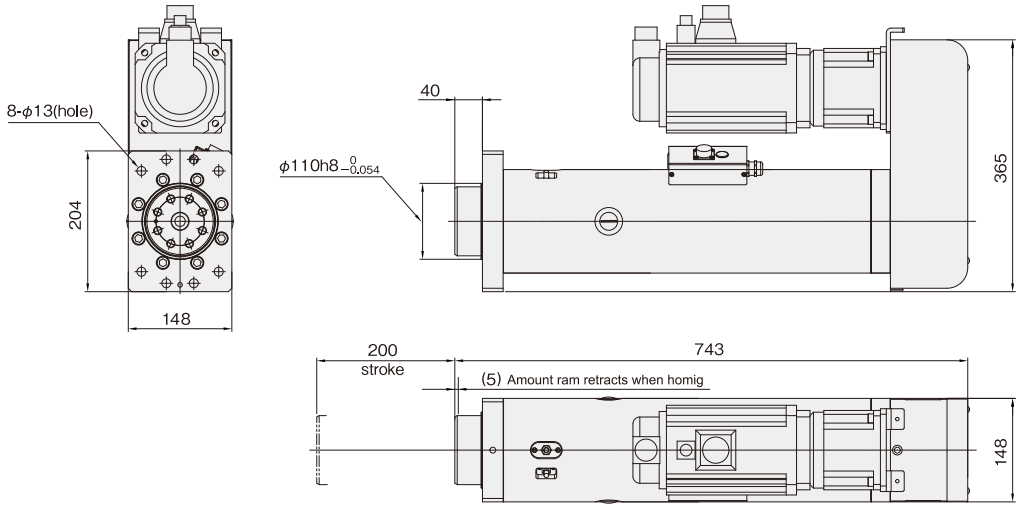
JP-S3001-100

Unit:mm



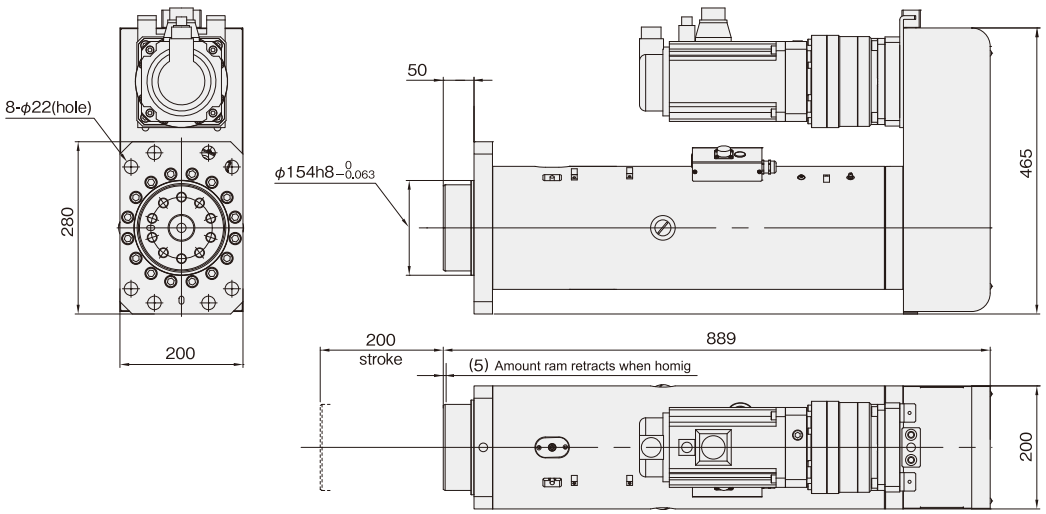
JP-S5R01-200

Unit:mm



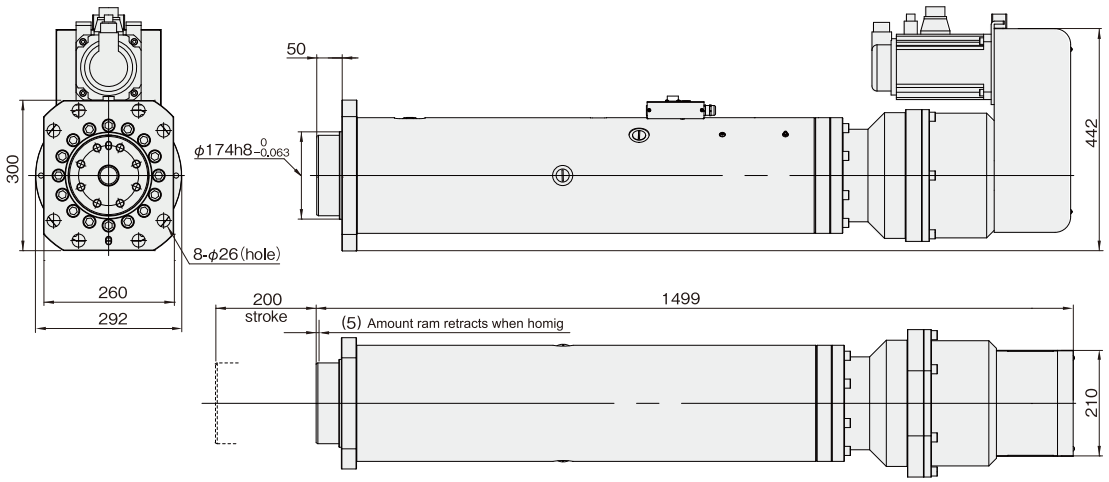
JP-S10R1-200

Unit:mm



JP-S20T1-200

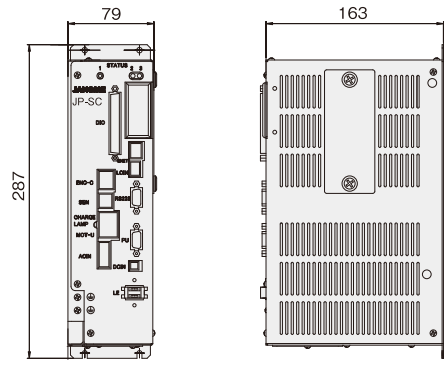
Unit:mm



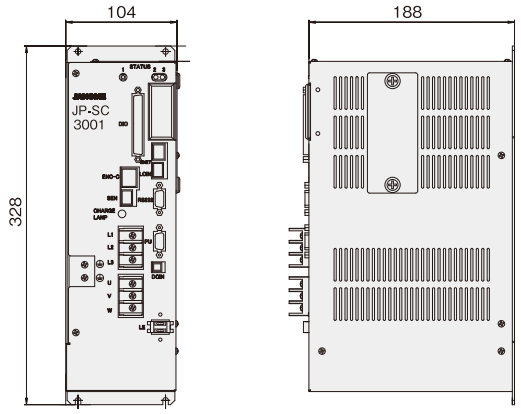
Dimensions

Unit:mm

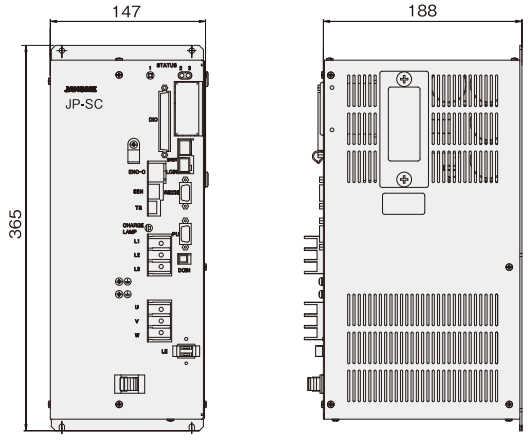
JP-SC0501～2001



JP-SC3001



JP-SC5R01～20T1



External Dimensions

Main Unit	W (mm)	D (mm)	H (mm)	Weight
JP-S0501-100	65	155	455	12kg
JP-S0501-150			505	13kg
JP-S0501-200			605	14kg
JP-S0501-250			655	16kg
JP-S0501-350			805	18kg
JP-S1001-100	65	155	455	12kg
JP-S1001-150			505	13kg
JP-S1001-250			655	16kg
JP-S1501-100	80	196	505	20kg
JP-S1501-200			645	25kg
JP-S1501-300			775	28kg
JP-S1501-350			845	30kg
JP-S1501-400			925	33kg
JP-S1501-450			995	35kg
JP-S2001-100	80	196	505	20kg
JP-S2001-200			645	25kg
JP-S2001-300			775	28kg
JP-S2001-350			845	30kg
JP-S2001-400			925	33kg
JP-S3001-100	100	259	570	35kg
JP-S3001-200			690	42kg
JP-S3001-300			810	48kg
JP-S3001-350			870	52kg
JP-S3001-400			930	55kg
JP-S5R01-100	150	365	643	98kg
JP-S5R01-200			743	110kg
JP-S5R01-300			843	123kg
JP-S5R01-350			893	129kg
JP-S5R01-400			943	135kg
JP-S10R1-200	200	465	889	198kg
JP-S10R1-400			1,089	235kg
JP-S10R1-500			1,189	272kg
JP-S20T1-200	292	442	1,499	387kg
JP-S20T1-400			1 699	437kg

Controller	W (mm)	D (mm)	H (mm)	Weight
JP-SC0501～2001	79	163	287	3kg
JP-SC3001	104	188	328	5kg
JP-SC5R01～20T1	147	188	365	8kg

The high motor output type controller specifcations are the same as those for the controller of the regular specification press one size larger.
※Dimensions exclude cables and protrusions.

