

# Machine Load

## Smart Screwdrivers (Purple)

Equipped with the Tamagawa permanent magnet synchronous servo motor.

- Equipped with the Tamagawa permanent magnet synchronous servo motor.
- Modular and combinational approach.
- Cutting-edge servo motor drive coupled with a precision reduction mechanism.
- Blowing or suction optional automatic feeding. dedicated cable and connector configuration ensures a safe and reliable operation.
- With a diverse range of styles, series, and specifications.
- Aesthetically pleasing and compact exterior design allows for flexible and convenient.



DC 15W

DC 40W

DC/AC 90W

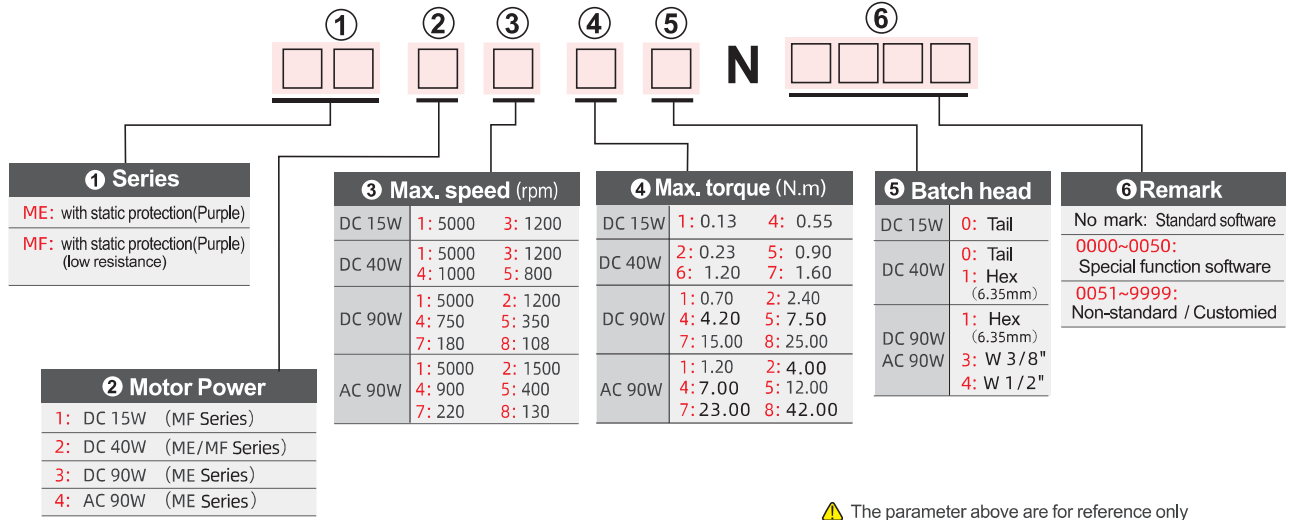
DC/AC 90W

### Technical Specifications

Motor Power	Model	Adapted controller	Tool cable	Torque output range			Speed range (rpm) *	Adapted outer diameter of screw (mm)	Applicable batch head	weight (kg)																
				kgf.cm	N.m	lbf.in																				
DC 15W	MF1110	ACT-H60□□	C521□-A	0.20~1.30	0.02~0.13	0.18~1.15	1~5000	1.0~1.7	Tail	0.29																
		HNB11□□																								
		XDT11□1																								
	MF1340	ACT-H61□□																								
		HNB13□□																								
DC 40W	ME/MF2120	ACT-H00□□	C1□2□	0.2~2.3	0.02~0.23	0.18~2.04	1~5000	1.0~2.0	Tail	0.50																
		HN□21□□	C1□6□																							
		HM□21□□	C1□6□																							
		XDT21□1	C1□8□																							
	ME/MF2350	ACT-H01□□	C1□2□	1.5~9.0	0.15~0.90	1.33~7.97	1~1200	2.0~3.0	Tail	0.70																
		HN□23□□	C1□6□																							
		HM□23□□	C1□6□																							
	ME/MF2460	XDT23□1	C1□8□	2.0~12.0	0.20~1.20	1.77~10.62	1~1000	2.0~3.5	Hex (6.35mm)	0.70																
		ACT-H02□□	C1□2□																							
		HN□24□□	C1□6□																							
	ME/MF2571	HM□24□□	C1□6□	5.0~16.0	0.50~1.60	4.42~14.16	1~800	2.5~4.0	Tail	0.75																
		XDT24□1	C1□8□																							
		ACT-H03□□	C1□2□																							
		HN□25□□	C1□6□																							
