

AB-CBM SERIES OD MOUNTED PIPE CUTTING & BEVELING MACHINE

The cold cutting machine is a portable machining tool featuring a split-frame design and dedicated cutting blades for pipe sectioning.

Machine Functions: Cutting, Beveling, Facing, Counter boring, Shaft OD machining/Grinding

Light Weight

Easy Installation

Fast & Precision Quality Operations

Heavy Thickness Cut

OTHER FEATURES:

- Lower axial and radial clearance, light weight suitable for working at narrow and complicated site
- Can separate to two half, it's easy for the pipe when two end not open.
- The machines do the cutting and beveling simultaneously
- The tool not only can process carbon steel, stainless steel and alloy pipe with U, V welding seam, also can process convex flange welded.

APPLICATION RANGE:

- They are widely used in the fields of petroleum, chemical, natural gas, power supply construction, boiler and nuclear power

DRIVING TYPE:

- Electric-OCE, Pneumatic-OCP, Hydraulic-OCH, Numerical Controller-OCS

SAFETY:

- Eliminates Health Risks: No hazardous gas fumes or sparks are generated during operation.
- Enhanced Safety: Facilitates remote operation, minimizing operator exposure.

EFFICIENCY:

- Streamlined Setup: Enables quick and effortless installation.
- Portability and Maneuverability: Lightweight and portable design for convenient transportation and jobsite use.
- Single-Step Completion: Achieves both cutting and beveling in one efficient pass.
- Superior Cutting Speed: Offers significantly faster cutting compared to gas cutting technology.
- Reduced Jobsite Transitions: Minimizes downtime associated with equipment relocation.



COST-EFFECTIVENESS:

- Low Consumables: Requires minimal replacement parts, reducing operational costs.
- Reduced Maintenance Requirements: Streamlined maintenance procedures for optimal performance.
- Optimized Manpower Needs: Efficient operation minimizes required personnel.
- Sustainable Tooling: Utilizes re-grindable cutting tools, maximizing lifespan and minimizing waste.

QUALITY:

- Precision Cutting: Delivers accurate and consistent cuts every time.
- Controlled Beveling: Enables precise bevel angles as specified by drawings.

PIPE CUTTING & BEVELING MACHINE

EM ELECTRIC

OD-Mounted Electric Series:

- Power Supply: 220-240V 1PH 50-60HZ
- Motor Power: 1.5-2KW

Electric (OCE):

- Motor Power: 1800W / 2000W
- Working Voltage: 220-240V
- Working Frequency: 50-60Hz
- Working Current: 8-10A



PM PNEUMATIC

- Working Pressure: 0.8-1.0 mpa
- Working Air Consumption: 1000-2000 l/min
- Single/Double Motor Drive Available

HM HYDRAULIC

- Working Power of Hydraulic Station: 5.5kW, 7.5kW, 11kW
- Working Voltage: 380V 3 Phase 5 Wire (Other Voltages can be Customized)
- Working Frequency: 50Hz
- Rated Pressure: 10MPa
- Rated Flow: 50-45 l/min (Stepless Speed Regulation)
- With 50 Meters Remote Control, PLC Control



SM (CNC) NUMERICAL CONTROL (SERVO)

- Servo Motor Power: 2.3kW-4.0kW (Customizable Non-Standard)
- Working Voltage: 220V / 380V
- Working Frequency: 50-60Hz
- Equipped with Remote 50 Meter Remote Start Stop

PIPE CUTTING & BEVELING MACHINE

MACHINE USAGE APPLICATION

FABRICATION YARDS & SHOPS:

- **Precise Pipe Length Cutting:** Achieve accurate cuts to exact specifications, eliminating material waste and ensuring proper pipe fitting during assembly.
- **Streamlined Joining Preparation:** Prepare pipe ends for welding, flanging, or other joining methods by creating smooth, clean surfaces for optimal joint integrity.

HAZARDOUS AREAS:

- **Safe Cutting of Hazardous Materials:** Cut and bevel pipes containing flammable or toxic materials (crude oil, petrol, diesel, gas, chemicals) without generating sparks, minimizing the risk of explosions or fires. This ensures a safer work environment for personnel.
- **Spark-Free Beveling:** Create precise bevels on pipe ends for welding, even in environments with strict spark control requirements.

VERSATILITY:

- **Broad Material Compatibility:** Cut and bevel a wide range of steel pipe materials used in various applications. This eliminates the need for specialized cutting equipment for different pipe types.

