SCHÜCO

Cradle to Cradle

Sustainable from the outset

Cradle to Cradle is becoming standard at Schüco

Cradle to Cradle stands for continuous material cycles and positively-defined materials which do not harm humans or the environment.

Building means thinking years ahead. Buildings which we design today determine how future generations will live and work. Properties that are inspired by the Cradle to Cradle principle fulfil the standards of tomorrow today while also functioning as a valuable raw materials stock.

Schüco develops solutions which preserve and shape the livelihood of future generations. Cradle to Cradle, or C2C for short, is therefore an essential part of our sustainability approach. It covers the whole life-cycle of a building from the design and manufacture, installation and use through to the possibility of dismantling the products and feeding them back into the closed recycling process.

Buildings are constructed in line with the C2C concept to be flexible and easy to convert, so that they meet future requirements. Any subsequent adjustments are taken into account here even in the early planning stages. This preserves the value that is created in manufacturing and finishing processes for the long term.

"Sustainability is not a trend – it's an attitude. This is reflected in all areas of our company.

Schüco is one of the pioneers in the construction industry, not only with regard to sustainability issues, but also in the development of C2C-certified products. We anticipate that the need and hence the demand for these certificates will increase significantly. After all, no other system covers sustainability at product level so extensively and consistently."

Andreas Engelhardt
Managing Partner

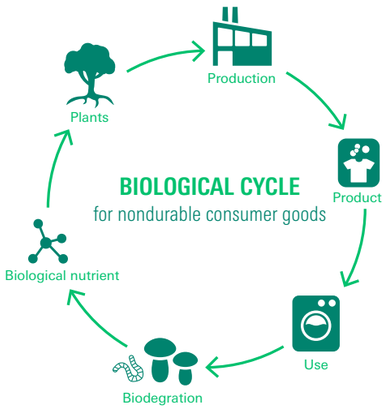
With 61 Silver and 15 Bronze-certified systems so far, Schüco is leading the way in applying the C2C principle to the building sector.

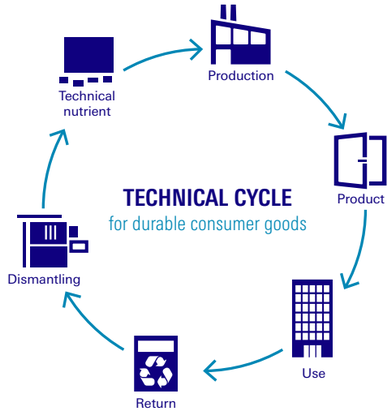
Sustainability with added value
The Cradle to Cradle philosophy forms the basis for all product developments at Schüco. This provides developers, architects and clients with independently tested reliability when selecting materials.

All C2C-certified systems from Schüco are available as standard at no additional charge and already meet the standards of tomorrow. This also means that C2C-inspired properties maintain their value better than conventional buildings.

With C2C Silver certification: ▸
Schüco ALB sun shading with C/Z-shaped louvre blades Schüco FWS 50 façade

Cradle to Cradle: A revolutionary concept





Nature was the inspiration for the groundbreaking design concept of the two forward and lateral thinkers, Professor Michael Braungart and William McDonough. The C2C philosophy views all materials to be nutrients in closed biological or technical cycles.
A differentiation is made here between nondurable consumer goods that are completely biodegradable and durable consumer goods that can be broken down to their raw materials at the end of their use. In this way, for example, construction products, technical installations and devices serve as "nutrition" for new products.

Within the framework of the C2C philosophy, raw materials are no longer lost following their use and can potentially be reused infinitely. This approach goes far beyond conventional notions of recycling, as the materials retain their quality and there is no waste.

For more information on Cradle to Cradle at Schüco, visit:
www.schueco.com/c2c

"We need to rethink sustainability if we want to shape the future of our planet in a positive way. Cradle to Cradle thinks in terms of "more benefits" rather than "less damage". To this end, C2C aims to produce intelligent products which are circulated infinitely in technical cycles without loss of quality.

The construction industry can take a leading role in this paradigm shift. The building sector accounts for around half of material consumption worldwide. We should use this fact as an opportunity to innovate and drive forward the development of products that are truly recyclable."

Professor Michael Braungart
Co-founder of the Cradle to Cradle design concept

Sustainable planning and action
Cradle to Cradle products and production processes require radical new thinking and intelligent treatment of resources. This starts with comprehensive, forward-thinking planning "from cradle to cradle" – from production out of raw materials and the usage phase through to dismantling, processing and reuse as raw material.