	DC 90W	ME/MF3111	HM□25□□	C1□6□	1.0~7.0	0.10~0.70	0.88~6.20	1~5000	2.0~2.5	Hex (6.35mm)	1.00															
XDT25□1			C1□8□																							
ME/MF3221		ACT-H71□□	C521□-A	6.0~24.0								0.60~2.40	5.3~21.0	1~1200	3.0~4.5	Hex (6.35mm)	1.10									
		XDT31□□																								
ME/MF3441		ACT-H72□□																10.0~75.0	1.00~7.50	8.80~66.0	1~350	4.0~7.0	4.0~7.0	Hex (6.35mm)	1.10	
		XDT32□□																								
ME/MF3551		ACT-H74□□																								50.0~150.0
	XDT34□□																									
ME/MF3771	ACT-H75□□	70.0~250.0			7.00~25.00	66.0~221.0	1~108	7.0~10.0	7.0~10.0	Square (W 3/8")	1.15															
	XDT35□□																									
ME/MF3883	ACT-H77□□		2.0~12.0	0.20~1.20								1.77~10.6	1~5000	1.8~3.5	1.8~3.5	Hex (6.35mm)	1.00									
	XDT37□□																									
	ACT-H78□□																									
AC 90W	ME4111																	XDT38□□	C521□-A	8.00~42.00	8.00~42.00	70.80~371.0	1~130	7.0~12.0	Square (W 1/2")	1.15
																		ME4221								
	ME4441	ACT-H82□□			2.0~12.0	0.20~1.20	1.77~10.6	1~5000	1.8~3.5	1.8~3.5	Hex (6.35mm)							1.10								
		ME4551																								
	ME4773	ACT-H85□□	8.0~40.0	0.80~4.00								7.08~35.4	1~1500	1.8~5.5	1.8~5.5	Hex (6.35mm)	1.10									
		ME4884																								
ME4884	ACT-H88□□	10.0~70.0																	1.00~7.00	8.80~61.0	1~900	4.0~7.0	4.0~7.0	Hex (6.35mm)	1.10	
																										ACT-H85□□
ME4551	ACT-H86□□				20.0~120.0	2.00~12.00	17.7~106.0	1~400	4.5~8.0	4.5~8.0	Hex (6.35mm)							1.10								
	ME4773																									ACT-H87□□
ME4884	ACT-H88□□		50.0~230.0	5.00~23.00								44.0~203.0	1~220	6.0~10.0	6.0~10.0	Square (W 3/8")	1.10									
																										ACT-H88□□
ME4884		80.0~420.0																	8.00~42.00	70.80~371.0	1~130	7.0~12.0	7.0~12.0	Square (W 1/2")	1.15	

\* The listed screw diameter range values in the table are for reference only. Feel free to consult our sales representatives for more detailed information if needed.

# Model

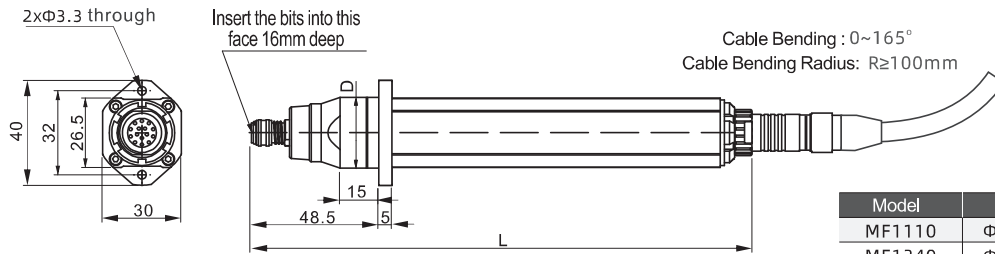


# Dimensions

(Unit: mm)

