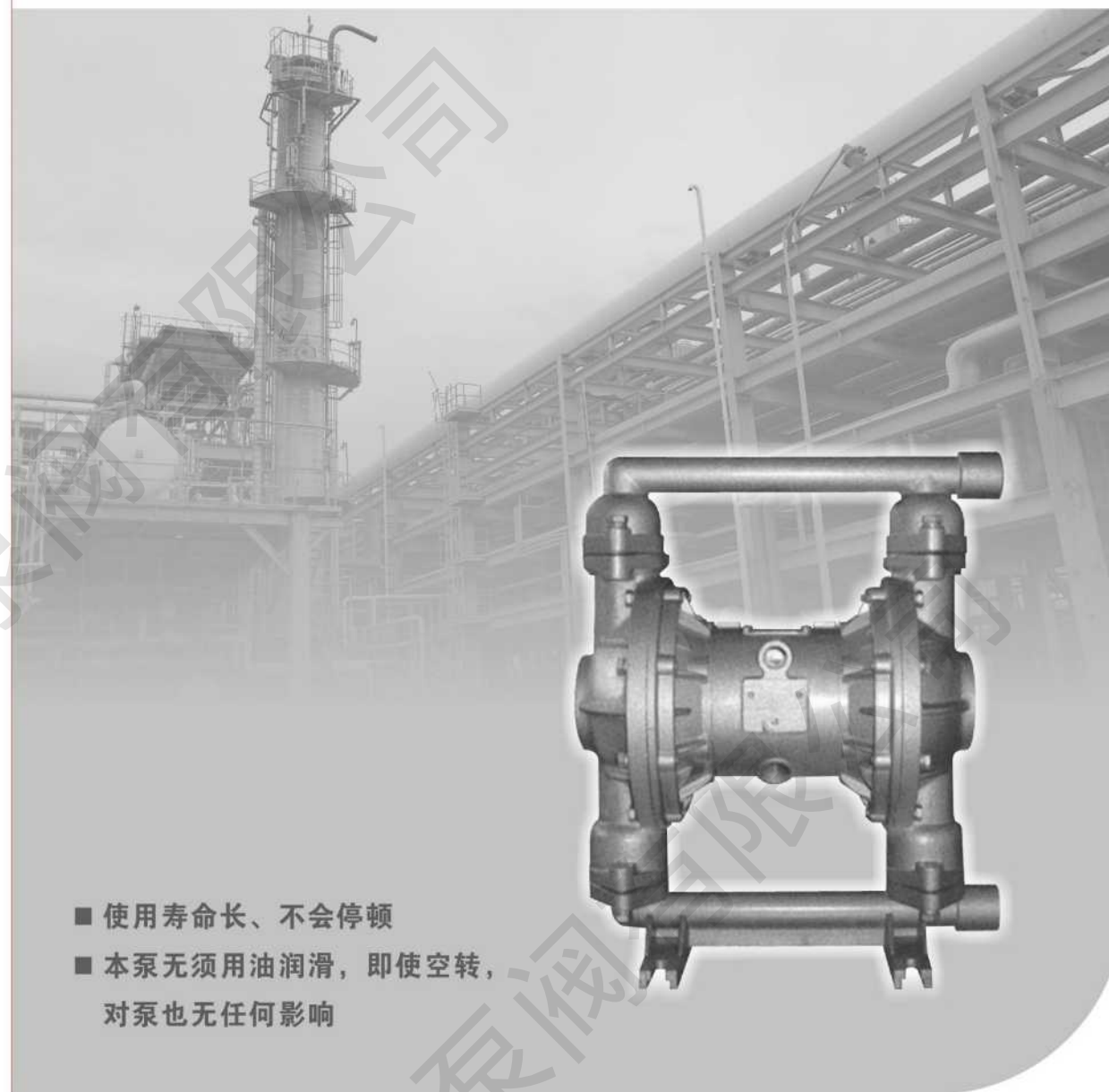


QBK | 气动隔膜泵

系列 | Air operated diaphragm pumps



- 使用寿命长、不会停顿
- 本泵无须用油润滑，即使空转，对泵也无任何影响

浙江凯亿泵阀有限公司

本公司拥有产品设计改进权，如有变动，恕不另行通知。
Our company reserves the right of improving the product design and changes it without notice.

