

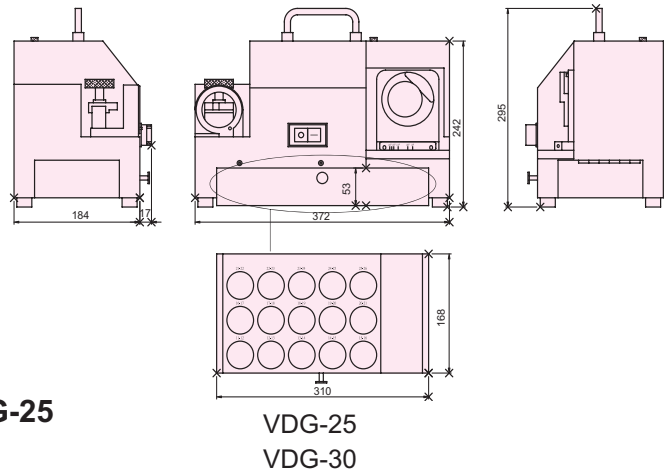
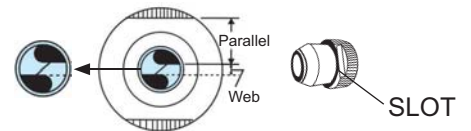
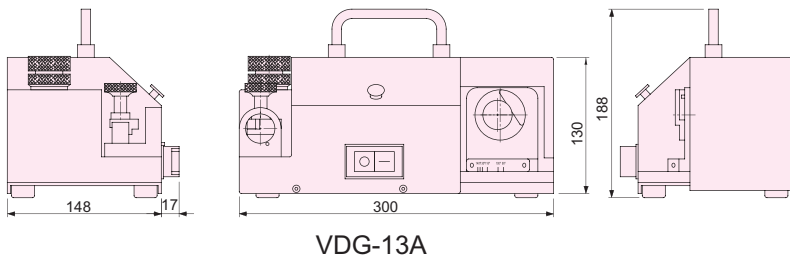
Precision Drill Grinder



PATENT



NEW



For Drill Re-sharpening
Precision, Efficient, , Fast & Easy Operation,
Short Processing Time, Wide Grinding Range,
Reasonable Price

1. High Efficiency, High Quality Grinding Lip, Good Grinding Results
2. Quality Assurance: $\pm 0.05\text{mm}$
3. Considerable Design, Invisible Tool Box, Delicate & Friendly Use
4. Peerless, Super Function, Durable, Strong Motor Can Work For 2 Hours.
5. Normal Drill, Center Drill, Carbide Nc Spot Drill Could Be Re-sharpen. Suit For The Drill Process On Steel, Casting Iron, Brass And Aluminum.
6. Grind Wheel Can Be Used For 1500 Times.



STRIGHT SHANK & TAPER SHANK



Precision Drill Grinder



PATENT

90°~140°
WIDE RANGE

Extension Holder



VDG-13A



Short Drill



VDG-25



Stand
Example

VTC-20
3405-221
PAGE C136



Holding Example

※Suit for factory & home application.

ORDER NO.	VDG-13A	VDG-25	VDG-30
DRILL DIAMETER	Ø2.0~Ø13.0	Ø12~Ø25 (Ø8~Ø30)	Ø8~Ø30
CENTER POINT ANGLE	90°~140°	90°~140°	90°~140°
POWER SUPPLY	AC-110 or 220 1PH	AC-110 or 220 1PH	AC-110 or 220 1PH
R.P.M. OF MOTOR	4500 R.P.M.	4500 R.P.M.	4500 P.R.M.
GRIND WHEEL	CBN #200	CBN #200	CBN #200
NET WEIGHT	AC-110: 9.8kgs AC-220: 9.8kgs	AC-110: 23.8kgs AC-220: 23.8kgs	AC-110 : 26.5 kgs AC-220 : 26.5 kgs
OVERALL DIMENSIONS	W282xD185xH110 mm	W380xD240xH200 mm	W380xD240xH200 mm
STANDARD ACCESSORIES	ALLOY STEEL COLLET ER-20 COLLETx11PCS Ø3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, EACH ONE COLLET HOLDER X 1 UNIT 4mm HEXAGON WRENCH X 1 PCS FOR CHANGE WHEEL Ø3mm EXTENSION HOLDER X 1 PCS	ALLOY STEEL COLLET ER-40 COLLETx14PCS Ø12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, EACH ONE COLLET HOLDER X 1 UNIT 5mm HEXAGON WRENCH X 1 PCS FOR CHANGE WHEEL	ALLOY STEEL COLLET ER-40 COLLETx23PCS Ø8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, EACH ONE COLLET HOLDER X 1 UNIT 5mm HEXAGON WRENCH X 1 PCS FOR CHANGE WHEEL
OPTIONAL COLLET SPECIAL SIZE	Ø2,2.5,3.5, 4.5, 5.5, 6.5, 7.5, 8.5, 9.5, 10.5, 11.5, 12.5	Ø8, 9, 10, 11,26, 27, 28, 29, 30 Ø11.5,12.5,13.5,14.5,15.5,16.5,17.5,18.5, 19.5,20.5,21.5,22.5,23.5,24.5,25.5,26.5	Ø11.5,12.5,13.5,14.5,15.5,16.5, 17.5,18.5,19.5,20.5,21.5,22.5, 23.5,24.5,25.5,26.5
CODE NO.	8001-012	8001-014	8001-015

GRIND WHEEL

ORDER NO.	FOR DRILL MATERIAL	WHEEL	CODE NO.
VDG-13B	HSS	CBN200	8001-500
VDG-13D	CARBIDE	SDC200	8001-501
VDG-25B	HSS	CBN200	8001-504
VDG-25D	CARBIDE	SDC200	8001-505

