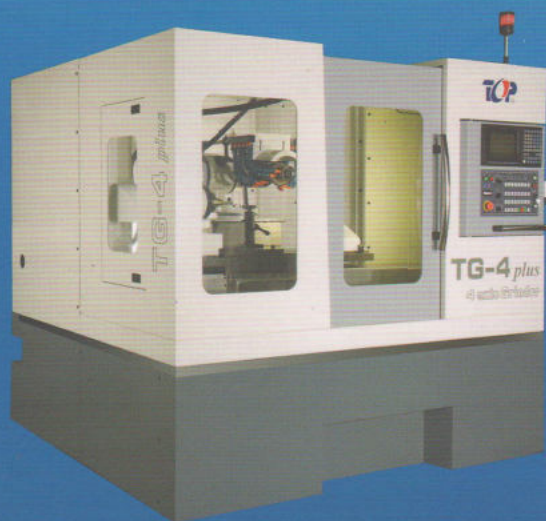




TOPWORK
ISO 9001 • CE

TG-5 · TG-4 · TE-5

CNC TOOL GRINDER
ACCURACY • RIGIDITY • EFFICIENCY



www.topwork.com.tw

Strongly structured bed – minimum vibration
High rigidity linear guideway – Maximum wear resistance
Full servo controller – Positioning accuracy
High precision ballscrew – Highly accurate operations

Workhead

- Spindle taper: BT-50.
- Fast workpiece chucking with pneumatic control.
- Workhead concentricity accuracy within 4 μ m.

Grinding Wheel Head

- High rigidity design.
- Equipped with high-precision, angular-contact ball-bearing.
- Motor speed: 9000rpm max.

Operation

- SIEMENS controller
- Touch screen panel allows manual inputs
- Fast screen switch between 3D CAD and CNC



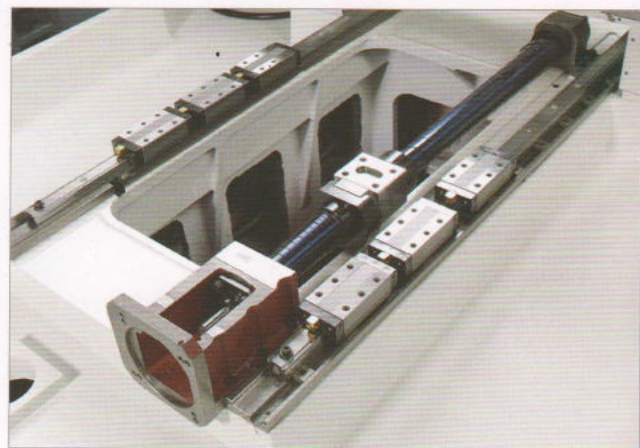
Characteristics

Coolant System

- 500 liter oil capacity.
- 80 ~ 100 liters per minute.
- Powerful pump.
- Equipped with oil cooler.

Linear guideway

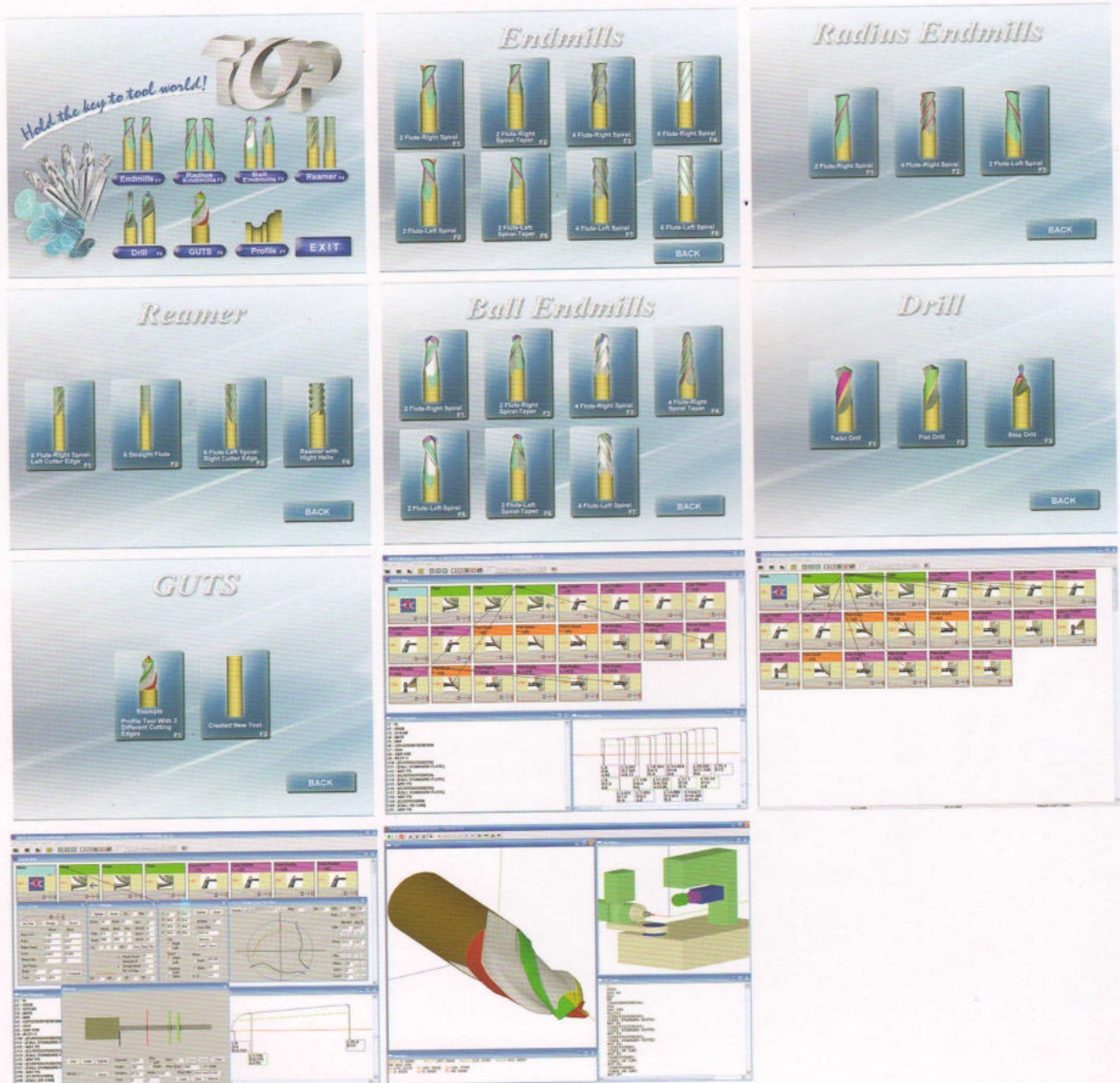
- High rigidity linear guideway for X, Y, Z axis .
- Driven by high precision ballscrew
- Central lubrication system reduce maintenance while operates.



