

**FILTERSORB**

**FILTRATION**

**ADSORPTION**

**INSTANT PRODUCTS**

**OXY TREATMENT**

**SYSTEMS**

# KATALOX LIGHT

ADVANCED FILTRATION MEDIA

## FILTRATION OF

- ◆ Less than 3 micron
- ◆ Suspended solids
- ◆ Sediments
- ◆ Turbidity
- ◆ Organics
- ◆ Color
- ◆ Odor

## REMOVAL OF

- ◆ Iron
- ◆ Manganese
- ◆ Hydrogen Sulfide
- ◆ Arsenic
- ◆ Radium
- ◆ Heavy Metals
- ◆ Radionuclides

## FEATURES

### HIGH

- ✓ MnO<sub>2</sub> Content (10%)
- ✓ Surface Area
- ✓ Filtration Rate
- ✓ Iron Removal Capacity
- ✓ Manganese Removal Capacity
- ✓ H<sub>2</sub>S Removal Capacity

### NO

- ✗ Disinfection By-Product
- ✗ Frequent media replacement
- ✗ Mandatory dosing requirement
- ✗ Crystalline Silica
- ✗ Extra operational costs
- ✗ Competition

**KATALOX LIGHT**  
SETTING BENCHMARKS  
IN WATER INDUSTRY



PREMIUM QUALITY  
MADE IN GERMANY





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### WHAT IS KATALOX LIGHT®?

**KATALOX LIGHT®** is a new brand of revolutionary advanced filtration media completely developed in Germany. It's composition simply makes it outstanding against the contemporary filter media available in water treatment industries, like sand, BIRM, Greensand Plus, Manganese Greensand etc. **KATALOX LIGHT®** is manufactured in Germany.

**KATALOX LIGHT®** is engineered with unique MnO<sub>2</sub> coating technique on **ZEOSORB®**, providing it light weight, higher filtration surface, more service life and more reliable performance (filtration down to 3 µm) than any other existing granular filter media.

**KATALOX LIGHT®** is being used in numerous system for residential, commercial, industrial and municipal applications worldwide. Suitable for high level filtration, color and odor removal, Iron, Manganese, Hydrogen sulfide removal, efficient reduction of Arsenic, Zinc, Copper, Lead, Radium, Uranium and other radionuclides and heavy metals.

**KATALOX LIGHT®** is ANSI/NSF 61 Certified for drinking water applications and has met the ANSI/ NSF 372 Lead free compliance.

### ADVANCED USE

High concentration coating of MnO<sub>2</sub> on the **KATALOX LIGHT®** surface (10%) is the biggest advantage compared to any similar product available in the market. This makes the oxidation and co-precipitation of contaminants much more effective. For removal of very high concentration of contaminant it's recommended to use H<sub>2</sub>O<sub>2</sub> as an oxidizer, which provides accelerated catalytic oxidation on the surface of the media. Conventional oxidizing agents like chlorine or potassium permanganate also could be used if required.



**KATALOX LIGHT®** can be used for Arsenic, Radium, Uranium removal but in these cases there is requirement of Iron in the water. **KATALOX LIGHT®** system is designed with special iron dosing technology which has many advantages over Adsorbent media used for Heavy Metal removal.

### KATALOX LIGHT VS COMPETITION

- Filtration down to 3 micron
- High resistance to chemicals and oxidants
- Long life time 7 to 10 years
- Highest Capacity in the market

	<b>KATALOX LIGHT</b>	COMPETITORS
Removal of Iron & Manganese	✓	✓
Removal of Hydrogen Sulfide (H <sub>2</sub> S)	✓	✗
Reduction of Turbidity, Suspended Solids and SDI	✓	✗
Filtration up to 3 Microns	✓	✗
Compact Installations (Only 1 step)	✓	✗
Light Weight material	✓	✗
Backwash Water Savings	✓	✗
Coating with High MnO <sub>2</sub> Content (>10%)	✓	✗

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**SYSTEMS**

KL System  
with simple  
Manual  
Control



KL System  
with fully  
Automatic  
Control

## THE FUTURE

In our perspective, the forthcoming developments in water treatment will present us with increasingly complex challenges, necessitating the use of more sophisticated and durable products. Watch Water® envisions that KATALOX LIGHT® could be leading in technological advancements.

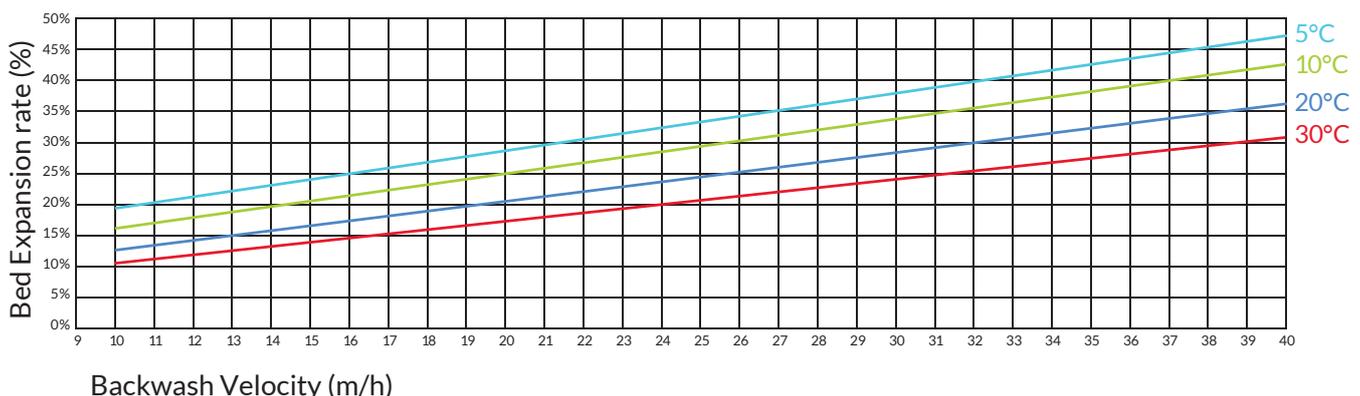
Water treatment industry now has access to cutting-edge catalytic filtration technology through Watch Water® - KATALOX LIGHT® systems. These systems are meticulously designed with the needs of both professionals and consumers in mind. They come in various models and can be tailored for manual backwash without electricity or configured to operate as fully-automatic units. The versatility of this system allows for use in a wide range of applications like municipality and industrial applications.

