

**Water softener
softliQ:MD12i**

Intended use

The water softener softliQ:MD12i is designed exclusively for use in industrial and commercial applications.

The water softener softliQ:MD12i must only and exclusively be used to soften cold water of drinking water quality.

The water softener softliQ:MD12i is designed for softening to < 0.1 °dH (full salting).

The water softener softliQ:MD12i is adjusted to the soft water demand expected at the time of installation, it is not suitable for major deviations in capacities. The nominal flow rate must not be exceeded under any circumstances.

The softliQ water softener protects water pipes and connected water-carrying systems from scaling but cannot prevent corrosion. In case of water pipes made of copper and/or galvanised steel, we recommend dosing exaliQ mineral solutions for corrosion protection.

Intended use

- For instance as pretreatment for reverse osmosis systems installed downstream
- For instance for heating systems, laboratories, restaurants and catering, ventilation and air conditioning systems

Application limits

The water to be softened must be free of iron and manganese.

- Iron < 0.2 mg/l
- Manganese < 0.05 mg/l

Function

The water softener softliQ:MD12i works in alternating operation to permanently ensure softened water of < 0.1 °dH. The two control valves are in operation alternately. A complete regeneration takes place as soon as the exchanger in operation is exhausted.

The softliQ:MD12i works with full salting. As required by DIN standard 19636-100, the system releases a complete regeneration for hygienic reason no later than after four days without regeneration.

The water softener softliQ:MD12i works with a constant capacity figure. Due to higher salting compared to softliQ:MD, a soft water hardness of < 0.1 °dH is ensured up to the end of the filter run.

Grünbeck myProduct app

You can control and register the softliQ water softener with the Grünbeck myProduct app. By means of a mobile end device, you can retrieve the data all over the world.

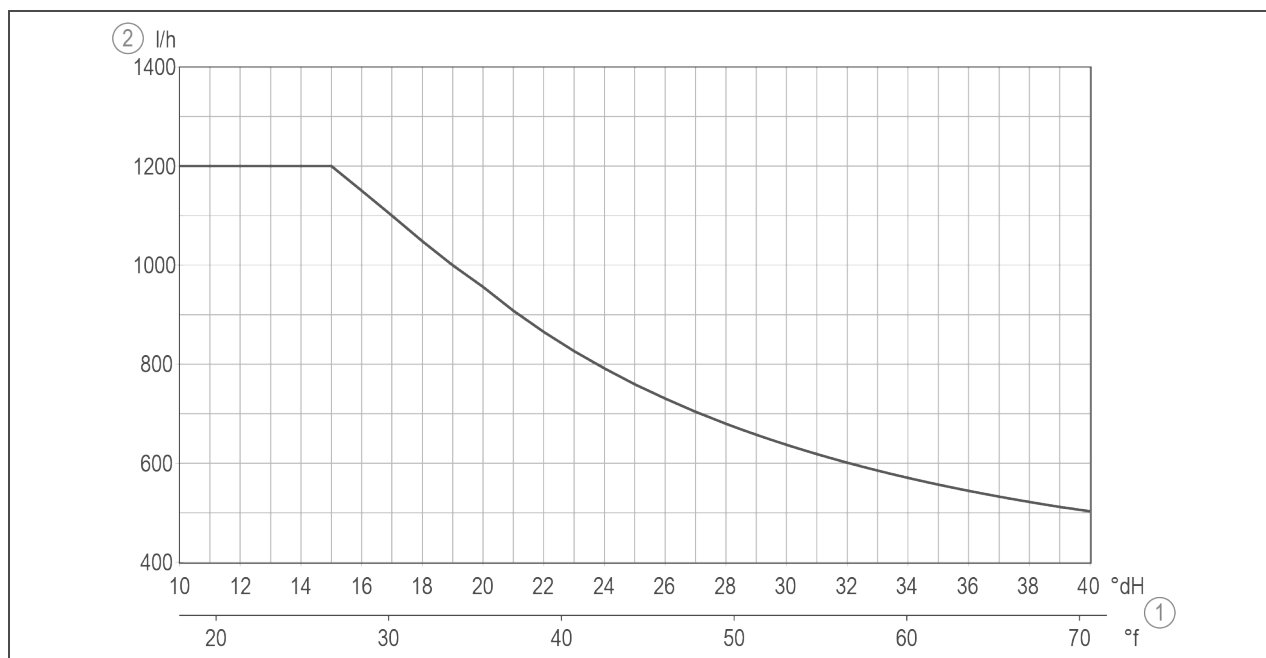
Design

- Compact design requiring little floor space and making optimum use of the space available
- Ergonomic system design for operation and maintenance
- Removable brine tank for hygienic and easy cleaning
- Integrated support tray to safely fill the brine tank
- Removable service lid for quick and convenient access to the control valve
- Compact and easily accessibly brine valve for easy maintenance
- Integrated safety float for increased protection in case of power failures
- Exchanger with special distribution system for efficient salt utilisation
- Special ion exchanger resin to meet highest demands on drinking water
- Glass beads for uniform distribution of the water

