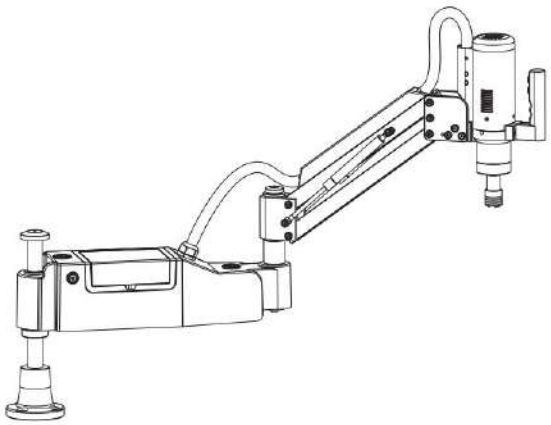
Servo Electric Tapping Machine

M16E/M30E/M36E

Operation Manual



Contact Number : 8895929247/9831029247

Catalog

OUR LOCATIONS

H & O SHOWROOM
116,117,G.T. ROAD, SALKIA
HOWRAH- 711 106

BOMBAY ROAD WORKS
NH-6 (BOMBAY RD),
P.O. - ARGORI, HOWRAH- 711 302

DELHI ROAD WORKS(MANUFACTURING UNIT)
DURGAPUR EXPRESSWAY,
VILL - GOYE, P.S. - DADPUR P.O.- DANRPUR
HOOGHLY- 712 305

ODISHA WORKS
Plot No. 133,Phase-1,New
Industrial Estate, Cuttack-754021,Odisha

PUNJAB (MANUFACTURING UNIT)
G.T. Road,Dhandari,Kalan,
Punjab-141010

KOLKATA SHOWROOM
71, GANESH CHANDRA AVENUE
CHADNI CHOWK, KOLKATA- 700013,
WEST BENGAL

SAFETY

• That working table or mounting surface must be lagged to the floor and secure before installation.
• Chinldren not easy to touch machine.
• Not exposed in the Dust Flammable and explosive environment.
•Always secure the work piece to the table before operating the machinel

• Wear safety glasses when operating this tapping machine.
• Do not wear jewelry or loose clothing when operating.
• Tie hair back before operating machine.
• Do not wear gloves when operating this equipment.
• Keep hands clear of the motor chuck and tap when actuating the motor.

• Do not alter or modify the motor or tapping unit by yourself.
• Keep hands free of pinch points on the tapping unit when operating.
• When any hazard is detected, turn the power switch off to stop the spindle roation and feed.

Maintanance

Perform regular maintenance according to the manual,
Periodically inspect for damage, loose hardware or anything irregular.
Keep both the motor and chuck free from contamination by cleaning regularly:

SPECIFICATION

This machine is designed for tapping, Tightening, and light reaming of holes.

Model	M16E	M30E	M36E
Type	Electric threading machine	Electric threading machine	Electric threading machine
Voltage	220V50Hz	220V50Hz	220V50Hz
Power	600W	1200W	1200W
Tapping range	M3-M16	M6-M30	M6-M36
Connector	GT12-T14	GT24-T20	GT24-T20
Collet	M3-M16	M6-M24	M6-M36
Quantity	8只	8只	11只
Operation mode	Vertical, vertical and horizontal*	Vertical, vertical and horizontal*	Vertical, vertical and horizontal*
Working radius	1045mm、1545mm*	1180mm、1735mm*	1180mm、1735mm*
Minimum radius	330mm	370mm	370mm
Maximum speed	375rpm	200rpm	125rpm
Customized	Customizable	Customizable	Customizable
Weight	30KG	53KG	56KG

▸ Standard components

List	Quantity
Tapping machine main body	One pc
Base Mount	One pc
Power cord	One pc
Allen Key	One pc
Tap holder	One set
Wrench for Tap holder adjust	One pc

▸ Optional accessories

List	Quantity
Magnetic Chuck 300kg	One pc
Magnetic Chuck 600kg	One pc
Magnetic Chuck 1000kg	One pc
Working table 900*600mm	One pc
Working table 800*500mm	One pc
Lifting screw	One pc
Long range tapping arm	One pc

