
	<p align="center">SPARTANBURG STEEL PRODUCTS PRESS LINE SPECIFICATION PRESS 1500 (144" x 96" 1600 \ 900 Ton – Double Action)</p>	Document No.: S02.003 Issue Date: 26 Mar 09 Revision: 07 Page 2 of 20
---	---	---


PRESS INFORMATION (ENGLISH)

	Inner	Outer
Work Capacity	1600 Tons	900 Tons
Ram Size L/R – F/B	126" –78"	144" – 96"
Ram Spacer Thickness	None	None
Length of Stroke	42"	36"
Slide Adjustment	24"	24"
Shut Height S.D.A.U. (From Bolster)	75"	74"
Target Die Height	74"	64"
Bolster Size L/R – F/B	144" – 96"	
Bolster Thickness	8"	
Rolling Bolster	Yes	
Carriage Thickness	9"	
Bolster Spacer	None	
Bolster Spacer Thickness	N\A	
Positive Knockout	None	
Quick Die Change Sub-Plates	None	
Sub-Plate Thickness	N\A	
Cushions (Number)	Yes (3) (Balancers Required)	
Tons Each	112.5 Tons @ 100 p.s.i.	
Tons Total	337.5 Tons @ 100 p.s.i.	
Stroke	7.5"	
Quantity @ Size L/R – F/B	2 @ 40"– 69"	
	1 @ 45"– 69"	
Distance From Bolster To Drip Pots	28.5"	
Distance Between Gibbs L/R	146"	
Strokes Per Minute	9 & 18 (2-Speed)	

	<p align="center">SPARTANBURG STEEL PRODUCTS PRESS LINE SPECIFICATION PRESS 1500 (144" x 96" 1600 \ 900 Ton – Double Action)</p>	Document No.: S02.003 Issue Date: 26 Mar 09 Revision: 07 Page 3 of 20
---	---	---

PRESS INFORMATION (METRIC)

	Inner	Outer
Work Capacity	1454 MT	818 MT
Ram Size L/R – F/B	3200mm – 1981mm	3658mm – 2438mm
Ram Spacer Thickness	None	None
Length of Stroke	1067mm	914mm
Slide Adjustment	610mm	610mm
Shut Height S.D.A.U. <i>(From Bolster)</i>	1905mm	1879mm
Target Die Height	1879mm	1625mm
Bolster Size L/R – F/B	3658mm – 2438mm	
Bolster Thickness	203mm	
Rolling Bolster	Yes	
Carriage Thickness	228mm	
Bolster Spacer	None	
Bolster Spacer Thickness	N\A	
Positive Knockout	None	
Quick Die Change Sub-Plates	None	
Sub-Plate Thickness	N\A	
Cushions (Number)	Yes (3) (Balancers Required)	
Tons Each	100 MT @ 689.5 kPa	
Tons Total	300 MT @ 689.5 kPa	
Stroke	191mm	
Quantity @ Size L/R – F/B	2 @ 1016mm – 1753mm	
	1 @ 1143mm – 1753mm	
Distance From Bolster To Drip Pots	724mm	
Distance Between Gibbs L/R	3708mm	
Strokes Per Minute	9 & 18 (2-Speed)	

	<p align="center">SPARTANBURG STEEL PRODUCTS PRESS LINE SPECIFICATION PRESS 1500 (144" x 96" 1600 \ 900 Ton – Double Action)</p>	<p align="right">Document No.: S02.003 Issue Date: 26 Mar 09 Revision: 07 Page 4 of 20</p>
---	---	---


AUTOMATION DEVICES USED

LOADER

Destacker / Rollcoater / Loader	.....	Yes
Max. Sheet Thickness	.....	.059" (1.52mm)
Min. Sheet Thickness	.....	.025" (.635)
Max. Sheet Size L/R – F/B	.....	120" – 75"
Min. Sheet Size L/R – F/B	.....	36" – 30"
Max. Loader Pass Height <i>(From Top Of Bolster)</i>	.....	55"
Min. Loader Pass Height <i>(From Top Of Bolster)</i>	.....	30"
Max. Stack Height <i>(Including Pallet)</i>	.....	N/A

UNLOADER

The un-loader of this press will set the part onto a conveyor. The part will then be loaded manually into the next press.

 <p>Spartanburg STEEL PRODUCTS INC.</p>	<p>SPARTANBURG STEEL PRODUCTS PRESS LINE SPECIFICATION PRESS 1500 (144" x 96" 1600 \ 900 Ton – Double Action)</p>	<p>Document No.: S02.003</p> <p>Issue Date: 26 Mar 09 Revision: 07 Page 5 of 20</p>
---	---	---

PRESS INFORMATION GENERAL

Comments:

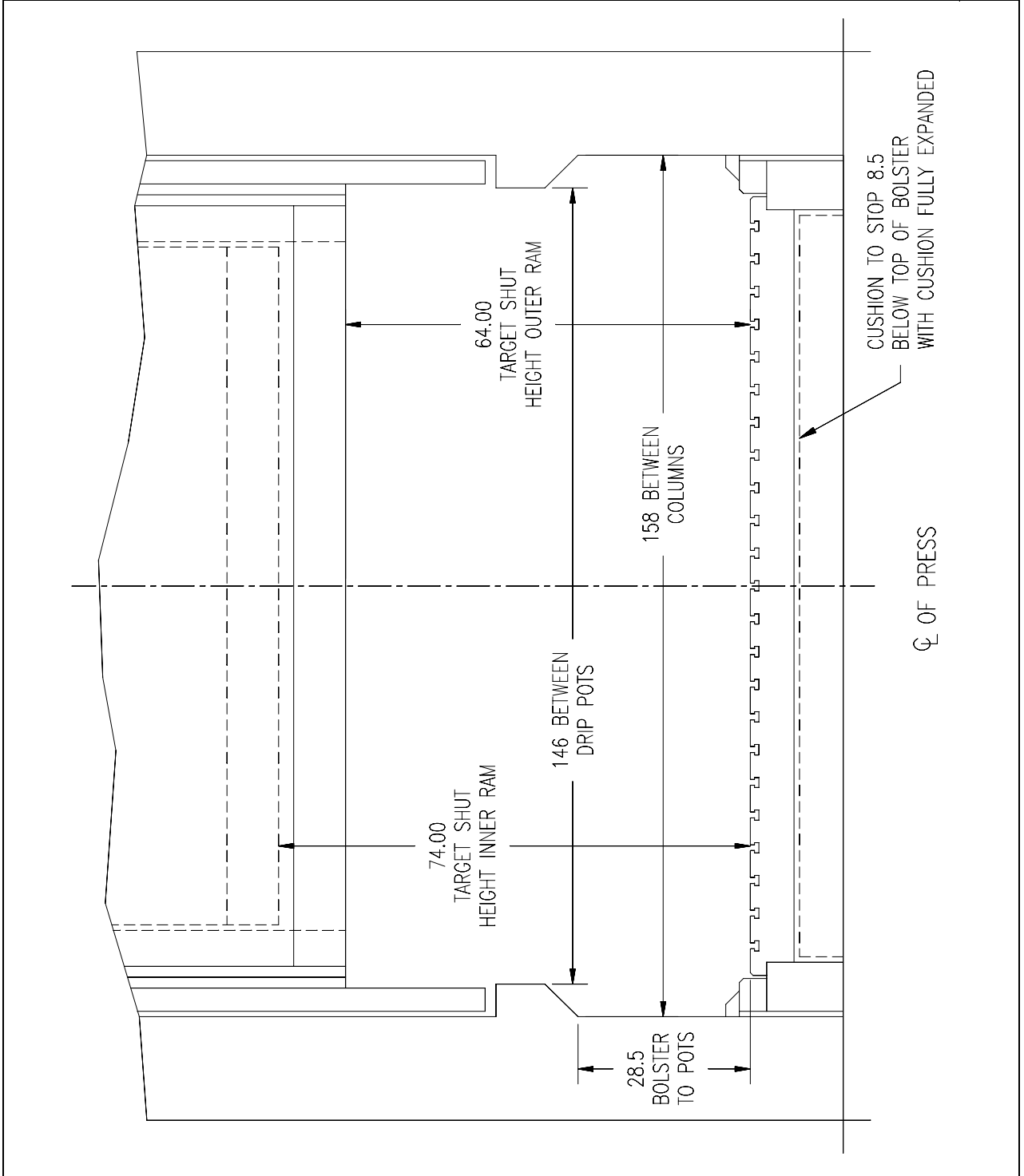
- 1) The parts can be turned over (180 degrees max.) between press 1500 and press 1501.
- 2) Pass-line and orientation are not to change throughout the pressline.
- 3) The Inner Ram Adapter Plate is to use a minimum of (8) automatic clamp locations. More clamp locations may be used as needed.
- 4) Inner Clamp Pockets can either be machined into the Inner Ram Adapter Plate (see page 17), or they can be inserted with a clamp ring (see page 16).



