

Electro Press
JP Series 5



New Model JP Series 5 Higher Speed • Greater Precision • Enhanced Interfacing

Faster, more precise with multiple interface capabilities

Great for new facilities

Better for your work environment than an oil or air press

Quality control functions

Improved productivity

Installation

Operation

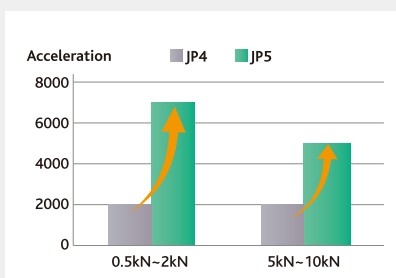
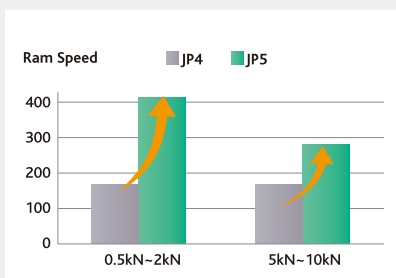
Maintenance

Easy Installation

- Ethernet port included as standard equipment
- Choose from 6 different Fieldbus types
- Low noise and clean work environment
- Much lower running cost than oil or air presses
- Easy program teaching

Faster ram movement for higher productivity

Max. ram speed up 2.5x; ram acceleration up 3.5x over our previous model. Best speed in the industry for lightweight presses; greatly reduces cycle time.



A rich variety of both pressing and sensor functions

Choose from among these pressing modes and stopping parameters:

Pressing Modes	Constant Speed Pressing
	Constant Load Pressing

Stopping Parameters	Position Stop
	Distance Stop
	Load Stop
	Time Stop
	Event Stop
	Differential Stop
	Increased Load Stop
Reduced Load Stop	

Sensor functions are introduced on pp. 3 and 4.

Improved product quality

Internal processing speed up 4.0x over our previous model.

Load Precision: $\pm 0.8\%$ (FS)*¹

*Value range from 5% or more of the maximum load.

Repeatability: $\pm 0.005\text{mm}$

*When the press unit is at a constant temperature.

Global Diagnostic Functionality

Comprehensive hardware diagnostics including PC boards. Its easy to switch among display languages; helpful in multinational workplaces where engineers and operators use different languages!

PC Software Languages

English, Japanese, Korean, Simplified Chinese

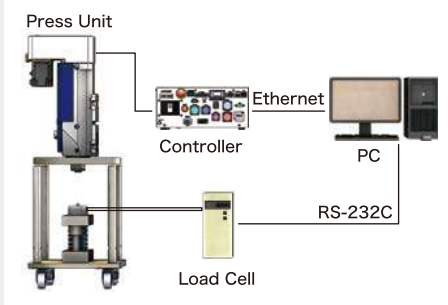
Teaching Pendant Languages

English, Japanese, Korean, Simplified Chinese

Auto Amp Adjustment • Auto Load Calibration

Now you can perform complicated load calibrations automatically.*²

Sample Setup



*1: This is the level of precision when measured in identical working conditions.

*2: Please consult with us about compatible load cells.

Ideal for the "IoT Era" visualized workplace...

