

**BILL OF MATERIALS
FOR**

PIONEER PRESS
NORTHFIELD, ILLINOIS

**GOSS UNIVERSAL 70 PRESS
WITH SHAFTED PRESS DRIVE**

Cut-Off 22.75" (560 mm)

Maximum Web Width 36" (914 mm)

Maximum Speed Capability 70,000 cph

Maximum Print Capability 160 tabloid pages with:

32 pages of process color
32 pages of spot color
96 black pages

Press Control Level Level II

LIST OF EQUIPMENT TO BE SUPPLIED

REELSTANDS are part of GOSS supply.

PRINTING UNITS

- 6 MONO UNITS (2 couples): Vertical web lead
- 2 2 HI TOWER UNITS, each consisting of 2 stacked Blanket/Blanket printing units with vertical web lead (4 couples).
- 2 4 HI TOWER UNITS, (8 couples):
 - Vertical web lead
 - Capability to print 2 webs in 2+2 colors
- 2 GOSS OPEN LOOP INFEED SYSTEMS located at base of 4-hi tower units (one per 4-hi tower unit)
- 2 FAN OUT CORRECTION BARS when printing 4 + 4 colors (one per 4-hi tower unit)

Units will be equipped with:

- Goss spray bar dampening
 - Open fountain inking
 - Three roller dampening
 - Motorized lateral and circumferential registers on the run of each plate cylinders \pm 3mm. The adjustment of the lateral register does not affect the circumferential register (and vice versa)
 - Individual ink train silencing
 - All cylinders manufactured from solid forged stainless steel
 - Plate cylinders with narrow slot lock-up and 2 plate register pins (1 per one page broadsheet) (two plates around)
 - Blanket cylinder with T-bar lock-up (one blanket around)
 - Pneumatic throw-offs
 - Oscillating drums (2 per inking couple)
 - Bearer-to-bearer cylinder running
 - Special hardening steel bearers
 - All cylinders protected by bearer guards and wipers
- 18 INCHING MOTORS with auto-ptime facility - one (1) per unit

FOLDER

- 2 DRIVEN DRAW ROLLER ASSEMBLIES, each equipped for 12 (twelve) webs.
- Roller top of former with adjustable gain
 - Former with chrome plated nose, blown edges and air blower
 - Tabloid slitter (friction driven) on former board
- 2 2.3.3 JAW FOLDERS for the production of TABLOID and broadsheet products with:
- Two pairs of driven nipping rollers, manually adjustable on the run
 - 1 two-around cutting cylinder
 - 1 three-around folding cylinder
 - Manual tabloid lap adjustment on the run - Range adjustment ± 15 mm.
 - 1 three-around jaw cylinder
 - Six blade delivery fly
 - Web severer for folder protection linked to jam detection system.
- 1 QUARTER PAGE FOLDER (Located on Folder #1)
- 1 DOUBLE PARALLEL FOLD ATTACHMENT (Located on Folder #1)
- 1 CROSSHEAD PERFORATOR - SINGLE BLADE (Located on Folder #1)

DRIVE AND CONTROL

Voltage: 400 Volts - 3 Phases + Earth - 60 Hz

- 1 SHAFTED PRESS DRIVE
- 1 GOSS CONTROL EQUIPMENT LEVEL II including:
- 1 CONTROL EQUIPMENT including:
- Unit cubicle integrated in operating side of each unit
 - Possibility to inch the press (forward or reverse)
 - Oil flow detection
- 2 MASTER CONTROL DESKS with:
- Master controls and light indicators
 - Sequential start-up (4 different programmable sequences)
 - Master adjustment of inking roller speed
 - Master adjustment of dampening
 - Copy counter (good, bad, number of revolutions)
 - Remote control of circumferential and lateral registers.
 - Fault display

DRIVE AND CONTROL (Cont'd.)

