

SOLUTION

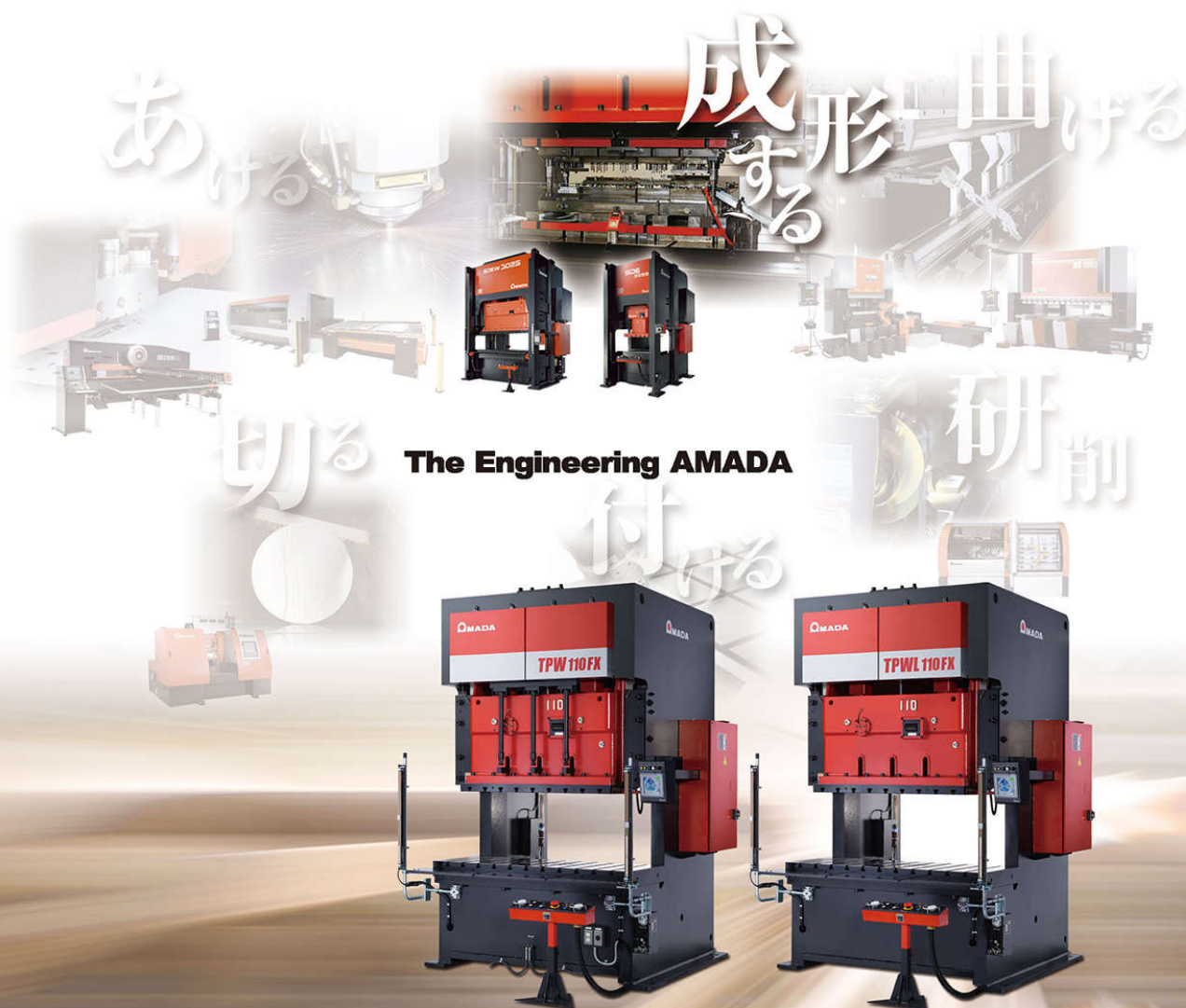


Double crank presses

TPW FX / TPWL FX SERIES

TPW-110FX / 150FX / 200FX / 250FX, TPWL-110FX / 150FX / 200FX / 250FX / 300FX

Press



The Engineering AMADA



Long-selling **double crank presses** to meet various customer needs

AMADA double crank presses have always led the times.

The TPW-FX series has adopted a wet clutch/brake unit that has a small energy loss and positively starts and brakes even during high speed operation.

It also has a sealed oil bath transmission that can operate maintenance free over a long period of time.

The TPW-FX stamping presses are enormously favored in all aspects, including systematization with a wealth of peripheral units, and expandability and operability from single-hit stamping, progressive die stamping and transfer line configurations.