In practice, this means that all used materials need to be dismantled easily, sorted by type and fully processed without loss of quality.

A closed cycle of this kind must prove that all materials used are free of pollutants and that they are produced using renewable energy so that they are safe and do not harm people or the environment.

With C2C Silver certification:
Schüco AWS 75.SI+ window

Strict criteria for certification

In order to achieve certification in accordance with the Cradle to Cradle Certified® Product Standard Product Standard, products are assessed against five extensive criteria. All criteria are weighted equally, however the material health is given particular importance.

Material assessment criteria group

Material Health

1. Material health of substances used

The health and safety of humans and nature must be guaranteed. To this end, manufacturers should record the substances and assess their toxicology, adhere to limit values and forbidden substances, and substitute problematic substances.

If a material contains substances that are on the defined list of forbidden substances, the test ends immediately. No certification is granted.

Material Reutilization

2. Recyclability of the product in the technical or biological cycle

Manufacturers are required to manufacture products with high reutilisation potential. To this end, it is necessary to provide proof of good recyclability, encourage a high proportion of secondary raw materials and implement return processes.

Process assessment criteria group

Renewable Energy

3. Use of renewable energies

The aim is to use renewable energies. To this end, manufacturers should record greenhouse gas emissions, use renewable energies for production and further processing or balance out the emissions caused by energy consumption with certificates.

Water Stewardship

4. Responsible water management

It is important to have a fair and conscious approach to managing water use. This requires a strategy for handling water responsibly, water audits and the removal of water supply and quality problems.

Social Fairness

5. Adherence to social standards

Human dignity and the integrity of natural systems should be respected. To this end, in-house or third-party audits need to be carried out, social problems in the supply chain rectified and positive impact strategies implemented.

With C2C Silver certification: ▸
Schüco AD UP 90.SI door

C2C product certificates are valid for

2 years.

For recertification, evidence of progress must be provided.

Process and stakeholders

Cradle to Cradle Certified® confirms successful testing of the product quality by the non-profit Cradle to Cradle Products Innovation Institute (C2CPII). Manufacturers and suppliers provide the necessary information about the product manufacture. For the auditing, optimisation and the certification process, Schüco works with accredited assessor EPEA Internationale Umweltforschung, based in Hamburg.

Certification levels

In each assessment criterion, one of five certification levels can be achieved: Basic, Bronze, Silver, Gold or Platinum. The results are recorded on a scorecard. The overall result for a product is based on the weakest criterion assessed.

Sustainable planning made simple

Professor Winfried Heusler
Senior Vice President,
Schüco International KG

"Since the beginning of the century, we have been concentrating on the issue of what architectural solutions for sustainable buildings might look like. Our considerations have since stretched far beyond the original core issue of energy efficiency: the increasing scarcity of resources requires a holistic consideration of buildings in their lifecycle.

In 2008, the DGNB (German Sustainable Building Council) developed its certification standard, and with it the most comprehensive system yet for sustainable building in the context of ecological and socio-cultural aspects. We have been working actively and formatively with the product advisory board ever since it was founded. In this way, we have been focusing on the responsible treatment of resources from an early stage. A core idea in this regard is the closed-loop circulation of construction products.

The Cradle to Cradle design concept combines these principles in one system. For us it was therefore a logical step to apply the C2C standard to our modular window and façade systems and design them to be adaptable and recyclable."

CERTIFIED cradle to cradle SILVER

CERTIFIED cradle to cradle BRONZE

The Schüco modular system
Every building is unique. Architects and planners therefore need solutions that allow them to plan and configure their building projects in a flexible way. The Schüco modular system is the ideal basis for creating individual combinations of window, door and façade systems – and keeping full control of costs and quality in the process.
Schüco achieved Bronze C2C certification for its modular system back in 2016. This makes it possible to use certified articles to put together entire production line with the C2C Bronze standard. The C2C modular system had Silver certification since 2018.

Flexible planning with SchüCal
Design software SchüCal introduces the modular system to modern planning practice, allowing individual window, door and façade combinations to obtain C2C verification. SchüCal checks all Silver-certified Schüco systems to see whether there is a C2C-compliant configuration. At the touch of a button, it generates environmental product declarations, U value calculations and CE Declarations of Performance. This gives façade developers and architects complete design freedom and reliability for planning a sustainable building envelope.

