

THE BESELER ENLARGER MODEL CB7



DRIVING
ELECTRON



LOW
FOCUS



FOCUS
HOLD
CABLE



FINE FOCUS
SPRING
ALIGNMENT



OFF / ON
ALL POWER



FOOT SWITCHES
MOMENTARY



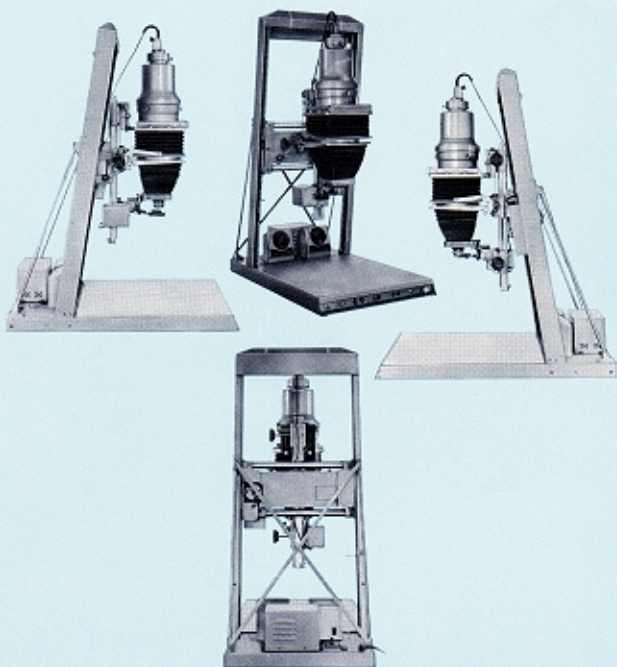
TIMER



FOCUS—GRIPSE
SELECTOR SWITCH

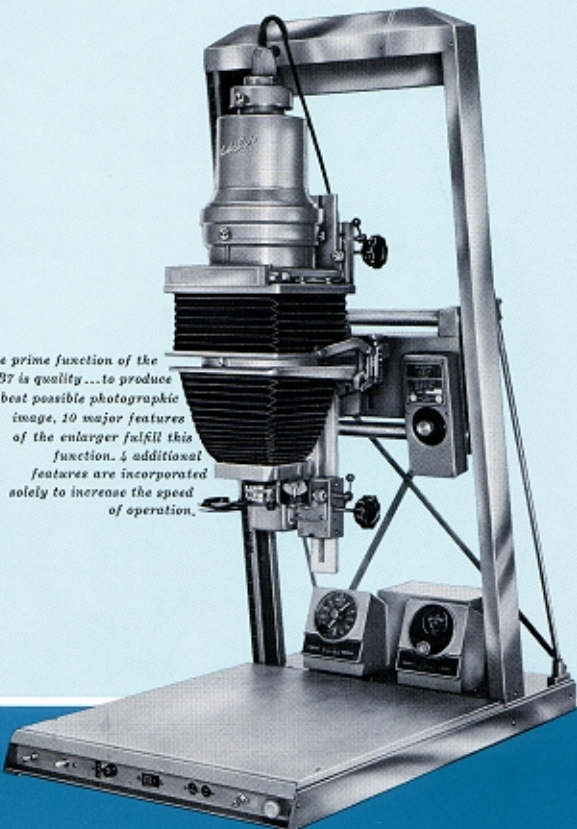


PRESS
TO GRIPSE



THE BESELER ENLARGER

The Beseler Enlarger Model CB7 is probably the finest instrument of its kind in existence. It brings greatly increased efficiency and a high degree of automation to the enlarging art. Its performance, its versatility, and its advanced engineering concepts permit the photographer to give full attention to the creative aspects of his printing techniques.



*The prime function of the
CB7 is quality...to produce
the best possible photographic
image. 10 major features
of the enlarger fulfill this
function. 4 additional
features are incorporated
solely to increase the speed
of operation.*

MODEL CB7

The Model CB7 performs each of its tasks flawlessly and effortlessly. It simplifies difficult darkroom problems, speeds regular operation, considerably increases output.

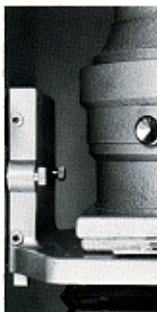
As new and exciting as the space age, it embodies provisions for continuous adaptations and additions, keeping pace with the technologies of tomorrow.

