

# THIN Air Powered Toggle Presses



TOG-L-LOC® (CLINCHING)



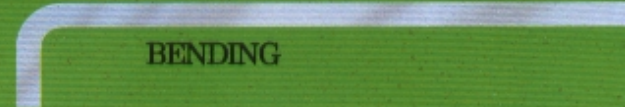
PIERCING



RIVETING

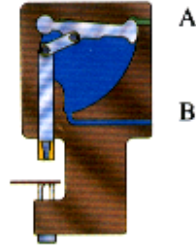
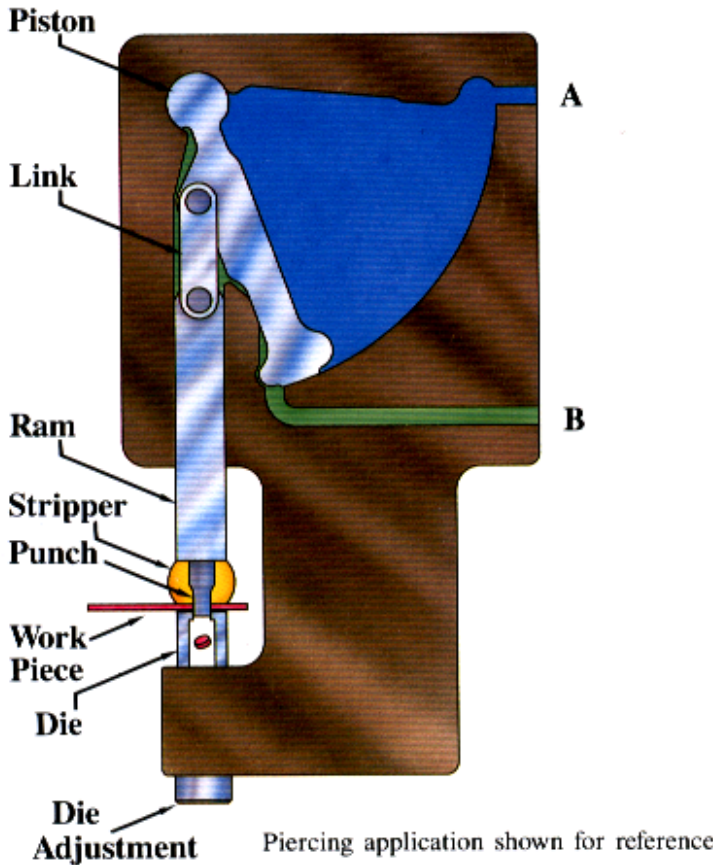


STAMPING

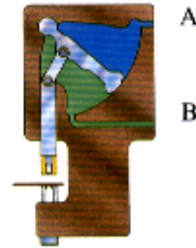


BENDING

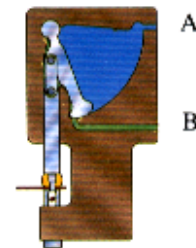
# BLIMM®



Air pressure at port "B" holds the piston and ram in the return position.



Air pressure at port "A" swings the piston through an arc, driving the ram and the toggle linkage.



Maximum force is achieved as the linkage "Toggles" or goes to center.

## Advantages & Features

BTM's patented "THIN" air powered toggle presses produce high forces using 80 psi (5.5 bars) air pressure! The "THIN" profile allows for close stacking. These extremely simple and rugged presses have only three moving parts. A unique, pivoting, rectangular, piston drives the non rotating ram through a force multiplying toggle linkage. This quick acting mechanism drastically reduces air consumption as compared with conventional pneumatic cylinders doing the same work. BTM press bodies are constructed of light weight, aircraft aluminum, hardcoated to a Rockwell C-70 for excellent wear characteristics.

Patented  
**THIN**  
Design

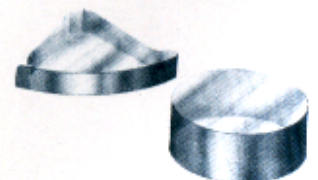


A BTM 1 Ton, Punch & Button Press is only 1.5 inches (38 mm) wide & weighs 15 lbs. (6.8 kg.).

Air consumption of BTM Toggle press compared with conventional pneumatic cylinders.

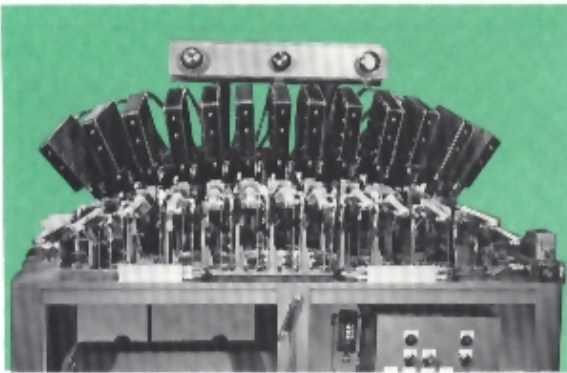
| Air Supply          | Required Force       | Stroke             | Device                        | Air used per complete cycle                     |
|---------------------|----------------------|--------------------|-------------------------------|---|
| 80 psi<br>(5.5 bar) | 2000 lbs.<br>(8896N) | 2.25"<br>(57.15mm) | 1 Ton BTM Press               | 256 in. <sup>3</sup><br>(652 cm <sup>3</sup> )  |
| 80 psi<br>(5.5 bar) | 2000 lbs.<br>(8896N) | 2.25"<br>(57.15mm) | 6" dia. (152.4mm)<br>Cylinder | 798 in. <sup>3</sup><br>(2084 cm <sup>3</sup> ) |

The BTM Press uses **68%** less air than the cylinder requires in the example. Stroke limiters are available to further reduce air consumption.

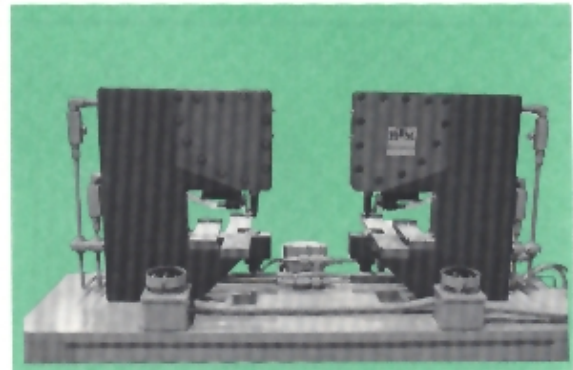


For formula and chart see page 32

# Machine Building With THIN Air Powered Toggle Presses **BTM**



BTM Air Toggle Presses may be mounted on close centers for simplified automation and special machine building.



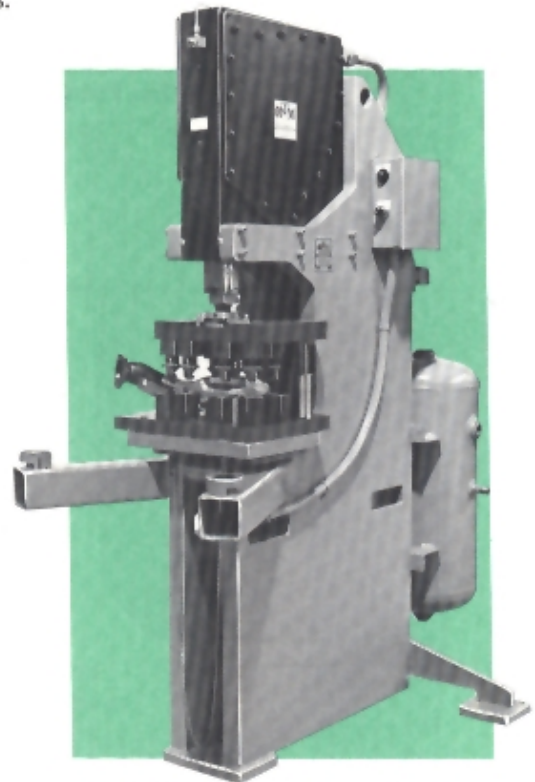
Simple fixtures can be built quickly with BTM presses.

BTM air powered toggle presses can perform all the typical operations of other presses, but within a smaller space and using only a small amount of air. Presses can be quickly tooled and easily mounted in any position.

Self-equalizing models facilitate access over flanges or channels. Bench, floor and tooling models can be equipped with die set tooling to quickly accommodate a multitude of applications.

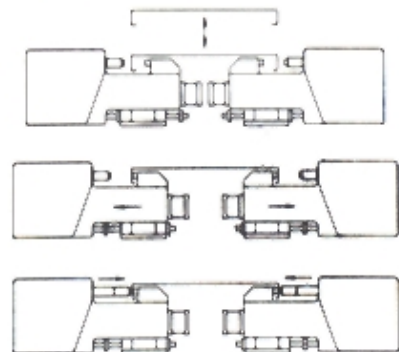
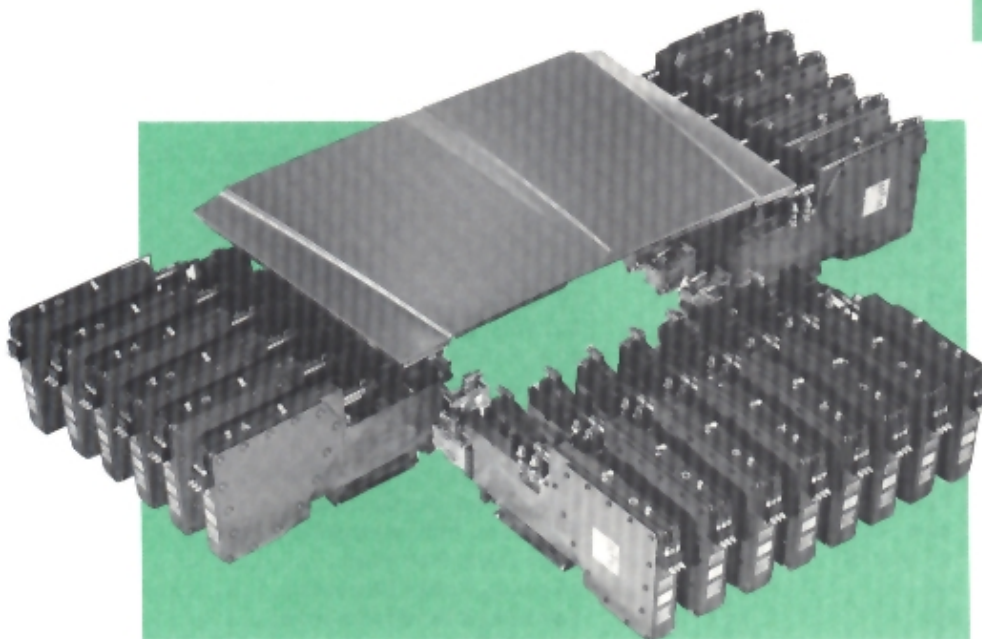
Various options and accessories are available to help you build machines quickly and cost effectively. These include; special rams, modified press bodies, control packages, and stroke limiters for improved cycle time with less air consumption. Special presses for unusual applications may also be developed.

For over 25 years BTM Corporation has offered complete design and build services to help you solve your production problems. Call our sales engineering department and let us help you apply our presses to your next application.



A BTM 20 ton floor press is shown with optional die set tooling and control package.

Self-Equalizing Toggle Presses allow easy load and unload of parts with flanges or channels.

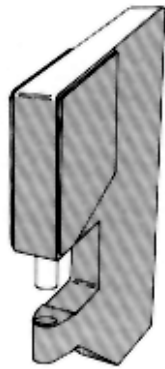


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## 1 & 2 Ton Presses



**PB**  
(Punch & Button)



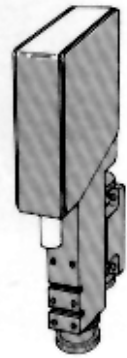
**PB6**  
(Punch & Button)



**FM**  
(Front Mount)



**H**  
(Head)

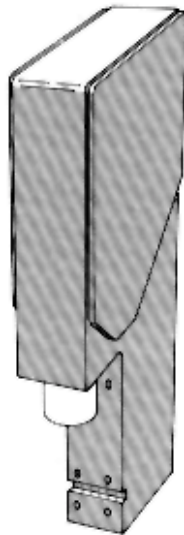


**EU & REU**  
(Equalizing)  
(Reverse Equalizing)

## 5 & 10 Ton Presses



**H**  
(Head)

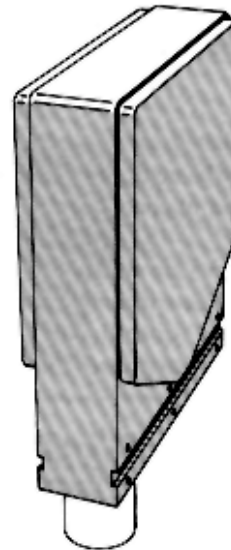


**FM**  
(Front Mount)

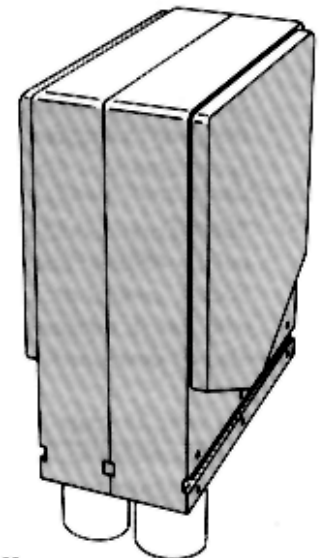


**EU & REU**  
(Equalizing)  
(Reverse Equalizing)

## 20 & 40 Ton Presses



**H**  
(Head)

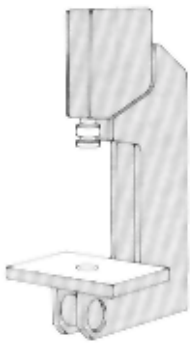


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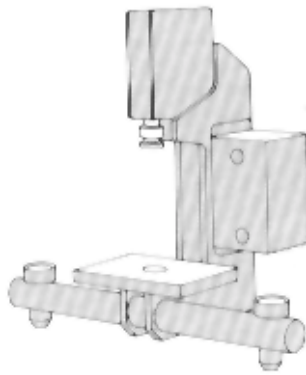
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## 2 Ton



T  
(Tooling)

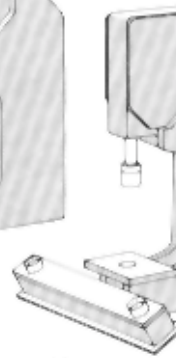


B  
(Bench)

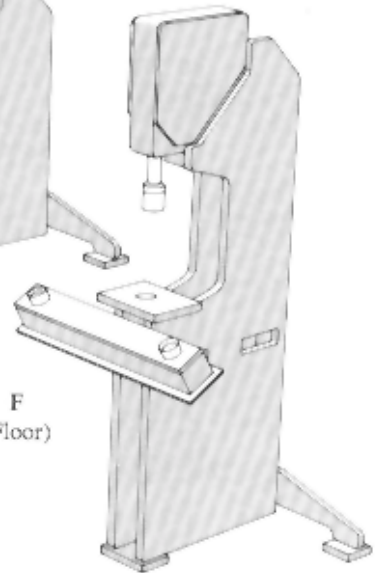
## 5 & 10 Ton



T  
(Tooling)

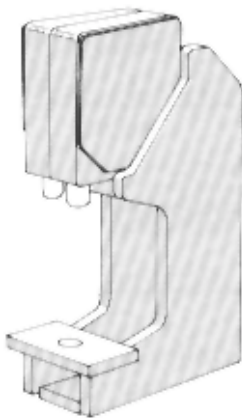


B  
(Bench)

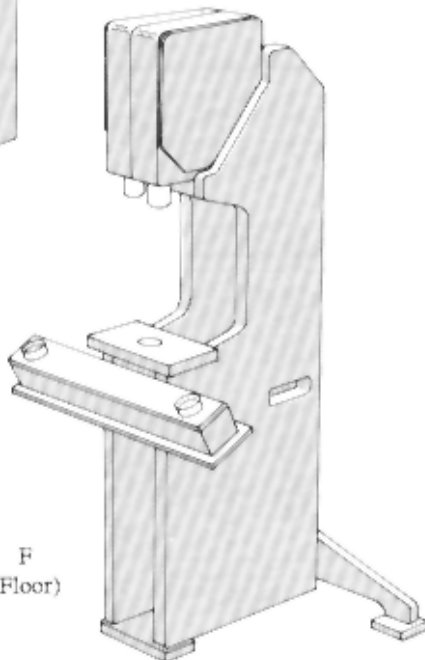


F  
(Floor)

## 20 & 40 Ton Page



T  
(Tooling)



F  
(Floor)

## Specials



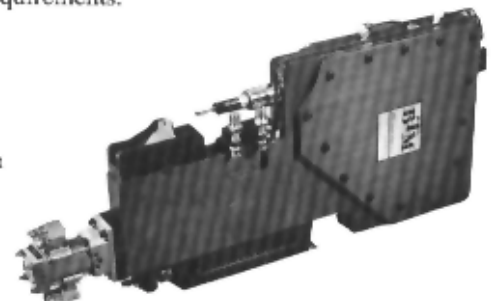
TM  
(TopMount)



Long  
Stroke  
Up to 10"  
on 4 & 8  
Ton Models

Special presses and modifications to standard presses are available. BTM can also supply completely tooled presses. Contact our Sales Engineering Department for assistance with your special press requirements.

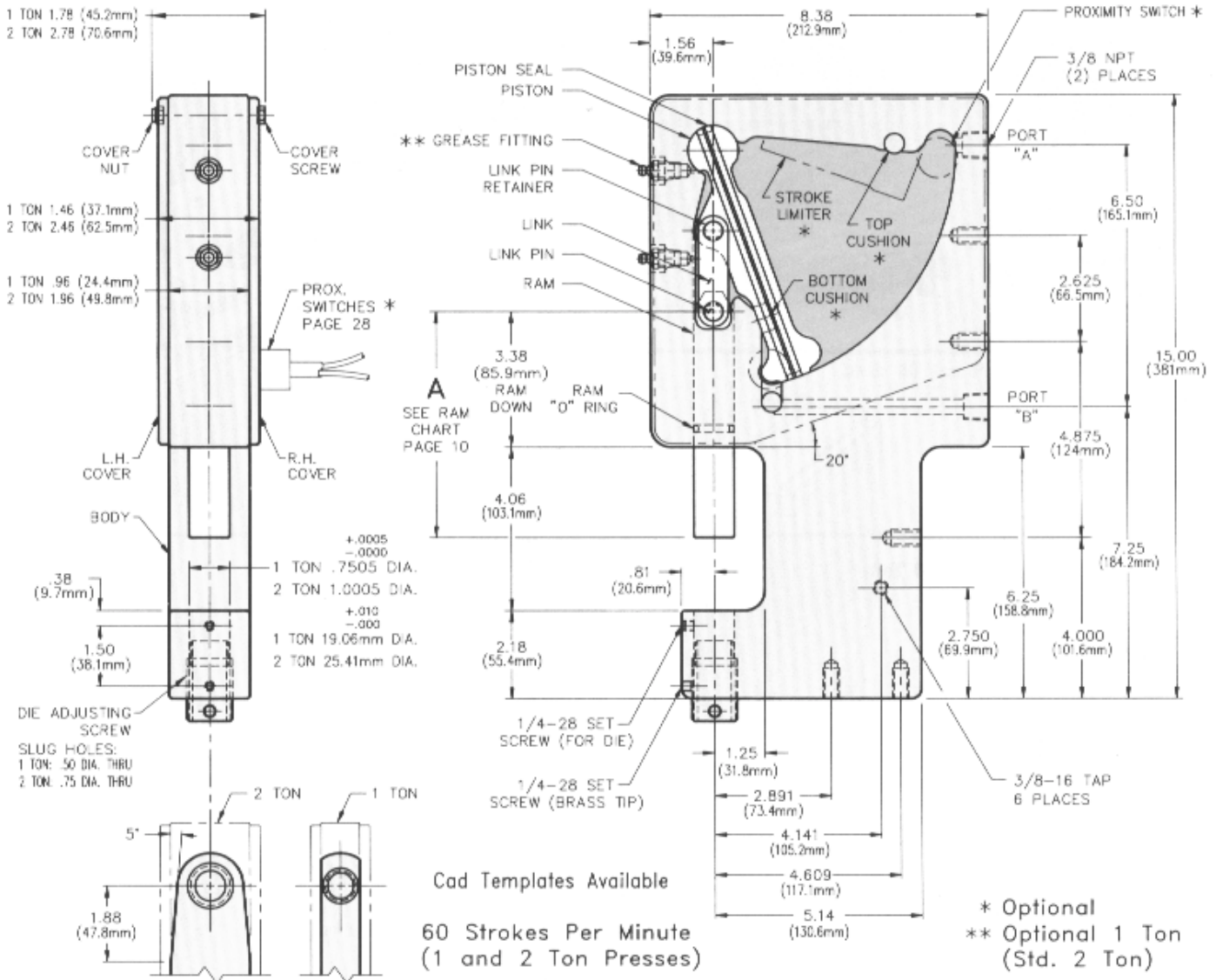
P5 EU  
(Equalizing)  
Complete with  
Tooling



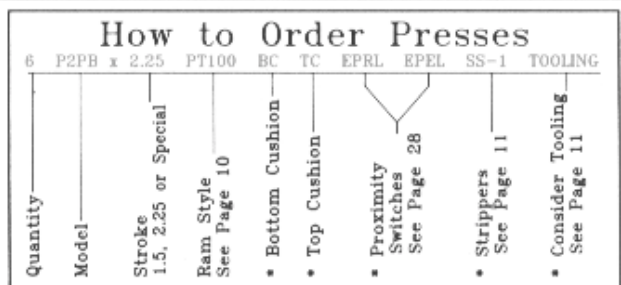
**PB Models**  
(Punch and Button)

PIPB x 1.50 (38.1mm) Stroke 001495 - 15 lbs. (6.8 kg)  
PIPB x 2.25 (57.2mm) Stroke 001496 - 15 lbs. (6.8 kg)

P2PB x 1.50 (38.1mm) Stroke 001497 - 25 lbs. (11.4 kg)  
P2PB x 2.25 (57.2mm) Stroke 001500 - 25 lbs. (11.4 kg)



| Components P1PB  |           |            |
|------------------|-----------|------------|
| Description      | No. Req'd | BTM No.    |
| P1PB x 1.5 Body  | 1         | 000079     |
| P1PB x 2.25 Body | 1         | 000080     |
| Piston           | 1         | 000115     |
| Piston Seal      | 2         | 000058     |
| Link             | 1         | 000118     |
| Link Pin         | 2         | 000122     |
| Ram - 75 Series  | 1         | See Pg. 10 |
| R.H. Cover       | 1         | 000125     |
| L.H. Cover       | 1         | 000126     |
| Cover Screw      | 13        | 000127     |
| Cover Nut        | 13        | 000078     |
| Ram "O" Ring     | 1         | 000149     |
| Grease Fitting   | 2         | Optional   |
| Sealant          | 1         | 000273     |
| Seal Kit         | 1         | 000798     |
| Top Cushion      | 1         | 001269     |
| Bottom Cushion   | 1         | 000829     |
| Stroke Limiter   | 1         | 000826     |
| Die Adj. Screw   | 1         | 013677     |
| Brass Set Scr.   | 1         | 004687     |
| Die Set Scr.     | 1         | 000148     |



### How to Order Components

|      |             |         |
|------|-------------|---------|
| 2    | P2 Link     | 000120  |
| Qty. | Description | BTM No. |

\* Denotes Options  
 Note: Use "O" Ring No. 000821 in P2PB & PB6.  
 Use No. 000150 in P2H & FW.