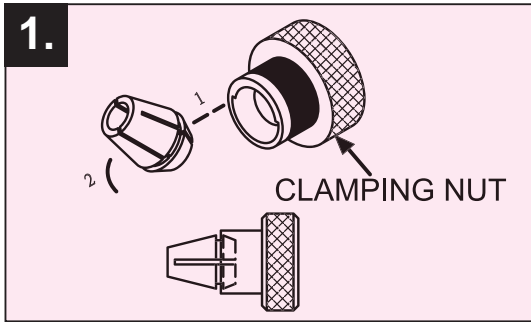
- VDG-25 allows up to size Ø8~Ø30mm, please choose optional collet Ø8, 9, 10, 11, 26, 27, 28, 29, 30mm.
- VDG-30 grinder wheel is same as VDG-25B & VDG-25D. by back champing type
- VDG-13A, ER-20 collet ø2, 2.5, 3, 3.5, 4, 4.5, 5, 5.5, 6 mm
- VDG-25, ER-40 collet ø8, 9 mm



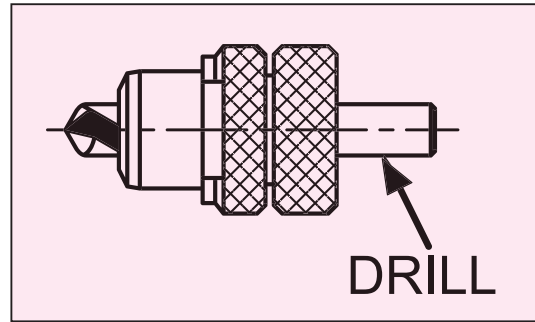
STRAIGHT SHANK & TAPER SHANK

SPECIAL USAGE MACHINE

A. HOW TO USE HOLDER UNIT FOR COLLET & DRILL

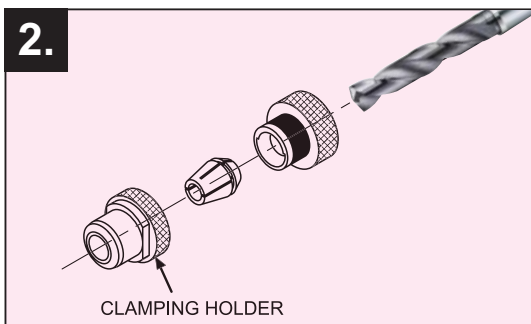


Please confirm the drill size and pick up proper collet. Assemble collet into clamping nut by 45 degree. (Before insert the drill into the clamping holder.)



HOLDER UNIT

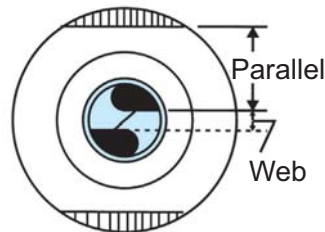
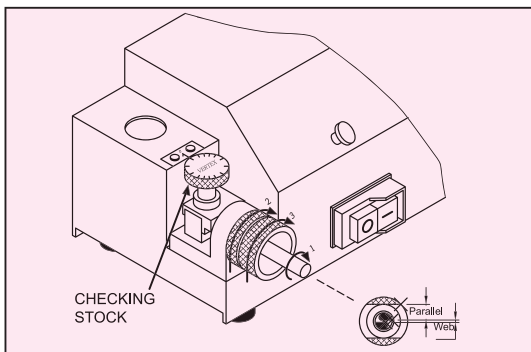
When drill length is less than 10mm, you need to add 1 scale on indicator.
Ex. when D=9mm, turn indicator to 10mm





Insert the drill, lock the clamping holder but not tightened, allow the drill can still move.



B. HOW TO SET THE HOLDER UNIT AT THE CHECKING STOCK

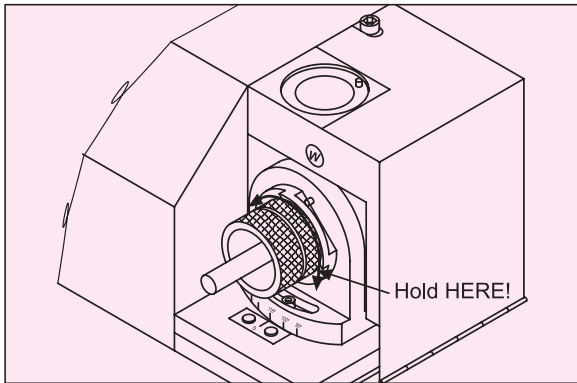


1. Find the drill diameter. (If the drill D. is 8.2mm) Set the indicator of scale No. as same as drill's diameter. (Please turn the indicator plate and set it between 8mm-8.5mm).
2. Insert the holder unit into the checking stock, The slot of clamping unit  will match into the PIN of checking stock. (Make sure the drill is touching the checking stock.)
3. Turn the holder unit and drill to clockwise (Make sure the drill is touching the checking stock). And tighten the holder unit by turning the clamping nut .

CAUTION (1.) Make sure the web blade of drill is parallel to the slot of clamping holder.
(2.) If a drill's length is less than 1/2, please add 1-2 scale onto the indicator plate.
(3.) If a drill's web blade is vary from normal drill, please check the parallel to slot of the clamping holder first, and then set the indicator.



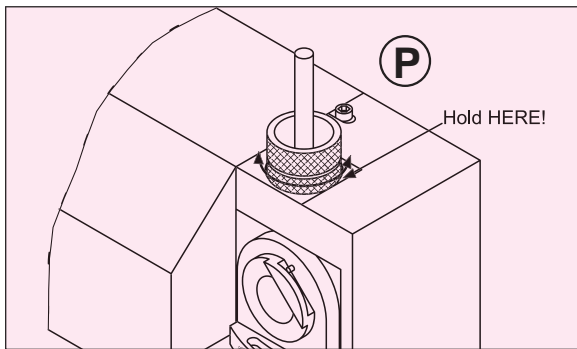
C. HOW TO GRIND THE WEB OF DRILL



1. Turn on the power.
2. Insert the holder unit into the (W) grind stock. The slot will match with the PIN. Let the drill reach diamond wheel smoothly. (Hold the clamping holder when turning.)
3. Grinding the drill by moving right and left. Until the grinding noise is gone.
4. Take out the holder unit. And turn 180°, Insert again like step 3. complete the web sharpening process.

