Manufacturers of
Professional Motion Picture Equipment
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Technical Information

ARRI Blimp 120 S

General Data

The ARRIFLEX 35 mirror reflex motion picture camera becomes an excellent studio camera when used in conjunction with the ARRI Blimp 120 S. The noise level of the camera, measured 3 ft in front of the front window, is reduced by the acoustic insulation of the blimp housing to about 24 Phons (24 dB). The ARRIFLEX 35 can be used in the ARRI Blimp 120 S with either the 200 ft (60 m) or the 400 ft (120 m) magazine.

The large optical range of the ARRI Blimp 120 S permits the use of standard, modern wide-angle, zoom, and anamorphic lenses. Four interchangeable front windows, having no influence on the acoustic insulation, enable the mounting of especially long lenses. All lens adjustments are carried out from outside the blimp by means of acoustically insulated adjustment mechanisms. All controls, switches, and indicators are clearly arranged for easy access and control.

Construction

The durable light metal housing of the ARRI Blimp 120 S is lined with sound-absorbent material. The large rectangular base provides a steady support on the tripod plate. Through a large hinged door on the left side (Fig. 3/g), hinged upper section (Fig. 3/c) and a removable hinged front window, the interior of the Blimp 120 S is easily accessible. The flat front window is removable and can be exchanged for one of a longer length. The adjustable matte box is also detachable.

The Blimp 120 S can be carried comfortably by means of two rigid carrying handles (Fig. 3/b and e); the front grip serves simultaneously as a holder for a camera light. An additional carrying handle is located on the long, divided front window (Fig. 3/a).

Operating Elements

Two rectangular windows, forward left and right, (Figs. 2/p and 1/d), and three round windows – one in the hinged side door (Fig. 2/m) and two at the rear (Fig. 5/e and b) enable control of the focusing and diaphragm settings, the footage indicator and the tachometer. The two large knurled knobs at the front right (Fig. 1/e) and left (Fig. 2/o), and a smaller one at the rear (Fig. 2/l) are synchronized and serve to adjust the focus. A folding hand crank (Fig. 2/n), which can be used interchangeably in the right-hand or left-hand knob, allows easier focusing. A further knob (Fig. 2/b) is for setting the diaphragm opening. This knob also takes a somewhat smaller hand crank. It is used for focusing when shooting with zoom lenses. By means of a dial (Fig. 1/a) the mirror reflex shutter can be rotated manually during camera standstill. Located at the rear of the blimp are the axially adjustable viewfinder eyepiece with fixable diopter compensator (Fig. 3/f),
pushbuttons for switching the camera on and off (Fig. 2/f),
sockets for the power supply (Fig. 1/g), pilotone conductor (Fig. 1/h), and pan handle switch (remote control, Fig. 1/f),

pushbuttons for the thermal overload guards (Fig. 1/o),

fuses for mains (Fig. 1/i), 24 V DC governor controlled motor (Fig. 1/p), and for the motor control with 24 V DC operation (Fig. 1/q)

as well as a spirit level (Fig. 1/l).

hand
b Film plane marking
c Openings for inserting masks, etc.
d Right-hand window showing focus and diaphragm setting
e Right-hand knob with focusing crank
f Socket for pan handle switch, i.e. remote control
g Power socket
h Pilotone socket
i 3 safety fuses
k Window for reading off metre or footage counter (when using the synchronous drive Cat. No. 2210)
l Spirit level
m Pushbutton switch "off"
n Pushbutton switch "on"
o Two pushbuttons for the thermal overload guard switches
p Fuse for 24 V DC governor controlled motor
q Fuse for motor control with 24 V DC

