ROTARY DIE CUTTER

Designed for the manufacture of printed
and die cut sheets of corrugated cardboard

RD 115S Flexo-Rotary Die Cutter • up to 12,000 sheets/h

RD 115S
12,000 sheets/h

Technical data

KOLBUS

KOLBUS Rotary Die Cutter RD 115S

designed for the manufacture of printed and die cut sheets of corrugated cardboard

Equipment variations

Standard equipment

- Modular machine design allows individual modules to be retrofitted
- Copilot system with a touch screen on the feeder and a touch screen with control panel in the area of the die cutter
  - Choice of production mode
  - Format memory
  - Operator guided production change
  - Automated total adjustment
  - Precision adjustments during production
  - Product counter and count-down indicator
  - Indication of machine and material flow malfunctions
  - Operator guided malfunction rectification
- The machine units are opened and closed via an electric drive in the feeder
- Individually adjustable intensity of all vacuum drives
- Vacuum supply for sheet separation with a closed filter housing
- Continuous vacuum transport of the corrugated cardboard sheets with hard anodised aluminium transfer wheels for optimal print quality
- Electronic vacuum monitoring
- Automatic vacuum zone control depending on sheet size
- Sheet transport monitoring by means of light buttons
- Air-conditioned control cabinets for power modules
- Servo-controlled drive technology based on Siemens SIMOTION D
  All quality-relevant elements with a separate servo drive
- Active Line Module for feeding back drive energy into the production line network
- Central media supply connection point in the main cabinet area
  - Media supply (air, water, control lines) to the individual modules is via energy chains for a long lifetime
- Emergency Stop available as push button and pull rope switch
- Remote Service Gateway, type RSG 702.A, for optimum production support via KOLBUS Remote Service
- Safety standard in accordance with EC directives and standards

Feeder Type RDF 115S

Loading and separating of corrugated cardboard sheets according to the leading edge-principle for continued processing

- Pneumatic side pushers in magazine area for optimum alignment of the corrugated board sheets
- Four shafts with feed wheels for a reliable separation process
- Feed wheels with quick-change system
- Frequency-controlled vacuum in feed wheel area to process different sheet thicknesses
- Independent servo drives for feed wheels, pull rollers and lift grid
- Vacuum sheet cleaning from below
- Motorised adjustment of the feed gate, lateral magazine guides, pull rollers

Alternative equipment

Infeed

- Platform for feeder for ergonomic manual feeding of the sheets
- Coupling with prefeeder
- Coupling with prefeeder and platform for feeder for ergonomic manual feeding of the sheets
- Adjustment
- Manual adjustment of the rear sheet feeder

Extension feeder type RDEA 115S

Module for extension, directly coupled to feeder for a reliable infeed of the corrugated cardboard sheet into the print unit via an independent vacuum transport. The drive and height of the vacuum transport are adjusted from the coupled feeder.

Print unit type RDP 115S

Module used to print on individual corrugated cardboard sheets from below using water-based inks.

- Flexo printing unit
- Hard chromium plated print cylinders and impression rollers
- Independent servo drives for impression rollers with vacuum transport, print cylinders and anilox rollers
- The register of the diemount cylinder is adjusted via a servo drive
- "Stretching and shrinking" function of the print image
- Use of various print plate thicknesses possible
  - The print plate thickness used per print unit must be uniform.
  - The diameter of the print cylinder must be coordinated with the project planning department depending on customer specified print plates (target diameter with two print plate thicknesses = 533.4 mm)
  - Motorised height adjustment of the impression roller with vacuum transport and anilox roller
  - Lateral adjustment of the print cylinder motorised, using precise ball screw to increase setting accuracy
- First bottom print unit, type RDPA 115S
- Additional bottom print unit, type RDPB 115S
- Top print unit, type RDPC 115S

Alternative equipment

Print cylinder

- Print cylinder in KOLBUS design with a standard plate retainer strip to mount the print plate
- Additional groove (Lockup Groove)
  for easier mounting of the print plate via, for example, elastic strips on the print cylinder in KOLBUS design
- Print cylinder with pneumatic locking system of the print plate and motorised inclination
- Chamber doctor blade
  - With automated washing program and cleaning agent supply
  - Volume flows for ink supply and return and contact pressure doctor blade adjustable from outside during production

