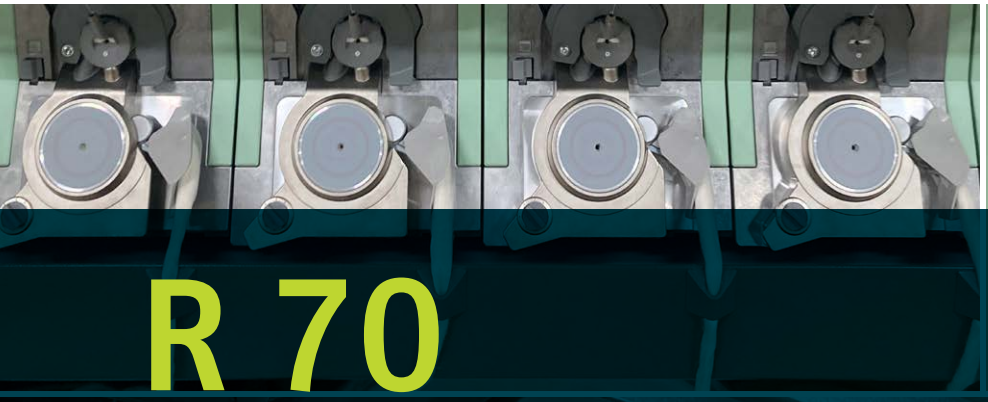
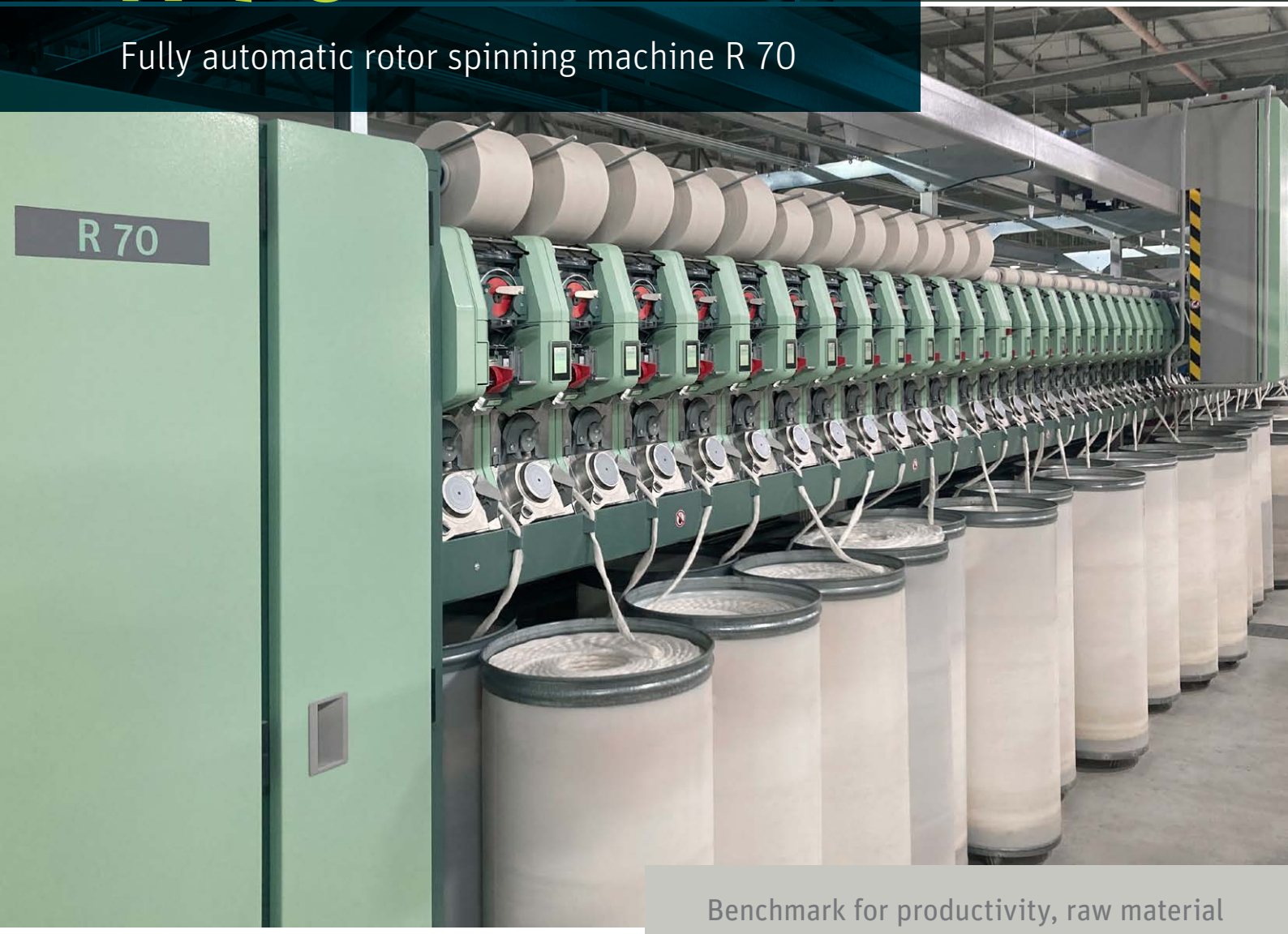
RIETER



