

ATTACHMENT A

General and Accepted Guidelines for Ordering Die Safety Blocks



A Die Safety Block absolutely needs to be used when it is necessary for the operator/setup personal to have “HANDS IN DIE,” or when someone is working on or in the die with a tool of some description that could cause injury should the press activate. Proper procedures do call for the use of die safety blocks in these instances, with the press locked-out.

1. Always be certain that the Die Safety Blocks are removed prior to cycling of the press. The construction material of the Die Safety Block described in # 2 below comes into play only if the Die Block has not been removed prior to cycling.
2. Use only certified material, preferably aluminum. Aluminum is malleable, and will deform. Magnesium is supposed to fracture at a 45 degree angle, but can fracture and cause shrapnel. Steel should never be considered due to potential shrapnel issues.
3. **.250” of daylight.** Under no circumstances should there be more space between the top of the Die Safety Block and the die, or between the top of the Die Safety Block and the slide if the die is absent. It is absolutely critical to accurately calculate the needed Safety Die Block length. An opening greater than .250” changes the force of a moving slide from static to dynamic.
4. If two Die Safety Blocks are needed, they should be placed at diagonal corners.
5. Specify and order a **Protective Bottom End Cap** Option, designed to add stability as well as strength. It protects ends from damage that might affect capacity.
6. **Wedges** made of either hard wood or aluminum are available and can be safely used. Refer to attached Price Sheet.
7. **Never** should 2 blocks or sections of any length be “stacked.” Most manufacturers’ warranties will be voided in such situations.
8. **Safety Power Cut-Off Systems** are absolutely necessary and comply with OSHA Energy Lockout Regulations.
9. The Addition of Handles provides a safer method of handling the Die Safety Blocks.
10. **Safety Block Holders** improve the system by providing a proper storage place when not in use. This option also facilitates the **Safety Power Cut Off System** utilization by providing a “home” position. See price sheet for details.
11. For Die Blocks weighing over 40 lbs, consider building a “Swing Arm” device to attach to the side of the press to eliminate lifting and positioning issues.
12. An **Adjustable Screw and Nut Assembly** provides easy adjustment both up and down by hand. Normally these devices provide about 5” of adjustment, and should be used in conjunction with a Bottom End Cap (see item # 5 above). Note: This option is not available on larger sized Die Safety Blocks. The standard assembly provides 63 static tons of load capacity.





13. **Avoid the temptation** to purchase just an Adjustable Screw and Nut Assembly unless you know the exact specification of the existing Die Safety Blocks. The integrity of your system could obviously be compromised. Certified material is paramount should a situation ever result.
14. As in all safety situations, good common sense should be the prevailing rule when establishing procedures.

Identifying Your Individual Requirements:

1. Review the basics above.
2. Decide which of the following two methods will work best for you:
 - (a.) Locate the Die Safety Block between the die halves. This will be the only option if the die is wall to wall (fills the entire bolster). Note: Different die sizes will dictate differing block lengths. Consider the use of the Adjustable Screw Option in these instances. (Never use so-called spacers to make up large differences). Or,
 - (b.) Locate the DSB between the slide and bolster. The closer to center position of the slide the block can be placed, the better. If two are used, place in diagonally opposite corners.
3. Measure the clear opening of either method (1) or (2) above, and carefully note, as this will determine the proper overall length of the die block with selected options.
4. Determine the weight of the upper half of the die, and the weight of the press slide or ram. Add these two numbers together and **multiply by 2** to reach the proper safety factor. This now becomes your Static Load Rating.
5. Select the proper model based on Length and Static Load Rating.

A worksheet is available upon request from Productivity Resources, Inc.

Order with confidence providing the above guide lines have been followed.

End

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Note: Use a separate Worksheet for each press being analyzed,



ATTACHMENT B

INDIVIDUAL PRESS ANALYSIS WORKSHEET FOR DIE SAFETY BLOCKS

PRESS # _____

MANUFACTURER _____ MODEL _____

SLIDE WEIGHT: _____ LBS

HEAVIEST UPPER HALF OF DIE: _____ LBS

TOTAL OF THESE TWO WEIGHTS: _____ LBS

DOUBLED (Multiply by 2 for Safety Factor) _____ LBS

FINAL WEIGHT (STATIC LOAD) FIGURE TO BE USED TO DETERMINE DIE BLOCK MODEL:

_____ LBS

DETERMINE LENGTH BY FIGURING EITHER:

- A. UPPER DIE HALF TO LOWER DIE HALF DIMENSION: _____ INCHES
- B. SLIDE TO BOLSTER DISTANCE EITHER WITH SLIDE IN FULL UP POSITION OR AT THE POINT WHERE THE DIE BLOCKS WOULD BE PLACED _____ INCHES

SUMMARY:

TOTAL STATIC LOAD:

_____ LBS IS THE DESIGN STATIC LOAD FACTOR

LENGTH OF BLOCK (Allow for **Protective End Cap** at .75" and **Adjustable Screw Assembly**, if used, at 3.75", total 4.50"):

_____ INCHES OF OVERALL LENGTH REQUIRED



OPTIONS:

1. **Protective End Caps** @ \$ _____ (not needed on model which include the Adjustable Screw and Nut Assembly – the bottom plate at .375" thick is included in price).
2. **Wedges** (use only one material per block) Wood @ \$24.50/set, Aluminum @ \$44.50/set
Use no more than one set of wedges per setup – never more. Also avoid shimming of any type

as the integrity of the setup is guaranteed to be compromised.

3. **Power Cut Off System** a. () Male: \$45.00 b. () Female: \$59.00 Total: \$ _____

4. **Die Block Holders** @ \$ 34.50 ea \$ _____

5. **Handles** @ \$ 8.25 ea factory installed: \$ _____



6. **Adjustable Screw and Nut Assembly** (American Tool and Die Models SB-1 and SB-2 only. Not available on SB-3 Models of any length) \$ 279.00 with base plate included (allow .625" for base plate thickness, and 3.75" for the adjustable screw and nut assembly in full down position.) Subtract this total of 4.375" from overall Die Block length required, taking into account and using to your advantage the 5.0" up/down travel of the **Nut Assembly**.

WORK SHEET SUMMARY FOR THE ABOVE PRESS ONLY:

American Model Number: _____ Price: \$ _____

Options included:

- () **Protective End Caps/set** @ \$ 93.00
- () **Adjustable Screw and Nut Assembly** @ \$ 279.00
See Note # 6 above
- () **Wedges** (s) ea: Wood @ \$24.00/set or Aluminum @ \$44.50/set
Supplied with chain connecting the two
- () **Handles** @ \$8.25 ea (factory installed)
- () **Power Cut Off Factory Attached:** () Male @ \$45.00
() Female @ \$59.00 Total: \$ _____

Total
\$ _____
\$ _____
\$ _____
\$ _____
\$ _____
\$ _____
\$ _____
\$ _____



Total \$ Amount of Order:

Kindly Return a Copy of the Summary To Productivity Resources, Inc with your purchase order (one copy for each press).

Please feel free to contact us at 800-276-5467 should you have any questions whatsoever.

Thank you.

August 24, 2004 PRI