Smoothly incorporate into your facility, for easy quality control

System Configuration

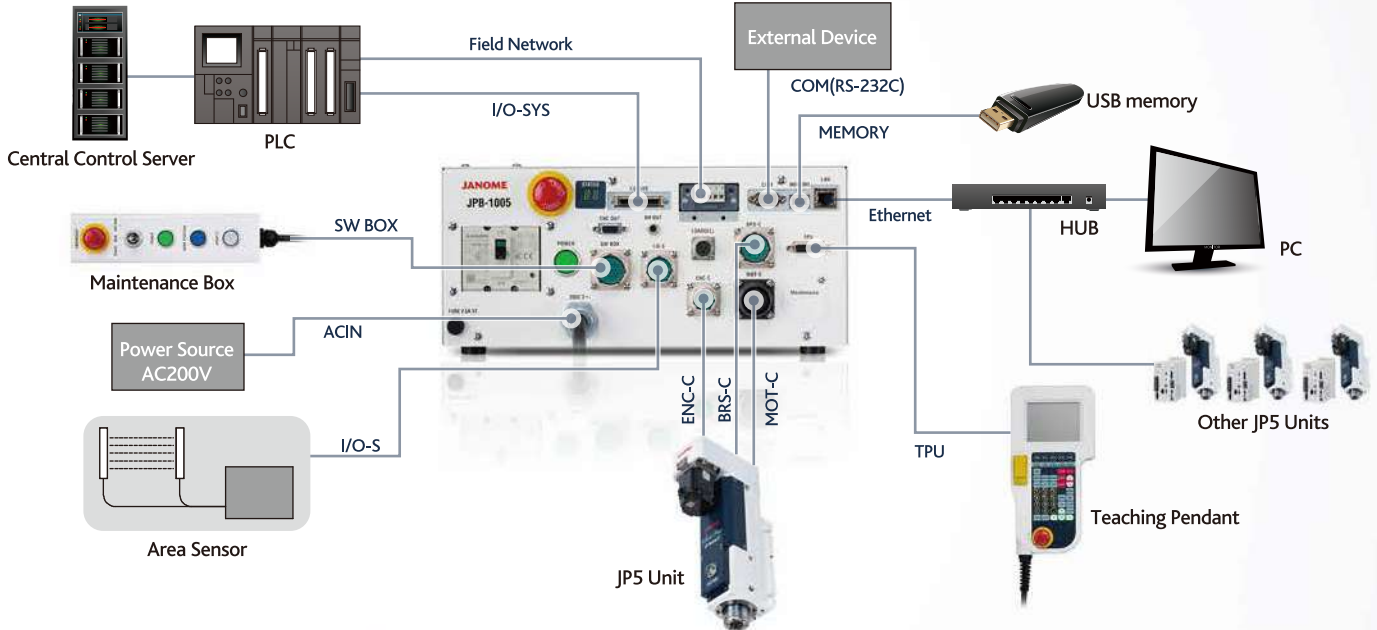
Standard Controller

Field Network Compatible

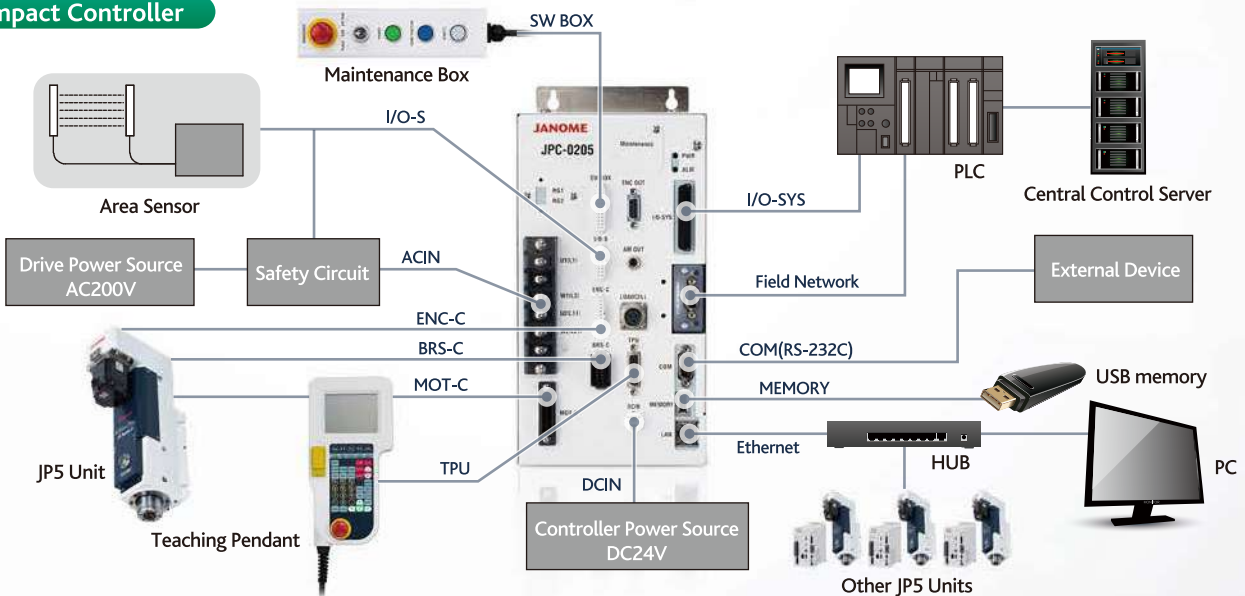
CC-Link, PROFIBUS, PROFINET, DeviceNet, CANopen, EtherNet/IP

