

INSTALLATION INSTRUCTIONS FOR LATHE SHIELDS

Photo 1: Sliding

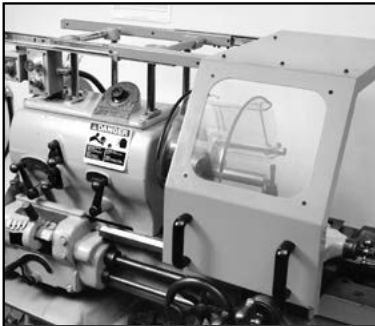


Photo 2: Crossslide-Travel

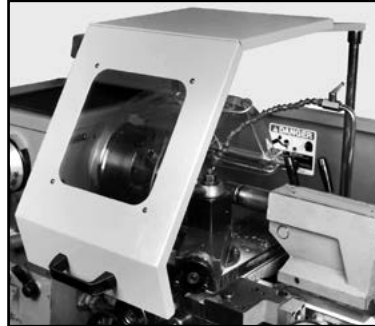


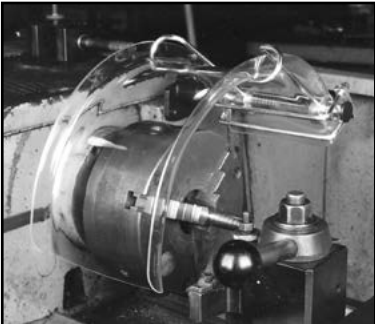
Photo 3: Small Steel



Photo 4: Large Steel



Photo 5: Transparent



Sliding (Page 2)

- ☐ MAJ-700
- ☐ MAJ-800
- ☐ MAJ-100
- ☐ MAJ-120

Crossslide-Travel

(Page 4)

- ☐ TXS-100
- ☐ TXS-200

Small Steel (Page 5)

- ☐ TPS-300
- ☐ TPS-400
- ☐ TPS-500

Large Steel (Page 6)

- ☐ TPS-600
- ☐ TPS-800
- ☐ TPS-100
- ☐ TPS-120

Transparent (Page 7)

- ☐ LXS-300
- ☐ LXS-400
- ☐ LXS-500
- ☐ LXS-600
- ☐ LXS-700

These shields are designed for machines that require protection from chips (swarf) and coolant generated at the point of operation. They also provide a barrier between the machine chuck and the operator.

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SECTION 1 —SLIDING

Lathe Shield Installation Manual

Introduction

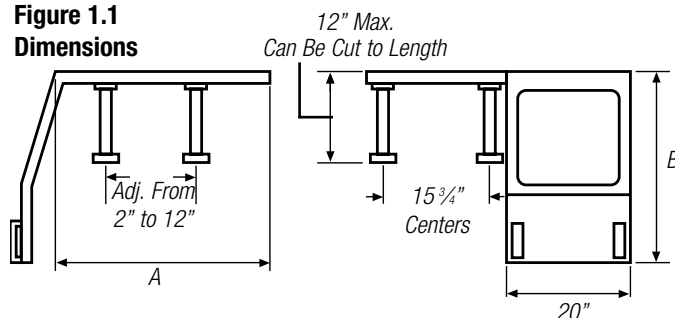
These shields are designed for lathes with chucks up to 48 inches. The ball-bearing carriage securely mounts to the headstock by four flanged mounting posts, as illustrated. The four mounting brackets are adjustable to provide easy mounting to the headstock. The mounting posts can be attached without interfering with any part of the equipment housed within the headstock.

The 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.

DIMENSION CHART

Part No.	A	B	Chuck Diameter
MAJ-700	26"	21"	28"
MAJ-800	27-1/4"	23"	32"
MAJ-100	29-1/2"	27"	40"
MAJ-120	33-1/4"	30-3/4"	48"

