

## GENO®-MX 1" - MX DN 100 backwash filter

### Intended use

The GENO®-MXA backwash filters are suitable for the following sectors:

- Filtration of drinking water
- Filtration of industrial water
- Overpressure

The filters **are not** suitable for the following sectors:

- Filtration of circulation water treated with chemicals
- Filtration of oils, greases, solvents, soaps and other lubricating media
- Separation of water-soluble substances
- Negative pressure

### Function

#### Filtration

The unfiltered raw water flows into the filter from the inlet side and then passes through the filter element to the pure water outlet.

Foreign particles the size of > 50 µm, 100 µm, 200 µm, 500 µm - depending on the filter element - are thus retained in the filtration process.

Depending on size and weight, the foreign particles either stick to the filter element or fall straight down

where they accumulate at the lowest point of the filter.

#### Backwash

Manual and time-controlled backwash.

The pressure of the filtered pure water is used for the backwash.

Triggering the backwash causes several things to happen:

- Brushes on the raw water side remove foreign particles from the filter elements.
- A suction nozzle opens the drain outlet at the bottom of the filter towards the backwash water connection.
- The pressure of the pure water is higher than the atmospheric pressure at the backwash water connection.
- Due to this differential pressure, a part of the pure water flows through the filter elements within the area of the hollow brushes into the suction nozzle.
- This part of the pure water is used as rinsing water.
- The rinsing water flushes the dissolved foreign particles through the suction nozzle.
- The rinsing water leaves the filter at the drain outlet towards the backwash water connection after passing through the suction nozzle.
- At the end of the backwash, the drain outlet will be closed.

#### Structure

- All parts coming into contact with the medium are made brass with a low level of dezincification or high-grade industrial plastic.

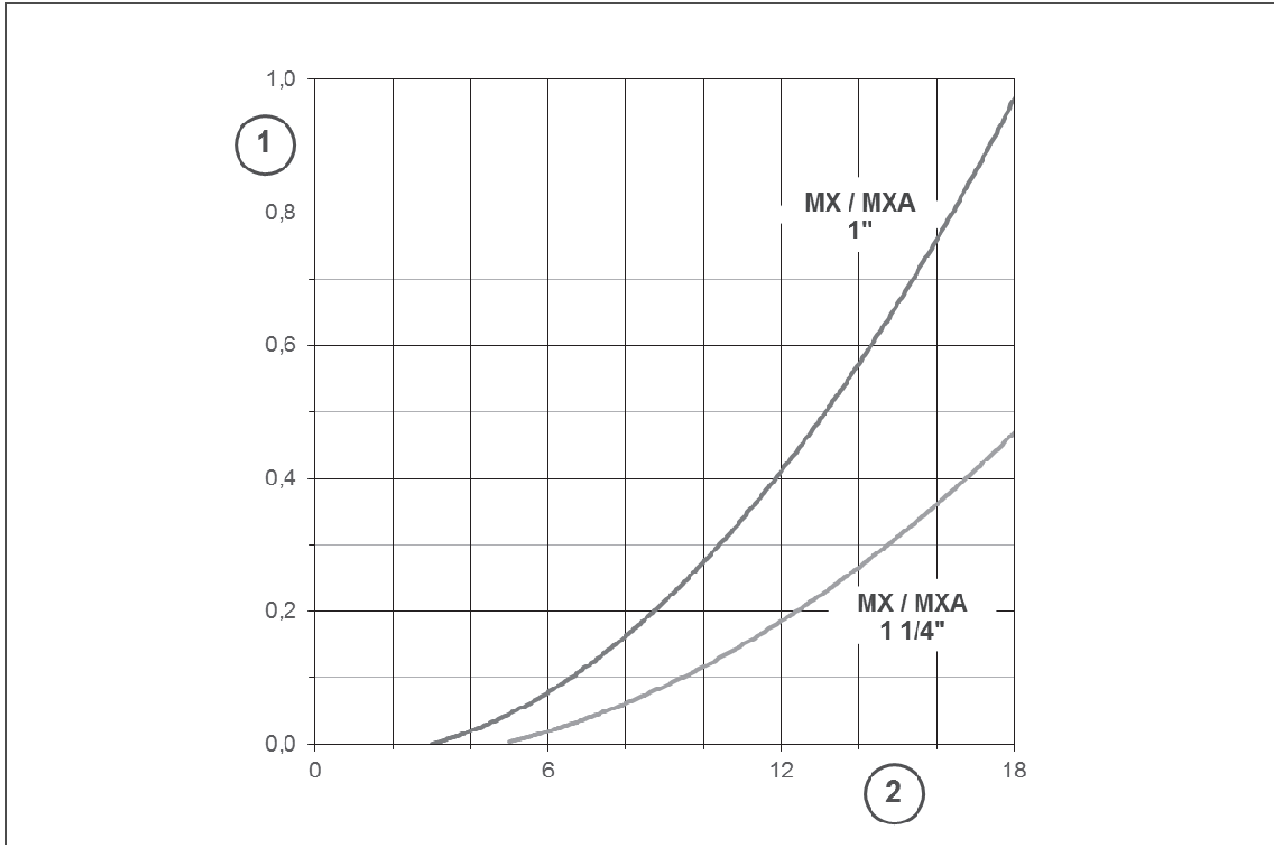
- Modular filter element made of high-grade, industrial plastic with filter mesh made of stainless steel.
- Integrated backwash water connection (funnel) according to DIN EN 1717.
- Pressure gauge on raw and pure water side to determine the degree of impurities (differential pressure).
- Water meter screw connection on GENO®-MXA 1" - MXA 2" backwash filter.
- Flange connection on GENO®-MXA DN 65, MXA DN 80, MXA DN 100 backwash filter (dimension of flange connection acc. to DIN 2642, without counter-flanges and seals).
- All water-contacting parts meet the requirements of the German Food and Feed Act (LFGB).

