

Four-high towers vs stacked satellites

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Four-High Towers Vs Stacked Satellites

By

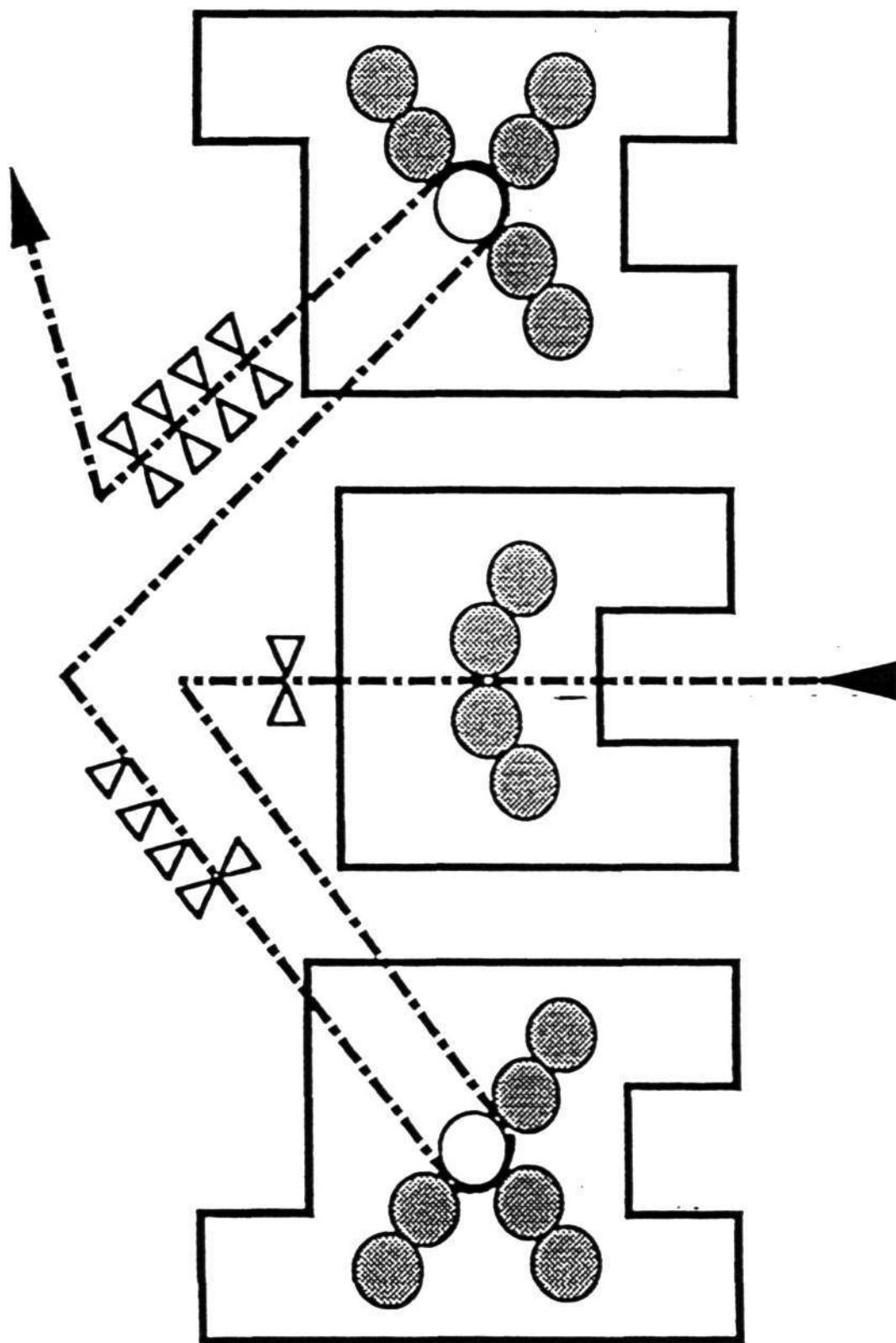
Boris Fuchs

IFRA/AMIC - Workshop Web Offset Technology in Bangkok, Thailand, 8 - 9 September, 1994