The TPWL-FX series is a family of double link presses to solve various pressworking problems, such as accuracy, speed, noise, and expandability.

Combining AMADA's comprehensive technology in metalworking, many state-of-the-art mechanisms and structures are adopted to meet a variety of customer needs.



TPW-110FX



TPWL-110FX

*Options are included in photos.

Double crank presses

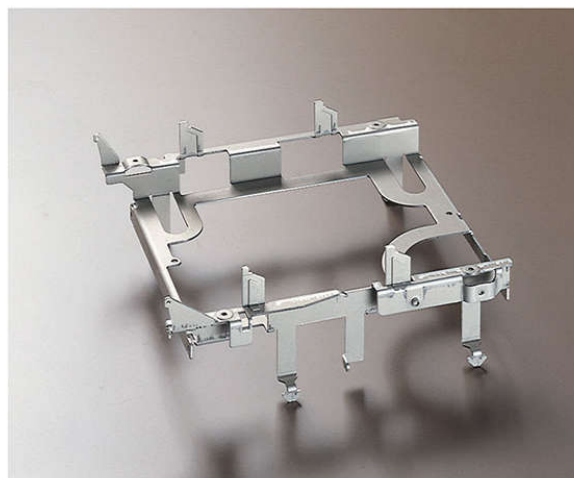
TPW FX / TPWL FX SERIES

Processing examples with representative sample workpieces

Material : SPCC
Thickness : 1.2mm



Material : SECC
Thickness : 0.5mm



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 the preset count, the motor automatically enters the idle condition and draws less power.

Eco-idling function

When its standby time reaches the preset time, the motor automatically enters the idle condition and consumes less power.

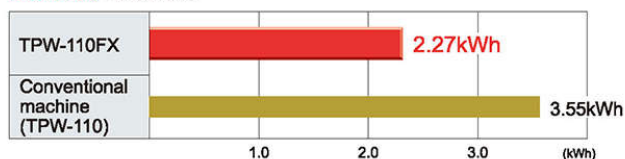
Touch screen blackout function

When the touch screen is not operated for the preset time, it blacks out to reduce power consumption.



Power consumption comparison

35.9% reduction



*Power consumption calculation conditions

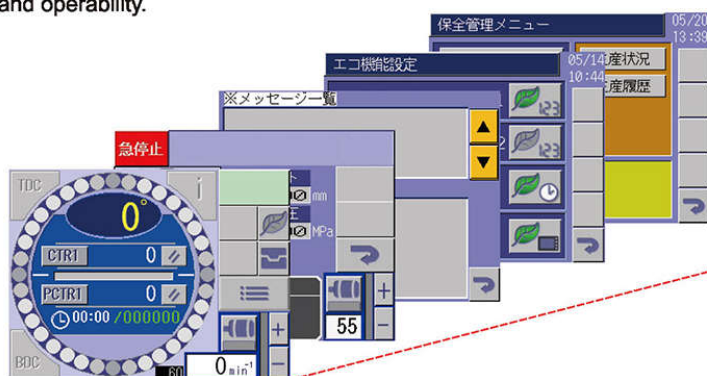
- Production stroke count: Maximum stroke count x 0.7
- Load operation: 30 min
- Standby (setup): 10 min

TPW-FX/TPWL-FX series technologies and functions

1 Operability improvement and machine data management (functionality)

Pendant control panel

A TFT color touch screen is fitted as standard and provides better visibility and operability.



8.5 inch control screen

Operation control displays

A new layout is adopted to provide visibility and intuitive operation.



Eco-function setting button

Shows the eco-function setting 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.

No.	名称	ON	OFF	設定
L1		0	---	テスト
L2		0	0	切
L3		0	0	切
L4		10	0	入
L5		0	0	切
L6		0	0	切
L7		0	0	切
L8		0	0	切

Rotary cam setting display



Digital setting display (stamping stroke count)

When you press numerical portions, you can set the corresponding counters, cam, or stamping stroke count.

Two-hand control panel with guard rings

Operability is improved by new guard rings and control buttons arranged not to obstruct the light curtain.

Thin control panel (15 mm thinner than conventional panels) suited to a seated operator.

Pictographs and English labels are the same as those of the SDE series.



Setting die information and operation

Data set to use dies, or die information, can be stored in the machine (standard 20 dies).

The stamping stroke count and rotary cam data settings can be changed all at once by switching the die information.