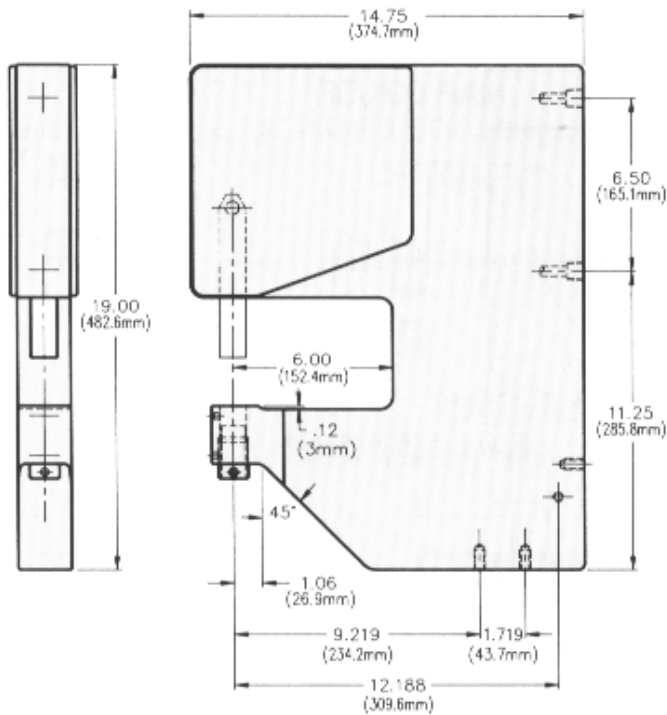
| Components P2PB   |           |            |
|-------------------|-----------|------------|
| Description       | No. Req'd | BTM No.    |
| P2PB x 1.5 Body   | 1         | 000083     |
| P2PB x 2.25 Body  | 1         | 000084     |
| Piston            | 1         | 000117     |
| Piston Seal       | 2         | 000058     |
| Link              | 1         | 000120     |
| Link Pin          | 2         | 000124     |
| Link Pin Retainer | 2         | 000121     |
| Ram - 100 Series  | 1         | See Pg. 10 |
| R.H. Cover        | 1         | 000125     |
| L.H. Cover        | 1         | 000126     |
| Cover Screw       | 13        | 000129     |
| Cover Nut         | 13        | 000078     |
| Ram "O" Ring      | 1         | See Note   |
| Grease Fitting    | 2         | 000050     |
| Sealant           | 1         | 000273     |
| Seal Kit          | 1         | 000800     |
| Top Cushion       | 1         | 001271     |
| Bottom Cushion    | 1         | 000591     |
| Stroke Limiter    | 1         | 000828     |
| Die Adj. Screw    | 1         | 013678     |
| Brass Set Scr.    | 1         | 004687     |
| Die Set Scr.      | 1         | 000148     |

# 1 & 2 Ton PB6, FM & H Presses



## PB6 Models (6 Inch Throat)

For components and dimensions not shown, see P1PB and P2PB on page 6.

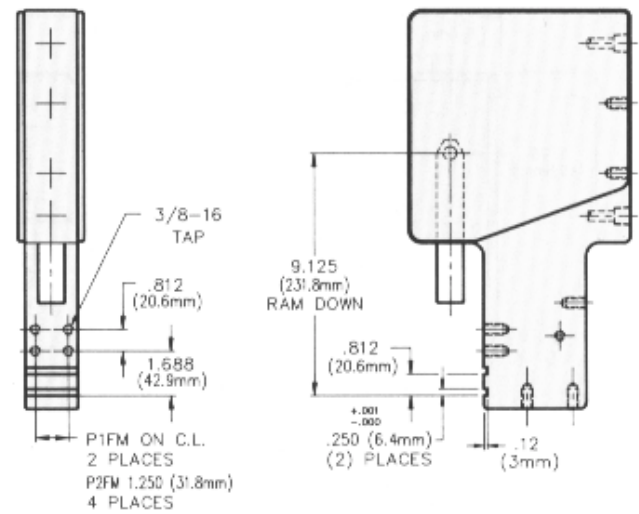


Cad Templates Available

| Model                        | Ass'y. No. | Body No. | Weight            |
|------------------------------|------------|----------|-------------------|
| P1PB6 x 1.50 (38.1mm) Stroke | 001501     | 000085   | 26.5 lbs. (12 kg) |
| P1PB6 x 2.25 (57.2mm) Stroke | 001504     | 000086   | 48.5 lbs. (22 kg) |
| P2PB6 x 1.50 (38.1mm) Stroke | 001503     | 000089   | 26.5 lbs. (12 kg) |
| P2PB6 x 2.25 (57.2mm) Stroke | 001506     | 000090   | 48.5 lbs. (22 kg) |

## FM Models (Front Mount)

For components and dimensions not shown, see P1PB and P2PB on page 6.

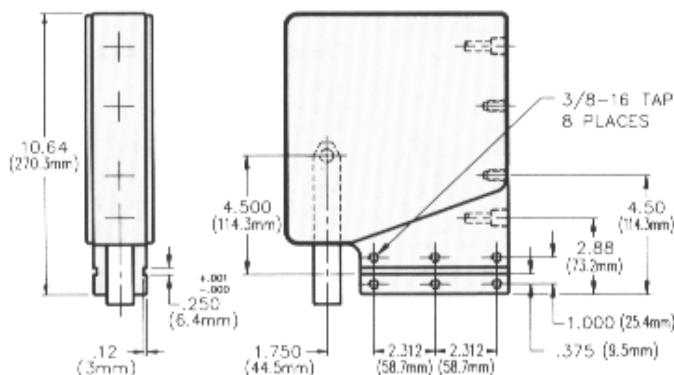


Cad Templates Available

| Model                       | Ass'y. No. | Body No. | Weight            |
|-----------------------------|------------|----------|-------------------|
| P1FM x 1.50 (38.1mm) Stroke | 001507     | 000948   | 14 lbs. (6.4 kg)  |
| P1FM x 2.25 (57.2mm) Stroke | 001510     | 000951   | 23 lbs. (10.5 kg) |
| P2FM x 1.50 (38.1mm) Stroke | 001509     | 000950   | 14 lbs. (6.4 kg)  |
| P2FM x 2.25 (57.2mm) Stroke | 001512     | 000953   | 23 lbs. (10.5 kg) |

## H Models (Head)

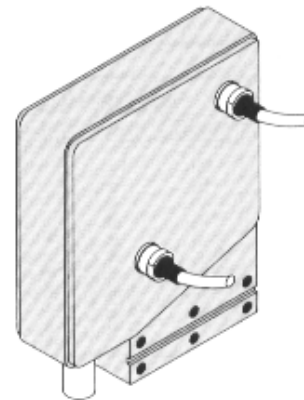
For components and dimensions not shown, see P1PB and P2PB on page 6.



Cad Templates Available

| Model                      | Ass'y. No. | Body No. | Weight             |
|----------------------------|------------|----------|--------------------|
| PH x 1.50 (38.1mm) Stroke  | 001519     | 000103   | 12.5 lbs. (5.7 kg) |
| P1H x 2.25 (57.2mm) Stroke | 001522     | 000104   | 20.0 lbs. (9.1 kg) |
| P2H x 1.50 (38.1mm) Stroke | 001521     | 000107   | 12.5 lbs. (5.7 kg) |
| P2H x 2.25 (57.2mm) Stroke | 001524     | 000108   | 20.0 lbs. (9.1 kg) |

## \* Options



Electrical Proximity Sensors

See Page 28

Stroke Limiter Limits upstroke to suit your requirements

See Page 6

Cushions on up and downstrokes

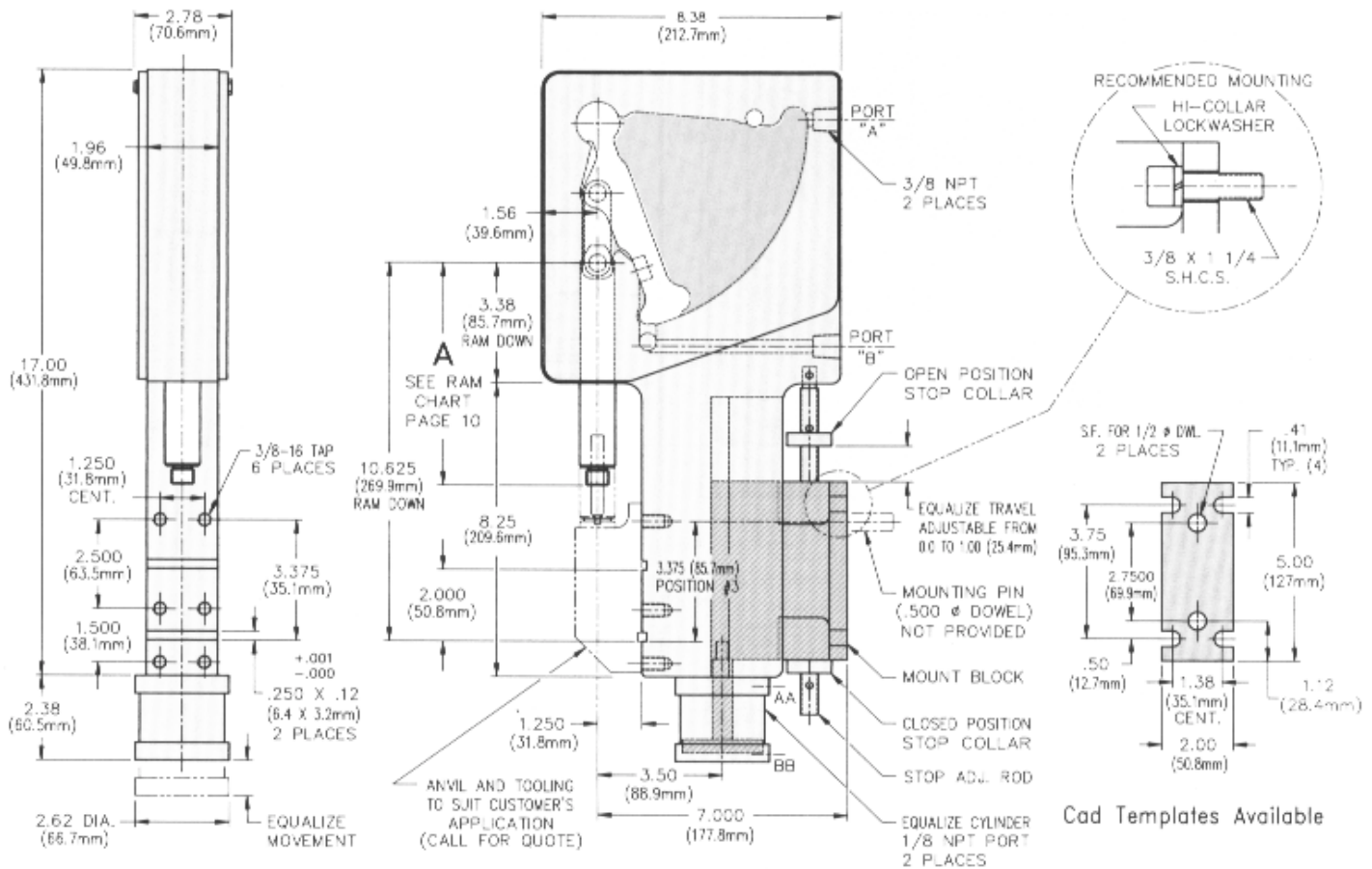
See Page 6

Presses are available with metric threads

Special, Tooling  
Call for quote

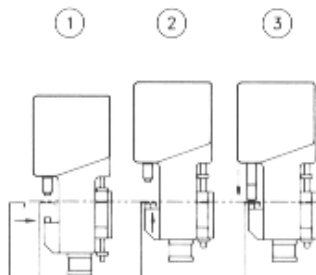
EU Models  
(Equalizing Unit)

P2EU x 1.50 (38.1mm) Stroke 012878 - 30 lbs. (13.6 kg)  
P2EU x 2.25 (57.2mm) Stroke 006210 - 30 lbs. (13.6 kg)



Cad Templates Available

### How Equalizing Works (Standard - Punch on Ram)



- ① Open Position - Part load and unload.
- ② Equalize Position - Die advanced to part.
- ③ Closed Position - Ram extended to perform work.

### How to Order Presses

| Quantity | Model       | Stroke                | Ram Style   | Bottom Cushion | Top Cushion | Proximity Switches | Strippers   | Consider Tooling |
|----------|-------------|-----------------------|-------------|----------------|-------------|--------------------|-------------|------------------|
| 6        | P2EU x 2.25 | PT100                 | BC          | TC             | EPRL        | EPEL               | SS-1        | TOOLING          |
|          |             | 1.50, 2.25 or Special | See Page 10 | *              | *           | See Page 26        | See Page 11 | See Page 11      |

### How to Order Components

| Qty. | Description | BTM No. |
|------|-------------|---------|
| 1    | Piston      | 000117  |

\* Denotes Options

Contact BTM's Sales Department for equalize strokes greater than 1.00 (25.4 mm)

For further information, see pages 33-35 in the technical section.

### Components P2EU

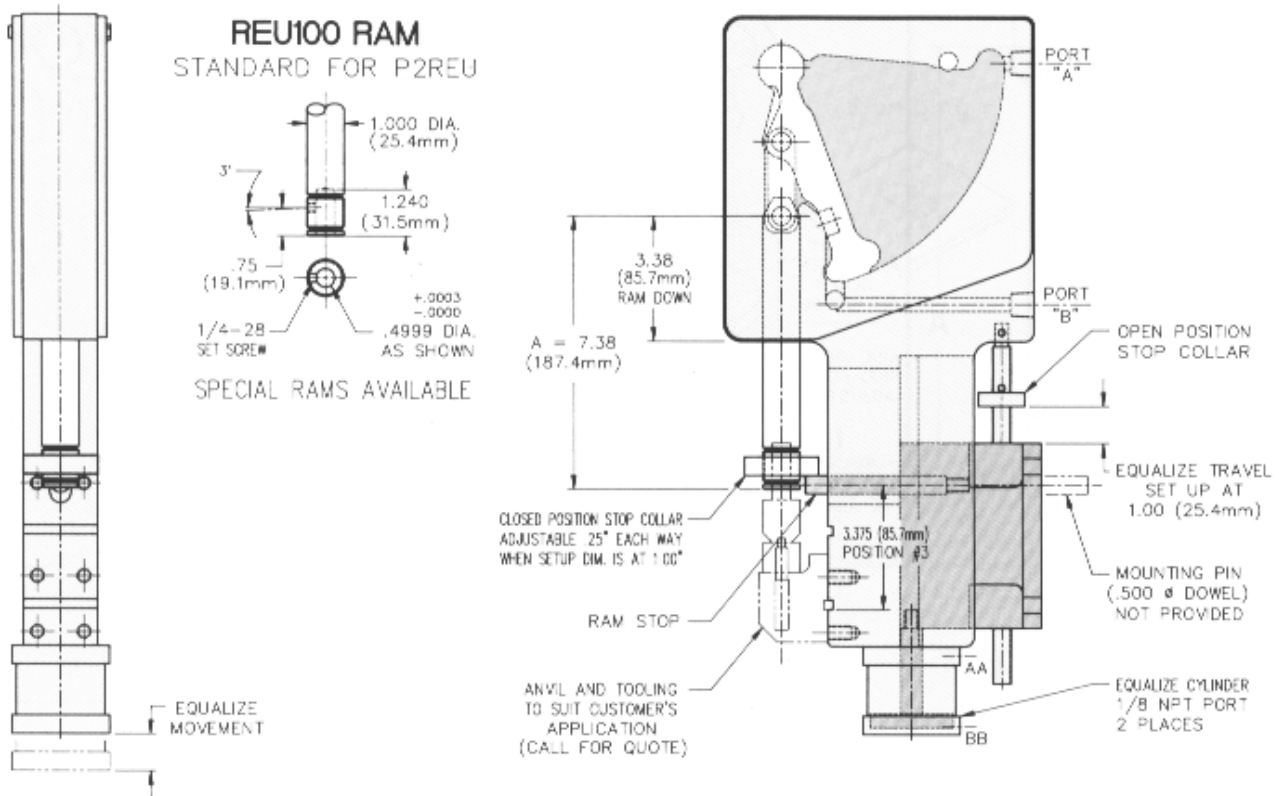
| Description               | No. Req'd | BTM No.    |
|---------------------------|-----------|------------|
| P2EU x 1.50 (38.1mm) Body | 1         | 012879     |
| P2EU x 2.25 (57.2mm) Body | 1         | 006211     |
| Piston                    | 1         | 000117     |
| Piston Seal               | 2         | 000058     |
| Link                      | 1         | 000120     |
| Link Pin                  | 2         | 000124     |
| Link Pin Retainer         | 2         | 000121     |
| Ram - 100 Series          | 1         | See Pg. 10 |
| R.H. Cover                | 1         | 000125     |
| L.H. Cover                | 1         | 000126     |
| Cover Screw               | 13        | 000129     |
| Cover Nut                 | 13        | 000078     |
| Ram "O" Ring              | 1         | 000150     |
| Grease Fitting            | 2         | 000050     |
| Sealant                   | 1         | 000273     |
| Seal Kit                  | 1         | 000800     |
| Top Cushion               | 1         | 001271     |
| Bottom Cushion            | 1         | 000591     |
| Stroke Limiter            | 1         | 000828     |
| Equalizing Air Cylinder   | 1         | 006157     |
| Stop Adjust Rod           | 1         | 013079     |
| Stop Adjust Collar        | 2         | 006162     |
| Mount Block               | 1         | 006139     |
| 3/16 Dia. x 1/2 Roll Pin  | 2         | 013088     |
| 3/16 Dia. x 1/4 Roll Pin  | 1         | 013087     |

# 2 Ton Reverse Equalizing (2 Position) Presses



**REU Models**  
(Reverse Equalizing Unit)

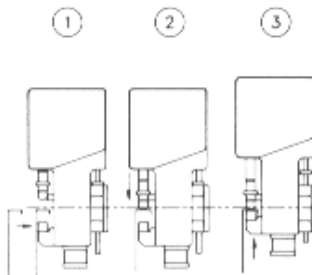
P2REU x 1.50 (38.1mm) Stroke 013126 - 30 lbs. (13.6 kg)  
P2REU x 2.25 (57.2mm) Stroke 013076 - 30 lbs (13.6 kg)



Cad Templates Available

For dimensions and items not shown, see P2EU, page 8.

