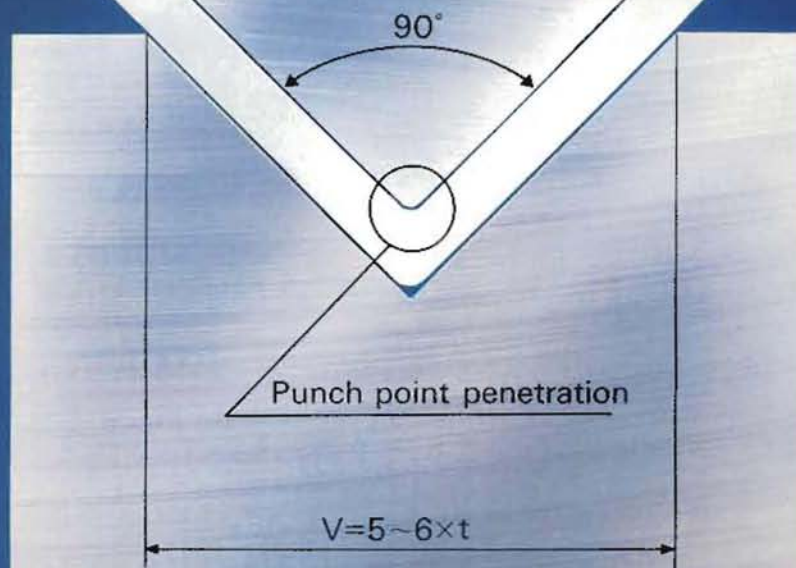
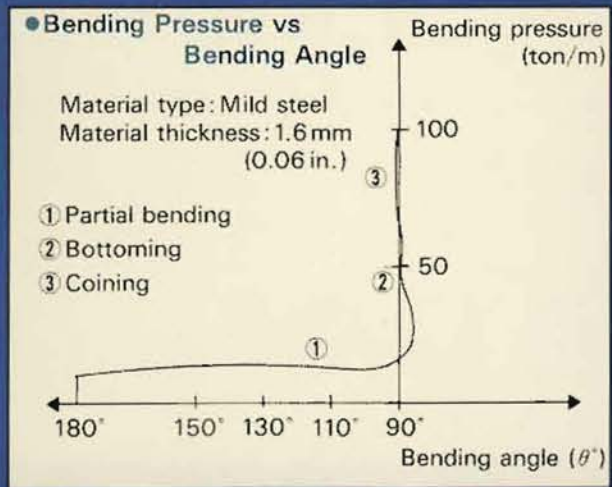