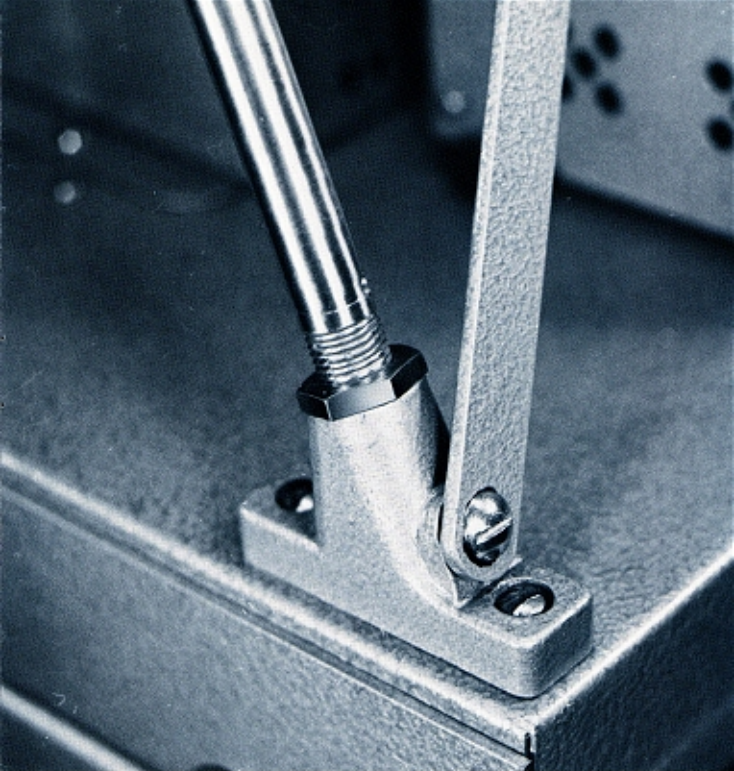


The Model CB7 continues the exclusive Beseler Enlarger tradition of absolute rigidity of the framework by using one of the strongest engineering principles known—the triangular truss. The basic principle is identical to that used in building bridges and other types of structures that must withstand any kind of vibration. The Model CB7 has 4 points of support, 11 points of rigidity, 5 triangular truss areas. (Other makes usually have one point of support, one point of rigidity, no triangular truss areas.) In addition, the CB7 embodies a solid steel T-beam base frame assembly.

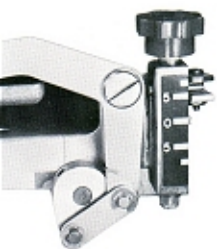
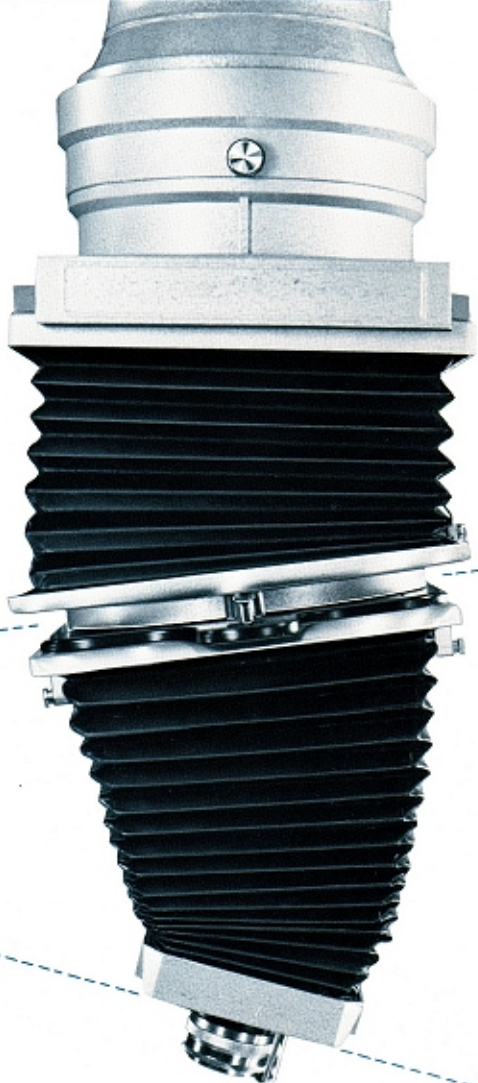
The importance of enlarger rigidity cannot be overstressed. The photographer is usually after perfect sharpness. Enlarging an image however, also enlarges any vibration, (and to the same ratio of magnification).

