

Precision Electric Powered Micro Grinder

E-FORCE[®]

A Cutting Edge Tool, based on finely developed motor technology

Created by the best technology of EIKO ELECTRIC INDUSTRIAL—a leading company on industrial motor manufacturing.



Quick Change & Slim Body

Toolless Attachment Changing System

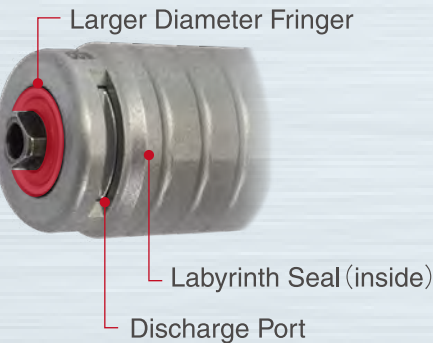
Finely crafted to detail.
Its sleek, full metal body is reminiscent of
a honed physique of an athlete.

E-FORCE[®]



■ Triple Guard

Three protection structures shut out the chips.
1. Upsized fringer blows off the chips.
2. Inner fringer flicks off the chips out of the discharge port.
3. Inner labyrinth seal blocks the chips.



■ Quick Changing

Speedy attachment exchange.



■ Interlock

Provides safe operation and
prevents tool troubles.
Designed to prevent mismatching
the attachment to the motor.

■ Brushless Motor

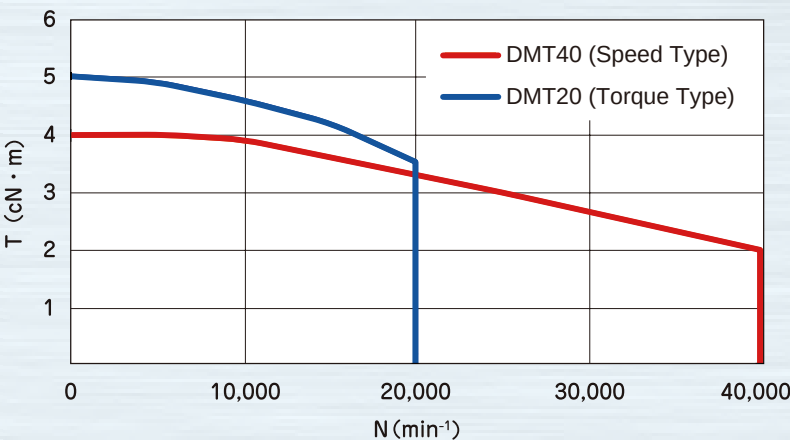
All models are equipped with
ceramic bearings and
a silent low-vibration brushless motor.

■ Multi-function Switch

Intuitive handling with a handy remote
controller.
An integrated controller for ON/OFF
and Speed UP/DOWN at hand.



E-FORCE[®] Motor Torque Characteristics



■ Standard Set

(40k Motor Type)

	Order Code	Model
Bundled Collet Size (φ 2.34mm)	9001	DSS402301
Bundled Collet Size (φ 3.0mm)	9004	DSS403001

Standard Equipment

Attachment (Rotary) • 40k Motor • Controller

Standard Accessories : Power Cord (100V) • A Choice of Collet φ 2.34mm or φ 3.0mm
Spanner • Handpiece Holder

Max Rotation Speed 40,000min⁻¹ Operational Rotation Speed 1,000~40,000min⁻¹

※1. 120V and 230V are also available.



■ Standard Set

(20k Motor Type)

	Order Code	Model
Bundled Collet Size (φ 2.34mm)	9027	DSS202301
Bundled Collet Size (φ 3.0mm)	9030	DSS203001

Standard Equipment

Attachment (Rotary) • 20k Motor • Controller

Standard Accessories : Power Cord (100V) • A Choice of Collet φ 2.34mm or φ 3.0mm
Spanner • Handpiece Holder