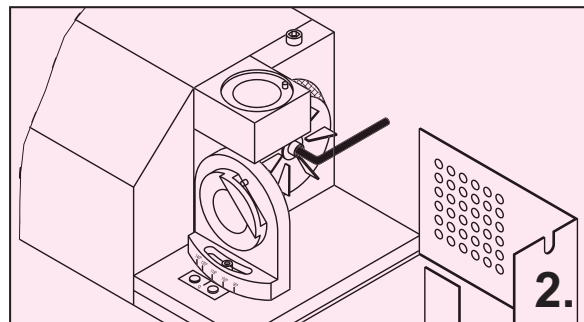
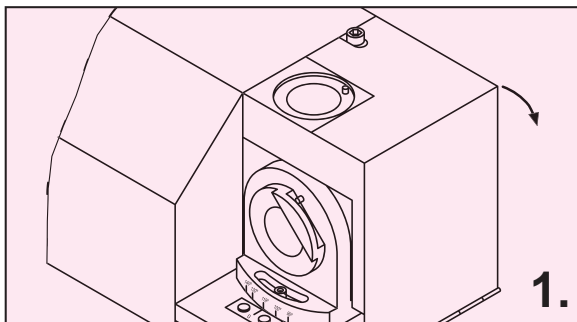
CAUTION (1.) Hold and turn the clamping holder to avoid mis-grinding. Hold drill or clamping nut when turning may result in un-even surface.
 (2.) To grind different angle shall adjust angle indicator before insert.

D. HOW TO GRIND CENTER POINT OF DRILL



1. Insert the holder unit into (P) grind stock slot and match with the PIN.
2. Turn the holder unit right and left slowly until the grind noise is off.
3. Take out the holder unit and turn oppsite 180° and repeat step 2.

E. HOW TO CHANGE THE DIAMOND WHEEL



1. Loosen the screw on the wheel cover.
2. Open the cover and loosen the screw which use to lock the grind wheel.
3. Change the wheel , make sure two screws are in place and fixed.

CAUTION Do not plug in the power before the wheel cover is closed.





Precision End Mill Grinder



PATENT



NEW

FAST EASY

NO.2 FOR SECOND RADIAL ANGLE 20°

ADJUST SCREW FOR DULL OR SHARP

CHECKING STOCK FOR CHECK END MILL PARALLEL WITH HOLDER UNIT

NO.3 FOR CUTTING ANGLE 6° GRIND ALL SURFACE OF END MILL 6° TAIL

GRINDING STOCK MADE OF CAST IRON

NO.1 FOR END MILL FLAT SLOT ANGLE 30°

ORIGINAL POINT

VEG-13A

VEG-25A

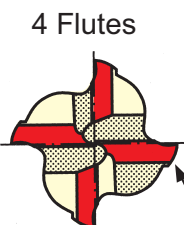
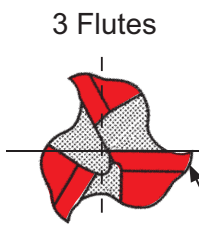
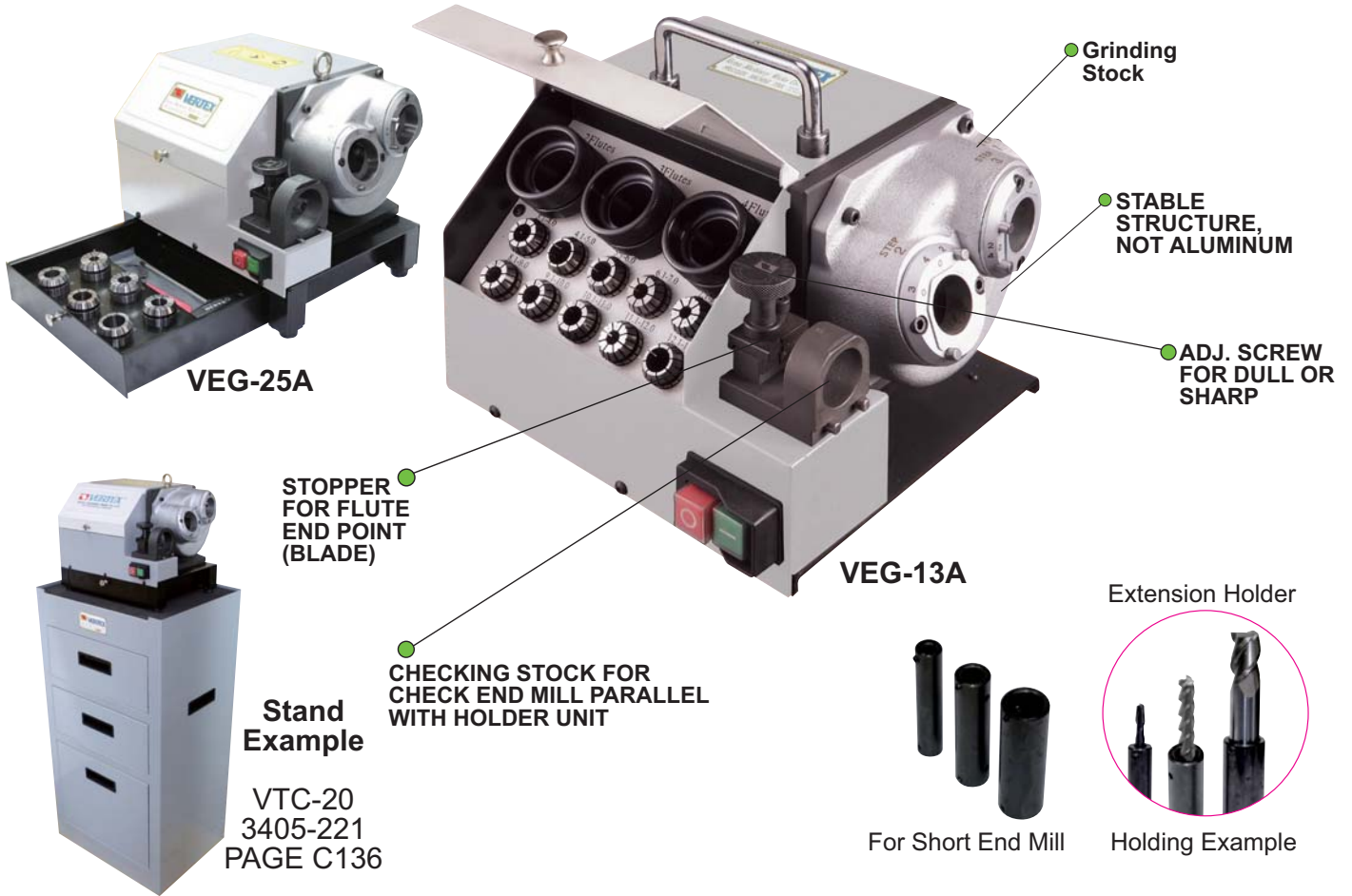
For End Mill Re-sharpening, 2, 3, 4 Number Flute Precision Efficient, Easy operation, Short processing time, Grinding Diameter from 4-13 mm. Reasonable Price, Fast, Rigid, Simplified Step

