

09 March 2017

Comparison of Heiland Enlarger Light Source with Ilford MG500 Head and Ilford Multigrade Filters

CONCLUSION

As discussed below, the Heiland unit is very easy to fit and very easy to use. It gives more flexibility in terms of ease with focusing (2 helpful features - the safelight setting and the option to increase light levels), and also offers a huge choice of filter grades due to being able to select any grade between 0 and 5 at 0.1 grades.

A slight negative is not being able to have a grade 00 - but that is also not an option on the MG500 head system.

In terms of exposing, it does require a user to have a separate timer but once that is set up then it is extremely easy to print.

The performance attained is very similar to the MG500 head performance but not quite as favourable as the below lens Multigrade filter system. That though, is primarily only due to the equivalent of grade 5 not being achieved as it is with the filter set - the Heiland attains a maximum contrast between a Grade 4.25 - 4.50.

In terms of contrast control the Heiland unit is very comparable to the MG500 head in performance, but with the bonus of extra flexibility in filter grade choices (1/10ths of a grade) and variable lighting intensity. This is useful for optimum enlarger exposing times and for applications like focusing or dodging/burning in.

We would recommend it for use with our Multigrade products but with the reservation that a slightly greater contrast range may be obtained using filters.

See detail below.

Our thanks go to Jürgen Heiland for the loan of the unit.

HARDWARE

The Heiland unit appears well constructed and is very light. It was fitted easily to the MG500 mounting and the heads were changed over in a matter of minutes.

The Heiland head unit was extremely easy to mount, it simply bolted in to the existing adapter plates for the 500 head. The head unit is a very simple designed black box with LED's but it is favourably small and light.

The control box is small and very simple to use. It has 3 control knobs that enable safelight focusing/viewing, standard focusing/viewing and grade choices (0-5).

A separate timer is required. It might be useful for some customers for the control unit to have a built in timer.

PRINTING

Work was printed with MGRC 1M – from an appropriate negative with a below lens filtration system at grades 0,1,2,3,4 and 5.

On the same negative on a DeVere 504 with a MG500 system - at grades 0,1,2,3,4 and 5.

On the same negative on a DeVere 504 with the Heiland head at grades 0,1,2,3,4 and 5.

In brief, the overall conclusion is that the Heiland system is extremely good. It is very easy to use, and gave decent contrast spacing / grades.

Its only shortfall is that at grade 5, it does not appear to be quite as hard in contrast as what can be achieved using below lens Multigrade filtration.

Exposures were also carried out through an optical step wedge and the densities were measured after processing. The results can be seen on the final page below.

USING THE HEILAND UNIT

The negative carrier loading functions the same way as when being used in the 500 head system.

The Heiland control unit visual displays are bright (red) but safe with MG paper.

Focusing or working with the red light option in place was easy especially because there is an option to give more light. It was used at light level 0, but it was also helpful to set it to 10 or 20. Clearly that increases the exposures, but it definitely gives an option for easy focusing even with the lens stopped down and avoids having to change aperture. When used at light setting 0, 10 or 20 all the prints are still comparable for sharpness. The filter grades go from 0-5, but can be set in 0.1 grade increments. Therefore, it is possible to select, for example, grade 1.1 or 1.2 etc. This is a big advantage of this system. For an application like split grade printing there is a fast way to toggle between grade 0 and 5 so it is not necessary to move up the grades in 0.1 increments to move between the extremes.

RESULTS

All prints were comparable in that I ensured a 0.8 density was attained at a specific mid grey point in each image

- The MGIV prints using the filters show a soft 0, with slight compression with the mid grades but the grade 5 is notably hard contrast.

- The MGIV prints off the MG500 Head system, show a softer 0 than the filter 0 (likely 00) - but have good spacing/contrast with the mid range prints. These mid grades are offset approximately a grade harder than the filter ones. Grade 5 though, only gives a contrast of about 4.25. The blacks look a lot stronger on these prints compared to both other systems, likely linked to most grades being harder in contrast compared to the MG filter prints.

