



BOWNT
PURIFICATION IN ACTION

BOWNT BOL/BV&BS系列离心过滤器

BOL/BV & BOL/BS系列工业离心过滤器是BOWNT全新一代液体微粒分离装置，利用液体旋转产生的离心力来分离可沉淀微粒，广泛应用于各种固液分离领域。固液分离器分离时不使用任何活动部件，无需清洁或更换过滤元件，可常年使用而无需维护，高效稳定的性能和经济的运行成本使其成为固液分离处理的理想选择。

离心过滤器本身通过多级组合分离能够大幅提高分离效率，同时还是最佳的预分离装置。先通过离心过滤器低成本、高效的预处理，再与自清洗过滤器、袋式过滤器、芯式过滤器等精过滤设备配合使用，能获得更佳的整体过滤性能，降低滤材消耗及物料排放，适用于各种行业及流体。



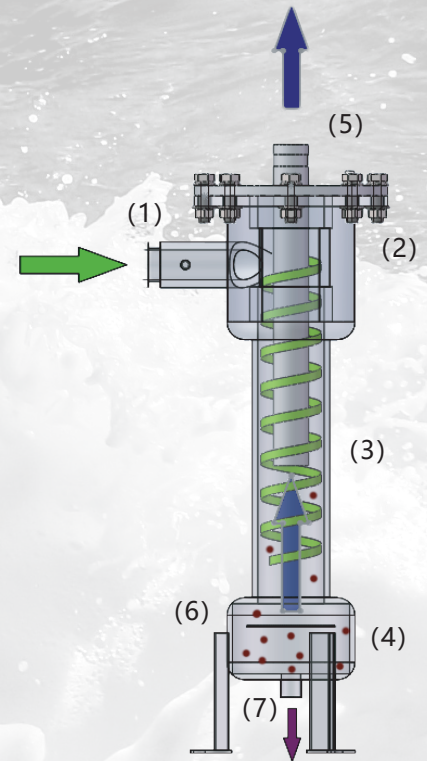
BOWNT BOL/BV&BS series centrifugal filter

BOL/BV & BOL/BS series industrial centrifugal filter is a new generation of BOWNT separation device, which is widely used in various solid-liquid separation field. The centrifugal force generated by the rotated feed water is used to separate the precipitable particles, there is no operative nor moving components inside the filter, free of cleaning and elements replacement, which allows continuous operation without a maintenance. Its highly efficient, stable performance and economic operation cost make it an ideal choice for solid-liquid separation.

System efficiency can be greatly improved by combining the centrifugal filter with multistage filtration devices, such as self-cleaning filter, bag filter, cartridge filter or other precision processing devices. Through the low-cost and high-efficiency pre-treatment of centrifugal filter, it can not only obtain better filtration performance, but also reduce the consumption of filter materials and sewage discharge, which is suitable for various industrial fluids.

工作原理:

水流沿切线方向流入 (1) 过滤系统,这将会产生一股离心水流,特殊的顶部进口设计加速环 (2) ,又对离心水流进行加速,离心力则迫使杂质颗粒向分离腔 (3) 的边壁运动,在那里杂质颗粒沿着边壁慢慢地落入静止收集腔 (4) ,清洁水则依靠旋流作用从上部的出口 (5) 流出,同时防涡器 (6) 能防止进入收集腔的沉淀杂质被涡流卷起,杂质颗粒则依程序设计可以间歇性或是连续地从排污口 (7) 排出。



Working Principle:

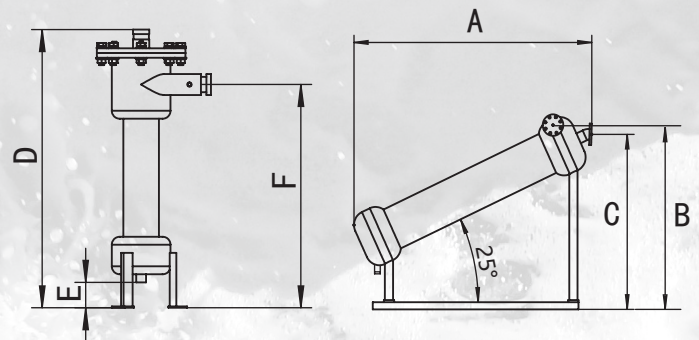
Water feeds into the filter inlet (1) along the tangential direction, produces a centrifugal flow and accelerating speed by the accelerator ring (2) . Particles are thrown to the inner surface of the separation chamber (3) under the centrifugal force, afterwards fall into the collection chamber (4) and discharged intermittently or continuously from the drain outlet (7) . While the clean water flows out from the outlet (5) under the water pressure. Needs to be emphasized that there is a anti vortex device (6) at the bottom to prevent the particles in the collection chamber (4) from being rolled up by the water flow.

技术参数:

离心过滤器最大工作压力 1.0MPa, 规格齐全, 单机流量为 4-307m³/h, 压损 0.02-0.07MPa。

Technical Parameters:

Standard centrifugal filter with an maximum working pressure of 1.0MPa, various sizes with a flow range from 4m³/h to 307m³/h. Filter pressure loss is approx. 0.02MPa-0.07MPa.



