

# FILTER FOR SELECTIVE heavy metal removing, for constant operation series MH/D-130 - MH4/D-1000 efficiency 3,2 - 41,0 m<sup>3</sup>/h

Heavy metals are the elements, which mass density amounts to more than 4,5 g/cm<sup>3</sup>.

Heavy metals include:

- \* Chromium - Cr
- \* Zinc - Zn
- \* Cadmium - Cd
- \* Cobalt - Co
- \* Manganese - Mn
- \* Copper - Cu
- \* Molybdenum - Mo
- \* Nickel - Ni
- \* Lead - Pb
- \* Mercury - Hg
- \* Selenium - Sn
- \* Vanadium - V
- \* Wolfram - W
- \* Iron - Fe
- \* Selenium - Sn



Some heavy metals, called microelements, are necessary for proper functioning of the living organisms, others do not have physiological role, but there are also metals and their compounds, which are redundant or even harmful for plants and human beings. Such metals are called toxic elements and compounds.

The amount of microelements in living organisms is usually trace, typical of each species. Deficiency or excess may harm the organisms.

The toxic metals contaminate the environment. The strongest toxic properties are shown by inorganic metal compounds, which easily dissolve and decompose, due to their abilities to permeate through cell membranes and penetrate bodily organs. They accumulate chiefly in kidneys, adrenal glands, liver, lungs, even in skin and hair. Such accumulation of toxic substances may lead to high blood pressure, cancer, kidney, liver or brain damage, or even mental aberration.

Heavy metals also contaminate the environment – soil, water, air and, directly or indirectly – together with food – get into human and animal organisms.

Our special filters, for removing heavy metals are used for some sewage sorts treatment, e.g. in electroplating plants. These systems are used in industrial plants, where heavy metal concentration exceeds acceptable level. Apart from these systems, selective ion exchange process may be conducted, as the standard water purification, supplement.

Model		MH/D-130	MH/D-180	MH/D-210	MH/D-300	MH/D-500	MH/D-700	MH/D-1000	
Media	Cation exchanger quantity [L]	130	180	210	300	500	700	1000	
	Type [inch]	16 x 65	18 x 65	21 x 66	24 x 69	30 x 78	36 x 78	42 x 78	
Valve type		Magnum							
Regenerant tank	Volume [L]	300	300	300	550	550	1000	1400	
	Salt quantity [L]	150	150	420	350	350	700	1000	
Flow <sup>I</sup>	Minimal [m <sup>3</sup> /h]	3,2	4,5	5,2	7,5	12,5	17,5	25	
	Nominal [m <sup>3</sup> /h]	4,0	5,4	6,5	9,0	14,2	20,5	28,5	
	Maximal [m <sup>3</sup> /h]	5,7	8,0	9,2	12,0	20,5	26,5	41	
Ion exchange capacity	Max [val]	260	360	50	600	1000	1400	2000	
	Min [val]	156	216	252	360	600	840	1200	
Regenerant consumption <sup>II</sup>	33% HCl [kg]	32,5	45	52,5	75	125	175	250	
	33% NaOH [kg]	36,4	50,4	58,8	84	140	196	280	
Water quantity in cycle <sup>III</sup>	Max [m <sup>3</sup> ]	87	120	140	200	333	466	690	
	Min [m <sup>3</sup> ]	52	72	84	120	200	280	420	
Backwash capacity [L/min.]		6,5	9	10,5	15	25	35	45	
Recommended backwash time [min.]		10					15		
Pressure drop <sup>IV</sup> [bar]		0,2					0,3		
Working pressure [bar]		2 - 8							
Feed water temperature [°C]		1 - 38							
Power supply [V]		220/12							
Water connection [inch]		1 1/2			1 3/4			2	
Filter dimensions	A [m]- height	1,95	1,95	1,95	2,05	2,12	2,12	2,40	
	B [m]- width	0,40	0,45	0,53	0,6	0,75	0,9	1,1	
Tank dimensions	C [m]- height	1,06	1,06	1,06	1,14	1,14	1,14	1,14	
	D [m]- width	0,62	0,62	0,62	0,82	0,82	1,16	1,16	

**Unit calculator:**

- 3,8 liter/min = 1 GPM
- 1 inch = 2,54 cm
- 1 bar = 1 atm = 15 PSI
- 1 mval/liter = 5 °F = 2,8 °N = 50 mg CaCO<sub>3</sub>/dm<sup>3</sup>

**Explanations:**

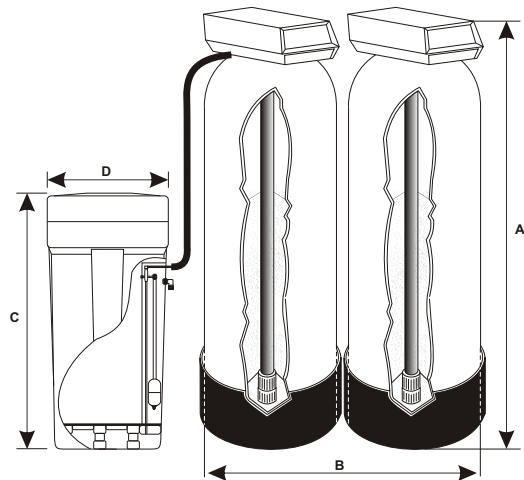
- <sup>1</sup> for household purposes
- <sup>2</sup> regeneration, II-stages: I - 10% HCl; II - 2% NaOH
- <sup>3</sup> for heavy metal contents of 3 mval/l. (np. Zn<sup>2+</sup> = 100 mg/l.)
- <sup>4</sup> depending on water quality and flow

**The components are TUV and PZH certified, conform to the EU directives**



**We also offer:**

- Softeners and Iron Removers
- Special filters
- UV lamps
- Reverse osmosis
- Chemicals dosing systems
- Demineralizers
- Galvanic waters treatment



**\*Due to the fast technology development we reserve the right to change technical data without prior notice**