Advantages of SMART and GUTS

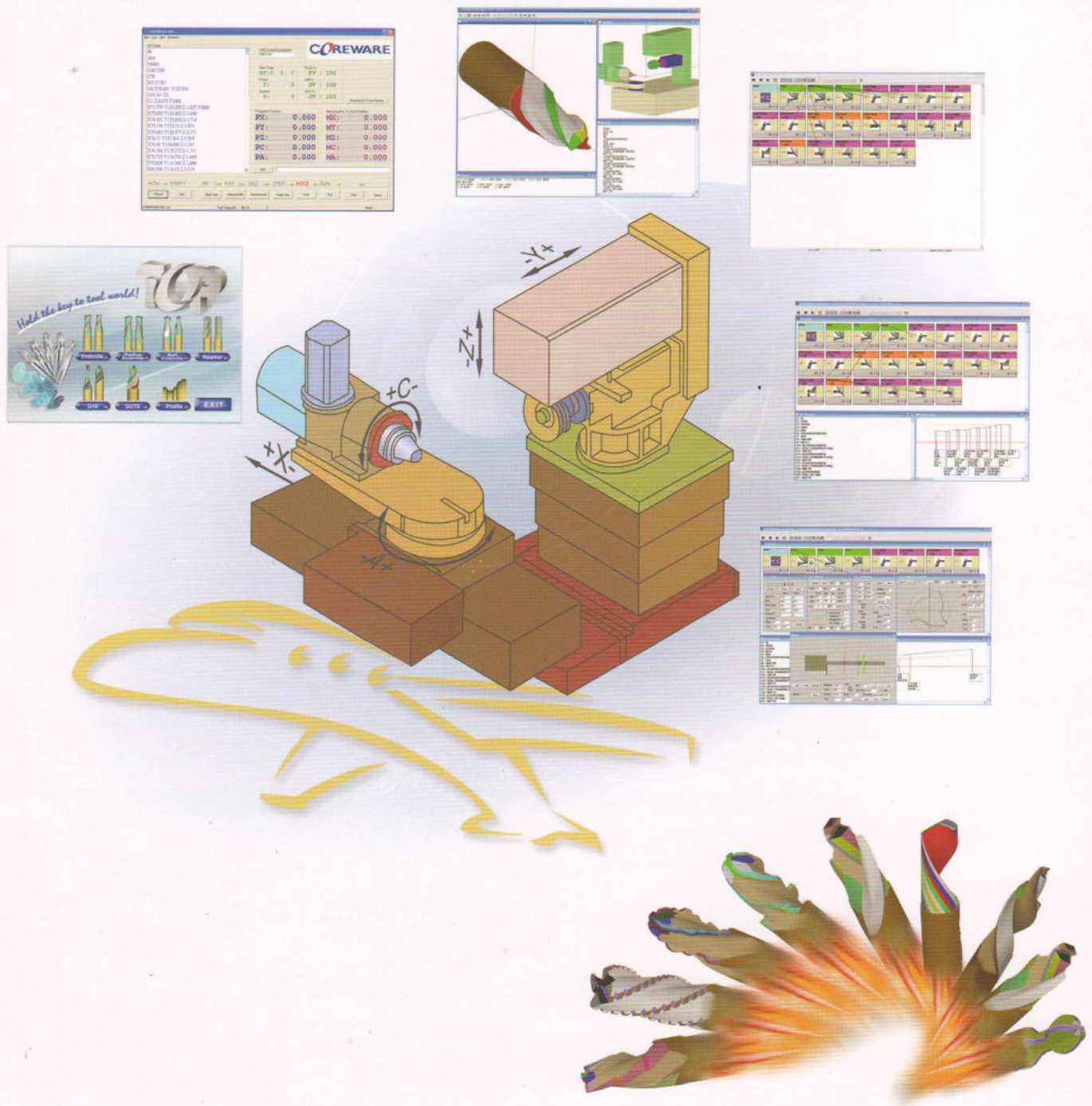
- Powerful tool design function with no limitation.
- Intellectual and logical interface.
- Combined with 3 advanced tools: design with spatial geometry calculation as key; grinds with 5-axis CNC grinding tool; infused with manual grinding concept.
- Spatial geometry based tool profile are more accurate than previous methods.
- Editable process sequence and method.
- Re-sharpening operation available.

