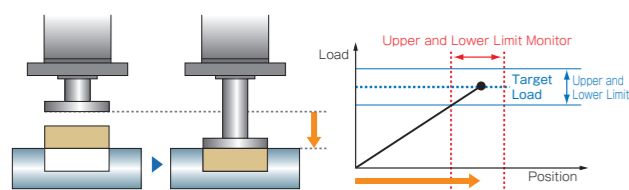


Press Control Method

4 choices of control methods are available to meet the requirement of various different applications.

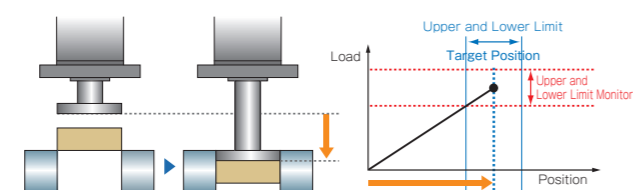
1 Load Control Position Monitor

Press until target load is detected, and judge Upper and Lower load limit at the same time, monitor Upper and Lower position and time limit.



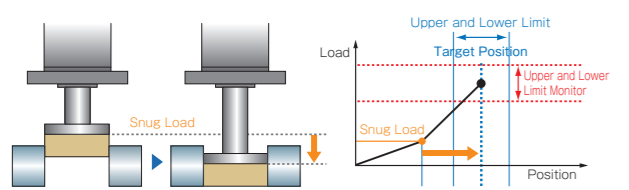
2 Position Control Load Monitor

Press until target position is detected, and judge Upper and Lower position limit at the same time, monitor Upper and Lower load and time limit.



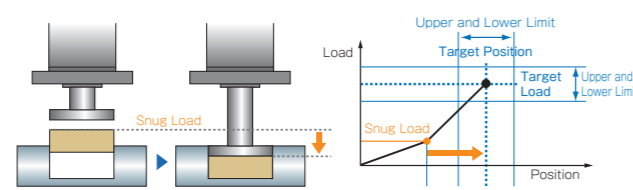
3 Increment Control

Press from Snug Load until target position, and judge Upper and Lower position limit at the same time, monitor Upper and Lower load and time limit.



4 Load & Increment Control

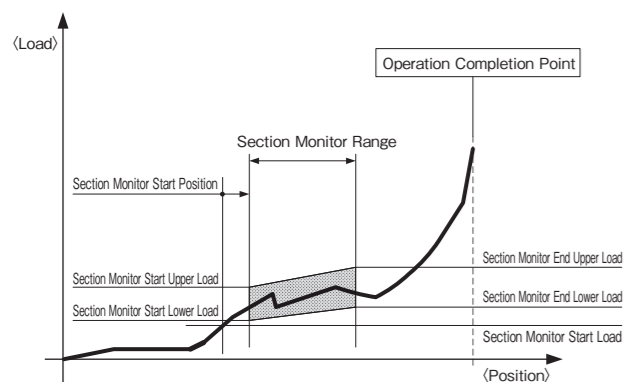
Press until target load and target position (increment control), and judge Upper and Lower load and position limit at the same time, monitor Upper and Lower time limit.



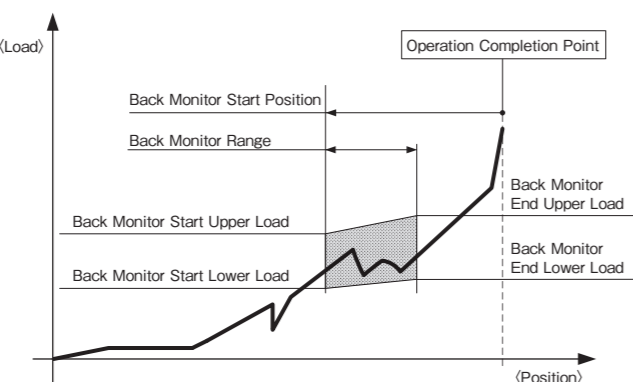
Monitor (Zone Judgement) Function

A function to monitor and judge Upper and Lower limit on a zone set optionally. Section Monitor: Monitor Start Position is set by distance from Section Monitor Start Load detected. Judgement is made when Upper or Lower limit detected. Back Monitor: Monitor Start Position is set by distance from the operation completion point. Judgement is made when operation is completed.