2 COMPUTERS, one incorporated into each press desk, with VDU screen, provides the following facilities:

- Press mimic
 - Selection of units, folder
 - Status of units and folder
 - ▶ Stop
 - ▶ Guard
 - ▶ Lubrication
 - ▶ Web break detectors
 - ▶ Unit and folder clutch
- Press diagnosis and parameter settings

2 QUALITY DESKS

- Two broadsheet page wide
 - Readout with LED (bar graph) for ink key setting
 - Store and recall ability of the following adjustments:
 - ▶ Ink keys
 - ▶ Dampener/Ink trims
 - ▶ Circumferential and lateral registers

1 FACILITY TO CONTROL ANY UNIT FROM ANY QUALITY DESK

1 DAMPENING - NAMA pressurized and chilled water supply system

WEB LEAD

12 MOTORIZED LINEAR WEB COMPENSATORS (maximum compensation of 650 mm)

12 MOTORIZED "SNAKE" TYPE WEB LEAD TAPES to lead the web from top of reelstand up to entry of folder.

CONTACT LESS INFRA RED WEB BREAK DETECTORS

ALL PIPE ROLLERS are mounted on ball bearings

ADDITIONAL EQUIPMENT

- 1 SET OF BLANKETS for the whole press (fitted) plus two spare blankets.
- 1 SET OF SPARE RUBBER COVERED ROLLERS for 1 printing couple (ink and water)
- 1 SET OF SPARE PARTS AND CONSUMABLES
- 1 SET OF CATWALKS, upper platforms, handrails and ladders, on operating side only.
- 5 CLUTCHES
- 1 STEEL ERECTION TABLE
- 12 TWO-ARM REEL TENSION PASTERS
- 1 MOTTER-STITCH
- 1 PLATE BENDER - Ternes
- 1 PLATE PUNCH - 5 hole with slot style lock-up

PRESS COLOR

Color: Ming Blue BS 4800 18E53 and Grey
Paint Finish: Smooth

NOTE: TRANSFER TABLE AND LOW PROFILE PAPER ROLL HANDLING SYSTEM AND INK PIPING ARE CUSTOMER RESPONSIBILITY.



CHICAGO SUN-TIMES

Chicago, Illinois

GOSS NEWSLINER PRESS SYSTEM WITH UNDERSHOT FOUNTAIN INKING SYSTEM

SIX (6) TWENTY-ONE (21) COUPLE, SIX (6) WEB PRESSES

The following Goss Newsliner Press Bill of Materials is for six (6) twenty-one (21) couple Goss Newsliner presses, equipped with six (6) 2:5:5 Jaw folders, thirty-six (36) 2-arm RTP's, press drives, and PC based press controls. The proposed presses will be installed in one (1) press row, which is illustrated in the enclosed drawing P14685.

Bill of Materials

UNITS:

- Twelve (12) Goss Newsliner 2-high units (4 couples) with undershot fountain inking system;
- Six (6) Goss Newsliner 4-high towers (5 couples) with undershot fountain inking system;
- Six (6) Goss Newsliner 4-high towers (8 couples) with undershot fountain inking system:
- Sidelay register control on all printing couples, remotely controlled from the Press Control System consoles;
 - Circumferential register control on all printing couples, remotely controlled from the Press Control System consoles;
 - Individual inch drives with controls for forward and reverse;
 - All couples equipped with inker and dampener silencing;
 - All units have straight across toolless plate lockup;
 - All units have 180° stagger T-bar blanket lockup;
 - All units equipped with bearer rings;
 - All units have auto-web lead-in device from RTP through units and straight thru angle bars to the RTF;
 - All 2-high units (4 couples) arranged for two (2) web operation:
 - Water-down-first, three roller direct-to-plate, 8 nozzle Goss spray bar dampeners.

- Six (6) Sets of spare inking and dampening rubber rollers for one (1) couple each;
Twenty (20) Selectable unit footprints.

TWO ARM RTPs:

- Thirty-six (36) Non-load bearing two (2) arm 50" roll diameter reels, tensions and pasters (RTPs) with leveling devices:

GOSS NEWSLINER FOLDERS:

- Six (6) Goss regular single 2:5:5 folders.

