

Dec 7th, 2020

ECT-Series DC Torque Control System Product Specifications



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GENERAL SAFETY RULES

WARNING! Read and understand all instructions. Failure to follow all instructions listed below may result in electric shock, fire, and/or serious personal injury.

SAVE THESE INSTRUCTIONS

Work Area

Keep your work area clean and well lit. Cluttered benches and dark areas invite accidents. Do not operate power tools in explosive atmospheres, such as in the presence of flammable liquids, gases, or dust. Power tools create sparks which may ignite the dust or fumes. Keep bystanders, children, and visitors away while operating a power tool. Distractions can cause you to lose control.

Electrical Safety

Grounded tools must be plugged into an outlet properly installed and grounded by all codes and ordinances. Never remove the grounding prong or modify the plug in any way. Do not use ungrounded plugs? . Check with a qualified electrician if you are in doubt as to whether the outlet is properly grounded. If the tools should electrically malfunction or break down, grounding provides a low resistance path to carry electricity away from the user. Avoid body contact with grounded surface and pipes, radiators, ranges, and refrigerators. There is an increased risk of electric shock if your body is grounded. Don't expose power tools to rain or wet conditions. Water entering a power tool will increase the risk of electric shock. Take care when using and handling the power/data cord. Never use the cord to carry the tools or pull the plug from an outlet. Keep the cord away from heat, oil, sharp edges, or moving parts. Replace damaged cords immediately. Damaged cords increase the risk of electric shock. When operating a power tool outside, use an outdoor extension cord marked W-A or W. These cords are rated for outdoor use and reduce the risk of electric shock.

Personal Safety

Stay alert, watch what you are doing, and use common sense when operating a power tool. Do not use tool while tired or under the influence of drugs, alcohol, or medication. A moment of inattention while operating power tools may result in serious personal injury.

Dress according to local safety guidelines . Do not wear loose clothing or jewelry. Contain long hair. Keep your hair, clothing, and gloves away from moving parts. Loose clothes, jewelry, or long hair can be caught in moving parts.

Avoid accidental starting of tool(s). Be sure the switch is off before plugging in. Carrying tools with your finger on the switch or plugging in tools may result in personal injury.

Remove adjusting keys or switches before turning the tool on. A wrench or a key that is left attached to a rotating part of the tool may result in personal injury.

. Keep proper footing and balance at all times. Proper footing and balance enable better control of the tool in unexpected situations.

Use safety equipment. Always wear eye protection. Dust mask, non-skid safety shoes, hard hat, or hearing protection must be used for appropriate conditions.

Tool use and Care

Use clamps or another practical way to secure and support the workplace to a stable platform. Holding the work by hand or against your body is unstable and may lead to loss of control.

Do not operate a tool beyond its defined limits. Use the correct tool for your application. The correct tool will do the job better and safer at the rate for which it is designed.

Do not use the tool if the switch does not turn it on or off. Any tool that cannot be controlled with the switch is dangerous and must be repaired.

Disconnect the plug from the power source before making any adjustments, changing accessories, or storing the tool. Store idle tools out of reach of children and other untrained persons. Tools are dangerous in the hands of untrained users.

Maintain tools with care. Keep cutting tools sharp and clean. Properly maintained tools, with sharp cutting edges, are

less likely to bind and are easier to control.

Check for misalignment or binding of moving parts, breakage of parts, and any other condition that may affect the operation of the tool. If damaged, have the tool serviced before using it. Many accidents are caused by poorly maintained tools.

Use only accessories that are recommended by the manufacturer for your model.

Accessories that may be suitable for one tool, may become hazardous when used on another tool.

SERVICE

Tool service must be performed only by qualified personnel. Service or maintenance performed by unqualified personnel could result in a risk of injury.

When servicing a tool, use only identical replacement parts. Follow instructions in the Maintenance section of this manual. Use of unauthorized parts or failure to follow maintenance instructions may create a risk of electric shock or injury.

SPECIFIC SAFETY RULES

Hold tool by insulated gripping surfaces when performing an operation where the cutting tool may contact hidden wiring or its cord. Contact with a "live" wire will make exposed metal parts of the tool "live" and shock the operator.

Never lubricate aerosol oil on to the electrical part.

Product

The kit consists of DC Servo screwdriver, cable and controller as a complete system.