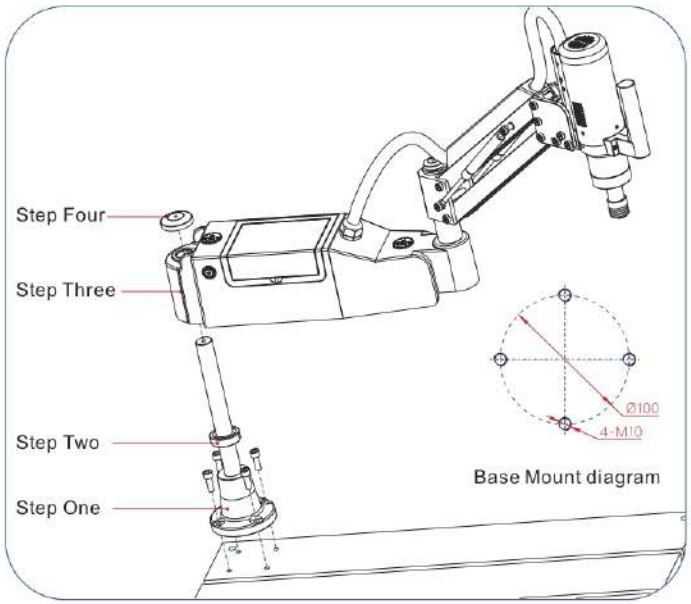
INSTALLATION

1.Use Four M10 bolts to fix Base Monunt, if not with our working table drill and tap 4 bolt holes on a flat smooth table or work bench. (See base Mount diagram as below)

2. Secure the base mount and fix the positioning nuts at the suitable height

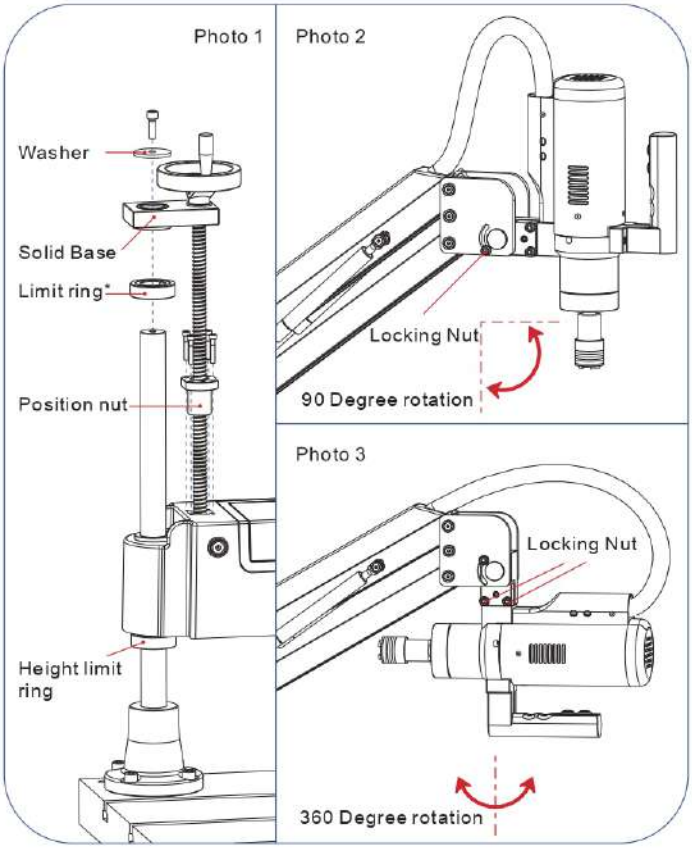
3. Slide the Control unit Mount onto the shaft of the base mount

4. Tighen the shaft cover

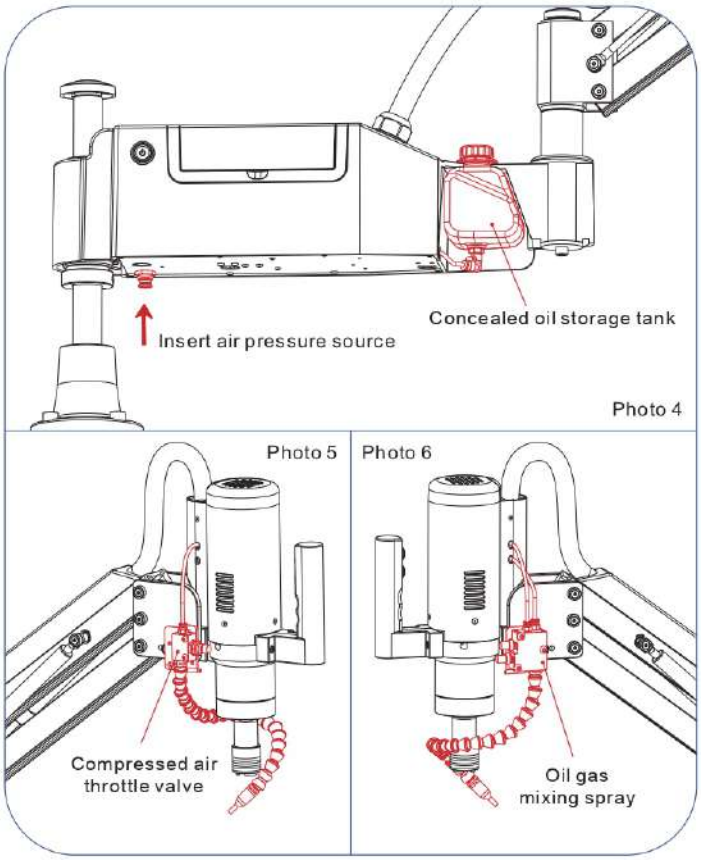


Base Mount diagram

Optional Component Installation



Optional Component Installation



Lifting screw assemble (Optional)