No.	部品名称	
No.001	SAMPLE-001	
000	SAMPLE-000	読み込み
001	SAMPLE-001	コピー
002	SAMPLE-002	貼り付け
003	SAMPLE-B002	削除
004	SAMPLE-003R	削除
005	SAMPLE-003L	削除
006		名称編集
007		閉じる
008		
009		

Program save and call

金型情報確認画面		05/17 16:33
金型No.	000	名称編集
部品名称	SAMPLE-A002	
金型名称		
生産予定数1	0 個	削除
加工ストローク数	0 min	
ダイハイト	0.00 mm	読み込み
セットハイト	0.00 mm	
ダイクッション圧	0.00 MPa	

Die information

Maintenance management

Maintenance information required for stable operation, such as oil change history, special voluntary inspection history, and number of times equipment has operated, can be checked on the machine.

保安全管理メニュー		05/17 14:06
アラーム履歴	生産状況	
稼働カウント		
アラームカウント		
機器保全カウント		
オイル交換履歴		
特自検履歴		

Maintenance management menu

オイル交換履歴		05/20 11:31
履歴	オイル交換日	カウント数
01	1970 年 1 月 1 日	0
02	1970 年 1 月	
03	1970 年 1 月	
04	1970 年 1 月	
05	1970 年 1 月	
06	1970 年 1 月	
07	1970 年 1 月	
08	1970 年 1 月	
09	1970 年 1 月	
10	1970 年 1 月	

Oil change history

特自検履歴		05/20 11:31
履歴	特自検日	カウント数
01	1970 年 1 月 1 日	0
02	1970 年 1 月	
03	1970 年 1 月	
04	1970 年 1 月	
05	1970 年 1 月	
06	1970 年 1 月	
07	1970 年 1 月	
08	1970 年 1 月	
09	1970 年 1 月	
10	1970 年 1 月	

Special voluntary inspection history

稼働カウント1		05/20 11:25
電源投入時間	0 h 0 m	
電源投入回数	0	
モーション時間	0 h 0 m	
トルクカット数	0	
光線遮光回数	0	
SOL-V作動回数	0	
潤滑回数	0	
スライト調節回数	0	

Operation counts

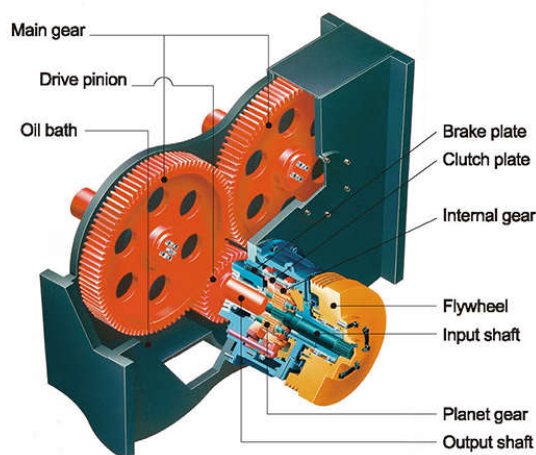
Safety standard

Safety PLCs that meet the requirements of the safety standard ISO 13849-1 are adopted to increase reliability in safety.

2 Performance-proven functions to unerringly meet fabrication needs (flexibility)

Traditional AMADA wet transmission

A planetary geared transmission is adopted to increase the reduction ratio and to produce high torque and energy. The multiple-disc construction of the clutch/brake unit reduces the air consumption when the clutch turns on and off, and ensures positive braking power transfer.

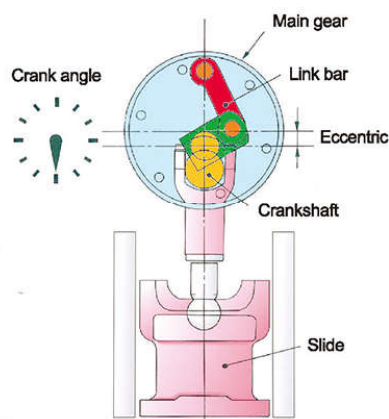
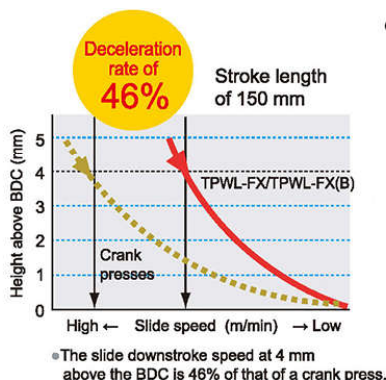


Highly accurate and productive link mechanism (TPWL-FX series)

The rotation of the crankshaft is varied by the link bar connected to the main gear rotating at constant speed.

