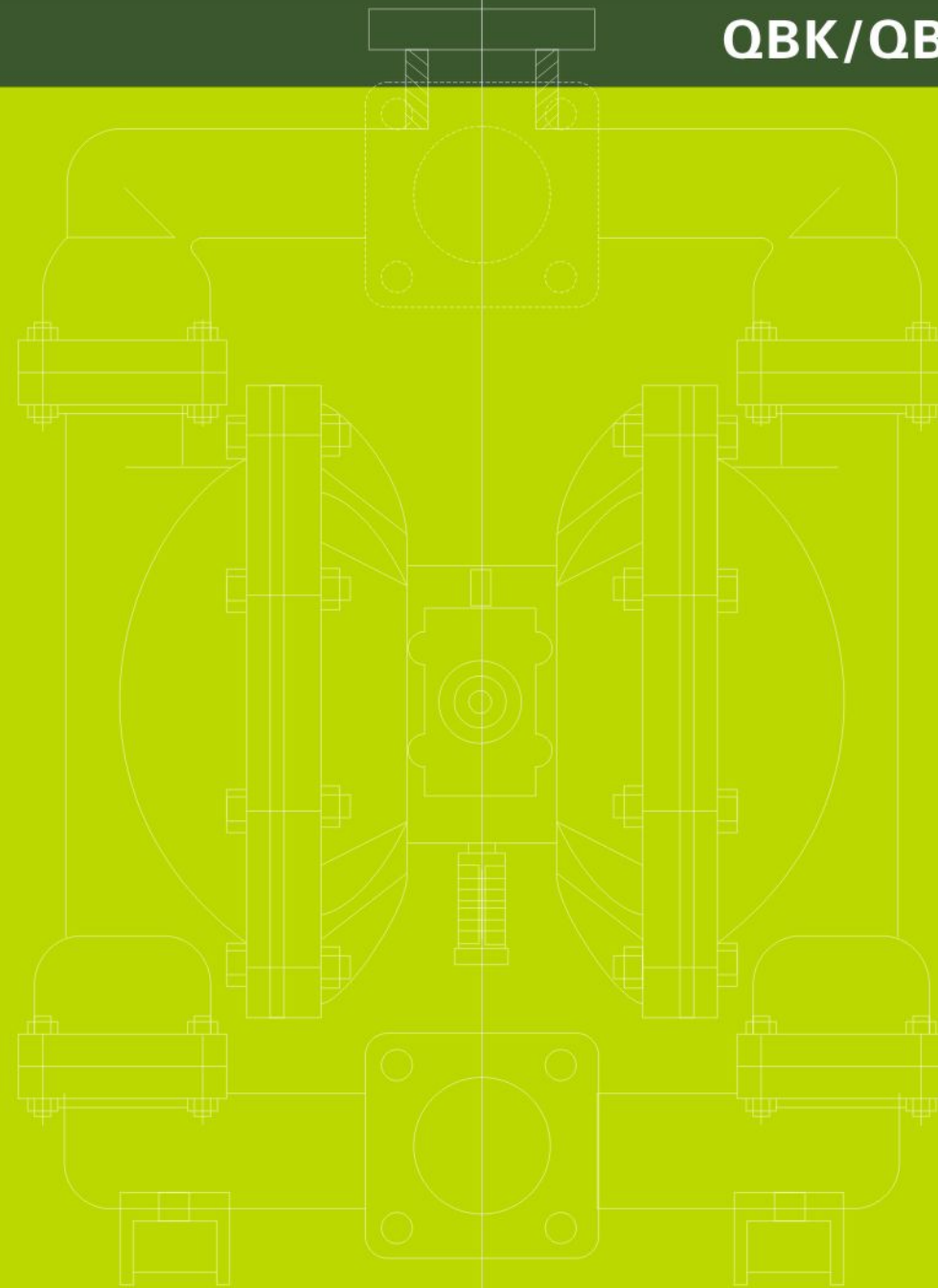


♻️ 采用生态纸印刷

## QBK/QBY气动隔膜泵

### QBK/QBY PNEUMATIC DIAPHRAGM PUMP

隔膜泵专业制造商  
DIAPHRAGM PROFESSIONAL  
MANUFACTURER

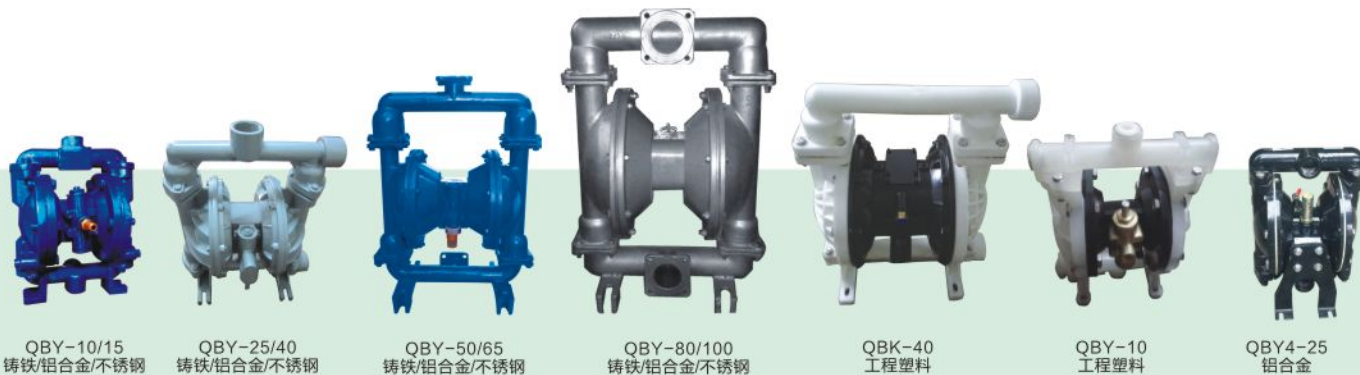


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气动隔膜泵系列



## 气动隔膜泵系列 SERIES AIR OPERATED DIA PHRAGM PUMPS

### 概述 Product Description

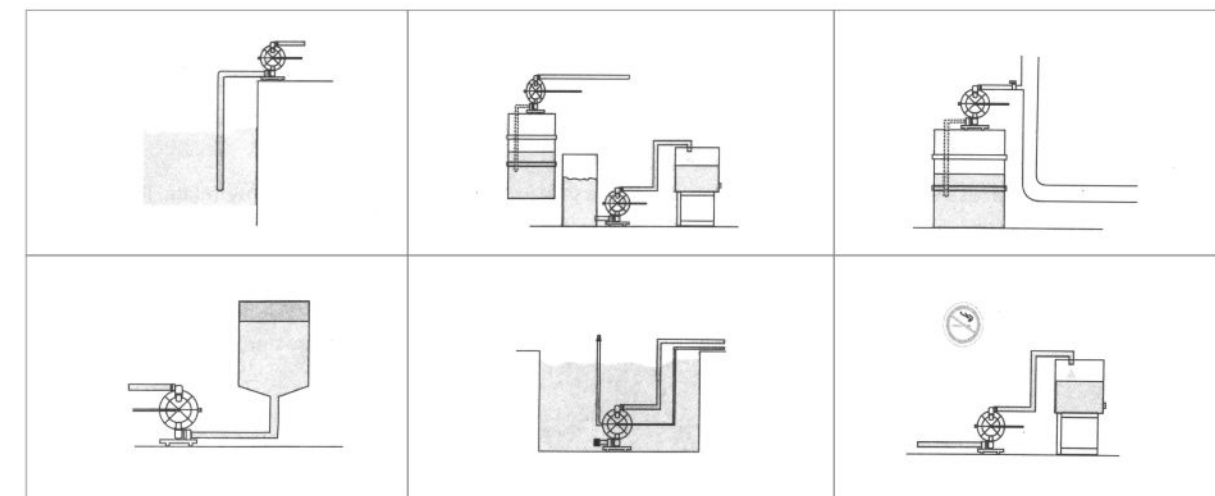
该系列隔膜泵是目前国内最新颖的一种泵类。对于各种腐蚀性液体、带颗粒、高黏度、易挥发、易爆、剧毒的液体、陶瓷釉浆、果酱、胶水、油轮仓底油回收、临时倒罐等液体均能予以抽光吸尽。其性能参数与德国的WLLDENPUMPS、美国的MARIO—WPUMPS相近。泵体流过部件材质采用不锈钢、铝合金、铸铁、塑料，隔膜根据不同液体分别采用丁晴橡胶、氟橡胶、氯丁橡胶及聚四氟乙稀四种。

This series of diaphragm pumps are the latest model at home. They are functioned to take out and suck in various corrosive liquid containing granules, viscous, volatile, inflammable, explosive or poisonous liquid, porcelain slurry, mashed fruit, glue, the reclamation of residual oil in tanker, temporary reversion of tanker, etc. The performance parameters of this series are close to that of German WLLDENPUMPS and American MARIO—WPUMPS. The components in contact with flow are made of stainless steel, aluminium alloy, cast iron and engineering plastics, while diaphragm may be NBR, viton, neoprene or PTFE.

### 主要用途 Usa The Field

- 1、泵吸花生酱、泡菜、土豆泥、红肠、巧克力、啤酒花、糖浆等；
  - 2、泵吸油漆、颜料、胶水、粘合剂等；
  - 3、泵吸各种瓦、瓷、砖器及陶器釉浆等；
  - 4、泵吸各种磨料、腐蚀剂、清洗油垢等；
  - 5、泵吸各种剧毒、易燃、易挥发液体等；
  - 6、泵吸各种污水水泥灌浆及灰浆等；
  - 7、泵吸各种强酸、强碱、强腐蚀液体等；
  - 8、作为各种固液分离设备的前级送压装置
1. The Pump can suck the peanut, pickles, tomato, slurry, red sausage, chocolate, hops, and syrup, etc.
  2. The Pump can suck the paint, pigment, glue and adhesive etc.;
  3. The pump can suck various glazed slurries of tile, porcelain, brick and chinaware etc.
  4. The pump can suck various grinding materials, corrosive agent and clean the oil dirt etc.
  5. The pump can suck various toxin and flammable or volatility liquid etc.
  6. The pump can suck various wedge water, cement slurry and mortar etc.
  7. The pump can suck various strong acid, alkali and corrosive liquid etc.
