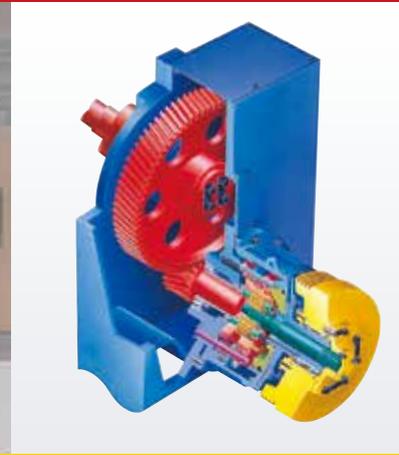


Single Crank Press

# TP FX SERIES



Lineup

1-point

TP-15FX / TP-25FX / TP-35FX / TP-45FX / TP-60FX / TP-80FX / TP-110FX / TP-150FX / TP-200FX



GLE  
NK  
NG  
ESS  
MACHINES

# Industry leading technology, which has always been ahead of its time — the traditional **CRANK PRESS!**

Since the introduction of the TP Series, it has always been at the leading edge of technology in press shops around the world. Besides its high versatility of functions that have surpassed the needs of our customers, the TP-FX Series is also digital network ready and assists in the visualization of operation conditions and maintenance information. Eco-counter and eco-idling functions save on energy, and improves its efficiency.



Single Crank Press

TP-80FX

TP-150FX

# TP FX SERIES

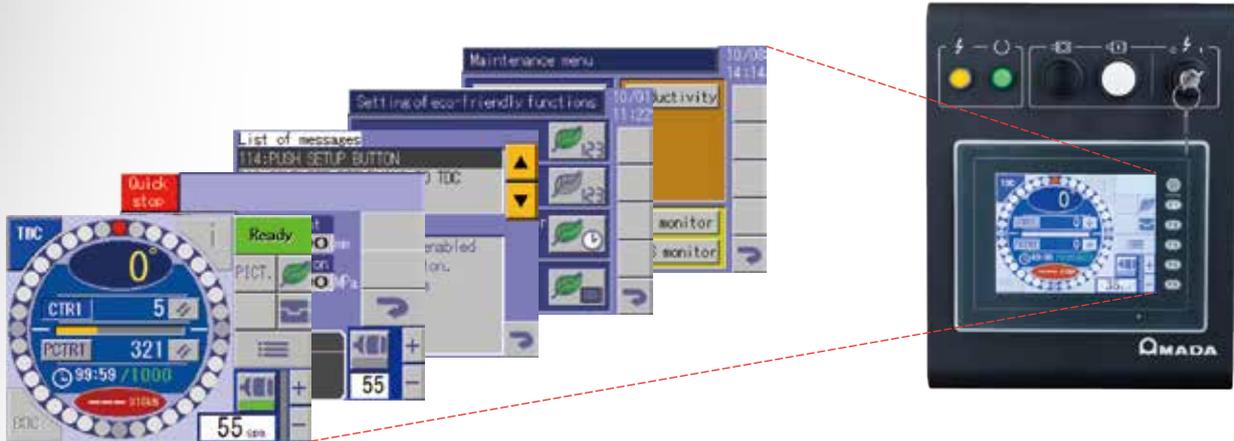
\*Options are included in photos.

# TP-FX Series Technologies and Functions

## 1 **Functionality: Improved Operator Interface Terminal (OIT) and machine data management**

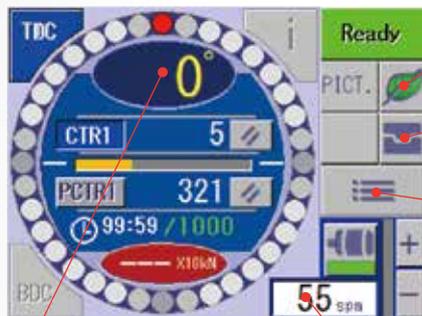
### Pendant control panel

Standard TFT color screen provides better visibility and operator interface.



