

DSP-1500 SERIES

Full Digital Servo Press / *Providing one-rank higher precision*



DAI-ICHI DENTSU LTD.

DSP-1500 Series System Configuration

Single System

The simplified system configuration can realize press operations. Operation is available by simple I/O control. The compact body allows space-saving design.

Press Tool

Display Panel



RS232C Cable

User Console



USB-RS485 Converter



IO Joint Cable

Brake Cable 24V DC
Limit Sensor Brake Cable

Shaft Unit



200V AC (Control Power Supply) *For power supply separation type

T/D Cable
Motor/Resolver Cable
Power Cable
200V AC (Driving Power Supply)

Limit Sensor Brake Cable



Multi-System

Main units allow batch control of multi-shafts. The user can set up an operation sequence and the program can be automatically controlled and operated by start-up. The function of monitoring the input and output of the PLC is also added. Wire saving and various field buses are supported. CC-LINK, Device-Net, Profibus, or the like are available.

Press Tool

Display Panel



RS422 Cable



RS232C Cable

RS232C Cable

RS232C Cable

User Console



PLC

Various Field Buses

LAN Cable

Ethernet Connection or Serial Communication

Power Cable

200V AC

Main Unit



Inter-Shaft Cable

IO Joint Cable

Limit Sensor Brake Cable

Brake Cable 24V DC

Shaft Unit



200V AC (Control Power Supply) *For power supply separation type

T/D Cable
Motor/Resolver Cable
Power Cable
200V AC (Driving Power Supply)

Limit Sensor Brake Cable



DSP-1500 SERIES

- All models incorporate load cells, which allows high-accuracy press-fit control. (Closed loop system)
- Pressure patterns can be set with 32 parameters. 32 works are available.
- Parameter setting software pursues user-friendliness. It is easy to operate by visual setup screens.
- Load data, distance, pressure waveform and other data can be controlled during pressurization.
- The compact body allows space-saving design. (3.4-MPa hydraulic cylinder or equivalent)

DSP Slim Line Servo Press



Standard Type (F-model)

Model	Maximum Load [kN]	Rated Load [kN]	Maximum Speed [mm/s]	Standard Stroke [mm] *1	Weight [Kg]	Applicable Controller
DPS-051R3-20FB	5	1.8	333	200	16.4	SAN4-40S(M/MS)
DPS-101R3-20FB	10	2.7	222	200	16.4	SAN4-40S(M/MS)
DPS-301R4H-20FB	30	10.8	200	200	36.5	SAN4-120S(M/MS)
DPS-501R4H-20FB	50	13.5	160	200	62	SAN4-120S(M/MS)
DPS-801R4H-20FB	80	18	120	200	98	SAN4-120S(M/MS)
DPS-102R5-20FB	100	32	133	200	110	SAN4-120S(M/MS)

Continuous Holding Type (P-model)

Model	Maximum Load [kN]	Rated Load [kN]	Maximum Speed [mm/s]	Standard Stroke [mm] *1	Weight [Kg]	Applicable Controller
DPS-051R3-20PB	5	5	88	200	17	SAN4-40S(M/MS)
DPS-101R4H-20PB	10	10	160	200	21	SAN4-120S(M/MS)
DPS-301R4H-20PB	30	30	53	200	38	SAN4-120S(M/MS)
DPS-501R5-20PB	50	50	53	200	79	SAN4-120S(M/MS)
DPS-801R5-20PB	80	80	40	200	116	SAN4-120S(M/MS)
DPS-102R5-20PB	100	100	32	200	116	SAN4-120S(M/MS)

*1 : 100mm and 300mm strokes are available optionally.

Controller

Single System

Multi-System



Servo Press Controller

Model	Width [mm]	Height [mm]	Depth [mm]	Weight [Kg]
SAN4-24S(M/MS)	60	235	170	1.4
SAN4-40S(M/MS)	60	235	170	1.6
SAN4-120S(M/MS)	123	235	170	3.5

DPT Servo Press

Low Power Type

Model	Maximum Load [kN(ton)]	Maximum Speed [mm/s]	Standard Stroke [mm] ^{*2}	Total Length [mm]	Shaft Diameter [mm]	Applicable Controller
DPT-021R1-15FSB	1.96 (0.2)	416	150	432	Φ30	SAN4-24S(M/MS)
DPT-051R2A-25FSB	4.90 (0.5)	333	250	665	Φ40	SAN4-24S(M/MS)
DPT-101R3-25FSB	9.81 (1.0)	277	250	690	Φ60	SAN4-40S(M/MS)
DPT-151R3-25FSB	14.71 (1.5)	277	250	690	Φ60	SAN4-40S(M/MS)
DPT-201R3-25FSB	19.61 (2.0)	166	250	690	Φ60	SAN4-40S(M/MS)
DPT-301R4H-25FSB	29.42 (3.0)	320	250	744	Φ60	SAN4-120S(M/MS)
DPT-501R4H-25FSB	49.03 (5.0)	200	250	885	Φ80	SAN4-120S(M/MS)
DPT-701R4H-25FSB	68.64 (7.0)	133	250	885	Φ80	SAN4-120S(M/MS)
DPT-102R5-25FGB ^{*3}	98.1 (10.0)	116	250	927	Φ100	SAN4-120S(M/MS)
DPT-152R5-25FGB ^{*3}	147.1 (15.0)	77	250	1007	Φ130	SAN4-120S(M/MS)
DPT-202R5A-25FGB ^{*3}	196.1 (20.0)	58	250	1116	Φ130	SAN4-120S(M/MS)

