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Find the *WESCO / Sylvania VXHC75/100/2KF-1B* at our website: *Click HERE*

INSTALLATION AND ALIGNMENT

HBO 50/100

XBO 75

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General information

- Specifications subject to change.
- The knowledge of the instrument is vital for safe operation. Therefore please read these operating instructions carefully before you put the instrument in operation. Additional information is available from our servicing department or from our authorized representatives.
Use the HBO 100 / XBO 75 lamp with our microscopes only.
- The instrument must be operated by properly trained personnel only.

Hints on operation

- **Caution: Since the HBO 100 / XBO 75 is under high pressure when in use, it must always be operated in closed lamp housings.**
- Even when not in use XBO lamps are under high pressure and may only be fitted in the lamp housing wearing safety mask (41 70 09) (1 in Fig. 1) and safety gloves (41 70 08) (2 in Fig. 1) with special artery protection.
- **Before lamp change:**
Let the HBO 100 / XBO 75 cool down sufficiently after switch-off to reduce the pressure. Wait at least 10 minutes, especially after switch-off of the XBO lamp!
- **The light of the HBO 100W and XBO 75W lamps contains a high amount of UV light which is harmful for the human eye. Provide inspection windows with filter glass for protection from the strong UV radiation. The use of sunglasses is strongly recommended when manipulating the microscope illuminator.**
Do not look directly into the lamp or into reflected lamp light.
- **Caution! Exchange the HBO 100 after expiry of the mean service life of 200hrs and the XBO 75 after expiry of the mean service life of 400hrs.**
Its intensity decreases with increasing number of service hours, i.e. homogeneous illumination can no longer be guaranteed. **Furthermore, there is the danger of explosion.**
The number of service hours is displayed on the running time meter.
- The connecting cables of the HBO 100 / XBO 75 must be checked at regular intervals.

* The UV radiation of the HBO 100W or XBO 75W lamp produces ozone. This obnoxious gas should be carried off via exhauster and tube, and the working room supplied with fresh air.

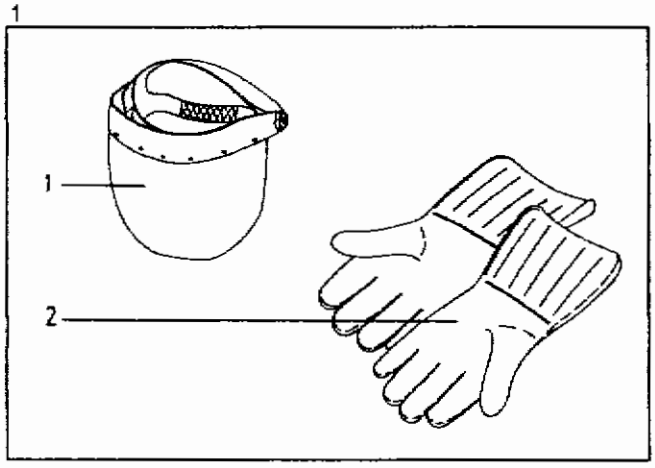
Disposal

- Used HBO lamps must be disposed of in original container in compliance with the legal regulations.

Maintenance

- **Always pull line plug before changing lamp, fuses, etc.!**
- Changes and repairs may only be performed by the manufacturer of the instrument or by authorized personnel.
- The manufacturer is not liable for any damage caused by unauthorized handling of the instrument, particularly the removal or exchange of instrument components or the use of accessories from other manufacturers. Furthermore, improper handling will forfeit any warranty claims.
- Damaged instruments or components may be repaired and serviced by our servicing department only.
- Clean dirty housing as follows:
Dip cleaning cloth into a mixture of water and a little cleaning fluid, remove dirt, and dry with a clean cloth. Do not use solvents.