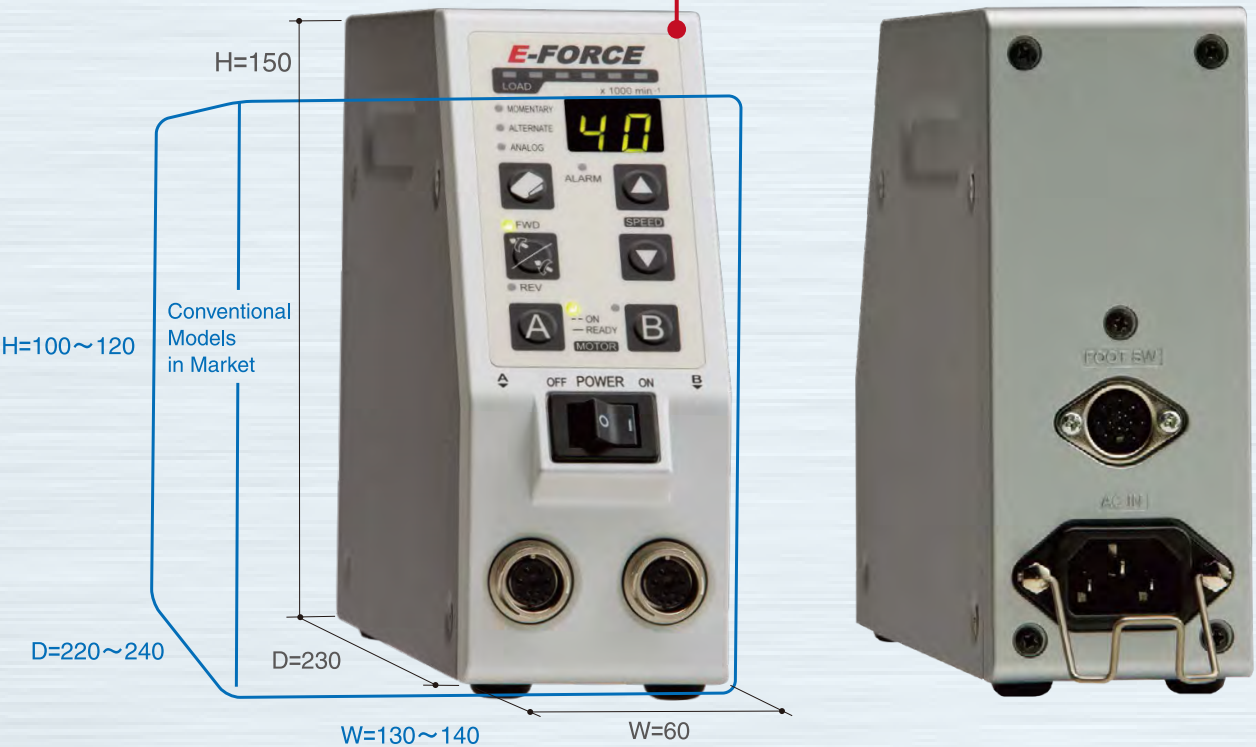
Max Rotation Speed 20,000min⁻¹ Operational Rotation Speed 1,000~20,000min⁻¹

※2. 120V and 230V are also available.



■ Space Saving Slim Controller

1/2 floor area of conventional models.
It means more space for work.



■ Attachment 9 types of attachment are available to suite your creativity.

Rotary 1,000~40,000 min⁻¹



Order Code 1026 Model DRT32

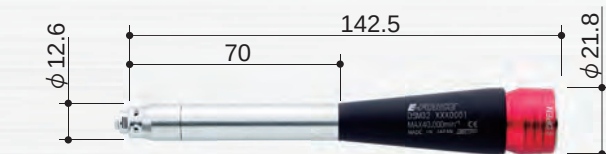
Slim body supports a subtle touch for fine finish.
The Triple Guard structure utilizing the centrifugal force to eliminate the chips delivers a superior dust-proof performance.

Recommended Works Boring, Chamfering, Deburring, Cutting

Specification Max Speed : 40,000min⁻¹ Continuous Operating Speed : 40,000min⁻¹
Collet Size : ϕ 1.0~ ϕ 3.175
Weight : 120g

Standard Accessory Spanner

Rotary Slim Type 1,000~40,000 min⁻¹



Order Code 1372 Model DSM32

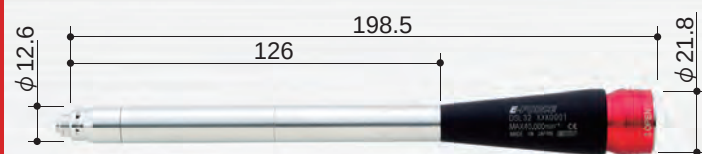
Ultimately slim, long straight nose.
The Triple Guard structure utilizing the centrifugal force to eliminate the chips delivers a superior dust-proof performance.
Spanner driven chucking system provides sure tool holding.