Four-high Towers vs. Stacked Satellites

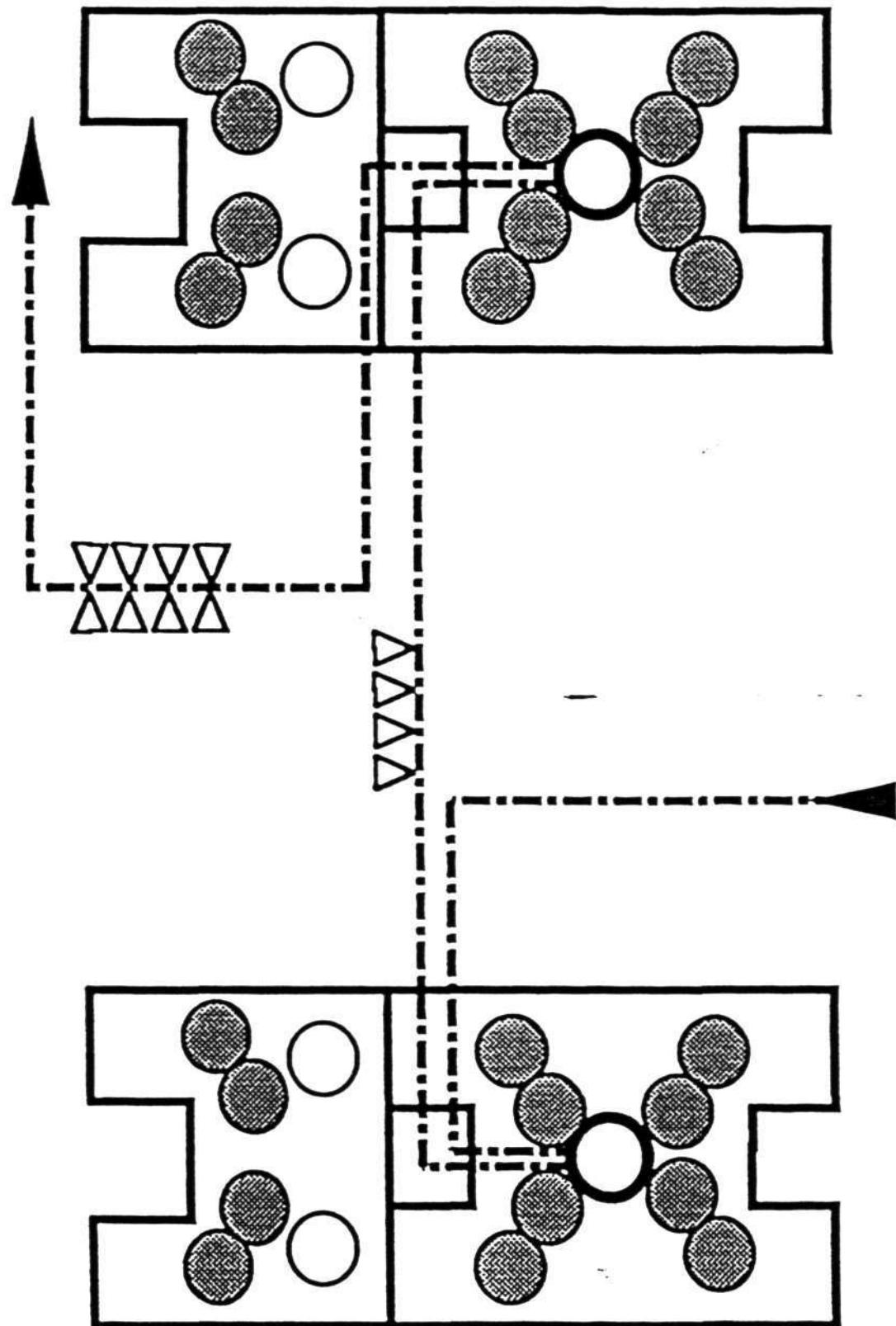
Boris Fuchs, IFRA

Printing unit configurations for 4+4 printing



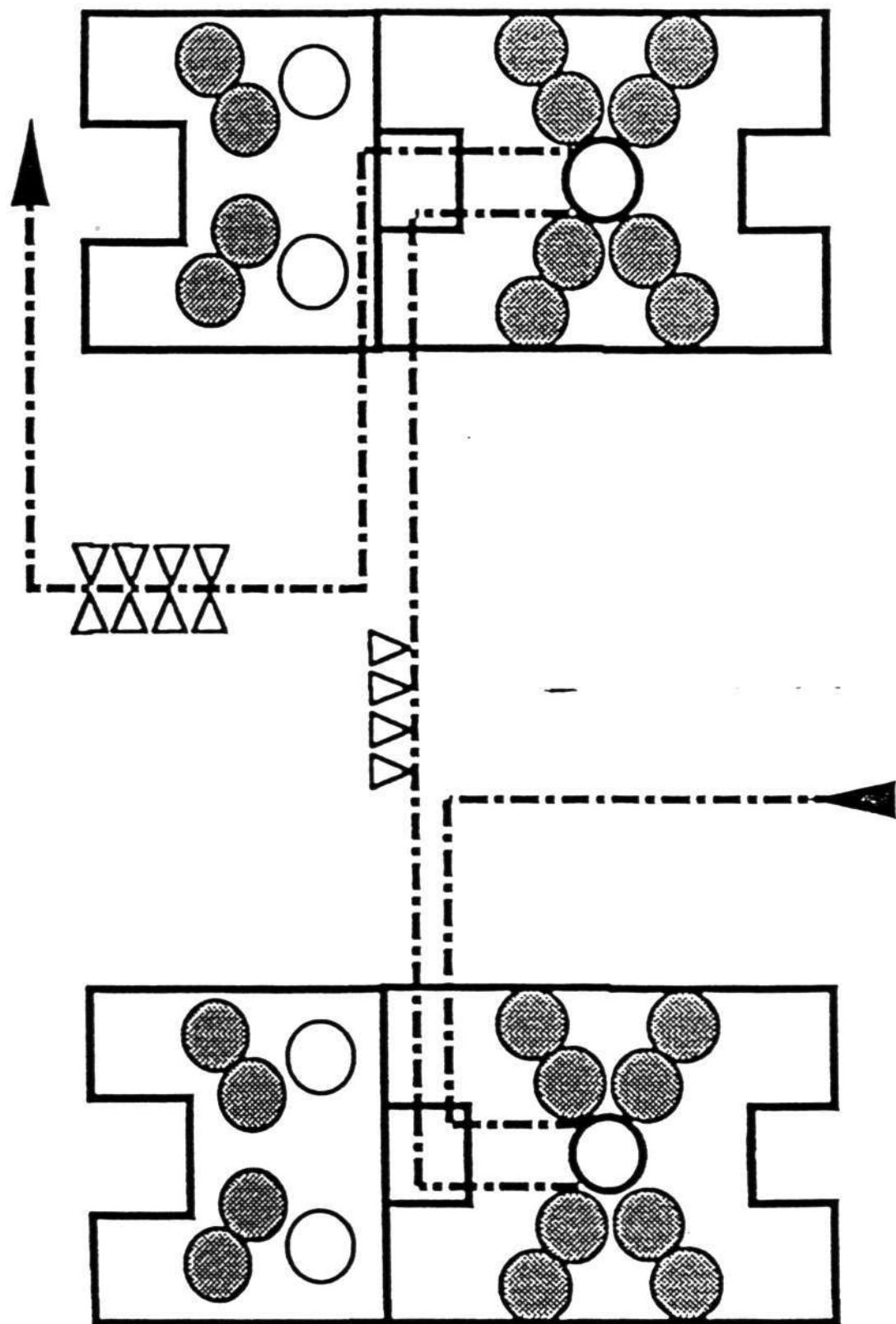
The combination of one arch-type printing unit and
two 3/4 satellites

Printing unit configurations for 4+4 printing



The combination of two six-couple towers (*satellites*)
Type A: 9-cylinder combination satellite with vertical web lead

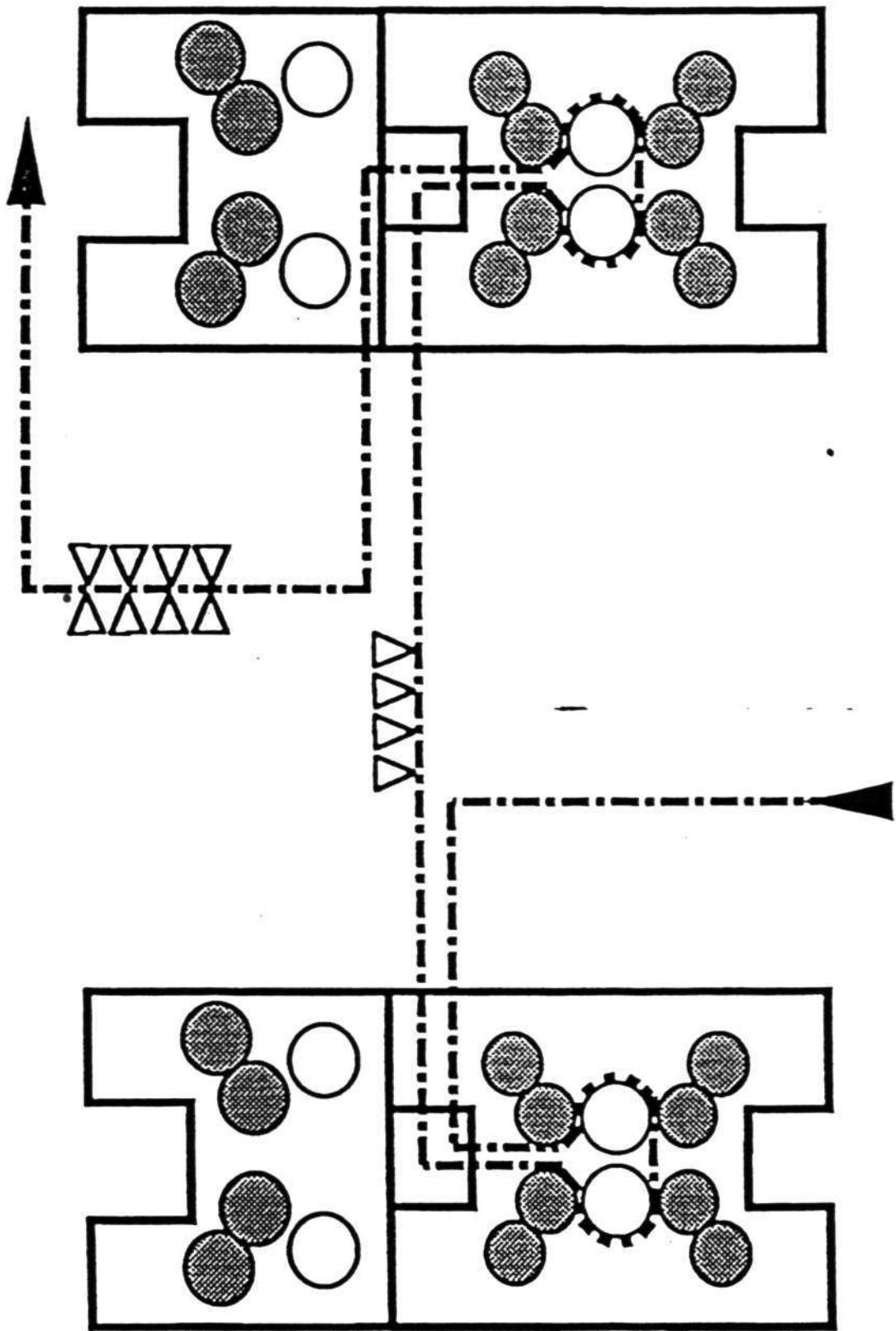
Printing unit configurations for 4+4 printing



The combination of two six-couple towers (*satellites*)