#### Scope of supply

- Backwash filter complete, including 2 pressure gauges 0-16 bar.
  - Up to a nominal diameter of DN 50 with water meter screw connections.
  - Starting from a nominal diameter of DN 65, flange version.
- Counter flanges and seals are not included in the scope of supply.

### Technical specifications I

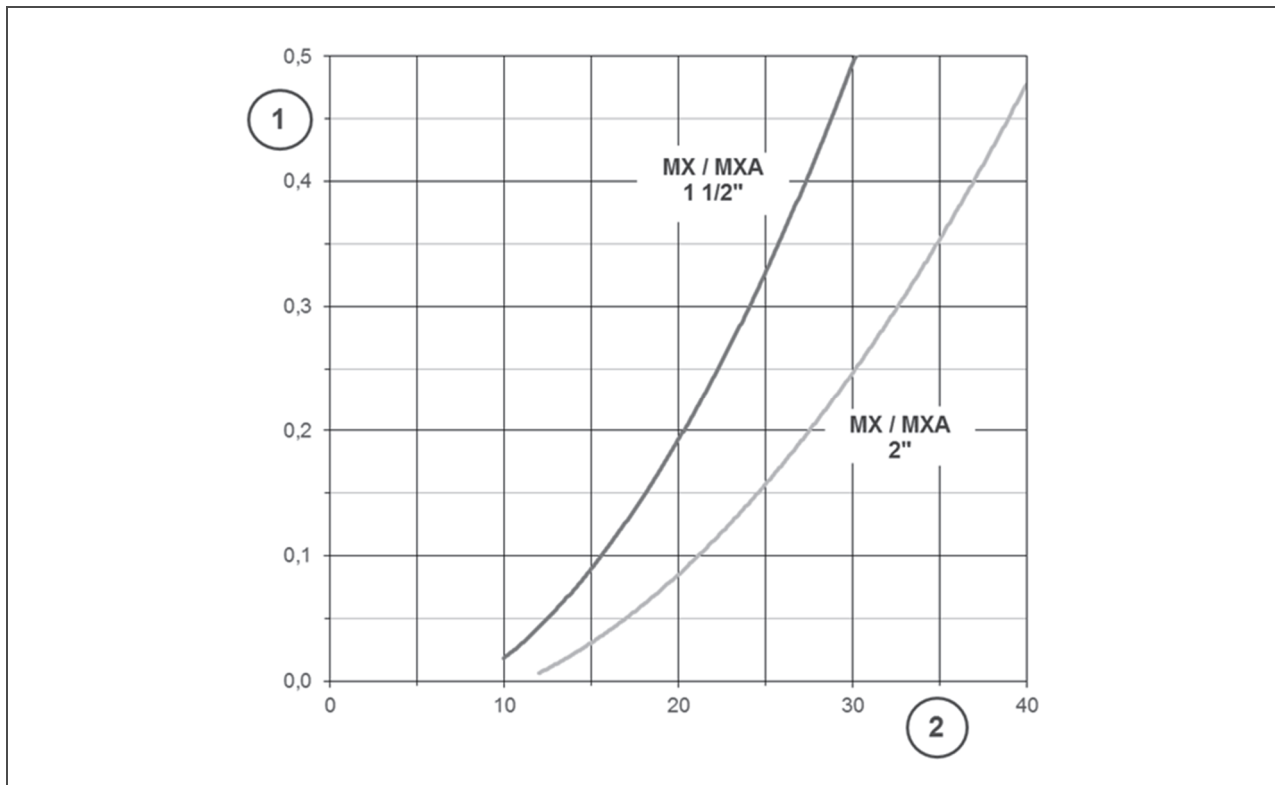
#### Pressure loss curves of GENO® MX / MXA 1" and 1 1/4" backwash filters



