AXIOS



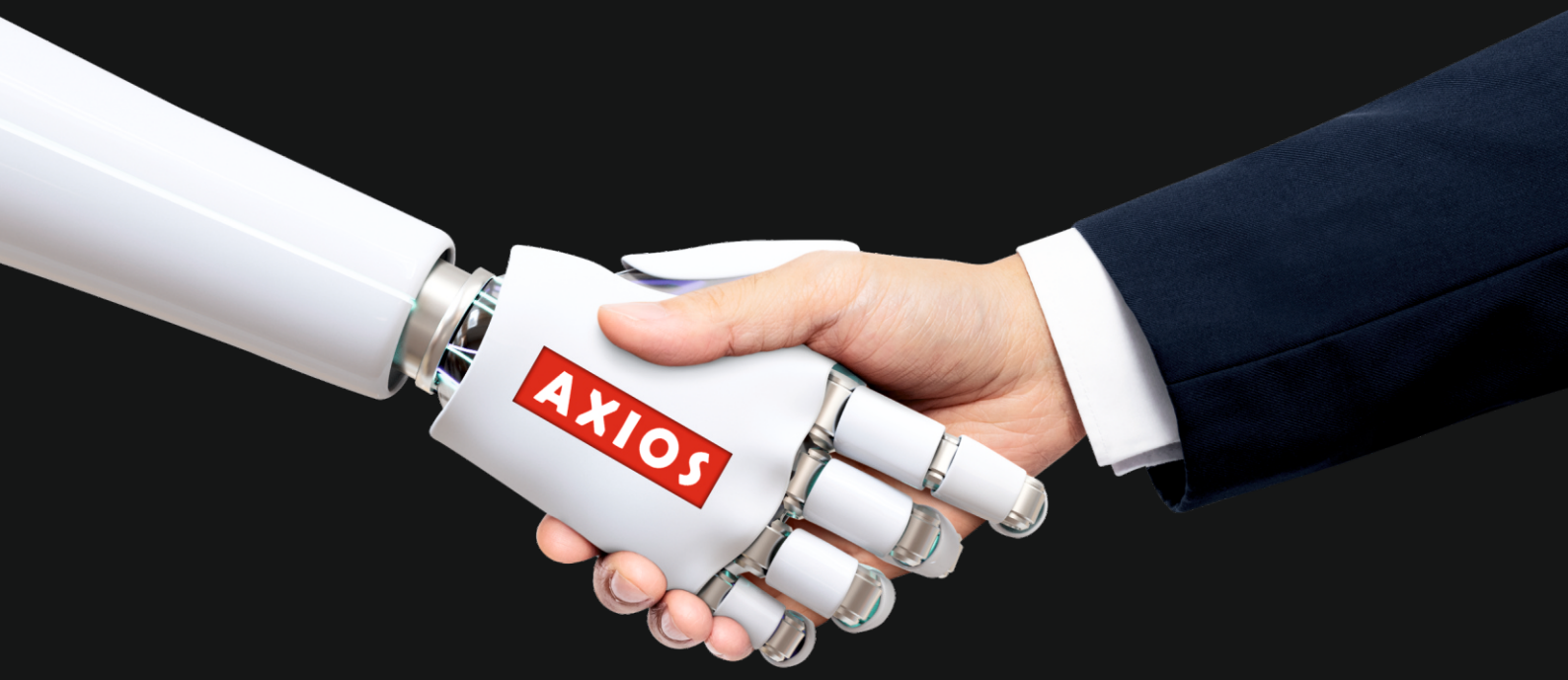
Powered By:

MITSUBISHI ELECTRIC

Tapping Machine

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A NICE WELCOME INTRODUCTION



OUR HAPPY CUSTOMER















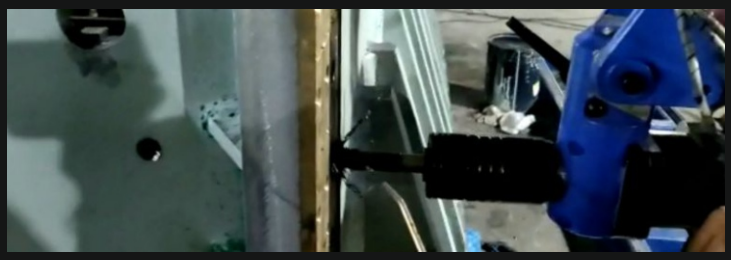



AXIOS



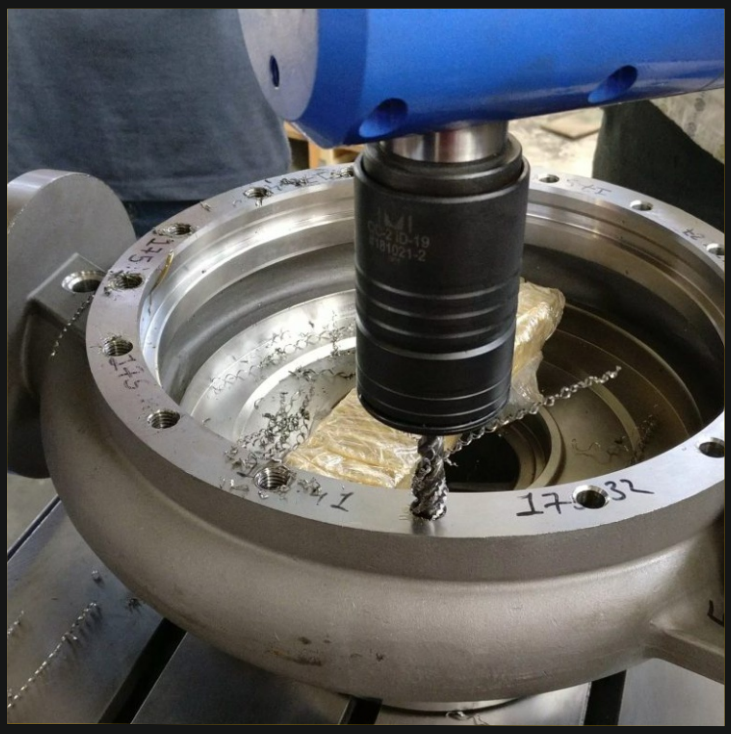











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AXIOS

Why Tapping Machine?

Benefit of Tapping on AXIOS v/s Conventional Hand Tapping

- Accurate Alignment with Drilled Hole
- Super Fast tapping,
- Increase Tool Life,
- No worker fatigue
- Precision Depth Control, Consistently throughout the batch
- Accuracy with GO-NoGO Guage



Benefit of Tapping on AXIOS v/s CNC



Save Time, Save Tools, Save Machine & Save Money



Tapping on a CNC Machine is a costly and cumersome process It needs to have high end tool holders & tools as well as the best machine with high skill operator for RIGID TAPPING (G84) Process.
While in AXIOS Tapping Machines, Tapping can be done with simple quick change adaptors, with zero skill (even with helper!!).
Tapping on the AXIOS can be done alongside CNC while the job is running, by the same CNC operator
This arrangement of CNC+AXOIS literally makes zero cycle time for tapping and tapping cost to zero

No Run Out after Regrinding & Recoating of Taps on AXIOS Machines, While it gives runout on CNC after Regrinding and ReCoating of taps.

AXIOS Immensely increases the tap life and decreases the tap breakages

Tapping on AXIOS

Virtually ZERO Time.
Because AXIOS run in between when CNC machine cycle is running with the same operator.

AT THE SAME SPEED OF CNC

Tapping on CNC

6 Taps per part
1000 Parts per day =1000*6=6000 Taps per day
6 sec per tap cycle time
=(6*6000)/3600 = 10 Hrs Total Time

CPP VMC - Rs.1200/ Hr
Cost of Tap = 1200*10 = Rs.12000 per day

Appr Cost Turning Center - Rs.500/ Hr
Cost of Tap = 500*10 = Rs.5000 per day

AXIOS Tapping V/S Any Imported China

How to recognize Imported(China) Tapping Machines?