Type B: 9-cylinder combination satellite with horizontal web lead

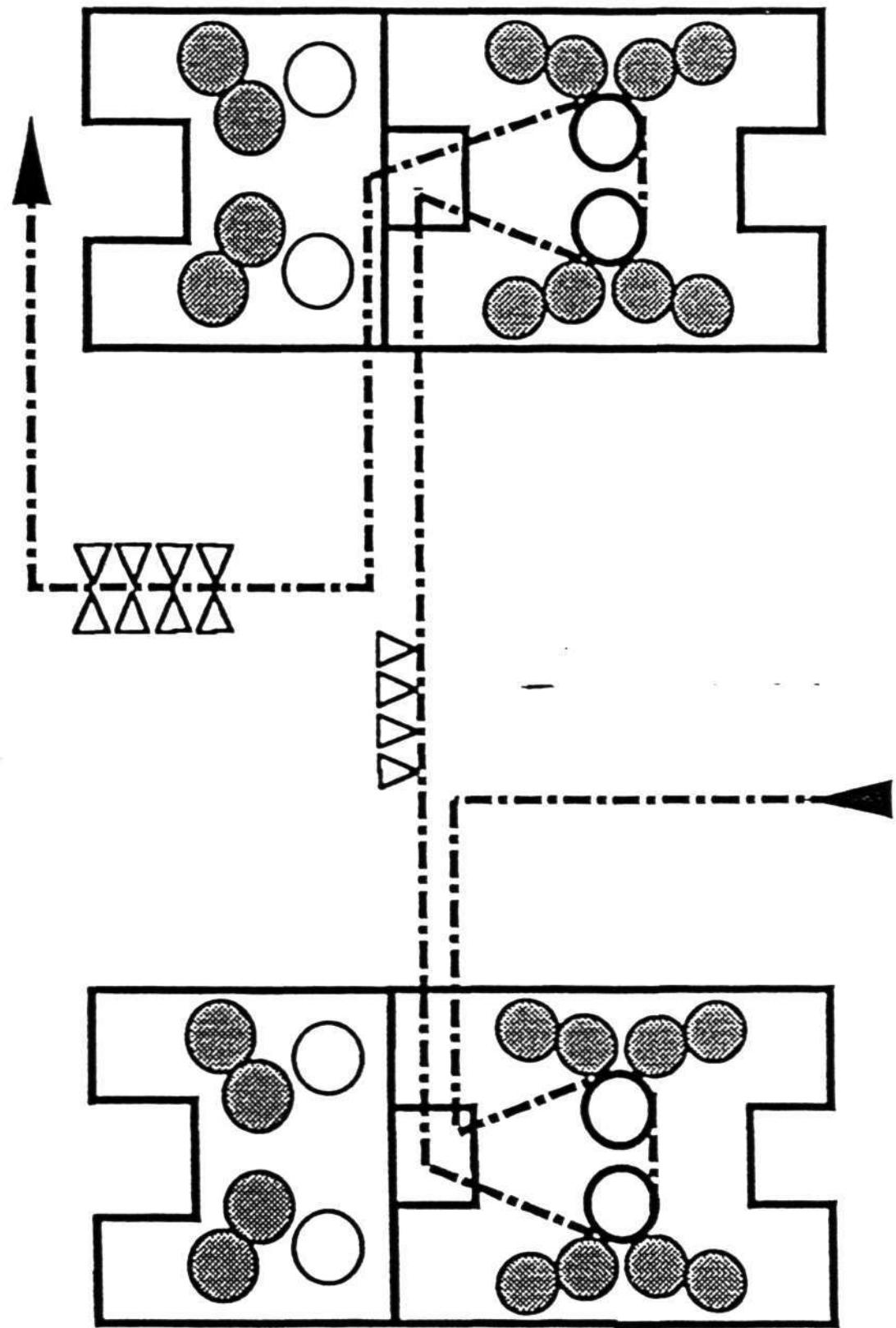
Printing unit configurations for 4+4 printing



The combination of two six-couple towers (satellites)

Type C: 10-cylinder combination satellite with vertical web lead

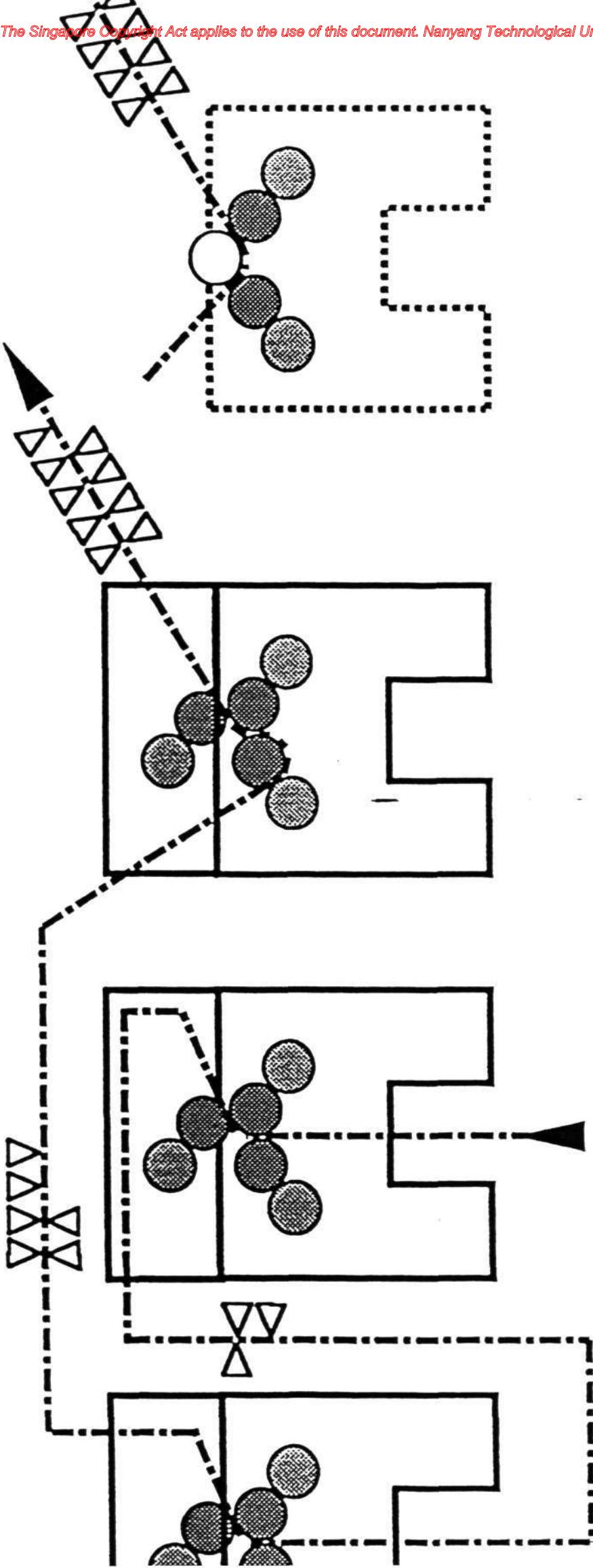
Printing unit configurations for 4+4 printing



The combination of two six-couple towers.(satellites)

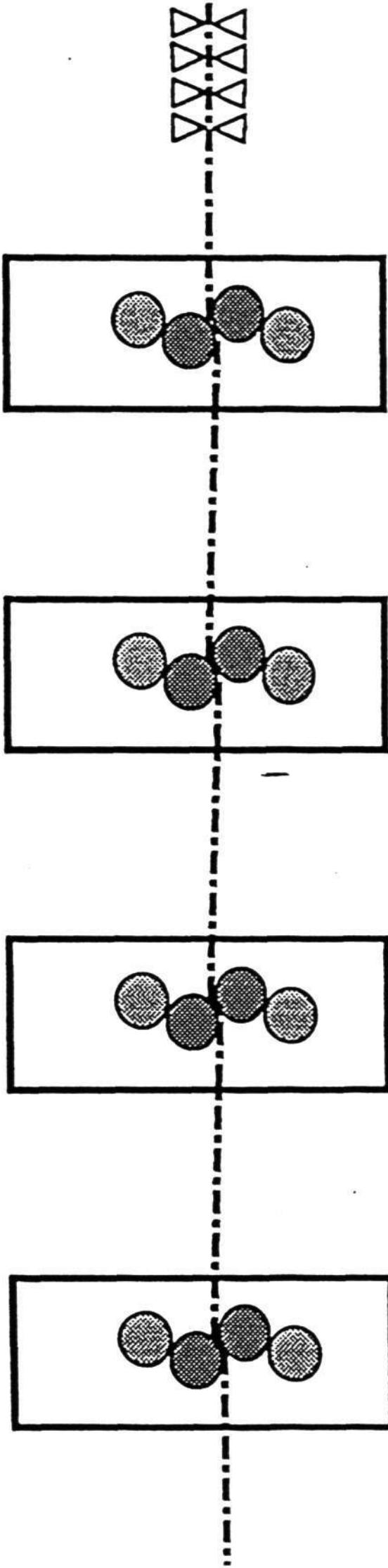
Type D: 10-cylinder combination satellite with horizontal web lead

