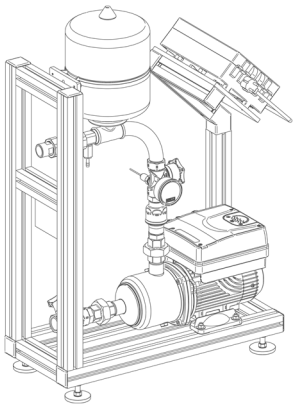
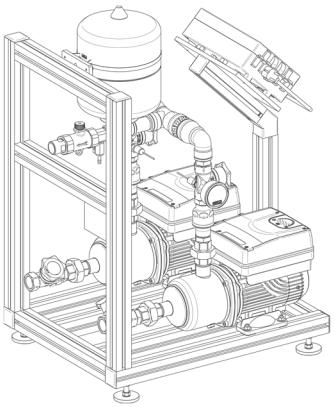




Pressure booster systems GENO-FU-X, GENO-HR-X, GENO-OSMO-FU-X, GENO-OSMO-HR-X

Intended use

The pressure booster systems GENO-FU-X and GENO-HR-X are designed for the low-noise supply of small and medium-sized distribution networks in buildings with raw water, softened water and partially demineralised water (permeate originating from reverse osmosis systems).

The pressure booster systems GENO-OSMO-FU-X and GENO-OSMO-HR-X may only be applied in combination with a GENO-OSMO-X reverse osmosis system.

The pressure booster systems GENO-FU-X and GENO-HR-X are designed for 100 % continuous operation.

The "N" version, for instance, is suited for the delivery of raw water, softened water or partially demineralised water of a reverse osmosis system, ultrafiltration system or nanofiltration system.

The „NE“ version is suited for the use in combination with the GENO®-EDI-X system as well as downstream of 2-stage reverse osmosis systems.

Function

In case of pressure booster systems GENO-FU-X-2 and GENO-HR-X-2, the run times of the pumps can be synchronised via an adjustable time interval. The fault changeover takes place automatically.

It is also possible to run the reverse osmosis systems in cascade operation. Thus, the delivery rate can nearly be doubled.

Pressure booster systems GENO-FU-X

The pressure booster system GENO-FU-X is speed-controlled via a pressure sensor and keeps the set working pressure constant to a large extent. Smooth start-up and run-down of the pump prevent water hammer. In addition, an expansion tank operating with forced flow, absorbs pressure fluctuations in case of major changes in the flow rate and reduces the switching frequency in case only small amounts are withdrawn.

In case of "0" consumption, the integrated, special pressure controller initiates the time-delayed switch-off of the pump. LEDs at the pump’s control panel inform on power supply, pump status and operating state.

Pressure booster systems GENO-HR-X

The pressure booster system GENO-HR-X is switched on via the freely adjustable pressure switch.

If the delivered flow comes to a standstill, the pump switches off after running on for a pre-set time.

The pressure at switch-off corresponds to the max. delivery pressure (shut-off head) of the pump.

Before the pump switches off, the diaphragm expansion tank with forced flow is filled with water. In case of high fluctuations in the flow, the switching operations of the pump are thus reduced.

Design

- Aluminium rack with adjustable feet to compensate for uneven floors
- Multi-stage centrifugal pump(s) with standard suction
- The system is activated by means of the control electronics installed at the system rack
- Control electronics with power switching
  - Versions „GENO-OSMO-FU-X” and „GENO-OSMO-HR-X” do not feature a control panel.
- Operating switch
- Operating record by means of SD-card
- Voltage-free signal/fault signal contact
- Two inputs for the release of the pump. Can be inter-connected with bus compatible GENO-OSMO-X.
- Non-return valve
- Pressure gauge
- Draining valve
- Contact water meter to indicate system flow respectively cascade connection

- Shut-off valves for each pump on the suction and pressure side of the pump
- Internal piping made of PE/PP and stainless steel, approved for drinking water
- Diaphragm expansion tank with forced flow
- Electrical connection to be made by others on site
- Suction and pressure lines are installed on one side (water).
- Operation on one side for test and setting purposes
- Self-venting pipes
- Low-noise pump due to multi-stage design
- Voltage-free fault signal output (NCC)
- Info display with
  - Indication of voltage supply by LED (illuminated, green LED)
  - Pump operation (illuminated, yellow LED
  - Signalling of single fault signals by flash frequency of red alarm LED