1.Inserting Lifting screw into hole on the arm, turn hand wheel to adjust positioning nut at desired height (Positioning Nut prohibited to take out)
2.Make Solide base to meet the Axis
3. Tighten the nut and washer in the top of Axis, make sure machine go up and down smoothly

Universal Tapping Head Operation (Optional)

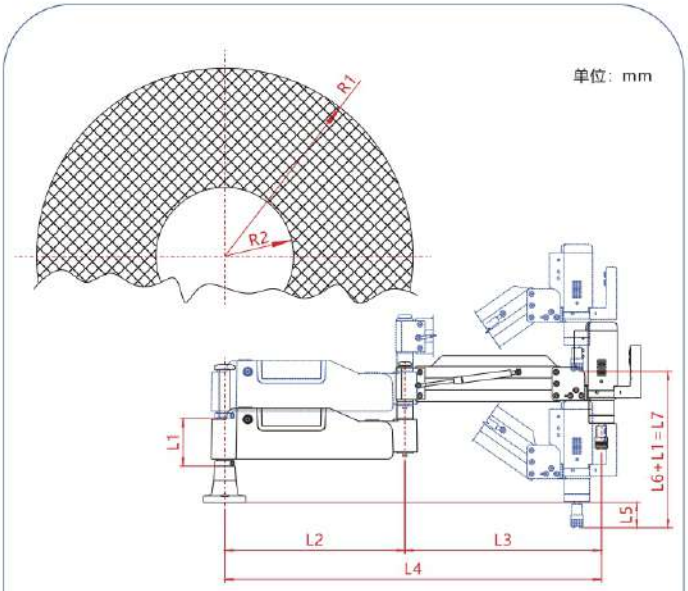
To make sure tapping head sound perpendicular to the work surface

Loosen the Locking nut to adjust the position of the tapping head between vertical and horizontal tapping.
Before tapping, make sure Locking Nut is tightly fixed aligned to the workpiece
When retunring the head to the vertical tapping position, remember that locking nut tighly fixed.

Use Of Auxiliary Components For Air Injection And Fuel Injection *

1.As shown in Figure 4, find the connection port of the air pressure source at the bottom and insert an 8mm air pressure pipe. It is recommended that the gas supply source be treated by the oil-water separator to ensure the normal service life of the jet and injection components.
2.As shown in Figure 5, the compressed air throttle valve has a single function of air injection. Turn the flow adjusting knob to adjust the amount of air blowing.
3.As shown in Figure 6, the oil air mixing spray has the function of fuel injection and jet mixing. Turn the oil mist adjusting knob to adjust the amount of fuel injection, and turn the air adjusting knob to adjust the amount of air blowing.

WOKING RANGE



MODEL	R1	R2	L1	L2	L3	L4	L5	L6	L7
M16	1045	330	130	500	545	1045	75	433	563
M24/M36	1180	370	160	550	630	1180	175	545	705

R1:Maximu working Radius, R2 Minimum working Radius
L1:Height adjustment L2 down arm shafts distance L3 upper arm shafts distance
L4,Maximum working Radius L5 ,Maximum working depth, L6 Tapping head lift range

OPERATION

Pls note, always wear safety glasses and use proper safety precuations when operating tapping, Gloves are not recommended when operating this machine

Connect the machine to a grounded 220V 50/60HZ electric supply
The circuit is protected with a circuit breaker as Photo 5, when power fault Circuit breaker should be checked
CAUTION:When making repairs to this unit, always disconnect the main power supply

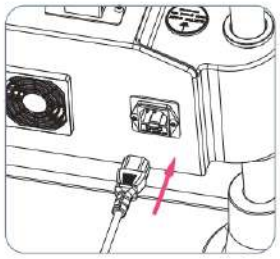


Photo 8

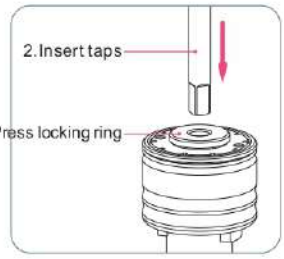


Photo 9

Insert Taps

Select the correct tap holder for the tap szie required, insert the tap into the holder by depressing the locking ring, Seat the top square into the tap holder; release the locking ring.

We have ISO/DIN/JIS/ANSI tap holder to meet various country standard.