1



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Microscope illuminator HBO 100W/2 and XBO 75W/2

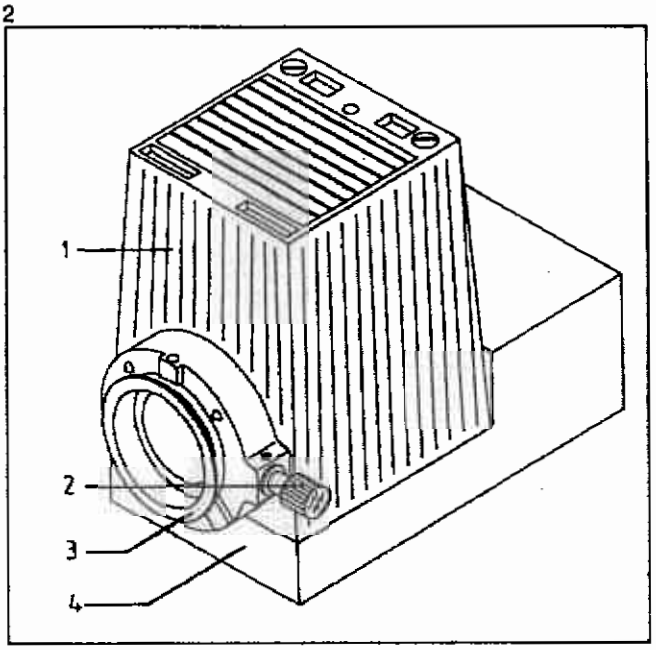
The HBO/XBO illuminator comprises:

- HBO/XBO lamp housing with reflector (44 72 16-9902)
- collectors (factory-installed):
  3-lens collector (46 72 74-9902)
  4-lens collector, high aperture, or (46 72 76)
  quartz collector, for UV (46 72 75)
- For HBO 100W/2: lamp socket with starter (44 80 16)
- For XBO 75W/2: lamp socket with starter (44 80 12)

- HBO 100W/2 mercury lamp (38 00 18-4060)
  or XBO 75W/2 xenon lamp (38 00 79-9190)

1 HBO/XBO lamp housing
2 Knob for focusing of lamp image
3 Ring mount for attachment to the microscope
4 Lamp socket with starter

2

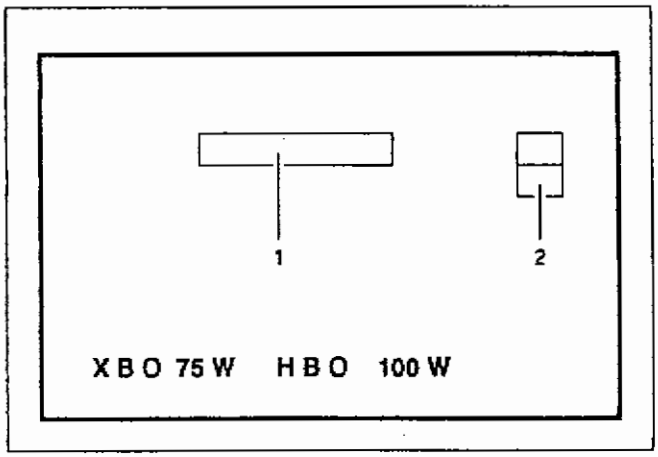


Stabilized power supply VX HC 75/100 Kf 45 84 50

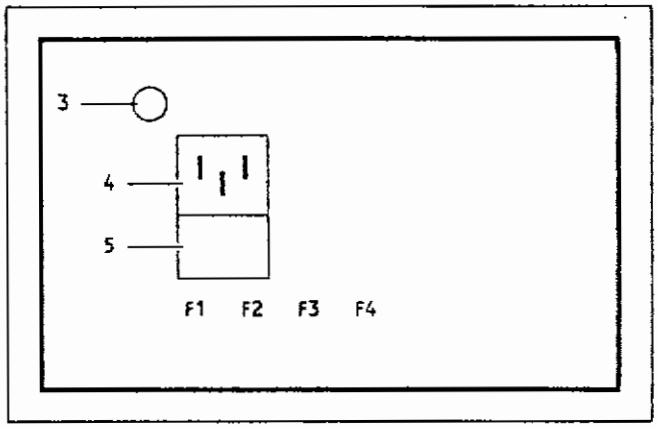
Adjusted voltage and frequency are displayed on the back of the power supply and must comply with the local line data. The voltage is variable for 90...140V and 187...264V and 50...60Hz. Always pull the power cable before voltage change.
Insert the corresponding fuses in holder (5). Connect HBO/XBO illuminator to the line via HF power supply using power cable with CEE plug (38 01 37-6750) or US flat plug (38 01 37-6740).