Recommended Works Chamfering, Deburring, Polishing (Deep Hole, Tight Hole, Narrow Section)

Specification Max Speed : 40,000min⁻¹ Continuous Operating Speed : 40,000min⁻¹
Collet Size : ϕ 1.0~ ϕ 3.175
Weight : 114g

Standard Accessory Spanner, Collet ϕ 3.0

Rotary Slim Long Type 1,000~40,000 min⁻¹



Order Code 1383 Model DSL32

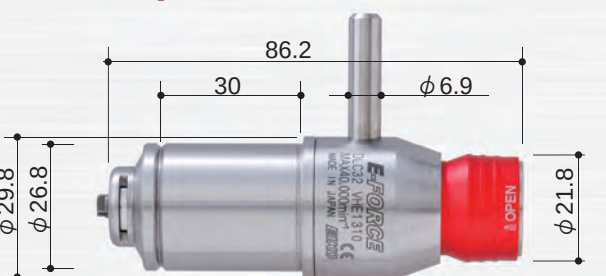
The longest in class. An extended version of the Rotary Slim Type (DSM32).
The Triple Guard structure utilizing the centrifugal force to eliminate the chips delivers a superior dust-proof performance.
Spanner driven chucking system provides sure tool holding.

Recommended Works Chamfering, Deburring, Polishing (Deep Hole, Tight Hole, Narrow Section)

Specification Max Speed : 40,000min⁻¹ Continuous Operating Speed : 40,000min⁻¹
Collet Size : ϕ 1.0~ ϕ 3.175
Weight : 152g

Standard Accessory Spanner, Collet ϕ 3.0

Lever Clamp 1,000~40,000 min⁻¹



Order Code 1070 Model DLC32

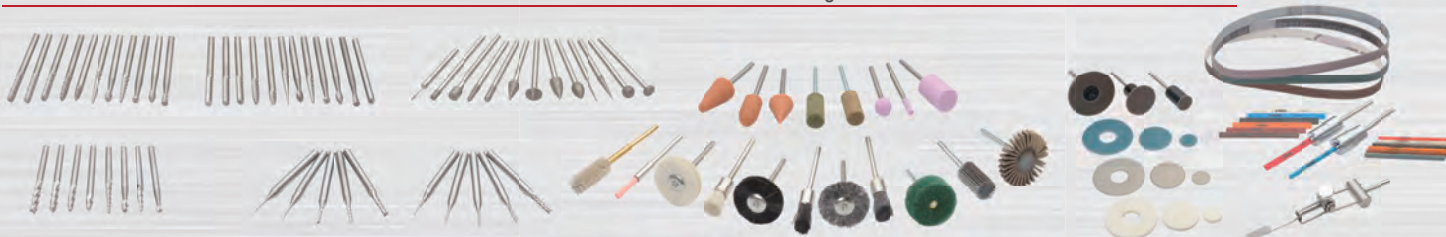
Self-cooling model.
Applicable to automated machines and mountable to robots.
The Triple Guard structure utilizing the centrifugal force to eliminate the chips delivers a superior dust-proof performance.

Recommended Works Boring, Chamfering, Deburring, Cutting

Specification Max Speed : 40,000min⁻¹ Continuous Operating Speed : 40,000min⁻¹
Collet Size : ϕ 1.0~ ϕ 3.175
Weight : 278g

Standard Accessory Spanner, Collet ϕ 3.0

■ Tools • Exclusive Tools Wide range of tools and exclusive tools for each attachment are available to E-FORCE. Please see our tool catalogue for more details.



Rotary ϕ 6 Type 1,000~20,000 min⁻¹



Order Code 1027 Model DRT64

Tools up to ϕ 6.35 are available.
The Triple Guard structure utilizing the centrifugal force to eliminate the chips delivers a superior dust-proof performance.
Spanner driven chucking system provides sure tool holding.

