





## Standard Machine Shop Guards

First Choice Solutions for Machine Shop Guards





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### features

All round visability

Unrestricted front access

Ease of installation

Two sliding quill access panels as standard

Suitable for :-

Horizontal, Vertical, Universal & Turret milling machines



## Slide & Swing Aside

#### milling machine guards

The patented Slide & Swing Aside Milling Machine Guard has been designed to meet the stringent guidelines laid down by both legal requirements and industrial necessity. It is manufactured using impact resistant clear polycarbonate and gives good visibility, immediate access and maximum operator protection. Its unique design ensures that the guard does not impair the performance or the versatility of the machine.

This is the first guard of its kind which enables either small workpieces or large castings fitting and overhanging the milling machine table to be completely protected but at the same time giving immediate and complete access to the piecepart or casting being machined. Each of the front panels can slide to the right or left and swing aside on their own axis out of the way, finishing in a position parallel to the end panels.

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, and although the panels slide aside they will not take up any more room than the actual length of the table.

Where large castings are being machined or the need to turn vice at 90° which overhang the front of the table, you can slide the guard forward and lock into the position required.

Now the SSA guard is supplied with two sliding quill access panels as standard it allows the operator to gain access to the quill or controls at the head of the machine without opening the main sliding front doors allowing the guard to be interlocked at all times.



### mounting the guard

the guard

The guard is supplied in two separate assemblies which are mounted at each end of the table. A flat bar drilled at one end with a rectangular locating block welded the other end is positioned at each end of the table in one of the "T" slots and the parallel sole bars are clamped to the mounting plate by two socket cap screws. The two parallel sole bars support a kingpost to which a pivoting bracket is fitted supporting a ball bearing sliding track to which the polycarbonate transparent front panels are fixed. The two assemblies can easily be moved forward or backward across the table by slackening the two socket cap screws each end and moving to the required position. Ideal for those situations where the vice needs to be turned at right angles and overhangs the front of the table.



### mounting the guard

#### Fig:1. 2J Mounting



Designed for Bridgeport 21 series and similar machines. Also for use where extension 'T' slots are less than 60mm long

dimensions

Fig:2. Table End Mounting



To be used where 'T' slots cannot be interrupted



Guard type	Description	Min Table Length "L"	Max Table Length "L"
SSA/07H25E	RH&LH Sliding Doors with Quill Access Panels	610	1070
SSA/02H25E	RH&LH Sliding Doors with Quill Access Panels	1000	1460
SSA/03H25E	RH&LH Sliding Doors with Quill Access Panels	1510	1970

### SSA standard guard items



#### 1. Electrical Interlock

Additional operator safety is provided by the installation of this compact yet totally effective and reliable safety switch. As the two front panels are closed the actuator tongue enters the switch body and closes internal contacts linked to the machine controls thus allowing machine operation only when the guard is properly closed. Interlocks are fitted to the right hand side of the SSA milling machine guard as standard. A rubber over centre cam latch provides secure closure of the two front panels whilst machine is in operation.



#### 2. Sliding Access Door

A portion of the front panel is converted to a sliding access door which will allow access to the machines operating levers, e.g. Bridgeport Mill or similar machine types quill feed arm access. The access panel is positioned in both right hand and left hand front panels. The use of two sliding panels gives you greater flexibility when machining off centre or for when having the need for having two set ups on the machine table at the same time.

### features

Operator friendly proximity guard Unrestricted front access Ease of adjustment Suitable for: Tool room machines, R & D

Tool room machines, R & D workshops, small batch production machines



## Just Swing Aside

### milling machine guards

The JSA-1E Interlocked Vertical Milling Machine Guard is suitable for Bridgeport Series 1 vertical milling machines or similar.

Its operator friendly proximity guard provides operator protection without the usual constraints of a full table guard. When not required it simply swings aside allowing full operator access to the machine table for setting and measurement, etc.

Not only is it suitable for tool room machines but also R & D workshops, prototype work and small batch production machines. It has a three sided framed Vivak/PETG screen with support arm and mounting bracket with an optional right hand side cut-out for access to quill feed arms (common to Bridgeport machines). Adjustment is easily attainable in both Z and Y axis.