Vibration is all around us... from air-conditioners, elevators, walking, street traffic, trains, doors closing. To maintain structural perfection that is equal to its optical performance, the CB7 is engineered to be vibration-free, delivering a new standard of clarity and sharpness for any size print.

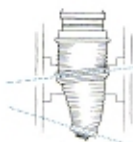




RIGIDITY OF FRAMEWORK



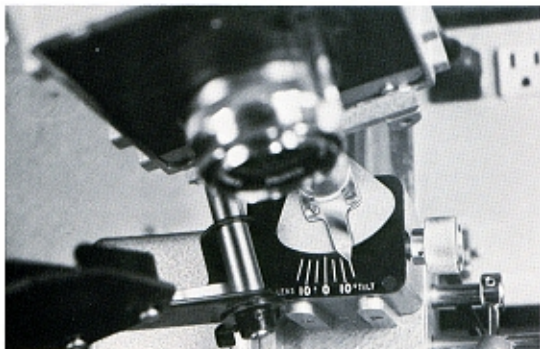
DISTORTION CONTROLS

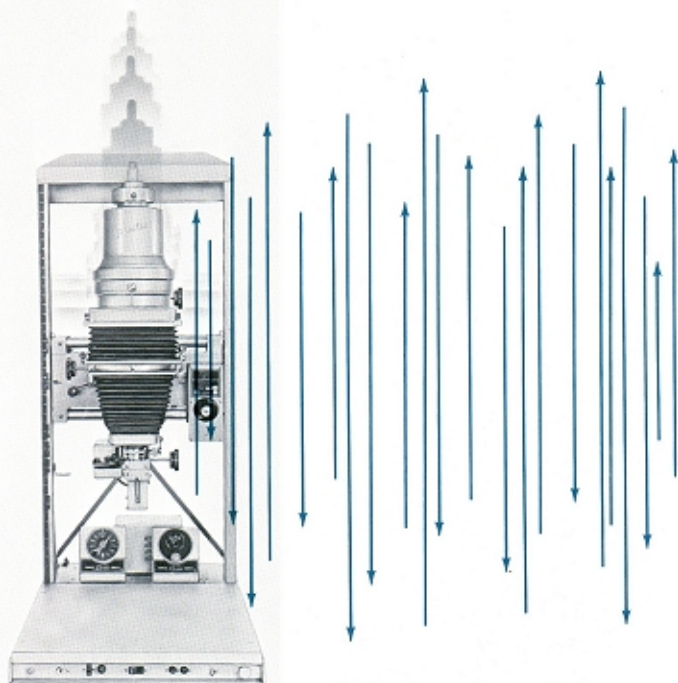


The Beseler CB7 embodies a negative stage tilt of $7\frac{1}{2}^{\circ}$ to each side of center. The tilting bracket mechanism is easily activated. A convenient knob offers easy, smooth and infinitely variable tilting, with the tilt degree showing on a graduated plate. The upper and lower bellow assemblies are connected to the negative stage and tilt with it. The negative carrier also revolves within the negative stage assembly, offering image tilt in any direction

The lens stage tilt is 15° to each side of center. The tilt control is self-locking with no backlash, incorporates a quick disengage for instant return to 0° .

Whether used as an enlarger or as a camera with the revolving Beseler camera back, the CB7 offers distortion control equal to many view cameras.





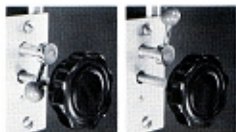
SPEED OF OPERATION

Studies of former enlarging practices showed a great deal of wasted time, due to the use of old-fashioned equipment. In the CB7 all important electrical functions are controlled from the front panel. This includes carriage elevation, lens movement, lamphouse illumination for picture composition and film focusing, print exposure, automatic safelight cutout, foot-switch acceptor, main on-off switch. Substantial operational time is saved by thus locating these automated controls together.