Scope of supply

- Water softener incl. connection equipment
- Water test kit "Total hardness"
- Drain connection DN 50 with siphon acc. to DIN EN 1717
- Operation manual

Continuous flow of water softener softliQ:MD12i

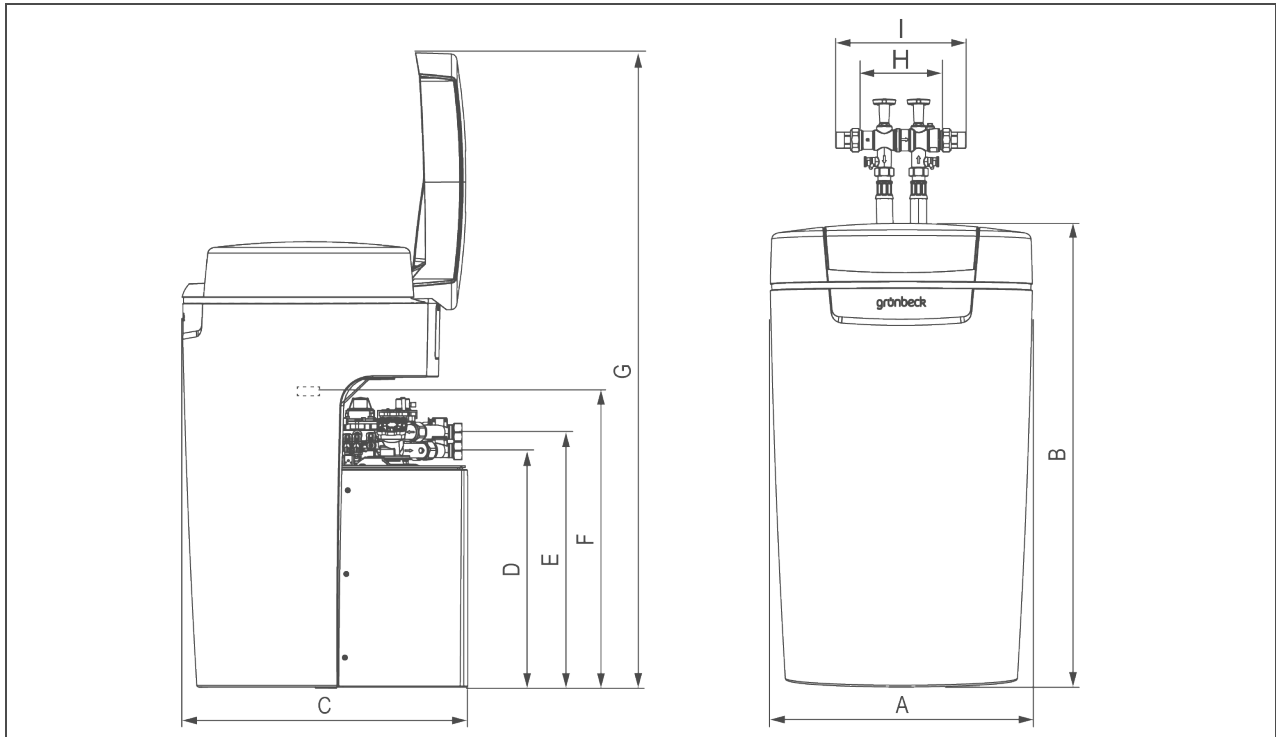


Item	Designation	Item	Designation
1	Raw water hardness	2	Continuous flow

The chart shows the possible range of application of the water softener softliQ:MD12i subject to the raw water hardness.

Up to a raw water hardness of 15 °dH, the softliQ:MD12i system can constantly provide a continuous flow of up to 1200 l/h. In case of higher raw water hardness, the possible continuous flow decreased along the characteristic curve.