SPARTANBURG STEEL PRODUCTS
PRESS LINE SPECIFICATION
PRESS 1500
(144" x 96" 1600 \ 900 Ton – Double Action)

Document No.:
S02.003
Issue Date: 26 Mar 09
Revision: 07
Page 6 of 20

Front View of Press

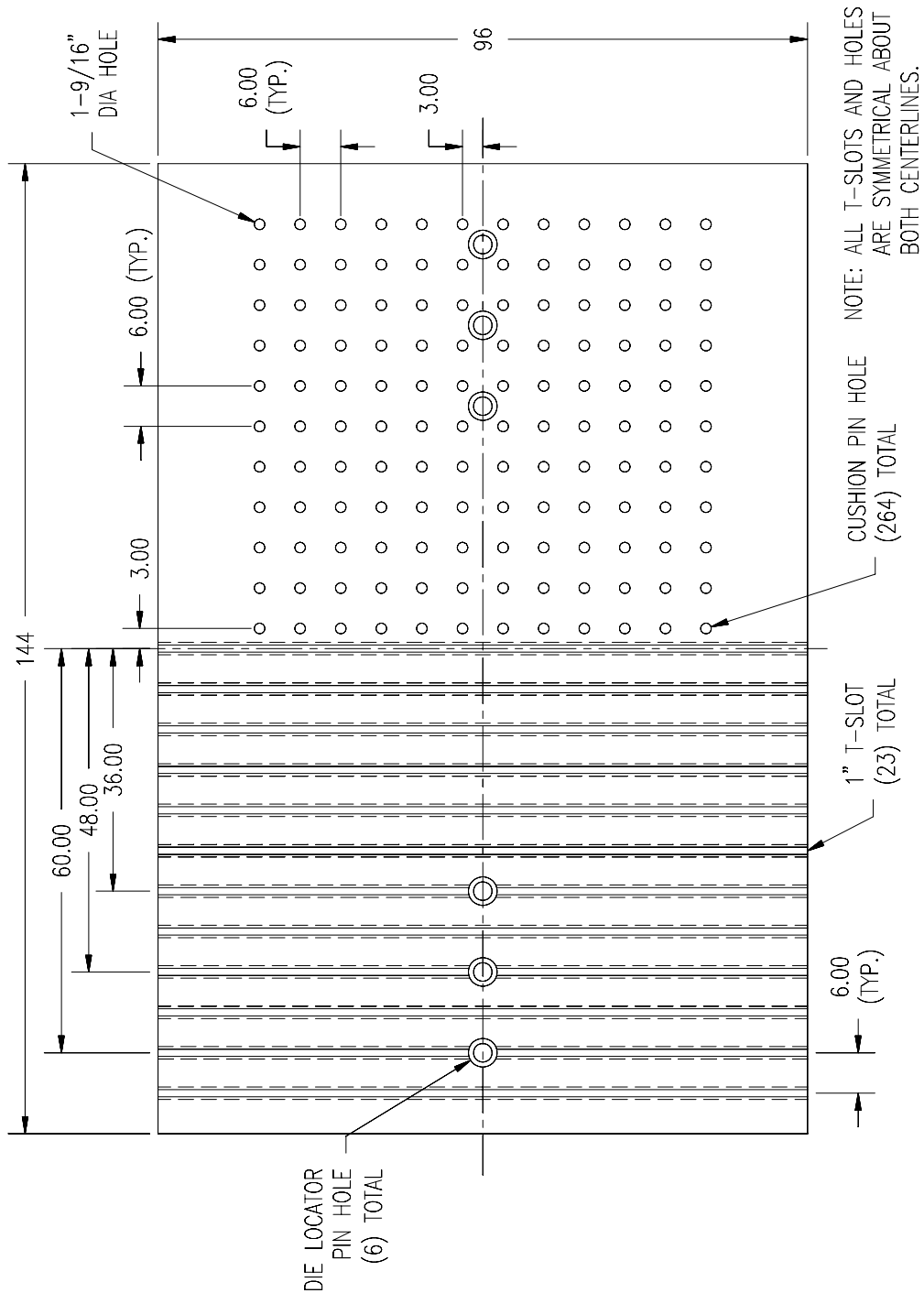




SPARTANBURG STEEL PRODUCTS
PRESS LINE SPECIFICATION
PRESS 1500
(144" x 96" 1600 \ 900 Ton – Double Action)

