OPERATION MANUAL

BMS BULUT® MAKİNA
SANAYİ VE TİCARET LTD. ŞTİ.

# BULUCUT-4

## ABRASIVE CUTTER

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**1 SAFETY RULES ..... 3**

**2 DESCRIPTION ..... 3**

2.1 TECHNICAL SPECIFICATIONS ..... 3
2.2 STANDARD ACCESSORIES ..... 3

**3 MAIN PICTURE ..... 4**

**4 UNPACKING ..... 6**

4.1 INSTALLATION ..... 6
4.2 INSTALLATION COMMISSIONING ..... 6
4.3 PLUMBING ..... 6
4.4 CUTTING DRIVE INSTALLATION ..... 7
4.5 TO CHANGE THE LAMP ..... 7

**5 CARE INSTRUCTIONS ..... 7**

5.1 PERIODIC CHECKS AND MAINTENANCE: (IMPORTANT) ..... 7
5.2 DAILY CONTROL AND TREATMENTS: (IMPORTANT) ..... 7

**6 CUTTING FLUID MANUAL ..... 7**

6.1 FIRST TIME FILLING OF RESERVOIR TANK ..... 8
6.2 ADDING CUTTING FLUID AFTER SOME PERIOD OF USAGE ..... 8
6.3 RECOMMENDATIONS AND CONDITIONS TO BE AVOIDED ..... 8

**7 INSTRUCTION ..... 8**

7.1 SAMPLE FIXING ..... 8
7.2 CUTTING OPERATION ..... 8

# 1 SAFETY RULES

Ensure that electrical connection & grounding made correctly.
Main safety rules and standards to be assured for the machine during installation & running.
The use and maintenance of the device not to made by persons other than authorized personnel
Ensure the work area clean and tidy working environment.
Machine does not work when the cover is closed.
Do not open the device during operation
To check cutting disc rotation of the engine for a few seconds, do not open the cover fully before the end of the process
Use gloves when cutting the sample.
Adequate lighting should be provided during work time. Ensure the device for replacing the broken lamp immediately when necessary.
In case of any danger during operation, use the emergency stop button (emergency) immediately.
Cutting disc should be careful located. The disc are at risk of fracture and do not use cutting discs definitely broken and deformed.
Assure complete and accurate periodic maintenance
To ensure the long life of the machine use only original spare parts.

# 2 DESCRIPTION

- Sturdy table model for sectioning metals, ceramics ,mineral samples
- Corrosion resistance GRP cover with see-through hood
- Special Aluminum casted heavy robust base
- Easy use twin cam actuated vises for holding samples
- All inside parts made from stainless steel or chromium plated steel
- Splash proof during cutting
- Cooling by two high flow water jets to provide optimum cutting
- Cutting action provided by moving cutting wheel on specimen or moving sliding table to cutting wheel
- 40W light illuminator protected from water in specially isolated cover fixed inside the cover to obtain safe and clear illumination on cutting area
- Separately mounted recirculation coolant tank with large drain
- 57 ltr capacity coolant tank, suitable filtering part provided to filter the slugs formed during cutting.

