



WORLD CUSTOMS ORGANIZATION
ORGANISATION MONDIALE DES DOUANES

Established in 1952 as the Customs Co-operation Council
Créée en 1952 sous le nom de Conseil de coopération douanière

HARMONIZED SYSTEM
COMMITTEE
-
23rd Session
-

NC0048E1
(+ Annexes I & II)
O. Eng.

H3-1

Brussels, April 1999.

CLASSIFICATION OF IMAGESETTERS AND INK-JET PRINTERS
AND STUDY OF THE EXPLANATORY NOTE TO HEADING 84.42

(Item VIII.10 on the Agenda)

Reference documents :

40.266 (HSC/17)	41.598 (HSC/20)
40.726 (HSC/18)	41.600, Annex F/20 (HSC/20 - Report)
40.600, Annex IJ/6 (HSC/18 - Report)	42.057 (HSC/21)
40.885 (HSC/19)	42.105 (HSC/21)
41.124 (HSC/19)	42.119 (HSC/21)
41.100, Annex G/19 (HSC/19 - Report)	42.750, Annex G/30 (HSC/22 - Report)
41.315 (HSC/20)	

I. BACKGROUND

1. At its 22nd Session, the Committee, on the basis of Docs. 42.057, 42.105 and 42.119 (HSC/21), discussed the classification of certain imagesetters, scanners and printers. Decisions were made on the classification of the Smart 342 and the Rapiline 51 OLP. The Secretariat was instructed to prepare a Classification Opinion on the Smart 342 for examination by the next preessional Working Party. The Committee also instructed the Secretariat to contact the requesting administration for the Rapiline 51 OLP to see if a Classification Opinion was required. One was not requested.
2. It was agreed that the question of the classification of combinations of apparatus (functional units), referred to in paragraphs 12 to 20 of Doc. 42.057 (HSC/21), should be postponed until new information was presented.
3. The Committee preliminarily discussed the classification of the Selectset Avantra 30 and the Iris 3047.

File No. 2618

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II. SECRETARIAT COMMENTS

Selectset Avantra 30

4. The Secretariat has received the technical information on this product referred to by the Delegate of Turkey at the Committee's 22nd Session. The Note from the Turkish Administration is reproduced in Annex I to the present document. This information confirms the technical information contained in the Annex to Doc. 42.057 and reproduced in Annex II to the present document. There are, however, some slight variations with regard to the data quoted in the image area and resolution range.
5. The Turkish Administration takes the view that the Selectset Avantra 30 is classified in heading 84.42 and, more precisely, in subheading 8442.10 by application of General Interpretative Rules 1 and 6. In addition, it is the Turkish Administration's view that the Explanatory Notes to Heading 84.42 do not reflect developments in technology and require revision and updating. No proposals were provided.
6. One delegate indicated at the last session that the Selectset Avantra 30 could reproduce the image on a polyester plate which was directly used in a printing machine. The information available to the Secretariat at the time indicated that the apparatus could not be used for the direct production of plates for printing machines. The Committee decided to address this issue at its next session, on the basis of more precise information on the product. Administrations were invited to send relevant information to the Secretariat as soon as possible.
7. The information provided by the Turkish Administration did not provide clarification on this point and, as the Secretariat had not received comments from other administrations, the Secretariat contacted the manufacturer. The Secretariat was told that the Selectset Avantra 30 has the possibility of printing an image directly on a polyester-based printing plate. However, in probably 98% of the time, it is used to expose an image on photosensitive film.

