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College of Engineering & Technology

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MTAB ARISTO ROBOT

6-AXIS INDUSTRIAL EDUCATIONAL ROBOT



SPECIFICATIONS

Parameter	Details
Number of Axes / Height	6 / 522 mm
Joint Actuators	Servo Motor (With Encoders)
Transmission	Belt drives, Ball Screws, Elbow & Gear drive
Joints	Ball Bearings
Gripper	Angular Jaws Type (Detachable)
Gripper Actuator	Pneumatic
Pay Load (Including Gripper)	3 kg
Repeatability	± 0.3 mm

JOINT RANGES

Joint	Range
J1 (Waist)	340°
J2 (Shoulder)	45°
J3 (Elbow)	45° (dependent on shoulder)
J4 (Wrist)	340°
J5 (Pitch)	180°
J6 (Roll)	340°

APPLICATIONS

Pick & Place Applications, Palletizing Kit, Stacking, Assembly, Testing switch Banks

Do's

Ensure workspace is clear before operation
Always check payload against limits
Use emergency stop in case of danger
Securely mount the robot to the floor

Don'ts

Enter the robot's work envelope during operation
Exceed the specified payload of 3 kg
Operate without proper training
Modify the robot or controller without authorization



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CNC MILLING MACHINE

MTAB - FLEX MILL



SPECIFICATIONS

Parameter	Details
X-Axis Travel (Longitudinal)	250 mm
Y-Axis Travel (Cross)	150 mm
Z-Axis Travel (Vertical)	220 mm
Table Size (Clamping Surface)	480 × 180 mm
T-Slots	3 × 10 mm
Max Load on Table	50 kg
Positional Accuracy	0.010 mm
Repeatability	± 0.005 mm
Rapid Feed (X / Y / Z)	5 m/min
Spindle Speed	3000 rpm

MACHINABLE MATERIALS

Aluminium, Brass, Copper, Plastics, Composites, Other machinable non-ferrous metals

APPLICATIONS

Precision component machining, Prototyping and modeling, Educational CNC training, Small batch production, Jigs and fixtures manufacturing, Engraving and drilling operations

Do's

- Ensure proper workpiece clamping
- Use correct cutting tools and parameters
- Maintain coolant level and cleanliness
- Check lubrication system regularly

Don'ts

- Operate without safety guards
- Exceed machine load or travel limits
- Use damaged or dull tools
- Ignore machine alarms or abnormal noise



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INGCO BMS14007

MTAB - FLEX MILL



SPECIFICATIONS

Parameter	Details
Voltage	220–240V ~ 50/60Hz
Input Power	1400 W
No-load Speed	5000 rpm
Blade Size	210 mm (8-1/4") × 25.4 mm
Base Material	Aluminium
Mitre Table Angles	0° to 45° left and right
Bevel Cuts	0° to 45° to the left
Cutting Capacity (0°/0°)	55 × 120 mm
Cutting Capacity (45°/0°)	55 × 83 mm
Cutting Capacity (0°/45°)	30 × 120 mm
Cutting Capacity (45°/45°)	30 × 83 mm

APPLICATIONS

Crosscuts, Miter cuts, Bevel cuts, Compound cuts, Framing, Posing, Trim work, Flooring

Do's

- Wear safety goggles and hearing protection
- Secure the workpiece firmly before cutting
- Ensure the blade guard is in place
- Keep hands away from the blade path

Don'ts

- Force the cut; let the blade do the work
- Reach over the blade while it's spinning
- Use with dull or damaged blades
- Operate without proper setup and support



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CNC TURNING MACHINE

MTAB - FLEX TURN



SPECIFICATIONS

Parameter	Details
Chuck Size	100 mm
Max. Turning Diameter	80 mm
Max. Turning Length	190 mm
Swing over Cross Slide	80 mm
Swing over Way Cover	244 mm
Max. Spindle Speed	6000 rpm
Number of Turret Stations	8
X-Axis Travel	190 mm (Diameter)
Z-Axis Travel	210 mm
Rapid Traverse (X / Z)	5 m/min
Feed Rate	2 m/min
Max. Speed	4000 rpm

MATERIALS

Aluminium, Brass, Copper, Plastics, Composites, Other machinable non-ferrous metals

APPLICATIONS

Precision Turning, Facing & Threading, Drilling & Boring, Small Batch Production, Prototyping

Do's

- DO clamp the workpiece securely in the chuck.
- DO verify tool offsets and program before starting.
- DO close the machine door and check interlocks.
- DO use correct tools, feeds, and speeds for the material.
- DO stop the machine immediately if abnormal noise or vibration occurs.

Don'ts

- DON'T touch rotating parts or chips during operation.
- DON'T exceed machine, chuck, or spindle limits.
- DON'T measure the job while the spindle is running.
- DON'T use damaged or worn cutting tools.



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VOLTZ VZ-DS-500

BELT & DISC GRINDER / SANDER



SPECIFICATIONS

Parameter	Details
Model	VZ-DS-500
Type	Electric Belt & Disc Grinder / Sander
Motor Power	500 W
Speed	2980 RPM
Belt / Disc Size	6 inch
Power Source	Corded Electric
Mounting Type	Bench-top

SUITABLE MATERIALS

Metal, Wood, Plastics, Non-ferrous materials

Do's

- Wear safety goggles and gloves
- Secure the machine firmly on the bench
- Use appropriate pressure while grinding
- Keep hands at a safe distance
- Switch off power before adjustments

Don'ts

- Touch the belt or disc while rotating
- Operate with loose clothing
- Force the workpiece aggressively
- Grind without guards in place
- Leave the machine unattended



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