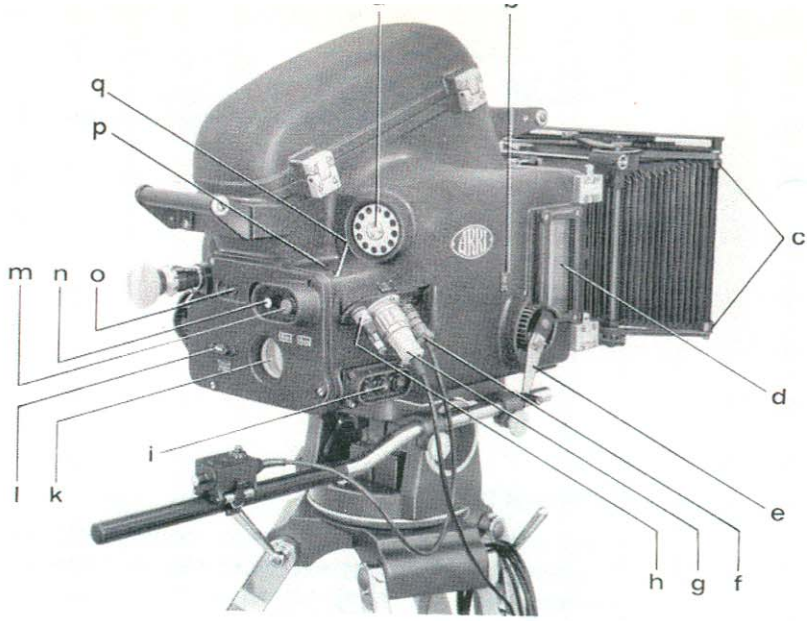


Fig. 2
a Knob for extending adjustable matte box
b Knob for adjusting diaphragm
c Film plane marking
d Latches for the two blimp doors
e Switch-on control
f Pushbutton "on" and "off" switches
g Cover for connection box
h Remote on/off switch with pilot light
i Pan handle
k Tommy screw for viewfinder tube
l Rear focusing knob
m Window for reading off meter or footage counter (when using the universal gear)
n Focusing crank
o Left-hand knob for focusing
p Left-hand window showing focus and diaphragm settings
q Lock for front window

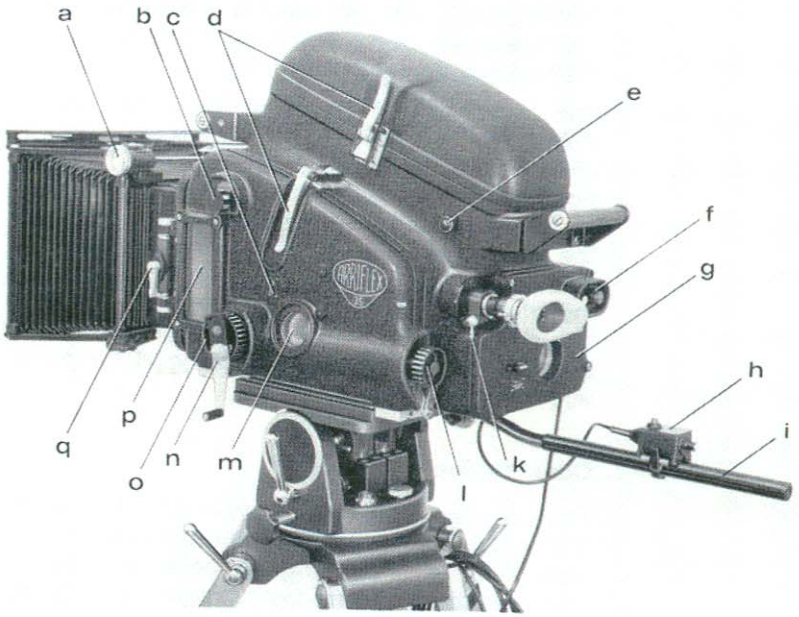
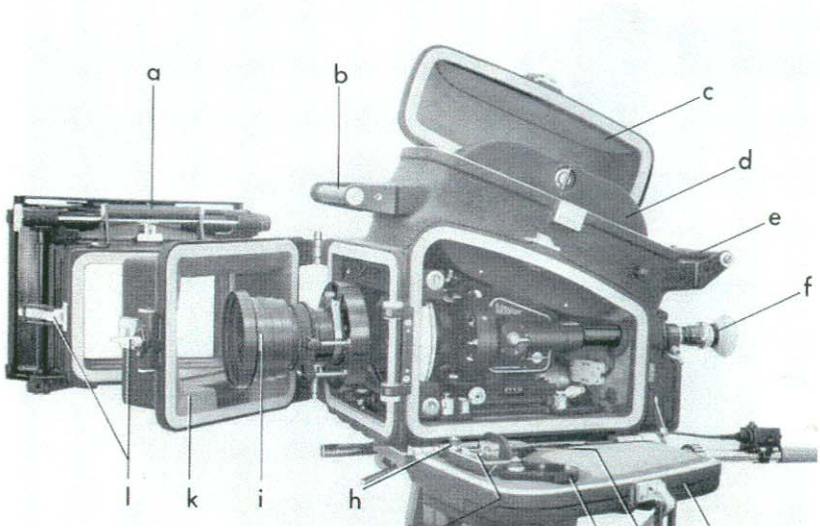


Fig. 3
a Carrying handle on large two-part front window
b Carrying handle
c Upper door to blimp
d 400 ft (120 m) F–R magazine
e Rear carrying handle
f Viewfinder eyepiece with diopter adjustment and foam rubber covering
g Side door to blimp
h Acoustically insulated adjustment mechanism (focus and diaphragm)
i Angénieux zoom lens, 25–250 mm
k Front port adapter
l Front port lock
m Dial illumination
n Counter illumination



Before being placed in the Blimp 120 S, the camera and motor are mounted on an intermediate gear. This unit can be mounted effortlessly, by means of centering pins and clamps, exactly on the blimp mounting frame, and if necessary, just as quickly removed. The blimp mounting frame is acoustically insulated from the blimp housing by rubber elements.