1. High Efficiency, High Quality Grinding Slip, Good Grinding Results
2. Quality Assurance: ±0.02mm, Strong, Reliable, Grinding Stock Won't Bend.
3. Easy Operation, For Urgent Need, Low cost, Save Money

ORDER NO.	VEG-13A	VEG-25A
CAPACITY END MILL DIA.	ø4~ø13mm	ø12~ø25mm
MOTOR	300W	500W
SPEED	4800rpm	4300rpm
POWER	AC-110 or 220 1PH 50/60HZ	AC-110 or 220 1PH 50/60HZ
AXIAL-ANGLE	NO.1 END MILL FLAT SLOT ANGLE 30° NO.2 SECOND RADIAL ANGLE 20° NO.3 CUTTING ANGLE 6°	NO.1 END MILL FLAT SLOT ANGLE 30° NO.2 SECOND RADIAL ANGLE 20° NO.3 CUTTING ANGLE 6°
STANDARD ACCESSORIES	ALLOY STEEL COLLET ER-20 COLLET: Ø4, 5, 6, 7, 8, 9, 10, 11, 12, 13mm 10 pcs/set WRENCH:1PC SDC 300 x1 For ø4~ø6mm SDC 270 x1 For ø7~ø13mm Square Type For 4 Flutes End Mill x 1 Set Hex. Type For 3 Flutes End Mill x 1 Set Parallel Type For 2 Flutes End Mill x 1 Set Ø4-Ø5, Ø6-Ø8, Ø10-Ø12mm EXTENSION HOLDER FOR EACH ONE.	ALLOY STEEL COLLET ER-40 COLLET: Ø12, 16, 18, 20, 22, 25mm 6 pcs/set WRENCH:1PC SDC 150 x1 For ø12~ø25mm Square Type For 4 Flutes End Mill x 1 Set Hex. Type For 3 Flutes End Mill x 1 Set Parallel Type For 2 Flutes End Mill x 1 Set
PACKING SIZE	320x260x300mm	365x293x345mm
WEIGHT (kg)	17	31
CODE NO.	8001-510A	8001-520A

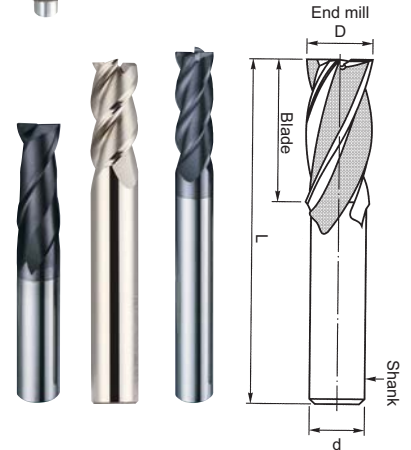
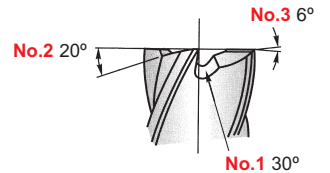


Precision End Mill Grinder



LONG BLADE FOR ORIGINAL POINT CHECKING

LONG BLADE FOR ORIGINAL POINT CHECKING



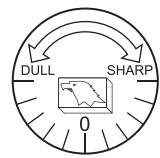
Optional Accessories

※ Each holder unit has mark 2, 3 and 4 on it.

ORDER NO.	Grind Wheel	FOR END MILL MATERIAL	Weight (kg)	CODE NO.
VEG-13BS	CBN 300 x1 For $\phi 4\sim\phi 6\text{mm}$	H.S.S.	0.35	8001-511A
VEG-13BL	CBN 270 x1 For $\phi 7\sim\phi 13\text{mm}$	H.S.S.	0.35	8001-512A
VEG-13DS	SDC 300 x1 For $\phi 4\sim\phi 6\text{mm}$	CARBIDE	0.35	8001-514
VEG-13DL	SDC 270 x1 For $\phi 7\sim\phi 13\text{mm}$	CARBIDE	0.35	8001-515
VEG-25BSV	CBN 150 x1 For $\phi 12\sim\phi 25\text{mm}$	H.S.S.		8001-516V
VEG-25DSV	SDC 150 x1 For $\phi 12\sim\phi 25\text{mm}$	CARBIDE		8001-517V

NEW

FAST EASY

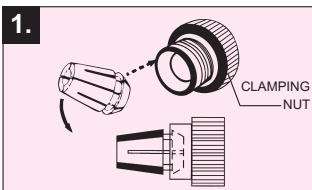


You can adjust the sharpness on the round plate, move toward dull and sharp mark.