Operational Interface



Software

Tool Grinding Process



Standard

Endmills



Endmill (2 Flute & Right Spiral)



Endmill (2 Flute & Left Spiral)



Taper Endmill (2 Flute & Right Spiral)

Taper Endmill (2 Flute & Left Spiral)



Endmill (6 Flute & Right Spiral)



Endmill (6 Flute & Left Spiral)



Endmill (4 Flute & Right Spiral)



Endmill (4 Flute & Left Spiral)

Ball Endmills



Ball Endmill (2 Flute & Right Spiral)



Ball Endmill (2 Flute & Left Spiral)



Ball Endmill (2 Flute & Right Spiral)



Ball Endmill (2 Flute & Left Spiral)



Ball Endmill (4 Flute & Right Spiral)



Ball Endmill (4 Flute & Left Spiral)



Taper Ball Endmill (4 Flute & Right Spiral)

Corner Radius Endmills



Corner Radius Endmill (2 Flute & Right Spiral)

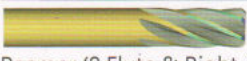


Corner Radius Endmill (2 Flute & Left Spiral)



Corner Radius Endmill (4 Flute & Right Spiral)

Reamer



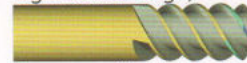
Reamer (8 Flute & Right Spiral & Left Cutter Edge)



Reamer (8 Flute & Left Spiral & Right Cutter Edge)

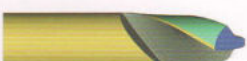


Reamer (6 Straight Flute)



Reamer with high helix

Drill & Cutter



Drill



Step drill

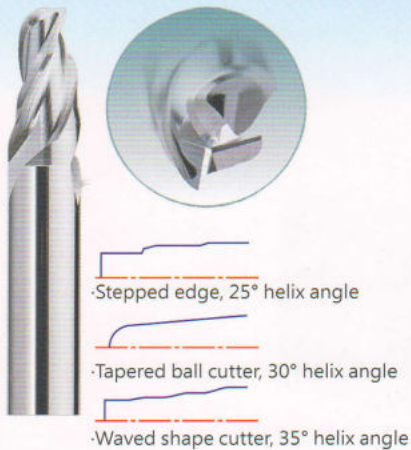


Side Cutter

Software

Optional

Profile tool with 3 different cutting edges



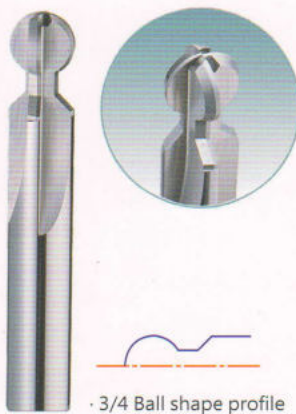
Cutting edge with wave shape



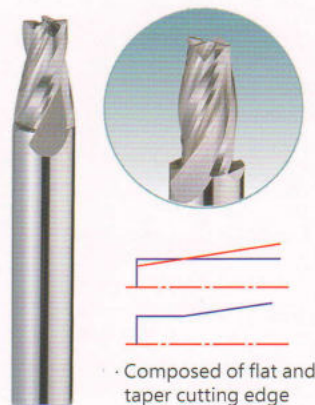
3/4 Ball shape formed by arcs connected



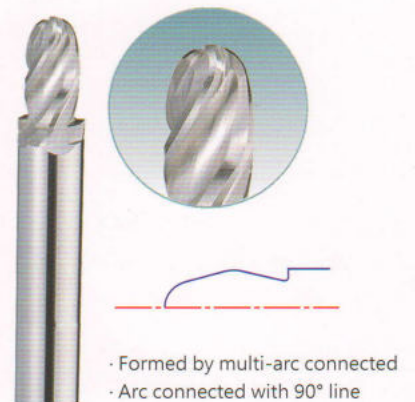
Straight flute with 3/4 ball shape



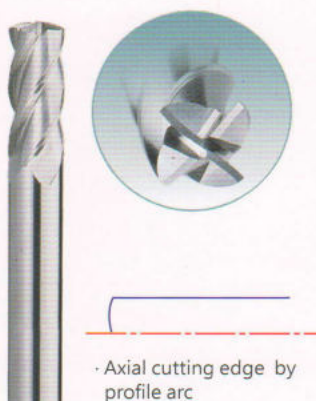
Angle tool formed with flat and taper cutting edge