Guard options available for fitting to either the left or right hand side of the machine, the standard being on the left.

#### universal mounting bracket



There is a mounting bracket available for ease of fixing the JSA guard to various shaped and sloping profile sufaces. With it's "L" shaped slotted legs and with a little bending of the bottom flange it is easily adjusted to suit various machine columns.

The bracket has three mounting positions for greater flexibility so if mounted on the centre set of holes will give you an additional 50mm of movement either up or down. The bracket is also designed for left or right hand mounting.

## the guard





Option: Can be supplied as opposite hand version

## features

High impact resistant clear PVC

An efficient Lathe Guard which gives maximum operator protection with good visibility, fast & easy access to the workpiece

Choice of mounting brackets

Electrical Interlocks



## Lathe Guards

#### the LXS lathe chuck guards

The LXS Lathe Chuck Guard consists of a semicircular construction made from moulded high impact resistant transparent material which is mounted on to a chromium plated extension tube, fastened to the headstock of the lathe with one of the various types of mounting brackets.

The semicircular guard covers the upper half of the lathe chuck as shown above.

Access to the workpiece is quick and easy, the guard is lifted and hinged away from the operator to access the chuck.

The size of the guard required is dependant on the centre height of the lathe and the diameter of the chuck. On lathes up to a centre height of 178mm there is only a small variation in diameter between the 3 and 4 jaw chucks, and therefore one size of guard will suffice.



#### mounting bracket with safety interlock

The chromium plated extension tube to which the guard is fastened is mounted to the headstock of the lathe by means of a universal mounting bracket incorporating an electrical safety interlock. The interlock incorporates cam operation, is sealed to IP 66 and conforms to EN 1088 and EN 60947-5-1.

#### mounting bracket without safety interlock

There are two options for mounting the non interlocked version of the LXS lathe guard to the headstock of the lathe. As above the chromium plated extension tube to which the guard is fastened is mounted to the headstock of the lathe by means of either Type A (LXS650) for horizontal face mounting or TYPE B (LXS652) for vertical face mounting.





Model	Α	В	С	D	Е	F	G	н	
LXS-200	140	200	128	25	165	60	250	35	
LXS-200E	140	200	128	25	165	85	310	35	
LXS-300	240	300	178	25	165	60	250	35	
LXS-300E	240	300	178	25	165	85	310	35	
LXS-400	340	400	228	25	203	60	290	35	
LXS-400E	340	400	228	25	203	85	310	35	
LXS-500	440	500	278	25	203	60	290	35	
LXS-500E	440	500	278	25	203	85	310	35	
LXS-600	540	600	328	25	203	60	290	35	
LXS-600E	540	600	328	25	203	85	310	35	

Model No.s with the letter 'E' at the end represent model with interlock

#### Mounting locations using universal mounting bracket with safety interlock



#### Face mounted

Guard mounted to the face of the headstock with universal mounting bracket incorporating Rotacam safety interlock switch.



#### **Recess top mounted**

Guard mounted in the top recess of the headstock with universal mounting bracket incorporating Rotacam safety interlock switch.



#### **Back mounted**

Guard mounted to the back of the headstock with universal mounting bracket incorporating Rotacam safety interlock switch.

**Important:** In the best interests of safety we recommends the use of safety interlocks where practically possible.

#### universal mounting bracket dimensions



#### mounting locations, Note: no safety interlock



#### ordering instructions

Select the guard required from the selection chart. If you have selected a guard with an electrical interlock, no further information is required. For guards without interlocks you need to specify the type of mounting bracket required from the above table. If no mounting bracket is specified then a type 'B' bracket will be supplied.

### **features**

Ease of installation

Light but very strong and easy to use

Good visibility in working conditions

Electrically Interlocked as standard

Optional gas spring to assist guard movement



## Lathe Guards

#### CLG chuck guard

The CLG-301 lathe guard is designed to fit the Colchester Triumph 2000 lathe or similar. Additional fixing brackets may be required for certain machines. See types 1 & 2 below. There is a gas strut conversion kit available for this guard type which will reduce wear and damage to the guard by preventing the guard from being dropped and slammed against the mounting bracket stop.