- 1) Standard packing item



EC-Series Screwdriver



Cable_14P (3m)



ECD-5000 Controller

Main features

- 1) Digital torque and angle program in 15 preset numbers and 2 multi step sequence programs
- 2) 15 Models managing variable presets with counting no. and I/O in sequential 10 steps
- 3) Color LCD touch screen with easy control
- 4) Auto speed setting by torque
- 5) Monitoring fastening quality and count of screw numbers
- 6) Error information by code display
- 7) Easy parameter setting and monitoring by ParaMON (PC software)
- 8) Real time torque data and curve display
- 9) Real time fastening data output
- 10) Modbus and Open Protocol
- 11) RS232C, Ethernet communication port

Screwdriver

General specification

no	Item	Specification
1	Electric power	DC38V, 5A max
2	Motor	Swiss DC servo motor
7	Torque repeatability	Depending on Joint characteristics and tool settings; from +/- 3% to +/- 10%
8	Speed	Auto speed by torque setting,

Model specification

Driver EC v x y z w ex) ECT50600-RA	V	Transducer	Blank	Non-Transducerized
			T	Transducerized
Controller ECD-4000U, 5000U ECTD-4000U	W	Type of Body	Blank	Straight
			-PT	Pistol (Up Type connector)
			-PB	Pistol (Down Type connector)
			-RA	Angle Head
			-R	Spindle
	X	Torque & RPM Range	30	
			40	
			50	
	Y	Gear Ratio	00, 05, 10...	See the Table 1
			1	E
	Z	Type of Drive	0	A (1/4")
				A (1/4") w/ Up Type connector
				A (1/4") w/ Down Type connector
			4	Q (1/4")
				Q (1/4") w/ Up Type connector
				Q (1/4") w/ Down Type connector
			5	Q (1/4")
				Q (1/4") w/ Up Type connector
				Q (1/4") w/ Down Type connector

Table 1

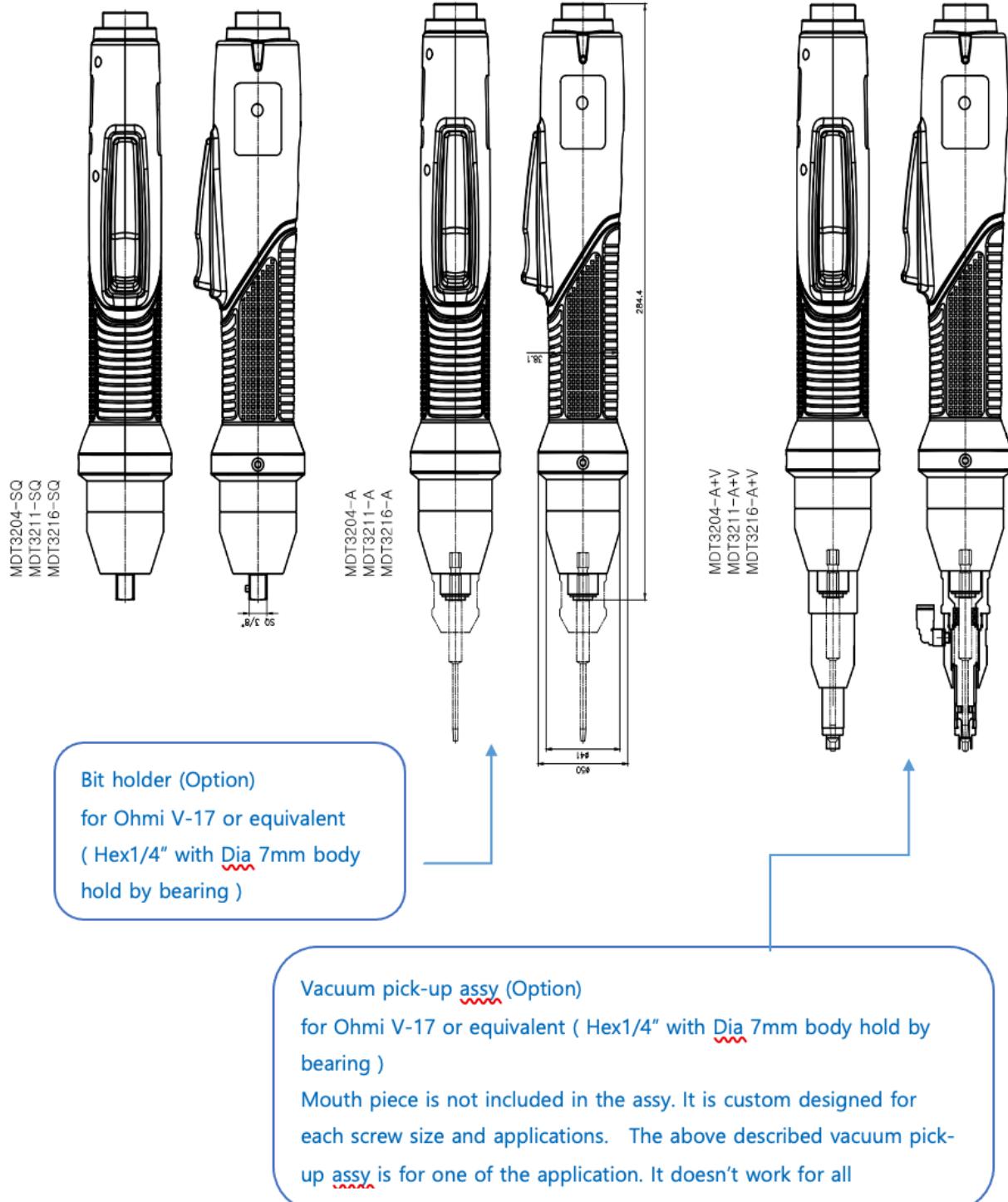
	Hts	Mtz
↓Gear Ratio↓	MD	EC
1/1	01	00
1/2	02	05
1/4	04	10
1/6	06	12
1/8	08	15
1/10	10	18
1/11	11	20
1/16	16	30
1/20	20	40
1/24	24	50
1/28	28	55
1/36	36	60
1/43	43	70
1/45	45	80
1/58	58	85
1/64	64	90

