



WELCOME TO FRIESENS!

While at Friesens, we want your color approval experience to be a pleasant one. While we view every project that enters our plant as important, having you in-house for a Press Check on your project provides a unique, interactive opportunity for our employee-owners to better meet and hopefully exceed your highest print expectations.

If you are doing a Press Check for the first time, the task may appear to be a daunting one. However, rest assured we've done it many, many times and we will use that experience to make it seem like you've been doing Press Checks forever. If you're a Press Check 'veteran', we look forward to your input and collaboration.

EFFECTIVE PRESS CHECKS

COMMUNICATION

The key to a smooth Press Check is communication. We will meet with you before your Press Check begins to discuss your particular objectives. We will ask you if you want help from our Press Operators and if you know what is—and what is not—possible on press. Please feel free to ask any questions about terms, procedures and events that you don't understand. Page sequence, color registration and marks are common concerns. If there are some critical elements of a book that need special attention, be sure to let our operator know. All information you give to us is valuable...so please don't hold back. If there is more than one person coming to do the Press Check, it is helpful for our operators to have a clear understanding of who will make the final decision, as we all see color a little differently.

WHAT TO EXPECT WHEN YOU ARRIVE IN MANITOBA

It is likely that you will travel to Manitoba by flying to Winnipeg. We will pick you up at the Winnipeg International Airport and bring you to our plant. The trip from the airport to our plant is approximately 90 minutes—depending on the time of day.

We suggest you check the weather in advance to know what to wear. Summer in Manitoba is warm...but winter is cold! Be prepared! All Friesens plants are heated, air conditioned and humidity controlled. Once inside our facilities we will supply you with high speed internet and a comfortable work area for your convenience.

Friesens maintains several customer suites across the street from our Book Plant. These modern accommodations will be your home away from home. Work spaces, wi-fi, a kitchenette, laundry facilities, a common area with couches, a TV and a library of books are provided for your comfort.

ARRIVING AT THE PLANT

Having a successful Press Check is both your goal and ours. We want you to be able to do your work quickly and effectively and leave with the satisfaction of knowing that the printing of your job has met or exceeded all of your expectations.



OPENING MEETING:

PURPOSE

To ensure that you meet all the participants and develop open lines of communication.

WHO WILL ATTEND

Attendees will include the Press Operator who will print your project and the Pressroom Supervisor. It will also include your CSR or Sales Manager.

EXPECTATIONS

We expect the meeting to be the start of a dialogue with our employee-owners who will be working on your project. It will also give you an opportunity to explain the areas that are most important to you and any unique areas that require special attention.

TIMELINES

We will give you an agenda for your time with us so you know what to expect. It includes when to be in the plant for Press Checks and, best of all, when we expect to complete the work so you can be on your way home!

PLANT TOUR

We will give you a plant tour, time permitting, prior to your first Press Approval. If there is insufficient time, the tour will be done between Press Checks.

WHAT ARE OUR EXPECTATIONS OF YOU

When coming to our plant for a Press Check, we have the following expectations:

- That images needing special attention are identified. It is also important we understand any particular likes or dislikes you have.
- That you have a basic understanding of the offset process.
- That you will be on time for Press Checks.
- Approvals can be done at the Press Console or in our Viewing Room, whichever you prefer.
- Interesting bit of info...bright colored clothing can affect the appearance of color on a press sheet. While we know this seems strange, it is a fact. If color is extremely critical, you may want to consider what clothing you wear during your Press Check.

WHAT YOU CAN EXPECT FROM US

- Courteous and friendly service, both at the press and throughout our facility.
- Scheduled Press Checks times.
- That we match printing as closely as possible to our calibrated monitors, approved proofs or a sample book which has been verified by our Color Management Staff.
- Our professional assistance in helping achieve the best results for your project.

- That we make your time here as enjoyable and stress free as possible.
- That you are met with our friendly, courteous and positive attitudes.
- That we are ready and organized for your visit.
- That we check the first sheet extra-carefully so that the process gets off to a good start.
- That we explain all your options if there are any areas of compromise required on press which are sometimes unavoidably inherent in the offset printing process.

