

## VORTICE®

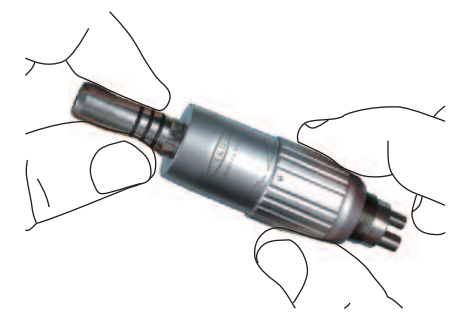
pneumatic micromotor

Thanks to its improved rotor and rotation chamber, which is coated with special hard material, 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).

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.

### TECHNICAL DATA

Product:	DEFINITIVE® - DEFINITIVE® LED	VORTICE®
Reference:	REF 600.00 (without light) REF 602.00 (with light)	REF 224.40 (4-hole connection) REF 224.52 (rapid connection)
Rotation speed:	1000 ÷ 40.000 rpm	4000 ÷ 20.000 rpm
Maximum torque:	3.5 Ncm	2.7 Ncm
Spray system:	E-type internal	E-type internal
Light source:	high-brightness white LED	-
Air pressure:	1 ÷ 3 bar or 14.5 ÷ 43.5 psi (cooling)	2.4 ÷ 3.0 bar or 34.8 ÷ 43.5 psi (drive)
Maximum air consumption:	26 NI/min	63 NI/min
Weight:	88 g	89 g
Standard conformity:	ISO 14457, ISO 3964, CEI EN 60601-1, IEC 80601-2-60	ISO 14457, ISO 3964, ISO 9168
Guarantee:	2 years	2 years

Product:	DUOPAD®	BMC40	CONV24
Reference:	REF 392.00	REF 390.00	REF 394.00
Input voltage:	15 Vdc ± 20%	32 Vdc ± 10%	24 Vac ± 10%
Maximum current:	22 mA	6 A (10 s)	8 A
Sizes:	73x117x24xmm	98x58 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
Guarantee:	2 years	2 years	2 years

Product:	PPOT
Reference:	REF 395.00
Input pressure:	0 ÷ 3 bar or 0 ÷ 43.5 psi
Guarantee:	2 years



UNI CEI EN ISO 13485

MICROMOTORS / Cat.072UK/2017



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DEFINITIVE® LED  
DUOPAD®  
VORTICE®



SIMPLIFYING DENTAL MOTION



## DEFINITIVE<sup>®</sup>LED

brushless micromotor

Without brushes and without bulb, DEFINITIVE<sup>®</sup>LED is the powerful electric motor which does not absolutely require any maintenance. Compactness, long-life illumination, higher reliability and reduced noise are but a few of the various features offered by this special 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.

Once coupled to the new DEFINITIVE<sup>®</sup>LED electric motor, any E-type dental handpiece with fiber optics can immediately get advantage of the LED technology which, simply and efficiently, allows natural daylight quality illumination of the operating area and produces a superior uniform light pattern. With LED technology you can forget any bulb changing. The innovative LED illumination integrated in the electric motor produces higher brightness thus assuring clearer vision during operation.

Micromotor is also equipped with a non-return O-ring for spray water.



Smaller in size than many other micromotors, DEFINITIVE<sup>®</sup> 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<sup>®</sup>

control panel



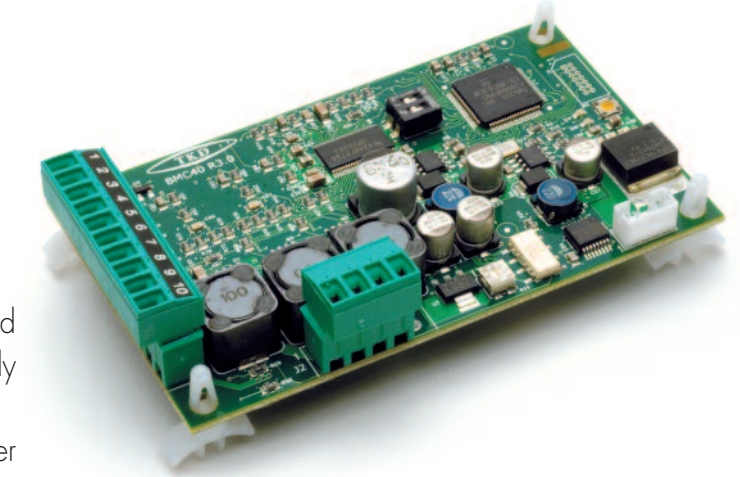
	100	1000	4000	5000	10000	40000	200000
HP 10:1	100 ÷ 4000 rpm						
HP 1:1		1000 ÷ 40000 rpm					
HP 1:5			5000 ÷ 200000 rpm				

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

With the compact DUOPAD<sup>®</sup> control panel, it is now possible to easily install and control two instruments: the DEFINITIVE<sup>®</sup>LED electric micromotor and the TITANUS<sup>®</sup>E / TITANUS<sup>®</sup>S piezo-electric scaler (or another instrument). It is also possible to control two separate electric micromotors. The DUOPAD<sup>®</sup> control panel is meant to be easily fixed to the existing dental Unit's frame and can be directly connected to the BMC40 and/or 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 LCD graphic interface. 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.

## 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 accurate control software.

Two additional devices, the CONV24 voltage converter and the PPOT pneumatic potentiometer, are also available to simplify integration into pneumatic Units.

The special vector control provided by the BMC40 module allows the DEFINITIVE<sup>®</sup> 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.

The BMC40 electronic board has got small sizes, thanks to the total use of SMT components.