Model List

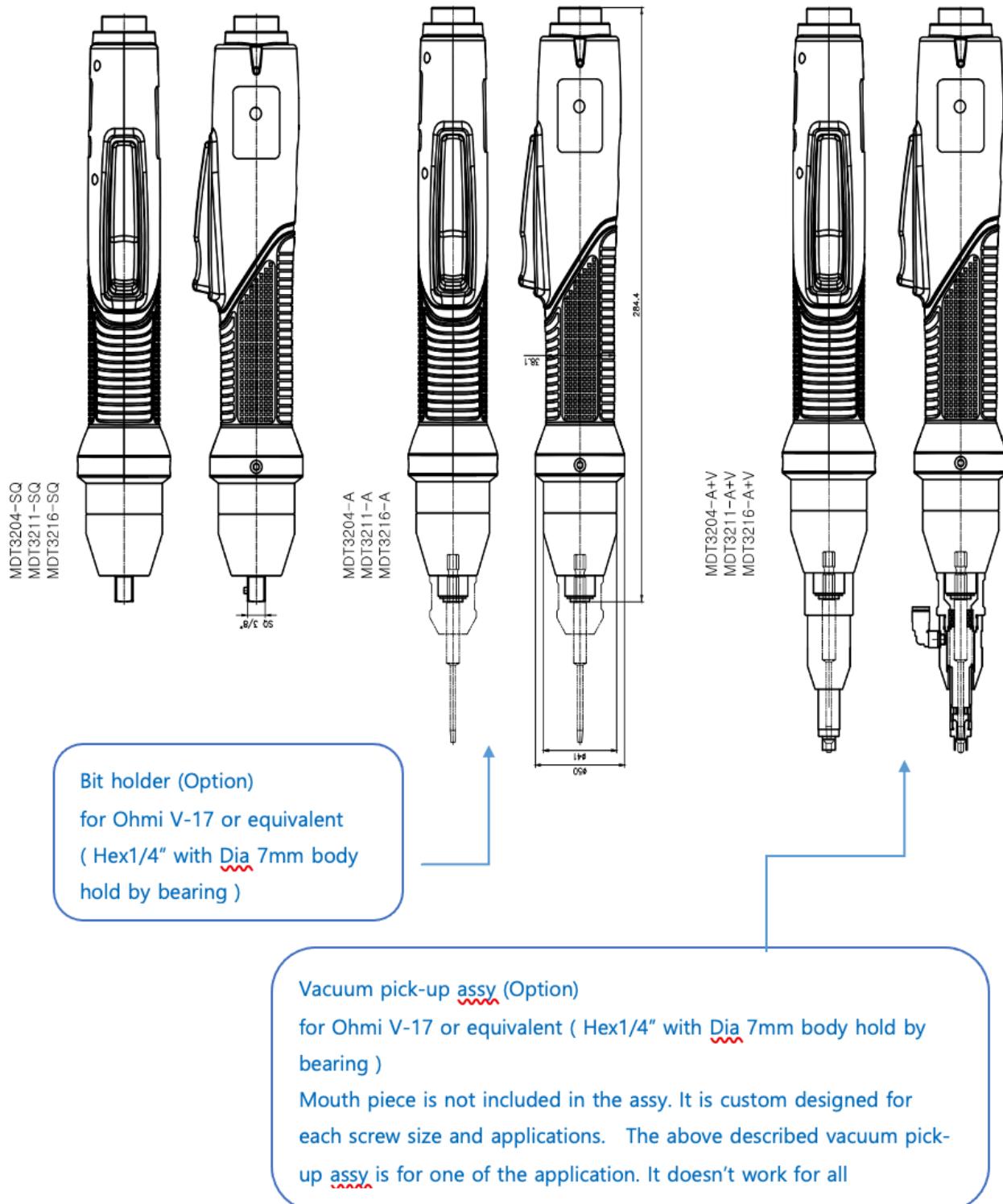
HANDHELD TRANSDUCERIZED									
MOUNTZ MODEL	Item No	Configuration	DRIVE	SPEED	Nm		Lbf.In.		Controller Model
					Min Torque	Max Torque	Min Torque	Max Torque	
ECT50100	313034	Inline	F 1/4" HEX	100-1800	0.80	4.00	7.08	35.40	ECTD-4000U Controller (110V) / 313003 ECTD-4000E Controller (230V) 313004
ECT50104	313035	Inline	3/8" SQ.DR.	100-1800	0.80	4.00	7.08	35.40	
ECT50150	313036	Inline	F 1/4" HEX	100-950	1.50	7.50	13.28	66.38	
ECT50154	313037	Inline	3/8" SQ.DR.	100-950	1.50	7.50	13.28	66.38	
ECT50200	313038	Inline	F 1/4" HEX	50-690	1.76	8.82	15.58	78.06	
ECT50204	313039	Inline	3/8" SQ.DR.	50-690	1.80	9.00	15.93	79.65	
ECT50300	313040	Inline	F 1/4" HEX	50-470	2.80	14.00	24.78	123.90	
ECT50304	313041	Inline	3/8" SQ.DR.	50-470	2.80	14.00	24.78	123.90	
ECT50554	313042	Inline	3/8" SQ.DR.	50-260	5.40	27.00	47.79	238.95	
ECT50704	313043	Inline	3/8" SQ.DR.	50-180	7.00	35.00	61.95	309.75	
ECT50705	313044	Inline	1/2" SQ.DR.	N/A	N/A	N/A	N/A	N/A	
ECT50854	313045	Inline	3/8" SQ.DR.	50-135	10.00	50.00	88.50	442.50	ECTD-4000U Controller (110V) / 313003 ECTD-4000E Controller (230V) 313004
ECT50855	313046	Inline	1/2" SQ.DR.	N/A	N/A	N/A	N/A	N/A	
ECT50100-PB	313047	Pistol Bottom Connector	F 1/4" HEX	100-1800	0.90	4.50	7.97	39.83	
ECT50104-PB	313048	Pistol Bottom Connector	3/8" SQ.DR.	100-1800	0.90	4.50	7.97	39.83	
ECT50120-PB	313049	Pistol Bottom Connector	F 1/4" HEX	100-1250	1.30	6.50	11.51	57.53	
ECT50124-PB	313050	Pistol Bottom Connector	3/8" SQ.DR.	100-1251	1.30	6.50	11.51	57.53	
ECT50200-PB	313051	Pistol Bottom Connector	F 1/4" HEX	50-690	2.30	11.50	20.36	101.78	
ECT50204-PB	313052	Pistol Bottom Connector	3/8" SQ.DR.	50-690	2.30	11.50	20.36	101.78	
ECT50300-PB	313053	Pistol Bottom Connector	F 1/4" HEX	50-470	3.20	16.00	28.32	141.60	
ECT50304-PB	313054	Pistol Bottom Connector	3/8" SQ.DR.	50-470	3.20	16.00	28.32	141.60	
ECT50500-PB	313055	Pistol Bottom Connector	F 1/4" HEX	50-310	4.80	24.00	42.48	212.40	
