

Fig. 1 Total view of 18-29 with transport chassis

ZEISS IKON

Heavy Duty Slide Projectors

The development of Zeiss Ikon Heavy Duty Slide Projectors has created an equipment which, on account of its outstanding features, can be employed for many purposes.

MAIN FEATURES of the equipment:

- High light output;
therefore applicable not only for ordinary projection but also particularly for rear and background projection
- Extremely even illumination by means of the Zeiss Ikon Honeycomb Condensor
- Large images at short distance
- Application of various slide-sizes
- Largest protection of slides against heat by means of cool light mirror, filter and cooling blower
- Easy mobility in combination with a trolley
- Space saving
by mounting an angular mirror in front of the lens (fig. 2)

FIELDS OF APPLICATION

a) In television and film studios

the projector is mainly employed for rear projection. Its advantages are here:

- bright and well-contrasted images
- no attendance of the lamphouse
- low-noise, therefore no sound-proof cabin necessary for shielding the microphones

b) In fashion and advertising photography

for background projection. Outdoor shots for fashion and catalogue photos become unnecessary when employing suitable slides

c) For the reproduction of advertising slides on fairs, exhibitions, or in department stores

d) For background and effect projection in theatres.

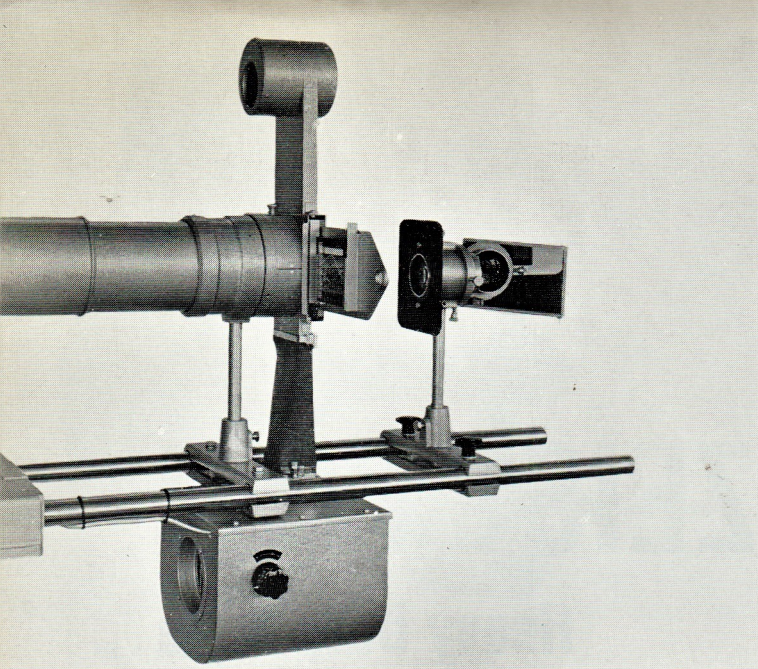


Fig. 2 Slide support with blower and mirror

The VARIETY OF APPLICATION is also remarkable. Operation is possible with most different sizes of slides and image areas, such as:

- the standard size of 8,5 x 8,5 cm.
with the image areas 73 x 73, 65 x 65, 55 x 66, 55 x 73, and 38 x 70 mm.
- the maximum size of 8,5 x 10 cm.
with the image areas of up to max. 73 x 88 mm.
(for focal length of 300 mm. and up only)
- The projector with the attachment 18-09.14 will be for reproducing of the minimum size of 5 x 5 cm with the projected image areas of 24 x 36 and 38 x 38 mm.

The heat concentration in the picture gate due to the high luminous output is reduced by the combination of a COOL LIGHT MIRROR with a HEAT REFLECTION FILTER as well as by the strong air blast of a BLOWER (fig. 2). Thus, the slide is sufficiently cooled, even during prolonged projection periods. — The number of revolutions of the blower is adjustable and, furthermore, the blower is equipped with a sound absorber and consequently operating noiselessly.

A fundamental advantage of the heavy duty slide projector is the COMFORT OF THE XENON LIGHT, for