### Operator Interface Terminal (OIT) display

Newly designed display layout provides better visibility and intuitive operation.



**Eco-function settings button**  
Shows the eco-function settings display.

**Setup button**  
Shows the setup display convenient to use when changing dies.

**Menu button**  
Shows the menu display for die information and maintenance information among other information.

Rotary cam setting display

No.	name	ON	OFF	mode
L1	ejector	0	---	TIMR
L2		0	0	OFF
L3		0	0	OFF
L4		0	0	OFF
L5		0	0	OFF
L6		0	0	OFF
L7		0	0	OFF
L8		0	0	OFF



By utilizing the numerical keypad, one can set the corresponding counters, cam, or stroke counts.

### Two-hand control panel with protective guard rings

New protective guard rings improve operability. A thinner control panel (15 mm thinner than conventional panels) makes operation more comfortable for the seated operator. Many AMADA stamping presses standardize pictographs and English labels, making an operator feel at ease at using any AMADA press equipment.

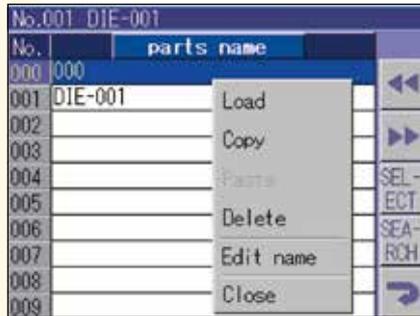




# TP-FX Series Technologies and Functions

## Die setup information and operation

Die information for up to 20 dies, and expandable up to 200, can be stored in the machine. The stroke count and rotary cam data settings can be changed all at once by selecting the different die entries.



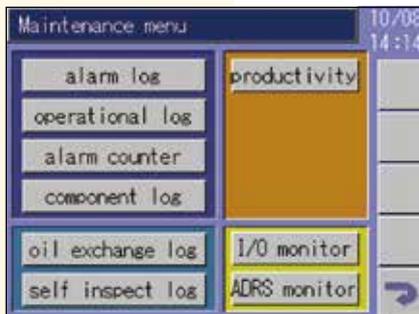
Program save and select



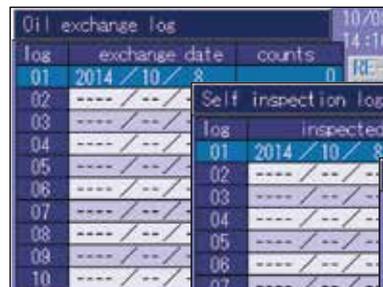
Die information

## Maintenance management

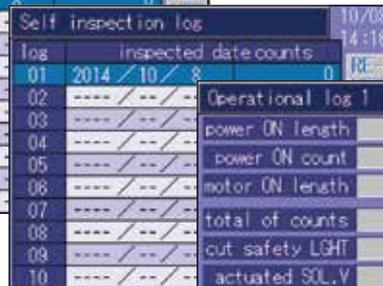
The TP-FX Series simplifies maintenance, showing a record of oil change history, inspection history, and number of total operations at the touch of a button. This feature lengthens the life of the equipment and promotes increased up-time.



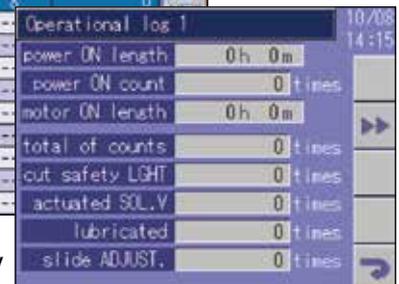
Maintenance management menu



Oil change history



Special voluntary inspection history



Operation counts

## Superior safety

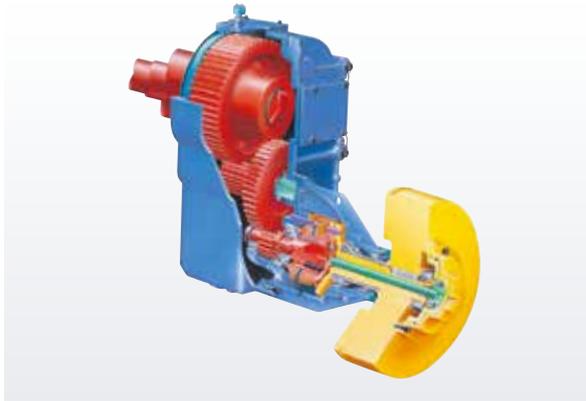
TP-FX Series presses incorporate safety PLCs meeting safety standard ISO 13849-1, which increases reliability in safety.