- Chamber doctor blade in KOLBUS design of plastic construction
  - Pump speed for ink supply and ink return can be set separately during operation on the print unit
  - Chambered doctor blade with integrated washing / air nozzles to clean the anilox roller
  - Tool-free change of the doctor blades
  - Ink supply and ink return via **diaphragm pumps** *or* Ink supply via **peristaltic pump**, ink return via **diaphragm pump**
- Chamber doctor blade in carbon design
  - Manufacturer **Absolute**
    Increased durability against the currently used print media.
    Optimised ink supply system for reduced inkloss during ink changeover
  - Ink supply via **peristaltic pump**, ink return via **diaphragm pump** (licensed by Absolute)
  - Optimised system for changing doctor blades without tools
  - Chamber doctor blade with integrated washing nozzles
- Anilox roller with ceramic coating
  Anilox roller specification and cell volume must be coordinated customer-specific with the project planning department. Anilox roller automatically swivels away from the print plate during idle cycles.
- Anilox roll changing trolley and fixture for bottom print unit or for top print unit
- Additional anilox roll changing trolley for bottom print unit *or* for top print unit
- Additional fixture for bottom print unit *or* for top print unit

Extension print unit between print units RDEB 115S

Module to extend the product transport and dwell zone between the print units.The vacuum transport, drive and height adjustment of the vacuum transport is adjusted from the coupled print unit.

Extension bottom print unit type RDEC 115S

Module to extend the dwell zone downstream of the last bottom print unit. The vacuum transport, drive and height adjustment of the vacuum transport is adjusted from the coupled print unit.

Optional equipment

- Register camera downstream of the last bottom print unit
  Optical system to detect and evaluate registermarks on the sheet when starting a new job. Register mark layout see extra sheet.

Extension top print unit, type RDED 115S

Module to extend the dwell zone downstream of the last top print unit in front of the die cutter. The vacuum transport, drive and height adjustment of the vacuum transport is adjusted from the coupled print unit.

Optional equipment

- Register camera downstream of the last top print unit
  Optical system to detect and evaluate registermarks on the sheet when starting a new job. Register mark layout see extra sheet.

Die cut unit type RDCA 115S

Module is used for die-cutting of separated and printed corrugated cardboard sheets.

- Hard chromium-plated diemount cylinders and anvil cylinders
- Independent servo drives for diemount cylinders and anvil cylinders
- The register of the die cutting cylinder is adjusted via a servo drive
- "Stretching and shrinking" function of the die cutting length
- Motorised lateral adjustment of the diemount cylinder via ball screws to increase the setting accuracy
- Motorised height adjustment of the anvil cylinder
- Laterally oscillating movement of the anvil cylinder for reduced wear of the anvil cover surface
- Motor driven brush to remove die cutting waste
- Grinding device
  for levelling the anvil cover surface using a grinding roll with micro grinding tape (self-adhesive and exchangeable)

Diemount cylinder

Alternative equipment

- Metric or imperial diemount cylinder
- Metric or imperial diemount cylinder with quick change system (**Serrapid®**)
  Optional equipment
- Conveyor belt for the removal of die cutting waste perpendicular to running direction
- Tracks for rotary die cutter RD 115S
- Tracks at floor level
- Flush tracks
  The track length must be coordinated with the project planning department. Preparations are to be carried out by the customer.

Technical data

FORMAT DATA

- Sheet feed length min. 450 mm | max. 1,540 mm
- Sheet feed length with Skip Feed min. 450 mm | max. 3,080 mm
- Sheet feed width min. 600 mm | max. 2,921 mm
- Board thickness min. 1 mm |max. 14,2 mm
- Print length max. 1,500 mm
- Print width max. 2,769 mm
- Die cut length max. 1,500 mm
- Die cut width max. 2,790 mm
- Print plate thickness min. 3.5 mm | max. 7.5 mm

MECHANICAL SPEED

- Up to 12,000 sheets/h at an infeed length of up to 1,400 mm
- Up to 10,000 sheets/h at an infeed length of 1,400 mm and above.

  The actual machine speed depends on the printing and die cutting length, the thickness of the print plate and if the function adjustable printing or die cutting length is used.