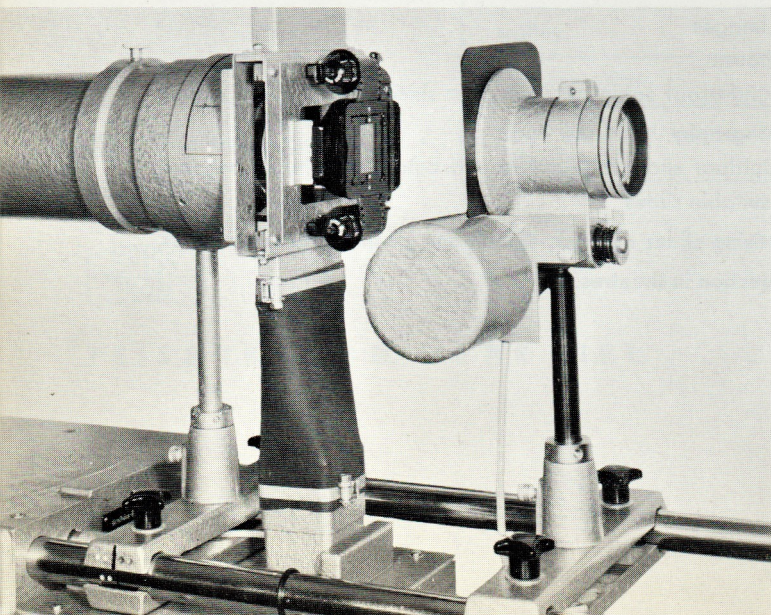
- it is free of light fluctuations
- its amperage can be infinitely regulated within a wide range
- it does not at all change its colour similar to the daylight
- it operates absolutely noiselessly
- the lamp does not require any attendance or observation during operation
- for television shootings its favourable spectral light distribution provides almost the same efficiency as incandescent light of the same photometric intensity.

The high LUMINOUS OUTPUT is obtained by means of the Xenon lamp XENOSOL; with the built-in honeycomb condenser there is an illumination which satisfies the highest requirements as to its uniformity, even for big screen images.

The Zeiss Ikon heavy duty slide projector can be supplied in **two** designs. They mainly differ from each other by the XENON lamphouse and the luminous output which can be obtained.

The type 18-29 is equipped with the lamphouse XENOSOL II, its source of light is the Xenon bulb XBO 1600 Watts. Operating with rectangular slide sizes with a picture ratio of abt. 3 : 4 and sufficiently fast lenses, the luminous flux is abt. 13 000 Lumen.

Fig. 3 Lens holder with remote focusing



The luminous flux will be lower when operating with slide sizes with other picture ratios, especially square picture ratios, as well as with lenses of a longer focal length.

The following examples, based upon the slide size 8,5 x 8,5 cm., with the picture areas of 55 x 73 mm., may convey you an idea of the efficiency of the projector:

In case of projection of an image of 3 x 4 m. on the screen, its factor of luminous density being "1" — as it is the case with unperforated, matt-white screens — abt. 1100 asb are obtained.

In case of rear projection, and the same size of screen image, a maximum luminous density of abt. 2200 asb is obtained on usual screen material.

If in case of projection on the screen a luminous density of 120 asb is sufficient, an image of 9 x 12 m. can be obtained.

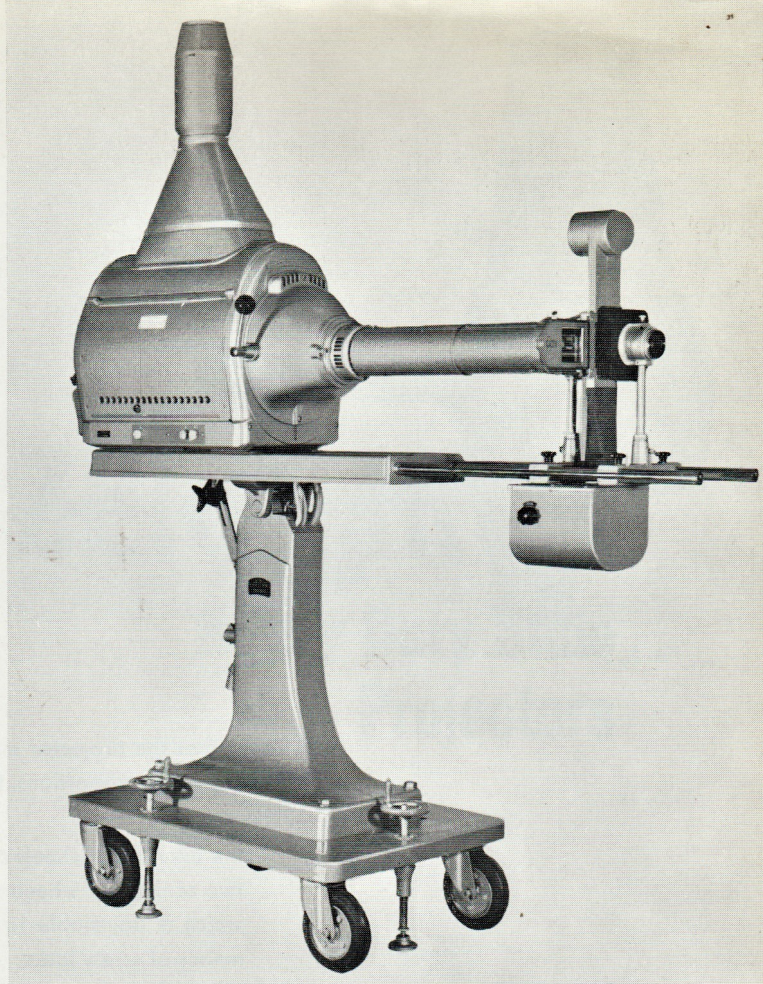


Fig. 4 Total view of 18-23 with transport chassis

The type 18-23 (fig. 4) is equipped with the Xenon lamphouse XENOSOL III and a high power bulb XBO 2500 Watts. This design represents a high power projector for special demands on the luminous output.