Recommended Works Boring, Chamfering, Deburring, Cutting

Specification Max Speed : 20,000min⁻¹ Continuous Operating Speed : 20,000min⁻¹
Collet Size : ϕ 2.34~ ϕ 6.35
Weight : 141g

Standard Accessory Spanner, Collet ϕ 6.0

Angle 90 1,000~20,000 min⁻¹



Order Code 1037 Model DAG90

Larger diameter gears are adopted to improve durability remarkably from conventional models. Right angle head.

Recommended Works Chamfering, Deburring, Polishing, Cutting

Specification Max Speed : 20,000min⁻¹ Continuous Operating Speed : 20,000min⁻¹
Collet Size : ϕ 2.34, ϕ 3.0, ϕ 3.175
Weight : 92g

Standard Accessory 2 Spanners, Collet ϕ 3.0
Rubber Pads for Disk ϕ 10x1 ϕ 20x1 ϕ 30x1
Disks ϕ 11#180x5 ϕ 11#600x5 ϕ 21#180x5 ϕ 21#600x5 ϕ 31#180x5 ϕ 31#600x5

Angle 60 1,000~20,000 min⁻¹



Order Code 1038 Model DAG60

Larger diameter gears are adopted to improve durability remarkably from conventional models. 60 degree angled head.

Recommended Works Chamfering, Deburring, Polishing, Cutting

Specification Max Speed : 20,000min⁻¹ Continuous Operating Speed : 20,000min⁻¹
Collet Size : ϕ 2.34, ϕ 3.0, ϕ 3.175
Weight : 92g

Standard Accessory 2 Spanners, Collet ϕ 3.0
Rubber Pads for Disk ϕ 10x1 ϕ 20x1 ϕ 30x1
Disks ϕ 11#180x5 ϕ 11#600x5 ϕ 21#180x5 ϕ 21#600x5 ϕ 31#180x5 ϕ 31#600x5

Belt Sander Belt Speed 0~approx. 1,000 m/min



Order Code 1048 Model DBT30

Adjustable belt angle and switchable working side.

Recommended Works Chamfering, Deburring

Specification Max Speed : 20,000min⁻¹ Continuous Operating Speed : 20,000min⁻¹
Belt Speed : 0~approx. 1,000m/min
Tool Width : 4/6/8 mm (Belt Perimeter 300mm)
Weight : 227g

Standard Accessory 2 Hexagon Wrenches
Belts 4mm wide #120x2 #240x2 #400x2
6mm wide #120x2 #240x2 #400x2
8mm wide #120x2 #240x2 #400x2

Mini Recipro Reciprocating Stroke 0~approx. 12,000 times/min



Order Code 1059 Model DRP10

Easy-to-grip pen shape body.
High speed polishing.

Recommended Works Polishing minute parts, ribs, and slits.

Specification Max Speed : 20,000min⁻¹ Continuous Operating Speed : 20,000min⁻¹
Stroke : 1.0mm Reciprocating Stroke 0~approx.12,000 times/min
Max Tool Size : ϕ 3.2mm
Weight : 142g

Standard Accessory Hexagon Wrench, Spring Holder, Ceramic Fiber Grindstone Holder, Electroplated Diamond File 1.8x5x55 #150
Ceramic Fiber Grindstone 1x6x50 #1200

■ Motor High Speed Type or High Torque Type with more attachments to match.

40k Motor

Max Speed 40,000 min⁻¹ Operational Speed 1,000~40,000min⁻¹



Order Code 1014 Model DMT40

Specification Max Output : 84W
Max Torque : 4.0cN·m
Weight : 96g (except Motor Cord)
Standard Accessory : Motor Cord (1.5m)

20k Motor

Max Speed 20,000 min⁻¹ Operational Speed 1,000~20,000min⁻¹



Order Code 1015 Model DMT20

Specification Max Output : 73W
Max Torque : 5.0cN·m
Weight : 142g (except Motor Cord)
Standard Accessory : Motor Cord (1.5m)

■ Clamp Joint Use between a motor and an attachment.

