CE 0425
Aksdent Global Dental Tıbbi Cihazlar San. Tic. Ltd. Şti
Fatih Mh. 1191 Sk. No:1/14 Sarnıç Gaziemir İzmir Türkiye
TD.01.KK.02.EN rev01 06.2026

MICROMOTOR

Product description: The intended use of pneumatic micromotors is to provide power and controlled rotational motion to contra angles and straight handpieces.

Product Ranges and Models: Beehive G-309, G-334

Intended Users: Dentists

Single Use / Reusable Status: Micro motors are reusable products but reusable period is limited by 250 Sterilisation cycles.

Product Storage and Shipping Conditions: Micromotors must be stored in a temperature range of -20 to 70 °C and a humidity range of 5% RH to 95% RH, pressure range of 700 hPa to 1060 hPa as indicated on the labels created according to EN 15223-1 Standard.

Target Patient Population: The Micromotors produced can be used in all patients aged 20 years and over.

Combined Equipment and Accessories: Contra Angles and Straight Low Speed Handpieces

INDICATIONS:

Micromotors are operated together with contra angles and straight handpieces. When used with compatible contra-angle and straight handpieces and appropriate burs/instruments, micromotors may assist in the following dental procedures:

Prophylaxis: Micromotors are used with prophy angles for dental prophylaxis (cleaning) procedures to remove plaque, stains, and tartar from the teeth.

Endodontics: In endodontic procedures like root canal treatment, micromotors with specialized endodontic burs and root files are used to access, shape, and clean the root canals.

Restorative Dentistry: Micromotors are used for cavity preparation, tooth restoration, and shaping teeth to receive restorative materials like fillings, crowns, inlays, onlays, and veneers.

Orthodontics: Micromotors can be used in orthodontic procedures to remove or adjust orthodontic appliances, bands, and brackets.

Oral Surgery: Micromotors are used in surgical procedures such as tooth extraction, bone shaping and tissue removal.

Implantology: In implant dentistry, Micromotors are used for osteotomy (bone preparation) and implant placement procedures.

Prosthodontics: Micromotors assist in the fabrication of crowns, bridges, dentures, and other prosthodontic appliances by preparing abutment teeth and shaping dental materials.

Periodontics: Contra Angles can be used for scaling and root planing procedures in the treatment of periodontal disease.

Gingivectomy: They are used to remove excess gum tissue during gingivectomy procedures.

CONTRAINDICATIONS :

Medical Conditions: Patients with certain medical conditions may not be suitable candidates for procedures involving contra angles. These conditions may include uncontrolled hypertension, severe cardiovascular diseases, bleeding disorders, and compromised immune systems.

Allergies and Sensitivities: Some patients may have allergies or sensitivities to the materials or cooling and lubricating agents used in dental treatments using micromotors. Dentists should inquire about allergies and sensitivities and select materials and agents accordingly.

Inadequate Anesthesia: Insufficient local anesthesia can lead to patient discomfort and pain during procedures involving micromotors. Dentists should ensure that patients are adequately anesthetized before commencing any procedure to minimize discomfort.

Age and Psychological Factors: Pediatric patients and individuals with severe dental anxiety or phobias may not tolerate the noise and vibrations associated with micromotors well. Dentists should consider alternative treatment options or techniques for these patients to reduce anxiety and discomfort. (Use is recommended for patients aged 20 and above)

Pregnancy: While there is no evidence suggesting a risk to the developing fetus, it is generally recommended to avoid elective dental procedures using micromotors during the first trimester of pregnancy if possible. Consultation with an obstetrician is advisable in such cases.

Operator Competency: Dentists and dental professionals should be well-trained and competent in the use of micromotors. Inadequate skill or experience can lead to procedural errors and patient harm.

Ergonomics and Operator Safety: Dentists should practice proper ergonomic techniques to avoid operator fatigue and injury when using micromotors.

SIDE EFFECTS:

When used in accordance with the manufacturer's instructions and clinical guidelines, micromotors are generally safe and well tolerated. However, improper use or inadequate maintenance may result in the following complications.