USB memory port as standard equipment

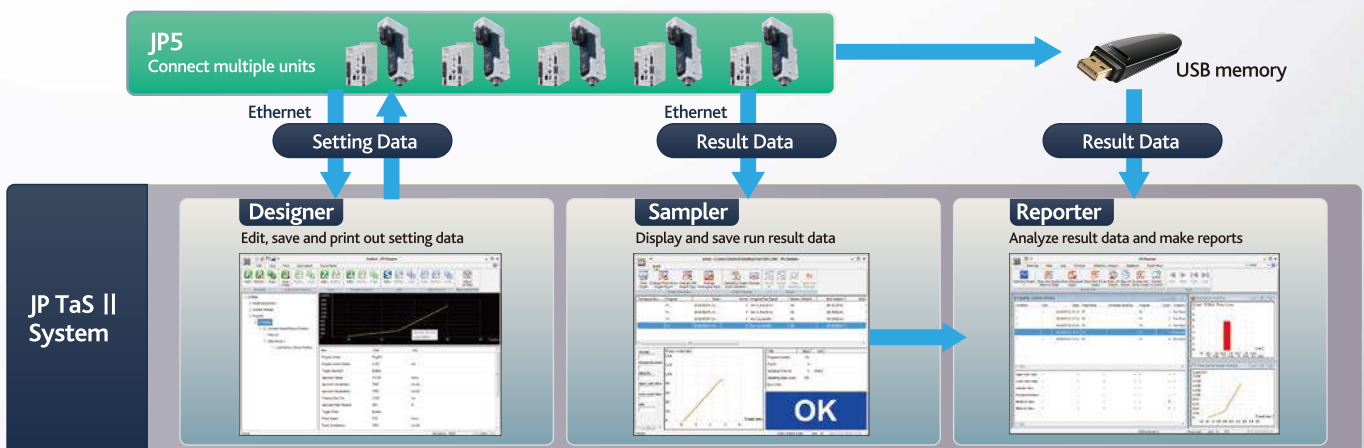
- Save result data (csv format)
- Back up and restore data
- Upgrade system software



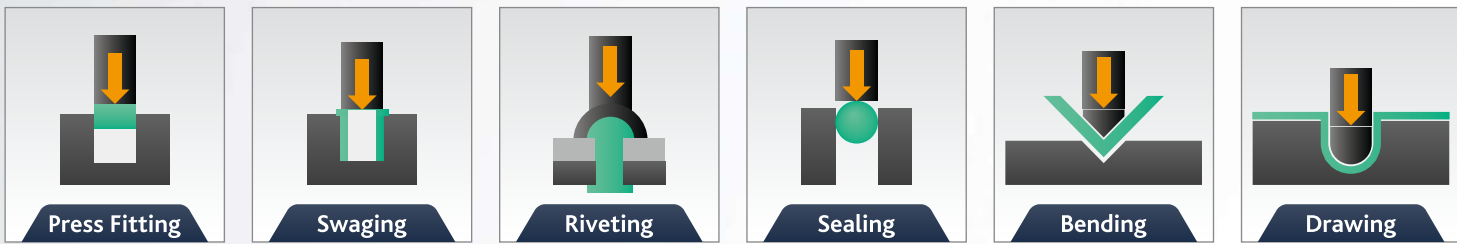
Compact Controller



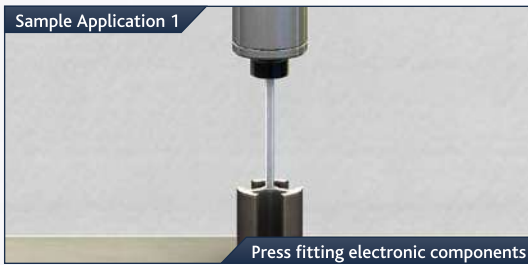
PC Software



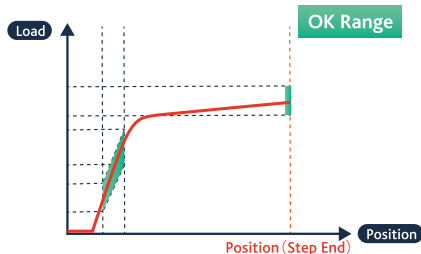
From press fitting to testing, the Janome Servo Press



