ROCKFORD SYSTEMS, LLC

The Trusted Choice for Machine Safety

SAFETY SHIELDS

FOR CUTTING AND TURNING MACHINES

Safety Shields is a comprehensive catalog that features a complete line of equipment to protect operators of cutting and turning machines.

The polycarbonate and steel shields found in this catalog can be applied to drill presses, lathes, milling machines, bench grinders, band saws, and disc and belt sanders.

The catalog also offers emergency-stop devices, disconnect switches, magnetic motor starters, lockouts, and danger signs.

All products in this catalog are intended and designed to meet the requirements of OSHA and ANSI safety standards.

At Rockford Systems, we are experts at machine guarding because it has been our sole focus for over 50 years. We stand committed to the prevention of injuries and fatalities. Our mission 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.

1-800-922-7533 | www.rockfordsystems.com

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INTRODUCTION

There are basic safety requirements for safeguarding cutting and turning machines. These basic safety requirements include safeguarding, controls, disconnects, starters, covers, and other considerations. We have explained the basic safety requirements below and have arranged this catalog so you can make your safeguarding choices quickly and easily.

1. SAFEGUARDING: When safeguarding the point-of-operation on a cutting or turning machine, shields (barriers) can be installed between the hazard and the operator. These shields can deflect chips, sparks, and coolant that are generated at the point-of-operation.

2. CONTROLS: Most cutting and turning machines are directly driven by a motor. When the motor is turned on, the tool or workpiece rotates causing a point-of-operation hazard. When the motor is turned off, the tool or workpiece coasts to a stop and the hazard is eliminated. The basic requirement for controls is that all cutting and turning machines must have an emergency-stop device located within reach of the operator. Some of the motor stop/start operator stations offered in this catalog are equipped with an emergency-stop push button to meet this requirement. These emergency stop buttons can also be supplied separately.

3. DISCONNECTS: All cutting and turning machines must have a disconnecting means to shut off all pneumatic, electrical, and hydraulic power sources coming to the machine. It must be capable of being locked only in the off position to comply with OSHA 1910.305 (j)(4), applicable ANSI standards, and OSHA 29 CFR 1910.147 (lockout/tagout).

4. STARTERS: All cutting and turning machines must have a starter that will automatically drop out when the control voltage is lost to the machine. To restart the machine when power is restored, someone must start the motor with some type of overt action, for example, pressing the start push button. This prevents the machine from automatically restarting when the voltage is restored.

5. COVERS: All cutting and turning machines must have the mechanical power-transmission apparatuses covered (guarded) if below a 7' level from the floor or working platform. This includes motor shafts, belts, pulleys, chains, sprockets, gears, etc.

6. OTHER CONSIDERATIONS: Other auxiliary safeguarding equipment may be required to make cutting and turning machines as safe as possible.

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OSHA PUBLICATIONS

When safeguarding cutting and turning machines, the general requirements that apply to these types of machines are in OSHA (Occupational Safety and Health Administration) Title 29 of the Code of Federal Regulations (CFR). These publications can be acquired by contacting:

U.S. Government Printing Office

P.O. Box 371954

Pittsburgh, PA 15250-7954

(202) 512-1800 • http://bookstore.gpo.gov

The following is a list:

7. An Act–Public Law 91-596, 91st Congress, S. 2193, December 29, 1970, Duties, Section 5(a)(1)(2)(b)
8. OSHA 29 CFR sections that an employer (user) must comply with include:

   1910.211 Definitions

   1910.212 General requirements for all machines

   1910.213 Woodworking machinery requirements

   1910.215 Abrasive wheel machinery

   1910.219 Mechanical power-transmission apparatus
9. OSHA 29 CFR 1910.147 The control of hazardous energy (lockout/tagout).
10. OSHA 29 CFR 1910.301-1910.399 Electrical

The basic OSHA standard, 29 CFR 1910.212, states that any machine that creates a hazard must be safeguarded to protect the operator and other employees. OSHA can also cite violations using other standards such as the ANSI (American National Standards Institute) B11 series.

ANSI Publications

B11–2008 General Safety Requirements

Common to ANSI B11 Machines

B11.6* Lathes

B11.9* Grinding Machines

B11.19* Performance Criteria for Safeguarding

B11.23* Machining Centers and CNC Milling, Drilling, and Boring Machines B11.24 Transfer Machines

B11.TR1 Ergonomic Guidelines

B11.TR3* Risk Assessment and Risk Reduction

B15.1 Mechanical Power Transmission Apparatus

01.1* Woodworking Machinery

*ANSI Standards for Cutting and Turning Machines

These standards can be purchased by contacting:

ANSI (American National Standards Institute, Inc.)

25 West 43rd Street, 4th Floor

New York, New York 10036

(212) 642-4900 • www.ansi.org

Other Publications

1. NFPA 79, Electrical Standard for Industrial Machinery
2. NEC (National Electrical Code) Handbook
3. NEMA (National Electrical Manufacturers Association)
4. Robotics Industry Association (RIA)

For additional safety information and assistance in devising, implementing or revising your safety program, please contact the machine manufacturer, your state and local safety councils, insurance carriers, national trade associations, and your state's occupational safety and health administration.

The shields (barriers) offered in this catalog are usually installed on drilling machines, lathes, milling machines, grinding machines, band saws, belt sanders, and disc sanders. Many of the shields can be used on other types of equipment including woodworking machines and robotics. Most of these shields are intended to deflect chips (swarf), sparks, splashing coolant, or lubricant away from the operator and other employees in the machine area. Shields provide visibility to the point-of-operation. Although these shields provide some degree of guarding for the operator, they cannot be considered guards. When using these shields, and before any of the shields illustrated in this catalog are moved from their normally applied position, power must always be turned off. In some cases, more than one type of shield per machine may be necessary to provide protection. For example, on lathes, a chuck shield may be required along with a cross shield where the tool comes into contact with the workpiece. This catalog offers several different types of shields. When considering shielding for your machines, be sure to choose the shield that fits your machining applications and still maintains current levels of productivity.

INTRODUCTION

DRILLING MACHINES

As with other cutting machines, the operator must be shielded from the rotating chuck and swarf that is produced by the drill bit. A wide variety of shields can be attached to the machine and used to protect this area. The ANSI standard for drilling machines is ANSI B11.8.

LATHES

There are three main safety considerations for lathes (engine, turret, etc.). One is the rotating chuck that could catch the operator's clothing, jewelry, hair, or hand and pull it into the machine. The second is the hazardous flying chips and splashing coolant that are generated at the point-of-operation (where the tool contacts the workpiece being machined). To protect these areas, two shields can be applied—one around a portion of the chuck and the other at the point-of-operation. Larger sliding shields can protect both areas, providing the workpiece is not too long. The third is the rotating transmission components that must be covered to prevent entanglement. The ANSI standard for lathes is ANSI B11.6.

MILLING MACHINES

The main safety consideration for milling machines is the swarf that is generated at the point-of-operation. Another safety concern is the tool cutter, which could catch operator's clothing, jewelry, hair, or any other part of the body. Usually on smaller mills, the operator and other employees in the machine area are protected by shields. These shields can be applied around the perimeter of the table or bed area or close to the cutter, depending on the size of the workpiece and the application. On larger milling machines, operators are sometimes protected by location; however, when working close to a cutting tool, operators must be protected from swarf. The ANSI standard for milling machines is ANSI B11.8.

GRINDING MACHINES

Shields are usually applied to grinding machines to protect the operator from chips (swarf), sparks, splashing coolant, or lubricant. Other safety concerns for grinders are the adjustment of the work rests and the adjustable tongues or ends of the peripheral members at the top of each wheel. Work rests shall be kept adjusted closely to the wheel with a maximum opening of 1/8". The distance between the wheel periphery and the adjustable tongue or the end of the peripheral member at the top shall never exceed ¼". Grinding machines are covered by OSHA in 29 CFR 1910.215. The ANSI standards for grinding machines are B11.9 and B7.1.

BAND AND TABLE SAWS

Shields are applied to band saws and table saws to protect the operator from flying chips, splinters, and dust. As with other cutting machines, care must be taken around the moving blade of the machine. Avoid wearing loose clothing and jewelry; properly restrain long hair. Band saws and table saws for woodworking are covered by OSHA in 29 CFR 1910.212 and 1910.213. The ANSI standard for metal sawing machines is ANSI B11.10.

DISC/BELT SANDERS/GRINDERS

Shields can be applied to disc/belt sanders/grinders to protect the operator from flying chips, splinters, and dust. As with other machines with rotating parts, care must be taken around the point-of-operation. Avoid wearing loose clothing and jewelry; properly restrain long hair. Disc and belt sanders for woodworking are covered by OSHA in 29 CFR 1910.212 and 1910.213. The ANSI standards for grinding machines are B11.9 and B7.1.

LOCKOUT/TAGOUT

As stated in OSHA 29 CFR 1910.147 The control of hazardous energy (lockout/tagout): "(a)(1)(i) This standard covenergizing or start-up of the machines or equipment, or release of stored energy could cause injury to employees. This standard establishes minimum performance requirements for the control of such hazardous energy."

1. Unplug the machine and use an electrical plug lockout or use a disconnect switch with padlocks, lockouts, and tags.
2. Disconnect and ensure that all power sources are locked and tagged out.
3. Stored electrical energy must be bled to obtain zero energy state.
4. Use a volt meter to make sure all circuits are dead.

ELECTRICAL REQUIREMENTS NFPA 79, ELECTRICAL STANDARD FOR INDUSTRIAL MACHINERY

INCOMING SUPPLY CIRCUIT CONDUCTOR TERMINATIONS

Under 5.1.1, it states that "where practicable, the electrical equipment of a machine shall be connected to a single power supply circuit."

SUPPLY CIRCUIT DISCONNECTING (ISOLATING) MEANS

In 5.3.1.1, it states that a supply circuit disconnecting means shall be provided for each incoming supply circuit to a machine. According to 5.3.1.1.1, each disconnecting means shall be legibly marked to indicate its purpose. Under 5.3.1.3, "The supply circuit disconnecting means other than attachment plugs and receptacles shall be mounted within the control enclosure or immediately adjacent thereto. Exception: Externally mounted supply circuit disconnecting means, whether interlocked or not interlocked with the control enclosure, supplying machines totaling 2hp or less shall be permitted to be mounted up to 6m (20ft) away from the

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enclosure providing that the disconnecting means is in sight from and readily accessible to the operator." Under 5.3.3, the disconnecting means shall be provided with permanent means for locking in the off position only (for other than attachment plugs). In accordance with 5.3.4.1, "The center of the grip of the operating handle of the disconnecting means, when in its highest position, shall not be more than 2.0 m (6ft 7in) above the floor. A permanent operating platform, readily accessible by means of a permanent stair or ladder, shall be considered as the floor for the purpose of this requirement." According to 5.3.2 (6), the supply circuit disconnecting means can be an attachment plug and receptacle (plug/socket combination) for cord connection to motor loads totaling 2hp or less.

CONTROL CIRCUIT SUPPLY, VOLTAGE, AND PROTECTION

In 9.1.1.1, it states that "Control transformers shall be used for supplying the control circuits." According to 9.1.1.3, "Transformers shall not be required if the supply voltage does not exceed 120volts ac." In accordance with 9.1.2.1, "The ac voltage for control circuits shall not exceed 120 volts, ac single phase." According to 9.1.3, control circuits shall be provided with overcurrent protection.

OVERLOAD PROTECTION OF MOTORS

According to 7.3.1, "Overload devices shall be provided to protect each motor, motor controller, and branch-circuit conductor against excessive heating due to motor overloads or failure to start."

STOP FUNCTIONS

According to 9.2.2, "The three categories of stop functions shall be as follows:

(1) Category 0 is an uncontrolled stop by immediately removing power to the machine actuators.

(2) Category 1 is a controlled stop with power to the machine actuators available to achieve the stop then remove power when the stop is achieved.

(3) Category 2 is a controlled stop with power left available to the machine actuators."

In 9.2.5.3.1, it states that "Each machine shall be equipped with a Category 0 stop." According to 9.2.5.3.2, "Category 0, Category 1, and/or Category 2 stops shall be provided where indicated by an analysis of the risk assessment and the functional requirements of the machine. Category 0 and Category 1 stops shall be operational regardless of operating modes, and Category 0 shall take priority. Stop function shall operate by de-energizing that relevant circuit and shall override related start functions."

EMERGENCY STOP FUNCTIONS

In accordance with 9.2.5.4.1, emergency stop functions shall be designed to be initiated by a single human action. In addition to the requirements for stop, 9.2.5.4.1.1 states that "the emergency stop shall have the following requirements:

(1) It shall override all other functions and operations in all modes.

(2) Power to the machine actuators, which causes a hazardous condition(s), shall be removed as quickly as possible without creating other hazards (e.g., by the provision of mechanical means of stopping requiring no external power, by reverse current braking for a Category 1 stop).

(3) The reset of the command shall not restart the machinery but only permit restarting."

In 9.2.5.4.1.2, it states that "Where required, provisions to connect additional emergency stop devices shall be provided." According to 9.2.5.4.1.3, "The emergency stop shall function as either a Category 0 or a Category 1 stop. The choice of the category of the emergency stop shall be determined by the risk assessment of the machine." In accordance with 9.2.5.4.1.4, "Where a Category 0 or Category 1 stop is used for the emergency stop function, it shall have a circuitry design (including sensors, logic, and actuators) according to the relevant risk as required by Section 4.1 and 9.4.1. Final removal of power to the machine actuators shall be ensured and shall be by means of electromechanical components. Where relays are used to accomplish a Category 0 emergency stop function, they shall be non-retentive relays.

Exception: Drivers, or solid state output devices, designed for safety related functions shall be allowed to be the final switching element, when designed according to relevant safety standards."

DEVICES FOR STOP AND EMERGENCY STOP

In accordance with 10.7.1.1, "Stop and emergency stop pushbuttons shall be continuously operable and readily accessible." According to 10.7.1.2, "Stop or emergency stop pushbuttons shall be located at each operator control station and at other locations where emergency stop is required."

In 10.7.2.1, it states that "The types of devices for emergency stop shall include, but are not limited to, the following:

(1) Pushbutton-operated switches

(2) Pull-cord-operated switches

(3) Foot-operated switches without a mechanical guard

(4) Push-bar-operated switches

(5) Rod-operated switches"

According to 10.7.2.2, "Pushbutton-type devices for emergency stop shall be of the self-latching type and shall have direct opening operation." In accordance with 10.7.2.3, "Emergency stop switches shall not be flat switches or graphic representations based on software applications." For restoration of normal function after emergency switching off, 10.8.3 says that "It shall not be possible to restore an emergency switching off circuit until the emergency switching off circuit has been manually reset." According to 10.7.3, "Actuators of emergency stop devices shall be colored RED. The background immediately around pushbuttons and disconnect switch actuators used as emergency stop devices shall be

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colored YELLOW. The actuator of a pushbutton-operated device shall be of the palm or mushroom-head type and shall effect an emergency stop when depressed. The RED/YELLOW color combination shall be reserved exclusively for emergency stop applications.

Exception: The RED/YELLOW color combination shall be permitted for emergency stop actuators in accordance with 10.8.4."

Under 10.8.5, "Where the supply disconnecting means is to be locally operated for emergency switching off, it shall be readily accessible and shall meet the color requirements of 10.8.4.1." According to 10.8.4.1, "Actuators of emergency switching off devices shall be colored RED. The background immediately around the device actuator shall be permitted to be colored YELLOW."

PUSHBUTTON ACTUATORS

According to 10.2.1, "Pushbutton actuators used to initiate a stop function shall be of the extended operator or mushroom-head type." As stated in 10.2.2.1, "The preferred color of start or on shall be GREEN, except that BLACK, WHITE, or GRAY shall be permitted. RED shall not be used for start or on." In 10.2.2.2, it states that "the preferred color for stop or off shall be RED, except that BLACK, WHITE, or GRAY shall be permitted. GREEN shall not be used for stop or off." According to 10.2.2.6, "Pushbuttons that cause movement when pressed and stop movement when they are released (e.g.,jogging) shall be BLACK, WHITE, GRAY, or BLUE, with a preference for BLACK." In accordance with 10.2.3.1, "A legend shall be provided for each operator interface device to identify its function and shall be located so that it can be easily read by the machine operator from the normal operator position. The legends shall be durable and suitable for the operating environment."

START DEVICES

According to 10.6, "Actuators used to initiate a start function or the movement of machine elements (e.g., slides, spindles, carriers) shall be constructed and mounted to minimize inadvertent operation." Protection Against Supply Interruption or Voltage Reduction and Subsequent Restoration Under 7.5.1, "Where a supply interruption or a voltage reduction can cause a hazardous condition or damage to the machine or to the work in progress, undervoltage protection shall be provided (e.g., to switch off the machine) at a predetermined voltage level." For restarting, 7.5.3 states that "Upon restoration of the voltage or upon switching on the incoming supply, automatic or unintentional restarting of the machine shall be prevented when such a restart causes a hazardous condition."

PROTECTIVE INTERLOCKS

In 9.3.6, it states that "Where doors or guards have interlocked switches used in circuits with safety related functions, the interlocking devices shall be listed, have either positive (direct) opening operation, or provide similar reliability and prevent the operation of the equipment when the doors or guards are open (difficult to defeat or bypass)." Under 9.3.1, "The reclosing or resetting of an interlocking safeguard shall not initiate machine motion or operation that results in a hazardous condition."

CREATING A SAFER WORK ENVIRONMENT

Rockford Systems LLC, a leader in machine safeguarding solutions, introduces PROTECTOR™ Series Shields. This highly innovative and patent-pending product line improves the safety and productivity of operators working with dangerous machinery.

CUSTOMER-DRIVEN SOLUTIONS

With over 50 years of industrial safety experience, Rockford Systems has integrated over 25,000 machine safeguarding solutions and collaborated extensively with Environmental Safety & Health (EHS) leaders, supervisors, operators and maintenance personnel across a variety of industries. We leveraged this wealth of knowledge and applications expertise into the design and production of our newest innovation:

PROTECTOR™
SERIES SHIELDS

SOLVING COMMON PROBLEMS

PROBLEM:

» Equipment operators complain that safeguarding shields limit visibility because of reflectivity or obstruction and nearby clip-on lamps get too hot.

SOLUTION:

» PROTECTOR Series Shields are manufactured with scratch-resistant polycarbonate and incorporate cool, bright LED lighting into the shield frame to yield superior visibility of the work area.

PROBLEM:

» Supervisors report that safeguarding shields can be bypassed when shields get pushed out of the way or are tampered with, thereby making the machines unsafe to operate.

SOLUTION:

» PROTECTOR Series Shields are offered in both non-interlocked and interlocked versions, the latter of which disengages power and prevents a machine start-up when the shield is not closed.

» PROTECTOR Series Shields feature a tamper-resistant interlock enclosure and available redundant safety monitoring. The safety relay monitors the interlock switch for failure, providing a notification if the interlock has been removed or is not functioning correctly.

PROBLEM:

» EHS professionals need to maximize safety while minimizing expenses, thereby generating a positive return on investment (ROI).

SOLUTION:

» PROTECTOR Series Shields are modular in design and easily configurable to tailor a custom fit for any machine application, thereby optimizing employee safety and generating a positive ROI.

A PATENT-PENDING, HIGH-QUALITY, HIGHLY-FEATURED LINE OF ROBUST MACHINE SAFEGUARDING SHIELDS THAT MAXIMIZE SAFETY, IMPROVE PRODUCTIVITY AND REDUCE RISK.

PROTECTOR™ SERIES FEATURES & BENEFITS

ROBUST CONSTRUCTION

PROTECTOR Series Shields are constructed of 14-gauge powder-coated steel and 3/16" shock-proof and oil-resistant polycarbonate, creating an extremely tough, rigid and durable safety shield to protect operators from flying debris, lubricants, coolants and swarf. All components carry a CE, UL and CSA certification and shields feature a limited one-year warranty. A full line of replacement polycarbonate shields is available to keep shields operating at peak efficiency.

MODULAR DESIGN

PROTECTOR Series Shields are modular in design so that shield shape, size, mount, arm, offset, lighting, interlocking and safety monitoring can be configured to provide the best solution for even the toughest machine guarding challenge. Available with various mounting options, these high-quality shields allow for reversal to address opposite-hand mounting scenarios when necessary. All shields are vertically and horizontally adjustable to clear varying work setups and table heights.

Rockford Systems configured the most popular shields for milling and drilling machines, lathes and grinders, which represent over 95 percent of all safeguarding applications. However, for those unusual applications or hard-to-guard machines, PROTECTOR Series Shields can be configured into over 60,000 modular combinations to ensure a precise, customized fit to improve worker safety.

Shield Options:

Octagonal Shield | Curved Shield | 3 Sided Shield | 2 Sided Shield | Flat Shield | Dual Flat Shield | Octagonal Shield without Handle

Arm Options:

Single Pivot 3 Arms | Double Pivot 3 Arms | Single Pivot 2 Arms | Double Pivot 2 Arms | Direct Mount

Mount Options:

Left Mount | Center Mount | Right Mount

WORKSPACE SAFETY LIGHTING

PROTECTOR Series Shields can include color-changing LED lighting nested into the frame of the shield to **illuminate the work area during machine operation.** The LED light strip is integrated into the shield frame and each strip packs 262 Lumens of light per linear foot. For example, the PROTECTOR 28" octagonal or circular shield provides 2180 Lumens, compared to a typical clip-on work lamp that provides only 800 Lumens. Operators will appreciate the non-reflective, true-color rendering white light illuminating their work area. When the shield is moved out of the safe work position, **white LEDs switch off and red LEDs switch on, thereby providing visual indication that the shield is in the open position.** All LED lighting has been manufactured to exacting IEC IP65 outdoor/wet location standards to withstand coolant and lubricant splashes.

Lathe Chuck without Illumination

Lathe Chuck Illuminated with *WHITE LEDS* in "run" position

Lathe Chuck Illuminated with *RED LEDS* in "stop" position

SAFETY INTERLOCKS & MONITORING

PROTECTOR Series Shields can be upgraded with a safety interlock switch or switches, dependent upon application. **Interlocking shields exceed OSHA regulations and ANSI standards and are considered a best safety practice.**

Shield interlocks shut off or disengage power and prevent machine start-up when the guard is not closed, thereby increasing operator safety and preventing operating bypassing. All safety-rated interlock switches are mounted in a tamper-resistant NEMA 4 housing, comply with the IEC/EN 60947 safety standard and carry IEC IP66/67 device ratings. Additional motor starter or anti-restart devices may be required when incorporating interlocking devices into the PROTECTOR Series Shields in order to ensure safe and compliant operation.

To achieve a Category 2 rating, a safety monitoring relay can be added as a redundant level of security, monitoring the integrity of the interlocking feature so that a removed or failed safety interlock will not permit unsafe operation of the machine.

Interlock

Non-Interlock

MADE IN THE USA

In recent months, it has become clear that complex international supply chains are not resilient to the immediate sourcing needs of organizations. PROTECTOR Series Shields are manufactured by Rockford Systems LLC in Rockford, Illinois, USA. **All shields are shipped within 2-3 weeks of order.**

CONTACT US

Our team is always ready to help customers, discuss their unique applications, and solve their machine safety problems.
Call 1-800-922-7533 or visit www.rockfordsystems.com.

POPULAR CONFIGURED PROTECTOR™ SERIES SHIELDS

MILLING MACHINES

RSSC2LL202L163

RSSD4LL202L163

RSSD4LL000L183

RSSD5LL202L163

RSSD6LL202L163

RSSE3LL202L163

LATHES

RSSD3LL000L103

DRILLING MACHINES

RSSC1LL161L103

RSSD2LL000L123

RSSD2LL000L143

RSSD2LL000L183

GRINDERS

RSSA4LL161L042

RSSF3LC000LD73

CUSTOMIZABLE PROTECTOR™ SERIES SHIELDS

To create a PROTECTOR Series Shield, determine the 14-digit configurated part number by following directions 1 - 6 and use the information in the **PART NUMBERING SYSTEM CHART** (see next page).

1 – The first 3 characters will always be RSS (Rockford Systems Shields)

2 – The first 3 digits will determine the type and size of the shield and LED lighting option

3 – Digit 4 will determine the shield mount

4 – The next 4 digits will determine the shield arm type, pivot, reach and interlock option

5 – The next 2 digits will determine the shield offset

6 – The last digit will determine with enclosure (interface type), depending upon the LED and interlock options selected:

If you have selected no LED, then you should select “No Enclosure” (0)

If you have selected LED and no interlock, then you should select “Lighted – Non-Interlocked Enclosure” (1)

If you have selected LED and interlock, then you should select “Lighted – Interlocked Enclosure” (2)

If you have selected LED and interlock and monitoring, then you should select “Lighted – Interlocked & Monitored Enclosure” (3)

LED Lighting?	Interlock?	Monitored?	Group 6 Option
NO	NO	NO	0
YES	NO	NO	1
NO	YES	NO	0
YES	YES	NO	2
YES	YES	YES	3

PART NUMBER EXAMPLE

RSSA1LL000X101 – Shield, Flat, 7” x 6” w/LED, Left Mount, Direct Mount w/o Interlock, 10” Offset, Lighted – Non-Interlocked Enclosure

PROTECTOR™ SERIES SHIELDS PART NUMBERING CHART

Reference the catalog or website for dimensional drawings for all shields shown below.

RSS XXX X XXXX XX X

SYSTEM TYPE PRODUCT CATEGORY

RSS — Rockford Systems Shields

ENCLOSURE

0	No Enclosure
1	Lighted – Non-Interlocked Enclosure
2	Lighted – Interlocked Enclosure
3	Lighted – Interlocked & Monitored Enclosure

Interlocked

Non-Interlocked

OFFSET

00	No Offset **
04	4" Offset
10	10" Offset
12	12" Offset
14	14" Offset
16	16" Offset
18	18" Offset
20	20" Offset
22	22" Offset
24	24" Offset
D7	7" Dual Offset *

Offset

SHIELDS

Flat Shield

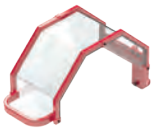
A1X	Flat, 7" x 6"
A1L	Flat, 7" x 6" w/LED
A2X	Flat, 9" x 8"
A2L	Flat, 9" x 8" w/ LED
A3X	Flat, 14" x 12"
A3L	Flat, 14" x 12" w/LED
A4X	Flat, 16" x 14"
A4L	Flat, 16" x 14" w/LED

2 Sided Shield

B1X	2 Sided, 14" x 12" x 12"
B1L	2 Sided, 14" x 12" x 12" w/LED
B2X	2 Sided, 16" x 14" x 12"
B2L	2 Sided, 16" x 14" x 12" w/LED
B3X	2 Sided, 6" x 6" x 6"
B3L	2 Sided, 6" x 6" x 6" w/LED

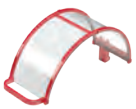
3 Sided Shield

C1X	3 Sided, 8" x 6" x 2"
C1L	3 Sided, 8" x 6" x 2" w/LED
C2X	3 Sided, 24" x 9" x 6.5"
C2L	3 Sided, 24" x 9" x 6.5" w/LED
C3X	3 Sided, 28" x 12" x 8"
C3L	3 Sided, 28" x 12" x 8" w/LED
C4X	3 Sided, 16" x 8" x 5"
C4L	3 Sided, 16" x 8" x 5" w/LED



Octagonal Shield

D1X	Octagonal, 6" x 8"
D1L	Octagonal, 6" x 8" w/LED
D2X	Octagonal, 9" x 8"
D2L	Octagonal, 9" x 8" w/LED
D3X	Octagonal, 12" x 8"
D3L	Octagonal, 12" x 8" w/LED
D4X	Octagonal, 16" x 8"
D4L	Octagonal, 16" x 8" w/LED
D5X	Octagonal, 20" x 10"
D5L	Octagonal, 20" x 10" w/LED
D6X	Octagonal, 24" x 10"
D6L	Octagonal, 24" x 10" w/LED
D7X	Octagonal, 28" x 10"
D7L	Octagonal, 28" x 10" w/LED



Curved Shield

E1X	Curved, 12" x 8"
E1L	Curved, 12" x 8" w/LED
E2X	Curved, 16" x 8"
E2L	Curved, 16" x 8" w/LED
E3X	Curved, 20" x 10"
E3L	Curved, 20" x 10" w/LED
E4X	Curved, 24" x 10"
E4L	Curved, 24" x 10" w/LED
E5X	Curved, 28" x 10"
E5L	Curved, 28" x 10" w/LED

Dual Flat Shield

F1X	Flat, Dual, 7" x 6" *
F1L	Flat, Dual, 7" x 6" w/LED *
F2X	Flat, Dual, 9" x 8" *
F2L	Flat, Dual, 9" x 8" w/LED *
F3X	Flat, Dual, 14" x 12" *
F3L	Flat, Dual, 14" x 12" w/LED *
F4X	Flat, Dual, 16" x 14" *
F4L	Flat, Dual, 16" x 14" w/LED *

* Compatible w/7" Dual Offset

Octagonal Shield without Handle

G1X	Octagonal w/o Handle, 6" x 8"
G1L	Octagonal w/o Handle, 6" x 8" w/Led
G2X	Octagonal w/o Handle, 9" x 8"
G2L	Octagonal w/o Handle, 9" x 8" w/LED
G3X	Octagonal w/o Handle, 12" x 8"
G3L	Octagonal w/o Handle, 12" x 8" w/LED

G4X	Octagonal w/o Handle, 16" x 8"
G4L	Octagonal w/o Handle, 16" x 8" w/Led
G5X	Octagonal w/o Handle, 20" x 10"
G5L	Octagonal w/o Handle, 20" x 10" w/LED
G6X	Octagonal w/o Handle, 24" x 10"
G6L	Octagonal w/o Handle, 24" x 10" w/LED
G7X	Octagonal w/o Handle, 28" x 10"
G7L	Octagonal w/o Handle, 28" x 10" w/LED

