

# The smallest of the KL family: Cold light for all requirements

## Why cold light?

Cold light is used in a wide variety of fields – wherever visible light is required but without the infrared component normally present in light. The KL 200 cold light source emits visible light which is virtually free of thermal components and uses bundled glass fibers to transmit the light to the object under examination.

## Cold, compact and capable

The KL 200 is a great little device. Its space requirements may be small but its performance is big.

The KL 200 has an attractive modern design and is manufactured using top-quality materials.

Last but not least, the KL 200's ease of operation underlines its professional qualities, illuminating your objects perfectly with cold light. And all this at a favourable price.

## Looks good

The functional details of KL 200 are packaged in an elegantly-designed casing.



# Technical specifications KL 200

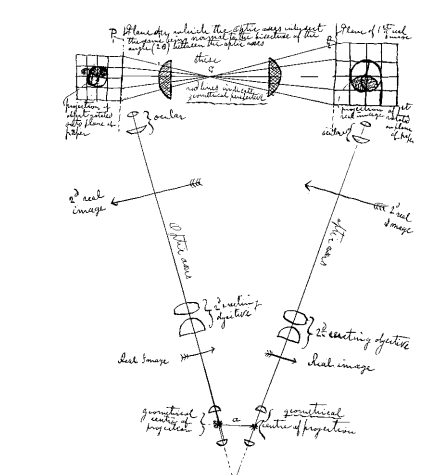
Features	Values	Tested in accordance with
<b>General specifications</b>		
Typ designation	-	KL 200
Dimensions (w x d x h) mm	-	125 x 205 x 120
Mass kg	-	approx. 1.5
Cooling	-	natural convection
Ambient temperature °C	-	+10...+40
Noise emission dB (A)	-	none
IP protection level	-	IP 20
<b>Electrical specifications</b>		
Operating voltage V	-	230 or 120
Frequency Hz	-	50...60
Max. power consumption VA	-	24
Fuses	-	230 V: primary T 125mA 120 V: primary T 250mA
Insulation	-	protection class II
Type of bulb	-	halogen reflector bulb
Bulb voltage rating V	-	8
Bulb power rating W	-	20
Average service life of bulb (stage III) h	-	300
<b>Light-technical specifications at light guide input level</b>		
Illumination Mix	-	4.5
Maximum light-technically usable diameter mm	-	6
Light-generating efficiency lm/W	-	approx. 7
Angle of light entry (2 $\alpha$ eff) degrees	-	approx. 55
Measures to reduce IR-radiation	-	cold light reflector
Approved to	-	230 V: VDE SEV 120 V: CSA (C/US)
		EN 61010-1 EN 61010-01 CSA C22.2 NO.1010.1

# Ideal cold light source for Greenough and telescope systems

The KL 200 and Greenough-style stereo microscopes

Nowadays a classical combination: the earliest model of the stereo microscope as designed by Greenough, now used in conjunction with a cold light source. The KL 200 is indispensable here, of course!

Even Horatio S. Greenough would have been delighted if he could have used a KL 200 to illuminate his specimens when he designed his microscope on the 20th September 1897.



Original hand sketch by H.S. Greenough

KL 200, stereo microscopes and macroscopes with main lens

Additional fields of application present themselves to the KL 200 when used in connection with a common main lens in stereomicroscopes and macroscopes.

This illustration shows a KL 200 with a 6-point ring light.

