

## ***Why industries need airline filters?***

Compressed air is not only the second big power than electric energy, but also it is the gas source with a variety of purposes which generally used in petro-chemical industry, metallurgy, electric power, machinery, light industry, textile, automobile manufacturing, electronics, food, medicine, biochemistry, national defense, scientific research and other industries and sectors.

Unclean compressed air contains a considerable amount of impurities, mainly have : Solid particles ,Per cubic meter in a typical big city environment contains about 140 million particles in the atmosphere, with about 80% of particles ,the sizes are smaller than 2 microns which can not be removed by air compressor suction filters, Furthermore ,Air compressor system continuously produce wear debris, rust of carbide slag and oil of carbide which speed up gas equipments abraded and lead to seal failure. Water, Generally there are more than 65% relative humidity in the atmosphere, after condensing which becomes wet saturated air with a lot of liquid droplets, they are the root cause of the equipments, pipes and valves corrosion, Also in winter freezing can block the pore channels in the pneumatic system. even if the separated pure clean saturated air, but with lower temperature, there will be condensation water analysis file, About every 10°C lower, the saturated water content will fall by 50%, that is half of the water vapor converted into liquid droplets. So it is necessary to use multi-stage water separators in the compressed air system .Oil content- lubricating oil used in high speed and temperature air compressor can have the effect of lubrication, sealing and cooling , but pollute the compressed air.

In modern facilities ,the use of compressed air is very important during the manufacturing process, So it is necessary to choose high efficiency, reliable compressed air filters and water separators and save energy and production costs.





Beng Chuan Machine Pte Ltd

## YB系列压缩空气过滤器

## YB Series Compressed Air Filter



### 产品类型 Product Selection

以下产品流量是在额定工作压力为7barg(100psig)下的压缩空气处理流量，其它工作压力下的应用，请参考选型系数

Below flows are for operation at 7 barg(100psig)with reference to20°C.For other pressure,please refer to the correction factors.

\*代表滤器滤芯的不同级别.

\*Represent grades of filter elements.

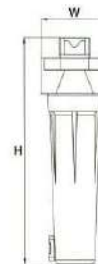
型号 Model	管道直径 Pipe Size	流量 ( Flow rates)			替换滤芯 Replacement Element Kit	外形规格 ( mm )		
		L/S	m³/min	cfm		数量 Qty	Width(W)	Height(H)
YB-12	Rc1/2"	10.0	0.6	21.1	B-12-*	1	104	203
YB-16	Rc1/2"	20.0	1.2	34.1	B-16-*	1	104	256
YB-20	Rc1/2"	40.0	2.4	84.8	B-20-*	1	104	317
YB-24	Rc1"	63.4	3.8	131.5	B-24-*	1	134	361
YB-28	Rc1"	100.0	6	211.9	B-28-*	1	134	471
YB-32	Rc1 1/2"	150.0	9	317.8	B-32-*	1	164	554
YB-36	Rc1 1/2"	200.0	12	423.7	B-36-*	1	164	668
YB-026	DN80	433.4	26	918.0	B-40-*	2	409	1325
YB-035	DN80	583.5	35	1235.9	B-44-*	2	409	1325
YB-045	DN100	750.2	45	1589.0	B-48-*	2	409	1325
YB-054	DN125	900.1	54	1906.8	B-44-*	3	520	1362
YB-066	DN125	1100.0	66	2330.0	B-48-*	3	520	1362
YB-088	DN125	1467.0	88	3107.4	B-48-*	4	545	1530



YB12/16/20



YB24/28



YB32/36

压力 Pressure	Barg	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
	Psig	15	29	44	59	73	87	100	116	131	145	160	174	189	203	218	232
修正系数 Correction factor		0.38	0.53	0.65	0.76	0.85	0.93	1.00	1.07	1.13	1.19	1.23	1.31	1.36	1.41	1.46	1.51