# SPH SERIES

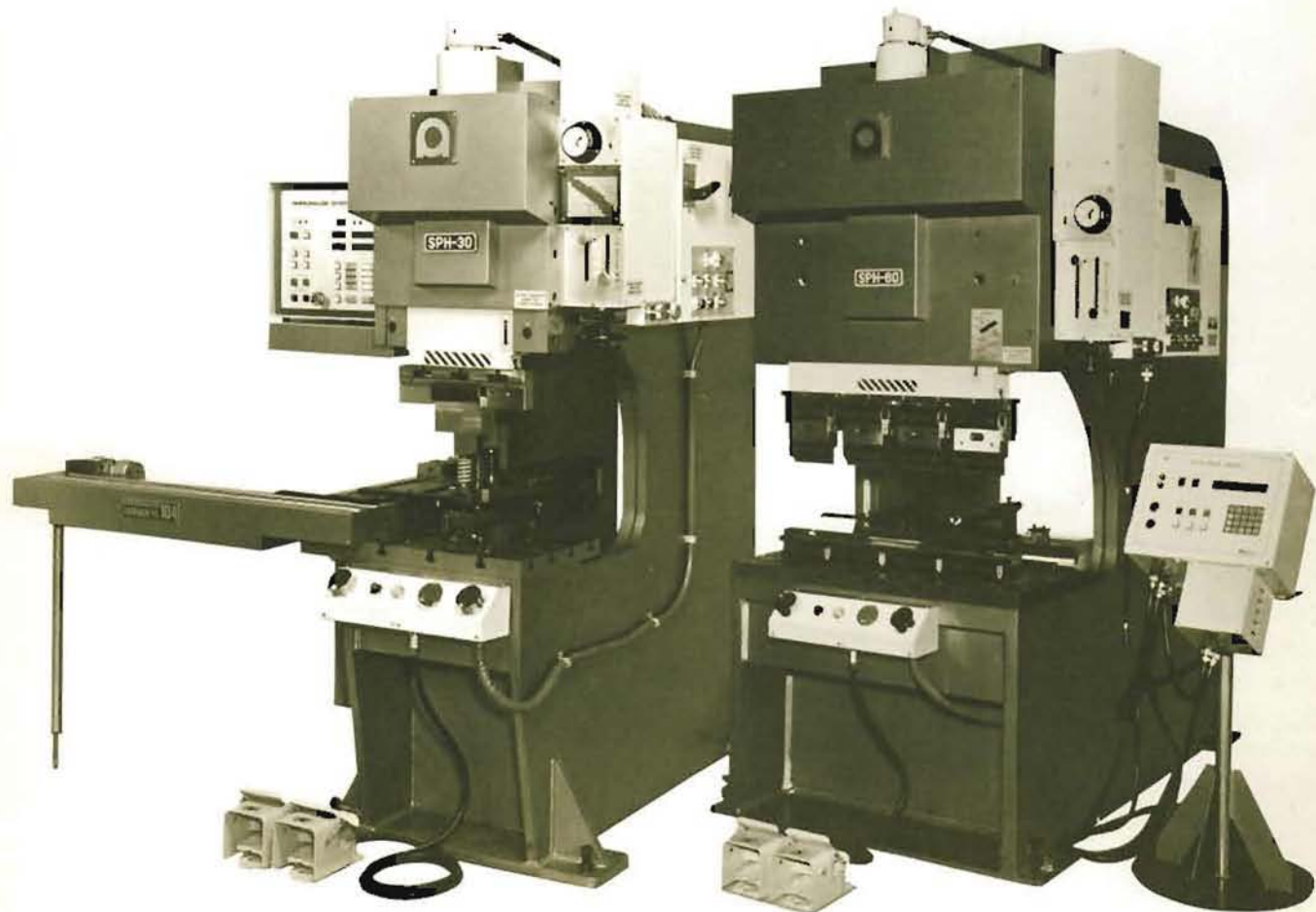
 **AMADA**  
SPH-30C • SPH-60C

**HYDRAULIC  
UNIVERSAL  
BRAKE  
&  
PRESS**

# Coining Cross-Section



# THE AMADA SPH SERIES HYDRAULIC BRAKE PRESSES COMBINE MULTI APPLICATION VERSATILITY WITH REMARKABLE PRODUCTIVITY AND ECONOMY



When more shop capacity is needed and floor space is at premium, there is always room for the SPH series press.

