MX System
Reduction in the number of instruments

Thanks to the unique performance of the motor & control systems, the CA 1:1 and CA 1:5 contra-angles are now adequate to cover most dental operations, including NiTi endodontics. This remarkable progress permits a reduction in the number of instruments used in the dental surgery.

MX - The unique solution for restorative dental medicine, prophylaxis and endodontics

Examples of operations possible with two Bien-Air contra-angles

<table>
<thead>
<tr>
<th>Application</th>
<th>CA 1:5</th>
<th>CA 1:1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amalgam Polishing</td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>Root Canal Treatment - NiTi</td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>Pin placement</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Deep Caries Removal</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Caries Removal</td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>Bone Surgery</td>
<td></td>
<td></td>
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<tr>
<td>Pin Hole Drilling</td>
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<tr>
<td>Temporary crown &amp; bridge prep.</td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>Gold and Microfil Polishing</td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>Gross Caries Removal</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Interdental and Subgingival Polishing</td>
<td></td>
<td></td>
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<tr>
<td>Amalgam Overhang Removal</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MC. Spadde Endo Technique</td>
<td></td>
<td></td>
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<tr>
<td>Chrome Cobalt Adjustment</td>
<td></td>
<td></td>
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<tr>
<td>General Cavity Prep. Finishing</td>
<td></td>
<td></td>
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<tr>
<td>Retention Groove Cutting</td>
<td></td>
<td></td>
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<tr>
<td>Porcelain Adjustment</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Final C-H Prep. Finishing Bevels + Margins</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Cavity Prep. Finishing Bevels + Margins</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Occlusal Adjustment</td>
<td></td>
<td></td>
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<tr>
<td>Dentin Reduction</td>
<td></td>
<td></td>
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<tr>
<td>Tooth Sectioning</td>
<td></td>
<td></td>
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<tr>
<td>Bulk Enamel Reduction</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bur speed in rpm</td>
<td>500 - 200,000</td>
<td>100 - 40,000</td>
</tr>
</tbody>
</table>
Design and ergonomics
OPTIMA MX INT can be integrated perfectly into all types of dental unit. Visibility is greatly improved by the new, larger screen. Its unique new mounting system allows the screen orientation to be adjusted for optimum visibility in all situations.

Easy-to-operate navigation system
The new navigation system has been designed to facilitate programming and use of the OPTIMA MX INT. To reduce the number of operations you have to perform before starting operation, 20 of the 40 programs available to you have been preset.

Performance of the MX micromotor
The modular design of the OPTIMA MX INT system allows you to use, at your choice, between one and four MX micromotors and a turbine. The MX micromotor currently offers unmatched, exceptional performance by allowing work at low speeds (100 rpm) for applications such as endodontics, while ensuring precision and safety of treatment.

Savings of time and money
The MX system meets practitioners' highest demands for efficiency and economy. The (sterilisable) MX micromotor used with only two contra-angles assures you of time savings and minimum capital investment.

OPTIMA MX INT - Advantages that count:
- Broad speed ranges with only two contra-angles: from 100 to 40,000 rpm with CA 1:1 and from 500 to 200,000 rpm with CA 1:5
- High Speed for restorative operations
- Low speed for NiTi endodontics: automatic reversal of the direction of rotation when the selected torque is reached, automatic return to clockwise movement (after an adjustable time-out)
- 40 customisable programs
- Easy navigation system

Major functions modifiable at all times:
- Selection of one of the 40 programs
- Actual instrument speed
- Handpiece ratio
- With or without lighting
- Light intensity
OPTIMA MX
Table-top control module for MX micromotor, without modifying the unit

The OPTIMA MX system allows an air-driven system to be upgraded to electric operation. The control unit with touch-sensitive display offers functions replacing several conventional instruments. It can be placed on or attached to the table or one of its sides. To preserve perfect legibility, the display inclination is always adjustable. The large coloured touch-sensitive screen is easy to use, as the symbols and indications are clear and precise, facilitating parameter selection and setting according to your own customised values. The OPTIMA MX system brings operating safety and comfort up to a very high level.

OPTIMA MX set - REF 1700047-001
Comprising:
• 1 OPTIMA control unit with colour display touch screen, REF 1600459-001
• 1 MX micromotor, sterilisable, rotational speeds from 100 rpm to 40,000 rpm, REF 1600375-001
• 1 B4VX hose. Quick-connect coupling and bayonet connector. Standard length 1.7 m, REF 1600428-001
  • 1 transformer, 80 to 240 Vac, REF 1301109-001
  • 1 stylus, REF. 1300134-001

OPTIMA MX - Advantages that count:
• Broad speed ranges with only two contra-angles:
  from 100 to 4,000 rpm with CA 1:1 and from 500 to 200,000 rpm with CA 1:5
• High Speed Mode for restorative operations
• Low Speed Mode for NiTi endodontics. automatic reversal of the direction of rotation when the selected torque is reached, automatic return to clockwise movement (after an adjustable time-out)
  • 5 customisable programs.