Overheating: Excessive friction or prolonged use without adequate cooling can lead to overheating of the micromotors, potentially causing discomfort to the patient and damage to the tooth structure. Proper water coolant flow should be maintained during procedures to prevent this.

Noise and Vibration: While micromotors are quieter and produce less vibration compared to high-speed handpiece, some patients may still be sensitive to the noise or vibration. Dentists should be attentive to patient comfort and make adjustments as needed.

⚠ WARNINGS AND PRECAUTIONS: ⚠

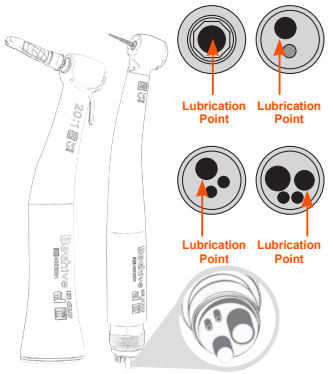
Read this user manual before use to fully understand the product functions and file it for future reference.

- Always consider patient safety when using the product.
- Users are responsible for the operational control, maintenance and continuous inspection of this product.
- Protect the product against impacts.
- Users and other persons in the area must wear protective goggles and masks during operation.
- If the product functions abnormally, stop operation immediately and contact your supplier.
- Do not use highly acidic water or sterilising solutions to wipe or clean the product.
- Products are delivered in non-sterile condition and must be autoclaved before use.
- Carry out regular function and maintenance checks.
- When the product has not been used for a long period of time, check that the product is working correctly before using it on a patient.
- In order to avoid interruption of treatment and in case of breakage during the surgical operation, it is recommended to have one spare product on hand.
- The product must not be used after 250 sterilisation cycles.
- Before reusing the product, it must be sterilised as specified in the sterilisation section.

LUBRICATION AND MAINTENANCE :

Lubricate the micromotor immediately after cleaning and/or disinfection.

Recommended Lubrication Interval
▶ Before Each Sterilisation
Or
▶ After each 30-minute period of use, or at least twice Daily



1) Shake the spray oil container thoroughly.

2) Attach the appropriate lubrication nozzle designed for the micromotor .

3) Position a napkin or cloth beneath the head of the micromotor.

4) Press the spray button until oil begins to flow from the head of the micromotor (approximately 2 seconds).

5) If contaminated oil is expelled from the micromotor, repeat the lubrication procedure.

6) After lubricating the micromotor, allow it to run idle for a minimum of 30 seconds to expel any excess oil.

7) Lubrication should be applied at the air inlet. If oil is applied through other inlets, it may not reach the motors, resulting in inadequate lubrication. For Borden type connections, the air inlet is the largest hole. For Midwest type connections, oil should be applied through the slightly smaller of the two larger holes

CLEANING, DISINFECTION AND STERILISATION :

1.Cleaning
- After each treatment, immediately clean the micromotor to prevent blood, saliva, and other fluids on the head from penetrating and leaving residues inside.
- Use suitable, sterilisable products that do not damage the micromotor.

2. Disinfection
- The use of disinfectants containing acetone, chlorine, or bleach is strictly not recommended.
- The micromotor must never be immersed in disinfectant solutions.
- For disinfection, wipe the surface with a clean cloth or cotton moistened with an appropriate disinfectant.
- Ultrasonic bath disinfection is not recommended.

3. Pre-Sterilisation Preparation
- The micromotor must be thoroughly cleaned,with no residues remaining.
- Lubricate the micromotor according to the lubrication procedure before sterilisation.
- Place the micromotor inside an autoclave pouch and seal it.

4. Sterilisation
- Only the sterilisation procedure specified below should be used:
- Steam sterilisation with a fractionated pre-vacuum phase, using a Class B cycle compliant with EN 13060, shall be performed.
- Nominal temperature: 134°C (273°F)
- Duration: 3 or 18 minutes, depending on national guidelines.
- The product is autoclavable up to 135°C. Follow the steriliser manufacturer's instructions. The maximum temperature specified for the product must not be exceeded during the sterilisation and drying phases.

After sterilisation, keep the micromotor sealed in the pouch to maintain sterility until use.