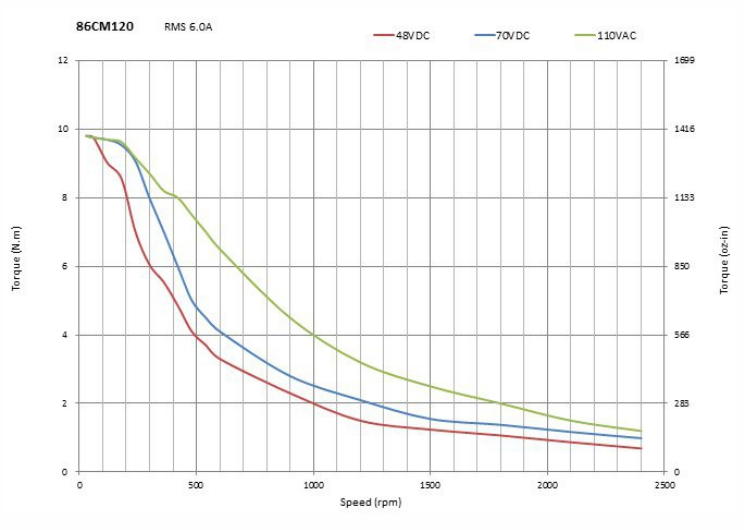




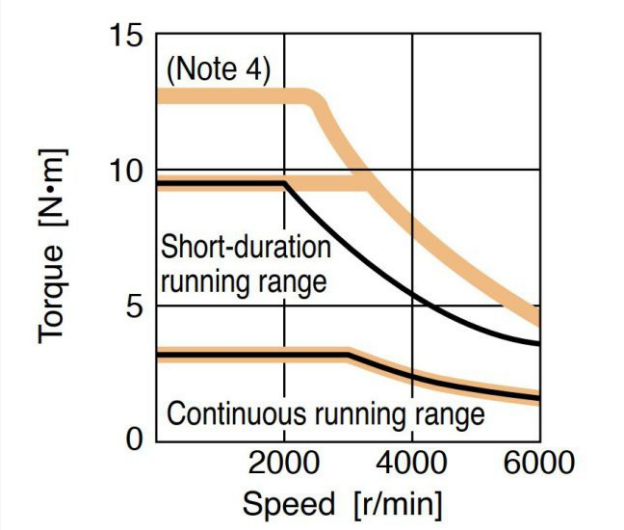


All Imported Machines are CHINA make only.

Servo Motor V/s Stepper Motor Graph



Servo Motor



Stepper Motor

AXIOS

Axios Make in India VS China Imported Comparison

Servo Motor	Stepper Motor
Controlled with Rugged Mitsubishi PLC.	Controlled with PCB Board
Highest torque available all throughout the RPM Range.	Full tourque available in lower RPM range only
Very long life.	High Maintenance cost
Run with Electronic Drive and various parameters.	No parameters
Runs on 3 Phase AC .	Runs on DC Supply only
Rugged Motor Structures for Heavy Loads. World Standard Tap Adaptors Used	Light duty motor structures for low RPM only china standard adaptors can be used.
Which are available anywhere in the world.	Only available with the seller
On Call Maintenance Service.	Not Available
All Spare Parts available anytime.	Not Available
EXPERT Technical support for Tap Solutions and Tap Life.	Not Available
Collaboration with Best Tool Makers.	Not Available

Speed Benefit Comparison 1/3rd

Tapping on AXIOS	Tapping on Any Other make
SPEED upto 900RPM M12 Tapping in 25 mm Depth Cycle Time = 2 Sec Job Change Time = 6 sec total - 8 Sec	SPEED upto 100RPM M12 Tapping in 25 mm Depth Cycle Time = 18 Sec Job Change Time = 6 sec total - 24 Sec
8 Hrs Shift=8*3600 Sec=28800 Sec Parts possible = 28800/8 = 3600 parts	8 Hrs Shift=8*3600 Sec=28800 Sec Parts possible = 28800/24 = 1200 parts
Requirement for production of 3600 Parts - 1 Machine 1 Tap 1 Person 1x Floor Space 1x Power	Requirement for production of 3600 Parts - 3 Machine 3 Tap 3 Person 3x Floor Space 2x Power

