

SMG ISO Series

OD-Mounted Automatic Pipe Beveling Machine

Operation Manual



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PART 1 EQUIPMENT INTRODUCTION

SMG OD-Mounted Automatic Pipe Beveling Machine

ISO series of automatic pipe beveling machine is a new designed OD-Mounted electric type beveling machine, equipped Germany METABO motor (BE1100). With following features make it widely used in the beveling working of small size pipe and work of pipe in narrow space, especially for pipe panel.

METABO motor: low noise, long life, stable performance and perfect speed adjustable function, with CE certificate.

Power supply: 220-240V 1PH 50/60HZ

FEATURES:

- Aluminum body, light weight, easy for operator
- Compact structure suitable for narrow space working
- Easy operation: Tool feed, tool back automatically
- OD-Mounted: easy set-up, operation
- Cold working, no spark, won't make the material affected.
- Perfect working precision, no burrs
- Well-adapted, you can make the speed adjust depend on the working conditions.

SPECIFICATION:

Model	Working Range	Wall thickness	Clamp Size
	OD mm	mm	OD mm
SMG ISO-63C	28-63	≤12	28,32,42,45,57,60,63
SMG ISO-76C	42-76		42,45,54,57,60,63,68,76
SMG ISO-89C	63-89		63,68,76,83,89
SMG ISO-114C	76-114		76,83,89,95,102,108,114

Custom-made clamp is available.

PACKAGE:

The machine packaged into a portable aluminum alloy case with all necessary parts, usual tool, beveling tools, operation manual.

PART 2 SAFTY INSTRUCTIONS

We take great pride in manufacturing safe, quality products. Please comply with the following safety rules and instructions before operating the equipment.



Read the following content before working READ

THE OPERATION MANUAL

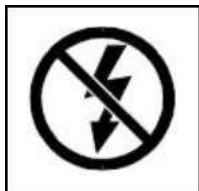
Before installing, you should read the manual, and make sure you understand all setup and operating instructions, it can help you save time and avoid injuring the operator and the machines

INSPECT MACHINE & ACCESSORIES

Before starting the machine, look for loose bolts or nuts, leaking lubricant, and any other physical conditions that may affect operation. Properly maintaining the machine can greatly decrease the chances for injury.

ALWAYS READ SIGNS AND LABLES

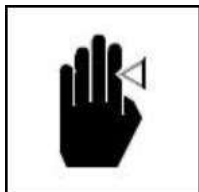
Please read the marks and signs. All the marks and signs should be clear and easy to read, and you should carefully to keep them.



DANGER! ELECTRIC SHOCK

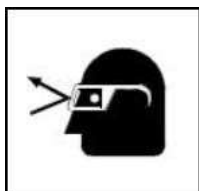
Always disconnect machine to power source before moving or removing motor.

Security of the electricity.



CAUTION INJURE HAND

Keep hands, arms and fingers clear of all moving parts.



WEAR SAFETY GOGGLE

Eye protection required. When using equipment.

Please wear safety goggle. No goggle no work.

