Glacier Energy

Technical Specification

Silk AX321 Flange Facing Machine

Overview:

- At 26.5kg (58lbs.), the AX321 is the lightest flange facing machine in the Silk range. It is bore mounted and covers a range of flanges from75mm (3”) internal diameter to 533mm (21”) external diameter.
- Depending on the flange bore size, rapid and effective internal mounting is achieved via a unique system of collets, or by a spigot base for the larger diameters.
- The cutting tool feed assembly consists of four rails and a crosshead with a swivelling tool post that are supported by precision linear bearings, providing both rigidity and extreme accuracy.
- The feed gearbox provides two cutting tool feed rates and is supplied with an additional lead screw to provide a total of four feeds.
- The machine is driven by a 630W (0.85hp) pneumatic motor mounted either vertically or horizontally if space is restricted.

Silk AX321 Features:

- Precise and robust
- Compact and portable
- Internally mounted
- Operates in any orientation
- Cuts “O” Ring grooves, RTJ and other V grooves, standard and compact flange facings, weld preparations, etc.
- Achieves surface finishes from 1.6µm Ra to 6.3µm Ra (63 CLA to 250 CLA) when turning and from 0.8µm Ra to 1.6µm Ra (32 CLA to 63 CLA) when polishing
- Pneumatic drive permits use in hazardous areas. Optional hydraulic drive is available on request
- Provided in own transportable case

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The Silk AX321 is a compact, lightweight machine, which can be carried and operated by one man. 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 radically. 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 Furmanite Silk 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.

Specifications

Principal Dimensions

Height (excluding air motor)	12 inches (305mm)
Rotational diameter (including air motor)	21.85 inches (555mm)
Maximum Swing	21 inches (533mm)
Minimum Swing	14.25 inches (360mm)
Tool Post Travel	2 inches (50mm)
Arm Clearance	1.88 inches (48mm)

Weights

Weight Less Base	58lbs (26,5kg)
Mounting Collet Assembly	9.5lbs (4.26kg)
Extension Base	16.5lbs (7,5kg)
Net Weight (Less Wooden Case)	105lbs (48kg)
Total Shipping Weight	172lbs (78kg)

Transportable Wooden Case Dimensions

Length	23 inches (590mm)
Height	16 inches (406mm)
Width	20 inches (510mm)

General Information

Gripping Range	
Small Collet	3 to 4 inches (0.75 to 0.100mm)
Medium Collet	4 to 5 inches (0.100 to 0.125mm)
Large Collet	5 to 6inches (0.125 to 0.150mm)
Extension Base	6 to 10 inches (0.150 to 0.250mm)
Flange Range	3 to 21 inches (0.75 to 0.533mm)
Drive Motors Two	1.55HP each
Drive Motor	0.85hp
Minimum air supply requirements	80 PSI / 80 CPM
Drive motor output speed	350 RPM
Final rotational speed	40 RPM

Cutting Feed (Per Rev)	Course Settings	Fine Setting
Course Leadscrew	0.039 inches (1.00mm)	0.010 inches (0.25mm)
Fine Leadscrew	0.026 inches (0.066mm)	0.006 inches (0.16mm)