  8. It can be used as a front-step transmission device of the solid and liquid separation equipment.

### 安装方式 Installation Method





## 性能特点 Function

气动隔膜泵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好多优点。

1. 不需灌引水，吸程高达7m，扬程达50m，出口压力 $\geq 6\text{kgf/cm}^2$ ；
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 $2\sim 8\text{kgf/cm}^2$ 之间)；
4. 该泵无旋转部件，没有轴封，隔膜将抽送的介质于泵的运动部件、工作介质完全隔开，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、易爆场合所使用安全可靠；
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动或突然停机，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，当符合恢复正常后，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，不像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(除配气阀外)无须用油润滑，即使空转，对泵也无任何影响，这是该泵一大特点

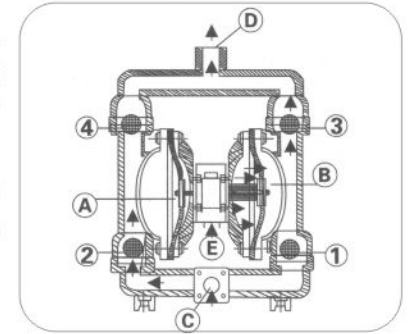
Air operated double diaphragm pumps not only can exhaust the flow liquid, But also convey some uneasy flowed medium with the merits of self-pumping pump, Diving pump, Shield pump, Slurry pump and impurity pump etc.

1. It's unnecessary to pour the drawing water, the suction lift reaches 7m height, The delivery lift reaches 50m length and the export pressure  $\geq 6\text{kgf/cm}^2$ ;
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 life and flow can pass the pneumatic valve open to realize the stepless adjustment (The pneumatic pressure adjustment is between  $2\sim 8\text{kgf/cm}^2$ );
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 exhausting 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 (the viscosity is below 10000 centipoise)
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.

## 工作原理 Working Principle

在泵的两个对称工作腔中A、B中各装有一块隔膜，由中心联杆将其连成一体。压缩空气从泵的进气口进入配气阀，通过配气机构将压缩空气引入其中一腔，推动腔内隔膜运动，而另一腔中气体排出。一旦到达行程终点，配气机构自动将压缩空气引入另一工作腔，推动隔膜朝相反方向运动，从而使两个隔膜连续同步地往复运动。

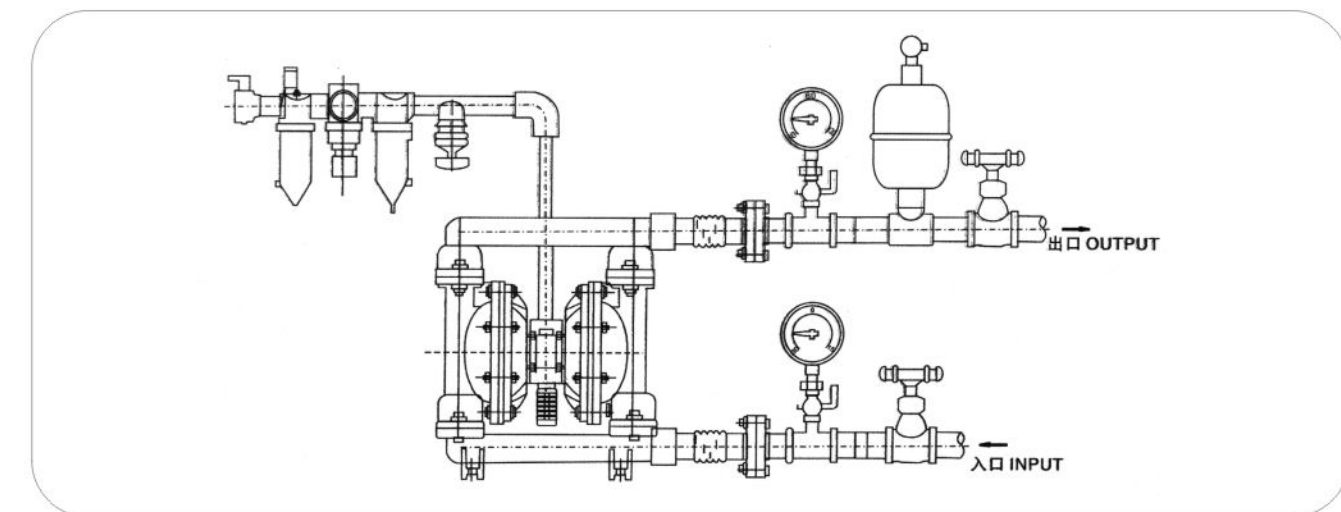
在图示中压缩空气由E进入配气阀，使膜片向右运动，则A室的吸力使介质由C入口流入，推动球阀②进入A室，球阀④则因吸入而闭锁；B室中的介质则被挤压，推开球阀③由D流出，同时使球阀①闭锁，防流，就这样循环往复使介质不断从C入口处吸入，D出口处排出。