R 70

Fully automatic rotor spinning machine R 70



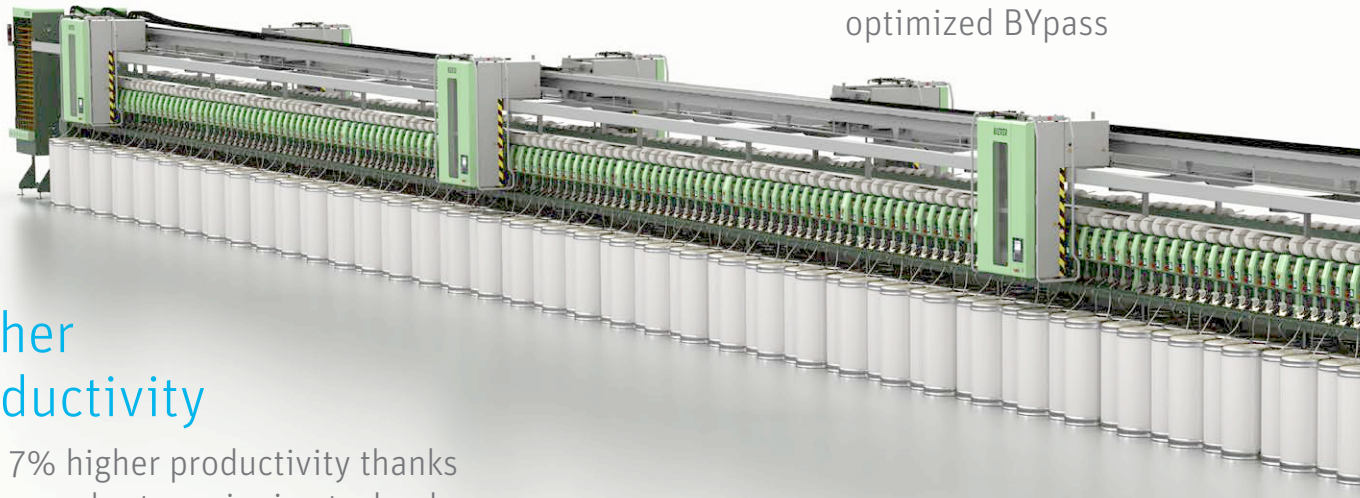
Benchmark for productivity, raw material utilization and energy consumption

R 70 OUTSTANDING ADVANTAGES

Premium Yarn Quality and Raw Material Utilization

Unique components, SPEEDpass, CHANNELpass and rotors for high-quality yarns

Controlled waste extraction thanks to optimized BYpass



Higher Productivity

Up to 7% higher productivity thanks to improved rotor spinning technology

Reduced Energy Consumption

Electrical and compressed air energy reduced thanks to the latest drive technology “smart control”

Energy Consumption Always in View

Integrated energy monitoring

Interface to the Rieter mill management system ESSENTIAL

More Flexibility

Savings by flexibly producing multiple lots on one machine

Package Quality

Flexible setting for package density

Prepared for packages with 350 mm diameter and 6 kg weight

Excellent damping, ready for high delivery speed

High Efficiency

Higher productivity thanks to simultaneous yarn piecings on multiple spinning boxes