1 Section Monitor

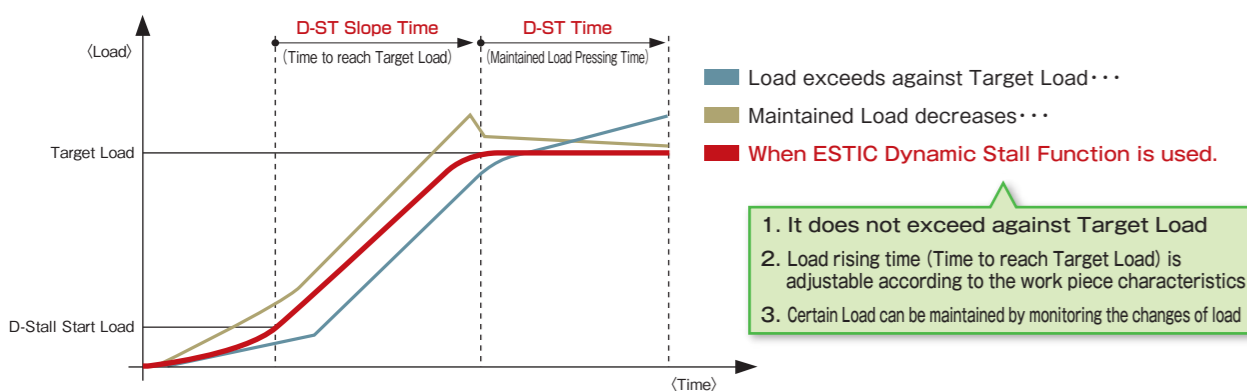


2 Back Monitor



Dynamic Stall Function

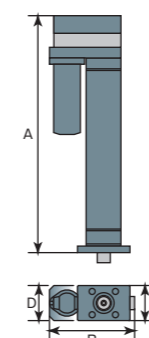
A function to hold the constant load by real time feedback from reading built-in load cell on Press unit. With this looped control of load, this function maintains to hold the load stable.



1. It does not exceed against Target Load
2. Load rising time (Time to reach Target Load) is adjustable according to the work piece characteristics
3. Certain Load can be maintained by monitoring the changes of load

Press Unit Specifications

Model	SPC010-20	SPC010-20-F	SPC020-20	SPC020-20-F	SPC030-20	SPC030-20-F	SPC050-20	SPC050-20-F	SPC100-20	SPC100-20-F	
Pressing Capacity	10.00		20.00		30.00		50.00		100.00		
Press Consecutive Rate	4.10		7.50		10.40		25.10		42.50		
Max. Stroke	200										
Max. Feed Speed	200		310		235		255		151		
Max. Press Speed	120		220		155		170		100		
Brake Sustainable Load	196 (20kg)		294 (30kg)		490 (50kg)		980 (100kg)		1960 (200kg)		
Repetition Load Accuracy	±0.1%										
Repetition Position Accuracy	±0.01										
Dimensions	A (mm)	503	520	605	625	695	720	809	837	910	945
	B (mm)	155	177.5	254.6	279.6	282.1	307.1	353.6	406.1	354.8	409.8
	C (mm)	65		80		90		135		135	
	D (mm)	65		100		100		135		135	
Flange	— without flange / with flange		without flange / with flange		without flange / with flange		without flange / with flange		without flange / with flange		
Weight	13	14	35	36	49	51	110	117	145	153	
Controller Type	SPU50C-40			SPU50C-5K				SPU50C-5K2			

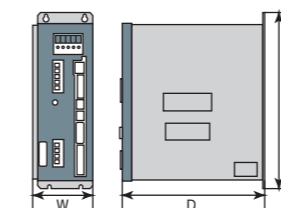


Control Unit Specifications

Model	SPU50C-40	SPU50C-5K	SPU50C-5K2
Control Power Voltage	Single Phase AC200~230V±10% 50/60Hz		
Main Power Voltage	Three Phases AC200~230V±10% 50/60Hz		
Main Power Capacity (At Rated Operation)	1.7KVA	3.7KVA	8.0KVA
Dimensions	W (mm)	87	116
	H (mm)	255	274.5
	D (mm)	205	210
Weight	3.4	3.5	5.6