The focusing and diaphragm unit (Fig. 4/c), likewise connected to this frame, is detachable and can be swung out for changing lenses. Outside the focusing and diaphragm unit is an interchangeable filter holder which can be changed to fit the type of lens being used. Inside the focusing and diaphragm unit are two bevelled gears which drive the focusing and diaphragm mechanisms independently of each other via ring gears. The focusing and diaphragm unit carries in addition, individual, removable focusing and diaphragm strips for each lens (Fig. 4/a and b). The focusing scale appears twice so that one may also read off the focusing setting at the right-hand window (Fig. 1/d). When a lens is changed, the calibrated scales must also be exchanged. In order to avoid confusion, the rear surface of the scale strips carry the number of the lens, camera and blimp. When shooting with a zoom lens the focus adjustment knob is used to set the various focal lengths. The diaphragm adjustment knob then takes over the actual focusing. The acoustically insulated mechanism for focusing and diaphragm adjustment are mounted in the large side door (Fig. 3/h). When this door is opened, the camera door can be removed for threading film and the magazine lock is easily accessible. Swinging out the focusing and diaphragm unit enables the lens to be removed and a new one inserted. When using Angénieux zoom lenses LA 2 Types 1 and 2, the insertion of the lens support in the empty lens openings of the turret becomes possible.

The blimp equipment can be driven with 220 V AC (3 x 220 V), on special request with 110 V (3 x 110 V) as well as 24 V DC.

Drive Motors:

3 x 220 V synchronous motor or 24 V DC motor. The electrical equipment for the sup i.e. control of these motors as well as of various cameras is built into the rear of the blimp, likewise the operating buttons switch-on and switch-off (Fig. 5/c, d).

The ON button is supplied with a control light which indicates, after the switch-on step, readiness of operation (end buckle switch re for operation). On the left-hand side of the OFF button are the two red release buttons for the built-in overload guard switches. The guard switch (Fig. 5/a) "lies" primary fi transformer I for the entire secondary 2 power supply for the control as well as the blimp interior lighting. The right guard switch serves as a fuse for the brake circuitry for the synchronous motor.

Two fuses are located in front of the shutter turning dial; with DC operation the left fuse (Fig. 1/p) protects the 24 V drive motor while the 0,8 A fuse (Fig. 1/q) protects the control. Three connection flange sockets are located underneath:

Left (Fig. 1/h) for the pilotone cable to the corresponding tape recorder
Centre (Fig. 1/g) for the corresponding connecting cable to the power supply, during operation with:

220 V	Connecting cable Ka 7
3 x 220 V	Connecting cable Ka 8
110 V	Connecting cable Ka 23 with condensor 32 MF and 2-pole US plug Connecting cable Ka 24 with condensor 32 MF, however with 2-p shockproof plug
3 x 110 V	Connecting cable Ka 14
24 V	Connecting cable Ka 9

and right (Fig. 1/f) for the connecting cable the panhandle switch Ka 10, or Ka 26 for mote control, 30 ft.

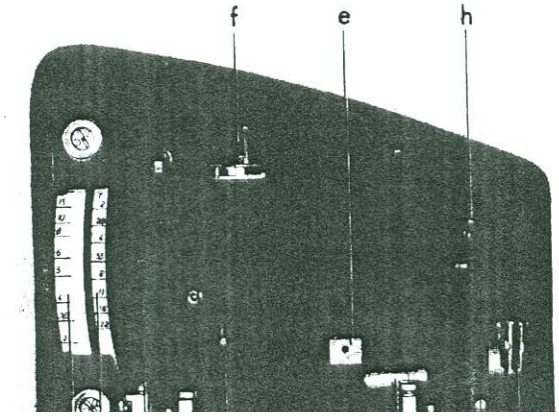


Fig. 4
a Focusing strip (focal length strip wl using Angénieux zoom lenses
b Diaphragm adjustment strip (focusing s when using Angénieux zoom lenses)
c Focus and diaphragm unit
d Focusing adjustment shaft
e Rear mounting support for the univel gear
f 8-pole round connection for the corr ponding drive motor