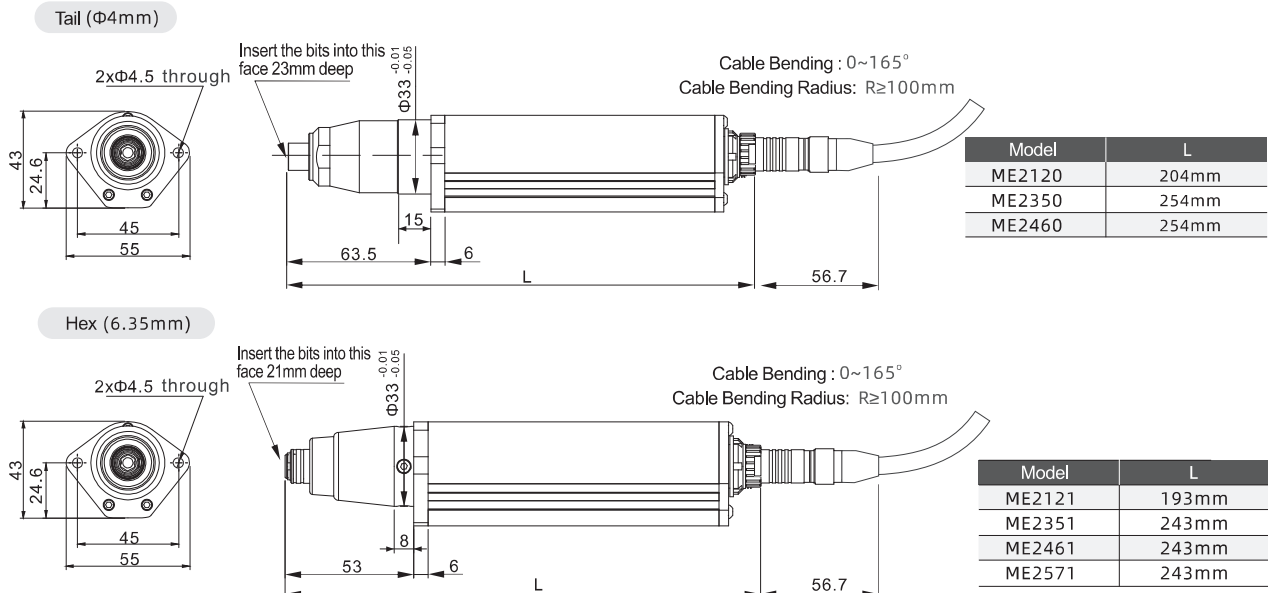
## 15W Series

MF1□□□



## 40W Series

ME2□□□



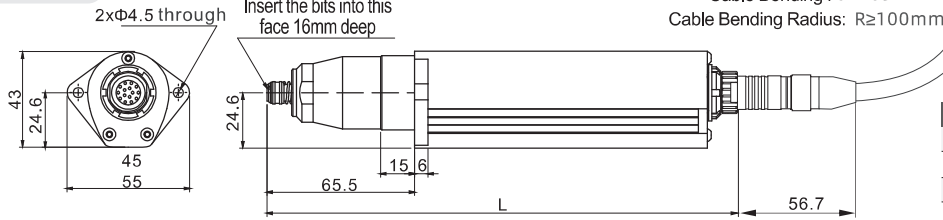
# Dimensions

(Unit: mm)

## 40W Series

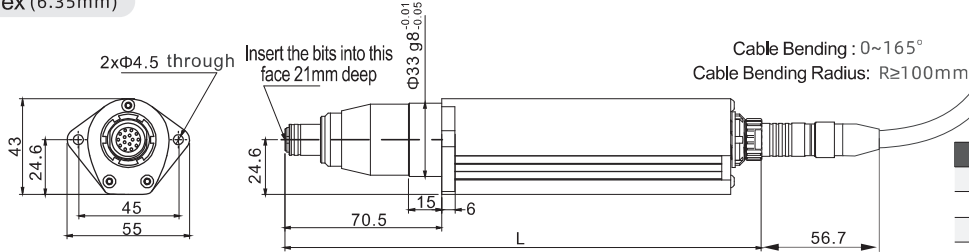
MF2□□□

Tail (Φ4mm)



