



RONA

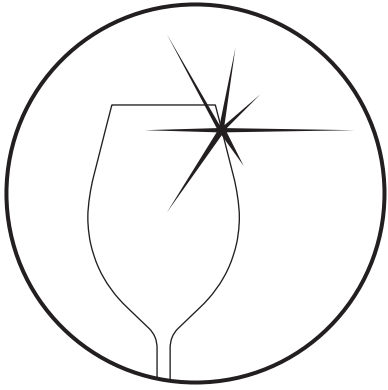
technology guide

RONA owns automatic technology processes which simulate handmade production and create products of high quality. The following attributes are typical:

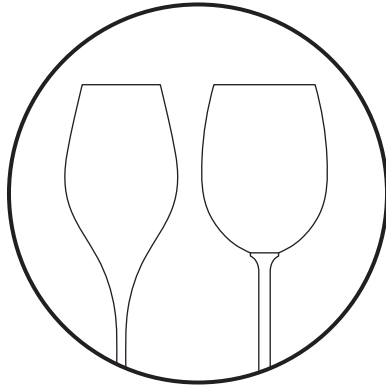
1. **Blow-blow goblet forming process** on 7 automatic lines simulate handmade quality standards on a significantly higher level than the press-blow process technology. The reason is that during the blow-blow process there is no contact between glass and metal as in the first phase of the competing press-blow process. A steam layer is created between the rotating glass and the mould.
2. In 2001 RONA introduced, as the first company in the world, technology of the so called "pulled stem" into the blow -blow process (4 automatic lines as of 2014). This process creates a monolithic product from the original two-piece process, and it significantly enhances its mechanical resistance and thus durability.
3. A competitive advantage was created here by development of both **ultralight goblets** (rim wall thickness of 0.6 mm – hardly distinguishable from handmade technology as seen in the product line SWAN for instance) and also by product types with **greater wall thickness** (1.8 mm or greater).
4. RONA typically offers **a mouth rim of standard resistance** combined with a high aesthetic quality. This is done through cracking off, edge melting, and grinding. In special cases RONA uses hot laser cutting (without flame edge melting) to increase rim resistance in the range of 60—80%.
The rim wall thickness standard for stemware is 1 ± 0.2 mm; in the case of HORECA $1 + 0.2$ mm. In the case of tumblers it is min 1.2 mm.
5. RONA offers two types of bottom edge profile – **the raised edge on the foot** (typical for automatic production) or **a smooth foot** (typical for handmade). All pulled stem products have **a melted bottom edge** which increases its contact resistance.

All proposed technological aspects in items 2 – 5 above are defining product with a high standard of contact resistance and fracture.

6. RONA is using highly resistant **platinum material** in the melting and forming technology. It prevents refractory inclusions in the last phases of glass delivery. As a consequence, no milky effect is observed after the dishwashing process.
7. Some special technological applications that are possible for RONA customers are the following:
 - **"V" profile** at the bottom of goblet bowl
 - **3-D (helix) shaped pulled stem** with 100% reproducibility
 - **Diagonal mouth** rim processing of goblet
 - Application of **sparkling point** ("Moussierpunkt") in the bottom of the flute by laser technology - thus enhancing bubbles rising in a drink
 - **Dimension limits of stemware:** height of 290mm, goblet diameter of 125mm, bottom diameter of 90 mm
8. **Low cost of tooling** for pulled stem technology.



