NAKANISHI

GROUPE TeCHmO SaTeCH
Partenaire d'usinage

ULTRA-PRECISION BRUSHLESS MICRO-GRINDER

Emax EVOlution

Maximized Evolution

Evolutionary Five Identities of New Emax EVOlution

"Tough Torque Brushless Motor"
"Flashing Live Load Indicator"
"Auto-Cruise Control"
"FIXPEED Function"
and
"STYLE"

TECHMO
30 rue de Montaran
45400 FLEURY LES AUBRAIS
commercial.techmo@techmo.fr
02 38 61 48 10
02 38 84 39 63

TECHMO TOULOUSE
18 chemin de la Violette
31240 L'UNION
magasin.toulouse@techmo.fr
05 61 61 34 35
05 61 61 34 44

SATECH
28 rue Alain Gerbault
72100 LE MANS
magasin@satech.fr
02 43 40 05 05
02 43 40 00 99

Emax EVOlution

Advanced High Performance Control Unit

Advanced Control Function

Upgraded Digital Display.
EVOLUTION on Speed Control Volume with Flash Load Indicator.

Motor speed digital display

Load Meter

●:Continuous load area
●:Intermittent load area
●:Overload

Diversity for work efficiency

2 Motors of A and B can be connected, and select the suited motor for work situation.

*Simultaneous motor operation is not allowable

Memory Speed Function FiXpeed®

An exclusive new feature of the Emax EVOlution, the FiXpeed® system allows everyone easily to fix speed of motor A and B independently prior to operate. For example motor A can be set to maintain the speed set by the FiXpeed® system while motor B has variable control using a foot controller. This function brings for unprecedented workability.

Advanced User Friendly Design

New Industrial Design.
EVOLUTION from Tower-type solid E-Max to User-oriented Identity.
Design meets Performance.

Auto Cruise Function

The control unit is equipped with an Auto Cruise Function. While using foot control for work, anyone could fix the motor at any speed by the embedded motor switch. Once speed is set, foot pedal control is not required. This function eliminates foot fatigue during operation.

Forward / Reverse Select Switch
Forward/Reverse rotation can be selected.

ø12mm Speed Control Volume
Easy to operate by one finger

Memory Speed Function FiXpeed®

Motor B
ON/OFF Function

Motor A
ON/OFF Function

Emax EVOlution Control Unit

Code No.	Model	Specifications
8224 (120V)	NE249 120	• Weight : 2.3 kg • Power Source : AC120/230V, 50-60Hz • Dimensions : W130 x D254 x H97 mm
8227 (230V)	NE249 230	

Accessories : Handpiece Holder : 1 pc., Handpiece Stand : 1 pc.
Power Supply Cord : 1 pc.

Handpiece System

NAKANISHI Smart Switch

The switch provides a click sensation.
A confirmation tone is reacted by the control unit when the switch is operated. The motor type is distinguishable by the switch color.

One Touch Tool Changing

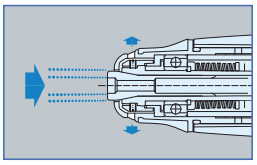
- Ring Type (IR-310)
  Easy twist open/close chuck

Various Collet Chuck Size

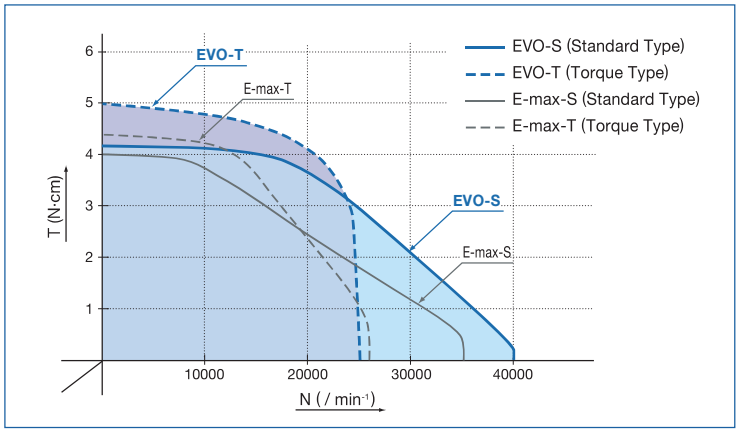
Various sizes ranging from ultra-small diameter (0.3 mm) are available for each attachment. Furthermore, collet replacement can be easily performed without spanner.