ECT50504-PB	313056	Pistol Bottom Connector	3/8" SQ.DR.	50-311	4.80	24.00	42.48	212.40	
ECT50604-PB	313057	Pistol Bottom Connector	3/8" SQ.DR.	50-200	6.60	33.00	58.41	292.05	ECTD-4000U Controller (110V) / 313003 ECTD-4000E Controller (230V) 313004
ECT50804-PB	313058	Pistol Bottom Connector	3/8" SQ.DR.	50-160	8.00	40.00	70.80	354.00	
ECT50805-PB	313059	Pistol Bottom Connector	1/2" SQ.DR.	N/A	N/A	N/A	N/A	N/A	
ECT50904-PB	313060	Pistol Bottom Connector	3/8" SQ.DR.	50-115	11.40	57.00	100.89	504.45	
ECT50905-PB	313061	Pistol Bottom Connector	1/2" SQ.DR.	N/A	N/A	N/A	N/A	N/A	
ECT50100-PT	313062	Pistol Top Connector	F 1/4" HEX	100-1800	0.90	4.50	7.97	39.83	
ECT50104-PT	313063	Pistol Top Connector	3/8" SQ.DR.	100-1800	0.90	4.50	7.97	39.83	
ECT50120-PT	313064	Pistol Top Connector	F 1/4" HEX	100-1250	1.30	6.50	11.51	57.53	
ECT50124-PT	313065	Pistol Top Connector	3/8" SQ.DR.	100-1251	1.30	6.50	11.51	57.53	
ECT50200-PT	313066	Pistol Top Connector	F 1/4" HEX	50-690	1.76	8.82	15.58	78.06	
ECT50204-PT	313067	Pistol Top Connector	3/8" SQ.DR.	50-690	1.80	9.00	15.93	79.65	
ECT50300-PT	313067	Pistol Top Connector	F 1/4" HEX	50-470	2.80	14.00	24.78	123.90	
ECT50304-PT	313068	Pistol Top Connector	3/8" SQ.DR.	50-470	2.80	14.00	24.78	123.90	
ECT50500-PT	313069	Pistol Top Connector	F 1/4" HEX	50-310	4.80	24.00	42.48	212.40	
ECT50504-PT	313070	Pistol Top Connector	3/8" SQ.DR.	50-311	4.80	24.00	42.48	212.40	
ECT50604-PT	313071	Pistol Top Connector	3/8" SQ.DR.	50-200	6.60	33.00	58.41	292.05	ECTD-4000U Controller (110V) / 313003 ECTD-4000E Controller (230V) 313004
ECT50804-PT	313072	Pistol Top Connector	3/8" SQ.DR.	50-160	8.00	40.00	70.80	354.00	
ECT50805-PT	313073	Pistol Top Connector	1/2" SQ.DR.	N/A	N/A	N/A	N/A	N/A	
ECT50904-PT	313074	Pistol Top Connector	3/8" SQ.DR.	50-115	11.40	57.00	100.89	504.45	
ECT50905-PT	313075	Pistol Top Connector	1/2" SQ.DR.	N/A	N/A	N/A	N/A	N/A	