Insert Tapp holder

1. Push up on the collar of the quick change chuck before insrting the tap holder, Insert the tap holder into the "quickly change chuck" Turn the holder until the "ears" of the holder locate the slots of the chuck, push up to lock the holder into position. To change holder, release the tap holder by pushing up on the collar of quick change chuck.

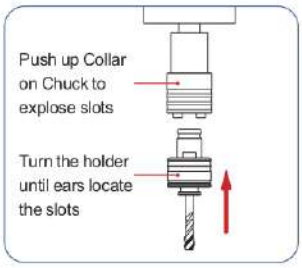


Photo 10

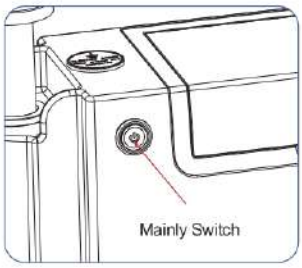


Photo 11

Power ON/OFF

- As shown in Figure 11, press the power switch button on the machine, the indicator light will be on, and the machine is in the ON state.
- When the button is pressed, the indicator light will go out, and the control panel will have a delay picture of several seconds after the machine is shut down, which is normal.

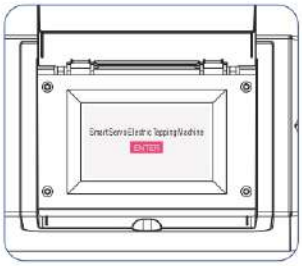


Photo 12

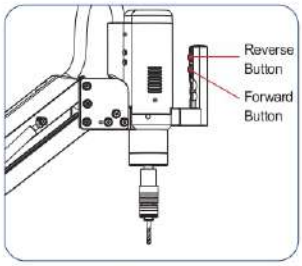
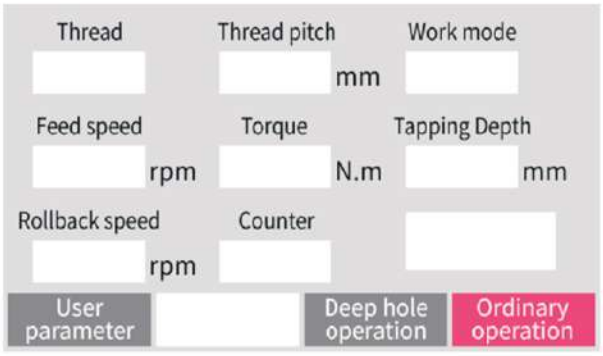


Photo 13

Tapping Operation

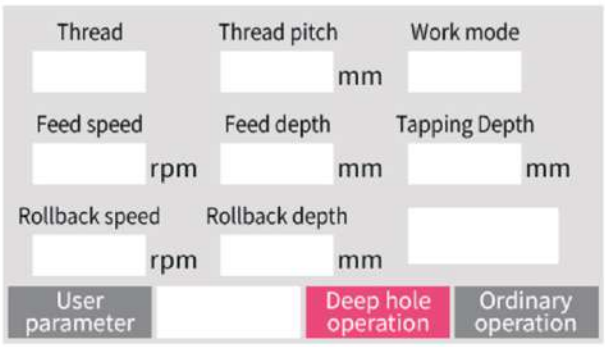
- As shown in Figure 12, refer to the instructions on the next page to correctly set the thread specification, tapping depth and tapping speed.
- As shown in Figure 13, press and hold the "Feed" button on the handle to conduct manual tapping operation, and press the "Back" button to conduct threading operation. After clicking the "Auto" switch mode, click the "Feed" button to conduct automatic tapping, and click the "Back" button to stop tapping.

EXERT ONLY ENOUGH DOWNLOAC PRESSURE TO STARTTHE
The tap will engage itself and follow the hole, when tapping a through hole remember that the tap will protrude on the bottom side of the workpiece, make sure sufficient clearence below the workpiece to allow tap to break through and not hit the work surface, Our tap holder with torque clutch, that will ratchet and stop the tap from turning when tap reach the bottom of hole.



Ordinary Processing

1.Thread: Metric/Inch Thread available
2.Thread Pitch: When Thread confirmed, will create Standard Thread Pitch automaticly, and you can also set at require
3.Work Mode
Normal: suitable for small thread
Smart: sutiable for big thread, will automatic adjust speed at torque fluctuation
4.Feed speed: Forward tapping speed parameter
5.Rollback speed: Reverse tapping speed parameter
6. Torque: when Thread confirmed, will create Standard Torque Protection value, that workable just turn on"Torque Protection" Button
7. Counter: Counting tapped workpiece synchronization
8. Tapping depth: Tapping Depth paramter setup
9.Manual/Auto: Change over Manual/Automatic tapping