1 Running time meter
2 Switch, lights with power on
3 Socket for lamp plug
4 Power outlet
5 Holder with fuses 1

3



4



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Exchange of HBO 100 W/2 mercury lamp

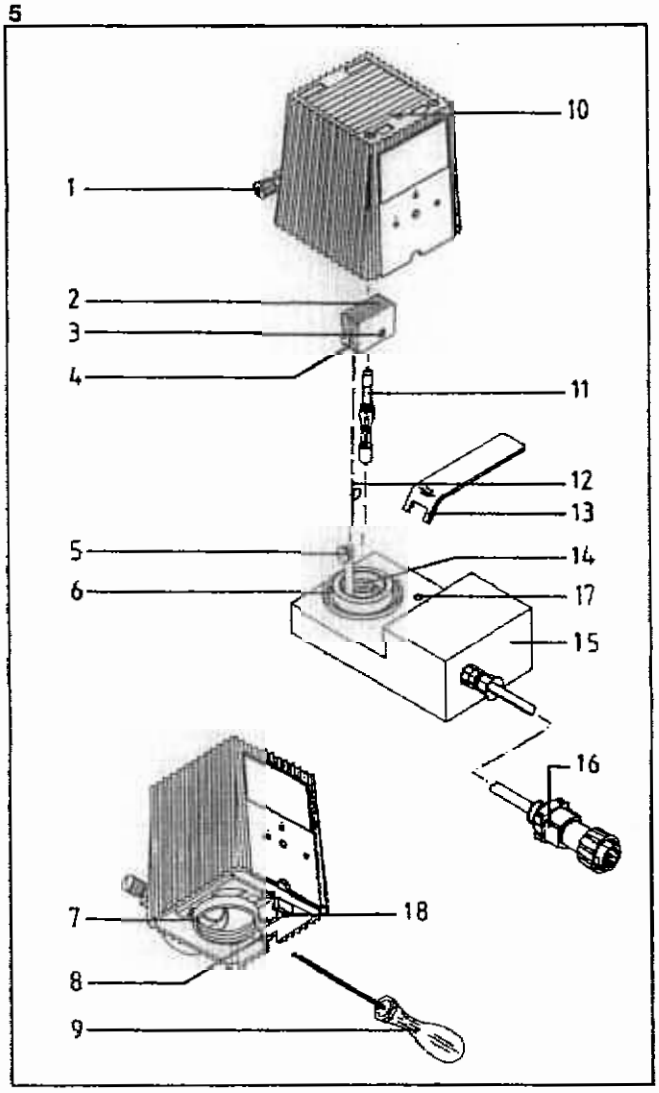
* Pull plug (16) from power supply VXHC 100/75.
* Detach illuminator (10) with cooled HBO 100 W/2 lamp from microscope.
* With knob (1) bring collector to foremost position.
* Put on gloves and face mask (Fig. 1).
* Loosen clamping screw (8) and take lamp socket out of lamp housing. The integral microswitch interrupts the power supply to the lamp.
* Take out defective lamp only when cold:

Loosen (14) with wrench (13) and (5), pull out lamp (11) and wire loop (12); loosen (3) and (4) and take out dissipator (2).
The defective HBO 100 is subject to special waste disposal.