Special Dust Protection Mechanism (patented)

The chuck section of Emax EVOlution has a special built-in dust protection mechanism that prevents entry of foreign materials such as chips, and provides superior durability as well.



Emax EVOlution vs E-max Torque Characteristic



2 Types of Motors

Provides choice of various applications.

- Standard Type Motor 1,000~40,000 min^{-1} (ENK-410S) Blue
- Torque Type Motor 1,000~25,000 min^{-1} (ENK-250T) Green

＊Exclusive use for Emax EVOlution

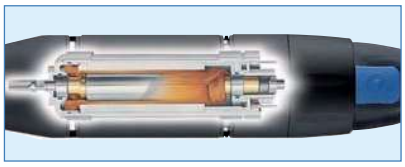
Emax EVOlution and Electer E-max have different motor cord pin configurations.

Emax EVOlution

Electer E-max

Excellent Durability

- High performance brushless motor eliminates the need of changing carbon brushes.
- RPM variation is minimal even when load changes. Allowing difficult and stable cutting in stress free motion. Suitable performance for finish grinding.
- Provides superior quietness and smoothness from low speed to high speed.



17 Type of Attachments for All Type of Applications

Capable of infinite applications with 14 different handpieces and 3 types of intermediate attachments.

＊Interchangeable with attachments form the E-max and ROTUS system.

＊Please mention "Code Number" upon your order.

Emax EVOlution STANDARD SET

Capable for wide range of applications. An excellent total balance in motor performance and dimension against required rotational speed.

1,000~40,000 min^{-1}

＊New Ring Type IR-310 is the standard attachment for Emax EVOlution standard set EV410-120, EV410-230.

Code No.	8233 (120V) / 8225 (230V)	Model	EV410-120 (120V) / EV410-230 (230V)
Attachment IR-310 — Motor ENK-410S			
Standard Equipment	Micro Grinder (IR-310+ENK-410S) : 1 pc. Collet Chuck ø3.0 mm (CHH-3.0), ø2.35 mm (CHH-2.35) : 1 pc. each Control Unit (NE249) : 1 pc. Handpiece Holder : 1 pc. Handpiece Stand : 1 pc. Power Supply Cord : 1 pc. Spanner (7 x 5.1) : 1 pc. Pin Spanner (K-233) : 2 pc. L Shaped Spanner : 1 pc.		

Emax EVOlution TORQUE SET

For heavy duty and larger tools, Torque type promises to extend operation ranges.

1,000~25,000 min^{-1}

＊New Ring Type IR-310 is the standard attachment for Emax EVOlution torque set EV250-120, EV250-230.

Code No.	8234 (120V) / 8226 (230V)	Model	EV250-120 (120V) / EV250-230 (230V)
Attachment IR-310 — Motor ENK-250T			
Standard Equipment	Micro Grinder (IR-310+ENK-250T) : 1 pc. Collet Chuck ø3.0 mm (CHH-3.0), ø2.35 mm (CHH-2.35) : 1 pc. each Control Unit (NE249) : 1 pc. Handpiece Holder : 1 pc. Handpiece Stand : 1 pc. Power Supply Cord : 1 pc. Spanner (7 x 5.1) : 1 pc. Pin Spanner (K-233) : 1 pc. L Shaped Spanner : 1 pc.		