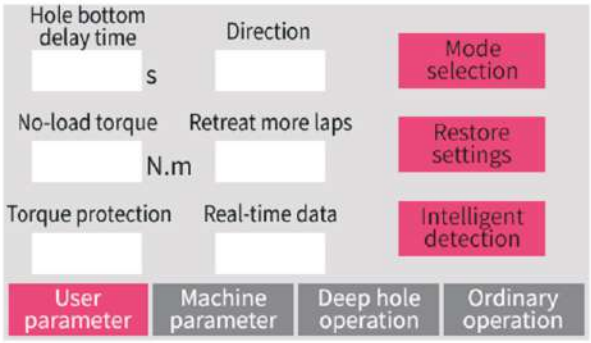


Deep hole tapping

Feed depth: parameters should less then tapping depth
Rollback depth: parameters should less then feed depth
Other parameter refer to ordincary tapping

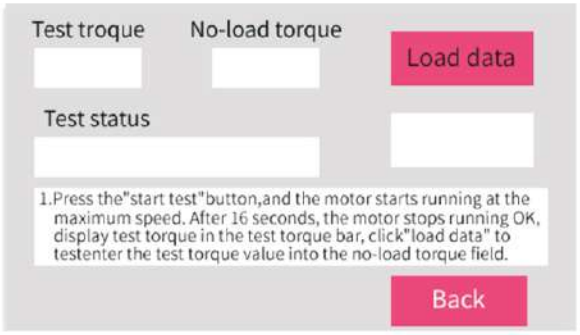
Workpiece saving for involking

Machine can restore 20 workpiece parameter for next directly application



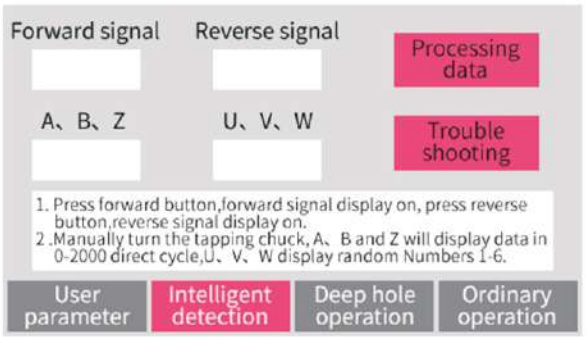
User parameters

1.Hole bottom delay time: when tap to set depth, tap delay time range 0-10s
2. Direction: Motor rotation in closewise or anticlockwise
3. No-load torque (Details refer to next page)
4.Retreat more taps: To ensure reverse smoothly, reverse circles more than forward circles
3.Torque protection: Preset standard break torque limits to protect tapps
5.Retreat more taps
6. Real-time data: turn on,tapping process will be displayed synchronization
7. Mode selection Tapping & Tightening Mold
8. Restore settings: CAUSIOUS restore factory settings
9. Intelligent detection. (Details refer to next page)
10.Machine parameters: always not allowded to revise.



No-loaded Torque

Click "start test" button, motor rotate at maximum speed, and stop in 16seconds, will show test result, click " load data", data will be added to no-loaded torque, then back.
When in tapping process, always torque protection value low popups then you can add no-loaded torque base on 0.1 until no popups

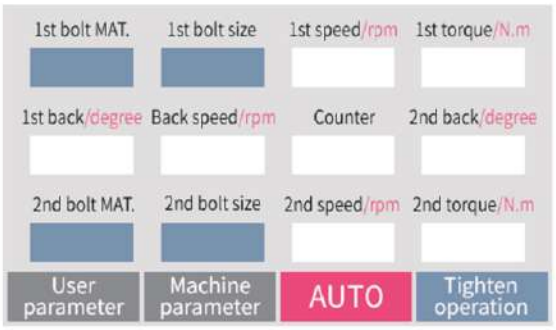


Interligient detection

Depressing forward BUTTON, function is "Work", if not button or line fault
Depressing Reverse BUTTON, function is "Work", if not button or line fault
A B Z Test, Hand Rotate the tap holder, function is data range "0-2000, if not or exceed, encoder fault
u v w test, Hand Rotate the tap holder, function is data range "1-6", if not or exceed, encoder fault Working: will record tapping data such as speed, depth, Torque

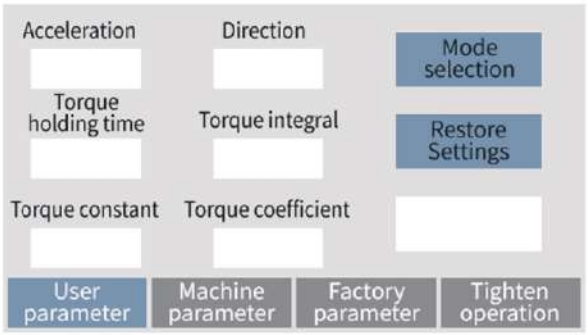
Troubleshooting

Tigthening operation



Nut materiasl: Choose Nut materials
Nut size: choose Nut thread
Tighening speed: Set tighening speed