Document No.:
S02.003
Issue Date: 26 Mar 09
Revision: 07
Page 7 of 20

Bolster Plate

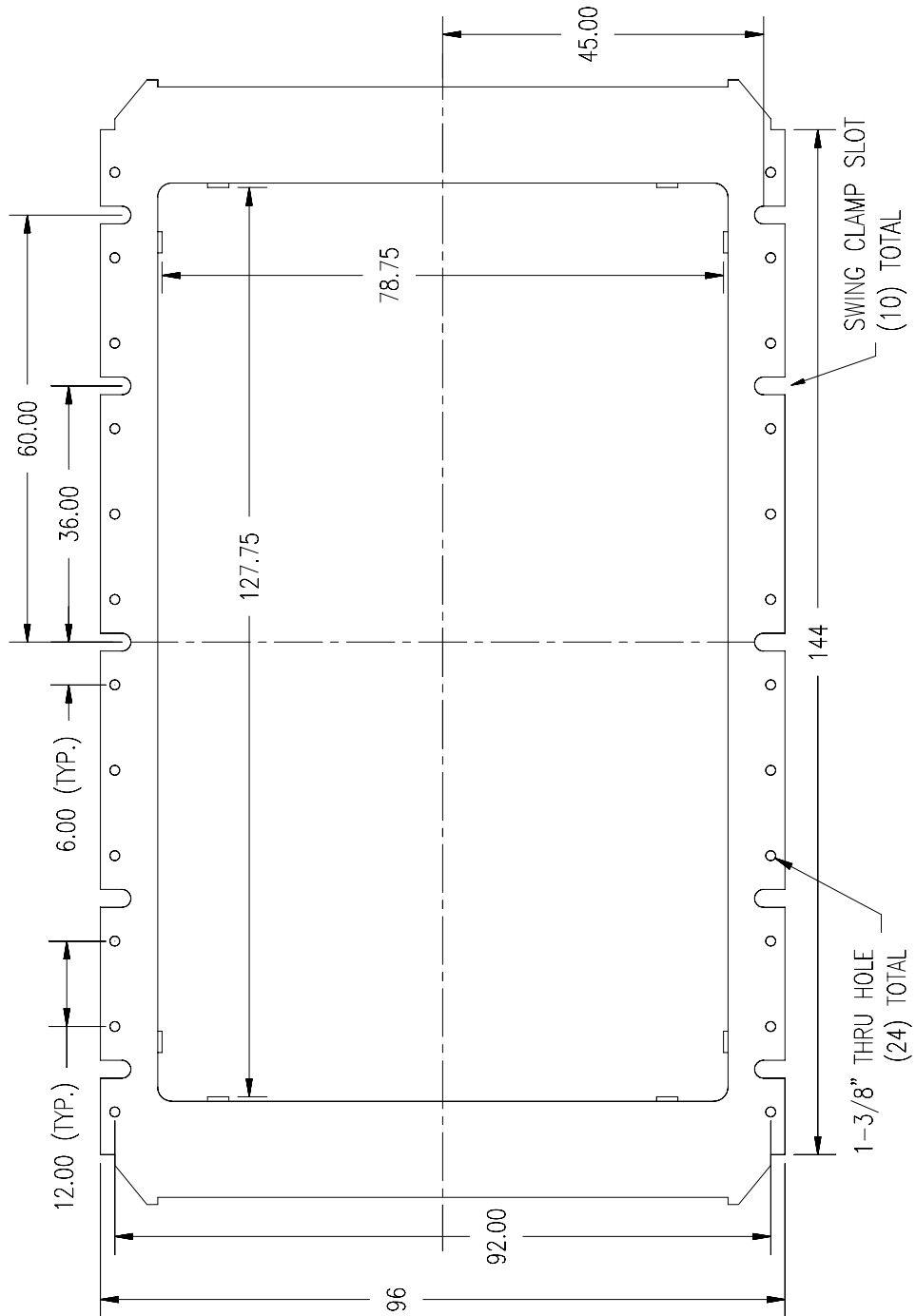




SPARTANBURG STEEL PRODUCTS
PRESS LINE SPECIFICATION
PRESS 1500
(144" x 96" 1600 \ 900 Ton – Double Action)

Document No.:
S02.003
Issue Date: 26 Mar 09
Revision: 07
Page 8 of 20

Outer Ram Face

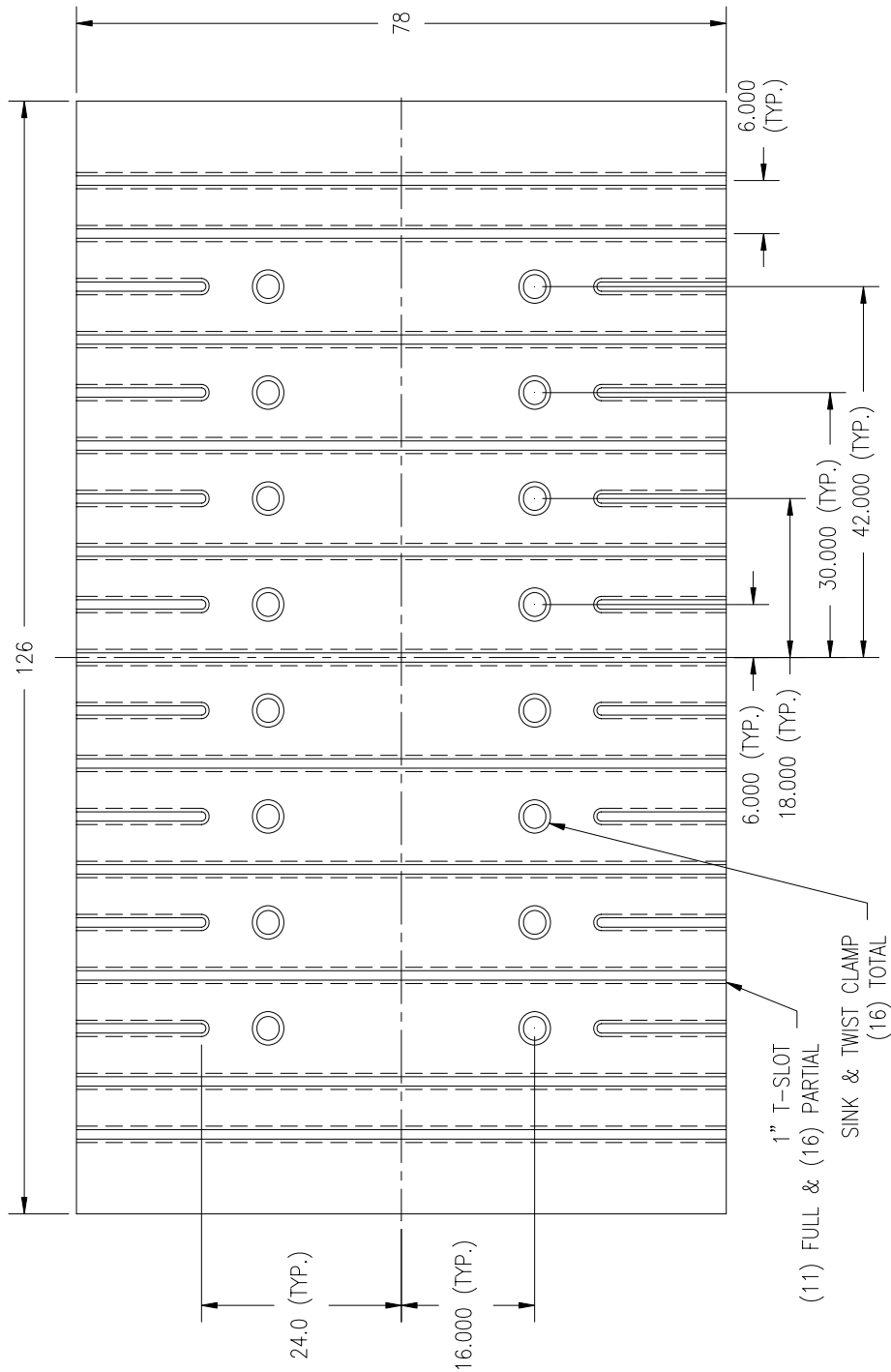




SPARTANBURG STEEL PRODUCTS
PRESS LINE SPECIFICATION
PRESS 1500
(144" x 96" 1600 \ 900 Ton - Double Action)

