#### Inverted microscope KERN OCL-2



### LAB LINE The variable inverted model for the flexible user in vocational training and the laboratory

#### Features

STANDARD

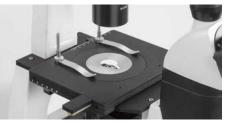
- The KERN OCL is a very easy to use, robust and stable inverted microscope for all common routine applications, producing impressive images.
- These trinocular microscopes are equipped with wide field eyepieces with a large field of view, diopter adjustment and infinity corrected plan achromatic objectives as standard.
- A nosepiece for up to 5 objectives, a large, mechanically adjusted stage and a phase contrast set are also provided as standard with the microscope.

- The Abbe condenser with its aperture diaphragm and the long 72 mm working distance, together with the fine, 0,001 mm scale focus, sets standards in this microscope class.
- The following optional accessories are available: A variety of eyepieces, objectives for a large working distance, a fixed stage and much more.
- One of the central features of this variable and simultaneously robust series of inverted microscopes is the stable and precisely adjustable mechanism.
- This model is availabe for both, right- and lefthanded persons.





Trinocular head



Stage





Phase contrast slide

Coaxial pinion drive for x/y Coarse and fine height adjustment

#### Technical data

- Eyepieces: HWF 10x20 mm
- Objectives: 10x / 20x / 40x und 20xPH
- Overall dimensions
   WxDxH 220x510x530 mm
- Net weight approx. 13 kg
- OCL 251
- · Right handed version

#### OCL 252

Left handed version

Please find detailed information in the following charts.

TRINO ABBE	HAL PH INFINITY 230	V 1 DAY WARRANTY BIN	D SCALE		
Model	Standard configuration				
KERN	Optical system	Tube	Illumination		
OCL 251	Infinity	Trinocular	6V / 20W Halogen (transmitting)		
OCL 252	Infinity	Trinocular	6V / 20W Halogen (transmitting)		

