

Fag Speedproof 4C

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Sound Swiss engineering, allied with computerized control and measurement systems.

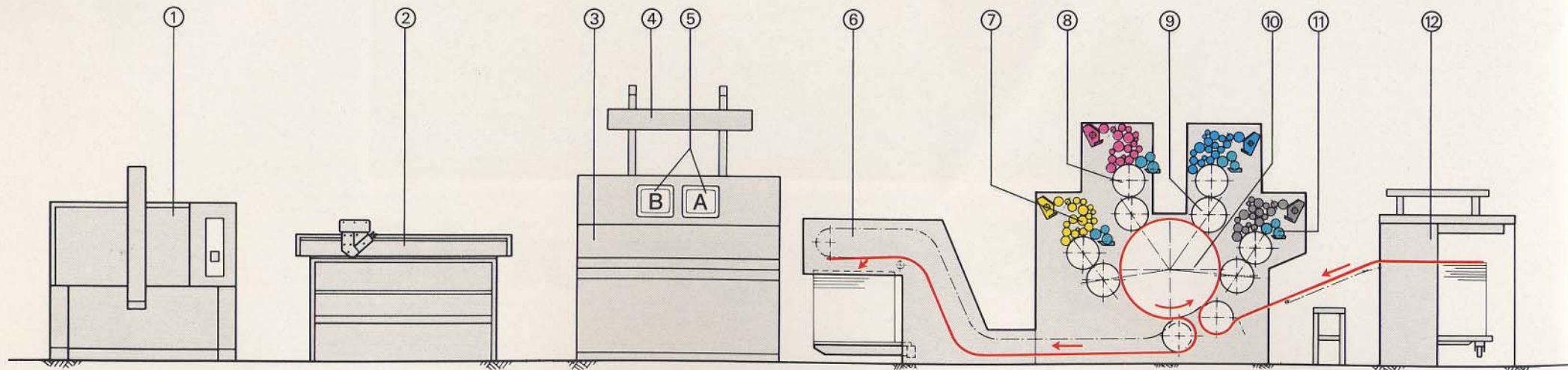
1. Plate scanner, with pre-set disk storage of ink-zone data.
2. Automatic densitometer for measurement of printing result.
The measured values are represented in colour graphics on the monitor screen B of the control desk.
3. Fag Speedproof 4C control desk, for managing all the main machine functions:
 - main drive, speed, emergency stop
 - application and retraction of the printing, damping and inking units, and the roller washing system

- speed of ink fountain ductor rollers
 - speed of damping unit rollers
 - lateral and circumferential register control, with machine running
 - feeder on/off control
 - remote inking control, with video display on screen A of the ink profile produced by all four units; automatic ink fountain zero setting
 - programming on video screen of entire 4-colour proofing cycle (with progressives) followed by automatic operation
4. Standardized lighting.

5. Two monitor screens for graphic displays:
 - A: Speedproof 4C machine functions (inking control with ink profile display, lateral and circumferential register, operating cycle programming and numbering).
 - B: Measurement values from the automatic densitometer (density, dot gain and trapping).
6. High pile delivery, sheets delivered at a convenient height for visual inspection.
7. Ink fountains and inking units. The zones are set from the control desk, and react rapidly and accurately to the correcting action. Each ink zone

segment can be moved through 100 steps of 0,0025 mm. Automatic roller washing. Remote speed control of inking and damping unit ductor rollers.

8. Plate cylinder with fast-action clamps and built-in register system.
9. Rubber blanket cylinder (with blanket washing unit if required).
10. Large counter-pressure cylinder, sheets gripped only once for all four colours, giving excellent register on all jobs.
11. Alcohol damping systems, giving outstandingly fast achievement of correct ink-water balance.
12. MABEG stream feeder.



The concept

The Fag Speedproof 4C is the first and only sheet-fed rotary machine in 71x104 cm format (28"x41") designed specially for both wet-on-wet proofing and economical short-run production.

Multicolour prints are produced more and more frequently, all over the world, on 4-colour sheet-fed or web-fed rotary presses.

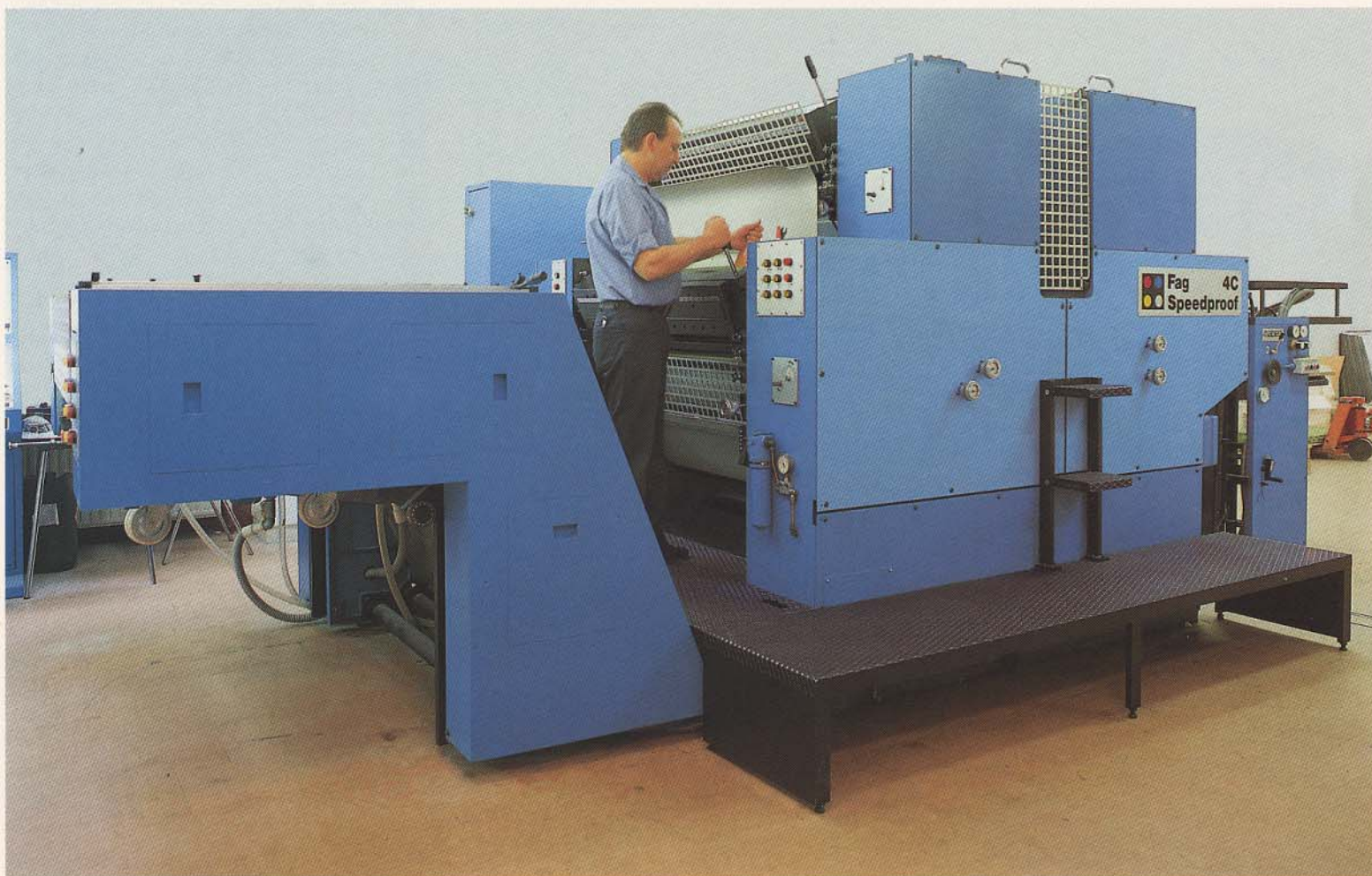
The result is an increasing demand for 4-colour proofs printed wet-on-wet, to simulate the conditions in production work.

The visual impression made by a print depends on many factors: the chemical properties and surface structure of the paper, the inks, the damping, the wet-on-wet printing characteristics, the speed used, to name only the most important. The best way to obtain a proof that accurately represents the production print is obviously to simulate production conditions as closely as possible in proofing – only by this means can unwelcome surprises (and expensive 4-colour machine downtime!) be avoided when going into production.

