

# TP series

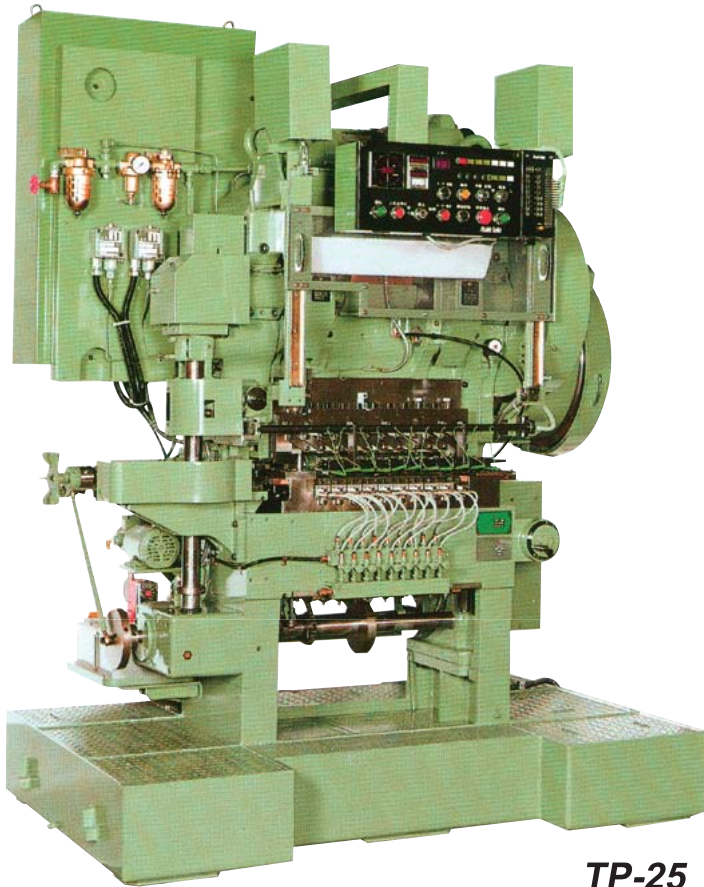
TP-15 TP-25 TP-45 TP-75 TP-100 TP-150 TP-45D TP-65D



**TP-75**

## Basic machine specification

Machine model		TP-15	TP-25	TP-45	TP-45D	TP-75	TP-65D	TP-100	TP-150
Rated capacity	kN	150(15ton)	250(25ton)	450(45ton)	450(45ton)	750(75ton)	650(65ton)	1000(100ton)	1500(150ton)
Recommended capacity	kN	90(9ton)	160(16ton)	300(30ton)	300(30ton)	550(55ton)	450(45ton)	700(70ton)	1050(105ton)
Standard ram stroke	mm	38.1	50.8	63.5	127.0	76.2	177.8	152	152
Max. ram stroke	mm	50.8	76.2	101.6	—	127	203.2	178	—
Shut height	mm	219.1	254.0	330.2	387.4	457.2	508.0	550.0	540
Main motor	kw	2.2(4P)	3.7(4P)	5.5(4P)	7.5(4P)	11(4P)	15(4P)	30(4P)	45(4P)
Machine speed	spm	50~250	50~200	40~150	40~150	25~100	25~100	25~70	20~60
Height×Width×Depth	mm	2,000×1,440×1,780	2,210×1,670×1,850	2,590×2,280×1,410	2,680×2,300×1,380	3,020×2,930×1,480	3,840×3,120×2,050	4,100×3,700×2,000	4,800×3,930×2,750
Machine weight (incl. die set)	ton	1.5	2.7	5.5	6.0	10.2	18.0	28.0	45.0



