

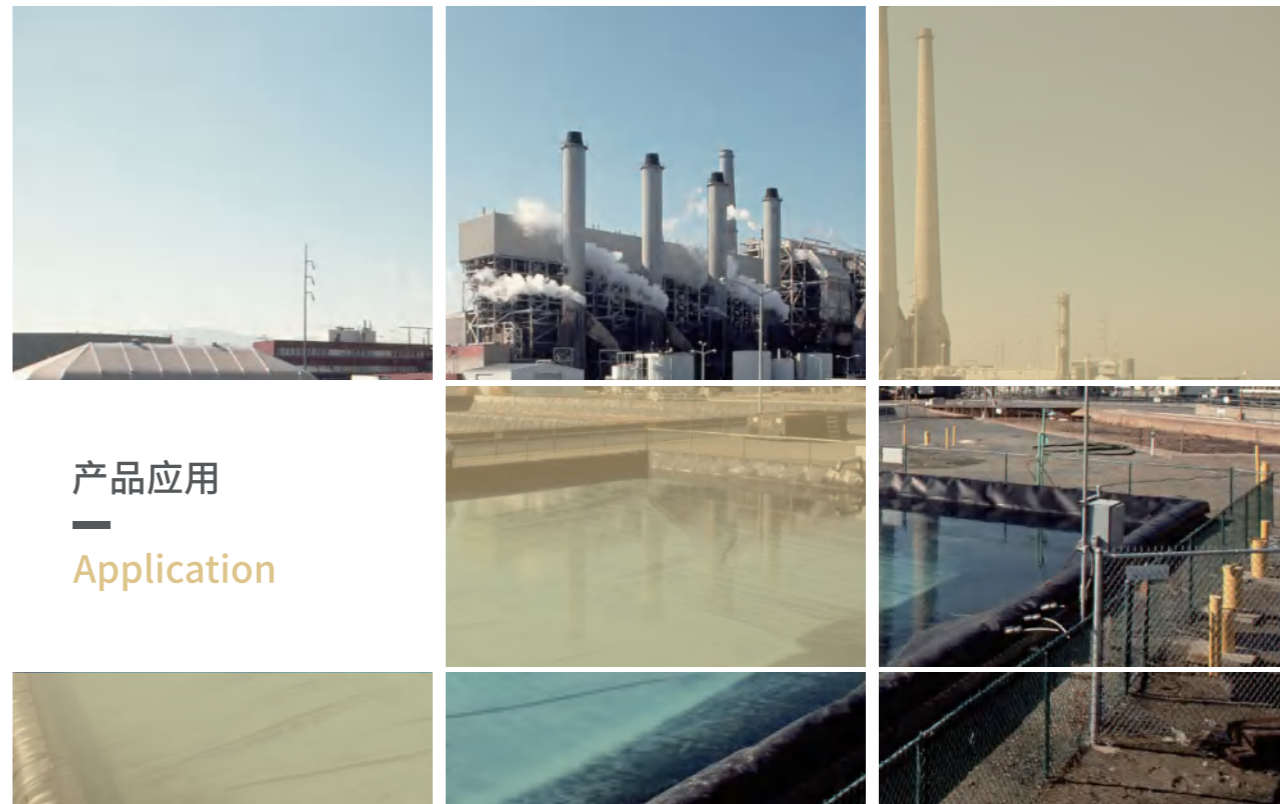
# BOWNT BOM

## 产品概述

### Description

BOWNT BOM介质过滤器具有独特的内部设计,可以确保过滤时水平稳,过滤效果好。设备反冲洗时形成高效内环流,反冲效率大大提高。具有高效全自动过滤,压差、时间、手动自动反冲洗,反冲洗用水少,占地面积小的优势。

BOWNT BOM Media Filter has a unique internal design, which can ensure stable filtering and good filtration effect. Backwashing efficiency is greatly improved because of the high efficiency inner loop. Compared with conventional sand filter, BOWNT BOM has distinct advantages on efficiency, automation degree, water consumption and space occupation, backwashing cycle can be activated by the differential pressure, time or manual control.