YOUR TIME IN THE PRESSROOM

When doing a Press Check at Friesens, you will have access to a Viewing Room. This Viewing Room is painted an N8 Grey. 5000°K lighting is used to make a neutral viewing area which most closely approximates natural light.

When the operator has a press sheet that he determines is a good match, it will be brought to you in the Viewing Room. In the room we will have the color proofs, or any previously printed project if we are requested to match. The first sheet is always the most critical, as it establishes the approximate densities we will run for the entire job.

When approving press sheets, it should not take more than 10 to 15 minutes in order to achieve color approval. The first press sheet can take a bit more time (up to 30 minutes) as we use that to establish our baseline densities. If a Press Check goes beyond the 30 minutes, there is a problem. At that point we would call another meeting to discuss the issues at hand and how to move forward to achieve the best results.

Once you have approved a form for color, you will be asked to sign the sheet. This sheet will be used as the standard for the balance of the run.

COLOR PROOFING

By the time your job is on press, you might have done a round of testing with our tech support staff and approved proofs that confirm the color management process. Now it is up to you and the Press Operator to ensure that the final sheet matches the proofing process you selected.

HOW WE VIEW COLOR

Color is a very subjective matter. One of the reasons for this is that all of us see color somewhat differently. At Friesens we try to address this as follows:

LIGHTING CONDITIONS

Lighting at both the press and in the Viewing Rooms is North American Proofing Standard (D50) 5000°K. In addition, walls in the Pressroom area are painted neutral grey.

COLOR PERCEPTION TESTS

All of our Press Operators are tested annually on how they view color. Our Press Operators must score in the top percentile for color perception.

DENSITOMETERS

Each press is equipped with densitometry— and some with spectrophotometry—so that we can best determine each sheet is meets our standards for grey balance and other critical measures such as dot gain, ink density and trapping.



COLOR BAR

The color bar is an essential tool used to monitor quality. Printed in the trim area on the tail end of the sheet, it's used to check the density of the ink, trapping, dot gain and color balance, among other things. Each component of the bar performs a specific function. Although there are different types of color bars, they're all a variation on this common theme.

SLUR TARGETS

A patterned square per process color is called a slur target. It is used to gauge ink slurring (ragged edges, double images) which can be caused by improper movement of the sheet, the plate or the press blanket.

GREY BALANCE

Grey balance is the correct densities of cyan, magenta and yellow used to produce a natural grey. The dots in the tonal range – from highlights to midtones to shadows – are monitored by watching the grey squares in the color bar, because if they are off, detail and contrast will be affected resulting in a less than true-to-life representation of the original image. When colors are out of balance (due to dot gain or incorrect ink density) these squares will show more cyan, magenta or yellow depending on which of the process colors is off. Color swings (example, a shift to pink if there is too much magenta) are easiest to see in the neutral areas of color.

TRIM MARKS

Trim marks are guides for folding and trimming the printed sheet.

REGISTRATION

A graphic element is considered out of register if there is variation by more than one row of dots. Small, cross-hair targets made out of the four process colors and built into the color bar will indicate how precise the alignment is.

DOT GAIN

Dot gain is an inherent part of offset printing and causes the size of the halftone dot to increase, thereby printing larger than what is on the proof, film or plate. Images adversely affected by dot gain will appear darker as well as lose detail and contrast. Several variables may cause dot gain – prepress work, equipment, type of ink, and paper. We compensate by adjusting plate curves.

INK DENSITY

Ink density relates to the thickness of printed ink. Solid squares of each process color, as well as custom match colors, can be noted at various intervals running the length of the color bar. They are used to monitor color consistency across the sheet, and from sheet to sheet. The tool your printer uses to check ink densities is called a densitometer.

TRAPPING

The term 'trapping' refers to (1) the slight manipulation of adjacent colors in prepress to remove any white gaps between them, or (2) the proper printing and adherence of a second ink over a first ink to optimize color. In case one, it's often easy to eyeball the sheet to see if adjacent colors have a butt problem – there will be a blank paper gap between them or a darker line indicating too much overlap. Case two is a printing issue. Printers examine color bar squares which are achieved by printing 100% each of two process colors – yellow and magenta to make red, cyan and yellow to make green, and magenta and cyan to make purple. Colors in the squares should look smooth. In either case, if you plan to hold the printer accountable for traps, the printer's prepress should construct them.