Iris 3047

8. The Committee instructed the Secretariat to prepare a new document for the next session, taking into account additional information. In this context, the US Delegate requested that the background of the 1996 amendment to heading 84.43 be included in the Secretariat's study. Administrations were invited to send any relevant information to the Secretariat.
9. At the time of the preparation of this document, the Secretariat had not received any comments from administrations and, therefore, contacted the manufacturer. The Secretariat was informed that the Iris 3047 needed to be connected to a Macintosh computer via IQ PRO 3000 Software. If disconnected from the computer, it was not capable of operation on its own. When asked where this printer was used, the manufacturer's representative indicated that the Iris 3047 is an Ink-jet printer that is used on the prepress side of a printing house for colour proofing.
10. At the request of the Delegate of the United States, the Secretariat reviewed the background to the 1996 amendment to heading 84.43. The Canadian Administration had presented a proposal to amend the texts of heading 84.43 and subheading 8443.50 to include a reference to ink-jet printing machines. Product literature on different machines was submitted. The 1996 amendments did create a specific reference to ink-jet printing

machines. Unfortunately, there seems to be no clear reference made at the time to a specific machine. Consequently, there is no guidance to assist administrations in determining the dividing line between ink-jet printers that have a specific function in the printing industry and those that, according to Note 5(D) to Chapter 84, could be classified as output units of ADP machines. This may lead to a lack of consistency in the classification of these goods.

11. At the time of the preparation of this document, the Secretariat had not received any new information from administrations concerning the classification of combination of apparatus (functional units), referred to in paragraphs 12 to 20 of Doc. 42.057 (HSC/21).

Explanatory Note to heading 84.42

12. The Committee agreed to re-examine this issue at its next session on the basis of a new document to be prepared by the Secretariat. The Chairman noted that discussions on the classification of the apparatus referred to in Doc. 42.057 (HSC/21) had not yet been finalized. Consequently, any discussion concerning the consistency of the relevant part of the Explanatory Note to heading 84.42 could not be brought to a conclusion at the 22nd session.
13. The Secretariat has done a preliminary analysis of the equipment in heading 84.42. One of the questions to be answered is whether film image recorders, also known as “recorders” or “imagesetters”, can be regarded as “Machinery, apparatus and equipment ..., for type-founding or type-setting, for preparing or making printing blocks, plates, cylinders or other printing components;” within the meaning of heading 84.42.
14. Machines or apparatus for type-founding or type-setting may still be used, e.g., in developing countries, but they are no longer manufactured. It is the view of the Secretariat that imagesetters cannot be regarded as machines or apparatus for type-setting. Consequently, the Secretariat concludes that “machines, apparatus and equipment for type-founding or type-setting” and all the equipment related to these articles should be deleted from the legal texts and also from the Explanatory Notes.
15. Some of the equipment mentioned in the Explanatory Note still exists but a different process may be used today; therefore, these items need up-dating. It will be necessary to obtain substantial input from industry experts to do this. Accordingly, the Secretariat would suggest that the updating of heading 84.42 and its Explanatory Note be undertaken in the context of the next HS review cycle on the basis of input received from administrations.

III. CONCLUSION

16. The Committee is invited :
- (a) to rule on the classification of the following equipment:
- (i) “Selectset Avantra 30”, “Dolev 4 Press” and “Accuset 1500 Plus”(imagesetters);
- (ii) Iris 3047 (ink-jet printer);

Note: The “Dolev 4 Press” and “Accuset 1500 Plus” were first discussed in Doc. 42.057 and their descriptions are reproduced in the Annex to the present document.

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- (b) to indicate what further action, if any, should be taken in this respect, and in particular whether it would agree that the updating of heading 84.42 and its explanatory Note should be studied by the Review Sub-Committee during the next review cycle.

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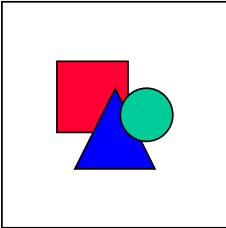
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NOTE FROM THE TURKISH ADMINISTRATION

