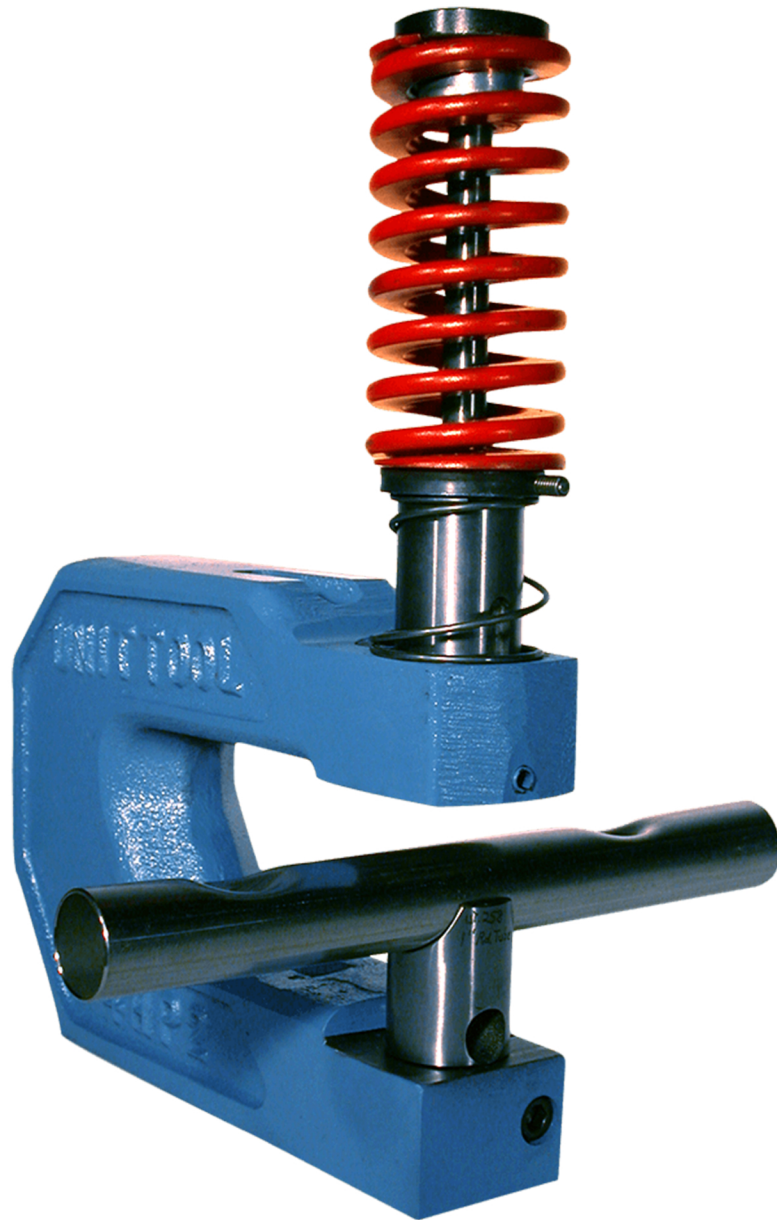




**TUBING, CHANNEL, AND
HORIZONTAL PUNCHING UNITS**



UNITTOOL PUNCH AND DIE COMPANY INC.

311 5th Street NW Clear Lake, WI 54005 | Phone: 1-716-873-8453 | Email: Info@Unittool.com