ROLAND 900

PRESSROOM TERMINOLOGY

Many printing terms are used to discuss color. They include:

COLOR BAR – The color bar is an essential tool used to monitor quality. Printed in the trim area on the tail end of the sheet, the color bar is used to check the density of the ink, trapping, dot gain and grey balance, among other things. Each component of the bar performs a specific function. Although there are different types of color bars, they are all a variation of this common theme.

REGISTRATION – A graphic element is considered 'out of register' if there is variation by more than one row of dots. Small, cross-hair targets made out of the four process colors—located in different areas of the sheet—indicate the precision color alignment. Many printers use trim marks made from the four process colors for registration.

TRIM MARKS – Trim marks are guides for folding and trimming the printed sheet.

SLUR TARGETS – A pattern square for process colors is called a slur target. It is used to gauge ink slurring (ragged edges and double images) which can be caused by improper movement of the sheet, plate or blanket on the press.

DOT GAIN – Dot gain is the natural process wherein the halftone dot increases in size, thereby printing larger than it appears on proof or plate. Images adversely affected by dot gain will appear darker and will lose detail and contrast. Several variables may cause dot gain—press work, equipment, type of ink and paper. We follow new industry standards established by GRACoL to compensate for these issues in advance. By studying color bar squares made with solids and screens of the same color (at 75%, 50% and 25%), the Press Operators can ensure that the press conditions are controlled to print within our tolerances.

DRYBACK – Dryback is a phenomenon that occurs when the ink dries on a sheet and its appearance changed from when it was freshly printed and still wet. There is less dryback on gloss-coated sheets and more on dull and smooth sheets.

GREY BALANCE – Grey balance is a very critical measure and is the term used to confirm the correct percentage of dot of cyan, magenta and yellow used to produce a neutral grey. The dots in the tonal range—from highlights to mid-tones to shadows—are monitored by watching the grey squares in the color bar. If they are off, detail and contrast will be affected, resulting in a less than true to life representation of the original image. When colors are out of balance (due to dot gain or incorrect density) these squares will show more cyan, magenta or yellow depending on which process color is off. These color swings (example: a shift to pink if there is too much magenta) or 'cast' is easiest to see in neutral areas.

INK DENSITY – Ink density relates to the thickness of printed ink. Solid squares of each process color as well as custom match colors can be noted at various intervals running the length of the color bar. They are used to monitor color consistency across

the sheet and from sheet to sheet. The tool we use to check ink densities is called a densitometer.

TRAPPING – the term 'trapping' refers to:

- 1) The slight manipulation of adjacent colors in Prepress to remove any white gaps between them.
- 2) The proper printing and adherence of a second ink color over a first ink color to optimize the color.

In case #1, it's often easy to eyeball the sheet to see if adjacent colors have a 'butt problem'—there will be a blank paper gap between them and the darker line indicating excessive overlap. CTP technology and new press equipment have dramatically improved this. Case #2 is a printing issue. We examine color bar squares which are achieved by printing 100% each of two process colors—yellow and magenta to make red, cyan and yellow to make green and magenta and cyan to make purple. Colors in the squares should look smooth. In either case, if you plan to hold us accountable for traps, our own Prepress Department should construct them.

PAPER AND PRESSES

Color can be affected by many different operations, elements and equipment. Press and paper are two of the most significant.

PRESS

Someone once said that no two presses print the same. That might be going a little far, but there are many reasons this might be the case:

- The age of the press
- The press 'packing'
- The condition of the rollers
- The plates

At Friesens we have standardized our presses. With the calibration that we do at Friesens, we can give you assurances that all presses will print similarly. While this in itself does not mean they will print exactly the same, our presses are regularly calibrated and maintained to a standard that ensures they will print very much the same.