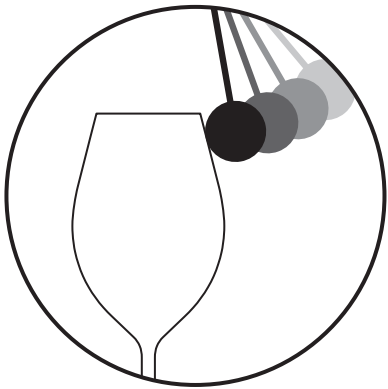
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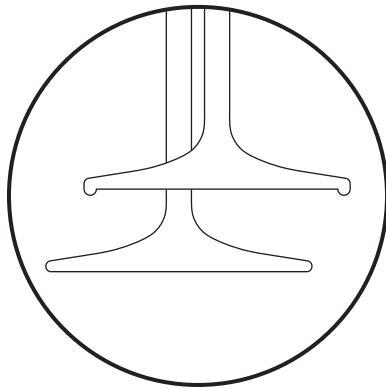
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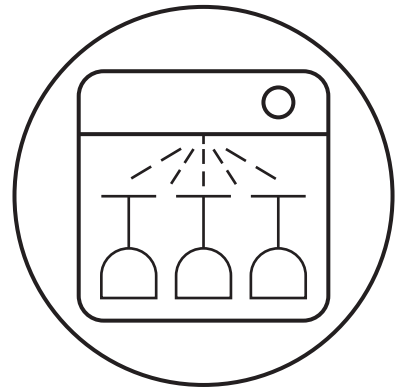
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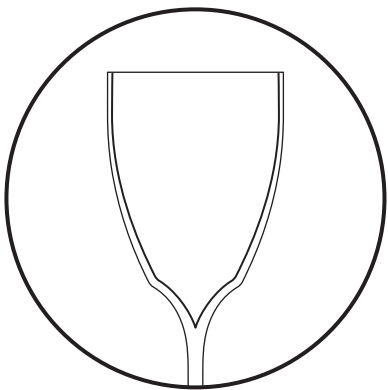
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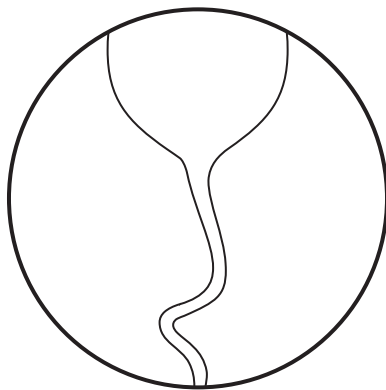
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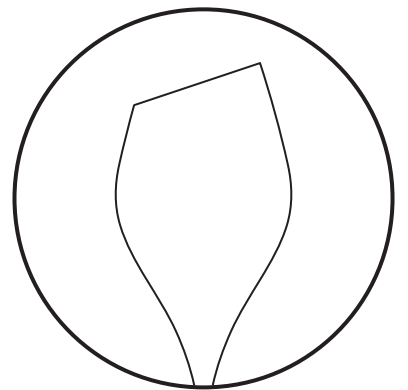
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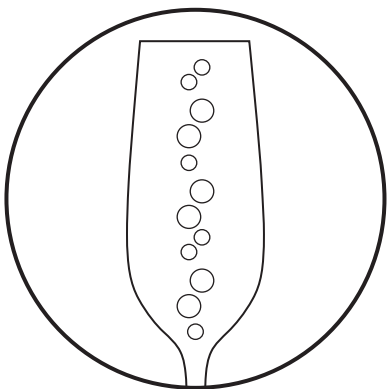
7.1



7.2



7.3



7.4



7.5



8



since 1892

10 Good Reasons to Buy RONA Glassware

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| | |
|--|--|
| | tradition of european crystal production since 1892 |
| | inspired product design and innovation with high utility and aesthetic value |
| | <i>superior quality drinkware and holloware made from lead-free crystalline glass</i> |
| | RONA crystal blanks are made from certified raw materials using pure silica sands for consistent clarity and brilliance |
| | <i>wide range of shapes, sizes, and decorations to suit all your household needs</i> |
| | dishwasher safe crystalline glassware |
| | FDA approved glass with no toxic additives - eco positive profile |
| | maximum durability and safety with fine polished rims |
| | <i>state of the art technology for fine pulled stemware supported by knowledgeable and dedicated staff members</i> |
| | all products are made according to strict ecological standards with priority given to regional and recyclable materials |



CEO
Lubomír Pecha



Chief of machine production
Bohuslav Krasňan

RONA has an ongoing „GMP approved“ („Good Manufacturing Practise“) production process resulting in high quality products which are hereby personally guaranteed by the officers of the company.

Crystal Clear Choice
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SCAN and find out more about RONA