There installs each diaphragm in both aligned working cavities (A) & (B), which can be connected together with a central coupling lever. The compression air enters the air distribution valve from the air entrance of the pump, the compression air into one cavity through the air distribution mechanism, push out the diaphragm movement in the cavity. The gas in another cavity will be drained. Once reaching the stroke terminal, the air distribution mechanism will automatically draw the compression air into another working cavity, push out the diaphragm to move towards the opposite direction, so as to let the both diaphragms continuously reciprocate motion in synchronism.

The compression air enters the air distribution valve from (E) shown as the diagram, let the diaphragm piece move towards the right direction. And the suction force in (A) chamber lets the medium flow into from (C) entrance, push out the ball valve (2) to enter (A) chamber, the ball valve (4) will be locked due to the suction force; The medium in (B) chamber will be pressed and pushed out the ball valve (3) to flow out from the exit (D). Meanwhile, let the ball valve (1) close, prevent backflow. Such movement in circles will let the medium uninterruptedly suck from (C) entrance and drain from (D) exit.

## 连接示意图 Connection Schematic Diagram





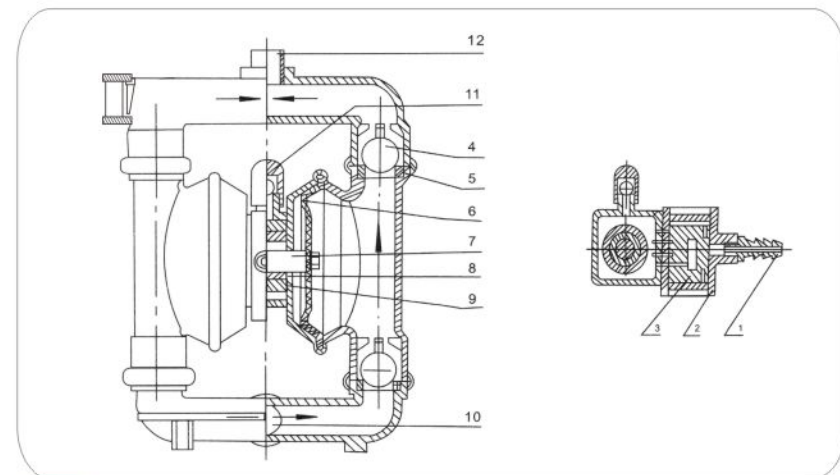
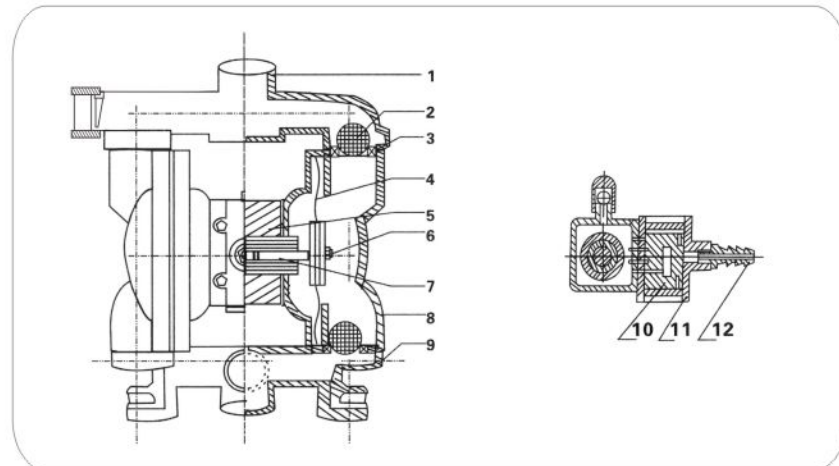
**性能参数 Performance Paramete**

型号 Model	流量 Discharge (m³/h)	扬程 Head (m)	出口压力 Exit pressuse (kgf/cm²)	吸程 Sucked lift (m)	最大允许 颗粒直接 Max grain Dia (mm)	最大供气 压力 Max pressure (kgf/cm²)	最大空气 消耗量 Max air consumption (m³/min)	膜片外径 Diaphragm diameter (m³/min)	重量 Weight (kg)	泵 Pump	
										进口 Inlet	出口 Outlet
QBY-10	0-0.8	0-50	6	5	1	7	0.3	140	7	丝扣 Threaded	3/8"
QBY-15	0-1	0-50	6	5	1	7	0.3	140	7	丝扣 Threaded	1/2"
QBY-25	0-5	0-50	6	7	2.5	7	0.6	230	20	丝扣 Threaded	1"
QBY-40	0-8	0-50	6	7	4.5	7	0.6	230	24	丝扣 Threaded	1 1/2"
QBY-50	0-15	0-50	6	7	8	7	0.9	340	50	50 法兰Flange	50 法兰Flange
QBY-65	0-16	0-50	6	7	8	7	0.9	340	56	65 法兰Flange	65 法兰Flange
QBY-80	0-28	0-50	6	7	10	7	1.5	450	70	80 法兰Flange	80 法兰Flange
QBY-100	0-30	0-50	6	7	10	7	1.5	450	78	100 法兰Flange	80 法兰Flange

注:★-有/-无 注:重量以铝合金为标准, 铸铁/不锈钢约是铝合金的1.7倍。材质: 铝合金、不锈钢、铸铁、塑料、流体部位衬氟  
Note:★-have/-without Note: the weight on the basis of aluminum alloy, cast iron/stainless steel is about 1.7 times of aluminum alloy.  
texture:aluminium alloy、stainless steel、cast iron、plastic、Fluid lining fluoride