Model	L
MF2120	205.5mm
MF2350	255.5mm
MF2460	255.5mm

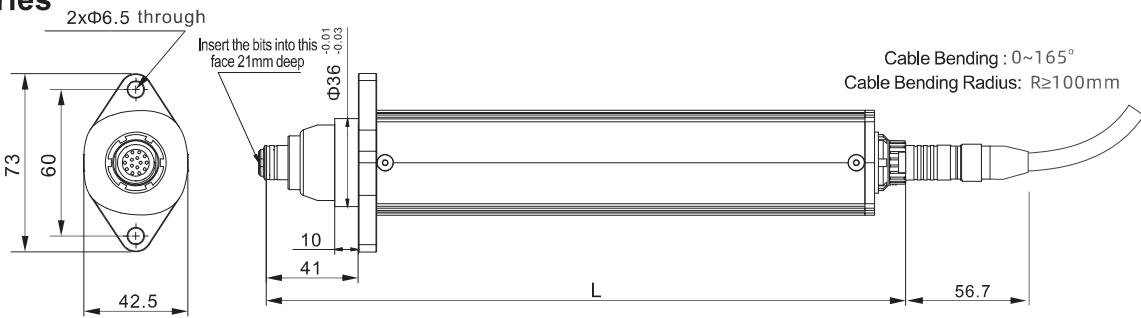
Hex (6.35mm)



Model	L
MF2120	210.5mm
MF2351	260.5mm
MF2461	260.5mm
MF2571	260.5mm

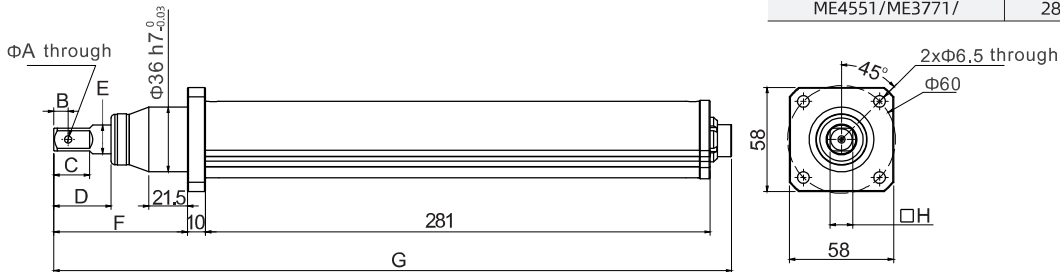
## 90W Series

- ME3111
- ME3221
- ME3441
- ME3551
- ME3771
- ME4111
- ME4221
- ME4441
- ME4551



Model	L
ME3111/ME3221/ME3441/ ME4111/ME4221/ME4441	266.5mm
ME4551/ME3771/	283.5mm

- ME3883
- ME4773
- ME4884

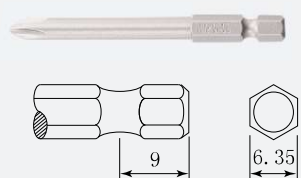


Model	A	B	C	D	E	F	G	H
ME3883/ME4773	3	6	15	25	Φ12 h8 <sub>-0.03</sub>	67.5	370.5	9.5±0.05
ME4884	4	8	20	32	Φ16 h8 <sub>-0.03</sub>	74.5	377.5	12.7±0.05

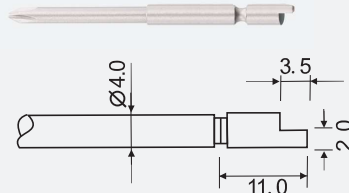
## Mounting size of bits

(Unit: mm)

Hex (6.35mm)



Tail (Φ4mm)



Square (W3/8")



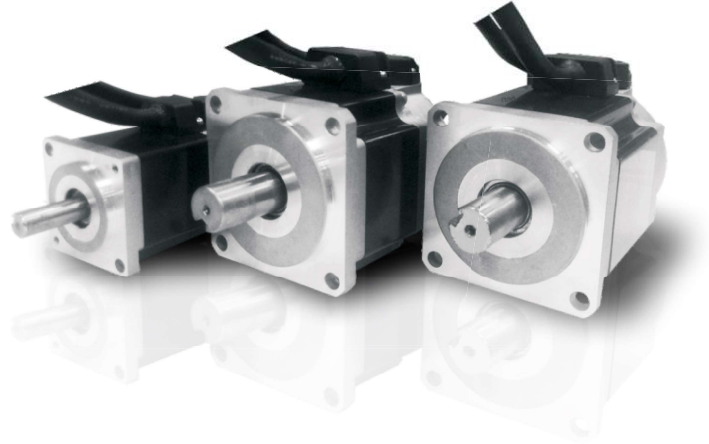
Square (W1/2")



# Servo motor type

## Smart Screwdrivers

- The best design combination of torque, speed, and precision.
- Convenient and flexible, multi-directional and multi-type tightening shaft output and installation method.
- Low noise, low vibration, Long-lasting life, High-reliability .

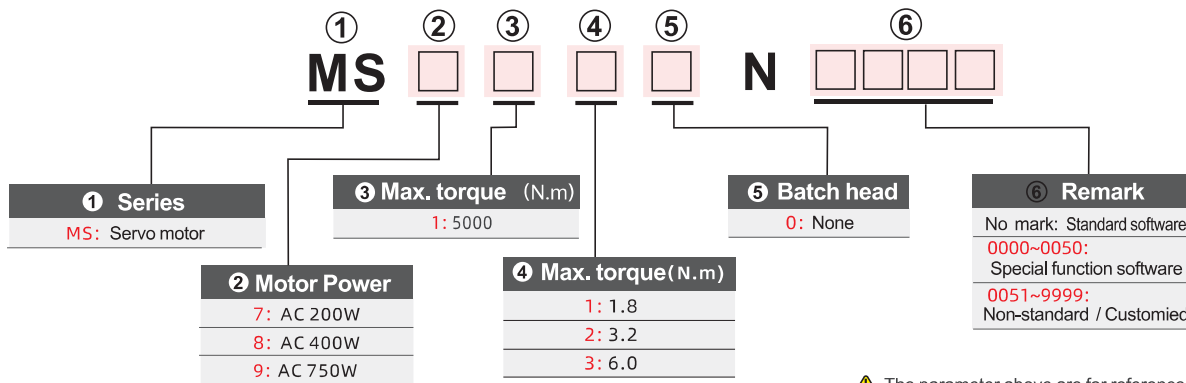


## Technical Specifications

Motor Power	Model	Adapted controller	Tool cable	Torque output range (N.m)	Max. Speed (rpm)
伺服AC200W	MS7110	ACT- M30□□	C311□	0.4~1.8	5000
		YAT20□□	C315□		
伺服AC400W	MS8120	ACT- M40□□	C311□	0.8~3.2	5000
		YAT40□□	C315□		
伺服AC750W	MS9130	ACT- M50□□	C311□	1.2~6.0	5000

- The size of the shaft head can be customized according to the actual use of the customer. Please consult our business staff before purchasing.
- There should be no hard connection between the servo motor and the batch head .

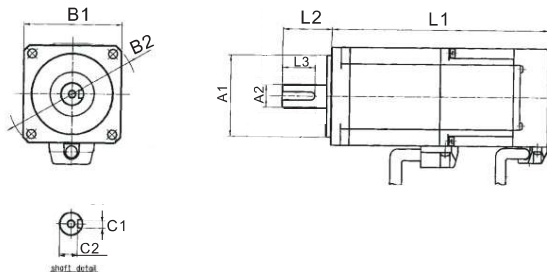
## Model



⚠ The parameter above are for reference only

## Dimensions

(Unit: mm)



Model	L1	L2	L3	A1	A2	B1	B2	C1	C2
MS7110	102.4±1	30±1	20	Φ50h7 <sub>-0.025</sub>	Φ14h6 <sub>-0.011</sub>	□60	Φ80	Φ5P9 <sub>-0.042</sub>	11 <sub>-0.2</sub>
MS8120	124.4±1	30±1	20	Φ50h7 <sub>-0.025</sub>	Φ14h6 <sub>-0.011</sub>	□60	Φ80	Φ5P9 <sub>-0.042</sub>	11 <sub>-0.2</sub>
MS9130	135±1	35±1	25	Φ70h7 <sub>-0.030</sub>	Φ19h6 <sub>-0.013</sub>	□80	Φ105	Φ5P9 <sub>-0.042</sub>	15.5 <sub>-0.2</sub>

# Large torque type

## Smart Screwdrivers

- The best design combination of torque, speed, and precision.
- Convenient and flexible, multi-directional and multi-type tightening shaft output and installation method.
- Low noise, low vibration Long-lasting life, High-reliability .