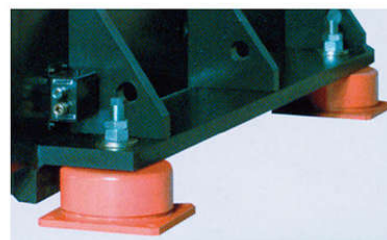
The slide is decelerated in the working portion of the stroke and is moved up and down at high speed in the other portions.

This mechanism has helped to reduce vibration and noise and to improve productivity 1.5 to 1.8 times (as compared with a crank press with the same working portion).



Pit-less, low working surface (TPWL-FX series)

Given the ease of installation and the future change of shop layout, the height of the 3000 kN TPWL-FX double crank presses is designed such that they can be installed without pit construction. The working surface height (bolster top surface height) is ergonomically designed low at about 1 m or so, even when the legs are mounted on vibration isolators.

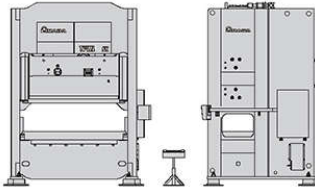


A menu of selectable frames

Various high rigidity frames can be selected, including a C-frame featuring excellent operability and easy to incorporate in the existing line, a bridge frame to combine operability and high rigidity, and an SF frame of straight side structure.

Straight side frame

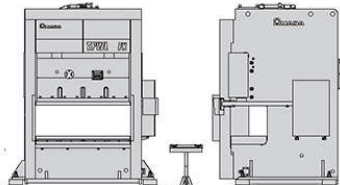
- Adoption of highly rigid one-piece straight side frame



TPWL-FX (SF)

Bridge frame

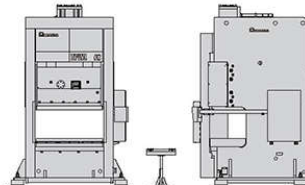
- Frame deflection under load is limited while the benefits of the C-frame are maintained.
- High accuracy structure close to straight side frame
- Excellent cost performance



TPWL-FX (BI)

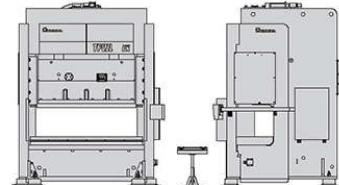
BI: Inner bridge (wide)

Adapted for multiple-step stamping and progressive-die stamping of thin sheets



TPWL-FX (BN)

BN: Inner bridge (narrow)
Concentrated load machine
for stamping thick sheets



TPWL-FX (BO)

BO: Outer bridge

Adapted for multiple-step stamping and for use of larger thin sheet stamping dies

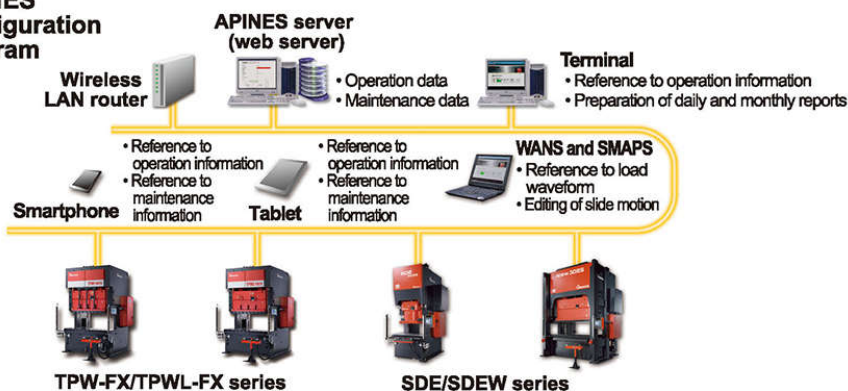
3 High expandability in consideration of digital network era (futuraity)

APINES*

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

APINES configuration diagram



Shop area monitor



Operation time chart

* AMADA Press machine Information Network System

Die space dimension tables

Die space dimension tables

Unit : mm

	TPW-110FX	TPW-150FX	TPW-200FX	TPW-250FX
Slide bottom drawings				
Bolster plate drawings				
[General purpose] [Progressive] [Drawing]				

Unit : mm

	TPWL-110FX	TPWL-150FX	TPWL-200FX	TPWL-250FX
Slide bottom drawings				
Bolster plate drawings				
[General purpose] [Progressive] [Drawing]				

Unit : mm

TPWL-110FX(BI)	TPWL-150FX(BI)	TPWL-200FX(BI)	TPWL-250 · 300FX(BI)
Slide bottom drawings			
Bolster plate drawings			

Unit : mm

Unit : mm

TPWL-200FX(BO)	TPWL-250 · 300FX(BO)
Slide bottom drawings	
Bolster plate drawings	

