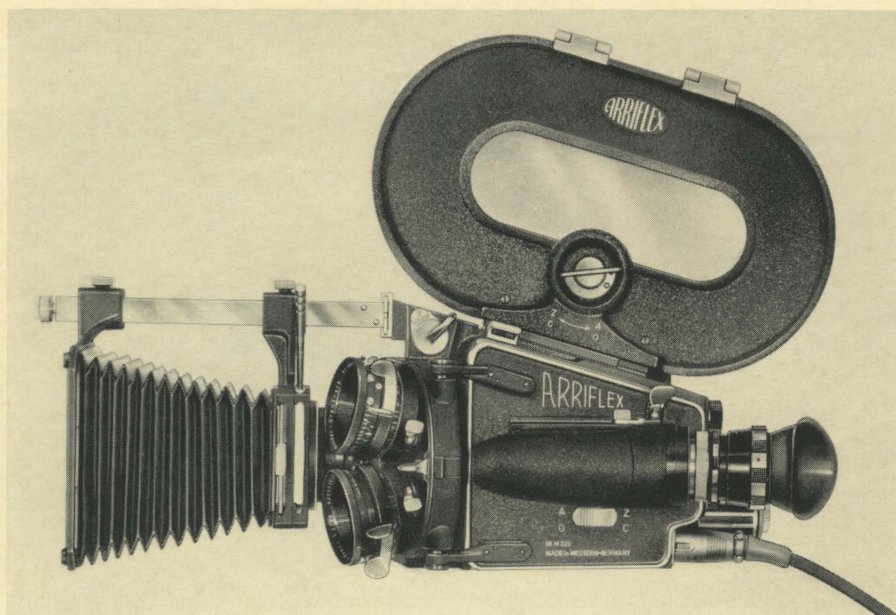


Mirror Reflex Motion Picture Camera

ARRIFLEX 16 M for 16 mm Film



Arriflex 16 M with
200 ft. magazine mounted

In the 16 mm field this new model developed by the ARNOLD & RICHTER K. G. is the ideal camera for news reel and studio work. The ARRIFLEX 16 M is used not only for on-the-scene reporting but also for many other types of work in scientific and industrial spheres.

Mirror reflex motion picture camera for 16 mm film with electric drive and interchangeable motors.

Compact, handy housing. Hinged camera door with rapid-action lock.

Quick-change magazines with built-in feed and take-up mechanism in the magazine throat for **200 and 400 ft. of film** on plastic cores or 100 and 200 ft. daylight-loading reels. Forward and reverse drive is standard equipment in all magazines.

ARNOLD & RICHTER K.G.

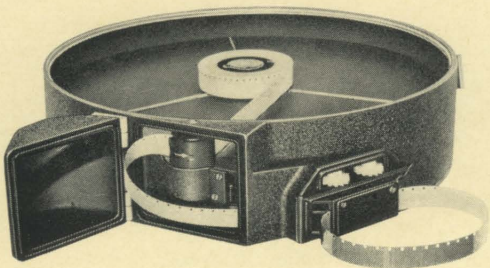
Manufacturers of Professional Motion Picture Equipment

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Phone: (0811) 3 80 91 – Cables: Arrifilm – Telex: 524317 arri d



In addition a **1200 ft. co-axial double-compartment magazine** in which the feed and take-up reels lie side by side with the result that the magazine can be kept relatively small and light. On request this magazine can also be equipped with reverse drive.