Each folder equipped as follows:

- Engineered for 57-1/2" and 54" web width;
- Folding cylinder - 5 copies in circumference;
- Jaw cylinder - 5 copies in circumference;
- Cutting cylinder - 2 copies in circumference;
- Cog belt delivery to operating side;
- One pair lower level 70 degree formers drilled for air, with double variable speed RTF;
- One intermittent (skip) slitter located on operating side former;
- Pneumatic trolley;
- Manual former sidelay;
- Imposition preset nipping rollers;
- Imposition preset jaw cylinder gaps;
- Motorized remote controlled running pin and lap adjustment;
- Manually controlled change over from straight to collect;
- Manually controlled running collect cylinder band adjustment;
- Motorized remote controlled cross association with web lead rollers to enable drive to operating side;

- Remote controlled pneumatic main drive shaft and folding couple clutches;
- Manual horizontal adjustment of roller point of former on lower level $\pm .39"$ (10mm);
- Automatic grease lubrication;
- Provision for stitcher on jaw cylinder;
- Provision for 3:2 folding couple in drive side position.

ANGLE BARS:

- Six (6) Two-high nests of angle bars including two (2) motorized compensators per bar level, one set of turning bars to allow either barred sheet from operating to drive side or vice versa, and mechanical drive connection to the unit. *Now both reversible*
- Twelve (12) Remote control motorized angle bar sidelay adjustments.
- Twelve (12) Remote control motorized roller front of bar (RFB) sidelay adjustments:
- All angle bars drilled and supplied with low pressure air.
 - All RFB tab and center slitters to be motor driven.

PRESS CONTROL SYSTEM (supplier to be determined):

- Twelve (12) Newliner PC based folder operation control consoles;
- One (1) Supervisory workstation/file-server with Auto Imposition System and printer;
- One (1) Printed Area Reader (PAR);
- One (1) Set of Press Control System spare parts including spare PC.

PRESS DRIVE SYSTEM (supplier to be determined):

- One (1) Press Drives consisting of thirty (30) 200 hp motors and controllers, six master controllers, two back-up master controllers, and spare 200 hp motor.

MISCELLANEOUS PRESS EQUIPMENT:

- Forty-two (42) Sets of unit and folder floor plating at operating level;
- Six (6) 60 hp dust collecting systems for folders and angle bar nests;
- Six (6) Spencer 20 hp low pressure air blowers for folders and angle bars;

- Six (6) Pressurized dampener feed system with chiller, each with adequate capacity to serve a press (40 couple maximum) with built-in backup on each system.
- Six (6) Press complements of inking and dampening rollers;
- Six (6) Ultrasonic web break protection systems with inertia trolleys and web severing devices:
- Goss Newsliner press operations, electronic maintenance, and mechanical maintenance training (see enclosed Newsliner training outline);
 - Goss press view program software;
 - Drive maintenance training;
 - Goss management awareness seminar;
 - Goss customer engineering support services;
 - Goss pre-paid installation project management services.

**SUN-TIMES PRESS ORDER
NOTES TO ENGINEERING**

- **Specials**
- **Provision on process leads for auto register system** ✓
- **Chuck type - IFRA** ✓
- **Ink canisters - quality: 10 per press** *3 1/2 gal. ea. (1 1/2 - 2 hr. cap.)*
- **Ink silencing - all couples** ✓
- **Ink level provisions (customer responsibility)** ✓
- **Sidelay/circumferential on all couples** ✓
- **All slitters motorized RFB 1/4 and 1/2 page positions** ✓
- **Folder inset (lead-in) rollers driven w/clutch** ✓
- **3:2 160 page Rotary folder provision on drive side** ✓
- **Over/under delivery. Under for future** *(dbl. dely. capable)*
- **Piggyback blowers for main DC drive motors required** *(supplied)*
- **All units between ^{folders} have clutches on horizontal drive** *(from control panel)*
- **RIP interface provision** *(or can be PAR)*
- **No blankets supplied with press** ✓
- **Skip slitter position on OP side former** ✓
- **Plate scanner provision** ✓
- **Ink fountain dividers - 3 per spot color couple (12 per press)** ✓
- **Page wide auxiliary pans - 4 per press** ✓
- **Aisle leads per P14685** ✓
- **Web movers located on all 2-Hi units** ✓
- **Unit selectability - see P14685** ✓

01.00.00 PRESS DESIGN DATA

01.01.01 Press Type:- NEWSLINER

Maximum production speed:- 75,000 copies per hour (cph)

01.02.01 Cutoff length:- ALL

Maximum print lengths are with register at midpoint and circumferential register set at zero.

