

Die Safety Blocks

For Presses and Press Brakes

DELIVERING TRUSTED MACHINE SAFEGUARDING SOLUTIONS FOR ORGANIZATIONS WORKING WITH INDUSTRIAL MACHINERY

WHY SAFEGUARD?

According to Occupational Safety and Health Administration (OSHA) statistics, nearly 18,000 workers in metal fabricating plants suffer non-fatal injuries annually in the United States. Even with strict machine and operator safety regulations in place, unguarded hazardous machinery remains a major source of fatalities, amputations and other traumatic injuries in manufacturing plants. A recent survey showed an alarming 50 percent or more of metal fabricating machinery in the United States are not in compliance with the critical safety requirements for guarding outlined by OSHA and the American National Standards Institute (ANSI).

Since 1971, the Fortune 500 and many of North America's largest manufacturers have depended upon Rockford Systems for customized machine safeguarding solutions to bring their operations into compliance with today's OSHA regulations, ANSI, RIA and NFPA standards to ensure they are prepared for tomorrow's safety challenges.

MACHINE SAFETY SOLUTIONS



Training and Education

Recommended For

Personnel in EH&S, Production/ Operations/ Maintenance, and Risk Management roles that need safeguarding training

Description

Seminars and webinars that teach people how to safeguard industrial machinery to be in compliance with OSHA regulations, and ANSI/RIA/NFPA standards

Output / Result

Safeguarding Seminar Certificate

Machine Risk Assessment

Recommended For

Organizations with new and/or relocated metal working machines or automation cells that need hazard identification and risk scoring

Description

Identifies the task and associated hazards on machinery
Scores the risk level using the ANSI B11.0-2015 safety standard methods

Output / Result

Hazard Analysis Report

Machine Safeguarding Assessment

Recommended For

Organizations with new, old, refurbished and/or relocated metal working machines, robots or automation cells that need safeguarding solutions and associated costs

Description

Identifies the task and associated hazards on machinery
Recommends safeguarding solutions using the current OSHA regulations, and ANSI/RIA/NFPA standards (or Corporate Standards where applicable)

Output / Result

Machine Safeguarding Assessment & Proposal

Customized, Engineered Integration Solutions

Recommended For

Included with Machine Safeguarding Assessment

Description

Delivers customized engineered and automated safety device interfaces or specialized controls for machines or robots

Output / Result

Machine Safeguarding Assessment & Proposal

OUR MISSION

Our aim is to enhance the long-term health and quality of life of workers in high-risk occupations, while improving the bottom line of the organizations we serve by increasing compliance, reducing risk, lowering costs, and improving productivity.

ROCKFORD SYSTEMS CAN HELP

At Rockford Systems, we are experts at machine guarding because it has been our sole focus for over 45 years. We stand committed to the prevention of injuries and fatalities. We are here to help insurance agencies, academic institutions, and businesses, large and small, address machine safety challenges and to remove the burden of managing the growing legal complexity of OSHA and ANSI requirements from simple turnkey solutions, to more complex customized solutions.



Over 10,000 Safeguarding Products

Recommended For

Included with Machine Safeguarding Assessment

Description

Ensures that industrial machines and automation cells are fully safeguarded to OSHA regulations, and ANSI/RIA/NFPA standards

Includes shields, guards, presence sensing devices, controls, disconnects, starters, covers and more for all metal working machines

Output / Result

Machine Safeguarding Assessment & Proposal

Expert Installation Services

Recommended For

Included with Machine Safeguarding Assessment

Description

OSHA trained installers safely integrate safeguarding products into sophisticated machine controls and train operators on proper use

Output / Result

Machine Safeguarding Assessment & Proposal

Technical Support and In-Field Support

Recommended For

Included with all purchases and installations

Description

Every purchase is backed up with a professional, highly-trained team of Technical Support Advisers

In-Field Service Technicians are available for more complex troubleshooting and repairs

Output / Result

Post purchase support via phone, fax, online or onsite

Ongoing Compliance Validation

Recommended For

Organizations who have completed a guarding installation that seek ongoing compliance validation