* Insert lamp socket with smaller diameter in dissipator and secure with screw (3).
* Insert lamp with dissipator and feed line in the corresponding openings of the lamp socket and secure with 17mm Allen wrench (13) and knurled screw (5). Longer side of dissipator, contact wire (4) and wire loop should be in one line.
* Clamp wire in dissipator with screw (4).
* Clamp carefully, because the generation of strong heat may cause insecure contacts.
* Screw contact pin supplied with lamp socket into threaded borehole (18) at the bottom of the lamp housing.
* Insert lamp socket with fitted lamp in the lamp housing so that alignment pin (7) engages borehole (6) and contact pin (18) borehole (17) of the lamp socket.
* Tighten screw (8). Connect illuminator to power supply VXHC 100/75.
* Check adjusted voltage and frequency on the back of the power supply; the values should be in compliance with the local line data. Connect power supply to the line.
* Push switch 2 in Fig. 3 on power supply. The lamp starts automatically and is ready for operation after approx. 2 to 3 minutes.

The HBO W/2 lamp should be exchanged after 200 operating hours (displayed on the running time meter).

5



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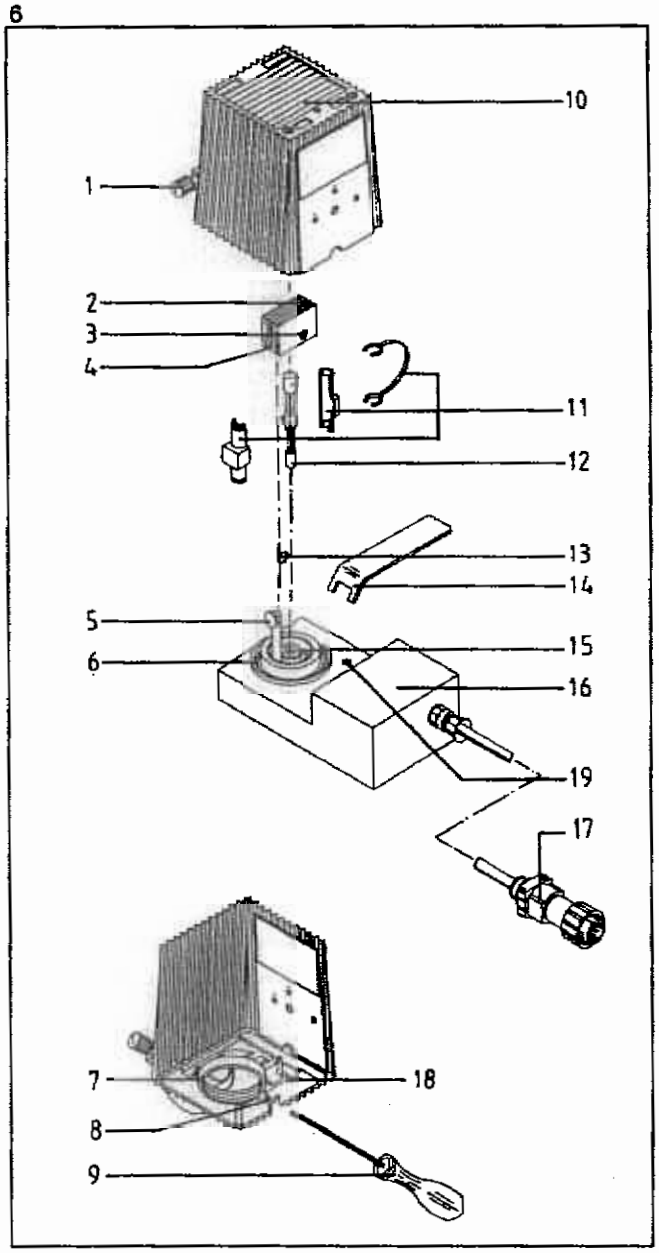
Exchange of the XBO 75W/2 xenon lamp