型号 Model	进出口尺寸 Inlet/Outlet inch (mm)	连接方式 Connection	排污口径 Drainage size inch (mm)	流量 Flow rate (m³/h)	尺寸 dimensions (mm)					
					A	B	C	D	E	F
BOL/BV&BS 1" FC	1" (25)	拷贝林/法兰 coupling/flange	1" (25)	4-6	590	407	375	751	100	649
BOL/BV&BS 1.5" FC	1.5" (40)		1" (25)	11-16	776	500	512	986	130	828
BOL/BV&BS 2" FC	2" (50)		1" (25)	18-25	783	515	495	994	130	864
BOL/BV&BS 2.5" FC	2.5" (65)		1.5" (40)	30-42	895	541	548	1118	130	925
BOL/BV&BS 3" FC	3" (80)		1.5" (40)	46-63	1088	560	638	1331	130	1041
BOL/BV&BS 4" FC	4" (100)		1.5" (40)	71-99	1134	636	679	1401	150	1123
BOL/BV&BS 5" FC	5" (125)		2" (50)	110-155	1264	730	778	1583	188	1292
BOL/BV&BS 6" FC	6" (150)		2" (50)	157-223	1548	865	922	1908	200	1548
BOL/BV&BS 8" FC	8" (200)		2" (50)	271-395	1777	971	1049	2180	220	1815
BOL/BV&BS 10" FC	10" (250)		3" (80)	424-613	2171	1175	1293	2675	280	2218
BOL/BV&BS 12" FC	12" (300)		4" (100)	610-885	2515	1447	1523	3125	350	2768

产品特点:

- 离心过滤器过滤单元从1"至12"多种标准系列, 还可根据客户的要求, 提供非标系列
- 它内部没有滤网, 也没有可拆卸的部件, 结构简单, 免维护
- 安装简单, 没有需要更换的部件
- 遵循水力学原理进行精妙设计, 离心分离效果好
- 允许进入分离器最大颗粒9mm, 允许进入分离器含污量可达 25000mg/l
- 对于大于 40 μ m 的大比重颗粒分离效率高达 98%, 离心过滤器可分离出最小 5 μ m 的固体杂质
- 分离过程中不使用任何活动部件, 近乎零维护运行成本, 极高可靠性
- 可装配自动化排污控制, 清洗时系统不断流
- 过滤器罐体及管道可提供碳钢防腐、304不锈钢、316L不锈钢、2205双相不锈钢材质, 满足不同的水质要求

Product Features:

- The centrifugal filter size is standard from 1 "to 12", other specifications can be customized as per customer' s requirements.
- There is no filter screen or detachable parts, structure and free maintenance.
- Simply installation and no need to replace the parts.
- Perfect hydraulics design, and good separation effect.
- The maximum particle size allowed to enter the centrifugal filter is 9mm, and the allowable solid content is up to 25000mg / L.
- Highly efficient separation, the separation rate for particle size over 40 μ m is up to 98%, and the particle size of 5 μ m can be separated as a minmum.
- There is no operative nor moving parts inside the filter, which is reliable and nearly zero maintenance.
- Filter can works without an interruption of separation during cleaning if equipped with an automatic drain device.
- Filter housing and manifolds are made of carbon steel with anti-corrosive treatment, which is optional for SS304, SS316L or duplex 2205 to meet different water sources.

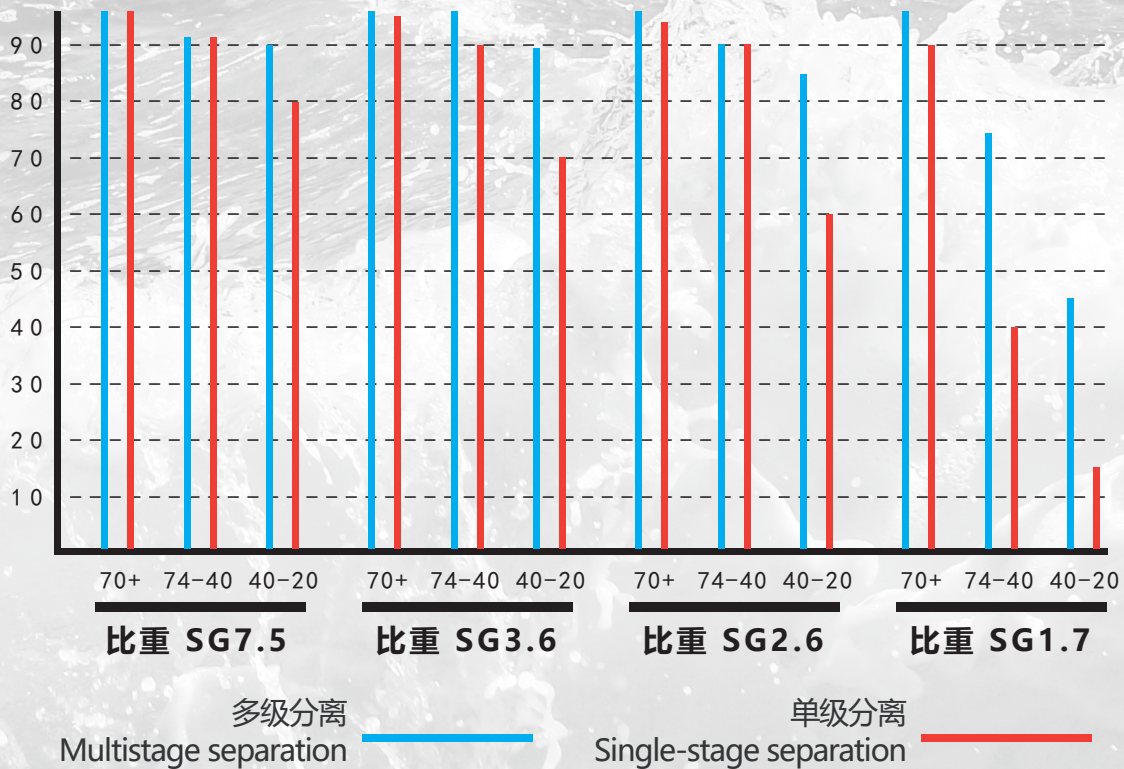
下表列出了一些BOL/B 工业离心过滤器成功从水中分离出的常见微粒的密度 (水的比重是1):