ADDITIONAL CAPABILITIES:

- **Internal Machining:** Perform internal machining of pipe ends to achieve specific angles required for joining or other processes. This eliminates the need for separate machining equipment and streamlines the overall workflow.

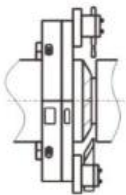
HIGH CAPACITY:

- **Handles Thick Pipes:** The machine can handle pipes with wall thicknesses up to 110 mm using standard accessories. This eliminates the need for additional equipment or modifications for thicker pipes encountered in demanding applications.

PLANT SHUTDOWNS & PROJECT WORK:

- **High Wall Thickness Capability:** Effectively cut and bevel pipes with thick walls, commonly encountered during plant shutdowns and large-scale projects. This eliminates the need for slower, less efficient cutting methods like oxy-fuel cutting.
- **Reduced Downtime:** The machine's portability and quick setup minimize downtime associated with equipment mobilization and preparation, allowing for faster completion of cutting tasks on large projects.

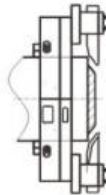
PROCESSING DRAWING



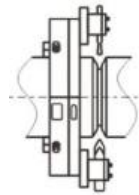
A - Cutting & Beveling (RH)



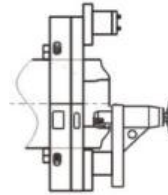
B - Cutting & Beveling (LH)



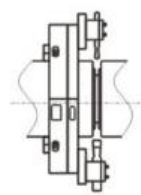
C - 37.5 & 10 Degree Compound Beveling



D - Double V Beveling



E - Counter Boring



F - Cold Cutting

PROCESSING SCHEMATIC

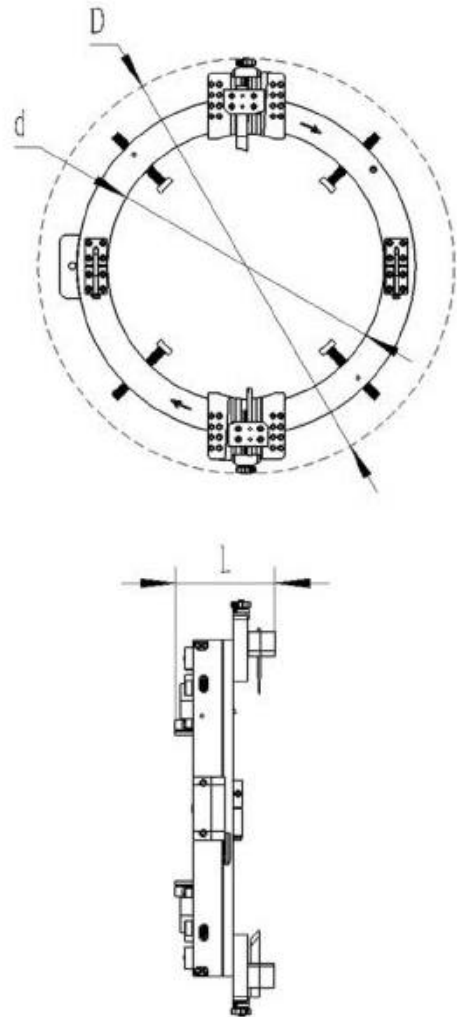
MODEL	SPECIFICATION	CAPACITY (OD)		WALL THICKNESS		ROTATION SPEED
		mm	in	STANDARD	HEAVY DUTY	
AB-CBM-106	89	25-89	1-3	≤30	-	42
AB-CBM-206	168	50-168	2-6	≤30	≤50	20
AB-CBM-308	230	80-230	3-8	≤30	≤50	15
AB-CBM-510	275	125-275	5-10	≤30	≤70	15
AB-CBM-610	305	150-305	6-10	≤30	≤110	13
AB-CBM-612	325	168-325	6-12	≤30	≤110	13
AB-CBM-814	377	219-377	8-14	≤30	≤110	13
AB-CBM-1016	426	273-426	10-16	≤30	≤110	12
AB-CBM-1218	457	300-457	12-18	≤30	≤110	12
AB-CBM-1420	508	355-508	14-20	≤30	≤110	11
AB-CBM-1622	560	400-560	16-22	≤30	≤110	11
AB-CBM-1824	610	457-610	18-24	≤30	≤110	11
AB-CBM-2024	630	480-630	20-24	≤30	≤110	11
AB-CBM-2026	660	508-660	20-26	≤30	≤110	11
AB-CBM-2228	715	560-715	22-28	≤30	≤110	10
AB-CBM-2430	762	610-762	24-30	≤30	≤110	10
AB-CBM-2632	830	660-830	26-32	≤30	≤110	10
AB-CBM-3036	914	762-914	30-36	≤30	≤110	10
AB-CBM-3642	1066	914-1066	36-42	≤30	≤110	9
AB-CBM-4248	1230	1066-1230	42-48	≤30	≤110	9
AB-CBM-4856	1430	1219-1430	48-56	≤30	≤110	8
AB-CBM-5664	1630	1422-1630	56-64	≤30	≤110	7
AB-CBM-6472	1830	1630-1830	64-72	≤30	≤110	6

Note: Non-standard machines are available according to customers requirement.

