

DN 25 (1")



DN 40 (1½")



Sales only
after consultation
with Grünbeck
Water analysis
required

Deferrisation/ demanganisation system GENO-mat MN-Z

Intended use

The deferrisation/demanganisation systems GENO-mat MN-Z are designed for the reduction of iron and manganese.

For demanganisation, a dosing system for oxidants must be provided upstream of the deferrisation/demanganisation system GENO-mat MN-Z.

Dosing is not required for deferrisation alone.

If an ammonium concentration of more than 0.5 mg/l is detected in the raw water, an additional treatment stage or treatment by the oxidation filter system fermaliQ must be provided by the client.

If the well water contains humic acids or hydrogen sulphide, the pure water quality to be expected might be adversely affected.

Application limits

- Iron content < 3.0 mg/l
- Manganese content < 1.0 mg/l
- TOC < 5.0 mg/l
- Al < 0.2 mg/l

For iron reduction

- pH value > 7.0

For manganese reduction

- pH value > 7.2

Function

The deferrisation/demanganisation system GENO-mat MN-Z works with the natural, catalytic filter material GENO-Fermanit. A control valve controls the operating cycles Filtration – Backwash – First filtrate.

Filtration

The raw water flows through the raw water inlet of the control valve into the filter cylinder. The filter material is flown through from top to bottom and foreign particles are retained in the process. The pure water is directed via the lower distributor nozzle and the riser pipe to the pure water outlet and into the pipe network.

Backwash

During the backwash process, the filter material is flushed from bottom to top. The filter material is loosened up and impurities are flushed out via the drain outlet.

For hygienic reasons, a backwash should take place every 6 days (factory-setting).

First filtrate

By an automatic switch-over of the control valve, the filter material is flushed from top to bottom. This first filtrate is discharged to the drain. Afterwards, the filter system is ready for operation.

Control unit

An electric timer controls the filter systems.