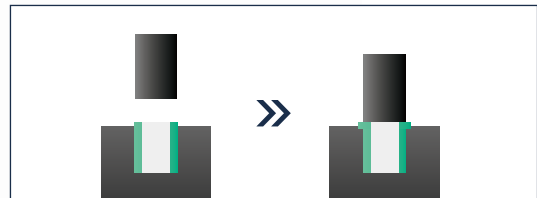
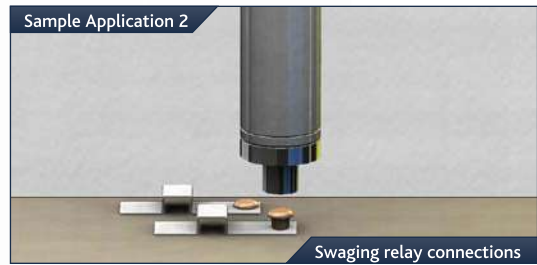
Press Fitting



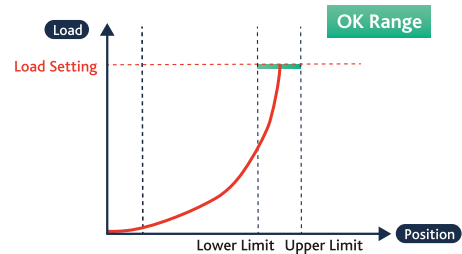
Pressing Condition: Constant Speed Pressing • Stop at Set Position
 Sensor Condition 1: Load Sensor • Position Range
 Sensor Condition 2: Load Sensor • Given Distance (Step End)



Swaging

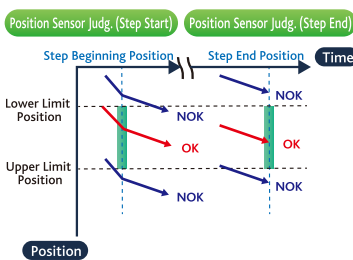


Pressing Condition: Constant Speed Pressing • Stop at Set Load
 Sensor Condition: Position Sensor (Step End)



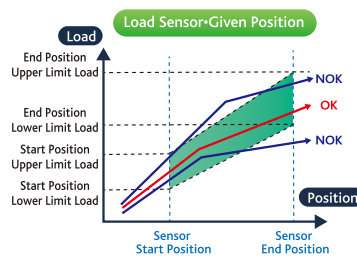
Step Sensor Judgment

Ram Position Sensor Judgment



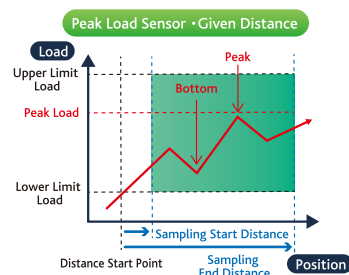
- Position Sensor Judg. (Step Start)
- Position Sensor Judg. (Step End)
- Distance Sensor Judg. (Step End)

Load Sensor Judgment



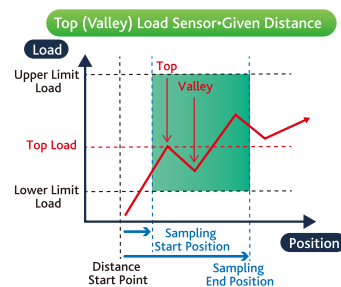
- Load Sensor • Given Position
- Load Sensor • Given Distance (Step Start)
- Load Sensor • Given Distance (Step End)

