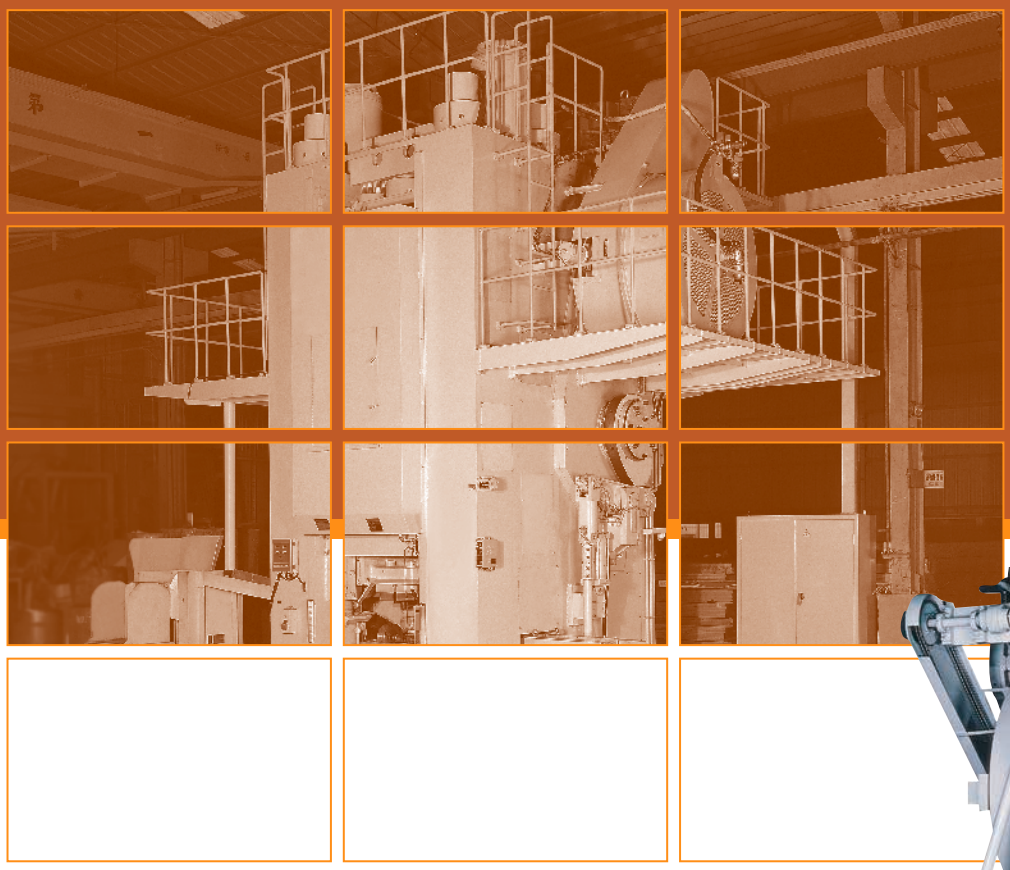
STAMTEC®

METAL STAMPING & FORMING EQUIPMENT

KP & KT Series

Knuckle-Joint Cold Forging Presses



250 . 400 . 650 . 850 . 1000 . 1200 . 2000 tons

KP SERIES

Knuckle-Joint 1-Point Cold Forging Presses

KP-2000 Knuckle-Joint Press

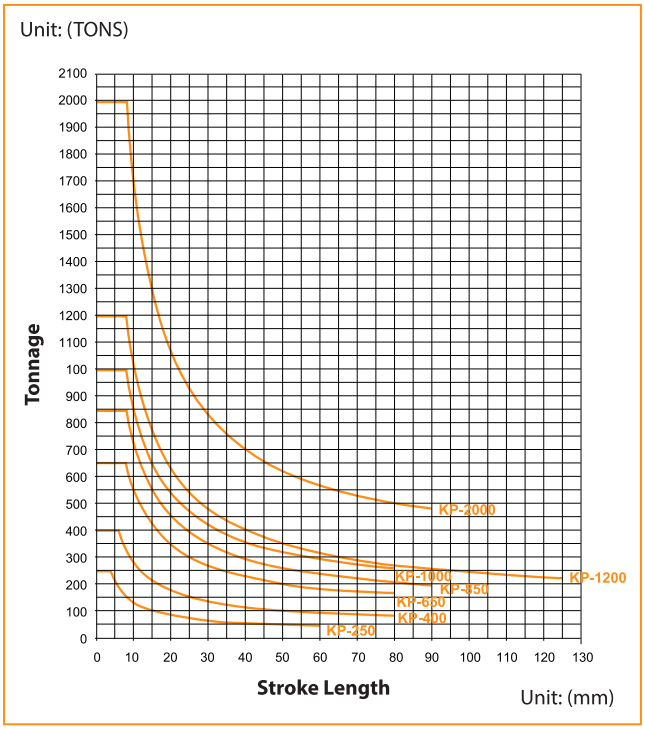
To improve and expand part production capabilities, Stamtec offers multiple **KNUCKLE-JOINT Forging Presses**, which change the motion of the slide.