**TP-25**



**TP-45**

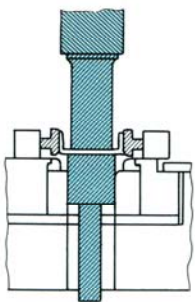
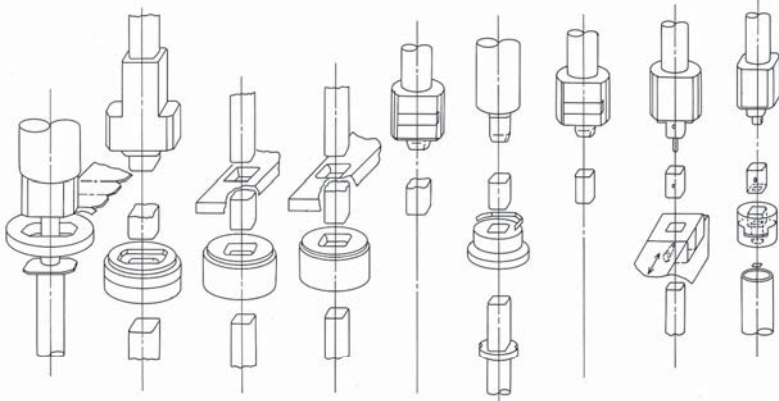
## Standard accessories

- Inverter motor
- Air clutch brake
- Lower knockout mechanism
- Back roll feed mechanism
- Transfer mechanism
- Vertical transfer mechanism
- Automatic lubrication device
- Air valve device
- Finger stop mechanism
- Operation box and control box
- Oil pan
- Machine lamp
- Outlet for 100V & 200V
- Transfer slide support (for 45 ton and upper size machines)

## Special accessories

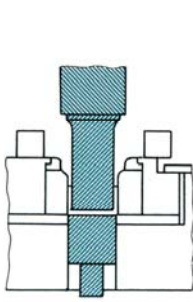
- Punch stripper & stop relief device
- Front & rear cross motion device / Front or rear cross motion device
- Zig-Zag feeding device
- CNC Zig-Zag feeding device
- Blank holder device
- Upper knockout device
- Thread rolling device
- Oil lubrication device (Drop type)
- Workpiece transfer detecting device
- Box type base
- Vacuum device
- Full cover
- Automatic reel stand and take-up reel or scrap cutter
- Knockout releasing device
- Camless sequence control (with resolver)
- Status indicator light
- Blank feeding device
- Soap water lubrication device
- Trimming device
- Reversing device
- Die cooling device
- Double working device
- Execution for machine oil circulation
- Special painting (Per customer's request)
- Sound insulation cover

Blanking      Drawing      Drawing      Bottom forming      Idle      Trimming      Idle      Embossing      Piercing



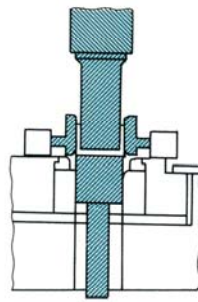
**Ram going down**

Workpiece is held between punch and knockout tool and pushed down into die.



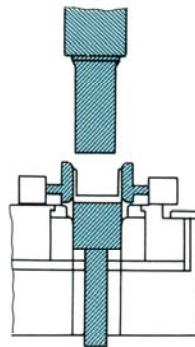
**Ram lower dwell**

Drawing is completed.



**Ram going up**

Workpiece is raised to transfer level and held by transfer fingers.