System Chart

Code No.	Model

Attachment

Ring Type

1147	IR-310

40,000 min⁻¹ Max. (✻1) 40,000 min⁻¹ Max. (✻2)

Lever Type

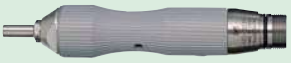
1005	IH-300

40,000 min⁻¹ Max. (✻1) 40,000 min⁻¹ Max. (✻2)

Straight Type

2811	IG-400

40,000 min⁻¹ Max. (✻1) 40,000 min⁻¹ Max. (✻2)



6 mm Torque Type (✻3)

1016	HG-200

30,000 min⁻¹ Max. (✻1) 27,000 min⁻¹ Max. (✻2)

Long Type

1017	BMH-300

35,000 min⁻¹ Max. (✻1) 35,000 min⁻¹ Max. (✻2)

90° Mini Angle Type

1012	MFC-300S

15,000 min⁻¹ Max. (✻1) 15,000 min⁻¹ Max. (✻2)

90° Mini Angle Type (Very Small Head)

1013	MFC-300M

15,000 min⁻¹ Max. (✻1) 15,000 min⁻¹ Max. (✻2)

90° Angle Type

1006	IC-300

35,000 min⁻¹ Max. (✻1) 20,000 min⁻¹ Max. (✻2)

45° Angle Type

1014	KC-300

35,000 min⁻¹ Max. (✻1) 20,000 min⁻¹ Max. (✻2)

LUSTER
(Reciprocating motion)

1302	LS-100

30,000 min⁻¹ Max. (✻1) 30,000 min⁻¹ Max. (✻2)

MINI-LUSTER (Reciprocating motion)

1307	ML-8

35,000 min⁻¹ Max. (✻1) 30,000 min⁻¹ Max. (✻2)

SWING-LUSTER (Right to left motion)

1380	SLS-16

35,000 min⁻¹ Max. (✻1) 24,000 min⁻¹ Max. (✻2)

Hammer Action Type

8060	HA-500

20,000 min⁻¹ Max. (✻1) 16,000 min⁻¹ Max. (✻2)

FINE BELT SANDER

1146	KBS-101

35,000 min⁻¹ Max. (✻1) 35,000 min⁻¹ Max. (✻2)

Speed Reducer· Extension Joint

Extension Joint

1015	CN-01

35,000 min⁻¹ Max. (✻1) 35,000 min⁻¹ Max. (✻2)

1/4 Speed Reducer

1009	RG-01

30,000 min⁻¹ Max. (✻1) 30,000 min⁻¹ Max. (✻2)

1/15 Speed Reducer

1010	RG-02

30,000 min⁻¹ Max. (✻1) 30,000 min⁻¹ Max. (✻2)

May be connected between the motor and the attachment when required increased torque.

Motor

Exclusive use for Emax EVOlution

- Standard Type Motor with Cord 1,000~40,000 min⁻¹

8086	ENK-410S

- Torque Type Motor with Cord 1,000~25,000 min⁻¹

8087	ENK-250T

Control Unit

Emax EVOlution Control Unit

8224 (120V)	NE249 120
8227 (230V)	NE249 230

Exclusive use for Emax EVOlution

LUSTER
(Reciprocating motion)
Built-in Motor

1483	NLS-110

30,000 min⁻¹ Max. (✻1) 30,000 min⁻¹ Max. (✻2)

✻ Can be used for Emax series attachments, reducers, and extension joint

✻ When using Emax EVOlution, be careful for Maximum Allowable Speed.

✻ Never connect to Emax Series motor NK-351, NK-261 and NK-151.

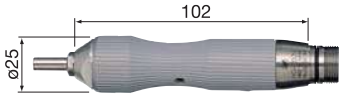
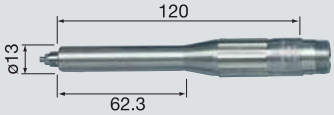
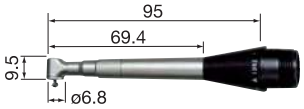
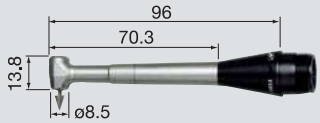
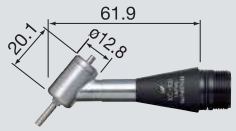
✻3 : Use 6㎜ torque Type HG-200 to connect ENK-250T

✻Maximum Allowable Speed, continuous use may change depending on the material being cut and other application variables.