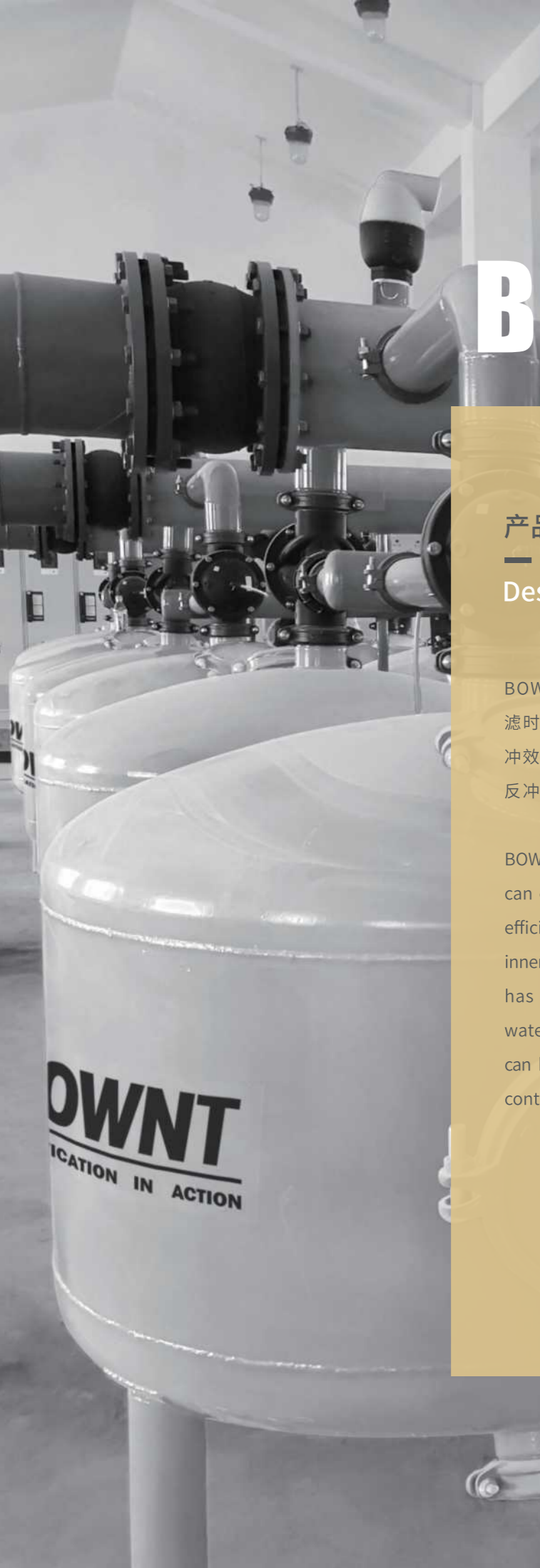


## 产品应用

### Application

工业循环水旁滤、低浊度(100mg/L)污水处理、海水淡化、中水回用、预处理等。

Industrial circulating cooling water filtration, low turbidity (100mg/L) sewage treatment, desalination, water reuse and pre-treatment etc.



## 介质过滤器单元结构特点

### Structure Characteristics

**01 /** 过滤器外壳为优质钢材,内外防腐(衬胶或喷塑),罐体精准焊接,可承受145psi(1Mpa)的压力。

Filter housing is made of high quality steel with internal & external anti-corrosive painting( rubber liner or plastic coating), the operating pressure is up to 145psi(1Mpa).

石英砂 /  
Quartz sand

**03 /** 介质过滤器上下设计了可拆卸人孔,下部的用于安装、调整集水器和清空维护内部滤料,上部的用于投加滤料和检查内部工作情况。过滤器应用水压密封原理,上、下人孔都采用防止水泄漏工艺设计,安全稳定、使用可靠。

BOWNT BOM is designed with removable manholes. The bottom one is used for installing and adjusting the water collectors or emptying and the filter for maintenance. The top one is used for adding filter material and checking the internal filtering situation. Leakage-proof manholes are adopt water sealing technology, which is more safe, stable and reliable.