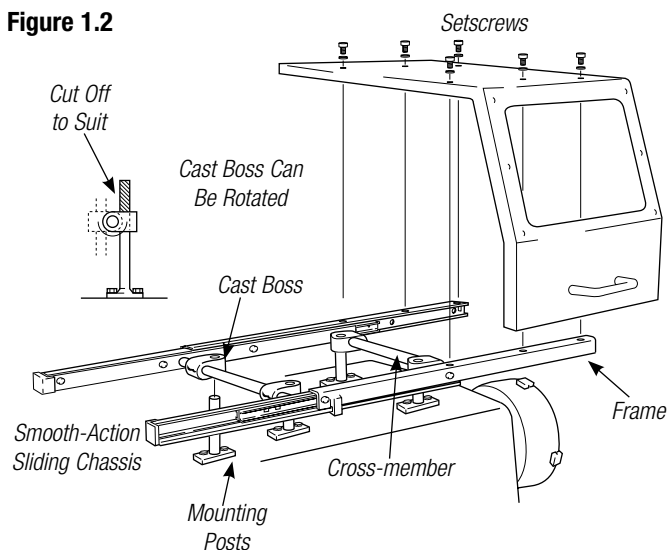
Figure 1.1
Dimensions



Installation

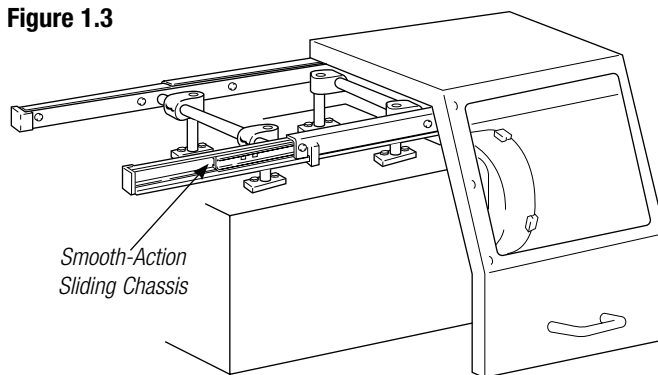
1. Remove all packing material from the shield and its mounting assembly.
2. Select the mounting location of the shield by measuring the distance from the headstock of the lathe to the point the shield must travel.
Make sure the underside of the shield clears the chuck. Cut the mounting posts to length, if required.
3. Drill and tap holes for the mounting posts. Make sure the holes do not interfere with gears, shafts, etc., and the assembly is located so it allows the shield to slide back far enough to expose the chuck.
4. The posts can be attached anywhere along the length of the crossmembers. They also can be mounted to the right or left by sliding or rotating the cast bosses. The cast bosses clamp to the crossmember and mounting posts (see Figure 1.2).

Figure 1.2



This drawing illustrates how easily the four mounting posts attach to the headstock of the lathe. It also shows how the sliding shield mounts to the rails of the ball-bearing carriage.

Figure 1.3



5. Bolt the four mounting posts to the headstock. (Bolts not furnished.)
6. Position the frame onto the posts.
7. With the frame positioned on the posts, attach the shield to the frame using the six socket setscrews provided (see Figure 1.2). Make sure access to the machine controls is not blocked.

REPLACEMENT WINDOW

Part No.	Replacement Polycarbonate Window For:
MAW001	MAJ-700
MAW-002	MAJ-800
MAW-003	MAJ-100
MAW-004	MAJ-120



When installing, allow enough clearance to ensure the shield or any of its parts will not be hit by normal movements of the chuck, crossslide, workpiece, etc.

Introduction

Mounting brackets are supplied separately for any of the shields found on pages 5-7. These brackets mount to the headstock of the lathe. Fasteners are not furnished. The transparent and small steel shields are attached to a zinc-plated extension tube which fits into these mounting brackets.

There are two principal types of mounting brackets available. Type A (Figure 2.1) is used for mounting to the top or the side of the headstock. Type B (Figure 2.2) is used for mounting to the face of the headstock.

For difficult mounting conditions, the Type A1 bracket (Figure 2.3) may be used. This bracket incorporates a telescopic height adjustment and can be swivelled up to an angle of 90° as required.

Figure 2.1
Type A Bracket
Part No. LXS-650

For mounting to the top or side of the headstock.

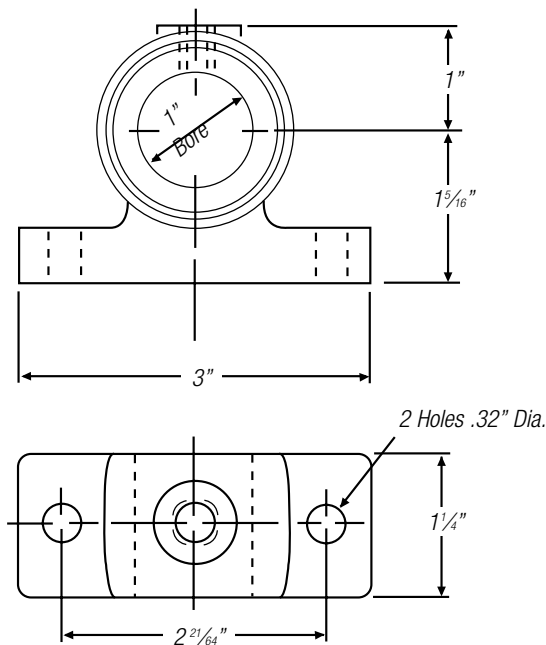


Figure 2.2
Type B Bracket
Part No. LXS-652

for mounting to the face of the headstock.