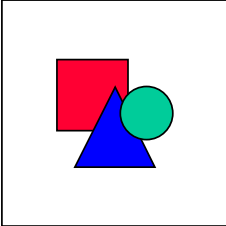
1. With reference to the letter mentioned above and 22nd Session of the Harmonized System Committee (HSC), please be informed that the technical information on imagesetter "Selectset AVANTRA 25 and Star 400 L2-I RIP" is stated below.
2. The imagesetter (photo type-setting machine), in general, is a pre-press machine used in printing sector. This machine transfers page plan, type-setting and analysis of the colour works to film which will be printed, such as on a catalogue, magazine, package, label, office documentation and so on, after combining them in order to be transferred to the plates of offset and flexo-printing machineries prepared by computer and scanner. The plates are mounted on the offset and flexoprinting machines, and the press in required amount which might be between 1000 and 1.000.000 pieces.
3. In this respect, the characters of the imagesetter "Selectset AVANTRA 25 and Star 400 L2-I RIP" should be examined to clear its nature being an imagesetter. The machines at issue are altogether considered as a complete "imagesetter". Star 400 is technically called as "Raster Image Processor" and used with imagesetter (AVANTRA 25) to transfer pages prepared in electronic environment in ASCII codes to bitmap data and then AVANTRA 25 transforms these datas to film in page size (58x38 cm for newspaper) with accurate pixel placement. These black and white films with the same dimensions of a page are used to obtain plates for printing. One plate is used for each main colour, for example cyan plate is used for cyan, magenta plate used for magenta etc. The plates are made of aluminium and fixed on the unit of printing machine and the coloured printing ink is used. After necessary calibration has been made, plates are used to print between 10.000 and 100.000 offset sheets per hour. In short, as explained above Star 400 RIP can not operate without AVANTRA and vice versa.
4. When generally speaking about the AVANTRA 25 type machines, their working method is the same as that of mentioned in the first paragraph. On-line processing can only be realized if the suitable on-line processor is connected to the concerned machine itself. If optional on-line processor that is chosen in correct size integrated to the machine, then processing (development) can be realized by controlling all processing functions from user control panel. In other words, processing is not the main function of the machine but it is suitable for connection with the processor to ensure process going more smoothly between the stages of start and finish. The machine is not capable of processing without integration to the correct size of on-line/off-line processor.
5. The concerned machine is transferred pages which have already prepared on the electronic environment to films which are suitable for the printing technology. For example, in case of colour printing, a film bunch of, all in black and white are obtained after colour separation, one is black and at least three main colours cyan, magenta, yellow are only suitable for the processing of the printing machines. Each black and white films are formed by pixel and later on each of them is used to print its own colour for the same page by printing machines. Four black and white films are used for colour printing and black and white film produces a monochrome page. The function of the machine is to produce these films only suitable for printing machines.
6. Because of its specific structure, the machine can not be used for a different purpose (for example to process a film which is used in photography) other than the one explained

above. The nature of the films produced by the concerned machine is totally different from the ones suitable for cinematographic and photographic purposes. Those films do not consist of pixels and all colours are on the same film in colour cases. This is the main difference between two groups of machines.

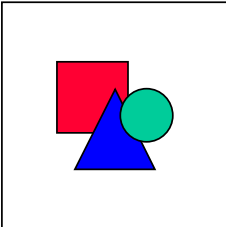
7. The films suitable for printing machines are produced by imagesetters and one black and white film is used for each colour. The machines mentioned under Heading 90.10 require one film that contains all colours on itself.
8. Under the light of information stated above the description, function and the other features of the AVANTRA 25-1 and STAR 400 L2-I RIP are in a complete harmony with the description of Heading 84.42. Additionally, a survey conducted by our Administration has shown that the machine at issue is used only printing sector and no photo company/studio using AVANTRA has been defined.
9. Therefore, the Turkish Administration takes the view that due to its given characteristics the said machine should be classified under Heading 84.42, specifically under Subheading 8442.10 by application of General Interpretative Rules 1 and 6.
10. Furthermore, according to the Explanatory Notes to Heading 84.42, it should be noted that the wording of text of the said Heading doesn't reflect the new technological developments and doesn't meet the requirements of the classification matters. Therefore, new references should be inserted to the EN, taking into account the number of the similar products at the market. We believe that a new wording to the text will prevent the future disputes.