无烟煤 /  
Anthracite

**BOM**

活性炭 /  
Activated carbon

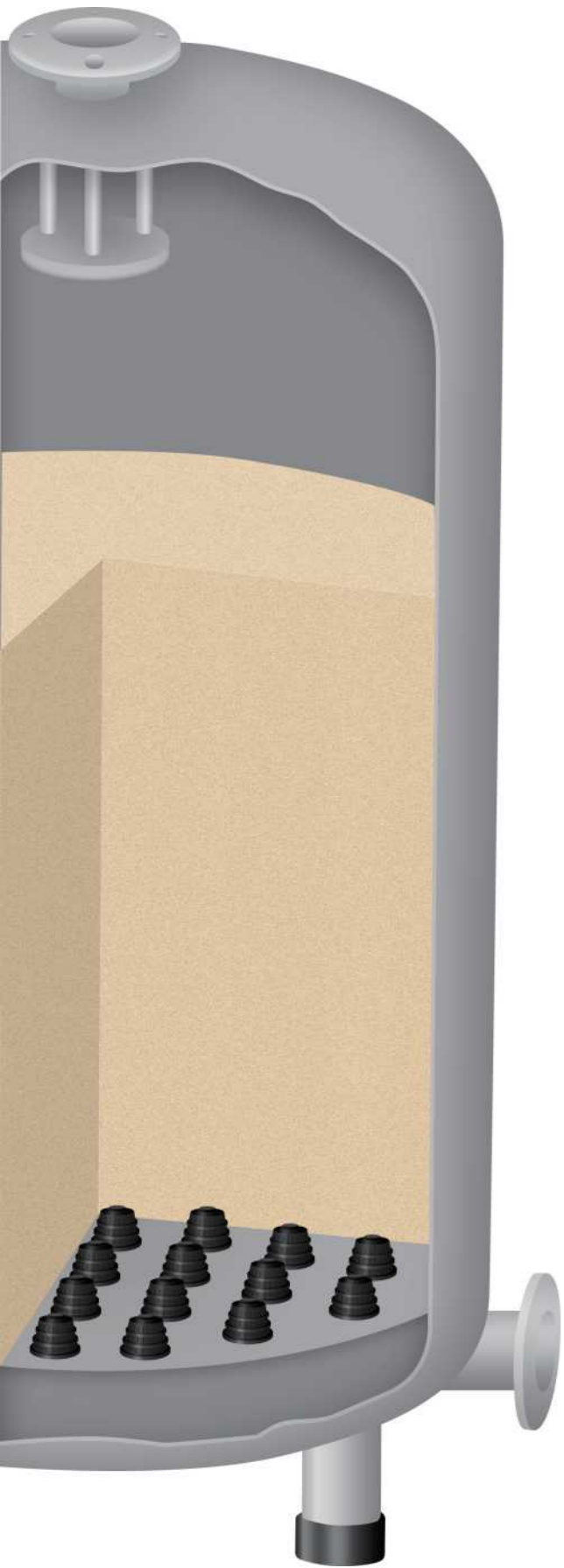
**02 /** 原水即使在高流速的情况下,通过顶部扩散器可以均匀分部到过滤器内部,过滤效果更加明显。

Feed water can be uniformly distributed to the cavity through the filter diffuser even under high flow velocity, greatly improved of filtration effect.

**04 /** 特殊设计安装的伞状压差补偿过滤集水器,可以使系统在过滤状态下各部分水压平衡,过滤流速高,效率高;系统在反洗状态下,内部水流形成内环流,反洗效果好、彻底省水。

Special design of umbrella-shaped pressure compensation water collectors ensures a pressure balance for all parts during filtration, high flow velocity and efficiency; inner loop during the backwashing cycle attributes to a good backwash effect and lower water consumption.