## 2 Flexibility: Performance-proven functions that meet demanding production needs

### Traditional AMADA wet transmission

Rotation from the flywheel is transferred to the slide through a planetary-gear transmission (for medium-capacity models) or a two-stage reduction-gear transmission (low-capacity models).

The results are higher reduction ratio, torque, and energy. A multiple-disc clutch-brake unit reduces air consumption when the clutch is turned on and off and transmits an appropriate braking force.



Two-stage reduction-gear transmission  
TP-25FX ~ TP-80FX



Planetary-gear transmission  
TP-110FX ~ TP-200FX

### Die height displayed in minimum increments of 0.01 mm\*

\*Except for TP-15FX, TP-25FX, and TP-35FX

Standard motorized Slide adjustment can adjust the Die height in minimal increments of 0.00039" (0.01mm). This promotes quick and easy Die changes.



### Highly rigid frame and bolster

Frame deflection is minimized by computer-aided strain analysis to meet precision stamping needs. Consequently, stamping accuracy is improved and the part rejection rate is reduced.

The instantaneous deflection of the bolster by the stamping load is minimized to achieve stable stamping quality and longer die life.



### Die cushions

There are available pneumatic die cushions with many years of proven performance and excellent durability, and hydropneumatic die cushions to expand the drawing range.



Pneumatic die cushion



# TP-FX Series Technologies and Functions

## 3 Future Facing: Expanding possibilities with automation

### Automation of press processing through system upgrade

Due to combine a stamping press machine with peripheral equipment, we support the automation of stamping press processing. A variety of lineups according to the processing content and high-operability are realized, contributing to high-precision processing.

Example for system upgrade:  
Straightener-feeder **LCC03KR3**



### APINES

APINES is AMADA Press machine Information Network System.

Visualization of press operating conditions and maintenance information with touch screen PC.

The Ethernet is equipped as standard.

- General-purpose presses to servo presses are all digital network ready
- Real-time shop floor monitoring
- Operation and production history, time chart
- Alarm information, maintenance information
- Tablet and smartphone ready



Shop area monitor



Operation time chart

### Network-compatible stamping press machines

#### Visualization of stamping press operation status and maintenance information by PC

- Digital network connection is possible from general-purpose to servo presses.

- Real-time monitoring of presses connected to the factory network.
- Alarm and maintenance information can be checked and saved in real-time.

Information sharing with external systems

IoT Solution of AMADA Group

#### V-factory:

Visualization of operation/production information

#### Computer terminal

- Reference of operating information
- Creating daily/monthly reports

#### APINES Web server

Visualization software of press shop

- Operation data
- Maintenance data

#### Mobile phone/Tablet

- Reference of operating information
- Reference of maintenance information



#### Wireless LAN router



#### WANMS

Pressure waveform analysis software



#### SMAPS

Motion creation and editing software



TP-FX Series



SDE-i3/SDEW-i3 Series



SDE-i3 GORIKI Series

### Network-compatible stamping press machines

## Eco-functions reduce power consumption

Advanced eco-functions are installed to achieve lower power consumption as compared with conventional machines.

### Eco-counter function

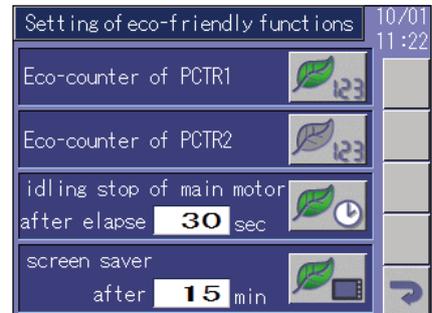
When the production count reaches a preset value, the motor automatically switches to idle mode and draws less power.