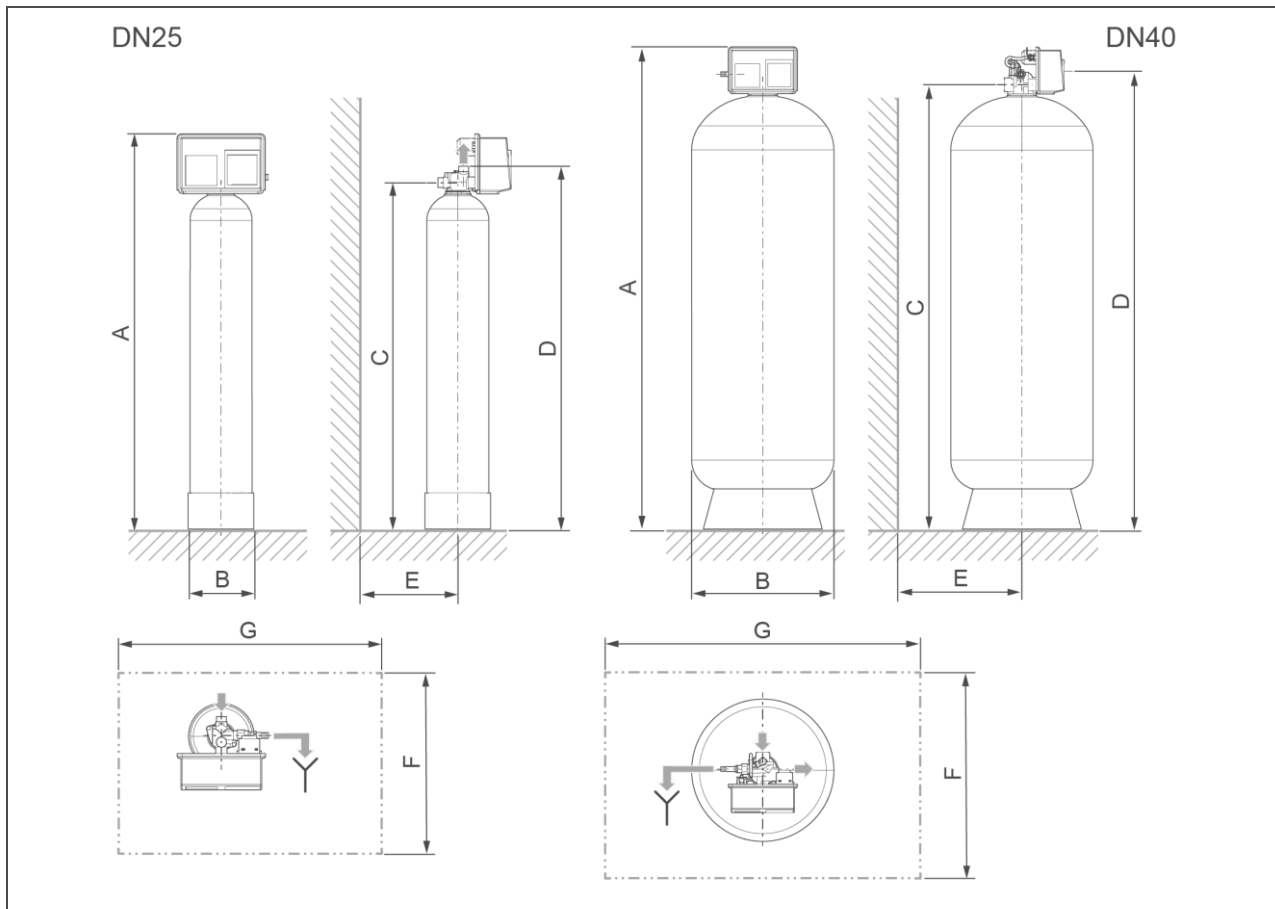
Design

- Control valve made of red brass
- Time-dependent control via electric timer
- Power cable with Schuko plug for transformer
- Control valve with rotary discs to set the backwash interval
- Cover for protection against splash water and unauthorised interference
- Filter cylinder made of pressure resistant plastic with fixtures for water flow control and retention of filter material

Scope of supply

- Filter cylinder including
 - Control valve
 - Riser pipe
- Filter material
- Drain hose
- Protective pipe cap
- Powder funnel
- Operation manual

Technical specifications I



| Dimensions and weights | | 25/13 | 30/14 | 40/18 | 50/19 | 60/20 | |
|------------------------|------------------------------|-------|-------|-------|-------|-------|------|
| A | Total height | mm | 1620 | 1620 | 1900 | 1870 | 2100 |
| B | Bottle diameter | mm | 260 | 340 | 420 | 550 | 620 |
| C | Connection height Raw water | mm | 1420 | 1420 | 1710 | 1680 | 1910 |
| D | Connection height Pure water | mm | 1470 | 1470 | 1735 | 1705 | 1935 |
| E | Distance to wall | mm | 230 | 280 | 300 | 365 | 405 |
| F | Depth of foundation | mm | 450 | 500 | 550 | 600 | 650 |
| G | Length of foundation | mm | 755 | 860 | 900 | 1030 | 1110 |
| | Operating weight | kg | 135 | 213 | 361 | 642 | 947 |

Technical specifications II

| Connection data | | 25/13 | 30/14 | 40/18 | 50/19 | 60/20 |
|--|-------|------------------------|-------|---------------------------|---------|-------|
| Nominal connection diameter | | DN 25 (1" male thread) | | DN 40 (1½" female thread) | | |
| Drain connection | | ≥ DN 50 | | | ≥ DN 70 | |
| Power supply | V~/Hz | 230/50 | | | | |
| System operation with protective low voltage | V/Hz | 24/50 | | | | |
| Protection/protection class | | IP 22/□ | | | | |
| Connected load | VA | ~ 10 | | | | |