Technical specifications I



Dimensions and weights		softliQ:MD12i
A	System width	mm 525
B	System height	mm 912
C	System depth	mm 580
D	Connection height of control valve (soft water)	mm 480
E	Connection height of control valve (raw water)	mm 518
F	Height of safety overflow of brine tank	mm 540
G	Height with open lid	mm 1290
H	Installation length without screw connection	mm 190
I	Installation length with screw connection	mm 271
Operating weight, approx.		kg 140
Shipping weight, approx.		kg 46

Technical specifications II

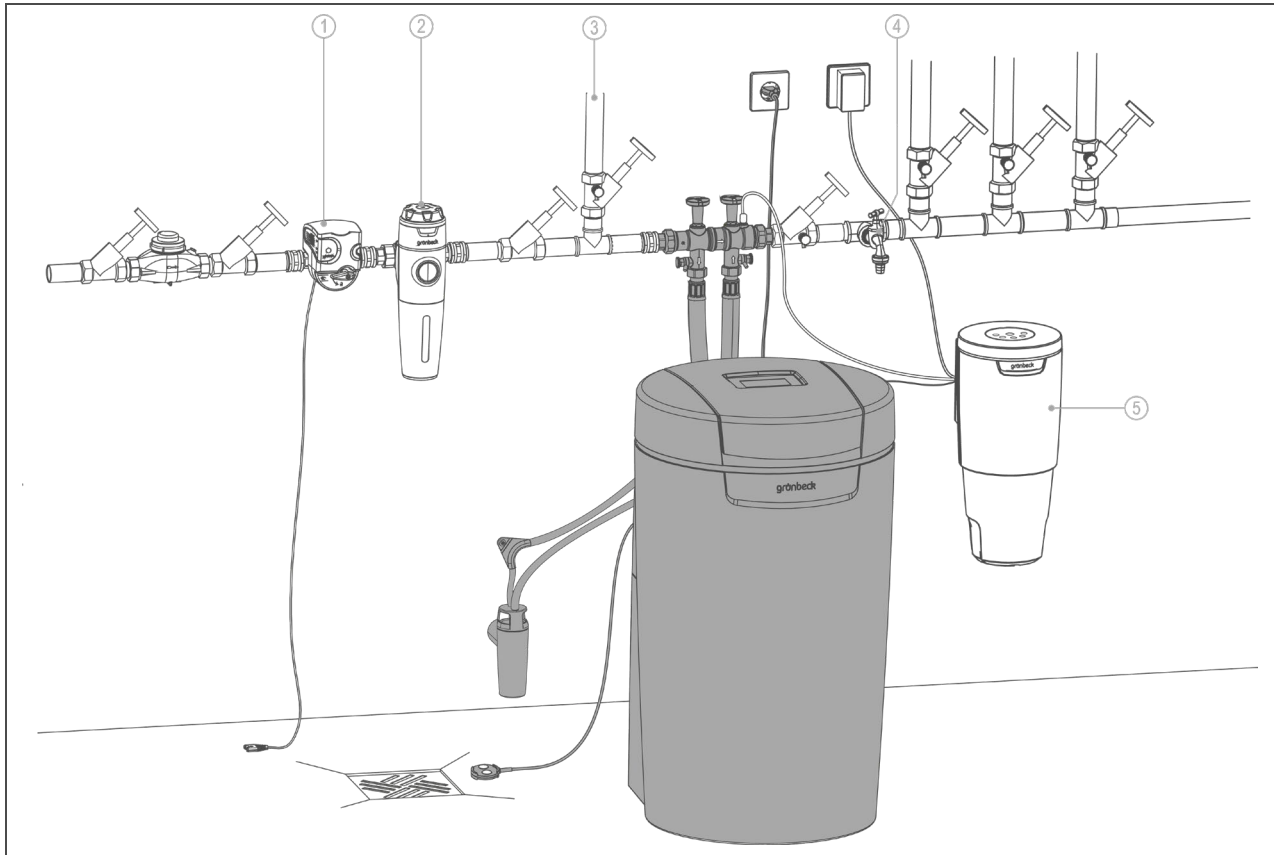
Connection data		softliQ:MD12i
Nominal connection diameter		DN 25 (1" male thread)
Min. drain connection		DN 50
Rated voltage range	V	100 - 250
Rated frequency	Hz	50 - 60
Rated load (during regeneration, temporarily)	W	14
Power input during softening, with display, Wi-Fi and illuminated LED ring being switched off	W	< 3.5
Protection/protection class		IP 54/II
Wi-Fi frequency band	GHz	2.4