Printing unit configurations for 4+4 printing



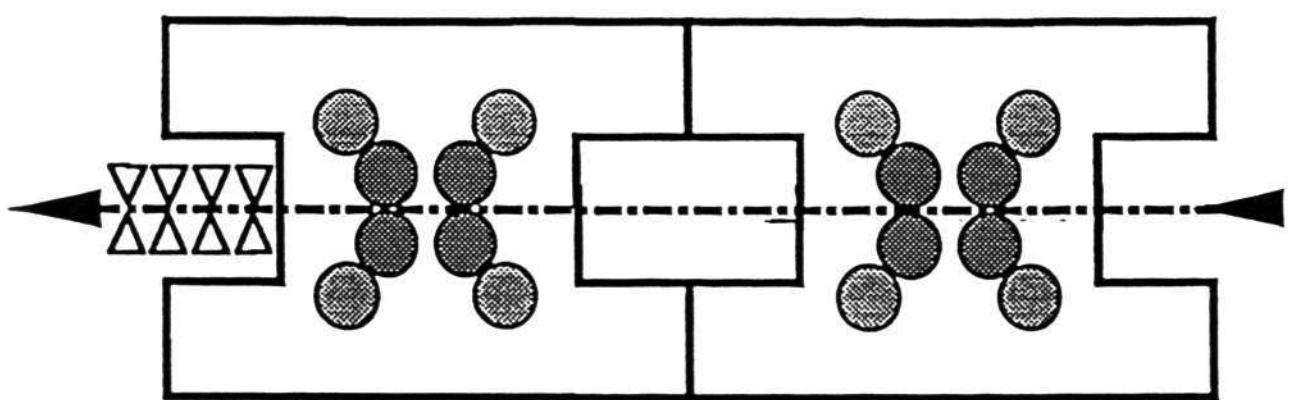
The combination of three Y-type printing units with 1 x Di-Litho
and - in outline - without Di-Litho

Printing unit configurations for 4+4 printing

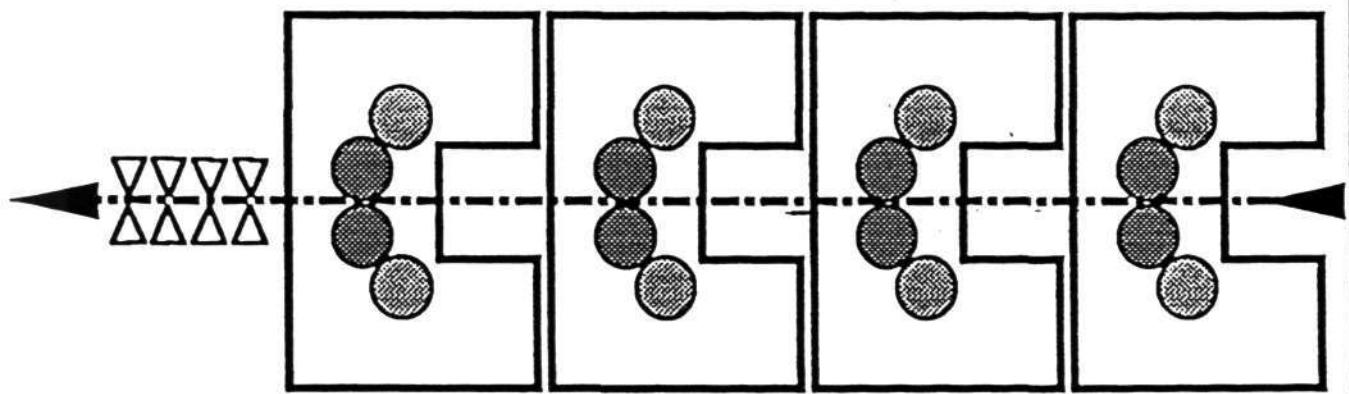


The horizontal web travel through 4 vertical
blanket-to-blanket printing units

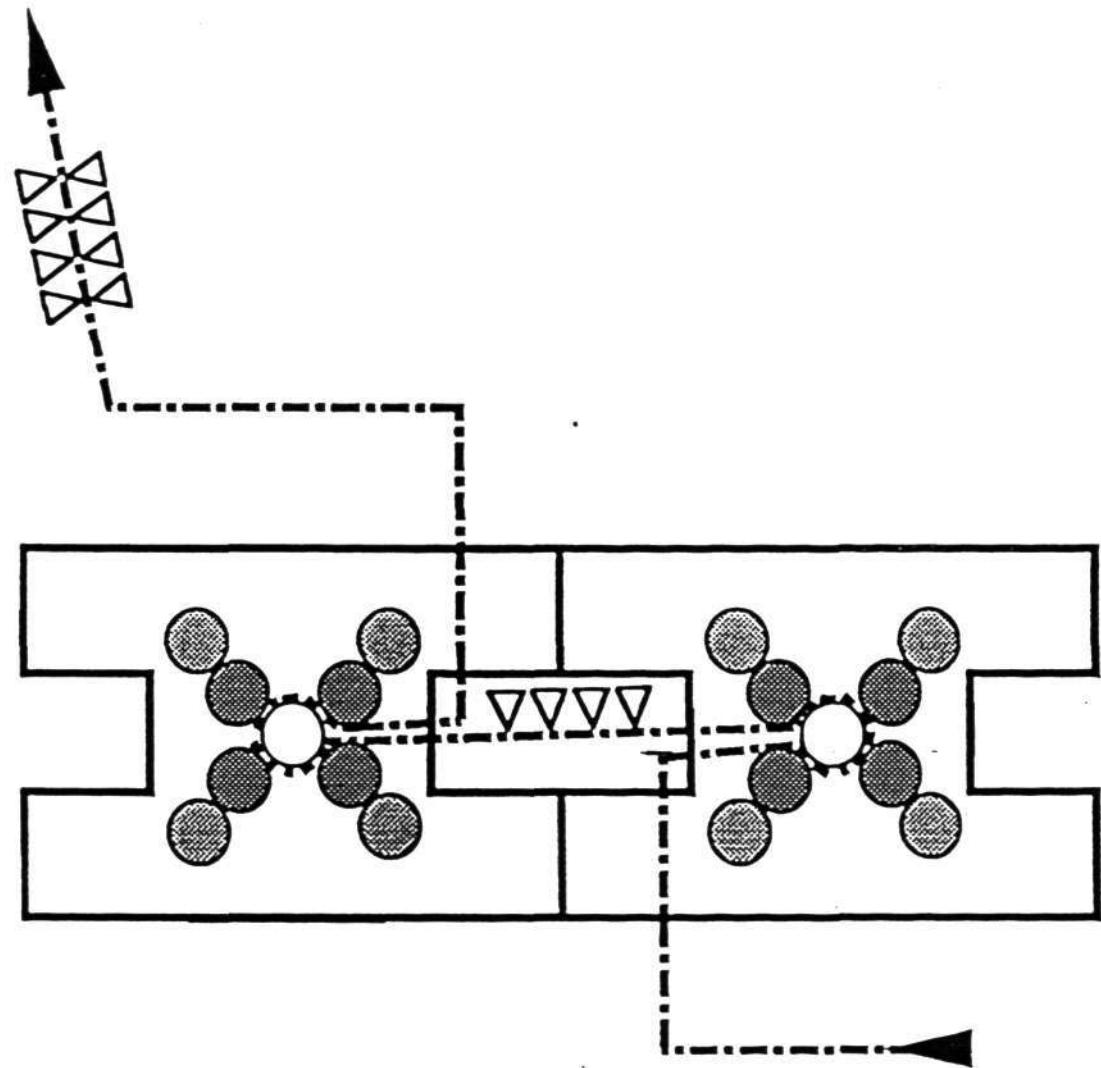
3.5 The vertical web travel through a 4-Hi tower
Type A: stacked H-type printing units



3.5 The vertical web travel through a 4-Hi tower Type B: stacked arch-type printing units

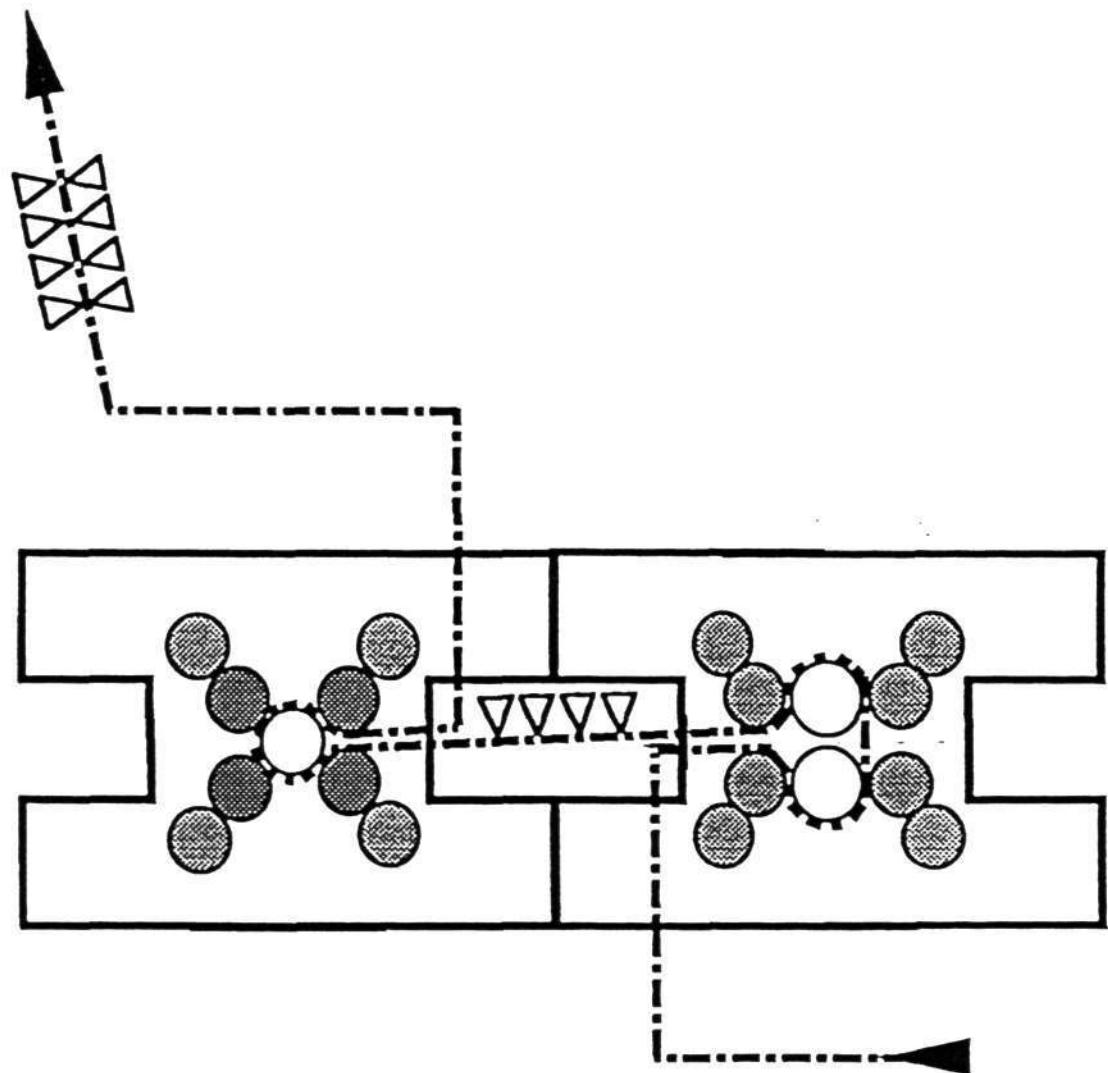


Printing unit configurations for 4+4 printing



3.6 Stacked satellite printing units
Type A: Stacked 9-cylinder satellites with vertical web travel

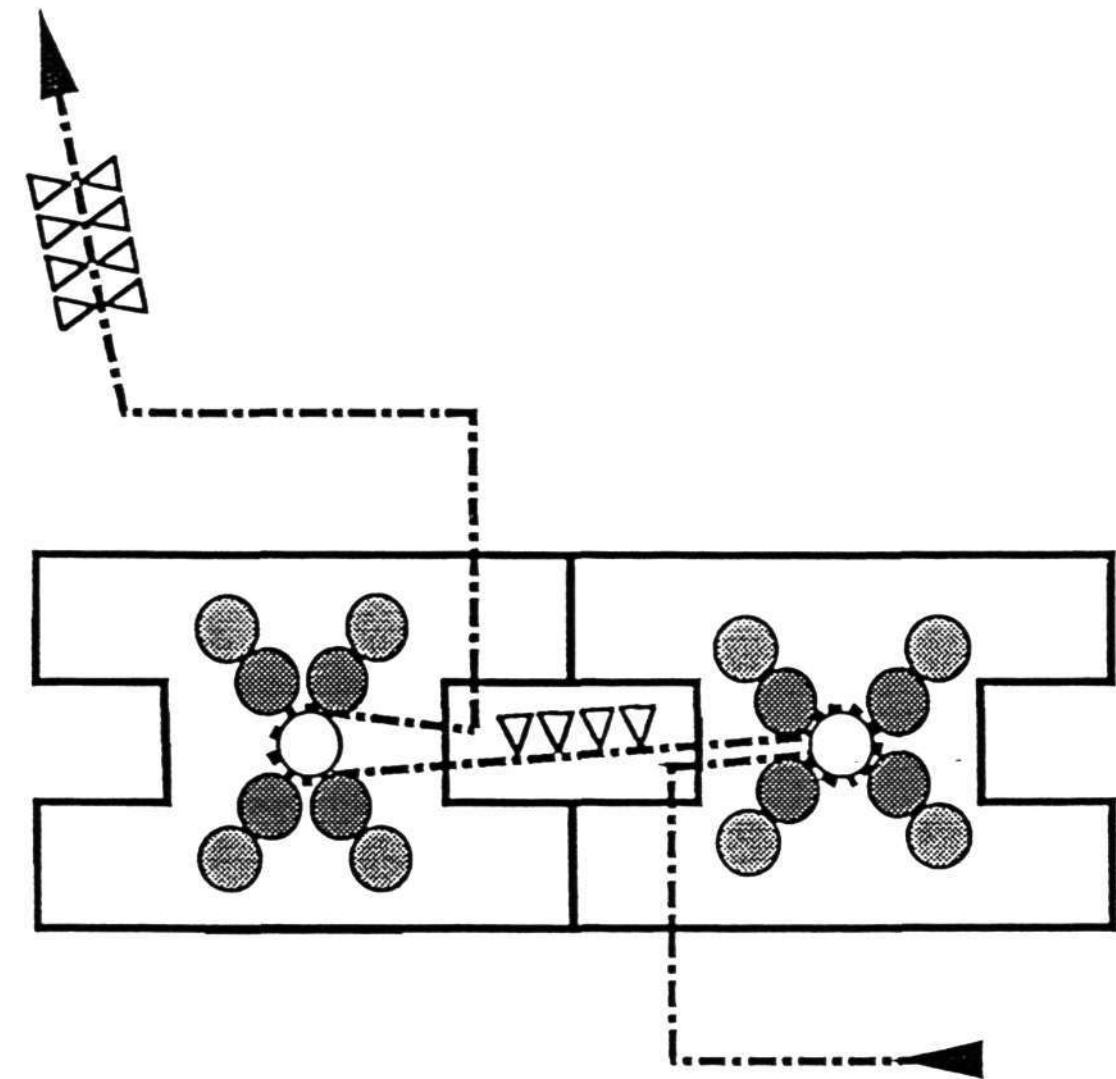
Printing unit configurations for 4+4 printing