To be provided by the customer:

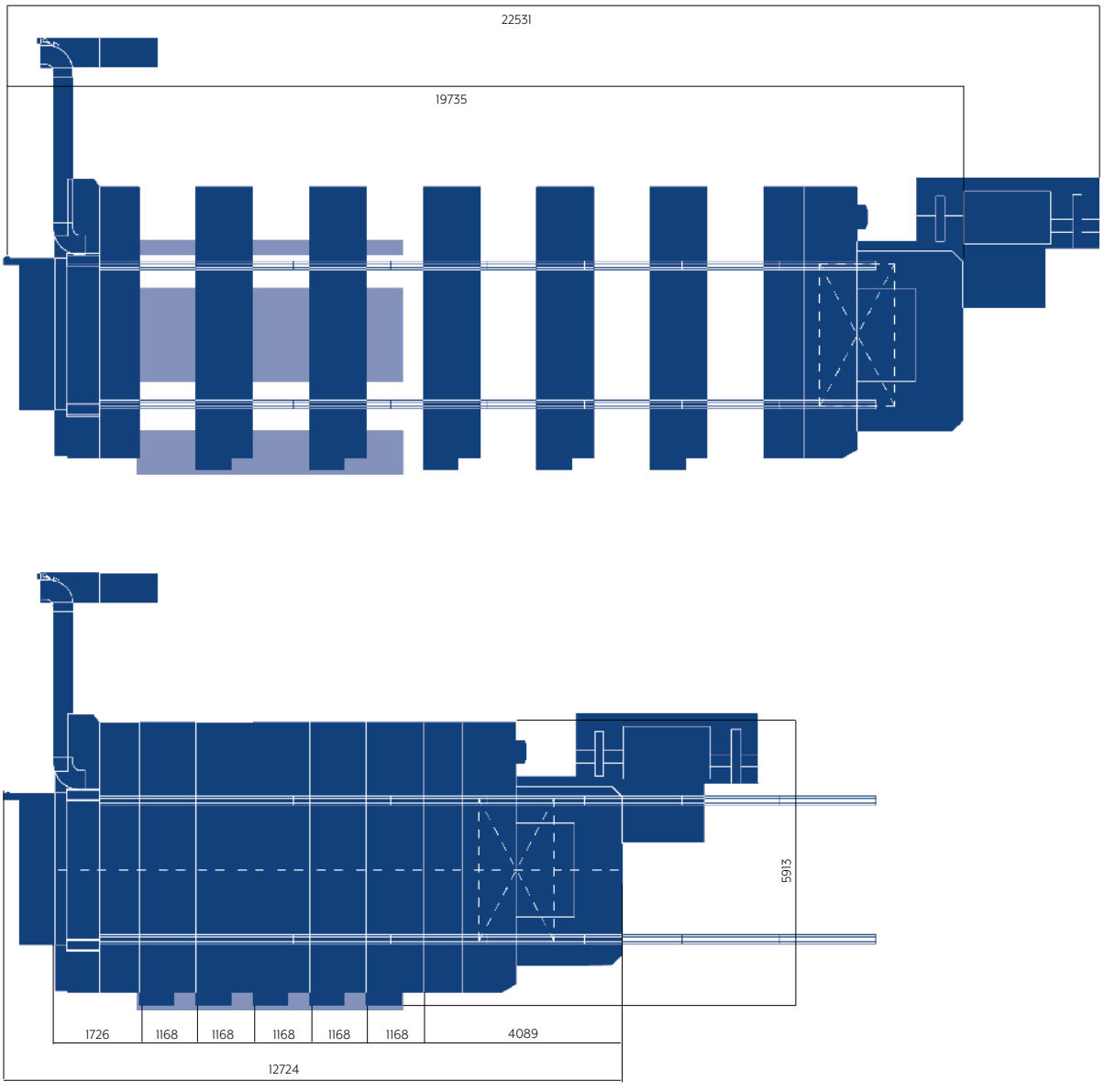
- Compressed air consumption depending on machine configuration
- Operating pressure 6 bar
- Compressed air supply, see extra sheet

Electrical equipment:

- 3 phase, 400 volt / N / PE, 50 cycles

  Country specific equipment available

Footprint RD 115S with 5 print units



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