磁铁矿 /  
Magnetite



## BOWNT BOM浅层砂过滤器性能特点

### Characteristics

- 独特罐装过滤单元, 性能稳定。

Unique tank filter unit with stable performance.
- 模块化设计的BOWNT BOM SF系列浅层砂过滤器, 可以根据流量的大小、占地要求, 安装形式等要求多单元灵活组合。

BOWNT BOM shallow sand filter with modular design, flexible combination of multi-units to meet with different flow rate, space and installation requirements.
- 采用时间、压差、手动等多种方式自动启用反冲洗模式, 反洗同时可以保持连续产水。

Filter can activate backwashing cycle by time, pressure differential and manual operation, backwashing without an interruption of filtration.
- 反洗时形成内旋流, 反洗效率高, 反洗时间短, 反洗时节水 (反洗用水量是传统砂滤器的1/3左右)。

Filter forms a inner loop during backwashing cycle, high efficiency, short backwashing time and low water consumption ( the backwashing water consumption is about 1/3 of the traditional sand filter).
- 安装方便, 不需要复杂起重装置。

Easy installation and free of complicated lifting device.
- 占地面积小, 可以根据实际用地情况灵活布置过滤单元的排列; 系统重量轻, 不需要特别的安装基座要求; 一般水平混凝土地面即可安装使用。

Filter units can be flexible arrayed for space-saving. The light weight makes it available of simple installation on the concrete ground.

## BOWNT BOM浅层砂过滤器工作原理

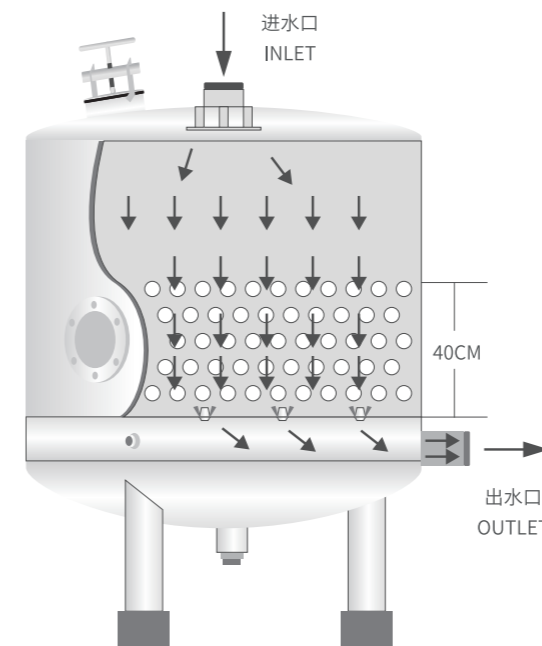
### Working Principle

过滤: 过滤系统是由多个过滤单元组成, 过滤时原水由进水总管进入, 再分别经过进水三通阀进入各过滤单元 (此时进水三通阀接通进水总管和过滤单元, 切断排污管) 进行过滤, 过滤的水汇总到出水总管后流出。原水经过扩散器, 配合特殊设计的外壳, 以接近平流的状态到达过滤器内的填料层。当水流过填料层时, 杂质被截留在填料层内。过滤器底部有伞状的过滤集水器, 将过滤后的水均匀地收集并流出。平流过滤, 决定过滤器可以在高的流速下过滤, 仍可达到较好的过滤效果。

BOWNT BOM filter is consist of several filter units, raw water feeds into the filter units through the inlet manifold and three-way valves, clean water after filtration is collected to the outlet manifolds. When the raw water is filled into the filter unit, water goes smoothly through the diffuser and filter layers close to an advection state, the impurities are intercepted in the layers, while the clean water is collected by the umbrella-shaped water collectors at the bottom of the filter. BOWNT BOM filter adopts advection filtration, which can realize a good filtration effect with high flow velocity.