Not to be added in website

Specification Comparison AXIOS V/s China Machines

Model No.	12900TR	Impotred China
Standard Features Included in Machine		
Working Radius (MM)	1700	1100
No. of Arms	2	2
Max. Tapping Capacity RPM	M12 x 1.75 mm Pitch @900RPM Capacity	M12 x 1.75 @50 RPM
Min Tapping Capacity RPM	M2x0.4 @900 RPM	M2x0.4 @180 RPM
Max Tap Pitch	1.75 mm	1.75 mm
RPM (FWD / REV)	0-900/900(Rev)	0-180/180
V/C (Cutting Speed)	**Beyond VMC/CNC 20-25**	3
Recommended V/C (Cutting Speed) IS **15** By Sandvik, Kennametal, Dormer, YG1		
PM Tap V/C	Available	Not available
Tapping Size (MS, EN8D, EN19)	2-12 mm	2-12 mm
Tapping Size (SS)	2-10 mm	2-10 mm
Tapping Head Movement	360° Universal	Vertical / Optinal : Horizontal
Tilting Movement	Any degree	Not available
Servo Motor	MITSUBISHI ELECTRIC	Stepper Motor
Servo Drive		Embedded PCB circuit
PLC		Not Available
Motor	**Servo Motor** 4000 RPM High Speed & High Torque	**Stepper Motor** 300 Low Speed & Low Torque
Servo Motor Power Input	3 Phase	1 Phase
Servo Encoder	Available	Not available
Servo Motor Power	3 Ø / 1000W	1 Ø/ 500 W
HMI	Touch Screen Pro-face (Schneider) Japan	Touch Pad CHINA Make
Power Safety	60 +/-	20 +/-
Power Safety	Transformer (440-220)	Not available
Gear Box	Helical Teeth with zero backless with accuracy of 0.006 Arc min. Taiwanese Heavy Frame	CHINA Make 0.06 Arc min. Accuracy
Hinge Support Plate Thickness	*12mm*	3 mm Sheet Metal
Hinge Bearing Support	*INA Germany*	Bushing
Colour	Powder Coating	Oil Paint
Cycle	Manual/Auto/Peck	Manual/Auto/Peck
Data of Tapping	MM, BSW, BSP, NPT, UNC	MM, Inch
Pannel Board	Servo Drive, PLC, HMI, SMPS, Transformer, Relay, Contactor	Embedded PCB circuit & Push Buttom Screen
Gas Spring	Made in Germany	China
Tapping Speed	3 times higher output then normal	Lower then Normal
Standard Parts included in Machine		
Tap Adaptors - 5 Nos - ISO	World Standard Billz Germany & KTA M6, M8, M10, M12, M16	Non-Standard / Non-Branded China clutch less Adaptors
Optional Acce.		
Multi Tool Multi Tap Programe	Available	Not Available
Base & Table	High Precision Ground Cast Iron Table	Sheet Metal / Not available

AXIOS Electric V/S Hydraulic V/S Pneumatic Tapping

Comparison of AXIOS Electric Servo Tapping Machine V/S Pneumatic Tapping Machine & Hydraulic Tapping Machine



Air Compressor



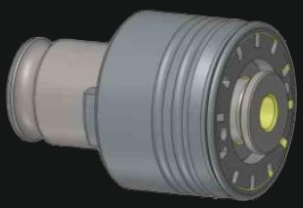
Hydraulic Power Pack



Hydraulic Motor

Electric	Pneumatic	Hydraulic
Runs on Simple Direct Electricity which is easily available in any factory unit at any place.	Runs with Pressurized Air, for which a heavy Air Compressor is needed. For pneumatic special line need to be arranged for pressurized air.	Runs with Pressurized Oil, for which full fledged power pack is needed. Power pack runs on high powered electric motor.
Electric power is consumed is used only when machine is under operation	Electric power is used continuously to run compressor motor for availability of air.	Electric power is used constantly to run power pack.
No Reduced Torque or power with Voltage drop	Torque and power reduces drastically with pressure low or flow of air is low.	Torque and power reduces drastically with low flow and pressure of oil
Mitsubishi Servo Motor and Gearbox are very long life.	Air motor being used has less working life	Hydraulic motor itself is high maintenance.
Almost Zero maintenance	Very High on Maintenance like, Air Seals, Rotor, Valves etc.	Very high on maintenance like Oil Seals, Rotor, Solenoid Valves etc.
Programmable with Depth Control and Auto and Peck cycles.	Non-Programmable.Only runs by forward-reverse of motor which is done manually by operator.	Non-Programmable. Only runs by forward reverse of motor which is done manually by operator.
No Operator Interaction when tapping is on. Machine will automatically reverse when depth is achieved or even during peck cycle.	Operator needs to pay critically high attention when tapping operation is on. Operator needs to reverse manually when depth is reached.	Operator needs to pay critically high attention when tapping operator is on Operator needs to reverse manually when depth is reached.
This auto-reverse reduces clutch slippage drastically. Eventually even adaptor life is increased.	This non auto reverse increases possibilities of slippage of clutch at each and every tap. Eventually adaptor life reduces radically.	This non auto reverse increase possibilities of slippage of clutch at each and every tap. Eventually adaptor life reduces radically.