Whale shape



Endmill with arc-end



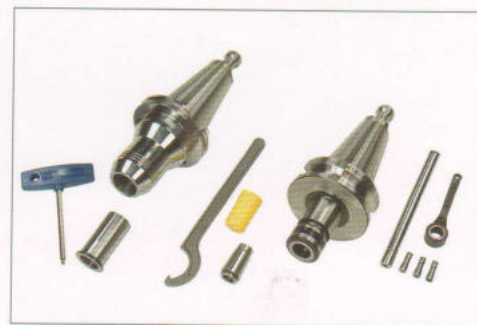
Step-Arc & Taper Shape





Mechanical Axes	X Axis	370 mm
	Y Axis	230 mm
	Z Axis	170 mm
	C Axis	∞
	Rapid traverse X	12 m/min
	Rapid traverse Y	12 m/min
	Rapid traverse Z	9 m/min
	Rapid traverse C	180 rpm
	Linear resolution	0.001 mm
	Radial resolution	0.001°
Axes Motor	X Axis	1.5 Kw
	Y Axis	1.5 Kw
	Z Axis	1.5 Kw
	C Axis	1.5 Kw
	A A xis	1.5 Kw
Tool data	Min. diameter	3 mm
	Max.turning diameter	200 mm
	Max. work-piece length	400 mm
Grinding spindle	Max. grinding wheel diameter	150 mm
	Grinding spindle speed	0 ~ 9000 rpm
	Peak Power	7.5HP (5.5Kw)
Cooling System	Cooling motor	3 HP & 2 HP
Controller	Type	MITSUBISHI
Machine	L x W x H	2300 x 1990 x 2250 mm
	Weight	4530 kg

TG-4 4-Axis CNC Tool Grinder



Standard Accessories

1. Full Enclosure splash Guard
2. Halogen Lamp
3. Grinding Wheel Flange
4. Leveling Bolts / Block
5. Pneumatic Collet Holder
6. Tool Box / Adjusting Tool
7. Cooling system
8. Angular Setting Disc for Machine Reference Point Measurement
9. Plug Gauge BT#50 for presetter Measurement
10. Plug Gauge NT#50 for Grinding wheel dressing
11. BT#50 Plug Gauge Machine Reference Point Measurement
12. Automatic Lubrication System
13. Tailstock
14. Spare belt 3R7M800



Mechanical Axis	X Axis	370 mm
	Y Axis	230 mm
	Z Axis	180 mm
	C Axis	∞
	A Axis	$-16^{\circ} \sim 196^{\circ}$
	Rapid traverse X	12 m/min
	Rapid traverse Y	12 m/min
	Rapid traverse Z	9 m/min
	Rapid traverse C	180 rpm
	Rapid traverse A	8 rpm
	Linear resolution	0.001 mm
	Radial resolution	0.001°
Axes Motor	X Axis	1.5 Kw
	Y Axis	1.5 Kw
	Z Axis	1.5 Kw
	C Axis	0.8 Kw
	A Axis	0.8 Kw
Tool data	Min. diameter	3 mm
	Max. turning diameter	200 mm
	Max. work-piece length	150 mm
Grinding spindle	Max. grinding wheel diameter	150 mm
	Grinding spindle speed	0 ~ 9000 rpm
	Peak Power	10 HP (7.5Kw) / 15HP (11Kw)
Cooling System	Cooling motor	3 HP & 2 HP
Controller	Type	SIEMENS
Machine	L x W x H	2062 x 2127 x 1955 mm
	Weight	4530 kg

TG-5 5-Axis CNC Tool Grinder



Standard Accessories

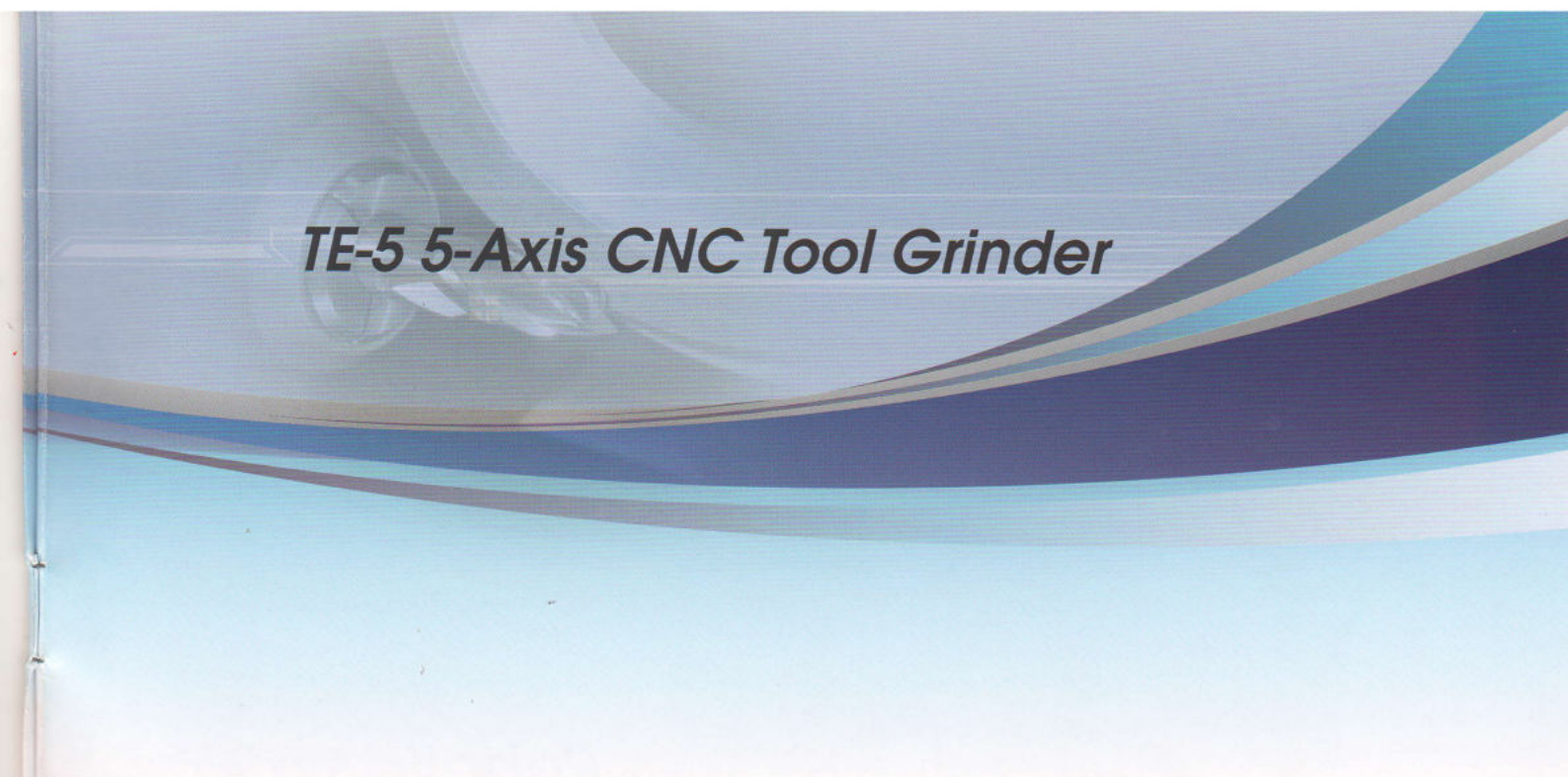
1. Full Enclosure splash Guard
2. Halogen Lamp
3. Grinding Wheel Flange
4. Leveling Bolts / Block
5. Spare belt
6. Pneumatic Collet Holder $\varnothing 6$ 、 $\varnothing 8$ 、 $\varnothing 10$ 、 $\varnothing 12$ 、 $\varnothing 16$ mm
7. GUTS Grinding Software
8. Tool Box / Adjusting Tool
9. Cooling system
10. Angular Setting Disc for Machine Reference Point Measurement
11. Plug Gauge BT#50 for presetter Measurement
12. Plug Gauge NT#50 for Grinding wheel dressing
13. BT#50 Plug Gauge Machine Reference Point Measurement
14. Automatic Lubrication System
15. 3-Dimension Model Simulation System