UNITTOOL TUBING, CHANNEL, AND HORIZONTAL PUNCHING UNITS

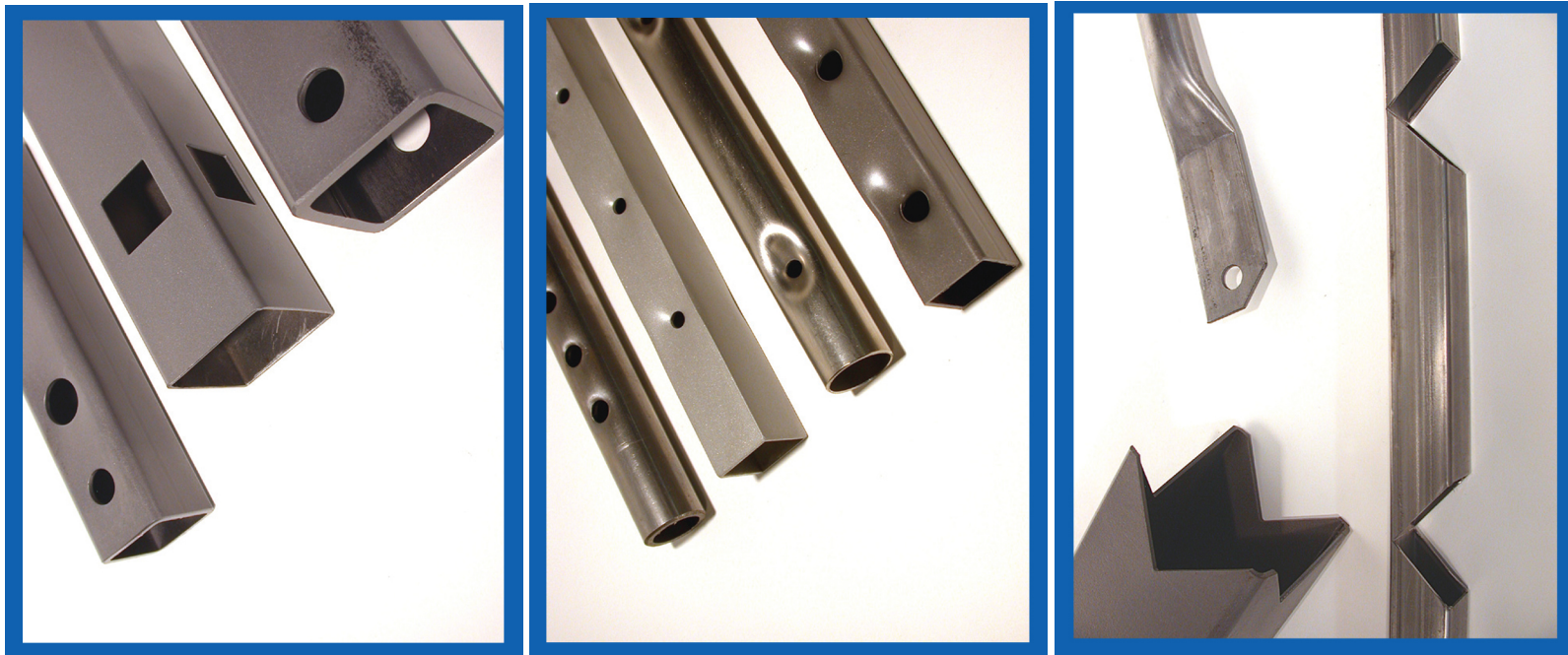
Unittool and Unipunch brands have combined and merged product offerings.

TABLE OF CONTENTS

TUBE PIERCING UNITS PAGES 3-4

HORIZONTAL PAGES 5-6
PUNCHING UNITS

HEAVY-DUTY CHANNEL PAGE 7
PUNCHING UNITS



MODEL TP-1 1/2"

(Two Piece Type)

TUBE PIERCING UNIT

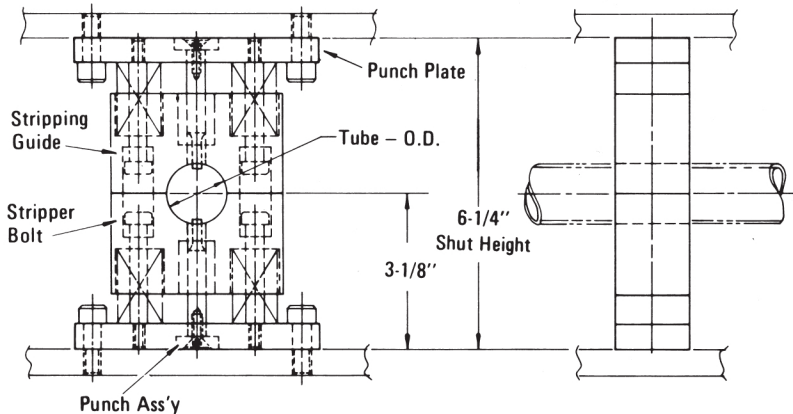
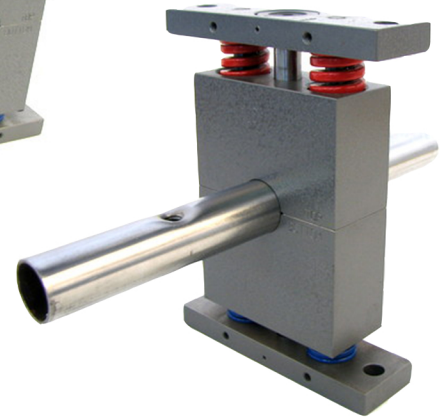
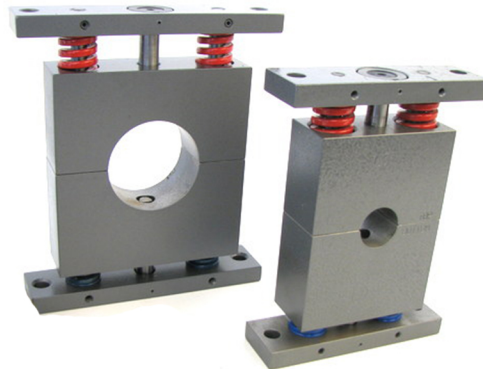
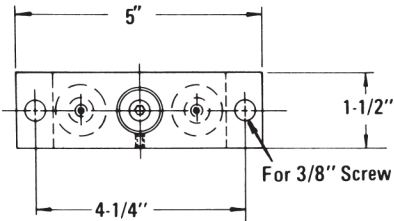
Capacity