Description

Ensures that safeguarding products are in place, working at optimal performance, and operators are using safeguarding solutions as designed and trained

Output / Result

Included with all Machine Safeguarding Assessment

INTRODUCTION

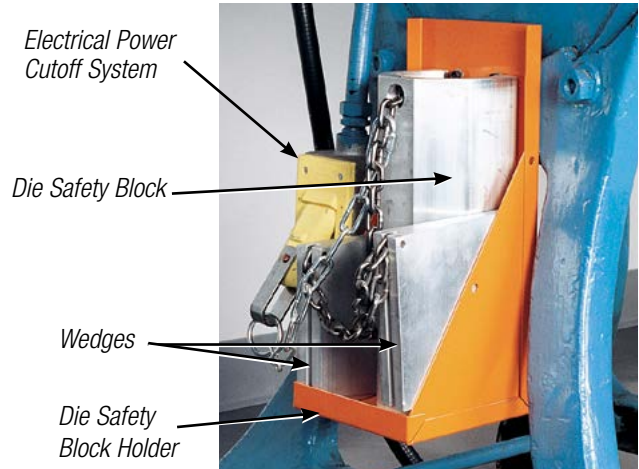
According to OSHA 29 CFR 1910.217, "The employer shall provide and enforce the use of safety blocks for use whenever dies are being adjusted or repaired in the press." They are not required during die setting unless die blocks are included in your die setting procedure. They also satisfy the lockout/tagout requirements for isolating mechanical energy.

Die safety blocks are placed between the die punch and holder with the machine stroke up. They are rated to support a static load. The static load represents the combined weight of the press ram, ram components (ram-adjust assembly and connection rod[s] or pitman arm[s]), and the upper die.

In some applications, as many as four safety blocks may be required. This is determined by the size of the press bed and the weight the blocks must support. On larger presses, the total slide weight must then be distributed among the quantity of safety blocks required.

The ram is usually adjustable; therefore, wedges or the adjustable screw device is offered to provide a proper fit. If the die takes up most of the space on the die set, it may be difficult to find a place to insert the block. To avoid accidentally stroking the press or leaving the safety block in the die after use, an electrical power cut-off interlock system should be used.

Note: Electrical interlocking of die safety blocks to the machine's motor and control circuits is required by ANSI B11.19.



U-Shaped Safety Block in Holder With Wedges and Electrical Power Cutoff System

ALUMINUM DIE SAFETY BLOCK SYSTEM

This high-strength die safety block is lightweight and comes in several sizes. The unique shape and mechanical properties of the 6063-T5 material have been calculated according to stringent structural aluminum design analysis standards to provide high strength.

To determine the number of die safety blocks required, the static load each die safety block will support, and the length of each block, please follow the instructions below and on the next page.

1. Determining the static load the die safety block(s) will support:

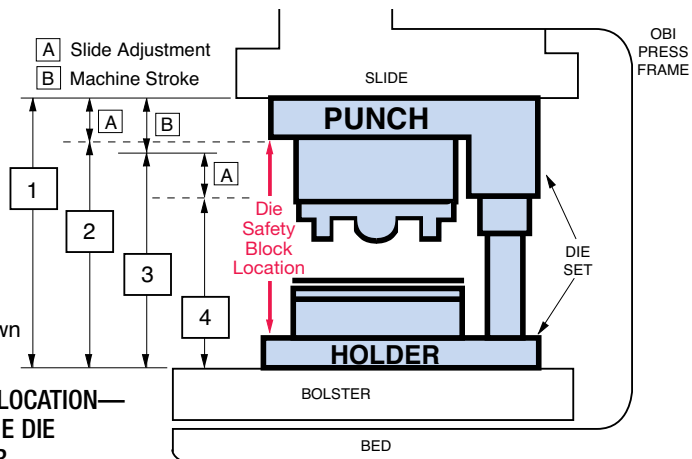
The actual static load that the die safety block(s) will support is determined by adding the actual weights of the press slide and slide components (ram-adjustment assembly, connection rod[s] or pitman arm[s], and the upper die).

If this weight cannot be determined, an approximate static load can be calculated using the information and formulas on the next page.

SHUT HEIGHT, [3] (DIE SPACE), ON MECHANICAL POWER PRESSES AND LOCATION OF SLIDE (BETWEEN [1] AND [2]) WHEN APPLYING DIE SAFETY BLOCKS

- [1] S.U.A.U. - Stroke Up - Adjustment Up
 - [2] S.U.A.D. - Stroke Up - Adjustment Down
 - [3] S.D.A.U. - Stroke Down - Adjustment Up
 - [4] S.D.A.D. - Stroke Down - Adjustment Down
- SHUT HEIGHT**

**DIE SAFETY BLOCK LOCATION—
PLACE BETWEEN THE DIE
PUNCH AND HOLDER.**



Allow 2000 pounds of static load for each cubic foot displaced in the press bed area (front to back x right to left) multiplied by the shut height (die space) of the press. *Note: When using this formula, the calculated approximated static load has a safety factor of two (2).*

FORMULAS:

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

$$(1728 \text{ cu in/cu ft})$$

$$\text{Cubic feet displaced} \times 2000 \text{ lb/cubic foot} = \text{Total Static Load}$$

EXAMPLE:

(Press Bed Area) (Shut Height)

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

$$64 \text{ cubic feet displaced} \times 2000 \text{ lb/cu ft} = 128,000 \text{ lb static load}$$

2. Determining the Die Safety Block Length

With the machine at the top of its stroke; stroke up — adjustment up (S.U.A.U. – see previous page), measure the space between the upper and lower die set plates (not the distance between the bolster and slide). This gives the maximum safety block length. To determine the stroke up — adjustment down (S.U.A.D. – see previous page) measurement, subtract the ram adjustment from the S.U.A.U. figure. This provides the minimum length of the die safety block.

Total Length of Die Safety Block Required _____”

EXCEPTIONS

A. If wedges will be used, subtract 1½” maximum. This is an allowance for variation in the stopping point of the crankshaft or adjustment of the ram.

Total Length of Die Safety Block Required _____”

B. When an adjustable screw is added to an octagonal safety block, the **minimum length of the aluminum portion of the safety block** is as follows:

For small and medium safety blocks

2½” plus the size of the adjustable screw device

For large safety blocks

3” plus the size of the adjustable screw device

When an adjustable screw device is added to an octagonal safety block and the screw is all the way inside of the safety block, **it will add 2” to the overall length of small and medium safety blocks and 2½” to the overall length of large safety blocks.** Therefore, subtract 2” for small or medium blocks and 2½” for large blocks to determine the length of the aluminum portion of the die block.

Example: If the minimum overall length of the small or medium safety block required is 10½” with any size adjustable screw device, the aluminum portion of the safety block would be 8½” (10½” - 2” = 8½”).

Example: If the minimum overall length of the large safety block required is 16” with any size adjustable screw device, the aluminum portion of the safety block would be 13½” (16” - 2½” = 13½”).

Total Length of the Aluminum Portion of the Die Safety Block _____”

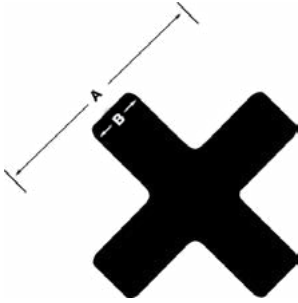
3. Determining the Size of the Die Safety Block

The size of the die safety block (small, medium, large) is determined by one or both of the following factors:

A. The size of the block itself and the area available in the die. (See static load charts.)

B. The static load capacity of the block (small, medium, large) versus the total static load being supported. (See static load charts.)

X-SHAPED SAFETY BLOCKS



	SMALL	LARGE
A	4"	5¾"
B	1"	1¼"

	WEIGHT OF BLOCKS
SMALL	0.681 lb/in
LARGE	1.250 lb/in

To determine the number of safety blocks required, the static load each safety block will support, and the length of each block, please refer to pages 2-3.

The X-shaped safety blocks can be furnished four different ways:

- Cut to length with a hole and pin for an interlock chain or wedges
- Cut to length only
- In a nine-foot length
- Cut to length with a hole and pin for an interlock chain or wedges and a base plate installed (order base plate separately; see page 6)

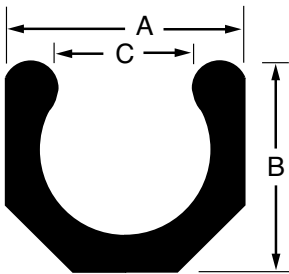
BLOCK LENGTH	MAXIMUM APPROXIMATE STATIC LOAD PER BLOCK IN POUNDS (TONS)*	
	SMALL	LARGE
1"-24"	97,000 (48)	203,000 (101)
24½"-30"	90,000 (45)	189,000 (94)
30½"-36"	86,000 (43)	171,000 (85)
36½"-42"	84,000 (42)	169,000 (84)
42½"-48"	73,000 (36)	165,000 (82)
48½"-54"	71,000 (35)	146,000 (73)
54½"-60"	69,000 (34)	144,000 (72)

*The approximate static loads shown in this chart have a built-in safety factor of two.

WAY FURNISHED†	SMALL	LARGE
	PART NO.	PART NO.
A	KTS-609	KTS-610
B	KTS-605	KTS-606
C	KTS-608	KTS-608
D	KTS-635	KTS-636

†Powder coating available on request—please consult the factory.

U-SHAPED SAFETY BLOCKS



	SMALL	MEDIUM	LARGE
A	4⅝"	5½"	6¾"
B	4"	4⅞"	5½"
C	2⅝"	3¼"	4¼"

	WEIGHT OF BLOCKS
SMALL	0.638 lb/in
MEDIUM	0.879 lb/in
LARGE	1.17 lb/in

To determine the number of safety blocks required, the static load each safety block will support, and the length of each block, please refer to pages 2-3.

The U-shaped safety blocks can be furnished three different ways:

- Cut to length with a hole and pin for an interlock chain or wedges
- Cut to length only
- In a nine-foot length

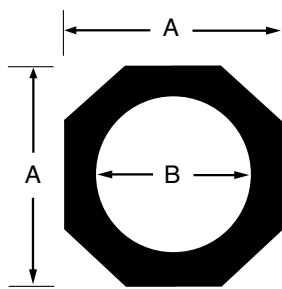
BLOCK LENGTH	MAXIMUM APPROXIMATE STATIC LOAD PER BLOCK IN POUNDS (TONS)*		
	SMALL	MEDIUM	LARGE
1"-24"	88,500 (44)	126,000 (63)	169,500 (84)
24½"-30"	87,000 (43)	123,000 (61)	166,000 (83)
30½"-36"	84,000 (42)	120,500 (60)	162,000 (81)
36½"-42"	81,500 (40)	117,500 (58)	159,000 (79)
42½"-48"	79,000 (39)	114,000 (57)	156,000 (78)
48½"-54"	76,500 (38)	112,000 (56)	152,000 (76)
54½"-60"	74,000 (37)	108,500 (54)	148,500 (74)

*The approximate static loads shown in this chart have a built-in safety factor of two.

WAY FURNISHED†	SMALL	MEDIUM	LARGE
	PART NO.	PART NO.	PART NO.
A	KTS-561	KTS-562	KTS-563
B	KTS-564	KTS-565	KTS-566
C	KTS-554	KTS-555	KTS-556

†Powder coating available on request—please consult the factory.

OCTAGONAL SAFETY BLOCKS



	SMALL	MEDIUM	LARGE
A	5 $\frac{5}{8}$ "	5 $\frac{1}{2}$ "	6 $\frac{3}{4}$ "
B	3 $\frac{1}{2}$ "	4 $\frac{1}{4}$ "	5 $\frac{1}{4}$ "

WEIGHT OF BLOCKS	
SMALL	0.833 lb/in
MEDIUM	1.12 lb/in
LARGE	1.58 lb/in

To determine the number of safety blocks required, the static load each safety block will support, and the length of each block, please refer to pages 2-3.