OPTION

00

## Inverted microscope KERN OCL-2



Interface         OCL 281         OCL 281         OCL 281         OCL 281         OCL 281           Her fac/ 87 0 mm         0         0         088-5240         0           Figure (C) 1 mm         0         0         088-5240         0           HWF 10/ 7 0 20 mm feasule 0,1 mm         0         0         088-5240         0           HWF 10/ 7 0 20 mm feasule 0,1 mm         0         0         088-5240         0           HWF 10/ 7 0 20 mm feasule 0,1 mm         0         0         088-5240         0           HWF 10/ 7 0 20 mm feasule 0,1 mm         0         0         088-5240         0           HWF 10/ 7 0 20 mm feasule 0,1 mm         0         0         088-5240         0           HWF 10/ 7 0 20 mm         10 / 7.0         0         0         088-5240           HWF 10/ 7 0/0         0 <td< th=""><th colspan="3">Model outfit</th><th colspan="2">Model KERN</th><th>Order number</th><th></th></td<>	Model outfit			Model KERN		Order number	
Binocular ubb         WF 16x/0 13 mm (reticule 0,1 mm)         OO         OO         OBB-A2406           HWF 10x/0 20 mm (reticule 0,1 mm)         O         O         OBB-A2401           HWF 10x/0 20 mm (reticule 0,1 mm)         OO         OBB-A2401         OBB-A2401           HWF 10x/0 20 mm (reticule 0,1 mm)         OO         OBB-A2401         OBB-A2401           HMF 10x/0 20 mm (reticule 0,1 mm)         OO         OBB-A2401         OBB-A2401           HMF 10x/0 20 mm (reticule 0,1 mm)         O         O         OBB-A2413           HMF 10x/0 20 mm (reticule 0,1 mm)         O         O         OBB-A2413           1000000000000000000000000000000000000				OCL 251	OCL 252	-	
Bypeices         HWF 10x / 0 2 mm (reliade 0,1 mm)         0         0         088.4240           HWF 10x / 0 2 mm (reliade 0,1 mm)         0         0         088.4210           HWF 10x / 0 2 mm (reliade 0,1 mm)         0         0         088.4210           HWF 10x / 0 2 mm (reliade 0,1 mm)         0         0         088.4210           HWF 10x / 0 13         0         0         088.4210           HWF 10x / 0 2 mm (reliade 0,1 mm)         0         0         088.4211           HWF 10x / 0 13         0         0         0.08.4211           10x / 0,25         -         0         0         0.08.4211           60x / 0,40         -         0         0.08.4211         0           60x / 0,70         0         0.08.4211         0         0.08.4211           10x / 0,60         -         0.08.4201         0         0.08.4201           10x / 0,60         -         0.08.4201         0         0.08.4201 <td< td=""><td></td><td>HWF 10x / Ø 20 mm</td><td></td><td>••</td><td>••</td><td>OBB-A2403</td><td></td></td<>		HWF 10x / Ø 20 mm		••	••	OBB-A2403	
project         INF         IOV         0         0         0BB A2410           HWF         IOV / 0 20 mm (reticule 0,1 mm)         0         00         080-00         080-4240           IOV // 10 CM/MIDE         0         0         0         0BB-A240         0           IOV // 10 CM/MIDE         0         0         0BB-A2413         0           IOV // 10 CM/MIDE         0         0         0BB-A2413         0           IOV // 0.0         0 <t< td=""><td></td><td colspan="2">WF 16x / Ø 13 mm</td><td>00</td><td>00</td><td>OBB-A2406</td><td></td></t<>		WF 16x / Ø 13 mm		00	00	OBB-A2406	
HWF loc/ 0 20 m (redioule 0,1 m)     0     0     08.42410       IVMF loc/ 0 22 main     IVMF loc/ 0 20 m (redioule 0,1 m)     00     000     008.4240       Infinity Plan actionality objectives (for log working     4x/013     0     0     088.4240       10x/ 0.25     0     0     088.4240     0       20x/ 0.40     0     0     088.42410       10x/ 0.25     0     0     088.42410       20x/ 0.40     0     0     088.42410       10x/ 0.40     0     0     0.08.42410       10x/ 0.40     0     0     0.08.42410       10x/ 0.40     0     0     0.08.42410       10x/ 0.40     0     0     0.08.42401       10x/ 0.40     0     0     0.08.42402       10x/ 0.40     0 <td< td=""><td>Evenieces</td><td colspan="2">HWF 10x / Ø 18 mm (reticule 0,1 mm)</td><td>0</td><td>0</td><td>OBB-A2404</td><td></td></td<>	Evenieces	HWF 10x / Ø 18 mm (reticule 0,1 mm)		0	0	OBB-A2404	
(indiving continuation with table OBB A2407 / OBB A2409)         0         0         0BB A2413           infinity Part advances         10x / 0.25         0         0         0BB A2413           10x / 0.25         0         0         0BB A2414         0           10x / 0.25         0         0         0BB A2415         0           10x / 0.40         0         0         0BB A2416         0           10x / 0.40         0         0         0         0BB A2416         0           10x / 0.40         0         0         0         0BB A2417         0         0         0         0BB A2407           10x / 0.40         0         0         0         0         0BB A2407         0         0         0         0         0BB A2407         0 <t< td=""><td>Lycpicics</td><td colspan="2">HWF 10x / Ø 20 mm (reticule 0,1 mm)</td><td>0</td><td>0</td><td>OBB-A2410</td><td></td></t<>	Lycpicics	HWF 10x / Ø 20 mm (reticule 0,1 mm)		0	0	OBB-A2410	
