High-quality yarns produced with a high level of performance
The G 38 is very flexible. The machine is supplied with a device for producing slub yarns (VARIOspin 4) as standard. Systems for producing core yarns and twin yarns are also available on request.
Full Flexibility for the Production of Standard and Special Yarns
High Machine Efficiency
The integrated individual spindle monitoring system (ISM premium) checks the running behavior of each individual spinning position. The system optimizes the operator guidance and increases machine efficiency.
The G 38 uses minimal energy thanks to energy-efficient components and suction on both sides of the machine.
Save Energy
Maximum Yarn Quality with High Productivity
High-quality technology components with a long service life

Economical Doffing Ensures Maximum Efficiency
SERVOgrip and self-monitoring grippers

Superb Running Performance, Even for Man-Made Fibers
Specialist components for manufacturing man-made fibers and blends

Save Energy
Optimized machine elements and double-sided suction

Full Flexibility for Special Yarns
Device VARIOspin 4 for producing slub yarns integrated as standard

High Machine Efficiency
Integrated individual spindle monitoring (ISM premium) with LEDs at each spinning position

* Option
OUTSTANDING ADVANTAGES

Simple Machine Conversion for the Production of Special Yarns

Devices for spinning core yarns and slub yarns, as well as twin yarns*

Maximum Production Time

Electronic drafting system FLEXIdraft

Minimal Workload

Tube loader ROBOload and system WILDload transfer tubes directly from the trolley*
Full Flexibility for the Production of Standard and Special Yarns

Produce slub yarns at any time

The ring spinning machine G 38 is an all-rounder that allows the business to respond quickly to changing market requirements. The Rieter slub yarn system VARIOspin 4 is integrated into the machine as standard. The latest generation servo motors are ideal for the high dynamics involved in slub yarn production.

With up to 1 824 spindles, the G 38 can produce a variety of slub yarns. This is also true for core yarns and twin yarns.

VARIOspin 4 for slub yarns

High-quality slub yarns can be produced with the device for spinning slub yarns VARIOspin 4. A range of slub designs can easily be programmed on the operating unit or an external computer with the appropriate software and reliably reproduced. This allows slub yarns to be produced efficiently and profitably with outstanding Rieter quality.
Precise production of core yarns*

The core yarn device works with a traversing guide roll for the filament. The traversing system for the filament is aligned with the traversing system for the roving. This means the filament thread is precisely integrated into the yarn. Soft, hard, and duo-core yarns (super-stretch) can be produced.

Simple production of twin yarns*

To produce a twin yarn, two rovings must run to one spinning position. In the drafting system, both are drafted separately. They are then twisted together in the spinning triangle. Due to their thread-yarn-like properties, twin yarns improve the quality of the yarn and end product.

Fast switchover to compact yarn with the Elite® CompactSet*

The G 38 can also be used to produce compact yarns. A standard ring-spinning machine can be fitted with the EliTe® CompactSet for the production of compact yarn, which is available as an option. The set is now also available for machines with up to 1,824 spindles.

* Option
High Machine Efficiency

Efficient production with ISM premium

The individual spindle monitoring, ISM premium, is built into the machine as standard. In addition to LEDs at each spinning position, it also has an LED at each section and signal lamps at the head and foot of the machine. They light up as soon as the individually defined limit for ends down is exceeded. The operator is guided to the relevant side of the machine and then to the affected spindle section with the ends down. Thanks to the three-stage display concept, operating personnel are guided to the ends down even more efficiently.

Another function is the permanent monitoring of the speed of the individual spindles. If a spindle runs outside the defined specifications, this is indicated by the LED flashing. This allows the operator to quickly and easily recognize which spindle is not running correctly. The operator can then intervene immediately, which avoids loss of raw material and quality.

As an option, the winding machine can be fitted with spinning position identification*. In the event of faulty cops, the winding machine sends a signal to the ISM and the second LED illuminates at the relevant spinning position. The operator is guided directly to the spinning position that is not operating correctly and can intervene immediately.

ISM premium is required for a roving stop device*. If ends down occurs, the ISM sends a signal to the roving stop, which stops the roving feed. This saves raw material.

* Option
The mill monitoring system SPIDERweb analyzes all data, indicates weak points and facilitates efficient personnel deployment. This increases both plant efficiency and yarn quality.