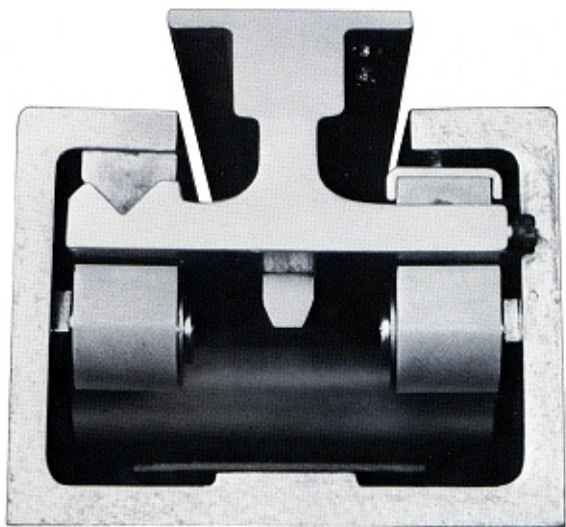
Inserting the negative carrier in the CB7 can be a quick one-hand operation; as it is inserted a ramp guide gently lifts the upper negative stage immediately accepting the carrier into the throat and allowing it to arrive into its proper optical position. The carrier is rotatable from 0° to 270° without opening the negative stage. Knobs and levers concerned with a single function are placed in juxtaposition to each other. All locking levers are locked when up, open when down.

Speed of operation is also attained by interconnection of key light systems in the darkroom. One push-button on the CB7 can cut out the darkroom safelight, expose the enlarging paper for a pre-determined period, stop the exposure, put on the safelight again.





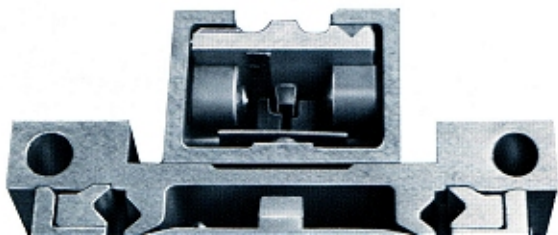
*Levers are locked when up,
open when down.*



LOCKING POWER



The capability of the Beseler Model CB7 to achieve any desired combination of positions is a major achievement. Locking the components into their positions is an equally important achievement. Every directional action of every component has its dynamic braking-action and counter-action which stops and holds all movement instantly and securely. The result is a locking power that holds firm with zero backlash, zero play, zero slip.

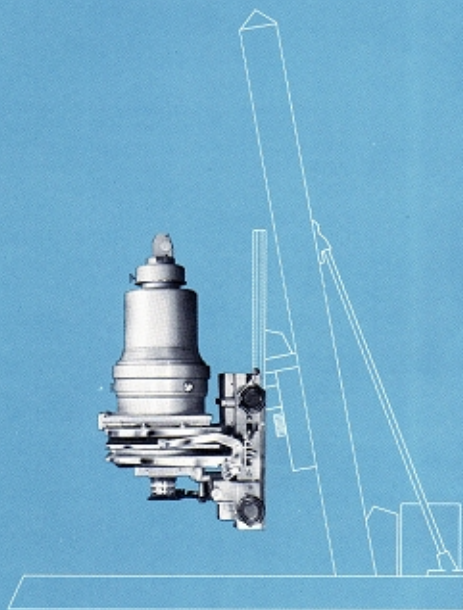




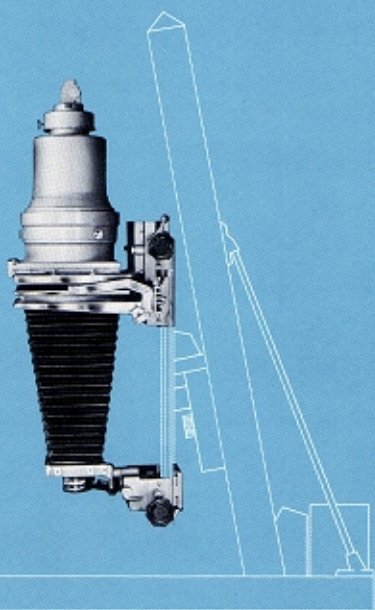
The Beseler CB7 is substantially more than an instrument for making enlargements. It performs many other operations.