**QBY-10 气动隔膜泵结构原理图**  
**QBY-40 Structural drawing**

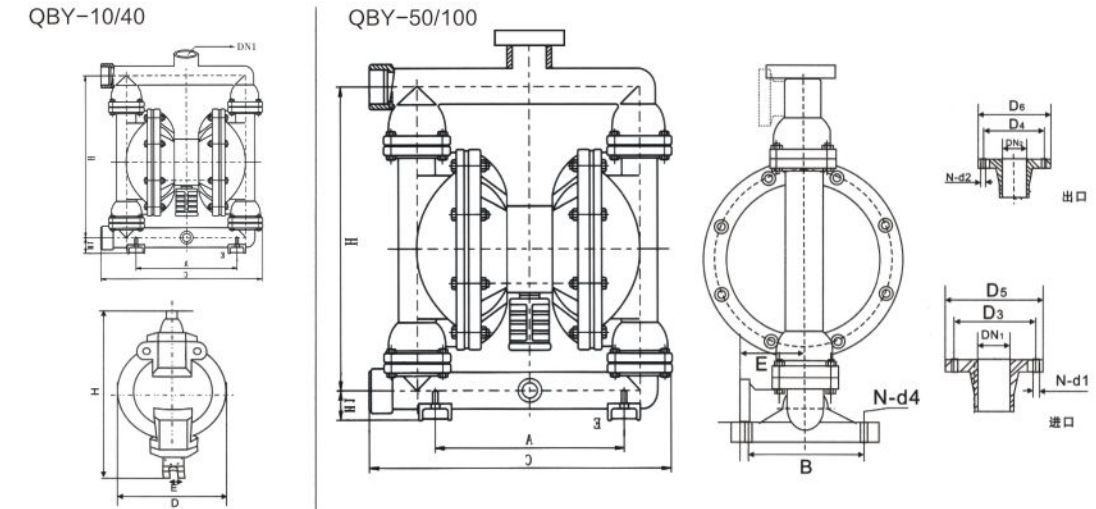
01.出水管 01.Outlet pipe	02.密封球 02.Ball sealer
03.密封座 03.Seal seat	04.隔膜片 04.Diaphragm vane
05.中间体 05.Intermediate	06.连杆组件 06.Connecting components
07.连杆铜套 07.Copperroads	08.泵体 08.Pump body
09.进水管 09.Inlet pipe	10.阀塞 10.Valve pluy
12.进气嘴 12.Admi ion piece	13.配气阀 13.Air distrbution valve



**QBY-50~100 气动隔膜泵结构原理图**  
**Structural drawing**

01.进气嘴 01.Admi ion piece	02.配气阀体 02.Air distrbution valve
03.配气阀 03.Air distrbution valve	04.密封球 04Ball sealer
05.密封座 05.Seal seat	06.隔膜片 06.Diaphragm vane
07.连杆组件 07.Connecting components	08.连杆铜套 08.Copper roads
09.中间体 09.Intermediate	10.进水管 10.Inlt pipe
11.排气口 11.Air outlet	12.出水管 12.Outlet pipe