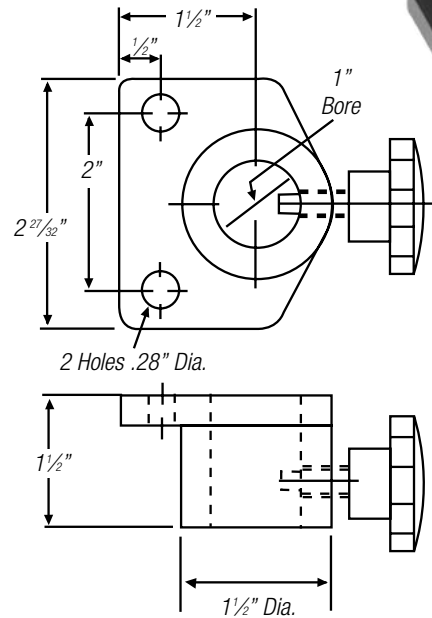
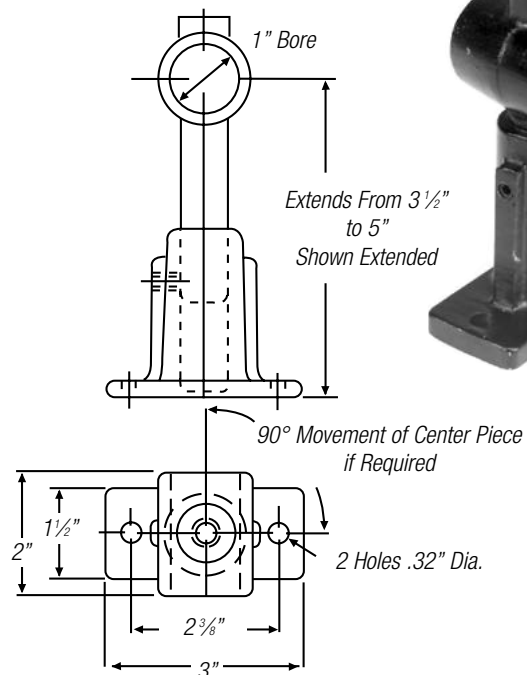


Figure 2.3
Type A1 Bracket
Part No. LXS-651

for extended mounting to the top or side of the headstock.



(Continued on next page.)

SECTION 2 —MOUNTING BRACKET

Lathe Shield Installation Manual

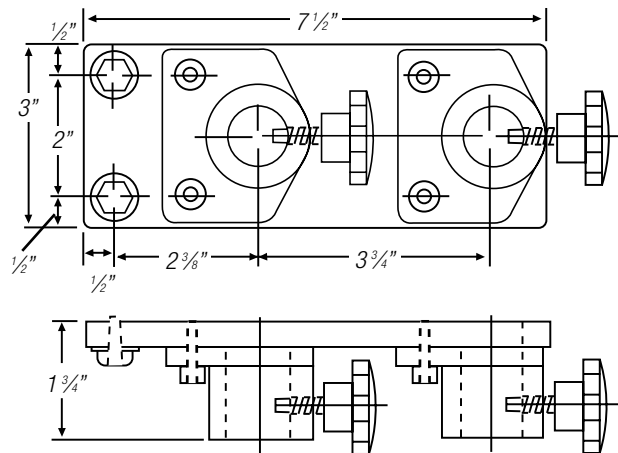
Introduction (continued)

Figure 2.4

Type B2 Bracket

Part No. LXS-653

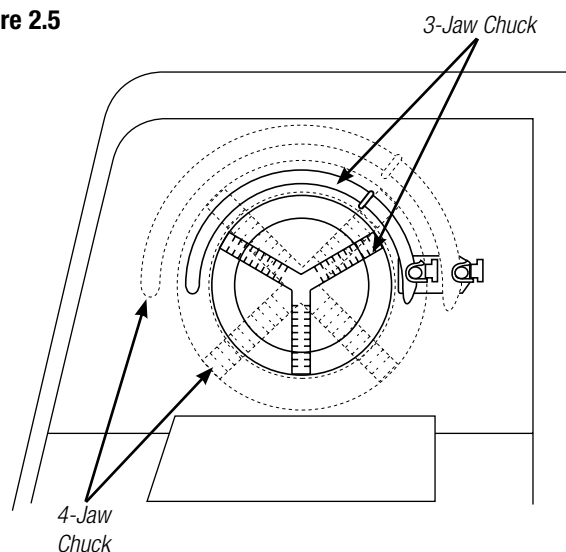
for mounting to the face of the headstock when two different sized shields are used.