Stamtec KP Series

1-Point Cold Forging Presses

Designed for cold forging and are ideal for near net-shape forming. The cold forge technology forms steel components without cutting metal fibers, giving the product a more consistent and durable strength.

Tonnage Range: 250 - 2000



KP-Series Tonnage - Stroke Length Curve

Knuckle-Joint Drives

Modified drive changing slide motion

Driven by an eccentric or crank mechanism, a knuckle-joint system can decrease slide velocity by up to 40% during the working portion of the stroke, often improving common stamping operation productivity.

Knuckle-joint presses are capable of delivering a tremendous amount of force by transferring energy from a motor through a linkage design. The drive shaft crank rotates completely, while the links are grounded to support the pressure.

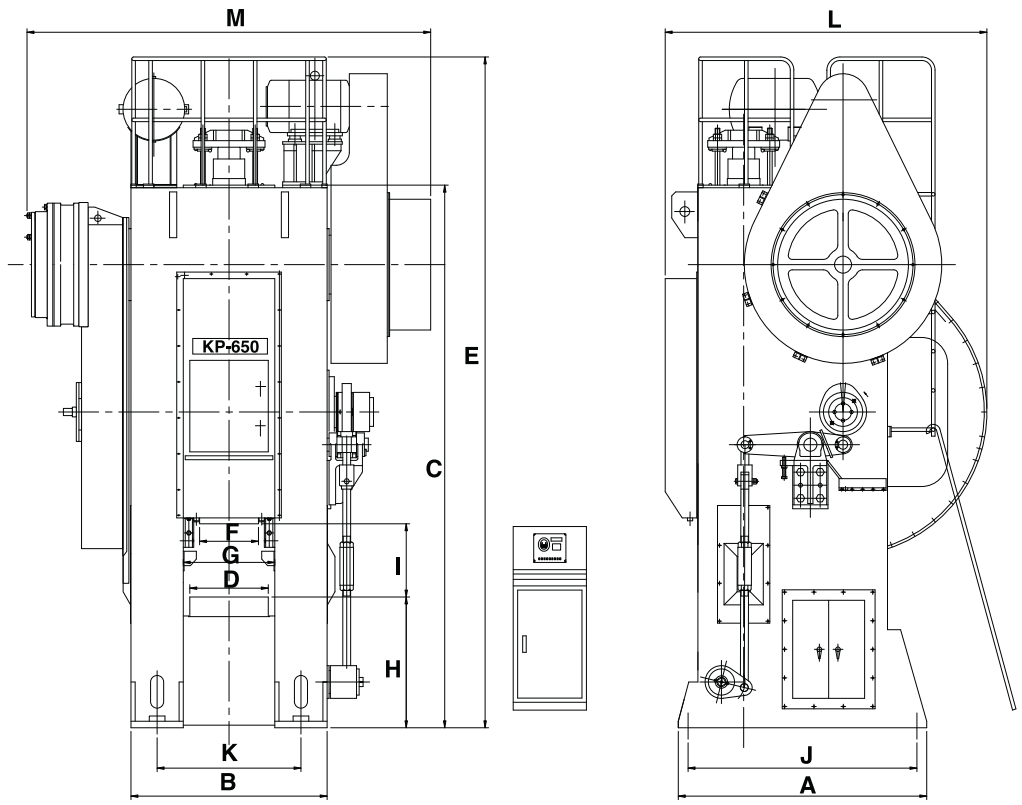
The knuckle-joint drive not only slows down the slide through the working portion of the stroke, but provides infinite pressure at the bottom of the stroke producing a significant dwell.