* Option
High Machine Efficiency

Efficient main drive motor*

The extremely efficient 110-kW main drive motor in the G 38 was developed for machines with up to 1 824 spindles and high speeds to save energy. It can also be used profitably on machines with fewer spindles and low speeds.

Save up to 4% energy with the LENA spindle*

The LENA spindle has been specially developed for high spindle speeds and low energy consumption. The whorl diameter of 17.5 mm and and other optimizations make a significant impact on energy efficiency.

Energy-saving 4-spindle tape drive

The Rieter 4-spindle tape drive is energy-efficient and easy to handle. The large enhancement of 90 degrees ensures that the spindle operates without failure, even with minimal contact pressure. The low contact pressure guarantees low energy requirements.

Optimal power transmission due to the 90° enhancement reduces energy consumption

Economical cop transport SERVODisc

The cop transport system SERVODisc is an open system, which means less maintenance is required. The system is driven by two diagonally offset 70-Watt motors. This requires only 10% of the energy compared to a pneumatic system.

Cross-section of the bottom part of a LENA spindle

* Option
ECOrized – less energy required for underpressure

The double-sided suction ECOrized developed by Rieter optimizes the aerodynamics of the entire suction system. This reduces the energy required to generate the necessary underpressure on machines with up to 1,824 spindles.

Compared to single-sided suction, a system with double-sided suction can transport the same air volume using less energy. The large duct cross-section and low air speed reduce air friction. This also has a positive influence on energy demand and reduces the energy costs of the spinning process.

A further crucial advantage of double-sided suction is the increased yarn count and raw material range. Whether used for man-made fibers, blends, special yarns, or conventional applications, double-sided suction is a sustainable and energy-efficient development of the suction system.

Drum separator for optimal running behavior

A consistent underpressure in the suction duct ensures good running properties of the machine. A drum filter collects the fibers found in the suction air. Sensors in front of and behind the filter monitor the pressure difference. If necessary, the drum filter is activated by the machine control and rotated. The collected fibers move from the drum separator into a non-pressurized outlet box. From here, they can be disposed of manually or via a central suction.

If the central fiber disposal method is used, only the underpressure that is needed to actually transport the material is used, which saves energy.
Economical Doffing Ensures High Efficiency

Save yarn with the SERVOgrip system

The proven and unique Rieter SERVOgrip system enables doffing without underwinding. By using SERVOgrip, no yarn residues occur that need to be removed from the whorl. This saves yarn and keeps the machine clean. Ends down caused by fiber fly and yarn residue are also avoided, thus increasing yarn quality.

The SERVOgrip system contains a clamping crown. Rieter is the only manufacturer whose clamping crown is opened and closed using the ring rail. This guarantees precise and controlled fixing of the yarn. Ends down following cop changes are thus largely avoided.

Self-monitoring grippers

The doffing system is self-monitoring, including the special profile of the doffer beam and the releasable grippers. In the event of faults, the doffing process is automatically stopped by a pressure monitor, ensuring an error-free doffing process.

Reliable cop transport with SERVOdisc

The cop transport system SERVOdisc works using peg trays that are clipped into a conveyor belt, allowing the tubes and cops to be precisely positioned. After doffing SERVOdisc reliably transfers the full cops to the cop trolley via the tube loader ROBOload or to the winding machine.
Minimal Workload

Flexible automation*

Various automation options are available. With the SERVODisc system, the ring-spinning machine can either be directly linked with a winding machine or with the tube loader ROBOload.

Tube loader ROBOload with trolley*

The system WILDload means significantly less work for operating personnel. The tubes are loaded into a trolley at the winding machine which is then clicked directly onto the ROBOload. No manual work is required.

* Option
Maximum Yarn Quality with High Productivity

Maximum spindle speeds

The best possible productivity level and minimal energy consumption means low yarn production costs. With its unique Rieter spinning geometry and the consistent use of high-quality technology components, the G 38 runs at the highest spindle speeds. This ensures consistently high yarn quality at maximum production. Spinning can be performed at high speed, even when the cops are in the build-up phase. For example, with a yarn count of Ne 30, up to 2% more yarn can be produced per machine each year.