Item	Designation	Item	Designation
1	Differential pressure in bar	2	Flow rate in m <sup>3</sup> /h

## Technical specifications II

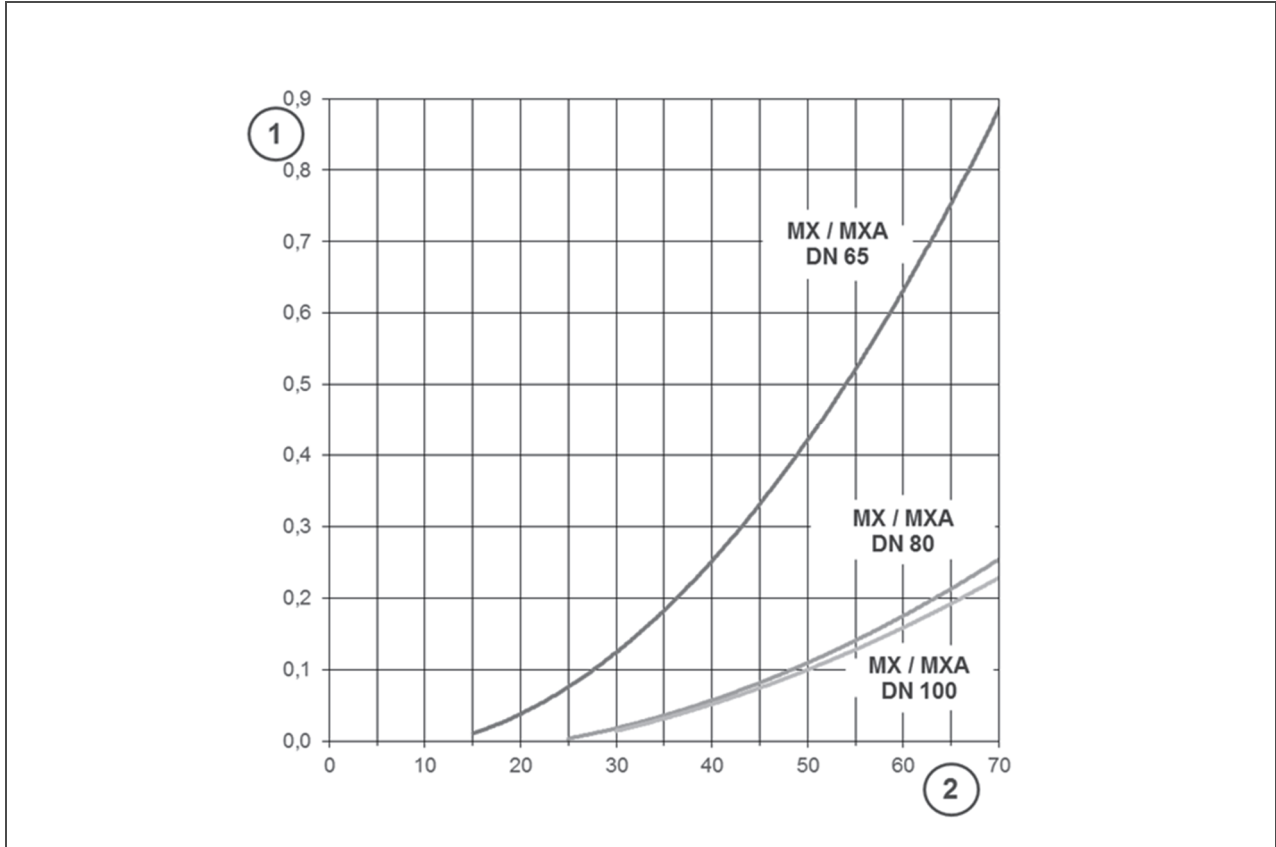
### Pressure loss curves of GENO® MX / MXA 1½" and 2" backwash filters