ARM

Direct Mount

Single Pivot 2 Arms

Double Pivot 2 Arms

Single Pivot 3 Arms

Double Pivot 3 Arms

000X	Direct Mount w/o Interlock
000L	Direct Mount w Interlock
161X	Articulating, Single Head Pivot, 2 Arms, 16" Reach w/o Interlock
161L	Articulating, Single Head Pivot, 2 Arms, 16" Reach w/ Interlock
161Y	Articulating, Single Base Pivot, 2 Arms, 16" Reach w/o Interlock **
161M	Articulating, Single Base Pivot, 2 Arms, 16" Reach w/ Interlock **
162X	Articulating, Double Pivot, 2 Arms, 16" Reach w/o Interlock
162L	Articulating, Double Pivot, 2 Arms, 16" Reach w/ Interlock
201X	Articulating, Single Head Pivot, 2 Arms, 20" Reach w/o Interlock
201L	Articulating, Single Head Pivot, 2 Arms, 20" Reach w/ Interlock
201Y	Articulating, Single Base Pivot, 2 Arms, 20" Reach w/o Interlock **
201M	Articulating, Single Base Pivot, 2 Arms, 20" Reach w/ Interlock **
202X	Articulating, Double Pivot, 2 Arms, 20" Reach w/o Interlock
202L	Articulating, Double Pivot, 2 Arms, 20" Reach w/ Interlock
241X	Articulating, Single Head Pivot, 2 Arms, 24" Reach w/o Interlock
241L	Articulating, Single Head Pivot, 2 Arms, 24" Reach w/ Interlock
241Y	Articulating, Single Base Pivot, 2 Arms, 24" Reach w/o Interlock **
241M	Articulating, Single Base Pivot, 2 Arms, 24" Reach w/ Interlock **
242X	Articulating, Double Pivot, 2 Arms, 24" Reach w/o Interlock
242L	Articulating, Double Pivot, 2 Arms, 24" Reach w/ Interlock
361X	Articulating, Single Head Pivot, 3 Arms, 36" Reach w/o Interlock
361L	Articulating, Single Head Pivot, 3 Arms, 36" Reach w/ Interlock
361Y	Articulating, Single Base Pivot, 3 Arms, 36" Reach w/o Interlock **
361M	Articulating, Single Base Pivot, 3 Arms, 36" Reach w/ Interlock **
362X	Articulating, Double Pivot, 3 Arms, 36" Reach w/o Interlock
362L	Articulating, Double Pivot, 3 Arms, 36" Reach w/ Interlock

** Compatible w/No Offset

MOUNT

L	Left Mount
R	Right Mount
C	Center *

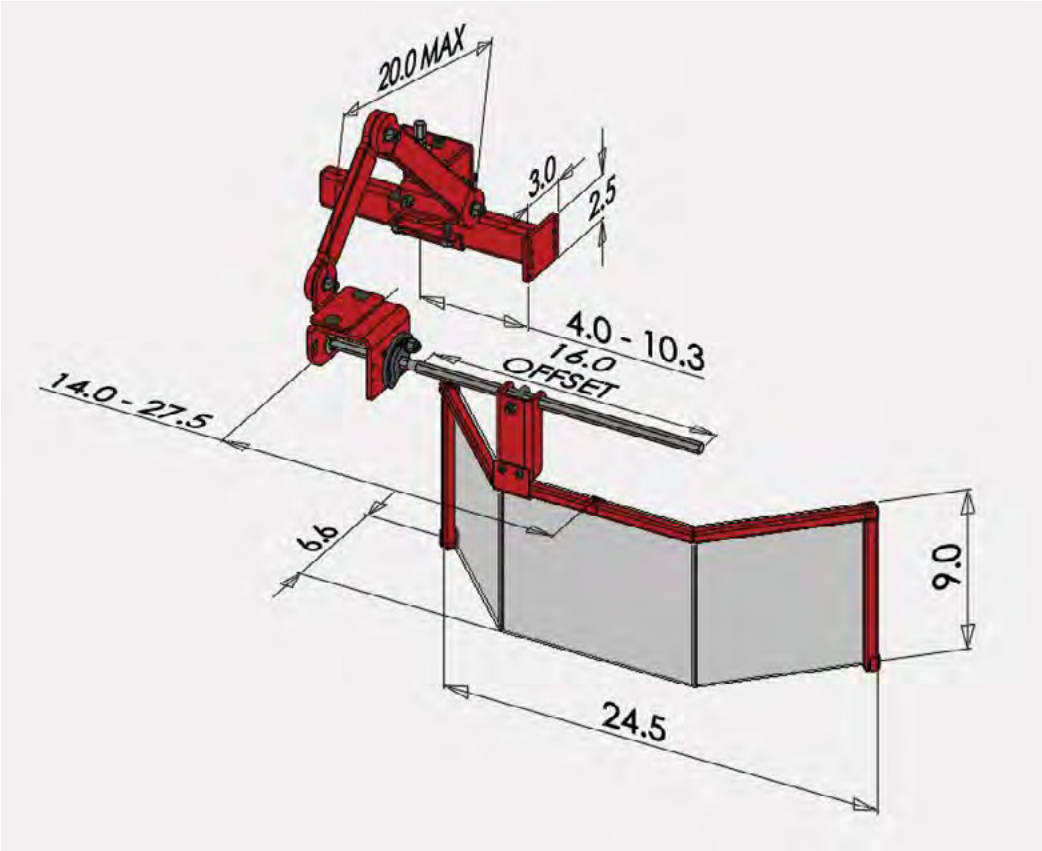
Left Mount

Center Mount

Right Mount

SAFETY SHIELD FOR LARGE MILLS

3-Sided Shield, 24” x 9” x 6.5”, Left Mount, Articulating, Double Pivot, 2 Arms, 20” Reach, 16” Offset
Other Sizes Available



	Basic	LED	Interlock	Interlock + LED	Ultimate
Part Number	RSSC2XL202X160	RSSC2LL202X161	RSSC2XL202L160	RSSC2LL202L162	RSSC2LL202L163
Shield	3 Sided	3 Sided	3 Sided	3 Sided	3 Sided
Mount	Left	Left	Left	Left	Left
Arm	Articulating, Double Pivot, 2 Arms	Articulating, Double Pivot, 2 Arms	Articulating, Double Pivot, 2 Arms	Articulating, Double Pivot, 2 Arms	Articulating, Double Pivot, 2 Arms
Offset	16”	16”	16”	16”	16”
LED	No	Yes	No	Yes	Yes
Interlock	No	No	Yes	Yes	Yes
Monitoring	No	No	No	No	Yes
Weight	22 lb	27 lb	23 lb	28 lb	29 lb
CAT	CAT 1	CAT 1	CAT 1	CAT 1	CAT 2

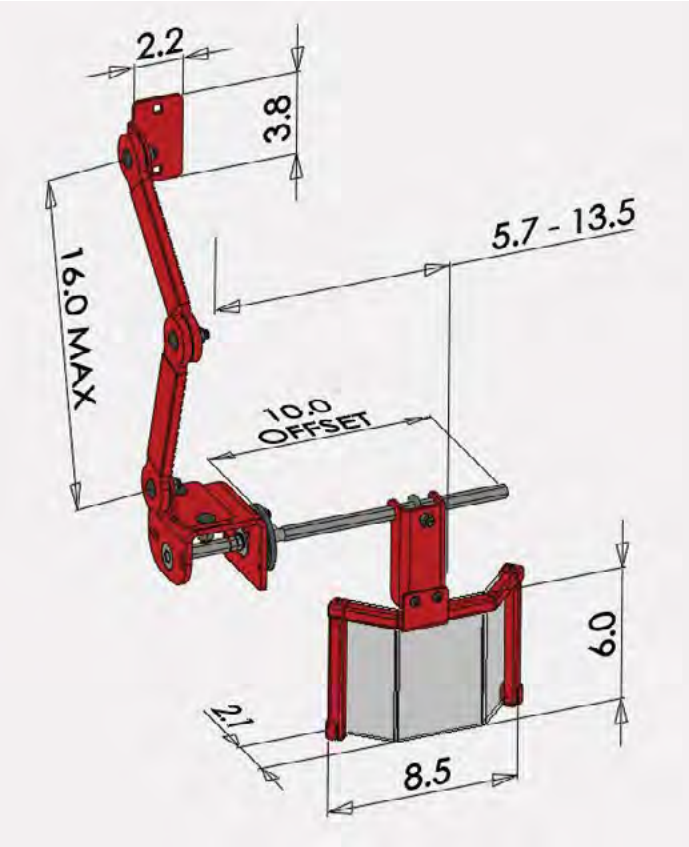
SAFETY SHIELD FOR LARGE MILLS

RSSC2XL202X160 | RSSC2LL202X161

RSSC2XL202L160 | RSSC2LL202L162 | RSSC2LL202L163

SAFETY SHIELD FOR SMALL DRILLS

3 Sided Shield, 8” x 6” x 2”, Left Mount, Articulating, Single Pivot, 2 Arms, 16” Reach, 10” Offset



	Basic	LED	Interlock	Interlock + LED	Ultimate
Part Number	RSSC1XL161X100	RSSC1LL161X101	RSSC1XL161L100	RSSC1LL161L102	RSSC1LL161L103
Shield	3 Sided 8” x 6” x 2”	3 Sided 8” x 6” x 2”	3 Sided 8” x 6” x 2”	3 Sided 8” x 6” x 2”	3 Sided 8” x 6” x 2”
Mount	Left	Left	Left	Left	Left
Arm	Articulating, Single Pivot, 2 Arms, 16” Reach	Articulating, Single Pivot, 2 Arms, 16” Reach	Articulating, Single Pivot, 2 Arms, 16” Reach	Articulating, Single Pivot, 2 Arms, 16” Reach	Articulating, Single Pivot, 2 Arms, 16” Reach
Offset	10”	10”	10”	10”	10”
LED	No	Yes	No	Yes	Yes
Interlock	No	No	Yes	Yes	Yes
Monitoring	No	No	No	No	Yes
Weight	11 lb	16 lb	12 lb	17 lb	18 lb
CAT	CAT 1	CAT 1	CAT 1	CAT 1	CAT 2

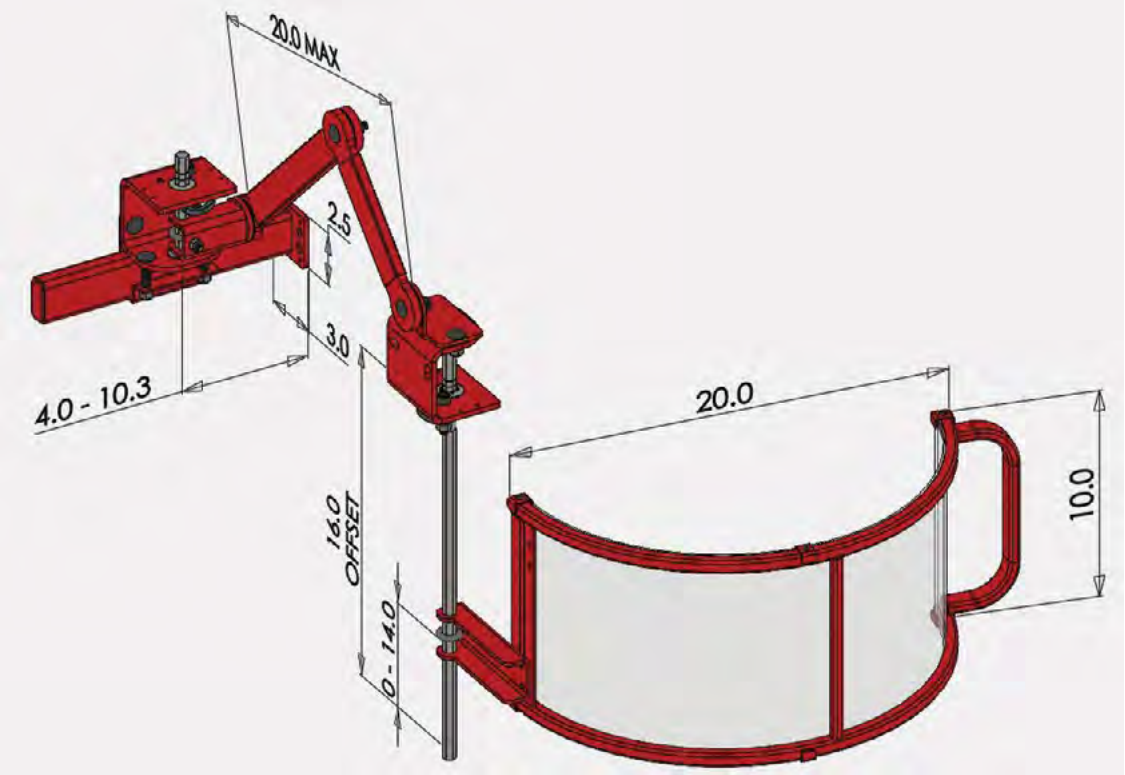
SAFETY SHIELD FOR SMALL DRILLS

RSSC1XL161X100 | RSSC1LL161X101

RSSC1XL161L100 | RSSC1LL161L102 | RSSC1LL161L103

SAFETY SHIELD FOR LARGE MILLS AND LATHES

Curved Shield, 20” x 10”, Left Mount, Articulating, Double Pivot, 2 Arms, 20” Reach, 16” Offset



	Basic	LED	Interlock	Interlock + LED	Ultimate
Part Number	RSSE3XL202X160	RSSE3LL202X161	RSSE3LL202X161	RSSE3LL202L162	RSSE3LL202L163
Shield	Curved 20” x 10”	Curved 20” x 10”	Curved 20” x 10”	Curved 20” x 10”	Curved 20” x 10”
Mount	Left	Left	Left	Left	Left
Arm	Articulating, Double Pivot, 2 Arms, 20” Reach	Articulating, Double Pivot, 2 Arms, 20” Reach	Articulating, Double Pivot, 2 Arms, 20” Reach	Articulating, Double Pivot, 2 Arms, 20” Reach	Articulating, Double Pivot, 2 Arms, 20” Reach
Offset	16”	16”	16”	16”	16”
LED	No	Yes	No	Yes	Yes
Interlock	No	No	Yes	Yes	Yes
Monitoring	No	No	No	No	Yes
Weight	23 lb	28 lb	24 lb	29 lb	30 lb
CAT	CAT 1	CAT 1	CAT 1	CAT 1	CAT 2

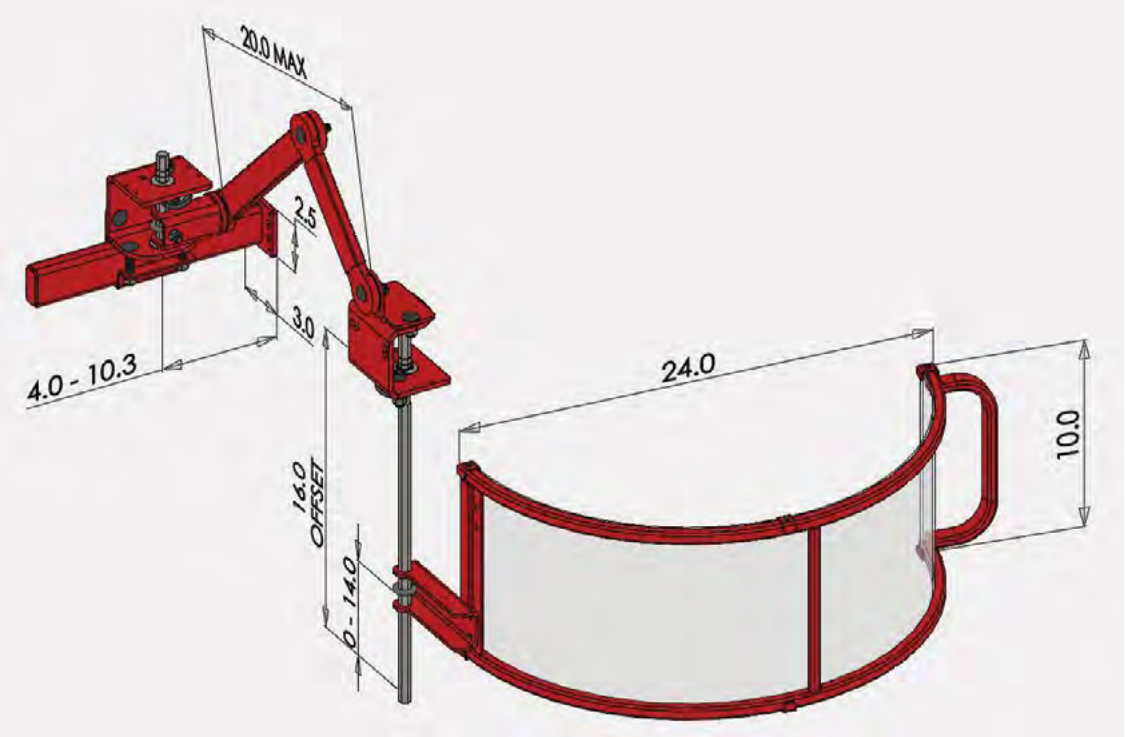
SAFETY SHIELD FOR LARGE MILLS AND LATHES

RSSE3XL202X160 | RSSE3LL202X161

RSSE3LL202X161 | RSSE3LL202L162 | RSSE3LL202L163

SAFETY SHIELD FOR EXTRA LARGE MILLS AND LATHES

Curved Shield, 24” x 10”, Left Mount, Articulating, Double Pivot, 2 Arms, 20” Reach, 16” Offset



	Basic	LED	Interlock	Interlock + LED	Ultimate
Part Number	RSSE4XL202X160	RSSE4LL202X161	RSSE4XL202L160	RSSE4LL202L162	RSSE4LL202L163
Shield	Curved 24” x 10”	Curved 24” x 10”	Curved 24” x 10”	Curved 24” x 10”	Curved 24” x 10”
Mount	Left	Left	Left	Left	Left
Arm	Articulating, Double Pivot, 2 Arms, 20” Reach	Articulating, Double Pivot, 2 Arms, 20” Reach	Articulating, Double Pivot, 2 Arms, 20” Reach	Articulating, Double Pivot, 2 Arms, 20” Reach	Articulating, Double Pivot, 2 Arms, 20” Reach
Offset	16”	16”	16”	16”	16”
LED	No	Yes	No	Yes	Yes
Interlock	No	No	Yes	Yes	Yes
Monitoring	No	No	No	No	Yes
Weight	24 lb	29 lb	25 lb	30 lb	31 lb
CAT	CAT 1	CAT 1	CAT 1	CAT 1	CAT 2

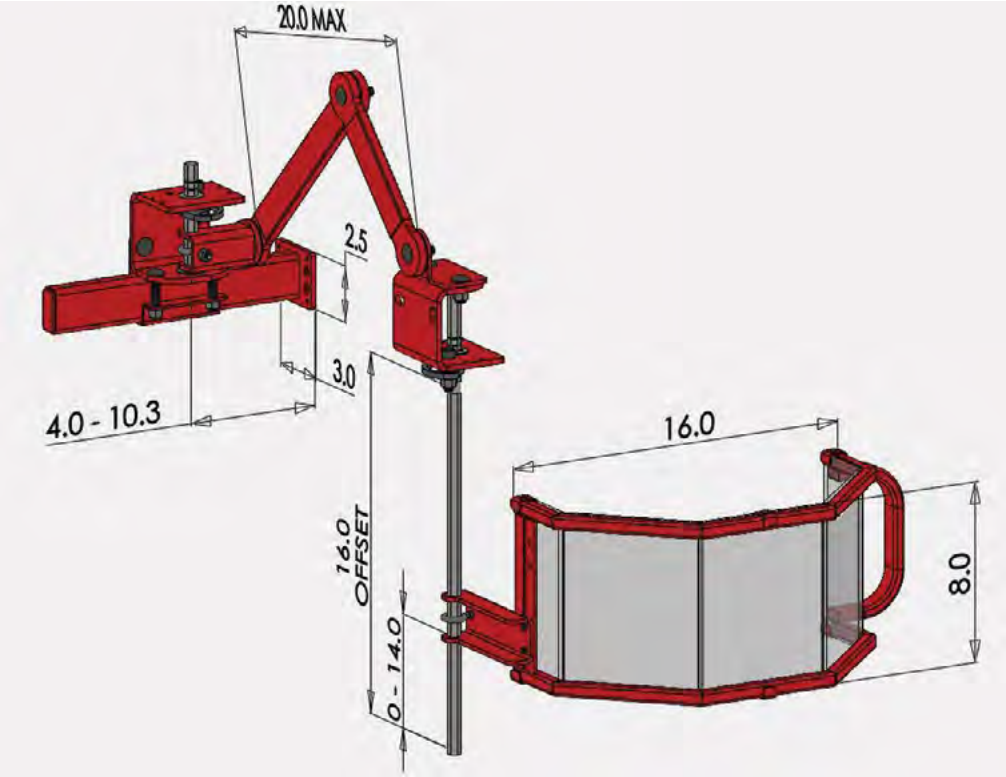
SAFETY SHIELD FOR EXTRA LARGE MILLS AND LATHES

RSSE4XL202X160 | RSSE4LL202X161

RSSE4XL202L160 | RSSE4LL202L162 | RSSE4LL202L163

SAFETY SHIELD FOR MEDIUM TO LARGE MILLS AND LATHES

Octagonal Shield, 16” x 8”, Left Mount, Articulating, Double Pivot, 2 Arms, 20” Reach, 16” Offset



	Basic	LED	Interlock	Interlock + LED	Ultimate
Part Number	RSSD4XL202X160	RSSD4LL202X161	RSSD4XL202L160	RSSD4LL202L162	RSSD4LL202L163
Shield	Octagonal 16” x 8”	Octagonal 16” x 8”	Octagonal 16” x 8”	Octagonal 16” x 8”	Octagonal 16” x 8”
Mount	Left	Left	Left	Left	Left
Arm	Articulating, Double Pivot, 2 Arms, 20” Reach	Articulating, Double Pivot, 2 Arms, 20” Reach	Articulating, Double Pivot, 2 Arms, 20” Reach	Articulating, Double Pivot, 2 Arms, 20” Reach	Articulating, Double Pivot, 2 Arms, 20” Reach
Offset	16”	16”	16”	16”	16”
LED	No	Yes	No	Yes	Yes
Interlock	No	No	Yes	Yes	Yes
Monitoring	No	No	No	No	Yes
Weight	22 lb	27 lb	23 lb	28 lb	29 lb
CAT	CAT 1	CAT 1	CAT 1	CAT 1	CAT 2

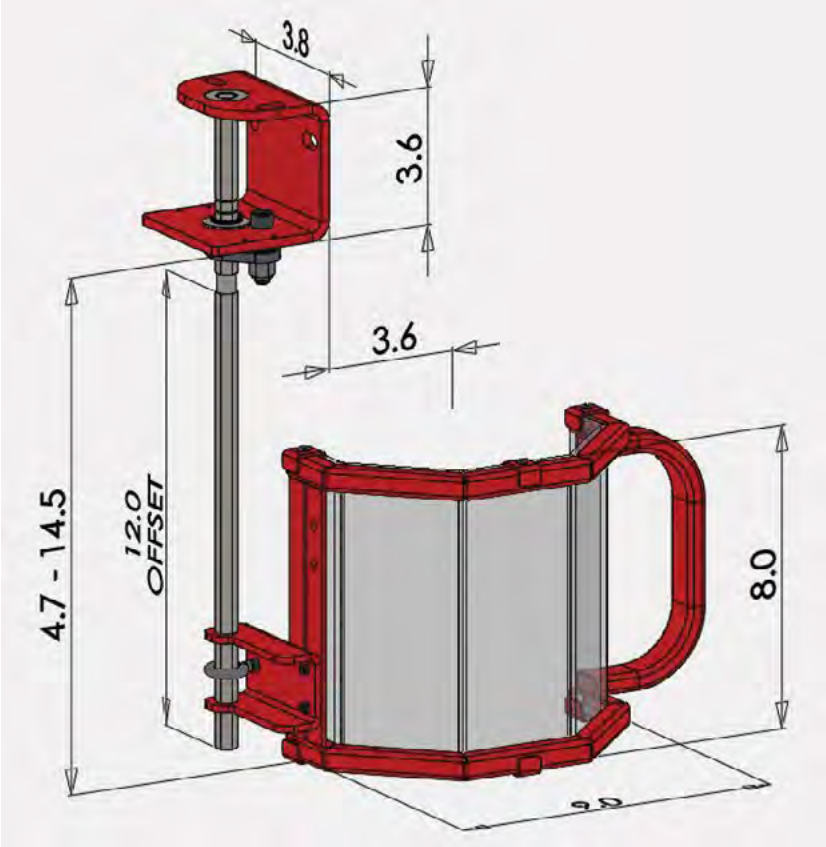
SAFETY SHIELD FOR MEDIUM TO LARGE MILLS AND LATHES

RSSD4XL202X160 | RSSD4LL202X161

RSSD4XL202L160 | RSSD4LL202L162 | RSSD4LL202L163

SAFETY SHIELD FOR SMALL TO MEDIUM MILLS AND DRILLS

Octagonal Shield, 9” x 8”, Left Mount, Direct Mount, 12” Offset



	Basic	LED	Interlock	Interlock + LED	Ultimate
Part Number	RSSD2XL000X120	RSSD2LL000X121	RSSD2LL000L120	RSSD2LL000L122	RSSD2LL000L123
Shield	Octagonal 9” x 8”	Octagonal 9” x 8”	Octagonal 9” x 8”	Octagonal 9” x 8”	Octagonal 9” x 8”
Mount	Left	Left	Left	Left	Left
Arm	Direct Mount	Direct Mount	Direct Mount	Direct Mount	Direct Mount
Offset	12”	12”	12”	12”	12”
LED	No	Yes	No	Yes	Yes
Interlock	No	No	Yes	Yes	Yes
Monitoring	No	No	No	No	Yes
Weight	8 lb	13 lb	9 lb	14 lb	15 lb
CAT	CAT 1	CAT 1	CAT 1	CAT 1	CAT 2

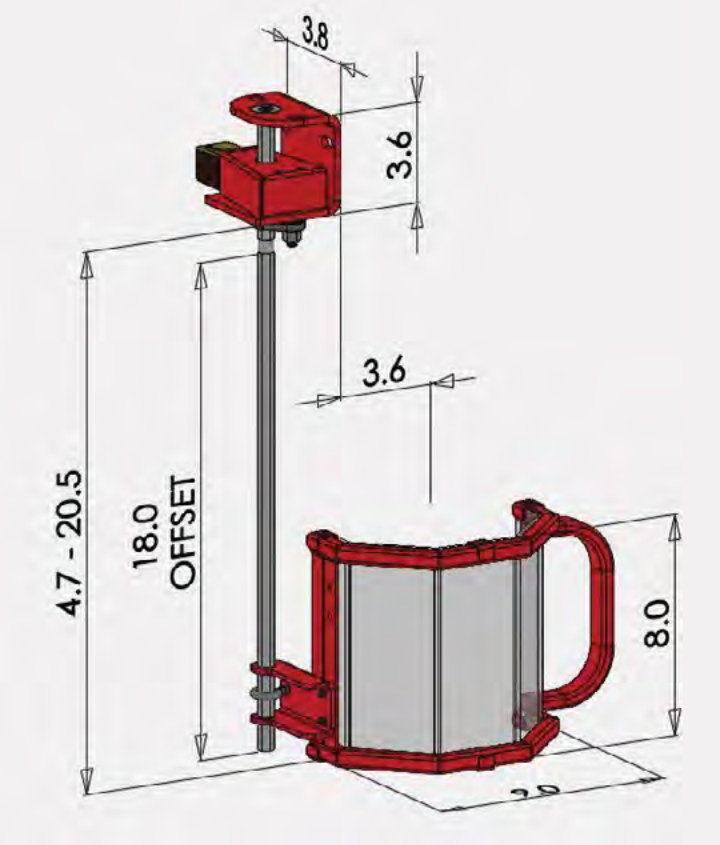
SAFETY SHIELD FOR SMALL TO MEDIUM MILLS AND DRILLS

RSSD2XL000X120 | RSSD2LL000X121

RSSD2LL000L120 | RSSD2LL000L122 | RSSD2LL000L123

SAFETY SHIELD FOR SMALL TO MEDIUM MILLS AND DRILLS

Octagonal Shield, 9” x 8”, Left Mount, Direct Mount, 18” Offset



	Basic	LED	Interlock	Interlock + LED	Ultimate
Part Number	RSSD2XL000L180	RSSD2LL000X181	RSSD2XL000L180	RSSD2LL000L182	RSSD2LL000L183
Shield	Octagonal 9” x 8”	Octagonal 9” x 8”	Octagonal 9” x 8”	Octagonal 9” x 8”	Octagonal 9” x 8”
Mount	Left	Left	Left	Left	Left
Arm	Direct Mount	Direct Mount	Direct Mount	Direct Mount	Direct Mount
Offset	18”	18”	18”	18”	18”
LED	No	Yes	No	Yes	Yes
Interlock	No	No	Yes	Yes	Yes
Monitoring	No	No	No	No	Yes
Weight	9 lb	14 lb	10 lb	15 lb	16 lb
CAT	CAT 1	CAT 1	CAT 1	CAT 1	CAT 2

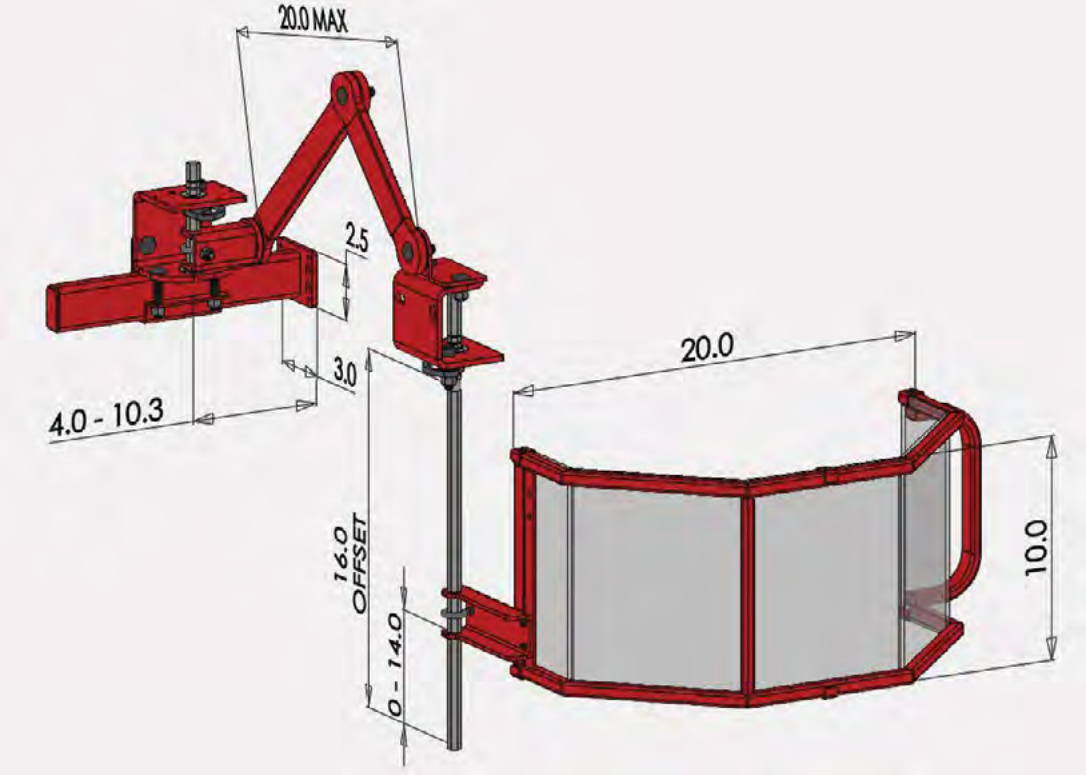
SAFETY SHIELD FOR SMALL TO MEDIUM MILLS AND DRILLS

RSSD2XL000L180 | RSSD2LL000X181

RSSD2XL000L180 | RSSD2LL000L182 | RSSD2LL000L183

SAFETY SHIELD FOR LARGE MILLS AND DRILLS

Octagonal Shield, 20” x 10”, Left Mount, Articulating, Double Pivot, 2 Arms, 20” Reach, 16” Offset