The octagonal safety blocks can be furnished four different ways:

- Cut to length with a hole and pin for an interlock chain and with an adjustable screw device and/or base plate installed (order adjustable screw device and/or base plate separately; see below and page 6)
- Cut to length with a hole and pin for an interlock chain or wedges
- Cut to length only
- In a nine-foot length

BLOCK LENGTH	MAXIMUM APPROXIMATE STATIC LOAD PER BLOCK IN POUNDS (TONS)*		
	SMALL	MEDIUM	LARGE
1"-24"	190,000 (95)	275,500 (137)	289,500 (144)
24 $\frac{1}{2}$ "-30"	173,000 (86)	258,000 (129)	258,000 (129)
30 $\frac{1}{2}$ "-36"	169,500 (84)	244,000 (122)	245,000 (122)
36 $\frac{1}{2}$ "-42"	164,500 (82)	232,000 (116)	234,500 (117)
42 $\frac{1}{2}$ "-48"	158,000 (79)	226,500 (113)	223,500 (111)
48 $\frac{1}{2}$ "-54"	155,500 (77)	226,000 (113)	211,000 (105)
54 $\frac{1}{2}$ "-60"	155,000 (77)	218,500 (109)	210,500 (105)

*The approximate static loads shown in this chart have a built-in safety factor of two.

WAY FURNISHED†	SMALL	MEDIUM	LARGE
	PART NO.	PART NO.	PART NO.
A	KTS-589	KTS-590	KTS-591
B	KTS-592	KTS-593	KTS-594
C	KTS-595	KTS-596	KTS-597
D	KTS-599	KTS-600	KTS-601

†Powder coating available on request—please consult the factory.

ADJUSTABLE SCREW DEVICE—FOR USE WITH OCTAGONAL SAFETY BLOCKS ONLY

This heavy-duty steel screw device is added to the octagonal shaped safety blocks. These screws are needed to prevent any space between the block and die when various dies are used or when the slide is adjusted.

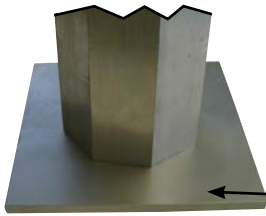


Note: If an adjustable screw device is mounted to an octagonal safety block, you must use the approximate static loads shown in the chart. This is because the adjustable screw devices will not hold as heavy a static load as the octagonal safety blocks by themselves.

ADJUSTABLE SCREW DEVICE			MAXIMUM APPROXIMATE STATIC LOAD PER ADJUSTABLE SCREW DEVICE IN POUNDS (TONS)*
OCTAGONAL SAFETY BLOCK SIZE	INCHES OF ADJUSTMENT	PART NO.	
SMALL	2"	KTS-574	106,000 (53)
	4"	KTS-584	102,500 (51)
	6"	KTS-625	98,500 (49)
	8"	KTS-626	94,500 (47)
	10"	KTS-627	91,000 (45)
	12"	KTS-622	87,500 (43)
MEDIUM	2"	KTS-575	73,000 (36)
	4"	KTS-585	70,000 (35)
	6"	KTS-628	67,000 (33)
	8"	KTS-629	64,000 (32)
	10"	KTS-630	61,000 (30)
	12"	KTS-623	58,000 (29)
LARGE	6"	KTS-598	189,000 (94)
	8"	KTS-631	181,000 (90)
	10"	KTS-632	174,000 (87)
	12"	KTS-624	167,000 (83)

*The approximate static loads shown in this chart have a built-in safety factor of two.

SAFETY BLOCK BASE



This safety block base can be added to U-shaped, octagonal-shaped, and X-shaped safety blocks. The base adds stability to help prevent the die block from tipping over. Available in 1/2" thick steel or aluminum.

