



## PIERCE-ALL INC.

6087 NETHERHART ROAD, UNIT 4,

MISSISSAUGA, ON. L5T 1G5

Phone (905) 670-2975 Fax (905) 670-5738

“The Name Says it All”

### Introduction

Pierce-All Perfomate Tooling System helps to keep hole punching costs down and production rates up. Perfomate round or shaped punches and dies are available in the following size ranges 0 – 1¼”, 1¼” to 2”, 2” – 3½”. An additional size range, 3 ½” – 5” is available for use in the Pierce-All 50ton hole punching machine. In each size range, the punch driver and stripping assembly accepts all round or shaped punches within that group. Because punch and die changes are fast, out of production time is minimal. With perfomate tooling it is not necessary to purchase complete assemblies for each punch, just the punch and die.

### Standard and special shapes

Tooling is available in a wide variety of standard round and shaped punches and dies. Special punches and dies can be made to any configuration. The following pages contain all the information you need to order to your specifications. The perfomate die system is economical and simple to use. Punches in the 0 to 1¼” size range use inexpensive die buttons and die button holders. All round or shaped dies up to 2” are held in die adapters. Dies in the 2” to 3½” size range are placed directly into the die locator ring on the machine table.

### Standard keying method

Shaped punches are keyed so that they may be oriented parallel, perpendicular or at a 45° angle to the tool holder centerline. For tooling in the 1¼” to 2” and 2” to 3½” size ranges, the key is incorporated in the punch driver and stripping assembly. Tooling in the 0 to 1 ¼” size range requires a separate key. It is slipped over the fork of the punch driver and stripping assembly. The punch is then inserted into the fork; the flats on the punch are matched with flats on the key and oriented in relation to the ears on the key. As the assembly is placed in the stripping guide, the ears on the key drop into slots in the upper collar of the guide which is keyed to the tool holder.

### Shear-proof punch

The shear-proof punch eliminates distortion and is recommended when less than full hole punching is required and when large openings in a sheet are needed. It has a built-in stripping mechanism that acts as a positive hold down on the material until the stripping stroke is completed. While the shear proof punch is designed for the Pierce-All Performator, it can be used on other hole punching machines with a special adapter. It is available in a 1/8” square and 2” square sizes.

### Perfomate tooling is versatile

Versatile perfomate tooling is standard for all Pierce-All Performator hole punching machines. Perfomators also accept tooling for machines of other manufactures. The wide range of perfomate tooling sizes, available off the shelf, eliminates the need for many specials.

### The multi purpose tool storage cabinet

Available from Pierce-All is the ideal cabinet for safe, convenient storage of punches and dies and other valuable tooling and accessories. The drawers glide easily on a heavy-duty suspension ball bearing system. The drawers open fully without sagging, for easy access to all stored items. One standard size suspension system fits all drawers to provide maximum flexibility. Drawer capacity is 400 pounds. The large sturdy drawer pull is supplied with labels and protective vinyl shields to provide easy identification of drawer contents. Each cabinet comes complete with Safeguard locking device for complete security and a variety of drawer accessories that include 23 partitions, 115 dividers, 5 groove trays and 140 label holders.

### Specifications

| <b>Cabinet Dimensions</b> | Inches            |
|---------------------------|-------------------|
| Height                    | 26”               |
| Width                     | 30”               |
| Depth                     | 27 ¾”             |
| <b>Drawer Dimensions</b>  |                   |
| Area                      | 25 1/8” x 25 1/8” |
| Useable draw heights      | 2 @ 3”            |
|                           | 2 @ 4”            |
|                           | 1 @ 8”            |