Peak Load • Bottom Load Sensors



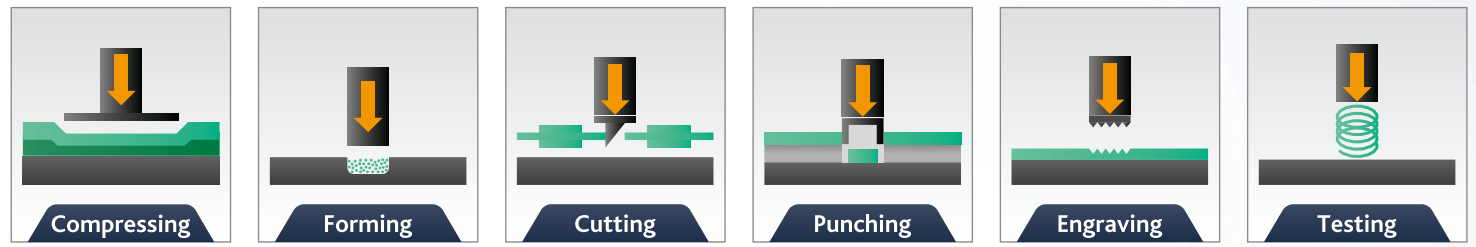
- Peak Load Sensor • Given Position
- Peak Load Sensor • Given Distance
- Bottom Load Sensor • Given Position
- Bottom Load Sensor • Given Distance

Top Load • Valley Load Sensors

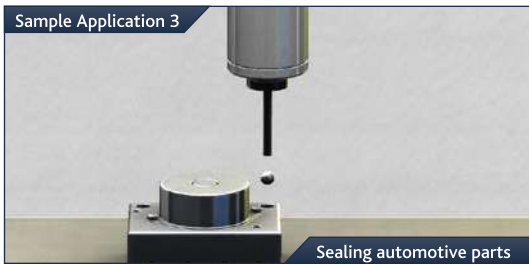


- Top Load Sensor • Given Position
- Top Load Sensor • Given Distance
- Valley Load Sensor • Given Position
- Valley Load Sensor • Given Distance

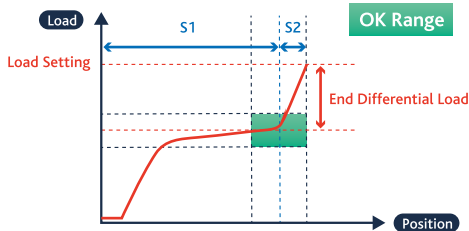
has an important role in many different processes.



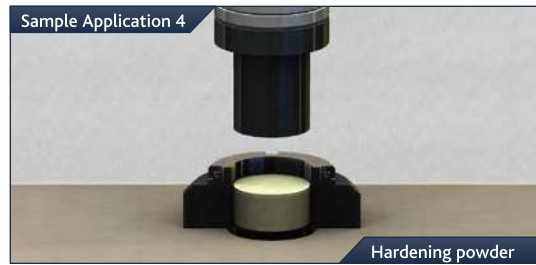
Sealing



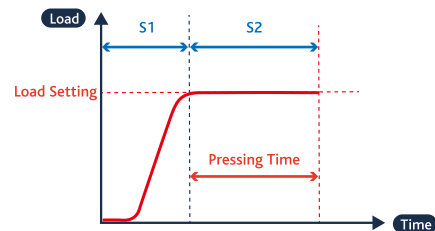
Pressing Condition S1: Constant Speed Pressing•Differential Load Stop
 Pressing Condition S2: Constant Speed Pressing•Incremental Load Stop
 Sensor Function: Differential Load Sensor•Given Position



Powder Forming

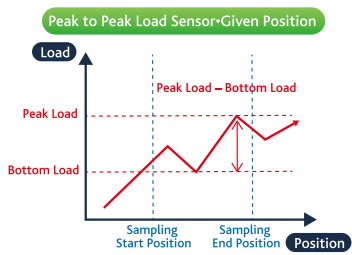


Pressing Condition S1: Constant Speed Pressing•Load Stop
 Pressing Condition S2: Constant Load Pressing•Time Stop



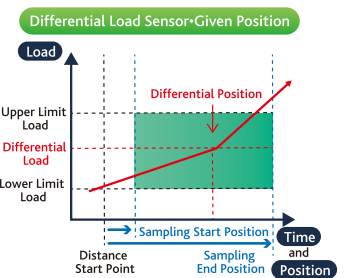
Load Path Sensor | Load Zone Sensors

Peak to Peak Load Sensors



- Peak to Peak Load Sensor•Given Position
- Peak to Peak Load Sensor•Given Distance