3.6 Stacked satellite printing units Type B: The combination of a 10-cylinder and 9-cylinder satellite

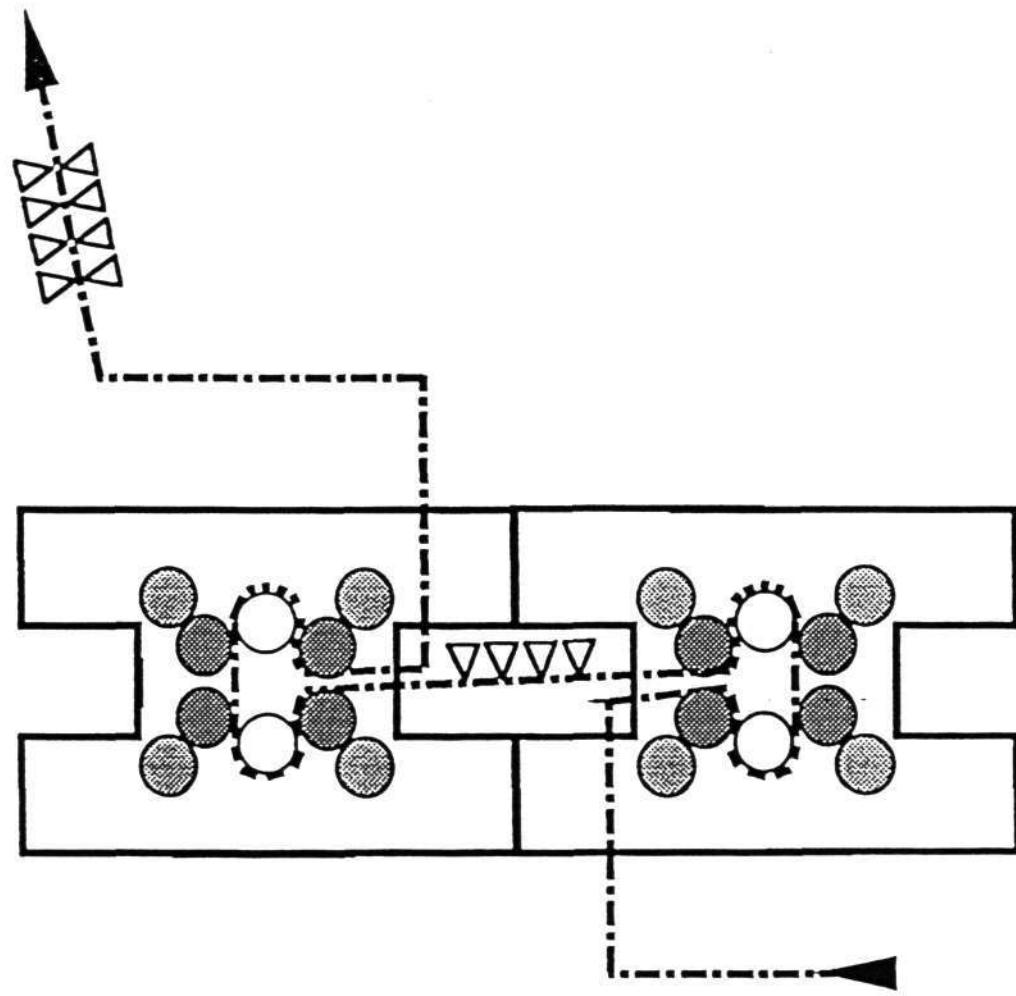
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Printing unit configurations for 4+4 printing



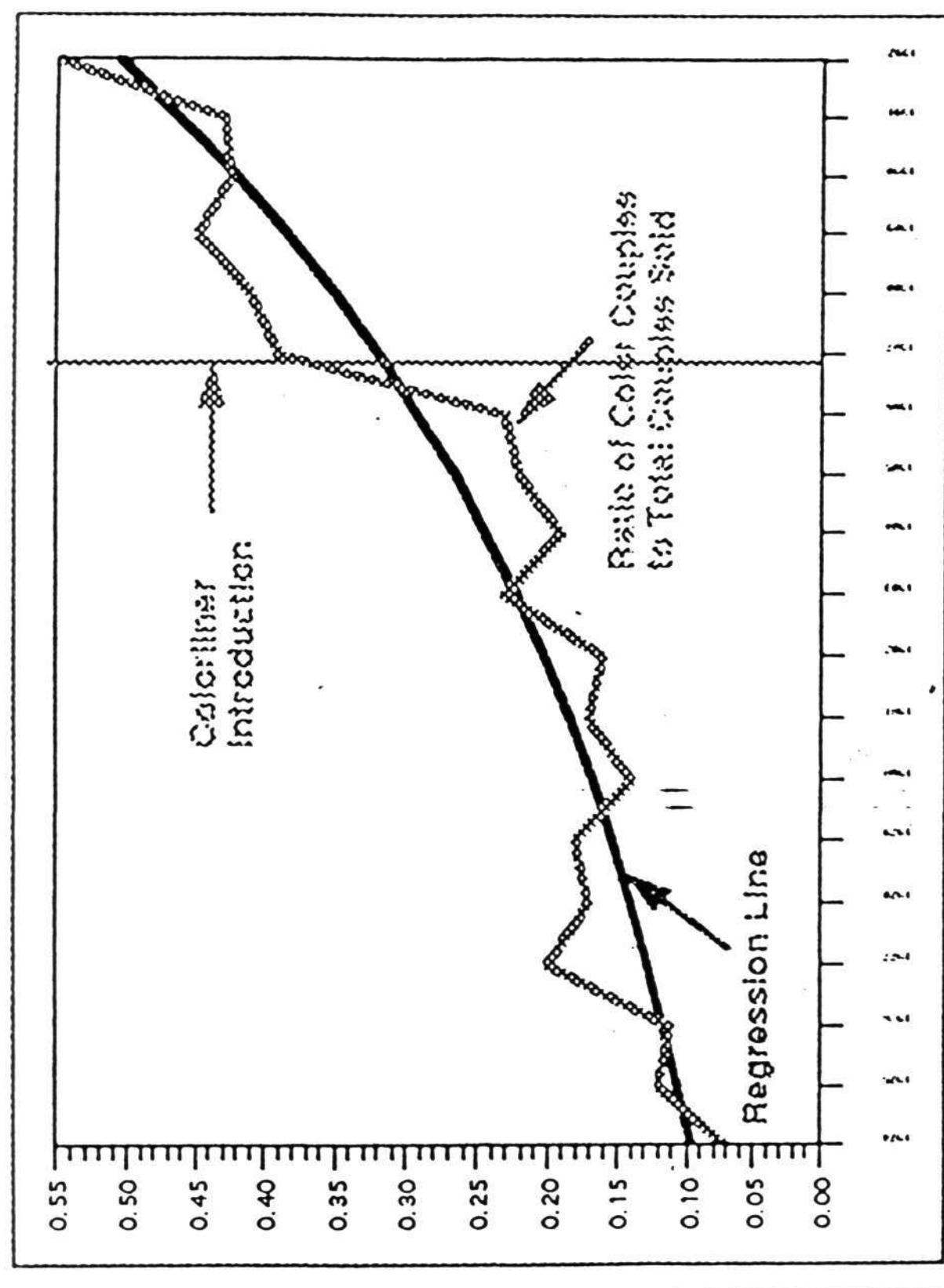
3.6 Stacked satellite printing units - Type C: The combination of a 9-cylinder satellite with vertical and horizontal web travel