AXIOS



World Standard Quick Change Adaptors
DIN/ISO Standards same as those used in CNC machines Easily and commonly available standard Quick change Chuck and Adaptors



Mitsubishi PLC Controller & Drives (Japanese Product)
For Tapping, High Load carrying Controller devices & Drives are Used Which can work in temperature up to 55° C.

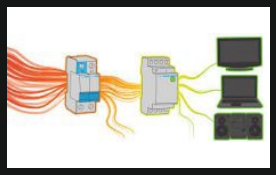


Mitsubishi 3 phase Servo Motor (Japanese Product)
Why 3 Phase ?

3 phase Real Servo motor performs 25-35% more powerful

then the same rating of any single phase Stepper and Servo Motors.

Internally closed loop Servo Motor with high resolution Encoder



Electrical Safety
Premium Brands of electrical used with isolation TRANSFORMER Panel designed to fully cover and safeguard from any impact damage



3 Phase 440 V - 220 V Transformer
To sustain power fluctuation up to ± 60 V and machine can work smoothly.
Also safeguards PLC Drive & motors.



Touch Screen
Pro – Face Schneider (Japanese Product)

AXIOS



Bearing Supported Hinges -
NO LUBRICATION REQUIRED
All pipes and joints supported with bearings for easiest movement and long life.



Magnetic Alignment Adaptors
Magnetic alignment adaptorscan be used to align universal head in desired angle as per the surface perpendicular to the drilled hole.



Heavy Frame Size Planetary GearBox
with Helical Teeth
with Low Backlash 6 ArcSecond Accuracy
with High Speed 6000 RPM rating
with torque rating more than required NM.



Casting Base with T-Slots
High Precision gound casting base and machined T-Slots



360° Universal Head
Heavy-duty special Vibration Absorbing Aluminium grade Universal head that can be set at any angle for horizontal tapping or tapping at any angle

Arm Joint Plates
Made of 10 MM thick special Aluminium grade Joint Plate for more rigidity and to absorb tapping vibration.



Heavy and sturdy table
Fabricated Table from 4mm Thick plates and angles for resting and mounting of heavy weight jobs up to 600Kg.

AXIOS TR Series







TR Series Specifications

Servo Motor	MITSUBISHI ELECTRIC
Servo Drive	
PLC	
Motor	Servo Motor 4000 RPM High Speed & High Torque
HMI (Touch Screen)	Pro-face (Schneider)
Pannel Board	Servo Drive, PLC, HMI, SMPS, Transformer, Relay, Contactor
Servo Motor Power Input	3 Phase
Power Safety	Isolation Transformer (440-220)
Cycle	Manual/Auto/Peck
Tapping Head Movement	Any Degree 360° Universal
Working Base	Ground & Machined T Slot
Hinge Bearing Support	INA Germany
Hinge Support Plate Thickness	12mm
Gear Box	Helical Teeth with Zero Backless with Accuracy of 0.006 Arc Min. Taiwanese Heavy Frame
(EA) Base Size	800 x 550
(EA) Table Size	850 x 600 x 800
Data Of Tapping	MM, BSW, BSP, NPT, UNC
Arm	Triple
Working Radius	1700
Colour	Powder Coating

AXIOS 33300TR







Maximum Torque **195 Nm**

Vc (Cutting Speed) **20**

Specifications 33300TR

Max Capacity	M33 x 3.5mm Pitch @200RPM Capacity
RPM (FWD / REV)	0-300/300(Rev)
Tapping Size (MS, EN8D, EN19)	6-33 mm
Tapping Size (SS)	6-24 mm
Tapping Chuck Size	3
Can Be Run On	60 ± Voltage
Power	2000 W
ISO Adopter	BILZ (Germany) / KTA
Available Vc For	PM Tap, TiAlN & AlCrN Coating Tap
Multi Tool Multi Tap Program Optional	Available



AXIOS 24300TR









Maximum Torque **145 Nm**

Vc (Cutting Speed) **23**

Specifications 24300TR

Max Capacity	M24 x 3mm Pitch @300RPM Capacity
RPM (FWD / REV)	0-300/450(Rev)
Tapping Size (MS, EN8D, EN19)	3-24 mm
Tapping Size (SS)	3-18 mm
Tapping Chuck Size	2
Can Be Run On	60 ± Voltage
Power	1500 W
ISO Adopter	BILZ (Germany) / KTA
Available Vc For	PM Tap, TiAlN & AlCrN Coating Tap
Multi Tool Multi Tap Program Optional	Available

AXIOS 16450TR







Maximum Torque **95 Nm**

V_c (Cutting Speed) **23**

Specifications 16450TR

Max Capacity	M16 x 2mm Pitch @450RPM Capacity
RPM (FWD / REV)	0-450/450(Rev)
Tapping Size (MS, EN8D, EN19)	3-16 mm
Tapping Size (SS)	3-12 mm
Tapping Chuck Size	2
Can Be Run On	60 ± Voltage
Power	1000 W
ISO Adopter	BILZ (Germany) / KTA
Available V_c For	PM Tap, TiAlN & AlCrN Coating Tap
Multi Tool Multi Tap Program Optional	Available



AXIOS 12900TR







Maximum Torque **47.5 Nm**

Vc (Cutting Speed) **34**

Specifications 12900TR

Max Capacity	M12 x 1.75mm Pitch @900RPM Capacity
RPM (FWD / REV)	0-900/900(Rev)
Tapping Size (MS, EN8D, EN19)	2-12 mm
Tapping Size (SS)	2-10 mm
Tapping Chuck Size	1
Can Be Run On	60 ± Voltage
Power	1000 W
ISO Adopter	BILZ (Germany) / KTA
Available Vc For	PM Tap, TiAlN & AlCrN Coating Tap
Multi Tool Multi Tap Program Optional	Available



AXIOS DB Series







DB Series Specifications

Servo Motor	MITSUBISHI ELECTRIC
Servo Drive	
PLC	
Motor	Servo Motor 4000 RPM High Speed & High Torque
HMI (Touch Screen)	Pro-face (Schneider)
Pannel Board	Servo Drive, PLC, HMI, SMPS, Transformer, Relay, Contactor
Servo Motor Power Input	3 Phase
Power Safety	Isolation Transformer (440-220)
Cycle	Manual/Auto/Peck
Tapping Head Movement	Any Degree 360° Universal
Working Base	Ground & Machined T Slot
Hinge Bearing Support	INA Germany
Hinge Support Plate Thickness	12mm
Gear Box	Helical Teeth with Zero Backless with Accuracy of 0.006 Arc Min. Taiwanese Heavy Frame
(EA) Base Size	800 x 550
(EA) Table Size	850 x 600 x 800
Data Of Tapping	MM, BSW, BSP, NPT, UNC
Arm	Double
Working Radius	1100
Colour	Powder Coating

AXIOS 33300DB







Maximum Torque **195 Nm**

Vc (Cutting Speed) **20**

Specifications 33300DB

Max Capacity	M33 x 3.5mm Pitch @200RPM Capacity
RPM (FWD / REV)	0-300/300(Rev)
Tapping Size (MS, EN8D, EN19)	6-33 mm
Tapping Size (SS)	6-24 mm
Tapping Chuck Size	3
Can Be Run On	60 ± Voltage
Power	2000 W
ISO Adopter	BILZ (Germany) / KTA
Available Vc For	PM Tap, TiAlN & AlCrN Coating Tap
Multi Tool Multi Tap Program Optional	Available



AXIOS 24300DB







Maximum Torque **145 Nm**

Vc (Cutting Speed) **23**

Specifications 24300DB

Max Capacity	M24 x 3mm Pitch @300RPM Capacity
RPM (FWD / REV)	0-300/450(Rev)
Tapping Size (MS, EN8D, EN19)	3-24 mm
Tapping Size (SS)	3-18 mm
Tapping Chuck Size	2
Can Be Run On	60 ± Voltage
Power	1500 W
ISO Adopter	BILZ (Germany) / KTA
Available Vc For	PM Tap, TiAlN & AlCrN Coating Tap
Multi Tool Multi Tap Program Optional	Available