Optional Attachment

1. Robotic System
2. Touch Probe
3. M-40 Universal Cutter Tool Grinder with Cylindrical Grinder Attachment
4. TD Diamond wheel truing and dressing Machine



Mechanical Axes	X Axis	240 mm
	Y Axis	220 mm
	Z Axis	250 mm
	C Axis	∞
	A Axis	$-16^{\circ} \sim 196^{\circ}$
	Rapid traverse X	10 m/min
	Rapid traverse Y	10 m/min
	Rapid traverse Z	8 m/min
	Rapid traverse C	180 rpm
	Rapid traverse A	8 rpm
	Linear resolution	0.001 mm
	Radial resolution	0.001°
Axes Motor	X Axis	1.5 Kw
	Y Axis	1.5 Kw
	Z Axis	1.5 Kw
	C Axis	0.8 Kw
	A Axis	0.8 Kw
Tool data	Min. diameter	3 mm
	Max. turning diameter	200 mm
	Max. work-piece length	150 mm
Grinding spindle	Max. grinding wheel diameter	150 mm
	Grinding spindle speed	0 ~ 9000 rpm
	Peak Power	5 HP (3.75Kw) / 7.5HP (5.6Kw)
Cooling System	Cooling motor	2 HP & 2 HP
Controller	Type	SIEMENS
Machine	L x W x H	1840 X 2737X 2070 mm
	Weight	4000 kg