Unit : mm

TPWL-250 · 300FX(BN)
Slide bottom drawings
Bolster plate drawings

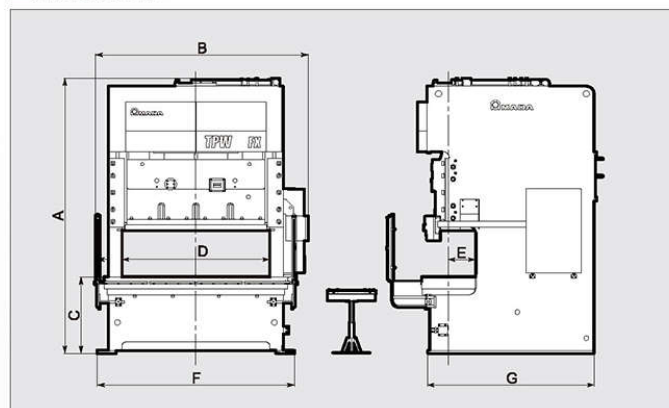
Unit : mm

TPWL-200FX(SF)	TPWL-300FX(SF)
Slide bottom drawings	
Bolster plate drawings	

T-slot dimensional drawing (common)

Dimensions

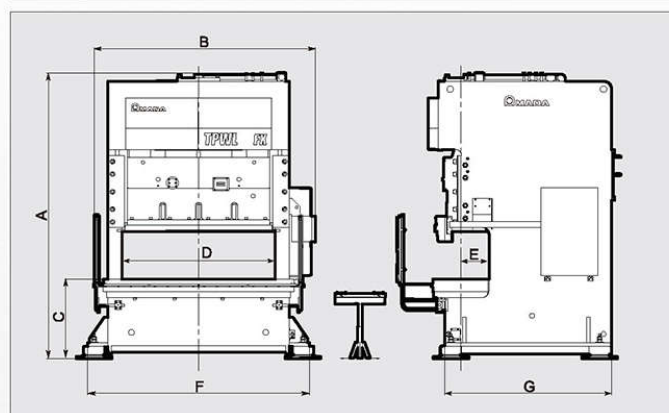
■ Dimensions



TPW-FX series

Unit : mm

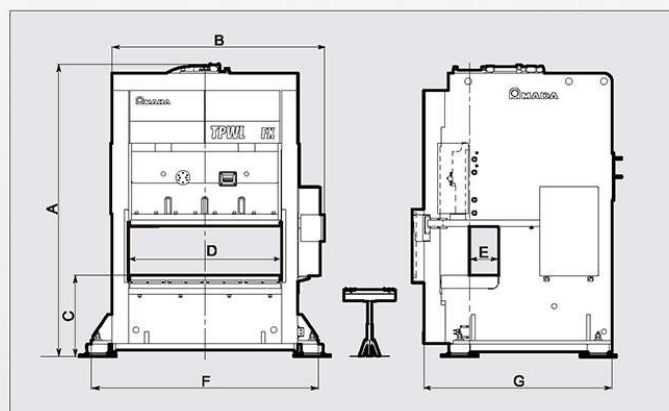
		A	B	C	D	E	F	G
TPW-110FX	General purpose	3190				360		1840
	Progressive	3070	2270	900	1540	280	2050	1750
	Drawing	3290				360		1840
TPW-150FX	General purpose	3315				390		1990
	Progressive	3195	2435	900	1670	320	2250	1870
	Drawing	3415				390		1990
TPW-200FX	General purpose	3745				435		2290
	Progressive	3595	2785	1000	1930	360	2580	2170
	Drawing	3845				435		2290
TPW-250FX	General purpose	4135				485		2480
	Progressive	3955	3085	1100	2170	400	2910	2305
	Drawing	4236				485		2480



TPWL-FX series

Unit : mm

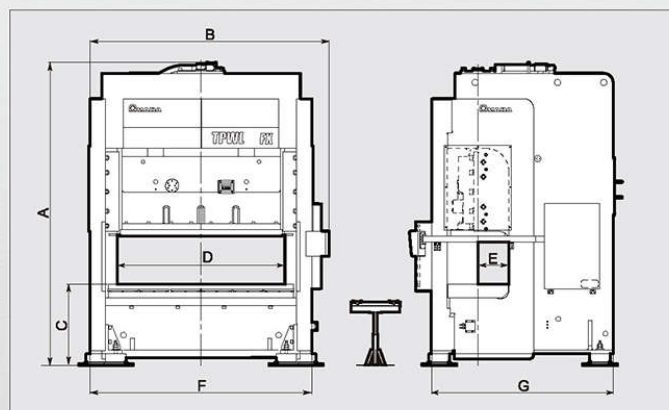
		A	B	C	D	E	F	G
TPWL-110FX	General purpose	3205				360		1835
	Progressive	3085	2270	(900)	1540	280	2250	1725
TPWL-150FX	General purpose	3330				390		1955
	Progressive	3210	2435	(900)	1670	320	2450	1825
TPWL-200FX	General purpose	3755				435		2275
	Progressive	3605	2785	(1000)	1930	360	2790	2100
TPWL-250FX	General purpose	4100				485		2460
	Progressive	3920	3085	(1055)	2170	400	3000	2230