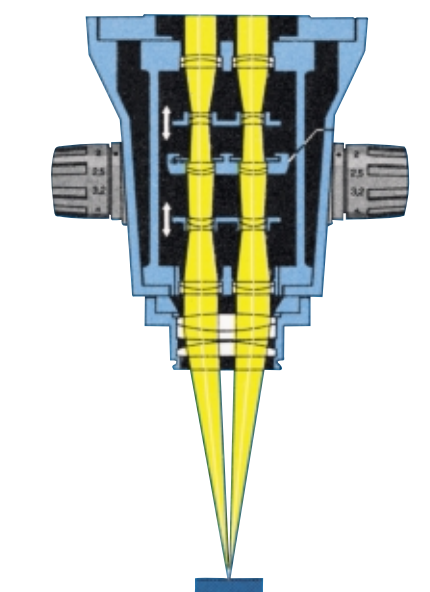
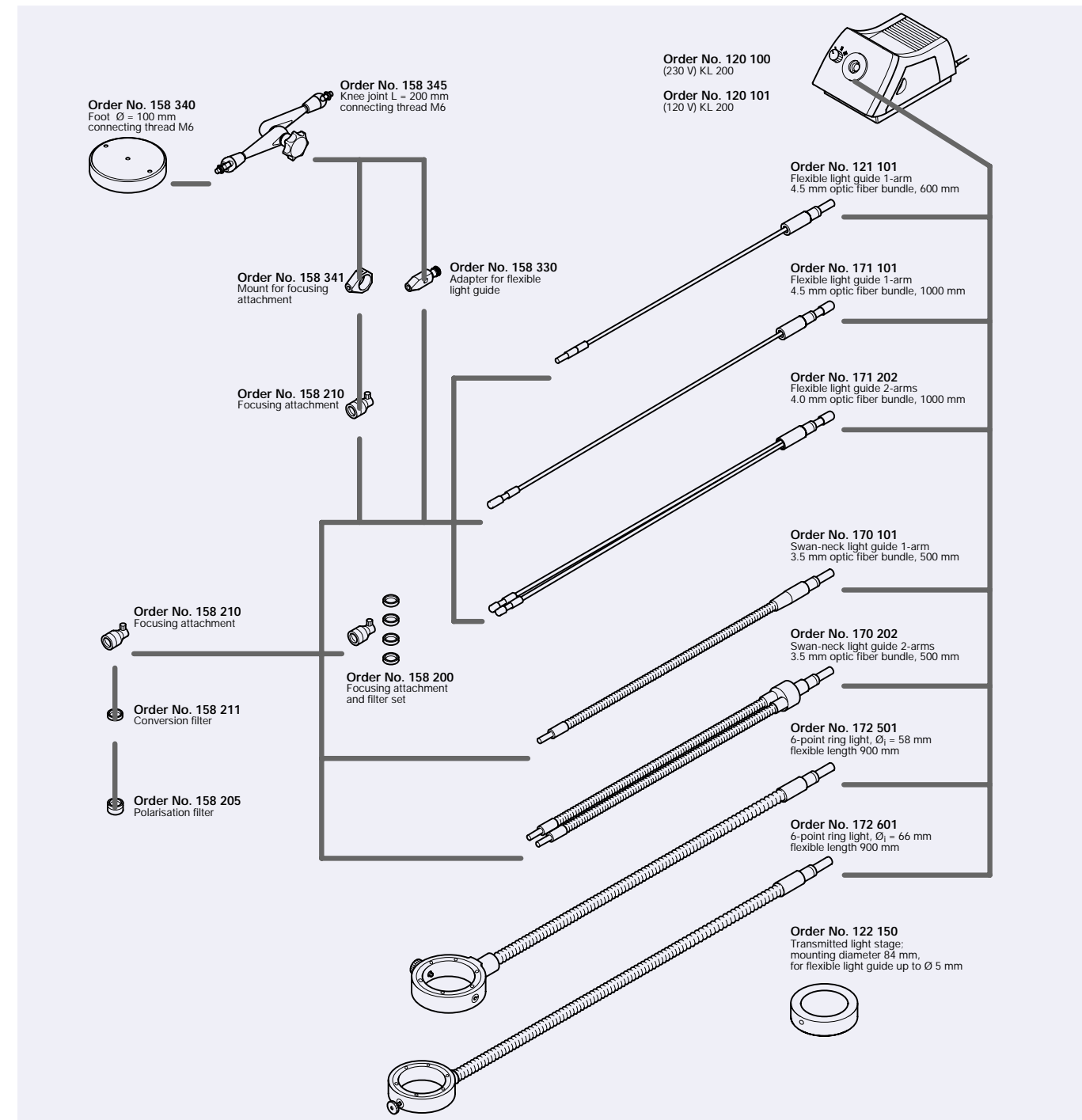


Diagram showing a telescope system

**The technological principle**  
 The brightness of the cold light source can be controlled in three stages. When stage I is used, the cold light reflector bulb can expect to render a service life up to 10 000 h; at stage III, the service life is around 300 h. At this stage, a colour temperature of 3200 K is achieved, making it ideal for use with artificial-light films. No tools are required to replace the reflector bulb. When the bulb compartment is opened, the electricity supply is interrupted; this is a sensible technical design feature fully in keeping with the requirements of state-of-the-art technology. Since no fan is required in this model, the light source is absolutely vibration-free. The KL 200 is compact, easy-to-use, maintenance-free and has been tested and approved in accordance with the relevant safety standards. Of course, the KL 200 also bears the European conformity symbol <math>\llcorner</math> (230 V - version only).

**Accessories**  
 Thanks to its extensive range of accessories, the KL 200 can be used in a very wide variety of applications. Whether for your hobby or for your professional needs, wherever you need cold light for illumination, we can provide you with the suitable accessories. The system diagram on the rear page of this brochure provides you with an overview of our entire range.

## System diagram KL 200



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## The KL 200 Cold, compact and cost-effective



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