Model	SPU50C-40	SPU50C-5K	SPU50C-5K2
Display and Key Pad	5 letters x 1 line with 7 Segment LED Display; 5 Function keys, Indicator lamps (OK/ALM/NG)		
I/O	IN 12 OUT 22		
COM Port	RS-232C x 1		

SPU50C

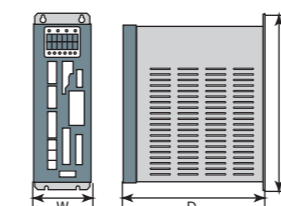


Master Control Unit Specifications

Model	ENRZ-MU50-***	
Control Power Voltage	AC100~230V±10% 50/60Hz	
Power Capacity	80W	
Dimensions	W (mm)	82.8
	H (mm)	255
	D (mm)	206
Weight	3.0	
Display and Key Pad	6 characters x 2 lines with 7 Segments LED Display, Status lamp (ST1, ST2, ST3, ST4), Function keys (6 keys)	

Model	ENRZ-MU50-***
Ethernet Port	10/100BASE-T x 1
COM Port	RS-232C x 1
Fieldbus Port (option)	Profibus, Profinet, EtherNet/IP, DeviceNet, CC-Link
I/O	IN 6 OUT 6
Extended I/O (option)	IN 16 OUT 16
Remote I/O (option)	IN 16 OUT 16
USB Port	USB-Mini A x 1

MU50



※How to read Model Type---ENRZ-MU50---NNN

N: No Fieldbus (Standard) C: CC-Link (Optional) NN: without Extend I/O and Remote I/O (Standard)  
 D: DeviceNet (Optional) E: Ethernet/IP (Optional) EN: with Extend I/O (Optional)  
 P: Profibus (Optional) T: Profinet (Optional) ER: with Extend I/O and Remote I/O (Optional)

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**COMPACT SERVO PRESS**  
**ELECTRO-MECHANICAL PRESS SYSTEM**



This catalog uses vegetable oil ink.  
 The contents of the catalog are as of June, 2018.



# Precision, Traceability, Environmentally Friendly

## State of Art Servo Control Technology

### ESTIC Servo Press realizes High Quality Assembly

#### Downsized

Designed to be as compact as Hydraulic Press for easier mechanical designing.

#### Environmentally Friendly

Servo Motor driven Press reduces energy consumption as low as 10-20% of Pneumatic or Hydraulic.

#### High Procutivity

Controlling Load, Position, Speed and Time with accuracy optimize the system for the best cycle time. And real time looped feedback for pressing status eliminates damages of the work piece.

#### Durability

No Belt drive is adopted, and Gear drive eliminates belt skipping, belt stretch, belt cut.

#### Easy Settings

Simple system configuration with Press unit, Cables and Controller, and User friendly Parameter Editing Software shorten the setting up time.

#### Safety Design

Fall prevention of Output Shaft during power shutdown is secured with a Break.

#### SPU50C (Press Control Unit)

Press Control Unit realizes High Quality, High Accuracy pressing

- Pressing Channel: 99 Channels
- Press Result History: 5120 records
- Press Curve Data: 50,000 points
- System Error History: 50 records

\*Numbers of the records which can be stored in the controller varies depending on the items selected for pressing results history.

#### MU50 (Master Control Unit)

Master Control Unit enables easy communication with PLC, Fieldbus, and it is expandable up to 10 Press Control Units.

- Pressing Channel: 99 Channels
- Press Result History: 20,000 records
- Press Curve Data: 50 records
- System Error History: 200 records

\*Numbers of the records which can be stored in the controller varies depending on the items selected for pressing results history.

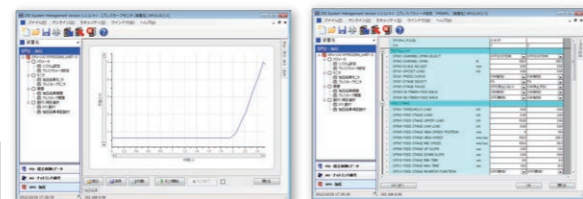


#### PC50 (Management Software)

User Friendly Parameter Editing Software helps to edit and maintain various parameters quickly.