## Standard Pressure Vessel Listing for Katalox Light® Systems (Manual/Automatic)

Pressure Vessel			KL Media Amount				Service Flow Rate				Backwash Flow Rate	
Vessel Mode	Tank Volume (liters)	Free-board (%)	Volume			Bed Height (mm)	Standard		Maximum		(m³/h)	(gpm)
			(%)	(liters)	(ft³)		(m³/h)	(gpm)	(m³/h)	(gpm)		
10x44	49.0	40	55	28.0	1.0	580	0.5	2.20	0.6	2.64	1.40	6.2
13x54	105.7	40	55	56.0	2.0	740	1.0	4.40	1.2	5.28	2.39	10.5
14x65	148.0	40	55	84.0	3.0	897	1.5	6.60	1.8	7.96	3.63	16.0
18x65	257.0	40	55	140.0	5.0	940	2.5	11.00	3.0	13.20	4.59	20.2
21x60	310.0	40	55	168.0	6.0	834	3.0	13.21	3.6	15.85	6.25	27.6
24x69	450.0	40	55	252.0	9.0	926	4.5	19.81	5.4	23.77	8.84	39.0
30x78	710.0	40	55	392.0	14.0	935	7.0	30.82	8.4	36.98	12.76	56.3
36x78	1020.0	40	55	560.0	20.0	932	10.0	44.02	12.0	52.83	18.37	81.0
42x78	1360.0	40	55	756.0	27.0	913	13.5	59.44	16.2	71.32	25.01	110.3
48x82	1840.0	40	55	1008.0	36.0	946	18.0	79.25	21.6	95.10	32.67	144.0

**Note :** » This is standard system parameter by considering ideal situation. It might vary depending on inlet parameters.  
 » Consider to design system with standard flow rate. At higher flow rate filtration quality might be compromised.  
 » 5 % gravel has been considered in above system parameters. If not, then consider 60% media volume.

## Backwash Velocity (m/h) vs. Bed Expansion (%)



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## Excellent Filter Media For Removal of **IRON (Fe), MANGANESE (Mn), H<sub>2</sub>S** as well as **Arsenic, Radionuclide and Heavy Metals** in Water

### SYSTEM OPERATING CONDITIONS

Inlet water pH		5.8 - 10.5
Freeboard		40%
Minimal Bed Depth	US	29.5 inches
	SI	75 cm
Optimal Bed Depth	US	47 inches
	SI	120 cm
Service Flow	US	4 - 12 gpm / ft <sup>2</sup>
	SI	10-30 m/h
Backwash velocity**	US	10-12 gpm / ft <sup>2</sup>
	SI	25-30 m/h
Backwash time**		10-15 minutes
Rinse time**		2-3 minutes

\*\* Note : Stated parameters could be more or less in some cases depending on inlet parameters.

**Please note: 'KATALYST LIGHT®' and KATALOX LIGHT®' are NOT two different products. They are just two different trade names for the same product.**

### TECHNICAL SPECIFICATIONS

Mesh size	US	14 x 30
	SI	0.6 - 1.4 mm
Uniformity Coefficient		≤ 1.75
Bulk density	US	66 lb / ft <sup>3</sup>
	SI	1060 kg / m <sup>3</sup>
Loading Capacity	For Fe <sup>2+</sup> alone	3000 mg/l 85000 mg/ft <sup>3</sup> (Aprx)
	For Mn <sup>2+</sup> alone	1500 mg/l 42500 mg/ft <sup>3</sup> (Aprx)
	For H <sub>2</sub> S alone	500 mg/l 14000 mg/ft <sup>3</sup> (Aprx)

### Regeneration / Dosing\*

	Fe <sup>2+</sup>	Mn <sup>2+</sup>	H <sub>2</sub> S
H <sub>2</sub> O <sub>2</sub>	0.9 mg/l	1.8 mg/l	4.5 mg/l
KMnO <sub>4</sub> /Cl	1.0 mg/l	2.0 mg/l	5.0 mg/l

\* Optional : Only if the water doesn't have sufficient ORP (Oxidation Reduction Potential) to oxidize the contaminants. **OXYDES-P** helps to keep the media surface clean and could be used during backwash.

**Disclaimer :** The information in this publication is based on reliable data and is provided in good faith, without warranty or performance guarantee, as product use conditions are beyond our control. Watch Water GmbH, Germany, does not offer express or implied warranties, including merchantability or fitness for a specific purpose. Users should assess product suitability and performance with their equipment. Specifications may change without notice. Please note that the filter media in this brochure do not eliminate bacteria. Do not use our products with microbiologically unsafe or unknown-quality water without proper disinfection. Watch Water GmbH, Germany, is not liable for consequential or incidental damages, such as lost profits from product use.



### Standard Packaging

Packaging	Weight of product	Quantity/ pallet	Gross Wt./ pallet	Certification
Bag (28 L)	30 kg	40	1225 kg	NSF/ANSI/ CAN 61 & 372
Bulk Bag (1000 L)	1060 kg	1	1085 kg	

\* Other packaging can be considered on request