	Basic	LED	Interlock	Interlock + LED	Ultimate
Part Number	RSSD5XL202X160	RSSD5LL202X161	RSSD5XL202L160	RSSD5LL202L162	RSSD5LL202L163
Shield	Octagonal 20” x 10”	Octagonal 20” x 10”	Octagonal 20” x 10”	Octagonal 20” x 10”	Octagonal 20” x 10”
Mount	Left	Left	Left	Left	Left
Arm	Articulating, Double Pivot, 2 Arms, 20” Reach	Articulating, Double Pivot, 2 Arms, 20” Reach	Articulating, Double Pivot, 2 Arms, 20” Reach	Articulating, Double Pivot, 2 Arms, 20” Reach	Articulating, Double Pivot, 2 Arms, 20” Reach
Offset	16”	16”	16”	16”	16”
LED	No	Yes	No	Yes	Yes
Interlock	No	No	Yes	Yes	Yes
Monitoring	No	No	No	No	Yes
Weight	24 lb	29 lb	25 lb	30 lb	31 lb
CAT	CAT 1	CAT 1	CAT 1	CAT 1	CAT 2

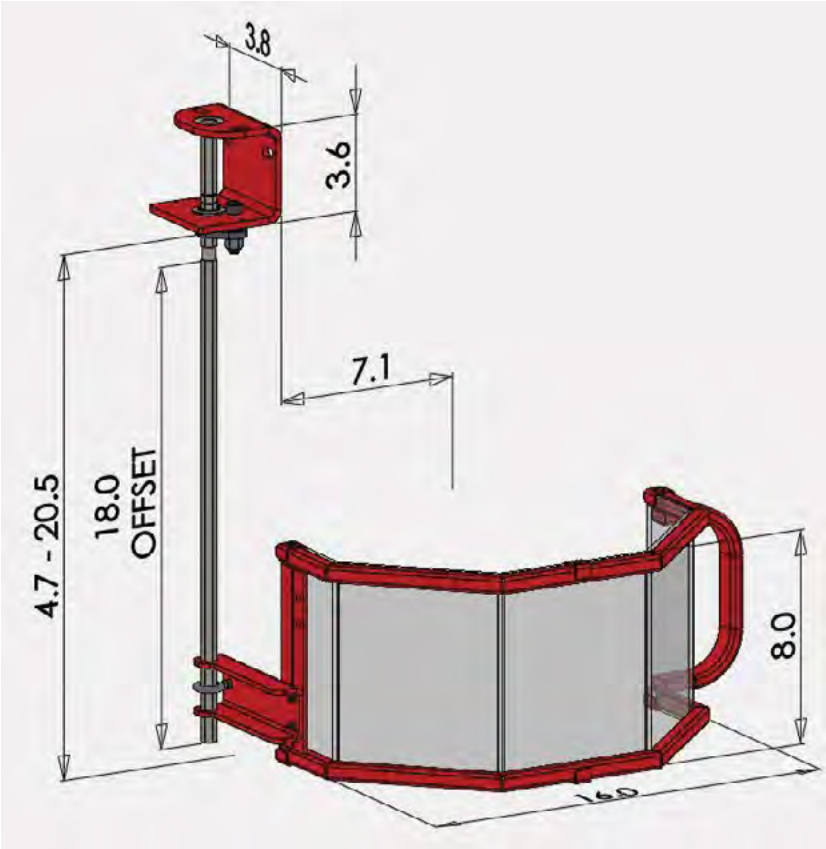
SAFETY SHIELD FOR LARGE MILLS AND DRILLS

RSSD5XL202X160 | RSSD5LL202X16

RSSD5XL202L160 | RSSD5LL202L162 | RSSD5LL202L163

SAFETY SHIELD FOR MEDIUM TO LARGE MILLS

Octagonal Shield, 16” x 8”, Left Mount, Direct Mount, 18” Offset



	Basic	LED	Interlock	Interlock + LED	Ultimate
Part Number	RSSD4XL000X180	RSSD4LL000X181	RSSD4XL000L180	RSSD4LL000L182	RSSD4LL000L183
Shield	Octagonal 16” x 18”	Octagonal 16” x 18”	Octagonal 16” x 18”	Octagonal 16” x 18”	Octagonal 16” x 18”
Mount	Left	Left	Left	Left	Left
Arm	Direct Mount	Direct Mount	Direct Mount	Direct Mount	Direct Mount
Offset	18”	18”	18”	18”	18”
LED	No	Yes	No	Yes	Yes
Interlock	No	No	Yes	Yes	Yes
Monitoring	No	No	No	No	Yes
Weight	10 lb	15 lb	11 lb	16 lb	17 lb
CAT	CAT 1	CAT 1	CAT 1	CAT 1	CAT 2

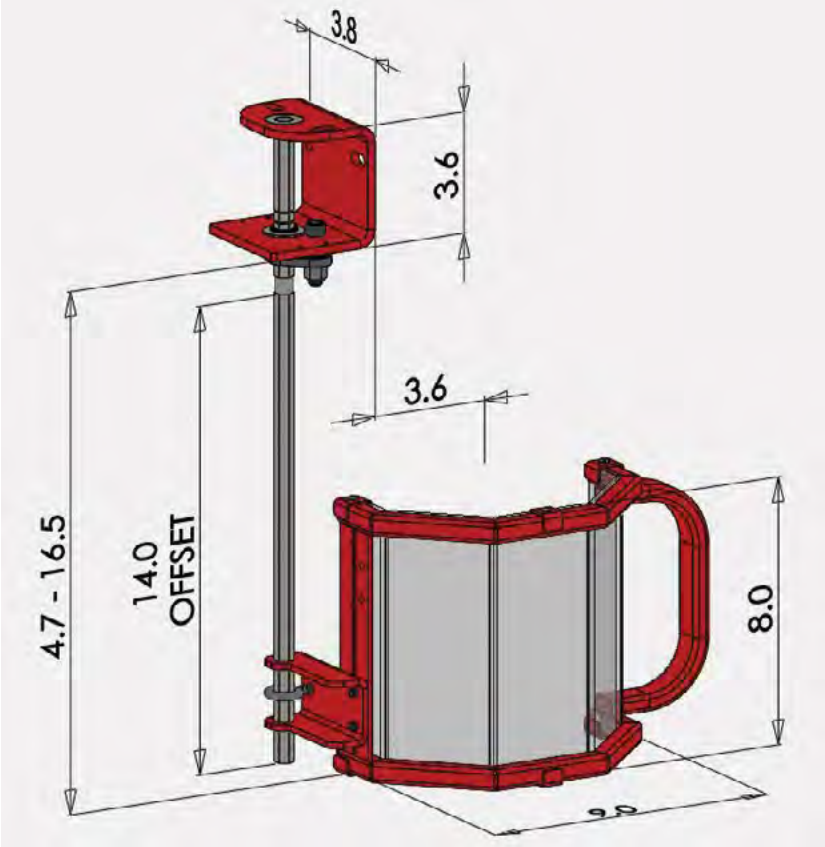
SAFETY SHIELD FOR MEDIUM TO LARGE MILLS

RSSD4XL000X180 | RSSD4LL000X181

RSSD4XL000L180 | RSSD4LL000L182 | RSSD4LL000L183

SAFETY SHIELD FOR SMALL TO MEDIUM DRILLS

Octagonal Shield, 9” x 8”, Left Mount, Direct Mount, 14” Offset



	Basic	LED	Interlock	Interlock + LED	Ultimate
Part Number	RSSD2XL000X140	RSSD2LL000X141	RSSD2XL000L140	RSSD2LL000L142	RSSD2LL000L143
Shield	Octagonal 9” x 8”	Octagonal 9” x 8”	Octagonal 9” x 8”	Octagonal 9” x 8”	Octagonal 9” x 8”
Mount	Left	Left	Left	Left	Left
Arm	Direct Mount	Direct Mount	Direct Mount	Direct Mount	Direct Mount
Offset	14”	14”	14”	14”	14”
LED	No	Yes	No	Yes	Yes
Interlock	No	No	Yes	Yes	Yes
Monitoring	No	No	No	No	Yes
Weight	8 lb	13 lb	9 lb	14 lb	15 lb
CAT	CAT 1	CAT 1	CAT 1	CAT 1	CAT 2

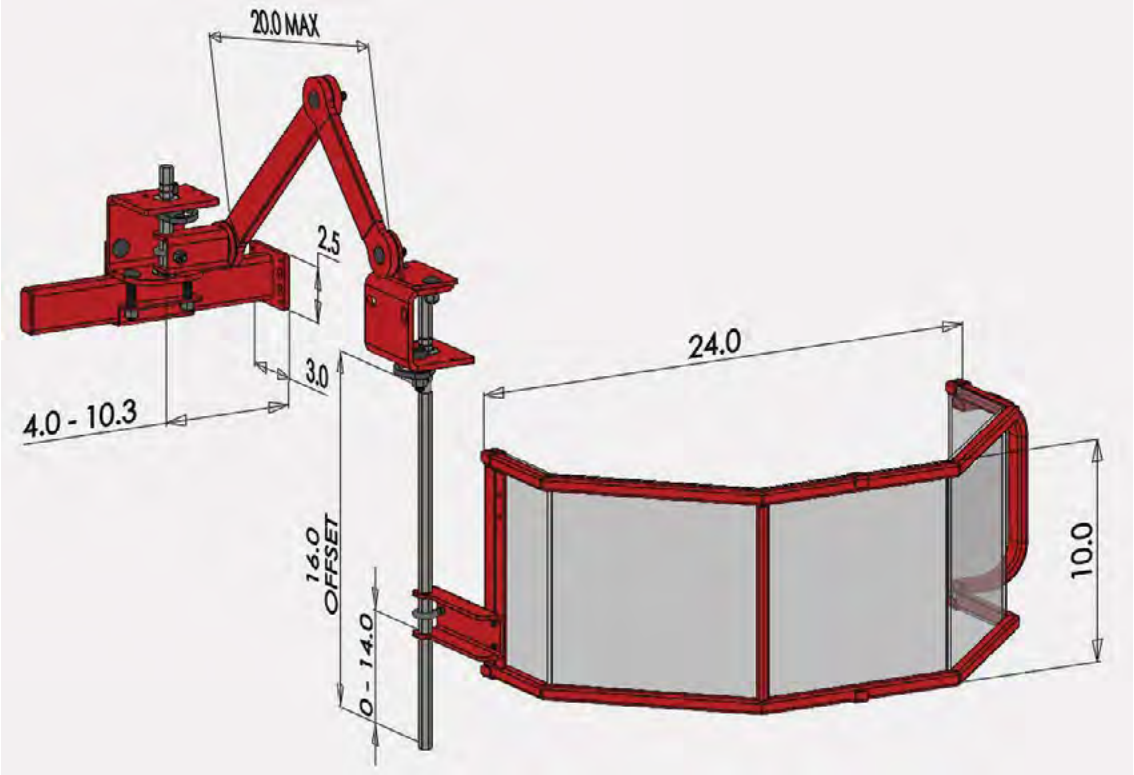
SAFETY SHIELD FOR SMALL TO MEDIUM DRILLS

RSSD2XL000X140 | RSSD2LL000X141

RSSD2XL000L140 | RSSD2LL000L142 | RSSD2LL000L143

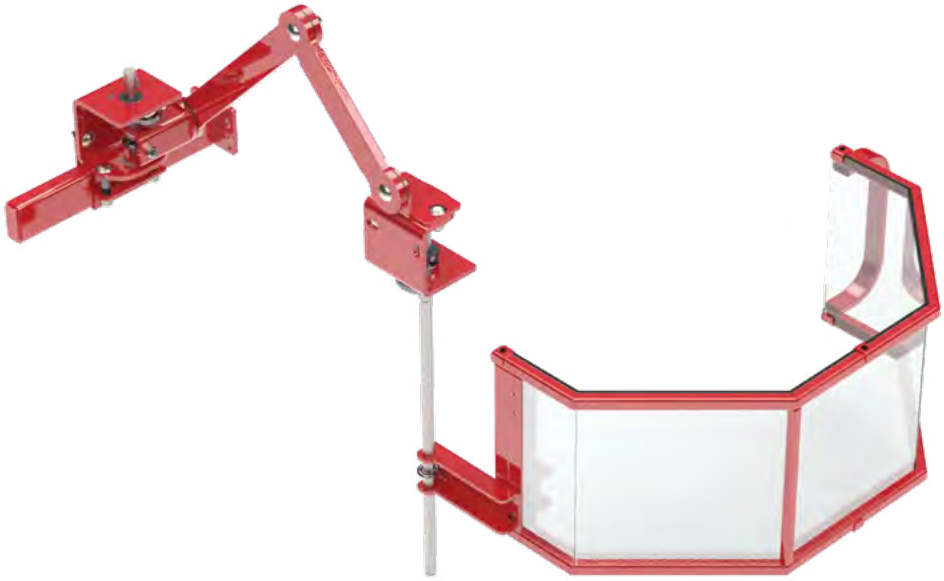
SAFETY SHIELD FOR EXTRA LARGE MILLS AND LATHES

Octagonal Shield, 24” x 10”, Left Mount, Articulating, Double Pivot, 2 Arms, 20” Reach, 16” Offset



	Basic	LED	Interlock	Interlock + LED	Ultimate
Part Number	RSSD6XL202X160	RSSD6LL202X161	RSSD6XL202L160	RSSD6LL202L162	RSSD6LL202L163
Shield	Octagonal 24” x 10”	Octagonal 24” x 10”	Octagonal 24” x 10”	Octagonal 24” x 10”	Octagonal 24” x 10”
Mount	Left	Left	Left	Left	Left
Arm	Articulating, Double Pivot, 2 Arms, 20” Reach	Articulating, Double Pivot, 2 Arms, 20” Reach	Articulating, Double Pivot, 2 Arms, 20” Reach	Articulating, Double Pivot, 2 Arms, 20” Reach	Articulating, Double Pivot, 2 Arms, 20” Reach
Offset	16”	16”	16”	16”	16”
LED	No	Yes	No	Yes	Yes
Interlock	No	No	Yes	Yes	Yes
Monitoring	No	No	No	No	Yes
Weight	26 lb	31 lb	27 lb	32 lb	33 lb
CAT	CAT 1	CAT 1	CAT 1	CAT 1	CAT 2

SAFETY SHIELD FOR EXTRA LARGE MILLS AND LATHES

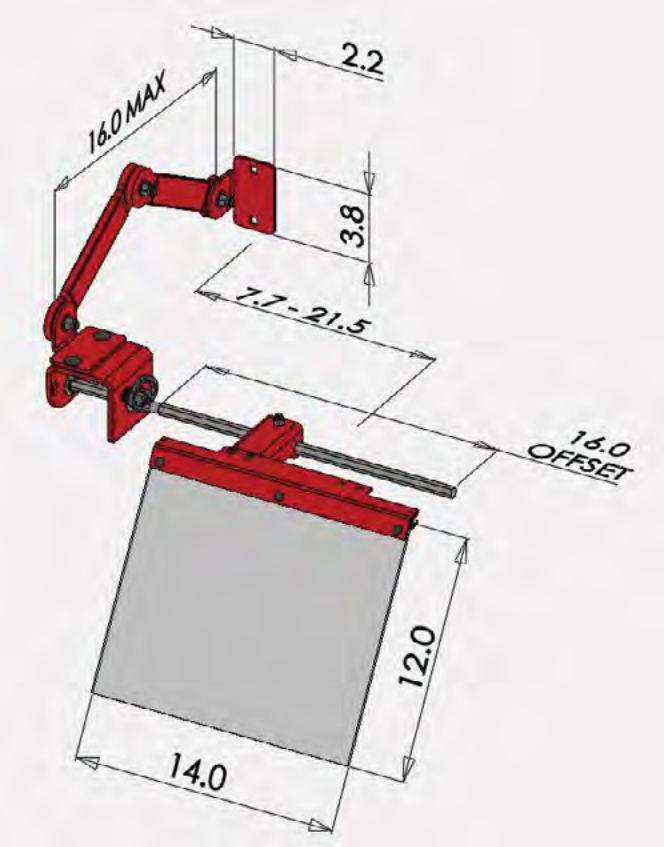


RSSD6XL202X160 | RSSD6LL202X161

RSSD6XL202L160 | RSSD6LL202L162 | RSSD6LL202L163

SAFETY SHIELD FOR MEDIUM GRINDERS AND HORIZONTAL SLIDE MILLS

Flat Shield, 14” x 12”, Left Mount, Articulating, Single Pivot, 2 Arms, 16” Reach, 16” Offset



	Basic	LED	Interlock	Interlock + LED	Ultimate
Part Number	RSSA3XL161X160	RSSA3LL161X161	RSSA3XL161L160	RSSA3LL161L162	RSSA3LL161L163
Shield	Flat 14” x 12”	Flat 14” x 12”	Flat 14” x 12”	Flat 14” x 12”	Flat 14” x 12”
Mount	Left	Left	Left	Left	Left
Arm	Articulating, Single Pivot, 2 Arms, 16" Reach	Articulating, Single Pivot, 2 Arms, 16" Reach	Articulating, Single Pivot, 2 Arms, 16" Reach	Articulating, Single Pivot, 2 Arms, 16" Reach	Articulating, Single Pivot, 2 Arms, 16” Reach
Offset	16”	16”	16”	16”	16”
LED	No	Yes	No	Yes	Yes
Interlock	No	No	Yes	Yes	Yes
Monitoring	No	No	No	No	Yes
Weight	13 lb	18 lb	14 lb	19 lb	20 lb
CAT	CAT 1	CAT 1	CAT 1	CAT 1	CAT 2

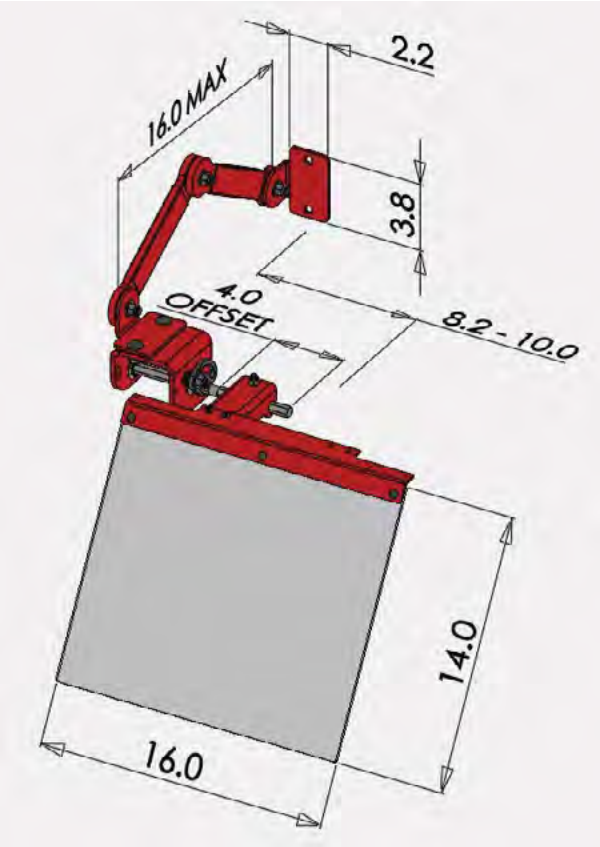
SAFETY SHIELD FOR MEDIUM GRINDERS AND HORIZONTAL SLIDE MILLS

RSSA3XL161X160 | RSSA3LL161X161

RSSA3XL161L160 | RSSA3LL161L162 | RSSA3LL161L163

SAFETY SHIELD FOR MEDIUM TO LARGE GRINDERS AND HORIZONTAL SLIDE MILLS

Shield, 16” x 14”, Left Mount, Articulating, Single Pivot, 2 Arms, 16” Reach, 4” Offset



	Basic	LED	Interlock	Interlock + LED	Ultimate
Part Number	RSSA4XL161X040	RSSA4LL161X041	RSSA4XL161L040	RSSA4LL161L042	RSSA4LL161L043
Shield	Flat 16” x 14”	Flat 16” x 14”	Flat 16” x 14”	Flat 16” x 14”	Flat 16” x 14”
Mount	Left	Left	Left	Left	Left
Arm	Articulating, Single Pivot, 2 Arms, 16" Reach	Articulating, Single Pivot, 2 Arms, 16" Reach	Articulating, Single Pivot, 2 Arms, 16" Reach	Articulating, Single Pivot, 2 Arms, 16" Reach	Articulating, Single Pivot, 2 Arms, 16” Reach
Offset	16”	16”	16”	16”	16”
LED	No	Yes	No	Yes	Yes
Interlock	No	No	Yes	Yes	Yes
Monitoring	No	No	No	No	Yes
Weight	13 lb	18 lb	14 lb	19 lb	20 lb
CAT	CAT 1	CAT 1	CAT 1	CAT 1	CAT 2

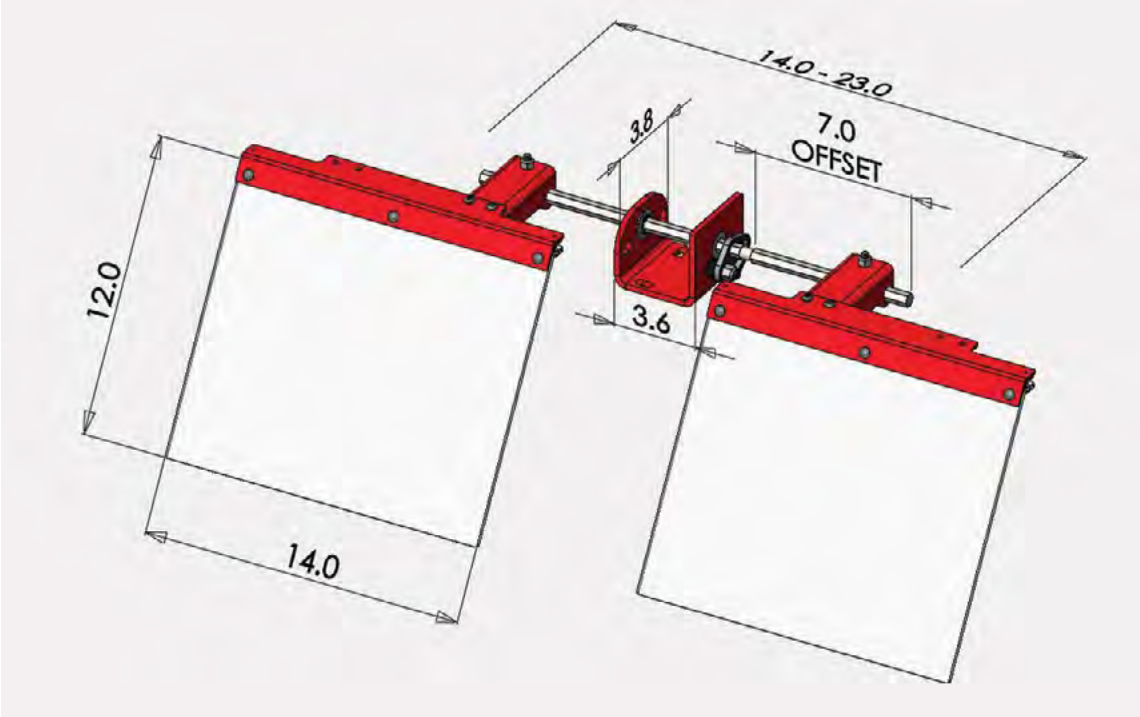
SAFETY SHIELD FOR MEDIUM TO LARGE GRINDERS AND HORIZONTAL SLIDE MILLS

RSSA4XL161X040 | RSSA4LL161X041

RSSA4XL161L040 | RSSA4LL161L042 | RSSA4LL161L043

SAFETY SHIELD FOR MEDIUM GRINDERS

Double Flat Shield, 14” x 7”, Center Direct Mount



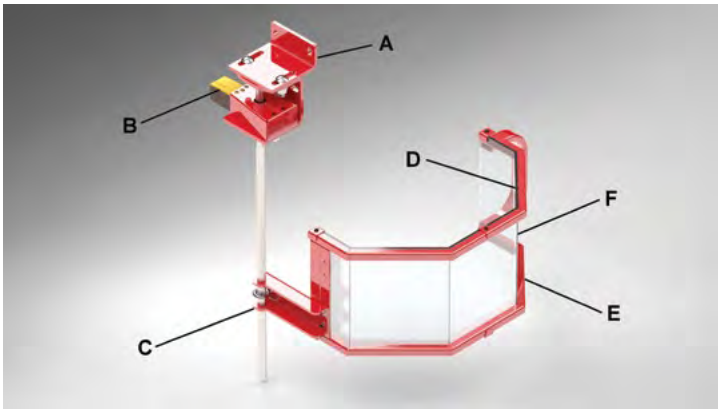
	Basic	LED	Interlock	Interlock + LED	Ultimate
Part Number	RSSA3XL000XD70	RSSA3LL000XD71	RSSA3XL000LD70	RSSA3LL000LD72	RSSA3LL000LD73
Shield	Double Flat 14” x 7”	Double Flat 14” x 7”	Double Flat 14” x 7”	Double Flat 14” x 7”	Double Flat 14” x 7”
Mount	Center	Center	Center	Center	Center
Arm	Direct Mount	Direct Mount	Direct Mount	Direct Mount	Direct Mount
Offset	7”	7”	7”	7”	7”
LED	No	Yes	No	Yes	Yes
Interlock	No	No	Yes	Yes	Yes
Monitoring	No	No	No	No	Yes
Weight	13 lb	18 lb	14 lb	19 lb	20 lb
CAT	CAT 1	CAT 1	CAT 1	CAT 1	CAT 2

SAFETY SHIELD FOR MEDIUM GRINDERS

RSSA3XL000XD70 | RSSA3LL000XD71

RSSA3XL000LD70 | RSSA3LL000LD72 | RSSA3LL000LD73

SHIELDS FOR DRILLS



Available in a variety of sizes, shapes and customizable options, Protector Shields for drills protect the operator from direct frontal contact with rotating spindle parts, flying debris and coolants/lubricants.

A – 1/4" steel mounting/pivot bracket with ball bearings – vertical or horizontal mounting – 120º rotation

B – Safety-rated microswitch (optional) mounted in tamper-resistant steel enclosures – 1 NO, 1 NC contacts

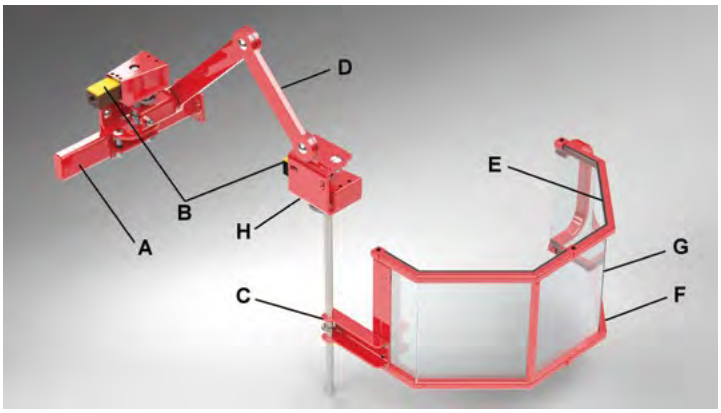
C – Adjustable shield-mounting clamp in 7GA steel – allows for radial and axial position adjustment

D – Available built-in LED lighting – lights your work, indicates available Interlock status

E – Heavy 14GA steel formed and welded shield frame with durable powder coat finish

F – 3/16" thick polycarbonate shock-proof & oil-resistant shield

SHIELDS FOR MILLS



Available in a variety of sizes, shapes and customizable options, Protector Shields for mills protect the operator from direct frontal contact with rotating spindle parts, flying debris and coolants/lubricants.

A – Sturdy, tubular steel mounting post with leveling taps– provides 8" of adjustment

B – Safety-rated microswitches (optional) mounted in tamper-resistant steel enclosures – 1 NO, 1 NC contacts

C – Adjustable shield-mounting clamp in 7GA steel – allows for radial and axial position adjustment

D – Tubular steel Articulating arms with anti-slip discs – 2 & 3 segments available for a reach of 16"-36"

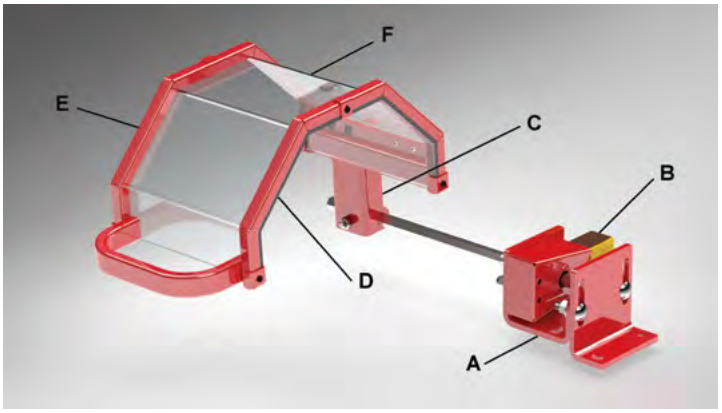
E – Available built-in LED lighting – lights your work, indicates available Interlock status

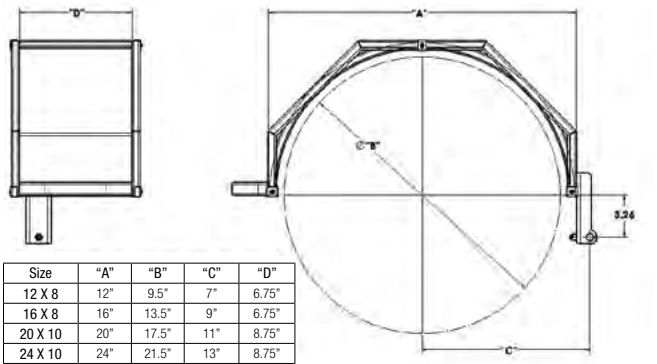
F – Heavy 14GA steel formed and welded shield frame with durable powder coat finish

G – 3/16" thick polycarbonate shock-proof & oil-resistant shield

H – 1/4" steel pivot/switch bracket with ball bearings – vertical or horizontal mounting – 120º rotation

SHIELDS FOR LATHES





Size	"A"	"B"	"C"	"D"
12 X 8	12"	9.5"	7"	6.75"
16 X 8	16"	13.5"	9"	6.75"
20 X 10	20"	17.5"	11"	8.75"
24 X 10	24"	21.5"	13"	8.75"
28 X 10	28"	25.5"	15"	8.75"

Available in a variety of sizes, shapes and customizable options, Protector Shields for lathes prevents the operator from direct contact with rotating chuck and helps in containing the lubricant/collant and working swarfs.

