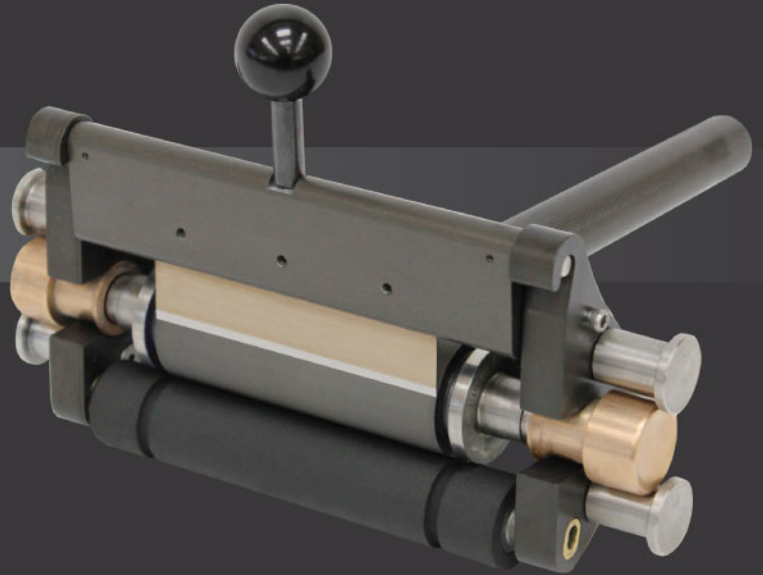


INK PROOFERS

QD™



Phantom™



Echocel Junior™



INK PROOFERS

QD™

Ink Proofing & Flat Bed Printing System (pat. # 8,783,180)

The most universal and consistent ink proofing system available.

The versatility of the QD components allow the proofers to be used by hand or in conjunction with the optional tables: Long or short, manual, electric or pneumatic powered tables with constant loading impression.

- ★ Handle Options: Flexo, Gravure & Offset Gravure
- ★ Fully Portable
- ★ Hard Coating on all Surfaces
- ★ Rolls Interchangeable on all HS Proofer
- ★ Glass Table Top
- ★ Easy clean up
- ★ Low Maintenance
- ★ Solid Handle without Springs
- ★ 2.75" & 5" Roller Widths Available
- ★ Front Loaded Anilox on Flexo & Offset Gravure
- ★ Substrates & Objects up to 1/8" thick with Flexo or Offset Gravure
- ★ Anilox Nip Loaded with Impression
- ★ Magnetically Loaded Doctor Blade
- ★ Constant Nip Pressure through Stroke
- ★ Variable Speed Electric Model
- ★ Universal Electrical Power Supply: 110v60Hz, 220v50Hz
- ★ Custom Fixtures Available for Offset Gravure
- ★ Customized Proofers Available



XDI™

Imaged Proofer Anilox

The only laser engraved imaged gravure proofer cylinders available are Harper XDI's with almost any decorative or functional digital design and down to 3pt. text.



Portable Proofer Stand

The Proofer Storage Stand safely stores 6 proofer rollers and the proofer assembly. The proofer rollers are suspended by their journals to protect the engraved surface area. Both HarperScientific proofer rollers can be stored, including rollers with the wide hub or the current narrow hub. The proofer assembly is stored with the handle down and it is safely supported on a rubber grommet.

Proofer Roll Storage Tray

The Proofer Roll Storage Tray safely stores 10 proofer rollers. The proofer rollers are suspended by their journals to protect the engraved surface area.



INK PROOFERS

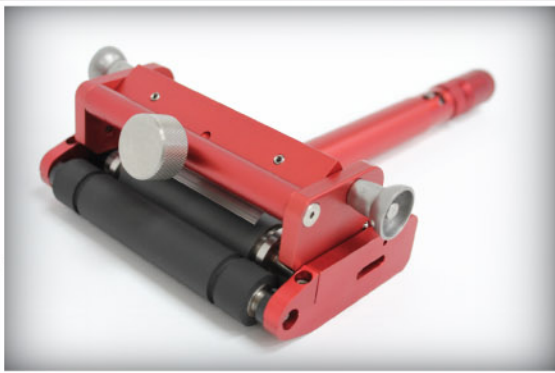
Phantom™ Hand Proofer

The Phantom™ Proofer Assembly is one of the most advanced "bladed" hand proofers on the market utilizing laser engraved anilox rolls. With a consistent anilox to rubber roll loading pressure, it gives ink room managers the assurance that each operator will get the same color results with each drawdown.



Benefits of Phantom™ Proofer are :

- ★ Ultra light in weight
- ★ Increases efficiency
- ★ Built-in bearings
- ★ Easy clean up
- ★ Solvent resistant transfer roll
- ★ Quick doctor blade change
- ★ Quick anilox roll change
- ★ Quick rubber roll change
- ★ Easy to maintain



Echocel Junior™ Hand Proofer (patented)

Precision Hand Proofer for color matching. The Echocel Junior™ system has many years in the field and has benefited from exposure to many applications with millions of dollars saved by its users.