Initial product of the second of				00	00	OBB-A2409	
Plan actionatic biperiors (br) log working distance)         Disk action (br) log working distance) <thdisk action<br="">(br) log working distance)</thdisk>		4x/0,13	0	0	OBB-A2413		
objective distance)         200,0.0         00B-A2115           40x7,0.0         •         •         0         0BB-A2416           50x7,0.70         •         0         0         0BB-A2417           Binocular tub         -         -         0         0         0BB-A2417           Binocular tub         -         -         0         0         0BB-A2401           -         -         -         0         0         0BB-A2402           -         -         -         0         0         0         0           -         -         -         -         0         0         0         0         0         0         0         0		10x/0,25	•	•	OBB-A2414		
distance)         40× 0, 0, 0         0BB A.24 16           60× 0, 0, 0         0         0BB A.24 17           and         So * inclined         So * inclined         So * inclined           30 * inclined	objectives	20x/0,40		•	•	OBB-A2415	
- 80° inclined · Number polymary distance: 52 - 75 mm · Number polymary distance: 52 - 75 mm · Number adjustment (one-sided)       o       08B A2401         Binocular tube       - 30° inclined · Number adjustment (one-sided)       o       08B A2407         Number adjustment (one-sided)       o       08B A2407         Number adjustment (one-sided)       o       08B A2407         Number adjustment (one-sided)       see       08B A2402         Number adjustment (one-sided)       see       0       0.08B A2402         Seg		40x/0,60	٠	•	OBB-A2416		
Interpupilary distance: 52 - 75 mm - Num diopre adjustment (one-aided)         o         o         oBB A2401           30° inclined - interpupilary distance: 52 - 75 mm - Mongin nombalation with tube OBB-A2403         so         oBB A2407           Autor of the pupilary distance: 52 - 75 mm - Mongin nombalation with tube OBB-A2403         so         oBB A2402           Autor of the pupilary distance: 52 - 75 mm - Mongin nombalation with tube OBB-A2403         so         oBB A2402           Autor of the pupilary distance: 52 - 75 mm - Monginary		60x/0,70		0	0	OBB-A2417	
a) minities       a) minities       a) minities       a) minities       a) minities         interpretention       a) minities       b) minities       b) minities       b) minities         interpretention       a) minities       b) minities       b) minities       b) minities         interpretention       a) minities       b) minities       b) minities       b) minities         interpretention       a) minities       b) minities       b) minities       b) minities         interpretention       a) minities       b) minities       b) minities       b) minities         interpretention       a) minities       b) minities       b) minities       b) minities         interpretention       a) minities       b) minities       b) minities       b) minities         interpretention       a) minities       b) minities       b) minities       b) minities       b) minities         interpretention       a) minities       b) minities       b) minities       b) minities       b) minities       b) minities         interpretention       a) minities       b) minities       b) minities       b) minities       b) minities       b) minities         interpretention       a) minities       b) minities       b) minities       b) minities       b) min	<b>2</b>	<ul> <li>30° inclined</li> <li>Interpupillary distance: 52 – 75 mm</li> </ul>		0	o	OBB-A2401	
Interpupilary distance: 52 - 75 mm - Light distribution: 80.20 - With diopter adjustment (one-sided)         o         08B-A2402           30° inclined - Interpupilary distance: 52 - 75 mm - Light distribution: 80.20 - With diopter adjustment (one-sided) (On/y in combination with tube OBB-A2409         o	Binocular tube	<ul> <li>Interpupillary distance: 52 – 75 mm</li> <li>With diopter adjustment (one-sided)</li> </ul>		o	0	OBB-A2407	