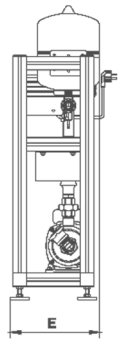
Pressure booster system GENO-FU-X

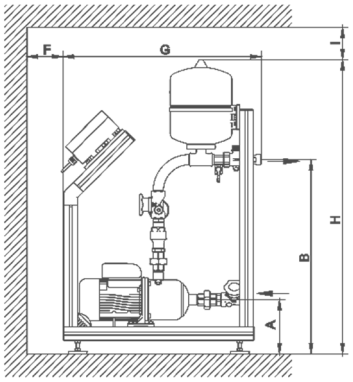
- Centrifugal pump with highly efficient permanent magnet motor IE5.
- Frequency converter with control panel, target pressure to be set with +/- key
- Pressure sensor made of stainless steel
- Pressure booster system GENO-HR-X
- Switch-on via pressure switch (manual) in case of pressure drop. Time delayed switch-off via contact water meter in case of zero flow
- Pressure switch made of stainless steel

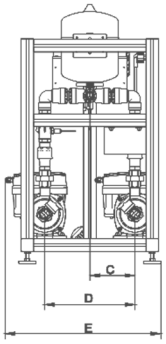
Scope of supply

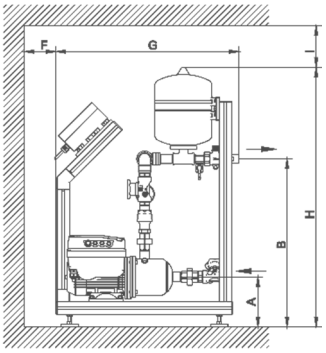
- Compact pressure booster systems on wooden pallets with cardboard wrap, ready for connection
- Operation manual

Technical specifications I GENO-FU-X N | GENO-OSMO-FU-X N









Dimensions and weights		2/40-1 N	2/40-2 N	4/40-1 N	4/40-2 N
A Height of water inlet (suction piece)	[mm]		180		
B Height of water outlet (pressure piece)	[mm]	650	610	650	610
C Centre distance (system centre – pump)	[mm]	–	163	–	163
D Centre distance (centre pumps)	[mm]	–	325	–	325
E System width	[mm]	300	560	300	560
F Min. distance - motor fan	[mm]		200		
G System depth	[mm]	660	660	680	680
H System height	[mm]	985	940	985	985
I Min. distance to pressure control	[mm]		200		
Empty weight	[kg]	26	39	27	41
Operating weight, approx.	[kg]	36	49	37	51
Shipping weight, approx.	[kg]	36	48	37	50
Order no. GENO-FU-X N		**730 640**	**730 641**	**730 642**	**730 643**
Order no. GENO-OSMO-FU-X N		**730 645**	**730 646**	**730 647**	**730 648**

Technical specifications I GENO-FU-X NE | GENO-OSMO-FU-X NE

Dimensions and weights		2/40-1 NE	2/40-2 NE	4/40-1 NE	4/40-2 NE
A Height of water inlet (suction piece)	[mm]		180		
B Height of water outlet (pressure piece)	[mm]	650	610	650	610
C Centre distance (system centre – pump)	[mm]	–	163	–	163
D Centre distance (centre pumps)	[mm]	–	325	–	325
E System width	[mm]	300	560	300	560
F Min. distance - motor fan	[mm]		200		
G System depth	[mm]	660	660	680	680
H System height	[mm]	985	940	985	985
I Min. distance to pressure control	[mm]		200		
Empty weight	[kg]	29	45	29	45
Operating weight, approx.	[kg]	39	55	39	55
Shipping weight, approx.	[kg]	39	54	39	54
Order no. GENO-FU-X NE		**730 790**	**730 791**	**730 792**	**730 793**
Order no. GENO-OSMO-FU-X NE		**730 795**	**730 796**	**730 797**	**730 798**

Technical specifications I GENO-HR-X | GENO-OSMO-HR-X N

Dimensions and weights		2/40-1 N	2/40-2 N	4/40-1 N	4/40-2 N
A Height of water inlet (suction piece)	[mm]		180		
B Height of water outlet (pressure piece)	[mm]	625	610	625	610
C Centre distance (system centre – pump)	[mm]	–	163	–	163
D Centre distance (centre pumps)	[mm]	–	325	–	325
E System width	[mm]	300	525	300	525
F Min. distance - motor fan	[mm]		200		
G System depth	[mm]		705		
H System height	[mm]		940		
I Min. distance to pressure control	[mm]		200		
Empty weight	[kg]	25	38	16	40
Operating weight, approx.	[kg]	35	48	36	50
Shipping weight, approx.	[kg]	35	47	36	49
Order no. GENO-HR-X N		**730 460**	**730 461**	**730 462**	**730 463**
Order no. GENO-OSMO-HR-X N		**730 466**	**730 467**	**730 468**	**730 469**