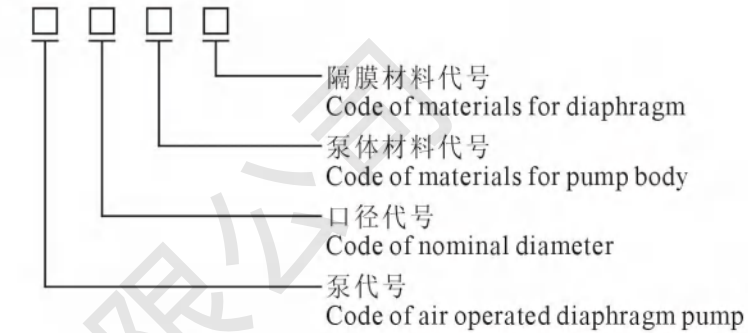
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隔膜泵型号编制方法 Establishment method of pump model

泵型号由四个单元组成按下列顺序编制

The pump model is composed of four units and is established according to the following sequence



泵代号 Code of air operated diaphragm pump: QBK1 QBK2

口径代号 Code of nominal diameter: 8(5/16), 10(3/8), 15(1/2), 25(1), 40(1¹/2), 50(2), 80(3)

泵体材料代号 Code of materials for pump body

泵体材料 Material of pump body	代号 Code	泵体材料 Material of pump body	代号 Code
铝合金 Aluminum alloy	L	不锈钢 Stainless steel	B
铸铁 Cast iron	Z	衬胶 Rubber lining	ZCJ
工程塑料 Engineering plastic	S		

隔膜材料代号 Code of materials for diaphragm

隔膜材料 Material of diaphragm	代号 Code	隔膜材料 Material of diaphragm	代号 Code
丁腈橡胶 Buna-N	NBR	氯丁橡胶 Neoprene	CR
氟橡胶 Viton	F	四氟橡胶 Teflon	F46
乙丙橡胶 Ethylene-propylene rubber	EPDM		

订货须知:

本公司QBK系列气动隔膜泵有两大系列,其中QBK1出口在中间, QBK2出口在侧边。订货时要予以说明,同时还要告之使用环境、温度、介质、流量、扬程、压力、泵体材料、隔膜材料。

Order notice:

We have two main series of QBK product, one is QBK1 which with center connection, the other is QBK2 with side connection. Please specify environment, temperature, medium, flow rate, head, pressure, materials of pump body and diaphragm when order.

QBK

气动隔膜泵 Air operated diaphragm pumps >>>

产品概述 Performance summary

QBK气动隔膜泵是我公司开发的第三代气动隔膜泵，具有使用寿命长，不会停顿等优点，它既能抽送流动的液体，又能输送一些不易流动的介质，具有自吸泵、潜水泵、屏蔽泵、泥浆泵和杂质泵等输送机械的许多优点。

- 1、不需灌引水，吸程高达5m，扬程达70m，出口压力 $\geq 6\text{bar}$ 。
- 2、流动宽敞，通过性能好，允许通过最大颗粒直径达10mm。抽送泥浆、杂质时，对泵磨损甚微。
- 3、扬程、流量可通过气阀开度实现无级调节(气压调节在1-7bar之间)。
- 4、该泵无旋转部件，没有轴封，隔膜等抽送的介质与泵的运动部件、工件介质完全隔开，所输送的介质不会向外泄漏。所以抽送有毒、易挥发或腐蚀性介质时，不会造成环境污染和危害人身安全。
- 5、不必用电。在易燃、易爆场所使用安全可靠。
- 6、可以浸没在介质中工作。
- 7、使用方便、工作可靠、开停只需简单地打开和关闭气体阀门，即使由于意外情况而长时间无介质运行或突然停机，泵也不会因此而损坏。一旦超负荷，泵会自动地停机，具有自我保护性能，当负荷恢复正常后，又能自动启动运行。
- 8、结构简单、易损件少，该泵结构简单，安装、维修方便，泵输送的介质不会接触到配气阀，连杆等运动部件，不象其他类型的泵因转子、活塞、齿轮、叶片等部件的磨损而使性能逐步下降：
- 9、可输送较粘的液体(粘度在1万厘泊以下)；
- 10、本泵无须用油润滑，即使空转，对泵也无任何影响，这是该泵最大特点。

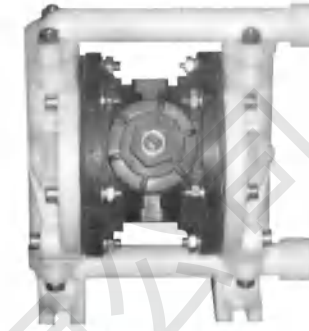
QBK is coosai's new developed series of AODD pump which is also the third generation, it has the virtue of long service life and nonstop operation, not only it can convey some uneasy flowed medium, with the merits of self-pumping pump, diving pump, shield pump, slurry pump and impurity pump etc.