**安装尺寸 Drawing of setting data**

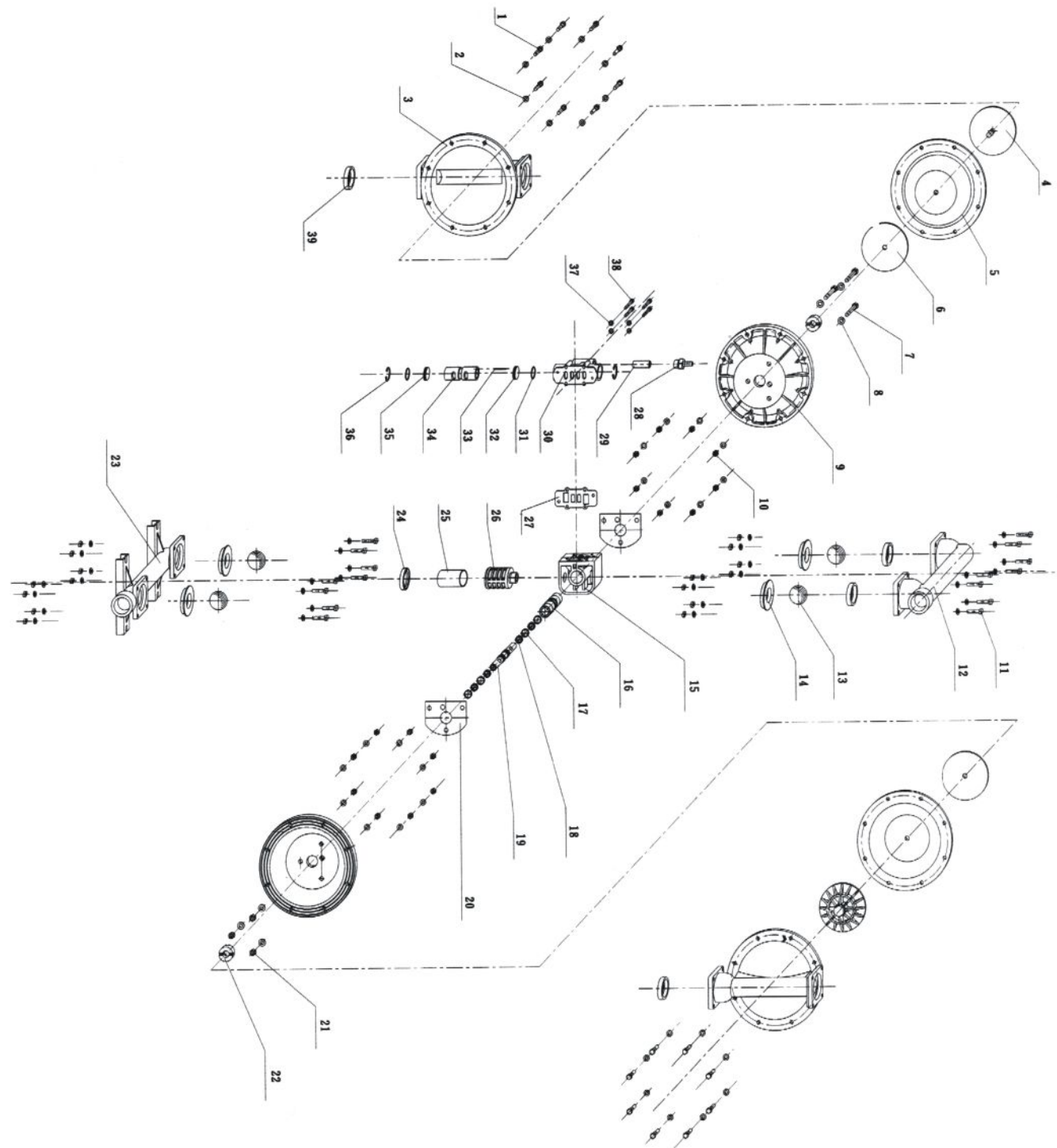


型号 Model	A	B	D5	D6	C	H	H1	H2	DH1	DN2	N-d1	N-d2	D3	D4	E	N-d4	进气 口 外径	材质 Materials
QBY-10	135	53	/	/	190	235	35	220	3/8" 丝扣	/	/	/	/	/	12	/	8	铸铁 (HT200) 铝合金 (ZL104) 不锈钢 (1Cr18Ni9Ti) 工程塑料 (PP)
QBY-15	135	53	/	/	190	235	35	220	1/2" 丝扣	/	/	/	/	/	12	/	8	工程塑料 (PP) 进出口均朝边出
QBY-25	255	150	100	100	380	530	70		1" 丝扣	1" 丝扣	4-φ11	4-φ11	75	75	55	4-φ10	10	工程塑料 (PP) 进出口均朝边出
QBY-40	255	150	130	120	380	530	70		1 1/2" 丝扣	1 1/2" 丝扣	4-φ13.5	4-φ13.5	100	90	55	4-φ10	10	工程塑料 (PP) 进出口均朝边出
QBY-25	220	160	100	100	370	460	50	410	1" 丝扣	1" 法兰	4-φ11	4-φ11	75	75	80	4-φ12	10	铸铁 (HT200)
QBY-40	220	160	130	120	370	460	50	410	1 1/2" 丝扣	1 1/4" 丝扣	4-φ13.5	4-φ13.5	100	90	80	4-φ12	10	铸铁 (HT200)
QBY-50	340	215	140	140	550	715	95		2" 法兰	2" 法兰	4-φ13.5	4-φ13.5	110	110	145	4-φ17.5	11	不锈钢 (1Cr18Ni9Ti)
QBY-65	340	215	160	140	550	715	95		2 1/2" 法兰	2 1/2" 法兰	4-φ13.5	4-φ13.5	130	130	145	4-φ17.5	11	不锈钢 (1Cr18Ni9Ti)
QBY-80	360	260	190	190	580	950	100		3" 法兰	3" 法兰	4-φ17.5	4-φ17.5	150	150	130	4-φ17.5	11	铝合金 (ZL104)
QBY-100	360	260	210	190	580	950	100		4" 法兰	3" 法兰	4-φ17.5	4-φ17.5	170	170	130	4-φ17.5	11	铝合金 (ZL104)

注: QBY-10和15铸铁/铝合金/不锈钢/塑料材质进出口均为丝扣连接, 无法兰。QBY-25和40不锈钢/塑料材质进出口均为丝扣连接, 无法兰, 铸铁/铝合金材质进出口均为法兰, 丝扣连接双用。QBY-50/65/80/100均法兰连接, 无丝扣。(产品样请参照目录图片)  
Note: QBY-10 and 15 cast iron / aluminum / stainless steel / plastic material import and export are threaded connection, not blue. QBY-25 and 40 stainless steel / plastic material import and export are threaded connection, not blue, cast iron / aluminum alloy and export are flanged, threaded connection dual-use. QBY-50/65/80/100 are flanged, no threaded. (Please refer to actual sample product catalog pictures)



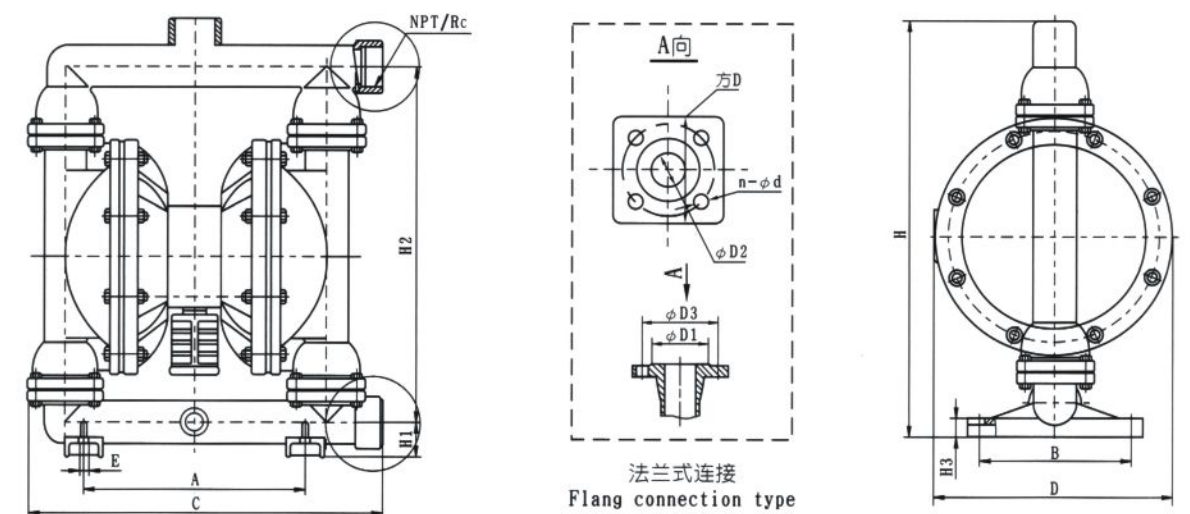
爆炸图 Explosive view



零件清单 Parts list

零件序号 Serial number	名称 Name	数量 Amount	材料 Data			
1	螺钉 Bolt	16	Q235-A			
2	垫圈 Gasket 10	64	Q235-A			
3	立柱 Stand column	2	1Cr18Ni9Ti	HT200	ZL 104	增强聚丙烯 Enhanced polypropylene
4	外压板 Outside Platen	2	Q235-A			
5	隔膜 Dissepiments	2	丁腈橡胶 Nitrile Rubbers	氟橡胶 Fluorine Rubber	氯丁橡胶 Chloronorgutta	
6	内压板 Endo Platen	2	ZL104 and Steel			
7	螺钉 Bolt	3	Q235-A			
8	垫圈 Gasket	6	Q235-A			
9	隔板 Clapboard	2	ZL 104			
10	螺母 Screw Cap M10	32	Q235-A			
11	螺钉 Bolt	16	Q235-A			
12	上盖 Top	1	1Cr18Ni9Ti	HT200	ZL 104	增强聚丙烯 Enhanced polypropylene
13	球 Ball	4	氯丁橡胶 Chloronorgutta	丁腈橡胶 Nitrile Rubbers	聚四氟乙烯 Polytetrafluoroethylene	陶瓷 Argil
14	球座 Tee	4	氟橡胶 Fluorine Rubber			
15	中间泵体 Pump Body	1	ZL 104			
16	铜套 Cuprum Series	1	H62			
17	O型密封圈 O-ring Seal	4	聚四氟乙烯 Polytetrafluoroethylene			
18	O型密封圈 O-ring Seal	4	丁腈橡胶 Nitrile Rubbers			
19	中间轴 Shaft	1	1Cr18Ni9Ti			
20	泵体密封垫 Block Gasket	2	耐油橡胶石棉板 Oil-proof rubber rock wool			
21	螺母 3CreW Cap	3	Q235-A			
22	定位圈 Site-ring	2	塑料 Plastic			
23	底座 Bottom	1	1Cr18Ni9Ti	HT200	ZL 104	增强聚丙烯 Enhanced polypropylene
24	消声器盖 Muffler Cover	1	ABS			
25	消声器体 Muffling Coat	1	QSn6.5-0.1			
26	消声器套 Muffler Body	1	ABS			
27	气阀密封 Air Valve Gasket	1	耐油橡胶石棉板 Oil-proof rubber rock wool			
28	气接头 Air Connector	1	Q235-A			
29	进气过滤器 Into gases Percolator	1	烧结黄铜颗粒 Sintering brass granule			
30	配气阀 Air Distributive Valve	1	ZQSn6-6-3			
31	O型圈 O-ring	2	丁腈橡胶 Nitrile Rubbers			
32	定位挡片 Baffle	1	Ly12			
33	起动杆 Site billot	1	H62			
34	活塞 Piston	1	ZL105			
35	定位挡片 Baffle	1	Ly12			
36	孔用弹性挡圈 Spring Collar	2	65Mn			
37	弹簧垫圈 Spring Cushion	4	65Mn			
38	螺钉 Bolt	4	Q235-A			
39	球座 Tee pressure annulus	4	增强聚丙烯 Enhanced polypropylene			