Intermediate drive ensures quality

For machines with an intermediate drive, the middle bottom roller is also driven in the center of the machine. This reduces the torsional forces on the bottom roller. The even running of the bottom roller ensures a consistent quality of the yarn.

Rieter top roller cot for all raw materials

The top roller cots Ri-Q-Cot developed by Rieter ensure perfect yarn quality. Different cots are available depending on the processed raw material and the yarn count.

Bräcker rings with a long service life

High-quality TITAN spinning rings from Bräcker are included in the G 38 standard package. These spinning rings have a long service life.

Low-vibration Novibra spindles

All machines are delivered exclusively with proven Novibra quality spindles, which have excellent running characteristics. Energy consumption and noise levels are also lower compared to other products.

Higher spindle speeds can be achieved as the Novibra spindles do not produce vibrations when running. This avoids tension spikes in the yarn and minimizes the number of ends down.

* Option
Quality tubes with high true-running accuracy*

Rieter’s precise quality spinning tube Ri-Q-Tube is made from a particularly stable polymer mixture and has a high true-running accuracy. The spindle bearings experience minimal load even at high speeds.

Q-package – the quality package for cotton*

The quality package Q-Package for cotton contains a nose bar, an “active” cradle (moving deflection edge) and a pressure bar (pin). Fiber guidance between the cradle and the nipping point of the delivery roller is further improved with the Q-package. The evenness of the yarn (CVm%) is improved by up to one percentage point. At the same time, yarn imperfections are reduced by 10 to 30%.

* Option

Target fiber guidance in the drafting system
Ideal fiber guidance in the drafting system

The Ri-Q-Draft drafting system ensures the ideal fiber guidance for most applications and very stable running behavior. The deflection bridge Ri-Q-Bridge is a key component in the spinning process. The optimal position and form of the cradle reduce the distance to the nipping point of the delivery roller. All the listed technology components, including the bottom aprons, are perfectly tailored to each other. This ensures ideal fiber guidance in the main draft zone.
Superb Running Performance, Even for Man-Made Fibers

Special components for man-made fibers and blends*

Rieter’s man-made fiber package consists of a SERVOgrip blade, bottom rollers with a larger diameter, and reinforced separators. It is a modular set. The individual elements can be configured based on customer requirements. The man-made fiber package improves spinning performance for yarns made of man-made fibers and blends.

The SERVOgrip blade reliably cuts the yarn during doffing and prevents ends down during start-up.

The bottom rollers have a larger diameter and improve the running characteristics of the machine when long man-made fibers are used.

The metal-reinforced front edge of the separators prevents notching from rotating thread ends. No fibers get caught. The run of the thread is not interrupted by flying fibers; as such, the ends down rate is very low.

Reliable yarn cutting for man-made fiber yarns with the SERVOgrip blade*

Rieter has developed a patented technology that reduces yarn twisting before doffing. When combined with the SERVOgrip blade, even high-strength yarns or core yarns can be cut properly when doffing.

* Option
Maximum Production Time

Set yarn parameters electronically

The new electronic drafting system drive FLEXIdraft for the ring-spinning machine G 38 uses frequency-controlled motors. This electronic drafting system drive means less work for operating personnel. Parameters such as yarn count and yarn twist can easily be adjusted on the machine display. There is no need to change gear wheels or make any other mechanical adjustments. The operator can also change the Z yarn twist direction or the S yarn twist direction on the operating unit. Mechanical adjustments to the belt tensioner for the spindle drive are now a thing of the past. The balloon control ring is designed so that it does not have to be replaced when the yarn twist direction is changed. This reduces the amount of work required by operating personnel. Machine downtime is minimized when changing material.
**No ends down in the event of a power failure**

If a power failure occurs, the rotation energy of the spindles is used to supply the machine controls with electricity. At this time, the main motor switches to generator mode. In a power failure lasting less than two seconds, the machine automatically accelerates to the previous operating speed. The machine comes to a controlled stop in the event of extended interruptions, thus avoiding ends down.