Simple building certification
C2C-certified products are viewed positively by the LEED and DGNB (German Sustainable Building Council) building certification systems. Moreover, the certification can be used as a supporting document in many other green building standards. Schüco supports architects, investors and fabricators with detailed documentation on the current certificates.

With C2C Silver certification: ▸
Schüco Façade FWS 35 PD

With C2C Bronze certification:
Schüco FWS 60 CV

C2C-certified Schüco systems

61 systems with Silver certification

36 window systems	▪ AWS 50 NI ▪ AWS 50 RO ▪ AWS 57 RO ▪ AWS 65 ▪ AWS 65 RL ▪ AWS 65 SL ▪ AWS 65 MC ▪ AWS 65 BS ▪ AWS 65 WF ▪ AWS 65 VV ▪ AWS 70.HI ▪ AWS 70 RL.HI	▪ AWS 70 SL.HI ▪ AWS 70 ST.HI ▪ AWS 70 BS.HI ▪ AWS 70 WF.HI ▪ AWS 70 VV.HI ▪ AWS 75.SI+ ▪ AWS 75 RL.SI+ ▪ AWS 75 BS.HI+ ▪ AWS 75.SI+ Optimized ▪ AWS 75 BS.HI+ Wood Design ▪ AWS 75 BS.SI+ ▪ AWS 75 BS.SI+ Optimized	▪ AWS 75 BS.SI+ Wood Design ▪ AWS 75 WF.SI+ ▪ AWS 75 VV.SI+ ▪ AWS 90.SI+ ▪ AWS 90.SI+ Optimized ▪ AWS 90 BS.SI+ ▪ AWS 90 BS.SI+ Optimized ▪ AWS 90 BS.SI+ Wood Design ▪ AWS 90 VV.SI+ ▪ AWS 90 AC.SI ▪ AWS 120 CC.SI ▪ AWS 120 AC.SI
13 façade systems	▪ FWS 35 PD.HI ▪ FWS 50.SI ▪ FWS 50 S.SI ▪ FWS 50 SG.SI ▪ FWS 60.SI	▪ FWS 60 SG.SI ▪ AF UDC 80 ▪ AOC 50.TI ▪ AOC 50.ST ▪ AOC 60.TI	▪ AOC 60.ST ▪ AOC 75.TI ▪ AOC 75.ST
7 door systems	▪ AD UP 75 ▪ AD UP 75 BL ▪ AD UP 90	▪ AD UP 90.SI ▪ ADS 70 HD ▪ ADS 75 HD.HI	▪ ADS 65 HD Gen2
3 fire protection systems	▪ ADS 90 FR 30	▪ ADS 90 FR 30 CE	▪ ADS 80 FR 30
2 sun shading systems	▪ ALB C-/Z-louvre blades	▪ ALB large louvre blades passive	

15 systems with Bronze certification

2 window systems	▪ AWS 114.SI	▪ AWS 114 SG.SI	
6 façade systems	▪ FWS 60 CV ▪ AF UDC 80 CV	▪ AF UDC 80.HI ▪ AF UDC 80.SI	▪ AF UDC 80 SG ▪ AOC 50.TI
6 sliding systems	▪ ASS 77 PD manual ▪ ASE 80.HI	▪ ASE 60 ▪ AS FD 90.HI	▪ AS FD 75 ▪ AS PD 75.HI
1 fire protection system	▪ ADS 90 FR 90		

Schüco – System solutions for windows, doors and façades

Based in Bielefeld, the Schüco Group develops and sells system solutions made of aluminium, steel and PVC-U for the building envelope. The product portfolio includes window, door, façade, ventilation, security and sun shading systems, as well as intelligent networked solutions for residential and commercial projects. Schüco also provides consultancy and digital solutions for all phases of a building project – from the initial idea through to design, fabrication and installation, as well as after sales with maintenance and servicing. Fabrication machinery and customer-oriented service complement the product portfolio. As one of the leading companies in the construction industry, Schüco is committed through its products and services to being a pioneer for comprehensive sustainability and actively contributing to climate neutrality and the circular economy within the construction sector. Founded in 1951, Schüco is now active in more than 80 countries and achieved a turnover of 2.28 billion euros in 2022 with 6750 employees.
For more information, visit www.schueco.com

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