- 1.It's unnecessary to pour the drawing water, the suction lift reaches 5m height, the delivery lift reaches 70m length and the export pressure $\geq 6\text{bar}$.
- 2.Wide flow and good performance. The diameter allowed to pass the max grain reaches 10mm. The damage is very less to the pump while exhausting the slurry and impurity.
- 3.The delivery lift and flow can pass the pneumatic valve open to realize the step less adjustment(the pneumatic pressure adjustment is between 1-7bar).
- 4.This pump has no rotary parts and no bearing seals. The diaphragm will completely separate the exhausted medium and pump running parts, working medium. The conveyed medium can't be leaked outside. Thus it will not cause the environmental pollution and human body safety dangerous while exhaustion the toxin and flammable or corrosive medium.
- 5.No electricity. It's safe and reliable while using in the flammable and explore places.
- 6.It can be soaked in medium.
- 7.It's convenient to use and reliable to work. Only open or close the gas valve body while starting or stopping. Even if no medium operation or pausing suddenly for long time because of accident matters, the pump will not be damaged caused by this. Once over loading, the pump will automatically stop and possesses the self protection function. When the load recovers normally, it also can start automatically.
- 8.Simple structure and less wearing parts. This pump is simple in structure, installation and maintenance. The medium conveyed by the pump will not touch the matched pneumatic valve and coupling lever etc. Not like other kinds pumps, the performance will drop down gradually because of the damages of rotor, gear and vane etc.
- 9.It can transmit the adhesive liquid(the viscosity is below 10000 centipoises).
- 10.This pump needn't the oil lubricant. Even if idling, it has any influence to the pump. This is a characteristic of this pump.

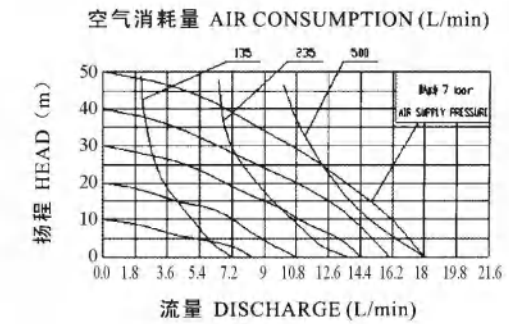
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气动隔膜泵 Air operated diaphragm pumps >>>

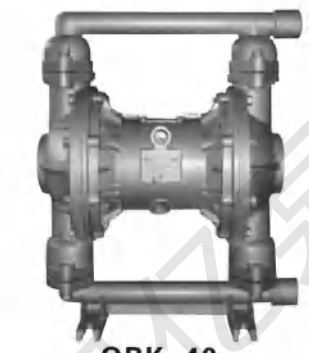
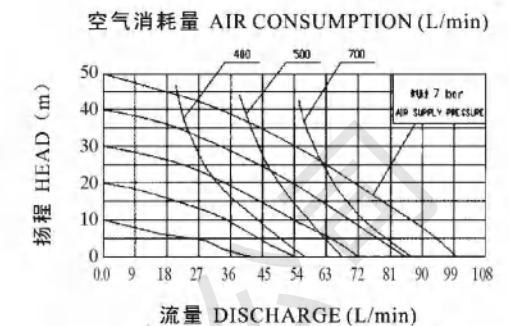
性能曲线图 Performance graph