ECT50100-RA	313076	Right Angle	F 1/4" HEX	100-1800	0.80	4.00	7.08	35.40	
ECT50104-RA	313077	Right Angle	3/8" SQ.DR.	100-1800	0.80	4.00	7.08	35.40	
ECT50150-RA	313078	Right Angle	F 1/4" HEX	100-950	1.50	7.50	13.28	66.38	
ECT50154-RA	313079	Right Angle	3/8" SQ.DR.	100-950	1.50	7.50	13.28	66.38	
ECT50200-RA	313080	Right Angle	F 1/4" HEX	50-690	1.80	9.00	15.93	79.65	
ECT50204-RA	313081	Right Angle	3/8" SQ.DR.	50-690	1.80	9.00	15.93	79.65	
ECT50300-RA	313082	Right Angle	F 1/4" HEX	50-470	2.80	14.00	24.78	123.90	
ECT50304-RA	313083	Right Angle	3/8" SQ.DR.	50-470	2.80	14.00	24.78	123.90	
ECT50554-RA	313084	Right Angle	3/8" SQ.DR.	50-260	5.40	27.00	47.79	238.95	
ECT50704-RA	313085	Right Angle	3/8" SQ.DR.	50-180	7.00	35.00	61.95	309.75	
ECT50705-RA	313086	Right Angle	1/2" SQ.DR.	N/A	N/A	N/A	N/A	N/A	ECTD-4000U Controller (110V) / 313003 ECTD-4000E Controller (230V) 313004
ECT50854-RA	313087	Right Angle	3/8" SQ.DR.	50-135	10.00	50.00	88.50	442.50	
ECT50855-RA	313088	Right Angle	1/2" SQ.DR.	N/A	N/A	N/A	N/A	N/A	
ECT50100-R	313089	Robotic	F 1/4" HEX	100-1800	0.90	4.50	7.97	39.83	
ECT50104-R	313090	Robotic	3/8" SQ.DR.	100-1800	0.90	4.50	7.97	39.83	
ECT50200-R	313091	Robotic	F 1/4" HEX	50-690	2.30	11.50	20.36	101.78	
ECT50204-R	313092	Robotic	3/8" SQ.DR.	50-690	2.30	11.50	20.36	101.78	
ECT50300-R	313093	Robotic	F 1/4" HEX	50-470	3.20	16.00	28.32	141.60	
ECT50304-R	313094	Robotic	3/8" SQ.DR.	50-470	3.20	16.00	28.32	141.60	
ECT50500-R	313095	Robotic	F 1/4" HEX	50-310	4.80	24.00	42.48	212.40	
ECT50504-R	313096	Robotic	3/8" SQ.DR.	50-311	4.80	24.00	42.48	212.40	
ECT50604-R	313097	Robotic	3/8" SQ.DR.	50-200	6.60	33.00	58.41	292.05	
ECT50804-R	313098	Robotic	3/8" SQ.DR.	50-160	8.00	40.00	70.80	354.00	
ECT50805-R	313099	Robotic	1/2" SQ.DR.	N/A	N/A	N/A	N/A	N/A	ECTD-4000U Controller (110V) / 313003 ECTD-4000E Controller (230V) 313004
ECT50904-R	313100	Robotic	3/8" SQ.DR.	50-115	11.40	57.00	100.89	504.45	
ECT50905-R	313101	Robotic	1/2" SQ.DR.	N/A	N/A	N/A	N/A	N/A	