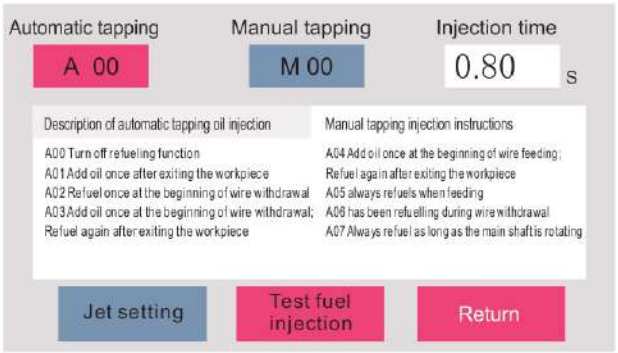
1. Torque Set: will auto generate torque value
2. Reverse angle: Spindle reverse angle
3. Reverse speed Spindle rotation speed
4. Counting: counting finished workpiece
5. Auto/Manual



User parameters

1.Acceleration: Controll machine accelerated speed, small value. acceleration slow
2. Direction:Machine tapping direction clockwise or anticlockwise
3.After Spindle rotation pausing, lock Axis time
4.80 not allowed to change
5. 2 not allowed to change

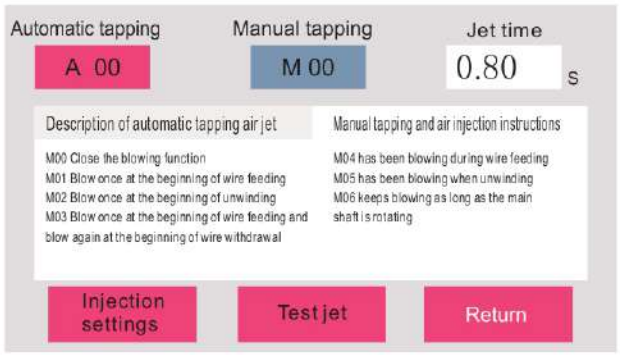
Torque ratio coefficient: correct the output torque value. When the actual output of screwing torque is greater than the set value, fine-tune the coefficient in 0.01 increments, such as 0.36, 0.37, 0.3... otherwise, it will gradually decrease, such as 0.34, 0.33, 0.32
Mode selection: click to enter tapping mode or screwing mode.
Restore settings: click and select "OK" to restore all settings to the factory default values. Be careful!
Lock axis normally open/auto lock axis: click to switch different modes
.Shaft locking is normally open: the shaft will not be locked after the motor stops running.
.Automatic shaft locking: after the motor stops running, it will continuously maintain the torque output to the time set in "Torque holding time".
Machine parameters: the underlying parameters of the machine are set incorrectly, which will affect the stability of the machine. If you need a password, please contact our company.
Factory parameters: the factory parameters of the machine are set. If the settings are incorrect, the machine will fail. If you need a password, please contact our company.



Injection Setting * (optional injection or injection components have this function)

Click "User parameter", and click "Injection setting" on the right to enter the setting interface above.

Automatic tapping: in the automatic tapping mode, click the button to switch the injection mode.
Manual tapping: In the manual tapping mode, click the button to switch the injection mode.
Injection time: enter a value in the box to control the time of each injection. The input range is 0.1 -9.0 seconds.
Jet setting *: Click to enter the jet setting interface. This button is only available with the optional "Air Jet - Component".
Test fuel injection: click to test whether the fuel injection circuit is normal. Click this button when adjusting the fuel injection/gas volume.



Jet Setting * (this function is only available with the optional jet single component)

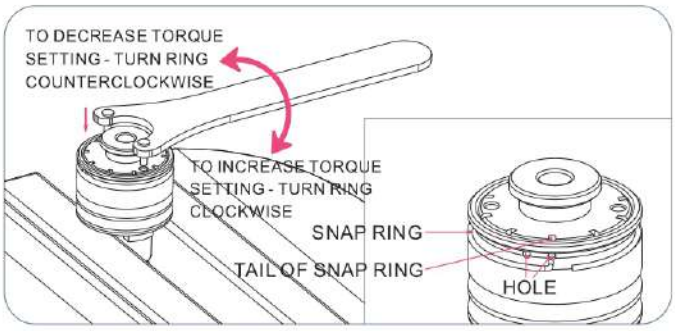
In the "fuel injection setting", click "fuel injection setting" in the lower right corner to enter the setting interface above.

Automatic tapping: in the automatic tapping mode, click the button to switch the air jet mode.
Manual tapping: In the manual tapping mode, click the button to switch the air jet mode.
Injection time: enter a value in the box to control the time of each injection. The input range is 0.1 -9.0 seconds.
Injection setting: click to return to the injection setting interface.
Test air jet: click to test whether the air jet path is normal. Click this button when adjusting the air injection volume.