Prepress Products and Systems: **SelectSet Avantra 25E Drum Imagesetter**

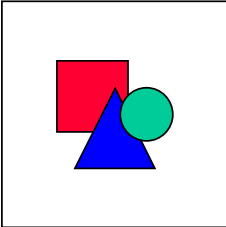


Agfa's SelectSet Avantra 25E puts advanced drum technology within reach of newspaper and prepress operations that need an affordable, quality imagesetter in a convenient 18 x 25" format. The Avantra 25E offers the productivity and reliability that have made Avantra the premier family of drum imagesetters in the industry. And while the Avantra 25E is tailored to meet your needs today, it's also upgradeable to a SelectSet Avantra 25 for even higher quality.



[Enlarged view](#)

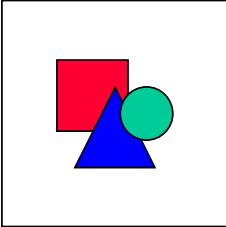
With the SelectSet Avantra 25E, you get an 18 x 25" format imagesetter--ideal for any single page or 2-up job, such as newspapers, brochures, newsletters, and even magazines. OptiSpot technology ensures a perfect spot size at the popular 1200 and 1800 dpi levels, resulting in dot placement and fidelity so accurate, that you can tackle higher-quality PostScript color jobs. The system's built-in productivity features allow you to output more jobs in less time. Optional DualSupply cassettes double your media supply or allow you to keep two media types ready at all times. And with SelectSet Avantra 25E's ease of use, any member of your staff can operate the system with minimal training.



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Features:

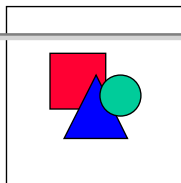
- Exceptional output at resolutions of 1200, 1800, and 2400 dpi, with maximum screen ruling of 200 lpi.
- Repeatability: plus or minus 0.2 mils (5 microns) over eight consecutive 18 x 25" outputs.
- Modular design and optional features let you configure an imagesetter that's right for you today, and flexible enough to grow with your business in the future.
- Outputs film, paper, or polyester plate materials with equal accuracy using Agfa's advanced OptiFocus feature, which automatically adjusts the optics for



- superior imaging, without any operator intervention.
- IntelliTrack, a self-propelled direct drive carriage that provides unequaled pixel placement precision and repeatability.
- FlexMedia option provides a choice of five standard media widths or define your own--from 12" to 18" (30.48 to 45.72 cm).
- User definable punch registration system to simplify the prepress process.
- An optional on-line processing system that provides an integrated bridge built right into the imagesetter's cover.
- DualSupply cassette option lets you mix and match media without having to stop and change cassettes.
- User-friendly touch-screen control panel that aids operation using illustrative icons.

Configurations:

- 18 x 25" (457 x 635 mm) format, including user-definable head and tail punch registration system.



Product Specifications: SelectSet Avantra 25E Drum Imagesetter

Imaging Technology:	Internal drum, 180 degrees
Maximum Image Area:	17.7 x 25" (449 x 635 mm)
Imaging System:	Visible red laser diode (650 micrometer wavelength)
Resolutions and Corresponding Spot Sizes:	1,200 dpi (472 dots/cm) at 20 microns 1,800 dpi (708 dots/cm) at 15 microns 2,400 dpi (945 dots/cm) at 15 microns
Repeatability*:	plus or minus 0.2 mil (5 microns) over 8 consecutive 18 x 25" (457 x 635) outputs
Maximum Imaging Speeds:	1,200 dpi--417 sq. in./ 2688 cm ² per minute 1,800 dpi--278 sq. in./ 1742 cm ² per minute 2,400 dpi--208 sq. in./ 1344 cm ² per minute
Maximum Imaging Speeds at Full Area:	1,200 dpi--1:05 1,800 dpi--1:37 2,400 dpi--2:10

Maximum Line Screen: 200 lpi (78 lines/cm)

Screening Technologies Supported: Agfa Balanced Screening
Adobe Accurate Screens
Standard PostScript RT Screening

Physical Dimensions: Width: 47" (119 cm)
Height: 48" (121 cm)
Depth: 29" (73 cm)
Weight: 750 pounds (340 kg)