## How Equalizing Works (Reverse - Die on Ram)



- ① Open Position - Part load and unload.
- ② Equalize Position - Die advanced to part.
- ③ Closed Position - Ram extended to perform work.

## How to Order Presses

| Quantity | Model        | Stroke<br>1.50, 2.25 or Special | Standard<br>Ram Style | * Bottom Cushion | * Top Cushion | * Proximity<br>Switches<br>See Page 28 | * Consider Tooling<br>See Page 11 |
|----------|--------------|---------------------------------|-----------------------|------------------|---------------|--|-----------------------------------|
| 6        | P2REU x 2.25 |                                 | REU100                | BC               | TC            | EPRL                                   | EPFL TOOLING                      |

## How to Order Components

| Qty. | Piston Description | BTM No. |
|------|--------------------|---------|
| 1    | Piston             | 000117  |

\* Denotes Options

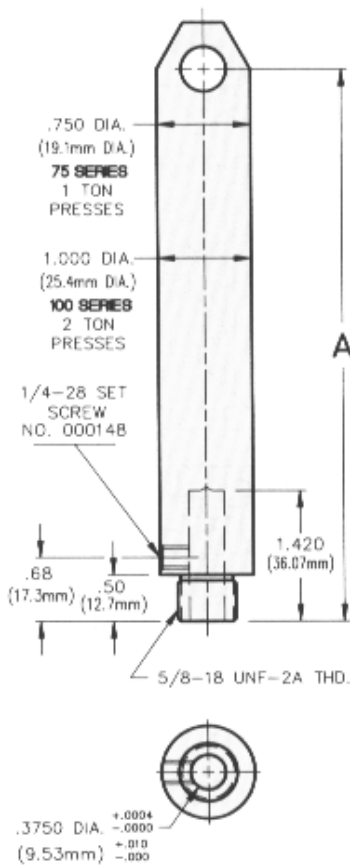
Contact BTM's Sales Department for equalize strokes greater than 1.00 (25.4 mm)

For further information, see pages 33-35 in the technical section.

## Components P2REU

| Description                | No. Req'd | BTM No. |
|----------------------------|-----------|---------|
| P2REU x 1.50 (38.1mm) Body | 1         | 013136  |
| P2REU x 2.25 (57.2mm) Body | 1         | 013077  |
| Piston                     | 1         | 000117  |
| Piston Seal                | 2         | 000058  |
| Link                       | 1         | 000120  |
| Link Pin                   | 2         | 000124  |
| Link Pin Retainer          | 2         | 000121  |
| REU100 Ram                 | 1         | 013117  |
| R.H. Cover                 | 1         | 000125  |
| L.H. Cover                 | 1         | 000126  |
| Cover Screw                | 13        | 000129  |
| Cover Nut                  | 13        | 000078  |
| Ram "O" Ring               | 1         | 000150  |
| Grease Fitting             | 2         | 000050  |
| Sealant                    | 1         | 000273  |
| Seal Kit                   | 1         | 000800  |
| Top Cushion                | 1         | 001271  |
| Bottom Cushion             | 1         | 000591  |
| Stroke Limiter             | 1         | 000828  |
| Equalizing Air Cylinder    | 1         | 006157  |
| Stop Adjust Rod            | 1         | 013079  |
| Stop Adjust Collar         | 1         | 006162  |
| Mount Block                | 1         | 006139  |
| 3/16 Dia. x 1/2 Roll Pin   | 1         | 013088  |
| 3/16 Dia. x 3/4 Roll Pin   | 1         | 013087  |
| Ram Stop                   | 1         | 013081  |

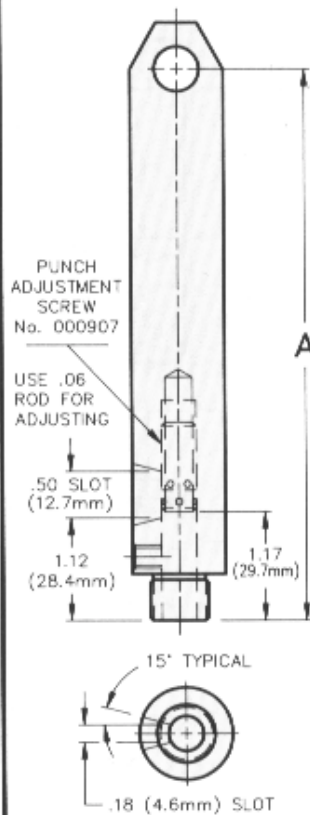
PT - 75  
PT - 100



SEE PAGE 11 FOR PUNCHES AND STRIPPERS THAT CAN BE USED WITH THIS RAM  
NOTE: A PUNCH LENGTH OF 2.50 (63.5mm) IS REQUIRED

PTA - 75  
PTA - 100

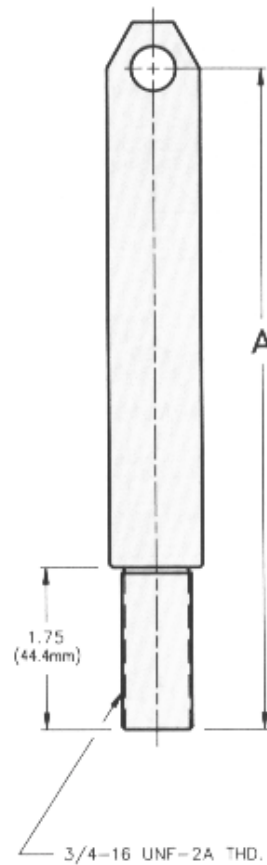
FOR ± .12 (3mm) TOOL ADJUSTMENT



PTA RAMS ARE IDENTICAL TO PT RAMS EXCEPT AS SHOWN

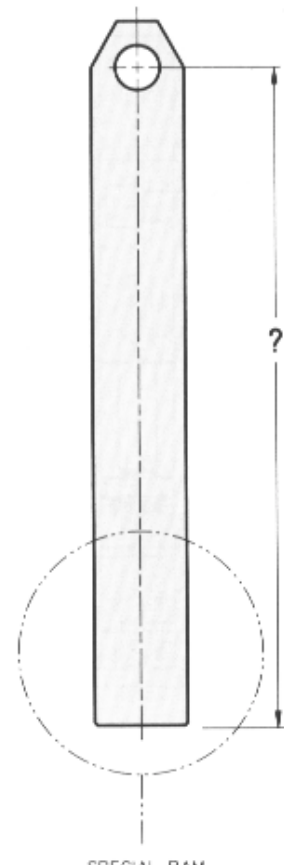
SEE PAGE 11 FOR PUNCHES AND STRIPPERS THAT CAN BE USED WITH THIS RAM  
NOTE: A PUNCH LENGTH OF 2.25 (57.2mm) IS REQUIRED

TE - 75  
TE - 100



USE WITH DIE SET ADAPTER PAGE 13

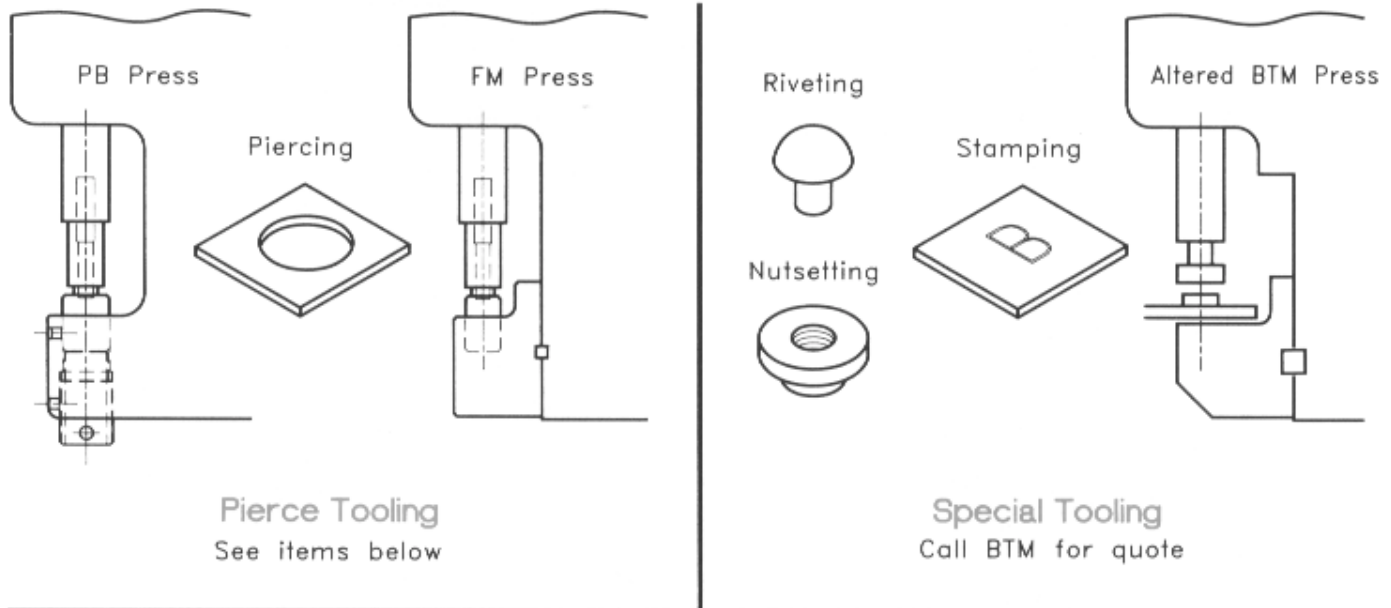
S - 75  
S - 100



SPECIAL RAM CUSTOMER TO PROVIDE RAM END CONFIGURATION FOR BTM PRICE AND DELIVERY

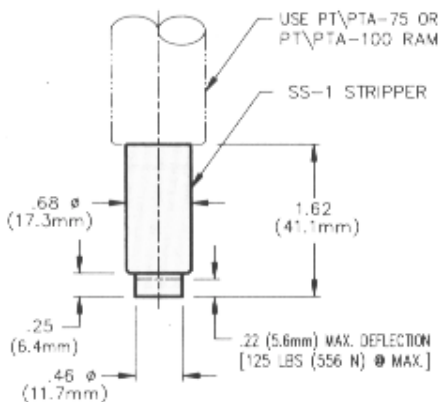
| SERIES  | PRESS MODEL | RAM STYLE | STROKE        | A DIM.         | BTM NO.        |
|---|-------------|-----------|---------------|----------------|----------------|
| 75<br>SERIES<br>RAMS<br><br>1 TON<br>PRESSES  | PB<br>PB6   | PT        | 1.50 (38.1mm) | 5.94 (150.9mm) | 000130         |
|   |             |           | 2.25 (57.2mm) | 6.25 (158.8mm) | 000131         |
|   | FM<br>H     | PTA       | 1.50 (38.1mm) | 6.25 (158.8mm) | 000904         |
|   |             |           | 2.25 (57.2mm) | 7.12 (180.8mm) | 000144         |
|   | S           | S         | 1.50 (38.1mm) | PER CUSTOMER   | TO BE ASSIGNED |
|   |             |           | 2.25 (57.2mm) | PER CUSTOMER   | TO BE ASSIGNED |
| 100<br>SERIES<br>RAMS<br><br>2 TON<br>PRESSES | PB<br>PB6   | PT        | 1.50 (38.1mm) | 5.94 (150.9mm) | 000334         |
|   |             |           | 2.25 (57.2mm) | 6.25 (158.8mm) | 000335         |
|   | FM<br>H     | PT        | 1.50 (38.1mm) | 5.94 (150.9mm) | 000133         |
|   |             |           | 2.25 (57.2mm) | 6.25 (158.8mm) | 000134         |
|   | 2EU         | PTA       | 1.50 (38.1mm) | 6.25 (158.8mm) | 000905         |
|   |             |           | 2.25 (57.2mm) | 7.12 (180.8mm) | 000146         |
|   | S           | S         | 1.50 (38.1mm) | 7.88 (200.2mm) | 000147         |
|   |             |           | 2.25 (57.2mm) | 7.88 (200.2mm) | 000147         |
|   | ALL         | S         | 1.50 (38.1mm) | PER CUSTOMER   | TO BE ASSIGNED |
|   |             |           | 2.25 (57.2mm) | PER CUSTOMER   | TO BE ASSIGNED |

## Examples of Tooling Set-Ups

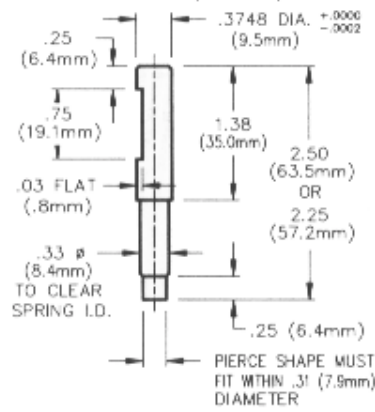


## Standard Strippers, Punches and Dies

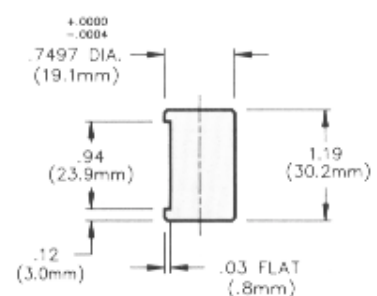
**SS-1 STRIPPER**  
BTM ASS'Y NO. 000157



**SS-1 PIERCE PUNCH**  
BTM No. 013137 (2.50 LG.)  
013729 (2.25 LG.)

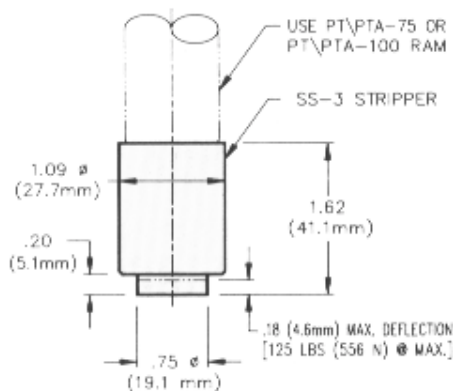


**1 TON PIERCE DIE**  
BTM NO.013138

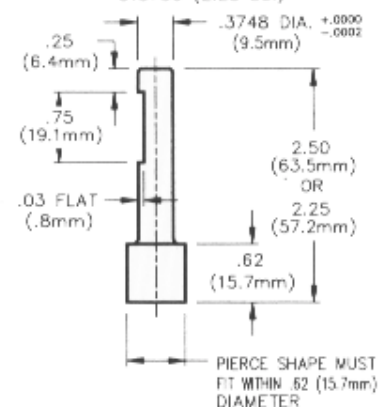


Matched Punch & Die Sets - Fax Pierce Punch Shape For Quote To Punch Tech, Inc. (Division of BTM) Fax: 810-364-6030

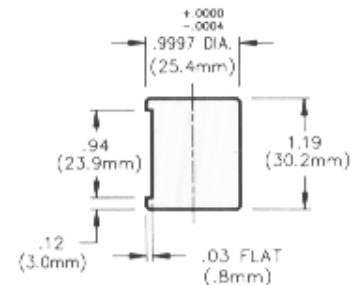
**SS-3 STRIPPER**  
BTM ASS'Y NO. 000168



**SS-3 PIERCE PUNCH**  
BTM No. 013139 (2.50 LG.)  
013730 (2.25 LG.)



**2 TON PIERCE DIE**  
BTM No. 013140

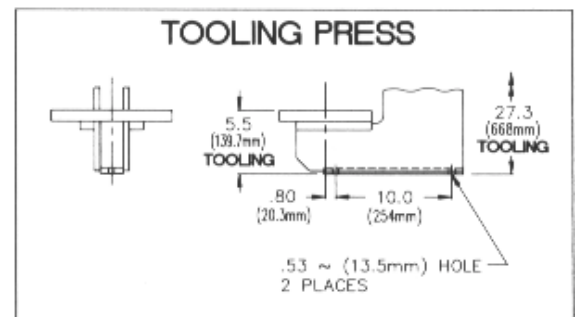
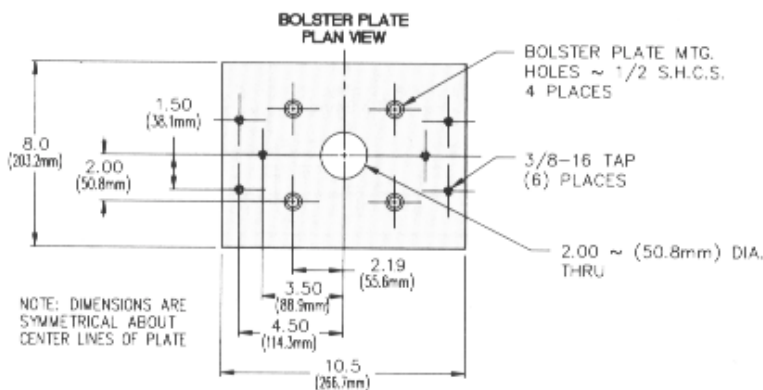
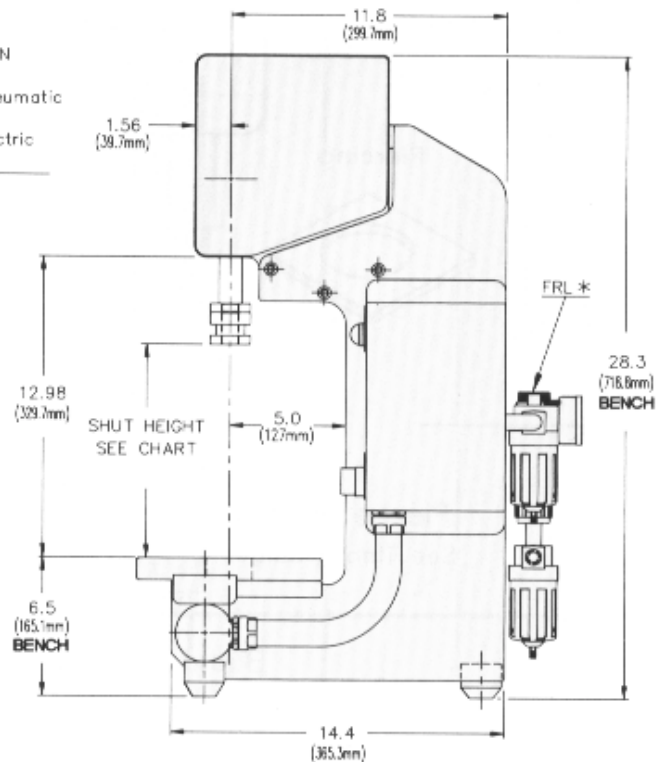
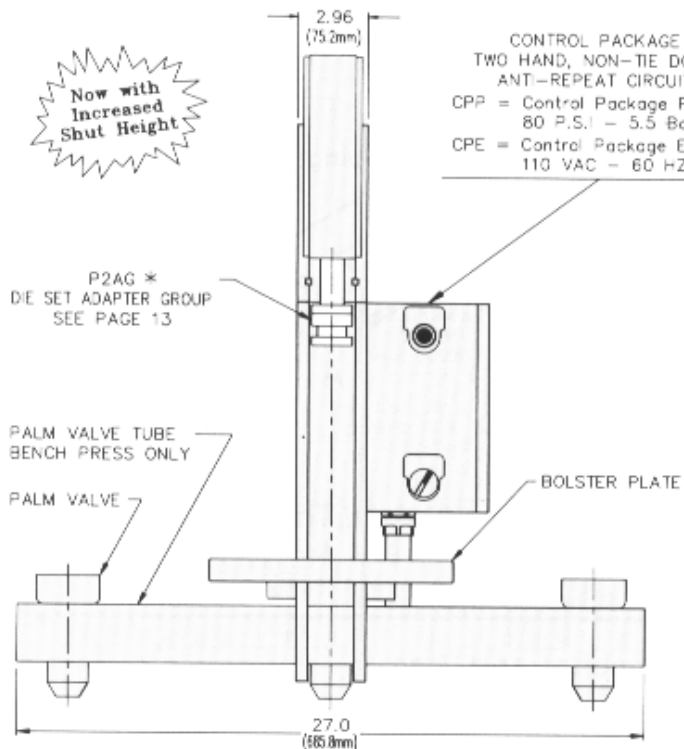


Matched Punch & Die Sets - Fax Pierce Punch Shape For Quote To Punch Tech, Inc. (Division of BTM) Fax: 810-364-6030

**B and T Models**  
(Bench and Tooling)

P2B x 1.50 (38.1mm) Stroke 000842 - 100 lbs. (45 kg)  
P2B x 2.25 (57.2mm) Stroke 000843 - 100 lbs. (45 kg)

P2T x 1.50 (38.1mm) Stroke 000844 - 100 lbs. (45 kg)  
P2T x 2.25 (57.2mm) Stroke 000845 - 100 lbs. (45 kg)