1/2" to 1 1/4" O.D. Tube

3/4" to 1 1/4" Square Tube

Max. Punch Dimension – .500

Max. Wall Thickness – .125



DESCRIPTION	CATALOG NUMBER
For Round Tubing – Assembled Unit including upper and lower sections with punches	TPA - 1 1/2 (Round)
For Square or Rectangle Tubing – Assembled Unit including upper and lower sections with punches	TPA - 1 1/2 (Sq. or Rect.)
Spare Parts –	
Stripping Guide only (Round)	TPSG-150 (Rd.)
Stripping Guide only (Sq. or Rect.)	TPSG-150 (Sh.)
Punch Plate	TPPP-150
Stripping Spring	TPSS-150
Stripper Bolt	3/8 x 2
Socket Cap Screw for Mounting	3/8 - 16 x 1

DESCRIPTION	OVERALL LENGTH	TUBE SIZE	CATALOG NUMBER
Punch Ass'y.	3-1/32	9/16 to 11/16	TPPA - 500-1
Punch Ass'y.	2-29/32	3/4 to 7/8	TPPA - 500-2
Punch Ass'y.	2-13/16	15/16 to 1-1/16	TPPA - 500-3
Punch Ass'y.	2-23/32	1-1/8 to 1-1/4	TPPA - 500-4
Specify Punch Tip Size			

For shaped hole units – ask for quotation

When ordering – specify – hole diameter, size of tube, wall thickness, type of material.

© Copyright Unitool Punch & Die Company – 1971, 1991.

Unitools low cost, two piece tube piercing units were designed to pierce up to 1/2" diameter holes in round tubing from 1/2" to 1 1/4" diameters — 3/4" through 1 1/4" square tubing, and rectangular tubing up to 1 1/4" cross sections.

Each complete unit consists of two identical punch assemblies. One assembly is attached to the ram of the press and the other assembly is secured to the press bed. The assemblies are generally mounted on upper and lower base plates or templates. Alignment between the upper and lower assembly is not necessarily critical since there is no die section and therefore punch and die shear are eliminated.

The amount of distortion around the hole, where the punch enters, will vary according to the size of the tube and the size of the perforated hole. The depression will appear where each punch enters. If it is desirable to punch one side only – merely omit the punch from one punch assembly. If it is desirable to have the depression on one side only – see "C" frame type unit shown on opposite page that will punch through both tubing walls from one direction.

Additional stripper guides must be ordered for each tubing size. The stripper guide will accommodate any size punch tip up to 1/2" diameter.

Special units for larger tubing or larger hole sizes are available upon request.