Any size negative from 8mm to 4" x 5" can be printed in the CB7. The negative can be enlarged onto the baseboard, super-enlarged (by lowering the baseboard), or wall-projected to giant mural size. In addition, the negative can be made into a same-size print, 1:1, or reduced to 1/8 the original size, 8:1, (see Print Size Chart). The baseboard is unobstructed, measures 21" x 24 1/2".

The Beseler camera back converts the CB7 into one of the most useful copying devices and vertical cameras available. Lens to film distance varies from 3" to 14" (a bellows extension similar to many view cameras). Camera back tilt is 7 1/2° from each side of center; lensboard tilt is 15° from each side of center. Two latching bars rigidly hold or allow quick removal of the camera back (or lamphouse and condensing system assemblies). The back accepts 4" x 5" cut film and film pack holders, Polaroid® holders, roll film holders.



MULTI-FUNCTIONS





INTERCHA

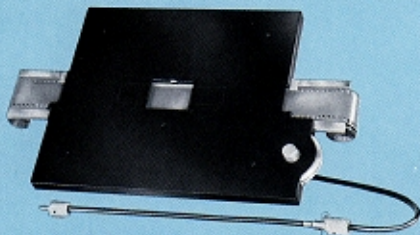
SO

The Beseler Enlarger Model CB7 has instantly interchangeable light sources: incandescent, coldlite (fluorescent), point-source, and continuous color filtration.

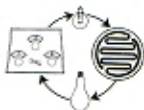
Incandescent light sources are, of course, somewhat more brilliant than the diffused fluorescent sources. Both have specific areas of use. Point-source systems, however, offer a different concept in illumination. Because the light is specular, the rays travelling through the condensers and the negative present an incredibly brighter, more contrasty, crisper image. Undercutting is virtually eliminated. It gives greater resolution, a better degree of acutance. Beseler's point-source is about 60X brighter than incandescent. If an average exposure is 6 seconds to make an enlargement with a standard #212 enlarging lamp, the point-source average exposure could be 1/10 second. This remarkable achievement makes it ideal for wall projection, for giant magnification, where short exposures are desirable, or for graphic arts use on slower line films.



NEW NEGATIVE CARRIER SYSTEM



ADJUSTABLE LIGHT SOURCES



To match the major design contributions of the CB7, the Beseler photo technicians set out to do the same for negative carriers. The result . . . vastly improved methods for handling film.

For the 35mm size, Beseler invented the Touchless Negative Carrier System. No glass is used. The Carrier floats the roll of film between 2 bearings. The roll is carried forward or backward by remote gear drive while the film is held taut with continuous, non-slip devices covering the sprocket holes only.

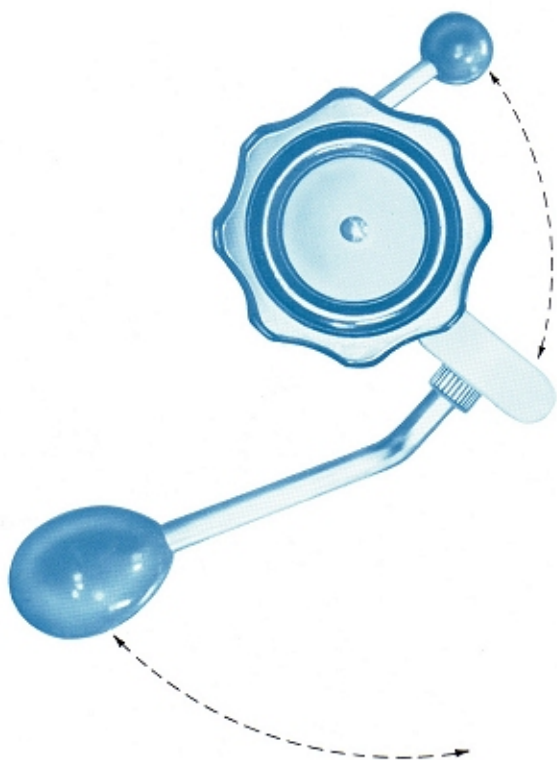
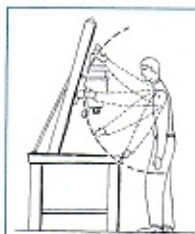
Any length of 35mm film may be inserted from 1 frame to a 250' roll. The Touchless Carrier embodies apertures for both half-frame and standard full-frame pictures; the frame number appears on the baseboard (or easel), as the film is advanced. The gear drive is operable at the carrier or by a flexible cable.