The Type B2 bracket (Figures 2.4 and 2.5) has a two-socket mounting. It can be fastened to the face of the headstock where shields with different diameters are used. It accommodates 3-jaw and 4-jaw chucks. The inner socket is used for the 3-jaw, smaller chuck shield. When changing over to a larger, 4-jaw chuck, the shield is removed from the inner socket and replaced by a larger diameter shield inserted into the outer socket. This accommodates the 4-jaw chuck.

Full dimensions, showing the shield in relation to the chuck, are illustrated in Figure 6.2 on page 8.

Figure 2.5



The electrical interlocking bracket assembly (Figure 2.6) includes the Type B bracket for mounting to the face of the headstock. This bracket assembly has an interlock switch that can be interlocked to the lathe's motor starter circuit. In most cases, the normally open contact of the switch is used. The cam is then positioned on the mounting rod of the shield so it pushes the wheel of the switch and holds the contact closed while the shield is down in position. When the shield is lifted up, the contact of the switch is opened, which causes the machine to stop.

Figure 2.6

Part No. FKT-781

Interlocking Bracket Assembly

Interlock Switch Specifications

Contacts.....	2 NO and 2 NC
Actuating Directions	4
Switching Ability.....	3 A @ 230 V AC, 0.27 A @ 230 V DC
Conduit Adapter	M20 to 1/2"
Operating Temperature	-13° to 176°F
	(-25° to 80°C)



Introduction

These lathe shields mount and travel with the crossslide for protection when machining long workpieces. The steel structure provides protection from flying chips and coolant. The window permits visibility into the point of operation. The front portion of the shield hinges up for access. This shield is ideal for lathes with long beds. Special sizes are available on request.

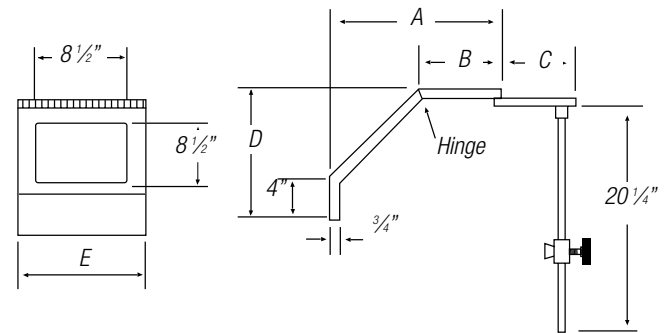
Installation

1. Remove all packing material from the shield and its mounting assembly.
2. Select the mounting bracket location on the crossslide of the machine and spot holes. Make sure the holes do not interfere with gears, shafts, etc. (A mounting bracket is not part of the assembly. It must be ordered separately—see pages 3-4 for choices.)
3. Drill and tap two holes for the mounting bracket. (See pages 3-4 for bracket dimensions or use the bracket as a template.)
4. Fasten the mounting bracket to the crossslide of the lathe using Allen-head fasteners (not furnished).
5. Assemble the shield to the mounting rod with the fasteners provided. See Figure 3.2.
6. Slide the mounting rod into the mounting bracket and tighten at the desired height.

DIMENSION CHART

Part No.	A	B	C	D	E
TXS-100	17"	8"	10"	12"	12"
TXS-200	23"	11"	12"	14-1/2"	13-3/4"