#### Two types of mounting bracket are available







### features

Unique construction allows excellent visibility

A range of sizes to suit chucks up to 800mm

Ease of installation



## Lathe Guards

#### the major and minor range of sliding lathe guards

#### The Major Sliding Lathe shields

This high quality steel lathe shield with a polycarbonate window provide maximum operator protection on standard machines or large C.N.C. lathe applications. Suitable for chucks up to 800mm (larger sizes are available from our specials department). The four support stands are adjustable for ease of mounting to the headstock. The shield slides over the headstock and out of the way when it is necessary to work at the point of operation for changing tooling, piecepart, etc. The shield is supplied with an electrical interlock as standard incorporating a safety limit switch working in accordance with EN1088, which will prevent the machine from running when the guard is in the open position.

#### The Minor Sliding Lathe shields

This guard is manufactured from steel and feature 2 windows of clear polycarbonate being situated on top and front panels, these windows provide good visibility for the operator. The shield slides over the headstock allowing access to the point of operation. This Lathe Shield is designed to guard chucks up to 600mm in diameter. (Refer to the Major range for larger chucks). Again the shield is supplied with an electrical interlock as standard incorporating a safety limit switch working in accordance with EN1088, which will prevent the machine from running when the guard is in the open position. These guards are easily fitted and can be adapted to fit almost any machine.



#### major lathe guard dimensions in mm



#### minor lathe shield dimensions in mm





The chuck diameters are shown for guidance only. The effective working diameters and clearances from the control equipment should be taken into consideration when selecting the guard.

#### safety switch



## features

Ease of installation

Light but very strong and easy to use

Good visibility in working conditions

Protects when machining away from the headstock



## Lathe Guards

#### TXS saddle mount lathe shields

This protection shield is normally mounted on the cross-slide of the lathe although mounting to other parts of the machine is possible. The steel structure with a 4mm thick polycarbonate window allows protection from chips and coolant, along with visibility to the point of operation. The front portion of the shield hinges up for access. The shield is ideal for applications where a simple chuck guard is insufficient, as it protects the operator when machining is taking place at a distance from the headstock.



#### TXS-100 & TXS-200 - Dimensions in mm TXS-200 Part No. **TXS-100** А 415 570 В 200 305 C 200 250 D 315 365 Е 100 100 F 300 350

#### TXS - Dimensions in mm



## features

Suitable for high linear speeds Minimum space requirement

Resistance to swarf, cutting and emulsions

Ease of installation - shafts do not need to be removed



## Lathe Guards

### Leadscrew cartridge blinds

The Leadscrew cartridge blind system (LSCB) ensures safe retraction in all situations due to the construction of the blind and can be used in any operation plane. The roller blind is housed in a strong sheet metal powder coated case for protection and ease of fitting. The housing is supplied in different sizes and lengths to suit various sizes of lathe.

A complete system consists of two roller blinds, one with adjustable fixing brackets for the tailstock side of the carriage.

Depending on obstructions on certain types of machines, additional fixing brackets may be required. (these are not supplied)







### Leadscrew cartridge blinds



#### Typical sizes avaiable - Dimensions in mm

Size	Draw
200	1500
250	1500
300	2200
350	2200
400	2200

The Leadscrew cartridge blind system (LSCB) are made to order and require the following information.

- 1) Make of lathe
- 2) Model of lathe
- 3) Ideally front view photo of lathe
- 4) Dimensions indicated on illustration



### features

Gives complete operator protection and clear vision of the job

#### Smooth telescopic action

Patented spiral guide groove gives radial movement to prevent jamming by swarf

Unique sprung ball catch allows quick and easy access to the chuck, after slackening the retaining screws



## Drill Guards

#### **DXS safetispeed drill guards**

The Guard has been specially developed to give maximum all round protection for the operator with a high standard of visibility without adversely affecting operation time.