A – 1/4" steel mounting/pivot bracket with ball bearings – vertical or horizontal mounting – 120º rotation

B – Safety-rated microswitch (optional) mounted in tamper-resistant steel enclosures – 1 NO, 1 NC contacts

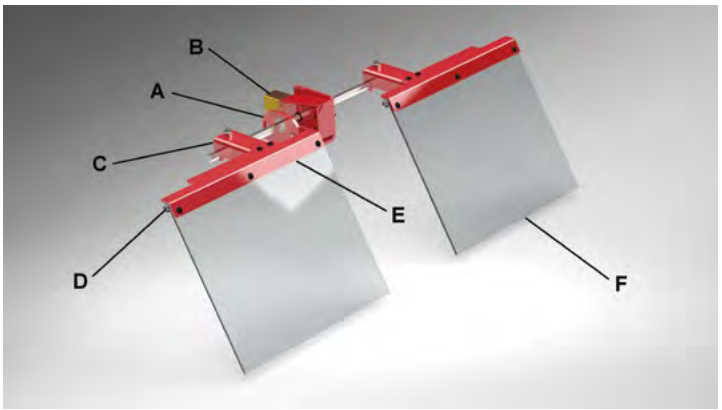
C – Adjustable shield-mounting clamp in 7GA steel – allows for radial and axial position adjustment

D – Available built-in LED lighting – lights your work, indicates available Interlock status

E – Heavy 14GA steel formed and welded shield frame with durable powder coat finish

F – 3/16" thick polycarbonate shock-proof & oil-resistant shield

SHIELDS FOR GRINDERS



Available in a variety of sizes, shapes and customizable options, Protector Shields for grinders prevents the operator from the projection of sparks and emery.

A – 1/4" steel mounting/pivot bracket with ball bearings – vertical or horizontal mounting – 120º rotation

B – Safety-rated microswitch (optional) mounted in tamper-resistant steel enclosures – 1 NO, 1 NC contacts

C – Adjustable shield-mounting clamps in 7GA steel – allow for radial and axial position adjustment

D – Available built-in LED lighting – light your work, indicate available Interlock status

E – Heavy 10GA steel formed top frames with durable powder coat finish

F – 3/16" thick polycarbonate shock-proof & oil-resistant shields

PROTECTOR™
SERIES SHIELDS

TECHNICAL SPECIFICATIONS
LIGHTED JBOX – RELAY

Ratings	
Assembly NEMA	Type 1, 2, 3R
Assembly Ambient Storage/Transport Range - Min	Minimum: -25 C
Assembly Ambient Storage/Transport Range - Max	Maximum: -55 C
Assembly Ambient Working Range - Min	Minimum: -25 C
Assembly Ambient Working Range - Max	Maximize: 70 C
Enclosure Mounting Type	Molded Mounting Feet
LED Voltage	24VDC
LED Lumens - Red	19 Lm./ft.
LED Lumens - White	262 Lm./ft.
LED Wattage - Red	3.29/ft.
LED Wattage - White	4.67/ft.
LED Chips Count	36/ft.
LED Environment	Outdoor / Wet Location / IP65
Power Supply Output Power	60W
Power Supply Output Voltage	24VDC
Power Supply Output Current	2.5A
Power Supply Input Voltage	85 - 305V
	Universal Input 110/230vac
Safety Output Voltage / Amperage	30-250 vac/VDC @ 6A

REGULATIONS & CERTIFICATIONS	
CCC084 - TERMINAL	CSA, UL94 - V0, IEC 60947-7-1
CCC086 - GROUND TERMINAL	CSA, UL94 - V0, IEC 60947-7-2
CCY055 - DIN RAIL	acc. to EN 60715, IEC / EN
CCY117 - END STOP	UL 94 - V2
CCY118 - END PLATE	UL 94 - V0
FYS028 - CORD GRIP	UL/CSA
KCM047 - ENCLOSURE	UL 50/50E, CSA 94.1/94.2, CSA C22.2 No.85, CSA C22.2 No.40, UL 94V-0, UL 746C
RYL152 - POWER SUPPLY	EN 60335, IT AV EN/UL/IEC 62368-1
RFC157FP - SAFETY RELAY	EN50205 EN61810-1; TUV SUD; UL/c-UL File No. E55996; UL508 CSA C22.2 No.14
LEDRWXXXX - LED STRIP	UL Listed 2108

PROTECTOR™
SERIES SHIELDS

TECHNICAL SPECIFICATIONS
LIGHTED JBOX – TOGGLED

Ratings	
Assembly NEMA	Type 1, 2, 3R
Assembly Ambient Storage/Transport Range - Min	Minimum: -25 C
Assembly Ambient Storage/Transport Range - Max	Maximum: -55 C
Assembly Ambient Working Range - Min	Minimum: -25 C
Assembly Ambient Working Range - Max	Maximize: 70 C
Enclosure Mounting Type	Molded Mounting Feet
LED Voltage	24VDC
LED Lumens - Red	19 Lm./ft.
LED Lumens - White	262 Lm./ft.
LED Wattage - Red	3.29/ft.
LED Wattage - White	4.67/ft.
LED Chips Count	36/ft.
LED Environment	Outdoor / Wet Location / IP65
Power Supply Output Power	60W
Power Supply Output Voltage	24VDC
Power Supply Output Current	2.5A
Power Supply Input Voltage	85 - 305V
	Universal Input 110/230vac

REGULATIONS & CERTIFICATIONS	
CCC084 - TERMINAL	CSA, UL94 - V0, IEC 60947-7-1
CCC086 - GROUND TERMINAL	CSA, UL94 - V0, IEC 60947-7-2
CCY055 - DIN RAIL	acc. to EN 60715, IEC / EN
CCY117 - END STOP	UL 94 - V2
CCY118 - END PLATE	UL 94 - V0
FYS028 - CORD GRIP	UL/CSA
KCM047 - ENCLOSURE	UL 50/50E, CSA 94.1/94.2, CSA C22.2 No.85, CSA C22.2 No.40, UL 94V-0, UL 746C
RYL152 - POWER SUPPLY	EN 60335, IT AV EN/UL/IEC 62368-1
TSSPST - TOGGLE SWITCH	IEC/EN 60947-5-1IEC/EN 60947-5-1; UL 508; CAN/CSA-C22.2 No. 14-18 and No. 94.2-15; EC marking
LEDRWXXXX - LED STRIP	UL Listed 2108

PROTECTOR™
SERIES SHIELDS

TECHNICAL SPECIFICATIONS
LIGHTED JBOX – MONITORED

Ratings	
Assembly NEMA	Type 1, 2, 3R
Assembly Ambient Storage/Transport Range - Min	Minimum: -25 C
Assembly Ambient Storage/Transport Range - Max	Maximum: 55 C
Assembly Ambient Working Range - Min	Minimum: -25 C
Assembly Ambient Working Range - Max	Maximize: 70 C
Enclosure Mounting Type	Molded Mounting Feet
LED Voltage	24VDC
LED Lumens - Red	19 Lm./ft.
LED Lumens - White	262 Lm./ft.
LED Wattage - Red	3.29/ft.
LED Wattage - White	4.67/ft.
LED Chips Count	36/ft.
LED Environment	Outdoor / Wet Location / IP65
Power Supply Output Power	60W
Power Supply Output Voltage	24VDC
Power Supply Output Current	2.5A
Power Supply Input Voltage	85 - 305V
	Universal Input 110/230vac
Safety Output Voltage / Amperage	17-250 vac/VDC @ 8A

REGULATIONS & CERTIFICATIONS	
CCC084 - TERMINAL	CSA, UL94 - V0, IEC 60947-7-1
CCC086 - GROUND TERMINAL	CSA, UL94 - V0, IEC 60947-7-2
CCY055 - DIN RAIL	acc. to EN 60715, IEC / EN
CCY117 - END STOP	UL 94 - V2
CCY118 - END PLATE	UL 94 - V0
FYS028 - CORD GRIP	UL/CSA
KCM047 - ENCLOSURE	UL 50/50E, CSA 94.1/94.2,CSA C22.2 No.85, CSA C22.2 No.40, UL 94V-0, UL 746C
RYL152 - POWER SUPPLY	EN 60335, IT AV EN/UL/IEC 62368-1
RFT159 - MONITORING RELAY	EN/IEC 60947-5-1, EN/IEC 60204-1, EN/ISO 13850, EN 1088/ISO 14119, UL, BG, CSA
LEDRWXXXX - LED STRIP	UL Listed 2108

TERMS AND CONDITIONS OF SALE PRICES

A. Prices specified include no federal, state, local, use, occupational, foreign, or other tax. Taxes, if applicable, will be added to the invoice. Unless otherwise stated, all prices are in U.S. dollars.

B. The prices include our regular packaging only. Any special packaging requested by the customer, including special protection for export shipment, will be at the customer's expense, and the cost of such special packaging shall be in addition to the prices quoted.

PAYMENT TERMS: Net in 30 days for equipment and net in 10 days for installation, service, and machine safeguarding assessments (with approved credit). Machine safeguarding seminar fees are due at the time of service. A 1½% monthly service charge (18% a year) will be added to past-due accounts.

CREDIT POLICY: Customers with established credit may purchase for immediate processing of orders. Customers not previously established with us or suitably rated by D&B must apply for open-account status. Orders received without suitable credit information must be prepaid in full before shipment. MasterCard, Visa, and American Express credit cards are accepted.

MINIMUM ORDER: Our minimum order is $25.00. Orders received for less than $25.00 will be subject to a service charge to bring the total to $25.00.

CANCELLATION FEE: Orders that are canceled prior to shipment may be subject to a cancellation fee if the products are nonstock, custom, special, or built to order.

SHIPPING AND HANDLING: Parcels are normally shipped prepaid via our carrier of choice with the charges added to the invoice, but they can also be sent collect or via consignee billing against the customer's account. Truck shipments are normally shipped collect, but they can also be shipped prepaid with the charges added to the invoice via our carrier of choice. A handling charge will be added to all invoices except for customer-pickup orders.

INSURANCE: All shipments are insured for the standard amount provided by the carrier. Additional insurance may be purchased at the customer's expense.

RISK OF LOSS: Unless otherwise agreed upon, all equipment will be shipped FOB shipping point. Title and risk of loss will pass to the customer upon delivery to the carrier at the point of shipment. Transportation will be at the customer's risk and expense, and any claim for loss or damage in transit must be made directly against the carrier.

RETURNED MERCHANDISE: Returned merchandise must be authorized by Rockford Systems in advance, at which time an RMA (return materials authorization) number will be issued. No returned merchandise will be accepted unless accompanied by an RMA number and this RMA number plainly identified on the outside of the shipping container. Material returned without this RMA number will be refused by our receiving department. All returned shipments must be prepaid. The minimum restocking charge will be 25% for any material not found to be defective. Such merchandise must be in original condition and unused in order to qualify for credit. Custom, special, or built-to-order items may not qualify for any credit; however, they may be returned for modification, if needed, which may be at an additional cost. No returns for credit will be considered more than 30 days from the date of shipment.

LIMITED WARRANTY: Rockford Systems, LLC, warrants that this product will be free from defects in material and workmanship for a period of 12 months from the date of shipment thereof.

PROTECTOR™ SERIES SHIELDS

ROCKFORD SYSTEMS LLC'S OBLIGATION UNDER THIS WARRANTY IS EXPRESSLY AND EXCLUSIVELY LIMITED to, at the sole discretion of Rockford Systems, LLC, providing a refund or credit for the amount paid for such Product or repairing or replacing such products, in each case solely for Products which are returned to it with-in the warranty period with shipping charges prepaid and which are found by Rockford Systems, LLC to be defective upon examination. This warranty will not apply to products damaged in natural disasters, including, but not limited to, earthquakes, fires and floods, or any product which will have been subject to misuse, negligence, accident, restriction, or use not in accordance with Rockford Systems, LLC's instructions or which will have been altered or repaired by persons other than the authorized agent or employees of Rockford Systems, LLC. Rockford Systems, LLC's warranties as to any component part is expressly limited to that of the manufacturer of the component part. This warranty only extends to the original Customer and can-not be transferred or assigned.

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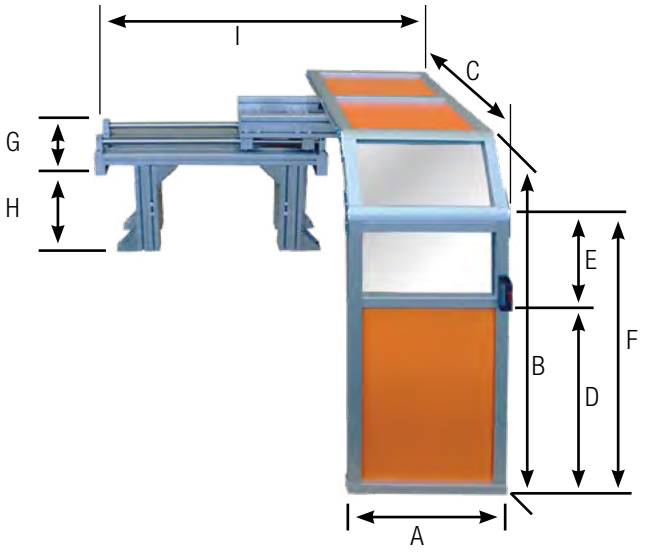
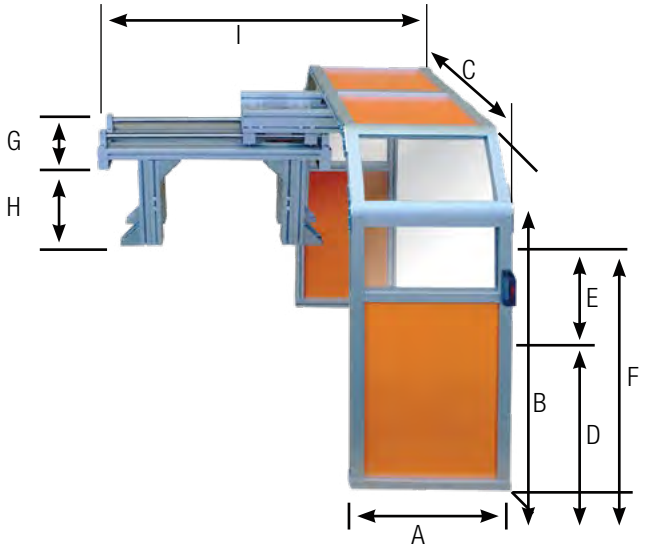
ELECTRICALLY INTERLOCKED LATHE CHUCK SHIELDS



Ordering Information

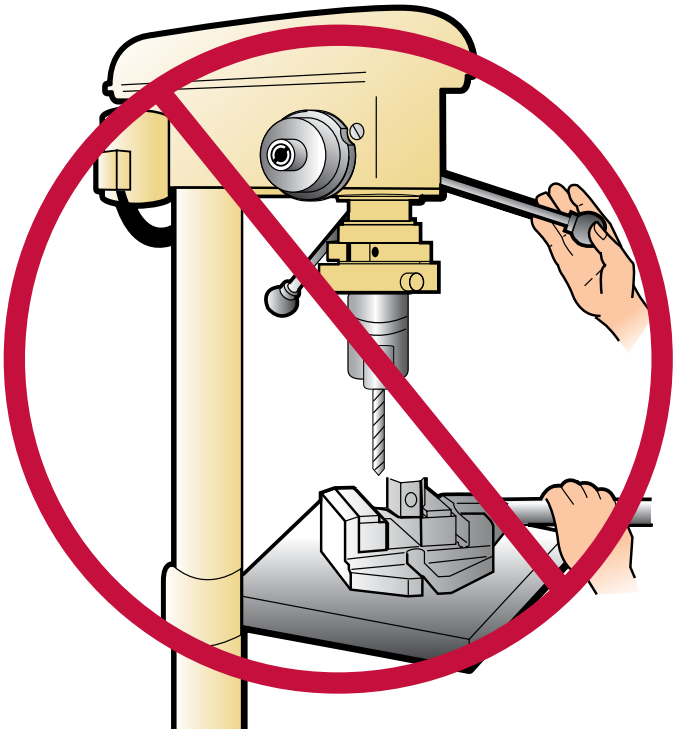
PART NO.	A	B	C	D	E	F	G	H	I
PTO 21/080	21.65" (550 mm)	39.37" (1,000 mm)	39.37" (1,000 mm)	20.39" (518 mm)	11.10" (282 mm)	31.49" (800 mm)	11.81" (300 mm)	15.35"-23.22" (390-590 mm)	36.61"-58.66" (930-1,490 mm)
PTO 21/120	21.65" (550 mm)	59.05" (1,500 mm)	55.11" (1,400 mm)	36.14" (918 mm)	11.10" (282 mm)	47.24" (1,200 mm)	11.81" (300 mm)	15.35"-23.22" (390-590 mm)	36.61"-58.66" (930-1,490 mm)



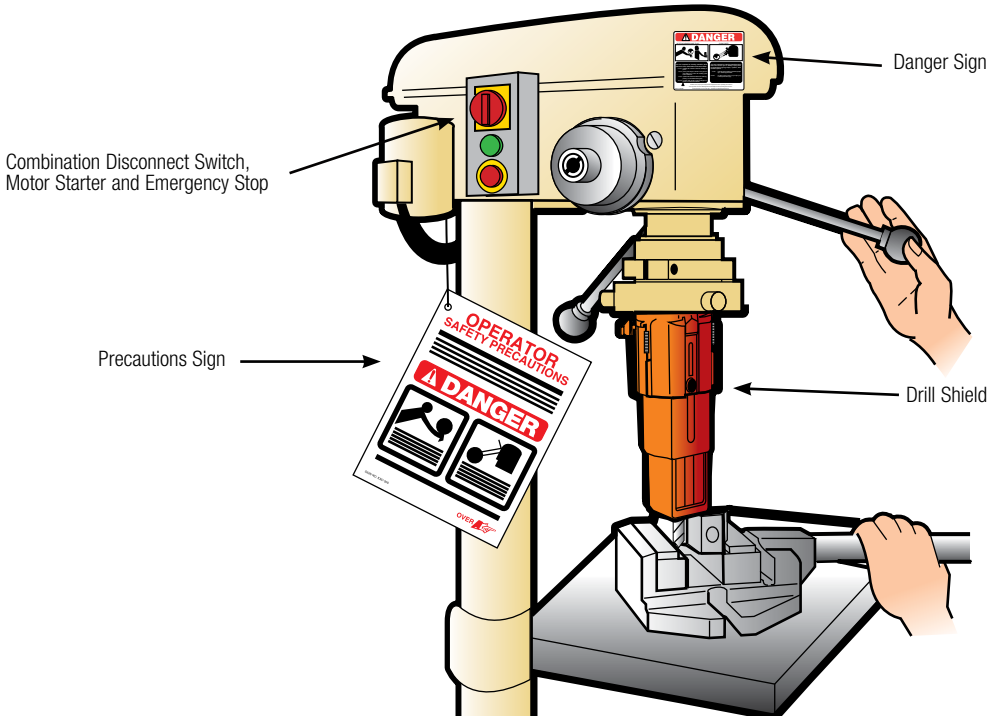
Ordering Information

PART NO.	A	B	C	D	E	F	G	H	I
PTO 22/080	21.65" (550 mm)	39.37" (1,000 mm)	39.37" (1,000 mm)	20.39" (518 mm)	11.10" (282 mm)	31.49" (800 mm)	11.81" (300 mm)	15.35"-23.22" (390-590 mm)	36.61"-58.66" (930-1,490 mm)
PTO 22/120	21.65" (550 mm)	59.05" (1,500 mm)	55.11" (1,400 mm)	36.14" (918 mm)	11.10" (282 mm)	47.24" (1,200 mm)	11.81" (300 mm)	15.35"-23.22" (390-590 mm)	36.61"-58.66" (930-1,490 mm)

UNGUARDED DRILL PRESS



SAFEGUARDED DRILL PRESS



SAFETY ON DRILL PRESSES

SAFETY CHIP SHIELDS
(PAGE 53)

HEAVY-DUTY ALUMINUM
DRILL PRESS SHIELDS
(PAGE 54)

www.rockfordsystems.com/online/safeguarding/drill-press-chuck-keys.cfm

DRILL PRESS CHUCK KEYS
(PAGE 54)

RIGID-ARM
MAGNETIC-BASE SHIELDS
(PAGE 78)

FLEXIBLE SPRING-STEEL
ARM SHIELDS
(PAGES 82-85)

UNIVERSAL BALL &
SOCKET SHIELDS
(PAGES 79-81)

ON/OFF MAGNETIC-BASE
SHIELDS
(PAGE 86)

ADJUSTABLE SLIDE SHIELDS
(PAGE 77)

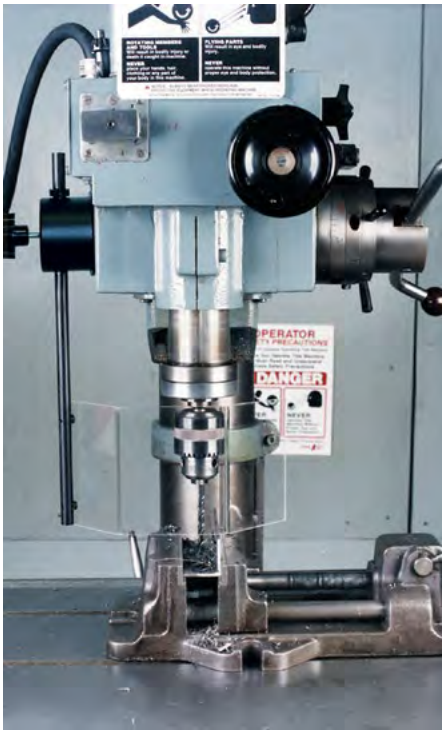
DISCONNECT SWITCHES, MOTOR
STARTERS & ACCESSORIES
(PAGES 89)

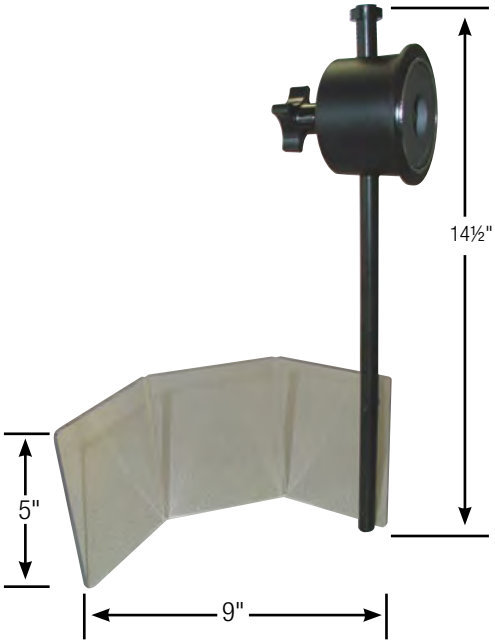
SAFETY CHIP SHIELDS

These sturdy safety chip shields provide protection from flying chips, coolant, and rotating parts. They are usually applied to small drill presses, milling machines, etc., and can be magnetically or permanently mounted.

The shield can be attached to any smooth ferrous surface on the machine by an 80-lb pull, 3¼" diameter magnetic base. If a smooth, ferrous surface is not available, a 3¼" x 5¼" mounting plate is also furnished with each shield.

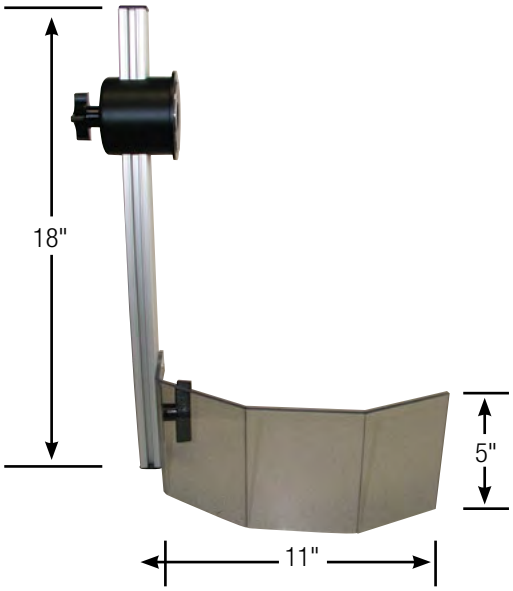
The impact-resistant, 3/16"-thick clear polycarbonate shield provides visibility to the point of operation. It adjusts and locks in any vertical position.





Ordering Information

PART NO.	DESCRIPTION
KYL001	5" x 9" Shield With ½" Diameter Black PVC Arm 14½" High
KYM001	5" x 9" Replacement Shield Only

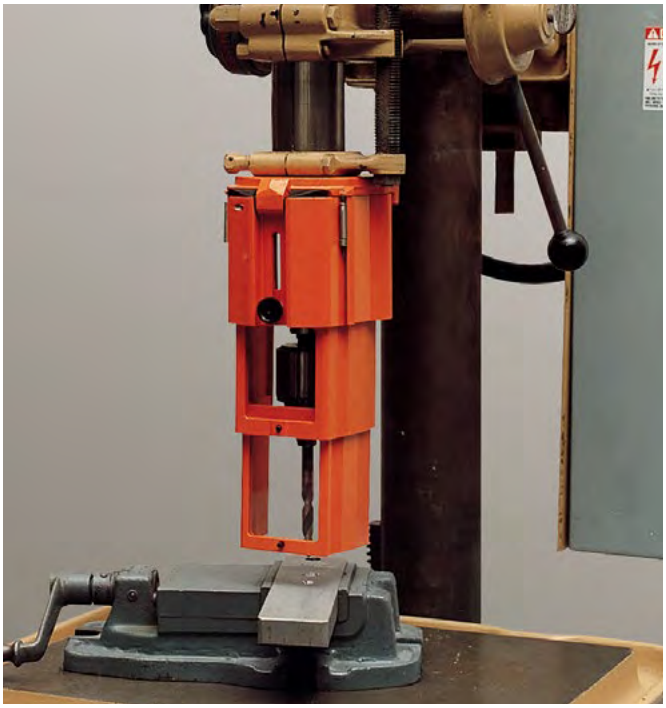


Ordering Information

PART NO.	DESCRIPTION
KYL055	5" x 11" Shield With 1" Square Extruded Aluminum Arm 18" High
KYL044	5" x 11" Replacement Shield Only

3 ¼" x 5 ¼" Mounting Plate Furnished With Each Type of Shield For Mounting to a Rough, Nonferrous Surface

HEAVY-DUTY ALUMINUM DRILL PRESS SHIELDS



3-tier shield shown in machining position.

These cast-aluminum drill press shields are furnished with a standard 1¾" bore. The **user can bore this shield to a size up to 3½"** for attaching to the quill of a machine.

This shield is available in 2-tier or 3-tier models which provides 3" to 6" travel of the drill press.

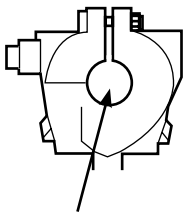
The top of the holder attaches to the quill of the drill press. The shields are open in the back. The bottom section has a clear panel for visibility.

For changing chucks or drill bits, the 2- or 3-tier section can be swung forward and upward out of the way. Also available are shields with a side hinge that swing to the left side.

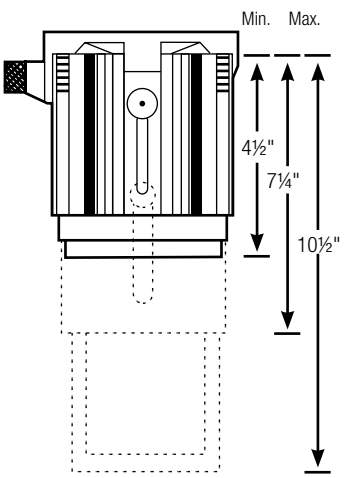
Ordering Information

PART NO.	DESCRIPTION
DZS001	3-Tier **Front** Hinge 4½" Min; 10½" Max; 6" Stroke; Max Chuck Diameter 2½"
DZS003	2-Tier **Front** Hinge 4$^{5}/_{16}$" Min; 7" Max; 2$^{11}/_{16}$" Stroke; Max Chuck Diameter 2¾"
DZS004	2-Tier **Front** Hinge 6" Min; 10½" Max; 4½" Stroke; Max Chuck Diameter 2¾"
DZS005	2-Tier **Side** Hinge 6" Min; 10½" Max; 4½" Stroke; Max Chuck Diameter 2¾"
DZS006	3-Tier **Side** Hinge 4½" Min; 10½" Max; 6" Stroke; Max Chuck Diameter 2½"
DZS002	Replacement Polycarbonate Window

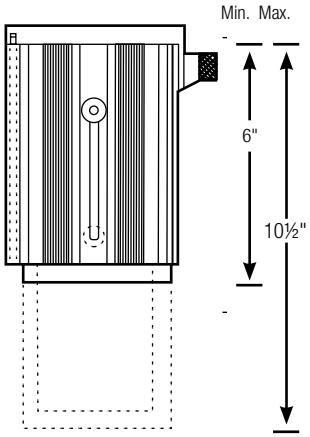
Front hinge shield shown open for tool change.