**Economic startup**

The function FLEXIstart allows the drafting system to be switched on and off in stages. This allows for a more efficient machine startup. Depending on the machine length, only a quarter or half of the machine is commissioned. This avoids unnecessary material waste.
Machine Data

Ring spinning machine G 38

Machine length L [mm]
\[ L = \text{no. spindles} \times \text{gauge} + \text{intermediate drive} + \text{constant (C)} \]

Maximum number of spindles
Up to 1,824 spindles per machine with 70-mm gauge
Up to 1,632 spindles per machine with 75-mm gauge

Machine without intermediate drive
Up to 1,248 spindles: all raw materials, 70 and 75-mm gauge
Up to 1,440 spindles: 100% cotton, 70-mm gauge

Length of intermediate drive: 600 mm

Constant C for suction and cop transport [mm]
- Suction: One-sided*: 4,180; Double-sided*: 5,636
- Connection to Murata, Savio, Schlafhorst without trolley: 5,185; with trolley: 6,641
- ROBOload without trolley: 5,828; with system WILDload without trolley: 7,284

*Single-sided suction is available for up to 1,440 spindles. Double-sided suction always has an intermediate drive and is available from 1,296 spindles.

Example calculation for machine length L [mm]
\[ L = \left( \frac{\text{spindles per machine}}{2} \times \text{gauge} \right) + \text{intermediate drive} + \text{constant (C)} \]

- Length with ROBOload and system WILDload
- Length with link to winder
- Length with ROBOload and system WILDload without trolley

Example calculation for machine length L [mm]
1,824 spindles, 70-mm gauge, intermediate drive, double suction, link
\[ L = \left( \frac{1,824}{2} \times 70 \right) + 600 + 5,636 = 70,076 \text{ mm} \]
### Technological data

<table>
<thead>
<tr>
<th>Material</th>
<th>Cotton, man-made fibers and blends up to 63 mm (2 1/2 in)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Yarn count</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Standard</strong></td>
<td>All raw materials</td>
</tr>
<tr>
<td></td>
<td>132 – 3.7 tex</td>
</tr>
<tr>
<td></td>
<td>Nm 7.5 – 270</td>
</tr>
<tr>
<td></td>
<td>Ne 4.5 – 160</td>
</tr>
<tr>
<td><strong>Optional</strong></td>
<td>All raw materials</td>
</tr>
<tr>
<td></td>
<td>132 – 2.4 tex</td>
</tr>
<tr>
<td></td>
<td>Nm 7.5 – 423</td>
</tr>
<tr>
<td></td>
<td>Ne 4.5 – 250</td>
</tr>
<tr>
<td><strong>Twist range</strong></td>
<td>200 – 3,000 T/m (5.1 – 76.1 T/in)</td>
</tr>
<tr>
<td><strong>Draft</strong></td>
<td>6 – 250-fold (mechanical)</td>
</tr>
<tr>
<td></td>
<td>10 – 80-fold (technological)</td>
</tr>
</tbody>
</table>

### Machine data

<table>
<thead>
<tr>
<th>Number of spindles (70/75-mm gauge)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Max.</td>
<td>1,824/1,632</td>
</tr>
<tr>
<td>Min.</td>
<td>288 (144 on request)</td>
</tr>
<tr>
<td>Per section</td>
<td>48</td>
</tr>
<tr>
<td><strong>Spindle gauge</strong></td>
<td>70; 75 mm</td>
</tr>
<tr>
<td><strong>Ring diameter</strong></td>
<td></td>
</tr>
<tr>
<td>70-mm gauge</td>
<td>36; 38; 40; 42; 45</td>
</tr>
<tr>
<td>75-mm gauge</td>
<td>36; 38; 40; 42; 45; 48; 51; (54)</td>
</tr>
<tr>
<td><strong>Tube length</strong></td>
<td></td>
</tr>
<tr>
<td>70-mm gauge</td>
<td>180 – 230 mm</td>
</tr>
<tr>
<td>75-mm gauge</td>
<td>180 – 250 mm</td>
</tr>
<tr>
<td><strong>Machine width</strong></td>
<td></td>
</tr>
<tr>
<td>Over center of spindle</td>
<td>660 mm</td>
</tr>
<tr>
<td>Doffer retracted</td>
<td>1,062 mm</td>
</tr>
<tr>
<td>Doffer extended</td>
<td>1,380 mm</td>
</tr>
</tbody>
</table>

