## PORTABLE LITENING

Now punch holes up to 3" right at the work sight. No longer is it necessary to take the work piece to a hydraulic press, merely drill the prescribed hole through the work piece, insert the punch base and draw bolt through the hole, screw it to the punch and flair ring and then tighten with a wrench. Cut and flair in one operation!!!

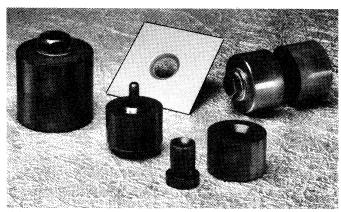
These punches are made from the same quality steel as our standard hole punch and will cut material with a tensile strength up to 55,000 LB and a yield to 50,000 LB. The punches are designed to cut aluminum to 14 gauge and mild steel to 16 gauge.

Punches are available in sizes from 1" to 3" in 1/4" increments. The flair ring angle is 45 degrees.

CATALOG NO.	CUTTING DIA.			
PL-1000	1"			
PL-1250	1-1/4"			
PL-1500	1-1/2"			
PL-1750	1-3/4"			
PL-2000	2"			
PL-2250	2-1/4"			
FLARING 1/8" LARGER THAN CUTTING DIAMETER				
PL-2500	2-1/2"			
PL-2750	2-3/4"			
PL-3000	3"			

PLK (All 9 Pcs. Above).....

Required starter hole for the 1" and 1-1/4" is 9/16" and for the 1-1/2" to 3" it will require a 3/4" starter hole. We recommend using a holesaw with guidedrills for this process. Torque requirements for the 3" punch is approximately 170 ft LB.



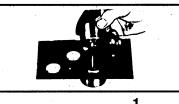
## **WARNING:**

The following precautions should always be used:

- 1. Eye protectors must always be used.
- 2. The punches produce a hole with sharp edges that can easily be removed with low cost modern equipment.

MAX CAPACITY:	HOLE CUTTING			FLANGING		
Aluminum:	14 SWG.	0.08"	2.0mm	16 SWG.	0.064"	1.6mm
Mild Steel:	16 ŚWG.	0.064"	1.6mm	16 SWG.	0.064"	1.6mm
Aircr. Steel:	18 SWG.	0.050"	1.2mm	18 SWG.	0.050"	1.2mm
Stainless:	18 SWG.	0.050"	1.2mm	18 SWG.	0.050"	1.2mm
Titanium:	18 SWG.	0.050"	1.2mm	18 SWG.	0.050"	1.2mm

## TRIPLE-ACTION LIGHTNING HOLE PUNCHES





Punch in position with guide pin passing through hole in metal.



First movement of punch causes cutting die to blank out hole.

2



3
Forming dies flange edges and straighten metal around hole.

For a fast, accurate job, you can't beat the MMA Triple\_Actioned Hole Punch, ONE – drill a small hole and insert the guide pin... TWO – put the halves of the punch together, and THREE – clamp them in an arbor press. Presto – you've made an opening the desired size...flanged it...and straightened the metal around it to its original size.

Size	CAT. NO.	
1"	LHPA	
1-1/4"	LHPAA	-
1-1/2"	LHPB	
1-3/4"	LHPBB	
2"	LHPÇ	
2-1/4"	LHPCC	
2-1/2"	LHPD	
2-3/4"	LHPDD	
3"	LHPE	
3-1/4"	LHPEE	
3-1/2"	LHPF	,
3-3/4"	LHPFF	-
4"	LHPG	

Larger Sizes Available Specify P.O.A. LHPK

(All 13 Pcs. Above).....