- bit intripuellary distance: 52 - 75 mm - light distribution: 80:20 (Only in combination with tube OBB-A2409)       o       OBB-A2408         Nosepiece       Quintuple       ●       ●       Image: Comparison of the combination with tube OBB-A2409)         Mechanical stage       - Stage size: WXD 180x 155 mm, - Coaxial coarse and fine focusing knobs       Right handed v.       ●       Image: Comparison of the combination with tube OBB-A2409         Mechanical stage       - Stage size: WXD 180x 155 mm, - Coaxial coarse and fine focusing knobs       Right handed v.       ●       Image: Comparison of the combination with tube OBB-A2409         Mechanical stage       - Stage size: WXD 180x 150 mm, - Coaxial coarse and fine focusing knobs       Right handed v.       Image: Comparison of the combination with tube OBB-A2405         Fixed stage       Stage size: WXD 240x 180 mm       O       OBB-A2426       Image: Comparison of the combination of the combinat		<ul> <li>Interpupillary distance: 52 – 75 mm</li> <li>Light distribution: 80:20</li> </ul>		•	•	OBB-A2402	
Mechanical stage         • Stage size: WAD 180x155 mm, • Coaxial coarse and fine focusing knobs         Right handed v. Left handed v.         • O         Image: Coaxial coarse and fine focusing knobs           Mechanical stage         Drop specimen holder (Ø 110)         Left handed v.         •         •         •         •           Specimen holder (Clip)         Image: Coaxial coarse and fine focusing knobs         •	Trinocular tube	<ul> <li>Interpupillary distance: 52 – 75 mm</li> <li>Light distribution: 80:20</li> <li>With diopter adjustment (one-sided)</li> </ul>	0	o	OBB-A2408		
Mechanical stage         · Travel: 80:00 mm         regin manded v         Left handed v.         Col         Cel         Cel <th< td=""><td>Nosepiece</td><td colspan="2">iece Quintuple</td><td>٠</td><td>•</td><td></td><td></td></th<>	Nosepiece	iece Quintuple		٠	•		
Mechanical stage     · Coaxial coarse and fine focusing knobs     Left handed v.     Image: Stage st				٠			
InductionInductionInductionInductionSpecimen holder (Clip)Image: Specimen holder (Ø 110)Image: Specimen holder (Ø 110)Image: Specimen holder (Ø 110)Image: Specimen holder (Ø 110)CondenserÅbbe N.A. 0,3 (aperture diaphragm), LWD 72 mmImage: Specimen holder (Ø 110)Image: Specimen holder (Ø 110)Image: Specimen holder (Ø 110)CondenserÅbbe N.A. 0,3 (aperture diaphragm), LWD 72 mmImage: Specimen holder (Ø 110)Image: Specimen holder (Ø 110)Image: Specimen holder (Ø 110)Illumination6V / 30W Halogen (transmitting)Image: Specimen holder (Ø 110)Image: Specimen holder (Ø 110)Image: Specimen holder (Ø 110)Illumination6V / 30W Halogen (transmitting)Image: Specimen holder (Ø 110)Image: Specimen holder (Ø 110)Image: Specimen holder (Ø 110)Illumination6V / 30W Halogen (transmitting)Image: Specimen holder (Ø 110)Image: Specimen holder (Ø 110)Image: Specimen holder (Ø 110)Illumination6V / 30W Halogen (transmitting)Image: Specimen holder (Ø 110)Image: Specimen holder (Ø 110)Image: Specimen holder (Ø 110)Illumination6V / 30W Halogen (transmitting)Image: Specimen holder (Ø 110)Image: Specimen holder (Ø 110)Image: Specimen holder (Ø 110)Phase contrast stilde1mage: Specimen holder (D Hobjective 20xImage: Specimen holder (Ø 100)Image: Specimen holder (Ø 100)Infinity plan achromatic PH-objective 20xImage: Specimen holder (Ø 100)Image: Specimen holder (Ø 100)Image: Specimen holder (Ø 100)C-Mount0,5xImage: Specimen holder (Ø 100)Imag	Mechanical stage		Left handed v.		•		
Fixed stageStage size: WxD 240x180 mmoOOBB-A2424Drop specimen holder (Ø 110)OOOBB-A2425OBB-A2425CondenserÅbbe N.A. 0,3 (aperture diaphragm), LWD 72 mm•••·Illumination6V / 30W Halogen (transmitting)••OBB-A2440OBB-A2432Phase contrast slide•OOBB-A2418OBB-A2418OBB-A2418Infinity plan achromatic PH-objective 10xOOOBB-A2420OBB-A2419Infinity plan achromatic PH-objective 20x••OBB-A2420OBB-A2420Infinity plan achromatic PH-objective 40xOOOBB-A2432OBB-A2432Octerring telescope••OBB-A2435OBB-A2437C-Mount1xOOOBB-A2438OBB-A2439Filter holder••OOBB-A2434OBB-A2434Blue (Ø 34 mm)•••OBB-A2435OBB-A2435Green (Ø 34 mm)••OBB-A2435OBB-A2435	-	Drop specimen holder (Ø 110)		•	•	OBB-A2425	
Fixed stage       Image: contrast stage       Image: contrast stage       Image: contrast stage       Image: contrast stage         Condenser       Abbe N.A. 0,3 (aperture diaphragm), LWD 72 mm       Image: contrast stage		Specimen holder (Clip)		٠	•	OBB-A2426	
Drop specimen holder (Ø 110)OOOBB-A2425CondenserAbbe N.A. 0,3 (aperture diaphragm), LWD 72 mmImage: CondenserAbbe N.A. 0,3 (aperture diaphragm), LWD 72 mmImage: CondenserImage: CondenserCondenserImage: CondenserOBB-A2430Image: CondenserOBB-A2430Illumination6V / 30W Halogen (transmitting)Image: CondenserImage: CondenserOBB-A2430OBB-A2432Image: CondenserOBB-A2432Phase contrast slideImage: CondenserImage: CondenserImage: CondenserOBB-A2430OBB-A2430Image: CondenserImage: Con	<b></b>	Stage size: WxD 240x180 mm	0	0	OBB-A2424		
LWD 72 mmLWD 72 mmImage: Contension of the second se	Fixed stage	Drop specimen holder (Ø 110)	0	0	OBB-A2425		