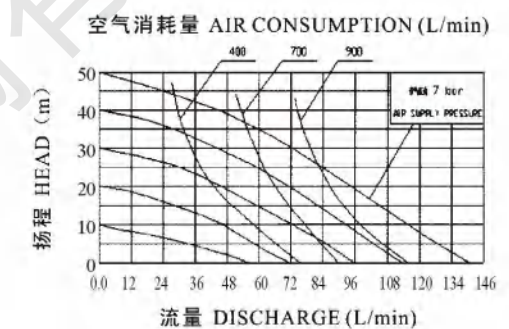
QBK-10-15



QBK-25



QBK-40



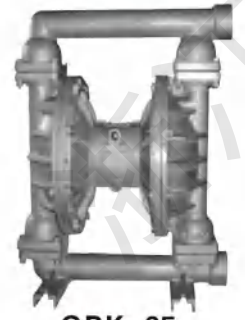
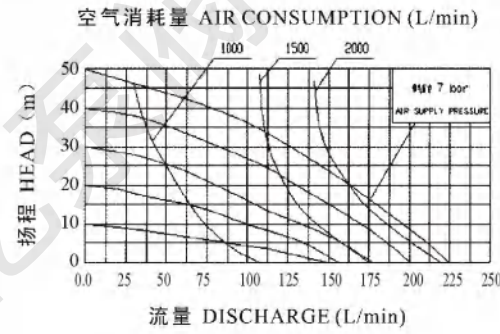
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气动隔膜泵 Air operated diaphragm pumps >>>

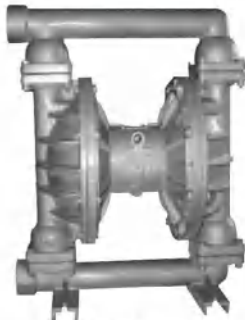
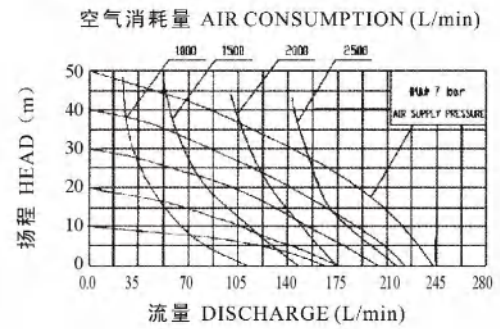
性能曲线图 Performance graph



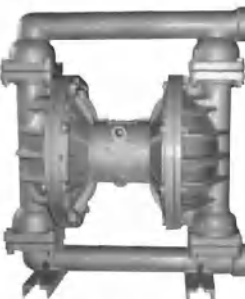
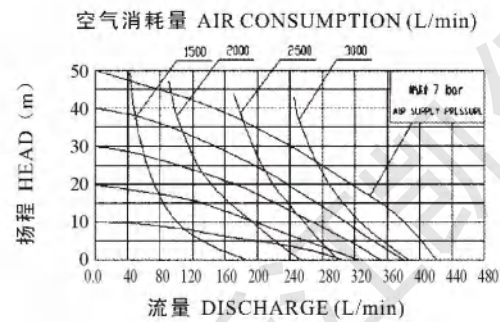
QBK-50



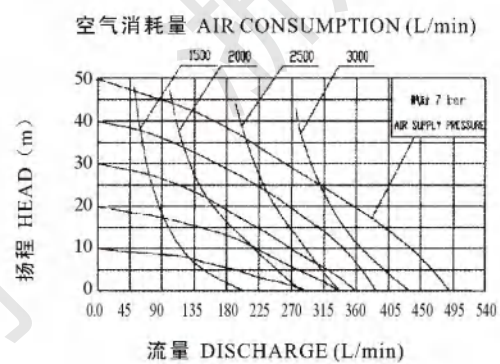
QBK-65



QBK-80



QBK-100



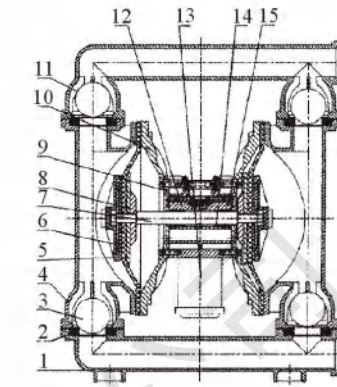
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气动隔膜泵 Air operated diaphragm pumps >>>