PART 3 INSTALLATIONS

GENERAL VIEW

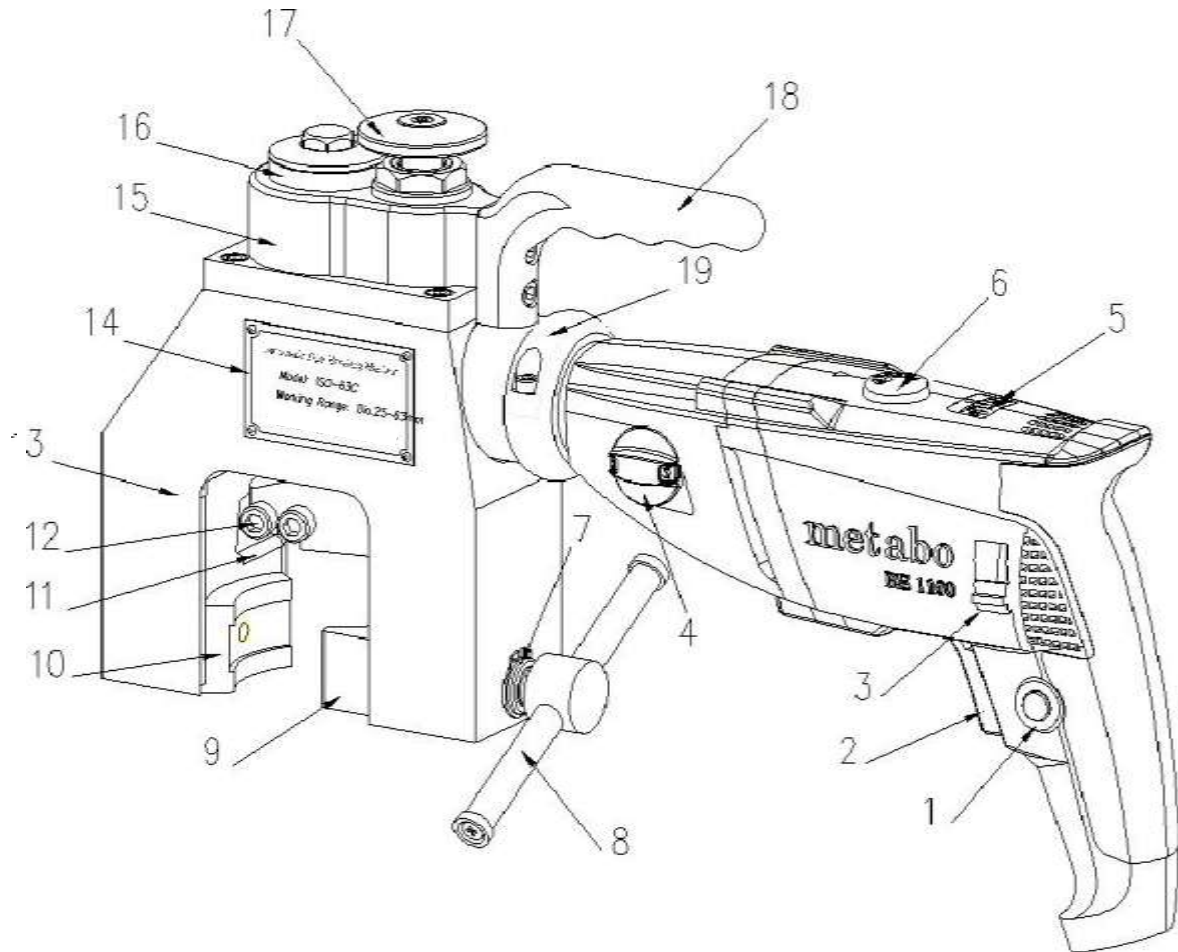


Figure A: General View

No.	Description	No.	Description
1	Locking key, METABO motor	11	Beveling tool
2	Switch, METABO motor	12	Tool holder (Cutter disk)
3	Direction selector, locked	13	Body, aluminum
4	Speed changer	14	Nameplate
5	Signal lamp	15	Reduction gearbox
6	Speed governor	16	Cap
7	Clamping screw	17	Tool feed/back wheel
8	Clamping handle	18	Handle, lifting
9	Clamping head	19	Connection couple
10	Clamp pad		

INSTRUCTIONS

1. Locking Key, METABO motor:

After switch on the motor, press the locking key, loose the switch, the motor will non-stop working; Press again, the motor switch off.

2. Direction selector:

For change the rotation direction: clockwise or anticlockwise. Due to the tool feed required clockwise, so the direction selector locked before dispatch to customers. Cannot change the rotation direction.

3. Speed changer:

Mechanical speed change, speed ratio of 3.1. Can only change the speed statically. (Change speed statically means when change the speed grade, switch off the machine) Grade 1: Low speed, high torque output

Grade 2: High speed, low torque output

Usually adopts low grade high speed, means "1-E", "1-F" or "1-G"

When working thin wall pipe, can adopt high grade low speed, means "2-A" or "2-B"

4. Signal lamp:

METABO motor signal device, when using, should pay attention to.

If the yellow light flashing, show that the carbon brush wear almost completely, need to change the new one;

If the yellow light frequent flashing, indicates that the power poor contact;

If the yellow light always be on, show that motor overload, high temperature, motor will overload protection, as shown in figure B.

5. Speed governor:

Electronic speed governor, from A to G, speed from slow to fast, can adjust speed dynamically. (Adjust speed dynamically means can adjust the speed while machine working)

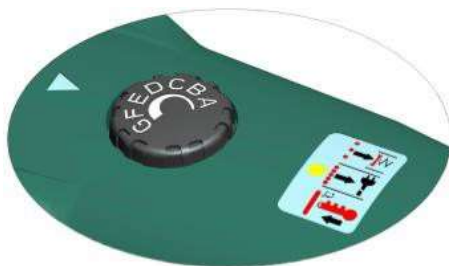


Figure B: Speed governor and Signal Light



Figure C: Speed Changer

6. Clamp pad:

Different size clamp pad for clamp the different pipe size. Each machine has different clamp pad.