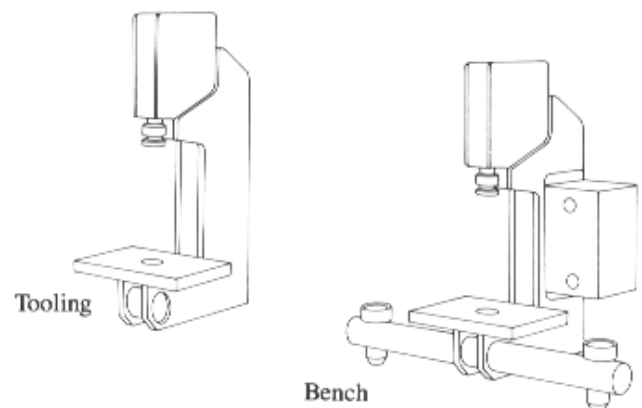


| STROKE                  | SHUT HEIGHT                              |
|-------------------------|--|
| 1.50 STROKE<br>(38.1mm) | 9.25 (235mm) MAX.<br>8.25 (209.5mm) MIN. |
| 2.25 STROKE<br>(57.2mm) | 8.50 (216mm) MAX.<br>7.50 (190.5mm) MIN. |

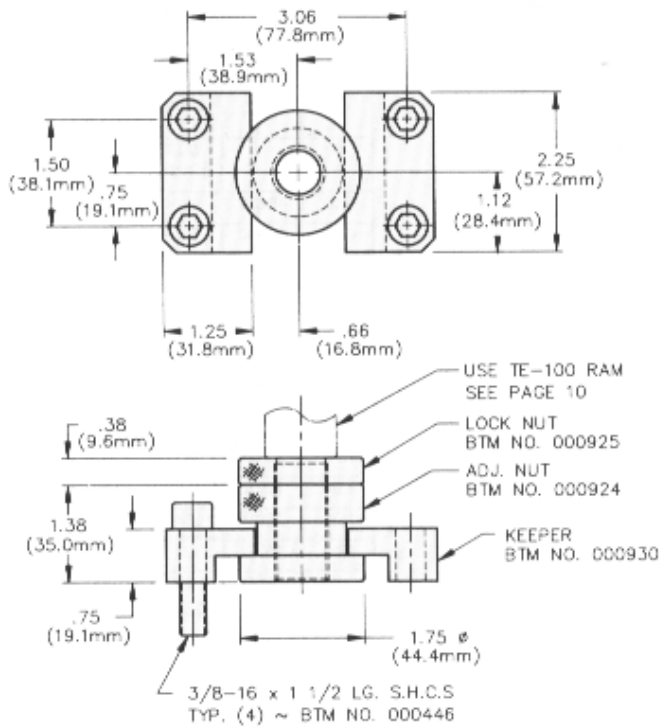
**How to Order Presses**

| Quantity | Model      | Stroke | Ram Style | Die Set Adapter | Bottom Cushion | Top Cushion | Control Package | Proximity Switches | Filter, Regulator | Consider Tooling |
|----------|------------|--------|-----------|-----------------|----------------|-------------|-----------------|--------------------|-------------------|------------------|
| 6        | P2B x 2.25 | TE-100 | DSAG      | BC              | TC             | CPP         | EPRL            | EPEL               | FRL               | TOOLING          |

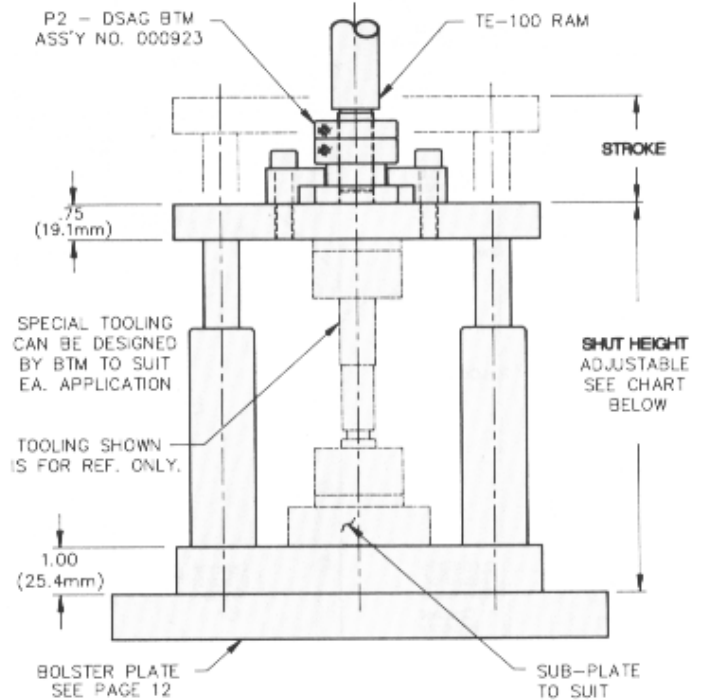
\* Denotes Options  
 See Page 13  
 See Page 10  
 See Page 13  
 See Page 10  
 See Page 28  
 See Page 11



## P2 - DSAG (DIE SET ADAPTER GROUP) BTM ASS'Y NO. 000923 (USED TO ADJUST SHUT HEIGHT)



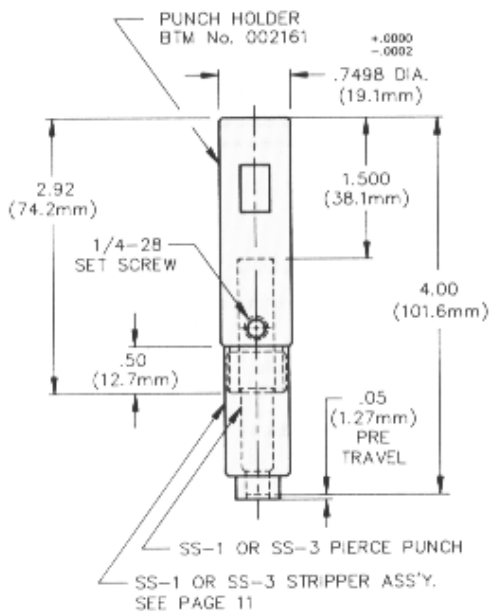
## DIE SET INFORMATION



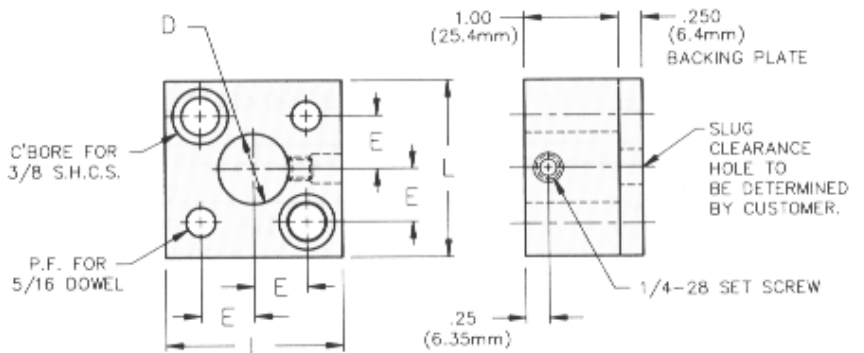
| STROKE               | SHUT HEIGHT                              |
|----------------------|--|
| 1.50 STROKE (38.1mm) | 9.25 (235mm) MAX.<br>8.25 (209.5mm) MIN. |
| 2.25 STROKE (57.2mm) | 8.50 (216mm) MAX.<br>7.50 (190.5mm) MIN. |

## PUNCH HOLDER ASS'Y.

BTM No. 013426 W/SS-1  
BTM No. 013427 W/SS-3  
BALL LOCK RETAINERS AVAILABLE



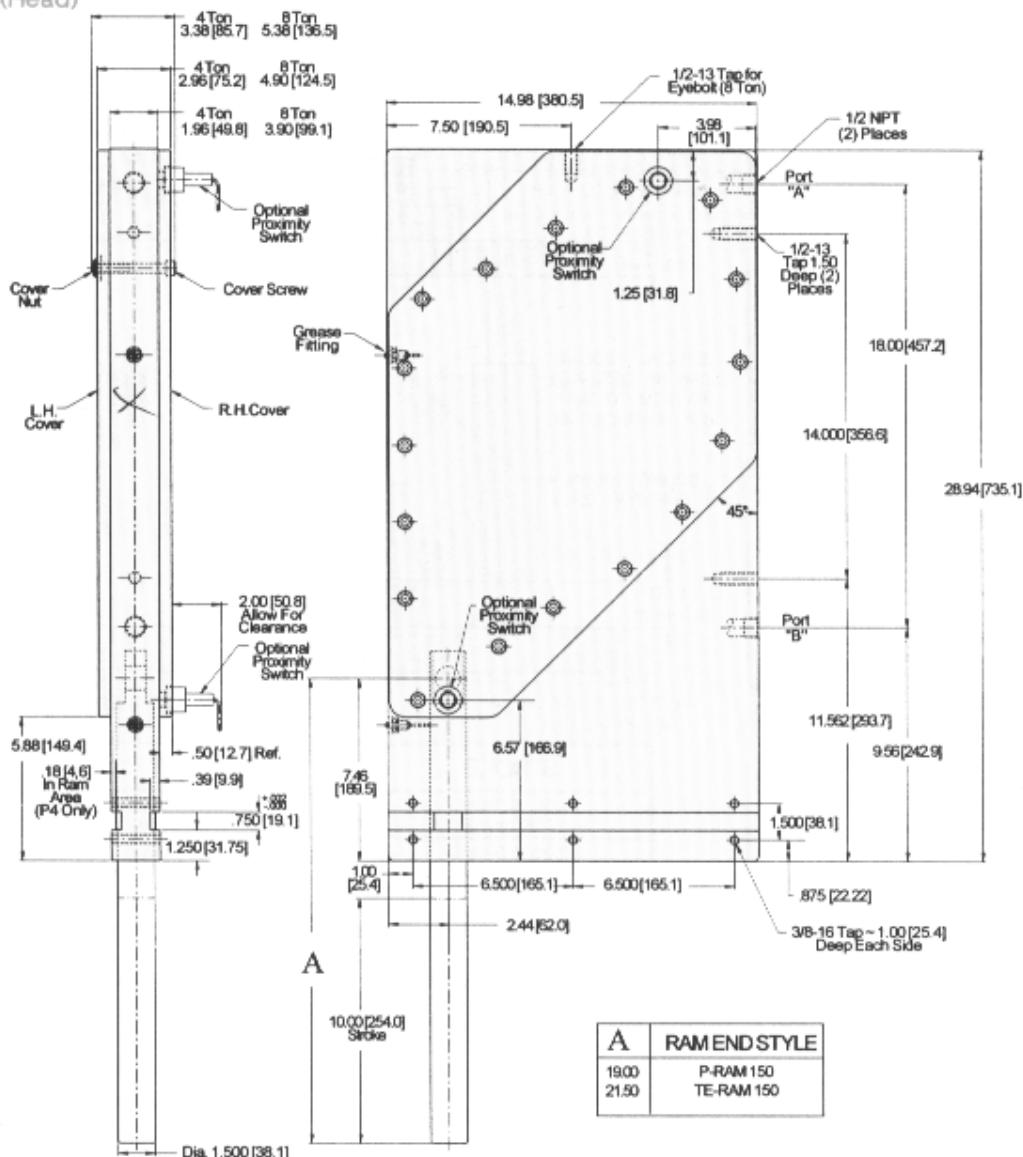
## RETAINER ASSEMBLY (RETAINER AND BACKING PLATE) BALL LOCK RETAINERS AVAILABLE



| BTM No. | D DIA. $\begin{smallmatrix} +.0003 \\ -.0000 \end{smallmatrix}$ | L             | E $\pm .0005$  |
|---------|---|---------------|----------------|
| 013142  | .7499 (19.1mm)  | 1.88 (47.8mm) | .5625 (14.2mm) |
| 013143  | .9999 (25.4mm)  | 2.25 (57.2mm) | .7500 (19.1mm) |

Punch Holder Assembly and Retainers may be used in any size press  
See "DIE SET INFORMATION" above for example.

H Models P4H x 10" Stroke ~BTM No. 000440 - 104 lbs. (47 Kg.) P8H x 10" Stroke ~BTM No. 000454 - 180 lbs. (82 Kg.) (Head)



**Force Exerted by Ram at Charted Distance from Bottom of Stroke**

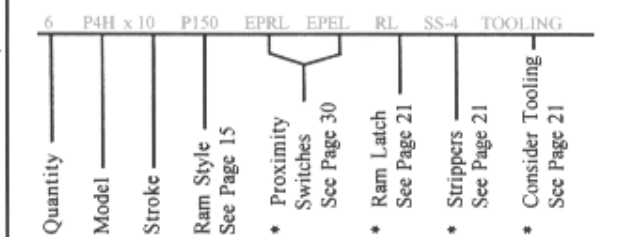
| Distance from Bottom (inches) | Force (lbs.) P4 | Air Consumption per single stroke (cu. in.) P4 | Force (lbs.) P8 | Air Consumption per single stroke (cu. in.) P8 |
|-------------------------------|-----------------|--|-----------------|--|
| 0                             |                 | RAM DOWN                                       |                 | RAM DOWN                                       |
| 0.01                          | 48250           | 190  | 96500           | 380  |
| 0.02                          | 20800           | 186  | 41600           | 372  |
| 0.03                          | 12490           | 183  | 24980           | 366  |
| 0.04                          | 10250           | 180  | 20500           | 360  |
| 0.06                          | 8400            | 180  | 16800           | 360  |
| 0.12                          | 6240            | 174  | 12480           | 348  |
| 0.24                          | 4920            | 167  | 9840            | 334  |
| 0.50                          | 4650            | 155  | 9300            | 310  |
| 0.75                          | 3280            | 147  | 6560            | 294  |
| 1.00                          | 2675            | 139  | 5350            | 278  |
| 1.25                          | 2200            | 134  | 4400            | 268  |
| 1.50                          | 2050            | 127  | 4100            | 254  |
| 1.75                          | 1960            | 122  | 3930            | 244  |
| 2.00                          | 1830            | 117  | 3660            | 234  |
| 2.25                          | 1750            | 112  | 3500            | 224  |
| 2.50                          | 1680            | 108  | 3360            | 216  |
| 3.00                          | 1520            | 99   | 3040            | 198  |
| 3.50                          | 1480            | 91   | 2960            | 182  |
| 4.00                          | 1360            | 84   | 2720            | 168  |
| 4.50                          | 1200            | 77   | 2400            | 154  |
| 5.00                          | 1020            | 70   | 2040            | 140  |
| 6.00                          | 950             | 57   | 1900            | 114  |
| 7.00                          | 890             | 44   | 1780            | 88   |
| 8.00                          | 840             | 31   | 1680            | 62   |
| 9.00                          | 870             | 17   | 1740            | 34   |
| 10.00                         | 890             | RAM UP   | 1780            | RAM UP   |

Components

**P4H**

| Description         | No. Req'd | BTM No.    |
|---------------------|-----------|------------|
| P4H Body 10" Stroke | 1         | 000441     |
| Piston              | 1         | 000443     |
| Piston Seal         | 2         | 000051     |
| R.H. Link Plate     | 1         | 000444     |
| L.H. Link Plate     | 1         | 000445     |
| Link Pin            | 2         | 000264     |
| Ram - 150 Series    | 1         | See Pg. 15 |
| R.H. Cover          | 1         | 000447     |
| L.H. Cover          | 1         | 000448     |
| Cover Screw         | 17        | 000268     |
| Cover Nut           | 17        | 000270     |
| Ram Wiper           | 1         | 000272     |
| Ram "O" Ring        | 1         | 000271     |
| Grease Fitting      | 2         | 000050     |
| Sealant - Cover     | 1         | 000273     |
| Top Cushion         | 1         | 004315     |
| Bottom Cushion      | 1         | 000813     |

**How to Order Presses**



**How to Order Components**

| Qty. | P4 Piston Description | BTM No. |
|------|-----------------------|---------|
| 2    | P4 Piston             | 000443  |

Components

**P8H**

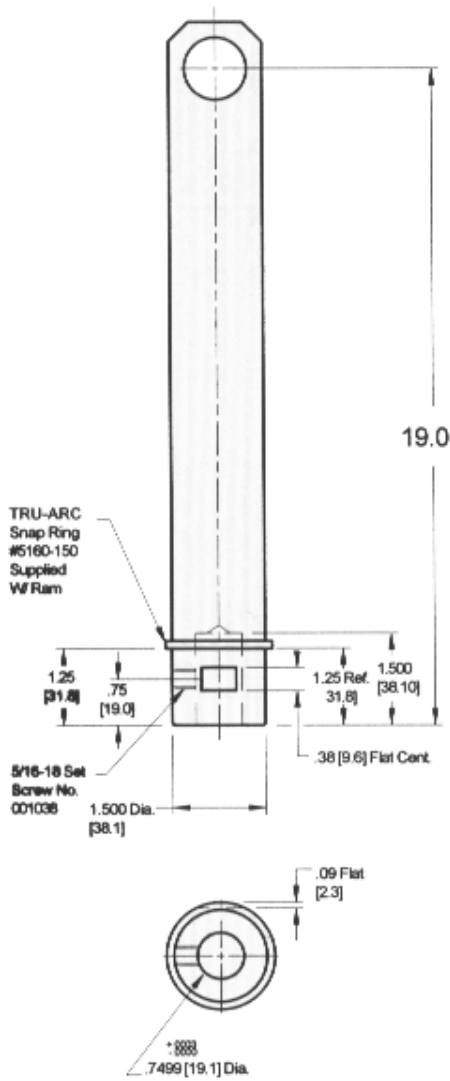
| Description         | No. Req'd | BTM No.    |
|---------------------|-----------|------------|
| P8H Body 10" Stroke | 1         | 000455     |
| Piston              | 1         | 000457     |
| Piston Seal         | 2         | 000060     |
| R.H. Link Plate     | 1         | 000458     |
| L.H. Link Plate     | 1         | 000459     |
| Link Pin            | 2         | 000265     |
| Ram - 150 Series    | 1         | See Pg. 15 |
| R.H. Cover          | 1         | 000447     |
| L.H. Cover          | 1         | 000448     |
| Cover Screw         | 17        | 000269     |
| Cover Nut           | 17        | 000270     |
| Ram Wiper           | 1         | 000272     |
| Ram "O" Ring        | 1         | 000271     |
| Grease Fitting      | 2         | 000050     |
| Sealant - Cover     | 1         | 000273     |
| Top Cushion         | 1         | 004316     |
| Bottom Cushion      | 1         | 000813     |