Model Drawings

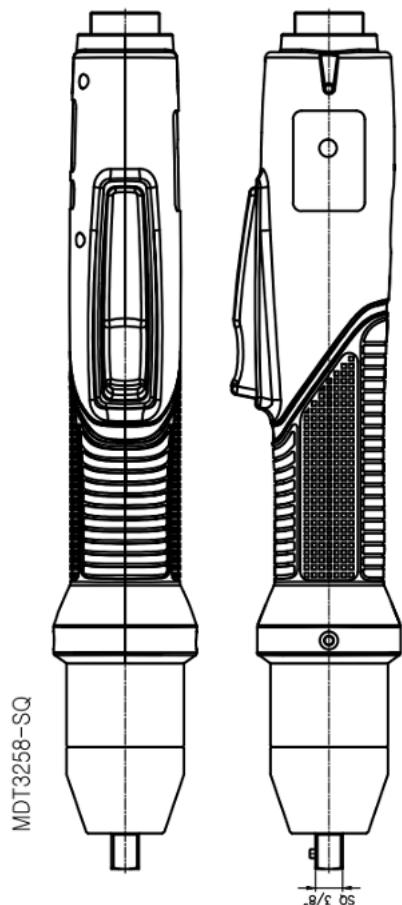
ECT3204, 3211, 3216



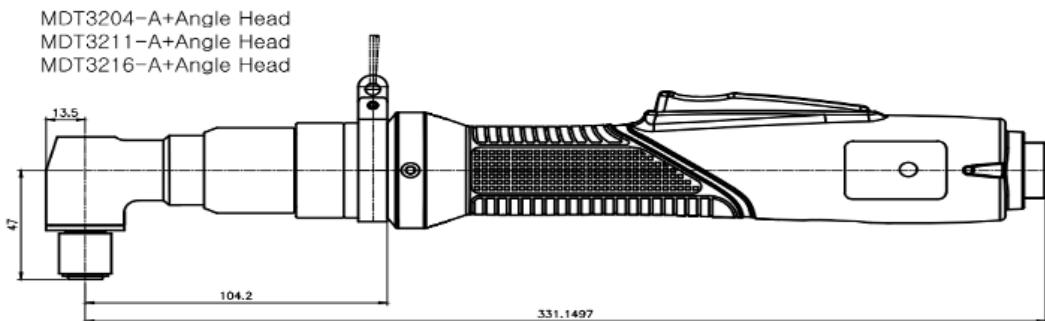
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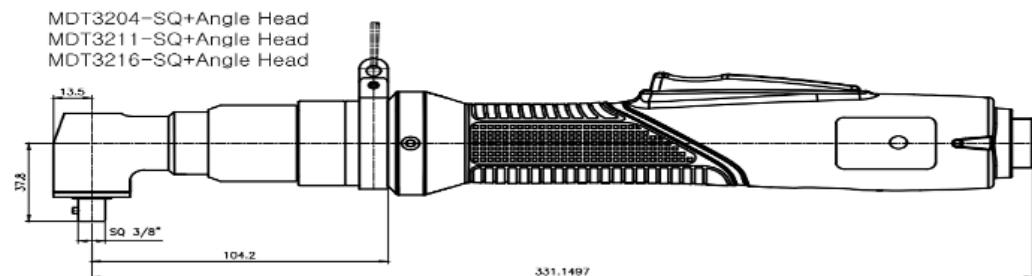
ECT3258