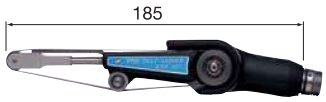
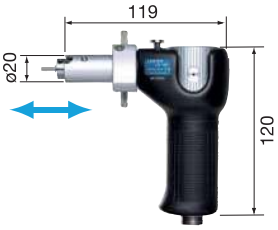
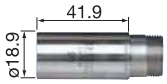
✻1 : Maximum Allowable Speed, intermittent use.
✻2 : Maximum Allowable Speed, continuous use.

✻Please mention "Code Number" upon your order.

Emax EVOlution Attachments

Product	Description	Specifications	Model	Code No.
	Emax EVOlution Control Unit	• Weight : 2.3 kg • Power Source : AC 120/230V, 50-60Hz • Dimensions : W130 x D254 x H97㎜	NE249 120	8224 (120V)
			NE249 230	8227 (230V)
 Exclusive use for Emax EVOlution	Standard Type Motor with Cord	• Weight : 90 g (w/o Cord) • Max. Torque 4.3 cN·m • with Straight Cord 1.5m • Max. Power : 73W • Speed : 1,000~40,000 min^{-1} • Accessory : Pin Spanner (K-233) 1 pc.	ENK-410S	8086
 Exclusive use for Emax EVOlution	Torque Type Motor with Cord	• Weight : 147 g (w/o Cord) • Max. Torque 4.8 cN·m • with Straight Cord 1.5m • Max. Power : 76W • Speed : 1,000~25,000 min^{-1}	ENK-250T	8087
	Ring Type Attachment	• Weight : 92 g • Collet Chuck : ø3.0㎜ (CHH-3.0), ø2.35㎜ (CHH-2.35) • Accessory : Spanner (7 x 5.1) 1 pc. Pin Spanner (K-233) 1 pc. L Shaped Spanner 1 pc. 40,000 min^{-1} Max. (✻) 40,000 min^{-1} Max. (✻2)	IR-310	1147
	Lever Type Attachment	• Weight : 62 g • Collet Chuck : ø3.0㎜ (CHH-3.0), ø2.35㎜ (CHH-2.35) • Accessory : Spanner (7 x 5.1) 1 pc. Pin Spanner (K-233) 1 pc. 40,000 min^{-1} Max. (✻) 40,000 min^{-1} Max. (✻2)	IH-300	1005
	Straight Type Attachment	• Weight : 55 g • Collet Chuck : ø3.0㎜ (NKM6-3.0) • Chuck Nut (CHN-6) • Accessory : Spanner (9 x 9), (15 x 17) 1 pc. each Bar Wrench (PCR-30) 1 pc. 40,000 min^{-1} Max. (✻) 40,000 min^{-1} Max. (✻2)	IG-400	2811
	6 mm Torque Type Attachment	• Weight : 210 g • Collet Chuck : ø6.0㎜ (CHG-6.0) • Accessory : Spanner (10 x 10) 1 pc. Bar Wrench (K-212) 1 pc. Pin Spanner (K-233) 1 pc. ✻ Use 6㎜ torque Type HG-200 to connect ENK-250T 30,000 min^{-1} Max. (✻) 27,000 min^{-1} Max. (✻2)	HG-200	1016
	Long Type Attachment for Deep Hole Grinding ø13 mm	• Weight : 156 g • Collet Chuck : ø3.0㎜ (CHM-3.0) • Accessory : Spanner (7 x 5.1), (6 x 4.5) 1 pc. each Pin Spanner (K-233) 1 pc. 35,000 min^{-1} Max. (✻) 35,000 min^{-1} Max. (✻2)	BMH-300	1017
	90° MINI ANGLE TYPE Attachment for Chamfering Deep Hole (Very Small Head)	• Weight : 47 g • Speed Reduction Ratio : 10/11 • Collet Chuck : ø1.6㎜ (K-253) • Accessory : Chuck Wrench (K-232) 1 pc. Pin Spanner (K-233) 1 pc. 15,000 min^{-1} Max. (✻1) 15,000 min^{-1} Max. (✻2)	MFC-300M	1013
	90° MINI ANGLE TYPE Attachment for Chamfering Deep Hole	• Weight : 50 g • Speed Reduction Ratio : 10/11 • Collet Chuck : ø1.6㎜ (K-252) • Accessory : Chuck Wrench (K-232) 1 pc. Pin Spanner (K-233) 1 pc. 15,000 min^{-1} Max. (✻1) 15,000 min^{-1} Max. (✻2)	MFC-300S	1012
	90° ANGLE Attachment	• Weight : 45 g • Standard Accessories (Rubber Pad, Paper Disk) • Collet Chuck : ø3.0㎜ (CHC-3.0) • Accessory : Standard Accessories 1 set. Chuck Wrench (K-231) 1 pc. Pin Spanner (K-233) 1 pc. 35,000 min^{-1} Max. (✻1) 20,000 min^{-1} Max. (✻2)	IC-300	1006
	45° ANGLE Attachment	• Weight : 45 g • Standard Accessories (Rubber Pad, Paper Disk) • Collet Chuck : ø3.0㎜ (CHC-3.0) • Accessory : Standard Accessories 1 set. Chuck Wrench (K-231) 1 pc. Pin Spanner (K-233) 1 pc. 35,000 min^{-1} Max. (✻1) 20,000 min^{-1} Max. (✻2)	KC-300	1014