规格一览表 General specification

型号 Type	入口 Suction		出口 Discharge		连接方式 Type of Connection				泵体材质 Material of pump body				
	inc	mm	inc	mm	NPT	BSPT	ANSI 法兰 Flanged	DIN 法兰 Flanged	铸铁 Cast iron Z	铝合金 Aluminum alloy L	不锈钢 Stainless steel B	塑料 Engineering plastic S	衬胶 Rubber lining ZCJ
QBK-10	3/8	10	3/8	10	●	●	-	-	●	●	●	●	-
QBK-15	1/2	15	1/2	15	●	●	-	-	●	●	●	●	-
QBK-25	1	25	1	25	●	●	-	-	●	●	●	●	-
QBK-40	1 1/2	40	1 1/2	32-40	●	●	-	-	●	●	●	●	-
QBK-50	2	50	2	50	●	●	●	●	●	●	●	●	-
QBK-65	2 1/2	65	2 1/2	50	●	●	●	●	●	●	●	-	●
QBK-80	3	80-100	3	80	●	●	●	●	●	●	●	-	-
QBK-100	4	100	4	80-100	-	-	●	●	●	●	●	-	●

主要零件材料 Major parts material form

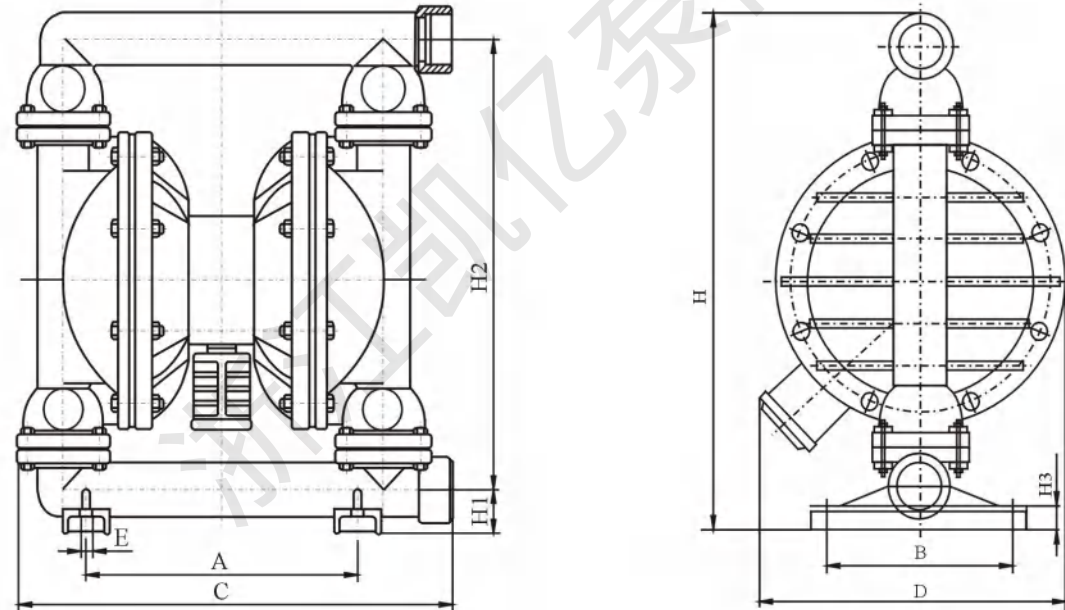


QBK系列气动隔膜泵 QBK Air operated diaphragm pump						
序号 No	零件名称 Accessory name	数量 Amount	材料 Material			
1	下盖 Bottom	1	不锈钢 Stainless steel 1Cr18Ni9Ti	铝合金 Aluminum alloy ZL104	铸铁 Cast iron HT200	塑料 Engineering plastic
2	球座 Tee	4	氟丁 Neoprene	丁腈 Buna-N	四氟 Teflon	氟橡胶 Viton
3	球芯 Ball	4	氟丁 Neoprene	丁腈 Buna-N	四氟 Teflon	陶瓷 Argil
4	立柱 Stand column	2	不锈钢 Stainless steel 1Cr18Ni9Ti	铝合金 Aluminum alloy ZL104	铸铁 Cast iron HT200	塑料 Engineering plastic
5	隔膜 Diaphragm	2	氟丁 Neoprene	丁腈 Buna-N	四氟 Teflon	氟橡胶 Viton
6	隔膜外压板 Outside platen	2	组件 Subassembly			
7	中间轴 Shaft	1	不锈钢 Stainless steel 1Cr18Ni9Ti			
8	隔膜内压板 Endo platen	2	Q235-A			
9	中间体垫 Block Gasket	2	丁腈 Buna-N			
10	隔膜排 Clapboard	2	铝合金 Aluminum alloy ZL104			
11	上盖 Top	1	不锈钢 Stainless steel 1Cr18Ni9Ti	铝合金 Aluminum alloy ZL104	铸铁 Cast iron HT200	塑料 Engineering plastic
12	中间体组件 Center pump body	1	组件 Subassembly			
13	消声器 Muffler	1	ABS			
14	U型密封圈 U Ring	4	丁腈 Buna-N			
15	中间轴导向套 Guide sleeve	1	组件 Subassembly			