TPWL-FX(BI) series

Unit : mm

		A	B	C	D	E	F	G
TPWL-110FX (BI)	General purpose	3025						
	Progressive	3085	2110	(900)	1480	280	2250	2030
TPWL-150FX (BI)	General purpose	3330						
	Progressive	3210	2310	(900)	1680	320	2450	2160
TPWL-200FX (BI)	General purpose	3755						
	Progressive	3605	2610	(1000)	1880	360	2790	2310
TPWL-250FX (BI)	General purpose	4100						
	Progressive	3920	2900	(1055)	2170	400	3000	2350
TPWL-300FX (BI)	General purpose	4170						
	Progressive	4020	2900	(1055)	2170	400	3000	2410

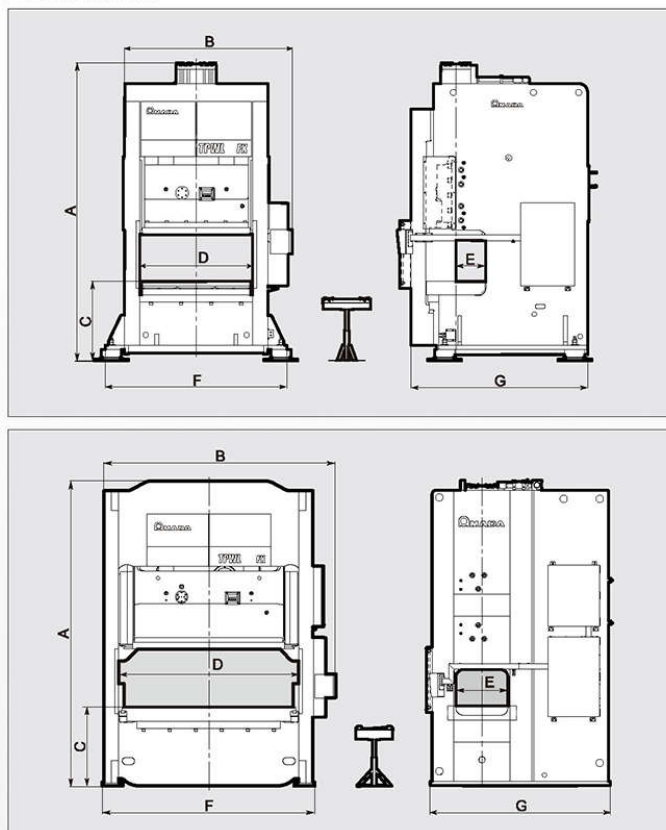


TPWL-FX(BO) series

Unit : mm

		A	B	C	D	E	F	G
TPWL-200FX (BO)	General purpose	3755						
	Progressive	3605	3010	(1000)	2280	360	2680	2310
TPWL-250FX (BO)	General purpose	4100						
	Progressive	3930	3095	(1055)	2470	400	2870	2350
TPWL-300FX (BO)	General purpose	4170						
	Progressive	4020	3095	(1055)	2470	400	2870	2410

■ Dimensions



TPWL-FX(BN) series

Unit : mm

		A	B	C	D	E	F	G
TPWL-250FX (BN)	General purpose	4275	2230	(1055)	1500	400	2410	2350
	Progressive	3965						
TPWL-300FX (BN)	General purpose	4395	2230	(1055)	1500	400	2410	2410
	Progressive	4115						

TPWL-FX(SF) series

Unit : mm

		A	B	C	D	E	F	G
TPWL-200FX (SF)	General purpose	3775	2890	1000	2240	720	2880	2490
	Progressive	3625						
TPWL-300FX (SF)	General purpose	4215	3110	1100	2490	720	2940	2490
	Progressive	4065						