The Fag Speedproof 4C guarantees perfect matching of proofs with the production prints, because it is designed to simulate production conditions exactly. And furthermore, it is built not only for wet-on-wet proofing, but also for full-scale short-run production.

First of all, the compact layout with inking units grouped around a large counter-pressure cylinder means that the distances between the inking units are very short. So while keeping the proofing speed relatively low, the printing conditions encountered on high-speed production machines are accurately simu-

lated. This satellite layout also saves space and time, because the sheets are gripped once only for all four colours, registering is perfect. All main machine functions are remote-controlled from the central desk, and setup times are exceptionally short – a vital advantage for both proofing and short-run production!



Decisive: short setup times

Setting the Fag Speedproof 4C is amazingly quick: a decisive factor resulting from the excellent access given by the compact design, and from the many work-saving details incorporated.

- The offset plates are examined automatically on the plate scanner, and the

relevant data is stored on a disk. When the disk is loaded into the reader on the control desk, the system uses this data to preset the Fag Speedproof 4C ink ducts ready for proofing – automatically.



- The plates are fixed in a moment, helped by the built-in register system, the fast-action clamps, and the easy access.
- Simple adjustment of the feeder and the paper stack.
- Lateral and circumferential register setting is done by remote control from the desk, and displayed on the monitor – no need to stop the machine.
- The inking control is also done from the desk: each of the 32 ink zone segments can be moved through 100 steps of only 0,0025 mm! And reaction is exceptionally fast. As the ink profile changes it is represented graphically on the monitor, and the corresponding data can be stored on disks for future use if needed.
- The ink-water balance (alcohol damping) is very quickly found, and the general ink-flow rate is set from the control desk by varying the ductor roller

speed. The damping roller speed is infinitely variable, and is also set from the control desk.

- Operating cycle programming on the monitor, for proofing with progressives. After completion of the proofs – with the necessary number of progressives – and setting ready for production, the subsequent jobs are done very quickly:
 - storage on disk of ink zones for future use, if required
 - removal of the printed sheets from the delivery station
 - washing (fully automatic) of the inking unit rollers
 - simultaneous washing (also automatic) of the rubber blankets by a Baldwin washing unit, available as an accessory
 - release and removal of the plates.

The Fag Speedproof 4C is designed with a range of built-in safety systems, to protect personnel and prevent damage to the machine.



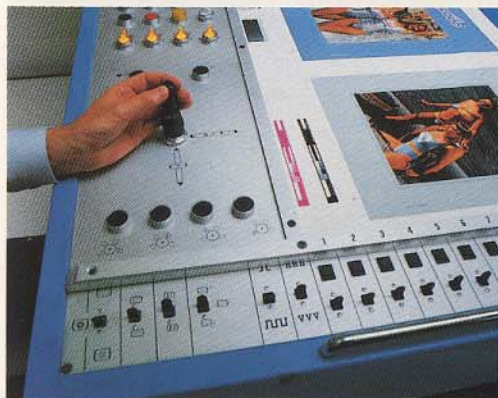
The control desk: central to operations

All important functions of the Fag Speed-proof 4C are controlled and monitored from the central control desk:

- Main drive, speed control, emergency stop.
- Pneumatic application and retraction of the printing, damping and inking units, and the roller washing system.
- Infinitely variable speed control of ink fountain ductor rollers.
- Infinitely variable speed control of damping unit rollers.
- Lateral and circumferential register control, during machine production.
- Feeder on/off control.
- Remote control of ink zone segments in each colour unit, with screen display of ink profiles. Automatic zero setting of ink fountains. Storage of ink zone setting data on disk, for automatic setting of ink profiles in repeat jobs.

- Programming on monitor screen of complete 4-colour proofing cycle with the necessary progressives, followed by fully automatic operation.

The control desk is fitted with standardized lighting, for correct assessment of the printing results.



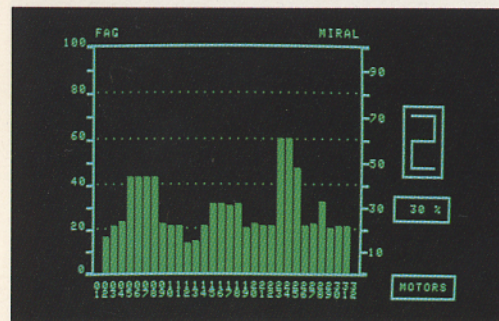
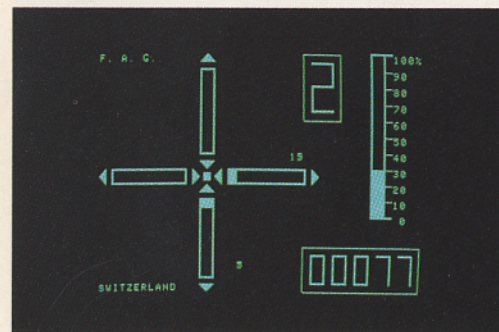
Monitor screens: for close visual control

The Fag Speedproof 4C control desk has two monitor screens:

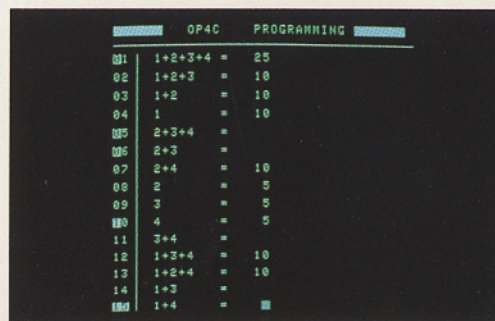
- Screen A which displays the various machine functions.
- Screen B which represents graphically the values measured by the automatic densitometer.

Screen A shows:

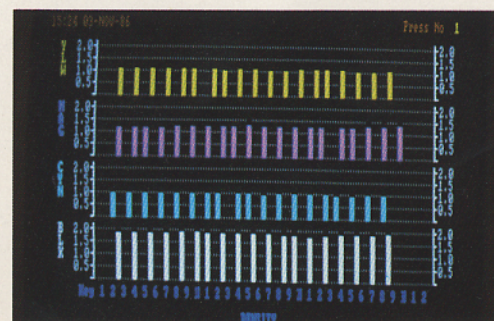
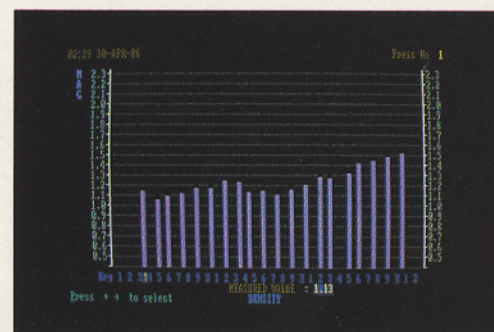
- the movements of the remote controlled lateral and circumferential register control, while the machine is running



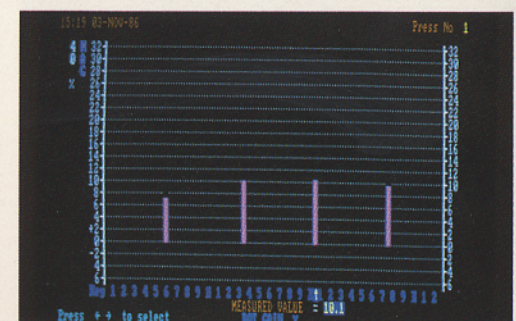
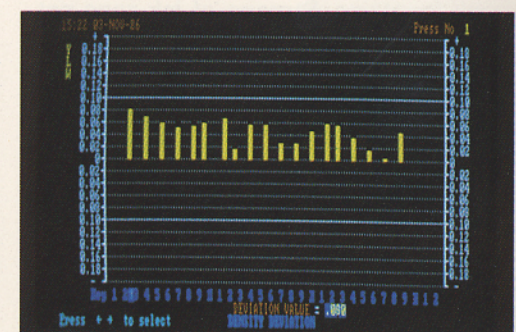
- the opening and closing of the segments varying the ink profile in each ink fountain
- the printing cycle program, including progressives, for the Fag Speedproof 4C in wet-on-wet proofing work. Operation is then fully automatic



Screen B shows a bar graph, within pre-selected tolerance zones, of the ink density, dot gain values and trapping measured on the automatic densitometer. The bar



graph can represent either each individual colour, all four colours simultaneously, or the \pm deviations from a given reference value.