Document No.:
S02.003
Issue Date: 26 Mar 09
Revision: 07
Page 9 of 20

Inner Ram Face

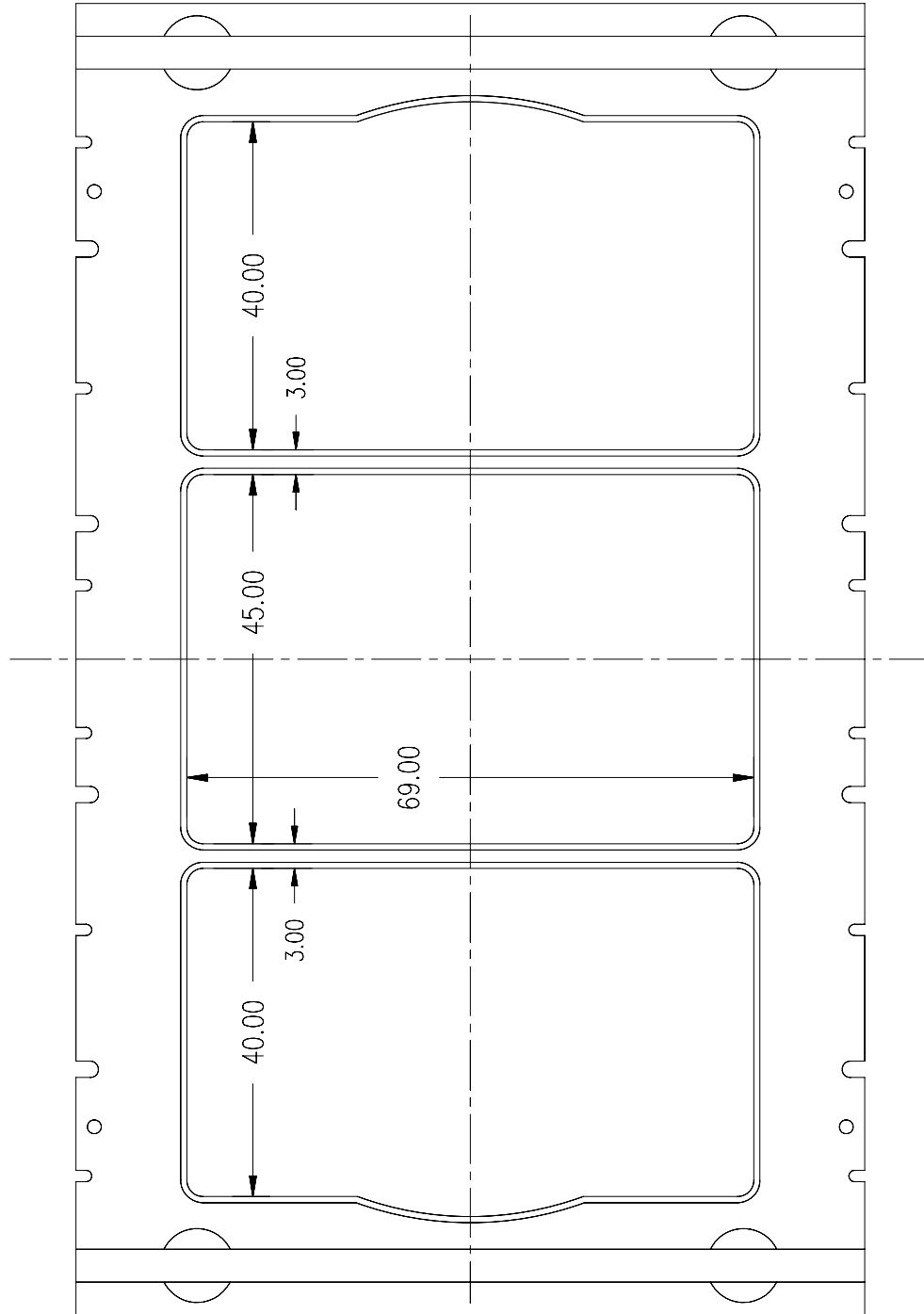




SPARTANBURG STEEL PRODUCTS
PRESS LINE SPECIFICATION
PRESS 1500
(144" x 96" 1600 \ 900 Ton – Double Action)

Document No.:
S02.003
Issue Date: 26 Mar 09
Revision: 07
Page 10 of 20

Cushion Layout



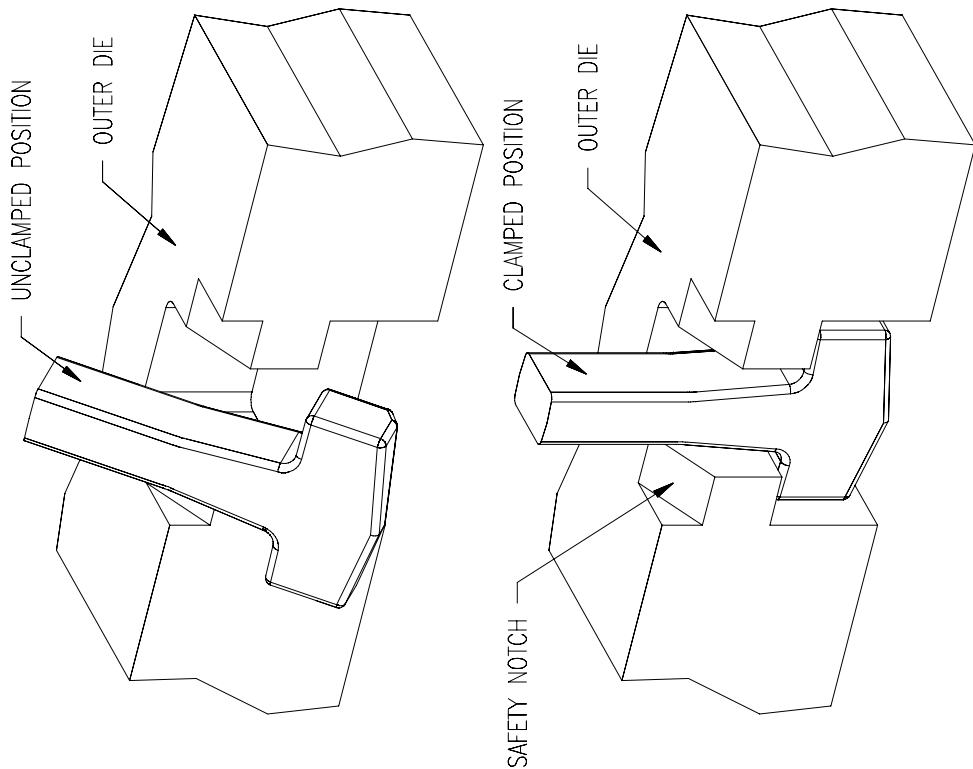


SPARTANBURG STEEL PRODUCTS
PRESS LINE SPECIFICATION
PRESS 1500
(144" x 96" 1600 \ 900 Ton – Double Action)

Document No.:
S02.003
Issue Date: 26 Mar 09
Revision: 07
Page 12 of 20

Outer Clamp Operation

- 1) SHOWN IS A 9 METRIC TON SWING TYPE DIE CLAMP.
- 2) THE CLAMP WILL SWING INTO POSITION THEN RETRACT TO CLAMP THE DIE.
- 3) THE NOTCH SHOWN IS FOR SAFETY PURPOSES. IN CASE THE CLAMP IS IN THE CLAMPED POSITION AND THE SLIDE IS BROUGHT DOWN TO GRAB THE DIE, THE ANGLE WILL KICK OUT THE CLAMP ARM.
- 4) FOR DETAILED DIMENSIONS SEE OUTER CLAMP POCKET DRAWING ON PAGE 12.