## RECTANGULAR POINT SIZE LIMITATION

Length



| ½" STN           |       | 1" STN           |       | 1 ¼" STN        |       | 2" STN           |        | 3 ½" STN |        |
|------------------|-------|------------------|-------|-----------------|-------|------------------|--------|----------|--------|
| W                | L     | W                | L     | W               | L     | W                | L      | W        | L      |
| .125             | .4840 | .125             | .9921 | .125            | 1.243 | .125             | 1.9960 | .125     | 3.4977 |
| .156             | .4750 | .156             | .9877 | .156            | 1.240 | .156             | 1.9938 | .156     | 1.4965 |
| .187             | .4636 | .187             | .9823 | .187            | 1.235 | .187             | 1.9911 | .187     | 3.4940 |
| .218             | .4499 | .218             | .9759 | .218            | 1.230 | .218             | 1.9880 | .218     | 3.4931 |
| .250             | .4330 | .250             | .9682 | .250            | 1.224 | .250             | 1.9843 | .250     | 1.4910 |
| .281             | .4135 | .281             | .9596 | .281            | 1.217 | .281             | 1.9826 | .281     | 3.4886 |
| .312             | .3907 | .312             | .9500 | .312            | 1.210 | .312             | 1.9754 | .312     | 3.4860 |
| .343             | .3637 | .343             | .9393 | .343            | 1.201 | .343             | 1.9702 | .343     | 3.4831 |
| Max Square .3535 |       | .375             | .2962 | .375            | 1.192 | .375             | 1.9645 | .375     | 3.4784 |
|                  |       | .406             | .9138 | .406            | 1.182 | .406             | 1.9583 | .406     | 3.4763 |
|                  |       | .437             | .8994 | .437            | 1.171 | .437             | 1.9515 | .437     | 3.4725 |
|                  |       | .500             | .8660 | .500            | 1.145 | .500             | 1.9364 | .500     | 3.4641 |
|                  |       | .562             | .8271 | .562            | 1.116 | .562             | 1.9192 | .562     | 3.4548 |
|                  |       | .625             | .7804 | .625            | 1.082 | .625             | 1.8998 | .625     | 3.4422 |
|                  |       | .687             | .7267 | .687            | 1.043 | .687             | 1.8781 | .687     | 3.4317 |
|                  |       | Max Square .7071 |       | .750            | 1.000 | .750             | 1.8540 | .750     | 3.4186 |
|                  |       |                  |       | .812            | .949  | .812             | 1.8275 | .812     | 3.4043 |
|                  |       |                  |       | .875            | .892  | .875             | 1.7984 | .875     | 3.3888 |
|                  |       |                  |       | Max Square .833 |       | .937             | 1.7666 | .937     | 3.3721 |
|                  |       |                  |       |                 |       | 1.000            | 1.7320 | 1.000    | 3.3541 |
|                  |       |                  |       |                 |       | 1.062            | 1.6944 | 1.062    | 3.3348 |
|                  |       |                  |       |                 |       | 1.125            | 1.6535 | 1.125    | 3.3142 |
|                  |       |                  |       |                 |       | 1.187            | 1.6092 | 1.187    | 3.2923 |
|                  |       |                  |       |                 |       | 1.250            | 1.5612 | 1.250    | 3.2690 |
|                  |       |                  |       |                 |       | 1.312            | 1.5090 | 1.312    | 3.2291 |
|                  |       |                  |       |                 |       | 1.375            | 1.4523 | 1.375    | 3.2185 |
|                  |       |                  |       |                 |       | 1.406            | 1.4221 | 1.406    | 3.2050 |
|                  |       |                  |       |                 |       | Max Square 1.414 |        | 1.437    | 3.1911 |
|                  |       |                  |       |                 |       |                  |        | 1.500    | 3.1621 |
|                  |       |                  |       |                 |       |                  |        | 1.625    | 3.1010 |
|                  |       |                  |       |                 |       |                  |        | 1.750    | 3.0310 |
|                  |       |                  |       |                 |       |                  |        | 1.875    | 2.9553 |
|                  |       |                  |       |                 |       |                  |        | 2.000    | 2.8722 |
|                  |       |                  |       |                 |       |                  |        | 1.125    | 2.7810 |
|                  |       |                  |       |                 |       |                  |        | 2.250    | 2.6809 |
|                  |       |                  |       |                 |       |                  |        | 2.375    | 2.5708 |

| Recommended Total Cutting Clearance for Steel |                 |          |
|---|-----------------|----------|
| Gauge   | Steel Clearance | U.S. STD |
| 20  | .009            | .0359    |
| 19  | .009            | .0418    |
| 18  | .009            | .0478    |
| 17  | .012            | .0538    |
| 16  | .012            | .0598    |
| 15  | .015            | .067     |
| 14  | .018            | .0747    |
| 13  | .021            | .0897    |
| 12  | .021            | .1046    |
| 11  | .024            | .1196    |
| 10  | .024            | .1345    |
| 9   | .030            | .1495    |
| 8   | .030            | .164     |
| 7   | .035            | .179     |
| 6   | .035            | .194     |
| 5   | .040            | .209     |
| ¼   | .045            | .250     |

Max Square  
2.4748

## Tool Steel Comparison

|    |   |  |
|----|---|--|
| A2 | <p>-----</p> <p>oooooooooooooooooooooooooooooooooooo</p> <p>=====</p> | <p>A2<br/>Air Hardening<br/><br/>Tool Steel</p>                          |
| S1 | <p>-----</p> <p>oooooooooooooooooooooooooooo</p> <p>=====</p>         | <p>S1<br/>Shock Resisting<br/><br/>Tool Steel</p>                        |
| S5 | <p>-----</p> <p>oooooooooooooooooooooooooooo</p> <p>=====</p>         | <p>S5<br/>Silicone<br/>Molybdenum<br/>Shock Resisting<br/>Tool Steel</p> |
| D2 | <p>-----</p> <p>oooooooooooooooooooooooooooooooooooo</p> <p>=====</p> | <p>D2<br/>High Carbon High<br/>Chrome<br/>Tool Steel</p>                 |
| M2 | <p>-----</p> <p>oooooooooooooooooooooooooooooooooooo</p> <p>=====</p> | <p>M2<br/>High Speed<br/><br/>Tool Steel</p>                             |

**LEGEND**    Wear Resistance    -----  
                  Red Hardness        oooooooooooooooooo  
                  Toughness            =====