### Technical Specifications

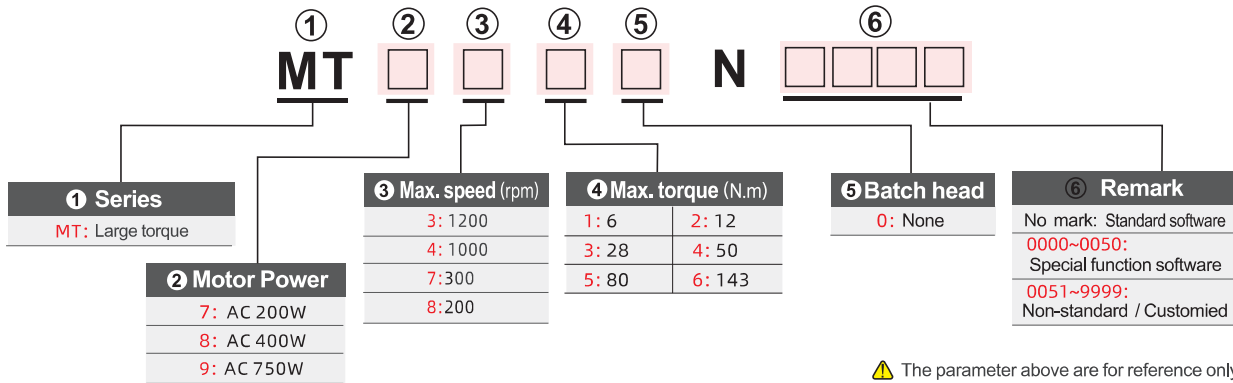
Motor Power	Model	Adapted controller	Tool cable	Torque output range (N.m)	Max. Speed (rpm)
AC200W	※ MT7310	ACT-M31□□	C311□	3~6	1200
AC400W	※ MT8320	ACT-M41□□		5~12	1200
	※ MT8730	ACT-M47□□		10~28	300
AC750W	※ MT9430	ACT-M52□□		10~28	1000
	MT9750	ACT-M57□□		30~80	300
		ACT-M57□□-N0001		20~50	300
	MT9860	ACT-M58□□		40~143	200

- The size of the shaft head can be customized according to the actual use of the customer. Please consult our business staff before purchasing.
- There should be no hard connection between the servo motor and the batch head .

※ 可选配批杆转接头，适用于六角(6.35mm)批杆，选前请咨询我司业务人员。

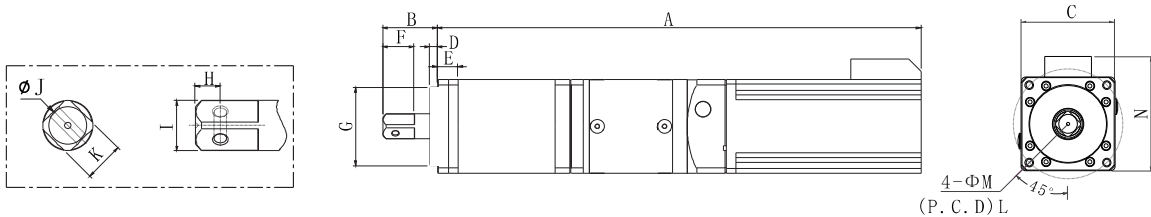


### Model



### Dimensions

(Unit: mm)



Model	A	B	C	D	E	F	G	H	I	J	K	L	M	N	Square	Wight (kg)
MT7310	269	28	60	3	13	15	Φ50g7	6	Φ12h7	3	□ 9.5	70	5.5	73	3/8"	2.9
MT8320	291	28	60	3	13	15	Φ50g7	6	Φ12h7	3	□ 9.5	70	5.5	73	3/8"	3.3
MT8730	309	35	60	5	13	20	Φ50g7	8	Φ16h7	4	□12.7	70	5.5	73	1/2"	3.6
MT9430	319	35	90	5	13	20	Φ80g7	8	Φ16h7	4	□12.7	100	7	93	1/2"	6.6
MT9750	340	40	90	6	13	25	Φ80g7	9	Φ25h7	4	□19	100	7	93	3/4"	7.3
MT9860	380	55	120	6	21	30	Φ80g7	14.5	Φ30h7	6	□25.4	130	9	120	1"	13.2