■ Standard and optional accessories

Model		TPW-FX		TPWL-FX		TPWL-FX(BI)		TPWL-FX(BO)		TPWL-FX(BN)		TPWL-FX(SF)	
Menu		General purpose	Progressive	General purpose	Progressive	General purpose	Progressive	General purpose	Progressive	General purpose	Progressive	General purpose	Progressive
Variable-speed drive	Inverter (with forward/reverse selector switch)	○	○	○	○	○	○	○	○	○	○	○	○
Lubrication system	Automatic grease	○	○	○	○	○	○	○	○	○	○	○	○
	Automatic oil circulation	—	—	—	—	—	—	—	—	—	—	—	—
Foundation parts	Anchor bolts, shims, leveling plates	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲
Vibration isolation system		▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲
Touch screen	8.4 inches	○	○	○	○	○	○	○	○	○	○	○	○
Die information	20 dies	○	○	○	○	○	○	○	○	○	○	○	○
	200 dies	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲
Total counter	6 digits (x 2)	○	○	○	○	○	○	○	○	○	○	○	○
Preset counter	6 digits (x 2)	○	○	○	○	○	○	○	○	○	○	○	○
Eco-counter		○	○	○	○	○	○	○	○	○	○	○	○
Ethernet		○	○	○	○	○	○	○	○	○	○	○	○
APINES		▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲
Air ejector	Solenoid type (1 circuit)	○	○	○	○	○	○	○	○	○	○	○	○
Slide adjuster	Motorized	○	○	○	○	○	○	○	○	○	○	○	○
Die height counter	In 0.01 mm increments	○	○	○	○	○	○	○	○	○	○	○	○
Overload protector (OLP)	Hydraulic	○	○	○	○	○	○	○	○	○	○	○	○
Operating method	Two-hand control	○	○	○	○	○	○	○	○	○	○	○	○
Control panel	Portable stand	○	○	○	○	○	○	○	○	○	○	○	○
Electronic rotary cam	4 spare channels	○	○	○	○	○	○	○	○	○	○	○	○
Die cushion		▲	—	▲	—	—	—	—	—	—	—	—	—
Light curtain		○	○	○	○	○	○	○	○	○	○	○	○
Work light	Fluorescent light	○	○	○	○	○	○	○	○	○	○	○	○
Inspection ladder		▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲

○ : Standard ▲ : Option — : Not available

Machine specifications

TPW-FX series

Model	TPW-110FX			TPW-150FX			TPW-200FX			TPW-250FX		
	General purpose	Progressive	Drawing	General purpose	Progressive	Drawing	General purpose	Progressive	Drawing	General purpose	Progressive	Drawing
Tonnage capacity	1100			1500			2000			2500		
Stroke length	mm	180	110	230	200	130	250	150	300	250	170	300
Tonnage rating point above BDC	mm	7.5	5.0	5.5	8.0	5.5	6.0	6.5	5.0	5.0	5.5	4.5
Strokes per minute (stepless)	min ⁻¹	35~65	55~110	25~50	30~55	45~90	25~45	40~75	20~35	20~40	30~60	15~30
Die height	mm	400	350	450	450	400	500	450	550	550	450	600
Slide adjustment	mm	90			100			110			120	
Slide face dimensions (LR x FB)	mm	1400×500			1600×550			1850×650			2100×700	
Bolster dimensions (LR x FB)	mm	1800×700	1800×540	1800×700	2000×760	2000×620	2000×760	2400×850	2400×700	2400×850	2700×950	2700×780
Main motor	kW×P	11×4			15×4			15×4			22×4	
Machine mass	kg	16000	14000	16000	20000	18000	20000	25000	23000	25000	35000	32000

TPWL-FX series

Model	TPWL-110FX			TPWL-150FX			TPWL-200FX			TPWL-250FX		
	General purpose	Progressive	Drawing	General purpose	Progressive	Drawing	General purpose	Progressive	Drawing	General purpose	Progressive	Drawing
Tonnage capacity	1100			1500			2000			2500		
Stroke length	mm	180	110	200	130		250	150		250	170	
Tonnage rating point above BDC	mm	7.5	5.0	6.5	6.5		6.5	7.0		7.0	7.0	
Strokes per minute (stepless)	min ⁻¹	35~65	40~80	30~55	40~75		25~45	40~65		20~40	30~60	
Die height	mm	400	350	450	400		500	450		550	450	
Slide adjustment	mm	90			100			110			120	
Slide face dimensions (LR x FB)	mm	1400×500			1600×550			1850×650			2100×700	
Bolster dimensions (LR x FB)	mm	1800×700	1800×540	2000×760	2000×620		2400×850	2400×700		2700×950	2700×780	
Main motor	kW×P	11×4			15×4			15×4			22×4	
Machine mass	kg	16000			20000			30000	29000	38000	36000	

