

## CLOSEUP MACRO & MICRO ACCESSORIES

In these exacting applications, the unique advantages of Nikon cameras assume special significance. To begin with, the Nikon user enjoys the only 100% accurate finder system in all of 35mm. The finder reflects precisely the picture area recorded on the film, no more and no less, so that each photo can be composed to the very edges of the frame.

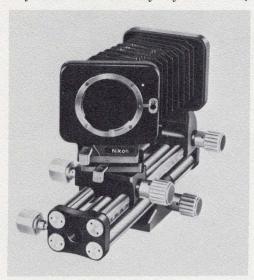
Interchangeability of finders and finder screens provide an unmatched capacity to suit any requirements and preference, in any application. The reliability and convenience of thru-the-lens metering is available even for vertical viewing by simply adding the Right Angle Finder.\* For ultra-critical focusing, there is the Eyepiece Magnifier or 6X Magnifying Finder.\*

Most Nikkor lenses can be used with one or another of the closeup accessories. Some lenses, however, are better suited for this application than others. The 50mm Auto-Nikkor f2 lends itself to successful closeup work with any accessory. Where highest possible resolution is paramount, the 55mm Auto Micro Nikkor will be found to surpass the highest requirements. There is also the Medical Auto-Nikkor—a complete, self contained system for closeup work.

All closeup, macro and micro accessories may be used with Nikkormat as well as Nikon slr cameras.

## BELLOWS FOCUSING ATTACHMENTS

Mounted between camera body and lens, bellows attachments provide continuous focus over a wide range of magnification ratios. The two models in the Nikon system may be used with virtually any Nikkor lens.



Model IV/PB-4 (Product No. 2602) The PB-4 with its unique, special facilities is the most versatile of all closeup accessories. Its front lens standard can be swung 25° and shifted 10mm each way to correct linear distortion and manipulate depth-of-field. The dual twin-track construction makes it possible to move the entire camera-bellowslens assembly as a unit for fine focusing without changing the lens-to-film distance. The camera may be attached or detached and turned to vertical or horizontal position at any point along the track.

Reproduction ratios extend from 1:1.2 to 1:3.6 with 50mm f2 lens in normal position, from 1:1.6 to 1:4.4 with lens reversed (using the BR-2 ring). The PB-4 accepts both slide copying attachments in the Nikon system for convenient duplicating of 35mm film. Weight 1,200g (42.8 ozs.)



Model V/PB-5 (Product No. 2635) This is a simplified version of the PB-4, with one twin-track and minus the front standard movements. It offers the same range of magnifications, accepts the same lenses and both slide copying attachments.

**REPRO-COPY OUTFIT**—Combines with camera to form a completely integrated closeup system for reproducing flat copy or photographing small objects and specimens. The outfit consists of a sturdy 2-piece upright column, sliding arm and camera bracket.

May be used with Extension Tubes, Bellows Attachments, Closeup Lenses, Microflex, or other special accessories. The mounting bracket can be locked in vertical, 45° or horizontal position anywhere along the column.

Model PFB-2 (Product No. 2761) is supplied with hardwood baseboard.

Model PFC-2 (Product No. 2760) includes carrying case which unfolds to serve as baseboard.



## **MAGNIFICATION RANGE WITH VARIOUS NIKON LENS/CLOSE IONS**

Note: The breaks in the magnification ranges for the Auxiliaryension Tube Set K indicate the areas which these accessories do not cone base of the table shows the normal magnification range of the lens

Rellows 200mm f4 135mm f2 8 105mm f2 5 85mm f1 8 28mm f3 5

Nikkor 105mm f4	200mm f4 Closest focal distance: 10 ft. (3m)				135mm t2.8 Closest focal distance: 5ft. (1.5m)				105mm f2.5 Closest focal distance 3-1/2 ft. (1m)					85mm f1.8 Closest focal. distance: 3-1/2 ft. (1m)					28mm f3.5 Closest focal distance: 2ft. (0.6m)					
Bellows Model Normal	Bellows IV or V Normal	Extension Tube Set K	Extension Tube E2	Auxiliary Closeup Lenses	IV or V Reversed	Bellows Model Normal	Extension Tube Set K	Extension Tube E2	Auxiliary Closeup Lenses	IV or V Reversed	Bellows Model Normal	Extension Tube Set K	Extension Tube E2	Auxiliary Closeup Lenses	IV or V Reversed	Bellows Model Normal	Extension Tube Set K	Extension Tube E2	Auxiliary Closeup Lenses	IV or V Reversed	Bellows Model Normal	Extension Tube Set K	Extension Tube E2	Auxiliary Closeup Lenses
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SLIDE COPYING ATTACHMENTS