Environmental

Temperature: 64 degrees - 84 degrees F
(18 degrees - 29 degrees C)

Relative Humidity: 45% - 55%, non-condensing

Electrical Requirements: 110/230 V, 50/60 Hz, 300 W

Media Sizes: Page Widths:
12" (30.48 cm)
13.3" (33.78 cm)
14" (35.58 cm)
16" (40.64 cm)
18" (45.72 cm)
User definable from 12" (30.48 cm) minimum up to 18" (45.72 mm) maximum with FlexMedia

Media Thickness: OptiFocus feature automatically adjusts depth of focus to accommodate media thickness from 4 to 8 mils (0.10 mm - 0.20mm)

DualSupply Capability: Optional

Media Packages: Daylight-loading rolls 250' (76.2 m) at 4 mils (0.10 mm) thickness

Punch Registration System: Choice between Stoesser or Bacher Control 2000 systems featuring head and tail punches

Avantra 25 OLP on-line processing system

- Width: 47" (119 cm)
- Height: 48" (121 cm)
- Depth: 52" (132 cm)
- Weight: 750 (340 kg)

System Options:

DualSupply cassettes

FlexMedia including:

- OptiFocus
- Customizable media width

Choice between Stoesser or Bacher 2000 system featuring head and tail punches

User-definable punch registration

ISO/IEC

Declaration of Conformity (PDF; 20K)

* Assumes non-condensing environmental conditions of 70 degrees F/21 degrees C and 50% relative humidity