### Eco-idling function

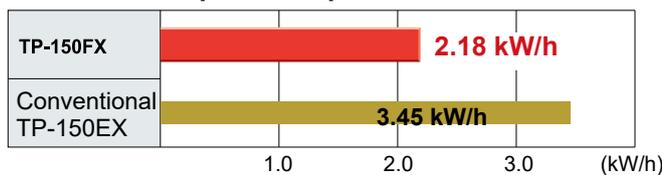
When standby time reaches a preset value, the motor automatically switches to idle mode and consumes less power.

### Touch screen blackout function

When the touch screen has not been operated for a preset time, the screen will shut off to reduce power consumption.



### Power consumption comparison



### 37% reduction

Power consumption calculation conditions

- Production stroke count: Maximum stroke count x 0.7
- Load operation: 30 min
- Standby (setup): 10 min

## Processing Examples with Sample Workpieces

### Noise and vibration reduction

Material: Cold Rolled Carbon Steel  
(JIS: SPCC)  
Thickness: 0.4 mm

Material: Steel for cold deep drawn extra  
(JIS: SPCE)  
Thickness: 0.5 mm





# Dimension Tables for Die Space

## TP-FX Series

Unit: mm

TP-15FX	TP-25FX	TP-35FX	TP-45FX	TP-60FX
<b>Standard slide bottom drawing</b>				
<p>Standard shank hole <math>\phi 32</math> H7 Depth: 40 2 x <math>\phi 18</math> Inversed spot facing: <math>\phi 34</math> Depth: 1</p>	<p><math>\phi 38</math> H7 Depth: 40 2 x <math>\phi 18</math> Inversed spot facing: <math>\phi 34</math> Depth: 1</p>	<p><math>\phi 38</math> H7 Depth: 55 6 x <math>\phi 18</math> Inversed spot facing <math>\phi 34</math> Depth: 1</p>	<p><math>\phi 50</math> H7 Depth: 55 6 x <math>\phi 22</math> Inversed spot facing <math>\phi 42</math> Depth: 1</p>	<p><math>\phi 50</math> H7 Depth: 60 4 x <math>\phi 22</math> Inversed spot facing <math>\phi 42</math> Depth: 1</p>

<b>Bolster plate drawing</b>				
<p>A 500 300 80 80 <math>\phi 100</math></p>	<p>A 550 300 90 90 <math>\phi 100</math></p>	<p>A 700 400 120 120 <math>\phi 120</math></p>	<p>A 800 450 150 150 <math>\phi 150</math></p>	<p>A 920 550 150 150 <math>\phi 180</math></p>
<p>B 500 180 300 70 80 80</p>	<p>B 550 200 300 80 90 90</p>	<p>B 700 250 400 100 120 120</p>	<p>B 800 320 450 120 150 150</p>	<p>B 920 400 550 150 150 150</p>
			<p>C for drawing processing 800 450 150 150 150 Pin hole 25 x <math>\phi 25</math> P: 50</p>	<p>C for drawing processing 920 550 150 150 150 Pin hole 16 x <math>\phi 30</math> P: 75</p>

## T-slot details

<p><b>TP-15FX - TP-35FX</b></p> <p>*This value is for bolster thickness, 60 mm for TP-35FX.</p>	<p><b>TP-45FX - TP-200FX</b></p>
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Unit: mm

TP-80FX	TP-110FX	TP-150FX	TP-200FX
<b>Standard slide bottom drawing</b>			

<b>Bolster plate drawing</b>			
<p><b>A</b></p>	<p><b>A</b></p>	<p><b>A</b></p>	<p><b>A</b></p>
<p><b>B</b></p>	<p><b>B</b></p>	<p><b>B</b></p>	<p><b>B</b></p>
<p><b>C for drawing processing</b></p>			