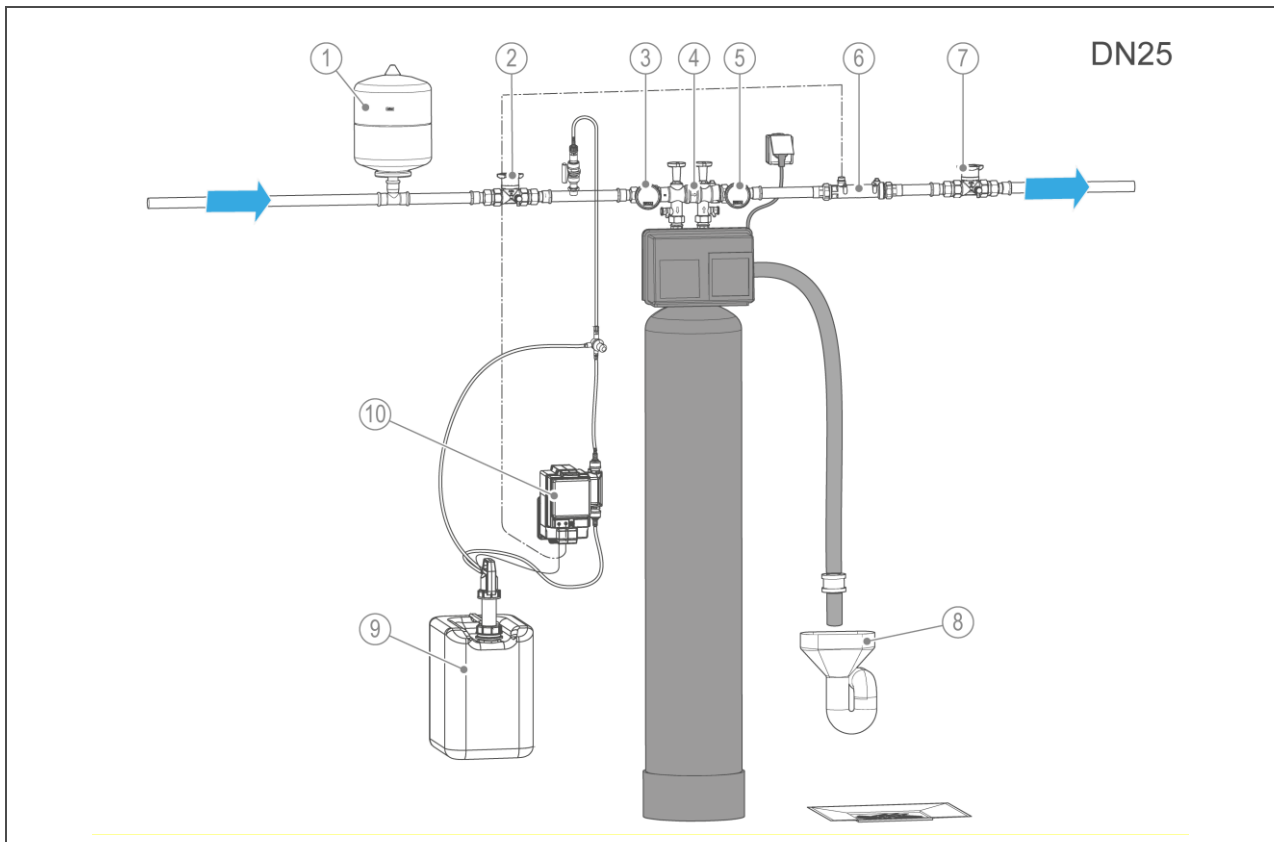
| Performance data | | 25/13 | 30/14 | 40/18 | 50/19 | 60/20 |
|--------------------|------|-----------|-------|-------|-------|-------|
| Nominal pressure | | PN 10 | | | | |
| Operating pressure | bar | 2.5 – 6.0 | | | | |
| Nominal flow | m³/h | 2.0 | 3.0 | 5.0 | 6.0 | 8.0 |
| Backwash capacity | m³/h | 2.3 | | 3.4 | 5.7 | |
| Backwash time | Min | 10 | | | | |

| Filling volumes and consumption data | | 25/13 | 30/14 | 40/18 | 50/19 | 60/20 |
|--------------------------------------|----|-------|-------|-------|-------|-------|
| Quartz gravel 3.15 – 5.6 | kg | 10 | 25 | 25 | 50 | 50 |
| GENO-Fermanit 0.5 – 1.0 | kg | 50 | 50 | 125 | 200 | 325 |
| Filter sand 0.4 – 0.8 | kg | 25 | 50 | 75 | 150 | 250 |