Printing unit configurations for 4+4 printing



3.6 Stacked satellite printing units Type D: Stacked 10-cylinder satellite with vertical web travel

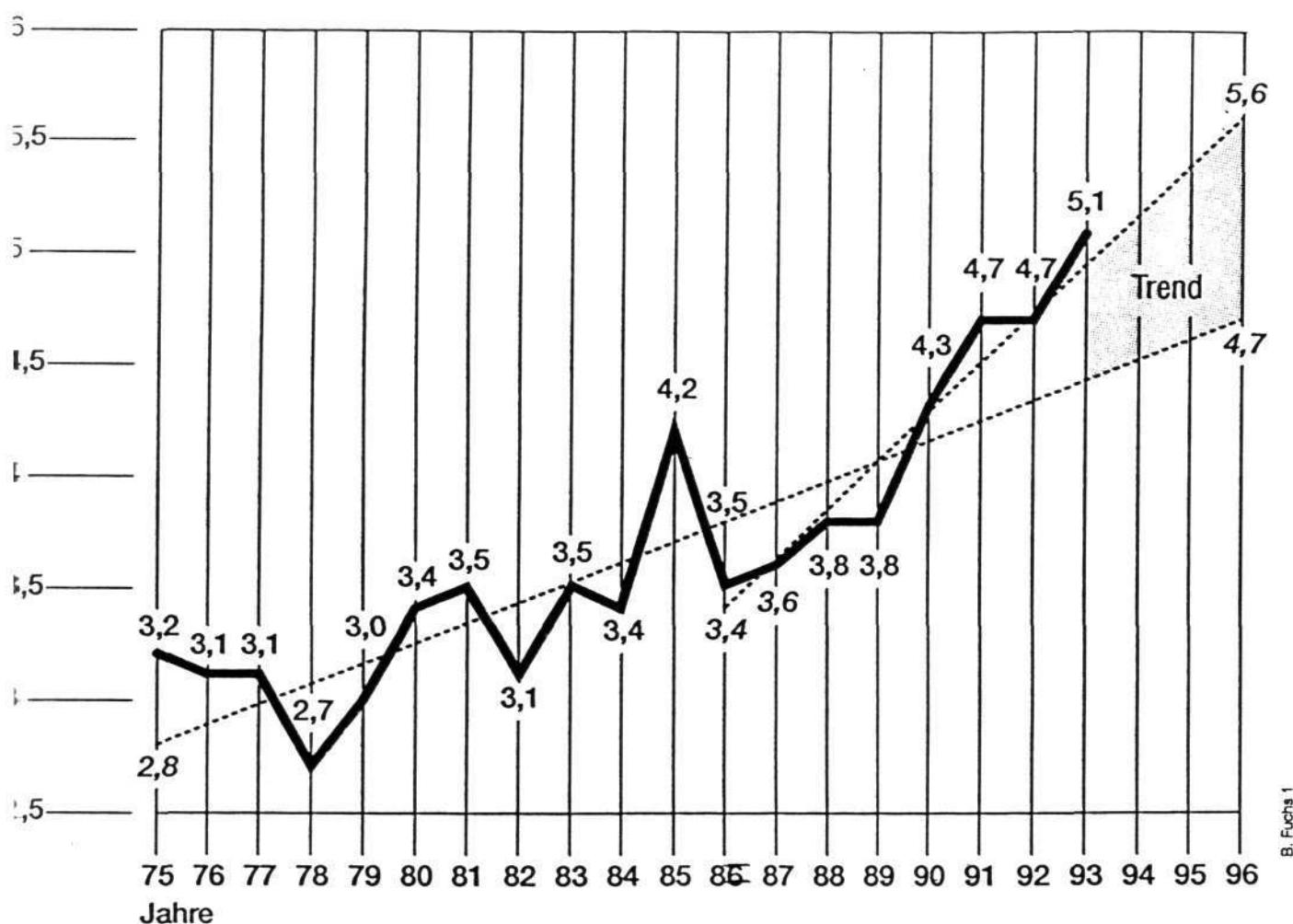
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The share of colour couples of the total number of printing couples sold in the USA.

Durchschnittliche Zahl der Farbstellen pro Papierbahn bei 16-Seiten-Zeitungsmaschinen in Westeuropa