Typical particle SG separated. (water SG is 1):

典型微粒材质 Typical Particles	比重 SG	典型微粒材质Typical	比重 SG
铝 Aluminum	2.7	土 Soil	1.2-2.0
氧化铝 Alumina	4.0	玻璃 Glass	3.0
石棉 Asbestos	2.1-2.8	砂砾(花岗岩) Gravel (granite)	2.5-3.0
矾土 Alumina	2.6	铁(钢) Iron (steel)	7.8
黄铜 Brass	9.0	铅 Lead	11.3
青铜,铜 Bronze, Copper	8.9	氧化铅 Lead oxide	9.5
碳,混凝土 Carbon, Concrete	1.8-2.5	锰 Manganese	7.4
碳化硅 Silicon Carbide	3.2	镍 Nickel	8.9
煤 (无烟煤) Coal (anthracite)	1.3-1.9	沙 Sand	2.6-2.8
煤灰 Coal Ash	2.9	淤泥 Silt	1.2-2.8
白云石(石灰石,大理石) Dolomite (limestone, marble)	2.9	硫磺 Sulfur	2.1

效率百分比

Efficiency percentage



选型依据:

为选择合适的分离器，应综合考虑以下因素：(1) 液体粘度与密度 (2) 微粒尺寸分布与密度 (3) 实际过滤流量 (4) 系统压力 (5) 排污周期。

固液分离高效与否要看产生的离心力，离心力大小取决于漩涡的流速，而漩涡的流速直接和流量成比例，所以请将实际流量与BOL离心过滤器规格型号表中的对应流量匹配来选择合适的型号。需要特别注意的是需要去除的微粒密度必须大于流体密度。二者密度相差越大，分离越有效。

Selection basis:

The selection of the centrifugal filter shall consider the following factors: (1) liquid viscosity and density; (2) particles size distribution and density; (3) actual filtration flow; (4) water pressure; (5) drain cycle.

The efficiency of solid-liquid separation depends on the centrifugal force generated, and the flow velocity of the cyclone flow, which is directly proportional to the flow rate. Therefore, you need to match the actual flow rate with the corresponding BOL centrifugal filter specification for an correct model. It should be noted that the sold density to be removed must be greater than that of the fluid. The greater density difference, the higher efficiency of separation.

应用行业:

- 原水处理: 地表水、地下水、海水、湖水、池塘水, 进入水厂、工厂及工业设前的预过滤。
- 机械加工: 冷却剂、磨削液、清洗剂、预过滤、循环剂循环再用
- 钢铁企业: 炼铁、焦化、炼钢、轧钢等生产过程中循环冷却水处理、喷嘴及结晶器保护等
- 石油工业: 油井注水、近海平台、工艺循环水。
- 造纸厂: 原水、黑液、工艺循环水
- 其它应用: 农业灌溉、电力系统、食品加工、园林绿化、洗车系统的水循环利用

Applications:

- Raw water treatment: pre-filtration of surface water, ground water, sea water, lake water, pond water and other water source before entering water plant, factories and industrial equipments.
- Mechanical processing: recycling of coolant, grinding fluid, cleaning agent, prefiltration, agent and etc.
- Steel plant: circulating cooling water treatment and nozzles/ crystallizer protection in the process of iron-making, coking, steel-making and rolling.
- Petroleum industry: water injection, offshore platform and process circulating water treatment.
- Paper plant: raw water, black liquor and process circulating water treatment.
- Other applications: irrigation, power system, food processing, landscaping, and water recycling of car washing system.