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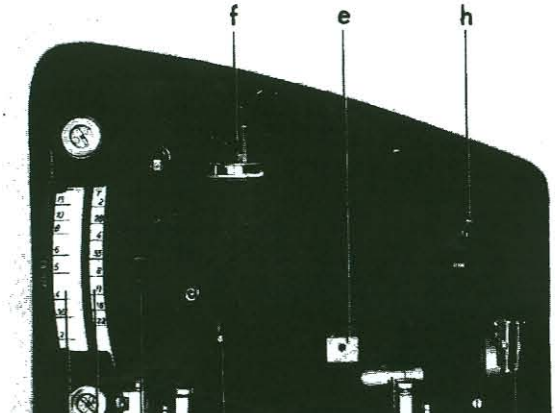

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c Focus and diaphragm unit
d Focusing adjustment shaft
e Rear mounting support for the un
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f 8-pole round connection for the corr
ponding drive motor

Underneath the connecting flange sockets are situated the 3 phase fuses (Fig. 1/i):

3 x 1 A with 220 V
3 x 2,5 A with 110 V

If the rear casing cover is removed, the "electrical centre" in the form of a plug-in relay switch panel is visible. After loosening the four red-edged fastening screws (Fig. 5) – **only these!** – the plug-in relay switch panel can be carefully removed. Take care not to bend the switch panel. For this step, the latter is separated from the fixed connections in the blimp by a multiple plug-in connection.

Please state the blimp serial number, or the number of the switching diagram when making enquiries about operational disorders or when ordering spare parts.

2 fixed outlets for the blimp-camera electrical connection are located inside the blimp:

8-pole round connection (Fig. 4/f) for the corresponding drive motor

8-pole flat plug (Fig. 4/g) for the corresponding connecting cable of the various cameras to be engaged. When loosening the flat plug, both spring locks must be simultaneously pressed.

The blimp interior lighting is supplied with 24 V; the lights have sockets with bayonet mounts:

Tachometer illumination	(Fig. 4/h)
Scale illumination	(Fig. 3/m)
Counter illumination	(Fig. 3/n)
Film threading light	(Fig. 4/i)

The latter switches off automatically when the equipment goes into operation. A red control light (Fig. 2/e) serves as switch-on control; it switches off when the OFF button is pressed, and with automatic switch-off (buckle switch): An automatic buckle switch – a prerequisite is of course, a similar device on the ARRIFLEX 35 – switches the camera motor off immediately after film end run-through.

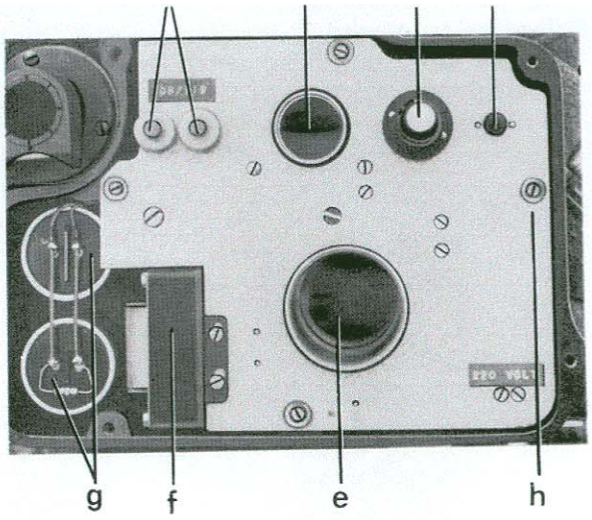
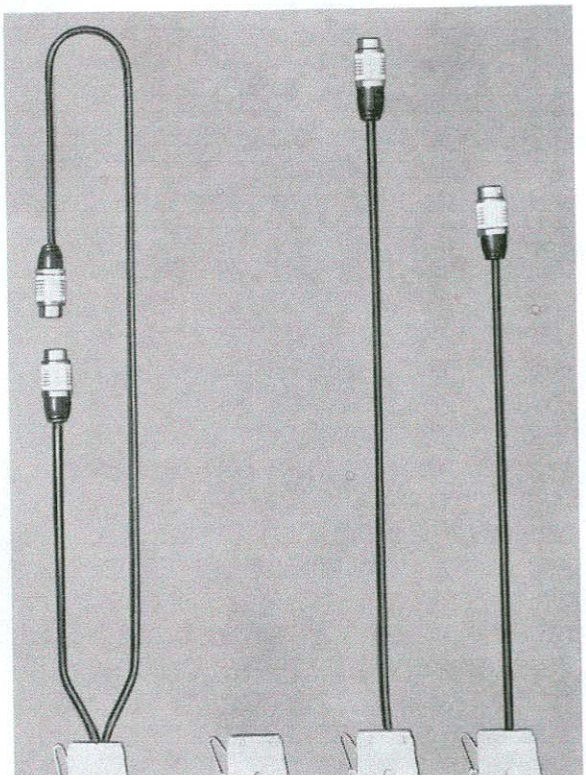


