HYDRO **SOLV®**

Type: AFM

Application

HydroSOLV® AFM filters are used for the treatment of highly contaminated raw water with suspended particles. Solid particles, which are larger than the spaces between the filter bed, are mechanically retained. By combining of several filter materials, the absorption capacity of the system is increased, and filter blocking prevented. Finest turbidity can also be removed partially by binding to the surface of the filter material.

An application field for example is the treatment of borehole water with a high proportion of suspend matter.

Activated glass filter media is manufactured from a specific glass type and processed to obtain the optimum particle size and shape.
The high surface area is negatively charged (zeta potential) to adsorb organics and small particles. It is more efficient and cost-effective than any other filtration media.

The media is bio-resistant and will not support bacterial growth -> no biofilm formation on the AFM® surface.

Filtration + Cleaning

Operation of **HydroSOLV® AFM** multilayer filter is according to the equal-flow method in three steps:

- **Filtration**
  The water to be treated is passing the **HydroSOLV® AFM** activated glass media from top to bottom

- **Backwash**
  The filter bed is flushed from bottom to top and the filter media is cleaned and dirt is flushed out.

- **Rinse**
  Water is passing the filter bed from top to bottom whereby any remaining contamination is flushed out and the filter bed is compacted again

The **HydroSOLV® AFM** activated glass media filtration is again ready for filtration process.

Function

HYDRO **SOLV®** filter designed and constructed as single vessel filter.
A fully automatic operation is guaranteed by a modern and efficient micro processor control. Backwash is preferably with time control and, on request, with volume control as an option.

The following functions and display monitoring can be requested and retrieved via the control:

Diagnose mode
Days since last backwash
Flow (size DN 25 only)
History

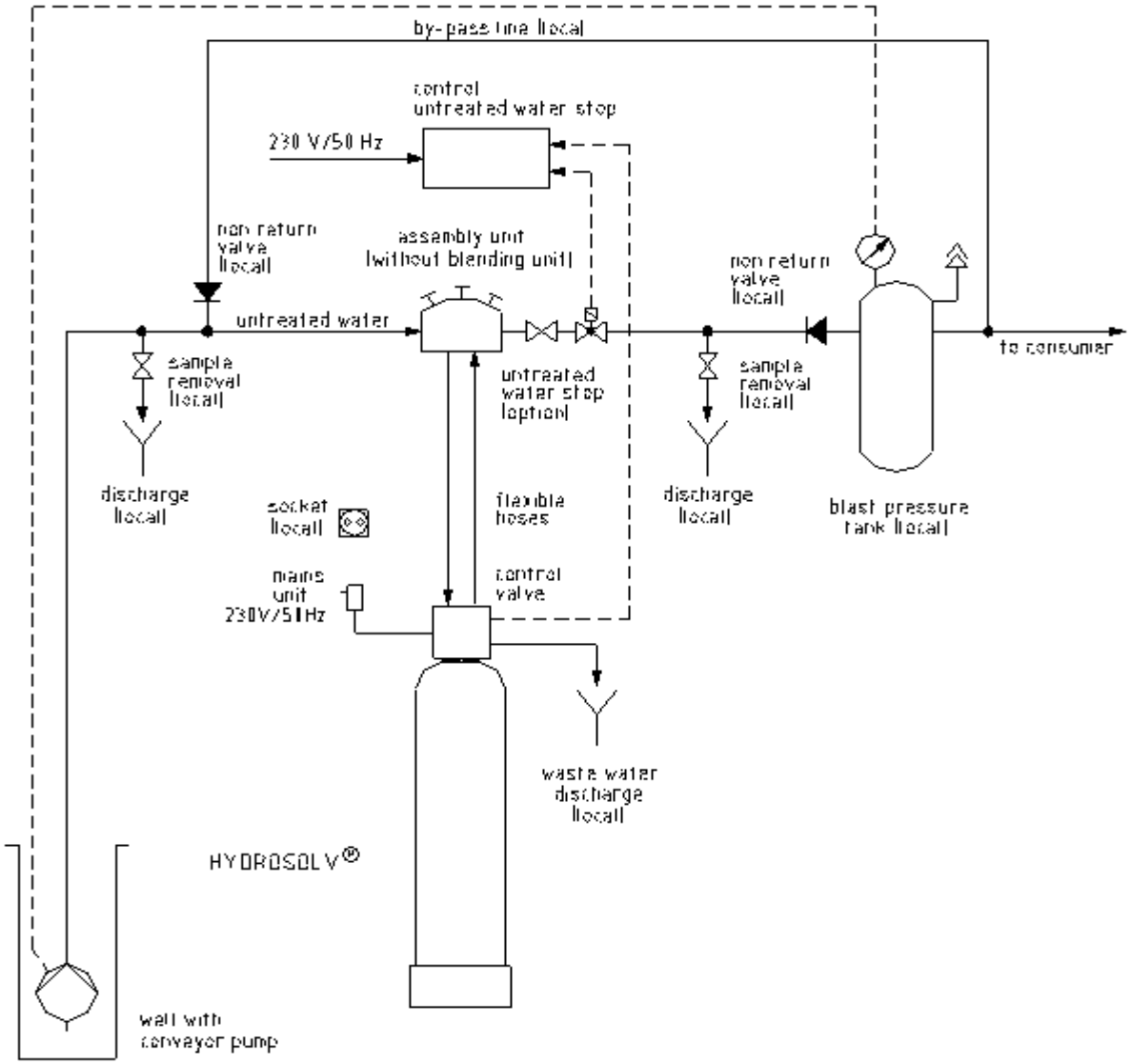
Description / Scope of supply

HYDRO **SOLV®** filter consisting of:

1 x pressure vessel
1 x filter material (see page 3 – technical data)
1 x central control valve made from plastic (Noryl)
1 x turbine-type water meter (DN 25 only)
1 x throttle valve to adjust the volume flow
1 x mains plug
1 x O&M manual

Accessories

Raw water stop DN 25 – Art. no. 550.061
Raw water stop DN 40 – Art. no. 550.073
Turbine-type water meter DN 40 – Art. no. 590.446



Note / conditions for installation

- The technical data and any general technical regulations as well as local installation rules shall be observed and ensured.
- The ambient temperature as well as any possible radiation heat shall not exceed 40°C.
- The installation site shall be resistant to frost.
- The installation site shall be free from fumes from solvents, color, lacquer and chemicals.
- A mains socket (230 V / 50 Hz) shall be provided adjacent to the system.
- A drain shall be provided (DN100) for backwash water.
- When using a lifting appliance, the size shall be adapted to the waste water volume.

Technical data		HYDRO SOLV ® AFM						
Type		**1054**	**1354**	**1465**	**1665**	**1865**	**2162**	**2472**
Connection feed / outlet		DN 25 (R 1" M)					DN 40 (R 1 1/2" M)	
Connection waste water		3/4"	1"	1"	1"	1"	1"	1"
Drain line (min.)		DN 100						
Connected load		230 V / 50 Hz AC						
Electrical connection		15 V AC / 500 mA						
Operational pressure min. / max.		2,0 bar / 8,0 bar						
Water temperature min. / max.		5 °C / 30 °C						
Ambient temperature max.		5 °C / 40 °C						
Resin vessel volume	Ltr.	63	105	150	194	257	330	473
Diameter pressure tank	mm	257	336	363	413	486	550	626
Filling								
Anthrazit filter media	Ltr.	12	20	30	40	60	70	80
AFM filter media, grade 2 (1.0-2.0 mm)	kg	12,5	12,5	25	25	38	50	70
AFM filter media, grade 1 (0.4-1.0 mm)	kg	25	50	62,5	75	100	125	175
Backwash	Min.	10	10	10	10	10	10	10
Rinse	Min.	5	5	5	5	5	5	5
Flow *)	m^3/h	1,0	1,5	2,2	3,0	3,5	4,5	5,0
Min. required backwash flow volume	m^3/h	1,7	2,5	3,4	3,9	4,5	5,7	7,7
Backwash water volume	m^3	0,4	0,6	0,9	1,0	1,1	1,4	1,9
Dimensions								
H = Height max.	mm	1800	1800	2100	2100	2150	2150	2350
H1 = Height pressure tank	mm	1386	1393	1674	1671	1722	1721	1915
H2 = Height feed / outlet control valve ~	mm	1441	1448	1729	1726	1777	1786	1980
H3 = Height with control valve ~	mm	1566	1573	1854	1851	1902	1901	2095
B = Width max.	mm	300	350	380	420	500	600	650
T = Depth max.	mm	300	350	380	420	500	600	650
Operational weight max.	kg	72	117	171	217	291	375	533

*) Actual flow dependent on water quality, filter performance and local installation.

Note: Technical advice and design from our water treatment expert is required!

Dimensions HYDRO **SOLV®** **AFM**