MODEL TP-2"

("C" Frame Type)

TUBE PIERCING UNIT

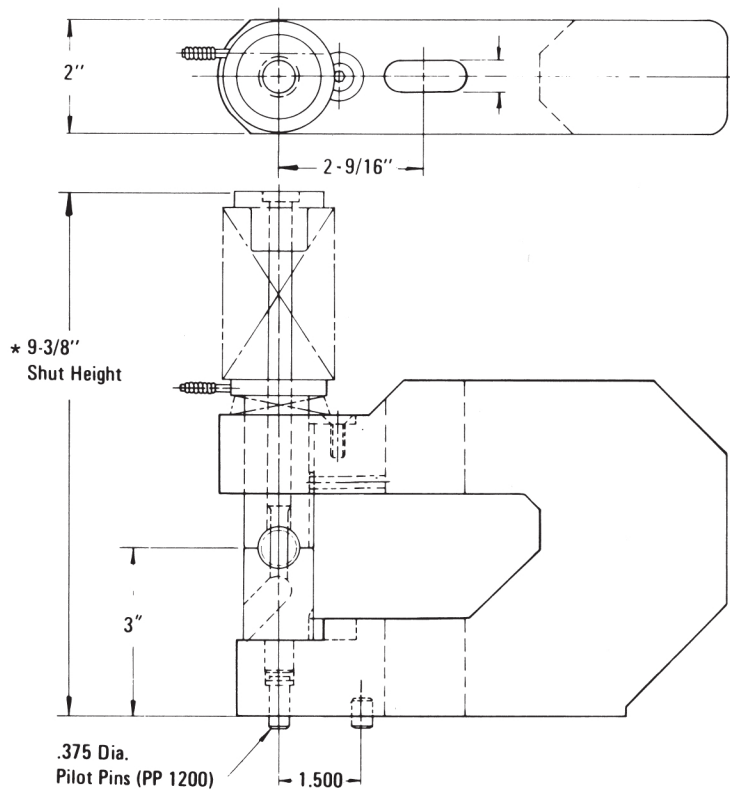
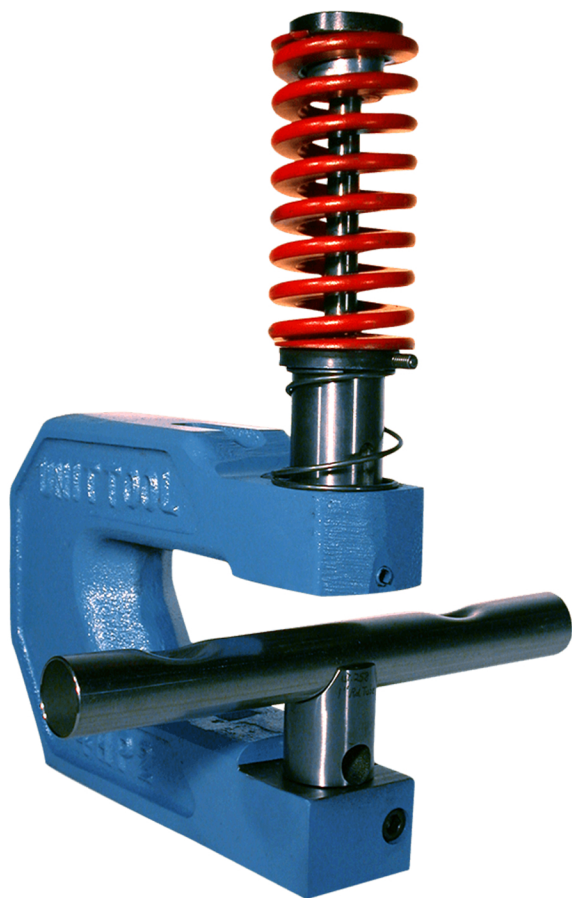
Maximum Tube Sizes

Round - 1" Dia. • Square - $\frac{7}{8}$ "

Maximum Punch Dimension

$\frac{7}{16}$ "

Maximum
Wall Thickness - 125



When ordering, specify hole diameter, tube diameter & tube wall thickness.