Figure 3.1 Dimensions



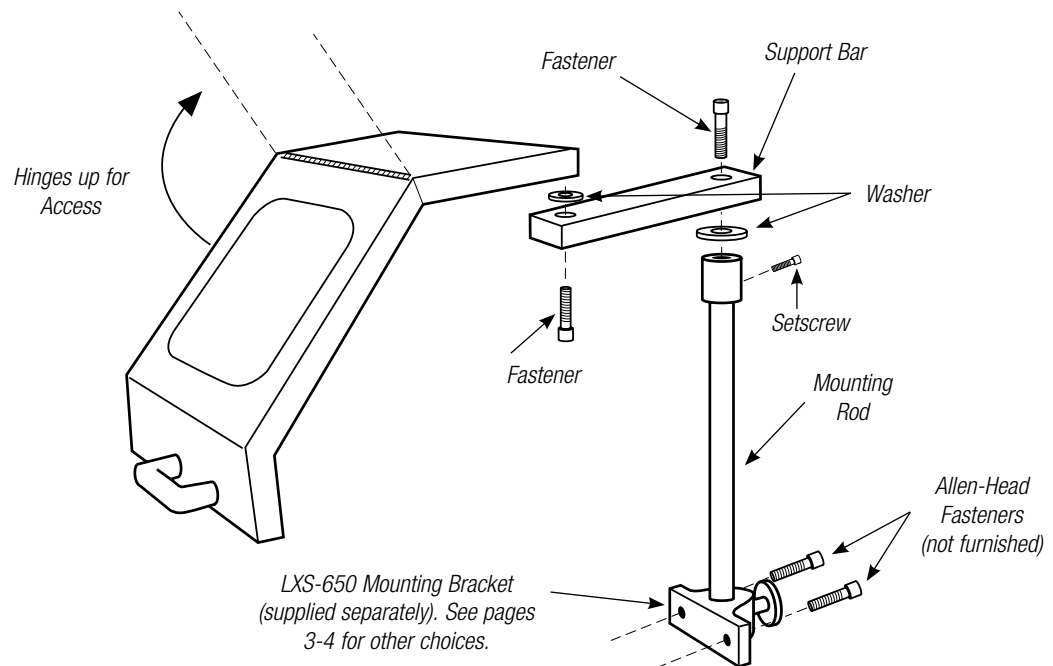
REPLACEMENT PARTS

Part No.	Description
TXW-000	Replacement Polycarbonate Window
TXR-000	Mounting Rod and Support Bar



When installing, allow enough clearance to ensure the shield or any of its parts will not be hit by normal movements of the chuck, crossslide, workpiece, etc.

Figure 3.2 Exploded View



SECTION 4—SMALL STEEL

Lathe Shield Installation Manual

Introduction

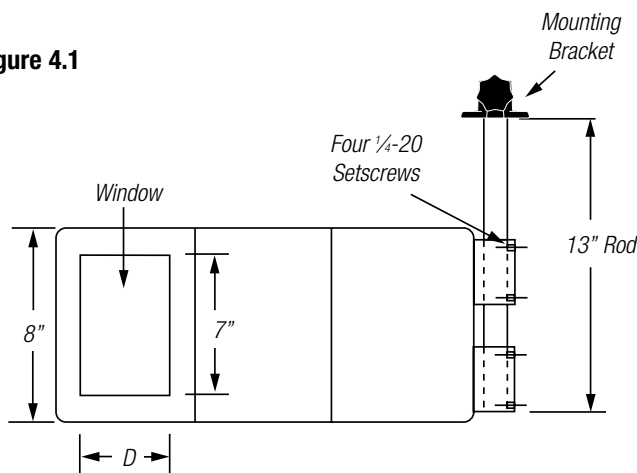
These small steel chuck shields are fabricated of 18-gauge steel and can be used on smaller lathes that have chucks up to 18 $\frac{1}{4}$ " in diameter. Each shield is furnished with a 1" x 13" mounting rod which can be cut to length if required. This mounting rod is fastened to the headstock of the lathe using a mounting bracket (must be ordered separately—see pages 3-4). The mounting rod is also used to hinge the entire shield. The shield can be lifted and swung up from the operator for quick and easy access to the chuck and the part being machined.

Installation

1. Remove all packing material from the shield and its mounting assembly.
2. Select the mounting bracket location and spot holes on the machine. Make sure the holes do not interfere with gears, shafts, etc. (A mounting bracket is not part of the assembly. It must be ordered separately—see pages 3-4 for choices.)
3. Drill and tap two holes for the mounting bracket. (See pages 3-4 for bracket dimensions or use the bracket as a template.)
4. Fasten the mounting bracket to the headstock of the lathe using Allen-head fasteners (not furnished).
5. Slide the shield onto the mounting rod and tighten the setscrews. See Figure 4.1.
6. Slide the mounting rod into the mounting bracket and tighten the knob. See Figure 4.1.

Note: Maintenance instructions for the polycarbonate window are on page 9.

Figure 4.1



When installing, allow enough clearance to ensure the shield or any of its parts will not be hit by normal movements of the chuck, crosslide, workpiece, etc.

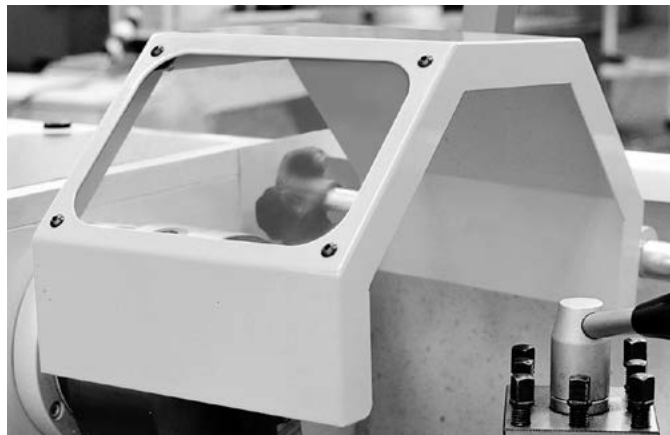
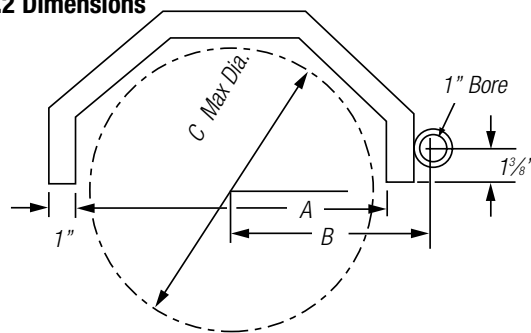