## YC 系列空气过滤器

## YC series Compressed Air Filter



### 产品介绍 Introduction

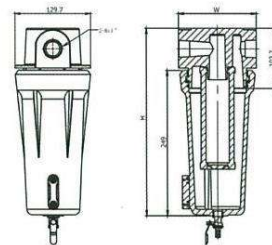
- 精致的外观设计,精良的螺纹加工技术
- 过滤器管头和管身采用卡口式连接,方便快捷安装和维护
- 实惠的价格,大批量的库存
- 广泛用于对压缩空气质量要求不高的行业
- 15年的发展历史,值得您信赖
- Dedicate appearance ,advanced process technology
- Adopt bayonet connection way between filter head and bowl,it is convenient and fast to install and maintain
- Favorable prices,strong inventory capacity
- Widely used in industries which don't have high requirement for compressed air quality
- 15 years development history ,it is worth you trusting

### 产品选型 Product Selection

以下产品流量是在额定工作压力7 bar g(100 psi g),温度20°C的标准工况下计算得出的数据,其它工作压力下的流量,请参考以下修正系数进行计算:

Below flows are for operation at 7 bar g(100 psi g)with reference to 20°C.For other pressure,please refer to the correction factors.

型号 Model	流量Flow Rate (m³/min)	管道口径 Pipe Size	Element Grade 滤芯等级	滤芯安装数量 Element Qty (PCS)	外形规格 Dimension(mm) Width(W) Height(H)	
YC001	1.2	Rc1/2 "	001 C/T/A/H	1	104	217
YC002	2.4	Rc3/4 "	002 C/T/A/H	1	104	278
YC004	3.8	Rc1 "	004 C/T/A/H	1	133	321
YC005	6.5	Rc1-1/2 "	005 C/T/A/H	1	133	426
YC007	9.0	Rc1-1/2 "	007 C/T/A/H	1	134	496
YC010	13.0	Rc2 "	010 C/T/A/H	1	134	609



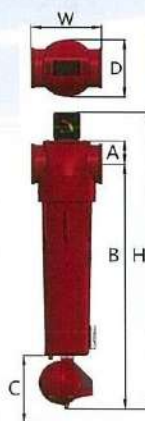
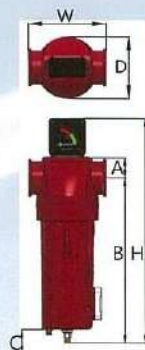
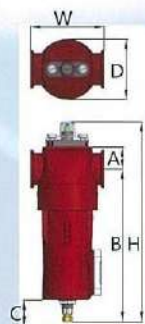
压力 Pressure	Barg	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
	Psig	15	29	44	59	73	87	100	116	131	145	160	174	189	203	218	232
修正系数 Correction factor		0.38	0.35	0.65	0.76	0.85	0.93	1.00	1.07	1.13	1.19	1.23	1.31	1.36	1.41	1.46	1.51

## 产品选型 Product Selection

以下空气流量是按照国际标准 ISO 12500:1 在额定工作压力的7bar (100 psi g), 温度 21 °C, 相对湿度 65% 计算得出。对于在其他压力, 请参考修正系数。

Below flow rates of compressed air are calculated according to the international standard ISO 12500:1 in rated working pressure of 7 bar (100 psi g), temperature of 21 °C, relative humidity 65% .For flows at other pressures apply the correction factors shown.

型号Model	管道直径 Pipe Size	流量Flow rates			数量Qty	外形规格Dimension(mm)					
		l/s	m <sup>3</sup> /min	cfm		W(宽)	D(直径)	H(高)	A	B	C(打开壳体的空间)
YF-B-010	Rc1/2"	16.7	1.0	35.3	1	96	78.6	261	29	199	83
YF-B-020	Rc3/4"	25.0	1.5	53.0	1	96	78.6	261	29	199	83
YF-B-030	Rc1"	33.3	2.0	70.6	1	96	78.6	261	29	199	83
YF-B-040	Rc3/4"	40.0	2.4	84.7	1	96	78.6	296	29	233	116
YF-B-050	Rc1"	46.7	2.8	98.4	1	96	78.6	296	29	233	116
YF-B-060	Rc1"	60.0	3.6	127.1	1	138	111	403	37	296	170
YF-B-070	Rc1-1/2"	80.0	4.8	169.4	1	138	111	403	37	296	170
YF-B-080	Rc1"	100.0	6.0	211.8	1	138	111	504	37	397	267
YF-B-090	Rc1-1/2"	125.0	7.5	264.8	1	138	111	504	37	397	267
YF-B-100	Rc2"	166.7	10.0	353.0	1	174	142	705	58	576	331
YF-B-110	Rc2-1/2"	216.7	13.0	458.9	1	174	142	705	58	576	331
YF-B-120	Rc2"	283.3	17.0	600.1	1	174	142	1016	58	887	660
YF-B-130	Rc2-1/2"	366.7	22.0	776.6	1	174	142	1016	58	887	660
YF-B-140	Rc3"	466.7	28.0	988.4	1	221	184	793	74	649	403
YF-B-140F	DN80	466.7	28.0	988.4	1	300	200	793	74	649	403
YF-B-140F	DN100	466.7	28.0	988.4	1	302	220	793	74	649	403
YF-B-150	Rc4"	550.0	33.0	1164.9	1	221	184	793	74	649	403
YF-B-150F	DN100	550.0	33.0	1164.9	1	297	220	793	74	649	403
YF-B-150F	DN125	550.0	33.0	1164.9	1	297	250	793	74	649	403
YF-B-160	Rc3"	683.3	41.0	1447.3	1	221	184	1050	74	906	682
YF-B-160F	DN80	683.3	41.0	1447.3	1	300	200	1050	74	906	682
YF-B-160F	DN100	683.3	41.0	1447.3	1	302	220	1050	74	906	682
YF-B-170	Rc4"	833.3	50.0	1765.0	1	221	184	1050	74	906	682
YF-B-170F	DN100	833.3	50.0	1765.0	1	297	220	1050	74	906	682
YF-B-170F	DN125	833.3	50.0	1765.0	1	297	250	1050	74	906	682



压力 Pressure	Barg	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
	Psig	15	29	44	59	73	87	100	116	131	145	160	174	189	203	218	232
修正系数 Correction Factor		0.38	0.53	0.65	0.76	0.85	0.93	1.00	1.07	1.13	1.19	1.23	1.31	1.36	1.41	1.46	1.51

铝合金压铸壳体，结构紧密，内外喷涂处理，使用寿命长，最大气体流量为12 m<sup>3</sup>/min

Aluminium alloy die-casting filter housings with tight structure and long life,the largest air flows is 12 m<sup>3</sup>/min

碳钢壳体设计可装多支过滤器滤芯，满足大流量需求，最大流量设计为88 m<sup>3</sup>/min

Carbon steel filter housings designed with several quantities of elements,meet the needs of larger flows to 88 m<sup>3</sup>/min

独特的滤芯设计理念，无需丝杆连接

Special design idea of elements elements without tie-rod

过滤器管头和管身采用卡口式连接，方便快捷安装和维护，满足客户对产品不同的要求

Adopt bayonet connection way between filter head and bowl,it is convenient and fast to install and maintain ,which satisfy customers' kinds of requirements

壳体的串联，可以减少安装和维护空间

Series connection can reduce the space of installation and maintenance

## ❖ 空气过滤器滤芯介绍 Element Introduction

本系列产品最大工作压力为1.6 Mpa.

滤芯最高工作温度为60°C.

滤芯等级：C/T/A/AA/H.

壳体保修一年，根据不同的工况条件，C/T/A/AA/H

滤芯设计使用寿命为3000小时.

The Max.working pressure is 1.6 Mpa.

The highest working temperature is 66°C.

Element grades:C/T/A/AA/H.

Filter housings warranty is one year under normal working condition,and according to different working conditions,element life time are 3000 hrs.



■ C级-滤除直径5 um大小的颗粒,最大残留油分含量5 ppm.  
Grade C ,remove solid particle to 5 um ,the largest residual oil content is 5 ppm

■ T级-滤除直径3 um大小的颗粒，最大残留油分含量3 ppm.  
Grade T ,remove solid particle to 3 um ,the largest residual oil content is 3 ppm

■ A级-滤除液态水和油，可滤除小至0.02 um的固态颗粒，最大残留油分含量0.02 ppm  
Grade A ,remove solid particle to 0.02 um ,the largest residual oil content is 0.02 ppm

■ H级-滤除小至0.01微米的固态颗粒，去除油雾和异味，最大残留油分含量0.001 ppm  
Grade H ,remove solid particle to 0.01 um ,oil mist and adsorb odour ,the largest residual oil content is 0.001 ppm

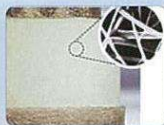
## 滤芯结构Element Structure



密封圈阻止未过滤的空气通过  
Seal ring prevent unfiltered air passing



不锈钢内外孔板网支撑滤芯的强度最大  
Stainless steel internal and external pore plates make the strength of elements achieve the maximum



95%空隙率 容纳尘埃的能力大，低能耗，使用寿命长  
95% porosity have strong capacity of holding dusts, low energy consumption, longer life



支撑层增加强度，预过滤  
Support layers increase strength, internal pre-filtering



端盖防化学腐蚀，能够承受最恶劣的压缩空气环境  
Cover antiseptic resistant, able to withstand the most



外层材料防止油或水被空气再次吹走，并与多种润滑油相容  
To prevent oil or water is blown away again, and compatible with a variety of lubricating oil



## 滤芯过滤性能Filtration Performance : PF、AO、AA、AX、ACS、AR、AAR

过滤等级 Filtration Grade	过滤类型 Filter type	颗粒去除，水气， 油溶胶 Particle removal/ water&oil aerosols	最大残余含油量 Max remaining oil content at 21°C ( 70°F)	更换周期 Change every	前级过滤等级 Precede with filtration grade	滤芯端盖颜色 End cap color
PF	Coalescing 凝聚式	5 um	N/A	8000 hrs	WS	黄色/Yellow
AO	Coalescing 凝聚式	1 um	0.6mg/m <sup>3</sup> 0.6ppm	8000 hrs	PF	红色/Red
AA	Coalescing 凝聚式	0.01 um	0.01mg/m <sup>3</sup> 0.01ppm	8000 hrs	AO	蓝色/blue
AX	Coalescing 凝聚式	0.01 um	0.001mg/m <sup>3</sup> 0.001ppm	有检测到油蒸气when oil vapour or odour is detected 有检测到油蒸气when oil vapour or odour is detected	AA	白色/white
ACS	oil vapour 油雾	N/A	0.003mg/m <sup>3</sup> 0.003ppm		AA	黑色/Black
AR	dry particulate 干颗粒	1 um	N/A	8000 hrs	N/A	绿色/Green



相对比市场普通材料B，YF系列的滤芯材料A经过特殊处理，疏水，疏油性好，保持气体流速畅通，减少提前堵塞的风险，压降和能源浪费  
Compared with common materials B, YF series' s materials A processed with special treatment have the advantages of good oleophobic and hydrophobic, Maintaining a high voids volume reduces the risk of premature blockage, system pressure losses and high energy consumption



折叠式褶皱可以减低过滤材料内的空气流速，提高过滤性能，减少压降  
Deep bed pleating can reduce the air flow velocity within the filtration media. This both improves filtration performance of the filter element and also reduces pressure losses.

# 产品应用行业 Application