High Power Type (Long-time holding available)^{*4}

Model	Maximum Load [kN(ton)]	Maximum Speed [mm/s]	Standard Stroke [mm] ^{*2}	Total Length [mm]	Shaft Diameter [mm]	Applicable Controller
DPT-021R3-15PSB	1.96 (0.2)	208	150	445	Φ30	SAN3-40S
DPT-051R3-25PSB	4.90 (0.5)	95	250	663	Φ40	SAN3-40S
DPT-101R4H-25PSB	9.81 (1.0)	133	250	690	Φ60	SAN4-120S(M/MS)
DPT-151R4H-25PSB	14.71 (1.5)	114	250	700	Φ60	SAN4-120S(M/MS)
DPT-201R4H-25PSB	19.61 (2.0)	80	250	723	Φ60	SAN4-120S(M/MS)
DPT-301R4H-25PSB	29.42 (3.0)	64	250	773	Φ60	SAN4-120S(M/MS)
DPT-501R5B-25PSB	49.03 (5.0)	58	250	885	Φ80	SAN4-120S(M/MS)
DPT-701R5-25PSB	68.64 (7.0)	41	250	888	Φ80	SAN4-120S(M/MS)
DPT-102R5B-25PGB ^{*3}	98.1 (10.0)	29	250	926	Φ100	SAN4-120S(M/MS)
DPT-152R5B-25PGB ^{*3}	147.1 (15.0)	22	250	962	Φ130	SAN4-120S(M/MS)
DPT-202R5-25PGB ^{*3}	196.1 (20.0)	16	250	1055	Φ130	SAN4-120S(M/MS)

*2 : Stroke change is available.

*3 : Made-to-order product.

*4 : For items requiring a certain load holding time (roughly 1 sec) or for shorter cycle times, choose high power type model. (consult us in advance)

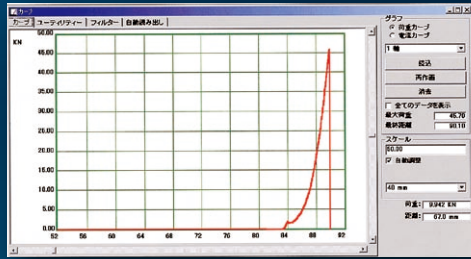
DPM Mini Press

Model	Maximum Load [kN]	Maximum Speed [mm/s]	Standard Stroke [mm]	Total Length [mm]	Shaft Diameter [mm]	Applicable controller
DPM-050H1-10P	0.5	130	100	255	Φ25	SAN4-24HSMS
DPM-011H1-10P	1	130	100	255	Φ25	SAN4-24HSMS

User Console for Windows version (Japanese/English) (Option)

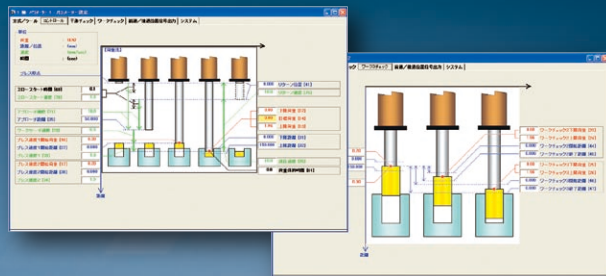
Including Main System Screen

Load Curve Screen



Operating Result Display Screen

Determination Value Edit Screen



PLC Monitor

List of Functions

- ① Operation Setting Screen Used to input each set value for press operation.
- ② Load Curve Screen Displays the pressurization operation state by waveform.
- ③ Load Statistical Calculation Screen... Used to perform statistical calculations of press operation results.
- ④ Data Storage/Read/Print Screen Used to set the storage and output of various data.
- ⑤ Environment Setting Screen Used to set communications and other environments.
- ⑥ Press Tool Information Screen Displays press tool (load cell) quality information.
- ⑦ Other Help function

Operation by PC (Windows XP, 7, 8) is available.

Various Functions

Hardware Functions

- Control interface : Discrete I/O
- Control communications : RS485high-speed communication line
- Multi-shaft control
- Main unit (Various field buses)

Protection Functions

- Load cell self-diagnosis circuit mounted
- Offset load diagnosis function
- Heterogeneous tool/unit connection diagnosis(Tool ID system)
- Unit servo-motor protection function mounted (Overcurrent, overload, abnormal voltage, temperature abnormality, etc.)