Operating with rectangular slide sizes with a picture ratio of 3 : 4 and sufficiently fast lenses, the luminous flux comes up to 18 000 Lumen at 83 Amps. The luminous flux will be lower when operating with slide sizes with other picture ratios and with lenses of a lower light intensity.

The following examples, based upon the slide size 8,5 x 8,5 cm. with a picture area of 44 x 73 mm. show the efficiency of the projector:

When projecting an image of 3 x 4 m. on the screen, the factor of luminous density being "1", abt. 1500 asb are obtained.

In case of **rear projection** on usual screen material, using the same size of screen image, a maximum luminous density of abt. 3000 asb will result.

In case of projection on to the screen with a luminous density of 120 asb, and a factor of luminous density "1", an image of 10,5 x 14 m. can be obtained.

Both types of projector can be supplied with a remote focusing control, so that, according to the requirements of the picture desired, from the place where the camera stands (transmitter 14-11.01, receiver 14-11.13) a fine focusing of the picture e.g. with background projection is possible.

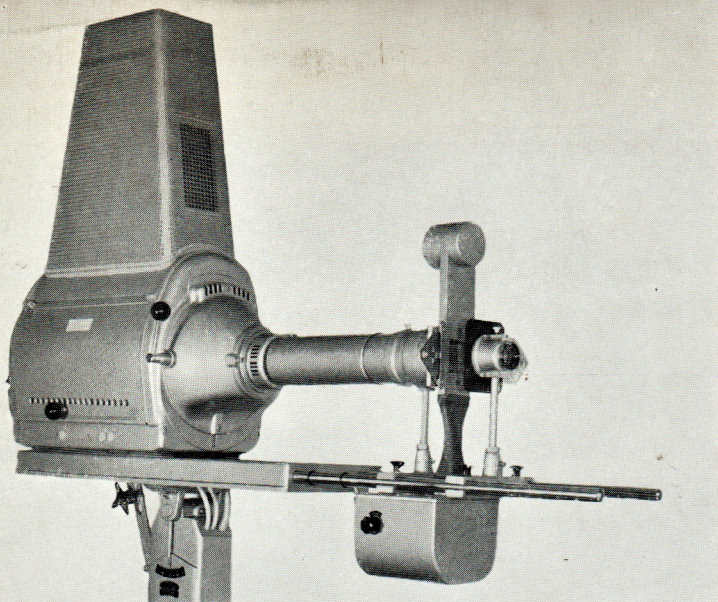


Fig. 5 18-23 with noise absorber

Special attention must be given to the cooling of the slides when operating with such high luminous flux. Here too, it is obtained by the combination of COOL LIGHT MIRROR, a HEAT REFLECTION FILTER and the slide BLOWER. This way the slide is sufficiently cooled, even during long projection periods. On the top of the lamphouse a suction ventilator is mounted, which can be supplied with a sound absorber in case of studio use of the projector (fig. 5).

The employed cool light mirror has a diameter of 380 mm.

In order that the projector may be moved according to the requirements and to adapt it to narrow room proportions, there are additionally available:

- a trolley,
the big rubber wheels of which easily run over uneven points, cables, etc.;
two of the four wheels of which have a swivel joint;
which is adjustable to height and inclination and arrestable against the floor by means of screw jacks;
- an angular mirror (fig. 2)
which can quickly be fastened in front of the lens;
by which the projector can be placed at the right angle towards the screen,
which effects a room saving of 1,3 m. in the main projection axis.

Dimensions:

Heavy duty slide projectors

	18-29		18-23	
	with trolley	without trolley	with trolley	without trolley
total height approx. in mm.	2000	1750	2100	1850
total length approx. in mm.	1990		1990	
total width approx. in mm.	680	400	680	400
Cat. No:				
Projector with lamp	18-29		18-23	
trolley	18-09.04		18-09.04	
angular mirror	18-09.07		18-09.07	
small size slide attachment	18-09.14		18-09.14	

Illustrations without obligation



ZEISS IKON AG. WERK KIEL

Handed by: