

KaVo laboratory drives

# The stars among the laboratory drives!

The top models following the successful K9 laboratory drives



KaVo. Dental Excellence.

# K5plus

## The compact all-rounder.

With the K5plus laboratory handpiece we offer an effective entry-level model for a flexible KaVo laboratory drive solution.

In this segment the handpiece delivers by means of its performance range of 4.5 Ncm and a maximum speed of 35,000 rpm.

Due to the patented KaVo one-shaft system, the drive is durable, robust and very easy to service. The compact, short shape and the low weight provide fatigue-free operation.



### Quality

- **Maximum stability** owing to ball bearing with patented, dirt-repellent sealing system.
- **Easy to service:** ball-bearing exchange can be easily and quickly be done in the lab.
- **Maximum reliability** due to tried and tested quick-clamping system.
- **Long service life** and less vibrations due to robust and patented one-shaft system.

# K-POWERgrip

## Effective and powerful.

With its low-vibration and low-noise performance, K-POWERgrip presents a strong point. With a maximum of 7 Ncm and 50,000 rpm, all common materials can be machined very precisely, thanks to the high torque.

With the supple soft grip, the handpiece feels comfortable and rests securely in the hand.

The handpiece surface features low heat generation during use.



### Performance

- **High traction** with a high 7-Ncm torque.
- **For all common materials**, speeds of up to 50,000 rpm in clockwise mode and 5,000 rpm in anticlockwise mode.

### Quality

- **Maximum stability** owing to ball bearing with patented, dirt-repellent sealing system.
- **Easy to service:** ball-bearing exchanges can be easily and quickly be done in the lab.
- **Maximum reliability** due to tried and tested quick-clamping system.
- **Durability** due to low handpiece heat generation.

# K-ERGOgrip

## The powerful comfort solution.

The K-ERGOgrip delivers with its handy, ergonomic shape and its lightness. The ergonomics of the different handle sleeves with soft grip have been developed together with the Fraunhofer Institute and have been optimally balanced for handling. It is hardly possible to achieve a more joint-friendly working position.



### Ease and convenience

- **Joint-friendly working position** due to ergonomic shape of the two handle sleeves.
- **Light and optimally balanced.**
- **For left-hand users** also 50,000 rpm in anti-clockwise operation
- **Minimal warming** of the handpiece for a pleasant working sensation.

### Performance

- **High traction** with a high 7-Ncm torque.
- **For all common materials**, speeds of up to 50,000 rpm in clockwise mode.
- **Optimum force transmission** of the new chuck system due to a 40 % higher retention force.

### Quality

- **Maximum stability** owing to ball bearing with patented, dirt-repellent sealing system.
- **Easy to service:** Ball-bearing exchange can be easily and quickly be done in the lab. Removal of the chuck for cleaning without tools.
- **Maximum reliability** due to higher chuck retention force.
- **Long service life** and less vibrations due to robust and patented one-shaft system.

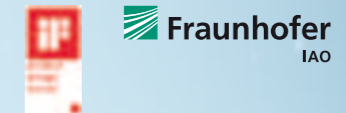
EASE AND CONVENIENCE

PERFORMANCE

QUALITY

The new clamping system offers an impressive retention force of 100 N and can be easily and quickly removed for cleaning.

Due to the new and safe clamping system, left-hand users can also work anti-clockwise at up to 50,000 rpm with the K-Control TLC control unit.



K-ERGOgrip (above): Ergonomic holding position, gentle on the wrist. No "bending" as with other handpieces (example below)