- Creating and editing Pressing Program Parameters
- Monitoring Pressing result, Pressing Curve
- Downloading Pressing result, Pressing curve

PC50-J : Japanese  
PC50-E : English



#### Where to use

#### Pressing

Bearing/Valve Guide  
Valve Seat/Plug  
Bush/Dowel/Pin/etc

#### Straightening

#### Pasting

#### Punching

#### Calking

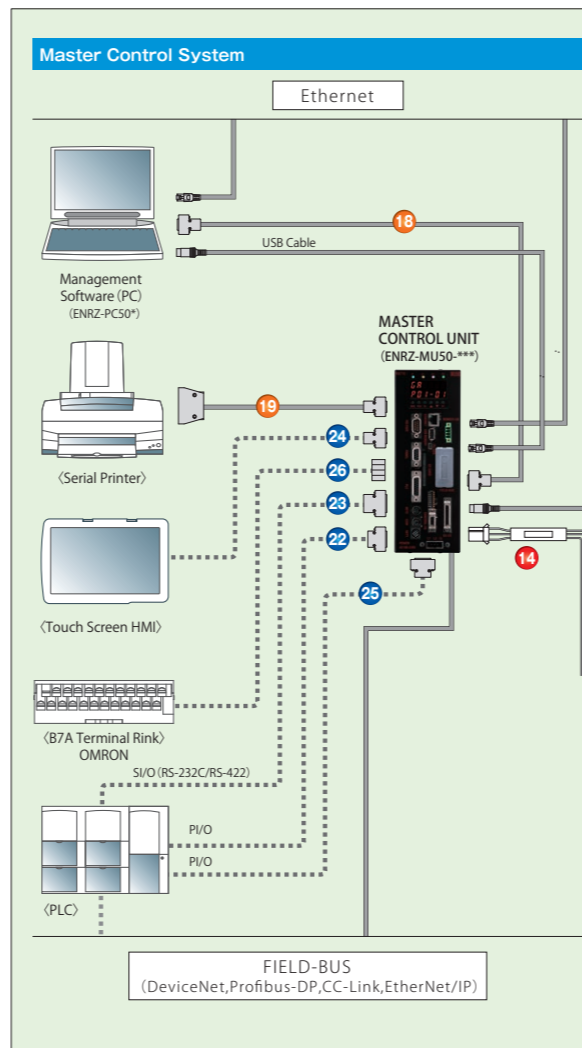
#### Positioning



## System Configuration

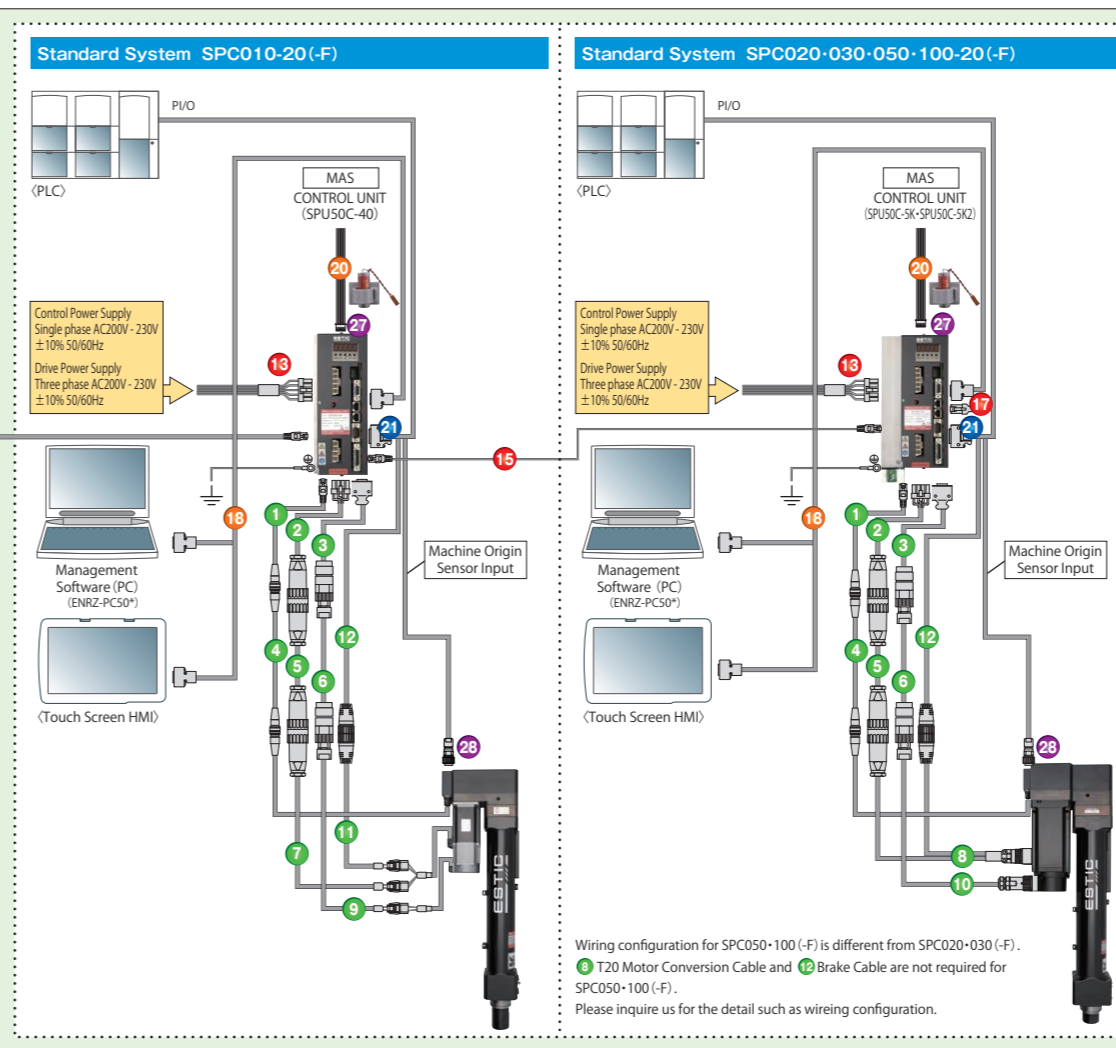
### Master Control System

Master Control System enables to connect up to 10 press units. All pressing results are collected by Master Unit. The system makes wiring and data control easier.



### Standard System

This is one to one system. Controls are made by discrete I/O.



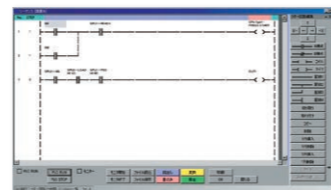
### Peripherals List

No.	Description	Length	Model Code
1	Torque Transducer Cable	5[m]	ENRZ-CVTN2-050
		10[m]	ENRZ-CVTN2-100
		15[m]	ENRZ-CVTN2-150
		20[m]	ENRZ-CVTN2-200
2	Motor Cable *1	5[m]	ENRZ-CVMN2-050
		10[m]	ENRZ-CVMN2-100