Item	Designation	Item	Designation
1	Differential pressure in bar	2	Flow rate in m³/h

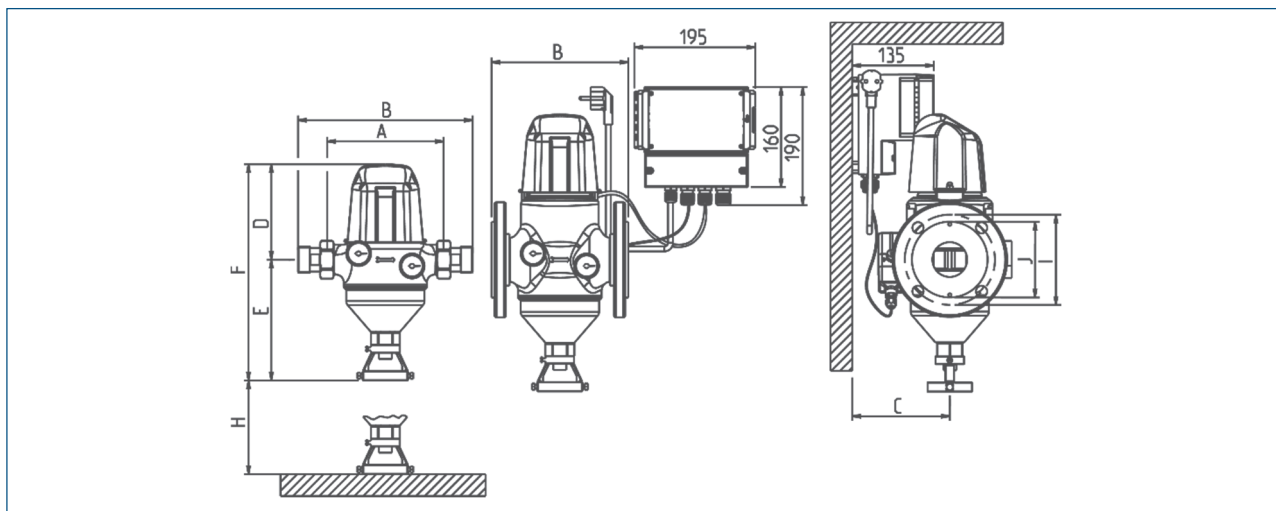
### Technical specifications III

#### Pressure loss curves of GENO® MX / MXA DN 65, DN 80 and DN 100 backwash filters



Item	Designation	Item	Designation
1	Differential pressure in bar	2	Flow rate in m³/h

## Technical specifications IV



### GENO® MXA backwash filter

Connection diameter	1"	1¼"	1½"	2"			
Nominal connection diameter					DN 65	DN 80	DN 100
Order no.	107 450	107 455	107 460	107 465	107 470	107 475	107 480

### Dimensions and weights

A: Installation length without screw connection	[mm]	190	190	206	206	-	-	-
B: Installation length with screw connection	[mm]	276	281	342	323	-	-	-
B: Installation length without counter flanges Flanges PN 16 acc. to DIN	[mm]	-	-	-	-	220	250	250
C: Min. distance to wall	[mm]	115	115	115	115	115	125	125
D: Overall height above centre of connection	[mm]	153	153	233	233	233	243	243
E: Overall height from lower edge of filter to centre of connection	[mm]	194	194	212	212	212	302	302
F: Total height	[mm]	347	347	445	445	445	545	545
G: Space above upper edge of filter	[mm]				130			
H: Space required for replacing filter element	[mm]	100	100	minimum 100 optimum from 215		minimum 100 optimum from 315		
I: Bolt circle diameter of flange	[mm]	-	-	-	-	145	160	180
J: Max. sealing surface	[mm]	-	-	-	-	122	140	158
K: Number of M 16 screws	[pcs]	-	-	-	-	4	8	8
Length of cable for differential pressure transducer	[mm]				1500			
Length of cable for drive unit	[mm]				1500			
Length of mains cable	[mm]				1500			

• **Product Data Sheet**

GENO®-MX 1" - MX DN 100 backwash filter

Dimensions and weights								
Empty weight with control unit GENO®-RS-tronic approx.	[kg]	8.6	8.7	12.7	12.7	14.8	19	20

**Technical specifications V**

GENO® MXA backwash filter								
Connection diameter		1"	1¼"	1½"	2"			
Nominal connection diameter						DN 65	DN 80	DN 100
Order no.		107 400	107 405	107 410	107 415	107 420	107 425	107 430