### Delivery Schedule

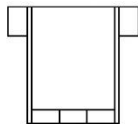
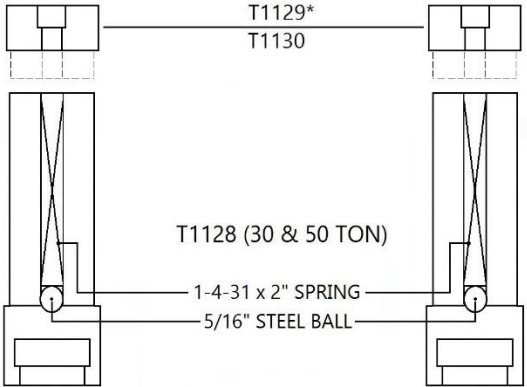
|   |                              |
|---|------------------------------|
| Round Punches & Dies A2 up to 1.25" Capacity  | Approx. 1 – 2 working days   |
| Shaped Punches & Dies A2 up to 1.25" Capacity | Approx. 3 – 4 working days   |
| Round Punches & Dies A2 to 5.0" Capacity      | Approx. 4 – 5 working days   |
| Shaped Punches & Dies A2 to 3.5" Capacity     | Approx. 6 – 7 working days   |
| Shaped Punches & Dies A2 to 5.0" Capacity     | Approx. 10 – 14 working days |

# 0.5 CAPACITY TOOLING

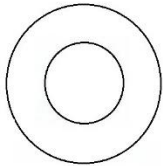


"The Name Says it All"

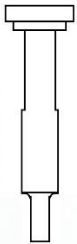
**\*DENOTES 50 TON PARTS**



○ T145



○ DS - 230 (12) 30T  
\* DS - 230 (18) 50T



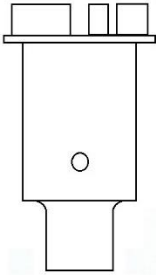
○ T103  
T102



○ 10 X 5/8 SHCS



○ T155



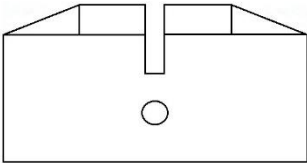
○ T215



○ T103  
T102



○ T104  
T105



○ T122

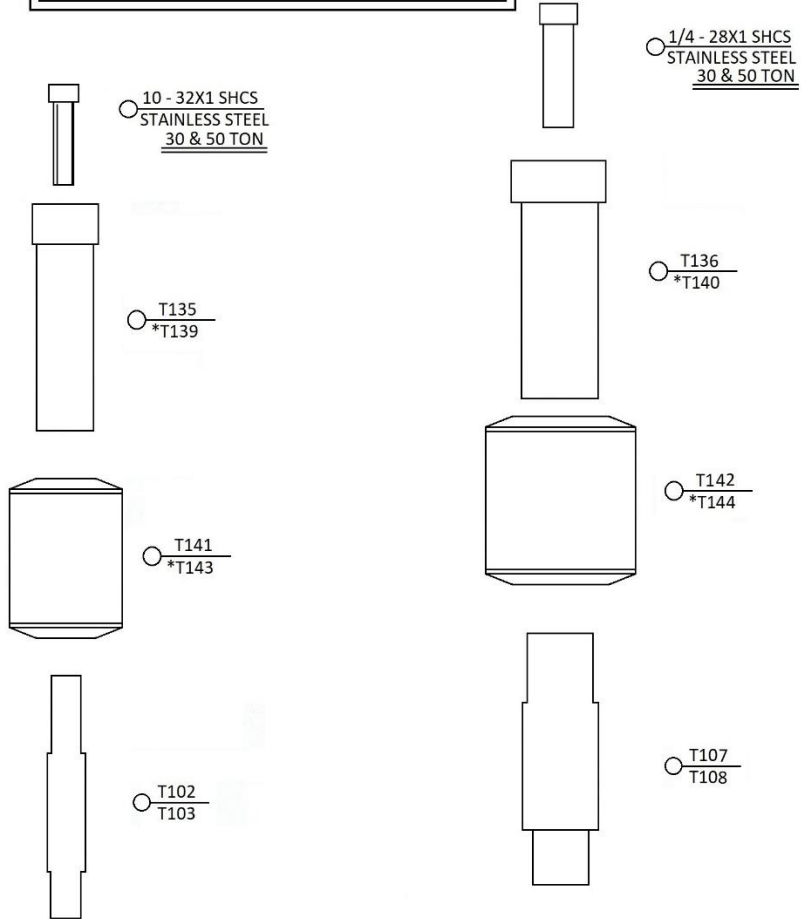
| CAT #:     | DESCRIPTION                     |
|------------|---------------------------------|
| T102       | 0.5 SHAPED PUNCH                |
| T103       | 0.5 ROUND PUNCH                 |
| T104       | 0.5 ROUND DIE                   |
| T105       | 0.5 SHAPED DIE                  |
| T122       | 0.5 DIE HOLDER                  |
| T145       | 0-0.5 PUNCH KEY                 |
| T155       | 0-0.5 PUNCH HEAD                |
| T215       | 0.5 PUNCH GUIDE                 |
| T1128      | SOLID P DRIVER BODY 30&50TON    |
| T1129      | SOLID P DRIVER HEAD 30 TON      |
| T1130      | SOLID P DRIVER HEAD 50 TON      |
| DS - 230   | DS230 DISC SPRINGS              |
|            | 5/16" DIA STEEL BALL (30&50TON) |
| 103258SHCS | 10- 32 X 5/8 SHCS               |