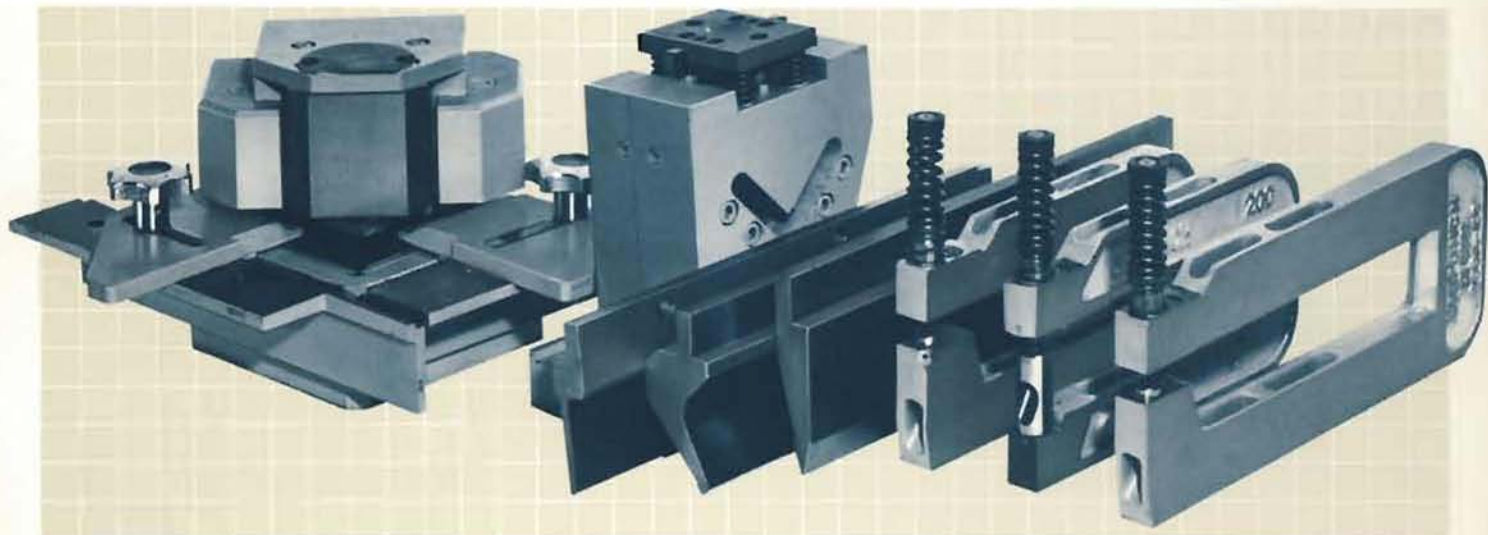
The unique features of the SPH hydraulic brake presses are adaptable to a multitude of metal processing applications.

The SPH presses can be quickly and easily set up for bending, punching, notching, cutting, and forming operations.

The SPH presses excel at the high tonnage, sharp radius bending applications found in the manufacture of electronic cabinetry, medical equipment, and other high precision products.

Optional equipment, including programmable gauging for bending and punching operations, is available to tailor the SPH press to your requirements.

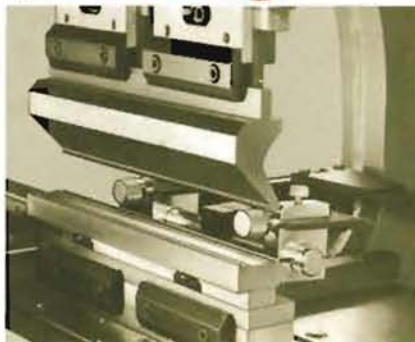
# One Machine That Does It All



The large T-slot bolster table and multi functional ram of the SPH presses provide access to several applications.

When more capacity is occasionally needed in any area of your shop, the SPH press is ready and capable, the SPH presses perform equally as well when dedicated to any of its many applications.

## 1 Bending



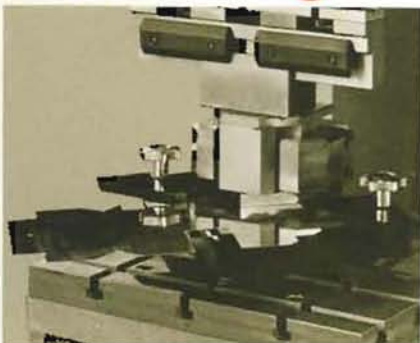
The power and precision required in bending applications is inherent with the SPH presses. The control mechanisms of the SPH press insure safe, accurate, and productive bending.

## 2 Punching



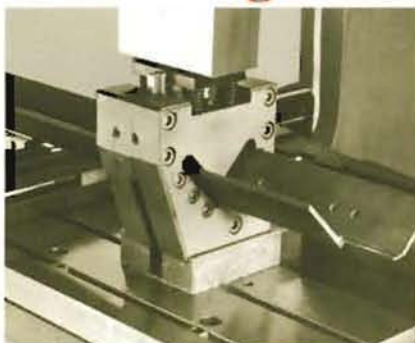
The SPH presses offer the speed and durability required for punching. Programmable gauging is available.

## 3 Notching



The SPH series hydraulic presses are adaptable to most any applications, including notching.

## 4 Cutting



Applications typical of Iron Workers are practical on the SPH presses.

