

Flange Facing AX321

Technical documentation

AX321

Lightweight, portable, flange facing, grooving and weld preparation machine designed to machine full faced, raised face and grooved flanges in the 3" - 21" (75mm - 533mm) diameter range.

The Silk AX321 is a compact, lightweight machine, which can be carried and operated by one person. It is constructed from the highest quality materials and designed to give finishes of machine shop accuracy on flanges with a diameter range of 3-21 inches.

Mounting Systems

For bore diameters up to 6 inches a unique system of collets is used, permitting very rapid and precise mounting. Fine adjustments can be made both vertically and radially.

For bore diameters between 6 inches and 10 inches the collets are replaced by a triangular extension base. Adjustable clamps are fitted to the corners, or alternatively to the straight faces of the triangular base. These permit fast centering in the bore before the machine is mounted.

Drive Unit

The machine is driven by a 0.85 hp pneumatic motor. This fits vertically to the drive hub, which provides direct drive input to the gearbox.

Feed System

The feed assembly consists of four feed rails and a crosshead supported by precision linear bearings, which assure a high degree of rigidity and accuracy. The tool post can be fitted to either side of the crosshead.

Finishes

By using two gear ratios and two interchangeable lead screws, four distinct finishes can be achieved. Intermediate finishes can be obtained by varying the cutting tools.

Quality

All TEAM Engineering activities are conducted in strict conformance to the ISO9001 quality system

Silk Design Department

All Silk machines are used by our on-site service technicians and over the years, we have modified and designed attachments to enable the Silk range of machine tools to undertake many specialist applications. Can we help you? Comprehensive CAD facilities operated by qualified design engineers and experienced project engineers are able to meet your exact requirements.



Integrated Solutions to Piping Problems | www.patriot-int.com

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Principal Dimensions	
Height (excluding air motor)	12" (305mm)
Rotational diameter (including air motor)	21 1/4 (555mm)
Maximum swing	21" (ø 533mm)
Minimum swing	14 1/4 (ø 360mm)
Tool post travel	2" (50mm)
Arm clearance	1 7/8 (48mm)
Weights	
Weight less base	58 lbs (26.5Kg)
Mounting collet assembly	9 1/2 lbs (4.26Kg)
Extension base	16 1/2 lbs (7.5Kg)
Net weight (less wooden case)	105 lbs (48Kg)
Total shipping weight	172 lbs (78Kg)
Transportable Wooden Case Dimensions	
Length	23" (590mm)
Height	16" (406mm)
Width	20" (510mm)
General Information	
Gripping range:	
Small collet	2" - 4" (ø 75mm - ø 100mm)
Medium collet	4" - 5" (ø 100mm - ø 125mm)
Large collet	5" - 6" (ø 125mm - ø 150mm)
Extension base	6" - 10" (ø 150mm - ø 250mm)
Flange range	3" - 21" (ø 75mm - ø 533mm)
Drive motor 85hp: Minimum air supply requirements 80 PSI @ 80 CFM	
Drive motor output speed 360 RPM: final rotational speed 40 RPM (approx)	

Cutting feeds	Course Setting	Fine setting
(Per rev)		
Course leadscrew	0.039" (1.00mm)	0.008
Fine leadscrew	0.026" (0.66mm)	0.002

Features

- Compact
- Easy to handle
- Bore Mounted
- Operates in any Position
- Cuts 'O' Ring Grooves, vertical grooves, "V" grooves, lens ring seats, weld preparations
- Achieves finishes from 63 CLA to 250 CLA (1.6 um Ra to 6.3 um Ra) plus 'phonograph' finish when turning, and 32 CLA to 63 CLA (0.8 um Ra to 1.6 um Ra) when polishing
- Pneumatic drive permits use in hazardous areas
- Provided in own transportable case

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