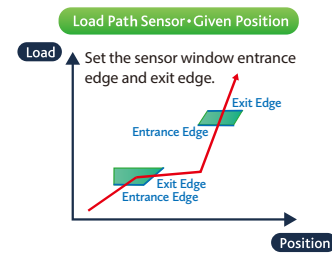
Inflection Point Load•Position Sensors



- Differential Load Sensor•Given Position
- Differential Load Sensor•Given Distance
- Differential Position Sensor•Given Position
- Differential Distance Sensor•Given Distance

Load Path Sensor

Path Based Load Tracking

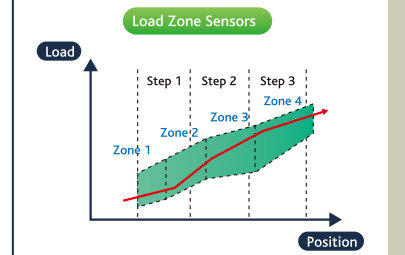


- Load Path Sensor•Given Position
- Load Path Sensor•Given Distance

Freely set the sensor window to meet a variety of configuration needs.

Load Zone Sensors

Load Sensors at Position Zones



This load sensor judgment applies to all or part of the program and is not influenced by divisions between pressing steps.

Models

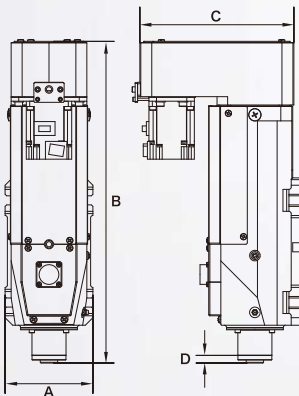
Ex.) JPU-1005L-BCNI150

JPU -				C			
Type	Maximum Load	Specs	Controller	Rating	Pulley Box Direction	Model Type	Stroke
JPU	0.5kN: 0055 1kN: 0105 2kN: 0205 5kN: 0505 10kN: 1005 20kN: 2005 30kN: 3005 50kN: 5005 80kN: 8005	Standard: N Long: L Clean: C	Standard: B Compact: C	CE: C	Standard: N Facing Right: R Facing Left: L Facing the Rear: B	Incremental: I Absolute: A*	0.5~2kN 80mm: 080 5~10kN 100mm: 100 150mm: 150 20~80kN 200mm: 200 400mm: 400

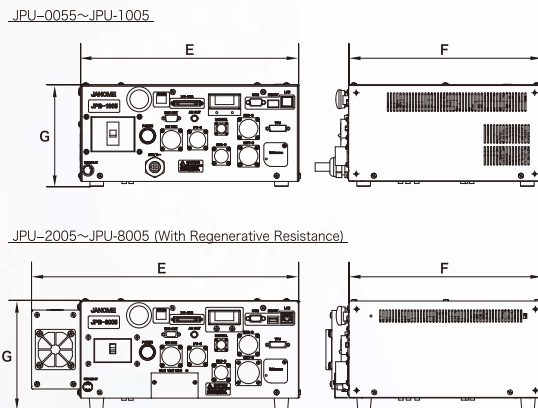
*Please contact us for available models.

External Dimensions

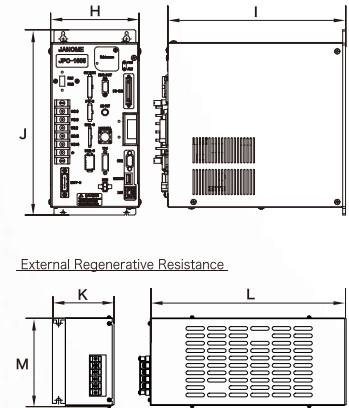
Press Unit



Standard Controller



Compact Controller



*D represents the ram retraction amount when returning to the home position.