## 5 Forming



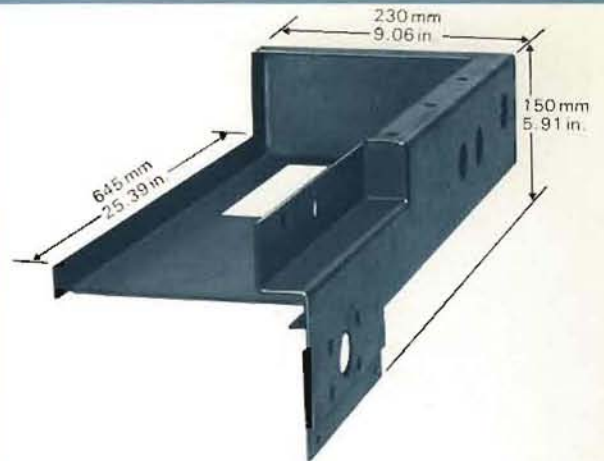
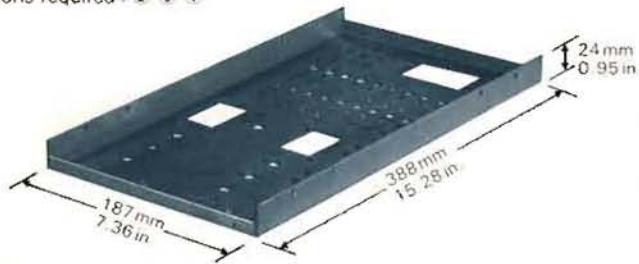
Punch and die sets for sheet metal forming and stamping are available. The optional SHANK HOLDER should

# WORKPIECE SAMPLES

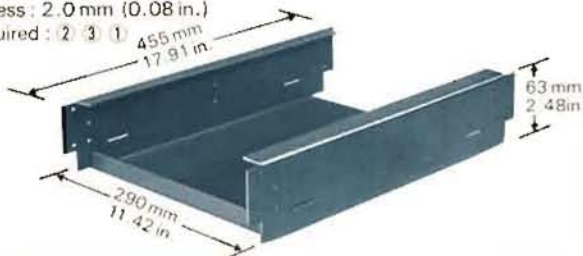
## Machine Operation

- ① Bending ② Punching ③ Notching  
④ Cutting ⑤ Forming

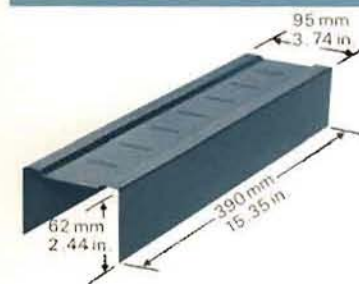
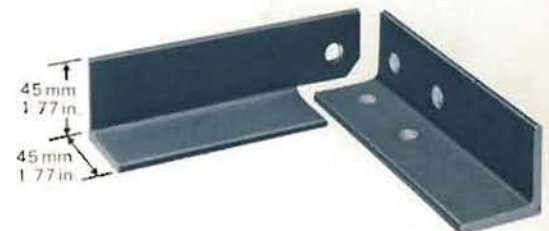
Part name : Electrical appliance parts  
Material type : Mild steel  
Material thickness : 1.2 mm (0.05 in.)  
Operations required : ② ③ ①



Part name : Stereo system chassis  
Material type : Aluminum  
Material thickness : 2.0 mm (0.08 in.)  
Operations required : ② ③ ①



Part name : Computer chassis  
Material type : Mild steel  
Material thickness : 2.6 mm (0.10 in.)  
Operations required : ② ③ ①

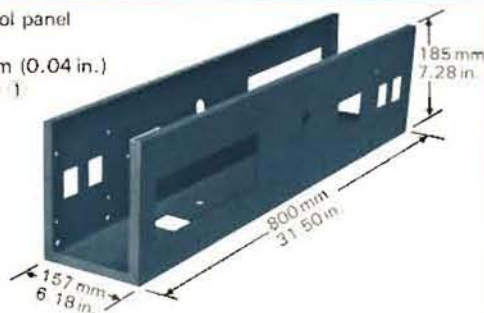


Material type : Mild steel  
Material thickness : 3.0 mm (0.12 in.)  
Operations required : ② ③ ④