KP SERIES SPECIFICATIONS

Type		KP-250		KP-400		KP-650		KP-850		KP-1000		KP-1200		KP-2000	
Main Specifications		S	V	S	V	S	V	S	V	S	V	S	V	S	V
Capacity	US Tons	275.58		440.93		716.50		936.97		1102.31		132.77		2204.62	
	Metric Tons	250		400		650		850		1000		1200		2000	
Rated tonnage point	in.	0.16		0.24		0.32		0.32		0.32		0.32		0.32	
	mm	4		6		8		8		8		8		8	
Stroke length	in.	4.72		6.30 / 7.09		6.30 / 7.09		7.09		6.30		9.84		7.09	
	mm	120		160 / 180		160 / 200		180		160		250		180	
Speed	SPM Continuos	40	30 - 50	32	25 - 40	30	25 - 35	30	25 - 35	30	25 - 35	25 - 30		22 - 32	
Die height (S.D.A.U.)	in.	14.57		15.75		15.75		15.75		19.69		23.62		21.65	
	mm	370		400		400		400		500		600		550	
Maximum upper die weight	lbs.	1102.31		1763.70		2204.62		2204.62		2645.55		2645.55		4409.25	
	kg	500		800		1000		1000		1200		1200		2000	
Bolster area (L-R x F-B)	in.	19.69 x 23.62		21.65 x 25.98		23.62 x 27.56		23.62 x 27.56		27.56 x 31.50		31.50 x 39.37		39.37 x 31.50	
	mm	500 x 600		550 x 660		600 x 700		600 x 700		700 x 800		800 x 1000		1000 x 800	
Slide area (L-R x F-B)	in.	15.75 x 16.54		15.75 x 19.69		17.72 x 21.65		17.72 x 21.65		18.90 x 25.59		31.50 x 31.50		31.50 x 27.56	
	mm	400 x 420		400 x 500		450 x 550		450 x 550		480 x 650		800 x 800		800 x 700	
Slide adjustment	in.	0.59		0.59		0.59		0.59		0.59		0.59		0.59	
	mm	15		15		15		15		15		15		15	
Bolster thickness	in.	3.94		4.72		5.91		7.09		7.09		7.87		9.84	
	mm	100		120		150		180		180		200		250	
Air Pressure Requirement	PSI	71.12		71.12		71.12		71.12		71.12		71.12		71.12	
	kg / cm2	5		5		5		5		5		5		5	
Main motor	HP x P	20 x 6	V.S. 25 x 4	40 x 6	V.S. 50 x 4	50 x 6	V.S. 75 x 4	75 x 6	V.S. 100 x 4	75 x 6	V.S. 100 x 4	V.S. 100 x 4		V.S.150 x 6 Inverter	

Bed knockout device								
Capacity	US Tons	11.02	16.53	33.07	33.07	55.12	55.12	88.19
	Metric Tons	10	15	30	30	50	50	80
Stroke length	in.	1.97	2.36	2.76	2.76	2.76	3.94	3.15
	mm	50	60	70	70	70	100	80