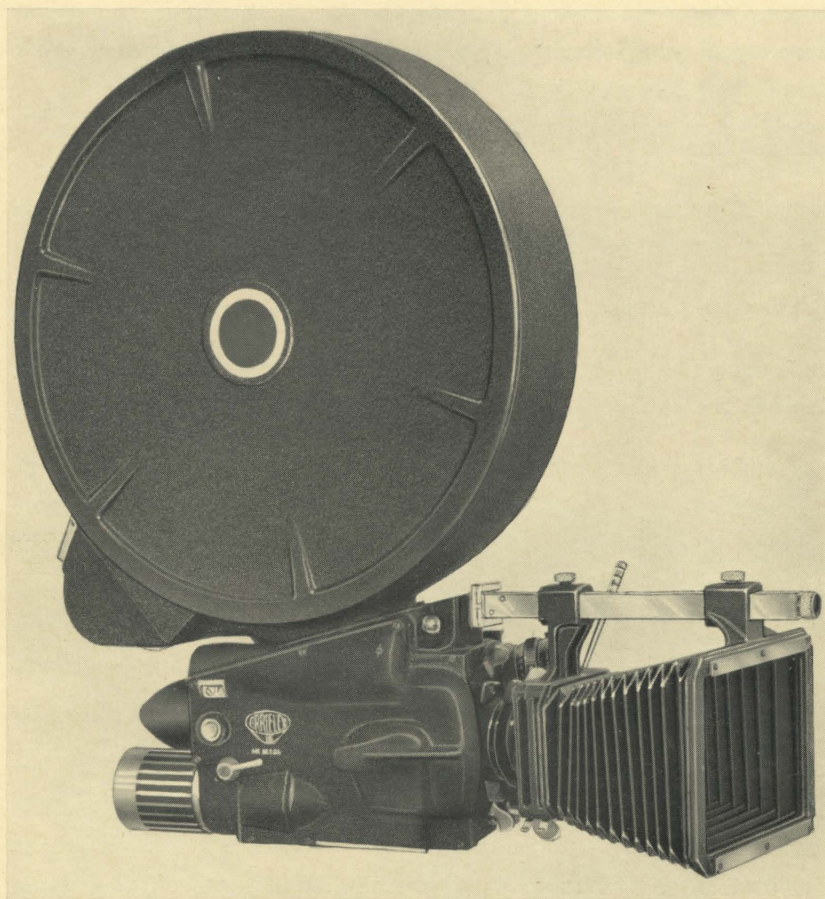
1200 ft. magazine (opened).

Properly formed cross-over loop between feed compartment and take-up compartment of magazine. Loop is protected by cross-over chamber cover.

Magazine changing is extremely simple. The magazines can be placed on the camera without bothering about proper gear meshing as the drive pinion in the camera housing is spring-loaded and its position automatically set and locked when the magazine is locked in place.

The locking mechanism between camera and magazine is very sturdy and secured against unintentional opening. After the magazine has been positioned, all that is necessary is to insert the loop formed between the feed and take-up sprockets into the film channel.

The mirror reflex finder system with its rotating mirror reflex shutter has an eyepiece with 10 x magnification and, regardless of whether or not the camera is running or whether the lens is wide open or stopped down, it produces on an interchangeable ground glass screen (on request with various markings such as TV format, crossed hairs, grid markings, etc.) a bright finder image which is vertically and laterally uninverted, parallaxfree and accurately framed. The deflecting prism is mounted on the camera door and, therefore, like the field lens, can easily be cleaned when the door is open.



View of camera with 1200 ft. magazine from the right. At the front of the housing is the front pilot lamp for automatic start marking.

The ARRI PERISCOPIC FINDER ATTACHMENT, which can be rotated and swivelled, is inserted between the ground glass screen and the eyepiece. The rubber eyecup for the eyepiece can be interchanged in a couple of seconds with that of another cameraman.

Moreover, in the near future a further finder eyepiece with an automatic closure mechanism will be available. When the cameraman places his eye against the rubber eyecup, slight pressure opens the cover automatically. It can be kept open per-



manently by tightening a threaded ring. In this case, too, the rubber eyecup is easily interchangeable; for spectacle wearers it can be fitted on request with a correction lens matching the eye glass.

Lackable **dioptric adjustment**.

Lenses in ARRIFLEX mounts ranging from 5.7 mm up to the longest available focal lengths can be used without restriction (long focal lengths with lens support).

Lens turret with divergent sockets for 3 lenses.

The matte box is equipped to take masks for special effects and also has one fixed and one rotatable **filter stage** (graduated and polarizing filters).

The film gate assembly ensures perfect registration of the film in its image plane. The basic elements are a rigid guide plate with aperture on the lens side and a spring-loaded rear pressure plate. There is a rigid lateral guide on the perforation side and a spring-loaded one on the opposite side. The film gate can be opened wide to insert the film, and the spring-loaded pressure plate is easily removed for cleaning. The material and finish of the film gate contribute towards elimination of emulsion deposits and consequent damage to the film.

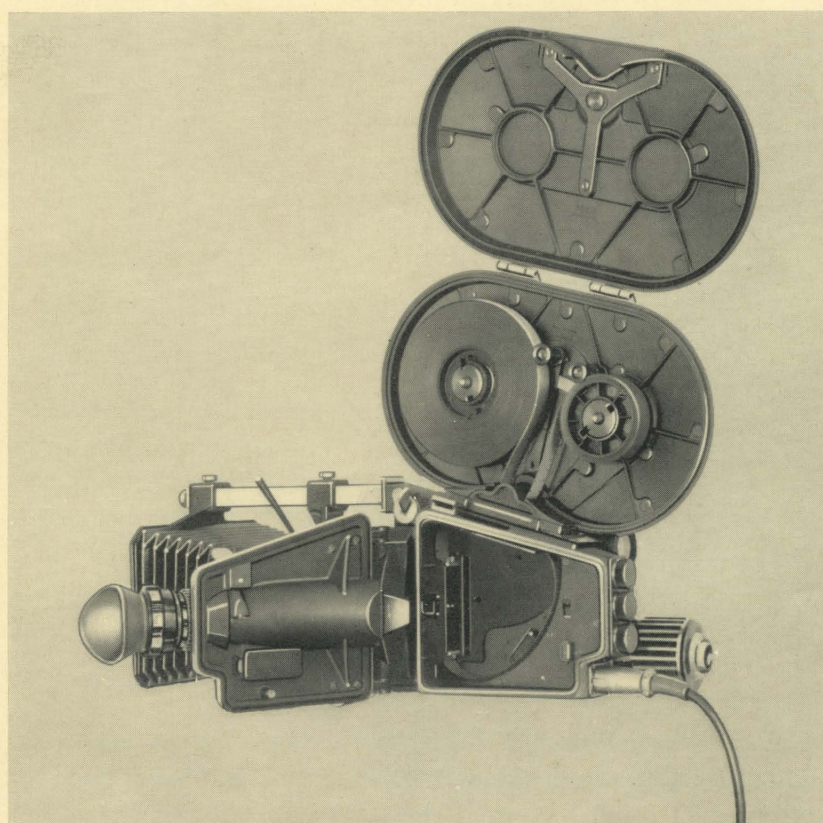
The claw system, in conjunction with the film gate, gives the ARRIFLEX 16 M the same excellent frame registration which is familiar to cameramen throughout the world from the ARRIFLEX 16St. The pull-down claw engages in the film perforation from the lens side while the registration pin engages in the perforation from the rear pressing the film against the rigid guide plate. The relative angular position of the pull-down claw and registration pin permits an effective shutter opening of 180° , so that 24 f. p. s. correspond to an exposure time of $1/48$ sec.

The tachometer, which has a measuring range of 0 to 50 f. p. s. (standard cameras have an operating range of 4 to 48 f. p. s.), is installed in a clearly visible position at the back of the camera.

The four-digit footage counter, which is also placed right in front of the cameraman, registers the length of film exposed, the right-hand digit serving as a frame counter, i. e. it indicates frames per foot instead of fractions of a foot.

The built-in pilot tone generator and slating mechanism (for full-frame exposure or optional edge marking) are further advantages of the ARRIFLEX 16 M. A transistorized DC motor with centrifugal governor for 24 or 25 f. p. s. is supplied for filming by the pilot tone method. This motor has permanent field, as a result of which its power input is only approximately 20 Watts. Its control accuracy is $\pm 1/4$ f. p. s.

3 connector sockets at the rear of the camera. One five-pole socket for pilot tone plug, one three-pole socket is connected in parallel to the power supply circuit for camera operation for special purpose. The third socket, a spare receptacle which is not wired in the standard model and can be equipped, as desired, with 2 to 12 poles, is available for special purposes (e. g. remote control of various operations).



Arriflex 16 M. Camera door and 200 ft. magazine cover open.



The **film run-out switch** automatically switches off the camera when the reel is exhausted or the film jams inside the camera.

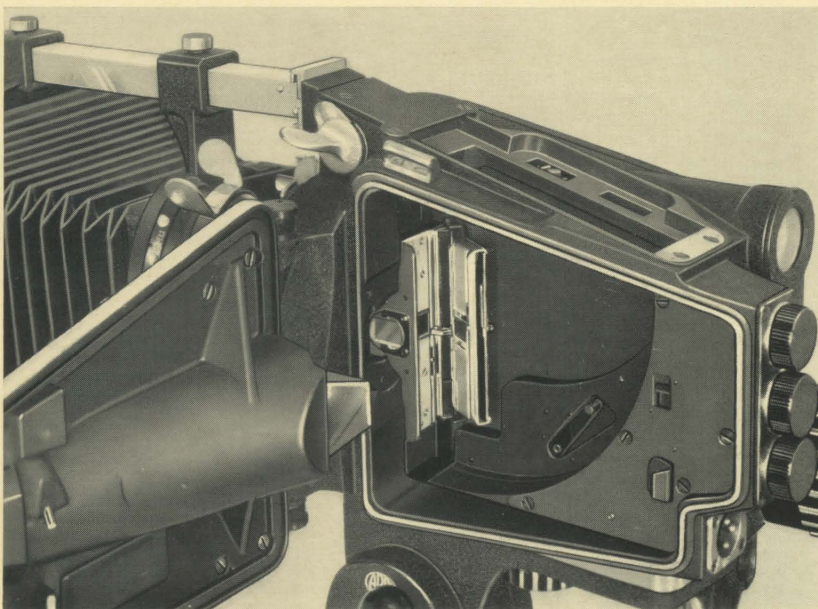
Power connector for camera: interlockable three-pole Cannon socket at rear of camera.

Operating voltage: 8 V DC supply from AC mains for synchronous operation.

The following **drive motors** can be installed in the ARRIFLEX 16 M, as desired.

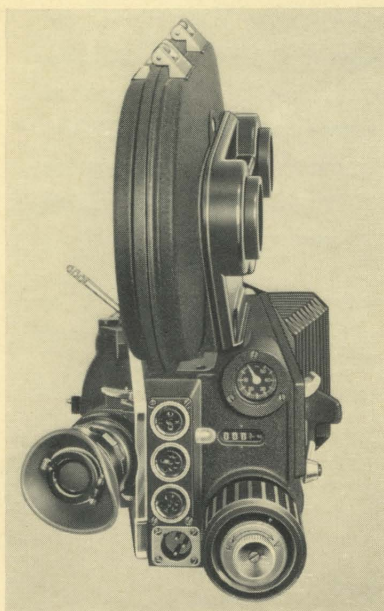


Variable speed motor (Cat.-No. 1160) for battery operation with rheostat for varying camera speed (4 to 48 f. p. s.); its circuit design gives a very fast pick-up. This motor is usually powered by battery but may also be connected to the mains via a power supply unit (for prolonged stationary shooting indoors).



Arriflex 16 M, camera door with deflecting prism swung out, film gate with spring-loaded pressure plate opened. The spring-loaded drive pinion in the magazine adaptation is partially visible.

At 24 f. p. s. it can also be run on a 6 V car battery. Knurled wheel behind the rheostat control cap for switching to forward and reverse drive. Knurled knob for inching.



Rear view of camera with 3 sockets, 3-pole Cannon socket for the battery cable, tachometer, combined footage (feet or meters) and frame counter, and the rear pilot lamp. The two knurled controls on the motor for forward and reverse drive and for manual inching are clearly visible.

Synchronous motor with power supply unit with selector for voltages from 110 to 250 V, for connection to single-phase AC mains and for mains frequencies of 50 or 60 c. p. s. Three versions of this motor are available: 50 c. p. s. for 24 f. p. s. (Cat.-No. 1163), 50 c. p. s. for 25 f. p. s. (Cat.-No. 1164), and 60 c. p. s. for 24 f. p. s. (USA) (Cat.-No. 1165).

The power supply unit is included in the standard equipment supplied with the synchronous motor. It transforms the line voltage to the operating voltage of the three-phase synchronous motor which for safety reasons has been designed for 42 V, and also provides the supplementary phase for the motor. A magnetic DC brake which acts on the synchronous motor is built into the power supply unit.

Both the above-mentioned motors can be **switched for forward and reverse drive**. The friction take-up drives of the 200 and 400 ft. magazines are automatically switched over simultaneously.

A mechanical phase-adjustment attachment is available as an accessory to the synchronous motor for recording TV screen images. This attachment brings the screen and film images into phase and prevents the recording of the line between screen images (blanking interval) on the film image of the ARRIFLEX 16 M.

The governor-controlled motor for 8 V battery operation and a fixed camera speed of 24 (Cat.-No. 1161) or 25 f. p. s. (Cat.-No. 1162) is designed for forward drive only. It is equipped with a knurled inching knob.

For single-frame shooting, the **single frame gear** is mounted in between the motor and the camera. It is triggered by a manual release or an intervalometer, both of which expose only one frame and transport the film to the next frame. A built-in counter in the intervalometer gives an accurate check on the functioning of the equipment. A frame counter for remote metering can also be supplied. Exposure times of 1/10, 3/10 and 9/10 sec. can be set by interchanging gears.

Many components and accessories, e. g. matte box, motors, finder eyepiece, time lapse and special effects equipment, can be rapidly interchanged without tools.

With a few exceptions these parts can be used with the standard ARRIFLEX 16 which will continue to be available in future.



For noise suppression during sound recordings, two blimps are available for the ARRIFLEX 16 M. The **Fibre Glass Blimp 16** can be used for the ARRIFLEX 16 St and ARRIFLEX 16 M; at a distance of 3 ft. it reduces camera noise to about 27 phons (27 db) according to German DIN standards. It is extremely light. The **UNIVERSAL Blimp** (for the 16 M model only) for more exacting requirements keeps camera noise at 3 ft. down to about 24 phons (24 db). The Fibre Glass Blimp 16 has interchangeable tops. Consequently the overall size can be adapted to the magazine size used.

The weight of the ARRIFLEX 16 M:

The ARRIFLEX 16 M with DC motor, a 25 mm lens and 200 ft. magazine (without film):

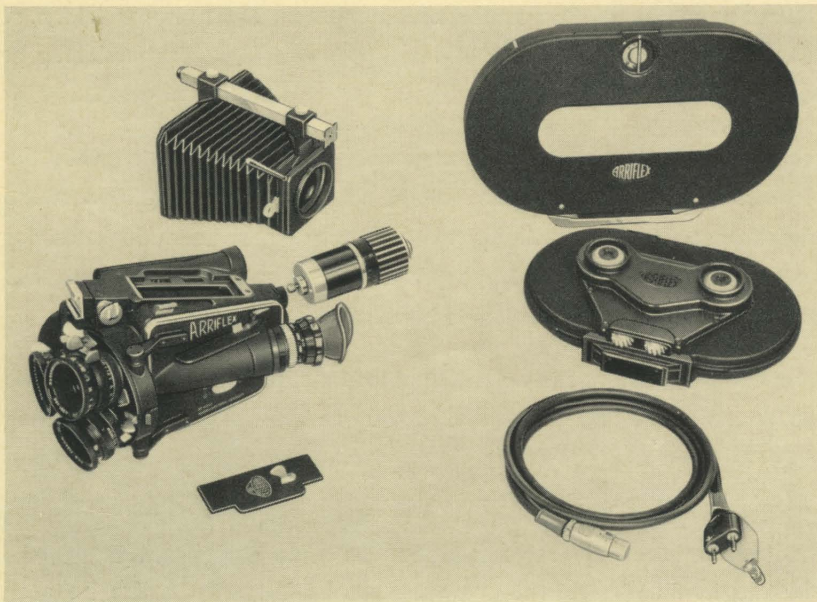
11 lbs.

The same outfit with 400 ft. magazine (without film):

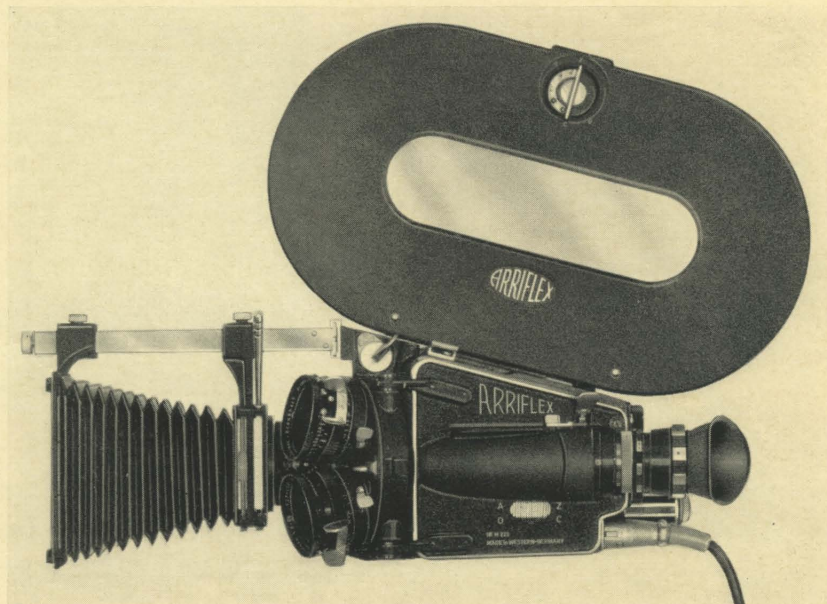
11 3/4 lbs.

The same outfit with 1200 ft. magazine (without film):

14 1/4 lbs.



Arriflex 16 M with 400 and 200 ft. magazines, matte box, drive motor, film compartment cover and battery cable.



Arriflex 16 M with mounted 400 ft. magazine.