For external dimensional diagrams of models not shown above, please contact us or download them from our website.
http://www.janomeie.com

Controllers

JP-SC0501～2001

JP-SC3001

JP-SC5R01～20T1

Pendant Unit (Optional)

JP-S＜Specifications＞

Model Type		JP-S0501	JP-S1001	JP-S1501	JP-S2001	JP-S3001	JP-S5R01	JP-S10R1	JP-S20T1
Pressing Capacity	Maximum	5kN	10kN	15kN	20kN	30kN	50kN	100kN	200kN
	Sensor Detection Unit*1	2N	4N	8N	8N	12N	20N	40N	80N
Ram Stroke		100mm,150mm 200mm,250mm 350mm	100mm 150mm 250mm	100mm,200mm 300mm,350mm 400mm,450mm	100mm,200mm 300mm,350mm 400mm	100mm,200mm 300mm,350mm 400mm	100mm,200mm 300mm,350mm 400mm	200mm 400mm 500mm	200mm 400mm
Ram Speed	Pressing	0.01～35mm/sec	0.01～35mm/sec	0.01～35mm/sec	0.01～35mm/sec	0.01～35mm/sec	0.01～35mm/sec	0.01～16mm/sec	0.01～8mm/sec
	Approaching/Returning	0.01～216mm/sec	0.01～216mm/sec	0.01～200mm/sec	0.01～200mm/sec	0.01～210mm/sec	0.01～200mm/sec	0.01～100mm/sec	0.01～50mm/sec
Maximum Holding Time*2		999.9sec	999.9sec	999.9sec	999.9sec	999.9sec	999.9sec	999.9sec	999.9sec
Load Precision*3		±50N at 0.5kN or more	±100N at 1kN or more	±200N at 2kN or more	±200N at 2kN or more	±300N at 3kN or more	±500N at 5kN or more	±1000N at 10kN or more	±2000N at 20kN or more
Repeatability*4		±0.01mm	±0.01mm	±0.01mm	±0.01mm	±0.01mm	±0.01mm	±0.01mm	±0.01mm
Maximum Jig Weight Suspended from Ram Tip*5		5kg or less	10kg or less	15kg or less	20kg or less	30kg or less	50kg or less	100kg or less	200kg or less
Power Consumption		200W	400W	750W	750W	2,000W	5,000W	5,000W	5,000W
Power Source	Single Phase	180～250V （50/60Hz） ※Please use the proper cable for your power source.				—	—	—	—
	Three Phase					180～250V（50/60Hz）			