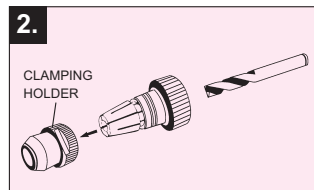


VEG-25A

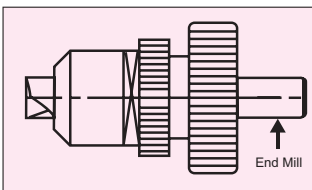
A. HOW TO INSTALL HOLDER UNIT FOR END MILL



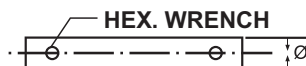
Please confirm the end mill size and pick up proper collet. Assemble collet into clamping nut by 45 degree. (Before insert the end mill into the clamping holder.)



Insert the end mill, lock the clamping holder but not tightened, allow the end mill can still move. Insert the end mill, let the end mill blade length 35mm out, (don't tightened the clamping Holder)



Extension: To attach on the end mill allow you to rotate it when it's length is too short for setting.



Stopper for flute end point (blade)

PLEASE CHOOSE CORRECT WHEEL FOR GRINDING.
SDC300 MARK 4-6 mm
SDC270 MARK 7-13mm



B. HOW TO SET THE HOLDER UNIT AT THE CHECKING STOCK

(For length and angle setting)



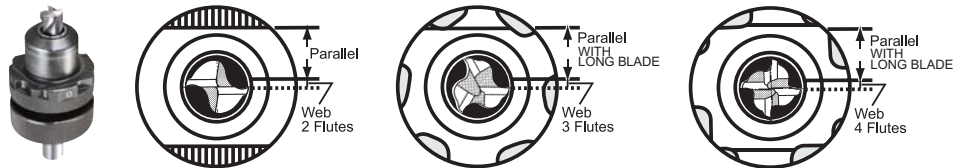
Original Point

- 1) Please make sure the blade of the end mill set in the position like we show below. Hold the end mill but not tight up. Always use 0 to check!
 ※ You can adjust the sharpeness on the round plate, move toward dull and sharp mark.
- 2) Aim at 0 mark and insert holder unit into checking stock. Turn clockwise a little bit, make sure the blade is touching the stock, lock the holder now.
 ※ When take out the holder unit, please turn the round plate counter clockwise so you can take out smoothly.

CAUTION: 1 Make sure the web blade of drill is parallel to the slot of clamping holder.

2 When the end mill blade is broken, the first grind job please turn to the dull side. And grind 2 times in order to get perfect result.

3. While setting, please align the end mill long blade to be parallelized with holder unit slot.



C. HOW TO GRIND NO1. END MILL FLUTE SLOT ANGLE 30°



- 1) Aim the original point at hole on No1. to grind end mill Flute Slot Angle 30°
- 2) Insert the holder and touch against the No1. surface, until the grind noise is off.

※ Always begin with 0.

※ While grinding, please turn holder unit right and left a little, against pins.

3) (2 Flutes) Please insert and take out turn 180° and repeat step 1~2;

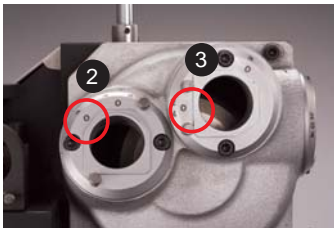
(3 Flutes) Please insert and take out turn 120° and repeat step 1~2, two times;

(4 Flutes) Please insert and take out turn 90° and repeat step 1~2, three times.

※ While grinding, holder unit shall touch / match most of the grinding stock and move smoothly.

※ Each holder will match each hole's pin, smart design.

D. HOW TO GRIND END MILL'S NO2. SECOND RIDIAL ANGLE 20° BACK ANGLE



- 1) Insert the Holder unit and aim the original point, touch the No2's surface until the grinding noise is off.

※ Always begin with 0.

※ While grinding, please turn holder unit right and left a little, against pins.

2) (2 Flutes) Please insert and take out turn 180° and repeat step 1~2;

(3 Flutes) Please insert and take out turn 120° and repeat step 1~2, two times;

(4 Flutes) Please insert and take out turn 90° and repeat step 1~2, three times.

E. HOW TO GRIND END MILL NO3. CUTTING ANGLE 6°



- 1) Place holder unit and aim at hole NO.3, touch the NO.3's surface until the grinding noise is off.

※ Always begin with 0.

※ While grinding, please turn holder unit right and left a little, against pins.

2) (2 Flutes) Please insert and take out turn 180° and repeat step 1~2;

(3 Flutes) Please insert and take out turn 120° and repeat step 1~2, two times;

(4 Flutes) Please insert and take out turn 90° and repeat step 1~2, three times.

F. HOW TO CHANGE GRIND WHEEL



1 Use 4mm Hex. Wrench, take out 4 screws of grinding stock, remove the grinding stock.

2 Take out the locking screw of the grind wheel and remove the grind wheel.

3 Replace the old one with a new grind wheel.

4 Lock back the screw, install the grinding stock and lock 3 screws.

※ When grind $\varnothing 4\sim 6\text{mm}$ please use correct diamond wheel.
 $\varnothing 7\sim 13\text{mm}$

CAUTION: When open, please **un-plug** the power core.