Figure 4.2 Dimensions



DIMENSION CHART

Part No.	A	B	C	D
TPS-300	12"	7-1/2"	11"	14-3/4"
TPS-400	15-1/2"	9-1/4"	14-1/2"	6-1/4"
TPS-500	19-1/4"	11-1/2"	18-1/4"	8"

REPLACEMENT PARTS

Part No.	Description
FKT-160	13" Mounting Rod
TPW-003	Replacement Window for TPS-300
TPW-004	Replacement Window for TPS-400
TPW-005	Replacement Window for TPS-500

Introduction

These large steel chuck shields are double-hinged for access to the chuck. The front hinged portion can be swung up for workpiece changes and the entire shield can be hinged back for changing chucks. The rear mounting rod hinges the entire shield. This shield is furnished with a mounting rod, a mounting plate, and a support bar.

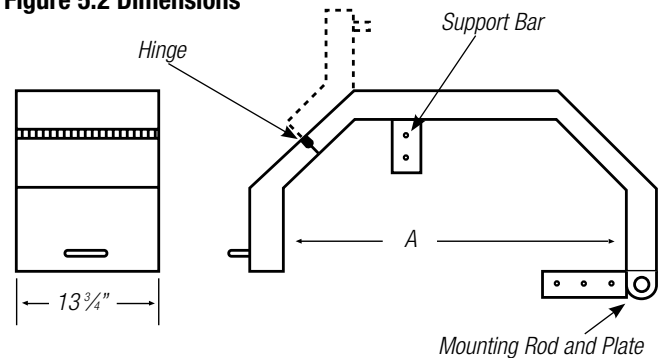
Installation

1. Remove all packing material from the shield and its mounting assembly.
2. Select the mounting bracket location on the machine. Make sure the holes do not interfere with gears, shafts, etc.
3. Spot and drill holes in the mounting plate; spot, drill and tap holes in the headstock of the lathe.
4. Fasten the mounting bracket to the headstock of the lathe. (Fasteners not furnished.)
5. Remove the outside guide bushing from the mounting rod. See Figure 5.1.
6. Slide the shield onto the mounting rod; return the guide bushing and tighten the setscrews.
7. Spot, drill and tap holes for the support bar. Attach the support bar to the face of the headstock. When the shield is in its normal operating position, it rests on the support bar. Due to the variation in headstock dimensions, a specially fabricated support bar may be required.

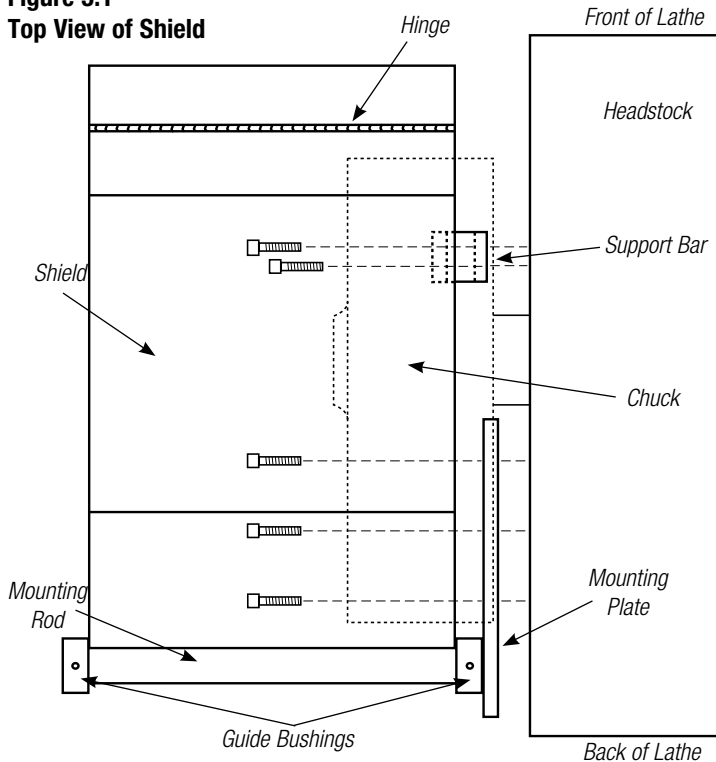


When installing, allow enough clearance to ensure the shield or any of its parts will not be hit by normal movements of the chuck, crossslide, workpiece, etc.