QBK安装尺寸 QBK Drawing of setting data





安装尺寸表 Tables of setting data

型号 Model	A	B	C	D	E	H1	H2	H3	H	螺纹式 Screw NPT/RC	法兰式Flange					
											D1	D2	D3	D	n	d
QBK-10	130	50	220	145	10	39	195	10	270	1/2	-	-	-	-	-	-
QBK-15	130	50	220	145	10	39	195	10	270	1/2	-	-	-	-	-	-
QBK-25	220	160	360	250	12	50	415	36	455	1	-	-	-	-	-	-
QBK-40	220	160	360	250	16	50	415	35	455	进1/2出4	-	-	-	-	-	-
QBK-50	335	220	540	345	16	88	720	25	720	-	90	50	110	方130X130	4	14
QBK-65	335	220	540	345	16	88	720	25	720	-	110	65	130	方130X130	4	14
QBK-80	425	250	570	450	18	110	900	32	900	-	125	80	150	方160X160	4	18
QBK-100	425	250	570	450	18	110	900	32	900	-	145	100	170	方160X160	4	18

注：O---寿命较长、△---寿命一般、×---不可用，本表仅从耐腐蚀性考虑，因聚四氟乙烯弹性比较差，故实际使用寿命因压力，泵行程杂质等因素影响而异。食品橡胶专用于食品饮料行业。

Note: O---longer life, △---ordinary life, X---not applicable. The table only considers anticorrosion. As elasticity of PTFE is relatively low, the actual service life may be different under the influence of pressure, pump travel, impurities and other factors. Food rubber is specially used for food and beverage industries.

QBK性能参数 Performance parameter

型号 Model	最大流量 Max Flow Rate (L/min)	扬程 Head (m)	出口压力 Exit pressure (kgf/cm <sup>2</sup> )	吸程 Sucked lift (m)	最大允许 颗粒直径 Max grain Dia (mm)	最大供气 压力 Max pressure (kgf/cm <sup>2</sup> )	最大空气 消耗量 Max air consumption (m <sup>3</sup> /min)	正常空气 消耗量 Max air consumption (m <sup>3</sup> /min)	泵 Pump	
									进口 Inlet	出口 Outlet
QBK-10	20	0-69	6.9	5	1	7	0.6	0.3	丝扣 Threaded	1/2"
QBK-15	20	0-69	6.9	5	1	7	0.6	0.3	丝扣 Threaded	1/2"
QBK-25	100	0-69	6.9	5	2.5	7	1.7	0.6	丝扣 Threaded	25
QBK-40	140	0-69	6.9	5	4.5	7	1.7	0.6	丝扣 Threaded	40
QBK-50	240	0-69	6.9	5	8	7	4.9	1.7	50 法兰Flange	50 法兰Flange
QBK-65	280	0-69	6.9	5	8	7	4.9	1.7	65 法兰Flange	65 法兰Flange
QBK-80	400	0-69	6.9	5	10	7	9.1	3	80 法兰Flange	80 法兰Flange
QBK-100	480	0-69	6.9	5	10	7	9.1	3	100 法兰Flange	80 法兰Flange

注：★ -有 /-无 注：重量以铝合金为标准，铸铁/不锈钢约是铝合金的1.7倍。材质：铝合金、不锈钢、铸铁、塑料、流体部位衬氟

Note: ★ -have /-without Note: the weight on the basis of aluminum alloy, cast iron/stainless steel is about 1.7 times of aluminum alloy. texture: aluminium alloy, stainless steel, cast iron, plastic, Fluid lining fluoride

结构图及配件 Structural drawing and fittings



零件清单 Parts 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、内衬聚四氟乙烯 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、内衬聚四氟乙烯 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、内衬聚四氟乙烯 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	铜 Copper
25	助动轴 Driving shaft	1	不锈钢 Stainless steel
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	进气喷 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



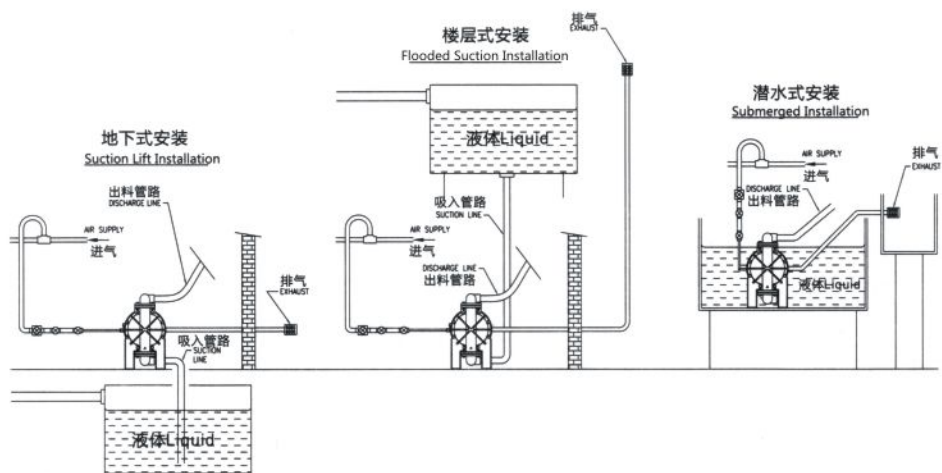
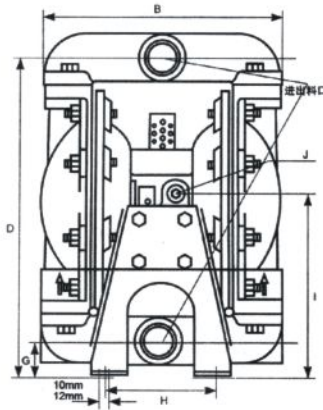
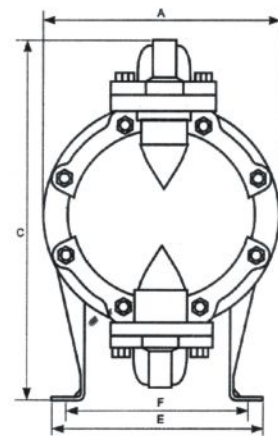
**QBY4气动隔膜泵系列**  
QBY4 SERIES AIR OPERATED DIA PHRAGM PUMPS