Controller Power Source		DC24V 1.6A				DC24V 2.2A	DC24V 2.5A	DC24V 2.7A	
Ethernet		Included as Standard Equipment							
Motor Encoder Output		Included as Standard Equipment							
Load Cell Output		Included as Standard Equipment							
Analog Motor Output		Speed and motor torque values monitored using electrical current output during press operation (optional).							
Pendant Unit Connection		Included as Standard Equipment （Pendant Unit is optional.）							
Digital Input/Output（DIO）		17 Inputs, 16 Outputs ※NPN/ PNP/ None（Please specify when placing your order.）							
Fieldbus		DeviceNet / PROFIBUS / CC-Link / CANopen / EtherNet/IP / PROFINET / None（Please specify when placing your order.）							
Regenerative Resistance*6		External Attachment/ Built-in（Please specify when placing your order.）					Built-in only		
Through Output for Pendant Unit Emergency Stop Contact Point*7		Contact point for Emergency Stop Button（EMG）attached to Pendant Unit goes through the controller unit outputs directly.							
RS232C		1ch （9 pins） IP Address setting, access to I/O Memory（Relay/register reading and writing）							
Operating Environment	Temperature	0～40℃							
	Relative Humidity	20～90%（Without condensation）							
	IP Protection Rating	IP20							
Compatible Controller*8		JP-SC0501	JP-SC1001	JP-SC1501	JP-SC2001	JP-SC3001	JP-SC5R01	JP-SC10R1	JP-SC20T1
High Power Motor Specification*9		●	●	—	●	●	—	—	—
Clean Room Compatible Models*10		—	●	●	●	—	—	—	—
Clean Class*11 (at the exhaust volume listed below)		—	Class 1000	Class 1000	Class 1000	—	—	—	—
Exhaust Flow		—	60NL/min	80NL/min	80NL/min	—	—	—	—
Exhaust Aperture（pipe's internal diameter）		—	φ19	φ19	φ19	—	—	—	—