Infra-red drier (option)

By means of medium-wavelength infra-red radiation at about 250°C the ink viscosity is reduced, considerably improving the absorption properties. As the ink absorbs much of the radiation, which is transformed into heat, the oxidation drying effect is greatly accelerated, giving:

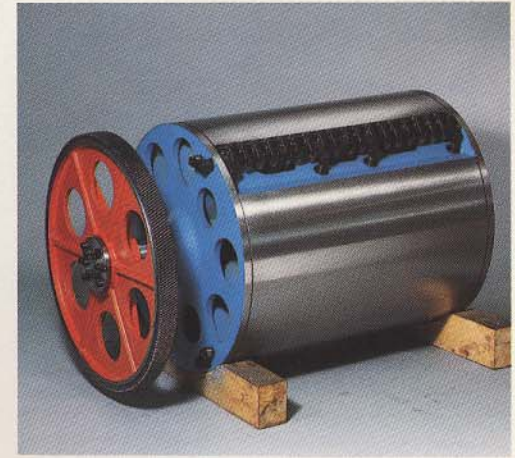
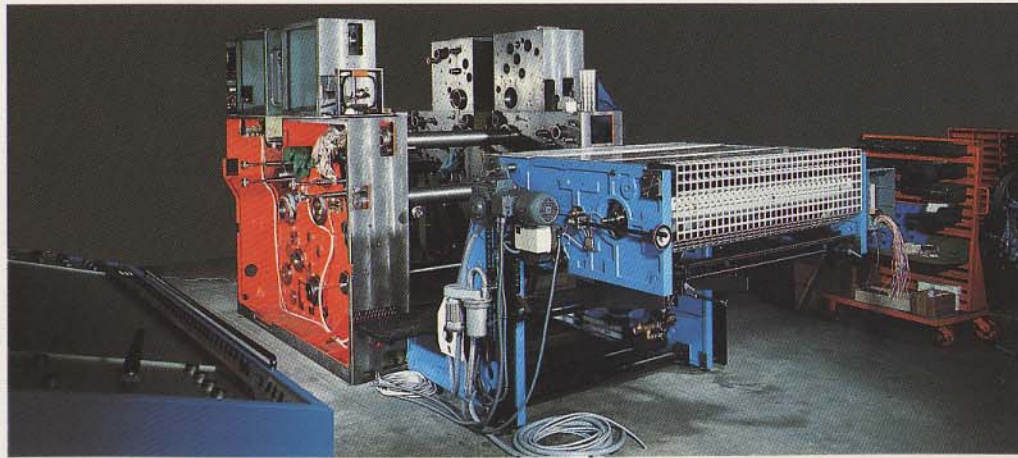
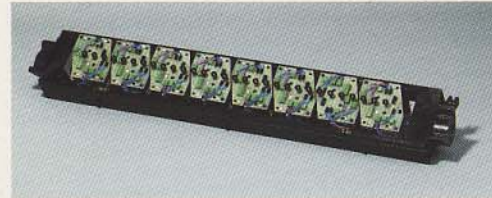
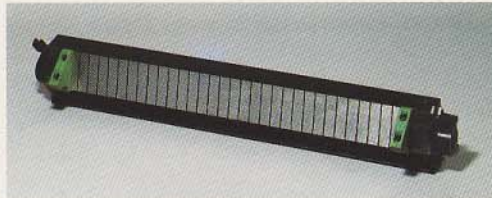
- less need, or elimination of powder spraying
- increased gloss; in other words proofs that simulate even rotary offset prints with perfect accuracy

Technology, experience, innovation

Fag's experience in proofpress building goes back a long way. After the letterpress test-presses, built in the Avenches (Switzerland) factory, which won worldwide success, came, as the seventies began, the first flat-bed offset proofing machines. It was at the DRUPA in 1982 that the prototype Fag Speedproof 4C was presented. After thorough testing under industrial conditions, series production began in 1985.

Fag machines are renowned for quality and performance: attributes that are guaranteed through modern manufacturing methods, motivated personnel and strict quality-control. Equally renowned is Fag customer backing: a service that is maintained through a team of support

engineers and instructors whose fields of action extend worldwide. Fag is a member of the important Bobst Group – leader in the manufacture of machines for the packaging industry.