**Cushion pin hole details**

<p><b>TP-45FX</b></p>	<p><b>TP-60FX - TP-200FX</b></p>
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# Specifications and Dimension Drawings

## Machine specifications

Machine model		TP-15FX	TP-25FX	TP-35FX
Model name		TP15FX	TP25FX	TP35FX
Capacity	kN	150	250	350
Tonnage rating point above BDC	mm	3.0	5.0	5.5
Strokes per minute	min <sup>-1</sup>	70 ~ 140	70 ~ 120	60 ~ 100
Stroke length	mm	60	80	110
Flywheel energy	kJ	0.5 ~ 2.1	1.0 ~ 2.9	3.3 ~ 9.1
Die height	mm	200	220	250
Slide adjustment	mm	40	50	55
Slide face dimensions (LR x FB)	mm	220 x 150	250 x 200	350 x 300
Bolster dimensions (LR x FB x T)	mm	500 x 300 x 50	550 x 300 x 50	700 x 400 x 60
Main motor	kW x P	1.5 x 4	2.2 x 4	3.7 x 4
Machine mass	kg	1200	1700	2600

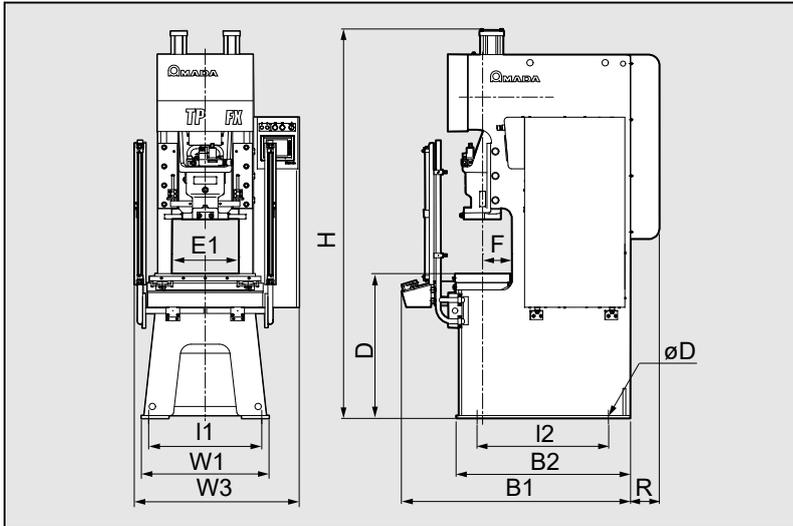
Machine model		TP-45FX		TP-60FX		TP-80FX	
Model name		TP45FX		TP60FX		TP80FX	
Specification model		General	Drawing	General	Drawing	General	Drawing
Capacity	kN	450		600		800	
Tonnage rating point above BDC	mm	10.5	7.0	6.5	4.5	7.0	4.8
Strokes per minute	min <sup>-1</sup>	55 ~ 100		45 ~ 85		40 ~ 75	
Stroke length	mm	100	140	120	160	130	180
Flywheel energy	kJ	9.6 ~ 31.8		13.2 ~ 47.0		14.0 ~ 49.1	
Die height	mm	255	290	290	335	320	350
Slide adjustment	mm	60		70		80	
Slide face dimensions (LR x FB)	mm	400 x 350		500 x 400		550 x 450	
Bolster dimensions (LR x FB x T)	mm	800 x 450 x 115		920 x 550 x 125		1030 x 600 x 125	
Main motor	kW x P	3.7 x 4		5.5 x 4		7.5 x 4	
Machine mass	kg	4200		6200		7400	