Rods Cutting-Off Unit



MACHINE FOR END MILL AND DRILL CUTTING

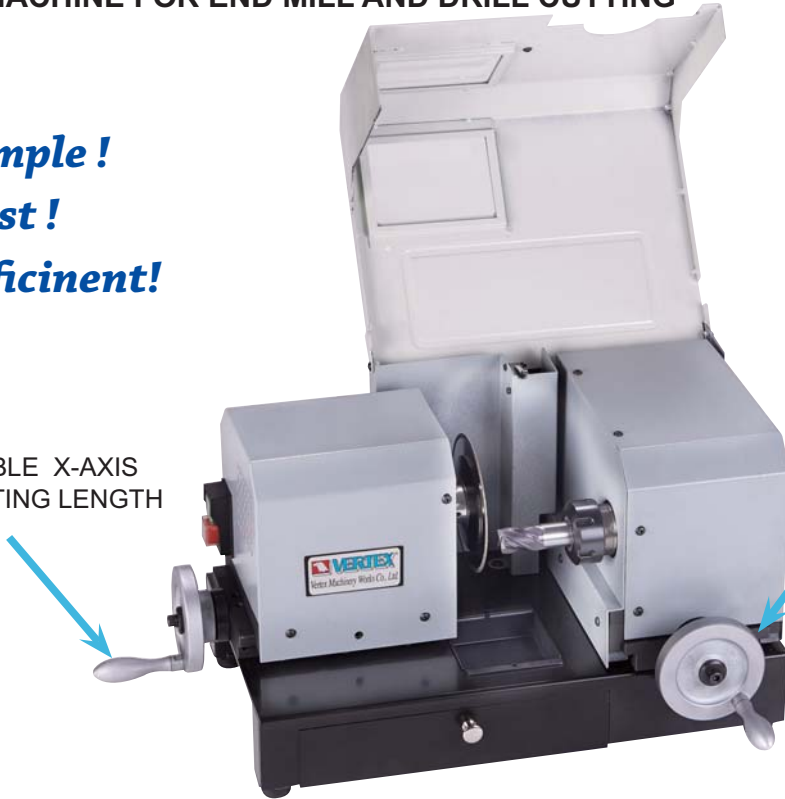
NEW

Simple!
Fast!
Efficient!

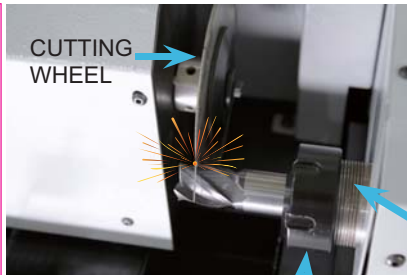
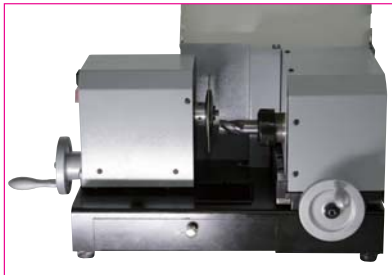
Safely & Efficiently Cutting
Speed Reference: For
Carbide End Mill
10ø → 58 sec
16ø → 103 sec
For H.S.S. End Mill
10ø → 63 sec
16ø → 113 sec

ADJUSTABLE Y-AXIS FOR
CUTTING OFF DIAMETER

ADJUSTABLE X-AXIS
FOR CUTTING LENGTH



FOR END MILL OR RODS CUT



CUTTING
WHEEL

TURNING
SPINDLE

ER-32
CLAMPING HOLDER
11 PCS/SET COLLET
CUTTING CAPACITY Ø2~Ø20
THROUGH HOLE Ø11

THROUGH
HOLE Ø11



1. Turning cutting wheel.
2. Turning workholding spindle.
3. After power is ON cutting wheel & workholding spindle are both turning.
4. Save time & reduce the 50% of the process, wheel & workpiece are turning at the same time while power is on.
5. Reduce the heating while cutting prevent material deformation.
6. Suit for Pin & Rod cutting.
7. Cutting Capacity: Ø2 to Ø20 diameter inside Ø11 mm trough hole. Max. cutting off length : 45 mm.
8. For end mill, drill, enjector pin, rods, round bar, etc.
9. Suit for material: CARBIDE, H.S.S., STEEL, BRASS, ALUMINIUM, IROM, etc. Please choose suitable wheel.
10. Turn off power to take out cuted-off workpiece after work is finished.

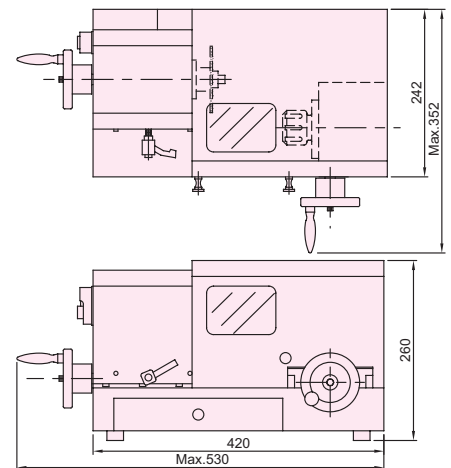
Standard accessories:

1. ER-32 collet × 11 pcs (Ø4, 5, 6, 8, 10, 12, 13, 15, 16, 18, 20 mm)
2. ER-32 wrench × 1 pc
3. SDC # 100 diamond wheel Ø110 × Ød16 × 1.36t × 1 pcs
4. Cutting-Off wheel E60WA Ø105 × Ød16 × 1t × 5 pcs
5. 4 mm HEX. Wrench × 1 pcs
6. ER-32 Collet Ø2, 3, 7, 9, 11, 14, 17, 19 mm are optional.