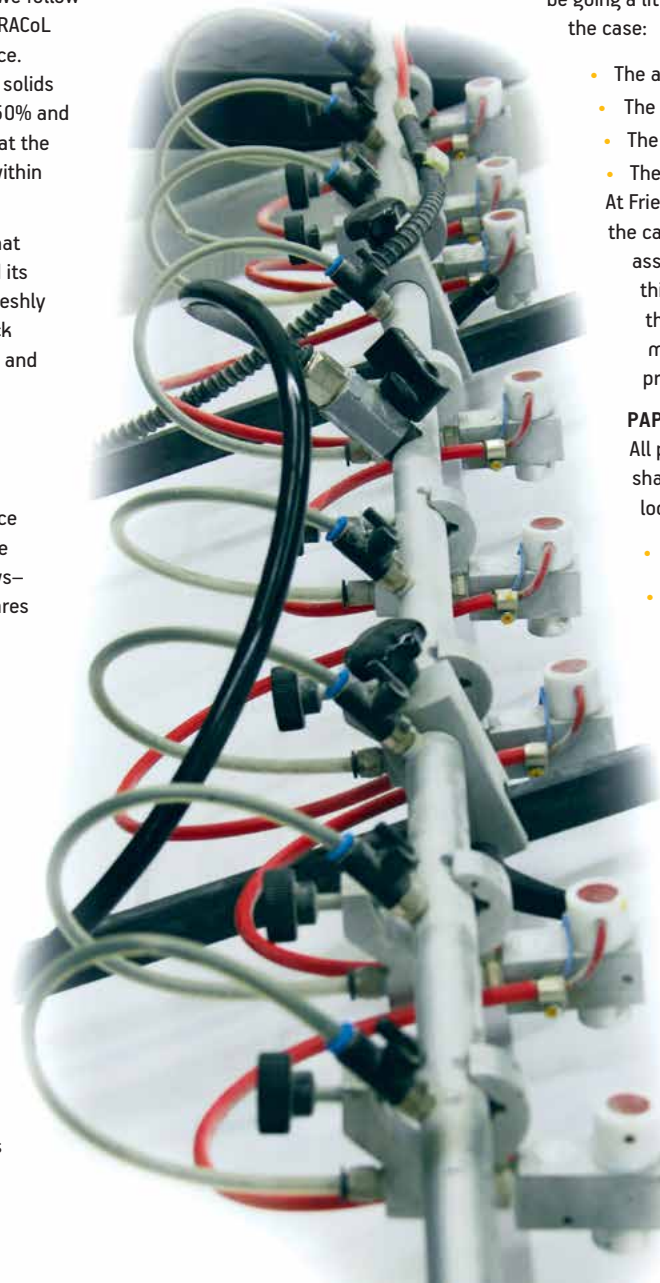
PAPER

All paper is white, right? Hardly. There are many shades of white, and each one will cause an image to look slightly different. In addition:

- Brightness can range from 88–96.
- Paper can be coated or uncoated.
- Coated finishes include gloss, matte, silk, smooth, and dull.

INK

Ink is used to print the image. Ink is made with pigment, and the amount of pigment in the ink determines the color. At Friesens we use inks with a high concentration of pigment. These inks are ISO 9000 and GRACoL standard including correct tack ratings. Ink is also a major factor in 'dryback' (see 'DRYBACK' section on this page for further information). Friesens works closely with our suppliers to ensure we use the highest grade inks possible that dry quickly and have less dryback than normal inks. The inks we use not only reproduce the best color possible but they are also vegetable based and environmentally friendly.



ON PRESS

At Friesens, a Press Check is truly a Press Check. You will be working with the Press Operator at the Press Console.

Naturally, the key to a smooth Press Check is communication. When you arrive, our meeting will give us some idea about what you are looking to achieve. Two of the questions we will ask of you is, "Do you want help from the operators?" and "Do you know what is—and what is not—possible on press?" Feel free to ask any questions about anything you are not sure of or do not understand. Page sequence, color registration, holes and marks are common concerns. If there are some critical elements of the project that need special attention, be sure to let the operator know. All information you can give to the operator is valuable . . . so don't hold back!

Our presses are equipped with the latest in pressroom technology. The MAN Rolands in particular are all connected to a PECOM system, which ensures the Press and Prepress Departments know what each other are doing. With PECOM, the press ink keys are set up according to the image we will be printing. This is done electronically, directly from the Prepress color file. It is done for each form and helps the Press Operator adjust more quickly for the changes in images from one form to another.