Quick start-up of the machine after a stop

Fast lot change

Yarn-like Piecings for Downstream Processing

Highly efficient rotor cleaning at every piecing and unique yarn end preparation

Easy Operation and Maintenance

Easy access to components, Smart colored touchscreen displays at each spinning position

Up To 7% Higher Production

Innovations based on leading technology

Enhanced yarn quality drives increased production

The fully automated rotor spinning machine R 70 combines a state-of-the-art spinning box with individually driven spinning positions. This design helps to:

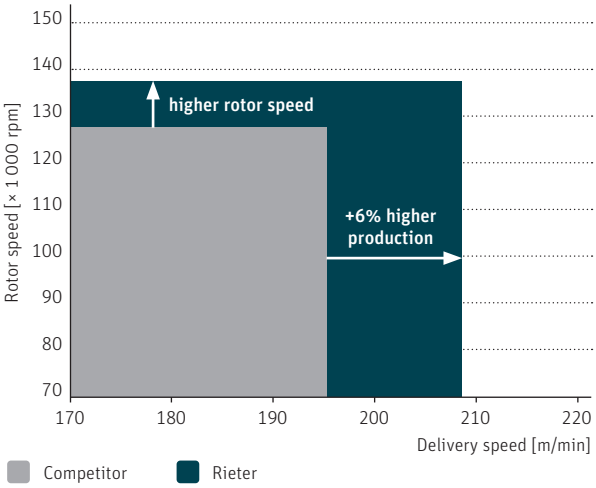
- Increase productivity
- Improve raw material utilization
- Lower energy consumption

The advanced spinning box consistently delivers high yarn strength and fewer imperfections (IPIs), outperforming typical competitor yarns. Cotton mills have turned this strength advantage into measurable gains: by reducing the twist or adding economic fibers to a blend, they increase production without compromising yarn quality.

In various applications, the machine demonstrates the capability to increase delivery speeds, with production gains of up to 7%. Stable spinning conditions and a low ends-down rate contribute to consistently high machine efficiency.

Superior technology allows higher production speed

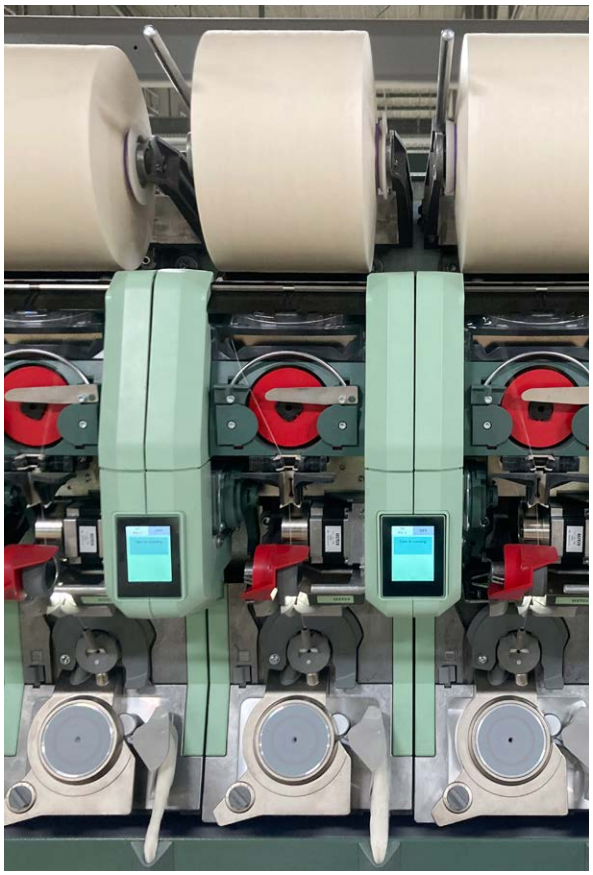
Ne 14, CO waste mix, weaving



Decisive benefits for downstream processing, piecing and package quality

The R 70 piecing technology, combined with pneumatic rotor cleaning during each piecing cycle, ensures a consistently high piecing success rate and reliable piecing quality.