The drill guard consists of two major components. The drill guard mounting which is fitted to the quill of the machine and the drill guard sleeves which clip into the mounting and are held in position by three spring loaded ball catches and retaining screws.

#### IMPORTANT

Bushes are only used with the 'Type A' top mounting to reduce the bore size from 70mm down to 37.85mm (shown opposite).

> For quill diameters from 70mm up to 95mm the 3-lugType 1L, 2L and 3L top mountings should be used

#### NOTE: NO BUSHES REQUIRED

For other types of mountings 'Type 1F and 2F' should be used.

The guard consists of two or three sleeves, the inner sleeve being a ribbed cage which is held stationary in the guard holder. The outer sleeve is free to move up and down on the inner cage and is fitted with a guide groove which gives radial movement to the outer sleeve thus preventing jamming.

The outer sleeve is fitted with a transparent acrylic window (as standard) held in position by two slideways and a retaining screw. The window can be quickly removed and replaced at regular intervals giving maximum visibility at all times. The outer sleeve rests on the piece part or jig. As the drilling operation takes place the inner cage moves down and automatically protects the window from metal slivers which are cut up by the edges of the inner cage.

The standard 'A' type drill guard mounting (i.e. DXS-500) is bored suitable for a quill diameter of 70mm. The thirteen sizes of reducing bushes will cover any quill diameter down to a maximum of 37.85mm. If a bush is required, refer to the table opposite. For sizes above 70mm and to a maximum diameter of 96mm use one of the 3-lug castings either 1L, 2L or 3L depending on orientation or obstruction on quill diameter. For fixed quill diameters above 96mm we can offer our 1F and 2F flanged top mountings.



### choosing a Safetispeed drill guard

All Safetispeeds shown below have a Standard Type A mounting. Other mounting types are available and are shown on the following page. Reducing bushes are suitable for all drill guards shown on this page.



### mounting type



#### reducing bushes for stardard 'A' mountings



The standard top mounting type 'A' (70mm) can be bushed to accomodate smaller diameters. Refer to the table below.

Quill diameter	Drill guard bush
metric (mm)	Model Ref
69.85 to 68.33	No brush reqd.
67.00 to 65.35	DXS-010
65.52 to 63.91	DXS-015
63.90 to 62.31	DXS-020
62.30 to 60.78	DXS-025
60.77 to 59.18	DXS-030
59.17 to 57.61	DXS-035
57.60 to 55.90	DXS-040
55.89 to 54.23	DXS-045
54.22 to 52.73	DXS-050
52.72 to 51.31	DXS-055
51.28 to 49.78	DXS-060
49.53 to 48.00	DXS-065
39.37 to 37.85	DXS-070

#### mounting types - continued



#### three lug mounting

Three Lug Guard Mounting:- This type of mounting will accommodate quills ranging in general diameter from Ø70mm to Ø96mm. For quill sizes exceeding Ø96mm Ø96mm use one of the above 1F or 2F castings. This design of mounting as illustrated has been developed to fit irregular shaped non-rotating quills. The mountings can be fitted to 'pear shaped' quills having projecting bosses which carry the depth adjusting screw and dependent on the angular position of the projection in plan view in relation to the front of the machine the appropriate type can be selected, either 1L, 2L or 3L. Also the three lug guard mounting can be used to avoid other obstructions on the fixed drill quill diameter such as grease nipples.

Typical Type 3 Lug Mounting Bored to Ø96mm





quill flange and necessitates tapped holes being provided in the face of the quill flange for fixing purposes.



The lugs on the fixing collar are bored out to a maximum of Ø96.00mm.The collar is attached to the fixed quill by adjusting the fixing screws to suit the required diameter.

selection chart

#### accessory



Clear Acrylic window,

DXS 100 as standard



Replacement Clear Acrylic

(Pack of 5 available)

window Pt No. 440A-N200006

Туре	63.5mm-101.2mm	76.2mm-127mm	2 Stage Cage	3 Stage Cage
Std Collar (Ø70)	DXS530	DXS520	DXS500	DXS510
Type 1L			DXS600/1L	DXS610/1L
Type 2L			DXS600/2L	DXS610/2L
Type 3L	Special upon a		DXS600/3L	DXS610/3L
Type 1F			DXS600/1F	DXS610/1F
Type 2F			DXS600/2F	DXS610/2F

#### NOTE

When ordering please specify which mounting is required, eg. DXS-600/2F You are required to select the bottom section depending on your risk assessment and working length of drills.