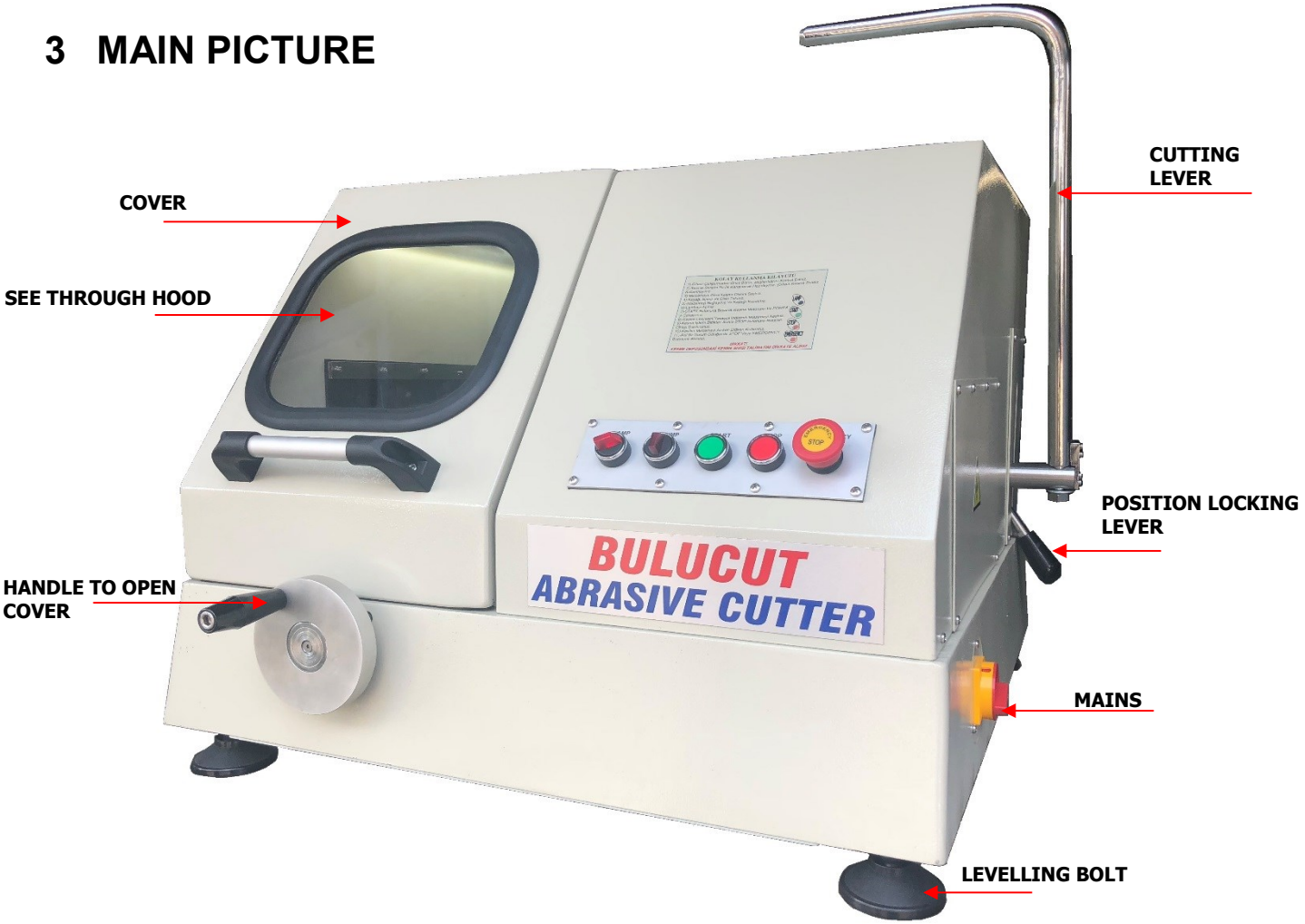
## 2.1 Technical Specifications

| | |
|---|---|
| Machine dimensions | *900 X 980 X 700 mm* |
| Case dimensions(coolant system included) | *1400 x 1000 x 850 mm* |
| Weight (net/gross) | *160 / 200 kg* |
| Motor | *2,2 KW, AC - 380 Volt - 2800 rpm* |
| Cutting system | ***Manual*** *( movement of sliding table with part against cutting wheel or movement of cutting wheel against part to be cutted)* |
| Cutting capacity | *150 mm dia* |
| Cutting wheel dim's | *250x32x1,6 (1,5) mm* |
| Coolant pump | *380 Volt, AC, 0,12 KW* |
| Coolant reservoir dimensions | *600 x 400 x 300 mm, 57 ltr capacity* |
| Lamp | *24Volt,40Watt* |