The frame being enlarged cannot buckle or curl; does not scratch against metal. The Beseler Touchless Negative Carrier fits all Beseler enlargers and most others as well. The CB7 also accepts the well-known 4" x 5" Beseler Negaflat Carrier. This grips the edges of film pack or cut film and holds it extremely taut and flat with pressure towards the extremities.



An improved Beseler standard glassless carrier is now available. Undercut pins guide the film into position; a balanced hinged top and new thumb-contour allows instant lift and drop. For those who prefer glass carriers, the CB7 offers anti-dust improvements. Heat filtration above the negative stage absorbs lamphouse heat, helps prevent consequent dust collection. In addition, a unique air-cooled lamphouse dissipates the balance of heat upwards away from the negative.

CREATIVE ENGINEERING





The Beseler Model CB7 is designed to be controlled by a human being. Each enlarger activity performed by the human has been reviewed and charted from the top, the side, the front and bottom view. The resulting charts became the basis for the decisions on which enlarger control should be located where.

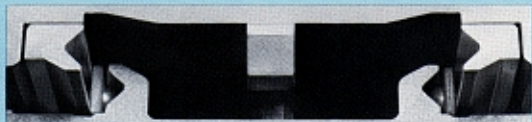
For example, within one 90° arc of the human arms are located the negative stage lever and lock (left side), negative stage tilt, lens stage tilt and lens stage focusing knob (right side), plus the entire control panel itself. The focusing controls are placed to be operated near one's eyes as well as at the lens stage.

Foot-operated exposure-switches may be plugged in to do what the hand-operated exposure push-button does. (This includes a momentary foot switch and a timer foot switch.) In still another human reference, knobs and adjustments are sized and knurled to match the human hand and fingers offering comfort as well as accurate control.



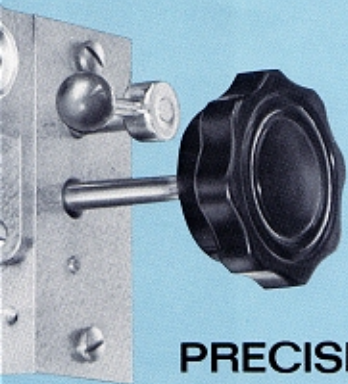
The Model CB7 Enlarger is a precise instrument in both its manufacture and operation. It is engineered to rigid specifications. Actual darkroom use has proved the Model CB7 to be functionally accurate in every aspect: the $7\frac{1}{2}^\circ$ tilting negative stage is self-locking; the lamp positioning for the point-source lighting system is rack-fed; the incandescent light source positioning is by adjustable tube which permits vertical movement of the lamp for optimum uniformity of illumination; the 15° tilting lens stage is center pivoted to the lens focusing block; the lens tilt knob is gear-driven with disengagement for quick return; the lens filter structure below the lens has a vertically and horizontally adjustable arm so that the filter may swing close to whichever lens is being used.

The 3 focusing blocks maintain their vertical 90° precision with lengthwise vee-ways matched to the configuration of the backbone; thus the lamphouse, condenser, negative and lens stages are always in precise alignment. The blocks themselves have floating non-distorting clamps and remarkably smooth movement. They eliminate play in all focusing sections with four eccentrically adjustable gibs, one adjustable floating delrin gib, one delrin vee gib.