KP SERIES OUTLINE DIMENSIONS

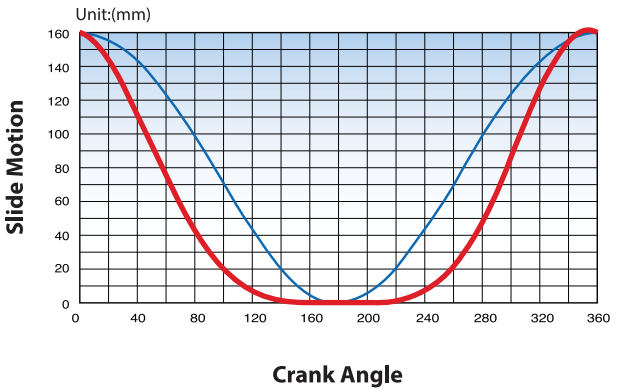


MODEL		KP-250	KP-400	KP-650	KP-850	KP-1000	KP-1200	KP-2000
A	in.	64.96	66.93	74.80	84.25	108.27	120.08	116.14
	mm	1650	1700	1900	2140	2750	3050	2950
B	in.	39.37	49.21	59.06	59.06	67.72	78.74	125.98
	mm	1000	1250	1500	1500	1720	2000	3200
C	in.	118.70	139.37	163.39	170.87	202.95	239.17	278.74
	mm	3015	3540	4150	4340	5155	6075	7080
D	in.	19.69	21.65	23.62	23.62	27.56	31.50	39.37
	mm	500	550	600	600	700	800	1000
E	in.	151.58	177.17	199.21	214.96	245.43	286.61	314.96
	mm	3850	4500	5060	5460	6234	7280	8000
F	in.	15.75	15.75	17.72	17.72	18.90	31.50	31.50
	mm	400	400	450	450	480	800	800
G	in.	22.44	23.23	27.56	27.56	32.28	39.37	51.18
	mm	570	590	700	700	820	1000	1300
H	in.	27.56	32.28	39.37	40.55	51.18	57.28	79.92
	mm	700	820	1000	1030	1300	1455	2030
I	in.	19.29	22.05	22.05	22.84	25.98	33.47	28.74
	mm	490	560	560	580	660	850	730
J	in.	60.24	61.81	68.90	78.35	101.97	113.78	96.46
	mm	1530	1570	1750	1990	2590	2890	2450
K	in.	30.71	37.40	43.31	43.31	50.00	59.06	114.17
	mm	780	950	1100	1100	1270	1500	2900
L	in.	72.84	83.66	96.85	107.68	124.41	135.83	215.35
	mm	1850	2125	2460	2735	3160	3450	5470
M	in.	82.68	103.94	121.85	134.65	196.06	199.21	255.12
	mm	2100	2640	3095	3420	4980	5060	6480

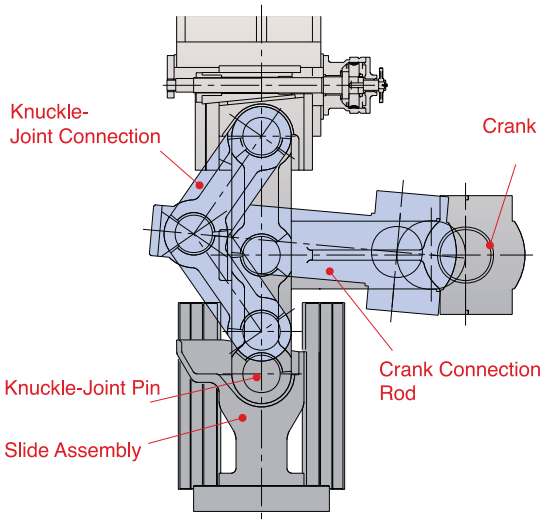
Characteristics of Knuckle-Joint Presses

Stamtec knuckle-joint mechanism can alter the motion velocity of Slide to a slow speed when Slide is driven approaching to Bottom Dead-end Center (BDC) point. This special feature applies for the production of extrusion, coining, upsetting, sizing, forging and heading.

Stroke Length - Crank Angle Curve



Slide Knuckle-Joint Mechanism

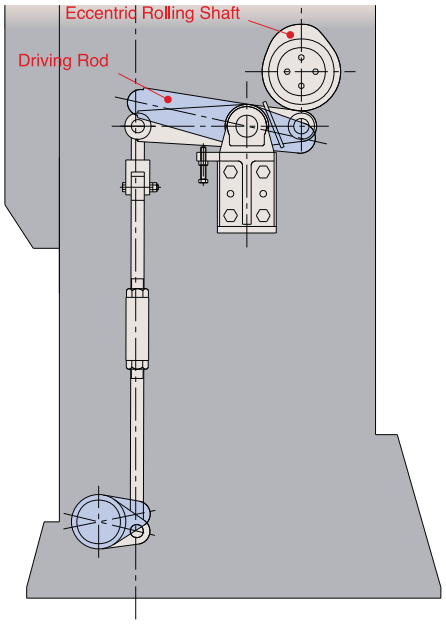


Slide Motion

Slide is connected to crank by two pieces of linked knuckle joints; its weight is offset by the adjustable pneumatic counterbalancer. This mechanism is to transit the revolution of crank to drive the slide for the movement of up and down strokes.