*1）Load detection unit indicates resolution capacity (A to D conversion); this differs from load detection accuracy.

*2）Hold times decrease as loads increase. (In some situations, hold times cannot be obtained.) increases in motor temperature also shorten hold times.

*3）Load sensor accuracy is ±1% of the maximum pressing capacity provided that the press is operating at 10% of its maximum capacity or above and the press unit and surrounding environment are at a constant temperature.
(However, for the 15kN type, load sensor accuracy is ±1.3% when at 13% maximum capacity or above.)
This figure represents the level of sensor accuracy and is not an indicator of load tolerance after pressing or margin of error.
※Please periodically check the load value.

*4）Repeatability is dependent upon the press unit bearing a constant load and the press and surrounding environment are at a constant temperature. Repeatability is not absolute and is not guaranteed.

*5）For information about jig weight, please contact the manufacturer of the jig you are using.

*6）The regenerative resistance for the JP-S3001 High Power Motor Specifications type is built-in only.

*7）The pendant unit's emergency stop signal is not detectable by the controller. To activate it, please be sure to construct a circuit that cuts power to the unit during an emergency stop.

*8）The controller's memory has 490KB available for storing result data. (This is roughly equal to 300sec of time series data.)

*9）The high power motor does not increase the maximum pressing capacity. Rather, it is useful for extending the holding time under certain conditions.
The ram speed, power consumption, etc. for these types differs from the content of this catalog. Please contact us for more information.

*10）Clean Room Types are not CE certified for use in the European Union.

*11）Clean class is based upon the United States' Federal Standard 209D（FED-STD-209D）.