← Safety Block Base

STEEL BASES FOR U-SHAPED AND OCTAGONAL-SHAPED SAFETY BLOCKS		
PART NO.	DESCRIPTION	DIMENSIONS
STL-053	MINI BASE	6" X 6"
STL-049	SMALL BASE	8 ⁵ / ₈ " X 8 ⁵ / ₈ "
STL-050	MEDIUM BASE	9 ¹ / ₂ " X 9 ¹ / ₂ "
STL-051	LARGE BASE	10 ³ / ₄ " X 10 ³ / ₄ "

STEEL BASES FOR X-SHAPED SAFETY BLOCKS		
PART NO.	DESCRIPTION	DIMENSIONS
STL-057	SMALL X-BASE	4" X 4"
STL-058	LARGE X-BASE	6" X 6"

ALUMINUM BASES FOR OCTAGONAL-SHAPED SAFETY BLOCKS		
PART NO.	DESCRIPTION	DIMENSIONS
KTS-638	SMALL BASE	6" X 6"
KTS-640	MEDIUM BASE	8" X 8"
KTS-641	LARGE BASE	10" X 10"

ALUMINUM BASES FOR X-SHAPED SAFETY BLOCKS		
PART NO.	DESCRIPTION	DIMENSIONS
KTS-637	SMALL X-BASE	4" X 4"
KTS-639	LARGE X-BASE	6" X 6"

SAFETY WEDGES

These wedges prevent hazardous movement of the press slide if a space is created between the block and die when various dies are used or when the slide is adjusted. All cut-to-length wedges are furnished with a 24" chain. Available in aluminum or hardwood.



Two-Piece Aluminum Safety Wedges

SAFETY WEDGES FOR SAFETY BLOCKS	
PART NO.	DESCRIPTION
KTS-571	6" ALUMINUM WEDGE FOR SMALL BLOCKS
KTS-572	7" ALUMINUM WEDGE FOR MEDIUM BLOCKS
KTS-573	8" ALUMINUM WEDGE FOR LARGE BLOCKS
KTS-570	ALUMINUM WEDGE MATERIAL IN A 9' LENGTH
KTS-642	HARDWOOD WEDGE FOR ALL BLOCK SIZES

HOLDERS

These holders are designed to accept U-shaped, octagonal, X-shaped, and adjustable safety blocks. They are constructed of heavy-gauge steel and painted safety orange. The holders attach easily to the machine with two 1/4" fasteners. A strap is furnished with each holder to keep the block in place. Safety wedges can also be stored in the holders.



HOLDERS	
PART NO.	DESCRIPTION
KTS-003	8" X 8" X 14"
KTS-005	10 ¹ / ₂ " X 10 ¹ / ₂ " X 14"
KTS-019	10 ¹ / ₂ " X 10 ¹ / ₂ " X 24"
KTS-020	12" X 12" X 30"

LIFTING HANDLE

PART NO. KTS-633

The aluminum lifting handle is a convenient option for all safety blocks that are used frequently.



ELECTRICAL INTERLOCK SYSTEMS

According to ANSI B11.19, safety blocks "shall be interlocked with the machine to prevent actuation of hazardous motion of the machine." The following interlock systems will satisfy this requirement. The interlock must be interfaced into the control system so that when the plug is pulled, the power to the main drive motor and control is disconnected. If the machine has a mechanical energy source, such as a flywheel, it must come to rest before the die block can be inserted. The interlock system is available in a yellow plug with one contact or an orange plug with two contacts. The interlock system includes the plug, a 24" long chain, a receptacle, and an electrical mounting box.

Part No. KTS-518

One-contact interlock system with 24" chain

Part No. KTS-533

Two-contact interlock system with 24" chain



KTS-518

WARNING LABELS

PART NO. KST-323 ENGLISH
PART NO. KST-323S-SPANISH

The warning label illustrated to the right is provided with all safety blocks and should be affixed directly to each safety block. If a safety block is not tall enough for the label to fit, affix it to a prominent location on the machine. All personnel operating or working around the machine must be required to read, understand, and adhere to all warnings on this label. If the label becomes destroyed or unreadable, it MUST be replaced. Contact the factory immediately for a replacement label and do not operate the equipment until the warning label is in place.