Common Fault Codes

Code	Analysis	Method
E-001	Over current	Check tap head perpendicularity, if driver and motor normal, if tap seized
E-002	Over voltage	Voltage overtension
E-004	Over current	Curent persistentl anomaly
E-008	encoder abnormal	Check Encoder line connection
E-010	overrun	Check UVW Test if ok, forward speed , motor and encoder connect
E-037	Incoder Error	Find signal interference and far away
E-150	communication checkout	Check Encoder line connection
E-200	Servo communication timeout	Check line and Encoder line connection
E-220	Password error	Retry with password, or contact with us
E-312	Torque proteciton error	Close Torque protection or increase value

Adjusting Tap Holder Torque Setting



The torque adapters are factory preset near the standard break torque limits developed for each tap size. When the tap reaches the bottom of the hole, resistance will cause the torque holders safety clutch to ratchet and stop the tap from turning, over-torquing and ultimately breaking.

When tap hardened steel,an increase in the factory torque settings may be required, When tap softmaterials or plastics, a decrease in factory torque setting prevents the tap fromover torquin

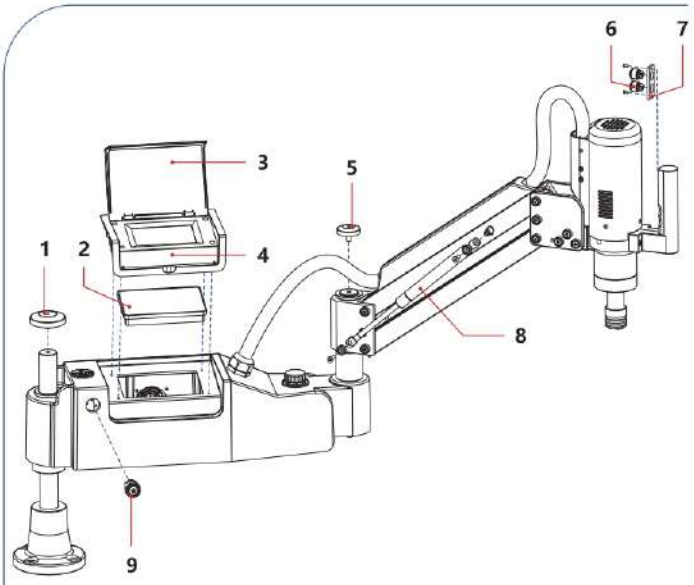
There are two lock positions on the outside diameter of the adapter designed to hold the tailof the snap ring. These two positions permit on adjustment range from onehalf to a full notch on the threoded ring. The tail of the snop ring must beinserted in the hole at either position and through a notch on the thread ring in order to lock in the adjusted torque setting

CAUTION: Never adjust the torque setting more than one notch at a time.