MDTH3204, MDTH3211, MDTH3216

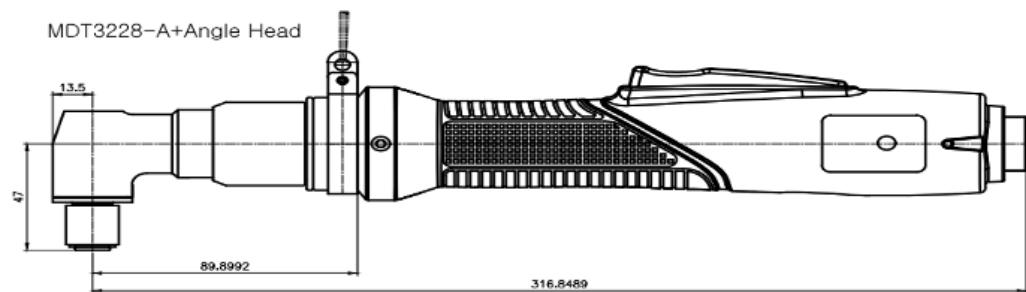


Bit socket : 1/4" hex female (quick change)

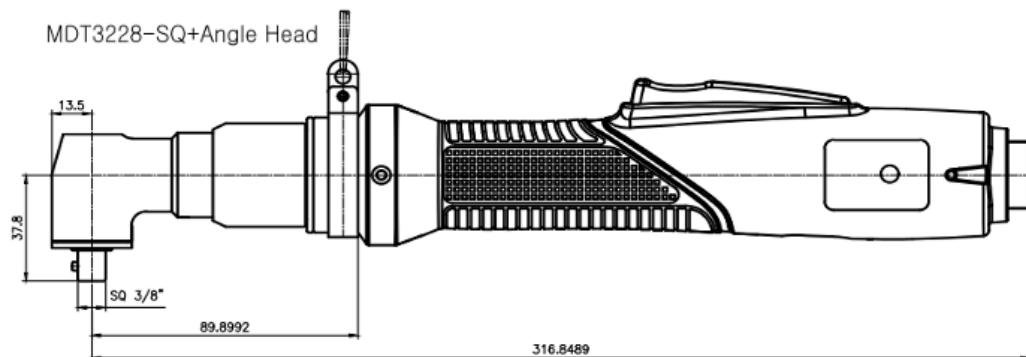


Bit socket : 3/8"SQ drive

■ MDTH3228



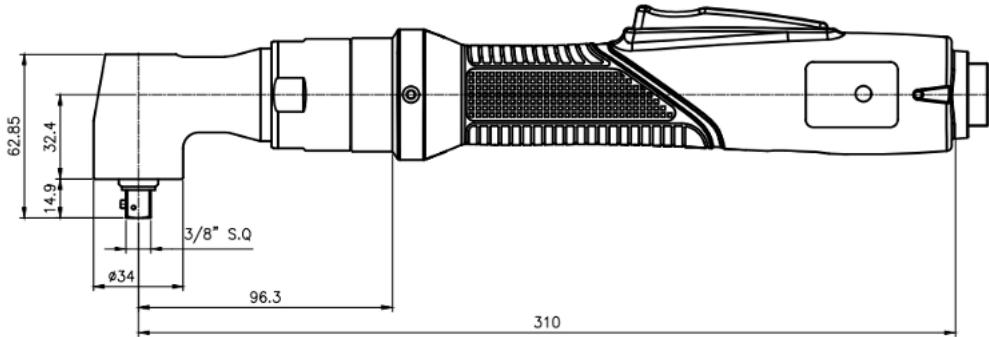
Bit socket : 1/4" hex female (quick change)