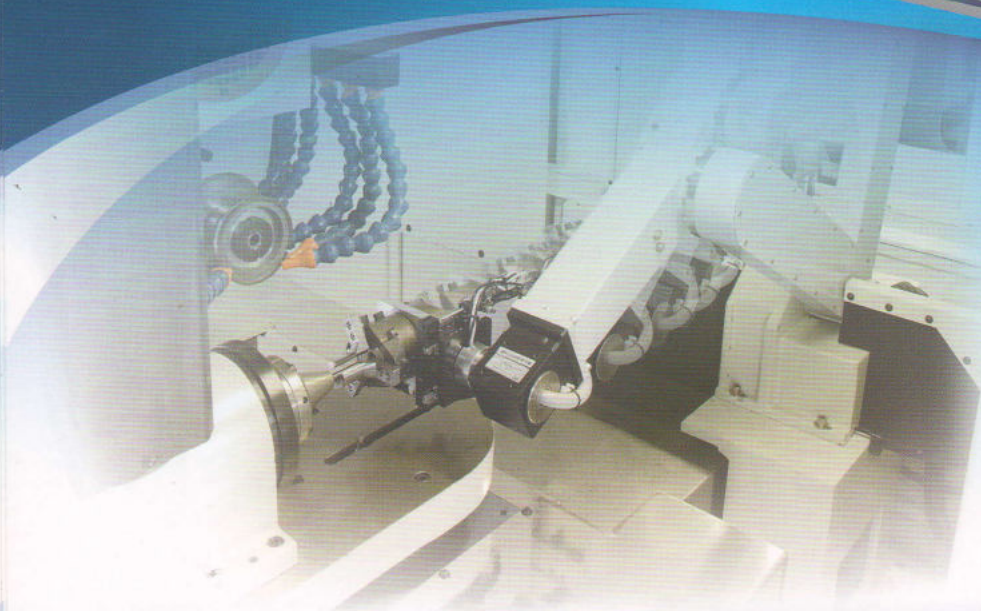
TE-5 5-Axis CNC Tool Grinder

Standard Accessories

- | |
|---|
| 1. Full Enclosure splash Guard |
| 2. Halogen Lamp |
| 3. Grinding Wheel Flange |
| 4. Leveling Bolts / Block |
| 5. Pneumatic Collet Holder Ø3、Ø4、Ø6、Ø8 mm |
| 6. GUTS Grinding Software |
| 7. Tool Box / Adjusting Tool |
| 8. Cooling system |
| 9. Angular Setting Disc for Machine Reference Point Measurement |
| 10. Plug Gauge BT#50 for presetter Measurement |
| 11. Plug Gauge NT#50 for Grinding wheel dressing |
| 12. Plug Gauge Machine Reference Point Measurement |
| 14. 3-Dimension Model Simulation System |
| 15. Spare belt |

Optional Attachment

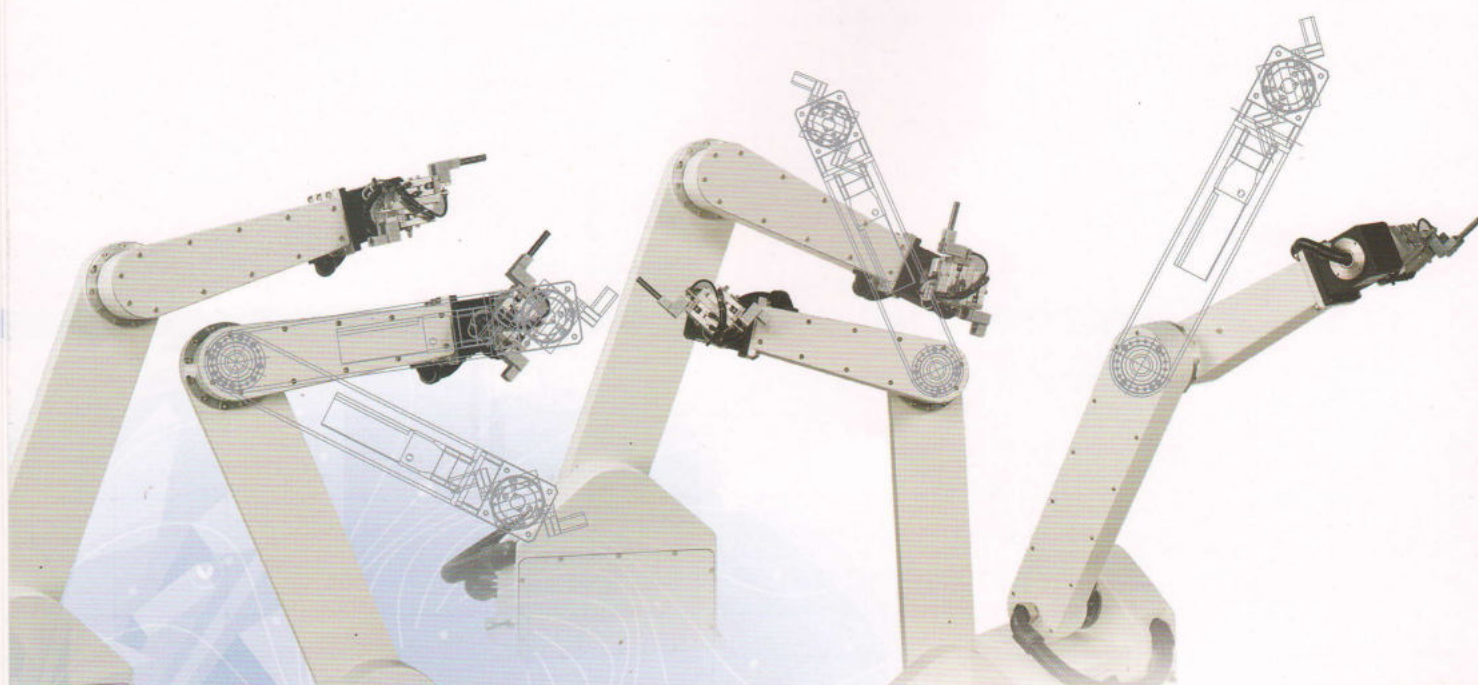
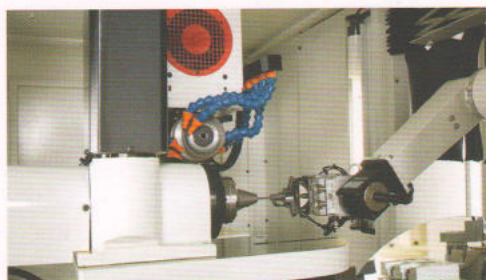
- | |
|---|
| 1. Robotic System |
| 2. Touch Probe |
| 3. M-40 Universal Cutter Tool Grinder with Cylindrical Grinder Attachment |
| 4. TD Diamond wheel truing and dressing Machine |