TECHNICAL DATA:

Model	Technical Data			
G334	**Max Speed**	25.000 RPM	**Cooling**	Inner 1 spray
	Noise level	<75	**Connection**	2h Borden
	Gear Ratio	1:1	**Illumination**	N/A
G309	**Max Speed**	25.000 RPM	**Cooling**	Inner 1 spray
	Noise level	<75	**Connection**	4h Midwest
	Gear Ratio	1:1	**Illumination**	N/A

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TROUBLESHOOTING:

FAILURE	POSSIBLE CAUSES	RECOMMENDED ACTION
The motor does not operate or does not rotate.	The air pressure from the dental unit is insufficient or there is no air flow.	Check the air outlet and air pressure of the dental unit. Adjust the pressure to the operating range recommended by the manufacturer.
	The air hose connection is incomplete or loose.	Ensure that the motor is correctly connected to the hose. Tighten the coupling nut.
	The hose or motor air channels may be blocked.	Check the hose and air channels. If the problem persists, contact an authorised Beehive service centre.
	The internal mechanism of the motor may be jammed.	Do not force the motor to operate. Contact an authorised Beehive service centre.
The motor rotates, but the connected handpiece or bur does not rotate.	The contra-angle or straight handpiece is not correctly connected to the micromotor.	Remove and reconnect the handpiece. Ensure that the handpiece is fully seated on the ISO E-type connection.
	The connected handpiece may be blocked or defective.	Lubricate the handpiece and check again. If the problem persists, send the handpiece to an authorised service centre.
	The drive coupling of the motor may be damaged or worn.	Stop using the motor and contact an authorised Beehive service centre.
Motor speed is low or torque is insufficient.	Air pressure is low or unstable.	Check the air pressure of the dental unit and adjust it to the appropriate value.
	There is air leakage, bending or blockage in the air hose.	Check the hose and connection points. Replace the hose if it is damaged or blocked.
	The motor has not been sufficiently lubricated.	Lubricate the motor according to the lubrication procedure. After lubrication, run the motor idle for at least 30 seconds to expel excess oil.
	There is excessive friction or mechanical jamming in the connected handpiece.	Lubricate the handpiece. If the problem persists, send the handpiece to an authorised service centre.
	The internal mechanism, rotor or bearings of the motor may be worn.	Contact an authorised Beehive service centre.
The motor operates intermittently.	The air flow is unstable.	Check the dental unit air outlet, foot control and hose connections.
	There is air leakage at the hose connection.	Tighten the coupling nut. Check the O-rings and seals.
	Dirt, oil residue or moisture may have accumulated inside the motor.	Lubricate the motor according to the lubrication procedure and run it idle briefly. If the problem persists, contact an authorised service centre.
The motor overheats.	Friction in the internal mechanism has increased due to insufficient lubrication.	Lubricate the motor. If contaminated oil continues to be expelled, repeat the lubrication procedure.
	Cooling air is insufficient.	Check the air flow and connections of the dental unit. If the problem persists, contact an authorised service centre.
	There is excessive friction or jamming in the connected handpiece.	Disconnect the handpiece from the motor and run the motor separately. If the overheating is caused by the handpiece, lubricate the handpiece or send it to an authorised service centre.
	The bearings, rotor or internal mechanism may be damaged.	Stop using the motor and contact an authorised Beehive service centre.