# ACT Series Controller

- With TFT-LCD monitor, it is able to display the setting, programming, and status of the machine.
- 12 task modes that can be used for multiple assembly requirements
- Up to 8 different torque parameter settings per task
- Built-in servo driver can provide precise control of torque, corner monitoring and deceleration tightening
- Programmable IO and system extension components for process control
- Communication interface for advanced data storage and factory control interactions
- Dual operation and monitoring functions, such as physical button and LED indicator light, to further improve the reliability of the controller
- Beautiful and compact configuration, convenient and flexible installation, suitable for many applications



# HNA Series Controller

- Patented Design
- TFT-LCD monitor able to display the setting, programming and status of the machine
- Lots of task modes that can be used for multiple assembly requirements
- Up to 8 different torque parameter settings per task
- Built-in servo driver can provide precise control of torque, corner monitoring and deceleration tightening
- Provides graphical tools for process optimization and diagnostics
- Programmable IO and system extension components for process control
- Communication interface for advanced data storage and factory control interactions
- Dual operation and monitoring functions, such as physical button and LED indicator light, to further improve the reliability of the controller



## Model

**ACT - M 1 0 2 1 - □**  
 ① ② ③ ④ ⑤ ⑥ ⑦

①	Name	<b>ACT:</b> ACT series Controller		
②	Screwdriver type	<b>M:</b> Machine load	<b>H:</b> Hand hold	
③	Power	<b>0:</b> 40W <b>4:</b> 400W	<b>1:</b> 100W <b>5:</b> 750W	<b>2:</b> 150W <b>6:</b> 15W
④	Max. speed (rpm)	<b>0:</b> 5000 <b>5:</b> 500	<b>1:</b> 1200 <b>6:</b> 400	<b>2:</b> 1000 <b>7:</b> 300
⑤	User interface	<b>0:</b> IO	<b>1:</b> IO+RS232	<b>2:</b> IO+RS485
⑥	Custom	<b>3:</b> IO+CANopen <b>4:</b> IO+Ethernet <b>5:</b> IO+EtherCAT		
⑦	Positioning device	<b>1:</b> no custom <b>other:</b> custom		
		<b>P:</b> Built-in positioning device <b>L:</b> Distribution balance arm port, but no positioning device <b>None:</b> No positioning device		

## Model

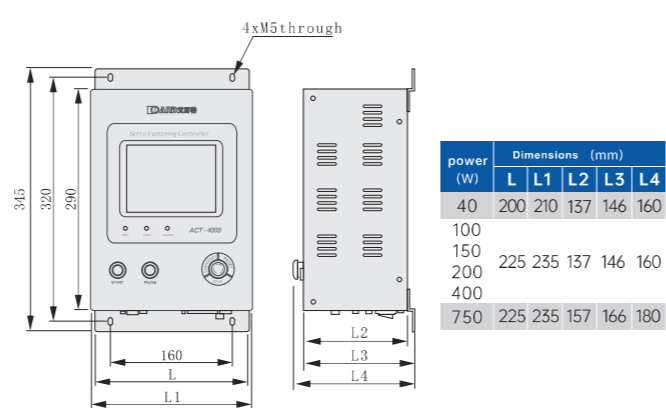
**HNA - M 2 1 1 1 - □**  
 ① ② ③ ④ ⑤ ⑥ ⑦

①	Name	<b>HNA:</b> HNA series Controller		
②	Screwdriver type	<b>M:</b> Machine load	<b>H:</b> Hand hold	
③	Power	<b>1:</b> DC 15W	<b>2:</b> DC 40W	<b>3:</b> DC 90W
④	Max. speed(rpm)	<b>1:</b> 5000	<b>2:</b> 1500	<b>3:</b> 1200 <b>4:</b> 1000 <b>5:</b> 800 <b>9:</b> 6000
⑤	User interface	<b>0:</b> IO	<b>1:</b> IO+RS232	<b>2:</b> IO+RS485
⑥	Custom	<b>3:</b> IO+CANopen <b>4:</b> IO+Ethernet <b>5:</b> IO+EtherCAT		
⑦	Positioning device	<b>1:</b> no custom <b>other:</b> custom		
		<b>P:</b> Built-in positioning device <b>L:</b> Distribution balance arm port, but no positioning device <b>None:</b> No positioning device		