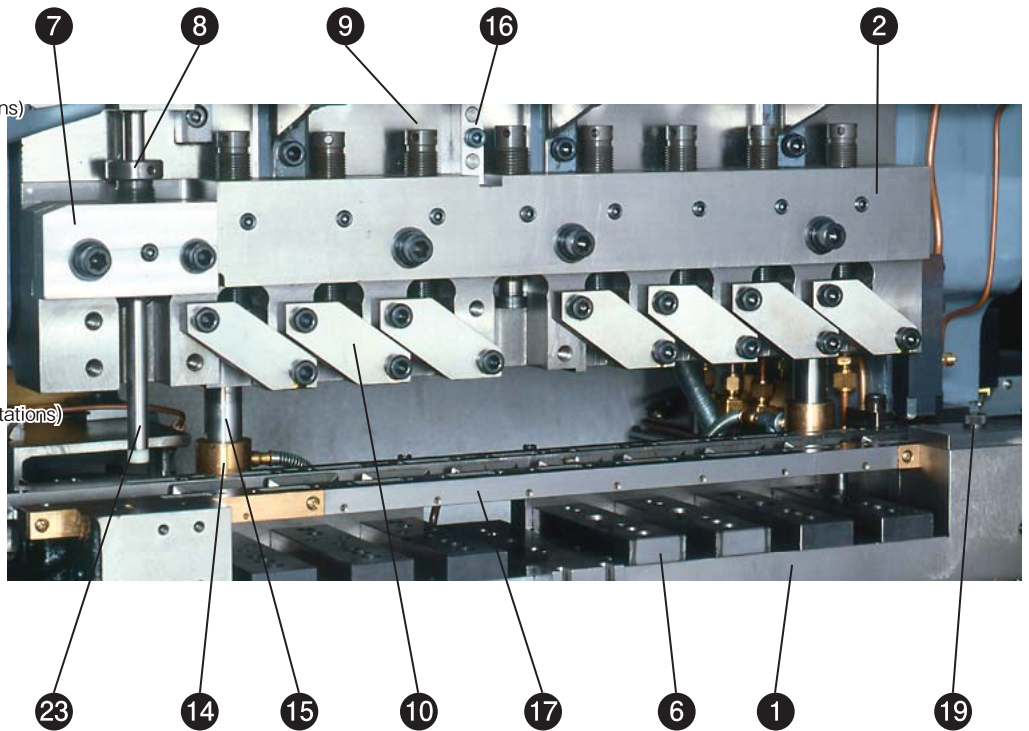


**Ram upper dwell**

Workpiece is carried by transfer fingers to the next station.