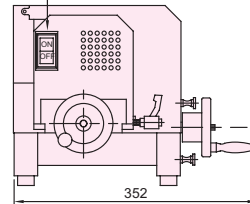
ORDER NO.	VOLTAGE	PACKING CARTON L × W × H	WEIGHT (KGS)	CODE NO.
VEC-20	AC110V, 220V / 50 HZ / 60HZ	530 x 352 x 260 mm	45.5	8001-540



THROUGH HOLE Ø11



SWITCH



Accessories for VEC-20



Flange x2/set



For H.S.S. Cutting Wheel x 5 Pcs



For Carbide Diamond cutting wheel x1 Pc

STANDARD ACCESSORIES:

ORDER NO.	SIZE	FOR END MILL MATERIAL	WEIGHT (KG)	CODE NO.
VEC-20-C	E60WA Ø105xØd16x1t 4" x 1 mm x 5 pcs/set	H.S.S.	0.10	8001-550
VEC-20-D	SDC Ø110 x Ød16 x 1.36t x 1 pcs	CARBIDE	0.08	8001-551
VEC-20-FLANGE	Ø76 x 5 2 pcs/set		0.24	8001-552

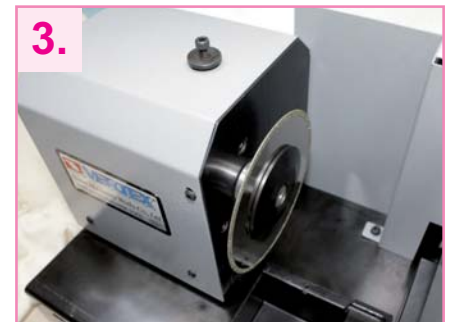
HOW TO CHANGE CUTTING WHEEL.



1. ● Open the case cover, USE the HEX.WRENCH to loose the flange's screw (Wear glove when operating)



2. ● Take out the 2nd flange clean the area with wind blow.



3. ● Take out the 1st screw.
 - Take out the 1st flange.
 - Remove the cutting wheel.



4. ● Put 2nd flange back. The Side ← go in first.
 - Put on new cutting wheel.
 - Put 1st flange back. The side ← go in first
 - Lock back the screw, close the case cover.
 - Turn on the power to test.
 - Ready to USE.



5. ● Drawer for storage.
 - Accessories for VEC-20

※ LOCK THE CUTTING WHEEL GENTLY TO PREVENT BREAKAGE



Precision End Mill Grinder

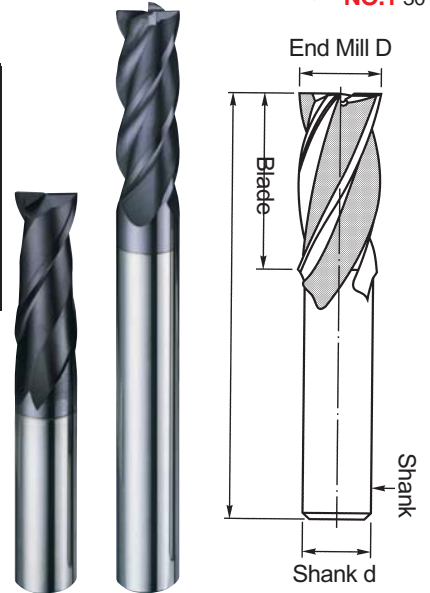
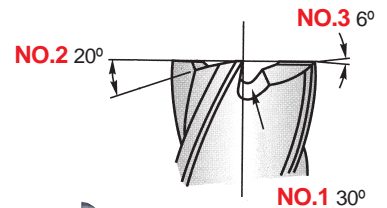


ORDER NO. VEG-13 CODE NO. 8001-510



**For End Mill Re-sharpening , 2 , 3 , 4 Number Flute
Precision, Efficient, Easy operation, Reasonable price,
Short processing time, Grinding Diameter from 4-13 mm.
Reasonable Price, Fast**

1. High Efficiency, High Quality Grinding Slip, Good Grinding Results
2. Quality Assurance: $\pm 0.02\text{mm}$
3. Easy Operation, For Urgent Need, Low cost, Save Money



ORDER NO.	CAPACITY END Mill DIA.	MOTOR	SPEED	POWER	AXIAL-ANGLE	CODE NO.
VEG-13	Ø4-Ø13mm	450W	6000rpm	AC-110V or 220V 1PH 50/60HZ	NO.1 END MILL FLAT SLOT ANGLE 30° NO.2 SECOND RADIAL ANGLE 20° NO.3 CUTTING ANGLE 6°	8001-510

WEIGHT 17kgs **PACKING SIZE** 320x260x300mm

Accessories

Diamond Grinding Wheel: SDC 300 x 1 For Ø4~Ø6mm
SDC 300 x 1 For Ø8~Ø13mm

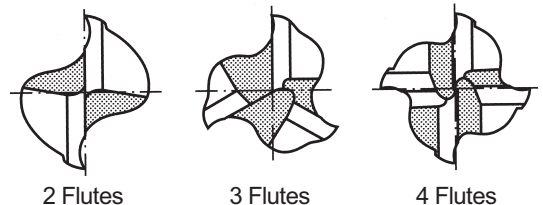
Grind Holder Unit: Square Type For 2 & 4 Flutes End Mill x1 Set
Hex. Type For 3 Flutes End Mill x1 Set

ER-20 Collet: Ø4, Ø5, Ø6, Ø7, Ø8, Ø9, Ø10, Ø11, Ø12, Ø13 mm, 10pcs/set

Wrench: 1pc

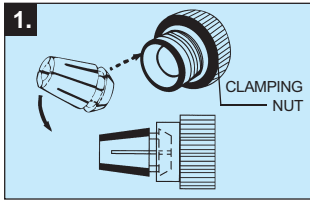
Optional Accessories

ORDER NO.	Grind Wheel	CODE NO.
VEG-13D	CBN 300 x 1 For Ø4~Ø6mm	8001-511
VEG-13E	CBN 300 x 1 For Ø8~Ø13mm	8001-512
VEG-13T	SBC 200 x For 2 Flute Ø4~Ø13mm	8001-513