* Pull plug (17) of lamp socket (16) on XBO 75W/HBO 100W power supply.
* Detach illuminator with XBO 75 W/2 lamp from microscope.
* With knob (1) move collector to foremost position.
* Put on gloves and face mask (Fig. 1).
* Loosen clamping screw (8) and take lamp socket carefully out of lamp housing. The integral microswitch interrupts the power supply to the lamp.
* Take out defective lamp only when cold:

Put on plastic cover (11) of the lamp. Loosen (5) and (15) with wrench (14), pull out lamp (12) and wire loop (13); loosen (3) and remove dissipator (2). Check whether (4) is tightened.
The lamp is under exceptionally high pressure. It is subject to special waste disposal!

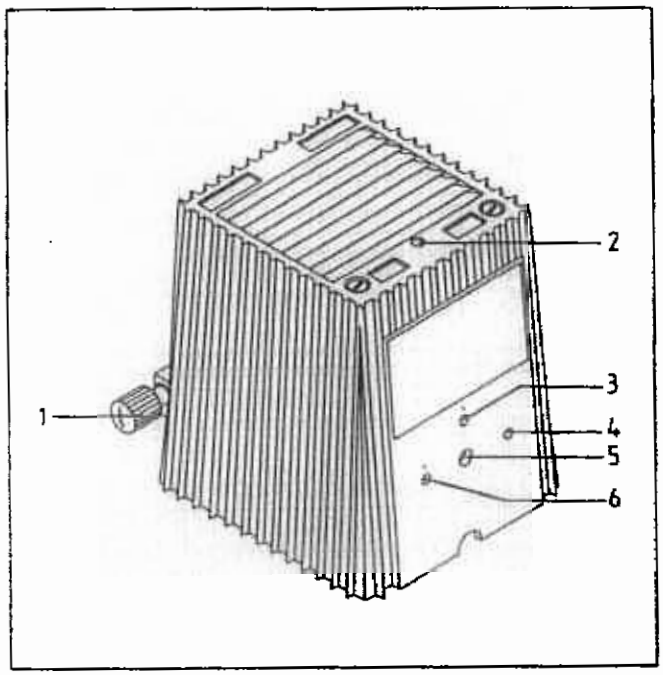
* Leave plastic over (11) on new lamp, which is under high pressure even when cold.
* Fit lamp socket with larger diameter in dissipator, align melt tip with longer side of dissipator, and secure lamp socket with screw (3).
* Insert lamp with dissipator and feed line in the corresponding openings of the lamp socket and secure Allen nut (15) with wrench (14). Fit the supplied Allen wrench accurately to prevent slipping. Tighten knurled screw (5). The longer side of the dissipator, line connector, wire loop and melt tip should be in one line.
* Clamp carefully, because the generation of strong heat may cause insecure contacts.
* Remove plastic cover from lamp before fitting it in the lamp housing.
* Screw contact pin supplied with the lamp socket into threaded borehole (18) at the bottom of the lamp housing.
* Insert lamp socket with fitted lamp in the lamp housing so that contact pin (18) engages borehole (19) of the lamp socket, and alignment pin (7) borehole (8). Tighten screw (8).
* Check adjusted voltage and frequency on the back of the power supply; both values should be in compliance with the local line data. Connect power supply to the line.
* The XBO 75 W/2 lamp should be exchanged after 400 operating hours (displayed on the running time meter).
* When pushing switch (2) (Fig. 3) on the power supply the lamp starts automatically and is ready for use.

