



**VEUGEN
INTEGRATED
TECHNOLOGIES LTD.**
Specializing In Industrial Automation

RAM-MASTER MANUFACTURED IN CANADA

DIE SAFETY BLOCKS



RAM-MASTER

Safety Blocks are manufactured, in Canada from high-strength 6063-T5 aluminum and are rated according to their length and whether fixed or adjustable. The adjustable screws are made of steel. Handles and electrical interlocks are provided as standard but blocks can be supplied without these features.



Capacities

Non adjustable, to 95 Tons.
Adjustable, to 53 Tons.
Mini Blocks to 5 Tons



The CSA standard Z142-02 requires that Safety blocks be used whenever dies are being adjusted or repaired in a press or when work of any kind is being performed between the ram and bolster. They also satisfy the lockout requirements for isolating mechanical energy. Safety Blocks are placed between the die punch and holder and must be rated to support the combined static load of the ram and associated components. Depending upon the weight to be supported as many as four Safety Blocks may be required. Rams are usually adjustable and consequently Safety Blocks can be supplied with an adjustable screw providing up to 12 inches, and more, of adjustment. To avoid accidentally operating the press with the blocks in place an electrical power cut-off interlock system must be used.



Quik-Stor Safety Block Holders can be used with all models of safety blocks. They provide a convenient means of storing the blocks when not in use.

MINI DIE SAFETY BLOCKS

5 Ton Capacity



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RAM-MASTER DIE SAFETY BLOCKS

GENERAL SPECIFICATIONS

Safety blocks can be supplied in fixed or adjustable lengths. All models, fixed and adjustable, use an Octagonal body section and are available in lengths up to 60". Load ratings are on the back page of this flyer.

FEATURES

All **RAM-MASTER** Safety Blocks incorporate the following features.

Load ratings are stamped on the body

6-1/2" Carrying handles are supplied on all models

Adjustable screw assembly. (Adjustable models only)

Adjustable Screws

The amount of adjustment available depends upon the height of the block. The longest screw is 16" which gives approximately 12" of adjustment. The shorter the block the less



Two holes at 90° to each other are cross bored in the top portion of adjusting screws so that a bar may be inserted to aid in turning the screw when making adjustments

Interlock chain attached to collar mounting screw

Octagonal extruded aluminium body cut to the required length.

Electrical Interlock System. (See usage note on back page)

Warning label advising correct use of Safety Block

Blocks may be ordered without interlocks but it is the responsibility of the user to ensure interlocks are used on all installations.

[See back page for ordering information](#)

MINI DIE SAFETY BLOCKS



MINI Die Safety Blocks are intended for use in very small presses and complement the RAM MASTER series. MINI blocks will fit in small spaces were larger blocks would not fit.

MINI blocks are 2.5" in diameter
Load capacity is 10,000 lbs (5 tons)

Available models. Highlighted models are those most readily available. All dimensions in inches. Load rating stamped on body.

Add **M** to end of part number for Plug and **F** for Socket. (**MF** for both)

For example: MSB610MF

NOTE: All blocks are shipped with hardware to attach your own interlocks.

HOW TO ORDER

Select the required model from the chart below adding M or F (or both) if interlocks are required.

Model Number	Minimum Height	Maximum Height
MSB406	4	6
MSB508	5	8
MSB610	6	10
MSB712	7	12
MSB814	8	14
MSB916	9	16
MSB1018	10	18
MSB1120	11	20

ACCESSORIES

BLOCK HOLDERS

Holders are designed to store all sizes of Safety Block. Made of heavy gauge steel and painted safety orange they attach to the press with two 1/4" screws.