Standard Tap Dimensions

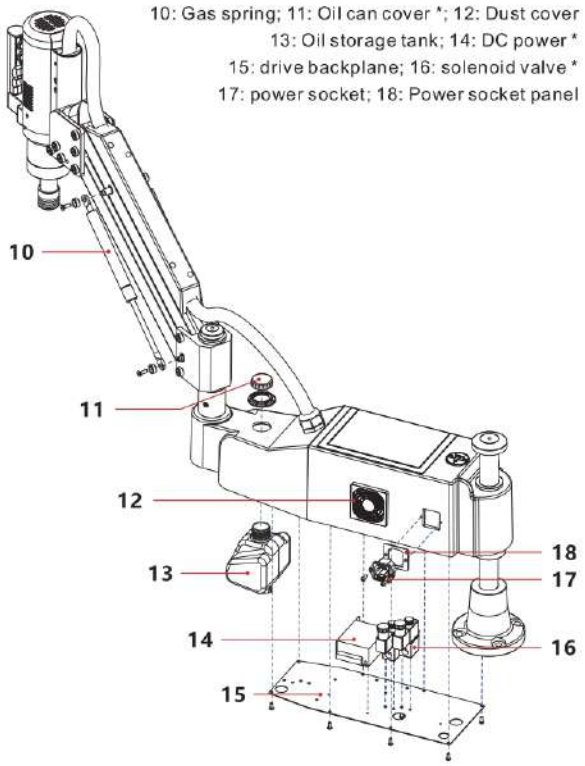
ISO			JIS			DIN		
Tap measure	Norm		Tap measure	Norm		Tap measure	Norm	
Dia× Square	ISO529 [1]	ISO529 [2] ISO2283	Dia× Square	JIS84430 [3]	Inches	Dia× Square	DIN371 [4]	DIN374 [5] DIN376
2.24×1.80		M3.0	3.00×2.50	M1.0-M2.6		2.50×2.10	M1-M1.8	M3.5
2.50×2.00	M1.0-M2.0	M3.5	4.00×3.15		UNC 1/8"	2.80×2.10	M2-M2.5	M4.0
2.80×2.24	M2.2-M2.6		4.00×3.20	M3.0-M3.5	#5-#6	3.50×2.70	M3	M4.5-M5.0
3.15×2.50	M3.0	M4.0	5.00×4.00	M4.0-M4.5	#8	4.00×3.00	M3.5	
3.55×2.80	M3.5	M4.5	5.00×4.00		UNC 5/32"	4.50×3.40	M4.0	M6.0
4.00×3.15	M4.0	M5.0	5.50×4.50	M5.0-M5.5	#10	5.50×4.30		M7.0
4.50×3.55	M4.5	M6.0	5.50×4.50		UNC 3/16"	6.00×4.90	M4.5-M6	M8.0
5.00×4.00	M5.0		6.00×4.50	M6.0	UNC 1/4"	7.00×5.50	M7.0	M10
5.60×4.50		M7.0	6.10×5.00		UNC 5/16"	8.00×6.20	M8.0	
6.30×5.00	M6.0	M8.0	6.20×5.00	M7.0-M8.0		9.00×7.00		M12
7.10×5.60	M7.0	M9.0	7.00×5.50	M9.0-M10	UNC 3/8"	10.00×8.00	M10	
8.00×6.30	M8.0	M10-M11	8.00×6.00	M11	UNC 7/16"	11.00×9.00		M14
9.00×7.10	M9.0	M12	8.00×6.00		PT 1/8"	12.00×9.00		M16
10.00×8.00	M10		8.50×6.50	M12		14.00×11.00		M18
11.20×9.00		M13-M15	9.00×7.00		UNC 1/2"	16.00×12.00		M20
12.50×10.00		M16-M17	10.50×8.00	M14-M15	UNC 9/16"	18.00×14.50		M22-M26
14.00×11.20		M18-M21	11.00×9.00		PT 1/4"	20.00×16.00		M27
16.00×12.50		M22-M23	12.00×9.00		UNC 5/8"	22.00×18.00		M29-M32
18.00×14.00		M24-M26	12.50×10.00	M16		25.00×20.00		M33
20.00×16.00		M27-M30	14.00×11.00	M18	PT 3/8"	28.00×22.00		M34-M38
22.40×18.00		M31-M33	14.00×11.00		UNC 3/4"	32.00×24.00		M39-M42
25.00×20.00		M36	15.00×12.00	M20		36.00×29.00		M44-M50
28.00×22.40		M37-M42	17.00×13.00	M22	UNC 7/8"	40.00×32.00		M52
31.50×25.00		M44-M50	18.00×14.00		PT 1/2"	45.00×35.00		M55-M60
35.50×28.00		M52-M56	19.00×15.00	M24-M25				
40.00×31.50		M58-M65	20.00×15.00	M26-M27	UNC 1"			
45.00×35.50		M66-M75	21.00×17.00	M28				
			22.00×17.00		UNC 1 1/8"			
			23.00×17.00	M30	PT 3/4"			
			24.00×19.00	M32	UNC 1 1/4"			
			25.00×19.00	M33				
			26.00×21.00	M34-M35	UNC 1 3/8"			
			26.00×21.00		PT 1"			
			28.00×21.00	M36	PT 11/4"			
			30.00×23.00	M39				
			32.00×26.00	M42				
			35.00×26.00		PT 13/8"			
			38.00×29.00		PT 11/2"			

Servo Electric Tapping Machine Exploded views



1: Optical shaft cover; 2: Touch screen; 3: Touch screen dust cover;
4: Touch screen frame; 5: Lower bracket shaft cover; 6: Handle button;
7: Handle button panel; 8: Gas spring; 9: Power switch

The following components marked with "*" are not included in the standard configuration. If necessary, please contact our company for additional options.



WARRANTY CARD

Thank you for purchasing our products!

The design and process of this product comply with relevant quality standards. According to the national Three Guarantees, if this product has non-human faults within one year from the date of purchase, we will provide free warranty services for cardholder users according to the warranty regulations.

1. Product warranty data filling:

User name: _____ Tel: _____

Add: _____

Product Name		Fuselage Model		
Dealer Name		Telephone		Dealer Stamp
Dealer Address		Zip Code		
Invoice No		Purchase Date		

2. Product maintenance record

Fault Display		Replace Material	
Repair Mode		Repair Date	
Repair Unit		Warranty	Yes ☐ No ☐
Remarks			

*This warranty card must be provided when receiving service.
Please keep it properly!

Product certificate

MODEL M16E□ M30E□ M36E

NUMBER _____

DATE _____

TEST _____