Bed Knockout Device

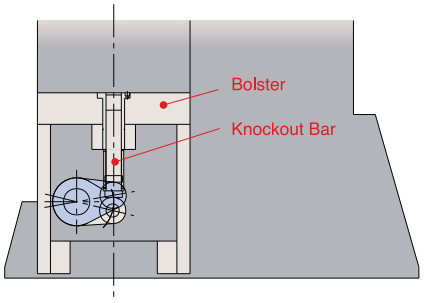
▼ Side View from Frame Outer



Bed Knockout Device

The knockout device installing beneath bolster of bed for taking the work-piece out of the toolings is activated by a driving rod, which is connection to the crank-driving eccentric rolling shaft.

▼ View to Frame Inside



KT SERIES

Knuckle-Joint 1-Point Cold Forging Transfer Presses

KT-800 Knuckle-Joint Press

Stamtec KT Series

1-Point Cold Forging **TRANSFER** Press

KT series is designed to accept and to combine with the various automations; thus, a minimized operation manpower, even a no-manual-control production, can be achieved. Intermediately, treatments are not necessary and can be avoided for the production of progressive multi-stage forging. A room for storing semi-forged parts and manpower for managing of that work are not required. The productivity of progressive multi-stage forging is triple times above single forging.

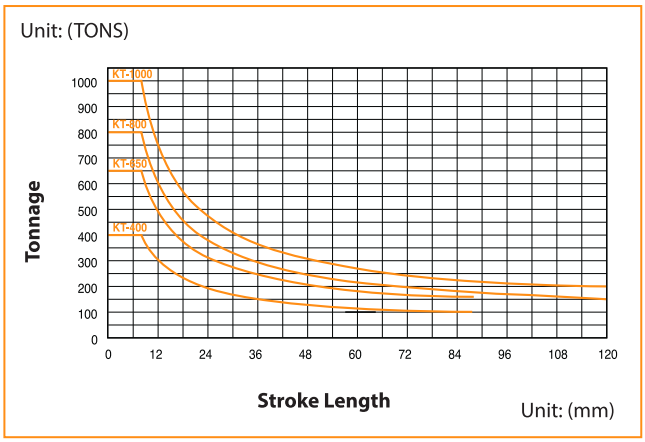
Tonnage Range: 400 - 1000

Stamtec Cold Forge Technology

Cold forging can reduce the material waste from 40% up to 60%, making it one of the most economical methods for manufacturing high precision parts. It's also offers more accurate and stronger net shape formed parts with little or no secondary operations.

Parts made with the irregular thickness or the complex shapes, such as trapezoid, cores, hollow cylinders, etc. which are extremely difficult to produce by typical cutting/forming dies, can be easily produced by cold forging technology.

Cold forging provides a number of advantages for producing steel components, including:



KT-Series Tonnage Stroke Length Curve

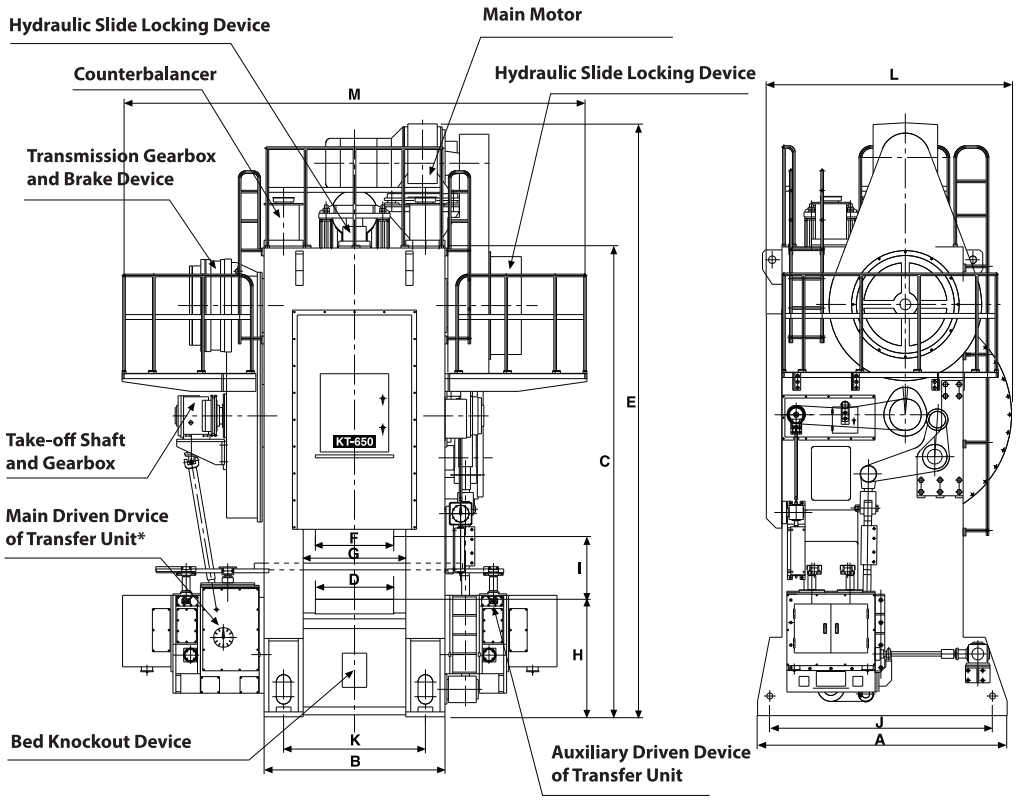
- Near-net-sharp forming
- Superior plasticity
- Higher productivity
- Better mechanical characteristics
- Good surface quality

KT SERIES SPECIFICATIONS

Type		KT-400	KT-650	KT-800	KT-1000
Main Specifications					
Capacity	US Tons	440.93	716.50	881.85	1102.31
	Metric Tons	400	650	800	1000
Rated tonnage point	in.	0.32	0.32	0.32	0.32
	mm	8	8	8	8
Stroke length	in.	7.09	7.87 / 7.09	9.84	9.84
	mm	180	200 / 180	250	250
Speed	SPM	25 - 40	25 - 35	25 - 35	25 - 35
Die height (S.D.A.U.)	in.	21.65	21.65	25.59	26.38
	mm	550	550	650	670
Bolster area (L-R x F-B x T.)	in.	27.56 x 27.56 x 4.72	31.50 x 31.50 x 5.91	43.31 x 31.50 x 6.69	43.31 x 31.50 x 7.09
	mm	700 x 700 x 120	800 x 800 x 150	1100 x 800 x 170	1100 x 800 x 180
Slide area (L-R x F-B)	in.	26.77 x 27.56	30.71 x 31.50	42.52 x 31.50	42.52 x 31.50
	mm	680 x 700	780 x 800	1080 x 800	1080 x 800
Slide open (F-B x H.)	in.	19.69 x 19.69	21.65 x 24.80	27.56 x 28.74	27.56 x 28.74
	mm	500 x 500	550 x 630	700 x 730	700 x 730
Slide adjustment	in.	0.59	0.59	0.59	0.59
	mm	15	15	15	15
Air Pressure Requirement	PSI	71.12	71.12	71.12	71.12
	kg / cm2	5	5	5	5
Main Motor	HP x P	V.S. 50 x 4	V.S. 100 x 4	V.S. 100 x 4	V.S. 125 x 4

Bed Knockout Device					
Capacity	US Tons	11.02 x 3.31 = 36.48	16.54 x 3.31 = 54.75	13.23 x 5.12 = 67.74	13.23 x 5.12 = 67.74
	Metric Tons	10 x 3 = 30	15 x 3 = 45	12 x 5 = 60	12 x 5 = 60
Stroke length	in.	2.36	2.76	2.76	2.76
	mm	60	70	70	70

KT SERIES OUTLINE DIMENSIONS



MODEL		KT-400	KT-650	KT-800	KT-1000
A	in.	82.68	100.39	127.95	133.86
	mm	2100	2550	3250	3400
B	in.	63.78	72.84	88.58	88.58
	mm	1620	1850	2250	2250
C	in.	165.95	190.16	238.98	244.29
	mm	4215	4830	6070	6205
D	in.	27.56	31.50	43.31	43.31
	mm	700	800	1100	1100
E	in.	206.69	234.33	284.25	277.17
	mm	5250	5952	7220	7040
F	in.	27.56	31.50	42.52	42.52
	mm	700	800	1080	1080
G	in.	36.22	41.34	53.15	53.15
	mm	920	1050	1350	1350

