

Rotation Cross Cutter

RQS 50

Technical data sheet



Ph-QUESTEC

Ph-QUESTEC – A cut above the rest

For more than 30 years now Ph-QUESTEC management offers its expertise and experience in designing and manufacturing as well as servicing and distributing Rotation Cross Cutter technology. Ph-QUESTEC is operating world-wide, setting up innovative new standards in refinement and production of cross cutting technology.

RQS 50 – Mode of Operation

The paper is inserted through a guide roller with two draw-in rollers while the tension of the paper web and its registration tolerance is technically controlled. The second roller's fast reading provides the web tension required on the register roller. To avoid any slip between pull roll and paper web they are tooled with segmented draw rolls which can be adjusted on the side. Contact pressure might be adjusted individually and the draw rolls will be deviated towards the web threading.

Afterwards the paper web is cut by a rotating top knife. To keep cutting force, attrition and the noises low, the top knife has a special spiral form. The lower knife drum distinguishes by elaborate and solid construction and might be adjusted during the production.

For precise cutting, the uncut paper web is transported by Air Stream System I technology and tensioned by a chrome transport roller. Simultaneously the cut sheet's top is first guided to a suction roller, then to a brake roller. Suction and brake roller both are equipped with a special arrangement of suction holes and a fixed suction section with negative pressure ensuring the best gentle transport.

The brake roller creates an overlapping stream which the Air Stream system transports on to the roller table which again cuts the streams into halves.

To increase adhesion with the sheet on the rotating transportation rollers, a vacuum is generated underneath the roller table. The end of the paper web is transported to the delivery device by belts. In between those transportation belts are located special nozzles to blow air towards the ends of the paper sheet coming out in shingles, and consequently facilitate gliding.

Former detailed manual handling with auxiliary sheets during change of piles is not needed any longer. The semi-automatic HNS Nonstop System allows easy pile changes at any time without any problems.

A well-engineered technology easily offers the possibility to extract sample paper sheets at any time during the cutting process.

In energy-optimised manner, blowers and motors of identical size either provide air to the suction rollers and the air conveyor table or create the corresponding vacuum. A manual preset function easy to operate allows the suction and blowing pressure to be adjusted to used paper grades and grammages.

With edges in precise alignment the paper sheets are collected in the sheet delivery. The stacking unit is characterized by an innovative flexible chain suspension.

RQS rotary cross cutters use SPS controllers produced by Siemens. For the most important functions the user will find the unit equipped with pushbuttons.



Your advantages at a glance

01. Impressive production speed above average

8.75 m/s, max. 50,000 sheets/h with wastage of 630 mm

02. Extremely accurate cutting

± 0.25 mm

03. Easy automated handling

Crucial parameters can be centrally adjusted during production process

04. Easy and flexible processing of every paper grade

The dynamic blower (WebSnap) prevents paper blockages, even reliable with very thin paper

05. Well-engineered proven technology

5 years of test runs of all systems applied to rebuilt cross cutters

06. Competent service worldwide plus a 24 hour emergency service

Experienced technicians on service, 95% of all spare parts available in stock

07. Complete manufacturing according to modular principles

Allows the RQS to be expanded at any time

08. Extraction of sample sheet

Sample sheets can be easily extracted at full speed

09. Air Stream-System I

All air bars can be adjusted during production process

10. Precision register control

Type of extreme low-backlash with ball screw (minimisation of paper waste)

11. Precision spur gear unit and aluminium box

Hardened spur gears in oil bath (reduces attrition in rates of 40 – 50 %)

12. Semi-automatic changing system

Optimised position with regard to sheet streaming

13. Drive

Mechanical drive by longitudinal shaft of the printer

14. Options

Separate co-flow drive, double-cut design, extra warranty, personnel training, pallet delivery, optimized guiding plate system

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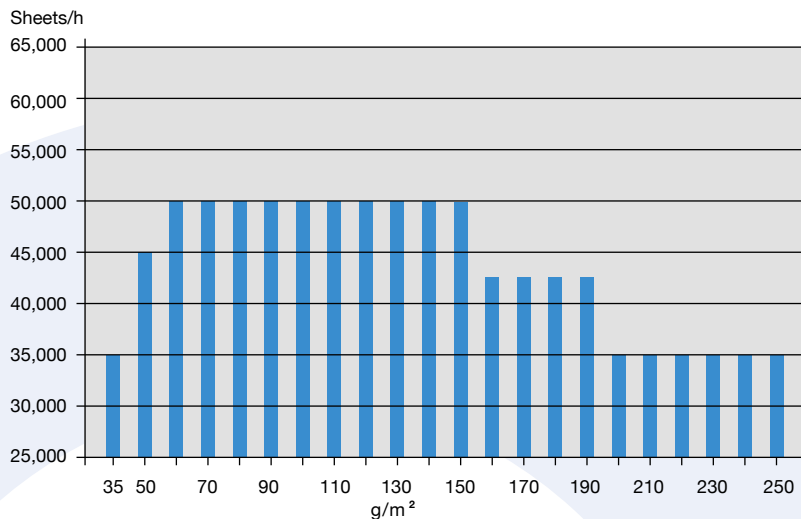


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RQS 50 – Paper specifications and performance data

The production capacity, as displayed in the illustration, is based on paper formats with a width of 600 – 1,000 mm. If the web width of the paper varies between 400 and 600 mm, speed reduction of approximately 20% is to be expected since the suction rollers lose vacuum pressure. To guarantee best performance levels paper without adhesive varnish coat or perforations must be chosen. Users will achieve high-speed performance with single coated paper evenly coloured in regular moisture condition. A homogeneous silicon coating applied by a silicone coating head is to be required. The coating head should not be any further away from the rotary cross cutter than either a distance of 14 meters of web path, or seven guide rollers at a max.

RQS 50 – Speed

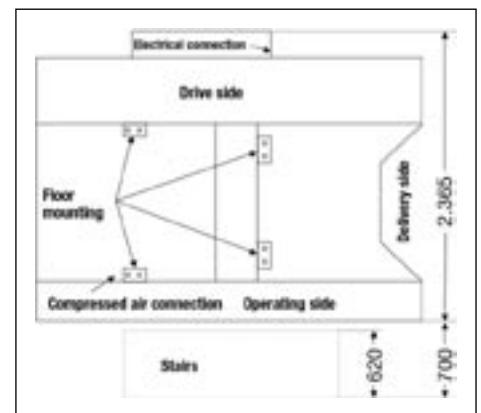


Technical data overview

RQS - With its modern design, ergonomic operating comfort and essential practical advantages for the user!

RQS 50	
Sheets/h	50,000
Paper weight	35 – 250 g/m ²
Cutting tolerance	± 0,25 mm
Voltage	3 x 380 V
Frequency	50 Hz
Machine weight	5,000 kg

Constructional dimensions and connecting dimensions



Control elements for the RQS 50

Design, production and service:

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