Performance data		softliQ:MD12i
Nominal pressure		PN 10
Rated pressure	MPa/bar	1.0/10
Operating pressure (recommended)	bar	2.0 – 8.0 (4.0)
Nominal flow (0 °dH, 0 °f, 0 mol/m³)	m³/h	1.2
Pressure loss at nominal flow	bar	0.5
Nominal capacity	m³ x °dH m³ x °f mol	2 x 15 2 x 27 2 x 2.7
Capacity per kg of regeneration salt	mol/kg	2.4
Regeneration time for a complete regeneration (4 bar)	min	30

Filling volumes and consumption data		softliQ:MD12i
Resin volume	l	2 x 7.5
Salt consumption (both exchangers)	kg	2.24
Capacity of brine tank [kg]	kg	≤ 95
Salt consumption per m³ and °dH	kg/(m³ x °dH)	0.07
per m³ and °f	kg/(m³ x °f)	0.039
per mol	kg/mol	0.39
Flushing water flow rate	m³/h	≤ 0.4
Total waste water volume (both exchangers)	l	58
Waste water volume per m³ and °dH	l/(m³ x °dH)	1.93
per m³ and °f	l/(m³ x °f)	1.07
per mol	l/mol	10.7

General		softliQ:MD12i
Water temperature	°C	5 - 30
Ambient temperature (technical applications)	°C	5 - 40
Humidity (non-condensing)	%	≤ 90
ÜA Registration number The Office of the Vienna Provincial Government – City of Vienna		R-15.2.3-21-17496
Order no.		187 140

Installation example



Item	Designation	Item	Designation
1	Safety device protectliQ	2	Drinking water filter pureliQ
3	Raw water pipe	4	Water withdrawal point
5	Dosing system exaliQ		

Installation requirements

Obey the local installation directives, general guidelines and technical specifications.

The installation site must be frost-proof and protect the product from direct sunlight, chemicals, dyes, solvents and their vapours.

If the softened water is intended for human consumption as defined by the German Drinking Water Ordinance, the ambient temperature must not exceed 25 °C. For applications that are purely technical, the ambient temperature must not exceed 40 °C.

You must install a drinking water filter and, if required, a pressure reducer (e.g. fine filter pureliQ:KD) upstream of the product.

A Schuko socket is required within a distance of approx. 1.2 m of the system. The socket outlet requires permanent power supply and must not be coupled with light switches, emergency heating switch or the like.

A drain connection (DN 50) must be available to discharge the regeneration water.

A floor drain suitable for the respective system size must be available at the installation site. Otherwise, a safety device such as a protectliQ or a safety device with water stop of the same quality must be installed. Floor drains that discharge to a lifting system do not work in case of a power failure. Make sure that lifting systems are resistant to salt water or use our delivery pump for regeneration water.

If required by the process installed downstream (e.g. a reverse osmosis system), a system separator must be used.

The connection block features a non-return valve on the inlet side. Safety relief valves must therefore be installed in flow direction downstream of the softliQ.

A water withdrawal point must be available near the product.

Accessories

Dosing system
exaliQ:KC6-e
Order no. 117 460

Dosing system
exaliQ:SC6-e
Order no. 117 465
Electronically controlled dosing technology to protect the water pipe against corrosion or to stabilise the total hardness.

Safety device protectliQ:A20
Order no. 126 405
Product to protect against water damage in one and two-family homes.

For other sizes, please inquire.

Delivery pump for regeneration water
Order no. 188 800
To discharge the regeneration water into drain pipes located at a higher level.

Extension kit for connection hoses DN 25
Order no. 187 660e
To extend the hose to 1.6 m.

90° connection angle 1" (2 pieces)
Order no. 187 865
To direct the connection hoses closer along the softliQ in case of confined installation conditions.

Supplementary blending valve
Order no. 187 870
To generate a blending water hardness. Can directly be connected to the connection block.

Supplementary soft water outlet
Order no. 187 875
For installation in the soft water outlet between the water softener and the connection block incl. sampling valve and non-return valve.

Installation kit softliQ:SD
Order no. 188 865
Space-saving combined connection of water softener and filter.

Consumables

Regeneration salt (25 kg)
as per EN 973 type A
Order no. 127 001

Water test kit
"Total hardness"
Order no. 170 187

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