MODEL		KT-400	KT-650	KT-800	KT-1000
H	in.	41.34	47.24	49.21	51.18
	mm	1050	1200	1250	1300
I	in.	28.74	28.74	35.43	36.22
	mm	730	730	900	920
J	in.	74.80	90.55	121.65	127.56
	mm	1900	2300	3090	3240
K	in.	50.00	57.09	70.87	70.87
	mm	1270	1450	1800	1800
L	in.	88.19	98.62	128.94	134.25
	mm	2240	2505	3275	3410
M	in.	177.56	187.01	208.86	210.43
	mm	4510	4750	5305	5345

Press Controls

User-friendly, fully programmable operation

Stamtec presses feature advanced, user-friendly automation controls with fully programmable on-screen displays for easy set-up, start-up, operation and diagnostics.

Our standard presses come equipped with **OmniLink 5100-MPC Press Automation Controls**.

OmniLink 805 Terminal: The user friendly OmniLink 805 Operator Terminal uses a Color 5.7"LCD TFT with 640 x 480 pixel resolution and touch screen.

OmniLink System 5100-MPC Press Controls are designed to meet all functional safety requirements of current and anticipated OSHA 29 CFR 1910.217, ANSI B11.1,and CSA Z142 standards, and to provide safety features in addition to these standards when properly applied, adjusted, installed and used.

Stamtec presses can be CUSTOMIZED with your choice of press controls from:

Rockwell Automation / Allen-Bradley · SIEMENS · MITSUBISHI ELECTRIC · WINTRISS · LINK Systems

Standard Features / Accessories

- Slide and die balance device
- Motorized slide adjustment (locking device)
- Centralized re-circulation lubrication
- Overrun detector
- Load monitor
- Digital die height indicator
- Misfeed detection receptacle
- Portable 2-hand pushbutton t-stand
- PLC controller
- Safety ladder and rail
- Air ejector - 3/8"
- Air source receptacle - 3/8"
- Operation manual & inspection report
- Motorized grease lubrication device for upper slide gibbing - KP Series
- Operation mode selection (off / inching / safety one stroke / continuous) - KP Series

Optional Features / Accessories

- Control system MPC series
- Photoelectric safety device
- Upper slide knockout device
- Motorized grease lubrication device
- Crank angle indicator (clock type)
- Electronic rotary cam switch (16 spare channels)
- Inverter
- Foot switch
- Die area light
- Power receptacle (single phase, 110V / 220V) - power source wiring by user
- Anti-vibration press mounts
- Foundation anchor bolts & plates
- Swivel operation panel
- Dual valve solenoid with detector
- Quick die change system
- Auto feeding system
- Flywheel brake device - KP Series
- Safety block with plug - KP Series
- Oil heater - KP Series
- Main motor power saving device - KP Series

STAMTEC®

METAL STAMPING & FORMING EQUIPMENT

Stamtec has been providing dependable, affordably priced metal stamping presses for almost 40 years in North America, and almost 70 years worldwide through our parent company Chin Fong. Our 72,000 sq. ft. sales, service, logistics, and assembly facility in Tennessee is home not only to North America's largest inventory of new presses and spare parts, but also our most important asset - our people. Our staff of engineering, sales, service, and support personnel are here to serve you in the most timely and professional manner. So, tap into our global strength, and grow with us as we grow with you!

GAP FRAME PRESSES
1-POINT AND 2-POINT

STRAIGHT SIDE PRESSES
1-POINT, 2-POINT AND 4-POINT

SERVO PRESSES
1-POINT AND 2-POINT
GAP AND STRAIGHT SIDE

FORGING PRESSES
WARM / HOT AND COLD

COIL FEEDING & HANDLING SYSTEMS

STAMTEC®
METAL STAMPING & FORMING EQUIPMENT

U.S.A. - STAMTEC, INC.
4160 Hillsboro Highway
Manchester, TN 37355 U.S.A.
TEL: +1-931-393-5050
FAX: +1-931-393-5060
sales@stamtec.com
www.stamtec.com