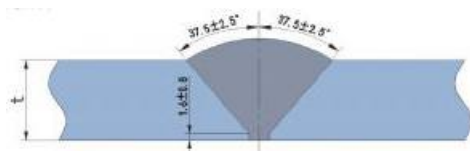
PIPE CUTTING & BEVELING MACHINE

OD MOUNTED PIPE CUTTING AND BEVELING MACHINE

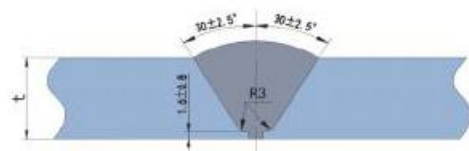
MODEL SIZE	d (mm)	D (mm)	L (mm)
AB-CBM-106	95	300	160
AB-CBM-206	185	480	178
AB-CBM-308	236	535	178
AB-CBM-510	283	584	178
AB-CBM-610	316	608	178
AB-CBM-612	334	636	178
AB-CBM-814	386	690	178
AB-CBM-1016	438	744	180
AB-CBM-1218	466	772	180
AB-CBM-1420	518	828	190
AB-CBM-1622	570	878	190
AB-CBM-1824	620	928	190
AB-CBM-2024	643	965	190
AB-CBM-2026	670	978	190
AB-CBM-2228	720	1050	190
AB-CBM-2430	772	1110	190
AB-CBM-2632	840	1174	192
AB-CBM-3036	928	1260	212
AB-CBM-3642	1078	1513	212
AB-CBM-4248	1248	1584	212
AB-CBM-4856	1438	1784	220



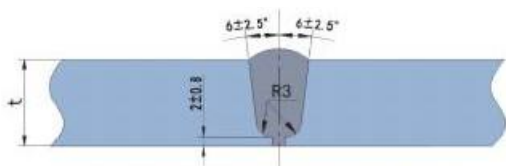
WELDING ANGLE DIAGRAM



37.5 deg. V T Type Beveling with 1.6mm Root



30 deg. U Type Beveling with 1.6mm Root, R= 3mm



6 deg. U Type Beveling with 2mm Root, R= 5mm



Compound Beveling According to ASME B16.[1].25

PIPE CUTTING & BEVELING MACHINE

ACCESSORIES

STANDARD TOOL SLIDE

Applicable processing wall thickness $\leq 30\text{mm}$

Clamshell C/W the standard tool slide as standard supply with standard tool bits, achieve cut/bevel up to 30mm wall thickness in one pass.



HEAVY WALL TOOL SLIDE

Applicable processing wall thickness $\leq 70\text{mm}$

Special for heavy walled pipe, especially for power plant with special tool bits, achieve cut/bevel up to 70mm wall thickness in multi passes.



BRIDGE TOOL SLIDE

Suitable for ultra-thick pipe processing, maximum thickness not exceeding 110mm

Complete with counterbore/I.D beveling tool, I.D beveling angle available for adjust. Special for heavy walled pipe, achieve cut/bevel up to 110mm wall thickness in multi passes also can process flange facing.



TRACKING TOOL SLIDE

Suitable for high-precision processing or deformed pipes with diameters greater than 700mm for foot length compensation

O.D tracking slide compensate for out-of-round pipe travel along the OD makes the bevel face balanced Usually apply on large size diameter pipe.



UNIVERSAL COUNTER BORING TOOL SLIDE

Used for processing the inner wall of pipes

Performs inside beveling and counter boring
Tool Feed: Manually
Max. Travel: 70mm.



TOOL HOLDER FOR PIPE OUTER WALL MACHINING

Used for trimming the outer wall of pipes and removing anti-corrosion layers

Pipe outer wall axial processing tool post to removal of anti-corrosion layer and turning.