FAILURE	POSSIBLE CAUSES	RECOMMENDED ACTION
The motor operates with excessive noise.	Lubrication is insufficient.	Lubricate the motor according to the lubrication procedure.
	Contaminated oil, particles or moisture have accumulated inside the motor.	Repeat the lubrication procedure and run the motor idle briefly. If the problem persists, contact an authorised service centre.
	The bearings or rotor may be damaged.	Stop using the motor and contact an authorised Beehive service centre.
The motor operates with vibration.	The connected handpiece, bur or instrument may be unbalanced.	Check the handpiece and the bur/instrument being used. Do not use non-standard, bent or worn burs.
	There may be wear or looseness at the motor connection area.	Check the connection area. If looseness or wear is observed, contact an authorised service centre.
The motor rotates on the connection or does not remain fixed.	The handpiece or motor connection is not fully seated.	Remove and reconnect the handpiece. Ensure that the connection is fully seated.
	The fixing pin, gripping surface or locking area may be worn.	Stop using the device and contact an authorised Beehive service centre.
The handpiece does not remain attached to the motor connection.	The connected handpiece is defective or its connection area is worn.	Check with another compatible handpiece. If the problem persists, contact an authorised service centre.
	The connection/retaining ring on the motor may be damaged.	Stop using the motor and contact an authorised Beehive service centre.
Air leakage is present from the motor or hose connection.	The coupling nut is loose.	Tighten the coupling nut.
	The O-ring or seal is worn or damaged.	Check the O-rings and seals. Replace damaged parts with new ones.
	The hose connection surface may be damaged.	Check the hose and connection surface. If damage is observed, contact an authorised service centre.
Water leakage is present from the motor or hose connection.	The water line connection is loose.	Check the water connection and secure it properly.
	The O-rings or sealing gaskets are worn or damaged.	Replace the O-rings or sealing gaskets with new ones.
Spray water does not flow or is insufficient.	The water setting on the dental unit is closed or insufficient.	Check the water flow setting on the dental unit.
	The water line is blocked, bent or loosely connected.	Check the water line and connection points. Clean or replace the hose if necessary.
	The water channels of the connected handpiece are blocked.	Carefully clean the spray outlets of the handpiece using the appropriate cleaning wire. If the problem persists, contact an authorised service centre.
Contaminated oil is expelled from the motor after lubrication.	Old oil, dirt or particles have accumulated inside the motor.	Repeat the lubrication procedure until clean oil is expelled. Run the motor idle briefly after each lubrication cycle.
Performance does not improve after lubrication.	Internal wear, bearing damage or rotor failure may be present.	Stop using the motor and contact an authorised Beehive service centre.
The motor operates irregularly after prolonged inactivity.	Oil may have dried or residues may have accumulated inside the internal mechanism.	Before use, lubricate the motor and run it idle briefly to check its function. If the problem persists, contact an authorised service centre.

SYMBOLS AND THEIR MEANINGS ACCORDING TO EN 15223-1 STANDARD

Box Label Template:

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	
Beehive A Perfect Harmony	Product Name/ Model	#	CE	SN	XXXXX	TR	XXXX		-20 70	5 95	700 hpA 1060 hpA			MD	UDI	TD.01.ET.01 - Rev. No: 00 Rev. Date: --/--/--	Aksdent Global Dental ve Tıbbi Cihazlar San. Tic.Ltd. Şti Fatih Mh. 1191 Sk.No:1/14 Gaziemir Sarnıç Gaziemir İzmir Türkiye	The product is autoclavable up to 135°C.

Symbols and Definitions

1	Brand	3	Product Model Number	5	Product Serial Number	7	Consult instructions for use	9	Symbol for Humidity Storage Conditions	11	Keep Away from Sunlight	13	Keep Dry	15	UDI	17	Manufacturer Information
2	Product Name	4	CE Marking	6	Manufacturer's Country Code and Date of Manufacture	8	Symbol for Temperature Storage Conditions	10	Product Pressure Range	12	Do Not Use if the Package is Damaged	14	Medical Device	16	Label Information		

Carton Label Template:

1	2	3	4	5	6	7	8	9
Beehive A Perfect Harmony	-20 70	5 95			MD	Aksdent Global Dental ve Tıbbi Cihazlar San. Tic. Ltd. Şti Fatih Mh. 1191 Sk.No:1/14 Gaziemir Sarnıç İzmir Türkiye		Quantity per Carton:

Symbols and Definitions

1	Brand	2	Storage Condition (Temperature)	3	Storage Condition (Humidity)	4	Attention	5	Fragile	6	Medical Device	7	Manufacturer Information	8	Keep Dry	9	Quantity per Carton

Laser Product Label Template:

1	2	3	4	5	6
Beehive A Perfect Harmony	CE	SN	MD	TR	#

Symbols and Definitions

1	Brand	2	CE Marking	3	Serial Number	4	Medical Device	5	Country of Manufacture Code and Date of Manufacture	6	Model/Type Number