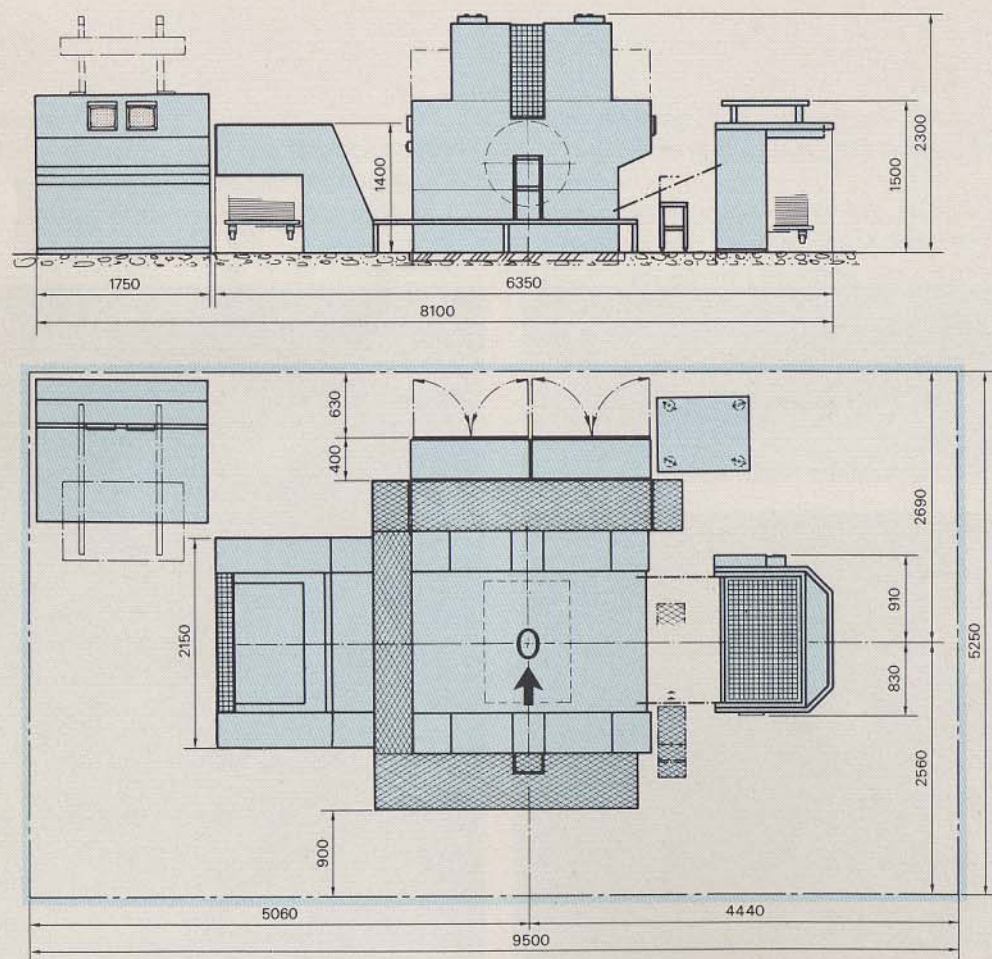




Fag SA Lausanne

7, rue de Genève, P.O. Box 640
CH-1001 Lausanne, Switzerland
Phone 021/20 12 71, Telex 454 193

Dimensions/floor space requirement



Technical data

| | |
|--|--------------------------------------|
| Printing size max. | 710×1040 mm 27.95×40.94 in. |
| Paper size max. | 730×1060 mm 28.74×41.73 in. |
| min. | 500× 700 mm 19.68×27.56 in. |
| Stock thickness | 0.05–0.5 mm 0.002–0.020 in. |
| Plate size max. | 800×1080 mm 31.50×42.50 in. |
| Plate thickness | 0.25–0.5 mm 0.010–0.020 in. |
| Speed max. | 4000 sheets/h |
| Floor space requirement including access to feeder, delivery and central control desk | 950× 525 cm 374×206.69 in. |
| Press height | 230 cm 90.55 in. |
| Weight, including paper stacked in feeder and delivery | approx. 18000 kg approx. 39690 lb |
| Total power requirements | 50 kW approx. |
| Compressed air supply | 6–7 bar |

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Peripheral equipment

The highly productive, cost-effective operation of the Fag Speedproof 4C is guaranteed by its computerized measurement and control system, with the plate scanner and automatic densitometer for simultaneous measurement of the 4 colours occupying a position of central importance.

