TECHNICAL DATA

Product:	VORTICE®	NUCLEUS®LED	DEFINITIVE® - DEFINITIVE®LED
Refererence:	REF 224.40 (4-hole connection) REF 224.52 (rapid connection)	REF 612.00 (with light)	REF 600.00 (without light) REF 602.00 (with light)
Rotation Speed:	4000 ÷ 22000 rpm	100 ÷ 40000 rpm	1000 ÷ 40000 rpm
Maximum torque:	2.7 Ncm	3.5 Ncm	3.5 Ncm
Spray system:	E-type internal	E-type internal	E-type internal
Light source:	-	High-brightness white LED	High-brightness white LED
Air pressure:	2.4 ± 3.0 bar (34.8 ÷ 43.5 PSI) (drive)	1 ÷ 4 bar (cooling)	1 ÷ 4 bar (cooling)
Maximum air consumption:	63 Nl/min	20 Nl/min	26 Nl/min
Sterilization:	by autoclave up to 134 °C/2 bar	by autoclave up to 134 °C/2 bar	-
Weight:	96 g.	81 g.	87 g.
Standard conformity:	ISO 14457, ISO 3964 ISO 9168	ISO 14457, ISO 3964, CEI EN 60601-1, CEI EN 60601-1-2, IEC 80601-2-60	ISO 14457, ISO 3964, CEI EN 60601-1, CEI EN 60601-1-2, IEC 80601-2-60
Guarantee:	2 years	2 years	2 years

Product:	QUARK®CA - QUARK®CAL	QUARK®ST - QUARK®STL
Refererence:	REF 650.00 (without light) REF 652.00 (with light))	REF 660.00 (without light)) REF 662.00 (with light))
Maximum rotation Speed:	40000 rpm	40000 rpm
Spray system:	E-type internal	E-type internal
Sterilization:	by autoclave up to 134 °C/2 bar	by autoclave up to 134 °C/2 bar
Weight:	63 g.	89 g.
Standard conformity:	ISO 14457, ISO 3964	ISO 14457, ISO 3964
Guarantee:	2 years	2 years

Product:	DUOPAD®	BMC40	BMC60	CONV24
Refererence:	REF 392.00 REF 398.00	REF 390.00	REF 397.00	REF 394.00
Input voltage:	13 Vdc ± 20%	32 Vdc ± 10%	32 Vdc ± 10%	24 Vac ± 10%
Maximum current:	100 mA	6 A	7 A	8 A
Sizes:	73x117x24 mm	98x58 mm	100x70 mm	60x50 mm
Standard conformity:	CEI EN 60601-1 CEI EN 60601-1-2	CEI EN 60601-1 CEI EN 60601-1-2	CEI EN 60601-1 CEI EN 60601-1-2	CEI EN 60601-1 CEI EN 60601-1-2
Guarantee:	2 years	2 years	2 years	2 years

Product:	PPOT	MOT2
Refererence:	REF 395.00	REF 396.00
Input pressure:	0÷3 bar	-
Input voltage:	5 Vdc	24 Vdc ± 20%
Guarantee:	2 years	2 years

CE 0051

IQNet Registration N° IT-1224

ISO 13485

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MICROMOTORS/Cat.104EN/2023

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MICROMOTORS

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SIMPLIFYING DENTAL MOTION

- VORTICE®
- NUCLEUS®LED
- DEFINITIVE®LED
- QUARK®CAL

VORTICE®

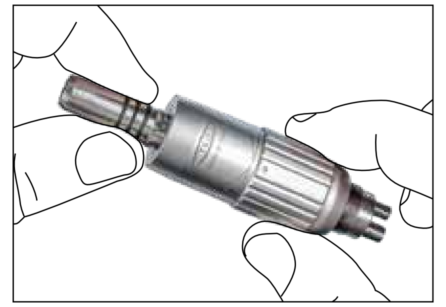
Pneumatic micromotor

Thanks to its improved rotor and rotation chamber, which is coated with special hard material, the VORTICE® micromotor now features higher power and reliability yet keeping smooth and quiet running. Its greater performance allows torque to keep extremely high and stable in the whole speed range, even under sustained load.
Micromotor has got internal spray system which fits any E-type contra-angle or straight handpiece.
Micromotor is available with standard 4-hole connection or rapid connection (Multiflex®-compatible).

Lubrication by means of the SO2000 service oil.

Multiflex® is a registered trademark of Kaltenbach & Voigt GmbH, Germany.

The rapid connection, together with the GYROFLEX® rapid coupling, allows the instrument to turn freely and smoothly throughout 360 degrees.

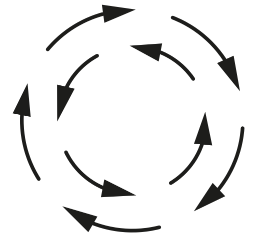


Speed can be adjusted in both forward/reverse drive by means of the rotating nut.

NUCLEUS®LED

Special brushless electric micromotor for endodontic procedures

BMC60 special motor drive



Reciprocating movements

NUCLEUS®LED micromotor

NUCLEUS®LED is the new innovative brushless electric micromotor which has been especially developed for endodontic procedures.
High flexibility and high movement precision are the key features offered by this new device.

Micromotor, whose speed ranges from 100 to 40000 RPM, has got LED illumination and standard ISO coupling which allows connection to any handpiece with fiberoptics and internal spray. The electric micromotor does not require any maintenance and is equipped with a blue non-return O-ring for spray water. Furthermore, micromotor can be sterilized in autoclave up to 134 °C / 2 bar.

Precise Torque control, Auto-Reverse and Rocking/Reciprocating functions are also special features available with the new BMC60 electronic board.

During reciprocation, the connected endodontic file is first driven in a cutting direction and then it is reversed so as to release. As the angle in the cutting direction is greater than the angle in the reverse direction one complete rotation is completed in several reciprocating movements and therefore the instrument progresses towards the apex.
Endodontic procedures carried out with reciprocating movements, reportedly, have numerous advantages over traditional ones.

A micromotor for Implantology is also available.

DEFINITIVE®LED

Brushless electric micromotor

DEFINITIVE®LED is the powerful 3-phase induction electric motor which does not absolutely require any maintenance.
Compactness, higher reliability and reduced noise are but a few of the various new features offered by this best-selling electric motor.
The innovative design of the windings and rotor allows high efficiency and superior performance, yet keeping total length of the motor very short.
Micromotor has got internal spray system which fits any E-type contra-angle or straight handpiece.
Once coupled to the DEFINITIVE®LED electric motor, any E-type dental handpiece with fiberoptics can immediately get advantage of the new LED technology which, simply and efficiently, allows natural daylight quality illumination of the operating area and produces a superior uniform light.
Micromotor is also equipped with a non-return O-ring for spray water.

Smaller in size than other micromotors, DEFINITIVE® is extremely light-weight and perfectly balanced.

Connection of the motor to the supply silicone hose has been further simplified thanks to the use of a electrified 4-hole connection.

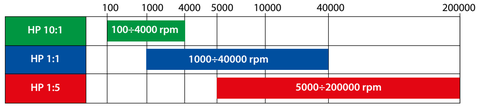
540°- swivelling connection through the special silicone hose

DUOPAD®

Control panel

With the new compact DUOPAD® control panel, it is now possible to easily install and control two instruments: the DEFINITIVE®LED electric micromotor or NUCLEUS®LED micromotor and the TITANUS®E/S/ ELED/SLED piezo-electric scalers. It is also possible to control two separate electric micromotors.
The DUOPAD® control panel is meant to be easily fixed to the existing dental Unit's frame and can be directly connected to the BMC40, BMC60 and USC60 electronic boards. Commands and information are exchanged and transmitted via the integrated RS232 serial port.

Information on the status of the active instrument is clearly displayed on the graphic LCD. By means of the soft-touch keyboard, it is possible to choose the instrument and select the appropriate operating mode. If the micromotor is selected, it is possible to adjust speed and direction mode. It is also possible to select the gear ratio of the used contra-angle handpiece: the real output speed is therefore worked out and displayed on the LCD. If the scaler is chosen, it is possible to select the normal/ perio/endo mode and adjust output power correspondingly.



Micromotors can be used with any speed-reducing or speed-increasing contra-angle handpiece with coupling compliant to ISO 3964 standard.

DEFINITIVE®LED UNIT

Compact control unit for electric micromotor

By using this new compact control unit it is now possible to take advantage of the powerful brushless
micromotor technology and upgrade an existing dental chair simply and efficiently.
Just position it over your chair's tray, plug in power supply, connect your existing turbine hose connector and you are ready to work! You can choose your stable operating speed, variable from 1000 to 40000 RPM, and the direction mode. Then you can start the electric micromotor by means of the existing unit's foot pedal

Rear connections

BMC40

Motor drive

The special BMC40 electronic control board has been designed to be installed into virtually any dental units with very simple wirings.
Besides various analogue control signals, higher flexibility can be achieved by the RS232 serial interface and specific control software. The special vector control provided by the BMC40 module allows the DEFINITIVE® motor to run smoothly and efficiently throughout the entire speed range. Preset speed is kept constant, even under sustained loads, throughout the whole speed range.
Three additional devices, the CONV24 voltage converter, the PPOT pneumatic potentiometer and the MOT2 switcher, are also available to simplify integration into dental Units.

QUARK®CAL / STL

Compact contra-angle and straight handpiece

Handpieces with ergonomic design, available with or without a high-efficiency fiber-optic glass rod.
The reduced weight and its perfectly balanced shape provide good tactile grip whereas the reduced head size facilitates access to the molar area.
The handpieces feature smart chrome coating and are equipped with high-precision ball-bearings and gears which allow superior reliability and high resistance to wear and corrosion.
The head locking mechanism is made for CA burs (Ø 2.35 mm) and the connection is standard so that handpieces can be connected to any brand of micromotor. The match with NUCLEUS®LED and DEFINITIVE®LED micromotors is particularly elegant.