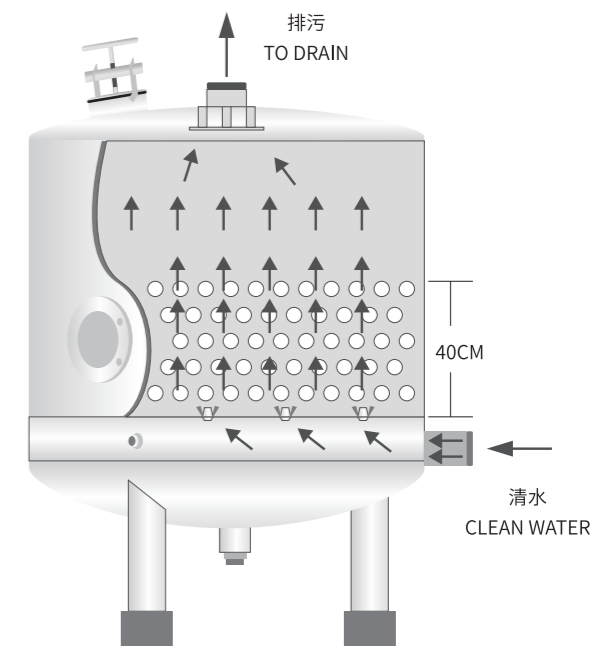
### 过滤状态

#### Filtration



### 反洗状态

#### Backwashing



反洗: 随着时间的推移, 杂质在填料层中的不断聚积, 水头损失将不断增大。当水头损失到达一定的设定限度时, 系统将自动转换至反洗状态, 以清洗聚积起来的杂质。对系统来说, 经常性的反洗以清除聚积起来的杂质是必要的。控制器发出信号给第一个过滤单元的电磁阀, 电磁阀接通压力水至第一个过滤单元进水口的液控三通阀, 该进水口液控三通阀改变方向, 切断进水管和过滤单元的连接, 导通过滤单元和排污管的连接, 此时其他过滤单元过滤后的净水进入正在反冲洗的过滤单元, 对此过滤单元进行高速反冲洗, 污水由排污管排出。在过滤系统中, 特殊设计的集水器使填料层在反洗状态时形成内环流, 填料之间互相搓洗, 最大限度地提高反冲洗效率, 减少所需的反洗水, 同时反洗时不漏砂。当反洗结束时, 阀门又回复到过滤状态, 下一个过滤器则准备进入反洗状态。

Filter head loss gradually increased with the accumulation of the impurities in the filter layers, the control unit will activate backwashing cycle automatically when the head loss reach to the preset value. Regular backwashing to remove the impurities is necessary to protect system, the control unit will send a signal to the 1st solenoid valve to close the 1st filter unit inlet and open the drain connection, clean water at the outlet manifolds begins backwashing the filter layers under water pressure, then the waste water is discharged from the drain line. During the backwashing cycle, the special designed water collector will form a inner loop in the filter layers, filter medias are collide with each other which has greatly improved the backwashing efficiency and reduced water consumption, while without sand leakage. Once the 1st filter unit has finished the backwashing cycle, the 1st valve will return to position, and the 1st filter unit turns to filtering state. Then the next filter unit goes on with backwashing cycle in the same way.

产品型号 Model	最大流量 Max.Flow (gpm) (m³/h)	筒体直径 Filter Housing Diameter (inch) (mm)	进出水管径 Inlet/Outlet Diameter (inch)	排污阀 Drainage Valve (inch)	最大工作压力 Max. Working Pressure (psi) (Mpa)	反洗水量 Water Consumption (gph) (m³/h)	罐体重量 (空载) Dry Weight (kg)
BOM SF20	44 10	20" 500	2"	2"	87 0.6	35 8	50
BOM SF30	88 20	30" 750	3"	3"	87 0.6	80 18	130
BOM SF36	124 28	36" 900	3"	3"	87 0.6	110 25	200
BOM SF42	158 36	42" 1050	3"	3"	87 0.6	154 35	250
BOM SF48	220 50	48" 1200	4"	4"	87 0.6	198 45	300
BOM SF60	264 60	60" 1500	4"	4"	87 0.6	330 75	400

■ 更大的流量可用更多单元连接在一起;其他规格请咨询我公司。

■ Filter units can be assembled to meet with large flowrate, please consult our company for specific conditions.