		15[m]	ENRZ-CVMN2-150
		20[m]	ENRZ-CVMN2-200
		5[m]	ENRZ-CVMN5-050
		10[m]	ENRZ-CVMN5-100
		15[m]	ENRZ-CVMN5-150
		20[m]	ENRZ-CVMN5-200
3	Resolver Cable	5[m]	ENRZ-CVRN-050
		10[m]	ENRZ-CVRN-100
		15[m]	ENRZ-CVRN-150
		20[m]	ENRZ-CVRN-200
4	Torque Transducer Relay Cable	3[m]	ENRZ-CVTN-030
		6[m]	ENRZ-CVTN-060
5	Motor Relay Cable *2	10[m]	ENRZ-CVTN-100
		15[m]	ENRZ-CVTN-150
		3[m]	ENRZ-CVMP-030
		6[m]	ENRZ-CVMP-060
		10[m]	ENRZ-CVMP-100
6	Resolver Relay Cable	15[m]	ENRZ-CVMP-150
		3[m]	ENRZ-CVMP-030
		6[m]	ENRZ-CVMP-060
		10[m]	ENRZ-CVMP-100
7	T06 Motor Conversion Cable *3	0.5[m]	ENRZ-CVMN40-005
		1[m]	ENRZ-CVMN5K-010
8	T20 Motor Conversion Cable *4	0.5[m]	ENRZ-CVRN40-005
		1[m]	ENRZ-CVRN5K-010
9	T06 Resolver Conversion Cable *5	0.5[m]	ENRZ-CVMN40-005
		1[m]	ENRZ-CVRN5K-010
10	T20 Resolver Conversion Cable *5	0.5[m]	ENRZ-CVMN40-005
		1[m]	ENRZ-CVRN5K-010
11	T06 Break Cable *3	0.5[m]	ENRZ-CVMN40-005
		1[m]	ENRZ-CVRN5K-010
12	Brake Cable	5[m]	ENRZ-CVBN-050
		10[m]	ENRZ-CVBN-100
		20[m]	ENRZ-CVBN-200