PIPE CUTTING & BEVELING MACHINE

SELECTION OF HYDRAULIC STATION

PLC TYPE HYDRAULIC STATION

POWER SUPPLY	7.5kW
WORKING VOLTAGE	380V, 3 PH, 5 Lines
WORKING FREQUENCY	50Hz
RATED WORKING PRESSURE	10Mpa
RATED FLOWING	0-36 l/min
CONTROL SYSTEM	PLC Control
WORKING SPEED	Remote Control
CONTROL PANEL	Electronic Display
OPEN WAY	Manual/Remote Control
OIL LINE LENGTH	6m (Standard)
NET WEIGHT (KG)	239Kg



EXPLOSION-PROOF HYDRAULIC STATION

POWER SUPPLY	7.5kW
WORKING VOLTAGE	380V, 3 PH, 5 Lines
WORKING FREQUENCY	50Hz
EXPLOSION-PROOF GRADE	BT4 / CT4
RATED WORKING PRESSURE	10Mpa
RATED FLOWING	36 l/min
OPEN WAY	Manual / Remote Control
OIL LINE LENGTH	6m (Standard)



DIESEL POWER HYDRAULIC STATION

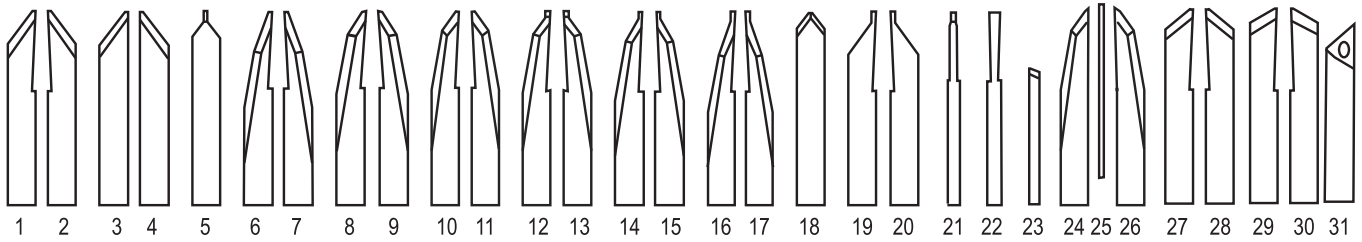
ENGINE POWER	22HP (15KW)
RATED WORKING PRESSURE	10Mpa
RATED FLOWING	50 l/min
OPEN WAY	Manual



Need other power, rated flowing, explosion-proof grade, etc., can be customized.

PIPE CUTTING & BEVELING MACHINE

STANDARD AB-CBM TOOLING



Item	DESCRIPTION
1	37° R.H. Bevel, 7-inch (178 mm)
1	37° R.H. Bevel, 3.5-inch (89 mm)
2	37° L.H. Bevel, 7-inch (178 mm)
	37° L.H. Bevel, 3.5-inch (89 mm)
3*	37° R.H. Double Bevel, 7-inch (178 mm)
3*	37° R.H. Double Bevel, 3.5-inch (89 mm)
4*	37° L.H. Double Bevel, 7-inch (178 mm)
4*	37° L.H. Double Bevel, 3.5-inch (89 mm)
5	37° Double Bevel Sever, 7-inch (178 mm)
5	37° Double Bevel Sever, 3.5-inch (89 mm)
6	20° - 10° R.H. Bevel, 7-inch (178 mm)
7	20° - 10° L.H. Bevel, 7-inch (178 mm)
8	30° - 10° R.H. Bevel, 7-inch (178 mm)
9	30° - 10° L.H. Bevel, 7-inch (178 mm)
10	37° - 10° R.H. Bevel, 7-inch (178 mm)
11	37° - 10° L.H. Bevel, 7-inch (178 mm)
12	37° - 10° R.H. Sever, 7-inch (178 mm)
13	37° - 10° L.H. Sever, 7-inch (178 mm)
14	30° - 10° R.H. Sever, 7-inch (178 mm)
15	30° - 10° L.H. Sever, 7-inch (178 mm)
16	20° - 10° R.H. Sever, 7-inch (178 mm)
17	20° - 10° L.H. Sever, 7-inch (178 mm)
18	37° Double Bevel, 7-inch (178 mm)
18	37° Double Bevel, 3.5-inch (89 mm)