1¾" diameter; User to Bore to Size up to 3½"



Dimensions of Part No. DZS001

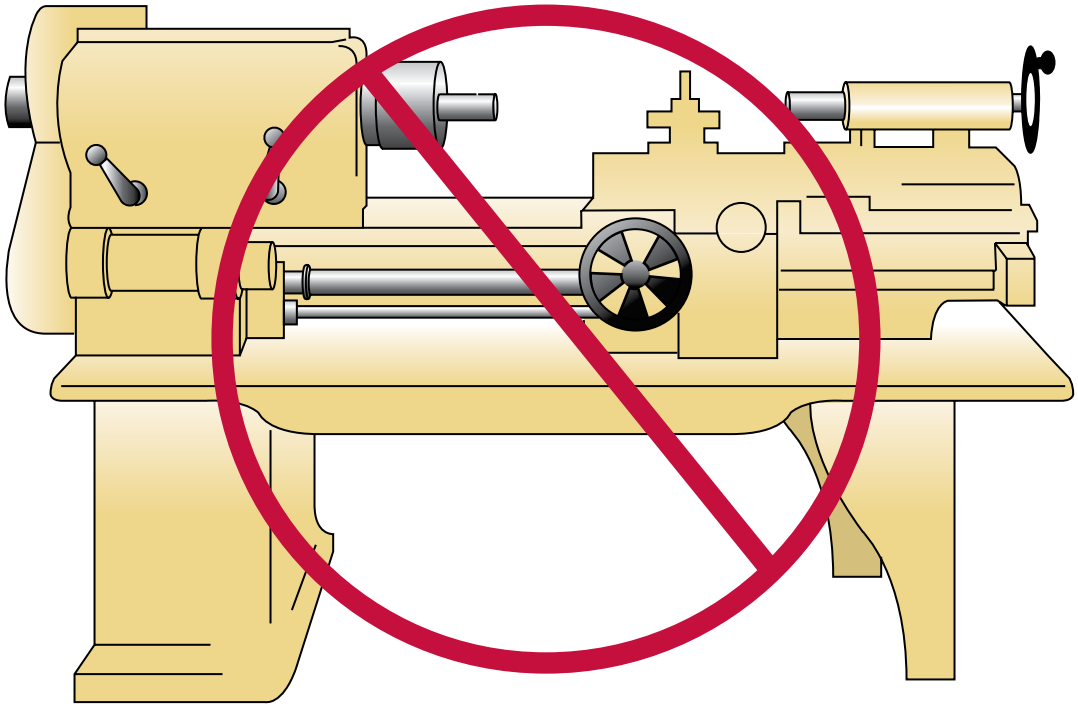


Dimensions of Part No. DZS005

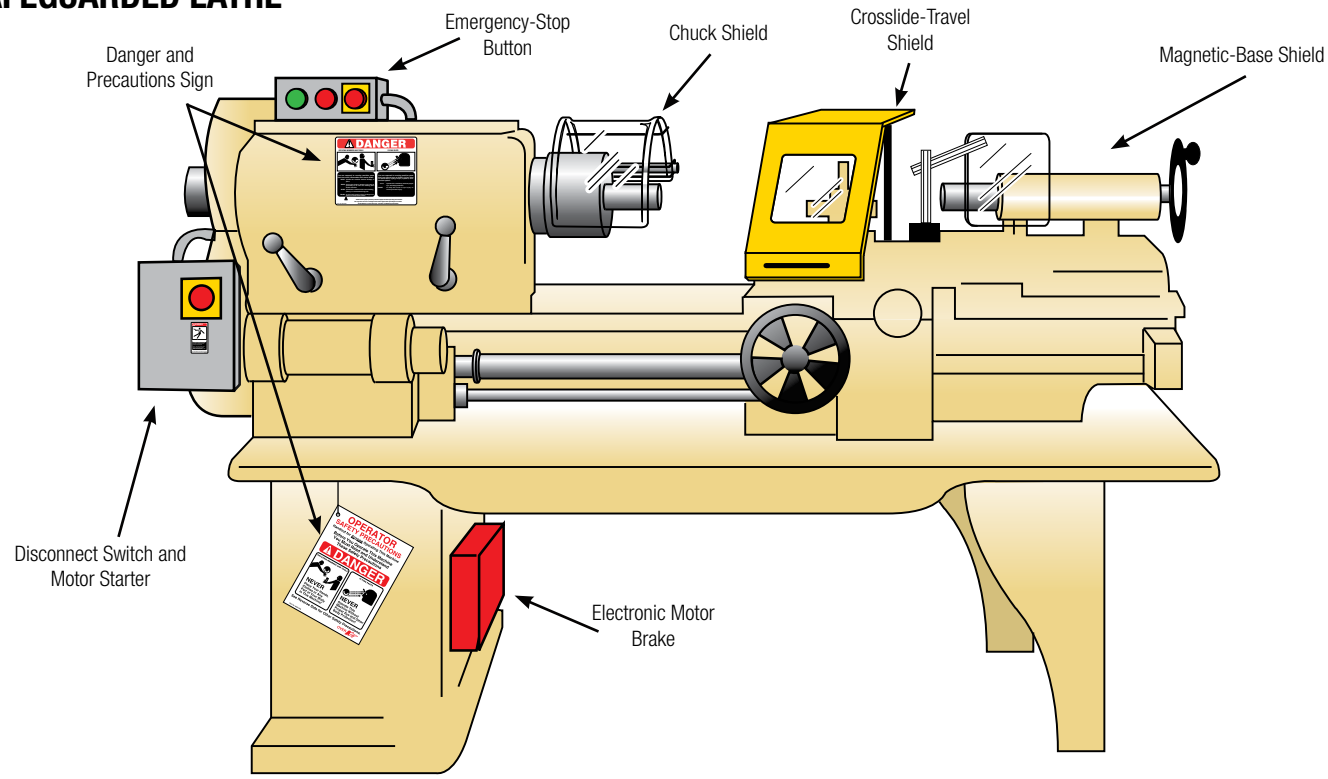
SPRING-LOADED/SELF-EJECTING DRILL PRESS CHUCK KEYS

Spring-loaded/self-ejecting drill press chuck keys are available to fit a wide variety of chucks. Visit www.rockfordsystems.com/keys

UNGUARDED LATHE



SAFEGUARDED LATHE



SAFETY ON LATHES

SLIDING LATHE SHIELDS
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CROSSLIDE-TRAVEL
LATHE SHIELDS
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SMALL STEEL LATHE
CHUCK SHIELDS
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LARGE STEEL LATHE
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RIGID-ARM
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UNIVERSAL BALL &
SOCKET SHIELDS
(PAGES 79-81)

FLEXIBLE SPRING-
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ON/OFF MAGNETIC-BASE
SHIELDS (PAGE 86)

LATHE CHUCK WRENCHES
(PAGES 61-62)

DISCONNECT SWITCHES, MOTOR
STARTERS & ACCESSORIES
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SAFETY SHIELDS FOR LATHES, TRANSPARENT CHUCK

LXS Series Lathe Chuck Shields are **Marked for Discontinuation** until inventory is depleted. Replacement transparent shields will be supported and supplied through January 1, 2024 or until inventory is depleted.

The LXS Series Shield will be replaced with The Protector™ Series Shields.

The Protector™ Series Shields are offered as curved, octagonal, interlocked, and interlocked and lighted forms.

LXS300 — 10" Diameter

**Marked for Discontinuation*

Replacement Options Below

LXS400 — 14" Diameter

**Marked for Discontinuation*

Replacement Options Below

Basic Protector:

RSSD3XR000X120
- Octagonal, 12" x 8"
- Right Mount
- Direct Mount w/o Interlock
- 12" Offset
- No Enclosure

RSSE1XR000X120
- Curved, 12" x 8"
- Right Mount
- Direct Mount w/o Interlock
- 12" Offset
- No Enclosure

RSSD4XR000X120
- Octagonal, 16" x 8"
- Right Mount
- Direct Mount w/o Interlock
- 12" Offset
- No Enclosure

RSSE2XR000X120
- Curved, 16" x 8"
- Right Mount
- Direct Mount w/o Interlock
- 12" Offset
- No Enclosure

Interlocked Protector:

RSSD3XR000L120
- Octagonal, 12" x 8"
- Right Mount
- Direct Mount w/Interlock
- 12" Offset
- No Enclosure

RSSE1XR000L120
- Curved, 12" x 8"
- Right Mount
- Direct Mount w/Interlock
- 12" Offset
- No Enclosure

RSSD4XR000L120
- Octagonal, 16" x 8"
- Right Mount
- Direct Mount w/Interlock
- 12" Offset
- No Enclosure

RSSE2XR000L120
- Curved, 16" x 8"
- Right Mount
- Direct Mount w/Interlock
- 12" Offset
- No Enclosure

Interlocked + LED Protector:

RSSD3LR000L122
- Octagonal, 12" x 8" w/LED
- Right Mount
- Direct Mount w/Interlock
- 12" Offset
- Lighted – Interlocked Enclosure

RSSE1LR000L122
- Curved, 12" x 8" w/LED
- Right Mount
- Direct Mount w/Interlock
- 12" Offset
- Lighted – Interlocked Enclosure

RSSD4LR000L122
- Octagonal, 16" x 8" w/LED
- Right Mount
- Direct Mount w/Interlock
- 12" Offset
- Lighted – Interlocked Enclosure

RSSE2LR000L122
- Curved, 16" x 8" w/LED
- Right Mount
- Direct Mount w/Interlock
- 12" Offset
- Lighted – Interlocked Enclosure

LXS500 — 18” Diameter

**Marked for Discontinuation*

Replacement Options Below

LXS600 — 24” Diameter

**Marked for Discontinuation*

Replacement Options Below

LXS700 — 28” Diameter

**Out of Stock*

Replacement Options Below

Basic Protector:

RSSD5XR000X120

- Octagonal, 20” x 10”
- Right Mount
- Direct Mount w/o Interlock
- 12” Offset
- No Enclosure

RSSE3XR000X120

- Curved, 20” x 10”
- Right Mount
- Direct Mount w/o Interlock
- 12” Offset
- No Enclosure

RSSD6XR000X120

- Octagonal, 24” x 10”
- Right Mount
- Direct Mount w/o Interlock
- 12” Offset
- No Enclosure

RSSE4XR000X120

- Curved, 24” x 10”
- Right Mount
- Direct Mount w/o Interlock
- 12” Offset
- No Enclosure

RSSD7XR000X120

- Octagonal, 28” x 10”
- Right Mount
- Direct Mount w/o Interlock
- 12” Offset
- No Enclosure

RSSE5XR000X120

- Curved, 28” x 10”
- Right Mount
- Direct Mount w/o Interlock
- 12” Offset
- No Enclosure

Interlocked Protector:

RSSD5XR000L120

- Octagonal, 20” x 10”
- Right Mount
- Direct Mount w/Interlock
- 12” Offset
- No Enclosure

RSSE3XR000L120

- Curved, 20” x 10”
- Right Mount
- Direct Mount w/Interlock
- 12” Offset
- No Enclosure

RSSD6XR000L120

- Octagonal, 24” x 10”
- Right Mount
- Direct Mount w/Interlock
- 12” Offset
- No Enclosure

RSSE4XR000L120

- Curved, 24” x 10”
- Right Mount
- Direct Mount w/Interlock
- 12” Offset
- No Enclosure

RSSD7XR000L120

- Octagonal, 28” x 10”
- Right Mount
- Direct Mount w/Interlock
- 12” Offset
- No Enclosure

RSSE5XR000L120

- Curved, 28” x 10”
- Right Mount
- Direct Mount w/Interlock
- 12” Offset
- No Enclosure

Interlocked + LED Protector:

RSSD5LR000L122

- Octagonal, 20” x 10” w/LED
- Right Mount
- Direct Mount w/Interlock
- 12” Offset
- Lighted – Interlocked Enclosure

RSSE3LR000L122

- Curved, 20” x 10” w/LED
- Right Mount
- Direct Mount w/Interlock
- 12” Offset
- Lighted – Interlocked Enclosure

RSSD6LR000L122

- Octagonal, 24” x 10” w/LED
- Right Mount
- Direct Mount w/Interlock
- 12” Offset
- Lighted – Interlocked Enclosure

RSSE4LR000L122

- Curved, 24” x 10” w/LED
- Right Mount
- Direct Mount w/Interlock
- 12” Offset
- Lighted – Interlocked Enclosure

RSSD7LR000L122

- Octagonal, 28” x 10” w/LED
- Right Mount
- Direct Mount w/Interlock
- 12” Offset
- Lighted – Interlocked Enclosure

RSSE5LR000L122

- Curved, 28” x 10” w/LED
- Right Mount
- Direct Mount w/Interlock
- 12” Offset
- Lighted – Interlocked Enclosure

SLIDING LATHE SHIELDS

Shield slid into position. Machine is ready for machining workpiece.

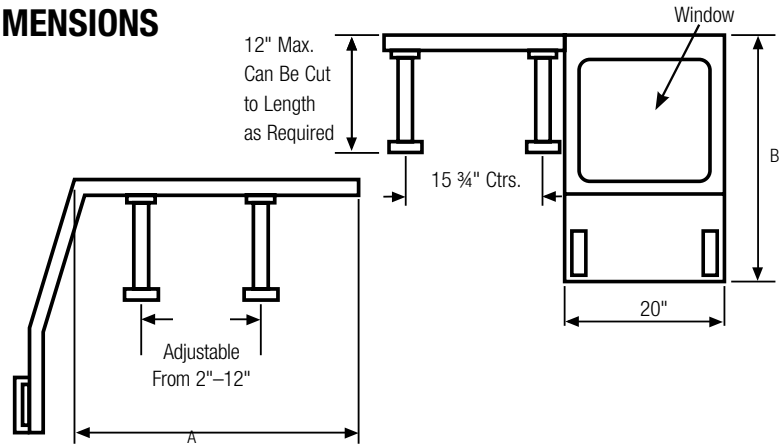
These heavy-duty sliding lathe shields are furnished in four different sizes. They are constructed of high quality, 12-gauge reinforced steel with a polycarbonate window. These shields are available for operator protection on large standard lathes, CNC machines, and OD grinders.

The shields are designed to fit lathes with chucks up to 48" in diameter. Four adjustable flanged mounting posts are provided for easy mounting. These posts are used to securely mount the shield's ball-bearing carriage to the top of the headstock, as illustrated (mounting hardware not included). This means the posts can be attached without interfering with any part of the equipment housed within the headstock.

These sliding shields slide out-of-the-way over the headstock, allowing the operator access to the point of operation for loading and unloading workpieces, changing tooling, changing chucks, removing swarf, etc. Each shield has approximately 22" of travel.

When ordering these sliding shields, check lathe dimensions and reference drawings. Special sizes are available on request.

DIMENSIONS



Ordering Information

PART NO.	A	B	CHUCK DIAMETER	REPLACEMENT POLYCARBONATE WINDOW
MAJ700	26"	21"	28"	MAW001
MAJ800	27¼"	23"	32"	MAW002
MAJ100	29½"	27"	40"	MAW003
MAJ120	33¼"	30¾"	48"	MAW004

CROSSLIDE-TRAVEL LATHE SHIELDS

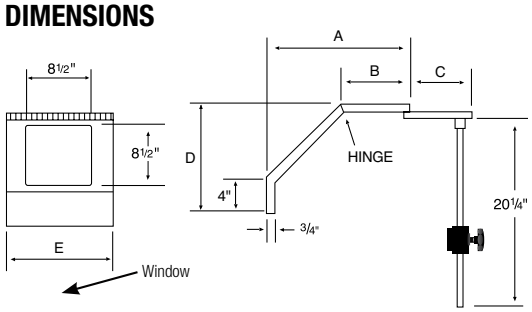
Shield travels with the crosslide for operator protection.

These lathe shields mount on and travel with the crosslide for protection when machining long workpieces. The 18-gauge reinforced steel structure provides protection from flying chips and coolant. The high-impact-resistant polycarbonate window permits visibility into the point of operation. The front portion of the shield hinges up for access. These shields are ideal for lathes with long beds. Special sizes are available on request.

Ordering Information

PART NO.	A	B	C	D	E
TXS100	17"	8"	10"	12"	12"
TXS200	23"	11"	12"	14½"	13¾"
TXW000	Replacement Polycarbonate Window				

DIMENSIONS



SMALL STEEL LATHE CHUCK SHIELDS

Shield in position. Machine is ready for machining workpiece.

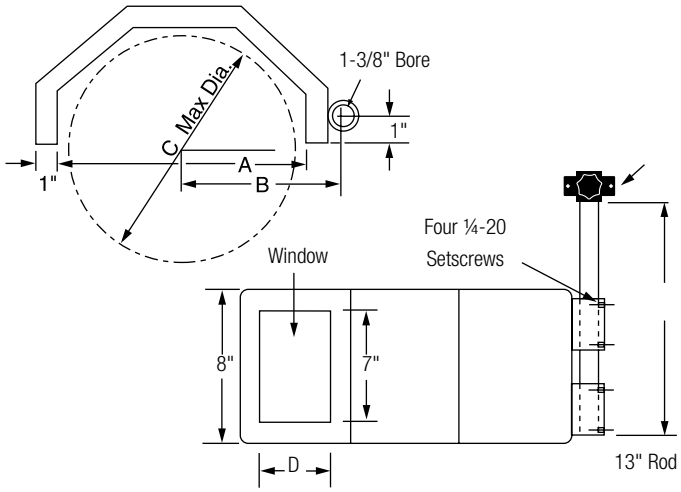
These sturdily constructed steel chuck shields are fabricated of 18-gauge steel with reinforced sides and can be used on smaller lathes that have up to 18½" diameter chucks.

Each shield is furnished with a 1" x 13" mounting rod which can be cut to length if required. This mounting rod is fastened to the headstock of the lathe. The mounting rod is also used to hinge the entire shield. The shield can be lifted and swung up for quick and easy access to the chuck and the part being machined. This shield includes a high-impact-resistant polycarbonate window which permits visibility into the point of operation. Various types of mounting brackets are available and are sold separately.

Ordering Information

PART NO.	A	B	C	D	REPLACEMENT POLYCARBONATE WINDOW
TPS300	12"	7½"	11"	4¾"	TPW003
TPS400	15½"	9¼"	14½"	6¼"	TPW004
TPS500	19¼"	11½"	18¼"	8"	TPW005

DIMENSIONS



LARGE STEEL LATHE CHUCK SHIELDS

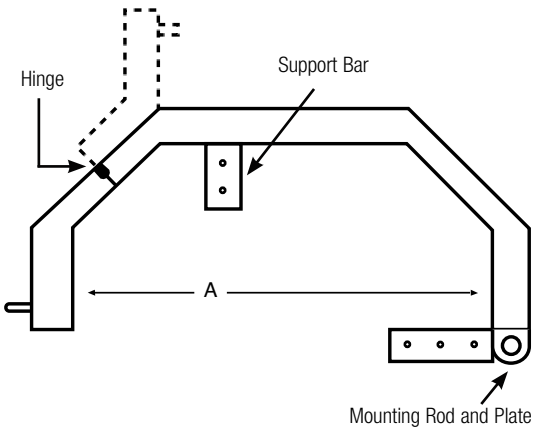
The hinged portion can swing up for workpiece changes.

These fabricated 18-gauge steel chuck shields with reinforced sides can be used on large lathes that have chucks up to 47" in diameter. They are double hinged for access to the chuck, workpiece, and tool. The front hinged portion can be swung up for workpiece changes, and the entire shield can be hinged back for changing chucks.

Each shield is furnished with a mounting rod, plate and support bar for mounting the shield to the face of the headstock. The rear mounting bracket hinges the entire shield, and the side mounting bracket supports the shield in its normal operating position.

Ordering Information

PART NO.	DIMENSION A
TPS600	24"
TPS800	32"
TPS100	40"
TPS120	47½"



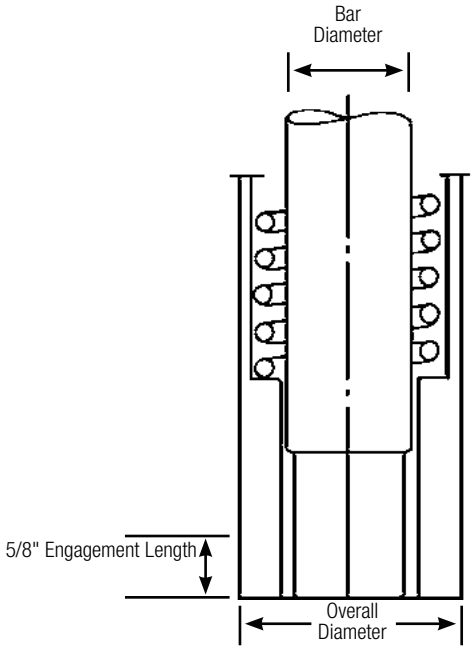
STANDARD SIZE LATHE CHUCK WRENCHES

One of the most common accidents on lathes or other machines involves a chuck wrench or key which is thrown from the chuck. This happens when someone forgets to remove the wrench from the chuck before the machine is turned on.

The spring-loaded or self-ejecting chuck wrenches can be used on lathes or other machines equipped with manually adjusted chucks. The spring-loaded sleeve ejects the wrench from the chuck after each use. These wrenches are engineered and designed to provide proper loads for self-removal of the wrench weight.

Adjusting the chuck using a spring-loaded chuck wrench.

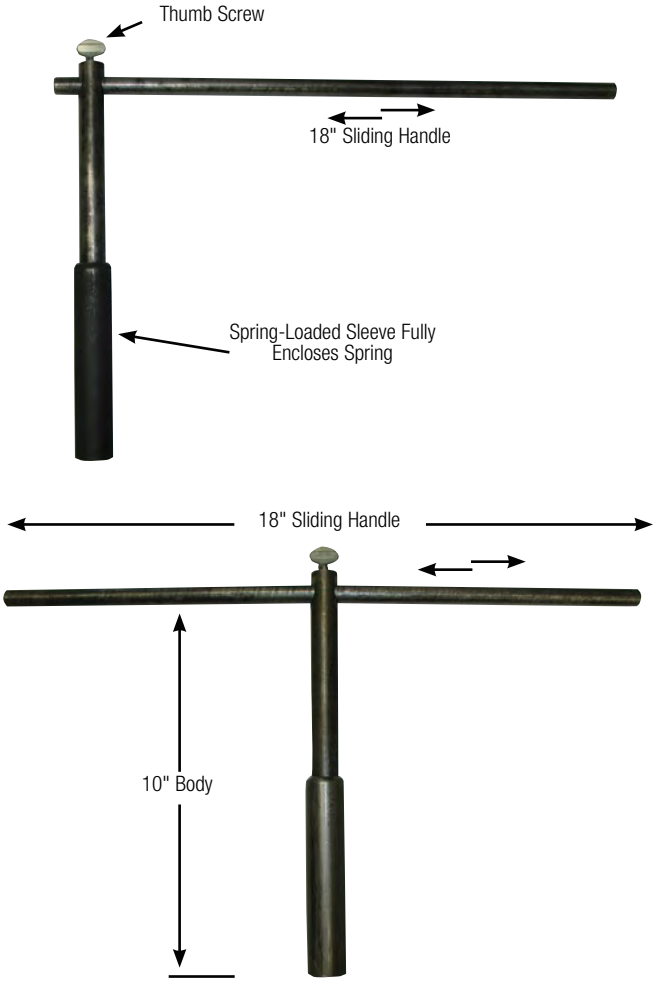
ALL PARTS BLACK OXIDE COATED



Ordering Information

PART NO.	NOMINAL SIZE	ACTUAL SIZE	BAR DIAMETER	OVERALL DIAMETER	HANDLE LENGTH
CWSM0281S	9/32" SQ	.271"	¾"	1.050"	5½"
CWSM0312S	5/16" SQ	.303"	¾"	1.050"	5½"
CWSM0375S	⅜" SQ	.365"	¾"	1.050"	5½"
CWSM0438S	7/16" SQ	.427"	¾"	1.050"	5½"
CWSM0500S	½" SQ	.490"	¾"	1.050"	5½"
CWSM0563S	9/16" SQ	.552"	15/16"	1.315"	9½"
CWSM0625S	⅝" SQ	.615"	15/16"	1.315"	9½"
CWSM0688S	11/16" SQ	.678"	15/16"	1.315"	9½"
CWSM0750S	¾" SQ	.740"	15/16"	1.315"	9½"
CWHM0500S	½" HEX	.490"	¾"	1.050"	5½"
CWHM0625S	⅝" HEX	.615"	¾"	1.050"	9½"
CWHM0750S	¾" HEX	.740"	15/16"	1.315"	9½"

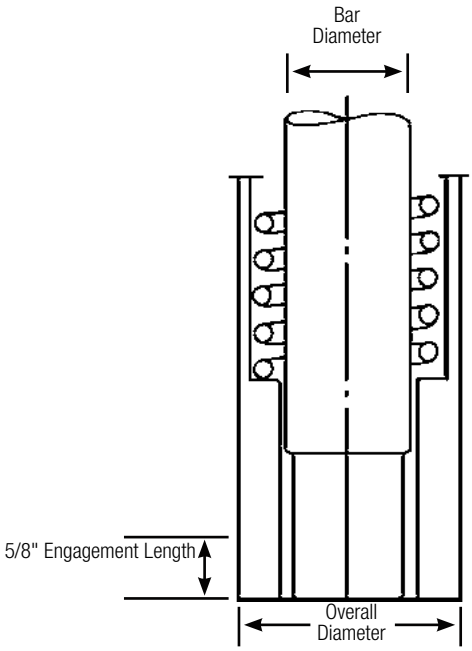
LONGER LATHE CHUCK WRENCHES



The 18" handle can be slid into position and locked in place with the thumb screw.

Adjusting the chuck using a long-handled spring-loaded chuck wrench.

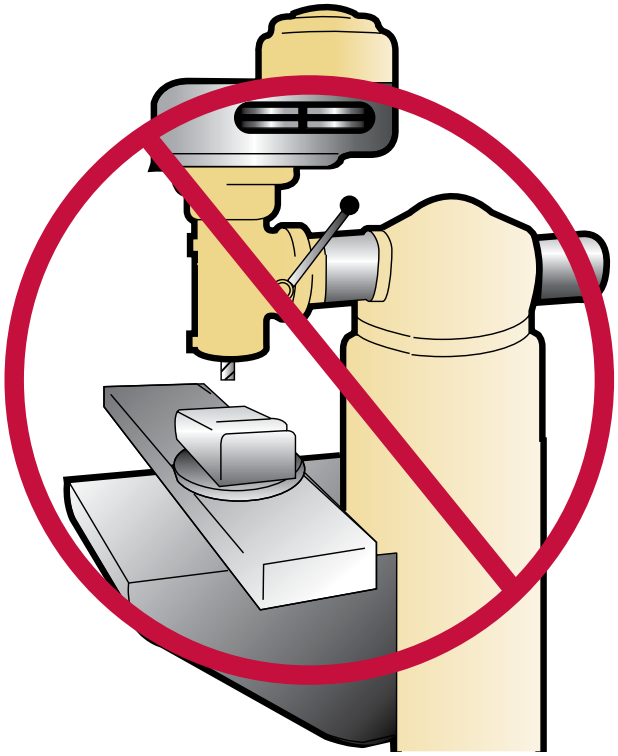
ALL PARTS BLACK OXIDE COATED



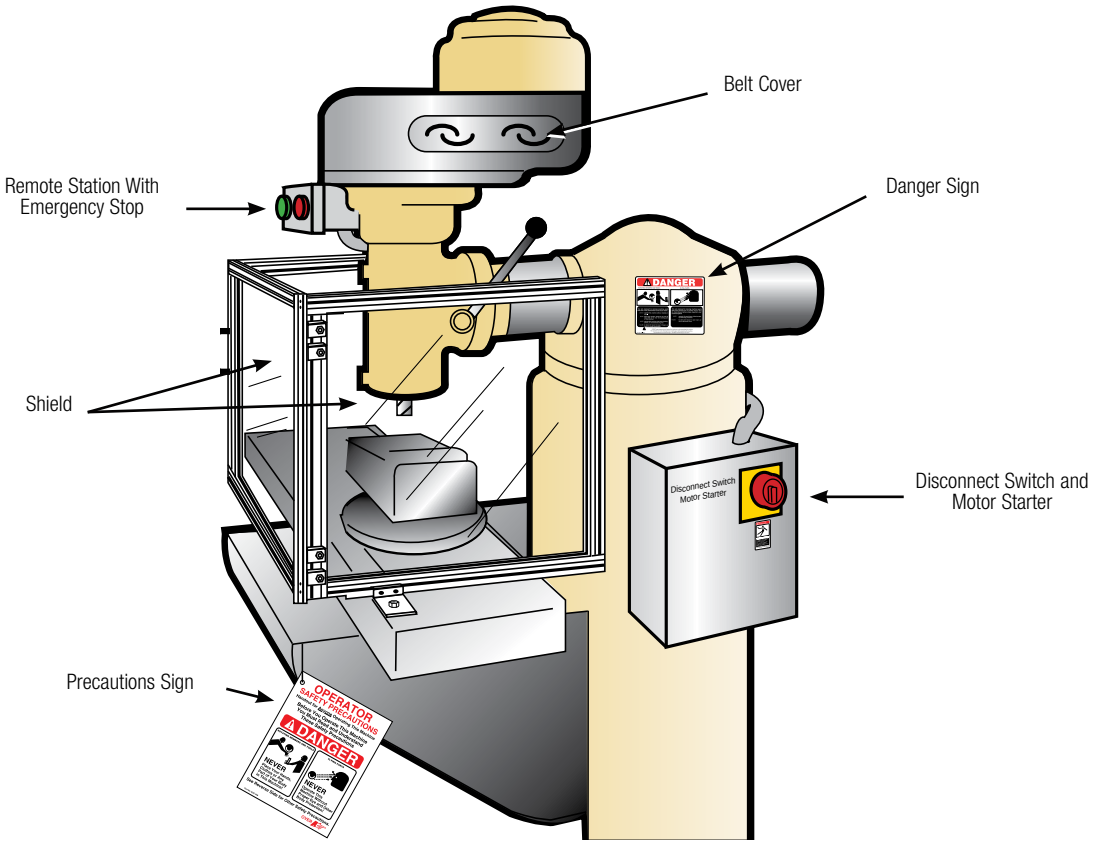
Ordering Information

PART NO.	NOMINAL SIZE	ACTUAL SIZE	BAR DIAMETER	OVERALL DIAMETER
CWSM0281L	9/32" SQ	.271"	3/4"	1.050"
CWSM0312L	5/16" SQ	.303"	3/4"	1.050"
CWSM0375L	3/8" SQ	.365"	3/4"	1.050"
CWSM0438L	7/16" SQ	.427"	3/4"	1.050"
CWSM0500L	1/2" SQ	.490"	3/4"	1.050"
CWSM0563L	9/16" SQ	.552"	15/16"	1.315"
CWSM0625L	5/8" SQ	.615"	15/16"	1.315"
CWSM0688L	11/16" SQ	.678"	15/16"	1.315"
CWSM0750L	3/4" SQ	.740"	15/16"	1.315"
CWHM0500L	1/2" HEX	.490"	3/4"	1.050"
CWHM0625L	5/8" HEX	.615"	3/4"	1.050"
CWHM0750L	3/4" HEX	.740"	15/16"	1.315"

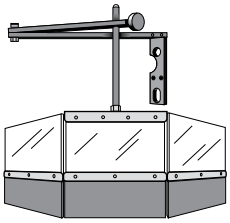
UNGUARDED MILLING MACHINE



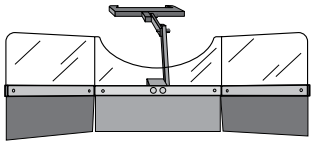
SAFEGUARDED MILLING MACHINE



SAFETY ON MILLING MACHINES



BRIDGEPORT MILLING MACHINE SHIELDS—FRONT (PAGE 65)



BRIDGEPORT MILLING MACHINE SHIELDS—REAR (PAGE 66)

SLIDE AND SWING-ASIDE SHIELDS (PAGES 67-68)

RIGID-ARM MAGNETIC-BASE SHIELDS (PAGE 78)

FLEXIBLE SPRING-STEEL ARM SHIELDS (PAGES 82-85)

UNIVERSAL BALL & SOCKET SHIELDS (PAGES 79-81)

ON/OFF MAGNETIC-BASE SHIELDS (PAGE 86)

ADJUSTABLE SLIDE SHIELDS (PAGE 77)

MILLING MACHINE BELT COVERS (PAGE 69)

DRAW BAR COVER

see www.rockfordsystems.com

ELECTRICAL INTERLOCK ASSEMBLY (PAGE 69)

BRIDGEPORT MILLING MACHINE CONTROLS (PAGE 66)

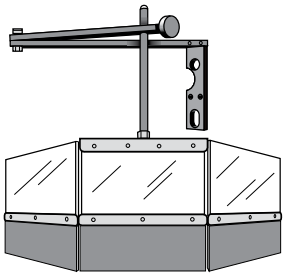
DISCONNECT SWITCHES, MOTOR STARTERS & ACCESSORIES (PAGES 89)

SAFETY SHIELDS FOR MILLING MACHINES

The Bridgeport Milling Machine Chip Shields (KYL019 and KYL059) are **Marked for Discontinuation** until inventory is depleted. Replacement shields will be supported and supplied through January 1, 2024 or until inventory is depleted.