Technical specifications II GENO-FU-X N | GENO-OSMO-FU-X N

Connection data		2/40-1 N	2/40-2 N	4/40-1 N	4/40-2 N
Nominal diameter on suction/pressure side	[DN]	25/25		32/25	
Max. power input	[kW]	0.7	1.4	1.4	2.7
Power supply	[V]/[Hz]	210 - 240/50 - 60			
Protection/protection class		IP 55/⏚			

Admissible media to be pumped	2/40-1 N	2/40-2 N	4/40-1 N	4/40-2 N
Raw water, soft water	suitable			
Permeate (= pure water of an RO system)	suitable			
Deionate (= ultra-pure water of an EDI system)	not suitable			

Performance data		2/40-1 N	2/40-2 N	4/40-1 N	4/40-2 N
Nominal delivery rate (best pump efficiency)	[m³/h]	3.4		6.25	
Range of delivery rate	[m³/h]	0.8 - 5.2		1.4 - 10.2	
Range of delivery head	[mWC]	56 - 16		67 - 17	
Shut-off head	[mWC]	55	55	66	66
Maximum revolution speed	[1/min]	3600			
Nominal pressure		PN 10			
Max. inlet pressure	[bar]	4	4	3.5	3.5
Suction characteristics		standard suction			
Volume of diaphragm expansion tank	[l]	8			

Material of pump	2/40-1 N	2/40-2 N	4/40-1 N	4/40-2 N
Impellers	1.4301			
Diffuser	1.4301			
Pump housing	1.4301			
Shaft	1.4301			
Floating ring seal	ceramic/carbon/EPDM			

General		2/40-1 N	2/40-2 N	4/40-1 N	4/40-2 N
Water temperature	[°C]	5 - 40			
Ambient temperature	[°C]	5 - 40			
Order no. GENO-FU-X N		**730 640**	**730 641**	**730 642**	**730 643**
Order no. GENO-OSMO-FU-X N		**730 645**	**730 646**	**730 647**	**730 648**

Technical specifications II GENO-FU-X NE | GENO-OSMO-FU-X NE

Connection data		**2/40-1 NE**	**2/40-2 NE**	**4/40-1 NE**	**4/40-2 NE**
Nominal diameter on suction/pressure side	[DN]	25/25		32/25	
Max. power input	[kW]	0.7	1.4	1.4	2.7
Power supply	[V]/[Hz]	230/50			
Protection/protection class		IP 55/⏚			

Admissible media to be pumped	**2/40-1 NE**	**2/40-2 NE**	**4/40-1 NE**	**4/40-2 NE**
Raw water, soft water	suitable			
Permeate (= pure water of an RO system)	suitable			
Deionate (= ultra-pure water of an EDI system)	suitable			

Performance data		**2/40-1 NE**	**2/40-2 NE**	**4/40-1 NE**	**4/40-2 NE**
Nominal delivery rate (best pump efficiency)	[m³/h]	3.4		6.25	
Range of delivery rate	[m³/h]	0.8 - 5.2		1.4 - 10.2	
Range of delivery head	[mWC]	56 - 16		67 - 17	
Shut-off head	[mWC]	55	55	66	66
Maximum revolution speed	[1/min]	3600			
Nominal pressure		PN 10			
Max. inlet pressure	[bar]	4	4	3.5	3.5
Suction characteristics		standard suction			
Volume of membrane pressure vessel	[l]	8			

Material of pump	**2/40-1 NE**	**2/40-2 NE**	**4/40-1 NE**	**4/40-2 NE**
Impellers	1.4404			
Diffuser	1.4404			
Pump housing	1.4404			
Shaft	1.4404			
Floating ring seal	ceramic/carbon/EPDM			

General		**2/40-1 NE**	**2/40-2 NE**	**4/40-1 NE**	**4/40-2 NE**
Water temperature	[°C]	5 - 40			
Ambient temperature	[°C]	5 - 40			
Order no. GENO-FU-X NE		**730 790**	**730 791**	**730 792**	**730 793**
Order no. GENO-OSMO-FU-X NE		**730 795**	**730 796**	**730 797**	**730 798**