Phase contrast slide         ●         OBB-A2432           Infinity plan achromatic PH-objective 10x         ●         OBB-A2418           Infinity plan achromatic PH-objective 20x         ●         ●         OBB-A2419           Infinity plan achromatic PH-objective 20x         ●         ●         OBB-A2420         ●           Infinity plan achromatic PH-objective 40x         ○         ○         OBB-A2420         ● <td< td=""><td>Condenser</td><td colspan="2">Abbe N.A. 0,3 (aperture diaphragm), LWD 72 mm</td><td>•</td><td>•</td><td></td><td></td></td<>	Condenser	Abbe N.A. 0,3 (aperture diaphragm), LWD 72 mm		•	•		
Phase contrast unit         Infinity plan achromatic PH-objective 10x         O         O         OBB-A2418           Infinity plan achromatic PH-objective 20x         •         •         OBB-A2419         •           Infinity plan achromatic PH-objective 20x         •         •         OBB-A2400         •           Infinity plan achromatic PH-objective 40x         •         •         OBB-A2400         •           Centering telescope         •         •         OBB-A2430         •         •           0,5x         •         •         •         OBB-A2430         •         •           1x         •         •         •         OBB-A2430         •	Illumination	tion 6V / 30W Halogen (transmitting)		•	•	OBB-A2440	
Phase contrast unit       Infinity plan achromatic PH-objective 20x       ●       ●       OBB-A2419         Infinity plan achromatic PH-objective 20x       ●       ●       OBB-A2400         Infinity plan achromatic PH-objective 40x       ○       ○       OBB-A2400         Centering telescope       ●       ●       OBB-A2405         0,5x       ○       ○       OBB-A2430         0,25x       ○       ○       OBB-A2439         Filter holder       ●       ●       OBB-A2430         Blue (Ø 34 mm)       ●       ●       OBB-A2435		Phase contrast slide		•	•	OBB-A2432	
Initial plan demonded in objective 20x         O         OBB-A2420           Infinity plan achromatic PH-objective 40x         O         O         OBB-A2420           Centering telescope         ●         ●         OBB-A2405         O           0,5x         O         O         OBB-A2437         O         O         OBB-A2437           1x         O         O         OBB-A2438         O         O         OBB-A2439           0,25x         O         O         OBB-A2439         O         O         OBB-A2439           Filter holder         ●         ●         O         OBB-A2434         O         OBB-A2435           Filter (Ø 34 mm)         ●         ●         ●         OBB-A2435         O		Infinity plan achromatic PH-objective 10x	0	0	OBB-A2418		
Initial plan domonate in robjective fox         Image in the plan domonate in robjective fox         Image in the plan domonate in robjective fox           Centering telescope         ●         ●         0BB-A2405         Image in the plan domonate in robjective fox           0,5x         0,5x         0         0         0BB-A2437         Image in the plan domonate in robjective fox           1x         0         0         0BB-A2438         Image in the plan domonate in robjective fox           0,25x         0,25x         0         0         0BB-A2439         Image in the plan domonate in the plan	Phase contrast unit	Infinity plan achromatic PH-objective 20x		•	•	OBB-A2419	
C-Mount         0,5x         0         0         0BB-A2437           1x         0         0         0BB-A2438         0           0,25x         0         0         0BB-A2439         0           Filter holder         0         0         0BB-A2439         0           Green (Ø 34 mm)         0         0         0BB-A2435         0		Infinity plan achromatic PH-objective 40x	0	0	OBB-A2420		
C-Mount         Ix         O         O         OBB-A2438           0,25x         O         O         OBB-A2439         O           Filter holder         ●         ●         OBB-A1357         O           Blue (Ø 34 mm)         ●         ●         OBB-A2434         O           Green (Ø 34 mm)         ●         ●         OBB-A2435         O		Centering telescope	•	•	OBB-A2405		
Filter         Filter holder         O         O         OBB-A2439           Green (Ø 34 mm)         •		0,5x		0	0	OBB-A2437	
Filter         Filter holder         ●         ●         OBB-A1357           Blue (Ø 34 mm)         ●         ●         0BB-A2434           Green (Ø 34 mm)         ●         ●         0BB-A2435	C-Mount	1x	0	0	OBB-A2438		
Filter         Blue (Ø 34 mm)         ●         ●         OBB-A2434           Green (Ø 34 mm)         ●         ●         OBB-A2435		0,25x	0	0	OBB-A2439		
Filter         OBB-A2435           Green (Ø 34 mm)         •         •         OBB-A2435		Filter holder	•	•	OBB-A1357		
Green (Ø 34 mm) • OBB-A2435		Blue (Ø 34 mm)	•	•	OBB-A2434		
Yellow (Ø 34 mm) • OBB-A2436	Filter	Green (Ø 34 mm)	•	•	OBB-A2435		
		Yellow (Ø 34 mm)		•	•	OBB-A2436	

