CRUXWELD®

INDUSTRIAL EQUIPMENTS PVT. LTD.

TUBOCUT KOALA

Manual Pipe Gas Cutting & Bevelling Machine

Hand-driven chain-guided oxy-fuel pipe cutter | Pipe Ø 100 mm and above | Bevel up to 45° | No electricity required

Previous model name: TUBOCUT-HG



OPERATING INSTRUCTIONS

Please use this machine only after carefully reading these operating instructions.

1. In order to assure safety, please arrange for qualified personnel, who have a thorough understanding of gas cutting machines, to install, maintain, check and operate the machine.
2. In order to assure safety, please operate this cutting machine only after fully understanding the contents of this instruction.
3. After reading this instruction, please keep it in an easily accessible place so that the relevant personnel can refer to it again.

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TUBOCUT KOALA Manual Gas Pipe Cutting Machine – Instructions

1. Application

The TUBOCUT KOALA manual gas pipe cutting machine is applicable for the cutting and bevel cutting of seamless steel pipe in industries such as petroleum, chemical, boilers, electric power generation, shipbuilding, building construction, motor vehicles, bridge building and so on. It is suitable for working outdoors, and is convenient and highly efficient.

2. Technical performance and characteristics

This cutting machine uses a worm wheel and worm as the driving system, with a chain to fix it on the pipe and four wheels for travel. An oxygen-acetylene flame (or oxygen-propane flame) is used for cutting. The machine body is cast aluminium alloy, so the machine is light and neat in appearance. No electricity is needed, which makes it especially suitable for outdoor work or other places without an electrical supply – an indispensable piece of equipment for pipeline construction.

3. Main technical data

Model	Cruxweld TUBOCUT KOALA
Cutting process	Oxy-fuel gas cutting (acetylene or propane)
Drive	Manual hand wheel, worm gear drive, chain-guided
Pipe diameter	Ø 100 mm and above (up to Ø 600 mm with the standard chain; larger with additional chain)
Cutting thickness	5 – 50 mm
Cutting shape	Straight cut and bevel cut
Bevel angle	0 – 45°
Travel accuracy	1 mm per 1000 mm
Cutting nozzles	G02 type, sizes 1 to 3 (supplied)
Weight	11 kg



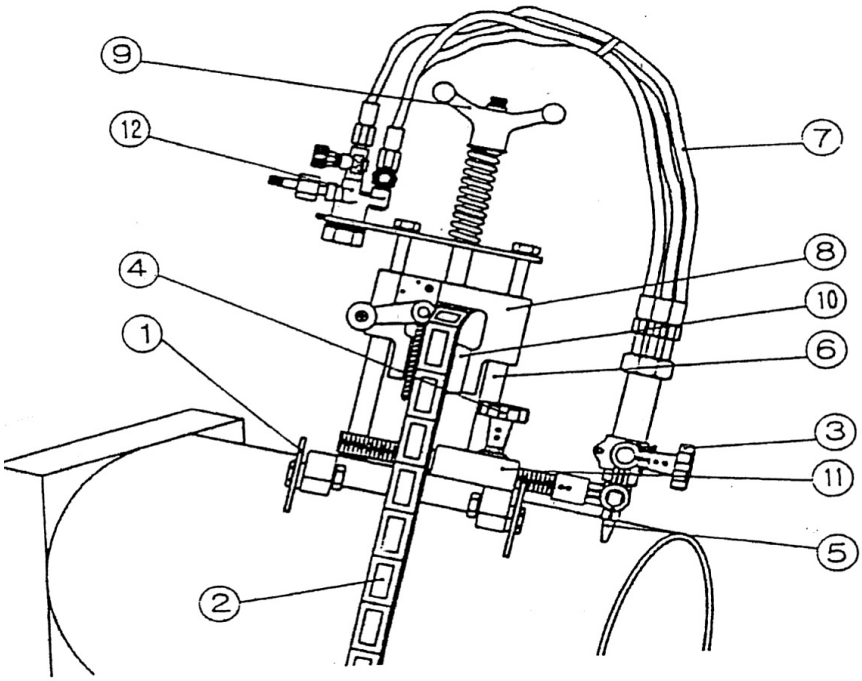
TUBOCUT KOALA mounted on a pipe with the chain tensioned