\* Denotes Options

# 150 Series Rams For P4 & P8 Presses

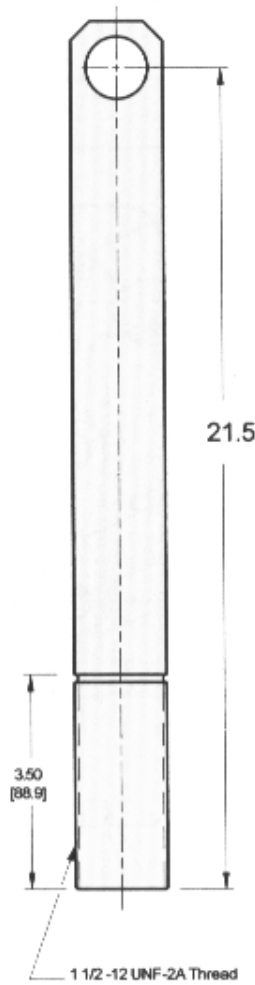


P-150



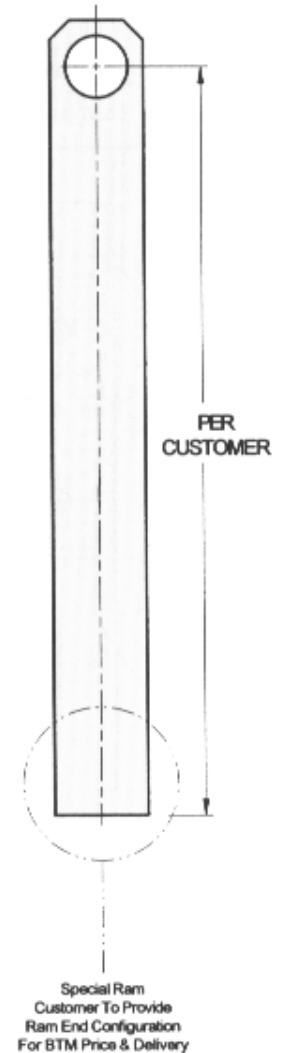
BTM No. 000276

TE-150



BTM No. 000285

S-150



TO BE ASSIGNED

See Pages 21-23 For Options & Accessories

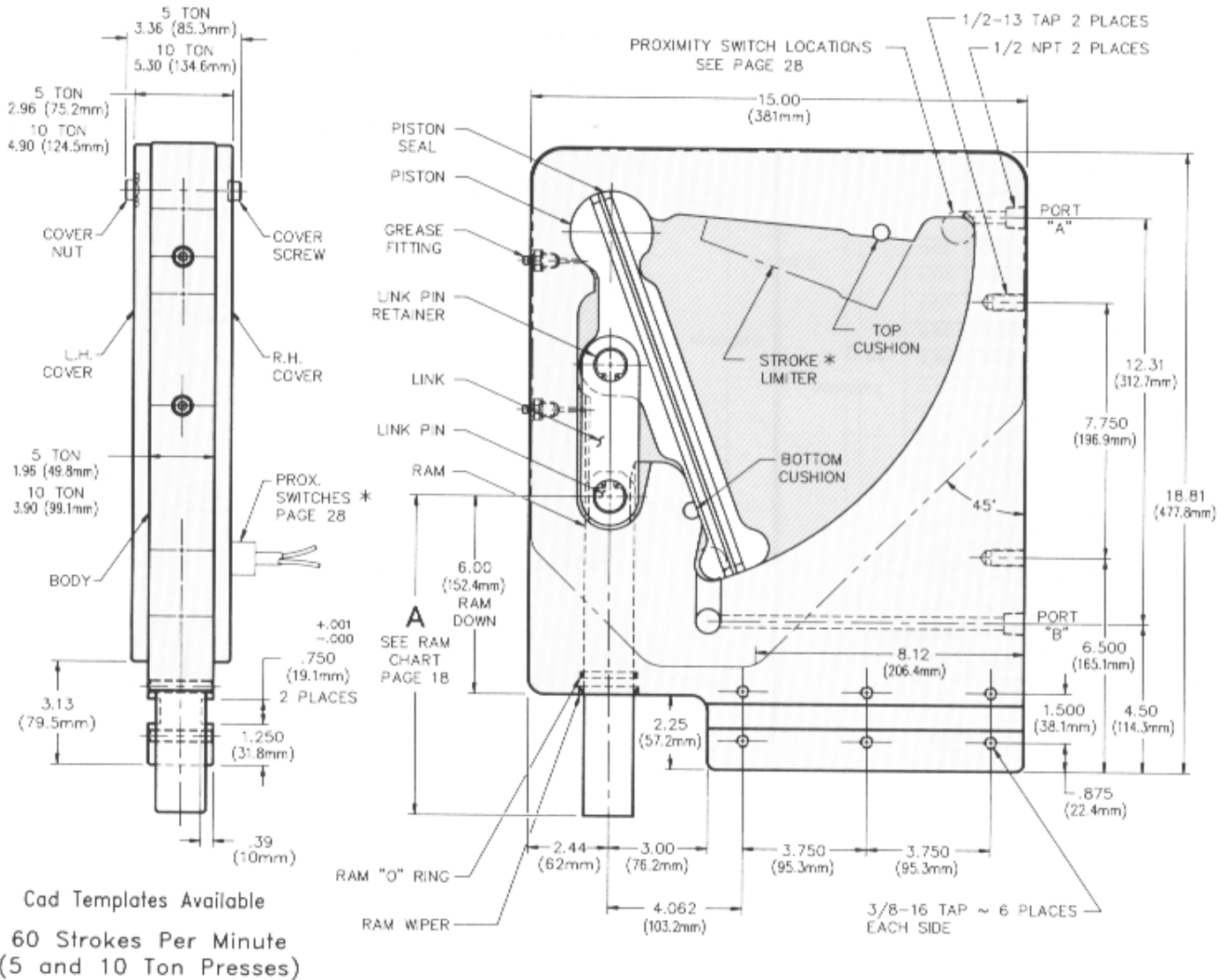
H Models  
(Head)

P5H x 3.00 (76.2mm) Stroke 001541 - 70 lbs. (32 kg)

P10H x 3.00 (76.2mm) Stroke 001543 - 120 lbs. (55 kg)

P5H x 4.50 (114.3mm) Stroke 001542 - 70 lbs. (32 kg)

P10H x 4.50 (114.3mm) Stroke 001544 - 120 lbs. (55 kg)

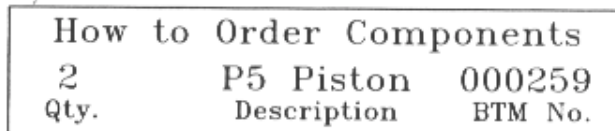
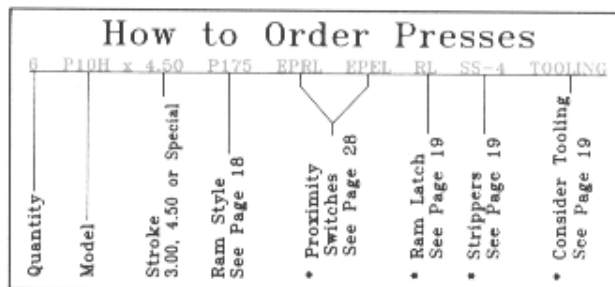


Cad Templates Available

60 Strokes Per Minute  
(5 and 10 Ton Presses)

### Components P5H

| Description               | No. Req'd | BTM No.    |
|---------------------------|-----------|------------|
| P5H x 3.00 (76.2mm) Body  | 1         | 000247     |
| P5H x 4.50 (114.3mm) Body | 1         | 000248     |
| Piston                    | 1         | 000259     |
| Piston Seal               | 2         | 000051     |
| Link                      | 1         | 000261     |
| Link Pin                  | 2         | 000264     |
| Link Pin Retainer         | 2         | 000263     |
| Ram - 150 Series          | 1         | See Pg. 18 |
| R.H. Cover                | 1         | 000266     |
| L.H. Cover                | 1         | 000267     |
| Cover Screw               | 15        | 000268     |
| Cover Nut                 | 15        | 000270     |
| Ram Wiper                 | 1         | 000272     |
| Ram "O" Ring              | 2         | 000271     |
| Grease Fitting            | 2         | 000050     |
| Sealant - Cover           | 1         | 000273     |
| Seal Kit                  | 1         | 000804     |
| Top Cushion               | 1         | 004315     |
| Bottom Cushion            | 1         | 004315     |
| Stroke Limiter *          | 1         | 000814     |



### Components P10H

| Description                | No. Req'd | BTM No.    |
|----------------------------|-----------|------------|
| P10H x 3.00 (76.2mm) Body  | 1         | 000249     |
| P10H x 4.50 (114.3mm) Body | 1         | 000250     |
| Piston                     | 1         | 000260     |
| Piston Seal                | 2         | 000060     |
| Link                       | 1         | 003203     |
| Link Pin                   | 2         | 000265     |
| Link Pin Retainer          | 2         | 000263     |
| Ram - 175 Series           | 1         | See Pg. 18 |
| R.H. Cover                 | 1         | 000266     |
| L.H. Cover                 | 1         | 000267     |
| Cover Screw                | 15        | 000269     |
| Cover Nut                  | 15        | 000270     |
| Ram Wiper                  | 1         | 006731     |
| Ram "O" Ring               | 1         | 006732     |
| Grease Fitting             | 2         | 000050     |
| Sealant - Cover            | 1         | 000273     |
| Seal Kit                   | 1         | 000805     |
| Top Cushion                | 1         | 004316     |
| Bottom Cushion             | 1         | 004316     |
| Stroke Limiter *           | 1         | 000815     |

\* Denotes Options

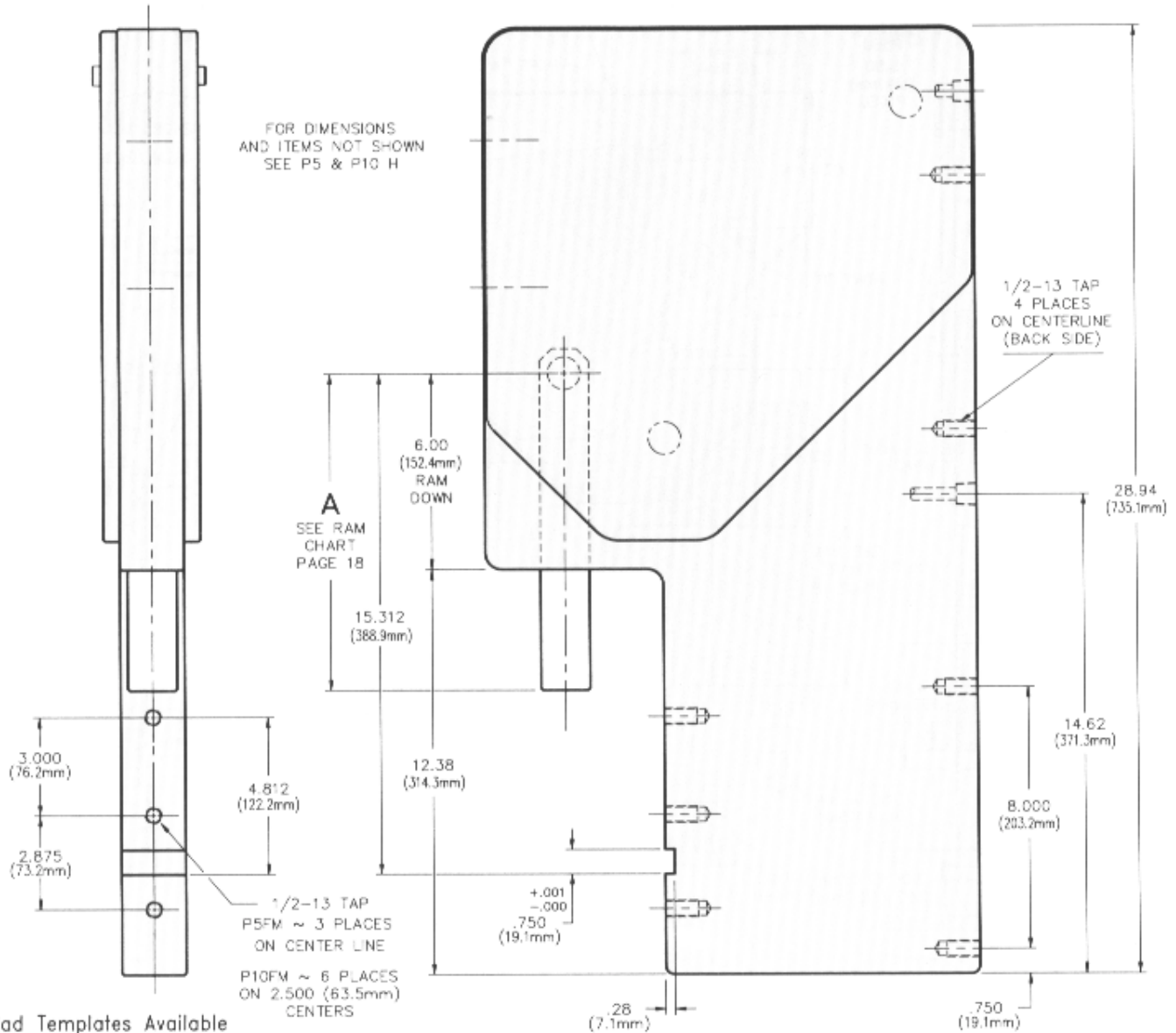
# 5 & 10 Ton FM Presses



**FM Models**  
(Front Mount)

P5FM x 3.00 (76.2mm) Stroke 001549 - 90 lbs. (41 kg)  
P5FM x 4.50 (114.3mm) Stroke 001550 - 90 lbs. (41 kg)

P10FM x 3.00 (76.2mm) Stroke 001551 - 155 lbs. (70 kg)  
P10FM x 4.50 (114.3mm) Stroke 001552 - 155 lbs. (70 kg)



Cad Templates Available

**Components**

**P5FM**

| Description                | No. Req'd | BTM No. |
|----------------------------|-----------|---------|
| P5FM x 3.00 (76.2mm) Body  | 1         | 000255  |
| P5FM x 4.50 (114.3mm) Body | 1         | 000256  |

**Components**

**P10FM**

| Description                 | No. Req'd | BTM No. |
|-----------------------------|-----------|---------|
| P10FM x 3.00 (76.2mm) Body  | 1         | 002571  |
| P10FM x 4.50 (114.3mm) Body | 1         | 003804  |

For components not shown,  
see P5H & P10H on page 14.

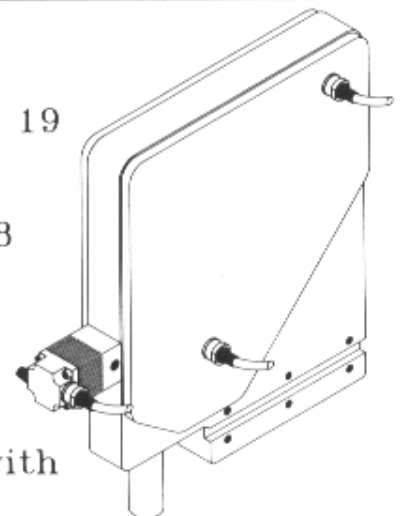
**\*Options**

Ram Latch - See page 19

Electrical Proximity  
Switches - See page 28

Stroke Limiter -  
Limit upstroke to suit  
your requirements.

Presses are available with  
metric threads.



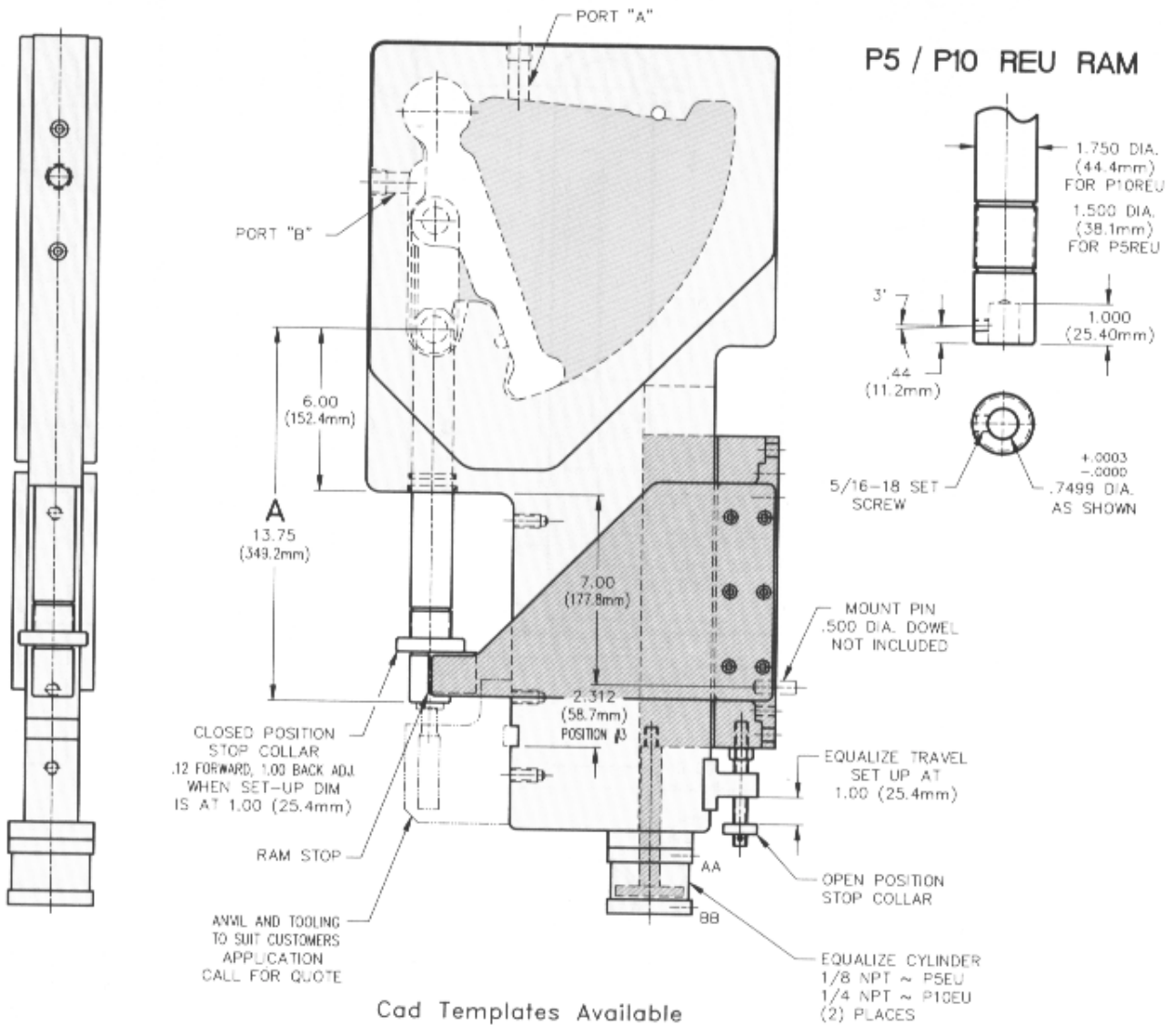


# 5 & 10 Ton Reverse Equalizing (2 Position) Presses

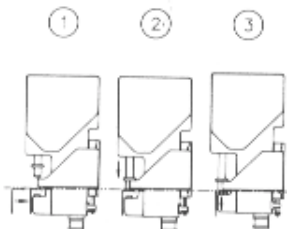


**REU Models**  
(Reverse Equalizing Unit)

P5REU x 3.00 (76.2mm) Stroke 013200 - 135 lbs. (61 kg)  
P10REU x 3.00 (76.2mm) Stroke 013202 - 225 lbs. (102 kg)



## How Equalizing Works (Reverse - Die on Ram)



- ① Open Position - Part load and unload.
- ② Equalize Position - Die advanced to part.
- ③ Closed Position - Ram extended to perform work.

## How to Order Presses

| Quantity | Model      | Stroke                                       | Ram Style   | Proximity Switches | Ram Latch   | Strippers   | Consider Tooling |
|----------|------------|--|---|--------------------|-------------|-------------|------------------|
| 6        | P10REU x 3 | REU175                                       | EPRL  | EPRL               | RL          | SS-4        | TOOLING          |
|          |            | 3, 4.5 or Special (EU)<br>3 or Special (REU) | See Page 16 (EU)<br>See Components at Right (REU) | See Page 28        | See Page 19 | See Page 19 | See Page 19      |

## How to Order Components

| Qty. | Mount Block Description | BTM No. |
|------|-------------------------|---------|
| 1    | Mount Block             | 006368  |

\* Denotes Options

For dimensions and components not shown, see P5EU & P10EU on page 16.

See pages 33-35 in the Technical Section for further information.