Fig. 5
Outside view of the relay switch panel (cover removed)

a Thermal overload guard switches
b Window for tachometer
c Pushbutton "on" with built-in pilot light
d Pushbutton "off"
e Window for meter or footage counter (when the synchronous drive Cat. No. 2210 is used)
f Mains transformer for control and lighting current
g Capacitors for the auxiliary phase when working with single-phase AC
h One of the four fastening screws for the relay switch panel

Fig. 6
Plug-in cable connections in the ARRI Blimp 120 S



Plug-in Cable Connections in the ARRI Blimp 120 S

If the blimp is ordered with a camera and suitable drive motors, the necessary connecting cables for this blimp are included. If no particulars about the camera to be used are available, Ka 22 and connecting cable Ka 4B (in this case, pilotone from mains transformer) are supplied as standard equipment.

The bridge plug Ka 22 replaces the control functions when using a camera without buckle switch. With AC operation, in this case the built-in transformer (Fig. 5/f) supplies the pilot voltage.

The illustrated cables Ka 2B, Ka 4, and Ka 4B (Fig. 6) establish the electrical connection bet-

Automatic start marking device
Tachogenerator
Buckle switch

for operation with 220 V AC
110 V AC
24 V DC (battery)

Cable Connection Ka 4

8-pole flat plug for fixed plug outlet in the blimp
6-pole plug for connection to the camera (pilotone/tachogenerator, start marking, buckle switch)

ARRIFLEX 35 equipped with:

Buckle switch
without tachogenerator (pilotone)

for operation with 220 V AC
110 V AC

Cable Connection Ka 4B

8-pole flat plug for fixed plug outlet in the blimp
6-pole Tuchel plug for connection to camera (buckle switch)
Pilotone from built-in mains transformer in the blimp
for operation with 24 V DC

Cable Connection Ka 2B

8-pole flat plug for fixed plug outlet in the blimp
6-pole Tuchel plug for connection to camera (buckle switch)
5-pole Tuchel plug for connection to 24 V DC motor (Pilotone)

Transport and Storage

The tropic-resistant transport and storage case (Cat. No. 2711) is available for transporting the ARRI Blimp 120 S. It is made of plywood with an outside covering of hammered aluminium. The fasteners shutting the case are designed to make it dustproof and waterproof.
When being stored for a lengthy period of time, the Blimp 120 S should not be left in the case, but rather (to preserve the elasticity of the joint rubber) kept in a dry, well-aired room. The ARRI plastic blimp hood protects the blimp against dust.

Standard Equipment

Cat. No.

2710 1 Blimp 120 S with external diaphragm and focusing remote control, detachable diaphragm and focusing head, interchangeable front port, extended optical system for viewfinder, interior illumination for diaphragm and focusing strips, control windows for tachometer and meter or footage counter, pilot light, spirit level, including electric brake for AC motor, circuit for AC and DC operation, external plug for ON/OFF remote control, including electric wiring for buckle switch

gaged in diaphragm/focusing head
7 focusing strips, blank
1 focusing strip sleeve
7 diaphragm control strips, blank
1 cover for front port
1 connecting cable for single-pha AC 220 V, for 110 V with condensor
1 pan handle switch Ka 10
1 connecting cable camera-blimp Ka or Ka 4b
1 plug for pilotone with bridge 4–5 Ka 21
1 bridge plug for control Ka 22
5 spare bulbs for interior lighting
1 spare bulb for pan handle switch
5 fuses
2 spare rubber claws for diaphrag focusing head
1 eye cushion
1 internal hexagonal socket wrench M
1 focusing ruler
1 cover
1 set circuit diagrams
1 operating instructions booklet

Further Accessories for Blimp 120 S

Cat. No.