AXIOS 16450DB







Maximum Torque **95 Nm**

Vc (Cutting Speed) **23**

Specifications 16450DB

Max Capacity	M16 x 2mm Pitch @450RPM Capacity
RPM (FWD / REV)	0-450/450(Rev)
Tapping Size (MS, EN8D, EN19)	3-16 mm
Tapping Size (SS)	3-12 mm
Tapping Chuck Size	2
Can Be Run On	60 ± Voltage
Power	1000 W
ISO Adopter	BILZ (Germany) / KTA
Available Vc For	PM Tap, TiAlN & AlCrN Coating Tap
Multi Tool Multi Tap Program Optional	Available



AXIOS 12900DB







Maximum Torque **47.5 Nm**

Vc (Cutting Speed) **34**

Specifications 12900DB

Max Capacity	M12 x 1.75mm Pitch @900RPM Capacity
RPM (FWD / REV)	0-900/900(Rev)
Tapping Size (MS, EN8D, EN19)	2-12 mm
Tapping Size (SS)	2-12 mm
Tapping Chuck Size	1
Can Be Run On	60 ± Voltage
Power	1000 W
ISO Adopter	BILZ (Germany) / KTA
Available Vc For	PM Tap, TiAlN & AlCrN Coating Tap
Multi Tool Multi Tap Program Optional	Available



AXIOS SD Series







SD Series Specifications

Servo Motor	**CHINA MAKE**
Servo Drive	
PLC	
Motor	Servo Motor 2000 RPM High Speed & High Torque
HMI (Touch Screen)	Delta
Pannel Board	Servo Drive, HMI,
Servo Motor Power Input	1 Phase
Power Safety Optional	Stabilizer
Cycle	Manual/Auto/Peck
Tapping Head Movement	Any Degree 360° Universal
Working Base	Ground & Machined T Slot
Hinge Bearing Support	INA Germany
Hinge Support Plate Thickness	12mm
Gear Box	Planetary Gear Box
(EA) Base Size	800 x 550
(EA) Table Size	850 x 600 x 800
Data Of Tapping	MM, BSW, BSP, NPT, UNC
Arm	Double
Working Radius	1100
Colour	Powder Coating

AXIOS 30180SD







Maximum Torque **195 Nm**

Vc (Cutting Speed) **11**

Specifications 30180SD

Max Capacity	M30 x 3.5mm Pitch @120RPM Capacity
RPM (FWD / REV)	0-120/140(Rev)
Tapping Size (MS, EN8D, EN19)	6-30 mm
Tapping Size (SS)	6-22 mm
Tapping Chuck Size	1
Can Be Run On	20 ± Voltage
Power	1000 W
ISO Adopter	BILZ (Germany) / KTA
Available Vc For	Normal Tap



AXIOS 24180SD







Maximum Torque **195 Nm**

Vc (Cutting Speed) **11**

Specifications 24180SD

Max Capacity	M30 x 3.5mm Pitch @120RPM Capacity
RPM (FWD / REV)	0-120/140(Rev)
Tapping Size (MS, EN8D, EN19)	6-30 mm
Tapping Size (SS)	6-22 mm
Tapping Chuck Size	2B
Can Be Run On	20 ± Voltage
Power	1000 W
ISO Adopter	BILZ (Germany) / KTA
Available Vc For	Normal Tap