## *2.2 Standard Accessories*

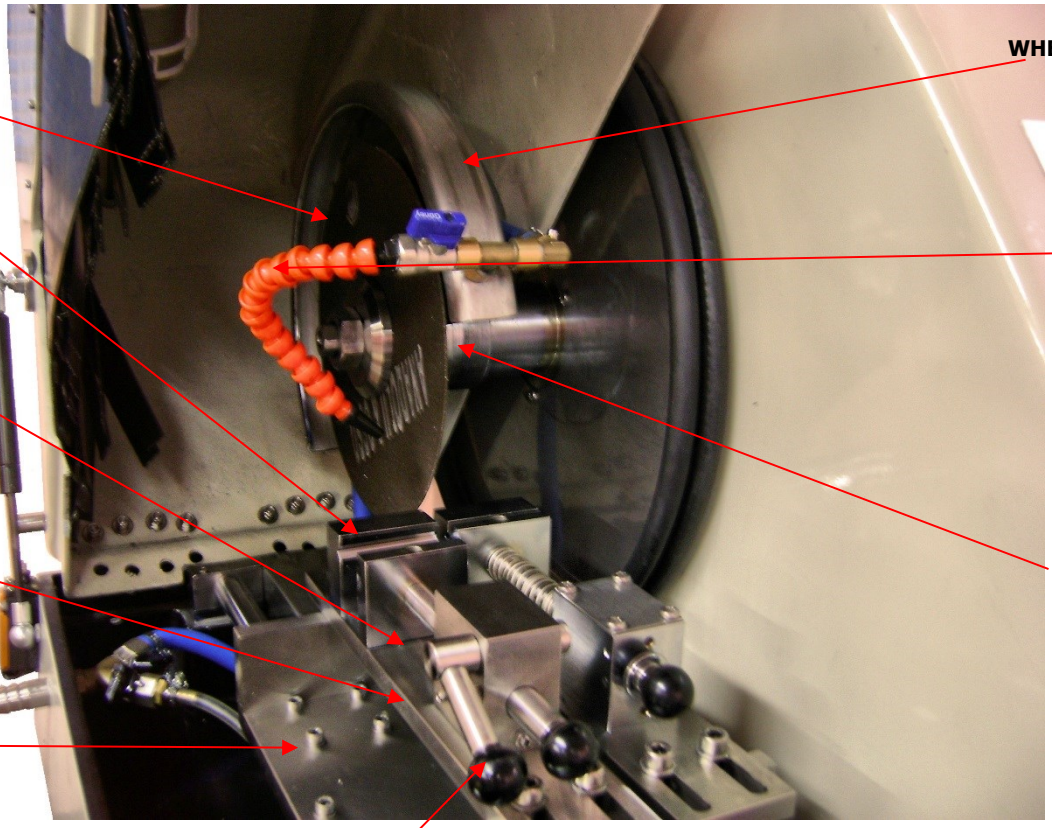
Complete cooling system (tank, recirculation pump and filter)
Cooling system hoses and clips
Flat wrench and tightening pin 250 mm (or 300 mm)
Cutting discs (5 pieces)
Cutting fluid (2 liter)