DESCRIPTION	CATALOG NUMBER
Complete Assembled Unit (For Round Holes)	TP-2
Parts (For Round Holes)	
Punch	TPP-202
Die	TPD-203
Guide	TPG-204
Stripper Spring	TPSS-205
Punch Head	TPPH-207

For Shaped Hole Units or Parts – ask for quotation

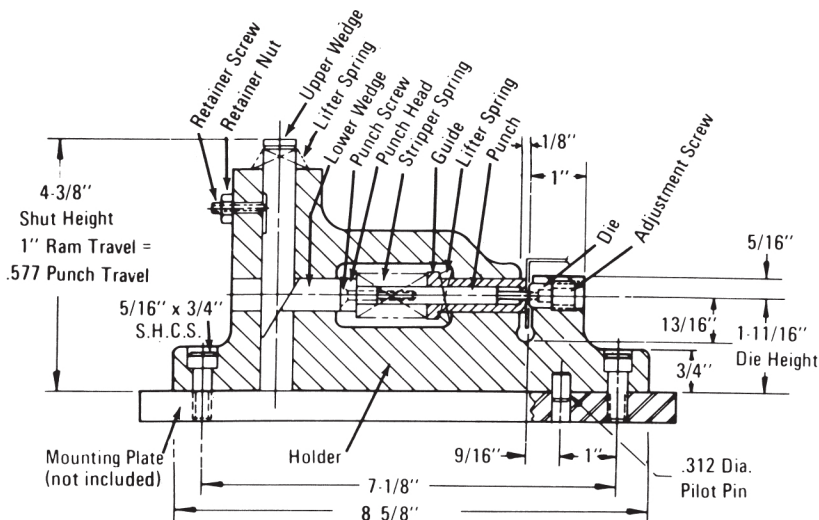
Unittools Tube Punching Units are self contained and self aligned with nothing attached to the ram of the press. Setups can be made quickly on a base plate, template or tee slotted plate. The $\frac{3}{8}$ " pilot pins in the bottom of the unit are used for accurately locating the units on a template or base plate. The pilot pins may be removed for setups on tee slotted plates.

Distortion around the hole appears only on one side of the tube. The punch tip travels through the tube and will punch a clean hole, without distortion, on the bottom side of the tube that is supported by the die section. The amount of distortion around the hole, where the punch tip enters, will vary according to the size of the tube and the size of the hole. For depression on each side of tube that may be desirable see unit on Page 1.

*Approximate – Tube Size determines Shut Height.

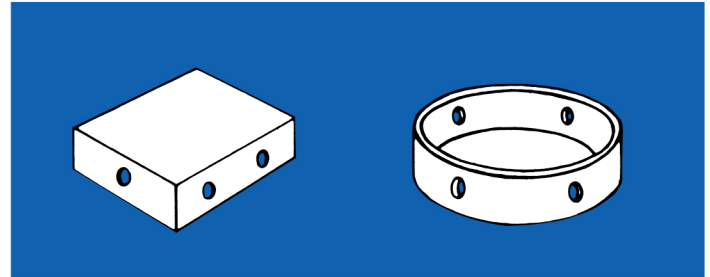
HORIZONTAL PUNCHING UNITS

(For Round Holes)



Horizontal Punching Units are designed for perforating round and shaped holes in flanges, angles, boxes and other formed parts. The cam action of this equipment makes it possible to use the units in a press brake or punch press without any special attachments. There is nothing attached to the ram of the press. The 3/8" pilot pin in the base of the unit can be used to accurately locate the tooling on a template in a straight line or scattered hole pattern. Standard punches, dies, guides, springs, etc. are readily available from our large inventory.

Our free engineering service is available to help solve your production needs. Send drawing or sample part for quotation or ask for a Unitool representative to call at your plant.



Max. Punch Size and Material Thickness
.250 in 3/32" thick steel, .312 in 1/16" thick mild steel

Unit Width — 3/4"