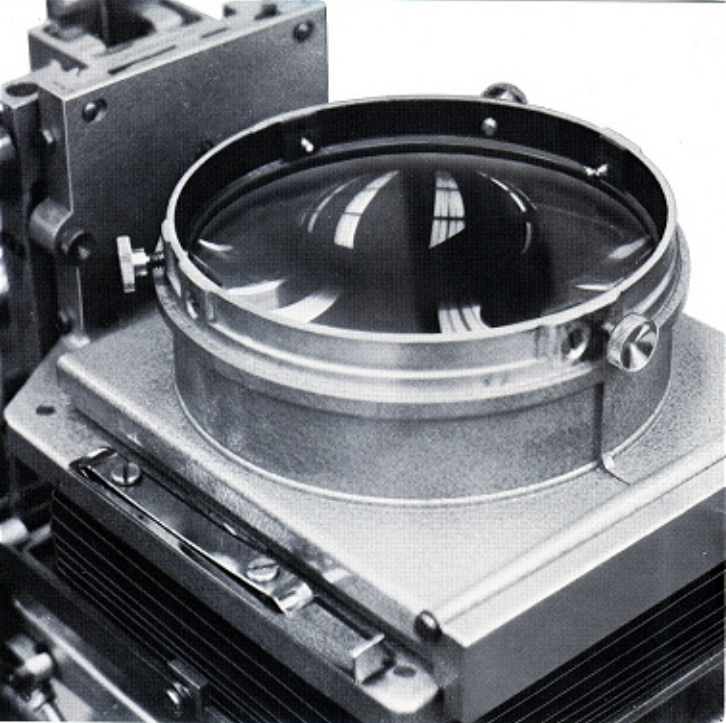
All adjustments and knobs are designed to be easily accessible, comfortable to use. Never before has so much care been taken to achieve the ultimate in precision controls for any enlarger.

An example of CB7 precision is in the electric focusing complex. The major carriage elevation switch offers instant activation, up or down, from a center "off" position. The lens focus motor switch has five touch controls: "fast" up, "fine" up, off, "fast" down, and "fine" down. The "fine" focus adjusting knob controls the speed of the up and down "fine" movements; it is adjustable from zero speed to virtual full speed, and it is changeable at will, even while focusing. The power focus unit has automatic stop limits, both up and down. When projecting murals on a far wall, a remote control cable can operate the "fine" positioning.



**PRECISION
CONTROLS**





SUPER-SIZED CONDENSERS

The CB7 condensers are larger than the usual condensers found in 4" x 5" enlargers. This provides an effective 50% increase in coverage at the outer portions of the film—at the corners.

These super-sized condensers in the CB7 offer close to an absolutely flat and even field of illumination for the entire image.

There are no hot spots, no center floodlighting; illumination, fall-off and dispersion is near-perfect. For the first time in enlarger-making history, the CB7 condenser system offers the photographer fair and equal importance to all 20 square inches of his 4" x 5" negative... to the entire surface of any size negative.

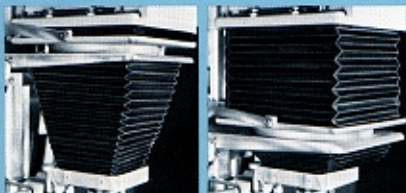


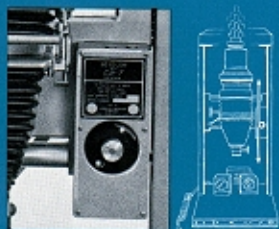


8mm TO 4"x5" NEGATIVES WITH ONE CONDENSER SYSTEM

In 1954, the Charles Beseler Company introduced to mass photographic manufacturing the "cone-of-light" principle. It has since become the standard by which the other older systems are judged. In older systems, extra sets of costly condensers had to be purchased, stored, handled; (a different negative size required a different focal length lens and this in turn required different light optics or condensers).

In the Beseler Model CB7, one unitized twin-condenser system is ideal for all negative sizes. The split-bellows negative stage is positionally adjustable to be placed anywhere within the cone-of-light formed between the condenser stage and the lens stage. The 4" x 5" negative is placed towards the top of the cone, the 8mm negative is placed near the bottom of the cone. In this way each size receives its maximum coverage, without extra condenser cost and inconvenience.