4. Main structure (see Picture 1)

1. The machine is made of cast aluminium alloy, which gives it many advantages such as strength, light weight and corrosion resistance.
2. The drive system is made up of a pair of worm wheel and worm, a pair of sprocket wheel and chain, and a spring-loaded clutch.
   a. The running gear is made up of the axle bearings, the idler-wheel axles and four wheels.
   b. Cutting torch and cutting nozzle: this machine uses an equal-pressure (injector type) cutting torch mounted on a rack and pinion, which allows the torch to be moved across, up and down. The bevel angle can be adjusted while cutting if needed. Three cutting nozzles are supplied with the machine: G02 No. 1 to G02 No. 3. The cutting parameters are given below for reference.

Cutting parameter table for different cutting tips

G02 nozzle No.	Cutting thickness (mm)	Oxygen pressure (MPa)	Acetylene pressure (MPa)	Speed requirement
1	5 – 15	0.30 – 0.35	> 0.05	Uniform motion by hand
2	15 – 30	0.30 – 0.40		
3	30 – 50	0.35 – 0.50		



Picture 1

(1) Travelling wheel
(2) Chain
(3) Hand wheel
(4) Hand wheel
(5) Cutting tip
(6) Control lever guide
(7) Hoses
(8) Frame
(9) Chain tension hand wheel
(10) Driving wheel
(11) Chassis body
(12) Gas distributor

5. Operating instructions

The torch carriage with the sprocket wheel can be moved along the two guide bars to adjust the pull of the chain. The position can be adjusted accurately not only across the pipe but also up and down within a limited range. A dial is fitted on the torch clamp, so the machine can be used both for straight cutting and for bevel cutting.

Put the machine in a suitable position on the pipe to be cut (do not exceed the range of the transverse adjustment). Press the spring and tension the chain so that the machine is held tightly on the pipe. Then light the cutting nozzle, regulate the flame, adjust the cutting torch to the correct position and angle, open the cutting-oxygen valve and turn the hand wheel at the same time to drive the machine. The machine moves forward when you turn the hand wheel clockwise, and backwards when you turn it anticlockwise.

The chain is made of square links. It can be taken apart and its length adjusted according to the outer diameter of the pipe to be cut (see Picture 2). The relationship between the pipe diameter and the number of chain links is given by the following formula:

D = d + 12

D: number of chain links

d: outer diameter of the pipe in centimetres

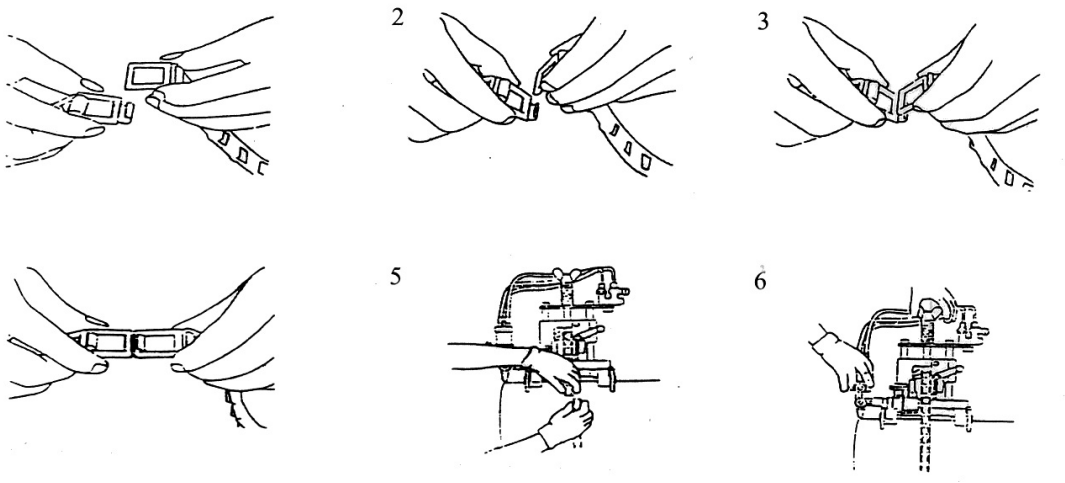
12: constant

Example: cutting a pipe of Ø 299 mm:

d = 299 mm = 29.9 cm ≈ 30 links

D = 30 + 12 = 42 links

So, from this formula, 42 chain links are needed to cut a pipe of Ø 299 mm.



Picture 2 – taking the chain apart and adjusting its length; fitting the machine on the pipe

6. Points to note

a. The place where the pipe rests should be kept flat to reduce friction when cutting pipes that are rotated. It is necessary for other people to help turn the pipe if it is very large. Keep enough space around the pipe when cutting fixed pipes, so that the machine can travel freely around it.

b. A little lubricant can be applied to the sliding parts to make the machine easier to operate.

c. The machine should be packed away promptly after the work is finished, to avoid losing the chain.

d. Keep the wheels and the chain free of slag and dirt; wipe the machine with a clean, dry cloth after use and store it in a dry place.

e. Do not cut pipes whose paint is still wet – the paint will stick to the wheels and impair smooth travel.

f. Follow all the usual gas cutting safety rules: use flashback arrestors and check valves, check hoses and connections for leaks with soapy water (never with a flame), wear goggles and protective clothing, and keep flammable materials away from the work area.

7. Warranty

Cruxweld will repair or replace this machine free of charge if it fails to work properly within six months from the date of purchase because of a defect in materials or workmanship. Damage caused by improper operation, incorrect storage or unauthorised modification is not covered; such repairs can be carried out at a charge. For service and genuine spare parts contact **support@cruxweld.com** or **+91 8800 882 983**.

8. Packing list

Item No.	Name	Unit	Quantity	Remark
1	Main engine (machine body)	set	1	
2	Tool box	pc	1	
3	Cutting torch	pc	1	
4	Wheel	pc	2	
5	Cross screw M5 x 10	pc	6	GB/T 819.2 equivalent
6	Chain	pc	75	links
7	Operating instructions	pc	1	
8	Inspection certificate	pc	1	
9	Packing list	pc	1	
10	Warranty card	pc	1	

Packer: _____ Inspector: _____ Date: _____

9. Inspection certificate

TUBOCUT KOALA Manual Pipe Gas Cutting Machine – Pass Certificate

INSPECTION OK

Product serial No.: _____ Date of manufacture: _____

Checked by: _____ Check date: _____

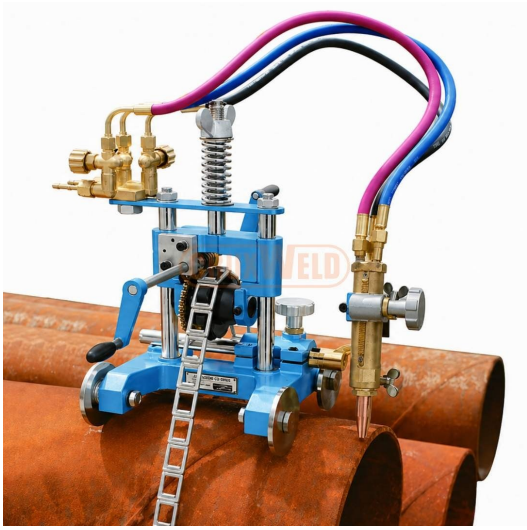
Inspected by: _____ Inspection date: _____

This machine has been inspected and tested at Cruxweld Industrial Equipments Pvt. Ltd. and conforms to the specifications stated in these operating instructions.

10. Record of use

Date	Pipe Ø (mm)	Wall (mm)	Nozzle No.	Operator	Remarks

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Cruxweld improves its products continuously. The technical data in this manual may change without notice.
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