Robotic system

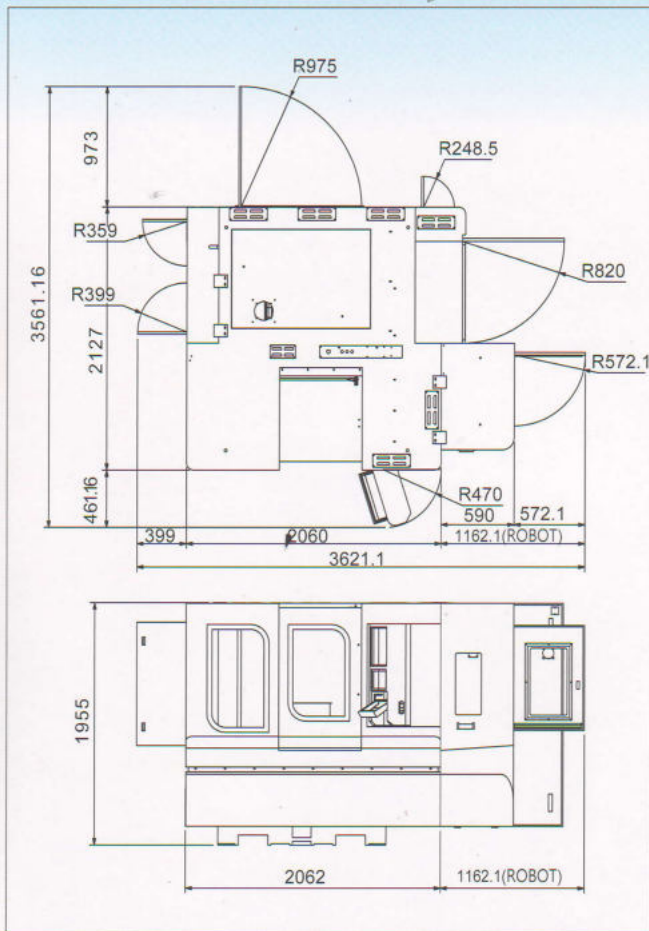
Robot Loading/unloading System®

- Fast loading robotic system: automation of loading and unloading within 10 seconds.
- Time efficient without the door adjustment.
- Avoid cutting oil mist to pollute the factory environment.

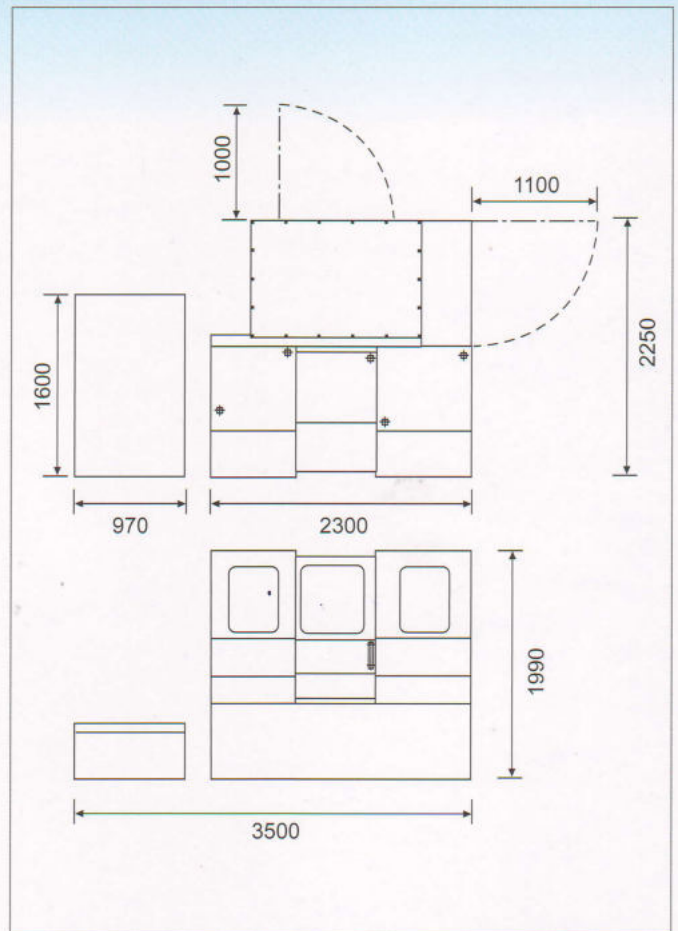


Dimension

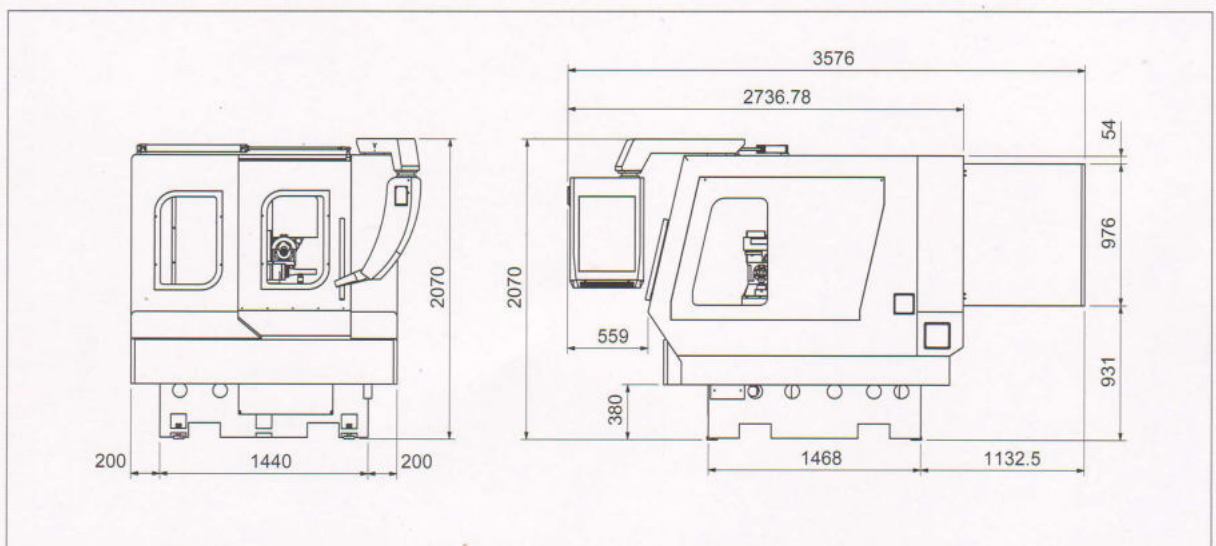
TG-5

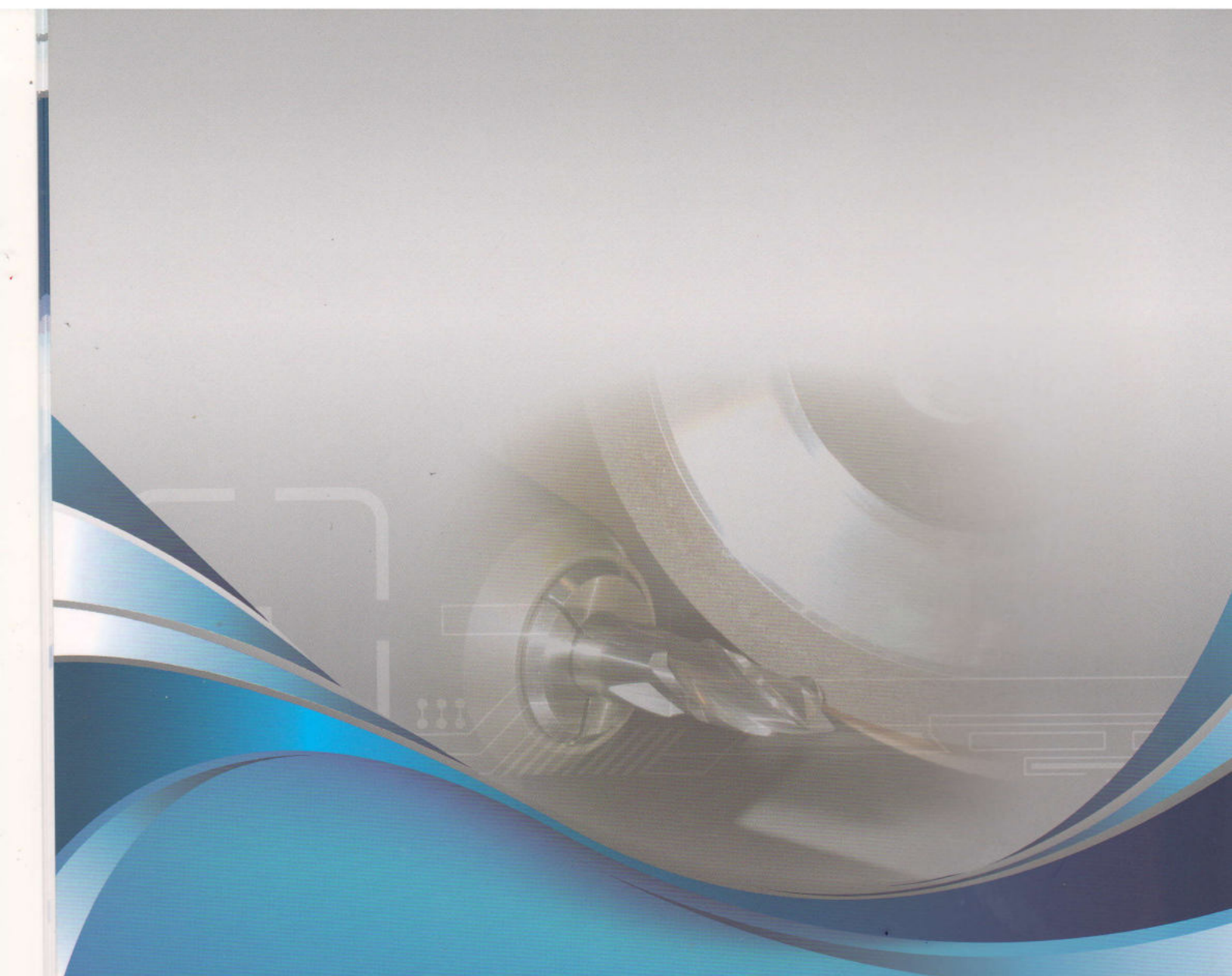


TG-4



TE-5





All specifications are subject to change without prior notice.



TOPWORK Industry Co.,Ltd.

No.9, 6th Road, Taichung Industrial District,
Taichung 40755, Taiwan.

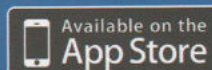
TEL : 886-4-23581558

FAX : 886-4-23581268

E-mail : topwork@ms12.hinet.net

www.topwork.com.tw

Scan Now to Download TOPWORK App. !



TOPWORK