### Technical data

<table>
<thead>
<tr>
<th>Spindle speed</th>
<th>Mechanical up to 25,000 rpm</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Installed power</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Main drive motor</strong></td>
<td>55, 80, or 110 kW depending on spindle number and yarn count</td>
</tr>
<tr>
<td><strong>Drafting system drive</strong></td>
<td></td>
</tr>
<tr>
<td>Without IMD</td>
<td>4.4 – 8.8 kW</td>
</tr>
<tr>
<td>With IMD</td>
<td>10.6 – 16.7 kW</td>
</tr>
<tr>
<td>With Suessen EliTe®</td>
<td>4.4 – 18.0 kW</td>
</tr>
<tr>
<td><strong>Ring rail drive</strong></td>
<td>1.75 kW</td>
</tr>
<tr>
<td><strong>Single-sided suction (50/60 Hz)</strong></td>
<td></td>
</tr>
<tr>
<td>Up to 1,008 spindles</td>
<td>6.5 kW/6.5 kW</td>
</tr>
<tr>
<td>1,056 – 1,440 spindles</td>
<td>12.6 kW/12.6 kW</td>
</tr>
<tr>
<td><strong>Double-sided suction</strong></td>
<td></td>
</tr>
<tr>
<td>1,296 – 1,824 spindles</td>
<td>2 x 6.5 kW</td>
</tr>
<tr>
<td><strong>Additional with EliTe®</strong></td>
<td>5.5 – 20.0 kW</td>
</tr>
<tr>
<td><strong>Mains connection</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Rated voltage</strong></td>
<td>380 – 440 V 50/60 Hz</td>
</tr>
<tr>
<td><strong>Other rated voltages available on request</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Compressed air</strong></td>
<td></td>
</tr>
<tr>
<td>Min. supply pressure</td>
<td>7 bar</td>
</tr>
<tr>
<td><strong>Exhaust air</strong></td>
<td></td>
</tr>
<tr>
<td>Consumption</td>
<td>approx. 1.5 Nm³/h (up to 1,440 spindles)</td>
</tr>
<tr>
<td></td>
<td>approx. 1.75 Nm³/h (up to 1,632 spindles)</td>
</tr>
<tr>
<td></td>
<td>approx. 2 Nm³/h (up to 1,824 spindles)</td>
</tr>
<tr>
<td><strong>Air volume with single-sided suction</strong></td>
<td>9,400 m³/h with 1,632 spindles</td>
</tr>
<tr>
<td><strong>Air volume with double-sided suction</strong> (even split of air flow rate in the head and foot of the machine)</td>
<td>11,300 m³/h with 1,632 spindles; 11,952 m³/h with 1,824 spindles</td>
</tr>
<tr>
<td><strong>Required underpressure at transition point</strong></td>
<td>50 – 200 Pa</td>
</tr>
<tr>
<td><strong>Options</strong></td>
<td></td>
</tr>
<tr>
<td>Power monitoring</td>
<td>Spiderweb</td>
</tr>
<tr>
<td>DDFflack</td>
<td></td>
</tr>
<tr>
<td>Core yarn devices</td>
<td>Twin yarn (ConA®/ring-twin)</td>
</tr>
<tr>
<td>Compacting system EliTe®</td>
<td>FLEXiStart</td>
</tr>
<tr>
<td>Roving stop device</td>
<td>110-kW main motor</td>
</tr>
<tr>
<td>LENA spindle</td>
<td>ROBOload with system WILDload</td>
</tr>
<tr>
<td>Man-made fiber package</td>
<td>Q-Package</td>
</tr>
</tbody>
</table>
Com4®ring
Yarn of choice
Com4®ring is the yarn produced on Rieter ring spinning machines which is characterised by high quality consistency compared to other ring yarns. Com4®ring yarn covers the entire yarn range from very coarse to superfine yarns and is universal in terms of fibre choice. Distinguishing attributes of the Com4®ring yarn are its high strength and higher hairiness, which result in good functional qualities and wearing comfort. The finished fabric stands out by its very good opacity and soft touch.

Yarn Characteristics
- High flexibility in raw material, yarn count and yarn character
- High tenacity
- High hairiness

Process Advantages
- Good running performance
- Good picking and low air consumption in air-jet weaving

Fabric Appearance
- Soft touch and drape
- Good opacity
- Broadest range for fabric designs

Typical End Products
- Universally applicable
- Outerwear
- Underwear
- Home textiles
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