Order using part # **SBH664**

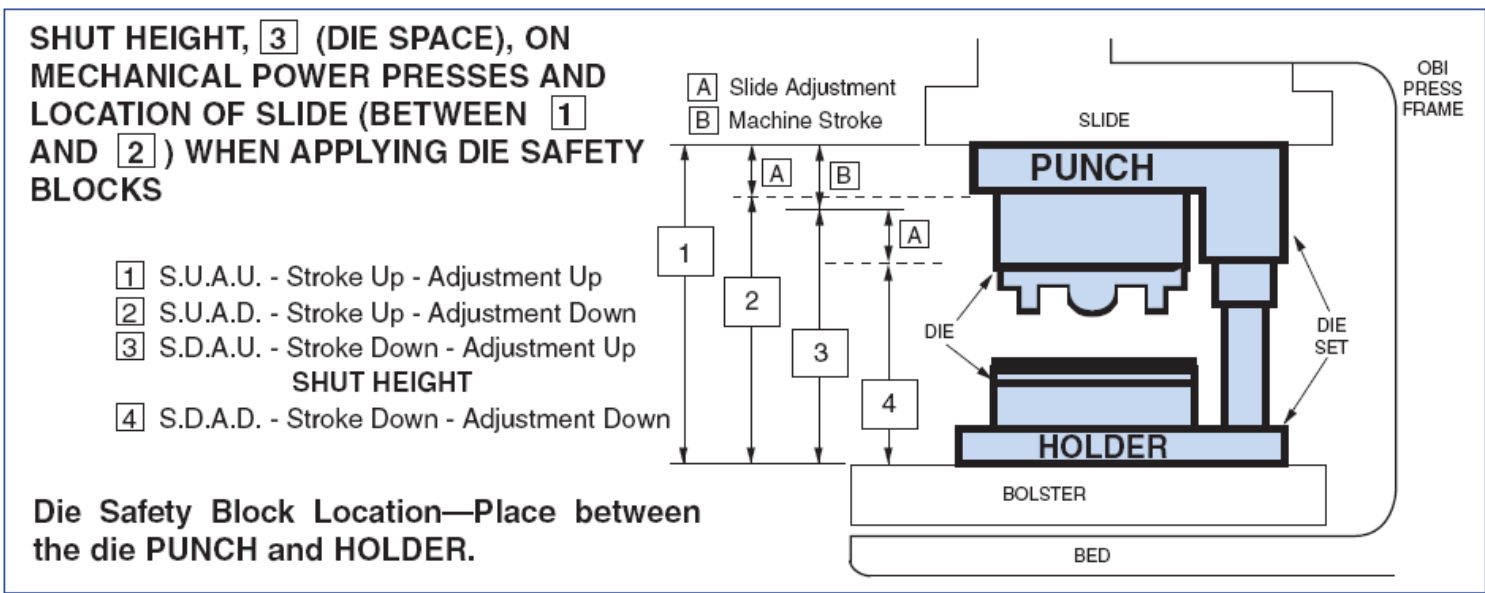


A GUIDE TO SIZING DIE SAFETY BLOCKS

Die safety blocks are placed between the die punch and holder... see diagram below. They must be rated to support the combined weight of the press ram, all components attached to the ram and the upper die.

As many four safety blocks may be required in a large press and they should be situated so that the load is evenly distributed between them.

To account for differences in the distance between the punch and holder safety blocks are usually supplied to be adjustable although they don't have to be adjustable providing some provision is made to ensure there is no gap greater than 1/4" between the upper and lower parts of the die set.



If you know the weight of the press slide and everything attached to it select safety block that matches that number allowing for a safety factor of two. If this number is not known the weight to be supported can be calculated using the formula shown below.

$$\frac{\text{Press Bed Area (sq in)} \times \text{Shut Height (in)}}{\text{Cubic Inches/Cubic Feet (Constant) } 1728 \text{ cu in/cu ft}} = \text{Cubic Feet Displaced}$$

Example

$$\frac{48'' \times 96'' \times 24''}{1728} = \frac{110,592}{1728} = 64 \text{ cu ft}$$

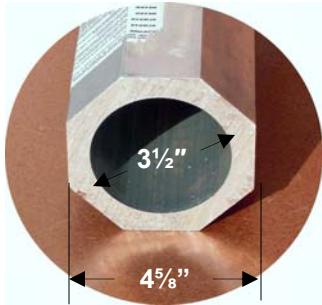
64 cubic feet displacement x 2,000 lb/ cu ft = 128,000 lbs. static load to be supported.

To determine Block Length with the press at the top of its stroke with the stroke adjustment up (S.U.A.U. see diagram) measure the space between the upper and lower die set. This gives the maximum length. To determine the S.U.A.U. subtract the ram adjustment from the S.U.A.U. number and that will give you the minimum height. The difference between the two is the amount of adjustment.

This flyer describes standard product readily available. If you have a need for something not shown here please contact us as we may be able to custom build something to meet your requirements.

NON ADJUSTABLE OCTAGONAL SAFETY BLOCKS

Non adjustable blocks are available in fixed lengths up to 60". The table below shows the maximum static load per block in lbs. and tons. The ratings shown have a safety factor of two.



Weight 0.833 lbs.in

Block Length (Inches)	Capacity. Lbs. (Tons)
1 - 24	190,000 (95)
24½ - 30	173,000 (86)
30½ - 36	169,500 (84)
36½ - 42	164,000 (82)
42½ - 48	158,000 (79)
48½ - 54	155,500 (77)
54½ - 60	155,000 (77)

HOW TO ORDER
Simply state the length you require plus the number of handles (one or two) and if Interlocks are required.

ADJUSTABLE OCTAGONAL SAFETY BLOCKS

When an adjustable screw is used the static load capabilities are as shown. Blocks with adjustable screws cannot hold as heavy a static load as octagonal safety blocks by themselves. The ratings shown have a safety factor of two.



Inches of Adjustment	Maximum Static Load. Lbs. (Tons)
2	106,000 (53)
4	102,500 (51)
6	98,500 (49)
8	94,500 (47)
10	91,000 (45)
12	87,500 (43)

HOW TO ORDER
We need to know the minimum height required and the amount of adjustment. [Please read the note below] The maximum minimum height is 60" and the normal maximum amount of adjustment is 12". However blocks with greater amounts of adjustment can be made. State the number of handles you need and if you need interlocks.

NOTE. All safety blocks, both fixed and adjustable, come with a hole and pin for the interlock chain plus one or two handles. Interlocks are extra and must be requested on your order

NOTE. A block with zero adjustment has a minimum height of 5". For every inch of adjustment the minimum height increase by 1". For example, a block with 6" of adjustment will have a minimum height of at least 11". Once this requirement is met the minimum height can be anything up to 60".

Correct Usage

Safety Blocks must be used when anyone is working in and around the die area of a press. An electrical interlock must be attached to the Safety Block so that the press cannot be operated when the blocks are in place. When not being used the blocks must be stored in a location where the electrical interlock can be interfaced with the press controls ensuring the press can only be started when the block is in the stored position, i.e. not in the press.

TECHNICAL ASSISTANCE

If you need help determining what size of block you need please do not hesitate to contact us.



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