Major functions modifiable at all times:
• Selection of one of the 5 programs • Actual instrument speed
  • Handpiece ratio • With or without lighting
  • Light intensity
DMX
Your unit’s control system controls the MX micromotor

DMX is available in several versions for integration into the unit. Your distributor-installer is able to upgrade your electric unit to the leading MX technology. You thus have available to you a high-performance instrument with your unit’s customary control system.

Our specialists will be pleased to inform you of the various possible solutions.

DMX - Advantages that count:

• Broad speed range with only two contra-angles: from 100 to 40,000 rpm with CA 1:1 and from 500 to 200,000 rpm with CA 1:5
• High Speed for restorative operations
• Low Speed for NiTi endodontics: automatic reversal of the direction of rotation when the selected torque is reached, automatic return to clockwise movement (after an adjustable time-out)
• Control of the MX micromotor, the most efficient on the market.

Increased therapeutic safety

Therapeutic safety at the operating site largely depends on the constant speed of the rotary instrument during operation. The ADA (American Dental Association) have thoroughly examined the drive systems (micromotor with attachment) of different manufacturers for the reliability of the manufacturer’s data and the micromotor’s performance. Our products obtained the following results during this test:

Most reliable system

Only the Bien-Air Micromotor MX, running with attachments CA 1:1 & CA 1:5, achieved the speed set on the display (control box).

Speed of electric handpieces with attachments at a control box setting ***

<table>
<thead>
<tr>
<th>Product (manufactured)</th>
<th>Attachment</th>
<th>Control box setting</th>
<th>Mean speed* rpm</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>CA 1:1</td>
<td>CA 1:5</td>
<td></td>
</tr>
<tr>
<td>Apex (Lares Research)</td>
<td></td>
<td>40,000</td>
<td>40,000*</td>
</tr>
<tr>
<td>EA-40LT (A-dec)</td>
<td></td>
<td>38,000</td>
<td>207,000</td>
</tr>
<tr>
<td>ELECTROtorque plus (Kavo)</td>
<td></td>
<td>37,000</td>
<td>195,000</td>
</tr>
<tr>
<td>Micromotor MX Series (Bien-Air)</td>
<td></td>
<td>40,000</td>
<td>200,000</td>
</tr>
<tr>
<td>Midwest eStylus (DENTSPLY Professional)</td>
<td></td>
<td>38,000</td>
<td>201,000</td>
</tr>
<tr>
<td>SIROtorque L+ (Sirona Dental Systems)</td>
<td>36,000</td>
<td>127,000</td>
<td></td>
</tr>
<tr>
<td>Ti-Max NL400 (Brasseler USA/NSK)</td>
<td>37,000</td>
<td>191,000</td>
<td></td>
</tr>
<tr>
<td>Titan E-lectric (DentalEZ Group/Star)</td>
<td>36,000</td>
<td>188,000</td>
<td></td>
</tr>
</tbody>
</table>

* Mean based on n=9 runs
** Expected bur speed would be 200,000 rpm

Strongest Performance

The MX is the only electric micromotor on the market which constantly keeps the set speed at a torque of 20 mNm.

Speed vs. torque for electric handpiece motors ***

*** Source: Publication of the ADA Council on Scientific Affairs, ADA Professional Product Review VOL. 2, ISSUE 1
MX Micromotor
The most powerful currently on the market

Brushless, sterilisable micromotor, with quick hose connection unique in the dental world.

High instrument torque reduces significant operating time and allows precise, efficient work, even at low rotational speed. MX is the only micromotor currently on the market which fully compensates for the increase in torque exerted on the instrument up to 20 mNm.

The new-generation MX micromotors have advantages that are unique in the dental world:
• High power at all speeds.
• Design without brushes and without position sensors, making the MX insensitive to fluids, and accordingly sterilisable in autoclave in accordance with ISO Standard 7785.
• Very-high-output micromotor with low running temperature even under continuous heavy loading.
  • Very broad speed range, from 100 to 40,000 rpm.
  • Long life, rugged, with vibration-free operation.
• Instant interchangeability thanks to the MX hose with integral quick-connect coupling, rotating through 360°.
  Its astute construction has enabled a reduction in the total micromotor-coupling length, offering improved manoeuvrability.
  • Near silent operation at low and high speeds.
  • Low maintenance requirements, facilitated by use of the same lubricant as for the handpieces.
    • E Standard coupling as per ISO 3964.
    • For instruments with or without light.

Warranty:
• Due to the quality of materials and the simplicity of this new brushless micromotor generation, Bien-Air is able to offer a 24-month full warranty.

References:
MX micromotor REF 1600375-001
Hose with quick-connect coupling REF 1600387-001
MX system - Simplicity and perfection
MX is the highest-performance system specially developed to simplify preparation and operations in the mouth. The MX system allows restorative and prophylactic operations to be performed with only two instruments, and provides a complete, reliable solution in endodontics. It is the only system to offer perfect safety due to full control of bur speed and torque.

The MX system is available in three variants:

- **OPTIMA MX**
  
  Table-top control module

- **OPTIMA MX INT**
  
  Control system to be integrated into the unit (retrofit)

- **DMX**
  
  Control system integrated into the unit