The R 70, featuring optimized winding geometry, enables precise package formation and stable structure – even at high delivery speeds. This contributes to smooth and trouble-free downstream processing.



Advanced piecing technology

Producing Yarns with Efficiency and Flexibility

Smart automation and digitization

Boosting efficiency with individually automated units

Spinning unit automation enables multiple piecing at up to 36 spinning positions as part of the standard configuration. This parallel operation reduces the number of ends down in a short time, allowing the R 70 to reach full production rapidly.

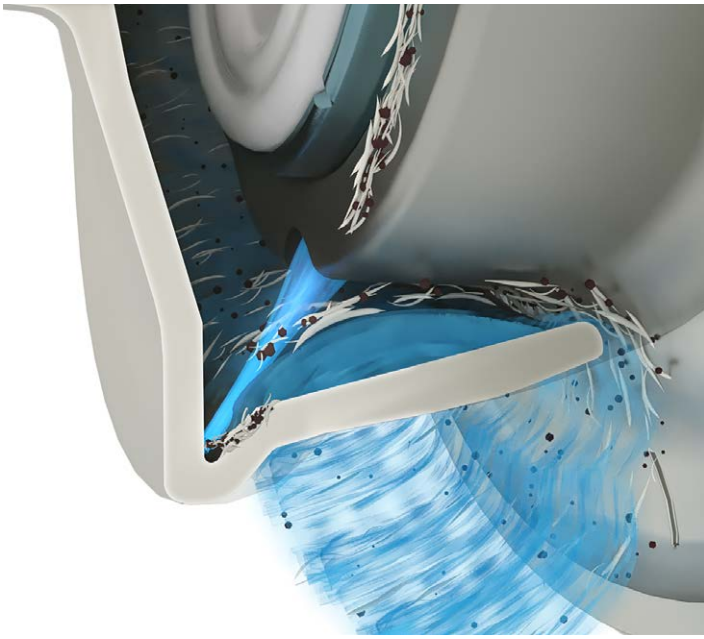
A high piecing success rate is supported by pneumatic cleaning of the rotor groove during each piecing cycle. In addition, resistant rotor deposits are removed through a mechanical robot cleaning system that operates automatically at each doffing.

Mechanical rotor cleaning with the robot

Higher flexibility with multiple lots and seamless continuous lot change

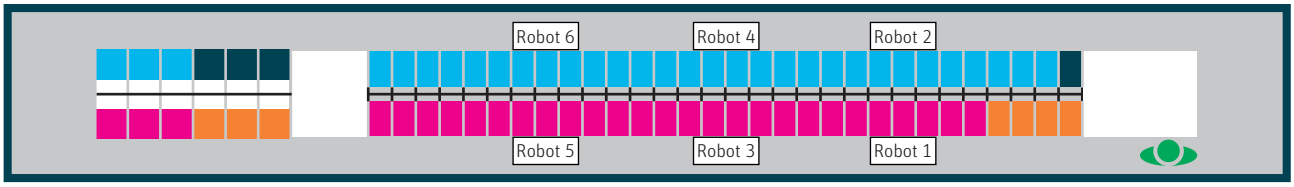
Each R 70 is equipped with the VARIOlot function, enabling the simultaneous spinning of multiple lots on a single machine. The standard configuration allows for up to four lots per machine, with a selected number of units available for testing.

The VARIOlot function, combined with the intelligent Continuous Lot Change feature, minimizes production downtime. Once a package reaches its target length, it is automatically replaced with an empty tube for a new lot. This process increases machine utilization and, depending on the frequency of lot changes, can increase annual production by over 2%.