- The MGIV prints using the Heiland unit show a softer 0 than both the filter 0 and the MG500 head (closer to 00 still though). The mid grades are offset approx 1/4 a grade harder than the filter prints. Grade 5 though, is still similar to the MG500 head - but very fractionally softer. It attains approx between 4.25 - 4.50. The blacks are slightly stronger than the most of the filter prints but not as strong as the MG500 prints.

In terms of exposures (time shown in seconds)...

	0	1	2	3	4	5
MG Filters	9.5	9.1	8.4	8	13	18
MG500 head	12	9.8	8.7	8	7.3	7.9
Heiland light set at 00	4.9	4.4	4	3.4	3	2.5
Heiland light set at 10					6.6	
Heiland light set at 20					13.7	

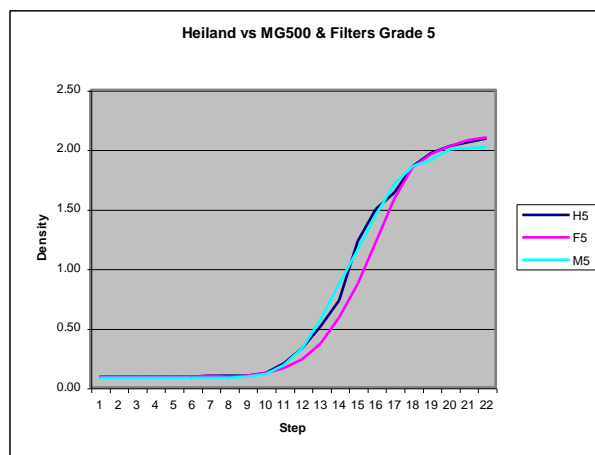
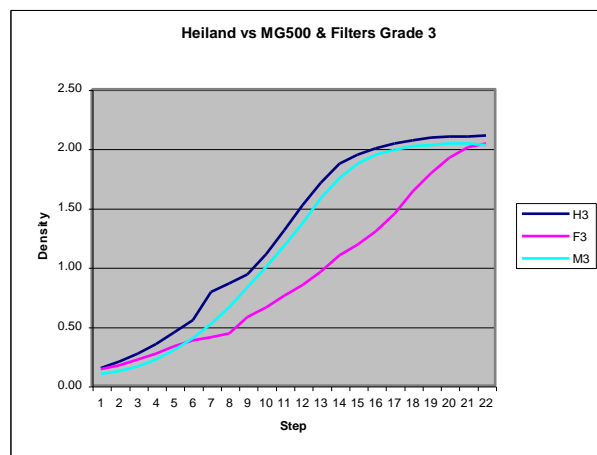
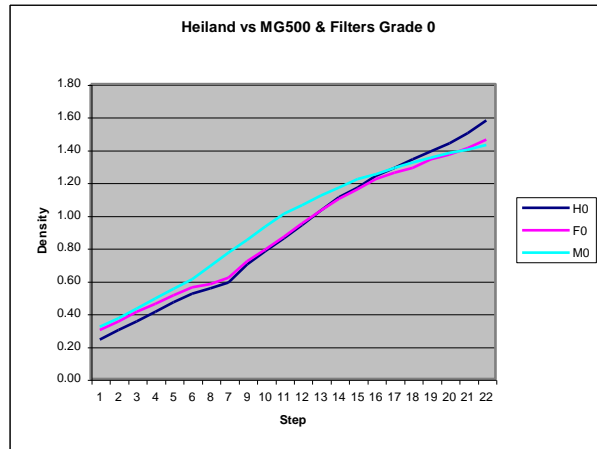
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STEP WEDGE RESULTS



Key:

- H – Heiland Unit
- F - Ilford Multigrade Filter Set
- M – Ilford MG500 Head