Drill guard top casting selection chart

Drill Guard Top Casting			
STD "A" & DXS-010 Bush			
STD "A" & DXS-010 Bush			
3 Lug/2 (Type 2L, 81mm Bore)			
3 Lug/2 (Type 2L, 81mm Bore)			
3 LUG/2 (Type 2L, 81mm Bore)			
3 LUG/2 (Type 2L, 81mm Bore)			
3 Lug/2 (Type 2L, 93mm Bore)			
3 Lug/2 (Type 2L, 93mm Bore)			
STD "A" & DXS-025 Bush			
STD "A" & DXS-020 Bush			
3 Lug/1L (Type 1L, 83mm Bore)			
3 Lug/2L (Type 2L, 88mm Bore)			
3 Lug/2L (Type 2L, 77mm Bore)			
3 Lug/2L (Type 2L, 77mm Bore)			

Machine Detail	Drill Guard Top Casting
Meddings - CS-30	3 Lug/2L (Type 2L, 77mm Bore)
Meddings - LT/MK3 Series	STD "A" & DXS-020 Bush
Meddings - LB1/111 Series	STD "A" & DXS-020 Bush
F.O'Brian Co. Ltd Fobco Star 1/2" cap	STD "A" & DXS-020 Bush
F.O'Brian Co. Ltd Fobco Star 5/8" cap	STD "A" & DXS-020 Bush
F.O'Brian Co. Ltd Fobco Ten Eight 1 1/4" cap	3 Lug/1L (Type 1L, 89mm Bore)
Stanton Thompson - J.G.H.	STD "A" & DXS-010 Bush
Stanton Thompson - Gima	3 Lug/1L (Type 1L, 85mm Bore)
Startrite - Mercury MK 2, 5 speed	Flanged/1F
Startrite - Mercury MK 2, 10 speed	STD "A" & DXS-020 Bush

### features

Ease of installation

Protection without interference

Ideal for small milling machines, drills, grinders, bandsaws, etc. when complementing one or more other guards



## Safety Chip Screen

## magnetic based safety chip Screen for minimum interference

The Magnetic Based Safety Chip Screen can be attached to any ferrous part of the machine by means of the powerful magnetic base. The screens can be fitted with a special double arm, each arm having both a longitudinal and swivelling movement and the screen can also be individually adjusted. This combination of movement allows the screen to be positioned at any angle.

The screens are made with a top curvature to deflect flying chips but 90% of the screen is a flat optically undistorted window through which the operator can clearly see the work in progress.



#### MAG200 & MAG300 - Dimensions in mm

MAGEOU G	MAGOOD DIIICIN			
Model	Screen Size	Magnetic base	Stem length	Arm length
MAG200	200 x 200	Ø89	150	150
MAG300	300 x 300	Ø89	150	200

### features

Ease of installation

Light but very strong and easy to use

Good visibility in working conditions

Optional underside strip lighting on GWG 200



## **Grinding Wheel Safety Screens**

#### grinding wheel safety screen for minimum interference

The Nelsa Grinding Wheel Safety Screen bolt simply and quickly to the casing of the grinder using an M8 bolt and gives protection with wheels up to 200mm diameter using the GWG100. For wheels larger than 200mm the GWG200 should be used.

The GWG100 has a cast aluminium frame measuring 160mm x 150mm with a 5mm thick replaceable polycarbonate screen. The GWG200 has a mild steel frame measuring 200mm x 200mm with a 5mm replaceable polycarbonate screen. Both Screens have a stainless steel pivot that connects the frame to the curved adjustable mounting pivot allowing ease of placement and adjustment.







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## **Further Information**

#### **Procter Machine Guarding**

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