Pneumatic rotor cleaning

VARIOlot 2 x 2: up to 2 lots per machine side



Raw Material Savings

Enhanced quality and optimized fiber yield with innovative technology

Proven spinning box technology with innovative features

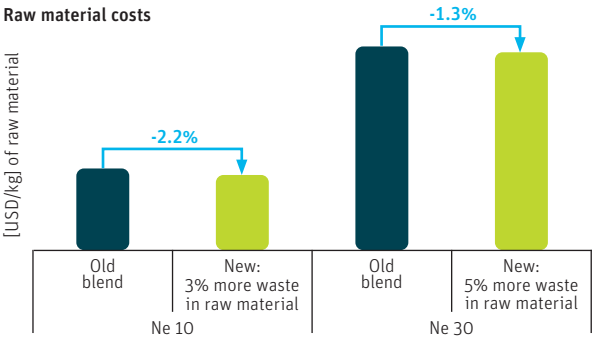
Superior yarn quality

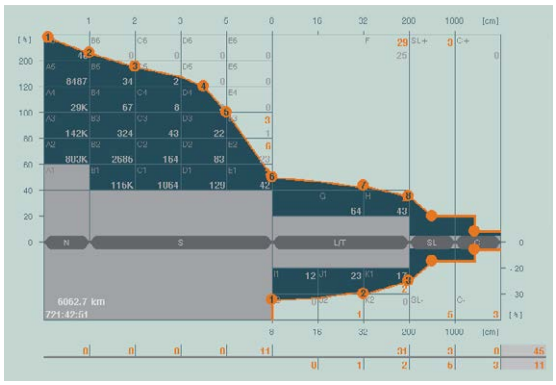
The spinning box of the R 70 features a range of unique, proven technologies, including:

- Optimized CHANNELinserts, standard and with SPEEDpass, for controlled fiber flow leading to higher yarn strength and spinning stability
- CHANNELpass variants for different fiber types
- Innovative design of rotor cups for better yarn quality
- Wide variety of nozzle types for different yarn characteristics
- The self-alignment of the spinning unit ensures a precise position of the nozzle and rotor

Improved waste extraction

The redesigned, patented, adjustable BYpass function for waste extraction allows precise control over waste structure and quantity, ensuring that spinnable fibers remain in the production process. This results in fewer endsdown and improved material utilization.





Stepless clearing curve and wide measurement area of the yarn clearer Q 30

Leading yarn clearing technology

The new generation optical yarn clearer Q 30 is integrated as a standard in the R 70. It is characterized by an advanced optical image sensor for enhanced measurement accuracy and data evaluation.

The clearing settings are further refined with a stepless clearing curve, allowing precise adjustments and minimizing unnecessary cuts. As an option, the yarn clearer can reliably remove foreign fibers of different colors.

The measurement area is wider to prevent dust accummulation, which makes maintenance easier and more efficient.

Highly Economical Use of Energy

Latest technology and efficient solutions

Low electrical power consumption

The R 70 is equipped with intelligent control systems that optimize electrical energy usage. The ECOrized functions reduce consumption during yarn end searching and when units are not spinning or deactivated for maintenance.

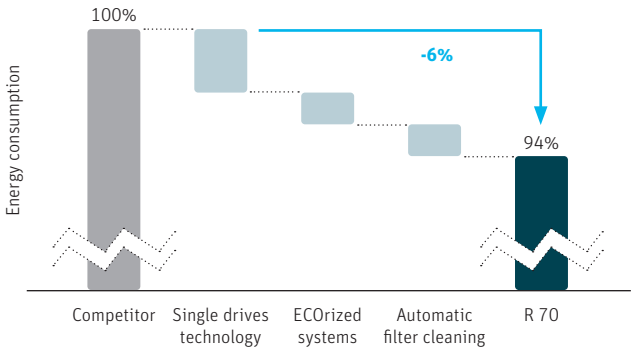
Additionally, the unique automatic filter cleaning system and optimized air routing further lower energy requirements and reduce operator time spent on maintenance tasks.

The modern single drives of the R 70, utilizing the latest technology, offer high efficiency and contribute to the machine's overall energy-efficient design.

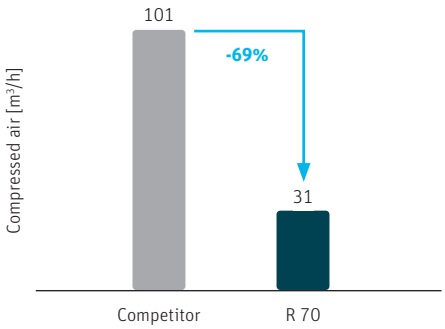
Substantially lower compressed air requirements

A significant portion of production costs comes from generating compressed air. The drive concept of the R 70 reduces both the installed capacity and the amount of compressed air required to operate the machine. This results in savings on production costs and substantially reduces the need for large compressor investments.