2601 Matte box for Blimp 120 S, indisper able accessory, always deliverd w the blimp

2711 Transport and storage case for Blir 120 S, of plywood, with hammered a minium outside covering, tropic-resi ant construction with dustproof and w terproof fasteners

2604 Transport and storage case for ma box, design as above

2609 Focusing crank, detachable, can used on both sides of the Blimp 120

2610 Foam rubber eye cushion, interchang able and washable

2612 Diaphragm and focusing strips, ca brated, engraved, and adjusted, o each required per lens; when order subsequently, the lenses must be se in to the factory

2624 Focusing strips, blank; 7 strips sup lied with blimp

2625 Diaphragm strips, blank; 7 strips sup lied with blimp

2613 Diaphragm control ring, one requir for each lens used in the Blimp 120 when ordering, please indicate mal focal length and speed of lens

2614 Buckle switch for ARRIFLEX 35 IIC later installation. Installation can done in our factory only. If an AR FLEX 35 IIC is ordered with a Blir

filming with ULTRASCOPE Anamorphic Lenses 40, 50, and 85
or
Special front port, as above, but for the ULTRASCOPE 50, 85, and 135 (please indicate on order) with:

1 special focusing finger
1 metal sunshade
1 special camera door with viewfinder for use in the Blimp 120 S switchable for standard and ULTRASCOPE viewing

Lens supports are necessary when using the ULTRASCOPE Anamorphic Lenses 40, 50, and 85 in the Blimp 120 S.

2631 1 Base support for ULTRASCOPE 40, 50, 85 and 135

2632 1 Lens cradle per lens

2633 1 Diaphragm control ring per lens

2634 1 Focusing ring per lens

2715 Special front port, interchangeable, for ARRI Blimp 120 S, with extension to accommodate the Angénieux LA 2 and LA 5 zoom lenses, including:

1 external zoom and focusing control
1 lens support
1 focusing drive
lens
1 zoom drive
1 zoom yoke
1 zoom strip, calibrated
1 focusing strip, calibrated
1 filter holder for Angénieux LA 2 lens

2716 Special front port for Angénieux Zoom Lens 10 x 25, for Blimp 120 S, with additional hinged front section which can be tipped up.

2712 Remote ON/OFF control switch for Blimp 120 S, 30 ft connecting cable

2626 Spare bulb 24 V, for blimp interior lighting

2008 Viewfinder, essential accessory for use with an ARRIFLEX 35 IIA or IIB

Ka 8 Connecting cable for 3 x 220 V

5049 ARRI halogen camera light with singly switchable, frosted halogen bulbs 2 x 625 W, mountable on the front carrying handle of the Blimp 120 S

2310 Heavy-duty friction tripod, Type S Maximum load 165 lbs, balanced up to 100 lbs, height 45", extensible to 70", weight approx. 50 lbs, particularly suited for the ARRI Blimp 120 S, with dovetail groove