MAXIMUM LOAD LABEL

PART NO. KST-330

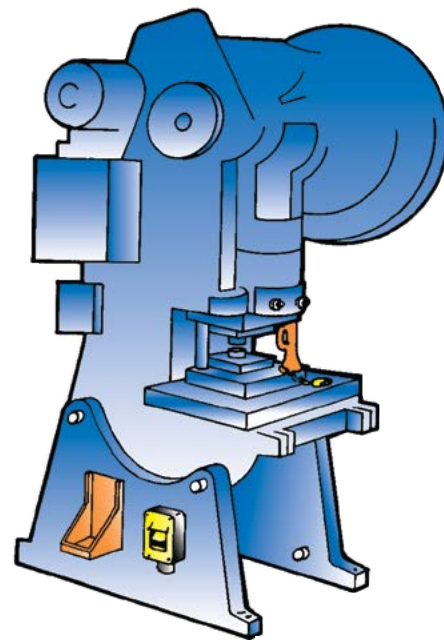
The maximum load label shown to the right is provided with all safety blocks and is affixed directly to each safety block. If the label becomes destroyed or unreadable, contact the factory for a replacement label. The maximum load in tons should be written legibly on the label in permanent marker based on the maximum load chart.



ADJUSTABLE DIE SAFETY BLOCKS



These adjustable safety blocks feature a tough malleable-iron bell-bottom base, a convenient handle for lifting, and precision-cut acme threads for easy adjustment and extra rigidity. The adjusting screw can be easily adjusted up or down by hand. Turning holes are also provided in the screw neck to facilitate the use of a turning bar, if required.



Safety Block in Use on a Power Press

PART NO.	CAPACITY IN TONS	LENGTH CLOSED	+ SCREW ADJUSTMENT	+ LENGTH SCREW ADJUSTMENT UP	BASE DIAMETER	WEIGHT IN POUNDS	SAFETY BLOCK HOLDER PAR NO.
KTS-520*	10	6¾"	1¼"	8"	4⅞"	8	KTS-003
KTS-521	10	8¾"	3½"	12¼"	5⅝"	10	KTS-003
KTS-522	10	12¾"	7¼"	20"	6½"	13	KTS-003
KTS-523	20	9½"	2¾"	12¼"	6⅜"	18	KTS-003
KTS-524	20	11½"	4½"	16"	6⅝"	22	KTS-003
KTS-525	20	17½"	9½"	27"	7¾"	35	KTS-005
KTS-526	24	11¾"	3¼"	15"	7¼"	31	KTS-005
KTS-527	24	15¾"	6½"	22¼"	7⅞"	40	KTS-005
KTS-528	24	21¾"	12"	33¼"	9¼"	56	KTS-005

*Does not have a handle.

Quotes from Past Participants

- The seminar has a lot of information on the safety of presses. Anyone with a press operation needs to attend
- It was what I expected
—very informative
- Instructors are very knowledgeable
- I thoroughly enjoyed the seminar and picked up a lot of very valuable information
- Excellent presentation
- Best training I've had in years
- The hands-on experience was great
- This seminar is, perhaps, the most comprehensive coverage that I have heard on this subject. The course is a "must" for anyone involved in machinery guarding or operational set-up

ROCKFORD SYSTEMS' QUALIFICATIONS

For many years Rockford Systems has been educating corporations throughout the world on machine safeguarding. Every year, hundreds of people attend these seminars. Participants come from a variety of areas including manufacturing, distribution, aerospace, insurance, government, and consulting. They include safety directors, plant managers, maintenance and engineering personnel, setup people, safety specialists, loss-control engineers, and safety consultants. Seminar instructors are very knowledgeable and have many years of experience in the machine tool industry.

MACHINE SAFEGUARDING SEMINAR OVERVIEW

According to safety standards, when a machine creates a hazard to operators and other employees in the machine area, it must be safeguarded. Rockford Systems offers a machine safeguarding seminar to teach people in positions of responsibility how to safeguard the point of operation and other machine hazards to meet these safety standards.

This 2½-day seminar explains how to interpret the performance language of both OSHA (Occupational Safety and Health Administration) and ANSI (American National Standards Institute) standards. Specific machine safeguarding situations are also discussed. Another section of the machine safeguarding seminar provides basic safeguarding guidelines for other metalworking machines using the ANSI B11-series safety standards.