PIERCE - ALL INC  
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**0" - 1.25' HEAVY DUTY TOOLING**



**\* DENOTES 50 TON PARTS**

NOTE: WITH SHAPED PUNCHES USE T145 OR T146 PUNCH KEY FOR 1.25" CAP USE LARGER DRIVER

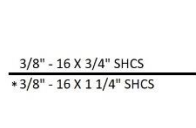
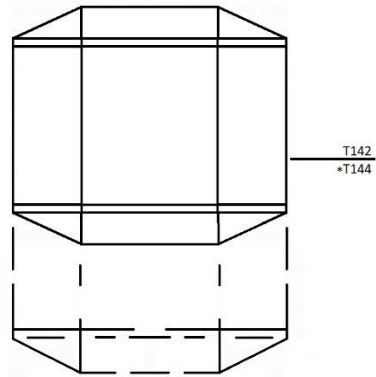
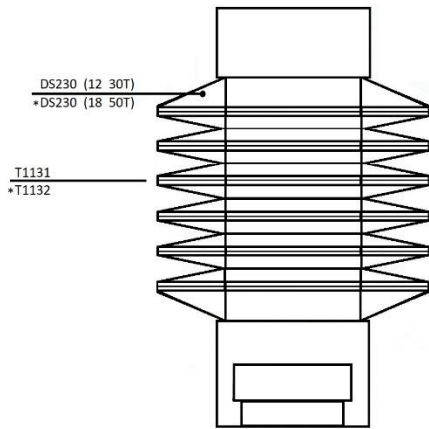
NOTE: PUNCHES & DIES AVAILABE IN A2 OR HSS TOOL STEEL

FOR SPECIAL SHAPES REFER TO WINDOWS IN THIS CATALOGUE

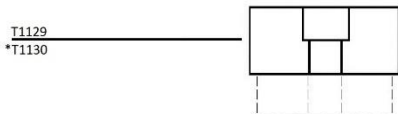
| CAT#      | DESCRIPTION:                              |
|-----------|---|
| T102      | .5" SHAPED PUNCH                          |
| T103      | .5" ROUND PUNCH                           |
| T107      | 1.0" SHAPED PUNCH                         |
| T108      | 1.0" ROUND PUNCH                          |
| T135      | .5" HEAVY DUTY PUNCH DRIVER               |
| T136      | .5" - 1.25" HEAVY DUTY PUNCH DRIVER       |
| *T139     | .5" HEAVY DUTY PUNCH DRIVER (50T)         |
| *T140     | .5" - 1.25" HEAVY DUTY PUNCH DRIVER (50T) |
| T141      | .5" URETHANE STRIPPER                     |
| T142      | .5" - 1.25" URETHANE STRIPPER             |
| *T143     | .5" URETHANE STRIPPER (50T)               |
| *T144     | .5" - 1.25" URETHANE STRIPPER             |
| 10321SHCS | 10 - 32X1 SHCS STAINLESS STEEL            |
| 14281SHCS | 1/4 - 28X1 SHCS STAINLESS STEEL           |



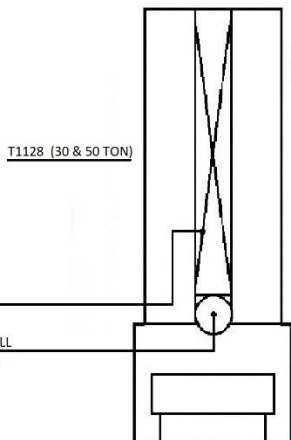
## 0" - 1.25" SOLID PUNCH DRIVER



**NOTE:** FOR EXTRA STRIPPER PRESSURE USE URETHANE STRPPER ABOVE



\* DENOTES 50 TON PARTS



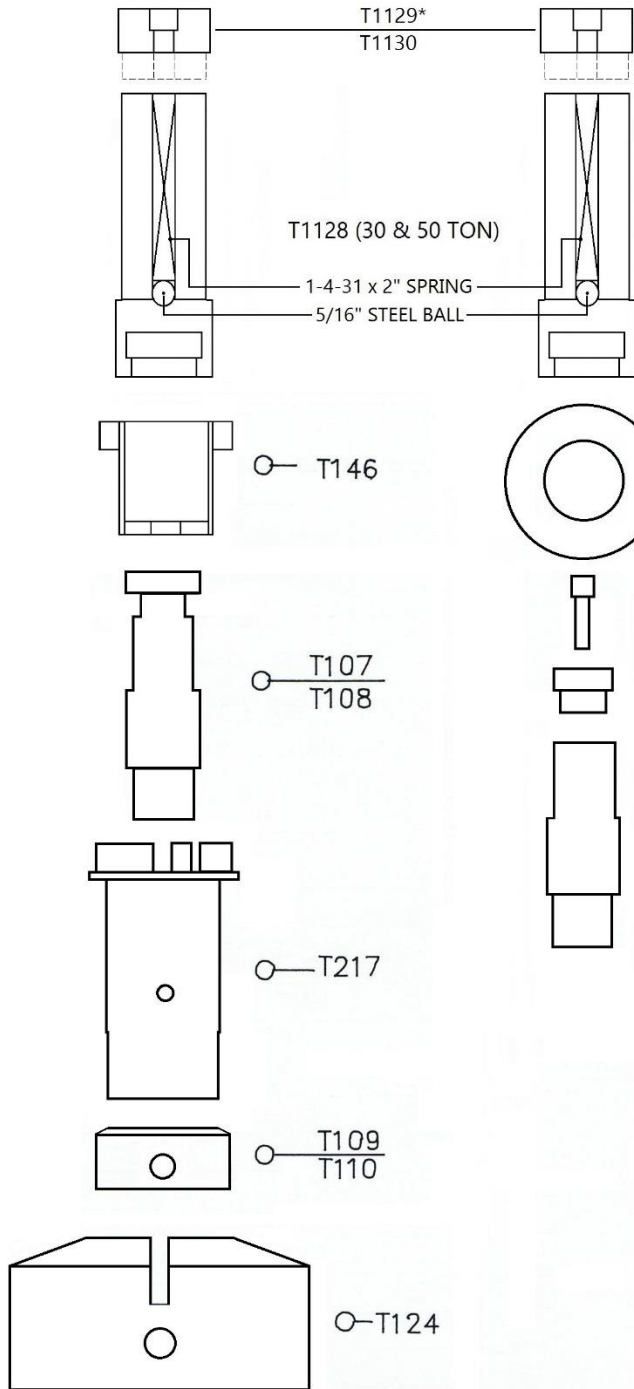
| CAT #      | DESCRIPTION:                       |
|------------|------------------------------------|
| T142       | URETHANE STRIPPER 30T              |
| * T144     | URETHANE STRIPPER 50T              |
| T1128      | SOLID PUNCH & DIE BODY 30 & 50 TON |
| T1129      | SOLID PUNCH & DIE HEAD 30 TON      |
| *T1130     | SOLID PUNCH & DIE HEAD 50 TON      |
| T1131      | SOLID PUNCH & DIE ASS'Y 30 TON     |
| *T1132     | SOLID PUNCH & DIE ASS'Y 50 TON     |
| DS230      | DISC SPRING (12 - 30T)             |
| *DS230     | DISC SPRING (18 - 50T)             |
|            | 3/8 - 16 X 3/4 SHCS (30T)          |
|            | 3/8 - 16 X 1 1/4 SHCS (50T)        |
| 1 - 4 - 31 | SPRING 2" LONG (30&50T)            |
|            | 5/16" DIA STEEL BALL (30&50T)      |

PIERCE - ALL INC.  
6087 NETHERHART ROAD, UNIT 4, MISSISSAUGA, ON, L5T

# 1.0 CAPACITY TOOLING



**\* DENOTES 50 TON PARTS**



DS-230 (12) 30T  
\* DS-230 (18) 50T

1/4-28 X 5/8 SHCS

T132

T107  
T108

T107  
T108

T217

T109  
T110

T124

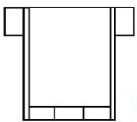
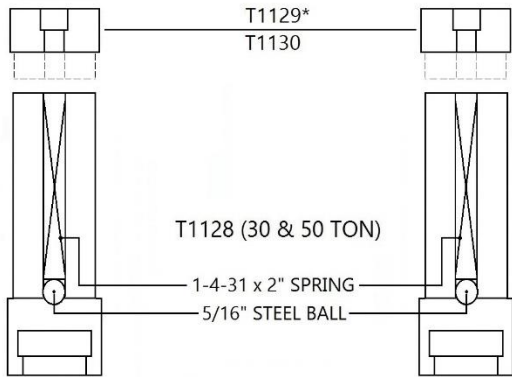
| CAT #:     | DESCRIPTION                     |
|------------|---------------------------------|
| T107       | 1.0 SHAPED PUNCH                |
| T108       | 1.0 ROUND PUNCH                 |
| T109       | 1.0 ROUND DIE                   |
| T110       | 1.0 SHAPED DIE                  |
| T124       | 1.0 DIE HOLDER                  |
| T132       | 1.0 PUNCH HEAD                  |
| T217       | 1.0 PUNCH GUIDE                 |
| T1128      | SOLID P DRIVER BODY 30&50TON    |
| T1129      | SOLID P DRIVER HEAD 30 TON      |
| T1130      | SOLID P DRIVER HEAD 50 TON      |
| DS - 230   | DS230 DISC SPRINGS              |
|            | 5/16" DIA STEEL BALL (30&50TON) |
| 142858SHCS | 1/4-28 X 5/8 SHCS               |

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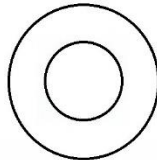


# 1.25 CAPACITY TOOLING

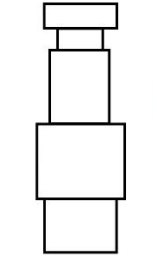
\*DENOTES 50 TON PARTS



T145



DS-230 (12) 30T  
\* DS-230 (18) 50T



T111  
T112

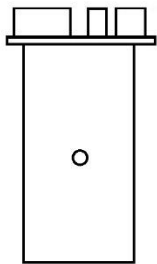


1/4-28 X 5/8 SHCS

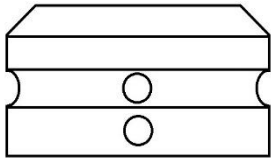


T132

T111  
T112



T219



T114  
T115

| CAT #:     | DESCRIPTION                     |
|------------|---------------------------------|
| T111       | 1.25 ROUND PUNCH                |
| T112       | 1.25 SHAPED PUNCH               |
| T114       | 1.25 ROUND DIE                  |
| T115       | 1.25 SHAPED DIE                 |
| T132       | 1.25 PUNCH HEAD                 |
| T219       | 1.25 PUNCH GUIDE                |
| T1128      | SOLID P DRIVER BODY 30&50TON    |
| T1129      | SOLID P DRIVER HEAD 30 TON      |
| T1130      | SOLID P DRIVER HEAD 50 TON      |
| DS - 230   | DS230 DISC SPRINGS              |
|            | 5/16" DIA STEEL BALL (30&50TON) |
| 142858SHCS | 1/4-28 X 5/8 SHCS               |

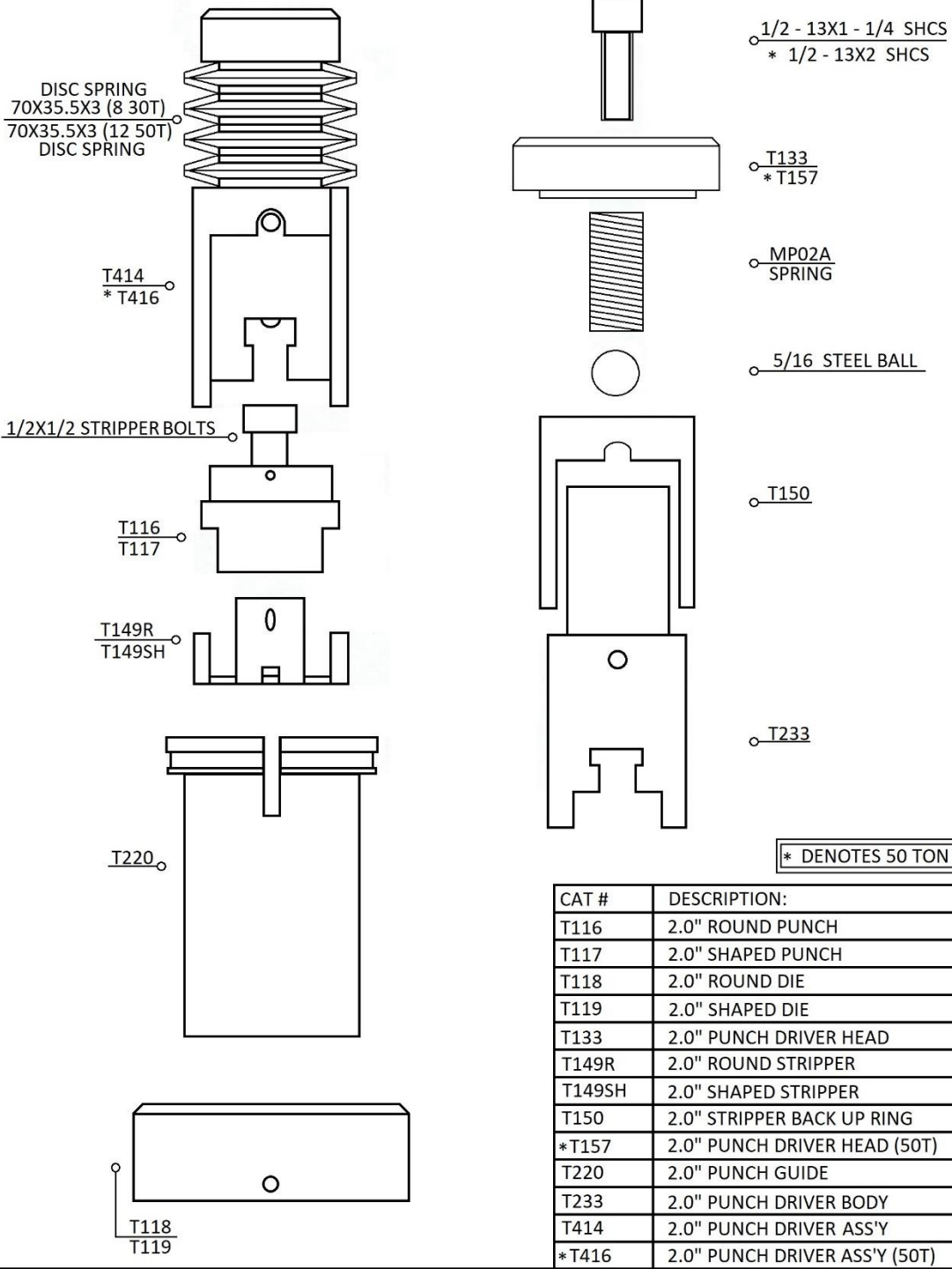
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"The Name Says it All"

## 2.0" TOOLING

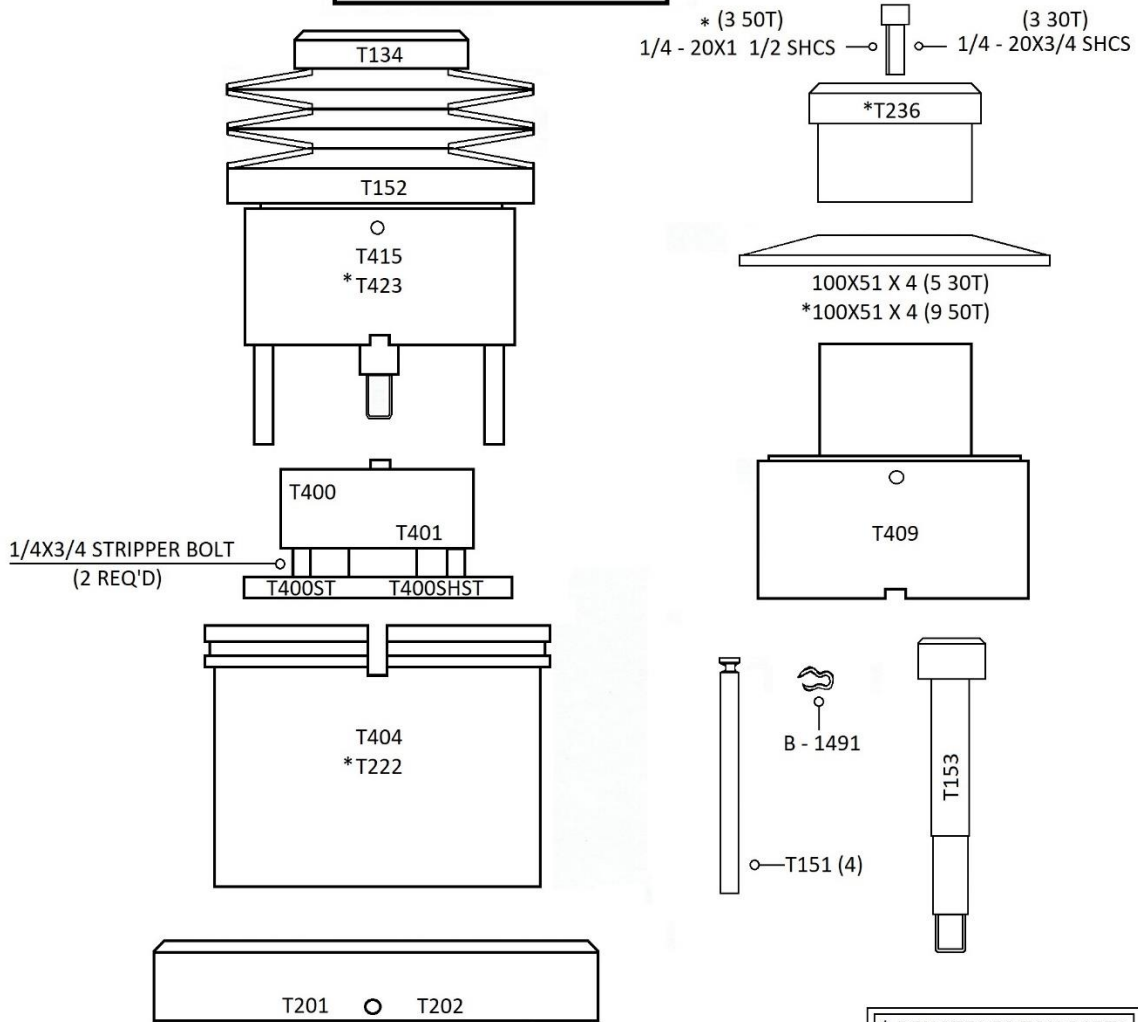


| CAT #  | DESCRIPTION:                  |
|--------|-------------------------------|
| T116   | 2.0" ROUND PUNCH              |
| T117   | 2.0" SHAPED PUNCH             |
| T118   | 2.0" ROUND DIE                |
| T119   | 2.0" SHAPED DIE               |
| T133   | 2.0" PUNCH DRIVER HEAD        |
| T149R  | 2.0" ROUND STRIPPER           |
| T149SH | 2.0" SHAPED STRIPPER          |
| T150   | 2.0" STRIPPER BACK UP RING    |
| *T157  | 2.0" PUNCH DRIVER HEAD (50T)  |
| T220   | 2.0" PUNCH GUIDE              |
| T233   | 2.0" PUNCH DRIVER BODY        |
| T414   | 2.0" PUNCH DRIVER ASS'Y       |
| *T416  | 2.0" PUNCH DRIVER ASS'Y (50T) |