JP-S Series Presses

JP-S0501

JP-S1001

JP-S2001

JP-S3001

JP-S5R01

JP-S10R1


JP-S（Clean Room Compatible）

JP-S＜Software Functions＞

Software Functions	
No. of Programs*1	Up to 512
No. of Pressing Steps*1	Up to 512 (in one program)
No. of Step Sensor Judgments*1	Up to 16 (in one step)
Basic Pressing Modes	Constant Speed Pressing ･Position Hold / Constant Speed Pressing ･Distance Hold / Constant Speed Pressing ･Load Hold / Constant Speed Pressing ･Increased Load Hold / Constant Speed Pressing ･Event Hold Constant Load Pressing ･Time Hold / Constant Load Pressing ･Position Hold / Constant Load Pressing ･Distance Hold / Constant Load Pressing ･Event Hold Using the combinations listed above, it is possible to set multiple pressing steps in a single program.
Step Sensor Judgment Types	Position Sensor (beginning of step) Load Sensor ･Given Position / Load Sensor ･Given Distance Peak Load Sensor ･Given Position / Peak Load Sensor ･Given Distance Bottom Load Sensor ･Given Position / Bottom Load Sensor ･Given Distance Top Load Sensor ･Given Position / Top Load Sensor ･Given Distance Valley Load Sensor ･Given Position / Valley Load Sensor ･Given Distance Peak to Peak Load Sensor ･Given Position / Peak to Peak Load Sensor ･Given Distance Differential Sensor 1 ･Given Position / Differential Sensor 1 ･Given Distance Differential Sensor 2 ･Given Position / Differential Sensor 2 ･Given Distance Position Sensor (end of step) Load Path Sensor ･Given Position / Load Path Sensor ･Given Distance
Ethernet Interfacing Capability	System program write-over Send/receive setting data Send result data Relay/register access-based control (Ethernet IO)
PC Software (JP-S SaS System)*2	JP-S Designer (Standard) JP-S Sampler (Optional) JP-S Reporter (Optional)
Display Unit Options	Load Unit: N, kgf, Lbf Length Unit: mm, inch
Pendant Unit Display Language Options	English, Japanese, Korean, Simplified Chinese

*1) The number of programs, pressing steps and step judgments is limited in relation to the total memory size (about 1MB). When multiple steps are included in one program, this in turn limits the number of new programs which can be added to the memory.
*2) The JP-S SaS System is a software package created for the JP-S Series. It is not compatible with other Electro Press products.
JP-S Sampler and JP-S Designer are not equipped with a language switching function. Please choose your preferred language when you place your order.

〈Standard Attachments〉

- Main unit cables (motor cable, encoder connector cable, sensor/load cell cable or sensor cable)
  ※JP-S3001-11, and models with a maximum pressing capacity of 50kN and above include a thermostat cable.
- Power cables (controller power cable, press unit drive power cable)
- Operation manual, PC software (CD-ROM) JP-S SaS System JP-S Designer

〈Options〉

- The JP-S Sampler and JP-S Reporter functions of the JP-S SaS System software allow you to switch among English, Japanese, Korean and simplified Chinese language displays.
- Pendant unit (with or without an emergency stop button*) (cable length: 2m, 3m,5m or 10m)
- Emergency stop button contact point output cable* (cable length: 3m or 5m)
- Short connector for the pendant*
- DIO connector
- DIO cable (cable length: 2m, 3m or 5m)
- Encoder output cable (cable length: 3m or 5m)
- Load cell output cable (cable length: 3m or 5m)
- Analog monitor output cable (cable length: 2m)
- DIN rail attachment board

* When using a pendant unit with an emergency stop button, be sure to construct a circuit to cut off the drive power. An "emergency stop button connection point output cable" is needed to construct a cutoff circuit. Also, when removing a pendant unit that has an emergency stop button, a "pendant short connector" is needed.

≪Compliance with European Union EC Directives≫

We make the following declarations about this product.
①Declaration of EMCD conformity
②Declaration of incorporation to cover LVD and MD
※For the machine and device as a whole, we respectfully request that customers conduct their own conformity test and risk assessment and carry out procedures for their declaration of EMCD, LVD and MD conformity.

※Conforming Models:

- JP-S0501/JP-SC0501
- JP-S1001/JP-SC1001
- JP-S1501/JP-SC1501
- JP-S2001/JP-SC2001
- JP-S3001/JP-SC3001
- JP-S5R01/JP-SC5R01
- JP-S10R1/JP-SC10R1
- JP-S20T1/JP-SC20T1

(Clean Room Types are not CE declared for import into the EEA.)

●Before using your press, read the operation manual and be sure to use the press correctly.
●Specifications may be modified without prior notice to improve product quality.

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