1 inch = 2.54 cm / 25.4 mm

1 mil = one-thousandth of an inch

1 mil = 0.025 mm

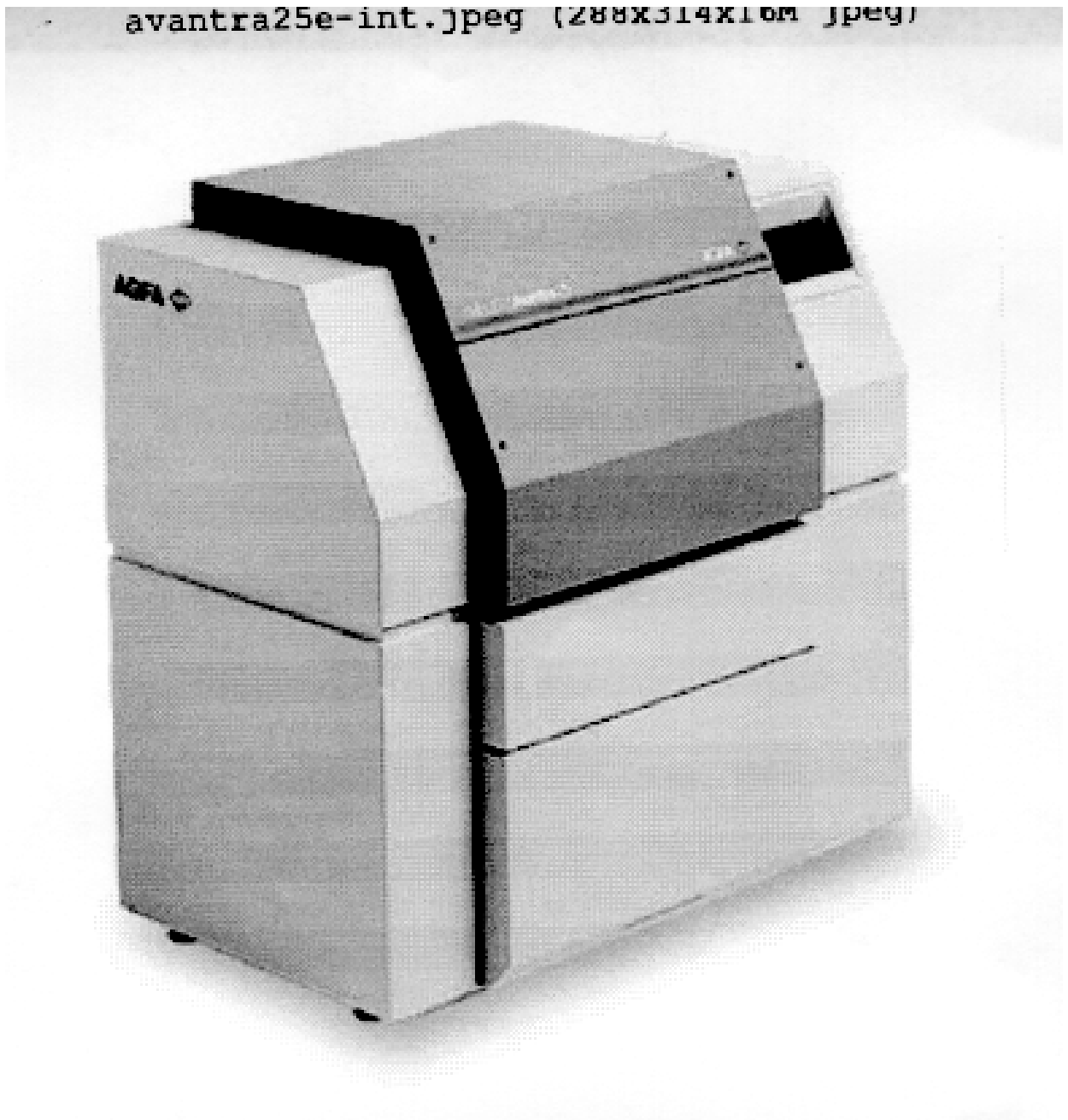
1 micron = 0.001 mm

1 mil = 25 micron

1 lb = 0.454 kg

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A. “Selectset Avantra 30” and “Dolev 4 Press”

These apparatus are imagesetters working with a visible red laser beam for the exposure of a latent image on four photosensitive films (cyan, magenta, yellow and black) or other photosensitive media. In these apparatus, the laser beam moves horizontally, dot by dot, line by line, over the entire surface of the film (drum-based imagesetter). The laser is switched on or off according to the “raster” data provided by an external automatic data processing machine. The image thus obtained may contain texts, pictures, drawings, etc., and is used in the preparation of plates for the offset printing industry. The maximum image format is 754 x 635 mm and the resolution ranges from 1,200 to 3,600 dpi.

The data for these imagesetters is processed in an external automatic data processing (ADP) machine and transmitted to these imagesetters. The desktop publishing (DTP) and raster image processing (RIP) software is presented with the imagesetters; as an alternative, an adapted ADP machine or hardware to adapt an ADP machine may be presented together with the imagesetter.

B. “Iris 3047”

This apparatus is a digital ink-jet printer which reproduces continuous-tone colour images (formats up to A0 - 864 x 1,189 mm), using variable-sized dots, on a wide range of media : newsprint, mat or glossy stocks, transparent materials, etc. It is used principally as a colour proofer and for industrial applications such as reflective or back-lit signage, exhibit displays, packaging, etc. The printing is effected on the basis of data provided by an external automatic data processing machine, to which it can be connected by a parallel interface.

C. “Accuset 1500 Plus”

This apparatus is an imagesetter working with a visible red laser beam for the exposure of a latent image on photosensitive film or other media. In this apparatus, the laser beam is deflected by a rotating mirror and generates an image pixel by pixel, line by line onto film or other photosensitive media. To secure accurate pixel placement, the mirror is placed in an isolated vacuum. The image thus obtained may contain texts, pictures, drawings, etc., and is used in the preparation of plates for the offset printing industry. The maximum page width is 355.6 mm and the resolution ranges from 1,200 to 3,600 dpi. The length of the page can be defined by the user.

The apparatus receives the necessary data from an external automatic data processing (ADP) machine incorporating desktop publishing (DTP) and raster image processing (RIP) software, which converts the digital data into a form which is readable and usable by the imagesetter. The desktop publishing (DTP) and raster image processing (RIP) software is presented together with the imagesetter but not the external automatic data processing machine.