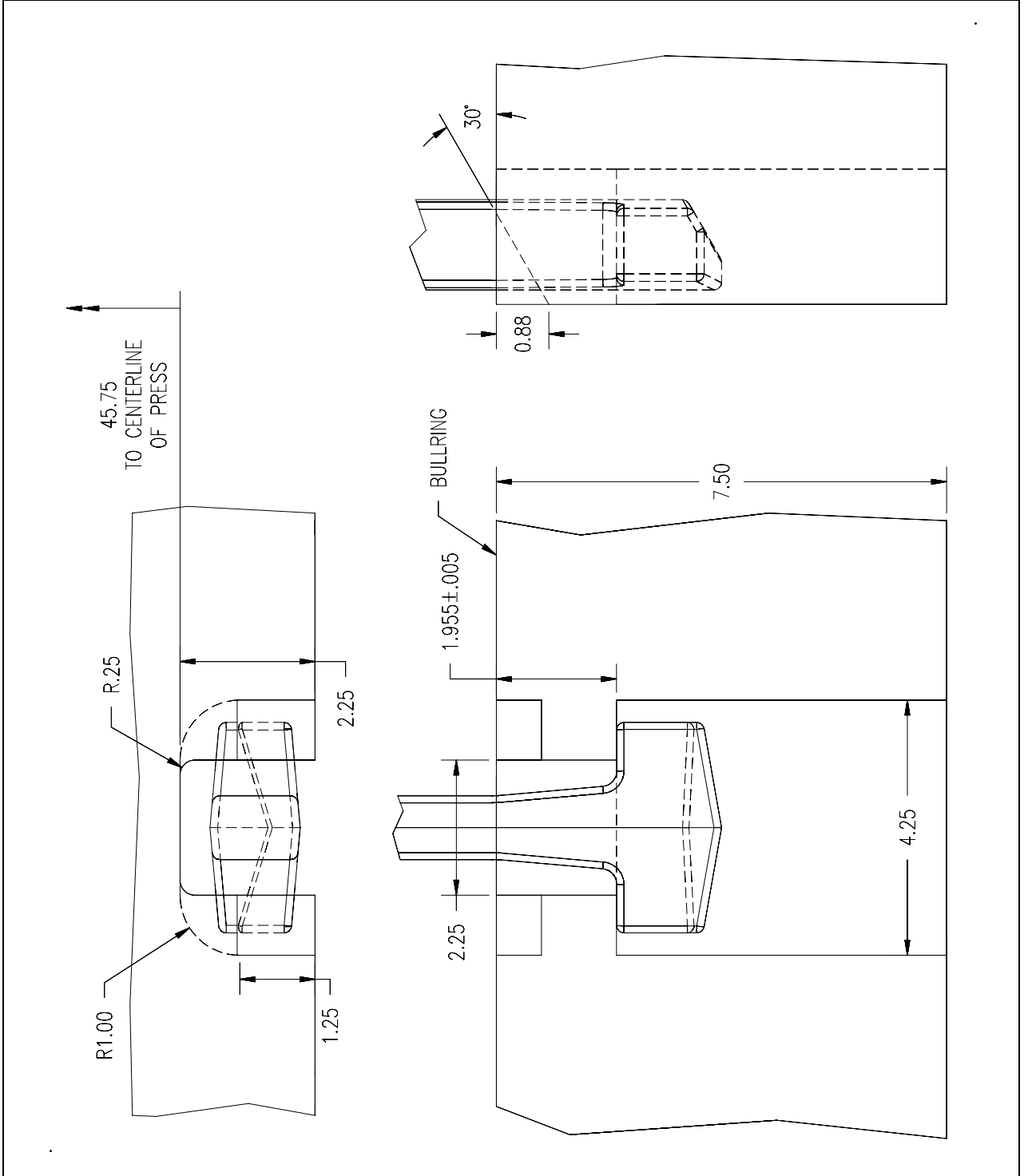




SPARTANBURG STEEL PRODUCTS
PRESS LINE SPECIFICATION
PRESS 1500
(144" x 96" 1600 \ 900 Ton – Double Action)

Document No.:
S02.003
Issue Date: 26 Mar 09
Revision: 07
Page 13 of 20

Outer Clamp Pocket (milled into bullring)

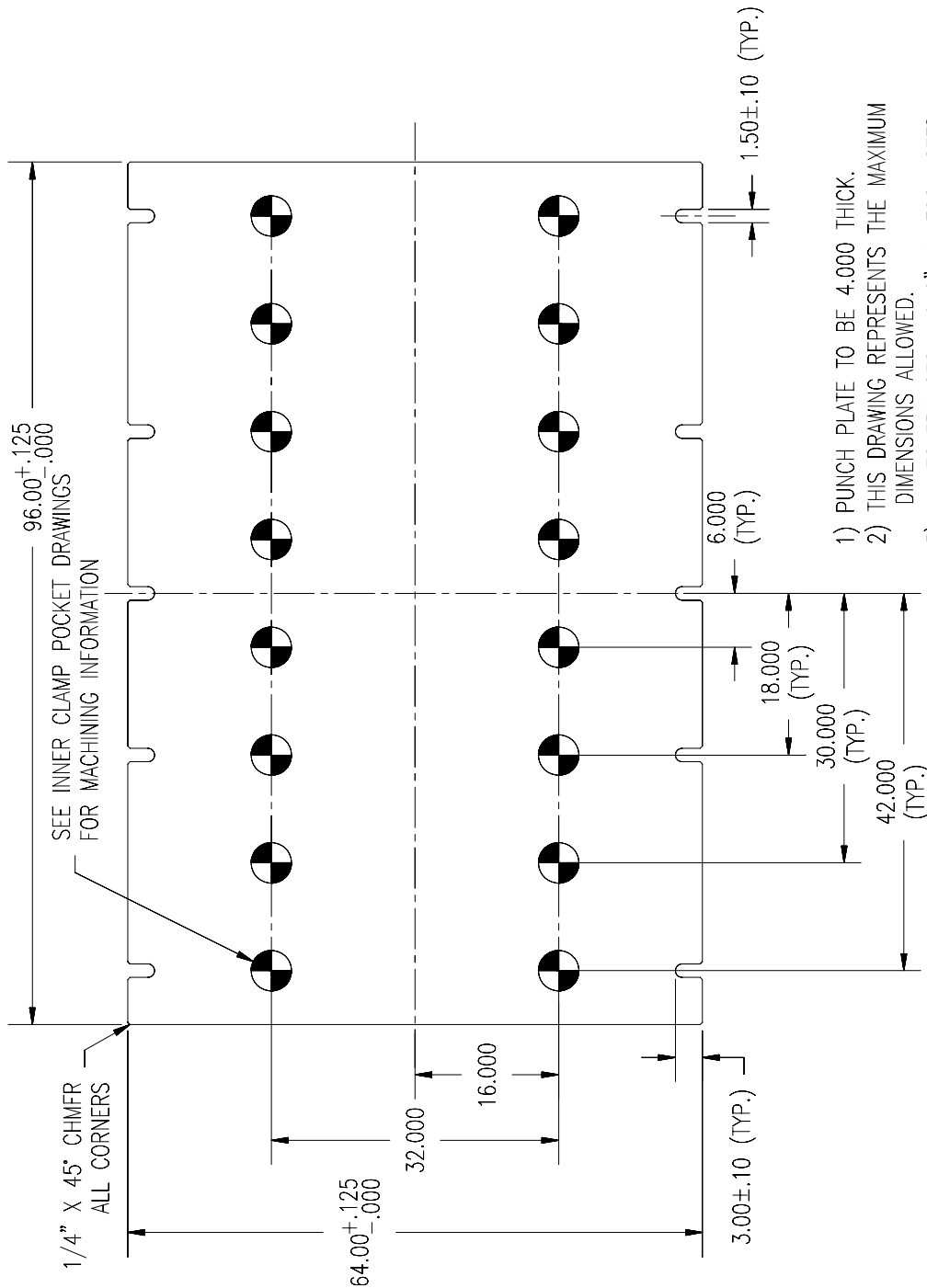




SPARTANBURG STEEL PRODUCTS
PRESS LINE SPECIFICATION
PRESS 1500
(144" x 96" 1600 \ 900 Ton – Double Action)

Document No.:
S02.003
Issue Date: 26 Mar 09
Revision: 07
Page 14 of 20

Inner Ram Adapter Plate (punch plate)



- 1) PUNCH PLATE TO BE 4.000 THICK.
- 2) THIS DRAWING REPRESENTS THE MAXIMUM DIMENSIONS ALLOWED.
- 3) ALL TOLERANCES ±.010" UNLESS NOTED.