01.02.05 Cutoff length:- 22 3/4" (57.8cm)

Web width range:- 1270 to 1680 mm subject to designed operating width(s)

Operating web width(s):- 57 1/2" Primary (1460 mm) and 54" Secondary (1372 mm)

Distance between frames: 82.675 (2100mm)

Maximum printing length : 561 mm(22.086")

01.03.00 Mounting Options:

01.03.02 Designed for floor mounting using re-adjustable levelling devices (tabletop)

1.04.00 Drive Options:

01.04.02 Conventional shafted drive at second unit printing level.

01.05.01 Primary electrical requirement : 480V/3Ph/60Hz (*specify*)
Secondary electrical requirement : 120V/1Ph/60Hz

01.06.02 Manual operated horizontal drive clutches, where applicable for selection.

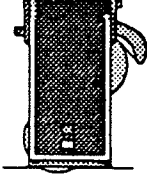
01.07.01 Press color. The following items on the press will be painted the Goss standard sky Blue Paint color:

- *Units
- *Folders
- *RTPs

Commercial Grey:

- *All "A" level crossbraces
- *All upper structure or "R" feature
- *All ball bearing (BB) roller ends
- *All arch platforms and steps on the units
- *All dust collector external from the folder
- *All swing down aisle steps
- *All remote oil/hydraulic reservoirs, including hanger items
- *All first level floorplates and beams - All first level "P" feature
- *All 2nd, 3rd, 4th, 5th, 6th level platforms and brackets
- *All angle bar sections
- *All outfeed assemblies

10.55.01 GOSS CT. 50 Two Arm Reelstands

Roll diameter (auto paste)	762-1270 mm (30"-50")	
Maximum roll weight	1600 kg (3500 lbs)	
Web Width	1680mm maximum (66")	
Reel core inside diameter	76 mm Cardboard (3")	
Weight-excluding paper rolls	(non-load bearing design) 9 tonnes	
Power requirement	24 kVA connected, 4 kVA typical running. 480V/3 Phase/60 HZ	
Compressed air requirement	42 litre/min at 7 bar (1.5 CFM at 100 PSI)	
Spider drive	.8 rpm 2.2 kW	
Running belt drive	9 kW with integral ventilation option	
Spider sidelay	± 18 mm at rate 1.9 mm/sec	
Splicing speed range	Impression-on speed to maximum press speed.	
Adjustable expiring butt setting	102-150 mm (4-5.9") in 1mm (.040") increments	
Paper stock	40-80 g/m ²	
Roll out of round tolerance	± 10 mm	
Tension range	110N - 530N (25 lbs-120 lbs)	
Tolerance	± 9N (2 lbs)	
Tolerance - Emergency stop	± 22N (5 lbs)	
Tension	Reels will maintain registration on 50" diameter rolls ± one row of dots (85 line screen) <i>provided</i> acceleration and deceleration are controlled ("normal register")	
	Not more than 20 copies will [fall] outside normal register through paste cycle during automatic splicing operation	
Quarter reel run and splice	Center positions only is standard run positions Splice speed dependent on roll condition and web tension	
Dolly height	25.4mm (1")	
Reel shaft height	1160mm (45.670")	
Minimum Loadable Roll Size	762mm (30") from dolly	
Reelshaft	Offset in frame	

Bottom face of column	30mm (1.180") above floor mounted on levelling devices
Doors	Two doors each side
Control panel	Sealed with Panel View
Paster firing mechanism	Pneumatic
Reelstand is not handed	
Electrical enclosure is located beside reelshaft	
Slip-ring is cylindrical type	

10.56.01 Non load - bearing

Top face of column 3130mm high (10.270')

Frame inside face is flat

10.58.01 Chuck type

Chucks used are IFRA expanding type

10.60.00 Goss two arm reelstands

10.60.01 Belt Carriage

One centered fixed belt carriage is fitted with two independent belt arms. 70mm wide belts are at 170mm (6.70") each side of center line

10.62.01 Controls

Uses an Allen-Bradley control system

10.63.01 Spider Arms

The spider arm positioning is done manually

Spiders are equipped with gear driven arrangement so they can be manually driven with a wrench along the reel shaft to accommodate fractional-width rolls. Position scale on key. Both A and B arms move together to the new position on the reel shaft.