Bit socket : 3/8"SQ drive

MDTH3258

MDT3258-SQ+Angle Head



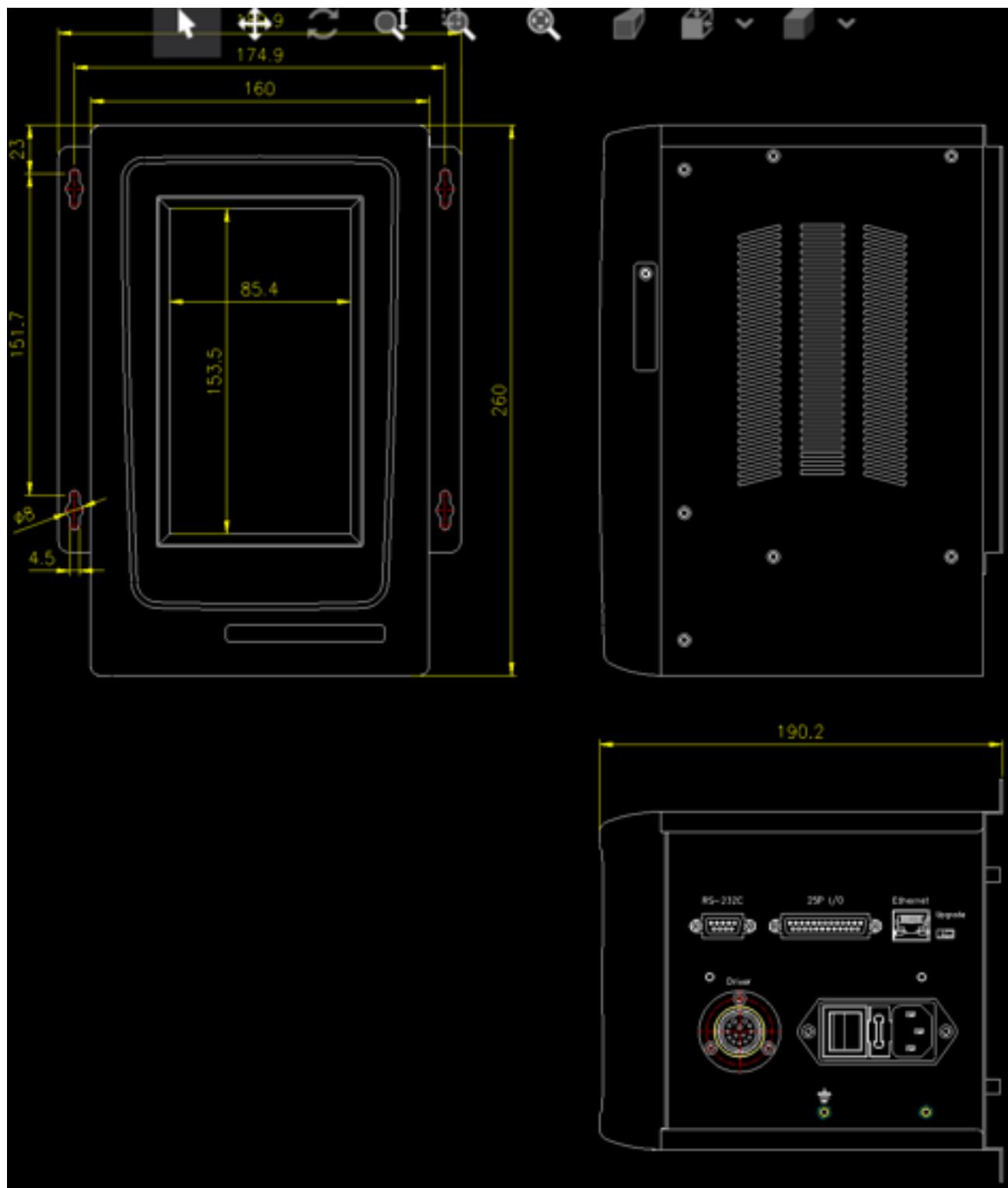
Bit socket : 3/8"SQ drive

Controller

Specification

no	Item	Specification	
		ECD-5000U	ECD-5000E
1	Input	AC120VC / AC230V, 50/60Hz	
2	Output	DC38V 3.5A	
3	Fuse	230V 25A	
4	Operating environment	0 ~ 40°C / 15 ~ 80% RH (without dew)	
5	Front panel	4.3" Color LCD with touch screen	
6	Communication	1 x RS232C, 1 x Ethernet	
7	Protocol	Modbus and Open Protocol	
8	I/O	8 Input & 8 Output flexible I/O (25P D-Sub)	
9	No. of program(Preset)	15	
10	Torque calibration	- 10% ~ +10%	
11	Screwdriver recognition	Auto detection of connected driver when power ON of controller	
12	Error display	Error code display (3 groups)	
13	Fastening verification	Torque control, Angle Monitoring or Angle Control, Torque Monitoring.	

Controller dimension





World Class ISO Certified Tool Repair and Calibration Services

Whether under warranty or not, we can repair Mountz tools with the utmost precision and we can calibrate any torque tool in the world.