SPARTANBURG STEEL PRODUCTS
PRESS LINE SPECIFICATION
PRESS 1500
(144" x 96" 1600 \ 900 Ton – Double Action)

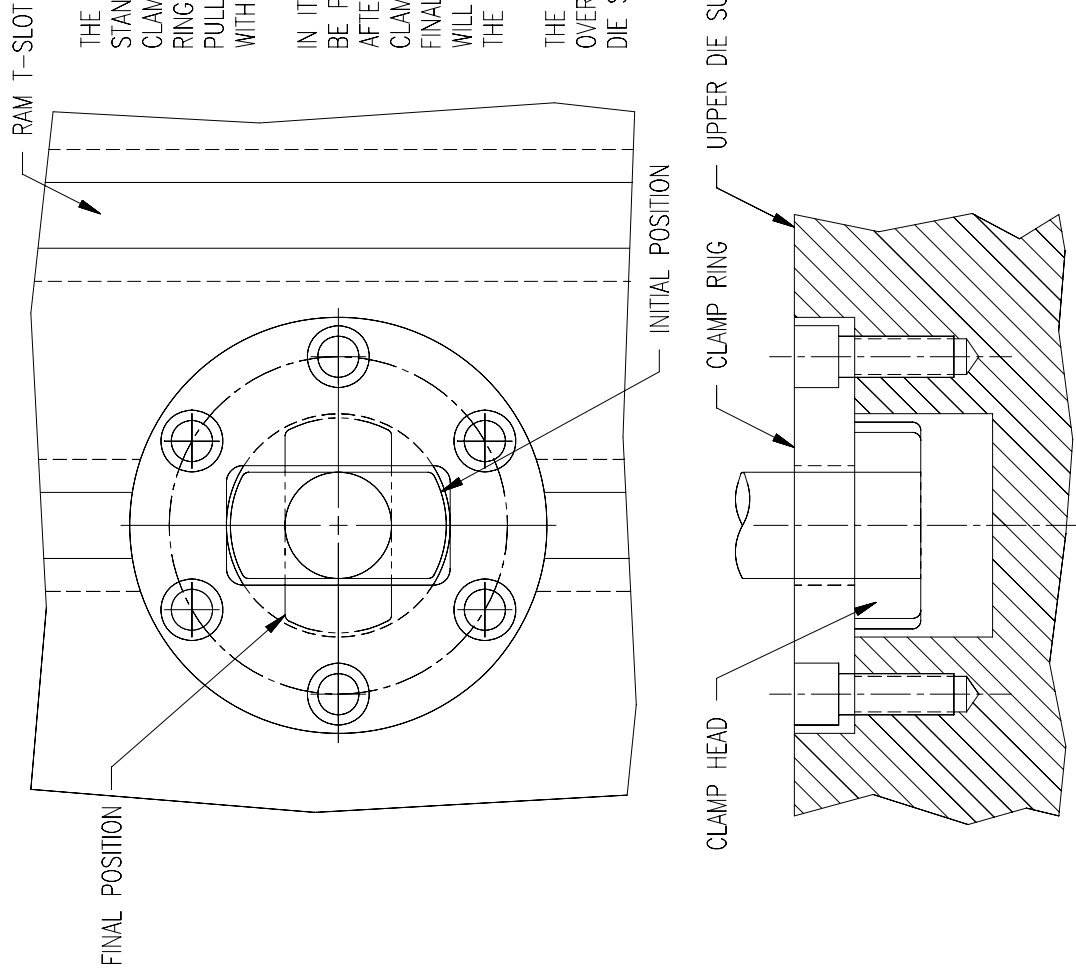
Document No.:
S02.003
Issue Date: 26 Mar 09
Revision: 07
Page 15 of 20

Inner Clamp Operation

THE DIE CLAMPING MECHANISM SHOWN USES STANDARD SINK & TWIST TYPE CLAMPS. THE CLAMP HEAD WILL TRAVEL THROUGH THE CLAMP RING, ROTATE 90°, AND RETRACT. THIS WILL PULL THE CLAMP RING AND UPPER DIE FLUSH WITH RAM SURFACE.

IN ITS INITIAL POSITION THE CLAMP HEAD WILL BE PARALLEL WITH THE T-SLOTS IN THE RAM. AFTER THE CLAMP HEAD PASSES THROUGH THE CLAMP RING, IT WILL ROTATE 90°. IN ITS FINAL CLAMPING POSITION, THE CLAMP HEAD WILL BE PERPENDICULAR TO THE T-SLOTS IN THE RAM.

THE T-SLOTS SHOWN IN THE DIAGRAM ARE OVERLAID FROM THE RAM ONTO THE UPPER DIE SURFACE FOR VISUAL REFERENCE ONLY.