Figure 5.2 Dimensions



**Figure 5.1
Top View of Shield**



Part No.	A
TPS-600	24"
TPS-800	32"
TPS-100	40"
TPS-120	47-1/2"

REPLACEMENT PARTS

Part No.	Description
LGR-000	Mounting Rod and Plate
LGR-001	Support Rod

(Continued on next page.)

SECTION 6 —TRANSPARENT

Lathe Shield Installation Manual

Introduction

These transparent chuck shields are mounted to a 1" x 13" mounting rod which is fastened to the headstock of the lathe using a mounting bracket (must be ordered separately—see pages 3-4). The semicircular shield covers half the circumference of the lathe chuck because it is mounted an equal distance from the chuck center.

Access to the chuck and workpiece is quick and easy. The shield is lifted up and out of the way for the operator.

Installation

1. Remove all packing material from the shield and its mounting assembly.
2. Select the mounting bracket location and spot holes on the machine. Make sure the holes do not interfere with gears, shafts, etc. (A mounting bracket must be ordered separately—see pages 3-4.)
3. Drill and tap two holes for the mounting bracket. (See pages 3-4 for bracket dimensions.)
4. Fasten the mounting bracket to the headstock of the lathe using Allen-head fasteners (not furnished).
5. Slide the mounting rod of the shield into the mounting bracket and tighten the knob.

Note: Maintenance instructions for the polycarbonate shield are on page 9.



When installing, allow enough clearance to ensure the shield or any of its parts will not be hit by normal movements of the chuck, crossslide, workpiece, etc.

Figure 6.2
Dimensions

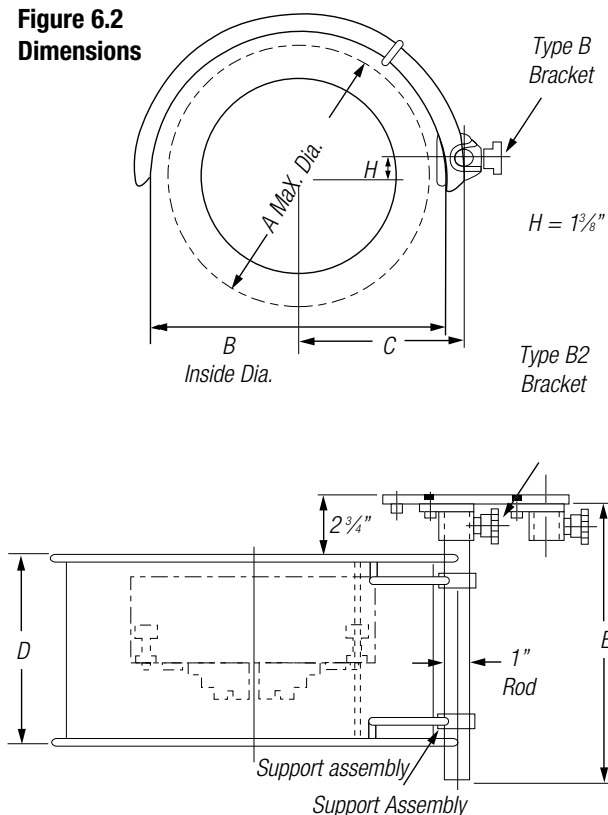
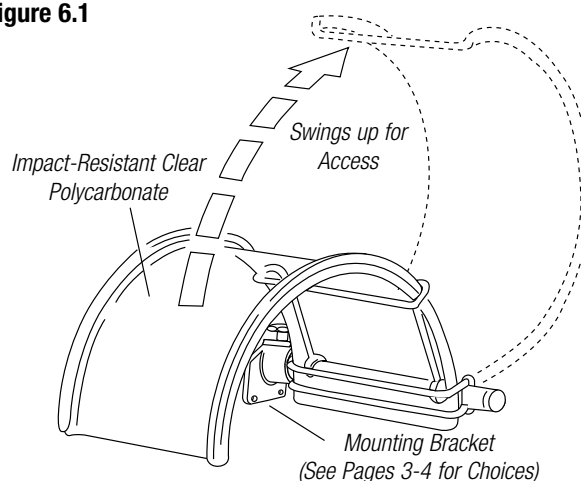


Figure 6.1



DIMENSION CHART

Part No.	DIMENSIONS IN INCHES				
	A	B	C	D	E
LXS-300	10	12	7	6-1/2	10
LXS-400	14	15-3/4	8-1/2	7-3/4	13
LXS-500	18	19-1/2	10-1/2	7-3/4	13
LXS-600	23-1/2	24-1/4	12-3/4	7-3/4	13
LXS-700	26	28	14-3/4	7-3/4	13

Note: The above part numbers do not include mounting brackets. See pages 3-4.