10.67.02 UPS

An uninterrupted power source supplies all reelstands in case of main supply failure. During press stop, the core brake controller is enabled. This prevents the running reels stopping too quickly and causing a web break.

Customer supplies UPS source and Goss supplies the UPS interface only.

10.69.01 Reel-Loading

Manual

10.73.01 Arm Control

Each arm can be controlled manually by push-buttons located on arms. Chuck position is locked to enable movement of arms

10.75.01 Cocking Roller

One end of cocking roller can be moved, in order to correct shape defects of the roll. Movement of the cocking roller is done manually.

10.79.01 Margin

Two cylinders actuated by motorized hydraulic pump move reel arms assembly. Margin can be controlled from the desk or locally.

10.81.02 Data Display

Reelstand data display on main press control desk

20.01.00 Printing Unit

20.02.01 Printing Units - general data

Blanket type	:	.081" Nopack
Blanket thickness	:	2.11 mm (.083") including packing
Blanket lockup	:	T-bar
Ink coverage	:	When printing process color, maximum total ink coverage should not exceed 280% nor any single color exceed 80%
Plate type	:	Aluminium
Plate width one page wide	:	¼ web width minus 3 mm (.118")
Plate width two page wide	:	½ web width minus 3 mm (.118")
Plate thickness range	:	0.254 to 0.305 mm (.010-.012")
Plate lock-up	:	Slot lock-up (refer to unit features)
Plate cylinder adjustment	:	
- sidelay	:	± 1.6 mm (.063")
- circumferential	:	± 3.2 mm (.125")
Factory lifting weight	:	35 metric tonnes per 8 cylinder unit (77,160 lbs)
Electrical requirement	:	6KVA per 2 Hi Module 480V/3 Phase/60 HZ
Compressed air requirement	:	2 litres/min (.07 CFM) free air/printing couple. Pressure at point of use 7 bar (100 PSI).
Dampener requirement:	:	22 litres (5.2 gal)/hr/couple at a pressure of 3.4 to 4.7 bar (50 to 68 PSI).
Ink requirements:	:	Supply requirements depend on type of inker specified. Refer to Section 22.
Lube hydraulic power pack	:	Size to be determined by Goss Engineering.

All units are fitted with:-

- Pushbutton plate-up stations.
- Automatic oil lubrication with oil pump failure warning.
- Torque overload device for each printing level
- Unit is pre-piped and pre-wired.

Construction of plate and blanket cylinders uses materials and processes designed to minimise corrosive attack during normal printing processes, given proper care and maintenance. A wide range of consumable materials are available to the press user, some of which, individually or in combination, may be highly corrosive. The press user must obtain assurances from the consumable supplier(s) that their products will not be detrimental to the printing press.

20.05.01 Clutches

A clutch arrangement is provided to isolate each unit from the drive.

20.07.01 Inching

Main drive forward inch and independent forward or reverse inch per level, with automatic timed re-engagement/synchronisation and plate positioning.

21.04.02 Goss Double-Width 8-Cylinder Unit A and B Levels (2x 1/1)

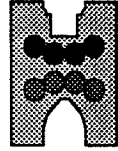
Comprising a unit consisting of four printing couples.

To print:

2 webs of 1 backing 1 (*aisle leads required*)

*web movers on both web aisle positions

1 web of 2 backing 2

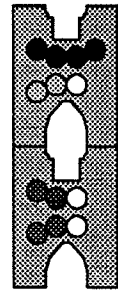


21.10.01 Goss Double-Width 13-Cylinder Unit A,B,C and D Levels (4/1)

Comprising a unit with five printing couples and three additional impression cylinders.

To print:

1 web of 4 color backing 1 color

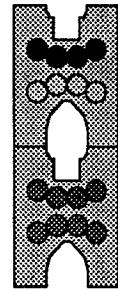


21.16.01 Goss Double-Width 16-Cylinder Unit

Comprising a unit consisting of eight printing couples.