**QBY4性能参数 Performance parameter**

型号 Model	最大流量 Max Flow Rate (L/min)	扬程 Head (m)	出口压力 Exit pressure (kgf/cm <sup>2</sup> )	吸程 Sucked lift (m)	最大允许颗粒直径 Max grain Dia (mm)	最大供气压力 Max pressure (kgf/cm <sup>2</sup> )	最大空气消耗量 Max air Consumption (m <sup>3</sup> /min)	口径 Inch	噪音 Noise (db)	泵体可选材料 Materials				
										铝合金 Zl104	铸铁 Ht200	不锈钢 1Cr18Ni9Ti	塑料 PP	流体部位衬氟 Fluorin-lining in filtrated part F46(EFD)、PO
QBY4-15	0-1.5	0-55	6	5	1.2	8	0.3	1/2"	60	★	★	★	★	/
QBY4-20	0-2	0-55	6	5	1.5	8	0.3	3/4"	60	★	★	★	★	/
QBY4-25	0-4	0-60	8	7	4	8	0.6	1"	80	★	★	★	★	★
QBY4-40	0-12	0-60	8	7	6	8	0.6	1 1/2"	80	★	★	★	★	★
QBY4-50	0-18	0-60	8	7	8	8	0.9	2"	80	★	★	★	★	★

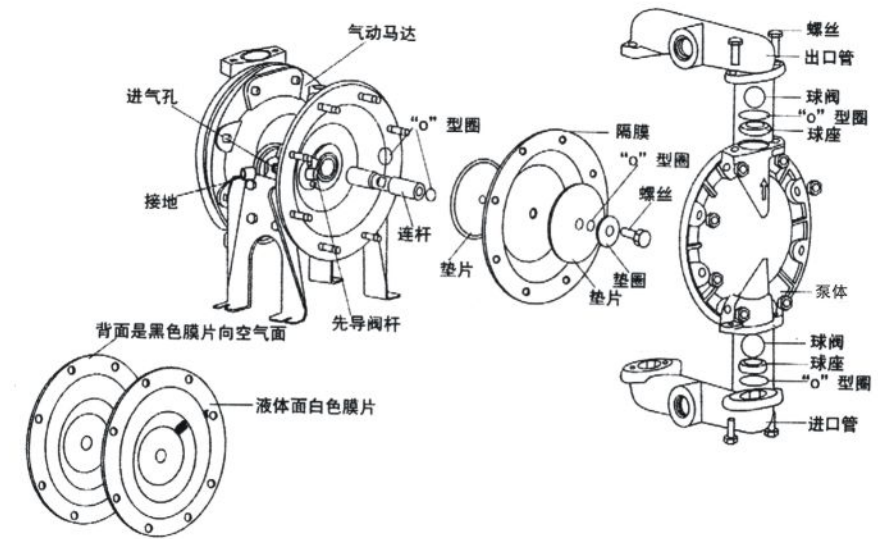
**QBY4安装尺寸 Drawing of setting data**

型号 Model	A	B	C	D	E	F	G	H	I	J
QBY4-15	150	225	270	200	155	180	43	80	155	1/4"
QBY4-20	150	225	270	200	155	180	43	80	155	1/4"
QBY4-25	202	216	315	290	160	190	32	104	166	1/4"
QBY4-40	290	336	500	405	340	300	124	225	198	3/8"
QBY4-50	300	340	500	398	340	300	130	225	198	3/8"



**气动隔膜泵系列**  
SERIES AIR OPERATED DIA PHRAGM PUMPS

**QBY4结构零件图 Structure detail drawing**



**几种隔膜泵材料特性 Characteristic of diaphragm**

介质种类 Dielectric Code	隔膜品种 The diaphragm varieties	丁腈橡胶 Chemigum	氯丁橡胶 Neoprene	氟橡胶 Viton	聚四氟乙烯 Teflon	食品橡胶 Food Rubber
发烟硝酸	Fuming nitric acid	x	x	△	△	
浓硝酸	Concentrated nitric acid	x	x	△	△	
浓硫酸	Strong sulfuric acid	x	x	○	△	
浓盐酸	Concentrated Hydrochloric acid	x	△	△	△	
浓磷酸	Strong phosphoric acid	x	△	△	△	
浓醋酸	Acetic Acid Glacial	x	x	x	△	
浓氢氧化钠	Strong Sodium Hydroxide	○	○	△	△	
无水氨	Anhydrous ammonia	△	△	△	△	
稀硝酸	Dilute nitric acid	x	x	○	△	
稀硫酸	Dilute sulfuric acid	△	△	△	△	
稀盐酸	Diluted hydrochloric acid	x	x	x	△	
稀磷酸	Diluted phosphoric acid	x	x	x	△	
稀氢氧化钠	Dilute Sodium Hydroxide	○	○	△	△	
氨水	Ammonia water	△	△	x		
苯	Benzene	x	x	○	○	
汽油	Gasoline	○	○	○	○	
石油	Oil	△	△	○	○	
四氧化碳	Fou oxidation carbon	○		○	○	
二硫化碳	Carbon disulfide	○		x	○	
乙醇	Ethanol	○	○	○	○	
丙酮	Acetone	x	△	x	○	
甲酚	Cresol	x	△	△	○	
乙醛	Aldehyde	x	x	△	○	
乙苯	Ethylbenzene	x	x	△	○	
丙烯晴	ACRYLONITRYL	△	△	x	○	
丁醇	Butanol	○	○	○	○	
丁二烯	Butadiene	○	○	△	○	
苯乙烯	Styrene	x	x	△	○	
醋酐	Dilute ethyl	x	x	x	○	
醚	Ether	x	x	x	○	

注：○---寿命较长、△---寿命一般、x---不可用，本表仅从耐腐蚀性考虑，因聚四氟乙烯弹性比较差，故实际使用寿命因压力，泵行程杂质等因素影响而异。  
食品橡胶专用于食品饮料行业。  
Note: ○---longer life, △---ordinary life, x---not applicable. The table only considers anticorrosion. As elasticity of PTFE is relatively low, the actual service life may be different under the influence of pressure, pump travel, impurities and other factors. Food rubber is specially used for food and beverage industries.



### 注意事项 Cautions

- 1、本泵振动极其轻微，一般情况可不装底脚螺栓。
- 2、如压缩空气有脏物进入，将会影响泵的正常启动，建议用户加装气动三联件。
- 3、在抽吸易冻结沉淀的介质时，应在泵的进口处装阀门，当停止用泵时，先将该阀关闭，然后再开泵数分钟，将泵体介质排净，并及时清洗泵内积液以免造成下次开泵困难。
- 4、更换隔膜时，须将泵内腔连杆，铜套清洗干净，并不要损坏白色四氟密封圈，按原样装好，即可使用。

- 1.If the pump vibration is very slight, there is generally no need to install the foundation bolts.
- 2.If the compressed air is mixed with dirty things, normal starting of the pump will be influenced. It is suggested that the user should additionally install the pneumatic triplex parts.
3. When pumping media that will easily freeze or deposit, please install a valve at the inlet of the pump. If the pump is to be stopped, please firstly close the valve, and then run the pump for several minutes to empty the media inside the pump and clean the accumulated liquid inside the pump in time, so as to avoid any difficulties in starting the pump next time.
4. When replacing the diaphragm, please clean the connecting rod in the inner cavity and the copper bush of the pump. And avoid damaging the white PTFE seal ring. Make the reassembly as original, and the pump can be used.