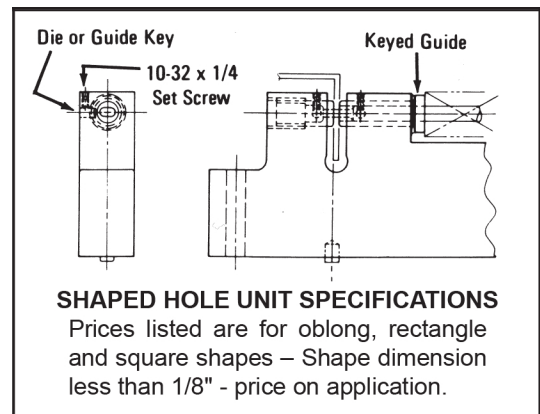
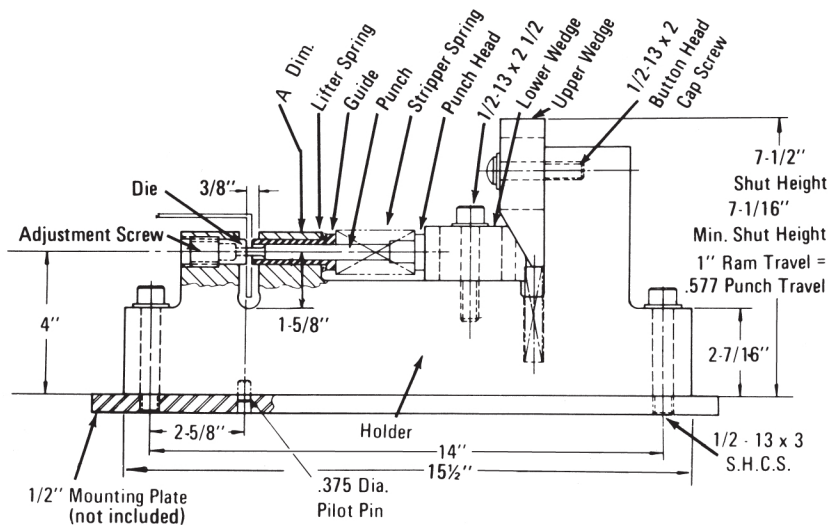
Approximate Weight 4 #

DESCRIPTION	CATALOG NUMBER
Complete Unit including Punch & Die (for Round Holes Only)	HWP-3/4
- PARTS -	
Punch Head	HZPH-077
Punch Only	MP-122
Punch & Head Assembly	HWP-072A
Die	HZD-073
Retainer Screw	1/4-20 x 3/8 Half Dog Set Screw
Retainer Nut	1/4-20
Punch Screw	10-32 x 1/4 F.A.S.S.
Guide	HZG-074
Stripping Spring	HZSS-075
Lifter Spring	LLS-076
Upper Wedge	HZW-078U
Lower Wedge	HZW-079L
Adjustment Screw	HZS-071
Pilot Pin	HZPP-075
Holder	HWP-3/4C

HORIZONTAL PUNCHING UNITS

(For Round & Shaped Holes)

SPECIFICATIONS			
DESCRIPTION	HWP-1 ¹ / ₄	HWP-1 ¹ / ₂	HWP-2
Holder Width	1 ¹ / ₄	1 ¹ / ₂	2
"A" Dimension	9/16	11/16	7/8
Maximum Punch Dimension	.4375	.625	.875
Maximum Material	.250	.250	.250
Approximate Weight	21#	25#	32#



DESCRIPTION	CATALOG NUMBER		
	MODEL HWP-1 ¹ / ₄	MODEL HWP-1 ¹ / ₂	MODEL HWP-2
Complete Unit (For Round Hole Only)	HWP-1 ¹ / ₄	HWP-1 ¹ / ₂	HWP-2
Complete Unit (For Shaped or Round Holes) – Includes Punch & Die –	HWP-1 ¹ / ₄ K	HWP-1 ¹ / ₂ K	HWP-2K
PARTS			
Punch Head	HPH-127	HPH-157	HPH-207
Round Punch	HP-122	HP-152	HP-202
Round Punch & Head Ass'y.	HPA-122A	HPA-152A	HPA-202A
Shaped Punch & Head Ass'y.	HPA-122K	HPA-152K	HPA-202K
Round Die	HD-123	HD-153	HD-203
Shaped Die	HD-123K	HD-153K	HD-203K
Guide (Not Keyed)	HG-124	HG-154	HG-204
Guide (Keyed)	HG-124K	HG-154K	HG-204K
Die or Guide Key	GK-100	GK-100	GK-100
Stripper Spring	HSS-125	HSS-155	HSS-205
Lifter Spring	HLS-126	HLS-156	HLS-206
Pilot Pin (Round)	PP-1000	PP-1000	PP-1000
Pilot Pin (Diamond)	PP-1000K	PP-1000K	PP-1000K
Upper Wedge	HZW-12BU	HZW-15BU	HZW-15BU
Lower Wedge	HZW-129L	HZW-159L	HZW-208L
Wedge Lifter Spring	HZLS-127	HZLS-127	HZLS-127
Adjustment Screw	HZS-121	HZS-151	HZS-201
Holder (Not Keyed)	HWP-1 ¹ / ₄ C	HWP-1 ¹ / ₂ C	HWP-2C
Holder (Keyed)	HWP-1 ¹ / ₄ CK	HWP-1 ¹ / ₂ CK	HWP-2CK