REPLACEMENT PARTS

Part No.	DIMENSIONS IN INCHES
LXS-301	Shield for LXS-300
LXS-401	Shield for LXS-400
LXS-501	Shield for LXS-500
LXS-601	Shield for LXS-600
LXS-701	Shield for LXS-700
LXS-302	Support Assembly for LXS-300
LXS-402	Support Assembly for LXS-400, -500, -600 & -700
FKT-159	10" Mounting Rod for LXS-300
FKT-160	13" Mounting Rod for LXS-400, -500, -600 & -700

(Continued on next page.)

Rockford Systems, LLC
Call: 1-800-922-7533

Using the Shields

These shields are intended to deflect objects such as chips and coolant. For protection, position the shield between the point of operation and the operator. Make sure the shield will not be hit by normal movements of the chuck, crossslide, workpieces, etc. During loading or setup of workpieces, the shield can be swung out of the way.

Note: Always make sure the shield is installed and maintained in first-class condition to meet the applicable OSHA (Occupational Safety and Health Administration) or ANSI (American National Standards Institute) standards.

Maintenance of the Polycarbonate

The transparent portions of these shields are made of polycarbonate which was selected for its strength and durability under impact. Although it will scratch if mistreated, it can be kept clear with the following appropriate care.

1. Remove coolant, chips, or debris periodically.
2. Using a clean sponge or soft clean cloth, wash with mild soap or detergent and lukewarm water.
3. Rinse well with clean water.
4. Hairline scratches or minor abrasions can be removed or minimized using a mild car polish such as paste wax. A wax coating also makes cleaning easier.

Do Not rub or wipe with dirty shop towels or scrape with a blade.

Do Not use gasoline, benzine, acetone, or carbon tetrachloride on the shield.

Do Not use cleaners or powders that contain abrasives, or “dry rub” abrasive dust to remove coolant, lubricant and chips.

When many shields are used in a plant, spare shields can be kept on hand and exchanged periodically. The shields can be removed from the machines, carefully washed, and exchanged at a later date.



When operating any turning machine (lathe), the operator must be properly trained and must wear proper personal protective equipment such as safety glasses with side shields, safety clothing, and safety shoes. The operator must not wear loose clothing, must not have unrestrained long hair, and must not wear jewelry.



When installing any shield, allow enough clearance to ensure the shield or any of its parts will not be hit by normal movements of the chuck, crossslide, workpiece, etc.

Warranty, Disclaimer and Limitation of Liability

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. ROCKFORD SYSTEMS LLC'S OBLIGATION UNDER THIS WARRANTY IS EXPRESSLY AND EXCLUSIVELY LIMITED to repairing or replacing such products which are returned to it within the warranty period with shipping charges prepaid and which will be disclosed as defective upon examination by Rockford Systems, LLC. This warranty will not apply to any product which will have been subject to misuse, negligence, accident, restriction and 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.

DISCLAIMER

The foregoing Warranty is made in lieu of all other warranties, expressed or implied, and of all other liabilities and obligations on the part of Rockford Systems, LLC, including any liability for negligence, strict liability, or otherwise, and any implied warranty of merchantability or fitness for a particular purpose is expressly disclaimed.

LIMITATION OF LIABILITY

Under no circumstances, including any claim of negligence, strict liability, or otherwise, shall Rockford Systems, LLC be liable for any incidental or consequential damages, or any loss or damage resulting from a defect in the product of Rockford Systems, LLC.

SECTION 8—RETURN MATERIALS AUTHORIZATION REQUEST FORM

Lathe Shield Installation Manual

To return material for any reason contact the sales department in our organization at 1-800-922-7533 for an RMA Number. All return materials shipments must be prepaid. Complete this form and send with material to Rockford Systems, LLC, 5795 Logistics Parkway, Rockford, IL 61109. Make sure the RMA Number is plainly identified on the outside of the shipping container.

Company _____

Address _____

City _____ State _____ Zip _____

Phone _____ Fax _____

Contact Name _____ Representative _____

Items Authorized To Return on RMA No. _____ Original Invoice No. _____ Date _____

Part No.	Serial No.	Description
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

Service Requested ☐ Full Credit ☐ 25% Restocking ☐ Repair & Return ☐ Warranty Replacement

Reason for return (describe in detail):

Return Materials Authorized by _____ Date _____