Machine model		TP-110FX		TP-150FX		TP-200FX	
Model name		TP110FX		TP150FX		TP200FX	
Specification model		General	Drawing	General	Drawing	General	Drawing
Capacity	kN	1100		1500		2000	
Tonnage rating point above BDC	mm	9.5	6.5	8.0	6.0	8.0	6.0
Strokes per minute	min <sup>-1</sup>	35 ~ 65	30 ~ 55	30 ~ 55	25 ~ 45	30 ~ 55	25 ~ 45
Stroke length	mm	150	200	175	225	200	250
Flywheel energy	kJ	13.8 ~ 47.7	15.0 ~ 50.3	19.6 ~ 65.9	21.5 ~ 69.6	33.9 ~ 113.9	37.3 ~ 120.9
Die height	mm	365	390	390	430	420	460
Slide adjustment	mm	100		100		110	
Slide face dimensions (LR x FB)	mm	600 x 500		700 x 550		850 x 630	
Bolster dimensions (LR x FB x T)	mm	1100 x 700 x 150		1250 x 750 x 160		1450 x 850 x 180	
Main motor	kW x P	11 x 4		11 x 4		15 x 4	
Machine mass	kg	11000		16000		24000	

■ Machine outline dimensions

**TP-15FX ~ TP-35FX**

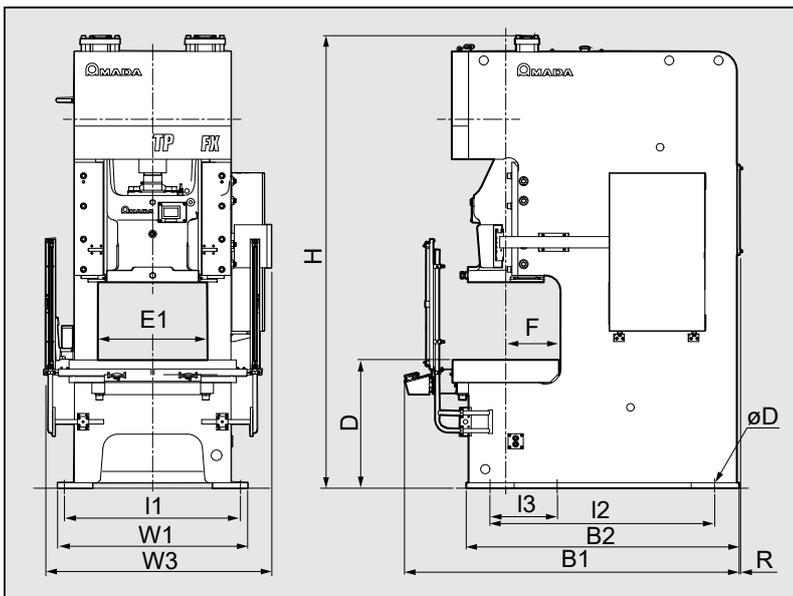
Unit: mm



Machine model	TP-15FX	TP-25FX	TP-35FX
W1	560	700	800
B2	785	955	1105
H * <sup>1</sup>	1810	2155	2425
D * <sup>1</sup>	800	800	800
E1	316	368	432
F * <sup>2</sup>	155	160	210
W3	910	905	1025
B1	1100	1260	1440
R	145	160	165
I1	500	620	720
I2	650	720	870
øD	ø24	ø24	ø24

**TP-45FX ~ TP-200FX**

Unit: mm



Machine model	TP-45FX	
	General	Drawing
W1	840	
B2	1180	1225
H * <sup>1</sup>	2295	2410
D * <sup>1</sup>	800	
E1	490	
F * <sup>2</sup>	240	
W3	1120	
B1	1560	
R	140	
I1	766	
I2	1010	1055
I3	-	
øD	ø40	

Machine model	TP-60FX		TP-80FX		TP-110FX		TP-150FX		TP-200FX	
	General	Drawing	General	Drawing	General	Drawing	General	Drawing	General	Drawing
W1	1000		1080		1250		1370		1540	
B2	1405	1450	1495	1570	1795		2005		2255	
H * <sup>1</sup>	2615	2740	2785	2915	3000	3075	3260	3435	3635	3875
D * <sup>1</sup>	850		850		850		900		1000	
E1	578		638		720		810		920	
F * <sup>2</sup>	285		310		360		390		435	
W3	1245		1340		1490	1505	1630		1780	
B1	1770	1785	1895	1900	2205		2405		2670	
R	65		35		25		15		15	
I1	900		980		1150		1270		1420	
I2	1205	1250	1280	1355	1515		1680		1930	
I3	-		-		-		570		500	
øD	ø40		ø40		ø45		ø45		ø45	

\*1 Bolster height and machine height does not include the height of the anti-vibration isolator.