\*1 Motor Cable ENRZ-CVMN2-\*\*\* is for Press Unit SPC010-20/20-F, SPC020-20/20-F, SPC030-20/20-F Motor Cable ENRZ-CVMN5-\*\*\* is for Press Unit SPC050-20/20-F, SPC100-20/20-F  
\*2 Motor Relay Cable ENRZ-CVMP-\*\*\* is for Press Unit SPC010-20/20-F, SPC020-20/20-F, SPC030-20/20-F Motor Relay Cable ENRZ-CVMP5-\*\*\* is for Press Unit SPC050-20/20-F, SPC100-20/20-F  
\*3 Attachment of Press Unit SPC010-20/20-F  
\*4 Attachment of Press Unit SPC020-20/20-F, SPC030-20/20-F  
\*5 Attachment of Press Unit SPC020-20/20-F, SPC050-20/20-F, SPC100-20/20-F  
\*6 Attachment of Master Control Unit  
\*7 Required between Press Control Unit and Press Control Unit when multiple presses are connected under Master Control System  
\*8 Required 1 piece for Master Control System  
\*9 Attachment of Press Control Unit  
\*10 Attachment for all models of Press Unit

### Built-in PLC Logic

Simplified PLC logic functions such as A contact, B contact, AND, OR, Timer, etc are equipped. PLC less system can be realized.



● Logic capacity: 500 steps

### USB connection

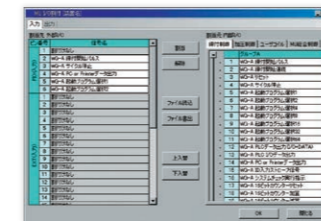
PC and SPC controller can be connected and communicated by USB cable (USB Mini-A port on MU controller). This will be useful if PC does not have a RS-232C port. RS-232C is also available for communication with PC.

### Data storage on USB Flash Drive

Program File, System Parameters, Pressing Results can be stored on USB Flash Drive (USB Type A port on MU controller).

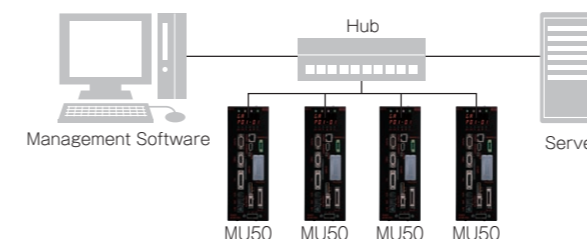
### I/O Signal Allocation

Input and Output signals on Control I/O, Extend I/O and Remote I/O, PLC Connection, Fieldbus Connection can be changed and allocated freely.



### Ethernet Port

Ethernet port is equipped on MU50 as standard.



### Serial Protocol for PLC Communication

PLC Serial Communication can be made by either RS232C or RS422. System Control and Pressing Result can be communicated with Serial Connection. MU50 is compatible with following PLC models.

#### Compatible PLC seires

Manufacturer	Series
MITSUBISHI	MELSEC-A Series
ELECTRIC	MELSEC-Q Series
OMRON	SYSMAC-CS1 Series SYSMAC-CJ1 Series
SHARP	JW30 Series JW300 Series
JTEKT	TOYOPUC

(RS-232C and RS-422 cannot be used at the same time)

### Fieldbus (Optional)

MU50 is compatible with Fieldbus (DeviceNet, Profibus-DP, CC-Link, EtherNet/IP). By using Fieldbus, System Control and Pressing Result can be communicated with Fieldbus.

#### Communication Specification

Item	Fieldbus Type
DeviceNet	Complied with DeviceNet Group 2
Profibus-DP	Complied with Profibus DP-V1
CC-Link	Complied with CC-Link communication system
EtherNet/IP	Complied with EtherNet/IP Group 2, 3