	Press Unit					Standard Controller				Compact Controller				External Regenerative Resistance			
	Dimensions (mm)				Weight (kg)	Dimensions (mm)			Weight (kg)	Dimensions (mm)			Weight (kg)	Dimensions (mm)			Weight (kg)
	A	B	C	D		E	F	G		H	I	J		K	L	M	
JPU-0055/0055C JPU-0105/0105C JPU-0205/0205C	116	425	218	5	17	350	310	163	11	140	280	292	5.8	-	-	-	-
JPU-0505 JPU-1005	146	502	258	5	34	350	310	163	11	140	280	292	6.4	(46)	(150)	(275)	(1.1)
JPU-0505C JPU-1005C	146	503	258	5	34												
JPU-0505L JPU-1005L	146	570	258	5	39												
JPU-2005/2005C JPU-2005L	171	706	384	5	80	428	338	175	13	140	280	292	7.5	100	318	150	2.9
JPU-3005/3005C JPU-3005L	230	775	474	5	161												
JPU-5005/5005C JPU-5005L	230	775	474	5	167												
JPU-8005 JPU-8005L	260	797	477	5	170	514	365	283	21	160	280	287	9	120	199	350	5.6
JPU-8005L	260	1087	477	5	230												

* () When the optional Regenerative Resistance is included.

*With the Compact Controller, the Regenerative Resistance in an external add-on.

*Regenerative Resistance is optional for JPU-0505~JPU-1005; it is standard for JPU-2005 and above.

For more details about dimensions, etc., please contact your Janome sales representative, or download external dimensional diagrams from our website.

<http://www.janomeie.com>

Specifications

Item		JPU-0055	JPU-0105	JPU-0205	JPU-0505	JPU-1005
Pressing Capacity	Maximum	0.5kN	1kN	2kN	5kN	10kN
	Setting Unit	1N	1N	1N	1N	1N
Ram Stroke	Maximum	80mm	80mm	80mm	100mm (L: 150mm)	100mm (L: 150mm)
	Position Setting Unit	0.001mm	0.001mm	0.001mm	0.001mm	0.001mm
Ram Speed	Pressing Time* ¹	0.01~35mm/sec	0.01~35mm/sec	0.01~35mm/sec	0.01~35mm/sec	0.01~35mm/sec
	Approach•Return Time	0.01~414mm/sec	0.01~414mm/sec	0.01~414mm/sec	0.01~280mm/sec	0.01~280mm/sec
	Setting Unit	0.01mm/sec	0.01mm/sec	0.01mm/sec	0.01mm/sec	0.01mm/sec
Maximum Holding Time* ²		999.9sec	360sec	20sec	999.9sec	25sec
Load Precision* ³		25N or more±4N	50N or more±8N	100N or more±16N	250N or more±40N	500N or more±80N
Position Repeatability* ⁴		±0.005mm	±0.005mm	±0.005mm	±0.005mm	±0.005mm
Maximum Jig Weight Suspended from the Ram Tip		up to 1kg	up to 2kg	up to 4kg	up to 10kg	up to 20kg
Clean Room Model Clean Class* ⁵		ISO4 (Class 10)	ISO4 (Class 10)	ISO4 (Class 10)	ISO4 (Class 10)	ISO4 (Class 10)
Power Consumption	Standard Controller	400W	400W	400W	950W	950W
	Compact Controller	200W	200W	200W	750W	750W
Power Source		Single Phase / Three Phase 200~240V ±10% (50/60Hz)				

Item		JPU-2005	JPU-3005	JPU-5005	JPU-8005
Pressing Capacity	Maximum	20kN	30kN	50kN	80kN
	Setting Unit	1N	10N	10N	10N
Ram Stroke	Maximum	200mm (L: 400mm)	200mm (L: 400mm)	200mm (L: 400mm)	200mm (L: 400mm)
	Position Setting Unit	0.001mm	0.002mm	0.001mm	0.001mm
Ram Speed	Pressing Time* ¹	0.01~35mm/sec	0.01~35mm/sec	0.01~35mm/sec	0.01~35mm/sec
	Approach•Return Time	0.01~320mm/sec	0.01~320mm/sec	0.01~320mm/sec	0.01~250mm/sec
	Setting Unit	0.01mm/sec	0.01mm/sec	0.01mm/sec	0.01mm/sec
Maximum Holding Time* ²		80sec	30sec	20sec	8sec
Load Precision* ³		1kN or more±160N	1.5kN or more±240N	2.5kN or more±400N	4kN or more±640N
Position Repeatability* ⁴		±0.005mm	±0.005mm	±0.005mm	±0.005mm
Maximum Jig Weight Suspended from the Ram Tip		up to 40kg	up to 90kg	up to 100kg	up to 100kg
Clean Room Model Clean Class* ⁵		ISO4 (Class 10)	ISO4 (Class 10)	ISO4 (Class 10)	-
Power Consumption	Standard Controller	3.7kW	3.7kW	5.2kW	5.2kW
	Compact Controller	3.5kW	3.5kW	5.0kW	5.0kW
Power Source		Three Phase 200~240V ±10% (50/60Hz)			

*1 Recommended setting range.