2312 Heavy-duty friction tripod, Type S, as above, but with flat top and 3/8" thread

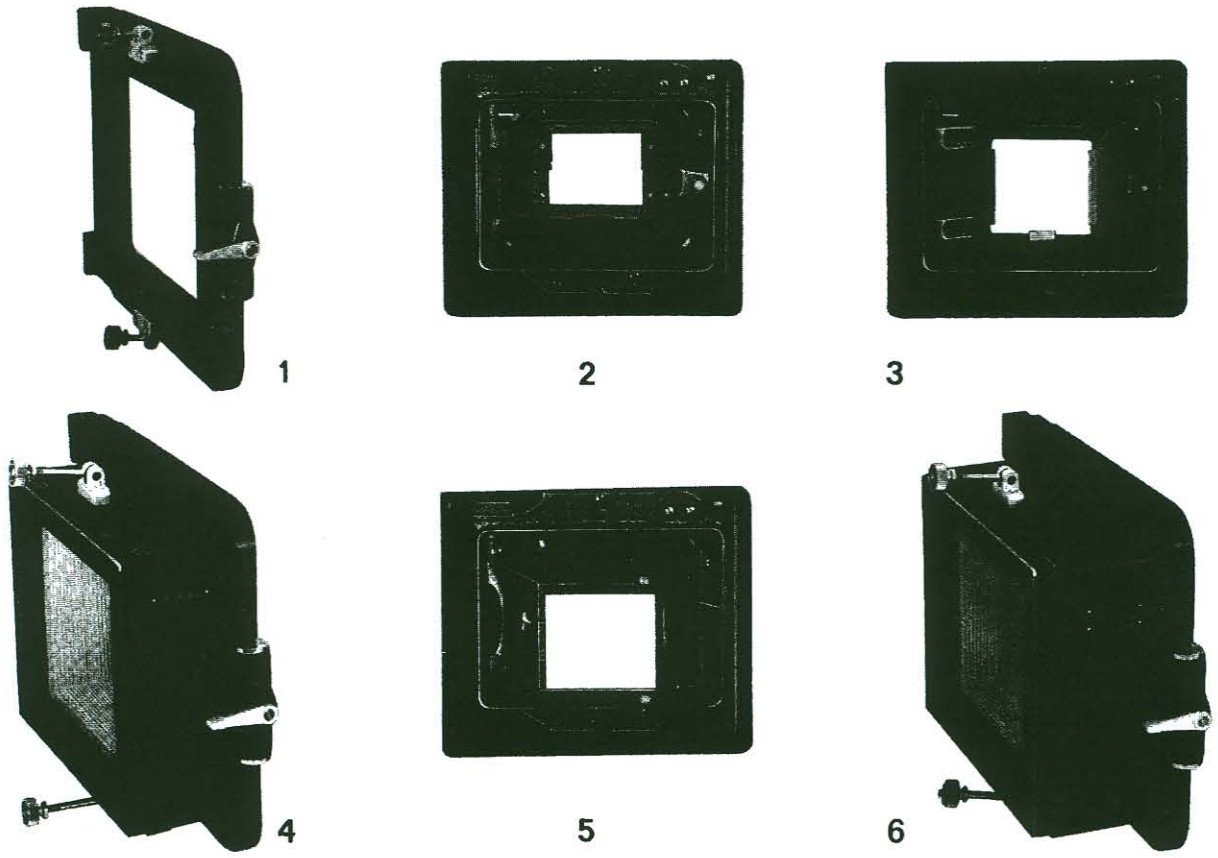


Fig. 7
Front port and filter holder for ARRI Blimp 120 S

1 flat front port
2 raised filter holder, projects inwards
4 short front port (see Cat. No. 2615)
5 raised filter holder, projects outwards