See below sheet:

Model	Clamp pad size (OD mm)
SMG ISO-63C	28,32,42,45,54,57,60,63
SMG ISO-76C	42,45,54,57,60,63,68,76
SMG ISO-89C	63,68,76,83,89
SMG ISO-114C	76,83,89,95,102,108,114

Note:

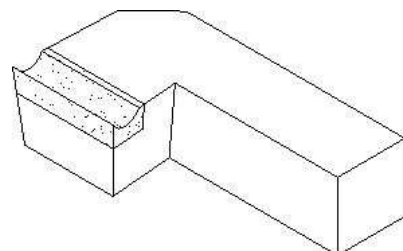
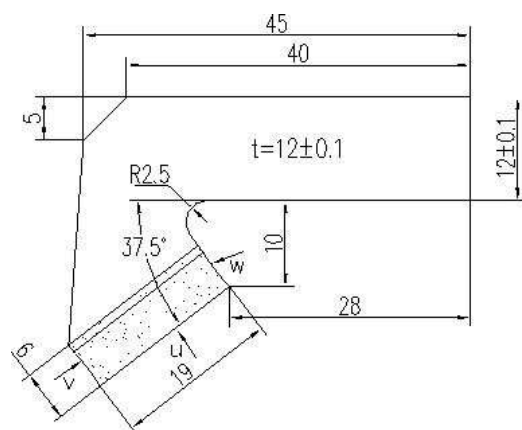
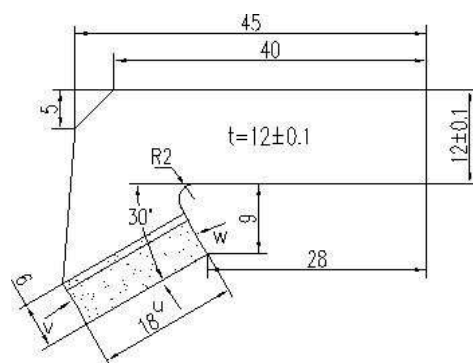
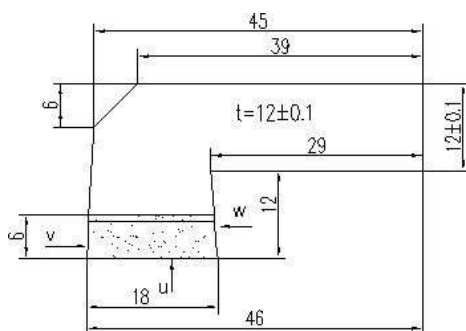
1. The clamp pad size can be customized
2. The clamp pad size must same as pipe size, otherwise the beveling will be eccentric

7. Beveling tool:

Each unit complete with 3 pieces.

(1x facing, 1 x 30 deg. and 1 x 37.5 deg.) Material:

Tungsten Steel



8. Tool feed/back wheel: Controller of tool feed or tool back

Press down it, the tool will feed automatically Pull up it, the tool will back automatically

PART 4 INSTALLATIONS AND OPERATION

OPERATION PROCEDURE

1. Measure the OD of the pipe, and choose the proper clamp pad install on the machine. The working range marked on the clamp pad, it is easy choose.
Caution: The clamp pad size must same as pipe size, otherwise the beveling will be eccentric
2. Put the pipe end into the machine, rotate the clamping handle clockwise, and make the machine mounted on the pipe firmly.
Caution: When beveling the thin wall pipe, use proper force clamping the pipe, avoid pipe out of shape.
3. Install the proper tool bit on the cutter. Make sure the tool bit in **clockwise**. The machine performs cold facing or beveling
Caution: Keep tool tip about 2mm distance away from pipe OD surface. According to the pipe size, positioning the tool bits.
4. Turn on the motor, press down the tool feed wheel, the machine start working
Caution: Cap and tool feed/back wheel rotate anticlockwise means feeding the tool.
 - 4.1 Continuously spray coolant while working, make the iron scrap come out smoothly and prolong the tool life.
 - 4.2 If the tool becomes blunt, edge it or replace with a new one
 - 4.3 While working, avoid iron scrap and coolant goes into motor.
5. After job completed, pull up the tool back wheel, then turn off the motor. Clean the iron scrap; make sure the scrap will not go into machine.
Caution: When heard “kaka”, means the tool back finished, turn off the motor immediately, avoid the clutch wear out.
6. Rotate the clamping handle anticlockwise, take off the machine. Clean and dry it, then storage.
Caution: When move the machine, lift the handle. Make sure do not lift the cable or tool feed/back wheel
When lubricate the machine, open the connection couple, grease it.

PART 5 IMPORTANT NOTES

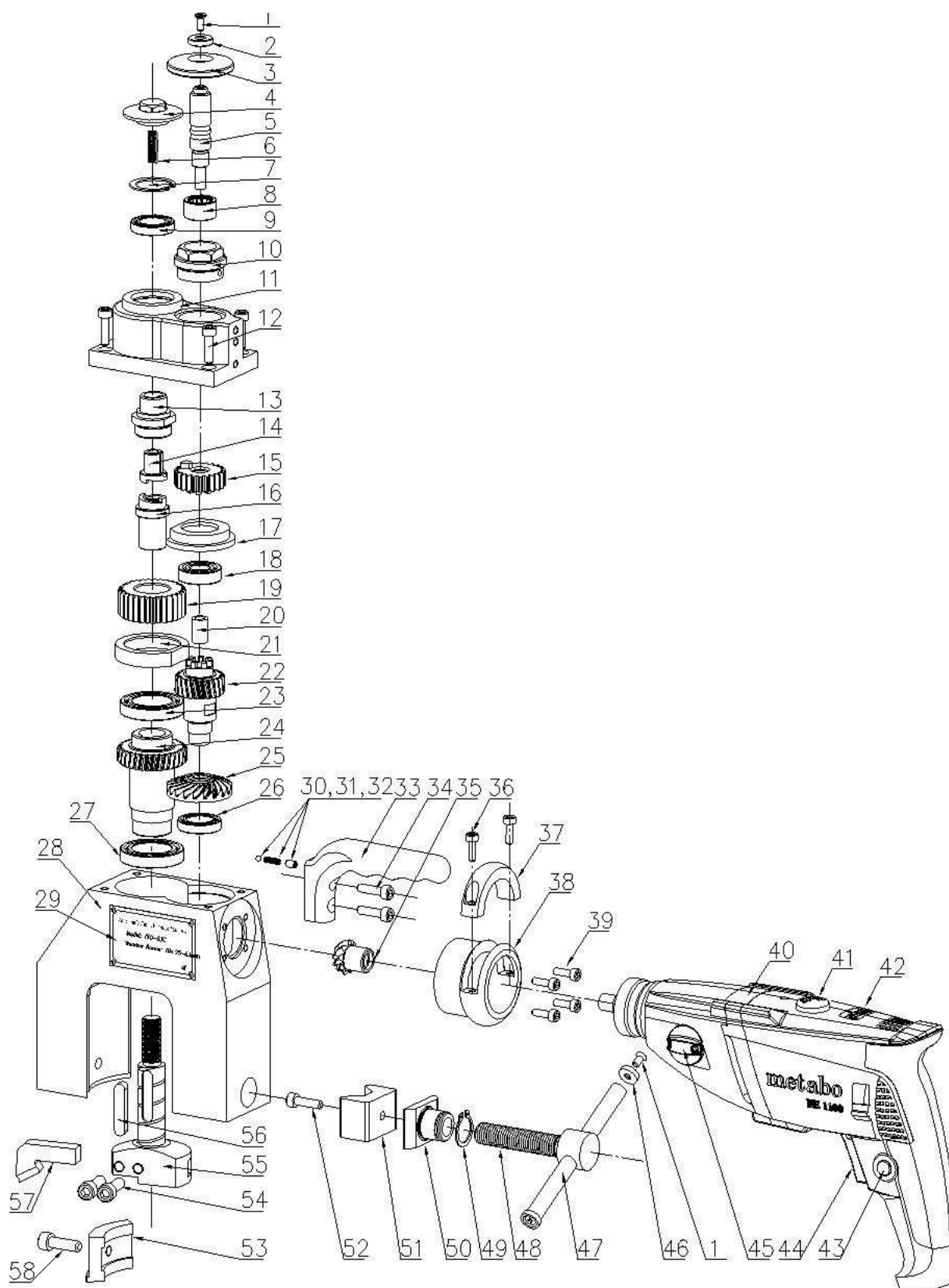
The following point, please pay more attention:

1. While working, spray the coolant continuously and clean the iron scrap.
 - 1.1 Make the iron scrap come out easily.
 - 1.2 Prolong the tool life
 - 1.3 Make sure avoid the coolant goes into electric motor
 - 1.4 Make sure avoid the iron scrap goes into electric motor
2. If the tool blunt, working resistance increased, result in shaft, motor and gears parts damaged. Please edge it or replace with a new one in time. If edge the tool, one tool can be used times
3. Machine stops itself, cannot turn on it forced. If the motor overheating, need self-cooling. Back the tool, re-start working.
4. Make sure the operator always beside the machine while working.
5. Strictly prohibited the machine overload working.
6. Working with high hardness pipe or heavy wall pipe, make sure adopts low grade/high speed working speed. (1-E or 1-F).
7. Pay attention to maintenance of machine, filling grease regularly.
Clean and dry the machine after each job finished.
8. Operator must read this manual completely before operation, the damage caused by wrong operation out of warranty scope.