At Friesens, we do have some expectations of our customers who will be on press. First and foremost, we expect that you will be checking for color only, not content. Second, we ask that you do not experiment on press as this gets very expensive. At the press stage, it is our understanding that you will be making minor changes only. While we want to give you the best looking sheet possible, there are some limitations one must keep in mind.

Proofs that have been proofed on a glossy sheet may not look exactly the same on press. Also, fluorescent colors and other bright colors made up of the four process colors may not look as brilliant as when proofed using an Ink Jet printer. Finally, while the amount of ink can be varied from one end of the sheet to the other, the same does not hold for variance from the top to the bottom of the sheet. Therefore, when one image follows another on the form, one has to understand that compromise may have to be made between images requiring heavy ink coverage, and those requiring light coverage.

When you have OK'd a press sheet, we will ask you to date and sign it. The Press Operator will then make constant checks throughout the press run, ensuring that sheets look consistent to the one that was OK'd.

WHEN YOU'RE DONE

When you are finished the entire job, you are welcome to take press sheets home with you. These can either be flat sheets rolled up and put in a tube, or hand folded and gathered signatures that will show the pages and signatures in sequence.

COLOR MANAGEMENT

Today, the new way of printing is to build the information into the original files and then calibrate the press accordingly. Ideally, this means that, instead of 'painting' at the press, the Press Operator runs to standards where the finished job is what the customer approved. In a Color Managed job, if the image being printed does not match the proof, rather than making changes on the press, the image in question should be adjusted and a new proof and plate made.

Working with Color Management is not easy. It requires new equipment, continued testing and calibrating and technically knowledgeable people.

When using Color Management, the originator of the files needs to ensure that all monitors and proofing devices remain constant and stable so the same results are generated time after time. This is a prerequisite to profiling. It is important that equipment be calibrated as often as required. Generally speaking, low cost monitors and proofing devices are less consistent, and require more frequent calibration. In fact, if the equipment is very inexpensive, it may not be possible to even calibrate, or to hold calibration.

Once the monitor and proofing device are producing consistent and repeatable results, there is a need to have the proofing device match what can be seen on a monitor. Profiles are the tools to make this all happen. Each piece of equipment needs to be profiled. This needs to be done only once, provided that other variables do not change. Some variables include brightness or contrast on the monitor, and ink and paper on the proofing device.

At Friesens, our Prepress and Press Departments control and manage color between all monitors, proofing devices, platesetters and presses. Each of these pieces of equipment has been profiled to match one standard and to ensure consistent and repeatable results. All equipment is tested on a regular basis to ensure that it will produce to the standards required.

While Color Management may not provide the perfect printed job, it will help to achieve faster and less 'painful' Press Checks. It is important to note that in order for Color Management to be effective, the process must start with the color separation. Color Management is not something that can be applied at the tail end of a job. For more information, order our High-Res Tool Kit or talk to one of our Tech Support Staff.

WE HOPE YOU ARE HAPPY

At Friesens our goal is to make raving fans of all of our customers. We know that difficult Press Checks can do just the opposite. Therefore, if at anytime during the press checking process you are unhappy, please do not hesitate to stop the process and regroup. While press time is expensive, it is important to all of us at Friesens that you are happy with your experience in our plant.

Sitting down with our Press Operators, Color Specialists, Supervisors and Managers will encourage dialogue to get things back on track.

Remember, we want you back again!

IMPORTANT VISITOR INFORMATION

1. All visitors must sign in and out with Receptionist at entrance to all facilities.
2. ID badges must be worn and visible at all times.
3. Return to Reception at end of visit.
4. No photos allowed unless a signed Friesens Photography Policy is on file.
5. Close toe/heel shoes must be worn throughout plant and hearing protection where designated. Purses, ties dangling jewelry and other loose items must be secured while in production.
6. Food Allergies & Restrictions – Please let your CSR know before you arrive if you have any dietary restrictions or special considerations and we'll do our best to accommodate you.

EFFECTIVE PRESSCHECKS