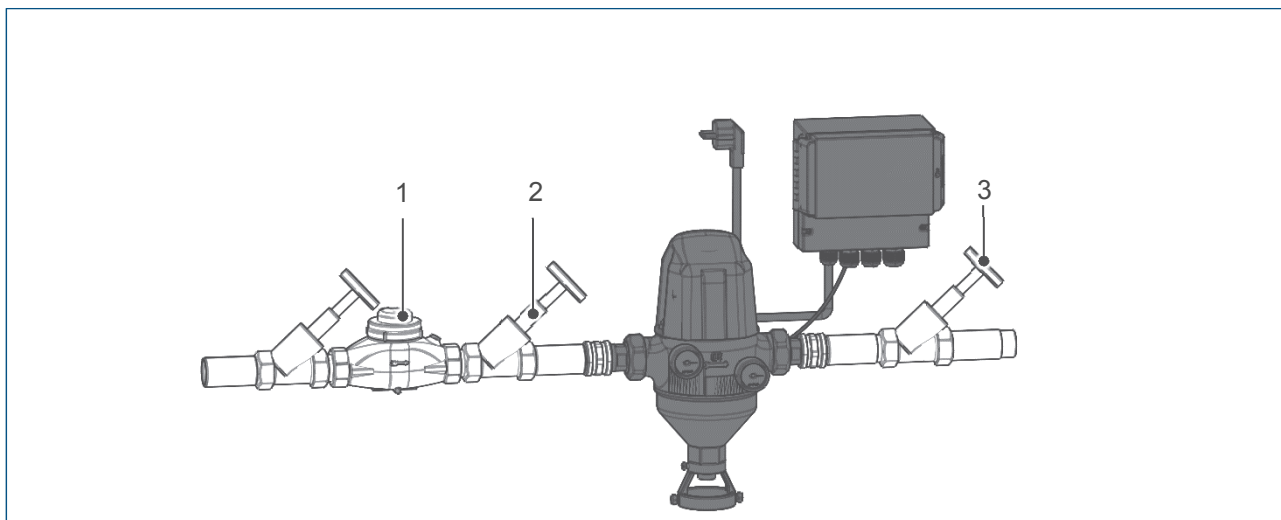
Connection data								
Drain connection HT pipe						DN 50		
Power supply	[V]/[Hz]					230/50-60		
						Operation with protective low voltage 24V~		
Electrical power consumption data	[VA]					26/19		
Operation = max./standby								
Protection / protection class						IP54/⚡		

Performance data								
Flow rate at Δp 0.2 (0.5) bar	[m³/h]	8.5(13)	12(18.5)	22(30)	27(38.5)	30(47)	60(96.5)	60(98)
K <sub>v</sub> -value	[m³/h]	18	25	46	56	69	124	138
Pore size	[µm]				100			
Largest/smallest pore size according to DIN EN 13443	[µm]				110/90			
Nominal pressure					PN 16			
Minimum flow pressure	[bar]				2			
Operating pressure at max. water temperature	[bar/°C]				10/90			
Differential pressure release	[bar]				0.4–0.5			

Consumption data								
Backwash water volume at a water pressure of 3 bar and a backwash time of 1.5 min., approx.	[l]				40			
Max. backwash volume flow at 9 bar, approx.	[m³/h]				4			

General								
DVGW registration number						NW-9301BO0194		
Max. water temperature	[°C]				90			
Max. ambient temperature	[°C]				40			

## Installation example



Item	Designation	Item	Designation
1	Water meter	3	Shut-off valve 2
2	Shut-off valve 1		

### Requirements with regard to the installation site

Observe local installation directives, general guidelines and technical specifications.

### Requirements on the electrical wiring

- Push socket with earthing contact within approx. 1.2 m of the control unit

### Requirements with regard to the water connection

- Drain water connection DN 50 to discharge the rinsing water
- Floor drain or a corresponding safety device

Install the product where it is not exposed to:

- Strong heat
- Frost
- Direct sunlight
- Chemicals, dyes, solvents and their vapours
- Negative pressure
- Coarse impurities. In case of coarse impurities, install a coarse dirt filter upstream of the inlet.

### Spare parts

Please inquire.

### Accessories

#### Safety valve for MXA

- Solenoid valve closed when deenergised
- Controlled by the GENO®-RS-tronic

Pre-assembled on the backwash water outlet, the safety valve prevents unacceptable water leaks during backwash in the event of a power failure.

Please inquire.

## Contact

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