To print:

1 web of 4 backing 4



22.01.01 UNDERSHOT FOUNTAIN INKING SYSTEM

Open fountain system with central divider and swing-back fountain for easy ink change and wash-up.

Two continuous two-page wide fountain blades with microprocessor adjustments on 8 printing zones per page, with read out and adjustment at control desk.

The closed loop motor modules are quickly replaceable and also have manual override in case of malfunction.

Motor driven adjustable speed ink fountain roller with proportional speed control relative to press speed.

Gear driven ink train.

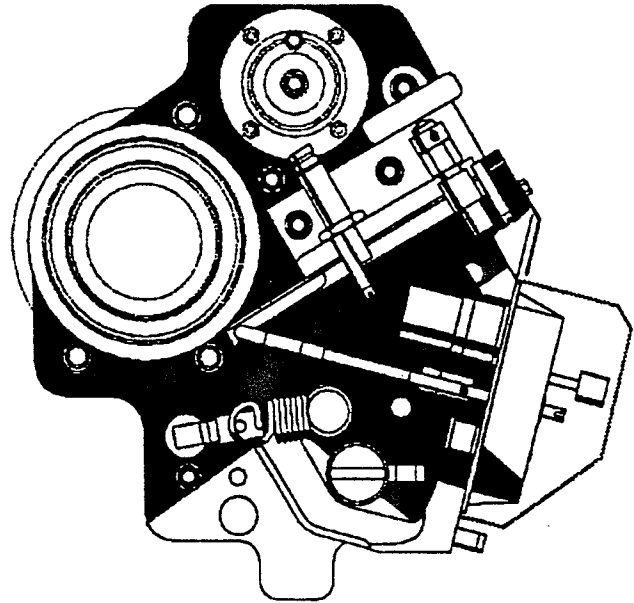
Stationary shaft rubber covered rollers.

Two ink form rollers with an individual setting facility for each flat. Form-to-cylinder stripes can be set from the unit aisle.

Ink wash-up device with slide out catch tray.

Frames drilled for Dayco separators.

All rubber rollers provided with quick release sockets.



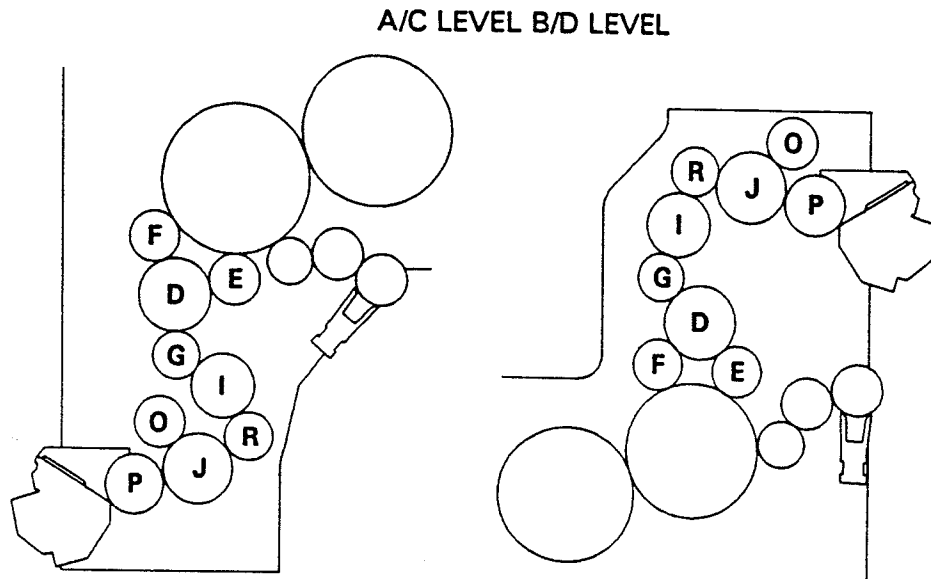
22.02.03 Ink Rollers

Ink arrangement (per couple) for 57.8 cm (22 3/4") cut-off:

J	Ink rail drum	polymer covered 153 mm dia. (6.023")
O	Ink rider roller	rubber covered 122 mm dia. (4.803")
P	Pick-up roller	polymer covered 176 mm dia. (6.929")
R	Transfer roller	rubber-covered 122 mm dia. (4.803")
I	Auxiliary ink drum 25mm oscillation	polymer plated 152 mm dia (5.984")
G	Transfer roller 25mm oscillation	rubber-covered 122 mm dia. (4.803")
D	Main ink drum 25mm oscillation.	polymer covered 188 mm dia. (7.401")

E	Form roller	rubber-covered	133 mm dia. (5.236")
F	Form roller	rubber-covered	135 mm dia. (5.314")

22.03.01 Roller Arrangement



22.04.02 Fountain Dividers

Magnetic ink fountain dividers to provide single page sections. These are used to split the fountain into sections allowing different colors to be used on different pages. Quantity as specified is 3 per spot color couple.

22.05.02 Auxiliary Ink Pans

Page wide auxiliary ink pans. These are additional 'trays' which can be placed inside the fountain to provide different colors on different pages. Quantity 4 per press.

22.20.01 Ink service information for Undershot Fountain

Fill rate :- 30 litres (7 gal)/hour/couple.

22.21.02 Ink Canisters

Portable colored ink canisters and associated ink pipes for use at color units
- 10 per press.

22.23.02 Ink Silencing

Ink roller train silencing provided on all couples.

22.26.01 Oscillation

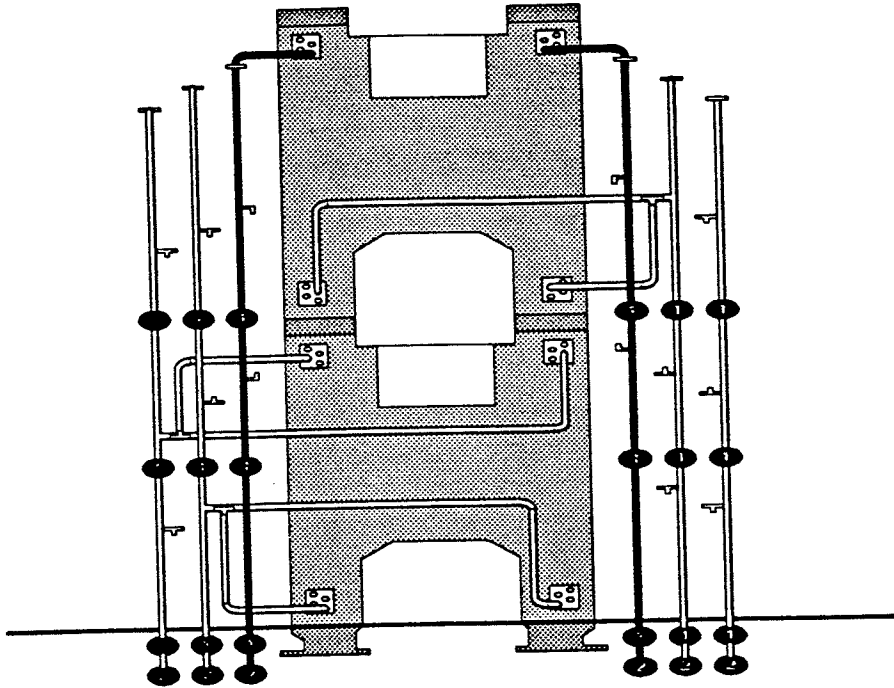
Ink drum oscillation.
- fixed 25mm (1") oscillator stroke.

22.28.01 Ink Feed Pipes

Printing unit is pre-piped for connection at base unit to Buyer's supply line.
Connecting pipework to be non-corrodible and sized to suit flow rate and ink pump system.

22.30.01 Piping Arrangement

One ink supply pipe to each couple at black units
One ink supply pipe to each color level (teed to both couples)



22.31.01

Manual ink feed valves and pipes, one set per printing couple.

22.31.02 Ink Levelers

Prepared for Buyer's supplied automatic ink leveler system.

22.33.02 'Pre-Ink' and Semi-Automatic Washup System

Pushbutton control at the desk drives ink train and allows ink to be available at the printing couple prior to press start-up. For all couples on a unit.

Local control at the unit drives ink train and applies a scraper blade to the main ink drum (on levels B and D) and to the auxiliary ink drum (levels A and C) while an operator applies washup solutions.