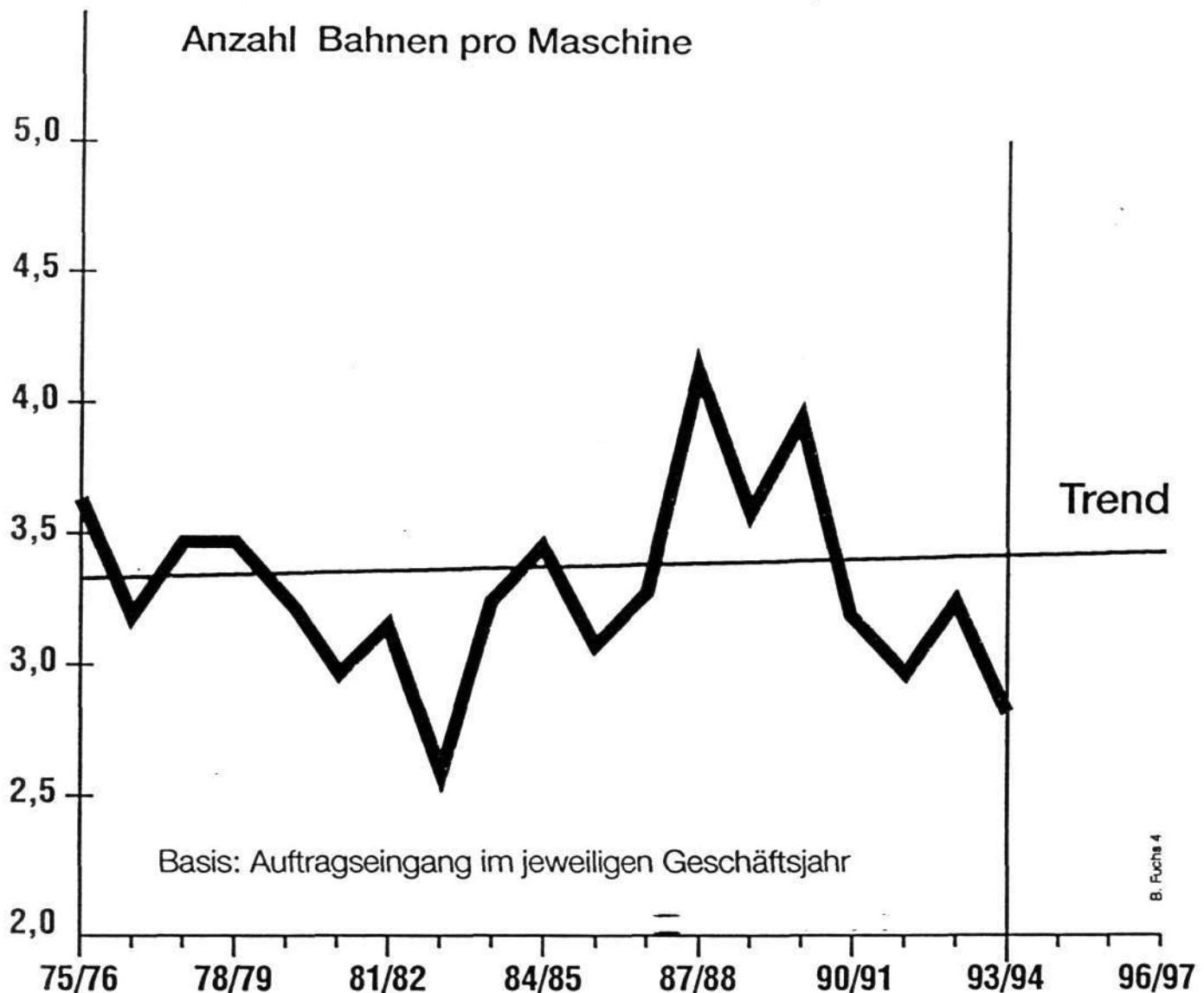
Farbwerke pro Papierbahn



B. Fuchs 1

Die Entwicklung der Farbkapazitäten
in 16-Seiten-Zeitungsoffset in Westeuropa



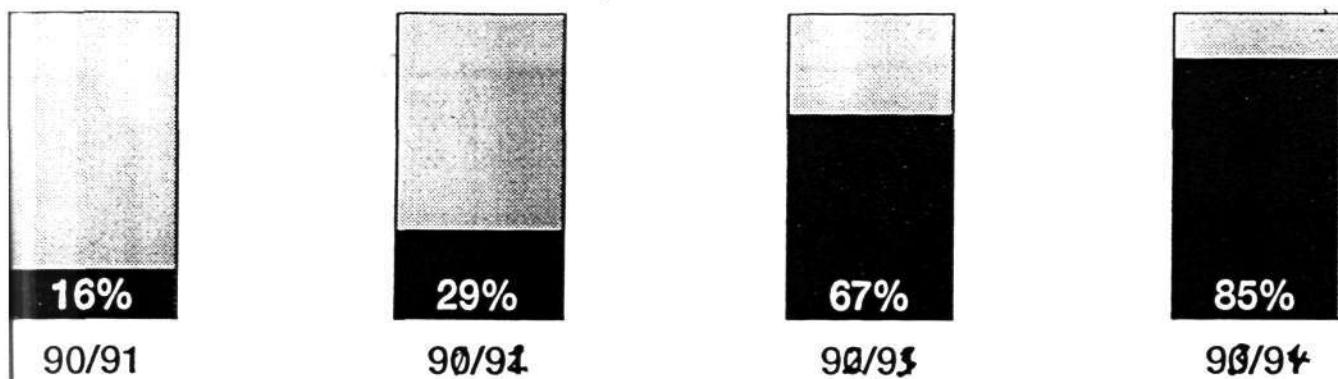


Entwicklung der Seitenzahlen für
-Seiten-Zeitungsmaschinen in Westeuropa



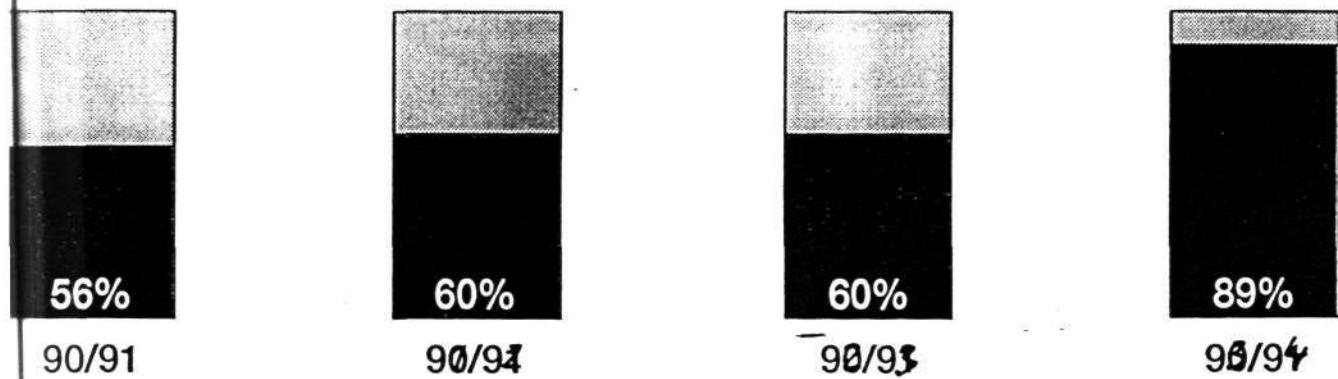
Anteil der 8er-Turm (Gummi/Gummi)-Maschinenkonzepte am Gesamtmarkt

Westeuropa



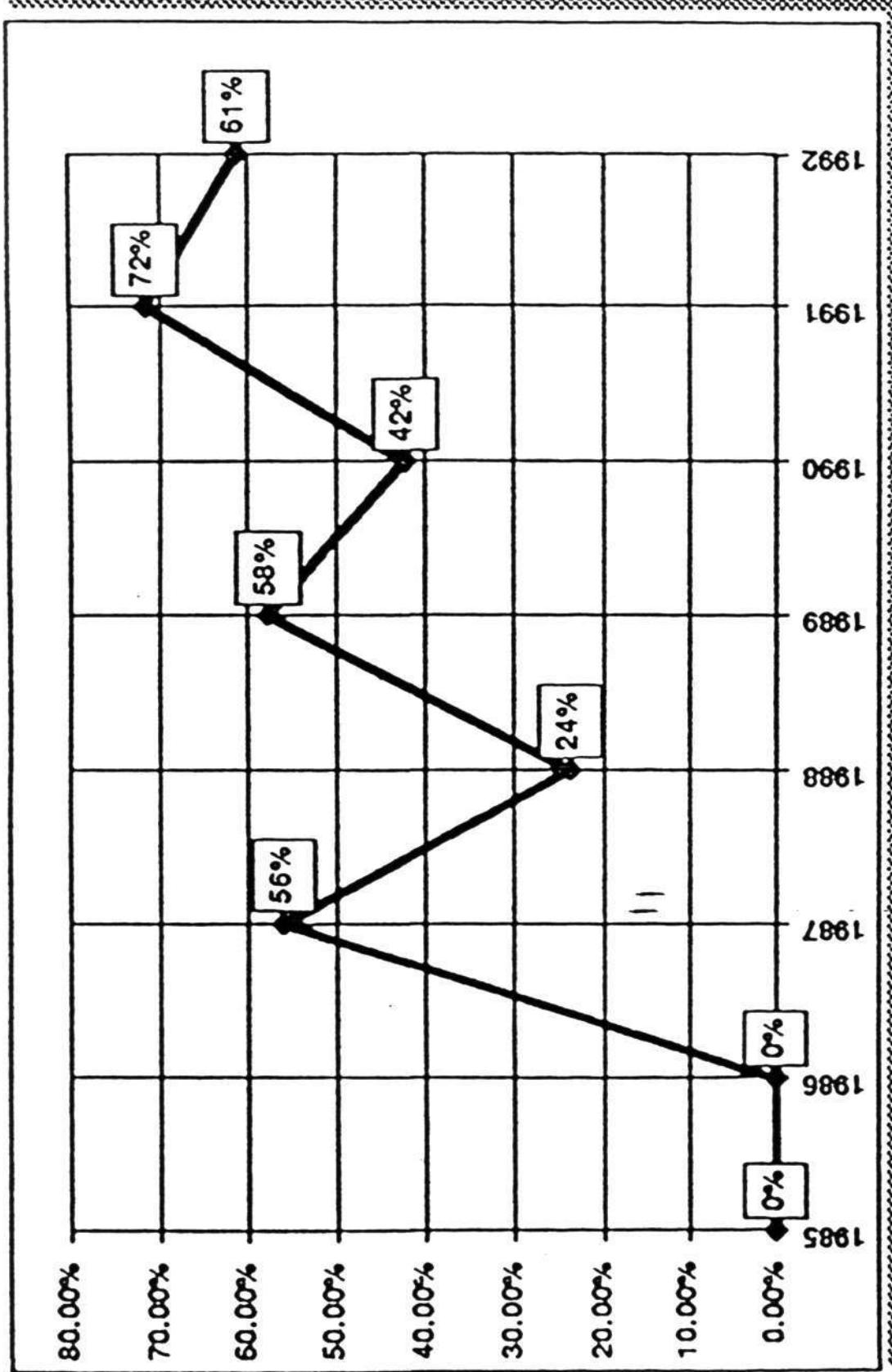
B. Fuchs 2

Übrige Länder (ohne USA, Japan)



Marktdurchdringung
der 8er-Türme (Gummi/Gummi)





The share of the presses with the 4-high tower configuration expressed as a percentage of the total of presses sold in the USA.

FOUR HIGH TOWER VERSUS STACKED SATELLITES

- SINCE DEVELOPMENT OF THE FOUR HIGH TOWER BY ROCKWELL IN 1978,
THE WORLD MARKET HAS SEEN A SIGNIFICANT CHANGE IN CUSTOMER
PREFERENCE TOWARD 4 HIGH:
 - AROUND 85% OF LARGE NEWSPAPER PRESS ORDERS IN EUROPE IN
1994 SO FAR ARE 4 HIGH
 - 86% OF GOSS HT ORDERS SINCE EARLY 1993 HAVE BEEN 4 HIGH
 - AROUND 90% OF GOSS UNIVERSAL ORDERS ARE NOW 4 HIGH BASED
 - RESIDUAL SATELLITE PRESS DEMAND ONLY IN MARKETS WHERE
COLOUR GROWTH IS NOT YET FULLY SEEN (EG. ITALY/SPAIN)
- MODERN WEB CONTROL SYSTEMS (AS ON THE GOSS HT) USING WEB
TENSION INFEEED AND OUTFEED SYSTEMS, AUTOMATIC REGISTRATION
CONTROL AND PRE-ANALYSED FAN OUT COMPENSATION ALREADY
PROVIDE EQUIVALENT PRINT QUALITY TO SATELLITE, BUT WITH SIMPLER
OPERATION AND MUCH GREATER COLOUR AND WEBBING FLEXIBILITY

Evaluation of the printing unit configurations for 4+4 printing:

| | | Efficiency | Printing quality | Ergonomics |
|-----|--------|------------|------------------|------------|
| 3.1 | | - - | - | 0 |
| 3.2 | Type A | 0 | + | 0 |
| | Type B | 0 | ++ | + |
| | Type C | - | + | - |
| | Type D | - | + | ++ |
| 3.3 | | + | - | - |
| 3.4 | | 0 | 0 | ++ |
| 3.5 | Type A | ++ | -0 | + |
| | Type B | + | 0 | ++ |
| 3.6 | Type A | 0 | + | 0 |
| | Type B | 0 | + | 0 |
| | Type C | 0 | ++ | + |
| | Type D | - | + | - |