Emax EVOlution Attachments

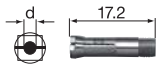
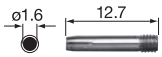
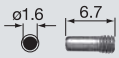
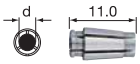
Product	Description	Specifications	Model	Code No.
	MINI-LUSTER Attachment (Pencil-Type Polisher) (Reciprocating motion)	• Weight : 130 g • Max. tool shank diameter ø3.2 mm, Screw clamp type. • Stroke range (fixed) : 0.8 mm • Accessory : Standard Accessories 1 set 35,000 min⁻¹ Max. (*1) 30,000 min⁻¹ Max. (*2)	**ML-8**	**1307**
	SWING-LUSTER Attachment (Pencil-Type Polisher) (Right to Left motion)	• Weight : 127 g • Reciprocating Stroke (Variable) : 0~9,000 times/min. • Stroke range (Variable) : 0~1.6 mm • Max. tool shank diameter ø5.0 mm, Screw clamp type. • Accessory : Standard Accessories 1 set 35,000 min⁻¹ Max. (*1) 24,000 min⁻¹ Max. (*2)	**SLS-16**	**1380**
	Hammer Attachment for Engraving and Ornament Processing Work	• Weight : 95 g • Stroke Times : 25~5,000 times/min. • Stroke Spring Pressure : 4.4~7.1N (Ring Adjustment Type) • Accessory : Spanner (7 x 5.1) 1 pc., Bar Wrench (K-212) 1 pc., Oil and nozzle, Hammer Bit (For replacement) 2 pcs. 20,000 min⁻¹ Max. (*1) 16,000 min⁻¹ Max. (*2)	**HA-500**	**8060**
	**FINE BELT SANDER Attachment**	• Weight : 350 g • Belt Speed : 0~825 m/min. • Belt Size : 4, 6, 8 mm • Accessory : 8, 6, 4 mm Belts Allen Wrench (3 mm) : 1 pc. 35,000 min⁻¹ Max. (*1) 35,000 min⁻¹ Max. (*2)	**KBS-101**	**1146**
Exclusive use for Emax EVOlution	**LUSTER Attachment** (Pistol-Type Polisher) (Reciprocating motion) **Built-in Motor**	• Weight : 800 g • Max. Torque 17.2 cN·m • with Straight Cord 1.5m • Stroke Range : 0~6 mm (variable) • Max. tool shank diameter ø6.4 mm, Screw clamp type. • Reciprocating Stroke (variable) : 0~7,600 times/min • Accessory : Standard Accessories 1 set Lubrication Oil, Lubrication Nozzle for LUSTER 30,000 min⁻¹ Max. (*1) 30,000 min⁻¹ Max. (*2)	**NLS-110**	**1483**
	**LUSTER Attachment** (Pistol-Type Polisher) (Reciprocating motion)	• Weight : 680 g • Stroke Range : 0~6 mm (variable) • Max. tool shank diameter ø6.4 mm, Screw clamp type. • Reciprocating Stroke (variable) : 0~7,600 times/min • Accessory : Standard Accessories 1 set Lubrication Oil, Lubrication Nozzle for LUSTER 30,000 min⁻¹ Max. (*1) 30,000 min⁻¹ Max. (*2)	**LS-100**	**1302**
	EXTENSION JOINT	• Weight : 83 g • Pin Spanner (K-233) : 1 pc. 35,000 min⁻¹ Max. (*1) 35,000 min⁻¹ Max. (*2)	**CN-01**	**1015**
	**1/4 SPEED REDUCER**	• Weight : 68 g • Pin Spanner (K-233) : 1 pc. 30,000 min⁻¹ Max. (*1) 30,000 min⁻¹ Max. (*2)	**RG-01**	**1009**
	1/15 SPEED REDUCER	• Weight : 93 g • Pin Spanner (K-233) : 1 pc. 30,000 min⁻¹ Max. (*1) 30,000 min⁻¹ Max. (*2)	**RG-02**	**1010**