# 3 MAIN PICTURE



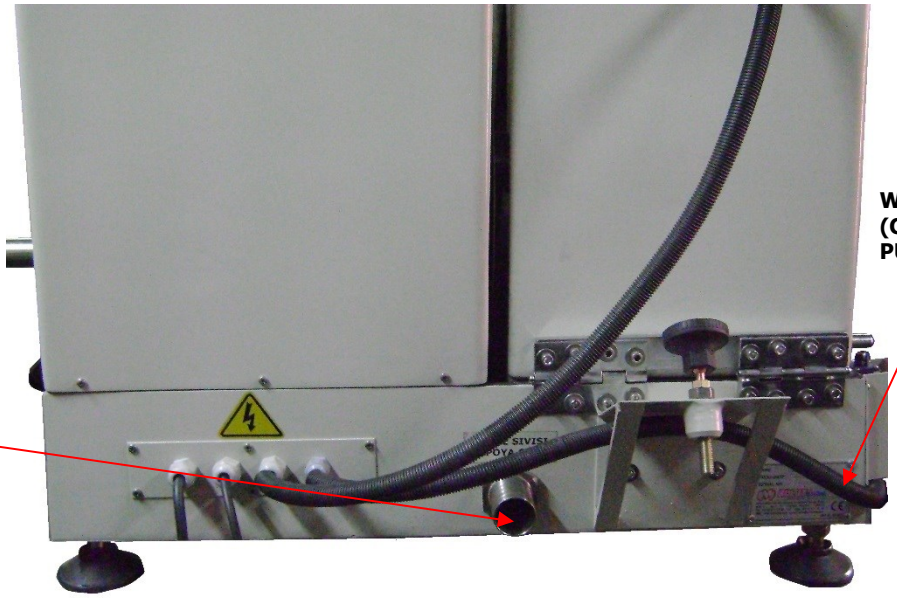

*…pic 1…*
*(The main picture)*

*…pic 2…* *(Functions of the buttons)*




*…pic 3…*

*(A view from the inside of the machine)*




*…pic 4…*

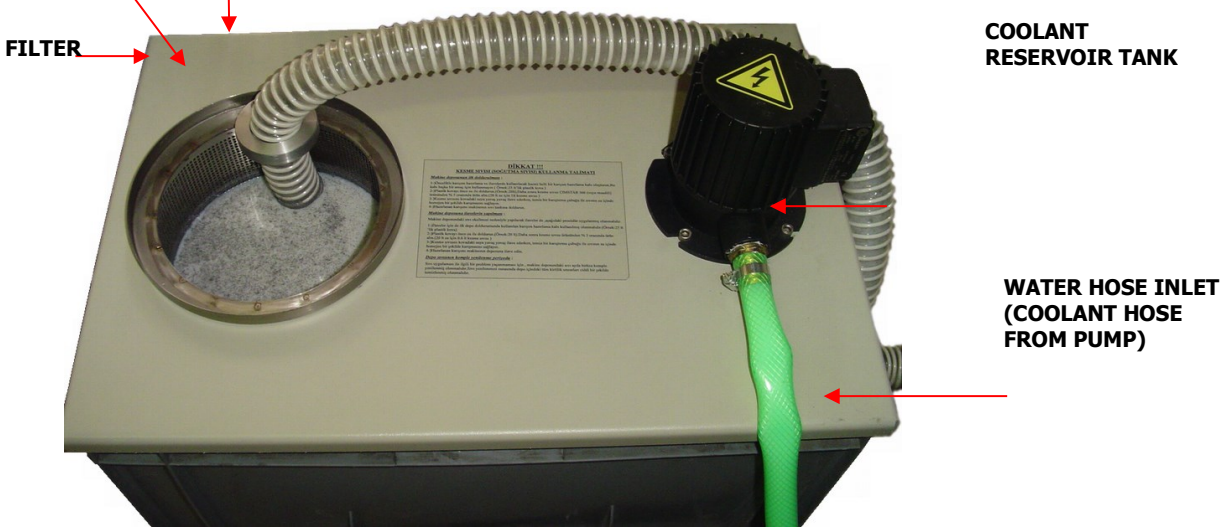
*(Electrical & water connections)*

FILL THE RESERVOIR TANK WITH WATER (55 LITER) AND %5 (2 LITER) OF CUTTING FLUID. LOCATE TOP COVER ON TANK.

WATER HOSE EXIT (COOLANT HOSE TO RESERVOIR)

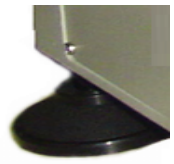
*…pic 5…*

*(Recirculation Coolant System)*




# 4 UNPACKING

Remove packing materials and lift out machine complete with baseboard. Remove 4 securing bolts that secures machine to baseboard



LEVELING BOLT

## *4.1 Installation*

- Open cover.(01)
- Remove the shipping strap from the cutting head and push the cutting lever (26) to the rear to raise the cutting Wheel (18) as high as possible.
- Install the cutter on suitable table and secure alignment by means of adjusting positions of 4 secure leveling bolts. (03)
- Plug to mains 380-400V (3 phase) power and check the turning position of cutter and ensure correct turning if necessary.

## *4.2 Installation Commissioning*

Check the machine's electrical connection is made before the electrical diagram. The machine needed to make the detection of the voltage and frequency. After making this determination, the machine outlet is provided in a suitable location with Make a connection to the required fixing. Under normal conditions, the machine380-400V / 50-60Hz (3P + N + GND) to work with. Make sure the grounding.
IMPORTANT: Electrical connection is made, then check the rotational direction of cooling the engine and cut the engine and changing the location of phase reversal Provide status 2. IMPORTANT: All electrical work and electrical maintenance, repair and so on. By competent and qualified electrician to make your jobs.

## *4.3 Plumbing*

- Locate recirculation pump on its table and bring it to the near of cutter.
- Make recirculation pump electrical connections Connect 18 mm coolant supply hose to the rear of cutter and tighten the hose clamp. Locate the other end to recirculation pump and tighten the hose clamp.
- Connect the 40 mm dia coolant return hose to rear of cutter and clip the hose clamp. Locate other end of hose on filter of reservoir tank.
- Fill the reservoir tank with water (55 liter) and %5 (2 liter) of cutting fluid.Locatetop cover on tank.

Open the cover of cutter and press PUMP button and allow pump to run a few minutes. This procedure ensures adequate mixing of coolant solution. (PUMP button is not used when the cover is closed.)

### 4.4 Cutting Drive Installation

- When installing the electrical connection to the cutting disc for sure. When inserting the cutting disc pay close attention. (For broken)
- NOTE: 300 mm diameter and 3 mm thick discs do not use more.
- Cover (2) Lift up. Tightening bolt, shaft sleeve hole.36 mm Loosen the clamping nut wrench (the motor shaft sleeve female left tooth.) instead of cutting discs and place the appropriate manner.
- At the same operations, in accordance with the tightening of the disk and do other cutting. Squeezing pin should never be left on the motor shaft sleeve. Cutting disc surface is clean on both sides and make sure that the hive.