TPWL-FX(BI) series

Model	TPWL-110FX(BI)			TPWL-150FX(BI)			TPWL-200FX(BI)			TPWL-250FX(BI)			TPWL-300FX(BI)		
	General purpose	Progressive	Drawing	General purpose	Progressive	Drawing	General purpose	Progressive	Drawing	General purpose	Progressive	Drawing	General purpose	Progressive	Drawing
Tonnage capacity	1100			1500			2000			2500			3000		
Stroke length	mm	180	110	200	130		250	150		250	170		250	200	
Tonnage rating point above BDC	mm	7.5	5.0	6.5	6.5		6.5	7.0		7.0	7.0		5.5	4.5	
Strokes per minute (stepless)	min ⁻¹	35~65	40~80	30~35	40~75		25~45	40~65		20~40	30~60		20~40	30~55	
Die height	mm	400	350	450	400		500	450		550	450		550	450	
Slide adjustment	mm	90			100			110			120			120	
Slide face dimensions (LR x FB)	mm	1400×500			1600×550			1850×650			2100×700			2100×700	
Bolster dimensions (LR x FB)	mm	1450×540		1650×620			1850×700			2100×780			2100×780		
Main motor	kW×P	11×4			15×4			15×4			22×4			30×4	
Machine mass	kg	17000			21000			28000	27000	37000	35000	38000	36000		

TPWL-FX(BO) series

Model	TPWL-200FX(BO)			TPWL-250FX(BO)			TPWL-300FX(BO)		
	General purpose	Progressive	Drawing	General purpose	Progressive	Drawing	General purpose	Progressive	Drawing
Tonnage capacity	2000			2500			3000		
Stroke length	mm	250	150	250	170		250	200	
Tonnage rating point above BDC	mm	6.5	7.0	7.0	7.0		5.5	4.5	
Strokes per minute (stepless)	min ⁻¹	25~45	40~65	20~40	30~60		20~40	30~55	
Die height	mm	500	450	550	450		550	450	
Slide adjustment	mm	110			120			120	
Slide face dimensions (LR x FB)	mm	1850×650			2100×700			2100×700	
Bolster dimensions (LR x FB)	mm	2250×700			2400×780			2400×780	
Main motor	kW×P	15×4			22×4			30×4	
Machine mass	kg	35000	33000	41000	40000		42000	41000	

TPWL-FX(BN) series

Model	TPWL-250FX(BN)			TPWL-300FX(BN)		
	General purpose	Progressive	Drawing	General purpose	Progressive	Drawing
Tonnage capacity	2500			3000		
Stroke length	mm	250	170	250	200	
Tonnage rating point above BDC	mm	7.0	7.0	5.5	4.5	
Strokes per minute (stepless)	min ⁻¹	20~40	30~60	20~40	30~55	
Die height	mm	550	450	550	450	
Slide adjustment	mm	120			120	
Slide face dimensions (LR x FB)	mm	1430×700			1430×700	
Bolster dimensions (LR x FB)	mm	1450×780			1450×780	
Main motor	kW×P	22×4			30×4	
Machine mass	kg	30000	29000	31000	30000	

TPWL-FX(SF) series

Model	TPWL-200FX(SF)			TPWL-300FX(SF)		
	General purpose	Progressive	Drawing	General purpose	Progressive	Drawing
Tonnage capacity	2000			3000		
Stroke length	mm	250	150	250	200	
Tonnage rating point above BDC	mm	6.5	7.0	5.5	4.5	
Strokes per minute (stepless)	min ⁻¹	25~45	40~65	20~40	30~55	
Die height	mm	500	450	550	450	
Slide adjustment	mm	110			120	
Slide face dimensions (LR x FB)	mm	1850×650			2100×700	
Bolster dimensions (LR x FB)	mm	2150×850			2400×950	
Main motor	kW×P	15×4			30×4	
Machine mass	kg	32000			42000	40000



For your safe use, be sure to read the manual carefully before use.

- Use of this product requires safeguard measures to suit your work. For details, see the safety guide in the stamping press section at the website of AMADA PRESS SYSTEM (www.amp.amada.co.jp).
- These machines correspond to the press machines specified in the Ordinance on Industrial Safety and Health. This means that you must contact the authorities for applying for their installation, for example.
- Options are included in photos.
- * The official model names of machines described in this catalog are non-hyphenated like TPW110FX. Use these registered model names when you contact the authorities for applying for installation, exporting, or financing. The hyphenated spellings like TPW-110FX are used in some portions of the catalog for sake of readability. This also applies to the other machines in the catalog.
- * The specifications described in this catalog are for the Japanese domestic market.

*Specifications, appearance, and equipment are subject to change without notice by reason of improvement.

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Inquiry



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