

Pioneer Machine Tools Product Brochure

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I.1 Slide Jaw Type Precision Air Chuck



I.2 Diaphragm Type High Precision Air Chuck



I.3 Air Supply Apparatus

Pioneer Trading Company supply the finest quality and most sophisticated tool holders and other products it was establish in the year 1974 with current capital of 17,500,000 yen. PTC is a leading provider of high-quality machine tools and equipment. Their products are known for their precision, durability, and advanced features. PTC also offers reliable customer support services. They are recognized for their commitment to quality and innovation in the industry.

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1.1 Slide Jaw Type Precision Air Chuck

The Slide Jaw Type Precision Air Chuck is a compact, robust and versatile device used in industrial applications for securely gripping and positioning workpieces during machining. It has several moving jaws, uses compressed air to operate, and sets up quickly while offering steady gripping force. It provides excellent accuracy and flexibility for different materials and shapes, and configurable choices. This adaptable chuck is often used, increasing productivity and precision in machining operations, in sectors like automotive, aerospace, and electronics.

1.1.1 3 Jaw Rotary Air Chuck



Industries it caters to

Automotive
Electronic
Robotics

Selection Parameters

Parameters	Min	Max
Weight	2kg	27kg
Gripping Force	4.2kN	32kN
Chucking cap. OD	3-73mm	16-233mm
Chucking cap. ID	6-73mm	16-233mm

Product Application

CNC turning centers
CNC milling
Lapping
Honing
Inspection

In order to hold and rotate workpieces, a 3-jaw rotary air chuck is utilised in machining. With the aid of pressurised air, its three jaws operate concurrently. It holds firmly, and adapts to different shapes. In CNC machining, it is effective, adaptable, and often used.

1.1.2 2 Jaw Rotary Air Chuck



Industries it caters to

Automotive
Electronic
Robotics

Selection Parameters

Parameters	Min	Max
Weight	2.7kg	6.7kg
Gripping force	7.4kN	10.3kN
Chucking cap. OD	3-90mm	3-135mm
Chucking cap. ID	6-90mm	10-135mm

Product Application

CNC turning centers
CNC milling
Lapping
Honing
Inspection

The jaws of a 2-jaw rotary air chuck are used to hold and rotate workpieces.

1.1 Slide Jaw Type Precision Air Chuck (continued)

1.1.3 4 Jaw Rotary Air Chuck



Industries it caters to

Automotive
Electronic
Robotics

Selection Parameters

Parameters	Min	Max
Weight	2.7kg	8.1kg
Gripping force	6.6kN	9.7kN
Chucking cap. OD	3-95mm	3-135mm
Chucking cap. ID	6-99mm	10-135mm

Product Application

CNC turning centers
CNC milling
Lapping
Honing
Inspection

Workpieces are held and rotated during milling by a 4-jaw rotary air chuck. It provides adaptability for a variety of forms holds eccentric workpieces. Allows for versatile and safe holding for precision cutting.

1.1.4 Sealed Rotary Air Chuck



Industries it caters to

Automotive
Electronic
Robotics

Selection Parameters

Parameters	Min	Max
Weight	2.2kg	31.5kg
Gripping force	4.2kN	32kN
Chucking cap. OD	3-77mm	16-245mm
Chucking cap. ID	6-77mm	16-245mm

Product Application

CNC turning centers
CNC milling
Grinding machines
Lapping
Honing
Inspection

A specialised kind of chuck known as a seal rotary air chuck combines the duties of workpiece holding . It is frequently utilised in machining applications to prevent cutting chips and sludge from penetrating inside the chuck.

1.1 Slide Jaw Type Precision Air Chuck (continued)

1.1.5 High Speed Rotary Air Chuck



Industries it caters to

Automotive
Electronic
Robotics

Selection Parameters

Parameters	Min	Max
Weight	-	4kg
Gripping force	-	9.7kN
Chucking cap. OD	-	3-90mm
Chucking cap. ID	-	6-90mm

Product Application

CNC turning centers
CNC milling
Lapping machines
Honing machines
Inspection machines

An air chuck designed specifically for high-speed machining is called a high-speed rotating air chuck. It offers stable gripping, stability, and exact rotation, enabling dependable and effective machining operations at high speeds.

1.1.6 Stationery Air Chuck



Industries it caters to

Automotive
Electronic
Robotics

Selection Parameters

Parameters	Min	Max
Weight	0.9kg	7kg
Gripping force	1.5kN	10.4kN
Chucking cap. OD	3-54mm	3-135mm
Chucking cap. ID	6-54mm	10-135mm

Product Application

CNC turning centers
CNC milling
Lapping
Honing
Inspection

The workpiece is held firmly in position throughout machining processes using a stationary air chuck. By limiting movement while machining operations are being carried out, it assures stability and accuracy, resulting in accurate and reliable outcomes.

1.2 Diaphragm Type High Precision Air Chuck

The Diaphragm Type Precision Air Chuck is a maintenance-free and reliable tool used in machining and manufacturing. It has a flexible diaphragm that can be made to expand or contract in response to compressed air, giving it a precise and consistent clamping force. This chuck ensures the highest accuracy, precision and stability by accommodating a variety of workpiece sizes and shapes with smaller strokes compared to Slide Jaw Type air chucks. It boosts efficiency in machining processes and is perfect for sectors including automotive, aerospace, and electronics. It requires tight tolerance in clamping points with the workpiece.



Selection Parameters

Parameters	Min	Max
Chucking cap.	2-40mm	3-90mm
Chuck dia	82mm	150mm
Jaw dia	40mm	110mm

Industries it caters to

Automotive
Medical
Aerospace

Product Application

Printing machine
High speed turning
High accuracy turning
Assembly

1.3 Air Supply Apparatus

The Air Supply Apparatus for an air chuck is a vital component that delivers controlled and clean compressed air to operate the chuck. It ensures reliable and efficient operation of the air chuck during machining processes.



Selection Parameters

Parameters	Min	Max
MAX Speed	6000rpm	12000rpm
Max. Air/Coolant Press	58psi	145psi

Industries it caters to

Automotive
Medical
Robotic
Electronic
Aerospace

Product Application

CNC turning centers
CNC milling
Grinding
Inspection
Printing machine
High speed turning
High accuracy turning
Assembly