### 应用实例 Application example

- 1、油罐清底，尽管有垫水法抽油，也不能保证将油抽干净，表面总要剩下至少3-5 mm厚的油层。以5000m<sup>3</sup>油罐为例，每次大约损耗1-1.5t油。对于有低位脱水槽的油罐，虽可将剩下的油和水排放到含油污水处理场回收，但是挥发的油品在输送过程中大都挥发殆尽，且污染环境。
- 2、临时倒罐、装卸车和油品采样，炼油生产调度过程中，油品经常要临时倒罐、装车和对油罐中油品采样检验。或者为了不至于污染正常的管线时，用隔膜泵接临时管线可以迅速方便地完成此项任务。
- 3、油轮仓底油回收一条3000t的油轮用固定螺杆泵卸油，仓库隔板之间至少要剩50t油，若用排量较大的隔膜泵，可以收到很好的效果。
- 4、瓦斯、硫化氢残液的输送炼油厂火炬底部的瓦斯残液和含硫水，需要集中排放和处理，否则会形成酸性腐蚀设备。
- 5、陶瓷行业：用该泵抽吸釉浆，并可用于向压滤机送压。
- 6、下水井、暗沟排除渍水、污油在下水井管道，阀门及暗沟检修时，需要排除渍水和污油。用潜水泵虽可抽尽渍水，但往往这些地方都远离电源，很不方便。使用隔膜泵则可采用压缩气瓶作动力，回收污油，排泄渍水。
- 7、污水处理场和污泥池的清扫污水处理场的污泥池，常常聚集大量的油泥和淤沙，需要清扫，采用隔膜泵抽吸灵活、方便省工、省力、省时。
- 8、液化气泵房和化验室排渍水，由于这些地方地势较低，又是一级防火区，采用隔膜泵排渍水比较安全，比用水抽子、汽抽子效率高好多倍。
- 9、此外，此泵应用于环烷酸精制转料，装车亚硫酸钠液体输送，苯类原料装卸车等方面都有它自己的优势。

- 1.Oil tank bottom cleaning. Although there is the water underlying process to pump the oil, it is not guaranteed that the oil can be thoroughly pumped out. There will always have a layer of oil with a thickness of 3-5mm on the surface. Taking the oil tank of 5000m<sup>3</sup> as the example, it wastes 1-1.5t oil every time. As for oil tanks with low position dehydration tanks, although the oil and water that are left will be discharged to oil-bearing sewage farms for recycling, the volatile oil will be volatilized during the transportation, and it will also pollute the environment.
- 2.Temporary tank dumping, loader and oil sampling. During the production scheduling in oil refining, temporary dumping, loading, and sample inspection of oil in the oil tank occur frequently. In order not to pollute normal pipelines, the diaphragm pump is used to connect with a temporary pipeline for completing these tasks rapidly and conveniently.
- 3.Recovery of bilge oil in the oil tanker. In an oil tank of 3000t, at least 50t oil are left between baffles of the warehouse when discharging the oil with the fixed screw pump. If the diaphragm pump with a larger displacement is used, a better effect will be achieved.
- 4.Transportation of gas and hydrogen sulfide residues. The gas residue and sulfur-bearing water at the bottom of the torque in refineries need to be discharged and disposed together; otherwise, acidity will be formed to corrode the equipment.
- 5.Ceramic industry: The pump is used to pump glaze slurry and send pressure to the filter press.
- 6.Removal of dirty water and oil in sewage wells and blind drains. During the maintenance and servicing of sewage well pipes, valves and blind drains, it is necessary to remove dirty water and oil. Although the submerged pump can completely pump out the dirty water, these places are always far away from the power supply, causing great inconvenience. When it is used, the diaphragm pump adopts the compressed air as the driving power to reclaim dirty oil and discharge dirty water.
- 7.Cleaning of sewage farms and sludge pools. Large amounts of oil sludge, mud and sand that must be cleaned gather in the sludge pools in sewage farms. The diaphragm pump featured by flexible pumping, great convenience, labor saving, manpower saving and time saving can be used.
- 8.Discharging of dirty water in liquefied gas pump rooms and laboratories. As these places have lower topography and are Class A fire prevention zones, it is relatively safe to use the diaphragm pump for discharging dirty water, and the efficiency is many times higher than that of hydroejector and steam ejector.
- 9.In addition, the pump also displays its advantages when applied in naphthenic acid refined transformed materials, transportation of loaded sodium sulfite liquid, and loaders of benzene raw materials.

### 故障与排除 Trouble shooting

故障形式 Malfunction forms	产生原因 Causes	排除方法 Troubleshooting
泵不出水或流量不足 No water comes out from the pump or the flow is insufficient.	1、气压不足 2、泵腔流道堵塞 3、阀门没有打开 1、The air pressure is insufficient. 2、The flow channel of the pump cavity is blocked 3、The valve is not opened	1、增加气压 2、打开泵腔清洗 3、开启阀门 1、Add the air pressure 2、Open the pump cavity for cleaning 3、Open the valve
泵停止工作 The pump stops its operation	1、配气阀损坏 2、隔膜片损坏 3、消声器堵塞 4、连杆密封漏气 1、The air distribution valve is damaged 2、The diaphragm is damaged 3、The muffler is blocked 4、Air leakage occurs in the connecting rod seal	1、修理或调换配气阀 2、调换隔膜片 3、清洗消声器 4、更换连杆密封 1、Repair or replace the air distribution valve 2、Replace the diaphragm 3、Clean the muffler. 4、Replace the connecting rod seal
扬程过低 The lift is too low	1、吸程太高或弯头太多 2、流量过大 3、气压过低 1、The suction valve is damaged 2、The flow is too high 3、The air pressure is too low	1、缩短管路减少弯头 2、关小出水阀 3、增加气压 1、Shorten the pipe and reduce elbows 2、Turn down the drain valve. 3、Add the air pressure
噪音太大 The noise is too low	1、消声器破裂 1、The muffler is broken	1、更换消声器 1、Add the air pressure.

产品现被广泛应用于环保、给排水、建筑、石油、化工、医药、电力等领域，树立了隔膜泵良好口碑

PRODUCTS ARE WIDELY USED IN ENVIRONMENTAL PROTECTION, TO FIELD DRAINAGE, CONSTRUCTION, PETROLEUM, CHEMICAL, PHARMACEUTICAL, POWER, ETC., AND ESTABLISH A GOOD REPUTATION DIAPHRAGM.

严谨的工作态度,科学的流体作业

THE RIGOROUS WORK ATTITUDE, SCIENTIFIC FLOW OPERATION

高水准的检测中心，高素质的检验团队

HIGH LEVEL OF TEST CENTER, QUALITY INSPECTION TEAM

健全的客户服务体系

SOUND CUSTOMER SERVICE NETWORK