KYL019

**Marked for Discontinuation*



Replacement Options

24" Basic Protector:

RSSC2XL361Y240
SINGLE PIVOT

- 3 Sided
- 24" x 9" x 6.5"
- Left Mount
- Articulating
- 3 Arms
- 36" Reach w/o Interlock
- 24" Offset
- No Enclosure

RSSC2XL362X240
DOUBLE PIVOT

- 3 Sided
- 24" x 9" x 6.5"
- Left Mount
- Articulating
- 3 Arms
- 36" Reach w/o Interlock
- 24" Offset
- No Enclosure

24" Lighted Protector:

RSSC2LL361Y241
SINGLE PIVOT

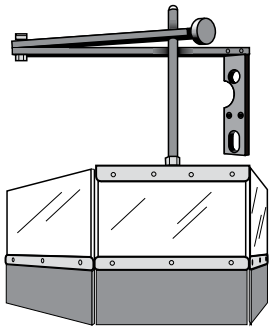
- 3 Sided
- 24" x 9" x 6.5" w/LED
- Left Mount
- Articulating
- 3 Arms
- 36" Reach w/o Interlock
- 24" Offset
- Lighted – Non-Interlocked Enclosure

RSSC2LL362X241
DOUBLE PIVOT

- 3 Sided
- 24" x 9" x 6.5" w/LED
- Left Mount
- Articulating
- 3 Arms
- 36" Reach w/o Interlock
- 24" Offset
- Lighted – Non-Interlocked Enclosure

KYL059

**Marked for Discontinuation*

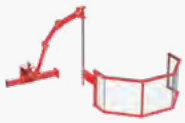


Replacement Options

16" Basic Protector:

RSSG4XL361Y120
SINGLE PIVOT

- Octagonal
- 16" x 8"
- Left Mount
- Articulating
- 3 Arms
- 36" Reach w/o Interlock
- 12" Offset
- No Enclosure



RSSG4XL362X120
DOUBLE PIVOT

- Octagonal
- 16" x 8"
- Left Mount
- Articulating
- 3 Arms
- 36" Reach w/o Interlock
- 12" Offset
- No Enclosure

16" Lighted Protector:

RSSG4LL361Y121
SINGLE PIVOT

- Octagonal
- 16" x 8" w/LED
- Left Mount
- Articulating
- 3 Arms
- 36" Reach w/o Interlock
- 12" Offset
- Lighted – Non Interlocked Enclosure

RSSG4LL362X121
DOUBLE PIVOT

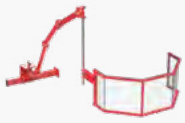
- Octagonal
- 16" x 8" w/LED
- Left Mount
- Articulating
- 3 Arms
- 36" Reach w/o Interlock
- 12" Offset
- Lighted – Non Interlocked Enclosure

Replacement Options

20" Basic Protector:

RSSG5XL361Y120
SINGLE PIVOT

- Octagonal
- 20" x 10"
- Left Mount
- Articulating
- 3 Arms
- 36" Reach w/o Interlock
- 12" Offset
- No Enclosure



RSSG5XL362X120
DOUBLE PIVOT

- Octagonal
- 20" x 10"
- Left Mount
- Articulating
- 3 Arms
- 36" Reach w/o Interlock
- 12" Offset
- No Enclosure

20" Lighted Protector:

RSSG5LL361Y121
SINGLE PIVOT

- Octagonal
- 20" x 10" w/LED
- Left Mount
- Articulating
- 3 Arms
- 36" Reach w/o Interlock
- 12" Offset
- Lighted – Non Interlocked Enclosure

RSSG5LL362X121
DOUBLE PIVOT

- Octagonal
- 20" x 10" w/LED
- Left Mount
- Articulating
- 3 Arms
- 36" Reach w/o Interlock
- 12" Offset
- Lighted – Non Interlocked Enclosure

These shields (KYL019 and KYL059) will be replaced with The Protector™ Series Shields. The Protector™ Series Shields (16", 20" or 24" size) are offered as basic, octagonal, 3 sided, single pivot, double pivot, interlocked, and interlocked and lighted forms. *Basic Protector shown/pictured for all shield variations below.*

24" Interlocked Protector:

RSSC2XL361M240
SINGLE PIVOT
- 3 Sided
- 24" x 9" x 6.5"
- Left Mount
- Articulating
- 3 Arms
- 36" Reach w/Interlock
- 24" Offset
- No Enclosure

RSSC2XL362L240
DOUBLE PIVOT
- 3 Sided
- 24" x 9" x 6.5"
- Left Mount
- Articulating
- 3 Arms
- 36" Reach w/Interlock
- 24" Offset
- No Enclosure

24" Interlocked + LED Protector:

RSSC2LL361M242
SINGLE PIVOT
- 3 Sided
- 24" x 9" x 6.5" w/LED
- Left Mount
- Articulating
- 3 Arms
- 36" Reach w/Interlock
- 24" Offset
- Lighted – Interlocked Enclosure

RSSC2LL362L242
DOUBLE PIVOT
- 3 Sided
- 24" x 9" x 6.5" w/LED
- Left Mount
- Articulating
- 3 Arms
- 36" Reach w/Interlock
- 24" Offset
- Lighted – Interlocked Enclosure

24" Interlocked + Monitored + LED Protector:

RSSC2LL361M243
SINGLE PIVOT
- 3 Sided
- 24" x 9" x 6.5" w/LED
- Left Mount
- Articulating
- 3 Arms
- 36" Reach w/Interlock
- 24" Offset
- Lighted – Interlocked & Monitored Enclosure

RSSC2LL362L243
DOUBLE PIVOT
- 3 Sided
- 24" x 9" x 6.5" w/LED
- Left Mount
- Articulating
- 3 Arms
- 36" Reach w/Interlock
- 24" Offset
- Lighted – Interlocked & Monitored Enclosure

16" Interlocked Protector:

RSSDG4XL361M120
SINGLE PIVOT
- Octagonal
- 16" x 8"
- Left Mount
- Articulating
- 3 Arms
- 36" Reach w/Interlock
- 12" Offset
- No Enclosure

RSSG4XL362L120
DOUBLE PIVOT
- Octagonal
- 16" x 8"
- Left Mount
- Articulating
- 3 Arms
- 36" Reach w/Interlock
- 12" Offset
- No Enclosure

16" Interlocked + LED Protector:

RSSG4LL361M122
SINGLE PIVOT
- Octagonal
- 16" x 8" w/LED
- Left Mount
- Articulating
- 3 Arms
- 36" Reach w/Interlock
- 12" Offset
- Lighted – Interlocked Enclosure

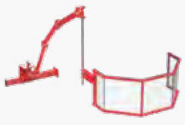
RSSG4LL362L122
DOUBLE PIVOT
- Octagonal
- 16" x 8" w/LED
- Left Mount
- Articulating
- 3 Arms
- 36" Reach w/Interlock
- 12" Offset
- Lighted – Interlocked Enclosure

16" Interlocked + Monitored + LED Protector:

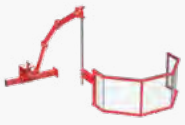
RSSG4LL361M123
SINGLE PIVOT
- Octagonal
- 16" x 8" w/LED
- Left Mount
- Articulating
- 3 Arms
- 36" Reach w/Interlock
- 12" Offset
- Lighted – Interlocked & Monitored Enclosure

RSSG4LL362L123
DOUBLE PIVOT
- Octagonal
- 16" x 8" w/LED
- Left Mount
- Articulating
- 3 Arms
- 36" Reach w/Interlock
- 12" Offset
- Lighted – Interlocked & Monitored Enclosure

20" Interlocked Protector:

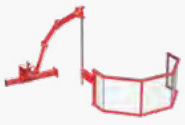


RSSG5XL361M120
SINGLE PIVOT
- Octagonal
- 20" x 10"
- Left Mount
- Articulating
- 3 Arms
- 36" Reach w/Interlock
- 12" Offset
- No Enclosure



RSSG5XL362L120
DOUBLE PIVOT
- Octagonal
- 20" x 10"
- Left Mount
- Articulating
- 3 Arms
- 36" Reach w/Interlock
- 12" Offset
- No Enclosure

20" Interlocked + LED Protector:



RSSG5LL361M122
SINGLE PIVOT
- Octagonal
- 20" x 10" w/LED
- Left Mount
- Articulating
- 3 Arms
- 36" Reach w/Interlock
- 12" Offset
- Lighted – Interlocked Enclosure

RSSG5LL362L122
DOUBLE PIVOT
- Octagonal
- 20" x 10" w/LED
- Left Mount
- Articulating
- 3 Arms
- 36" Reach w/Interlock
- 12" Offset
- Lighted – Interlocked Enclosure

20" Interlocked + Monitored + LED Protector:

RSSG5LL361M123
SINGLE PIVOT
- Octagonal
- 20" x 10" w/LED
- Left Mount
- Articulating
- 3 Arms
- 36" Reach w/Interlock
- 12" Offset
- Lighted – Interlocked & Monitored Enclosure

RSSG5LL362L123
DOUBLE PIVOT
- Octagonal
- 20" x 10" w/LED
- Left Mount
- Articulating
- 3 Arms
- 36" Reach w/Interlock
- 12" Offset
- Lighted – Interlocked & Monitored Enclosure

CHIP SHIELDS FOR BRIDGEPORT MILLING MACHINES

These specially designed, quality-constructed shields are ideal for Bridgeport milling machines. They place a barrier between flying chips (swarf), sparks, coolant from the machine, and the operators or other employees in the area. They can be easily moved in or out of position to provide quick tool and part changes.

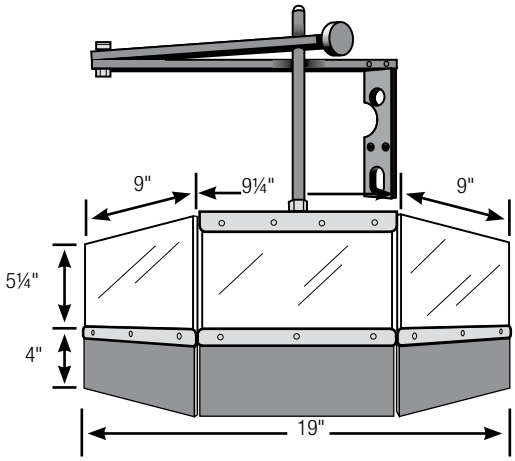
These shields are quick and easy to install. They attach directly to existing head machine bolts so no additional drilling or tapping is required.

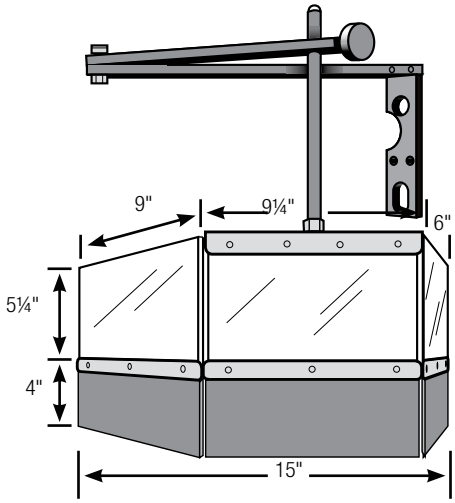
These shields are constructed of high-impact-resistant polycarbonate material. Attached at the bottom of each section of the shield is durable, flexible neoprene material to keep flying chips and swarf contained as the bed moves up and down.

FRONT SHIELDS

The front shield is mounted on a heavy-duty universal steel arm which is used to swing it back into the exact position it was before tool or workpiece changes. The arm is 29" long and has an adjusting knob for raising and lowering the shield. The shield itself can also be used to hold a print.

KYL019 front chip shield.





Ordering Information

PART NO.	DESCRIPTION
KYL019	9¼" H x 19" W **Front** Shield With Two 45° Bends
KYL065	9¼" x 19" **Front** Replacement Shield Only

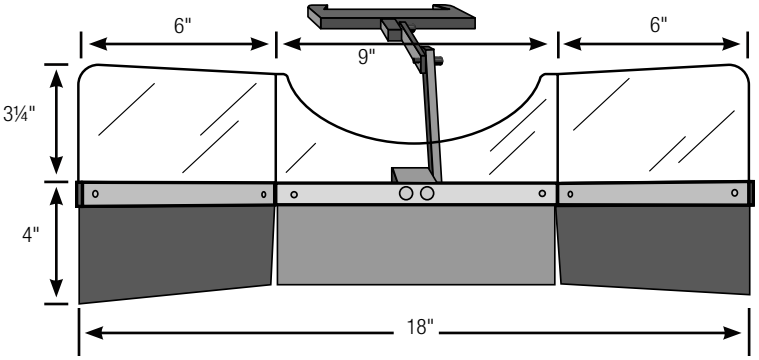
Ordering Information

PART NO.	DESCRIPTION
KYL059	9¼" H x 15" W **Front** Shield With One 45° Bend and One 90º Bend

CHIP SHIELDS FOR BRIDGEPORT MILLING MACHINES (CONTINUED)

REAR SHIELD

A rear shield is also available to protect the back area of the milling machine. This shield is easy to install and mounts directly onto the machine frame with a setscrew to hold it in place.



Rear shield only (front shield not shown).

Ordering Information

PART NO.	DESCRIPTION
KYL020	7¼" H x 18" W **Rear** Shield With Two 45° Bends
KYL065	7¼" x 18" **Rear** Replacement Shield Only

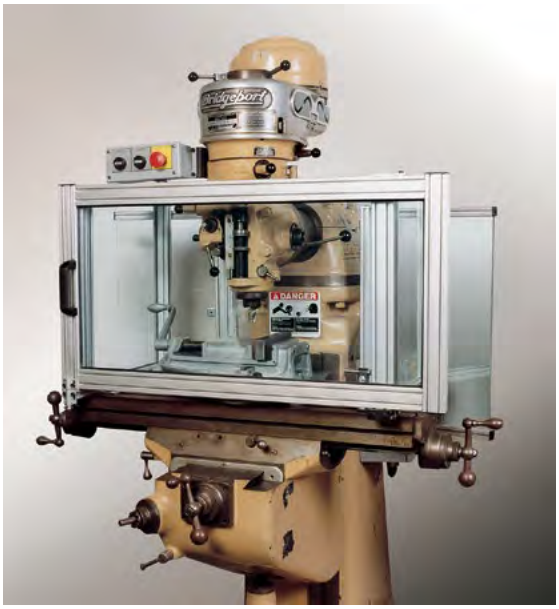
BRIDGEPORT VERTICAL MILLING MACHINE CONTROLS

This control is designed for Bridgeport vertical milling machines that have a table motor. Each milling machine control is housed in a NEMA 12 enclosure that includes a disconnect switch, reversing magnetic main drive motor starter, a control relay for the table motor, and a 100 VA transformer that is generically numbered and wired to terminals. A remote station provides the operator controls consisting of a self-latching red emergency-stop palm button, an illuminated green table motor reset push button, and a main motor reverse/off/forward selector switch. These Bridgeport vertical milling machine controls are available for machines with 208, 230 or 460 VAC and 1 to 5 HP.

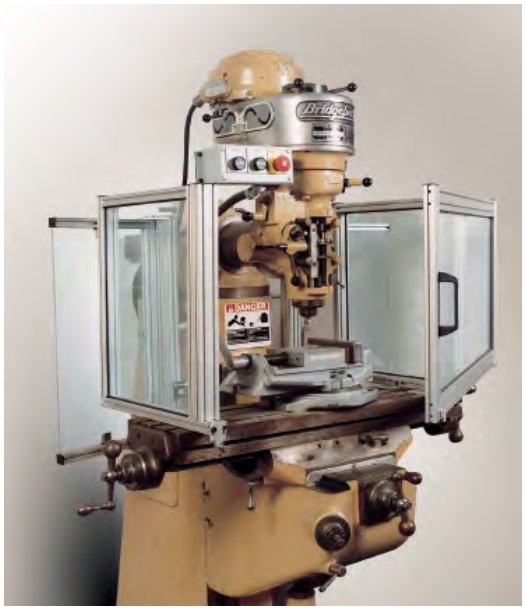
Ordering Information

PART NO.	DESCRIPTION
BVM2081	For 1HP, 208-VAC Machine
BVM2081Z5	For 1.5HP, 208-VAC Machine
BVM2082	For 2HP, 208-VAC Machine
BVM2301	For 1 HP, 230-VAC Machines
BVM23015	For 1.5 HP, 230-VAC Machines
BVM2302	For 2 HP, 230-VAC Machines
BVM2303	For 3 HP, 230-VAC Machines
BVM4601	For 1 HP, 460-VAC Machines
BVM46015	For 1.5 HP, 460-VAC Machines
BVM4602	For 2 HP, 460-VAC Machines
BVM4603	For 3 HP, 460-VAC Machines
BVM4605	For 5HP, 460-VAC Machine

SLIDE AND SWING-ASIDE SHIELDS



Part No. SSA000 with door closed.



Part No. SSA000 with door open.

INTRODUCTION

These shields protect operators when machining either small workpieces or large castings that sometimes overhang the milling machine table. At the same time, they can provide immediate and complete access to the workpiece or casting being machined by sliding or swinging aside the door(s), as illustrated.

THE SHIELD

The transparent portion of the shield is constructed of impact-resistant polycarbonate. The frame of the shield is made of 1" x 2" extruded aluminum. The shield has front sliding panel(s) and two side fixed panels. The side panels are attached at both ends of the table.

These assemblies can be mounted or removed in a matter of minutes by using two locking T-bolts with nuts.

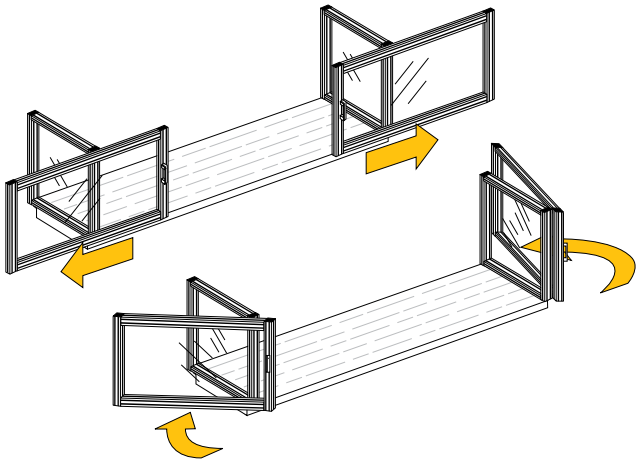
Each of the front panels can slide to the right or left and swing aside on their own axis out of the way (see drawings).

The advantage of the slide and swing-aside movement is that you can obtain immediate access to the whole length of the table for loading and unloading large workpieces. Although the panels slide aside, they will not take up any more room than the actual length of the table itself, because the sliding and swing-aside action takes place in one movement by simply lifting a latch.

THE SHIELD CONSTRUCTION

The parallel sliding bars enable the shield to be adjusted to the distance required from the front of the table to the shield. The adjustment on these bars caters to castings or large components which overhang the table. This adjustment is achieved by loosening the two socket cap screws at either end of the table. This permits the complete shield assembly to be moved backwards or forwards to the position required.

A safety latch is provided where the two front panels or the front and side panels come together which holds the panels in place. The latch has to be released manually prior to opening the panels.



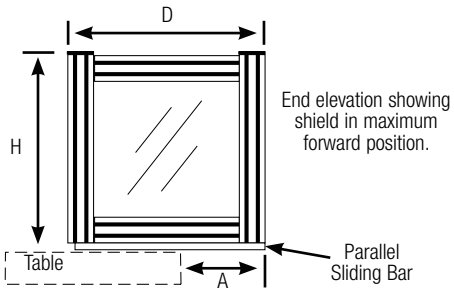
The unique construction allows the front panels to slide and swing aside exposing the entire table.

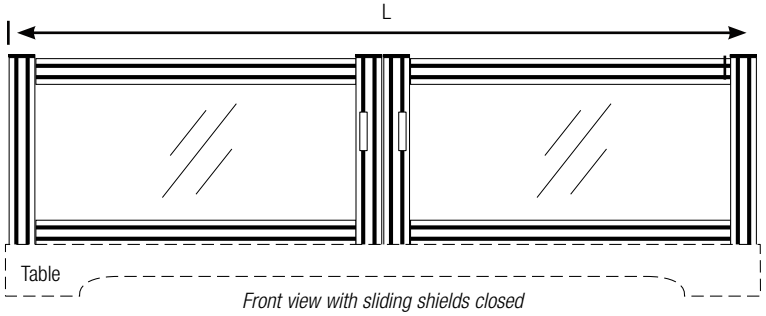
SLIDE AND SWING-ASIDE SHIELDS (CONTINUED)

There are three sizes of shields available which cover table sizes up to a maximum length of 76". On bed-type milling machines, where the table length is well in excess of 76", it is still possible to use the SSA300 shield. In many instances, only part of the maximum length of the table is used. If this is the case, the SSA300 shield would be suitable as long as the longitudinal traverse used does not exceed the maximum length of the shield. For a table length of less than 36", the SSA000 shield may be used.

These shields have been generously designed to give protection to the operator; this will be noted in dimension H, which gives the height of the shields. Special height panels are available upon request.

The standard shield does not provide protection on the back of the table. The rear shields (below) are used to minimize coolant splash and flying chips that may fly out of the back of the machine.





Front view with sliding shields closed

Ordering Information

PART NO.	L–LENGTH OF TABLE WORK SURFACE	H HEIGHT	D DEPTH	A MAXIMUM ADJUSTMENT
SSA000*	24"-36"	20"	20"	13"
SSA200**	36"-56"	20"	20"	13"
SSA300**	56"-76"	20"	20"	13"

*Has one sliding and swing front door
**Has two sliding and swing front panels.

REAR SHIELD ASSEMBLIES

These shield assemblies can be used to protect personnel from swarf and chips at the rear of the table on both sides of the machine column. They can be used on milling machines or other equipment that require these types of shields. The two ¼"-thick polycarbonate panels are mounted to the frame of the machine with mounts (see photo). Each panel has extruded aluminum framing to hold the polycarbonate in place. The mounts are also attached to this frame. The assembly is available in two sizes and includes two shields, one set of mounts, and connectors. Special sizes are available upon request.

Ordering Information

PART NO.	DESCRIPTION
SSA420	24" x 24" Rear Shields With Mounts (Set)
SSA430	24" x 36" Rear Shields With Mounts (Set)


Rear shield assembly on left side of machine column.

MILLING MACHINE BELT COVER

OSHA requires under 29 CFR 1910.219 that all mechanical power-transmission apparatuses on machinery that create a hazard be covered if below a 7-foot level from the floor or working platform. The sheaves and belts on milling machines must be covered to meet this requirement.

These unique patented belt covers are made of durable cast aluminum. The hinged covers are sold in pairs for the right and left sides and are permanently attached to the machine. Spindle speed changes are done quickly and efficiently by simply pulling down the belt cover.

This belt cover is made for Bridgeport model J.

Ordering Information

Part No.	Description
KYL021J	Model J Belt Cover With Hinges—11" W x 2¾" H x ⅜" Thick

Cover closed.

Cover open on model J Bridgeport milling machine.

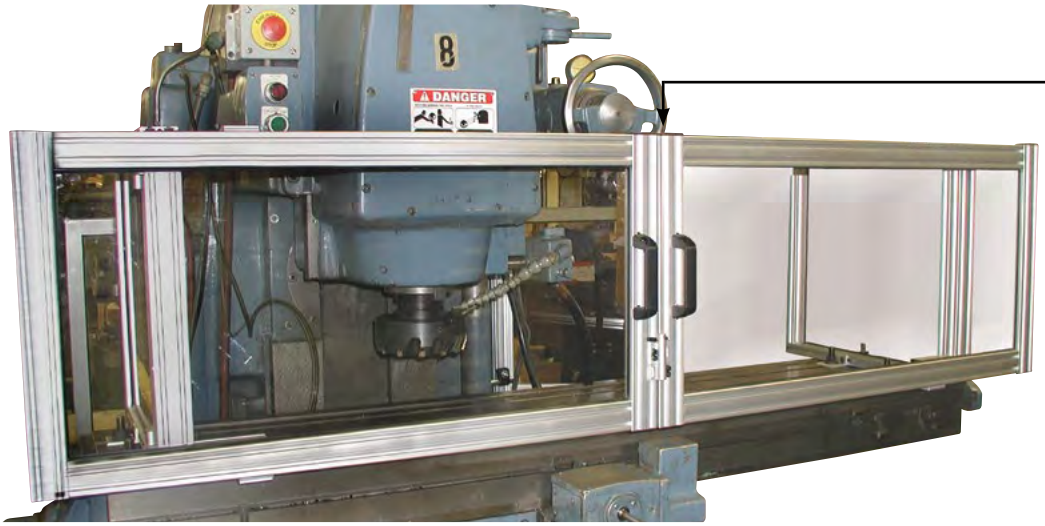
ELECTRICAL INTERLOCK ASSEMBLY

MAGNETIC SAFETY SWITCH AND BRACKET ASSEMBLY PART NO. FKT876

Additional operator safety can be provided by the installation of this magnetic safety switch and bracket assembly.

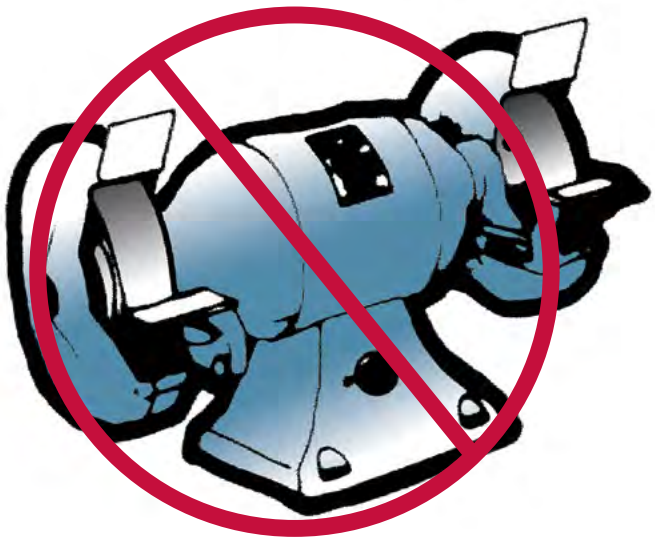
INTERLOCK SWITCH SPECIFICATIONS

Contacts.....1 NO
Operating Temperature.....14º to 149º F (-10º to 65º C)
Rated Current.....2 A, fuse externally 1.6 A quick acting
Rated Voltage .....250 VAC
Cable .....13 ft of prewired 2-conductor flexible cable

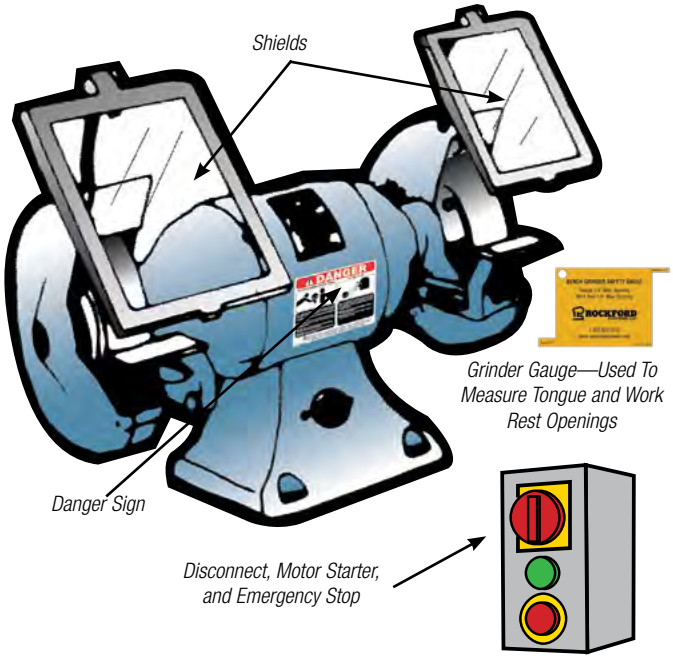


(Mounted on inside of front panels.)

UNGUARDED GRINDER



SAFEGUARDED GRINDER



SAFETY ON BENCH GRINDERS

RIGID-ARM MAGNETIC-BASE SHIELDS
(PAGE 78)

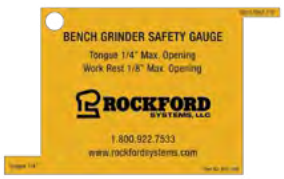
DOUBLE-WHEEL FLEXIBLE-ARM SHIELDS
(PAGE 71)

SINGLE-WHEEL FLEXIBLE-ARM SHIELDS
(PAGE 71)

STANDARD-MOUNT GRINDER SHIELDS
(PAGE 72)

UNIVERSAL BALL & SOCKET SHIELDS
(PAGES 79-81)

HEAVY-DUTY SINGLE BUFFER SHIELDS
(PAGE 72)



BENCH GRINDER SAFETY GAUGE
(PAGE 73)

DISCONNECT SWITCHES, MOTOR STARTERS, AND ACCESSORIES
(PAGES 89)

DOUBLE- AND SINGLE-WHEEL FLEXIBLE-ARM GRINDER SHIELDS

Double-Wheel Grinder Shield

Bench grinder shields are designed to minimize the debris and hazards associated with bench grinders and buffers. Both double- and single-wheel grinder shields are available.

The double-wheel grinder shield provides protection for both wheels of the grinder with one continuous shield. The durable shield is made of clear, 3/16"-thick polycarbonate and measures 18" x 6". A special shield bracket adds stability to the top of the shield.

The single-wheel grinder shield is made of clear, 3/16"-thick polycarbonate and measures 6" x 6". This sturdy, impact-resistant shield is designed for use when a single wheel needs safeguarding.

The flexible spring-steel arms come in three lengths: 12", 18" and 24".

MOUNTING OPTIONS

There are two mounting options for the double- and single-wheel grinder shields.

- Direct-mount base—attaches directly to the grinder table or pedestal
- Magnetic base—3" diameter magnet

If an adequate flat, smooth, ferrous mounting surface is not available, an optional steel mounting plate is available that can be permanently attached to the machine to hold the magnetic base.