Seminars combine classroom discussion with demonstrations of machines under power. Hands-on experience with these machines and visual aids, including slides and videos, are also used. These teaching methods enable the participants to interpret the OSHA and ANSI standards as they relate to their specific machine applications and production requirements.

DAY-TO-DAY OUTLINE OF SAFEGUARDING SEMINAR

Day 1 8:00 a.m. to 5:00 p.m.

- Welcome, Introduction, and Objectives of Seminar
- Brief History of ANSI, OSHA, and NFPA-79
- Risk Reduction
- OSHA 29 CFR 1910.211, Definitions
- OSHA 29 CFR 1910.212, General Requirements for All Machines and Auxiliary Equipment
- OSHA 29 CFR 1910.217 Mechanical Power Presses
- ANSI B11.1-2009 Mechanical Power Presses
- Full-Revolution-Clutch Identification and Control Requirements
- Part-Revolution-Clutch Identification and Control Requirements
- Control Reliability and Brake Monitoring
- Electrical Component Requirements (NFPA-79)
- Hand-Feeding Tools
- Point-Of-Operation Safeguarding—Guards, Devices, Methods
- Design, Construction, Setting, and Feeding of Dies
- Inspection and Maintenance Records
- Instruction to Operators
- Reports of Injuries
- Mechanical Power-Transmission Apparatus (OSHA 1910.219)

Day 2 8:00 a.m. to 5:00 p.m.

- ANSI B11.2 Hydraulic Power Presses
- ANSI B11.3 Power Press Brakes
- ANSI B11.4 Shears
- ANSI B11.5 Iron Workers
- ANSI B11.6 Lathes (Manually Operated)
- ANSI B11.7 Cold Header and Cold Formers
- ANSI B11.8 Drilling, Milling, and Boring Machines
- ANSI B11.9 Grinding Machines
- ANSI B11.10 Metal Sawing Machines
- ANSI B11.11 Gear Cutting Machines
- ANSI B11.12 Roll Forming and Roll Bending Machines
- ANSI B11.13 Automatic Screw/Bar and Chucking Machines
- ANSI B11.14 Coil Slitting Machines/Systems Withdrawn—See ANSI B11.18
- ANSI B11.15 Pipe, Tube, and Shape Bending Machines
- ANSI B11.16 Metal Powder Compacting Presses
- ANSI B11.17 Horizontal Hydraulic Extrusion Presses
- ANSI B11.18 Coil Processing Systems
- ANSI B11.19 Safeguarding Methods (Criteria)
- ANSI B11.20 Integrated Manufacturing (Cells)
- ANSI B11.21 Machine Tools Using Laser Processing (Cutting)
- ANSI B11.22 CNC Turning Centers and Lathes
- ANSI B11.23 Machining Centers—CNC Mills, Drills, Boring
- ANSI B11.24 Transfer Machines
- ANSI/SPI B151.1 Horizontal (Plastic Injection Molding Machines)

Day 2 (Continued)

- BS ISO 14137 and JIS B6360 Electrical Discharge (EDM) Machines
- ANSI B152.1 Hydraulic Die Casting Presses
- ANSI/RIA R15.06—1999 & 2012 Robots and Large Work Envelopes
- OSHA 1910.147 Control of Hazardous Energy Lockout/Tagout

Day 3 8:00 a.m. to 10:00 a.m.

- Machine Demonstrations

SEMINAR MATERIALS

Each person attending this seminar receives a variety of information regarding machine safeguarding which includes reprints of the following:

- OSHA 29 CFR 1910.211, 1910.212, 1910.217, and 1910.219
- Charts and graphs for future reference
- Safeguarding product catalogs
- U.S. Department of Labor memorandums
- Mechanical Power Press Safety Information Card
- Safety Distance Guide Slide Chart
- Folding, Acrylic Copolymer OSHA and ANSI Guard-Opening Scales
- Laminated function-testing checklists for safeguards

SEMINAR REGISTRATION FORM



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Registration for the dates of _____

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Address Line 2 _____

City _____ State/Province/Region _____ ZIP/Postal Code _____

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Registrants:

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Name/Title of person making registration _____ Phone _____

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