\*2 Dimension from the bolster centerline to the frame edge.

These specifications, machinery, equipment, and appearance are subject to change without notice for reason of improvement.



## ■ Standard and optional accessories

S: Standard, O: Optional, ---: Not available

Machine name		TP-15FX	TP-25FX	TP-35FX	TP-45FX ~ TP-80FX	TP-110FX ~ TP-200FX
Variable-speed drive: Inverter with forward/reverse selector switch		S	S	S	S	S
Lubrication system	Manual grease	S	S	S	S	S
	Automatic grease	---	---	---	O	O
Mechanical knockout		O	O	O	O	O
Foundation parts: Anchor bolts, shims, and leveling plates		O	O	O	O	O
Vibration isolation system: Rubber isolators		O	O	O	O	O
Slide cap		S	S	S	S	O
Touch screen	5.7"	S	S	S	S	S
	8.4"	---	---	---	O	O
Die information	20 dies	S	S	S	S	S
	200 dies	O	O	O	O	O
Total and preset counter: each 6 digits (x 2)		S	S	S	S	S
Eco-counter and Ethernet		S	S	S	S	S
Software: APINES		O	O	O	O	O
Air ejector with solenoid type: 1 circuit		S	S	S	S	S
Motorized slide adjuster		---	---	O	S	S
Die height counter: Digital display in 0.01 mm increments		---	---	---	S	S
Hydraulic overload protector (OLP)		---	---	S	S	S
Two-hand control system		S	S	S	S	S
Control panel	Stationary	S	S	S	S	S
	Portable stand	---	O	O	O	O
Electronic rotary cam: 4 spare channels		S	S	S	S	S
Die cushion		---	---	---	O	O
Light curtain*		S	S	S	S	S
Waveform Load Monitor (2 channel)		---	O	O	O	O
Die Protection (4 Channel)		O	O	O	O	O

\* Warning: The TP-FX model press does not include the O.S.H.A. required Point of Operation guards.

For protection of the operator, Point of Operation guards should be used at all times and are the responsibility of the end user. Safety guards can be added as a line item option.

## ■ Specifications of digital die cushion as option

Unit: mm

Machine name	TP-45FX		TP-60FX		TP-80FX		TP-110FX	TP-150FX	TP-200FX	
	General	Drawing	General	Drawing	General	Drawing	General / Drawing	General / Drawing	General / Drawing	
Capacity	kN	10	23	19	35	23	63	75	95	140
Stroke length	mm	50	70	60	80	70	80	80	80	100
Pad dimensions (LR x FB)	mm	230 x 210	260 x 235	285 x 270	370 x 265	260 x 235	480 x 300	450 x 305	510 x 345	640 x 445

 Before using those products, please read the operator's manual carefully and follow all applicable instructions.

- Use of this product requires safeguard measures to suit your work. For details, see the safety guide on the home page.
- The servo presses correspond to the press machines specified in the Ordinance on Industrial Safety and Health. It is necessary to make application for their installation and take any other measure required.
- Options are included in the photos.



- \* Specifications, appearance, and equipment are subject to change without notice for improvement and other purposes.
- \* The official "Model name" for machines and units listed in this catalogue are TP15FX, TP25FX, TP35FX, TP45FX, TP60FX, TP80FX, TP110FX, TP150FX, and TP200FX.
- \* Use these "Model numbers" when contacting authorities to apply for installation, export, or financing.
- \* In this catalogue, if there is a part with a hyphen in it, like "TP-15FX," it is for readability.
- \* The specifications described in this catalogue are for the Japanese market. Please ask your sales person for details.

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