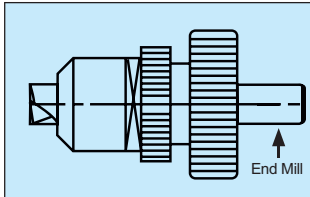




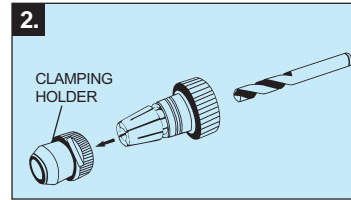
A. HOW TO INSTALL HOLDER UNIT FOR END MILL



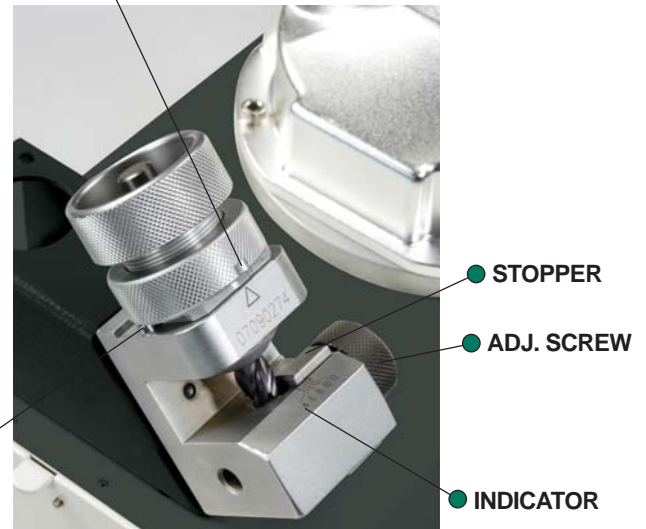
Please confirm the drill size and pick up proper collet. Assemble collet into clamping nut by 45 degree. (Before insert the drill into the clamping holder.)



HOLDER UNIT



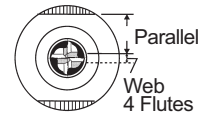
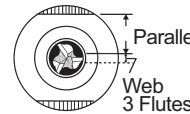
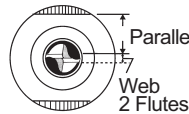
Insert the drill, lock the clamping holder but not tightened, allow the drill can still move. Insert the end mill, lock the clamping Holder, let the end mill blade length 35mm out, (don't tightened the clamping Holder)



B. HOW TO SET THE HOLDER UNIT AT THE CHECKING STOCK (For length and Angle Setting)



- 1 Turn the Adjust screw to the Indicator for the end mill size.
- 2 Place Clamping unit and aim the original point at the checking stock and insert stopper until the end mill is touching the bottom.
- 3 Turn the Holder unit clockwise, and touch against stopper.
- 4 Tighten the holder unit and take out all unit. And make sure the Holder unit tightened.



C. HOW TO GRIND NO1. END MILL FLUTE SLOT ANGLE 30°



- 1 Aim the original point at hole on No.1 to grind end mill Flute Slot Angle 30°
- 2 Insert the holder and touch against the No.1 surface, until the grind noise is off.
- 3 Take out turn 180° and continue to grind next Flute, repeat these step by turning 90° and insert.

D. HOW TO GRIND END MILL'S NO2. SECOND RIDIAL ANGLE 20° BACK ANGLE



- 1 Insert the Holder unit and aim the original point at screw, touch the No2's surface until the grinding noise is off.
- 2 Take out and insert, repeat these steps if you want to grind 4 Flutes, you must complete 4 times grind process.
- 3 Movable Stock, 2T is for 2 Flute, 3T is for 3 Flute, 4T is for 4 Flute, please loosen 2 screws when grind different Flutes (choice from 2,3,4 Flutes). When grinding, please note:
2 Flutes, turn all the way down to the end of the screw track until the 2T mark is match with screw.
3 Flutes, turn until the 3T mark is match with screw

E. HOW TO GRIND END MILL NO3. CUTTING ANGLE 6°



- 1 Place the Holder unit aim the original point at screw and insert into No3.
- 2 Touch against the No3. surface until the grinding noise is off
- 3 Now move the Holder unit right and left.
- 4 Repeat these steps to complete 4 Flutes grind process.

F. HOW TO CHANGE GRIND WHEEL



- 1 Use 4mm Hex. Wrench, take out 3 screws of grinding stock, remove the grinding stock.
- 2 Take out the locking grind wheel and remove the grind wheel.
- 3 Replace the old one with a new grind wheel.
- 4 Lock back the screw, install the grinding stock and lock 3 screws.



HOW TO CHOOSE VISE FOR YOUR MACHINE

MACHINE HORSE POWER	SUITABLE VISE MODEL NO.
1HP	VK-4, VK-5, VQS-3, VQS-4, VA-4, VW-3 VW-4, VMP-4, VMC-4
2HP	VK-5, VK-6, VQS-5, VMC-4, VA-4, VA-5 VW-4, VMP-5, VWT-5, VNC-100H, VQC-100, VQC-100H
3HP	VK-6, VMP-5, VHT-4, VA-5, VA-6, VJ-400, VJ-500, VH-4, VH-5, VWT-4B, VNC-100H, VNC-125H, VQC-100, VQC-125, VQC-100H, VQC-125H
5HP	VK-8, VA-6, VA-8, VJ-500, VJ-600, VMC-5P VMC-6P, VW-5, VH-5, VH-6, VHO-6, VHT-6, VWT-6B, VD-675, VQC-125, VQC-160, VNC-125H, VNC-160H, VMP-7A
7HP	VH-8, VH-8L, VHO-8, VMC-7P, VMC-8P, VMC-8PL, VNC-160LH, VMP-8A, VMP-12, VQC-160LH, VQC-160, VQC-160L, VQC- 200L, VQC-200LH
10HP	VQC-160, VQC-160L, VQC-200L, VQC-160LH, VQC-200LH, VMC-8P, VMC-8PL, VSM-20, VH-12, VQCV-160H