Part No. FKT1106
Steel Mounting Plate

DOUBLE-WHEEL GRINDER SHIELDS— 18" X 6" FLAT SHIELD

PART NO.	DESCRIPTION
KYL183	12" Direct-Mount Flexible Spring-Steel Arm
KYL184	18" Direct-Mount Flexible Spring-Steel Arm
KYL186	12" Magnetic-Mount Flexible Spring-Steel Arm
KYL187	18" Magnetic-Mount Flexible Spring-Steel Arm
KYL177	18" x 6" Flat Replacement Shield Only
FKT1072	Flat Mounting Bracket for 18" x 6" Shield
FKT1106	3½" x 4⅝" Steel Mounting Plate for Magnetic Base

SINGLE-WHEEL GRINDER SHIELDS— 6" X 6" FLAT SHIELD

PART NO.	DESCRIPTION
KYL178	18" Direct-Mount Flexible Spring-Steel Arm
KYL180	12" Magnetic-Mount Flexible Spring-Steel Arm
KYL181	18" Magnetic-Mount Flexible Spring-Steel Arm
KYL176	6" x 6" Flat Replacement Shield Only
FKT1106	3½" x 4⅝" Steel Mounting Plate for Magnetic Base

Single-Wheel Grinder Shield

STANDARD-MOUNT GRINDER SHIELDS

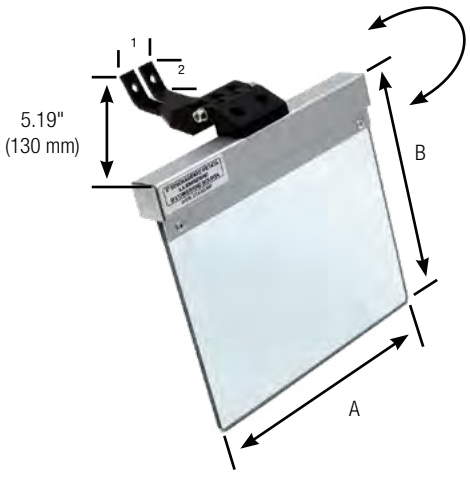
These grinder shields are available in various sizes for protection from the swarf of bench or pedestal grinders. The frames are constructed of reinforced fiber nylon or heavy cast aluminum. Each shield is furnished with a threaded support rod. The transparent shield is high-impact-resistant polycarbonate to minimize scratching and provide durability.

Ordering Information

PART NO.	DESCRIPTION (EACH SOLD SEPARATELY)	REPLACEMENT POLYCARBONATE WINDOW
GWG201	6¼" H x 5¼" W Shield—Nylon Frame	GWW001
GWG202	8½" H x 6" W Shield—Nylon Frame	GWW002
GWG203	12¾" H x 12" W Shield—Aluminum Frame	GWW003

HEAVY-DUTY SINGLE BUFFER SHIELDS

These buffer shields are available in various sizes for protection from the swarf of bench or pedestal grinders. The frames are constructed of reinforced fiber nylon or heavy cast aluminum. Each shield is furnished with a threaded support rod. The transparent shield is high-impact-resistant polycarbonate to minimize scratching and provide durability.



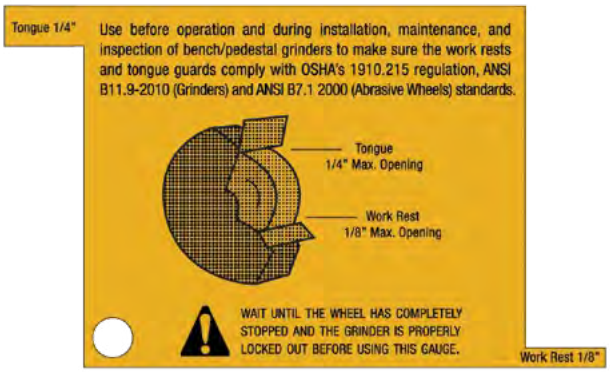
[1] 1.18" (30 mm) [2] 0.98" (25 mm)

Ordering Information

PART NO.	A	B
PMA02/112	6.3" (160 mm)	5.71" (145 mm)
PMA02/216	7.87" (200 mm)	7.28" (185 mm)

BENCH GRINDER SAFETY GAUGE—PART NO. KSC096

Front



Back

The bench grinder safety gauge is laser-cut, Grade 5052 aluminum with H32 hardness. The safety yellow, durable powder-coated gauge has silk-screened text and graphics. It measures 2¾" wide by 2¼" high by .1000" thick and has a ¼" hole for attachment to the bench grinder.

OSHA 29 CFR 1910.215 specifies that work rests must be kept adjusted closely to the wheel with a maximum opening of 1/8" to prevent the workpiece from being jammed between the wheel and the rest. OSHA also states that the distance between the grinding wheel and the adjustable tongue must never exceed ¼".

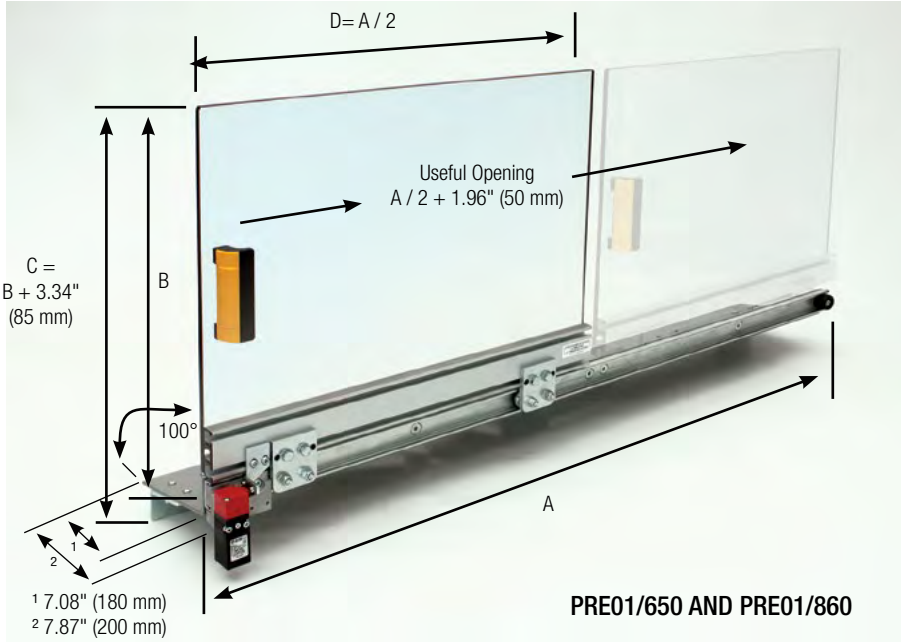
Bench Grinder Safety Guage with Tether

The bench grinder gauge includes an 18" long plastic-coated, 18-8 stainless steel tether that is riveted to the gauge on one end and open to screw (hex head 1/2" long drilling screw #10 included) into a machine stand on the other, allowing you to keep your grinder gauge next to your bench grinder all the times and prevent it from getting lost or stolen.

Checking tongue opening.

Checking work rest opening.

ELECTRICALLY INTERLOCKED SURFACE GRINDER SHIELDS

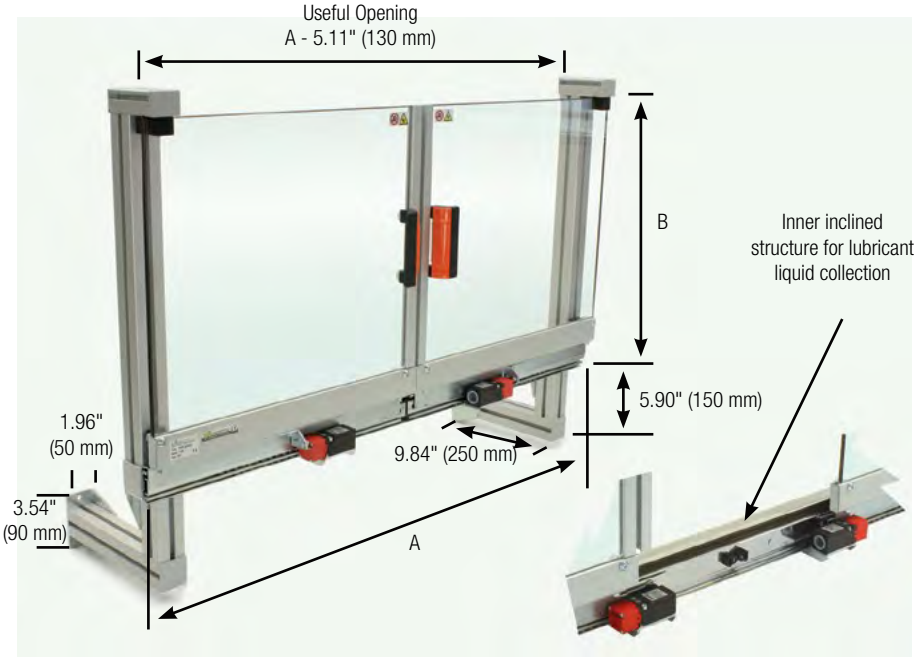


PRE01/650 AND PRE01/860

Ordering Information

PART NO.	A	B
PRE01/650	47.24" (1,200 mm)	19.68" (500 mm)
PRE01/860	62.99" (1,600 mm)	23.62" (600 mm)

Note: May be purchased without safety microswitch



Ordering Information

PART NO.	A	B
PRE10/550	39.37" (1,000 mm)	20.07" (510 mm)
PRE10/655	47.24" (1,200 mm)	22.04" (560 mm)
PRE10/860	62.99" (1,600 mm)	25.98" (660 mm)

Note: May be purchased without safety microswitch

BAND SAW SHIELD ASSEMBLIES

These high-quality band saw shields place a barrier between an operator and flying debris generated at the point of operation. The transparent, L-shaped portion of the band saw shield is constructed of high-impact-resistant, 3/16"- thick clear polycarbonate.

Flexible spring-steel arms come in standard lengths of 12", 18", and 24" for attaching the shield.

The band saw shield assemblies are offered with a direct-mount base that is attached directly to the band saw. Mounting hardware is included.

DIMENSIONS

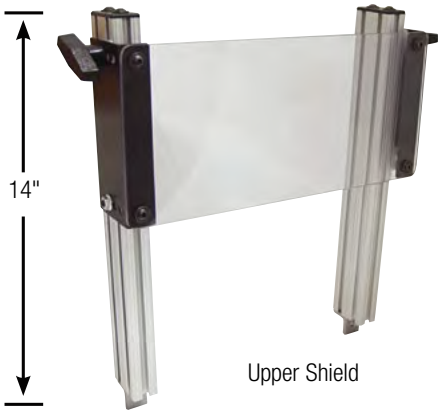
Ordering Information

PART NO.	DESCRIPTION
KYL189	12" Direct-Mount Arm With 6" H x 6" W L-Shaped Shield (4" D)
KYL190	18" Direct-Mount Arm With 6" H x 6" W L-Shaped Shield (4" D)
KYL175	6" x 6" L-Shaped Replacement Shield Only

DISC AND BELT SANDER SHIELD ASSEMBLIES

These high-quality, adjustable disc and belt sander shields place a barrier between an operator and flying debris generated at the point of operation. They fasten directly to the machine using 1" x 2" extruded aluminum with mounting hardware included. The transparent portion of the shield is constructed of high-impact-resistant, 3/16"-thick clear polycarbonate. Easy vertical adjustment of the shields is achieved simply by loosening and tightening the black knobs.

These shields can also be used on a combination belt sander & disc sander.

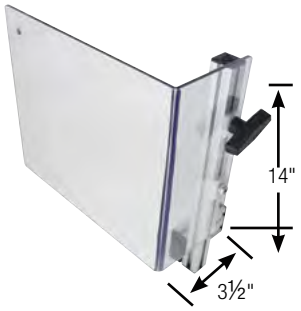


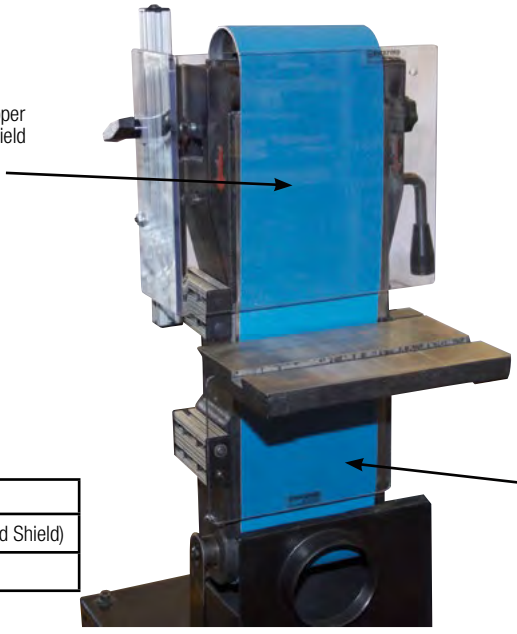
Disc sander shield assembly.

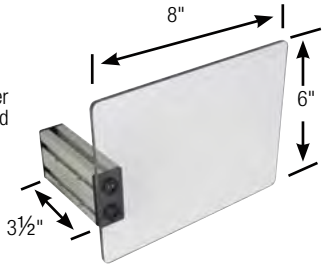
Disc Sander Shield

PART NO.	DESCRIPTION	REPLACEMENT SHIELD
KYL228	9" Disc Sander Shield Assembly (6" x 13" Shield)	KYL229
KYL230	12" Disc Sander Shield Assembly (7" x 16" Shield)	KYL231
KYL232	16" Disc Sander Shield Assembly (9" x 20" Shield)	KYL233
KYL234	20" Disc Sander Shield Assembly (11" x 24" Shield)	KYL235
KYL236	24" Disc Sander Shield Assembly (13" x 28" Shield)	KYL237

BELT SANDER SHIELD ASSEMBLIES







Belt sander shield assembly.

Upper Belt Shield

PART NO.	DESCRIPTION
KYL226	Upper Belt Shield Assembly (L-Shaped Shield)
KYL227	Upper Belt Shield Only (L-Shaped)

Lower Belt Shield

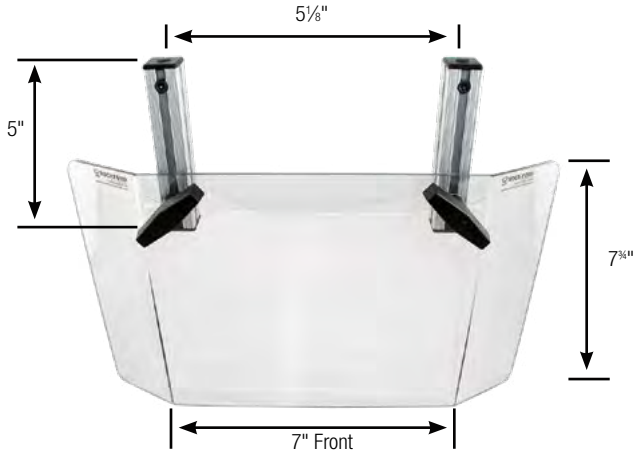
PART NO.	DESCRIPTION
KYL224	Lower Belt Shield Assembly (6" x 8" Shield)
KYL225	Lower Belt Shield Only (6" x 8")

ADJUSTABLE SLIDE SHIELDS

These high-quality adjustable slide shields can be used on drills, mills, saws, or special machine applications. The transparent portion of these shields is constructed of durable, clear 3/16"-thick polycarbonate. The shield places a barrier between an operator and the flying chips (swarf), sparks, and coolant generated at the point of operation.

These shields can be mounted vertically or horizontally on the flat surface of any machine. The transparent portion of the shield attaches to the mounting brackets and offers a slide adjustment of 3½". Two standard size shields with 30° sides are available: 7¾" x 11" and 9½" x 19". Contact Rockford Systems for other shield sizes or longer adjustments.

Adjustable slide shield on front column of machine.



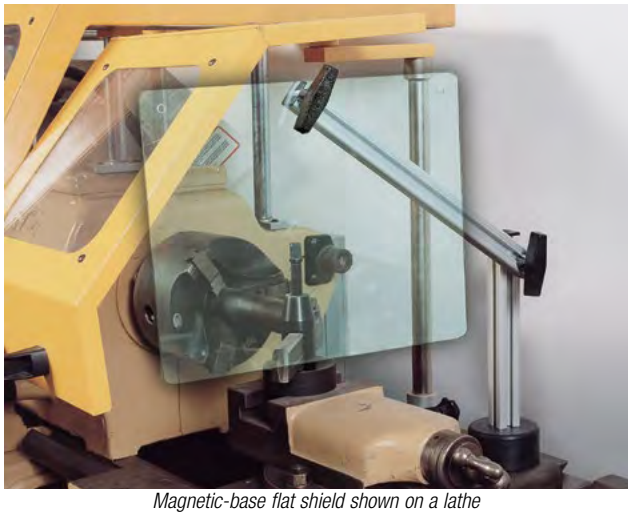
Adjustable Slide Shield—7" Front

PART NO.	DESCRIPTION
KYL192	Adjustable Slide Shield With 30° Angle and 7" Front
KYL012	Replacement Shield—7" Front

Adjustable Slide Shield—10⅜" Front

PART NO.	DESCRIPTION
KYL193	Adjustable Slide Shield With 30° Angle and 10⅜" Front
KYL017	Replacement Shield—10⅜" Front

RIGID-ARM MAGNETIC-BASE SHIELDS

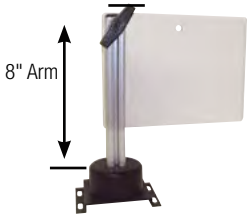


Magnetic-base flat shield shown on a lathe

Magnetic-base concave shield shown on a lathe

These rugged magnetic-base shields can be used on lathes, small milling machines, drills, grinders, band saws, etc. These shields can be attached to any ferrous surface on the machine by an 80-lb pull magnetic base. If a flat, smooth, ferrous surface is not available, a mounting plate (3½" x 4-5/8") is also furnished. Large polypropylene plastic handles are used for easy positioning and locking.

The transparent portion of the chip shield is constructed of high-impact-resistant, 3/16"-thick clear polycarbonate material. It is furnished with a circular base which measures 3¼" in diameter. An 8" aluminum base extrusion is provided and attaches to the magnetic base. Also available is a 12" extruded-aluminum arm extension. This arm can be cut to a shorter length if required for your application.



PART NO.	DESCRIPTION	REPLACEMENT SHIELD ONLY
CBS1C1	Base With 6" x 8" Flat Shield	CSAA3
CBS2C1	Base With 10" x 12" Flat Shield	CSAA5
CBS3C1	Base With 14" x 16" Flat Shield	CSAA7

PART NO.	DESCRIPTION	REPLACEMENT SHIELD ONLY
CBS1C1B	6" x 8" Flat Shield With 12" Arm Extension	CSAA3
CBS2C1B	10" x 12" Flat Shield With 12" Arm Extension	CSAA5
CBS3C1B	14" x 16" Flat Shield With 12" Arm Extension	CSAA7

PART NO.	DESCRIPTION	REPLACEMENT SHIELD ONLY
CBS6C1	Base With 8" x 10" Concave Shield	CSAD2
CBS7C1	Base With 10" x 12" Concave Shield	CSAD3

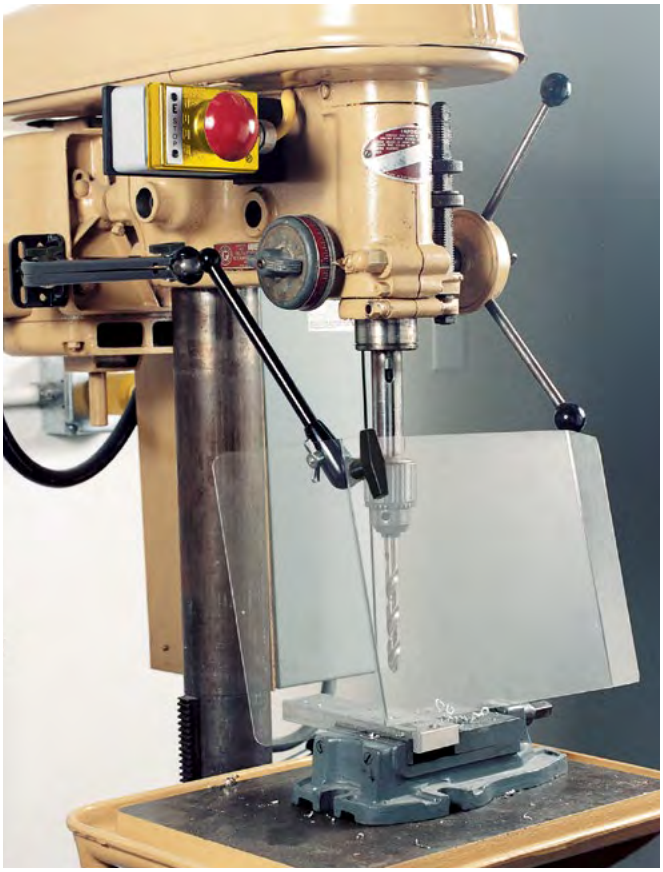
PART NO.	DESCRIPTION	REPLACEMENT SHIELD ONLY
CBS6C1B	8" x 10" Concave Shield With 12" Arm Extension	CSAD2
CBS7C1B	10" x 12" Concave Shield With 12" Arm Extension	CSAD3

UNIVERSAL BALL & SOCKET SHIELDS

A variety of these quality-constructed, very versatile shields are available. They are ideal for mills, drills, lathes, grinders, band saws, or similar equipment including woodworking machines. The shield places a barrier between operators or other employees in the area and the flying chips (swarf), sparks, and coolant generated from the tool. These shields are furnished with heavy universal steel ball-and-socket arms to provide simple movement and adjustment. Large polypropylene plastic handles are used for positioning and locking. Arms mount easily to the frame or column of the machine and include standard mounting hardware.

The shields offered are made of high-impact-resistant 3/16"-thick clear polycarbonate, selected for its toughness under impact to protect the operator. Each shield, except for the flat shield, has a hole in the left and right corners so the arm can be conveniently mounted on either side of the machine. Special size shields are available upon request.

Universal ball & socket shield on a milling machine.



Universal ball & socket shield shown on a drill press.

Universal ball & socket shield shown on a band saw.

UNIVERSAL BALL & SOCKET SHIELDS (CONTINUED)

All Steel Pivot Balls Are Hardened For Longevity

PART NO.	DESCRIPTION
KYL104	6" x 8" Flat Shield With 21" Universal Arm
KYL105	6" x 8" Flat Shield With 31" Universal Arm
KYL106	6" x 8" Flat Shield With 44" Universal Arm
CSAA3	6" x 8" Flat Replacement Shield Only
CYF016	Clamp Kit for Attaching to Table or Ledge

PART NO.	DESCRIPTION
KYL107	10" x 12" Flat Shield With 21" Universal Arm
KYL108	10" x 12" Flat Shield With 31" Universal Arm
KYL109	10" x 12" Flat Shield With 44" Universal Arm
CSAA5	10" x 12" Flat Replacement Shield Only
CYF016	Clamp Kit for Attaching to Table or Ledge

PART NO.	DESCRIPTION
KYL110	30° Angle Shield 8" H (7" Front) With 21" Universal Arm
KYL111	30° Angle Shield 8" H (7" Front) With 31" Universal Arm
KYL112	30° Angle Shield 8" H (7" Front) With 44" Universal Arm
KYL012	30° Angle 8" H (7" Front) Replacement Shield Only
CYF016	Clamp Kit for Attaching to Table or Ledge

PART NO.	DESCRIPTION
KYL113	30° Angle Shield 9½" H (10⅜" Front) With 21" Universal Arm
KYL114	30° Angle Shield 9½" H (10⅜" Front) With 31" Universal Arm
KYL115	30° Angle Shield 9½" H (10⅜" Front) With 44" Universal Arm
KYL017	30° Angle 9½" H (10⅜" Front) Replacement Shield Only
CYF016	Clamp Kit for Attaching to Table or Ledge

UNIVERSAL BALL & SOCKET SHIELDS (CONTINUED)

THE 90º SIDE PREVENTS INTERFERENCE WITH A DRILL PRESS HANDLE

PART NO.	DESCRIPTION
KYL127	30° & 90° Angle Shield 9½" H (10 3/8" Front) With 21" Universal Arm
KYL128	30° & 90° Angle Shield 9½" H (10 3/8" Front) With 31" Universal Arm
KYL129	30° & 90° Angle Shield 9½" H (10 3/8" Front) With 44" Universal Arm
KYL126	30° & 90° Angle 9½" H (10 3/8" Front) Replacement Shield Only
CYF016	Clamp Kit for Attaching to Table or Ledge

PART NO.	DESCRIPTION
KYL116	90° Angle Shield 9½" H (11" Front) With 21" Universal Arm
KYL117	90° Angle Shield 9½" H (11" Front) With 31" Universal Arm
KYL118	90° Angle Shield 9½" H (11" Front) With 44" Universal Arm
KYL018	90° Angle 9½" H (11" Front) Replacement Shield Only
CYF016	Clamp Kit for Attaching to Table or Ledge

PART NO.	DESCRIPTION
KYL119	8" x 10" Concave Shield With 21" Universal Arm
KYL120	8" x 10" Concave Shield With 31" Universal Arm
KYL121	8" x 10" Concave Shield With 44" Universal Arm
CSAD2	8" x 10" Concave Replacement Shield Only
CYF016	Clamp Kit for Attaching to Table or Ledge

PART NO.	DESCRIPTION
KYL122	10" x 12" Concave Shield With 21" Universal Arm
KYL123	10" x 12" Concave Shield With 31" Universal Arm
KYL124	10" x 12" Concave Shield With 44" Universal Arm
CSAD3	10" x 12" Concave Replacement Shield Only
CYF016	Clamp Kit for Attaching to Table or Ledge

CYF016—Clamp kit attaches to table or ledge.

FLEXIBLE SPRING-STEEL ARM SHIELDS

These flexible arms are made of high-quality, heavy-duty ¾"-diameter spring steel covered with vinyl to protect from grease, oil, and contaminants that could weaken their holding power. They offer virtually unlimited adjustment possibilities and long-term holding power.

The shield can be used on lathes, drill presses, milling machines, grinders, band saws, woodworking machines, and similar equipment. It places a barrier between an operator and flying chips (swarf), sparks, and splashing coolant generated at the point of operation. The transparent portion of these flexible-arm shields is constructed of high-impact-resistant, 3/16"-thick polycarbonate. Special shield sizes are available up to 12" x 12"; please call our sales department at 1-800-922-7533 for more information.

The flexible-arm shields have two mounting options: direct or magnetic. The direct-mount base can be fastened directly to a machine with two ¼" fasteners (included). The magnetic base consists of a 3"-diameter magnet with **100-lb holding force.** If an adequate flat, smooth, ferrous mounting surface is not available, an optional steel mounting plate can be permanently attached to the machine to hold the magnetic base.

Flexible spring-steel arm shield on milling machine.

Flexible spring-steel arm shield on milling machine.

Flexible spring-steel arm shield on lathe.

FLEXIBLE SPRING-STEEL ARM SHIELDS (CONTINUED)

MADE OF ¾"-DIAMETER VINYL-COVERED SPRING STEEL

PART NO.	DESCRIPTION
KYL096	6" x 8" Flat Shield and 12" Arm With Direct-Mount Base
KYL097	6" x 8" Flat Shield and 18" Arm With Direct-Mount Base
CSAA3	6" x 8" Flat Replacement Shield Only

PART NO.	DESCRIPTION
KYL100	6" x 8" Flat Shield and 12" Arm With Magnetic Base
KYL101	6" x 8" Flat Shield and 18" Arm With Magnetic Base
CSAA3	6" x 8" Flat Replacement Shield Only
FKT1106	Optional 3½" x 4⅝" Steel Mounting Plate (Fasteners Not Included)

PART NO.	DESCRIPTION
KYL098	10" x 12" Flat Shield and 12" Arm With Direct-Mount Base
KYL099	10" x 12" Flat Shield and 18" Arm With Direct-Mount Base
CSAA5	10" x 12" Flat Replacement Shield Only

Optional Mounting Plate

PART NO.	DESCRIPTION
KYL102	10" x 12" Flat Shield and 12" Arm With Magnetic Base
KYL103	10" x 12" Flat Shield and 18" Arm With Magnetic Base
CSAA5	10" x 12" Flat Replacement Shield Only
FKT1106	Optional 3½" x 4½" Steel Mounting Plate (Fasteners Not Included)

FLEXIBLE SPRING-STEEL ARM SHIELDS (CONTINUED)

PART NO.	DESCRIPTION
KYL136	30° Angle Shield 8" H (7" Front) and 12" Arm With Direct-Mount Base
KYL137	30° Angle Shield 8" H (7" Front) and 18" Arm With Direct-Mount Base
KYL012	30° Angle 8" H (7" Front) Replacement Shield Only

PART NO.	DESCRIPTION
KYL139	30° Angle Shield 8" H (7" Front) and 12" Arm With Magnetic Base
KYL140	30° Angle Shield 8" H (7" Front) and 18" Arm With Magnetic Base
KYL012	30° Angle 8" H (7" Front) Replacement Shield Only
FKT1106	Optional 3½" x 4⅝" Steel Mounting Plate (Fasteners Not Included)

PART NO.	DESCRIPTION
KYL142	30° Angle Shield 9½" H (10⅜" Front) and 12" Arm With Direct-Mount Base
KYL143	30° Angle Shield 9½" H (10⅜" Front) and 18" Arm With Direct-Mount Base
KYL017	30° Angle 9½" H (10⅜" Front) Replacement Shield Only

PART NO.	DESCRIPTION
KYL145	30° Angle Shield 9½" H (10⅜" Front) and 12" Arm With Magnetic Base
KYL146	30° Angle Shield 9½" H (10⅜" Front) and 18" Arm With Magnetic Base
KYL017	30° Angle 9½" H (10⅜" Front) Replacement Shield Only
FKT1106	Optional 3½" x 4⅝" Steel Mounting Plate (Fasteners Not Included)

PART NO.	DESCRIPTION
KYL148	30° & 90° Angle Shield 9½" H (10⅜" Front) and 12" Arm With Direct-Mount Base
KYL149	30° & 90° Angle Shield 9½" H (10⅜" Front) and 18" Arm With Direct-Mount Base
KYL126	30° & 90° Angle 9½" H (10⅜" Front) Replacement Shield Only

PART NO.	DESCRIPTION
KYL151	30° & 90° Angle Shield 9½" H (10⅜" Front) and 12" Arm With Magnetic Base
KYL152	30° & 90° Angle Shield 9½" H (10⅜" Front) and 18" Arm With Magnetic Base
KYL126	30° & 90° Angle 9½" H (10⅜" Front) Replacement Shield Only
FKT1106	Optional 3½" x 4⅝" Steel Mounting Plate (Fasteners Not Included)

FLEXIBLE SPRING-STEEL ARM SHIELDS (CONTINUED)

PART NO.	DESCRIPTION
KYL154	90° Angle Shield 9½" H (11" Front) and 12" Arm With Direct-Mount Base
KYL155	90° Angle Shield 9½" H (11" Front) and 18" Arm With Direct-Mount Base
KYL018	90° Angle 9½" H (11" Front) Replacement Shield Only

PART NO.	DESCRIPTION
KYL157	90° Angle Shield 9½" H (11" Front) and 12" Arm With Magnetic Base
KYL158	90° Angle Shield 9½" H (11" Front) and 18" Arm With Magnetic Base
KYL018	90° Angle 9½" H (11" Front) Replacement Shield Only
KYL1106	Optional 3½" x 4⅝" Steel Mounting Plate (Fasteners Not Included)

PART NO.	DESCRIPTION
KYL160	8" x 10" Concave Shield and 12" Arm With Direct-Mount Base
KYL161	8" x 10" Concave Shield and 18" Arm With Direct-Mount Base
CSAD2	8" x 10" Concave Replacement Shield Only

PART NO.	DESCRIPTION
KYL163	8" x 10" Concave Shield and 12" Arm With Magnetic Base
KYL164	8" x 10" Concave Shield and 18" Arm With Magnetic Base
CSAD2	8" x 10" Concave Replacement Shield Only
FKT1106	Optional 3½" x 4⅝" Steel Mounting Plate (Fasteners Not Included)

PART NO.	DESCRIPTION
KYL166	10" x 12" Concave Shield and 12" Arm With Direct-Mount Base
KYL167	10" x 12" Concave Shield and 18" Arm With Direct-Mount Base
CSAD3	10" x 12" Concave Replacement Shield Only

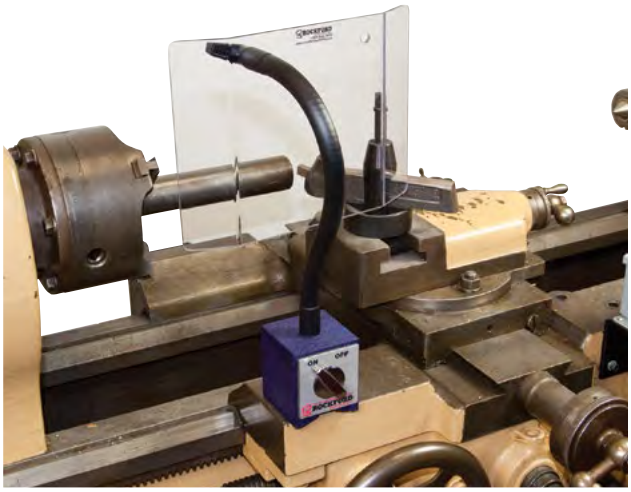
PART NO.	DESCRIPTION
KYL169	10" x 12" Concave Shield and 12" Arm With Magnetic Base
KYL170	10" x 12" Concave Shield and 18" Arm With Magnetic Base
CSAD3	10" x 12" Concave Replacement Shield Only
FKT1106	Optional 3½" x 4⅝" Steel Mounting Plate (Fasteners Not Included)

ON/OFF MAGNETIC-BASE SHIELDS

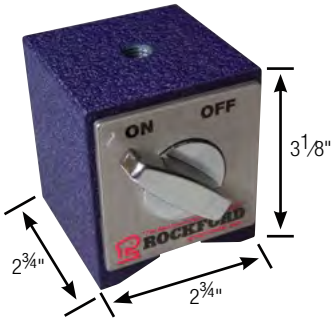
These versatile on/off magnetic-base shields can be used on lathes, drills, mills, grinders, or any equipment that has a flat, ferrous mounting surface. The heavy-duty magnetic base is 2¾" square with a V-groove and measures 3" high. The **200-lb holding force** keeps the shield in place when the magnet is on. If an adequate flat, smooth, ferrous mounting surface is not available, an optional steel mounting plate (Part No. FKT1106) can be used.