6

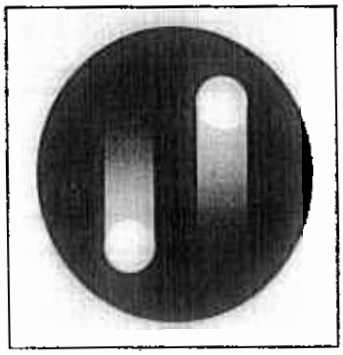


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7



8



Focusing and centering

- Switch on lamp and turn illuminator to a wall at a distance of approx. 3m.
- Focus the image of the focal spot and its mirror image by adjusting the collector.
- If the location of the focal spot and its mirror image are other than in Fig. 8, correct with the centering Allen screws. Shown in Fig. 7 are the screws for the following adjustments:

1 Collector adjustment
2 Vertical lamp adjustment
3 Vertical mirror image adjustment
4 Lateral lamp adjustment
5 Focusing of mirror image
6 Lateral adjustment of mirror image

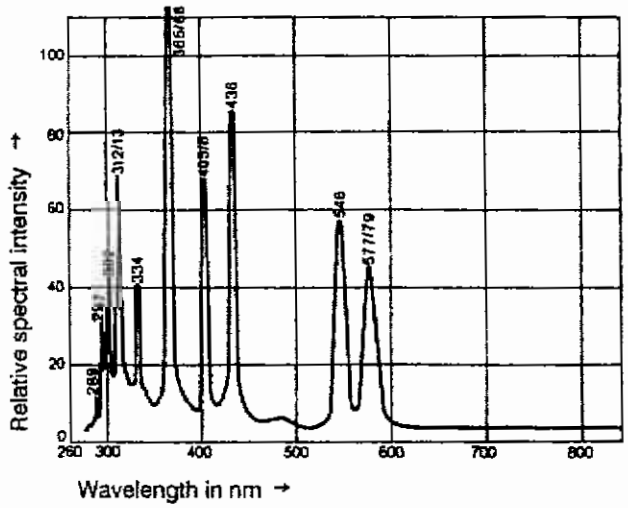
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HBO 100 mercury lamp	38 00 18-4060
Arc drop voltage	20V
Operating current	5A
Output	100W
Mean service life	200hrs
Luminous area	0.25x0.25mm^2

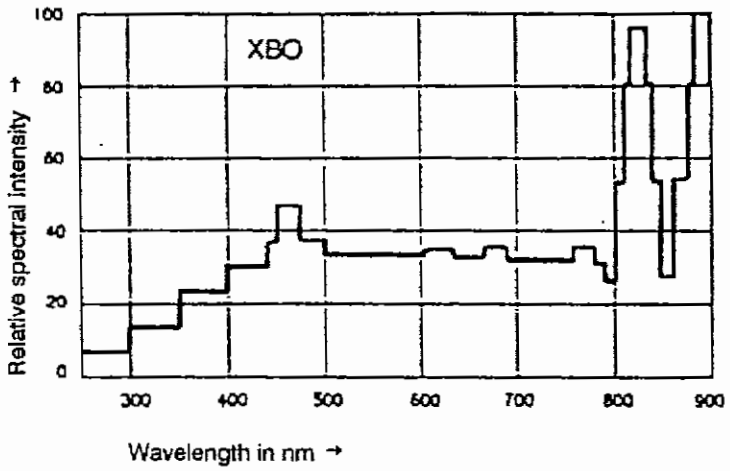
XBO 75W xenon lamp	38 00 79-9190
Arc drop voltage	14V
Operating current	5.4A
Output	75W
Mean service life	400hrs
Luminous area	0.25x0.5mm^2

Power supply VX HC 75/100 Kf		45 84 50
Supply:		90...140 - 187...264V
Frequency		50...60Hz
Power consumption		240VA
Fuses: 90...140V :	F1 and F2 2.5A SB	(38 01 27-0250)
	F3 0.16A SB	(38 01 27-0120)
	F4 1.25A SB	(38 01 27-0210)
187...264V :	F1 and F2 1.25A SB	(38 01 27-0210)
	F3 0.08A SB	(38 01 27-2060)
	F4 1.25A SB	(38 01 27-0210)

Line spectrum of the HBO mercury lamp



Spectrum of the XBO xenon lamp



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