Technical specifications II GENO-HR-X N | GENO-OSMO-HR-X N

Connection data		**2/40-1 N**	**2/40-2 N**	**4/40-1 N**	**4/40-2 N**
Nominal diameter on suction/pressure side	[DN]	25/25		32/25	
Max. power input	[kW]	1.1	2.1	1.4	2.7
Power supply	[V]/[Hz]	230/50			
Protection/protection class		IP 55/⏚			

Admissible media to be pumped	
Raw water, soft water	suitable
Permeate (= pure water of an RO system)	suitable
Deionate (= ultra-pure water of an EDI system)	not suitable

Performance data		**2/40-1 N**	**2/40-2 N**	**4/40-1 N**	**4/40-2 N**
Nominal delivery rate (best pump efficiency)	[m³/h]	2.0		4.0	
Range of delivery rate	[m³/h]	1.0		2.4 - 7.2	
Range of delivery head	[mWC]	54 - 24		50 - 16	
Shut-off head	[mWC]	58		60	
Nominal revolution speed (50 Hz)	[1/min]	2900			
Nominal pressure		PN 10			
Max. inlet pressure	[bar]	4			
Suction characteristics		standard suction			

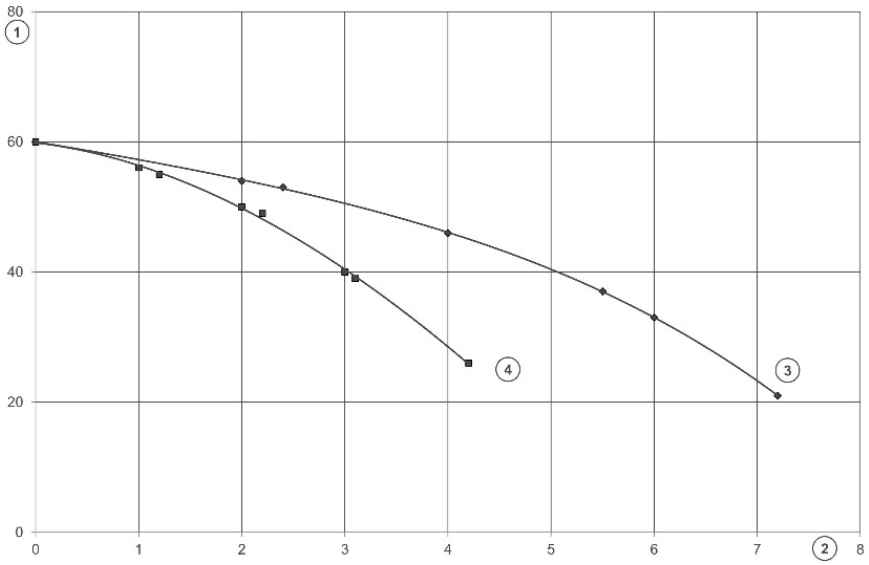
Material of pump	**2/40-1 N**	**2/40-2 N**	**4/40-1 N**	**4/40-2 N**
Impellers	technical polymer			
Diffuser	1.4301			
Pump housing	1.4301			
Shaft	1.4301			
Floating ring seal	ceramic/carbon/EPDM			

General		**2/40-1 N**	**2/40-2 N**	**4/40-1 N**	**4/40-2 N**
Water temperature	[°C]	5 - 40			
Ambient temperature	[°C]	5 - 40			
Order no. GENO-HR-X N		**730 460**	**730 461**	**730 462**	**730 463**
Order no. GENO-OSMO-HR-X N		**730 466**	**730 467**	**730 468**	**730 469**

Characteristic curves:

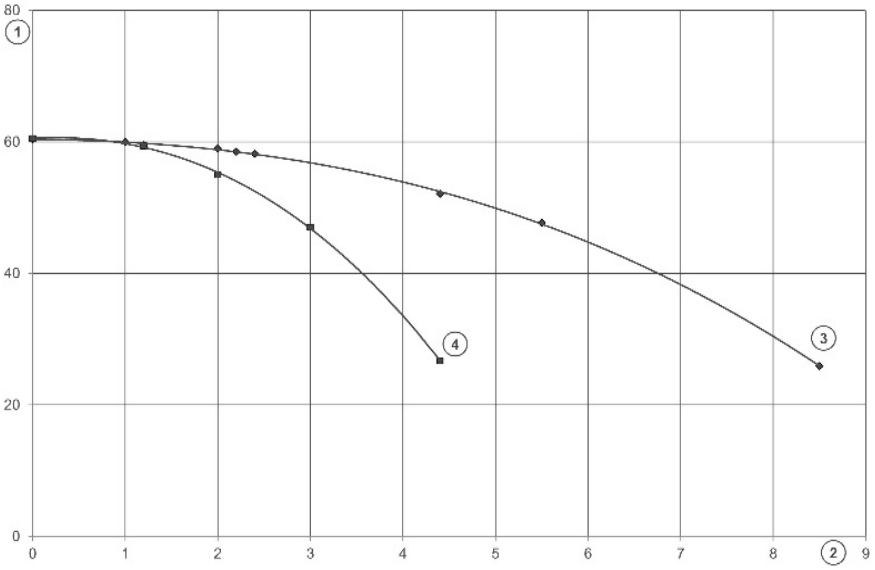
Pressure booster system GENO-FU-X 2/40 N | GENO-FU-X 2/40 NE