QBK

气动隔膜泵 Air operated diaphragm pumps >>>

主要外型尺寸 Main external dimension



主要外形尺寸表 Tables of setting data

型号 Type	A	B	C	D	E	H1	H2	H3	H	螺纹 Threaded		法兰式 Flanged	
										NPT/BSPT	ANSI	DIN	
QBK-10-15	135	48	218	144	12	34	176	10	226	3/8"-1/2"	-	-	
QBK-25	220	130	381	248	12	46	420	18	505	1"	-	-	
QBK-40	220	130	381	248	12	50	420	18	505	1 1/2"	-	-	
QBK-50	330	170	510	347	14	50	521	27	705	2"	●	●	
QBK-65	330	170	510	347	14	99	526.4	50	705	2 1/2"	●	●	
QBK-80	356	255	530	455	18	96	570	50	845	3"	●	●	
QBK-100	356	255	530	455	18	120	570	50	845	-	●	●	

法兰端尺寸根据相应的标准设计，按设计规定，也可以根据客户的设计生产。
The dimension for the flange is designed in accordance with the relevant standard, and it can be specified as the customers' requirement.

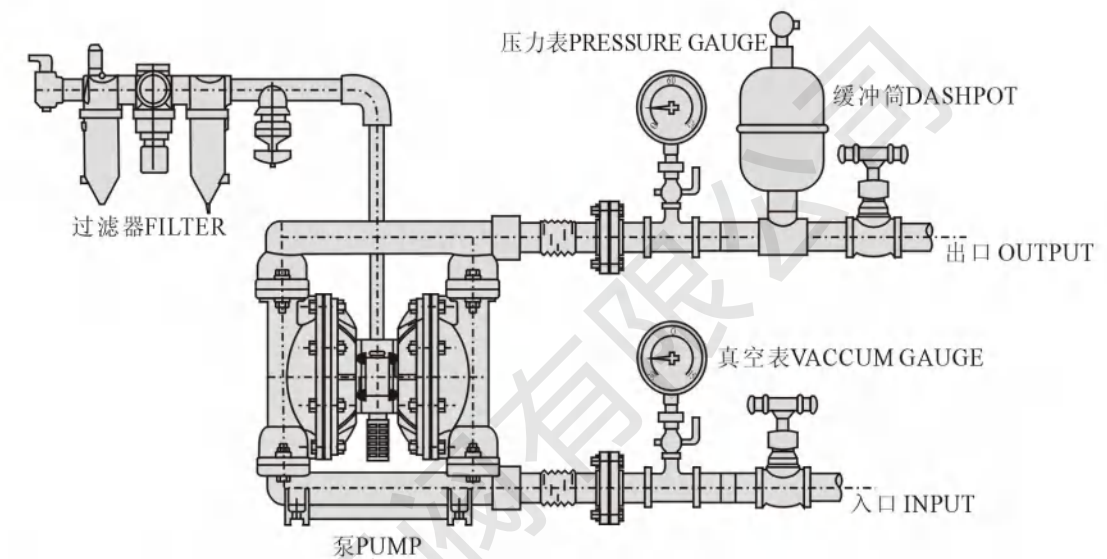
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气动隔膜泵 Air operated diaphragm pumps >>>