AXIOS 16300SD





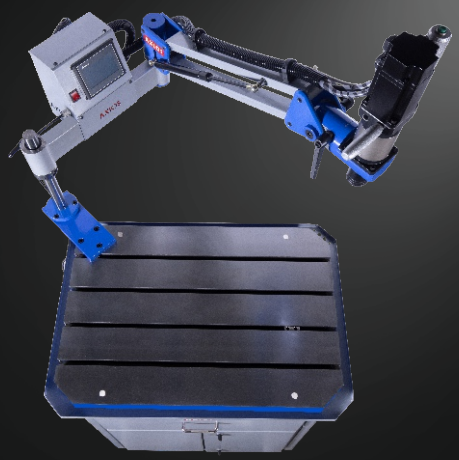


Maximum Torque **195 Nm**

V_c (Cutting Speed) **10**

Specifications 16300SD

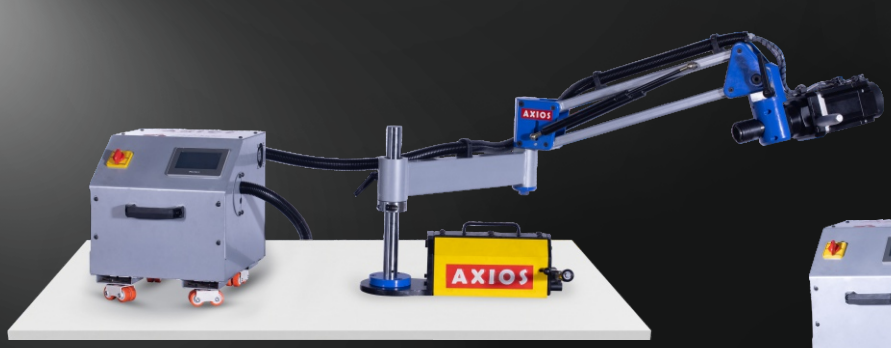
Max Capacity	M16 x 2mm Pitch @200RPM Capacity
RPM (FWD / REV)	0-200/300(Rev)
Tapping Size (MS, EN8D, EN19)	3-16 mm
Tapping Size (SS)	3-12 mm
Tapping Chuck Size	1
Can Be Run On	20 ± Voltage
Power	750 W
ISO Adopter	BILZ (Germany) / KTA
Available V_c For	Normal Tap



AXIOS

MG Series







Specifications MG Series

Arm	Double
Working Radius	1100
Tapping Head Movement	360° Universal



DB Series With Magnet Base	SD Series With Magnet Base
12900DBM	16300SDM
16450DBM	24180SDM
24300DBM	30180SDM

* For all Other Detailed Specifications Please Refer to Respective Models in Series Pages

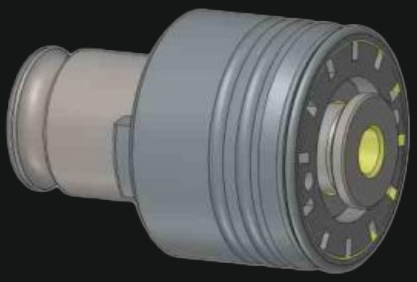
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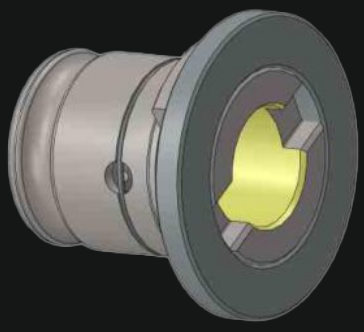
- High Precision Ground Casting Base 800 x 550mm with Machined T Slots
  Precision Ground C.I.Base with Machined T Slots
- Heavy Duty Sheet Metal Table with Panel in-built
  Axios Hevay Duty Table Which Can Sustain 600 Kg.



- "Magnetic Alignment Adaptor - 1B Size For M12
  (Must Have Part)"
- "Magnetic Alignment Adaptor - 2B Size For M16 / M24 Machine
  (Must Have Part)"
- "Magnetic Alignment Adaptor - 3B Size For M33 / M40 Machine
  (Must Have Part)"
- "Magnetic Alignment Adaptor - 4B Size For M48 Machine
  (Must Have Part)"



- "Bilz/KTA Make Tap Clutch Adaptor - Size 1B - For M3 to M12 cap
  (each adaptor ts one size)"
- "Bilz/KTA Make Tap Clutch Adaptor - Size 2B - For M14 to M24 cap
  (each adaptor ts one size)"
- "Bilz/KTA Make Tap Clutch Adaptor - Size 3B - For M26 to M33 Cap
  (each adaptor ts one size)"
- "Bilz/KTA Make Tap Clutch Adaptor Size 4B - For M36 to M48 Cap
  (each adaptor ts one size)"



- Bilz /KTA Make Tap Adaptor Reduction Socket - 2B/1B
- Bilz /KTA Make Tap Adaptor Reduction Socket - 3B/2B
- Bilz/KTA Make Tap Adaptor Reduction Socket - 3B/1B
- Bilz/KTA Make Tap Adaptor Reduction Socket - 4B/3B
- Bilz/KTA Make Tap Adaptor Reduction Socket - 4B/2B

AXIOS

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