Pressure booster system GENO-OSMO-FU-X 2/40 N | GENO OSMO-FU-X-2/40 N



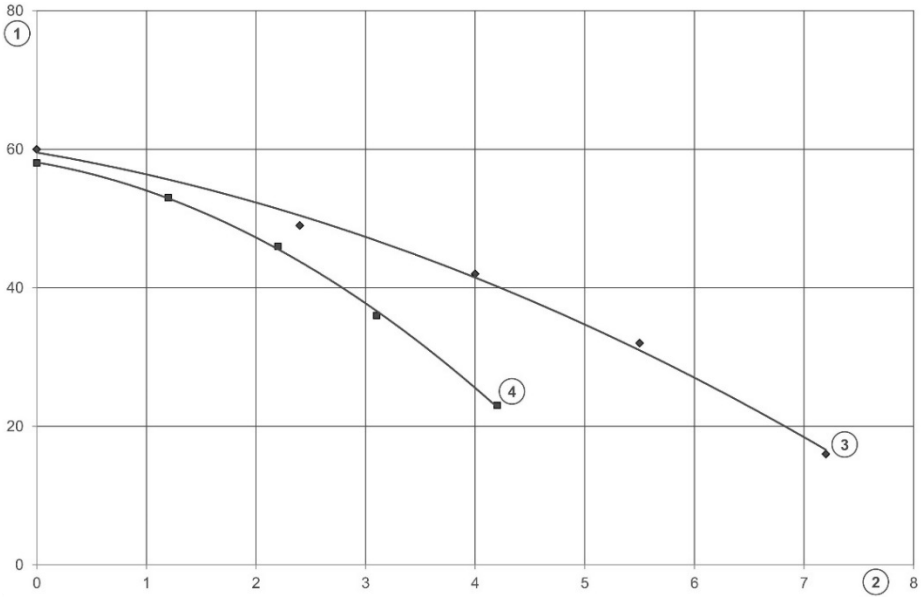
Item	Designation	Item	Designation
1	Delivery head [m]	3	GENO-FU-X 2/40 N GENO-OSMO-FU-X 2/40 NE
2	Delivery rate [m³/h]	4	GENO-FU-X 2/40 N GENO-OSMO-FU-X-2/40 NE

Pressure booster system GENO-FU-X 4/40 N | GENO-FU-X 4/40 NE
Pressure booster system GENO-OSMO-FU-X 4/40 NE | GENO-OSMO-FU-X-4/40 NE



Item	Designation	Item	Designation
1	Delivery head [m]	3	GENO-FU-X 4/40 N GENO-OSMO FU-X-4/40 NE
2	Delivery rate [m³/h]	4	GENO-FU-X 4/40 N GENO-OSMO FU-X-4/40 NE

Pressure booster system GENO-HR-X 4/40 N | GENO-HR-X 2/40 N
Pressure booster system GENO-OSMO-HR-X 4/40 N | GENO-OSMO-HR-X 2/40 N



Item	Designation	Item	Designation
1	Delivery head [m]	3	GENO-HR-X 4/40 N GENO-OSMO-HR-X 4/40 N
2	Delivery capacity [m³/h]	4	GENO-HR-X 2/40 N GENO-OSMO-HR-X 2/40 N

Installation requirements

Observe local installation directives, general guidelines and technical specifications.

The installation site must be frost-proof. The system must be protected from chemicals, dyes, solvents and vapours.

An adequate distance for installation and service work must be observed.

The installation room must have a floor drain. If no floor drain is available, an appropriate safety device (e.g. GENO-STOP) has to be installed.

Floor drains that discharge to a lifting system do not work in case of a power failure.

Contact

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