主要技术参数 Main specifications

型号 Type	最大流量 Max Flow Rate (L/Min)	出口压力 (最大) Discharge Pressure (Bar)	吸程 Sucked Lift (m)	最大允许颗粒直径 Max Grain Diameter (mm)	最大空气消耗量 Max Air Consumption (L/min)	隔膜材质 Material Of Diaphragm				
						丁腈橡胶 Buna-N	氯丁橡胶 Neoprene	乙丙橡胶 EPDM	氟橡胶 Viton	四氟 Teflon
QBK-10-15	20	6.9	5	1	300	●	●	●	●	●
QBK-25	100	6.9	5	2.5	600	●	●	●	●	●
QBK-40	140	6.9	5	4.5	600	●	●	●	●	●
QBK-50	240	6.9	5	8	900	●	●	●	●	●
QBK-65	280	6.9	5	8	900	●	●	●	●	●
QBK-80	400	6.9	5	10	1500	●	●	●	●	●
QBK-100	480	6.9	5	10	1500	●	●	●	●	●

系统连接示意图 System connection schematic diagram



备注：在使用QBK气动隔膜泵时，要安装空气过滤器，以滤去压缩空气中的水分，并在泵的出口安装压力表，避免因压力过高损害泵，在泵不工作时应及时清洗泵，避免因凝固损坏泵。

Note: When the air operated diaphragm pump works, install the air filter to leach the moisture from the compressed air, and install the manometer at the outlet of pump, so to avoid damaging as too high pressure, when the pump doesn't need work, please clean it in time to prevent from concreting.

零件清单 Part List

序号 No.	名称 Name	数量 Quantity	材料 Material
1	进口管 Inlet pipe	1	不锈钢、铸铁、铝合金、塑料、内衬聚全氟乙烯 Stainless steel, cast iron, aluminium alloy, plastic, inner lining FEP
2	出口管 Outlet pipe	1	不锈钢、铸铁、铝合金、塑料、内衬聚全氟乙烯 Stainless steel, cast iron, aluminium alloy, plastic, inner lining FEP
3	泵体 Pump body	2	不锈钢、铸铁、铝合金、塑料、内衬聚全氟乙烯 Stainless steel, cast iron, aluminium alloy, plastic, inner lining FEP
4	泵腔 Pump chamber	2	铝合金、铸铁 Aluminium alloy, cast iron
5	中间体 Intermediate	1	铝合金 Aluminium alloy
6	隔膜片 Diaphragm vane	2	聚四氟乙烯 PTFE
7	隔膜片 Diaphragm vane	2	丁腈橡胶、氯丁橡胶 Acrylonitrile butadiene rubber, polychloroprene
8	中间体密封垫 Intermediate seal gasket	2	丁腈橡胶 Acrylonitrile butadiene rubber
9	助动轴套 Driving shaft housing	2	塑料 Plastic
10	连杆轴套 Connecting rod shaft housing	2	塑料 Plastic
11	活塞套 Piston bush	2	塑料 Plastic
12	活塞 Piston	2	塑料 Plastic
13	滑块 Slipper block	1	铝合金 Aluminium alloy
14	滑板 Slipper block	1	镀铬钢 Chromium-plated steel
15	密封滑圈 Sealing slip ring	1	塑料 Plastic
16	助动滑块 Driving slipper block	1	塑料 Plastic
17	盖板 Cover plate	1	铝合金 Aluminium alloy
18	盖板垫 Cover plate gasket	1	橡胶 Rubber
19	消声器 Muffler	1	塑料 Plastic
20	密封座 Seal seat	4	橡胶 Rubber
21	密封座 Seal seat	4	聚四氟乙烯 PTFE
22	压板 Clamping bar	4	不锈钢、碳钢 Stainless steel, carbon steel
23	连杆轴 Connecting rod	1	不锈钢 Stainless steel
24	压簧 Compression spring	1	弹簧 Spring
25	助动轴 Driving shaft		铜杆 Copper rod
26	助动轴密封圈 Seal ring of driving shaft	2	橡胶 Rubber
27	Y型O型圈 Y-type O-ring	4	橡胶 Rubber
28	O型圈 O-ring	1	橡胶 Rubber
29	蝶型O型圈 Butterfly-type O-ring	1	橡胶 Rubber
30	进气嘴 Inlet nozzle	1	铜 Copper
31	密封球 Ball sealer	4	橡胶 Rubber
32	密封球 Ball sealer	4	不锈钢、陶瓷、聚四氟乙烯 Stainless steel, ceramic, PTFE

结构图及配件 Structural drawing and fittings

先导式换气结构
Pilot air change structure
内置式气阀一体机
Built-in air valve all-in-one