1/4 Reducer

Output 250~5,000 min⁻¹



Order Code 1394 Model DGR04

Connecting attachment to motor with Quick Change Function.
Multiplies the torque by 4 times while reducing the rotation speed to 1/4.
Fits 20k motor (DMT20).

Recommended Works Boring, Chamfering, Deburring, Polishing, Cutting with high torque required.

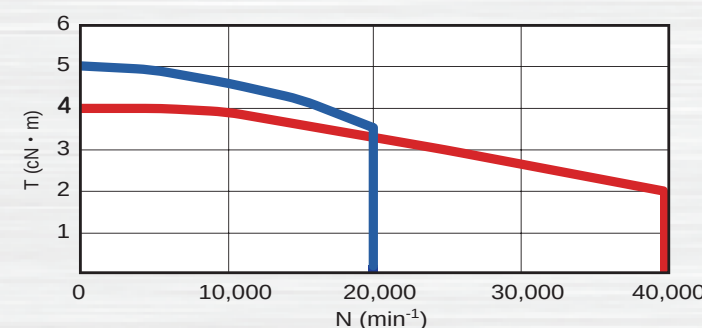
Specification Input Max Speed : 1,000~20,000min⁻¹ Continuous Operating Speed : 20,000min⁻¹
Output Max Speed : 250~5,000min⁻¹ Continuous Operating Speed : 5,000min⁻¹
Weight : 149g

Compatibility of Motor•Attachment•Clamp Joint

	Rotary (DRT32)	Rotary Slim (DSM32)	Rotary Slim Long (DSL32)	Lever Clamp (DLC32)	Rotary ϕ 6 (DRT64)	Angle 90 (DAG90)	Angle 60 (DAG60)	Belt Sander (DBT30)	Mini Recipro (DRP10)	1/4 Reducer (DGR04)
40k Motor (DMT40)	○	○	○	○						
20k Motor (DMT20)	○	○	○	○	○	○	○	○	○	○

E-FORCE[®] Motor Torque Characteristics

— DMT40/DIH40 (Speed Type)
— DMT20/DIH20 (Torque Type)



■ Controller

- LOAD Meter**
Operating load condition is indicated with LED.
■ Continuous Load Range (Continuously operable level. Recommended to use within this range.)
■ Intermittent Load Range (Operable level with intermission.)
■ Overloaded Condition (Too much load.)
 - Rotation Speed Indicator**
Indicates the rotation speed and the error codes.
 - Rotation Speed Set Button (▲▼)**
Increases the rotation speed by pressing ▲ button, and decreases with ▼ button.
 - Motor A Button**
Turns ON/OFF Motor A.
 - Motor B Button**
Turns ON/OFF Motor B.
 - Rotation Direction Switch Button**
Switches the direction of rotation.
 - Foot Switch Mode Select Button**
Available when the foot switch (optional) is connected.
•Momentary Mode : Tool rotates at the set speed during pressing the foot switch.
•Alternate Mode : Tool starts rotating at the set speed by pressing once, and stops by pressing again.
•Analog Mode : Rotation speed changes according to the amount of pressing of the foot switch.
 - Power Switch**
 - Motor A Connector**
 - Motor B Connector**
 - Foot Switch Connector**
 - Power Cord Connector**
- Order Code 1001 Model DCR01**
- Specification Input Voltage : AC100V (50/60Hz)
Dimensions : 60 (W) x230 (D) x150 (H)
Weight : 1.95kg (excluding Power Cord)
Standard Accessory : Motor Cord (100V, 2m)
※1. 120V and 230V are also available.



[Controller Back Panel]

■ Optional Accessories

■ Foot Switch

Order Code 1163 Model DFS01

■ Motor Extension Cord (3m)

Order Code 1154 Model DLC01

■ Power Cord

100V
Order Code 1131 Model DAC10
120V
Order Code 1132 Model DAC12
230V
Order Code 1133 Model DAC23