Economical electrical concept



Compressed air savings
720 units, 8 robots, 500 breaks/1 000 RH, 36 piecings

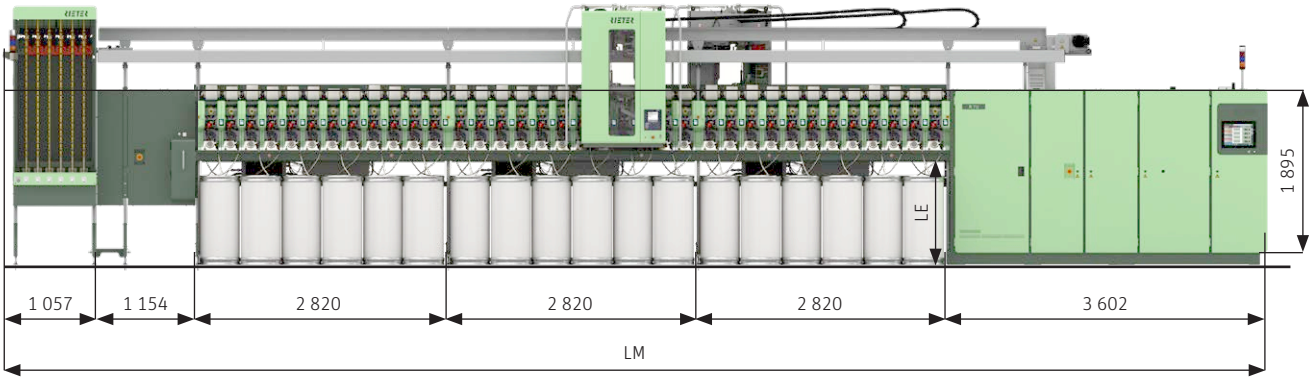


Integrated Energy Monitoring

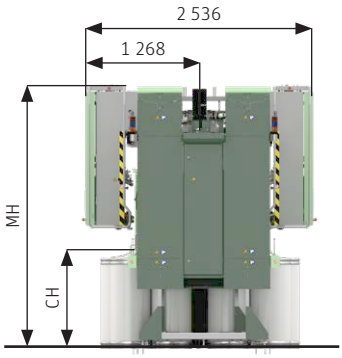
The energy monitoring system is standard in each R 70 machine. It continuously tracks energy consumption, including usage per kilogram of yarn produced, enabling ongoing optimization of production efficiency.

Machine Data

R 70 rotor spinning machine



Length dimensions and weights					
Machine specification	**Spinning units**	**Sections**	**LM Machine length [mm]**	**Net weight [kg]**	**Comments**
Base machine, 2 sections, 2 robots	48	2	LM = 11 453	7 520	–
Additional section	24	1	LS = 2 820	1 135	Max. machine length 32 sections
Additional 2 robots	–	–	–	600	–



Height dimensions			
CH Can height [mm]	**LE Section lower edge [mm]**	**MH Machine height [mm]**	**RS Service height for erection [mm]**
1 070	1 175	2 950	3 500
1 200	1 305	3 080	3 600

Technological data	
Material	Natural and man-made fibers up to 60 mm length
Sliver weight	Nm 0.14 – 0.27; Ne 0.08 – 0.16; 7.4 – 3.7 ktex
Draft	25 to 400-fold
Yarn count	Nm 5 – 100; Ne 3 – 60; 200 – 10 tex
Yarn twist	196 – 1 500 T/m; 5 – 38 TPI