Model IV/PS-4 (Product No. 2633) Used in conjunction with the PB-4 or PB-5 Bellows Attachment, the PS-4 serves not only for 1:1 duplicating of 35mm mounted slides and filmstrips but also to improve upon the originals. The frame holding the original can be shifted 6mm vertically and 9mm horizontally to permit cropping for a section of the slide which is enlarged in copying to fill the full 35mm format. When not in use, the bellows of the PS-4 fold flat for easy, safe storage. Attached trays hold filmstrips in place.

Model V/PS-5 (Product No. 2634) Except for the absence of the filmstrip trays and frame shifting feature, the PS-5 is identical to the PS-4. It may be used with both bellows focusing attachments.



BR-2 LENS REVERSING RING Product No. 2630) Permits any lens with 52mm front thread\* to be mounted in reverse position on either Bellows Attachment. Provides optimum lens performance at reproduction ratios greater than 1:1. Also convenient for on-the-spot closeups when mounted directly on camera, with lens reversed.

BR-3 ADAPTER (Product No. 2629) Fits onto back of reversed lens and provides 52mm thread so that a slide copying adapter or filter may be attached. Also serves as lens hood and protects rear element of lens.



MODEL K EXTENSION TUBE SET (Product No. 2710) Comprises 5 tubes which can be used in various combinations to add extensions from 5.8 to 46.6mm between camera body and lens. Accepts any current Nikkor lens from 20mm through 300mm. May be combined with bellows or Model E2 tube for greater magnification. Supplied with leather case.



MODEL E2 EXTENSION TUBE (Product No. 2720) This convenient closeup device is inserted between camera body and lens, adding an extension of 14mm. It accepts any current Nikkor lens from 20mm up. When used with Auto-Nikkors, the built-in plunger is depressed to open the lens to full aperture for viewing and focusing. Releasing the plunger stops the lens down to 'taking' aperture. The plunger accepts a Nikon cable release. E2 Tube may be used in conjunction with Bellows Attachments or Model K Extension Tube Set to provide semi-automatic diaphragm control with these accessories, or for greater magnification.



AUXILIARY CLOSEUP LENSES—Supplementary meniscus lenses in 52mm screwin mounts\* readily adapt camera for copying and closeup work. They require no exposure increase and do not interfere with automatic diaphragm action. Available in three progressively increasing powers: No. 0 (0.7 diopter), No. 1 (1.5 diopters) and No. 2 (3 diopters). May also be used in combination and in conjunction with extension tubes or bellows attachments.



BELLOWS NIKKOR 105mm f4 (Product No. 166) Specifically designed for use with either bellows attachment which provide continuous focus with this lens from infinity to greater than 1:1. Comfortably long working distance, even at maximum reproduction, is an added advantage of this combination.

\* 52mm screw-in fits all current lenses from 24 to 200mm except Medical Nikkor and 180mm f2.8.

## Photomicrographic Accessories

While mostly known for its cameras and lenses, Nikon is also one of the world's foremost manufactures of high-quality microscopes. The firsthand knowledge and experience developed by Nikon in both fields is evident in the precision and refinements exhibited by these accessories.

MICROSCOPE ADAPTER (Product No. 811) This attachment utilizes the viewing system and shutter of the camera, which it adapts to any standard microscope. It comes with a Type C viewfinder screen to replace the one being used in the Nikon camera. Reproduction is one-half of the microscope's magnification. Model for Nikkormat slr (without finder screen), Product No. 816.



Specifications subject to change without notice.





MICROFLEX PFM—Embodies its own image-forming optics, shutter mechanism and viewing system. Reduces overall magnification by one-half. Supplied with focusing ocular eyepiece for high-power photomicrography, and interchange-able ground-glass screen and 7x magnifier for low-power work. The screen also offers advantages in teaching and other group viewing applications.

The Microflex has an internal prism system which diverts the microscope image into the viewing eyepiece or onto the viewing screen. The exposure is made with conventional cable release which swings the prism out of the camera path and trips the shutter. All of the light reaches the film. Shutter speeds range from 1 second to 1/300th plus "bulb" and "time" for prolonged exposures. There is also provision for synchronized flash.

M35-S CAMERA BODY (Product No. 801) Can be used with Microflex, in place of Nikon or Nikkormat body. Contains film transport and counter, with dark slide.