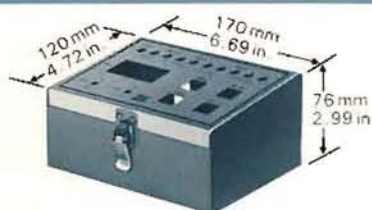
Part name : Steel rack  
Material type : Stainless steel  
Material thickness : 1.0 mm (0.04 in.)  
Operations required : ② ①

Part name : Electrical connection box  
Material type : Mild steel  
Material thickness : 0.8 mm (0.03 in.)  
Operations required : ② ③ ①

Part name : Elevator control panel  
Material type : Mild steel  
Material thickness : 1.0 mm (0.04 in.)  
Operations required : ② ③ ①



Part name : Control panel cover  
Material type : Mild steel  
Material thickness : 2.3 mm (0.09 in.)  
Operations required : ② ③ ①



Part name : Control box  
Material type : Mild steel

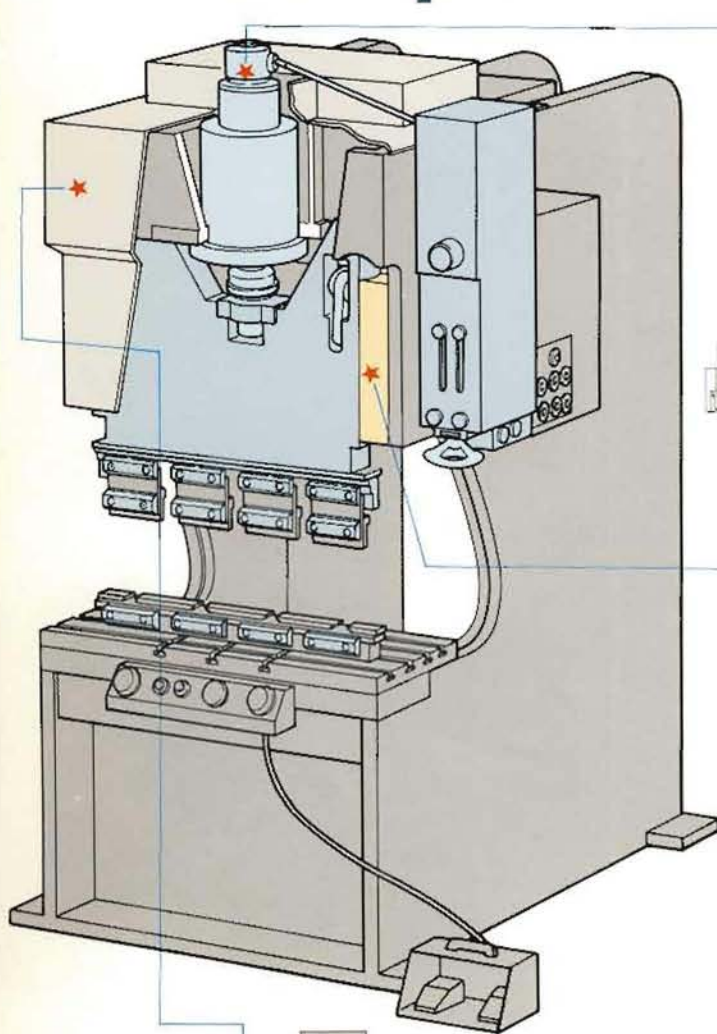


Part name : Meter panel  
Material type : Stainless steel



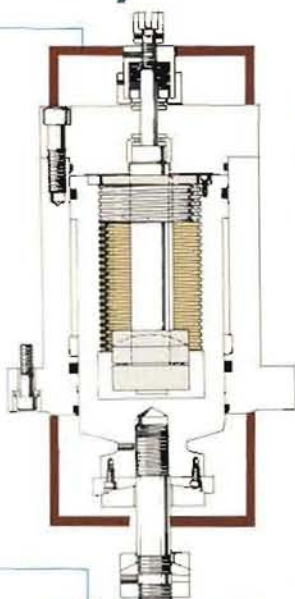
Part name : Medical equipment  
Material type : Stainless steel

# Powerfull Mechanism in Compact Body



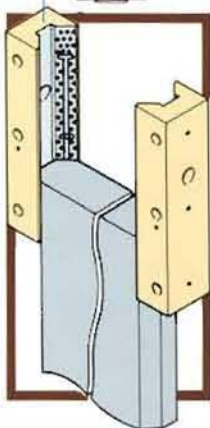
## Hydraulic Servo Ram Mechanism

The SPH presses utilize a rugged yet precise hydraulic system. The internal positive stop cylinder excels at both precision bending work and high tonnage punching. Stroke length is adjustable with a conveniently located handwheel. The ram position can be adjusted while developing tonnage. When using press brake tooling, the operator can dial in the bend angle with the material in the dies, the ram position is displayed by digital LEDs in units of 0.01mm (.0004 in.), thus eliminating much of the trial and error process common in bending work.



## Massive Ram Guides

The low maintenance oilless guiding system provides precise and durable ram guidance. This well designed ram guides are lubricated by embedded carbon warfers, thus eliminating many problems commonly associated with gibbing.



## Two Speed Operation

The point at which the ram slows to working speed can easily be selected by the operator. Optimum cycle times can be maintained and bending back lash problems can be eliminated.

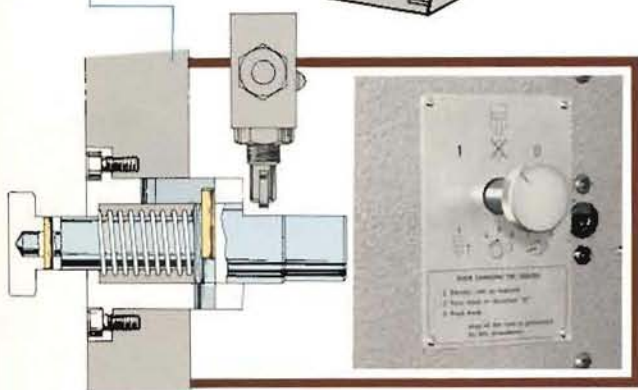
## Stroke Length Adjustment

This feature increases productivity by shortening the stroke length and cycle time. The optimum stroke length can quickly be set by upper limit adjust knob.



## Emergency Stop Button

One second's difference may be crucial in successfully coping with an emergency. The emergency stop button on the front operator's panel is located so that the operator may easily reach it. When the button is pushed, the whole machine is turned OFF and the ram stops immediately.



## Ram Lock Device

The ram lock can be activated prior to tool changes or other potentially hazardous operations. When the mode switch is turned OFF, the ram is electrically prevented from moving, when the ram lock knob on the left side of the frame is turned right and pushed in, the ram is mechanically locked resulting in duple safety operation.

## Designed For Efficiency

AMADA SPH presses have C-type main frames, used for their superior rigidity. Their open back structure allows processing of long and irregularly shaped workpieces.

The centrally located emergency stop button and the dual operation buttons

# OPTIONS

## AMADAN SS54 • SS104



This is a microcomputer-controlled X-Y positioning system. Memory capacity is 99 programs of 120 steps each. When press power is turned off, an internal battery maintains the programs intact.

## AUTO-BACKGAUGE



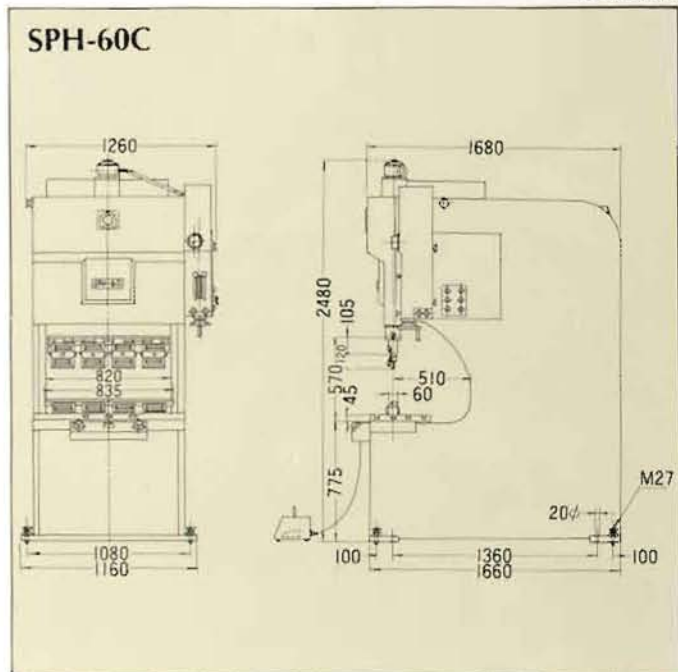
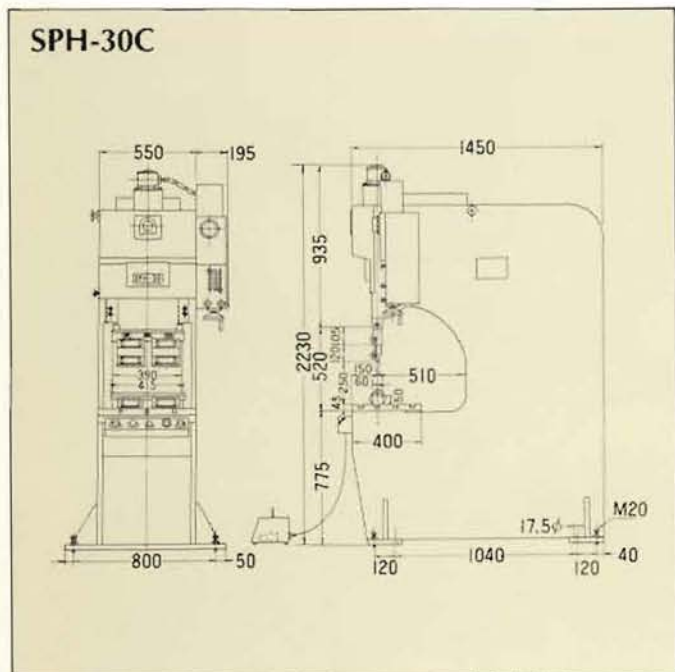
This gauge is designed especially for bending operations. It is controlled by key board with LED display, and can store 50 different bending positions.

## SPLIT TYPE SHANK HOLDER



A Shank Holder enables the SPH to be used as a stamping press, using existing tools.

unit : mm



# SPECIFICATIONS

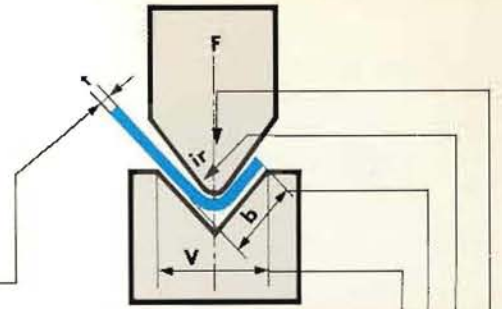
	SPH-30C	SPH-60C
CAPACITY	30 tons (Metric ton), 33 tons (U.S. ton)	60 tons (Metric ton), 66 tons (U.S. ton)
BENDING LENGTH	415 mm (16.34 in.)	835 mm (32.87 in.)
OPEN GAP	520 mm (20.47 in.)	570 mm (22.44 in.)
APPROACH SPEED	35~50 mm/sec. (1.38~1.97 in./sec.)	50 mm/sec. (1.97 in./sec.)
BENDING SPEED	50Hz	9 mm/sec. (0.35 in./sec.)
	60Hz	10.8 mm/sec. (0.43 in./sec.)
RETURNING SPEED	50Hz	64 mm/sec. (2.52 in./sec.)
	60Hz	76.8 mm/sec. (3.02 in./sec.)
MOTOR	2.2 kW (3 HP)	5.5 kW (7.5 HP)
HYDRAULIC OIL	40 liters (10.567 gal.)	60 liters (15.850 gal.)
WEIGHT	2,450 kg (5.401 lb.)	5,000 kg (11.023 lb.)

Specification subject to change without prior notice.

# HOW TO READ THE PRESSURE CHART

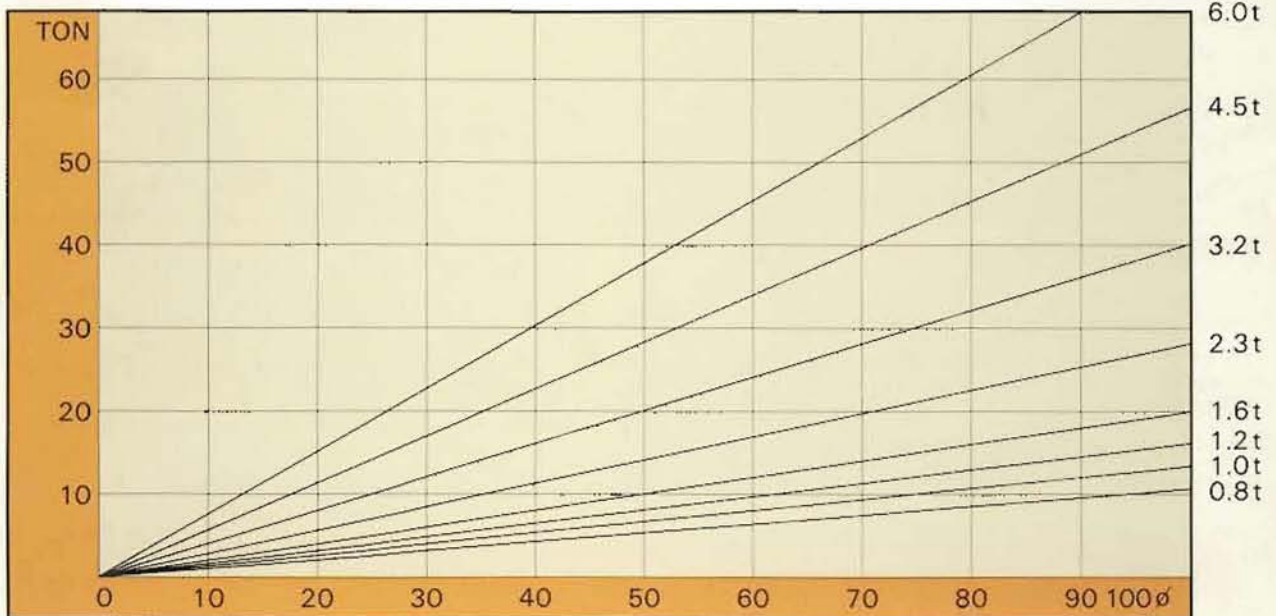
If the material thickness and inner bending radius are known, the following information can be obtained from the chart below:

1. Pressure required to bend material of 1 meter length.
2. Die width to be used.
3. Minimum bendable flange width.



t	4	6	7	8	10	12	14	16	18	20	25	32	40	50	63	80	100	125	160	200	250	V	b	ir	
%	0.7	1	1.1	1.3	1.6	2	2.3	2.6	3	3.3	4	5	6.5	8	10	13	16	20	26	33	41				
0.5	4	3																							
0.6	6	4	4	4																					
0.8		7	7	5	4																				
1.0		11	10	8	7	6																			
1.2			14	12	10	8	7	6																	
1.4				15	13	11	10	9	8																
1.6					17	15	13	11	10	9															
2.0						22	19	17	15	13	11														
2.3							25	23	19	17	15	12													
2.6								28	25	22	18	14													
3.0									34	30	24	19	15												
3.2										34	27	22	17	14											
3.5											33	26	20	16	13										
4.0												43	34	27	21	17									
4.5													44	34	27	21									
5.0														52	42	33	26	21							
6															60	48	38	30	24						
7																	52	41	33	26					
9																		67	54	43					
10																			85	67	53	42			
12																				96	78	60	55		
16																					136	107	86		
19																						150	125	100	
22																							160	130	
25																								210	170
30																									240

t Material thickness  
(tensile strength: 45-50 kg/mm<sup>2</sup>)  
F Pressure per 1 meter  
ir Inner bending radius  
b Minimum flange width  
V Die width



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