### 4.5 To Change the Lamp

*…pic 6…*

LED 24V DC, 8,4W /1 MT

## 5 CARE INSTRUCTIONS

### 5.1 Periodic Checks and Maintenance: (IMPORTANT)

All maintenance periods by authorized and qualified personnel properly please. Part of SAFETY RULES please refer at all times.

Any maintenance, parts replacement should be discontinued before carrying out the electrical and related parties should be informed. Installation of the machine should be checked regularly and any illegal connections or when a state of emergency must be reported to occur and should be remedied by giving notice to authorized persons.

After the cleaning process is completely finished all the fluid control valves, bolt connections should be checked.

### 5.2 Daily Control and Treatments: (IMPORTANT)

- Use Device, cleaning out the water. (PLC screen Man.Water)
- Cutting disc on a regular basis due to product residue, and the parts remains clean. After the cutting process is completed, clean the accumulated dust of iron.
- Make sure the seals while cleaning and definitely aggressive, plotters feature do not use the material.
- Disconnect the power plug after use necessarily.
- Switch off the electrical connection to the device must be pre-maintenance and cleaning.

## 6 CUTTING FLUID MANUAL

Cutting fluid while cutting iron to the continuous bypass hose or hose is clogged with the dust of cutting fluid. Clean the hoses.

Fluid application to avoid any problems with the machine store completely replace the fluid once a month. During the renewal of the liquid in the tank clean of all elements of pollution. Please check store cutting fluid. In case of reduction (not only water and cutting fluid is water), stirring the mixture with 4% cutting fluid &water tank to be added. The machine used for a long time, the iron powder in the device, cutting fluid, hoses, water tank, filter, and input-output hoses with clean water and carefully wipe with a damp cloth and keep for later.

### *6.1 First Time Filling Of Reservoir Tank*

1) - Obtain separate tank for mixing. (For example 25 ltr. plastic tank)
2) - Fill tank with water. (For example 20 ltr) Later, add, %5 CIMSTAR 506 cutting fluid (or its compatible) (1 ltr for 20 ltr water)
3) - While adding, cutting fluid to water slowly, mix well
4) - Put this mixed fluid to reservoir tank.

### *6.2 Adding cutting fluid after some period of usage*

1) - In case of requirement of adding cutting fluid after first time filing, followings to be considered.
2) - Fill plastic tank with water. (For example 20 ltr.) Later, add %3 CIMSTAR 506 Cutting fluid (For 20 ltr water 0.6 ltr cutting fluid)
3) - While adding, cutting fluid to water slowly, mix well
4) - Put this mixed fluid to reservoir tank .After each month of usage we recommend you to clean reservoir tank and add new cutting fluid as first time filling.

### *6.3 Recommendations and Conditions to Be Avoided*

1 - ) May be possible, should be used as a good-quality water
2 - ) Mixture preparation, cutting fluid, the mixture is poured into the water should not be.
3 - ) The machine store, only the addition of water, or just cutting fluid should not be done any time. Continuous addition of the mixture should be made.
4 - ) Machine store the mixture, using a refractometer measurement of the ratio coefficient of 1.4 according to the fluid should be considered canceled. Refractometer with the rate control, the machine should be made at the level of the liquid tank is full.

## 7 INSTRUCTION

### *7.1 Sample Fixing*

Two wises positioned at our works for general purpose of cutting. When required for larger samples, it can be necessary to reposition the wises nearer to the front of the machine. For this purpose, loosen 4 bolts of fixing plate of holding fixture. Locate the sample on fixed jaw (07) and push forward clamping jaw (08) against sample. Use a suitable pressure and push clamping lever (13) tightly. Do not over clamp

### *7.2 Cutting Operation*

- Be sure sample is clamped and jaws tighten well.
- Close the cover. (The cutter will not operate unless the cover is completely closed )
- Start cutting and pump motors by pressing START button. (Do not start motors when cutting lever is in mid position and be sure cutting wheel is not touching the sample)
- Check the flow of coolant and adjust the flow of water jets if required
- Slowly feed the cutter wheel on sample by pulling cutting lever. (17)
- To reach constant cutting range maintain pressure as required. (Excessive force may cause motor overload and damage cutter wheel.)
- When cutting procedure is completely finished, bring the cutting lever to its starting position.
- Cutter wheel rotates for several seconds after pushing STOP button or opening cover. In case of opening cover, Pease be sure cutter Wheel.