| General data | | 25/13 | 30/14 | 40/18 | 50/19 | 60/20 |
|---------------------------|----|--------|-------|-------|-------|-------|
| Water temperature | °C | 5 – 30 | | | | |
| Ambient temperature | °C | 5 – 40 | | | | |
| Humidity (non-condensing) | % | ≤ 90 | | | | |

| Order no. | 153 420 | 153 430 | 153 450 | 153 460 | 153 470 |
|-----------|---------|---------|---------|---------|---------|
| | | | | | |

Installation example



| Item | Designation | Item | Designation |
|------|------------------------------------|------|------------------------------------|
| 1 | Diaphragm expansion tank | 6 | Contact water meter |
| 2 | Shut-off valve with sampling point | 7 | Shut-off valve with sampling point |
| 3 | Pressure gauge Inlet pressure | 8 | Dosing tank |
| 4 | Connection kit | 9 | GENODOS DM-oxi dosing |
| 5 | Pressure gauge Outlet pressure | 10 | Drain connection |

Requirements for the installation site

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

- Protection from frost, severe heat exposure and direct sunlight
- Protection from chemicals, dyes, solvents and their vapours
- Ambient temperature and radiation temperature in the immediate vicinity
 - ≤ 25 °C for applications in the drinking water sector
 - ≤ 40 °C for purely technical applications

- Protection from heat sources (e.g. heating systems, boilers and hot water pipes)
- Access for maintenance work (take required space into consideration)
- Sufficiently illuminated and ventilated
- Horizontal installation surface with sufficient load-bearing capacity to support the operating weight of the product

Water installation

- Floor drain or corresponding safety device with water stop function (e.g. safety device protectliQ)
- Salt water resistant lifting system in case the drain

connection is located at a higher level

- Drain connection ≥ DN 50 up to type 40/18
- Drain connection ≥ DN 70 from type 50/19
- Shut-off valves with sampling point upstream and downstream of the product
- Pressure gauge upstream and downstream of the product

Electrical installation

- Schuko socket with permanent power supply (1.2 m max. from the control unit)

Accessories

Connection kit 1"-I
(up to type 30/14)
Order no. 185 505

Connection kit 1½"-I
(from type 40/18)
Order no. 185 540

Connection kit for connection to the water pipe free of mechanical stress in the industrial sector

Safety device
protectliQ:A20
Order no. 126 400

Product to protect against water damage in one and two-family homes.

For other sizes, please inquire

Dosing system
GENODOS DM-oxi 1"
(up to type 30/14)
Order no. 163 420

Dosing system
GENODOS DM-oxi 1½"
(from type 40/18)
Order no. 163 430

Complete dosing system consisting of dosing pump GP-/40, contact water meter, suction lance for 20 kg transport dosing containers, dosing valve 3/6 and 4 m dosing line

Dosing point
GENODOS DM-oxi 1"
(up to type 30/14)
Order no. 163 860

Dosing point
GENODOS DM-oxi 1½"
(from type 40/18)
Order no. 163 880

Overflow valve
GENODOS DM-oxi 1", 1½"
Order no. 163 790

Consumables

Filter filling GENO-mat MN-Z 25/13
Order no. 153 022

Filter filling GENO-mat MN-Z 30/14
Order no. 153 024

Filter filling GENO-mat MN-Z 40/18
Order no. 153 028

Filter filling GENO-mat MN-Z 50/19
Order no. 153 030

Filter filling GENO-mat MN-Z 60/20
Order no. 153 032

Water test kit for iron
0 – 0.8 mg/l and 1 – 10 mg/l
(30 determinations)
Order no. 170 150

Water test kit to quickly check the iron content

Water test kit for manganese
0.03 – 0.5 mg/l
(100 determinations)
Order no. 170 097

Water test kit to quickly check the manganese content

Dosing agent GENO-oxi plus
(20 kg)
Order no. 170 029

Contact

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