MOTOR POWER



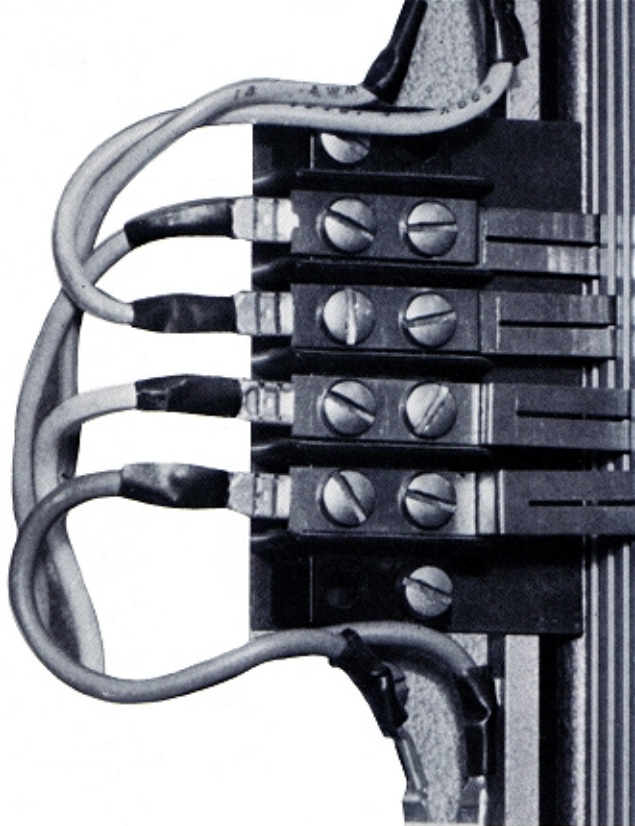
The CB7 combines the use of both electric motor power and human power.

In the research and design stages the choice of using either kind of power for basic enlarger movement was made optional to a number of practicing professional darkroom experts. As a result of their thoughtful decisions, the ideal combination of both the human and the automated power exists in the CB7.

The vertical movement of the carriage assembly is run by motor, carrying with it the lamphouse and condenser assembly, the negative stage, the lens stage. This vertical motor power removes one of the greatest single operating problems in enlarging. It saves the photographer from wasting time and energy.

Also available to the CB7 photographer is a motor power drive for the lens stage. This offers focusing by switch at the front panel or by a remote control cord (as for wall projection, where the photographer may be at the paper surface some 5, 10, 20 or more feet away from the lens). The front panel motor controls are for both fast and slow speeds; remote control handles fine speed. In both instances the power drive includes the on, off, up and down positioning.

The CB7 offers the combined use of both human and power-focusing; one does not supersede the other. There are many creative printers who desire a final human touch to the focusing knob.



SPACE-AGE CIRCUITRY

The automation of the CB7 is on a par with Beseler's standards, the highest in the industry.

A new type of wireless buss contact system was invented for the CB7 to operate from the outer enlarger framework, through a main chassis junction box and into the main carriage assembly. A pre-wired channel box accommodates the transistorized 4-speed power focus acceptance unit.

A special modular receptacle has a sliding cover plate which automatically adjusts the enlarger lamp circuit for a timer or for manual operation at the front panel.

Provision has been made for the modularized acceptance of a line of voltage stabilizer, plus a Beseler Resistrol Unit (incorporating a Voltmeter) for the enlarger lamp. The Resistrol and Voltmeter indicate the incoming line volts and allow setting and maintaining the voltage to any desired level from 50 to 150, up to maximum line voltage. This offers virtually infinite control of exposure time.





ALIGNMENT CONTROLS



Perfect sharpness and maximum operating efficiency is achieved with any enlarger only when its lamp-condenser-negative-lens assemblies are in exact 90° alignment with the baseboard, or printing surface. Although most other enlargers are properly aligned when they leave their factories, they often become misaligned when handled during shipment. The CB7 can always be brought into exact alignment quickly and easily.



It is highly improbable that a perfect zero degree level floor and table, and a perfect 90° wall, will be available to the photographer. Slanting floors or slightly tilted tables are more common. For that reason, the Beseler Model CB7 incorporates four easily accessible turnbuckle points, allowing the entire enlarger to be brought into and held in absolute 0°-90° alignment right in the darkroom where it is to be used.

The heavy extruded vertical frame has adjustable rear cross braces and two support rods with turnbuckle action. This enables the frame to be adjusted in the 1st vertical position, then the 2nd vertical position. It places the focusing track and optical axis in perfect relation to the board. If the enlarger is moved to a different location, the same quick, simple turnbuckle action maintains proper alignment.

BESLER ENLARGERS ARE THE WORLD'S FINEST

*There are 30 Models in 3 Series.
6 Models are shown here.*

See your Authorized Beseler Dealer for a demonstration.



Model 23C-II



Model 45 MCXA



Model 45 MCRX



Model CB7



Model 57 HVT



Model 57 MVT

*CB7 accessories include Line Voltage Stabilizer, Resistrol with Voltmeter, Timer,
Foot Switches, Power Focus with Remote Control.
Specifications subject to change without notice.*

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