## Interface Description



## Dimensions (mm)

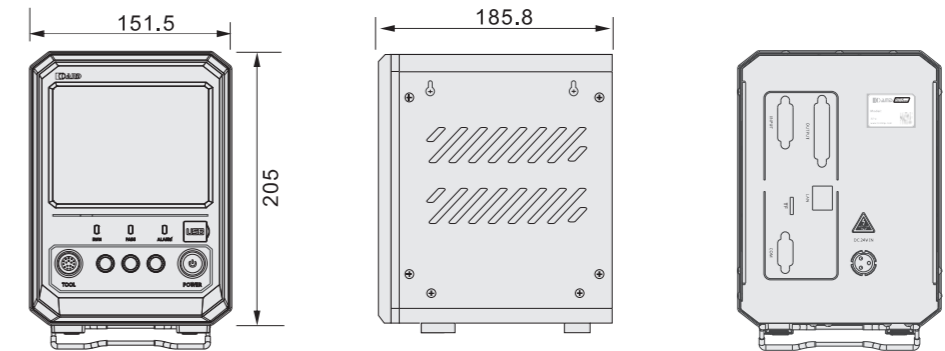


## Specifications

Model	ACT-M/H 0XX1	ACT-M1/2XX1	ACT-M3/4XX1	ACT-M5XX1
Input voltage	1 Φ AC200~230V ± 10% 50/60HZ			
No-load consumption [1]	<20W	<15W		<30W
Output power [2]	40W	100W/150W	200W/400W	750W
Display (Operation interface)	① TFT-LCD, Touch Screen support    ② 3 function buttons+3 LED indicators			
Torque accuracy	Within the maximum output torque range ≤3 δ ± 5%, else ≤3 δ ± 8%			
The smallest unit of twist angle display	1degree(1°)			
Tightening method	● Torque as priority (angle simultaneous monitoring secondly)    ● Angle as priority (torque simultaneous monitoring secondly)			
IO channel	8_CH Optocoupler isolated input(20mA/CH,Max), 8_CH relay contact output(3A/CH, Max)			
Communication interface [3]	① RS232    ② RS485    ③ CANopen    ④ Ethernet    ⑤ EtherCAT			
Recommended use environment	Temperature -10 °C ~ +60 °C, humidity <90% RH (no condensation)			
Storage environment	Temperature -20 °C ~ +85 °C, humidity <90% RH (no condensation)			
Weight	about 5.5kg			
Dimensions [4]	Please refer to "Dimensions"			

[1] No-load consumption refers to the power consumption of the controller itself when the screwdriver body is not connected.  
 [2] The output power refers to the maximum output power of the internal servo drive of the controller, which matches the mounted servo motor.  
 [3] For the configuration of the communication interface, please refer to the product selection table.  
 [4] The external dimensions are the maximum appearance of the controller itself when erected and in front of your view.

## Dimensions



## Specifications

Input voltage	AC 85~264V, 47~63HZ
No-load consumption [1]	<20W
Output power [2]	40W
Display (Operation interface)	① TFT-LCD, Touch Screen support    ② 3 function buttons+3 LED indicators
Torque accuracy	Within the maximum output torque range ≤3 δ ± 5%    ≤3 δ ± 8%
The smallest unit of twist angle display	1degree(1°)
Tightening method	① Torque as priority (angle simultaneous monitoring secondly)    ② Angle as priority (torque simultaneous monitoring secondly)
IO channel	8_CH Optocoupler isolated input(20mA/CH,Max), 8_CH relay contact output(3A/CH, Max)
Communication interface [3]	① RS232    ② RS485    ③ CANopen    ④ Ethernet    ⑤ EtherCAT
Recommended use environment	Temperature -10 °C ~ +60 °C, humidity <90% RH (no condensation)
Storage environment	Temperature -20 °C ~ +85 °C, humidity <90% RH (no condensation)
Weight	about 3.5kg
Dimensions [4]	205(H)x151.5(W)x185.80(T)mm

[1] No-load consumption refers to the power consumption of the controller itself when the screwdriver body is not connected.  
 [2] The output power refers to the maximum output power of the internal servo drive of the controller, which matches the mounted servo motor.  
 [3] For the configuration of the communication interface, please refer to the product selection table.  
 [4] The external dimensions are the maximum appearance of the controller itself when erected and in front of your view.