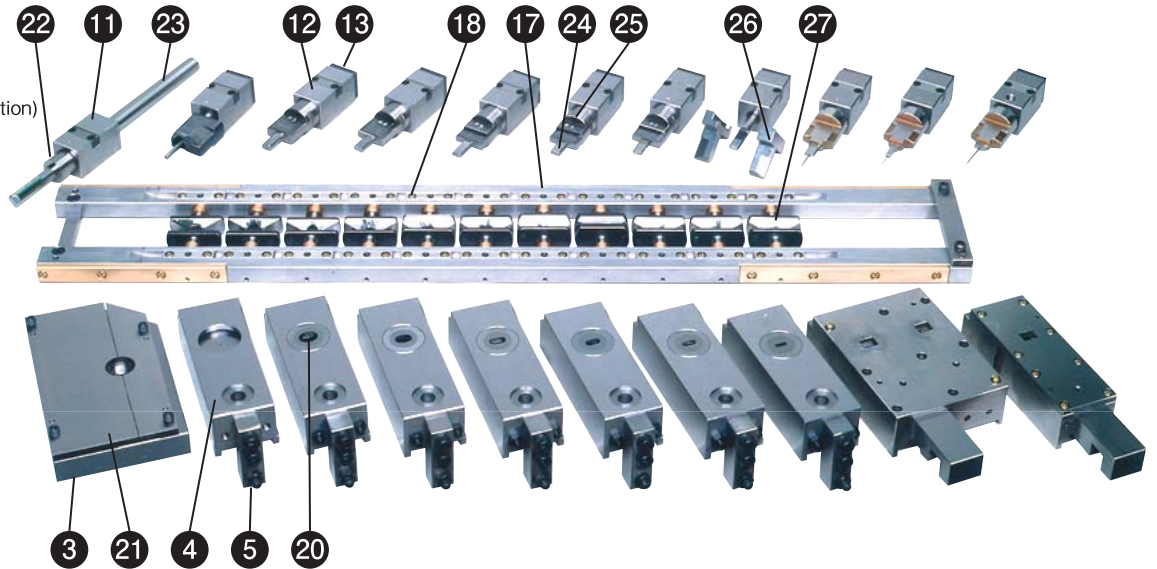
## Die set

- 1 Die bed
- 2 Punch plate
- 3 Blanking die holder
- 4 Die holder (#2 and subsequent stations)
- 5 Die holder plate
- 6 Die holder key
- 7 Upper blanking block
- 8 Blanking adjust screw
- 9 Adjust screw
- 10 Punch holder clamp
- 11 Punch holder (#1 station)
- 12 Punch holder (#2 and subsequent stations)
- 13 Punch holder cap
- 14 Guide bush
- 15 Guide post
- 16 Locating block
- 17 Transfer slide
- 18 Finger key
- 19 Cap



## Tooling

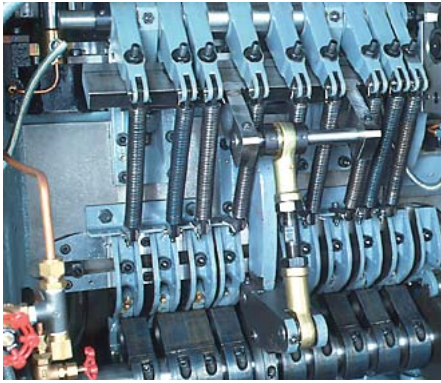
- 20 Die
- 21 Blanking stripper
- 22 Blanking punch (#1 station)
- 23 Upper plunger (#1)
- 24 Punch
- 25 Stripper thimble
- 26 Finger spreader
- 27 Finger



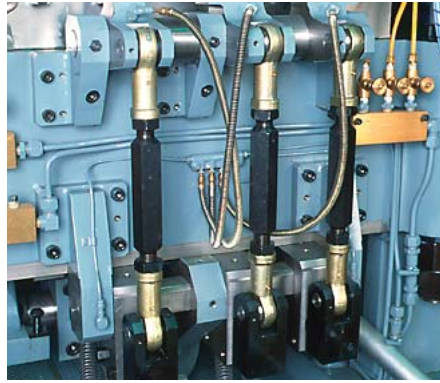
## Die set

Machine model		TP-15	TP-25	TP-45	TP-45D	TP-75	TP-65D	TP-100	TP-150
Max. draw (Standard ram stroke)	mm	15.9	20.6	25.4	57.2	31.8	76.2	65.0	65.0
Max. draw (Max. ram stroke)	mm	20.6	31.8	41.3	—	57.2	87.0	76.0	—
Max. width of material	mm	70	98	114	114	168	168	168	168
Max. feed length of material	mm	70	76	82	82	102	102	102	102
Number of stations (standard)		7 9 10 11	8 9 11 13 15	8 9 10 12 14	10 12	9 10 11 12 14	11 12 14	11 12 16	9 11 14
Center distance between stations	in	2½ 2 1¾ 1½	3 2½ 2 1¾ 1½	4 3½ 3 2½ 3½	3 5½ 5 4½ 4	3½ 4½ 4	140 <sub>m</sub> 127 <sub>m</sub> 95 <sub>m</sub>	173 <sub>m</sub> 140 <sub>m</sub> 109 <sub>m</sub>	
Max. blank diameter for blanking only	mm	38.1 31.8 25.4 19.1	50.8 41.3 31.8 25.4 19.1	69.9 63.5 57.2 50.8 38.1	57.2 50.8 95.3 82.6	69.9 63.5 57.2 69.9 63.5	91.0 82.0 62.0	112 91.0 66.0	
Max. blank diameter for blanking & cupping	mm	44.5 44.5 36.5 36.5	57.2 57.2 47.6 47.6 38.1	69.9 69.9 69.9 63.5 50.8	76.2 63.5 95.3 85.7	85.7 85.7 76.2 98.4 98.4	95.0 86.0 81.0	119 95.0 75.0	

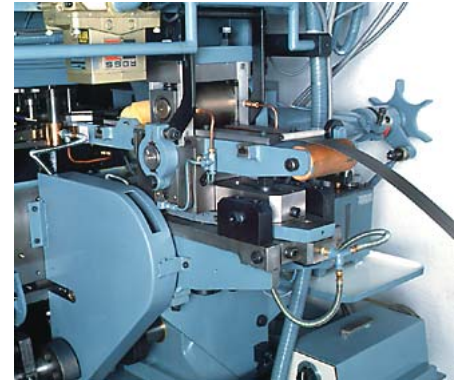
※Other number of stations is available.



