

# KaVo Laboratory Handpiece Collection

Precision at your Fingertips



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# KaVo Laboratory Drives

## K5plus

**Convenient, flexible and extremely powerful**



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

### 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 comfortable operation.

#### Quality

- **Maximum stability** due 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

**Dynamic 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.

### Effective and powerful.

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 counterclockwise mode.

#### Quality

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

### The powerful comfort solution.

#### Ease and convenience

- **Ergonomic working position** due to contoured shape of the two handle sleeves.
- **Light and optimally balanced.**
- **For left-hand users** also 50,000 rpm in counter-clockwise operation
- **Minimal warming** of the handpiece for a comfortable 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 is due to a 40 % higher retention force.

#### Quality

- **Maximum stability** due to ball bearing with patented, dirt-repellent sealing system.
- **Easy to service:** Ball-bearing exchange can 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.

## K-ERGOgrip Optimum Ergonomics



The K-ERGOgrip delivers with its ergonomic shape and lightweight. 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 hard to achieve a more comfortable working position.

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 counter-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)*

**Fraunhofer**  
IAO



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	K-ERGOgrip	K-POWERgrip	K5plus	K4plus	K9	SF
Speed	1,000 – 50,000 rpm in clockwise operation Full speed in counter-clockwise operation	1,000 – 50,000 rpm in clockwise operation Counter-clockwise operation limited to 5,000 rpm	1,000 – 35,000 rpm in clockwise operation Counter-clockwise operation limited to 5,000 rpm	1,000 – 30,000 rpm in clockwise operation Counter-clockwise operation limited to 5,000 rpm	1,000 – 25,000 rpm in clockwise operation Counter-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 Counter-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.

Due to the ergonomics and because the center of gravity is closer to the front, it can be managed with more flexibility and sensitivity than any conventional one. When using 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.  
Comfortable Control



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.: 1000.7198
Option 3	Relay output 12-V receptacle

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-Control 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

Select and store quickly and easily.

4 storable programs:

- Save within 4-seconds and thus a 4-second speed control function.
- 4-color 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, easy 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 counter-clockwise rotation depending on handpiece of up to 50,000 rpm each.



K-Control TLC foot



K-Control TLC knee



K-Control TLC table





## KaVo MASTERspace

### Discover greater efficiency and timeless design



As one of the world's largest system providers, KaVo has accumulated decades of competence in high-quality laboratory equipment. With a high-performing team of experienced planning specialists, we develop installation solutions that are exactly customized to meet your requirements.



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