Standard Set

Product	Attachment	Bundled Collet Size	Power Cord	Order Code	Model
Standard Set (40k Motor Type)	Rotary	φ 2.34mm	100V	9001	DSS402301
			120V	9002	DSS402302
			230V	9003	DSS402303
		φ 3.0mm	100V	9004	DSS403001
			120V	9005	DSS403002
			230V	9006	DSS403003
Standard Set (20k Motor Type)	Rotary	φ 2.34mm	100V	9027	DSS202301
			120V	9028	DSS202302
			230V	9029	DSS202303
		φ 3.0mm	100V	9030	DSS203001
			120V	9031	DSS203002
			230V	9032	DSS203003
Standard Set (Rotary Engine 40)		φ 2.34mm	100V	9901	DSSR42301
			120V	9902	DSSR42302
			230V	9903	DSSR42303
		φ 3.0mm	100V	9904	DSSR43001
			120V	9905	DSSR43002
			230V	9906	DSSR43003
Standard Set (Rotary Engine 20)		φ 2.34mm	100V	9933	DSSR22301
			120V	9934	DSSR22302
			230V	9935	DSSR22303
		φ 3.0mm	100V	9936	DSSR23001
			120V	9937	DSSR23002
			230V	9938	DSSR23003
Standard Set With Foot Switch (Rotary Engine 40)		φ 2.34mm	100V	9917	DSFR42301
			120V	9918	DSFR42302
			230V	9919	DSFR42303
		φ 3.0mm	100V	9920	DSFR43001
			120V	9921	DSFR43002
			230V	9922	DSFR43003
Standard Set With Foot Switch (Rotary Engine 20)		φ 2.34mm	100V	9949	DSFR22301
			120V	9950	DSFR22302
			230V	9951	DSFR22303
		φ 3.0mm	100V	9952	DSFR23001
			120V	9953	DSFR23002
			230V	9954	DSFR23003

Item List

Item Name	Order Code	Model
Controller	100V	DCR01
	120V	DCR02
	230V	DCR03
Motor	40k Motor	DMT40
	20k Motor	DMT20
Attachment	Rotary	1026 DRT32
	Angle 90	1037 DAG90
	Angle 60	1038 DAG60
	Belt Sander	1048 DBT30
	Mini Recipro	1059 DRP10
	Lever Clamp	1070 DLC32
	Rotary Slim Type	1372 DSM32
	Rotary Slim Long Type	1383 DSL32
	Rotary φ 6 Type	1027 DRT64
	Clamp Joint	1394 DGR04
	Rotary Engine	
Accessory	Rotary Engine 40 φ 2.34	1361 DIH40-2
	Rotary Engine 40 φ 3.0	1362 DIH40-3
	Rotary Engine 20 φ 2.34	1363 DIH20-2
	Rotary Engine 20 φ 3.0	1364 DIH20-3
	Power Cord (100V)	1131 DAC10
	Power Cord (120V)	1132 DAC12
	Power Cord (230V)	1133 DAC23
	Foot Switch	1163 DFS01
	Motor Extension Cord (3m)	1154 DLC01

Compatibility Table of Collet

Attachment	Item Name	Order Code	Model
DRT32 (Rotary) DLC32 (Lever Clamp)	Collet (φ 1.0mm)	1081	DCC10
	Collet (φ 1.2mm)	1082	DCC12
	Collet (φ 1.4mm)	1083	DCC14
	Collet (φ 1.6mm)	1084	DCC16
	Collet (φ 1.8mm)	1085	DCC18
	Collet (φ 2.0mm)	1086	DCC20
	Collet (φ 2.34mm)	1087	DCC23
	Collet (φ 3.0mm)	1088	DCC30
	Collet (φ 3.175mm)	1089	DCC32
	Collet (φ 2.34mm)	1100	DCS23
DAG90 (Angle 90) DAG60 (Angle 60)	Collet (φ 3.0mm)	1101	DCS30
	Collet (φ 3.175mm)	1102	DCS32
DRT64 (Rotary φ 6 Type)	Collet (φ 2.34mm)	1114	DCB23
	Collet (φ 3.0mm)	1115	DCB30
	Collet (φ 3.175mm)	1116	DCB32
	Collet (φ 4.0mm)	1117	DCB40
	Collet (φ 5.0mm)	1118	DCB50
	Collet (φ 6.0mm)	1119	DCB60
	Collet (φ 6.35mm)	1120	DCB64

CARPA Industry Support

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