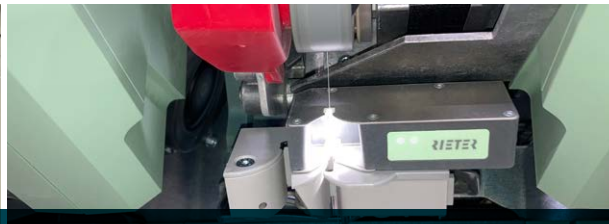
Machine data	
Design	Double-sided rotor spinning machine with sectional construction, with two package transport belts and package removal on one machine end Spinning positions with individual drives and individual automation for piecing and pneumatic rotor cleaning Machine with robots for doffing and additional mechanical rotor cleaning*
Spin box R 70	Single motor driven rotors, magnetic bearings, technically prepared for up to 180 000 rpm Single motor driven opening rollers, with infinitely variable electronic settings, 6 000 – 11 000 rpm Single motor driven and digitally controlled sliver feeding
Unique technology	Flexible optimization with unique solutions: • Advanced technology including unique adjustable BYpass function controlling the amount of waste extraction • CHANNELpass: variants for different fiber types • CHANNELinsert with SPEEDpass: for additional airflow in the fiber channel • High speed XGQ rotor types for increased yarn quality
AEROpiecing	AEROpiecing technology for most exactly repeated piecing process Targeted cleaning of the rotor groove with compressed air at each piecing cycle Innovative yarn end preparation 36 multiple piecings as a standard
Delivery speed	300 m/min with cylindrical packages for any machine length
Winding system	Digitally controlled winding process and package build using single motor drives for package and yarn guide Ready to produce high and low package density Package arms designed for uniform contact pressure, including effective damping system also for manmade fibers Electronic length measuring for packages with defined yarn length
Suction system	Efficient and energy saving suction system with adjustable automatic filter cleaning in machine end stock Separate collection of: • waste from spin box and trash belt • hard waste from automation Possibility to connect to central waste collection* Electronic setting and control of spinning vacuum Exhaust air optionally directed upwards or downwards
Operator guidance	Main machine panel with color touch screen for graphically oriented operator guidance 4-colored signal lamps on head stock and end stock with programmable alarm indication Signal lamp on each section, different signal for malfunction and missing sliver Smart colored touchscreen displays at each spinning positions for indications and information

* Option

Machine data	
Gauge	230 mm
Number of spinning units	24 per section; maximum 32 sections or 768 spinning units
Robots*	2, 4, 6, 8 robots per machine for doffing With additional combined mechanical & pneumatical rotor cleaning unit*
Round cans	Diameter up to 450 mm or 18″ in two rows under the machine Diameter up to 500 mm or 20″ in three rows
Rectangular cans	220 × 920 mm
Can height	1 070 mm (42″) and 1 200 mm (48″)
Tube loader	Included in the head stock for all tube shapes; individual tube loader for each machine sides; split into 6 chains with individual activation; storage capacity 540 tubes = 2 × 6 × 45 tubes
Package size	Cylindrical packages up to 350 mm diameter or 6 kg weight
Package removal system	Package transport with conveyor belts to the end stock Package lift* for manual removal to an ergonomic working height Interface for automatic transport and palletizing systems*
Waste removal system	Interface to automatic waste removal from waste chambers*
Waxing device*	With individual drive and big wax roll diameter 75 mm diameter on each spinning unit
Trash belt suction	Effective trash removal for long machines
ECOrized suction*	Allows suction to be switched off when the spin box is not spinning or deactivated. It saves energy.
eXpert System	Easy and fast setting of the automation and piecing parameters with the eXpert system including default setting values
iDS – intelligent Drive System	Higher machine efficiency with the robot intelligent Drive System
Yarn quality monitoring*	Rieter Q yarn clearers (opto-digital yarn clearer) Optical foreign fiber detection*
Energy monitoring	Machine equipped with measuring device for electrical energy consumption Indication of consumption per kg of yarn on the machine screen
VARIOlot	Spinning with different settings on one machine VARIOlot 2 × 2 each machine side can be assigned to two production groups
TESTunits	Selected units can be dedicated for technology testing
VARIOspin*	Equipment for fancy yarn production Operation of single production groups can be freely selected in combination with VARIOlot
ESSENTIAL	Equipped with ESSENTIALmonitor, the all-in-one mill management system