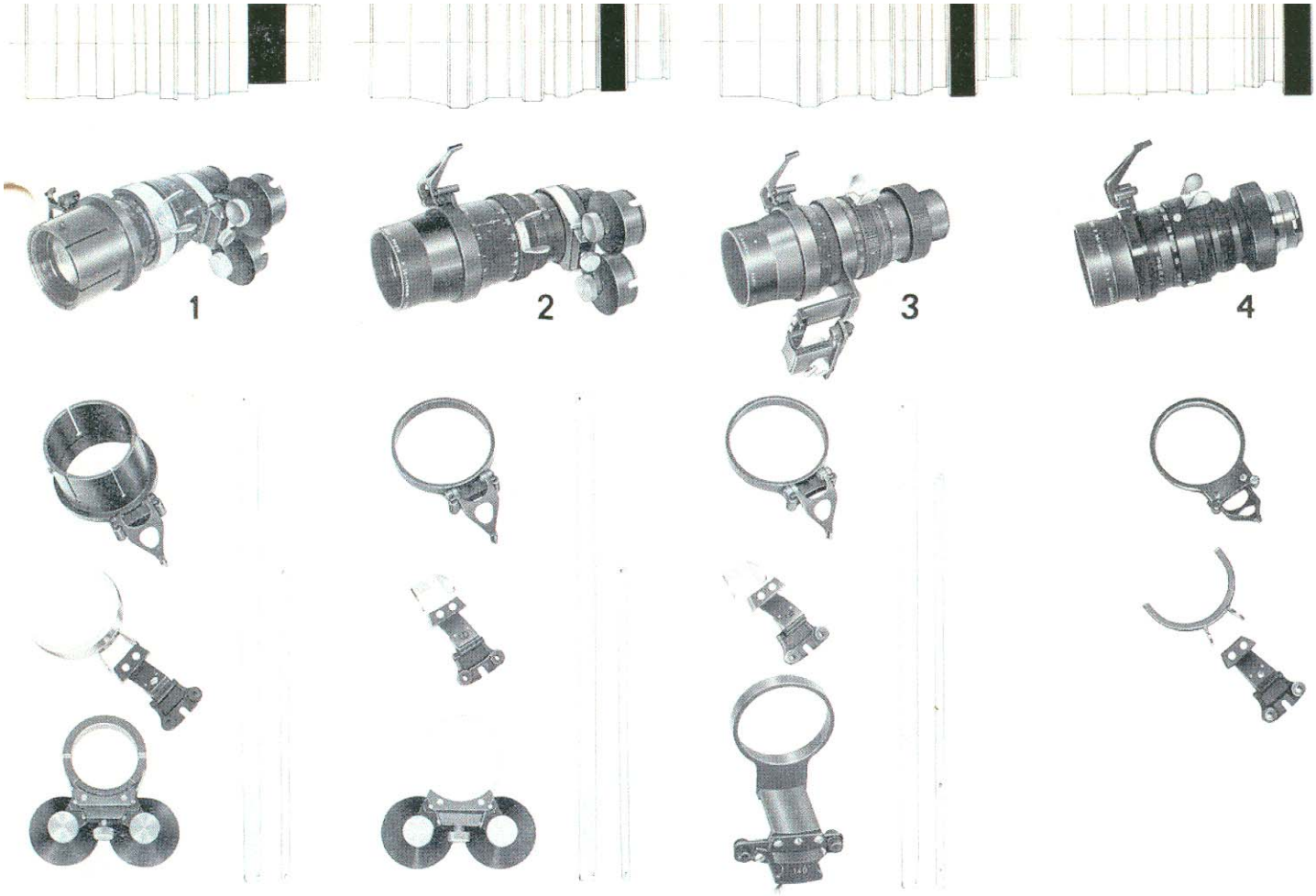


Fig. 8
Angénieux Zoom Lenses with Installation Accessories

1

Angénieux LA 2 Type 1
focus adjustment driver with sleeve
focal length yoke with lens grip
focal length driver
support with two-part clamping ring
focal length strip
focusing strip
The black-coloured diameter in the diagram = 43,8 mm

2

Angénieux LA 2 Type 2
focus adjustment driver with ring
lens grip
focal length driver
support
focal length strip
focusing strip
The black-coloured diameter in the diagram = 54 mm

3

Angénieux LA 2 Type 3
mounting plate
focal length strip
lengthened focusing strip
The black-coloured diameter in the diagram = 61,4 mm

4

Angénieux LA 2 Type 4
focus adjustment driver with ring
lens grip
focal length driver
focal length and focusing strip,
like Types 1 and 2
The black coloured diameter in the diagram = 61,4 mm

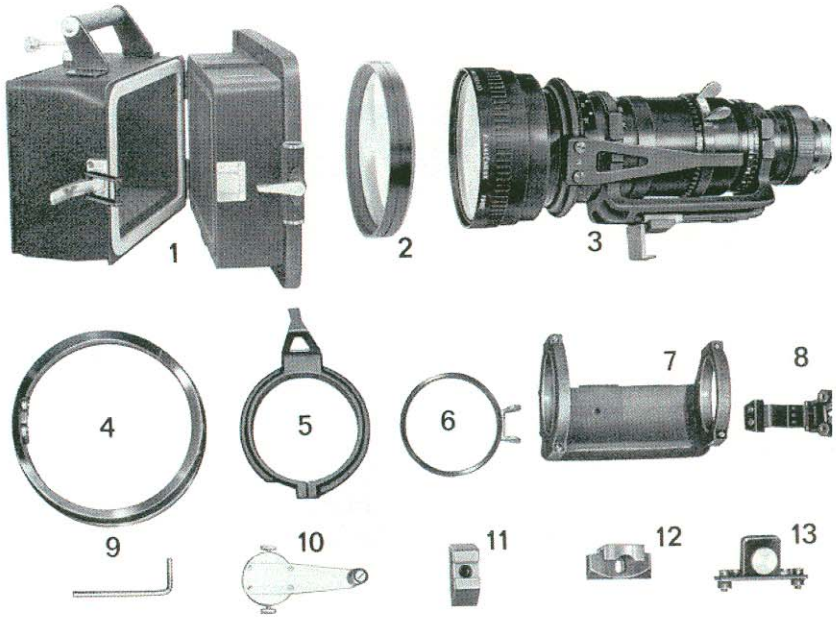
With new orders, Type 4 is always deliver Type 4 is provided with an ARRIFLEX mo or, on request, a steel adapter, and does require a support. For the older types 1 and 3, accessory parts can be supplied request.

Lenses in the ARRI Blimp 120 S

Angénieux LA 5 with installation accessories
1 medium front port
2 screw-on filter
3 Angénieux LA 5 25–100 mm
4 support ring with segment
5 mounting plate
6 focus adjustment driver
7 lens grip with 3 screws
8 focal length driver
9 focal length strip
10 focusing strip

Fig. 10
Angénieux Zoom 10 x 25 with installation accessories
1 long, two-part front port
2 screw-on filter
3 Angénieux zoom lens 25–250 mm, mounted
4 focus adjustment driver ring
5 clamping ring with spring catch
6 clamping ring
7 lens support with clamping device
8 driver
9 internal hexagonal socket wrench
10 focusing crank
11 base
12 segment
13 lower lens adjusting support

Not shown: focal length and focusing strip



The short front port, to which a metal sunshade with adjusting blocks and long screw spanners belongs, can be used in conjunction with the ARRI ULTRASCOPE Anamorphic Lenses 40, 50, and 85 in the ARRI Blimp 120 S. If the Ultrascope Anamorphic Lenses 50, 85, and 135 are used, the medium front port is necessary, likewise with metal sunshade.
Both front ports have the Cat. No. 2615 (please indicate on order whether short or medium front port is required).

Advertising Department
Technical data and standard equipment particulars are not binding and are subject to