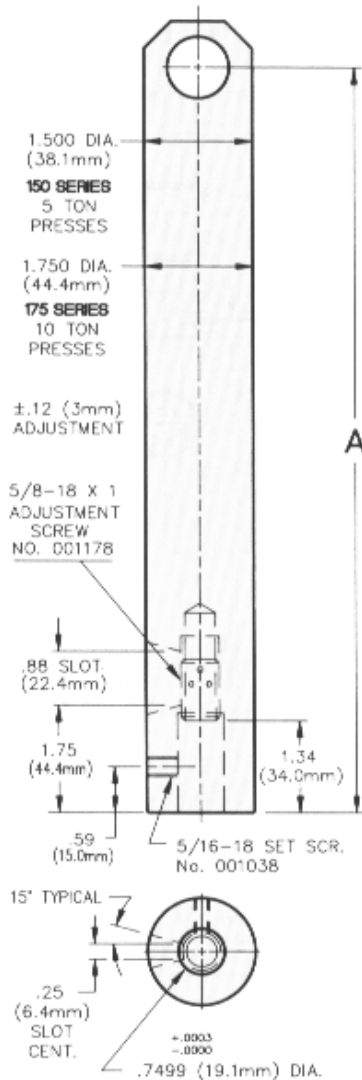
## Components P5REU

| Description               | No. Req'd. | BTM No. |
|---------------------------|------------|---------|
| P5REU Ram                 | 1          | 013194  |
| Mount Block               | 1          | 006368  |
| Stop Collar (Closed Pos.) | 1          | 013216  |
| Ram Stop                  | 1          | 006519  |
| R.H. Equalize Side Plate  | 1          | 006366  |
| L.H. Equalize Side Plate  | 1          | 006367  |
| Key 3/8 x 3/8 x 3/4       | 2          | 007027  |
| Key 1/2 x 1/2 x 8         | 2          | 007011  |

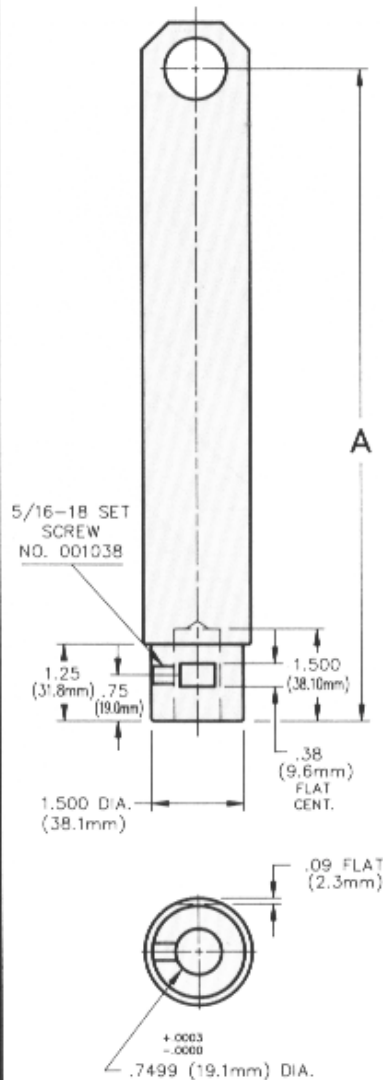
## Components P10REU

| Description               | No. Req'd. | BTM No. |
|---------------------------|------------|---------|
| P10REU Ram                | 1          | 013198  |
| Mount Block               | 1          | 013484  |
| Stop Collar (Closed Pos.) | 1          | 013216  |
| Ram Stop                  | 1          | 013199  |
| R.H. Equalize Side Plate  | 1          | 006366  |
| L.H. Equalize Side Plate  | 1          | 006367  |
| Key 3/8 x 3/8 x 3/4       | 2          | 007027  |
| Key 1/2 x 1/2 x 8         | 2          | 007011  |

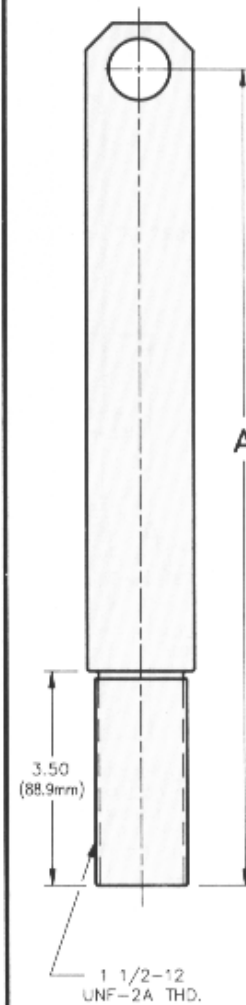
PA - 150  
PA - 175



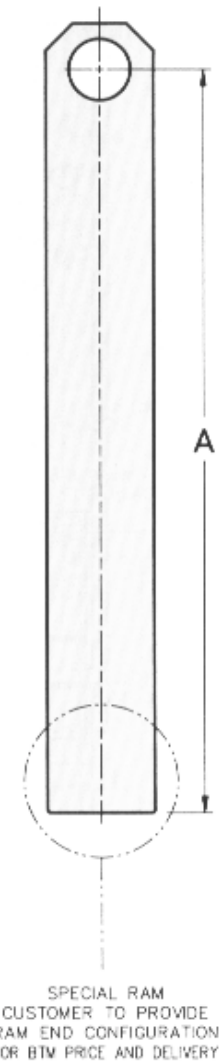
P - 150\*  
P - 175



TE - 150  
TE - 175

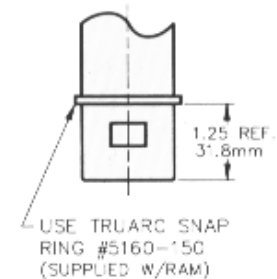


S - 150  
S - 175



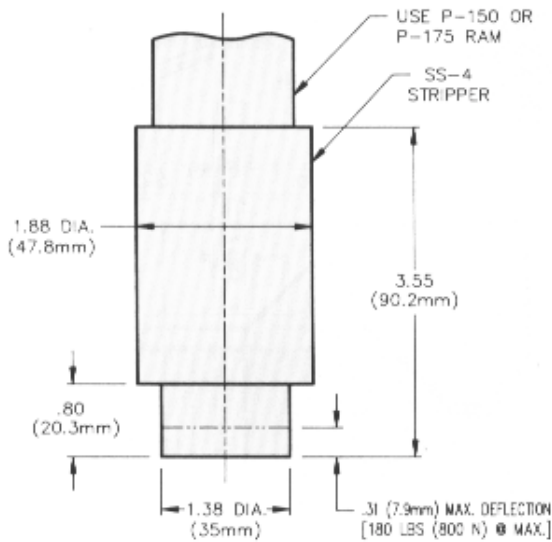
| SERIES   | PRESS MODEL | RAM STYLE      | STROKE         | A DIM.            | BTM NO. |
|--|-------------|----------------|----------------|-------------------|---------|
| 150<br>SERIES<br>RAMS<br><br>5 TON<br>PRESSES  | H           | PA             | 3.00 (76.2mm)  | 11.97 (304.0mm)   | 001177  |
|  |             |                | 4.50 (114.3mm) | 13.47 (342.1mm)   | 002773  |
|  | FM          | P*             | 3.00 (76.2mm)  | 10.62 (269.7mm)   | 000274  |
|  |             |                | 4.50 (114.3mm) | 12.12 (307.8mm)   | 000275  |
|  | EU          | TE             | 3.00 (76.2mm)  | 13.30 (337.8mm)   | 000283  |
|  |             |                | 4.50 (114.3mm) | 14.80 (375.9mm)   | 000284  |
| ALL  | S           | 3.00 (76.2mm)  | PER CUSTOMER   | TO BE<br>ASSIGNED |         |
|  |             | 4.50 (114.3mm) |                |                   |         |
| 175<br>SERIES<br>RAMS<br><br>10 TON<br>PRESSES | H           | PA             | 3.00 (76.2mm)  | 11.97 (304.0mm)   | 013109  |
|  |             |                | 4.50 (114.3mm) | 13.47 (342.1mm)   | 013110  |
|  | FM          | P              | 3.00 (76.2mm)  | 10.62 (269.7mm)   | 004886  |
|  |             |                | 4.50 (114.3mm) | 12.12 (307.8mm)   | 004887  |
|  | EU          | TE             | 3.00 (76.2mm)  | 13.30 (337.8mm)   | 005687  |
|  |             |                | 4.50 (114.3mm) | 14.80 (375.9mm)   | 004893  |
| ALL  | S           | 3.00 (76.2mm)  | PER CUSTOMER   | TO BE<br>ASSIGNED |         |
|  |             | 4.50 (114.3mm) |                |                   |         |

\* P-150 RAMS USE A SNAP RING TO BACK UP STRIPPER.

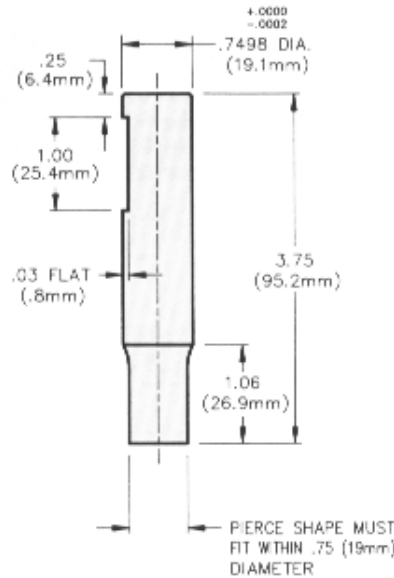


## Strippers, Punches and Dies

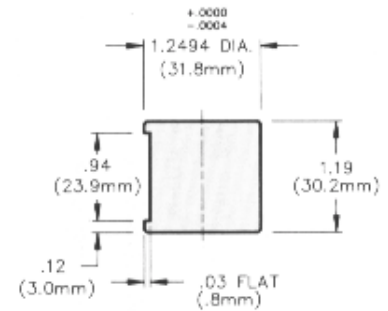
**SS-4 STRIPPER**  
BTM ASS'Y NO. 000286



**SS-4 PIERCE PUNCH**  
BTM No. 013149

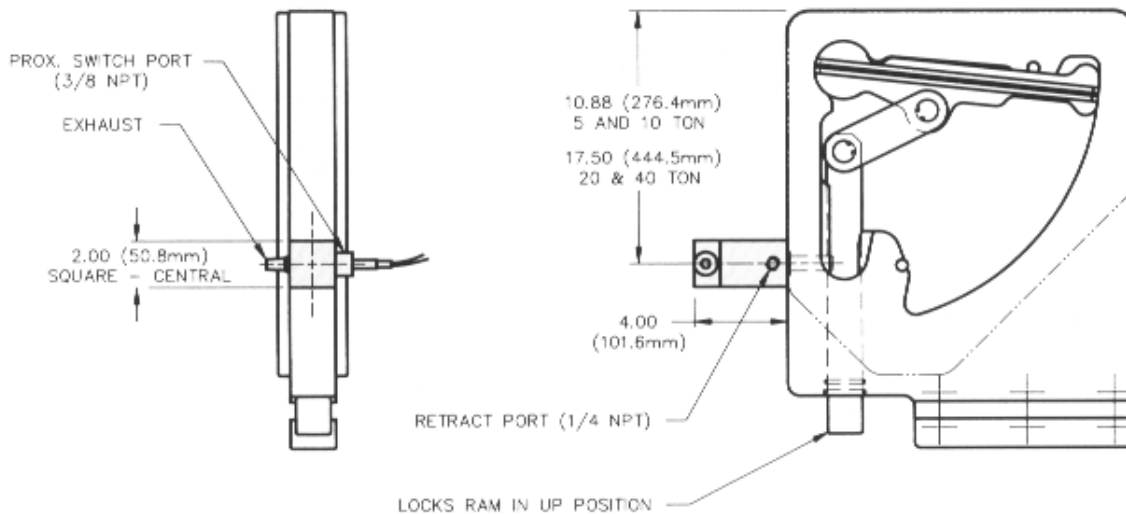


**SS-4 PIERCE DIE**  
BTM No. 013150



Matched Punch & Die Sets - Fax Pierce Punch Shape For Quote To Punch Tech, Inc. (Division of BTM) Fax: 810-364-6030

## Ram Latch with Proximity Switch



The ram latch prevents the ram from drifting down, and is used to facilitate tool changes with the air off.

Available on 5, 10, 20 and 40 Ton Presses  
Models: H, FM, EU, REU, T, B or F.  
(H Shown)

NOTE: 2 Ram Latches are required for 40 Ton Presses. Located on center-line of rams.

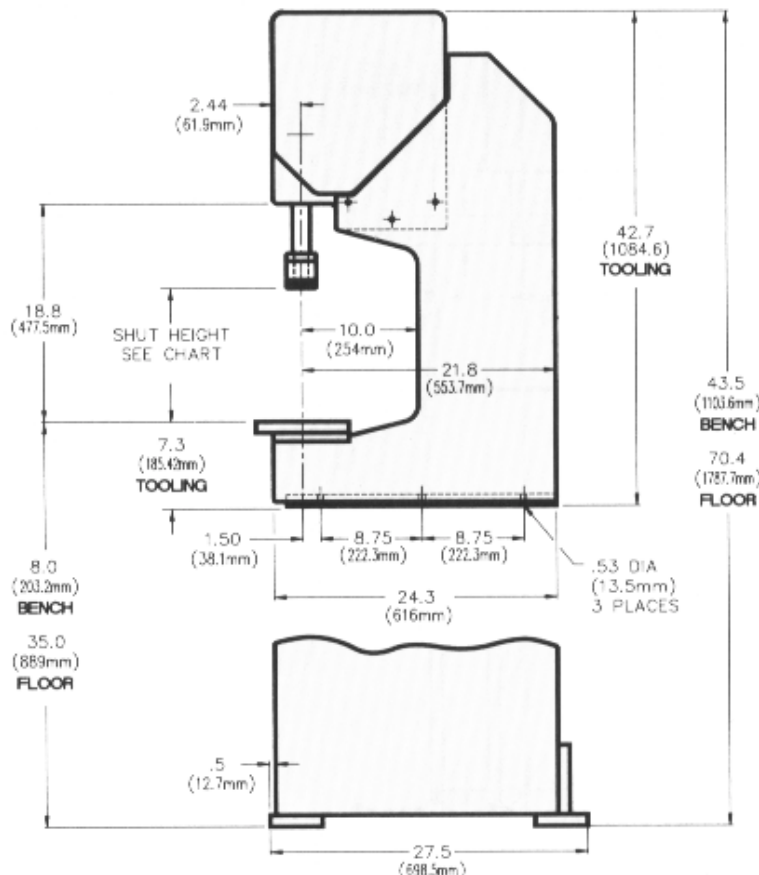
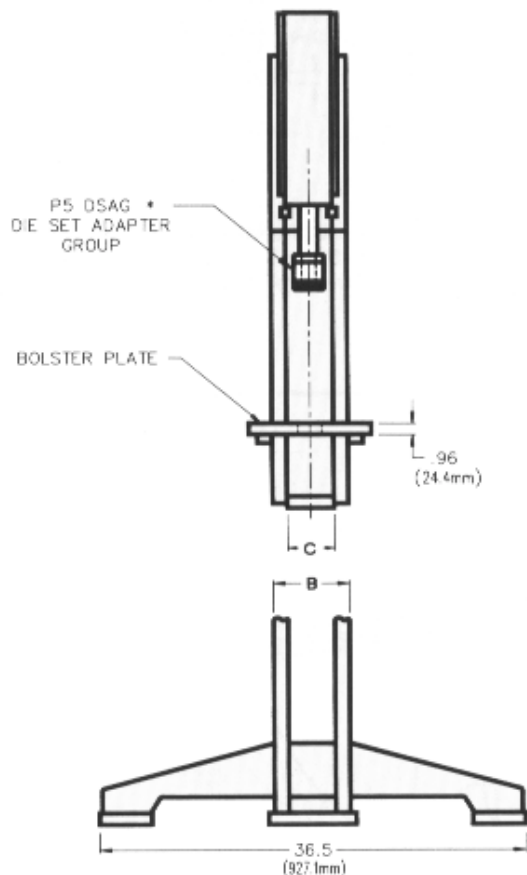
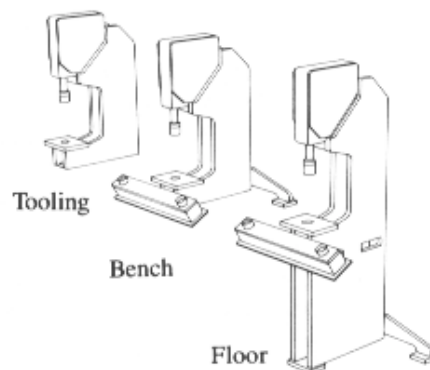
Retract port, and prox. switch location positioned by customer. See page 28.

**B, F and T Models**  
(Bench, Floor and Tooling)

Now with  
Increased  
Shut Height

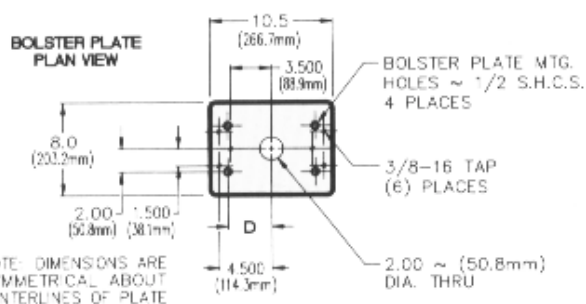
P5B x 3.00 (76.2mm) Stroke 000846 - 310 lbs. (141 kg)  
 P5B x 4.50 (114.3mm) Stroke 000847 - 310 lbs. (141 kg)  
 P5F x 3.00 (76.2mm) Stroke 000850 - 450 lbs. (205 kg)  
 P5F x 4.50 (114.3mm) Stroke 000851 - 450 lbs. (205 kg)  
 PST x 3.00 (76.2mm) Stroke 000848 - (136 kg)  
 PST x 4.50 (114.3mm) Stroke 000849 - (136 kg)

P10B x 3.00 (76.2mm) Stroke 000852 - 700 lbs. (318 kg)  
 P10B x 4.50 (114.3mm) Stroke 000853 - 700 lbs. (318 kg)  
 P10F x 3.00 (76.2mm) Stroke 000856 - 835 lbs. (380 kg)  
 P10F x 4.50 (114.3mm) Stroke 000857 - 835 lbs. (380 kg)  
 P10T x 3.00 (76.2mm) Stroke 000854 - 560 lbs. (255 kg)  
 P10T x 4.50 (114.3mm) Stroke 000855 - 560 lbs. (255 kg)



| PRESS         | B              | C              | D              |
|---------------|----------------|----------------|----------------|
| <b>5 TON</b>  | 3.2<br>81.3mm  | 1.96<br>49.8mm | 2.19<br>55.6mm |
| <b>10 TON</b> | 6.4<br>162.6mm | 3.90<br>99.1mm | 3.75<br>95.3mm |

| STROKE                   | SHUT HEIGHT                                  |
|--------------------------|--|
| 3.00 STROKE<br>(76.2mm)  | 11.50 (292.1mm) MAX.<br>10.50 (266.7mm) MIN. |
| 4.50 STROKE<br>(114.3mm) | 10.00 (254.0mm) MAX.<br>9.00 (228.6mm) MIN.  |



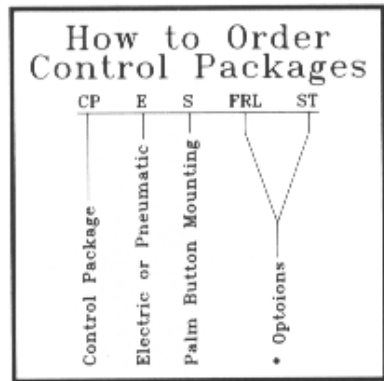
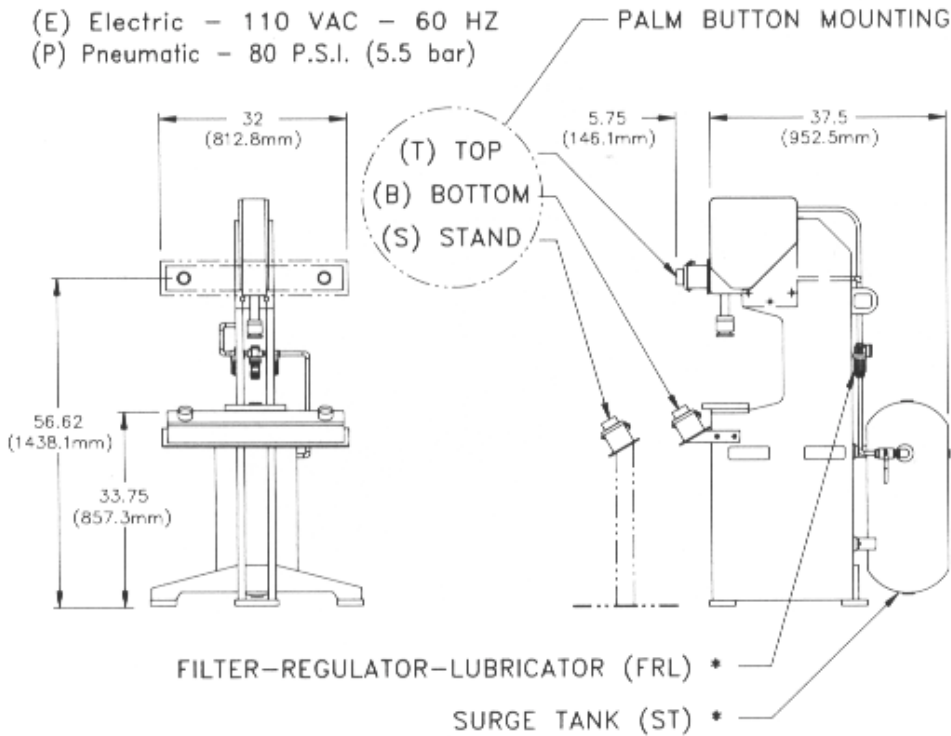
### How to Order Presses

|                           |   |      |                       |        |      |    |      |      |    |   |   |     |    |         |
|---------------------------|---|------|-----------------------|--------|------|----|------|------|----|---|---|-----|----|---------|
| Quantity                  | 6 | P10F | 4.50                  | TE-175 | DSAG | RL | EPRL | EPFL | CP | E | S | FRL | ST | TOOLING |
| Model                     |   |      |                       |        |      |    |      |      |    |   |   |     |    |         |
| Stroke                    |   |      | 3.00, 4.50 or Special |        |      |    |      |      |    |   |   |     |    |         |
| Ram Style                 |   |      | TE is Standard        |        |      |    |      |      |    |   |   |     |    |         |
| See Page 18               |   |      |                       |        |      |    |      |      |    |   |   |     |    |         |
| • Die Set Adapter         |   |      |                       |        |      |    |      |      |    |   |   |     |    |         |
| See Page 21               |   |      |                       |        |      |    |      |      |    |   |   |     |    |         |
| • Ram Latch               |   |      |                       |        |      |    |      |      |    |   |   |     |    |         |
| See Page 19               |   |      |                       |        |      |    |      |      |    |   |   |     |    |         |
| • Proximity Switches      |   |      |                       |        |      |    |      |      |    |   |   |     |    |         |
| See Page 28               |   |      |                       |        |      |    |      |      |    |   |   |     |    |         |
| • Controls                |   |      |                       |        |      |    |      |      |    |   |   |     |    |         |
| See Page 21               |   |      |                       |        |      |    |      |      |    |   |   |     |    |         |
| • Consider Tooling        |   |      |                       |        |      |    |      |      |    |   |   |     |    |         |
| See Pages 11, 13, 19 & 21 |   |      |                       |        |      |    |      |      |    |   |   |     |    |         |

\* Denotes Options

## CONTROL PACKAGES (CP)

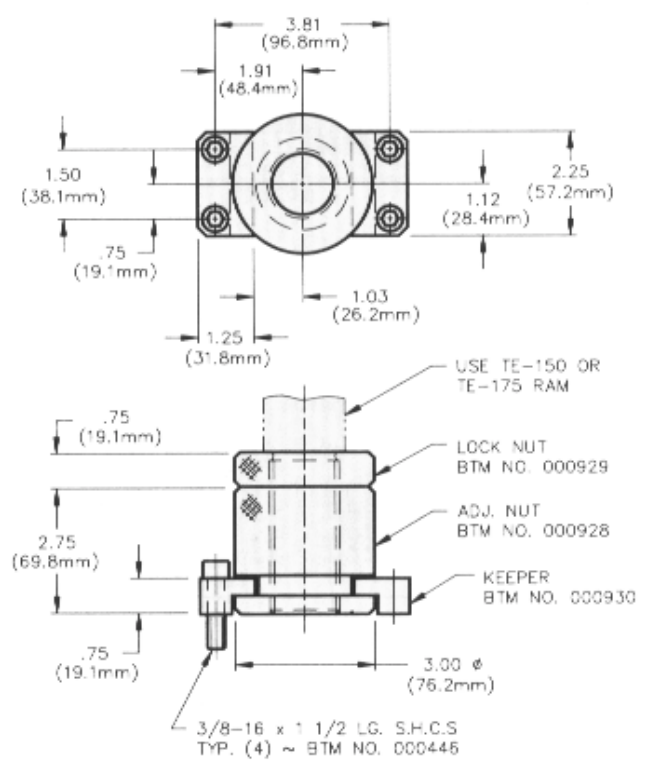
- (E) Electric - 110 VAC - 60 HZ
- (P) Pneumatic - 80 P.S.I. (5.5 bar)



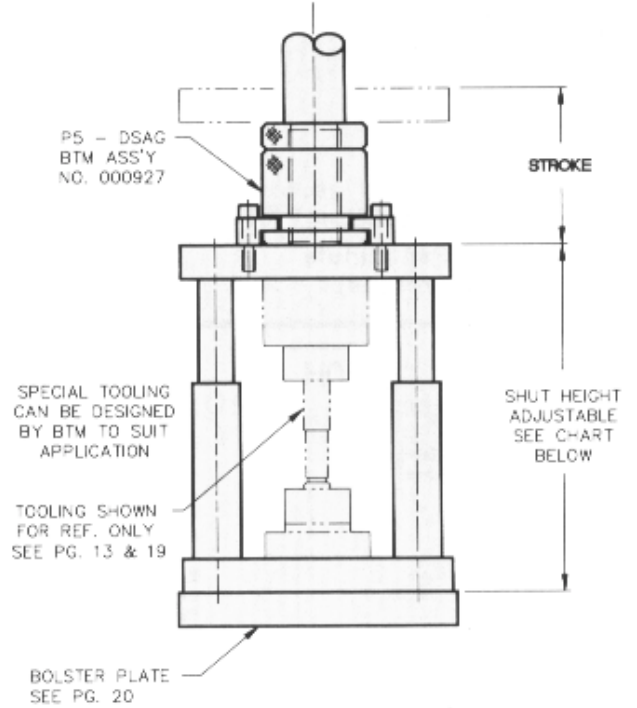
Standard Control Package logic is 2 hand, anti tie down, anti repeat.