Both the Phantom™ & Echocel Junior™ Proofer Systems are available with 1, 3 or 6 standard XLT™ laser engraved anilox rolls. Custom engravings are available from 2000cpi/0.5bcm (60°) to 70cpi/33bcm (89° Trihelical). Please select from the list below when ordering system(s) with standard anilox proofer rolls.

STANDARD SINGLE LINE SCREEN ROLLS	Imperial		Metric	
	Line Screen	Volume	Line Screen	Volume
	Cells Per Inch	BCM/in	Cell/cm	Cm/m
Single Line Screen Standard Proofer Rolls				
Roll 1	1000	1.25	397	1.94
Roll 2	900	1.45	354	2.2
Roll 3	800	1.8	315	2.8
Roll 4	700	2.2	276	3.4
Roll 5	600	2.5	236	3.9
Roll 6	550	3	217	4.6
Roll 7	500	3.2	197	5
Roll 8	440	3.4	173	5.3
Roll 9	400	3.7	157	5.7
Roll 10	360	4.3	142	6.7
Roll 11	300	4.8	118	7.4
Roll 12	260	5.7	102	8.8
Roll 13	200	6.8	79	10.5

Traditional Hand Proofer
(for Water/Solvent Inks)



XLT™ Traditional
Laser Engraved
Anilox Rolls at a
60° Hex

STANDARD ECHOKOTE ROLLS	Imperial		Metric	
	Line Screen	Volume	Line Screen	Volume
	Cells Per Inch	BCM/in	Cell/cm	Cm/m
Single Line Screen Standard Proofer Rolls				
Roll 1-C	200	8.0	79	12.4
Roll 2-C	165	10.0	65	15.5
Roll 3-C	145	12.0	57	18.6
Roll 4-C	135	14.0	53	21.7
Roll 5-C	120	16.0	47	24.8
Roll 6-C	110	18.0	43	27.9
Roll 7-C	100	20.0	39	31.0

Viscous Hand Proofer
(for Metallic/Thick UV Inks)



XLT™ Viscous
Laser Engraved
Anilox Rolls at a
30° Hex

STANDARD BANDED LINE SCREEN ROLLS	Imperial		Metric	
	Line Screen	Volume	Line Screen	Volume
	Cells Per Inch	BCM/in	Cell/cm	Cm/m
Banded Line Screen Standard Proofer Rolls				
Roll 14	900	1.45	354	2.2
	800	1.8	315	2.8
Roll 15	700	2.2	276	3.4
	600	2.5	236	3.9
Roll 16	550	3.0	217	4.6
	500	3.2	197	5
Roll 17	440	3.4	173	5.3
	400	3.7	157	5.7
Roll 18	360	4.3	142	6.7
	300	4.8	118	7.4
Roll 18	260	5.7	102	8.8
	200	6.8	79	10.5

Line Screen	Tolerance
550 & Up	+/- 0.1 BCM
200 - 549	+/- 5% BCM
120 - 199	+/- 6% BCM
Below 119	+/- 10% BCM

INK PROOFERS

Frequently Asked Questions

What are the advantages of using a bladed ink proofer and what is the benefit of press ready ink?

- a) Correlation between ink mixing and the press, saving valuable press time.
- b) Savings not just in time, but materials (especially substrate and ink).
- c) It gives you the ability to recheck ink after it has been used on press and use it again for the same job or another job with the same PMS color.
- d) It is the perfect lab room tool. It is very easy to clean, operate, does not have too many moving parts and it is very easy to maintain.

If I have a Junior proofer and want to upgrade to a Phantom proofer or a Phantom QD, can I still use the anilox rolls on the Phantom proofer family?

The anilox rolls are interchangeable. You can use the same rolls for either the Echocel Junior, the Phantom or the QD.

Do you refurbish or recondition proofer anilox rolls?

No. It is not economically viable to recondition a proofer roll but we can replace bent or mushroomed journals.

Can I send my proofer to HarperScientific for repair?

Yes. We recommend you send us your proofer assembly if you are having problems or are not getting a consistent drawdown. We will run a full evaluation on the assembly to determine the cause of the problem.

Do the rubber rolls ever go bad?

Yes. Rubber ages, hardness increases and the surface glazes over time. These issues will change the transfer rate and affect the density. Example: once a roll hits 55 durometer, it will transfer 12% to 14% less density with solvent inks than a 45 durometer roll.

Can I just drop the Phantom into a pail of cleaner and let it soak?

No. Even though the unit is anodized and all the hardware is stainless steel, we do not recommend soaking the unit. Follow the cleaning instructions and the unit will last a long time.

Does micro-foam in water-based ink cause issues with proofing?

Yes. The ink must be free of foam or it will give you inconsistent drawdowns.

How easy is it to correlate the proofer engravings to the press engravings?

- a) The volume is more important than the screen count because the transfer roll works like a tint sleeve
- b) Coarser engravings are easier to keep clean
- c) Start with the same proofer volume as the press for UV inks, add 5% for water-based inks and solvent inks are all solvent speed and viscosity dependant. The proofer volume may be plus or minus 15% than that of the press. It's best to talk with an HS product specialist.
- d) For custom banded rolls, always consider manufacturing tolerances. For 550 and above, never ask for volumes closer than 0.4bcm to each other. For 500 and below, keep the volumes at a minimum of 6% to each other.