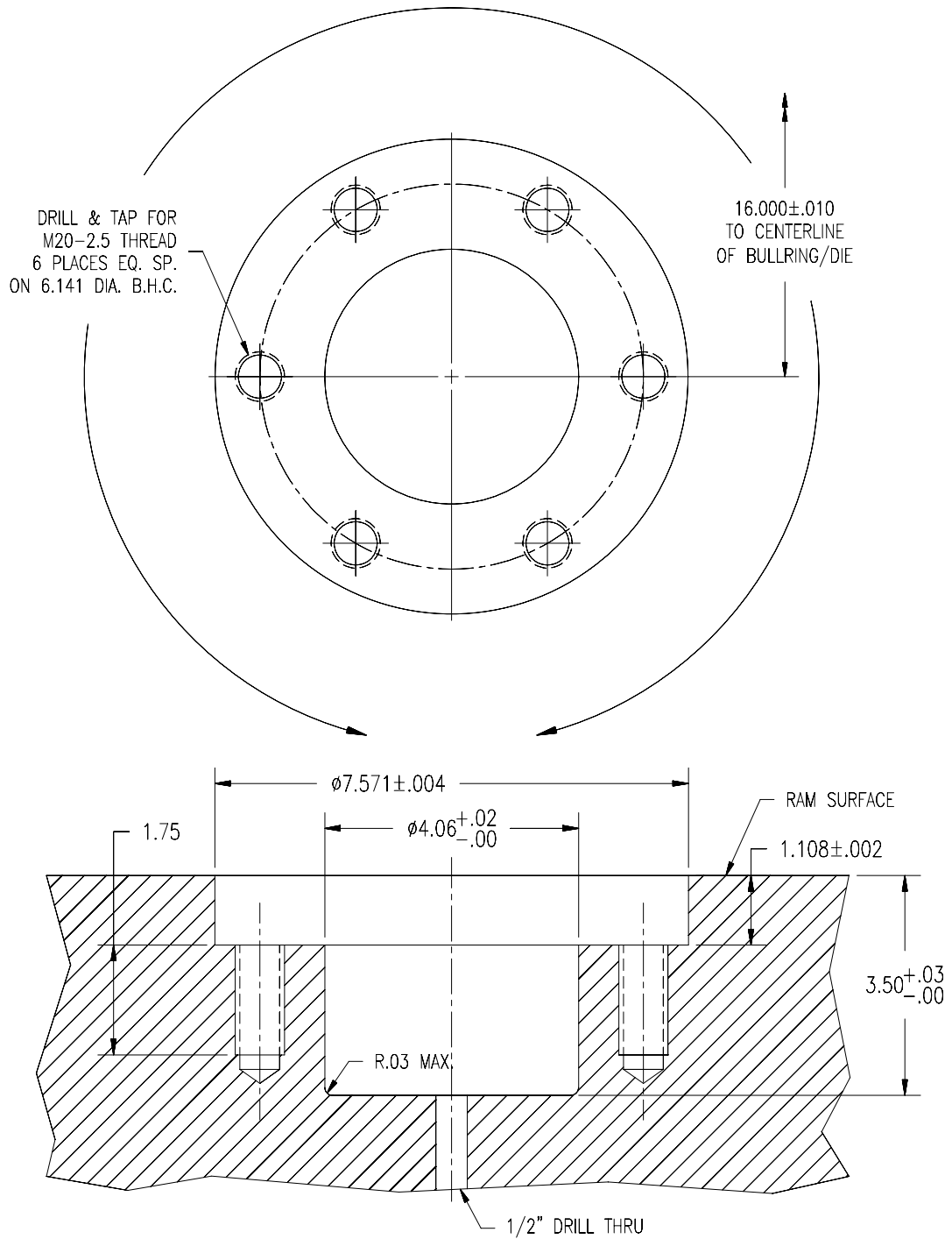




SPARTANBURG STEEL PRODUCTS
PRESS LINE SPECIFICATION
PRESS 1500
(144" x 96" 1600 \ 900 Ton – Double Action)

Document No.:
S02.003
Issue Date: 26 Mar 09
Revision: 07
Page 16 of 20

Inner Clamp Pocket (for inserted clamp ring)

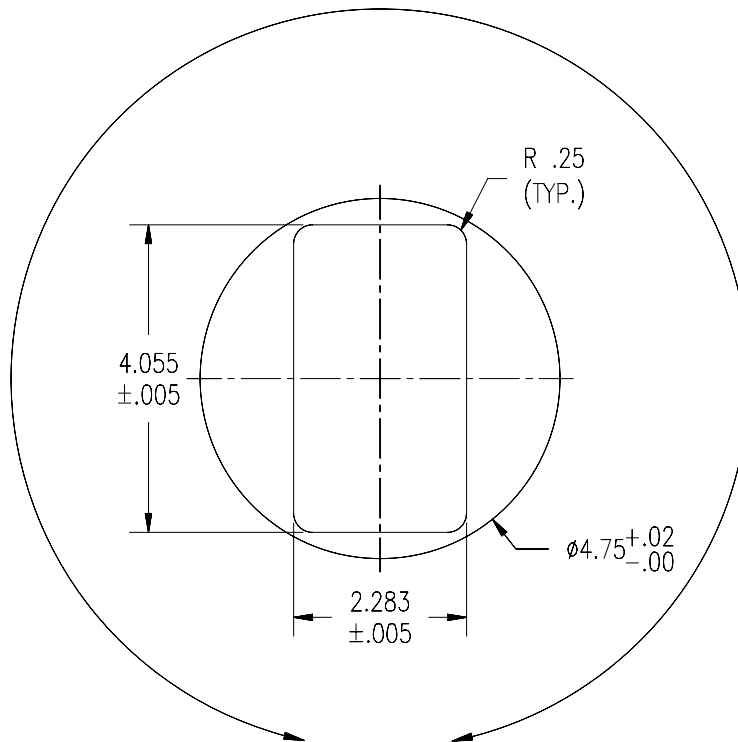
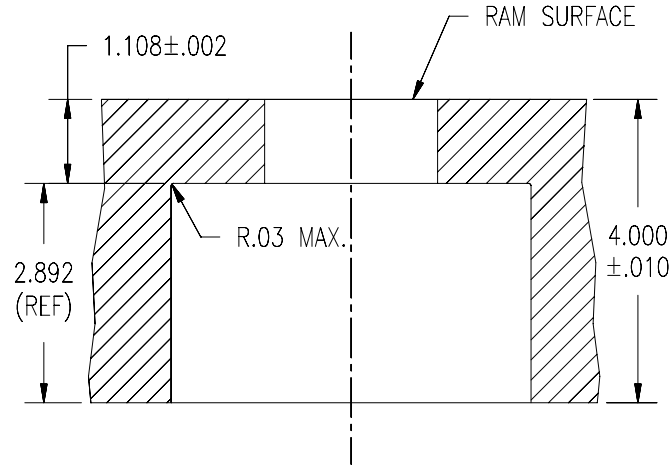




SPARTANBURG STEEL PRODUCTS
PRESS LINE SPECIFICATION
PRESS 1500
(144" x 96" 1600 \ 900 Ton – Double Action)

Document No.:
S02.003
Issue Date: 26 Mar 09
Revision: 07
Page 17 of 20

Inner Clamp Pocket (milled into upper die plate)



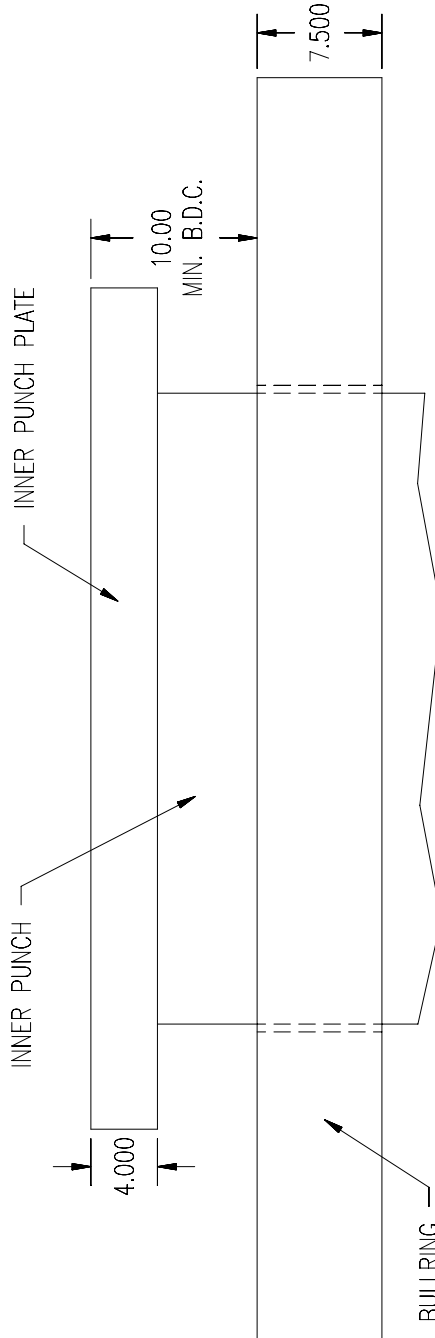
NOTE: THE 2.892 DIMENSION IS FOR REFERENCE ONLY, THE DETERMINING FACTOR IS THE THICKNESS OF THE MATERIAL LEFT AT THE BOTTOM OF THE C'BORE (1.108±.002.)