Special Control Packages are available.

## P5 - DSAG (DIE SET ADAPTER GROUP) BTM ASS'Y NO. 000927



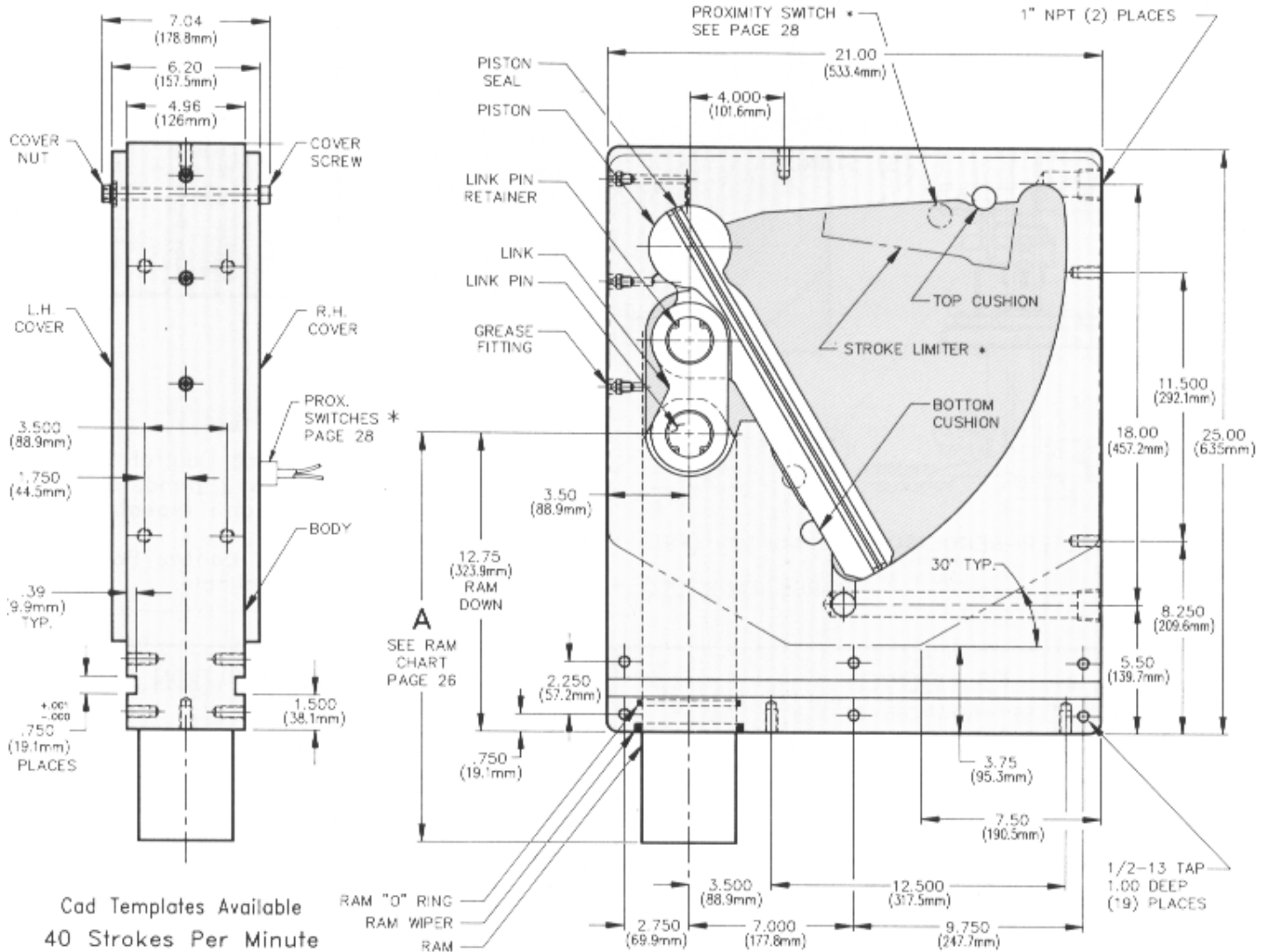
## DIE SET INFORMATION



| STROKE                   | SHUT HEIGHT                                  |
|--------------------------|--|
| 3.00 STROKE<br>(76.2mm)  | 11.50 (292.1mm) MAX.<br>10.50 (266.7mm) MIN. |
| 4.50 STROKE<br>(114.3mm) | 10.00 (254.0mm) MAX.<br>9.00 (228.6mm) MIN.  |

H Models  
(Head)

P20H x 3.00 (76.2mm) Stroke 001556 - 345 lbs. (157 kg)  
P20H x 4.50 (114.3mm) Stroke 001557 - 345 lbs. (157 kg)



Cad Templates Available  
40 Strokes Per Minute  
(20 Ton Presses)

### Components P20H

| Description                | No. Req'd | BTM No.    |
|----------------------------|-----------|------------|
| P20H x 3.00 (76.2mm) Body  | 1         | 000422     |
| P20H x 4.50 (114.3mm) Body | 1         | 000423     |
| Piston                     | 1         | 000424     |
| Piston Seal                | 2         | 000431     |
| Link                       | 1         | 000425     |
| Link Pin                   | 2         | 000426     |
| Link Pin Retainer          | 2         | 000432     |
| Ram - 400 Series           | 1         | See Pg. 26 |
| R.H. Cover                 | 1         | 000429     |
| L.H. Cover                 | 1         | 000430     |
| Cover Screw                | 17        | 000436     |
| Cover Nut                  | 17        | 000437     |
| Ram Wiper                  | 1         | 000434     |
| Ram "O" Ring               | 1         | 000433     |
| Grease Fitting             | 3         | 000050     |
| Sealant - Cover            | 1         | 000273     |
| Seal Kit                   | 1         | 000809     |
| Top Cushion                | 2         | 004318     |
| Bottom Cushion             | 2         | 004318     |
| Stroke Limiter             | 1         | 000823     |

### How to Order Presses

|                    |   |                       |             |             |             |             |                          |         |
|--------------------|---|-----------------------|-------------|-------------|-------------|-------------|--------------------------|---------|
| Quantity           | 6 | P20H x 4.50           | T-400       | EPRL        | EPEL        | RL          | DSAG                     | TOOLING |
| Model              |   |                       |             |             |             |             |                          |         |
| Stroke             |   | 3.00, 4.50 or Special |             |             |             |             |                          |         |
| Ram Style          |   |                       | See Page 26 |             |             |             |                          |         |
| Proximity Switches |   |                       |             | See Page 28 |             |             |                          |         |
| Ram Latch          |   |                       |             |             | See Page 19 |             |                          |         |
| Die Set Adapter    |   |                       |             |             |             | See Page 27 |                          |         |
| Consider Tooling   |   |                       |             |             |             |             | See Pgs. 11, 13, 19 & 27 |         |

### How to Order Components

|      |   |             |         |
|------|---|-------------|---------|
| Qty. | 2 | P20 Link    | 000425  |
|      |   | Description | BTM No. |

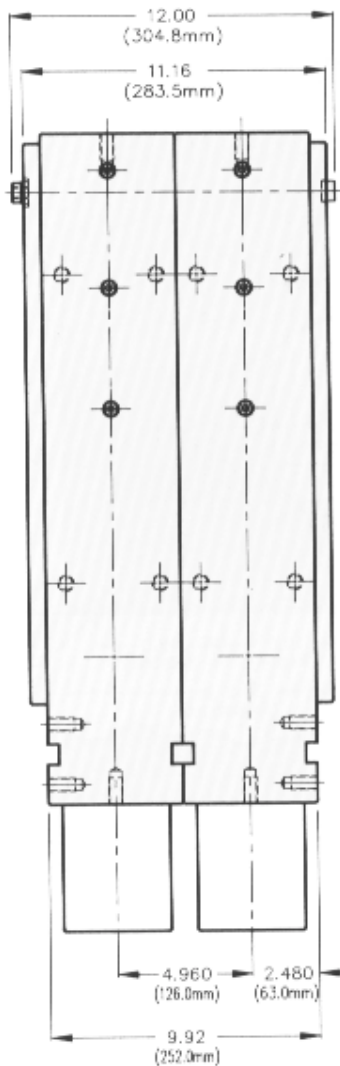
\* Denotes Options

# 40 Ton H Presses

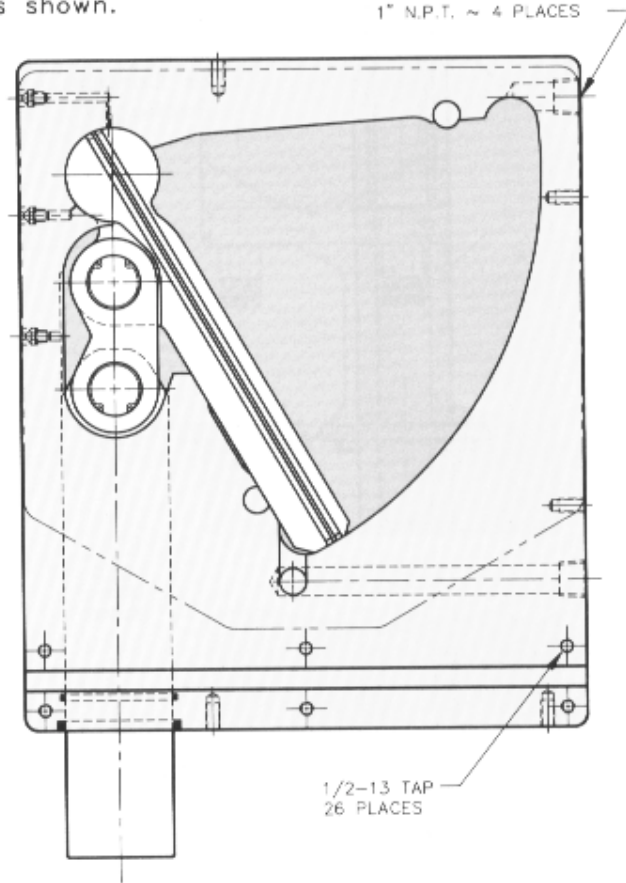


H Models  
(Head)

P40H x 3.00 (76.2mm) Stroke 003899 - 660 lbs. (300 kg)  
P40H x 4.50 (114.3mm) Stroke 003900 - 660 lbs. (300 kg)



NOTE:  
Dimensions are identical to P20H  
except as shown.



Cad Templates Available

40 Strokes Per Minute  
(40 Ton Presses)

### Components P40H

| Description                | No. Req'd | BTM No.    |
|----------------------------|-----------|------------|
| P40H x 3.00 (76.2mm) Body  | 1         | 013144     |
| P40H x 4.50 (114.3mm) Body | 1         | 013145     |
| Piston Set                 | 1         | 004615     |
| Piston Seal                | 4         | 000431     |
| Link                       | 1         | 004614     |
| Link Pin                   | 2         | 004616     |
| Link Pin Retainer          | 2         | 000432     |
| Ram - 400 Series           | 2         | See Pg. 26 |
| R.H. Cover                 | 1         | 000429     |
| L.H. Cover                 | 1         | 000430     |
| Cover Screw                | 17        | 004618     |
| Cover Nut                  | 17        | 000437     |
| Ram Wiper                  | 2         | 000434     |
| Ram "O" Ring               | 2         | 000433     |
| Grease Fitting             | 6         | 000050     |
| Sealant - Cover            | 1         | 000273     |
| Seal Kit                   | 1         | 004617     |

### How to Order Presses

| Quantity | Model | Stroke          | Ram Style   | Proximity Switches | Ram Latch   | Die Set Adapter | Consider Tooling         |
|----------|-------|-----------------|-------------|--------------------|-------------|-----------------|--------------------------|
| 6        | P40H  | 4.50 or Special | T-400       | EPRL               | EPEL        | RL              | DSAG                     |
|          |       |                 | See Page 26 | See Page 28        | See Page 19 | See Page 27     | See Pgs. 11, 13, 19 & 27 |

### How to Order Components

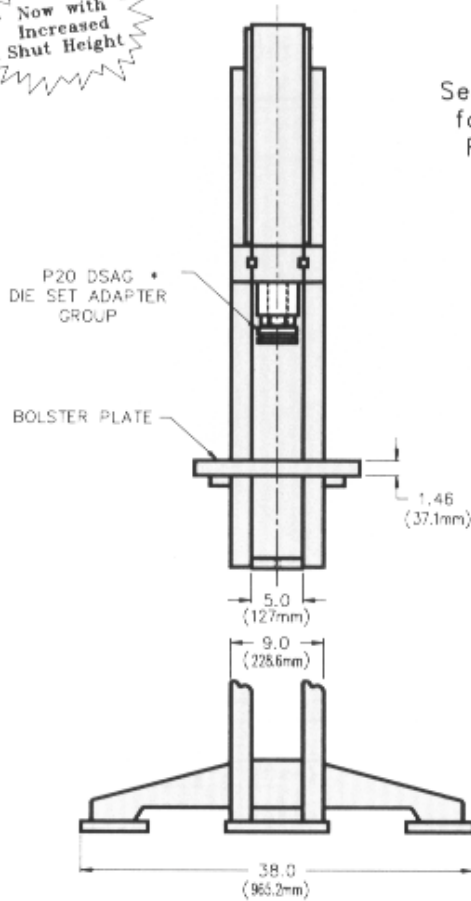
| Qty. | Description | BTM No. |
|------|-------------|---------|
| 2    | P40 Link    | 004614  |

• Denotes Options

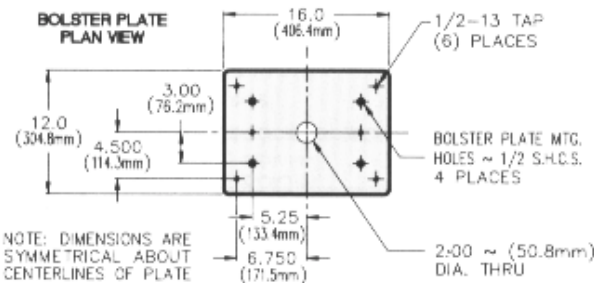
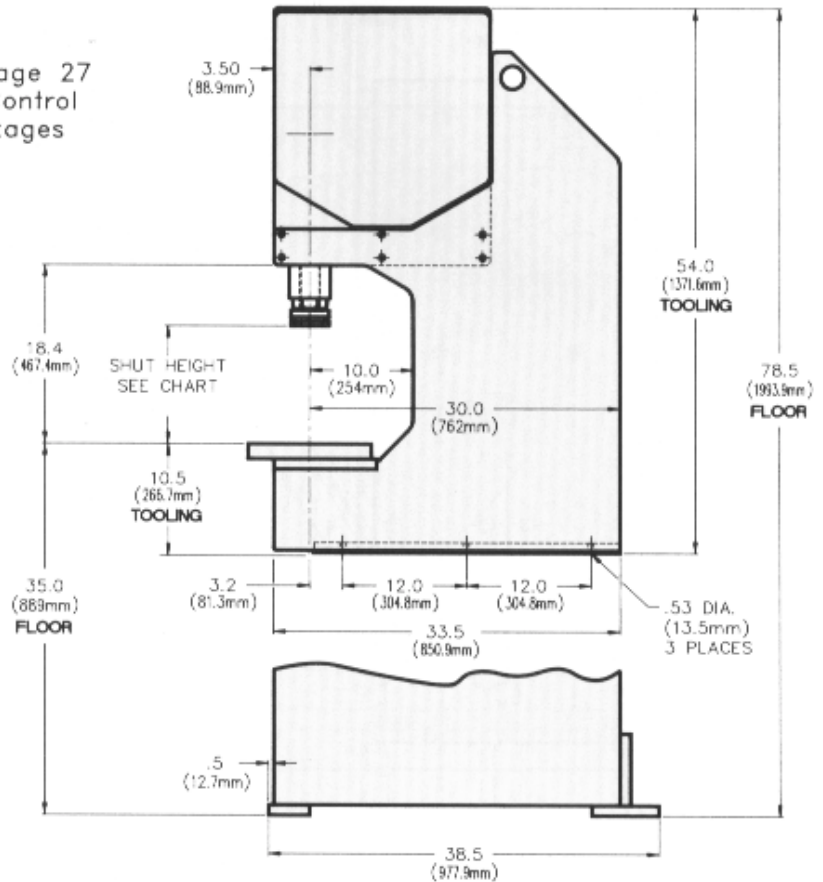
**F and T Models**  
(Floor and Tooling)

P20F x 3.00 (76.2mm) Stroke 000862 - 2600 lbs. (1182 kg)  
 P20F x 4.50 (114.3mm) Stroke 000863 - 2600 lbs. (1182 kg)  
 P20T x 3.00 (76.2mm) Stroke 000860 - 1550 lbs. (705 kg)  
 P20T x 4.50 (114.3mm) Stroke 000861 - 1550 lbs. (705 kg)

Now with  
Increased  
Shut Height

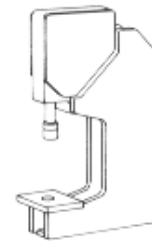


See page 27  
for Control  
Packages

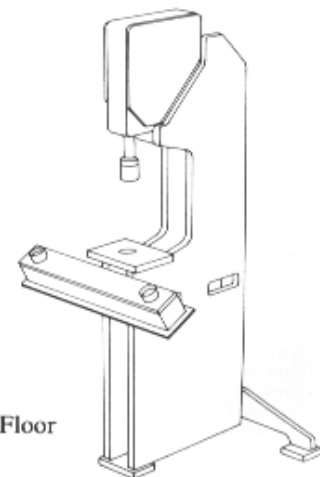


NOTE: DIMENSIONS ARE  
SYMMETRICAL ABOUT  
CENTERLINES OF PLATE

| STROKE                   | SHUT HEIGHT                                  |
|--------------------------|--|
| 3.00 STROKE<br>(76.2mm)  | 12.50 (317.5mm) MAX.<br>11.50 (292.1mm) MIN. |
| 4.50 STROKE<br>(114.3mm) | 11.00 (279.4mm) MAX.<br>10.00 (254.0mm) MIN. |