The 12", 18", and 24" flexible spring-steel arms are covered with vinyl to protect them from grease, oil, and contaminants that would weaken their holding power. They offer virtually unlimited adjustment possibilities and have long-term holding power.

The transparent portion of these shields is constructed of high-impact-resistant, 3/16"-thick clear polycarbonate. The shield places a barrier between an operator and the flying chips (swarf), sparks, and coolant generated at the point of operation. A variety of flat, angled, and concave shields are available.



On/Off magnetic-base shield on a lathe.



Optional Mounting Plate

Ordering Information

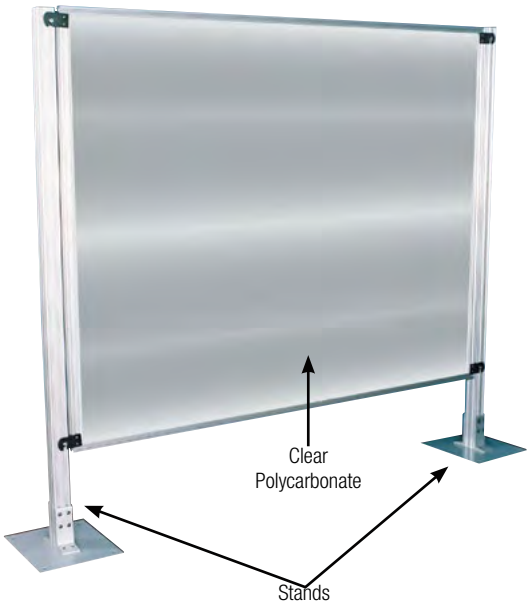
PART NO.	DESCRIPTION	REPLACEMENT SHIELD
KYL197	6" x 8" Flat Shield With 12" Arm	CSAA3
KYL198	6" x 8" Flat Shield With 18" Arm	CSAA3
KYL200	30° Angle Shield 7" Front With 12" Arm	KYL012
KYL201	30° Angle Shield 7" Front With 18" Arm	KYL012
KYL203	10" x 12" Flat Shield With 12" Arm	CSAA5
KYL204	10" x 12" Flat Shield With 18" Arm	CSAA5
KYL206	30° Angle Shield 10⅜" Front With 12" Arm	KYL017
KYL207	30° Angle Shield 10⅜" Front With 18" Arm	KYL017
KYL209	30° & 90° Angle Shield 10⅜" Front With 12" Arm	KYL126
KYL210	30° & 90° Angle Shield 10⅜" Front With 18" Arm	KYL126
KYL212	90° Angle Shield 11" Front With 12" Arm	KYL018
KYL213	90° Angle Shield 11" Front With 18" Arm	KYL018
KYL215	8" x 10" Concave Shield With 12" Arm	CSAD2
KYL216	8" x 10" Concave Shield With 18" Arm	CSAD2
KYL218	10" x 12" Concave Shield With 12" Arm	CSAD3
KYL219	10" x 12" Concave Shield With 18" Arm	CSAD3
FKT1106	Optional 3⅛" x 4⅝" Steel Mounting Plate (Fasteners Not Included)	

FREE-STANDING SHIELD ASSEMBLY

Free-standing shield used to protect the area around a milling machine from flying chips.

These shields can be used to protect the area between machines, the backside of machines, along aisles, etc.

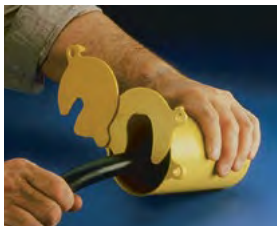
These free-standing adjustable shield assemblies are available in a wide range of sizes. They are constructed of 3/16"-thick polycarbonate material surrounded by aluminum framing. The shield can easily be adjusted up or down on the stands. The stands are constructed of 2"-square extruded aluminum. Each base includes four holes for permanent mounting to the floor. Four standard sizes are available. Special size shield assemblies are available upon request.



Ordering Information

PART NO.	DESCRIPTION
KYL026	48" H x 48" L Shield Size
KYL027	48" H x 60" L Shield Size
KYL028	48" H x 72" L Shield Size
KYL029	48" H x 96" L Shield Size

LOCKOUTS



ELECTRICAL PLUG LOCKOUT

PART NO. KYM088

This lockout container can lockout plugs up to 3" wide and 5½" long with a maximum cord diameter of 1¼".

The lockout consists of a round container and two cover plates made of a durable and chemically resistant thermoplastic. The cover plates, when used singularly or combined, are locked to produce a universally fitting electrical plug lockout device.

This lockout is bright yellow so it can also serve as a visual warning to other plant personnel.

PLUG HUGGER—PART NO. KYM199

This device is ideal for frequently locked-out cords. It slides over the plug's blades and locks with a key. It can only be used on standard 125-V, 15A plugs (polarized or nonpolarized) with a hole on both blades.

LOCKOUT HASPS

These lockout hasps are made from 12-gauge steel that is epoxy-coated for superior rust resistance and added dielectric strength. The yellow plastic coating on the lock area is for visibility. These devices accept up to six padlocks with 9/32" maximum shackle diameter.

KYM989

KYM988

PART NO. KYM988 1" Diameter Lockout Hasp

PART NO. KYM989 1½" Diameter Lockout Hasp

LOCK-A-PLUGS

KYM984

KYM987

These lockout devices accommodate a large variety of electrical plugs. The large device (KYM987) also locks out necked-down pneumatic male fittings commonly attached to compressed air hoses. These devices accommodate up to four padlocks with 9/32" maximum shackle diameter.

PART NO. KYM984
For plugs up to 1½" wide, 1½" high, and 3" long with a maximum cord diameter of ½"

PART NO. KYM987
For plugs up to 3½" wide, 3½" high, and 6" long with a maximum cord diameter of ¾"

ELECTRICAL POWER CUTOFF SYSTEM (INTERLOCK)

This interlock assembly can be interfaced into the control system so when the plug is pulled, the machine or equipment becomes inoperable. It includes a two-prong plug, a 24" chain, a receptacle, and an electrical mounting box.

PART NO. KTS518
One-Contact Interlock System With 24" Chain

PART NO. KTS533
Two-Contact Interlock System With 24" Chain

PLUGOUT

PART NO. KYM983

This lockout container accepts lockout plugs up to 2¾" wide and 4¾" long with a maximum cord diameter of 2¾". It is constructed of high-impact, yellow UV-stabilized polymer. It has an easy to use two-step close and slide assembly. It allows the use of four individual padlocks (up to 3/8" shackle diameter). A lockout hasp can be used if more locks are required. An advantage to this plug lockout is that it can be stored on the cord when not in use. This device is 4¼" wide and 7¼" long.

TAGOUTS

These tagouts are 2-7/8" x 5½" x .055" thick, and made of a polyethylene material. They meet the requirements of OSHA 29 CFR 1910.147 for lockout/tagout. The reverse side of each tagout is the same.

PART NO. KYM192 | PART NO. KYM193 | PART NO. KYM194 | PART NO. KYM195 | PART NO. KYM196 | REVERSE SIDE

LOCKOUT VALVES

SLIDE-OPERATED VALVE

This three-way valve is operated with the manual movement of a slide that opens and closes the valve. This valve shuts off air at the machine and then bleeds off downstream air. It can be locked only in the off position.

PART NO.	PORT SIZE
	IN-OUT
RCD113	½"
RCD114	¾"

EEZ-ON VALVE

This valve shuts off air supply to the machine and bleeds downstream air when the valve is closed. When the valve is open, it gradually allows air into the air system to prevent damage to air components. It can be locked only in the off position. This valve is furnished with a muffler.

PART NO.	PORT SIZE	
	IN-OUT	EXHAUST
RCD121	½"	¾"
RCD122	¾"	¾"

SINGLE-PHASE DISCONNECT SWITCH WITH MAGNETIC MOTOR STARTER AND SELF-LATCHING EMERGENCY-STOP BUTTON

This single-phase unit is designed for motors that have built-in overloads. Typical applications for these combinations include smaller crimping machines, grinders, drill presses, and all types of saws.

PART NO. CSS055 (115V, ½ HP MAX.)

The 115V, 15A disconnect switch and nonreversing magnetic motor starter are housed in a NEMA 12 enclosure. Enclosure size is 8" x 6" x 3½". It includes a self-latching red emergency-stop palm button and a green motor control on push button. It can be used on machines with 115V power and is rated up to ½ HP maximum.

The disconnect switch has a rotary operating handle which is lockable in the off position only. This meets OSHA regulations and ANSI standards.

For machines with 230VAC single-phase motors, a transformer is required to reduce the control circuit voltage to 115VAC in order to comply with NFPA 79. See the RSD series disconnect switches, motor starters, and combinations on pages 93-94.

SINGLE-PHASE STARTER WITH SELF-LATCHING EMERGENCY-STOP BUTTON

PART NO. CSF082 (115VAC, 3/4 HP MAX.)

The 115VAC, 20A non-reversing magnetic motor starter, self-latching red emergency-stop palm button, green motor control on push button and red motor control off push button are housed in a NEMA 4 polycarbonate enclosure. Enclosure size is 5" x 5" x 4". It can be used for machines with 115VAC power and is rated up to 3/4 HP maximum at 115VAC. For machines with 230VAC single-phase motors, a transformer is required to reduce the control circuit voltage to 115VAC in order to comply with NFPA 79. See the RSD series disconnect switches, motor starters, and combinations on pages 92-93.

PART NO. CSF301 (115VAC, 2 HP MAX.)

The 115VAC, 30A non-reversing magnetic motor starter, self-latching red emergency-stop palm button, green motor control on push button and red motor control off push button are housed in a NEMA 12 enclosure. Enclosure size is 8" x 6" x 6". It can be used for machines with 115VAC power and is rated up to 2 HP maximum at 115VAC. For machines with 230VAC single-phase motors, a transformer is required to reduce the control circuit voltage to 115VAC in order to comply with NFPA 79. See the RSD series disconnect switches, motor starters, and combinations on pages 92-93.

ENCLOSED TRANSFORMERS

These transformers comply with OSHA regulations and ANSI standards and are available for use when the motor start/stop station is remotely located from the starter enclosure, and voltage to these buttons must be 115V or less. These transformers mount directly to the frame of the machine. If the existing motor starter operating coils are a higher voltage (208, 230, 460, 575 V), they must be replaced with a 115V coil when furnishing these transformers. A replaceable fuse is accessible from the outside of the transformer housing.

Ordering Information

PART NO.	DESCRIPTION
RSF021	100-VA, 230/460-V Primary and 115V Fused Secondary With a 1 A, 230-V Fuse
RSF030	150-VA, 230/460-V Primary and 115V Fused Secondary With a 1.5 A, 230-V Fuse

IEC FUSED DISCONNECT SWITCHES, MAGNETIC MOTOR STARTERS, AND COMBINATIONS

These three-phase disconnect/starters are housed in a NEMA 12 metal enclosure. The enclosure size will vary depending on the motor starter required. These units can be used on machines with 208, 230, 460, or 575 V. They are furnished with an overload relay and have operating coils of 115V, 60 Hz. The disconnect operating handle is lockable in the off position only. These combination units meet OSHA regulations, ANSI standards, and NFPA 79.

To obtain the part number of the motor starter required, please refer to the part numbering chart on the next page.

A remote station is required when using any **plain-door** starter. To obtain the part number of the remote operator station required, please refer to the part numbering chart on the page 94.

PART NO. RSD-1230-F

PART NO. VOS2100

PART NO. RSD-2210-P-1

Note: Please furnish the exact motor horsepower, voltage, and full-load amps when ordering any of the disconnects or starters on page 93. This information is usually on the motor nameplate. Voltage can be 208, 230, 460, or 575 V. If other sizes are required, please consult Rockford Systems.

SELECTING A DISCONNECT, STARTER, OR COMBINATION DISCONNECT/STARTER(S)

To determine the 9-digit configured part number for a disconnect, starter, or combination disconnect/starter(s) required, follow directions 1-7 below and use the information in the **PART NUMBERING SYSTEM CHART** below.

The first 3 digits for all disconnects, starters, or combination disconnect/starter(s) are RSD.

The 4th digit determines the size of the disconnect switch, if required. Zero (0) indicates no disconnect switch provided.

The 5th digit determines the type of the main motor starter and/or 2nd motor starter. Zero (0) indicates no starters.

The 6th digit determines the size of the main motor starter. Zero (0) indicates no main motor starter.

The 7th digit determines the size of the 2nd motor starter. Zero (0) indicates no 2nd motor starter.

The 8th digit (if required) determines the configuration and location of the operator controls.

The 9th digit determines if a transformer and/or wiring is required.

DISCONNECT AND STARTER(S) PART NUMBERING SYSTEM CHART

RSD-XXXX-X-X

DISCONNECT AND STARTER(S)

RSD	—Separate or Combination

DISCONNECT SWITCH SIZE (IEC) (PLUS MAXIMUM MAIN MOTOR FLA)

0	—No Disconnect Switch
1	—30A CC Disconnect—1- to 17-FLA Total Motor Current
2	—30A J Disconnect—1- to 20-FLA Total Motor Current
3	—60-A J Disconnect—21- to 40-FLA Total Motor Current
4	—100-A J Disconnect—41- to 66-FLA Total Motor Current
5	—200-A J Disconnect—67- to 133-FLA Total Motor Current
6	—400-A J Disconnect—134- to 266-FLA Total Motor Current

REVERSING/NONREVERSING MOTOR STARTER

0	—No Starters
1	—Nonreversing Main Motor Starter
2	—Reversing Main Motor Starter
3	—Nonreversing Main Motor Starter & Nonreversing 2nd Motor
4	—Nonreversing Main Motor Starter & Reversing 2nd Motor
5	—Reversing Main Motor Starter & Nonreversing 2nd Motor
6	—Reversing Main Motor Starter & Reversing 2nd Motor
7	—Nonreversing 2-Speed Main Motor Starter
8	—Reversing 2-Speed Main Motor Starter
9	—Nonreversing 2-Speed Main Motor Starer & Nonrev. 2nd Motor
A	—Nonreversing 2-Speed Main Motor Starter & Reversing 2nd Motor
B	—Reversing 2-Speed Main Motor Starter & Nonreversing 2nd Motor
C	—Reversing 2-Speed Main Motor Starter & Reversing 2nd Motor

MAIN MOTOR STARTER SIZE

0 —No Main Motor Starter

Motor Horsepower Chart

	IEC	1-Phase 115V	1-Phase 230 V	3-Phase 208 V	3-Phase 230 V	3-Phase 460 V	3-Phase 575 V
1	—12 A	1/2	1	2	3	7.5	7.5
2	—18 A	3/4	2	5	5	10	10
3	—25 A	2	3	5	7.5	15	15
4	—32 A	2	5	7.5	10	20	20
5	—40 A	3	7.5	10	10	30	30
6	—50 A	3	10	15	15	30	40
7	—65 A	5	10	20	20	50	50
8	—80 A	7.5	15	25	30	60	75
9	—95 A	7.5	20	30	30	60	75
A	—115 A	10	25	30	40	75	100
B	—185 A	15	30	50	60	125	150
C	—265 A	–	–	75	100	200	200

MODIFIER

-	—Blank—No Specific Configuration, Terminals, Transformer, or Wiring
1	—Generically Numbered and Wired to Terminals —Includes Transformer
2	—Generically Numbered and Wired to Terminals —Without Transformer

CONFIGURATION & OPERATOR LOCATION

-	—Blank—No Specific Configuration
P	—All Operators Remote (Plain Door)
F	—All Motor Operators on Door of Enclosure
X	—F Configuration With E-Stop in Place of Single-Motor Stop
Y	—F Configuration With Addition of E-Stop

2nd MOTOR STARTER SIZE

0 —No Main Motor Starter

Motor Horsepower Chart

	IEC	1-Phase 115V	1-Phase 230 V	3-Phase 208 V	3-Phase 230 V	3-Phase 460 V	3-Phase 575 V
1	—12 A	1/2	1	2	3	7.5	7.5
2	—18 A	3/4	2	3	5	10	10
3	—25 A	2	3	5	7.5	15	15
4	—32 A	2	5	7.5	10	20	20
5	—40 A	3	7.5	10	10	30	30
6	—50 A	3	10	15	15	30	40
7	—65 A	5	10	20	20	50	50
8	—80 A	7.5	15	25	30	60	75
9	—95 A	7.5	20	30	30	60	75
A	—115 A	10	25	30	40	75	100
B	—185 A	15	30	50	60	125	150
C	—265 A	–	–	75	100	200	200

Please see page 94 for an example of a disconnect and starter(s) part number.

SELECTING A REMOTE OPERATOR STATION

To determine the 8-digit configured part number for a remote operator station required, follow directions 1-3 below and use the information in the **PART NUMBERING SYSTEM CHART** below.

The first 3 digits determine the orientation of the remote operator station.

Digits 4 through 7 determine motor operators. Zero (0) indicates no operator(s).

The 8th digit (if required) determines the 2nd motor operators.

REMOTE OPERATOR STATION PART NUMBERING SYSTEM CHART

XXX - XXXX - X

REMOTE OPERATOR STATION ORIENTATION

HOS	—Horizontal Operator Station
VOS	—Vertical Operator Station

MAIN MOTOR START/STOP/E-STOP OPERATORS

1	—Start/Stop Push Buttons
2	—Start/E-Stop Push Buttons
3	—Start/Stop/E-Stop Buttons
4	—E-Stop Button Only

MAIN MOTOR FORWARD/REVERSE OPERATORS

0	—No Forward/Reverse Operators
1	—Forward/Reverse Selector Switch*
2	—Forward/Reverse Push Buttons

2nd MOTOR OPERATORS

-	—Blank—No 2nd Motor
1	—Start/Stop Push Buttons
2	—Start/Stop Push Buttons & Forward/Reverse Selector Switch

MAIN MOTOR JOG

0	—No Jog
1	—Jog/Run Selector Switch

MAIN MOTOR SPEED CHANGE

0	—No Speed Change
1	—Fast/Slow Selector Switch
2	—Fast/Slow Push Buttons

* Must be configured with a start push button

DISCONNECT AND STARTERS PART NUMBER EXAMPLE

1 2345 6 7

RSD - 3521 - P - 1

The example shown above, RSD-3521-P-1, indicates that the enclosure containing the combination disconnect/starter(s) has a 60-A disconnect switch, a 18-A reversing main motor starter, and a 12-A nonreversing 2nd motor starter. All motor controls will be in a remote station. This disconnect/starter(s) will be generically numbered and wired to terminals and will include a transformer.

REMOTE OPERATOR PART NUMBER EXAMPLE

1 2 3

VOS - 3100 - 1

The example shown above, VOS3100-1, indicates that it is a vertical-oriented remote operator station which includes main motor start/stop/E-stop buttons, main motor forward/reverse selector switch, and start/stop push buttons for the 2nd motor starter.

REMOTE OPERATOR STATIONS

PART NO. HOS4000

This 4½" x 3½" x 3" station has a self-latching red emergency-stop palm button in a NEMA 12 metal enclosure. To reset this button, turn it to the right.

PART NO. HOS4000

PART NO. HOS4200

(FOR USE WITH REVERSING MOTOR STARTERS)

This 3½" x 8¾" x 3" station has motor forward and reverse push buttons and a self-latching emergency-stop palm button in a NEMA 12 metal enclosure.

PART NO. HOS4200

PART NO. VOS2000

(FOR USE WITH NONREVERSING MOTOR STARTERS)

This 6¾" x 3½" x 3" station has a motor on push button and a self-latching red emergency-stop palm button in a NEMA 12 metal enclosure.

PART NO. VOS2000

PART NO. VOS1100

(FOR USE WITH REVERSING MOTOR STARTERS)

This 8¾" x 3½" x 3" station has motor on and stop push buttons and a motor forward/reverse selector switch in a NEMA 12 metal enclosure.

PART NO. VOS1100

PART NO. HOS4201

(FOR USE WITH REVERSING MOTOR STARTERS)

This 3½" x 10½" x 3" station has a motor jog/run selector switch, forward and reverse push buttons, and a self-latching emergency-stop palm button in a NEMA 12 metal enclosure.

PART NO. HOS4201

PART NO. VOS2100

(FOR USE WITH REVERSING MOTOR STARTERS)

This 8¾" x 3½" x 3" station has a motor forward/reverse selector switch, a motor on push button, and a self-latching red emergency-stop palm button in a NEMA 12 metal enclosure.

PART NO. VOS2100

PART NO. VOS1000

(FOR USE WITH NONREVERSING MOTOR STARTERS)

This 6¾" x 3½" x 3" station has motor on and stop push buttons in a NEMA 12 metal enclosure.

PART NO. VOS1000

PART NO. PB5R00-01—

Self-Latching Emergency-Stop Mushroom-Head Push Button

PART NO. CTM506—

Yellow Emergency-Stop Nameplate (22.5 mm hole)

PART NO. CTC550—

Push/Pull to Release Emergency-Stop Push Button

PART NO. CTM548—

Yellow Emergency-Stop Nameplate (30 mm hole)

DANGER SIGNS AND LABELS

The signs offered in this catalog are .055" thick linear polyethylene. They are semi-rigid plastic and are capable of withstanding a temperature range of -60° to 130° F. They are resistant to tears and may be mounted with nails, rivets, screws, bolts, nylon lock-straps, double-face adhesive tape, etc. Each sign is protected from fading, chipping, scratching, weather extremes, physical abuse, grease, oil, moisture, chemicals and acids. These signs do not rust, dent, or corrode. They do not curl up or rip and are lightweight and easy to handle.

OPERATOR SAFETY PRECAUTIONS FOR METAL-CUTTING MACHINERY—8½" X 11" X .055" THICK

PART NO. KSC048—ENGLISH

PART NO. KSC048S—SPANISH

PART NO. KSC048F—FRENCH

KSC048 FRONT (ENGLISH)

KSC048 BACK (ENGLISH)

KSC048S FRONT (SPANISH)

KSC048S BACK (SPANISH)

DANGER SIGNS AND LABELS

SHIELD SIGN—5" X 6" X .055" THICK

PART NO. KSC046—ENGLISH
PART NO. KSC046S—SPANISH
PART NO. KSC046F—FRENCH

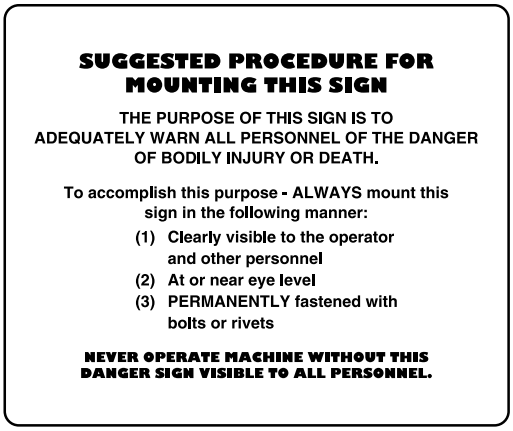
GENERAL MACHINE SIGN—10" X 12" X .055" THICK

PART NO. KSC056—ENGLISH
PART NO. KSC056S—SPANISH
PART NO. KSC056F—FRENCH

SAW BLADE SIGN—5" X 6" X .055" THICK

PART NO. KSC058—ENGLISH
PART NO. KSC058S—SPANISH
PART NO. KSC058F—FRENCH

REVERSE SIDE OF SIGNS



ELECTRICAL LABEL: WARNING—HAZARDOUS VOLTAGE

PART NO. KST152—2½" X 1½" X .002" THICK
PART NO. KST153—3" X 5" X .002" THICK

ELECTRICAL LABEL: DANGER—HIGH VOLTAGE

PART NO. KST194—2-7⁄8" X 5-7⁄8" X .003" THICK

OSHA STANDARDS

OSHA 29 CFR 1910.212 and a portion of 1910.219 are included in this catalog for use as a reference when determining safety requirements for bringing cutting and turning machines into compliance. Please note that 29 CFR 1910.147 (lockout/tagout) is not included here but it is an OSHA standard an employer must comply with for all machines and equipment.

29 CFR 1910.212 GENERAL REQUIREMENTS FOR ALL MACHINES

(a) Machine guarding — (1) Types of guarding. One or more methods of machine guarding shall be provided to protect the operator and other employees in the machine area from hazards such as those created by point of operation, ingoing nip points, rotating parts, flying chips and sparks. Examples of guarding methods are barrier guards, two-hand tripping devices, electronic safety devices, etc.

(2) General requirements for machine guards. Guards shall be affixed to the machine where possible and secured elsewhere if for any reason attachment to the machine is not possible. The guard shall be such that it does not offer an accident hazard in itself.

(3) Point of operation guarding. (i) Point of operation is the area on the machine where work is actually performed upon the material being processed.

(ii) The point of operation of machines whose operation exposes an employee to injury, shall be guarded. The guarding device shall be in conformity with any appropriate standards therefor; or, in the absence of applicable specific standards, shall be so designed and constructed as to prevent the operator from having any part of his body in the danger zone during the operating cycle.

(iii) Special hand tools for placing and removing material shall be such as to permit easy handling of material without the operator placing a hand in the danger zone. Such tools shall not be in lieu of other guarding required by this section, but can only be used to supplement protection provided.

(iv) The following are some of the machines which usually require point-of-operation guarding:

(a) Guillotine cutters.
(b) Shears.
(c) Alligator shears.
(d) Power presses.
(e) Milling machines.
(f) Power saws.
(g) Jointers.
(h) Portable power tools.
(i) Forming rolls and calenders.

(4) Barrels, containers, and drums. Revolving drums, barrels and containers shall be guarded by an enclosure which is interlocked with the drive mechanism, so that the barrel, drum or container cannot revolve unless the guard enclosure is in place.

(5) Exposure of blades. When the periphery of the blades of a fan is less than seven (7) feet above the floor or working level, the blades shall be guarded. The guard shall have openings no larger then one-half (½) inch.

(b) Anchoring fixed machinery. Machines designed for a fixed location shall be securely anchored to prevent walking or moving.

29 CFR 1910.219 MECHANICAL POWER-TRANSMISSION APPARATUS

(b) Prime-mover guards—(1) Flywheels. Flywheels located so that any part is seven (7) feet or less above floor or platform shall be guarded in accordance with the requirements of this subparagraph:

(i) With an enclosure of sheet, perforated, or expanded metal, or woven wire;

(ii) With guard rails placed not less than fifteen (15) inches nor more than twenty (20) inches from rim. When flywheel extends into pit or is within 12 inches of floor, a standard toeboard shall also be provided;

(iii) When the upper rim of flywheel protrudes through a working floor, it shall be entirely enclosed or surrounded by a guardrail and toeboard.

(iv) For flywheels with smooth rims five (5) feet or less in diameter, where the preceding methods cannot be applied, the following may be used: a disk attached to the flywheel in such manner as to cover the spokes of the wheel on the exposed side and present a smooth surface and edge, at the same time providing means for periodic inspection. An open space, not exceeding four (4) inches in width, may be left between the outside edge of the disk and the rim of the wheel if desired, to facilitate turning the wheel over. Where a disk is used, the keys or other dangerous projections not covered by disk shall be cut off or covered. This subdivision does not apply to flywheels with solid web centers.

(v) Adjustable guard to be used for starting engine or for running adjustment may be provided at the flywheel of gas or oil engines. A slot opening for jack bar will be permitted.

(vi) Wherever flywheels are above working areas, guards shall be installed having sufficient strength to hold the weight of the flywheel in the event of a shaft or wheel mounting failure.

Note: This is not the entire content of 29 CFR 1910.219.

This catalog does not cover all aspects of a safety program. There are many publications on the subject of safety. Please see page 5 for a listing of safety sources.

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