Item	DESCRIPTION
19	37° R.H. Sever, 7-inch (178 mm)
19	37° R.H. Sever, 3.5-inch (89 mm)
20	37° L.H. Sever, 7-inch (178 mm)
20	37° L.H. Sever, 3.5"
21	1/4-inch (6.35 mm) Sever, 7-inch (178 mm)
21	1/4-inch (6.35 mm) Sever, 3.5-inch (89 mm)
22	3/8-inch (9.53 mm) Sever, 7-inch (178 mm)
22	3/8-inch (9.53 mm) Sever, 3.5-inch (89 mm)
23	10° Counter Bore, 2- inch (50.8 mm)
24*	37° - 10° R.H. Double Bevel, 7-inch (178 mm)
25*	1/8-inch (3.18 mm) Sever, 6-inch (152.4)
26*	37° - 10° L.H. Double Bevel, 7-inch (178 mm)
27	45° R.H. Bevel, 7-inch (178 mm)
27	45° R.H. Bevel, 3.5-inch (89 mm)
28	45° L.H. Bevel, 7-inch (178 mm)
28	45° L.H. Bevel, 3.5-inch (89 mm)
29	30° R.H. Bevel, 7-inch (178 mm)
29	30° R.H. Bevel, 3.5-inch (89 mm)
30	30° L.H. Bevel, 7-inch (178 mm)
30	30° L.H. Bevel, 3.5-inch (89 mm)
31	Counterbore Insert Holder
31	Carbide Insert

* Blades used as a set.

CARBIDE HOLDERS

Max depth of cut/max wall capacity = 3.5-inches [89 mm]

#4 Insert Holder
#6 Insert Holder
#8 Insert Holder
#10 Insert Holder

37° Insert holder max wall capacity = 1.090" (27.7 mm)

37° x 3.5-inch (89 mm) RH Insert Holder
37° x 3.5-inch (89 mm) LH Insert Holder
37° x 7-inch (178 mm) RH Insert Holder
37° x 7-inch (178 mm) LH Insert Holder

30° Insert holder max wall capacity = 1.190" (30.2mm)

30° x 3.5-inch (89 mm) RH Insert Holder
30° x 3.5-inch (89 mm) LH Insert Holder
30° x 7-inch (178 mm) RH Insert Holder
30° x 7-inch (178 mm) LH Insert Holder

37° - 30° Max wall capacity = 3.180-inch (80.8 mm)

37° - 30° x 7-inch (178 mm) RH Insert Holder

37° - 30° x 7-inch (178 mm) LH Insert Holder

CARBIDE INSERT

Max depth of cut/max wall capacity = 3.5-inches [89 mm]

#4 Insert
#6 Insert
#8 Insert (M5 X 0.80 X 20mm screw)
#10 Insert (M6 X 1.0 X 25mm screw)

37° Insert holder max wall capacity = 1.090" (27.7 mm)

RH Bevel Insert
LH Bevel Insert
M4 Torx screw

30° Insert holder max wall capacity = 1.190" (30.2mm)

RH Bevel Insert
LH Bevel Insert
M4 Torx screw

37° - 30° Max wall capacity = 3.180-inch (80.8 mm)

RH Bevel Insert
LH Bevel Insert
M4 Torx screw

Customize solution available on request.

PIPE CUTTING & BEVELING MACHINE

T-TYPE BEVELING MACHINE

PRODUCT DESCRIPTION

- Quick and easy ID mounting, self locates centre of the pipe.
- Beveling and grooving with high speed. Used for the welding preparation.
- Can process facing, flange, convex surface and seal groove.
- Cold cutting process will not influence the quality of the material of the pipe.
- High quality beveling tool, can process different grades of carbon steel, alloy steel, stainless steel and so on.
- Can process the U, V and J shape of pipe beveling according to the requirements.

SPECIFICATIONS

HSDS SERIES ELECTRIC

Driven by low-energy consumption electric motor 110V or 220V optional, 50-60Hz



SPECIFICATIONS

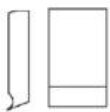
HTCM SERIES PNEUMATIC

Driven by pneumatic motor.
Air working pressure: 0.6-0.8Mpa,
Air consuming flux: 650-960L/min



BEVELING TYPES

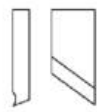
- Other bevel angles for alloy steel, cast steel.



0°
CUTTING
TOOL



30°
BEVELLING
TOOL



37°
BEVELLING
TOOL



15°
INSIDE BEVELLING
TOOL



SDC/TCM-28T



SDC/TCM-80T



SDC/TCM-150T

MODEL SIZE	SIZE	WORKING RANGE (ID) mm	WALL THICKNESS mm	RATED POWER kW	ROTATING RATE rpm
Electric: HSDC Pneumatic: HTCM	80T	28-76	≤15	0.9	53
	120T	45-93	≤20	1.43	34
	150T	65-159	≤20	1.43	34
	350T	150-330	≤20	1.43	34

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