HEAVY-DUTY CHANNEL PUNCHING UNITS

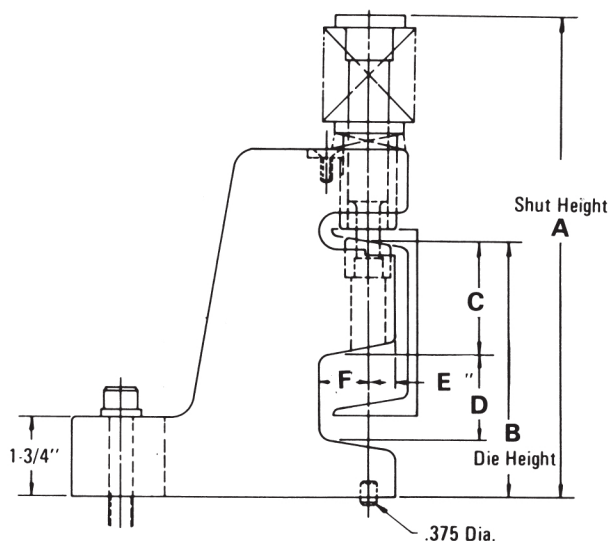
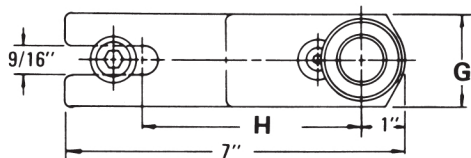
For - Channels • Angles • Extrusions



Standard round and shaped hole units are especially designed to punch up to 5/8 diameter holes in 3 and 4" structural channel, and up to 13/16 diameter holes in 5 and 6" structural channel. The face of the die buttons are ground at the same angle as the taper on the channel flange. The surface of the die button is ground smooth, however, the face of the die can be serrated to prevent the channel from drifting prior to the punch entering the material. The smooth face die generally works out satisfactorily. The taper on the face of the die button may be eliminated when punching channels with straight flanges – please specify die No. HD153. for Model HCP-2 and Die No. HD-203 for Model HCP-2-1/4

SPECIFICATIONS

DESCRIPTION	HCP-2 for 3" & 4" CHANNEL	HCP-2 1/4 for 5" & 6" CHANNEL
Max. Punch Size	5/8	13/16
Shut Height—A	10 3/8	12 5/8
Die Height—B	5 1/2	7 3/4
Dimension—C	2 1/4	3 1/4
Dimension—D	1 3/4	3
Dimension—E	Advise	3/4
Dimension—F	1"	1 1/8
Dimension—G	2"	2 1/4
Dimension—H	4 1/8	5
Approx. Weight	16#	26#



CATALOG NUMBER

DESCRIPTION	CATALOG NUMBER	
	HCP-2 MAX. PUNCH SIZE .625	HCP-2 1/4 MAX. PUNCH SIZE .8125
Complete Unit — Round Hole	HCP-2 *	HCP-2 1/4
Complete Unit — Shaped Hole	HCP-2K	HCP-2 1/4K
PARTS		
Punch Head & Ass'y (Round)	HPA-202A	HCPA-202A
Punch	HP-202	HCP-202
Punch Head	HPH-207	HPH-207
Punch Head & Ass'y (Shaped)	HPA-202K	HCPA-202K
Round Hole Die (Smooth Face)	HCPD-153	HCPD-203
Round Hole Die (Serrated Face)	HCPD-153SF	HCPD-203SF
Shaped Die (Smooth Face)	HCPD-153K	HCPD-203SFK
Shaped Die (Serrated Face)	HCPD-153SFK	HCPD-203SFK
Guide (Not Keyed)	HG-204	HG-204
Guide (Keyed)	HG-204K	HG-204K
Guide Retainer	GR-300	GR-300
Stripper Spring	HSS-205	HSS-205
Punch Retainer	PR-100	PR-100
Lifter Spring	HLS-206	HLS-206
Pilot Pin	PP-1000	PP-1000
Holder (Not Keyed)	HCP-2C	HCP-2 1/4C
Holder (Keyed)	HCP-2CK	HCP-2 1/4CK

*Note: If taper on face of die is not desired, please specify die No. HD153.