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## 3.5" TOOLING

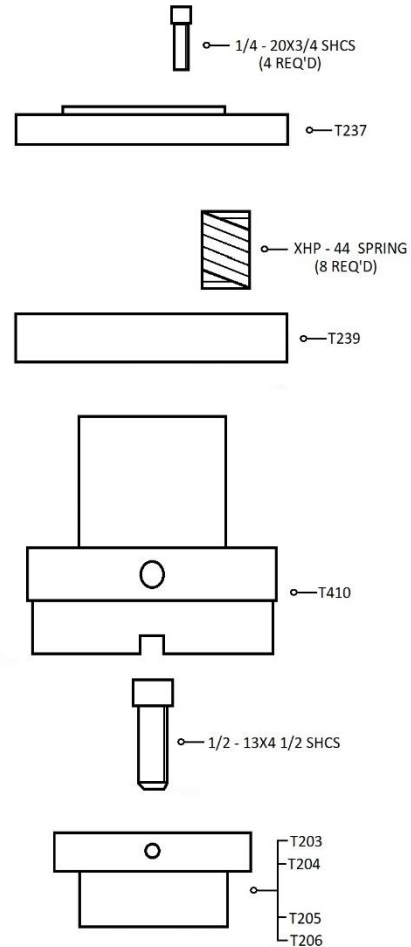
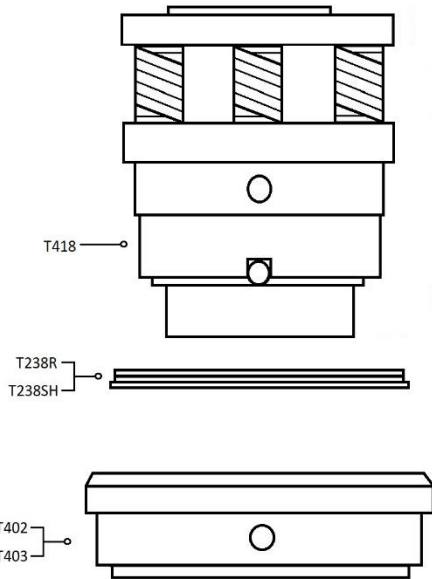


| CAT # | DESCRIPTION:                    | CAT #    | DESCRIPTION:                      |
|-------|---------------------------------|----------|-----------------------------------|
| T134  | PUNCH DRIVER HEAD (30T)         | T400ST   | 3.5" ROUND STRIPPER               |
| T151  | PRESSURE PIN (STRIPPER)         | T400SHST | 3.5" SHAPED STRIPPER              |
| T152  | SPRING SUPPORT RING             | T404     | 3.5" PUNCH GUIDE                  |
| T153  | PUNCH TIP RETAINER SCREW        | T409     | 3.5" PUNCH DRIVER BODY            |
| T201  | 3.5" ROUND DIE                  | T415     | 3.5" PUNCH DRIVER ASS'Y (30T)     |
| T202  | 3.5" SHAPED DIE                 | *T423    | 3.5" PUNCH DRIVER ASS'Y (50T)     |
| *T222 | 3.5" PUNCH GUIDE (50 TON)       | 100514   | 100X51X4.0 DISC SPRINGS           |
| *T236 | 3.5" PUNCH DRIVER HEAD (50 TON) | B - 1491 | RETAINING CLIP                    |
| T400  | 3.5" ROUND PUNCH                | *T4000   | 3.5" ROUND PUNCH OVER 3.062" DIA  |
| T401  | 3.5" SHAPED PUNCH               | *T4010   | 3.5" SHAPED PUNCH OVER 3.062" DIA |



"The Name Says it All"

## 5.0" TOOLING



### NOTE:

PUNCHES AND DIES ARE AVAILABLE  
IN THE FOLLOWING TOOL STEEL GRADES

- A2 - STANDARD APPLICATIONS
- D2 - FOR INCREASED WEAR RESISTANCE  
FOR SS OR HRS APPLICATIONS
- M2 - FOR SUPERIOR RESISTANCE  
HIGH PRODUCTION APPLICATIONS
- S1 - FOR EXCELLENT TOUGHNESS  
HEAVY DUTY APPLICATIONS

PLEASE ASK ORDER DESK  
FOR RECOMMENDED TOOL

| CAT #  | DESCRIPTION                    |
|--------|--------------------------------|
| T203   | 5.0" PUNCH ROUND 4.0" MAX DIA  |
| T204   | 5.0" PUNCH SHAPED 4.0" MAX DIA |
| T205   | 5.0" PUNCH ROUND 5.0" MAX DIA  |
| T206   | 5.0" PUNCH SHAPED 5.0" MAX DIA |
| T237   | 5.0" PUNCH DRIVER HEAD         |
| T238R  | 5.0" STRIPPER ROUND            |
| T238SH | 5.0" STRIPPER SHAPED           |
| T239   | 5.0" SPRING PRESSURE PINS      |
| T402   | 5.0" DIE ROUND                 |
| T403   | 5.0" DIE SHAPED                |
| T410   | 5.0" PUNCH DRIVER BODY         |
| T418   | 5.0" PUNCH DRIVER ASS'Y        |