* Option

Rieter . Rotor spinning machine R 70

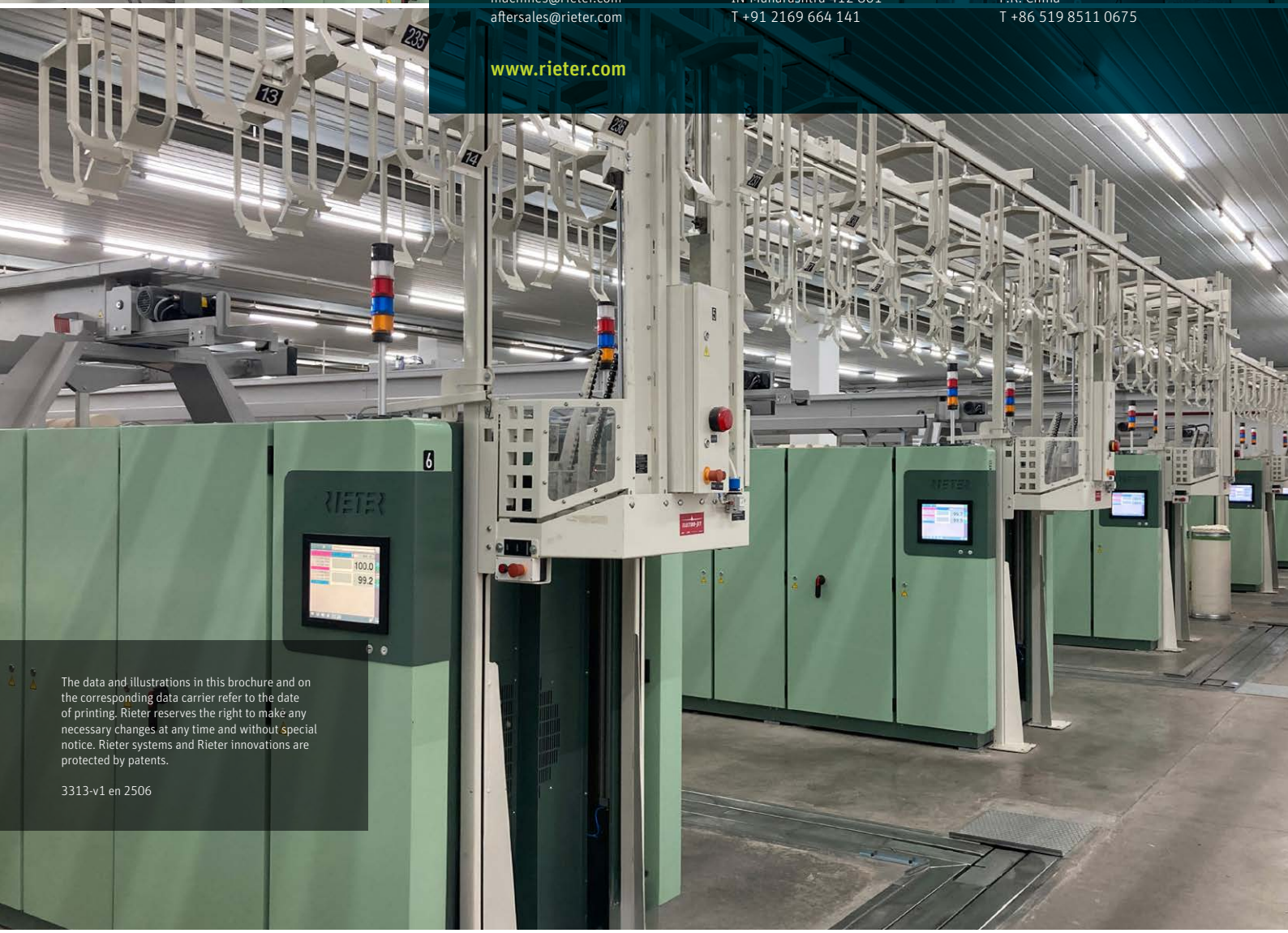


Rieter Ltd.
Klosterstrasse 20
CH-8406 Winterthur
T +41 52 208 7171
machines@rieter.com
aftersales@rieter.com

Rieter India Private Ltd.
Gat No. 768/2, Village Wing
Shindewadi-Bhor Road
Taluka Khandala, District Satara
IN-Maharashtra 412 801
T +91 2169 664 141

Rieter (China) Textile Instruments Co., Ltd.
390 West Hehai Road
Changzhou 213022, Jiangsu
P.R. China
T +86 519 8511 0675

www.rieter.com



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