### 浅层砂过滤器

### Shallow Sand Filter

进水水质 / Feed water quality	SS≤30mg/L
出水水质 / Output water quality	SS≤5mg/L
反洗耗水量 / Backwashing water consumption	<1%过滤流量 / <1% of feed flow
反洗最小压力 / Min. backwashing pressure	≥29psi (0.2Mpa)
反洗方式 / Backwashing	内源反洗 (单体除外) / With internal flow(except single unit)
控制方式 / Control	时间、压差控制 / Time and pressure differential



### 多层介质过滤器

### Multi-layer Media Filter

DSA-双层滤料石英砂+无烟煤
DSA-double-layers quartz sand + anthracite
标配为C=碳钢, 可选S=不锈钢, F=玻璃钢
Standard body material C=carbon steel, optional for S=stainless steel and F=fiber glass



产品型号 Model	最大流量 Max.Flow (gpm) (m³/h)	筒体公称直径 Filter Housing Diameter (inch) (mm)	最大工作压力 Max. Working Pressure (psi) (Mpa)	高度 Height (inch) (mm)	重量 Weight (t)
BOM DSA400-C	6.6 1.5	16" 400	87 0.6	63" 1600	0.8
BOM DSA800-C	26.4 6	32" 800	87 0.6	63" 1600	0.9
BOM DSA1000-C	41.8 9.5	40" 1000	87 0.6	122.4" 3110	1.3
BOM DSA1250-C	66 15	50" 1250	87 0.6	128" 3251	2.1
BOM DSA1600-C	105.6 24	64" 1600	87 0.6	135" 3427	2.5
BOM DSA2000-C	167.2 38	80" 2000	87 0.6	144.2" 3665	3.2
BOM DSA2200-C	202.4 46	88" 2200	87 0.6	148.3" 3769	4.2
BOM DSA2500-C	259.6 59	100" 2500	87 0.6	158.3" 4021	4.6
BOM DSA3000-C	368.6 84	120" 3000	87 0.6	164.4" 4177	7.5
BOM DSA3200-C	422.4 96	128" 3200	87 0.6	172.3" 4377	7.8

## 单层介质过滤器

### Single-layer Media Filter

SS-单层砂滤 SC-单层活性炭

SS-single layer quartz sand SC-single layer activated carbon

标配为C=碳钢, 可选S=不锈钢, F=玻璃钢

Standard body material C=carbon steel, optional for S=stainless steel and F=fiber glass

产品型号 Model	最大流量 Max.Flow (gpm) (m³/h)	筒体公称直径 Filter Housing Diameter (inch) (mm)	最大工作压力 Max. Working Pressure (psi) (Mpa)	高度 Height (inch) (mm)	重量 Weight (t)
BOM SS400-C	4.4 1	16" 400	87 0.6	63" 1600	0.8
BOM SS800-C	17.6 4	32" 800	87 0.6	63" 1600	0.9
BOM SS1000-C	28 6.4	40" 1000	87 0.6	122.4" 3110	1.07
BOM SS1250-C	44 9.8	50" 1250	87 0.6	128" 3251	1.5
BOM SS1600-C	70 16	64" 1600	87 0.6	135" 3427	2.1
BOM SS2000-C	110 25	80" 2000	87 0.6	144.2" 3665	3.3
BOM SS2200-C	132 30	88" 2200	87 0.6	148.3" 3769	4.1
BOM SS2500-C	176 40	100" 2500	87 0.6	158.3" 4021	5.3
BOM SS3000-C	246 56	120" 3000	87 0.6	164.4" 4177	7.6
BOM SS3200-C	282 64	128" 3200	87 0.6	172.3" 4377	8.2
BOM SC400-C	4.4 1	16" 400	87 0.6	63" 1600	0.9
BOM SC800-C	22 5	32" 800	87 0.6	154.2" 3918	1.2
BOM SC1000-C	35 8	40" 1000	87 0.6	181.7" 4616	1.5
BOM SC1250-C	52 12	50" 1250	87 0.6	184.6" 4691	1.8
BOM SC1600-C	88 20	64" 1600	87 0.6	187.6" 4766	2.6
BOM SC2000-C	135 31	80" 2000	87 0.6	196.7" 4996	3.9
BOM SC2200-C	162 37	88" 2200	87 0.6	201.3" 5114	4.6
BOM SC2500-C	216 49	100" 2500	87 0.6	217.3" 5521	6.3
BOM SC3000-C	308 70	120" 3000	87 0.6	223.5" 5677	8.5
BOM SC3200-C	352 80	128" 3200	87 0.6	231.4" 5877	9.5