PART 6 EXPLODED VIEWS AND PARTS LIST

ISO-63C Exploded View



Part No.	Description	Qty	Part No.	Description	Qty
63C-01	Cross screw	3	63C-30	Steel ball	1
63C-02	Washer	1	63C-31	Spring	1
63C-03	Tool feed/back wheel	1	63C-32	Screw	1
63C-04	Cap, bearing	1	63C-33	Handle	1
63C-05	Clutch lever	1	63C-34	Bolts	2
63C-06	Spring	1	63C-35	Bevel gear shaft	1
63C-07	Circlip (jump ring)	1	63C-36	Bolts	2
63C-08	Bearing	1	63C-37	Semicircle block	1
63C-09	Deep groove ball bearing	1	63C-38	Motor couple	1
63C-10	Hexagonal cap	1	63C-39	Bolts	4
63C-11	Cover	1	63C-40	Motor, METABO BE1100	1
63C-12	Bolts	4	63C-41	Speed governor	1
63C-13	Cap, backstop	1	63C-42	Signal lamp	1
63C-14	Backstop	1	63C-43	Locking key, switch	1
63C-15	Spur pinion	1	63C-44	Switch, METOBA	1
63C-16	Feed bush	1	63C-45	Speed changer	1
63C-17	Small bush	1	63C-46	Cap	2
63C-18	Deep groove ball bearing	1	63C-47	Clamping handle	1
63C-19	Spur gear	1	63C-48	Clamping screw	1
63C-20	Needle bearing	2	63C-49	Circlip (jump ring)	1
63C-21	Big bush	1	63C-50	Screw bush	1
63C-22	Small helical gear shaft	1	63C-51	Clamping head	1
63C-23	Deep groove ball bearing	1	63C-52	Bolt	2
63C-24	Big helical gear shaft	1	63C-53	Clamp pad	1
63C-25	Spiral bevel gear	1	63C-54	Fix screws, beveling tool	1
63C-26	Angular contact bearing	1	63C-55	Tool holder (Cutter disk)	1
63C-27	Deep groove ball bearing	1	63C-56	Flat key	1
63C-28	Body, aluminum	1	63C-57	Beveling tool	1
63C-29	Name plate	1	63C-58	Bolt	1

PART 7 TROUBLE SHOOTING

Trouble	Possible reason	Remedy
Motor does not work	The cable is not well connected Overload protection not remove	Check the cable to see if it is well installed, Wait to remove the overload protection
Abnormal noise of Electric Motor	The gear of motor wears out or damaged Motor bearing damaged	Replace the parts by professional
Electric motor overheating	High speed working makes overload; Motor fan damaged	Lower the working speed Replace the fan by professional
Electric motor burnt	Iron scrap or coolant goes into; Unsteady power voltage; Tool bit blunt, result in high load;	Replace with new motor rotor or stator Replace complete motor
Reduction gearbox abnormal noise	Gear inside damaged; Bearing inside damaged.	Inspect and replace
Cutter rotate anticlockwise	Direction selector change	Choose the correct direction
Tool cannot feed	Clutch wear out; Clutch spring damaged Tool feed screw wear out	Inspect and replace
Tool back slowly	Clutch spring damaged	Inspect and replace
Tool cannot back	Tool feed exceed the Max travel, make the screw releasing	Take off the tool bit, fix the bottom of tool holder(cutter), pull up the tool feed wheel, choose the slow motor speed, tool will back
Machine working shake while	Clamping not fastened or the clamp pad wrongly choose;	Tighten the clamping handle Change a proper clamp pad
Beveling surface not good	The bevel tool bit is blunt or damaged Speed tool fast	Edge the tool bit or replace with new tool bits Slow down the motor speed
Beveling face eccentric	Wrongly size clamp pad choose	Use the correct clamp pad, same size as pipe OD.

Note:

If a problem not listed in the chart, stop the operation and contact us for additional instruction