Standard configuration

 $\mathbf{o}$  = Option

### **KERN Pictograms:**



360° rotatable microscope head



Monocular Microscope For the inspection with one eye



**Binocular Microscope** For the inspection with both eyes

Trinocular Microscope



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ABBE

the additional option for the connection of a camera Abbe Condenser With high numerical aperture for the

For the inspection with both eyes and



Halogen illumination For pictures bright and rich in contrast

concentration and the focusing of light



LED illumination Cold, energy saving and especially long-life illumination



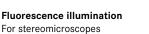
Incident illumination For non-transparent objects



Transmitting illumination For transparent objects



**Fluorescence illumination** 





For direct transmitting of the picture to a PC



Automatic temperature compesation For measurements between 10 °C and 30 °C



Protection against dust and water splashes IPxx The type of protection is shown by the pictogram.



**Battery operation** 

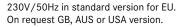
Ready for battery operation. The battery type is specified for each device.



**Rechargeable battery pack** Rechargeable set.



Mains adapter





Power supply Integrated in balance. 230V/50Hz standard EU. More standards e.g.

GB, AUS or USA on request. Package shipment The time required to manufacture the product internally is shown in days in

the pictogram.



DAYS

Warranty

The warranty period is shown in the pictogram.





#### Abbreviations

C-Mount	Adapter for the connection of a camera to a trinocular microscope
H(S)WF	High (Super) Wide Field (Eyepiece with high eye point for wearers of glasses)
LWD	Long Working Distance

Your KERN specialist dealer:

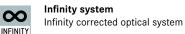
N.A.	Numerical Aperture	W.D.	Working Distance	
	Single-Lens Reflex camera	WF	Wide Field (Field number up to Ø22 mm for 10x evepiece)	
SWF Super Wide Field (Field number at least Ø 23 mm for 10x eyepiece)				



Polarising unit

Phase contrast unit

For a higher contrast



Fluorescence illumination

for compound microscopes

Fluorescence illumination

for compound microscopes

With 100W mercury lamp and filter

With 3W LED illumination and filter



FL-HBO

C

FL-LED

0

PH

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POLAR

Zoom magnification For stereomicroscopes



Parallel optical system For stereomicroscopes, enables fatigue-proof working

Integrated scale Lunn In the eyepiece SCALE





For direct transmitting of the picture to a PC



Integrated USB 3.0 digital camera



## **Wolf Laboratories Limited**

www.wolflabs.co.uk

Tel: 01759 301142

Fax:01759 301143

sales@wolflabs.co.uk



## Use the above details to contact us if this literature doesn't answer all your questions.

# Pricing on any accessories shown can be found by keying the part number into the search box on our website.

The specifications listed in this brochure are subject to change by the manufacturer and therefore cannot be guaranteed to be correct. If there are aspects of the specification that must be guaranteed, please provide these to our sales team so that details can be confirmed.