Tooling



Floor

### How to Order Presses

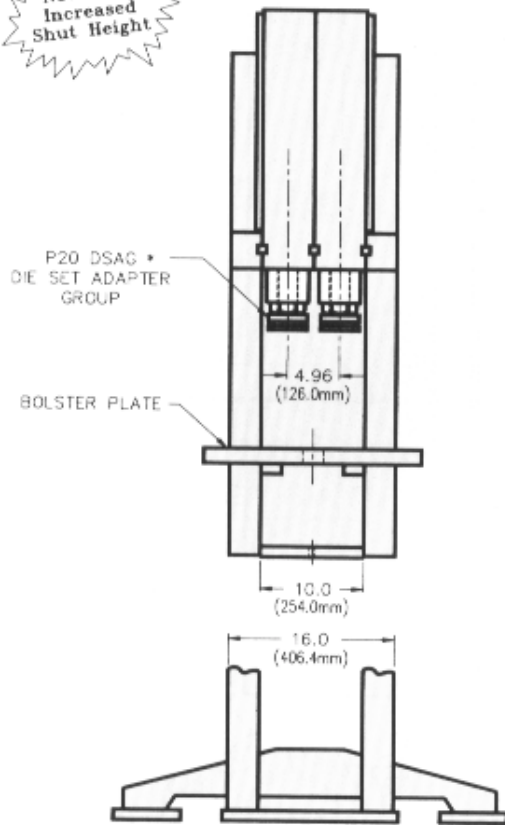
| Quantity | Model | Stroke | Ram Style | Die Set Adapter | Ram Latch | Proximity Switches | Controls   | Consider Tooling |
|----------|-------|--------|-----------|-----------------|-----------|--------------------|------------|------------------|
| 6        | P20F  | 4.50   | T-400     | DSAG            | RL        | EPRL               | EP E S PRL | TOOLING          |

\* Denotes Options  
 • Die Set Adapter See Page 27  
 • Ram Latch See Page 19  
 • Proximity Switches See Page 28  
 • Controls See Page 27  
 • Consider Tooling See Pages 11, 18, & 27

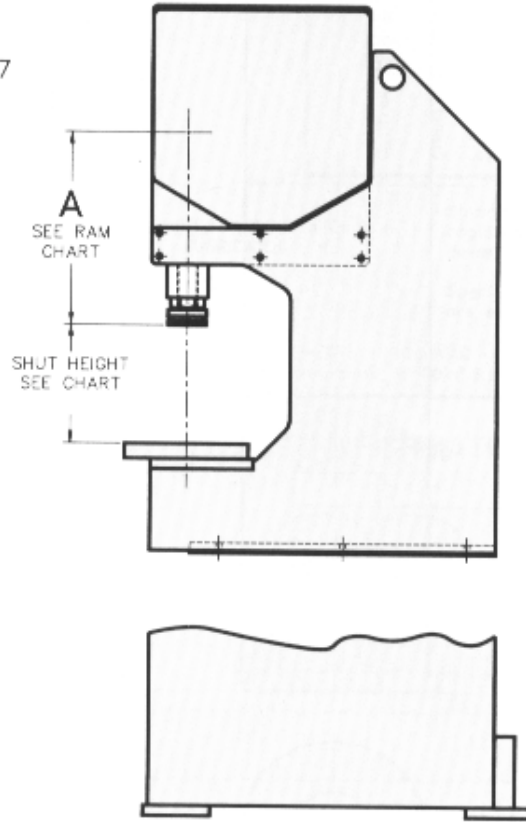
## F and T Models (Floor and Tooling)

P40F x 3.00 (76.2mm) Stroke 003905 - 2950 lbs. (1338 kg)  
 P40F x 4.50 (114.3mm) Stroke 003906 - 2950 lbs. (1338 kg)  
 P40T x 3.00 (76.2mm) Stroke 003903 - 1895 lbs. (860 kg)  
 P40T x 4.50 (114.3mm) Stroke 003904 - 1895 lbs. (860 kg)

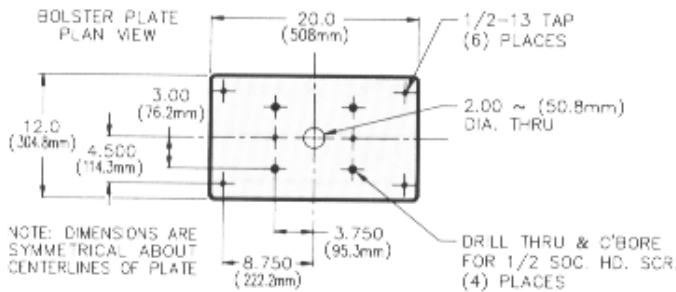
Now with  
Increased  
Shut Height



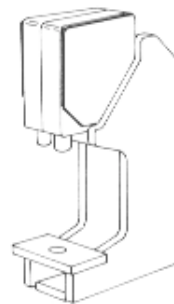
See page 27  
for Control  
Packages



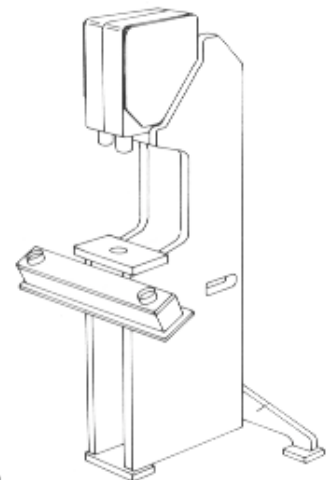
NOTE: DIMENSIONS ARE IDENTICAL TO 20 TON  
VERSIONS EXCEPT AS SHOWN.



NOTE: DIMENSIONS ARE  
SYMMETRICAL ABOUT  
CENTERLINES OF PLATE



Tooling

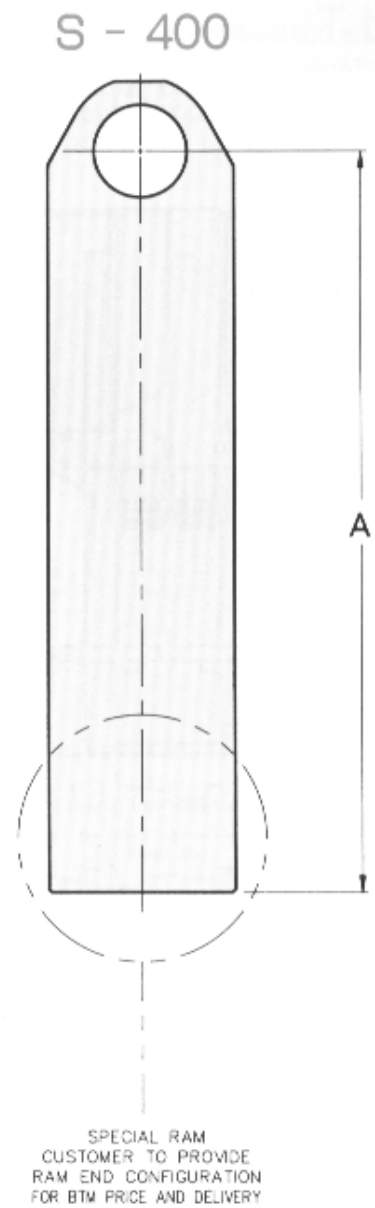
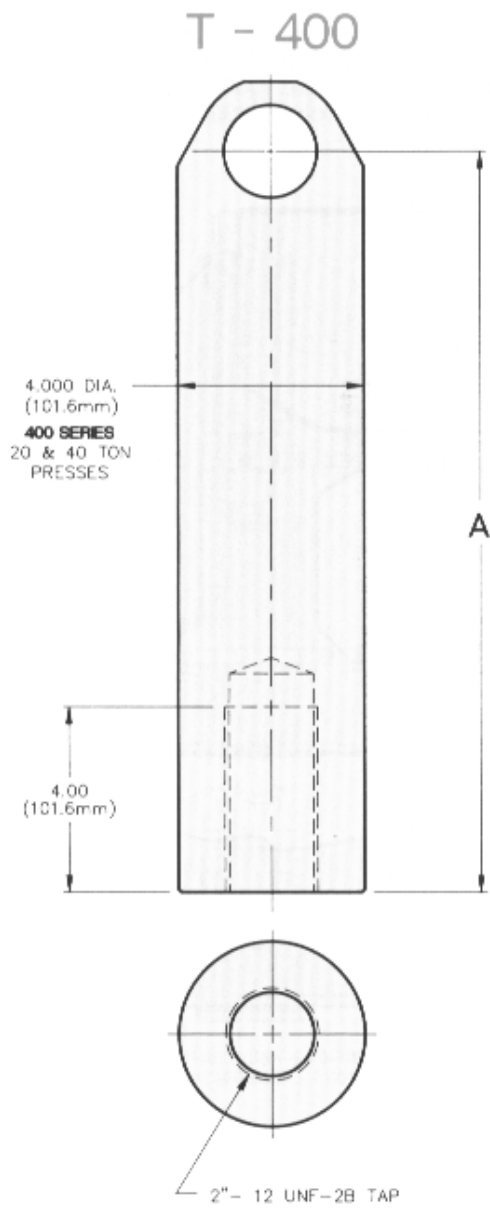


Floor

### How to Order Presses

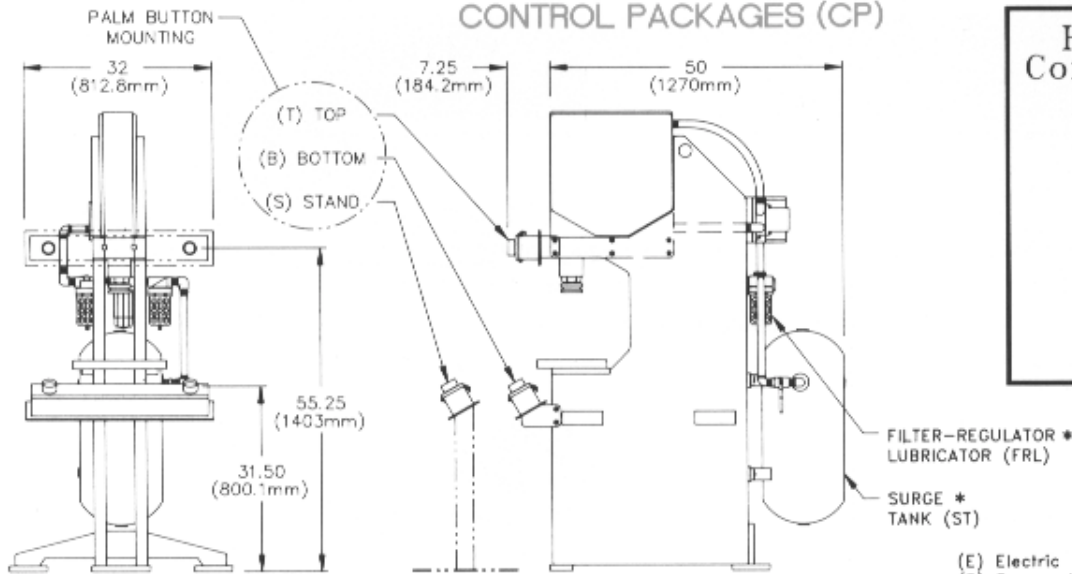
|                    |   |      |                       |       |      |    |      |      |    |   |   |     |         |
|--------------------|---|------|-----------------------|-------|------|----|------|------|----|---|---|-----|---------|
| Quantity           | 6 | P40F | 4.50                  | T-400 | DSAG | RL | EPRL | EPFL | CL | E | S | FRL | TOOLING |
| Model              |   |      |                       |       |      |    |      |      |    |   |   |     |         |
| Stroke             |   |      | 3.00, 4.50 or Special |       |      |    |      |      |    |   |   |     |         |
| Ram Style          |   |      | T is Standard         |       |      |    |      |      |    |   |   |     |         |
| Die Set Adapter    |   |      |                       |       |      |    |      |      |    |   |   |     |         |
| Ram Latch          |   |      |                       |       |      |    |      |      |    |   |   |     |         |
| Proximity Switches |   |      |                       |       |      |    |      |      |    |   |   |     |         |
| Controls           |   |      |                       |       |      |    |      |      |    |   |   |     |         |
| Consider Tooling   |   |      |                       |       |      |    |      |      |    |   |   |     |         |

\* Denotes Options

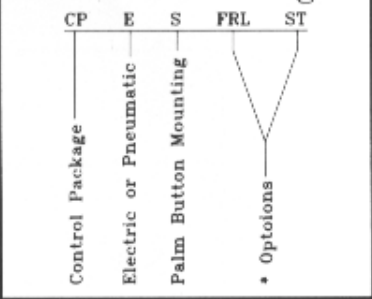


| SERIES  | PRESS MODEL | RAM STYLE | STROKE            | A DIM.             | BTM NO.           |
|---|-------------|-----------|-------------------|--------------------|-------------------|
| 400<br>SERIES<br>RAMS<br>FOR<br>20 & 40<br>TON<br>PRESSES | ALL         | T         | 3.00<br>(76.2mm)  | 16.00<br>(406.4mm) | 007607            |
|   |             |           | 4.50<br>(114.3mm) | 17.50<br>(444.5mm) | 007947            |
|   |             | S         | 3.00<br>(76.2mm)  | PER<br>CUSTOMER    | TO BE<br>ASSIGNED |
|   |             |           | 4.50<br>(114.3mm) | PER<br>CUSTOMER    | TO BE<br>ASSIGNED |

## CONTROL PACKAGES (CP)



### How to Order Control Packages



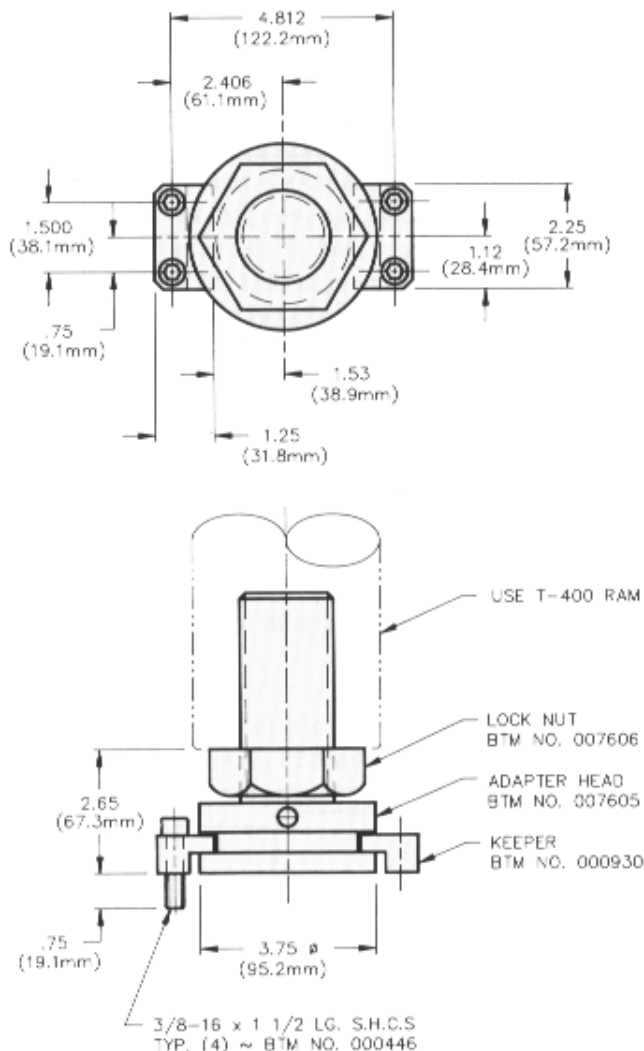
Standard Control Package Logic is 2 hand, anti tie down, anti repeat.

Special Control Packages are available.

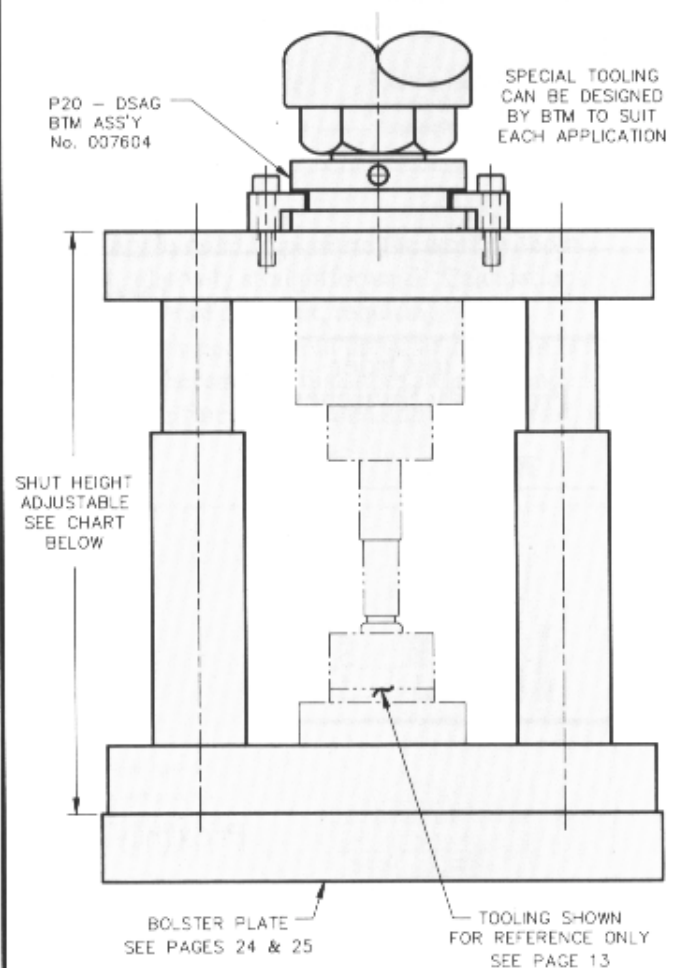
(E) Electric - 110 VAC - 60 HZ  
(P) Pneumatic - 80 P.S.I. (5.5 bar)

## P20 - DSAG

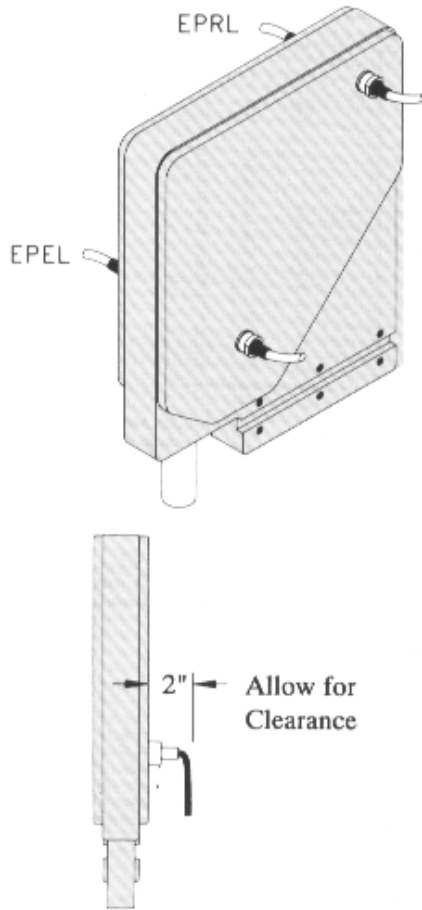
(DIE SET ADAPTER GROUP)  
BTM ASS'Y NO. 007604



## DIE SET INFORMATION



| STROKE                | SHUT HEIGHT                                  |
|-----------------------|--|
| 3.00 STROKE (76.2mm)  | 12.50 (317.5mm) MAX.<br>11.50 (292.1mm) MIN. |
| 4.50 STROKE (114.3mm) | 11.00 (279.4mm) MAX.<br>10.00 (254.0mm) MIN. |



### Ram Latch

Mountable on 90° increments. Proximity switch independent of port A.

Ram Latch available for 5, 10, 20, & 40 ton presses only. See page 19.

The Ram Latch prevents the ram from drifting down, and is used to facilitate tool changes with the air off.

## Ordering Information

### How to Order Proximity Switches

| EP                   | R                             | L                               |
|----------------------|-------------------------------|---------------------------------|
| Electrical Proximity | R = Retracted<br>E = Extended | L = Left Hand<br>R = Right Hand |

| Components   |  | Proximity Switch |
|--|--|------------------|
| Description  | BTM No.                                |                  |
| Standard Proximity switch<br>3 wire, lighted, AC,<br>Honeywell Microswitch.<br>Others are available.<br>This switch can be used<br>on all press sizes, models<br>and positions EPRL, EPEL,<br>etc. | 006266<br>Includes mounting<br>adapter |                  |

## Proximity Switch Specifications

| AC - Normally Open (DC Available)     |                                    | AC SENSOR |  |      |     |
|---------------------------------------|------------------------------------|-----------|--|------|-----|
| Operating Voltage Range<br>20-260 VAC | Supplied with 6'<br>cable - 3 wire |           |  | LOAD | VAC |
| Load Current Maximum<br>500 mA        |                                    |           |  |      |     |