*2 Value when making a cold start. This may also change due to setting conditions.

*3 Load display precision is ±0.8% (FS) of the maximum load when pressing in the range of 5% or more of the maximum load.

This is an indicator of sensor measuring unit and accuracy and is not an indicator of load tolerance after pressing or margin of error.

Precision also dependent upon there being no influence from increases in temperature.

*4 Position repeatability is dependent upon the press bearing a constant load at constant press unit and surrounding environmental temperatures.

Repeatability is not a guarantee of absolute position precision.

*5 The clean class indicated above is based upon ISO-14644-1 and upon United States Federal Standard 209D (FED-STD-209D).

Compact Controller is not compatible with clean room use.

Common Specifications

Basic Pressing Modes		While pressing at constant speed: Position Stop / Distance Stop / Load Stop / Incremental Load Stop / Differential Load Stop / Event Stop / Reduced Load Stop While pressing at a constant load: Time Stop / Position Stop / Distance Stop / Event Stop Use these combinations to create multistep pressing settings in a single program.
Sensor Functions		Step Sensor / Program Sensor / Load Zone Sensor
No. of Programs*1		Up to 512
No. of Pressing Steps*1		Up to 512 (in one program)
No. of Step Sensors*1		Up to 16 (in one step) Up to 512 (in one program)
External Input/ Output	COM	RS-232C 1ch
	I/O-SYS*2	17 Inputs / 16 Outputs *Specify NPN/PNP at time of order.
	Ethernet	10BASE-T/100BASE-TX
	MEMORY	For USB Memory Connection (Save results data, backup and restore data, update system software.) (up to 32GB)
	Field Networks	CC-Link, PROFIBUS, PROFINET, DeviceNet, CANopen, EtherNet/IP (all are optional)
	I/O-S	For Safety Device Connection
Other		Teaching Pendant Connector, SWBOX Connector (standard) Load Cell Output, Encoder Output, Analog Monitor Output (optional)
Encoder		Incremental (standard) or Absolute types*3 (optional)
Display Units		Load unit: N, kgf, Lb Length unit: mm, inch
Display Languages	PC Software	English, Simplified Chinese, Japanese, Korean
	Teaching Pendant	English, Simplified Chinese, Japanese, Korean
Drive and Control Method		AC servomotor drive 32 bit CPU (dual core)
Work Environment	Surrounding Temperature	0~40°C
	Relative Humidity	20~90% (Without condensation)
	Elevation	Up to 1,000m

*1 The number of programs, pressing steps and step judgments is limited in relation to the total memory size.

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 Optional internal I/O Power Supply available for the Standard Controller.

*3 Please Contact us for available models.

<Accessories>

- PC Software JPS Designer (Windows® 7, Windows® 8.1, Windows® 10, Windows® Embedded Standard 7 WS7P compatible)
- Operation Manual (CD-ROM)
- Press Unit Connector Cables (3m)
- SWBOX Short Connector
- TPU Short Connector
- I/O-S Short Connector
- I/O-SYS Connector

<Optional>

- Teaching Pendant (with Emergency Stop Switch/Sub-Switch) (Cable Length: 3m, 5m)
- Maintenance Box (Cable Length: 3m, 5m)
- PC Software JP TaS II System (Windows® 7, Windows® 8.1, Windows® 10, Windows® Embedded Standard 7 WS7P compatible)
- External Regenerative Resistance (For 0.5t, 1t)
- I/O-SYS Cable (2m, 3m, 5m)

Janome Servo Presses are used in a wide range of industries, including automotive, consumer electronics, aerospace, cosmetics and pharmaceuticals.



- Please contact us regarding the Stand-Alone and Head Type presses.
- Specifications may be modified without prior notice to improve product quality.

C14-00(06.0)EN 2017.11-000

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URL: <http://www.janome.co.jp/industrial.html>