SPARTANBURG STEEL PRODUCTS
PRESS LINE SPECIFICATION
PRESS 1500
(144" x 96" 1600 \ 900 Ton – Double Action)

Document No.:
S02.003
Issue Date: 26 Mar 09
Revision: 07
Page 18 of 20

Upper Die Stagger

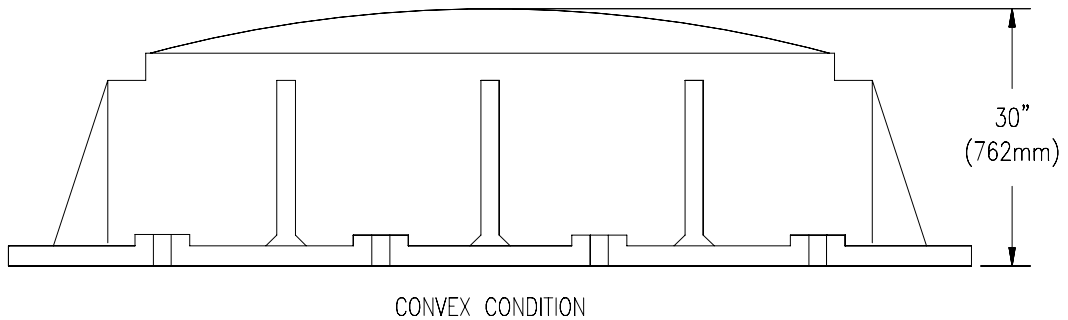
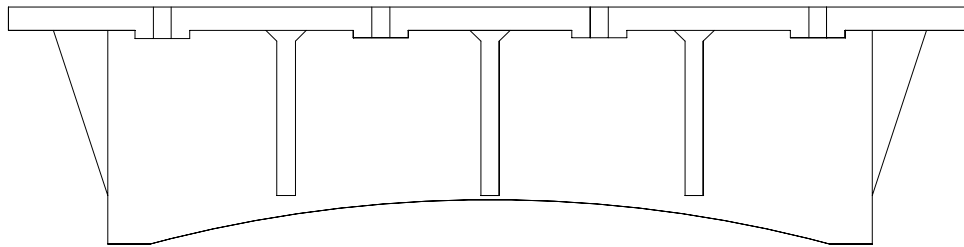
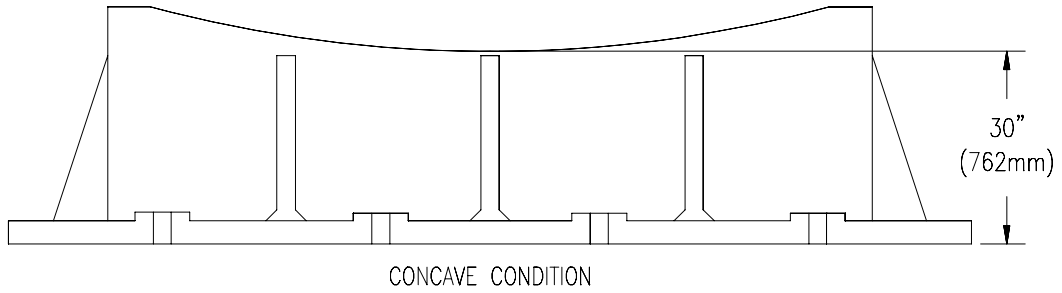
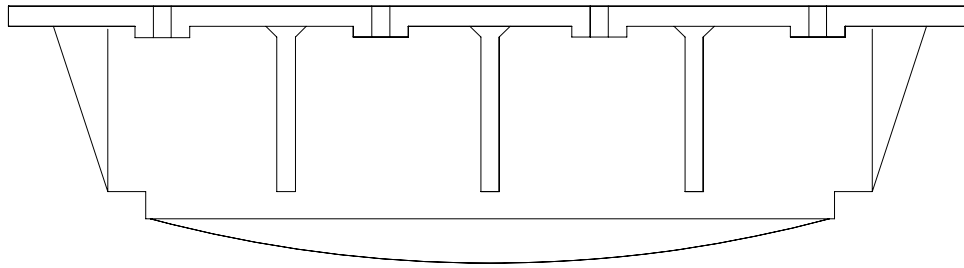




SPARTANBURG STEEL PRODUCTS
PRESS LINE SPECIFICATION
PRESS 1500
(144" x 96" 1600 \ 900 Ton – Double Action)

Document No.:
S02.003
Issue Date: 26 Mar 09
Revision: 07
Page 19 of 20

Lower Die Height Diagram

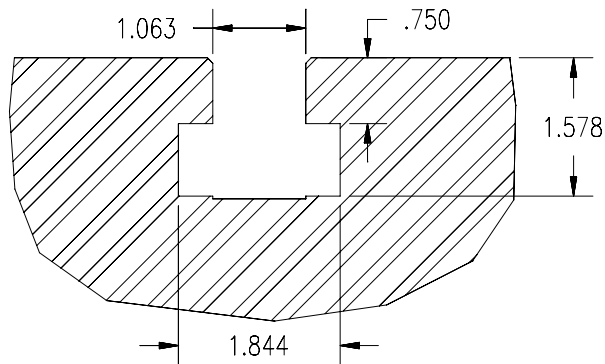




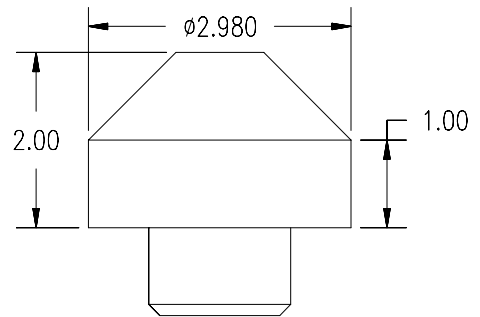
SPARTANBURG STEEL PRODUCTS
PRESS LINE SPECIFICATION
PRESS 1500
(144" x 96" 1600 \ 900 Ton – Double Action)

Document No.:
S02.003
Issue Date: 26 Mar 09
Revision: 07
Page 20 of 20

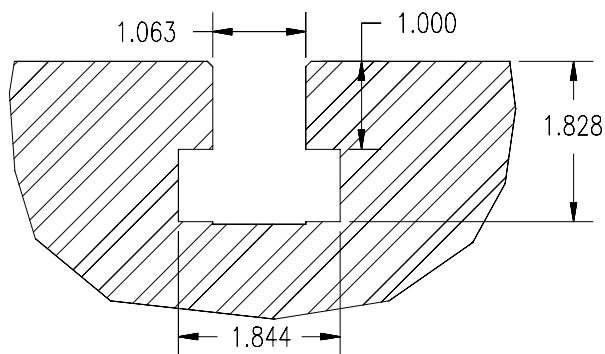
Locator Pin and T-slot Sections



SECTION OF
BOLSTER T-SLOT



DETAIL OF DIE
LOCATOR PIN



SECTION OF
RAM T-SLOT