*Maximum Allowable Speed, continuous use may change depending on the material being cut and other application variables.

*1 : Maximum Allowable Speed, intermittent use.
*2 : Maximum Allowable Speed, continuous use.

***Please mention "Code Number" upon your order.**

Collet Chuck

Product	Inside Diameter : ød	Fit to	Model	Code No.
 CHC Group	ø1.6	IC-300, KC-300	CHC-1.6	90416
	ø2.35		CHC-2.35	90492
	ø3.0		CHC-3.0	90430
	ø3.175		CHC-3.175	90493
CHG Group	ø2.35	HG-200	CHG-2.35	91192
	ø3.0		CHG-3.0	91130
	ø3.175		CHG-3.175	91193
	ø6.0		CHG-6.0	91160
	ø6.35		CHG-6.35	91196
	ø1.0, ø1.5, ø2.0, ø2.5, ø4.76		CHG-□□	—
	ø1.6, ø4.0, ø5.0			
CHH Group	ø2.35	IH-300, IR-310	CHH-2.35	90692
	ø3.0		CHH-3.0	90630
	ø3.175		CHH-3.175	90693
	ø1.0, ø1.5, ø2.0, ø2.5		CHH-□□	—
	ø1.6			
CHM Group	ø1.0	BMH-300	CHM-1.0	90910
	ø1.6		CHM-1.6	90916
	ø2.0		CHM-2.0	90920
	ø2.35		CHM-2.35	90992
	ø3.0		CHM-3.0	90930
	ø3.175		CHM-3.175	90993
	ø1.6	MFC-300S	K-252	90316
	ø1.6	MFC-300M	K-253	90016
 NKM6 Group (NK Micron Chuck)	ø2.35	IG-400	NKM6-2.35	92030
	ø3.0		NKM6-3.0	92092
	ø3.175		NKM6-3.175	92093

Chuck Nut

Product	Description	Fit to	Model	Code No.
	Chuck Nut	IG-400 (for NKM6 Group)	CHN-6	2104

Parts

Product	Description	Fit to	Model	Code No.
	Straight Cord : 1.5 m <with Switch>	ENK-410S (Standard Type Motor)	ENKCD-410S	8088
		ENK-250T (Torque Type Motor)	ENKCD-250T	8089
	Power Supply Cord	Control Unit : Emax EVOlution NE249	K-269	1484
	Foot Control ON-OFF and speed change can be accomplished.	Control Unit : Emax EVOlution NE249	FC-64	8106
	Handpiece Holder	Control Unit : Emax EVOlution NE249	K-273	8107
	Handpiece Stand		K-274	8104

TECHMO
30 rue de Montaran
45400 FLEURY LES AUBRAIS
commercial.techmo@techmo.fr
02 38 61 48 10
02 38 84 39 63

TECHMO TOULOUSE
18 chemin de la Violette
31240 L'UNION
magasin.toulouse@techmo.fr
05 61 61 34 35
05 61 61 34 44

SATECH
28 rue Alain Gerbault
72100 LE MANS
magasin@satech.fr
02 43 40 05 05
02 43 40 00 99