# KaVo laboratory handpieces at a glance.

	K-ERGOgrip	K-POWERgrip	K5plus	K4plus	K9	SF
Speed	1,000 – 50,000 rpm in clockwise operation No limit in anti-clockwise operation	1,000 – 50,000 rpm in clockwise operation Anti-clockwise operation limited to 5,000 rpm	1,000 – 35,000 rpm in clockwise operation Anti-clockwise operation limited to 5,000 rpm	1,000 – 30,000 rpm in clockwise operation Anti-clockwise operation limited to 5,000 rpm	1,000 – 25,000 rpm in clockwise operation Anti-clockwise operation limited to 5,000 rpm	5,000 – 60,000 rpm in clockwise operation 50,000 rpm with K-Control and K-Control TLC Anti-clockwise operation limited to 5,000 rpm
Torque	max. 7 Ncm	max. 7.0 Ncm	max. 4.5 Ncm	max. 4 Ncm	max. 3.3 Ncm	max. 5.7 Ncm
Power	max. 160 Watt	max. 150 Watt	max. 85 Watt	max. 85 Watt	max. 42 Watt	max. 125 Watt
Chuck system	Retention force min. 100 N Chuck exchange without tools	Retention force min. 70 N Chuck exchange with tool	Retention force min. 70 N Chuck exchange with tool	Retention force min. 70 N Chuck exchange with tool	Retention force min. 70 N Chuck exchange with tool	Retention force depends on tightening of the screw-type chuck
Temperature increase when operating	Extra low + 5°K	Very low + 9°K	Low + 13°K	Low	Low	Low
Dimensions	L = 140 mm short D = 28 – 38 mm oval for peeling handle D = 11 mm stylus position	L = 165 mm D = 25 – 29 mm oval for peeling handle D = 14 mm stylus position	L = 149 mm D = 25 – 28 mm peeling handle D = 16 mm stylus position	L = 149 mm D = 25 – 28 mm peeling handle D = 16 mm stylus position	L = 149 mm D = 27 – 32 mm peeling handle D = 16 mm stylus position	L = 175 mm D = up to 33.5 mm peeling handle D = 16 mm stylus position
Weight	Dental handpiece 202 g cable 107 g	Dental handpiece 250 g cable 105 g	Dental handpiece 216 g cable 103 g	Dental handpiece 216 g cable 103 g	Dental handpiece 230 g cable 190 g	Dental handpiece 350 g cable 190 g
Ease and convenience	2K Softgrip shank Two different, exchangeable ergonomic handles Optimum hand-arm angle	Low-vibration 2K Softgrip shank Flexible and light handpiece cable	Light and flexible handpiece cable	Light and flexible handpiece cable		
Easy to service	Low number of component parts One-shaft system (only 2 screw connections for exchanging both ball bearings)	anti-soiling cap Patented sealing system	Low number of component parts One-shaft system (only 9 component parts) anti-soiling cap	Low number of component parts One-shaft system (only 9 component parts) anti-soiling cap	anti-soiling cap	
Control	Can be connected to K-Control TLC control units with knee, foot and table versions (and old K-Control knee, foot, table)			Can only be connected to control unit K4 (no longer available)	Can be connected to K-Control TLC control units with knee, foot and table versions (and old K-Control knee, foot, table)	Can only be connected to control unit K-Control (no longer available)
Actuation of accessory devices	with K-Control TLC via 12-V relay			-	-	-

## From the practice.

### 5 years of experience with the K-ERGOgrip handpiece.

The ergonomics of the K-ERGOgrip are superior, as you'd expect from KaVo so it's designed to sit comfortably in anyone's hands. Whether you're cutting, processing steel or performing any large relinings that have to be ground with a high plastic content, the K-ERGO-grip will be comfortable to use.

- Not too much strain on the wrist.
- No tired or tingling fingers.
- No muscle tenseness in the forearm.
- Strong grip with the hand no longer required.
- No numbness after prolonged processing.

Especially due to the ergonomics and because the center of gravity is closer to the front, it can be managed distinctly more flexibly and sensitively than any conventional one. Thus especially in the noble metal or ceramic sector the K-ERGOgrip can be handled between the fingers like a fountain pen.

Another positive aspect worth mentioning is the fact that the handpiece can rotate counter-clockwise without speed limitation – ideal for left-hand users.

The cleaning of the chuck mechanism is now done without the use of tools, frequently and by everybody.

A fantastic technical handpiece that represents a quantum jump in ergonomics that my team and I do not want to ever do without.



Dental technician Manfred Horn shares his experience with the KaVo K-ERGOgrip handpiece.

# KaVo K-Control TLC control units.

## Flexible control for maximum occupational safety.

One control unit for different handpieces – just exchange via automatic handpiece identification, thereby flexible exchange of handpieces. The investment in the KaVo control unit offers maximum flexibility – now and in the future. We have developed this generation so that older handpieces are also recognized and can be easily exchanged.

## Triggering options of the dust extraction equipment with the K-Control TLC.

Option 1	Automatic operation, current consumption control during suction
Option 2	Control line K-Control for KaVo dust extraction equipment order no.: 1.000.7198
Option 3	Relay output 12-V jack socket

## Select and store quickly and easily.

4 storable programmes:

- Constant speed via an automatic readjustment.
- Save within 4 seconds and thus a 4-second speed control function.
- 4-colour display for easy distinction.
- Quick access to the preset speeds and torque for repeated work by simply pressing the speed control.



## Advantages of the KaVo K-Control TLC control units at a glance:

- One control unit for different handpieces – just exchange via automatic handpiece identification, thereby flexible exchange of handpieces. An investment in the future!
- Select individually between table, knee or foot control depending on requirements or available space.
- Just suspend knee version from existing knee suspension.
- Safety switch for enabling speeds of over 30,000 rpm.
- Clockwise or anti-clockwise rotation depending on handpiece of up to 50,000 rpm each.

## KaVo handpieces and control units working together.

	K-ERGOgrip 4944	K-POWERgrip 4941	K5plus 4911	K4plus 4912	K9 4930 / 970 / 960	SF 4005	K12* 4940	K11* 4990	K5* 4910	K4* 4914
K-Controll TLC (4955, 4956, 4957)	X	X	X		X		X	X	X	
K-Control* (4960, 4965, 4970)	X	X	X		X	X	X	X	X	
K4 control units* (4974, 4964, 4954)				X						X

A large number of KaVo handpieces are compatible with the control units.


\* no longer available



K-Control TLC foot

K-Control TLC knee

K-Control TLC table



# Always to your benefit:

The KaVo Service advantage.

Easy and quick cleaning.

Ball bearings can be easily  
exchanged (see Instructions for Use)

Low service / maintenance expenditure.  
Unbeatable value for money.



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