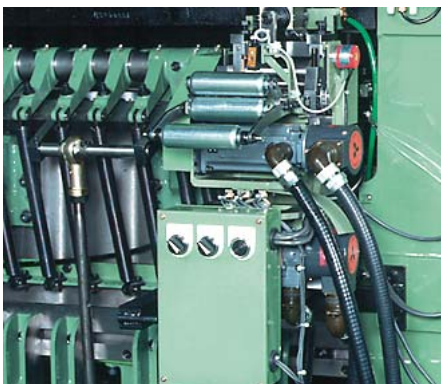
■ **Punch stripper & stop relief device** is to strip workpieces from punches at the stations workpieces cling to punches.



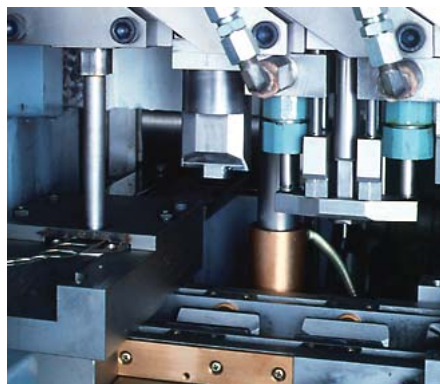
■ **Cross motion device** is mounted at the front or rear of the machine in order for cross-piercing, slotting and forming.



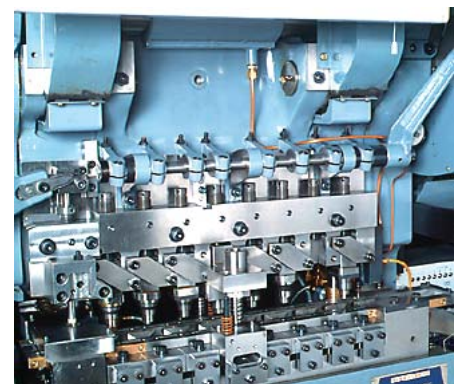
■ **Zig-Zag feeding device** is a mechanical feeder to feed material zig-zag by 2 rows and 3 rows.



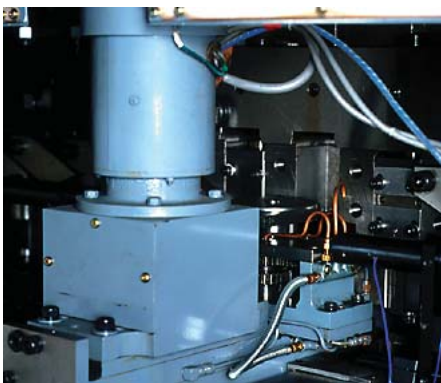
■ **CNC Zig-Zag feeding device** is a 2 axis CNC feeder to feed material zig-zag. Inputting blank diameter and bridge width makes automatic calculation of feeding length and swinging distance.



■ **Blank holder device** is used at #2 and subsequent stations to support drawing operation.



■ **Upper knockout device** is to knockout workpiece downward during the forming, using inside of punch.



■ **Thread rolling device** is mounted at the right end or middle of the machine in order for thread rolling, cutting and beading on workpieces.



■ **Oil lubrication device** is to supply drawing oils by compressed air from reservoir into dies to lubricate material during drawing operation.



■ **Workpiece transfer detecting device** is to detect mis-transfer of workpieces between the stations to stop the machine and avoid tool breakage.



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