Setup and display functions (User console used)

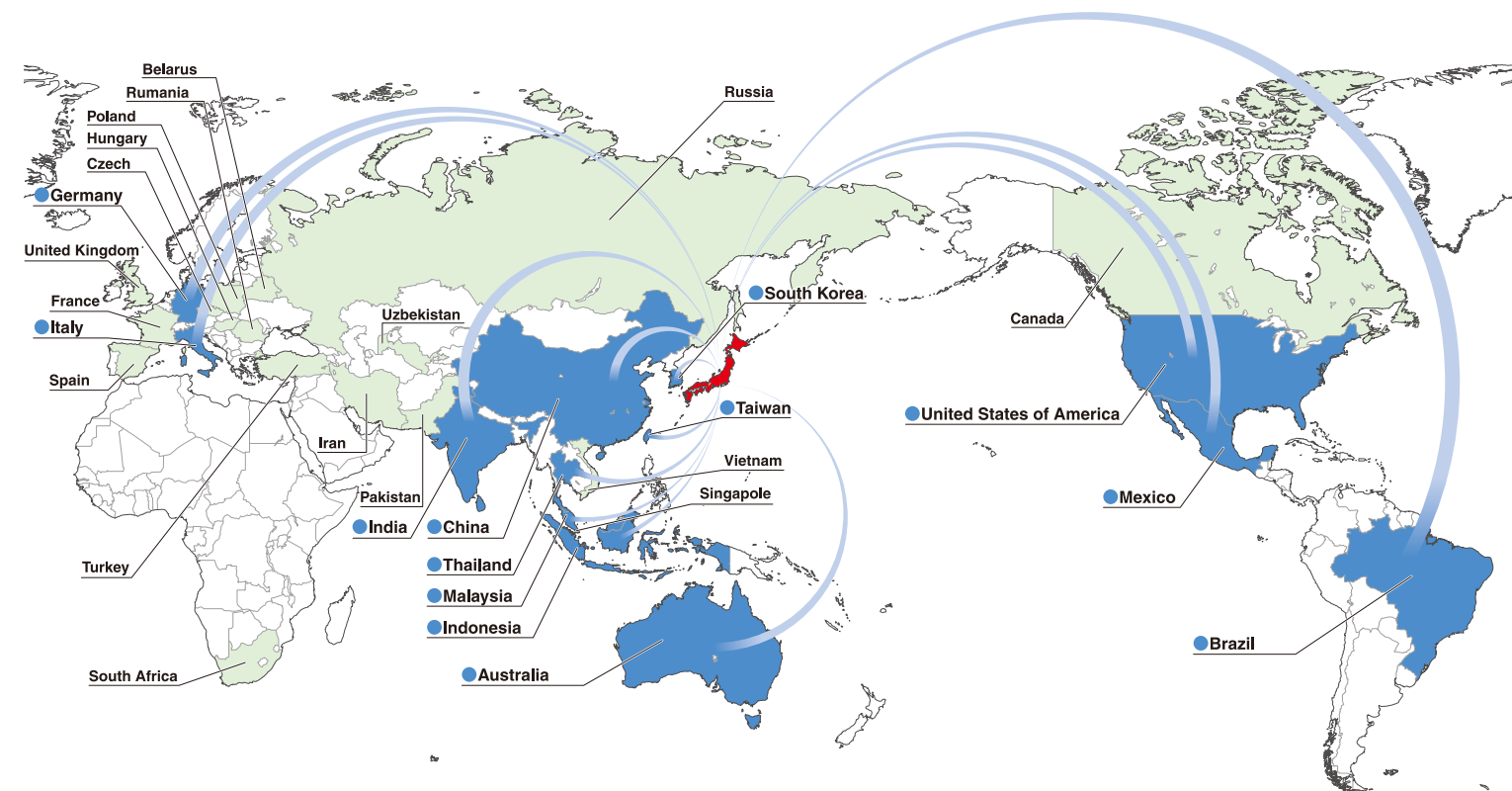
- Function of operating the files of setup data and operation results data
- Setup parameter graphics menu function
- Applied pressure waveform display
- Free design of operation programs

Pressurization Functions

- Target load stop
- Target distance stop
- Target load holding : Time stop
- Target distance holding : Time stop
- Monitoring : Position, Load, Time, Load Rate
- Load sampling speed : 1m/s or less
- Automatic gain adjustment by load feedback(Closed loop control)
- Repeat position accuracy : ± 0.01 mm *Depending on tool specifications.
- Load Parameter : 32 types
- Load Range : 0.5kN - 220kN
- Maximum Connecting tool number : 31



Global Delivery Map



※ ■ Service Available
■ Delivery Record



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●Specification may be changed without notice due to system improvement. ●Actual color may be different than they appear on this brochure.