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QBY型气动隔膜泵 QBY GAS-DRIVING DIAPHRAGM PUMPS

使用说明书 Working Instruction

QBY 型气动隔膜泵 QBY type gas-driving diaphragm pump



■ 概述 Summarize

● QBY 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、杂质泵等输送机械的许多优点。

● QBY series not only pump liquid, but also transport any medium which difficult in flowing, they have many advantage of self priming pump, submersible pump, canned pump, and impurity pump.

■ 产品特点 Characteristics

● 不需灌引水，吸程高达 7m，扬程达 70m，出口压力 $\geq 6\text{kgf/cm}^2$ ；

● 流动宽敞，通过性能好，充许最大颗粒直径达 10mm。输送泥浆、杂质时，对泵磨损甚微。

● 扬程、流量可以通过气阀开度实现无级调节（气泵调节 $1-7\text{kgf/cm}^2$ 之间）；

● 该泵无旋转部件，没有轴封，隔膜将抽转的介质与泵的运动部件、工作介质完全隔开，所输送的介质不会像外汇漏。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；

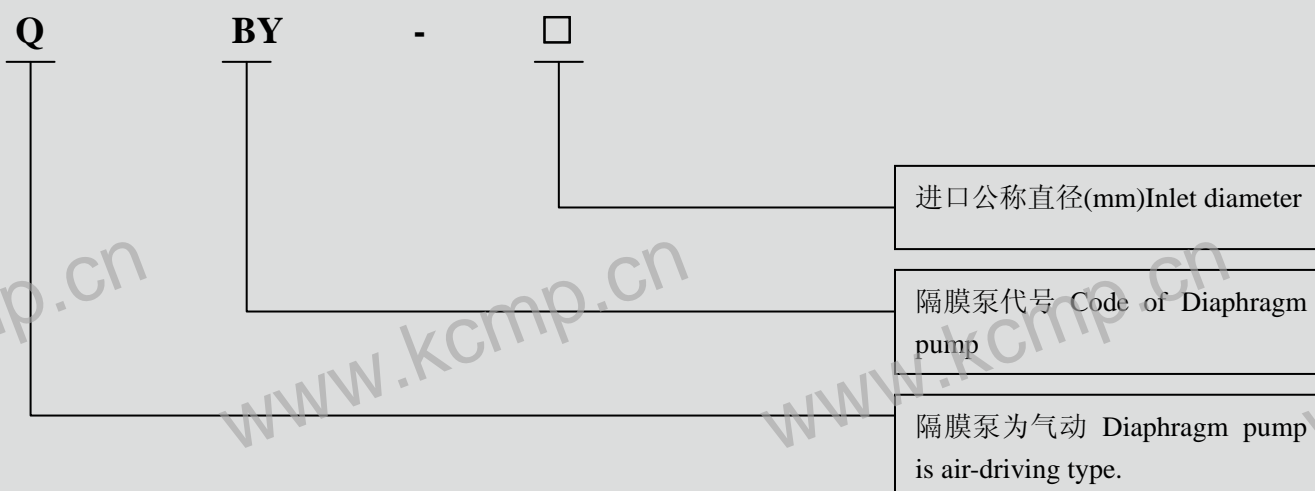
- 不必用电，在易燃易爆场所使用安全可靠；
- 可以浸没在介质中工作；
- 使用方面、工作可靠、开停只需简单的打开和关闭气体阀门，即使由于意外情况长时间无介质运行或突然死机，泵也不会因此而损坏，一旦超负荷，泵会自动停机，具有自我保护性能，当负荷恢复正常后，又能自动启动运行。
- 结构简单、易损件少，安装、维修方便，泵输送的介质不会接触到配气阀，连杆等运动部件，不像其它类型的泵因转子、活塞、齿轮、叶片等部件的磨损而性能下降；
- 可输送输粘的液体（粘度在 1 万厘泊以下）；
- 本泵无需油润滑，即使空转，对泵也无任何影响，这是该泵的一大特点。
- Dont need irrigate and lead water, the pump head can reach to 70mm,and outlet pressure 6kgf/cm².
- flowing roomily and passing performance is good,that can pass the solid grain whose max diameter is 10mm, it wont result in many wear and teer when passing slurry and impurity.
- Head and capacity realizd nonpolar adjust by air-valve opening deeree (lair pressure-adjusting is at 1-7kgf/cm².
- This pump hasnt rotary parts and shaft seal,the septclm separate the medium which are pumped and the pumps stir parts,so that the passed medium wont be leaked,therefore,it wonresult in environmental pollution and bad to people, when transport poisonous and corrosive medium.It is safe and reliable on the combustibile and explosive occasions.
- Can operate while it is im merged in water.
- Easily to use, operating reliably,only need open and turn off the air-valve that make it start and stop,even if long-lime on medium running or stop suddenly because of accidental status,pump still be good,Besides, it will stop by itself when it is over-loading, and it can keep safe by itself, and go on running when load come back to be normal.
- Simple structure,less parts which are easy to be destroyed, be easily to install, and convenient to maintain. The passing medium wont come into contact with equiped air-valve and other stir parts,which dont like other pumps make for performances descend which caused by wear and tear of rotor,plunger,gear wheel,vane and other parts.
- Can passing stick liquid.
- It neednt be lubricated with Oil, it wont influence the pump, even if empty runing ,thats one of the marked features.
- You will find that constring ent air gees into equiping air valve from E in drawing show, that makes film runto right,so the suction of workaround A inake medium into the pump from inletr. burst through 2 in to workaround A,ball valve 4 will be closed down, because of indraft, the medium in workaround13will be extruded,burst through ball valve3, and outflow from outlet D, meantime, make ball valve, closed down, avoid reflucence,like this, making medium indrafted from inlet C,and expeled ,from outletD.

■ 主要用途 Applications

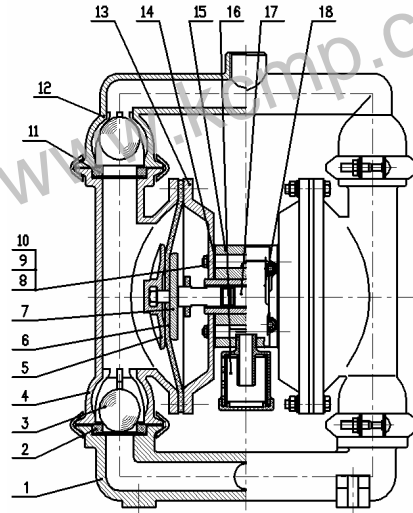
- 泵吸花生酱、泡菜、土豆泥、红肠、巧克力、啤酒花、糖浆等；
- 泵吸油漆、颜料、胶水、粘合剂等；
- 泵吸各种瓦、瓷、砖器及陶器釉浆等；
- 泵吸各种磨料、腐蚀剂、清洗油垢等；
- 泵吸各种剧毒、易燃、易挥发液体等；
- 泵吸各种污水、水泥灌浆及灰浆等；
- 泵吸各种强酸、强碱、强腐蚀液体等；
- 作为各种固液分离设备的前级送压装置。

- Pump peanut butter, pickled vegetable, mashed potatoes, banger, chocolate, beer and so on.
- Pump oil paint, dye, glue water, bond and so on.
- Pump kinds of tile, porcelain, and ceramic glair.
- Pump kinds of grinding material, cauterant, and clean out oil dirt.
- Pump diversified liquid with poison and easy to burn and volat.
- Pump sewage, cement grouting and ashes.
- Pump diversified acid, alkali and liquid with corrosive material.
- The sending pressure equipment that separate diversified solid and liquid.

■ 型号意义 Designation meaning

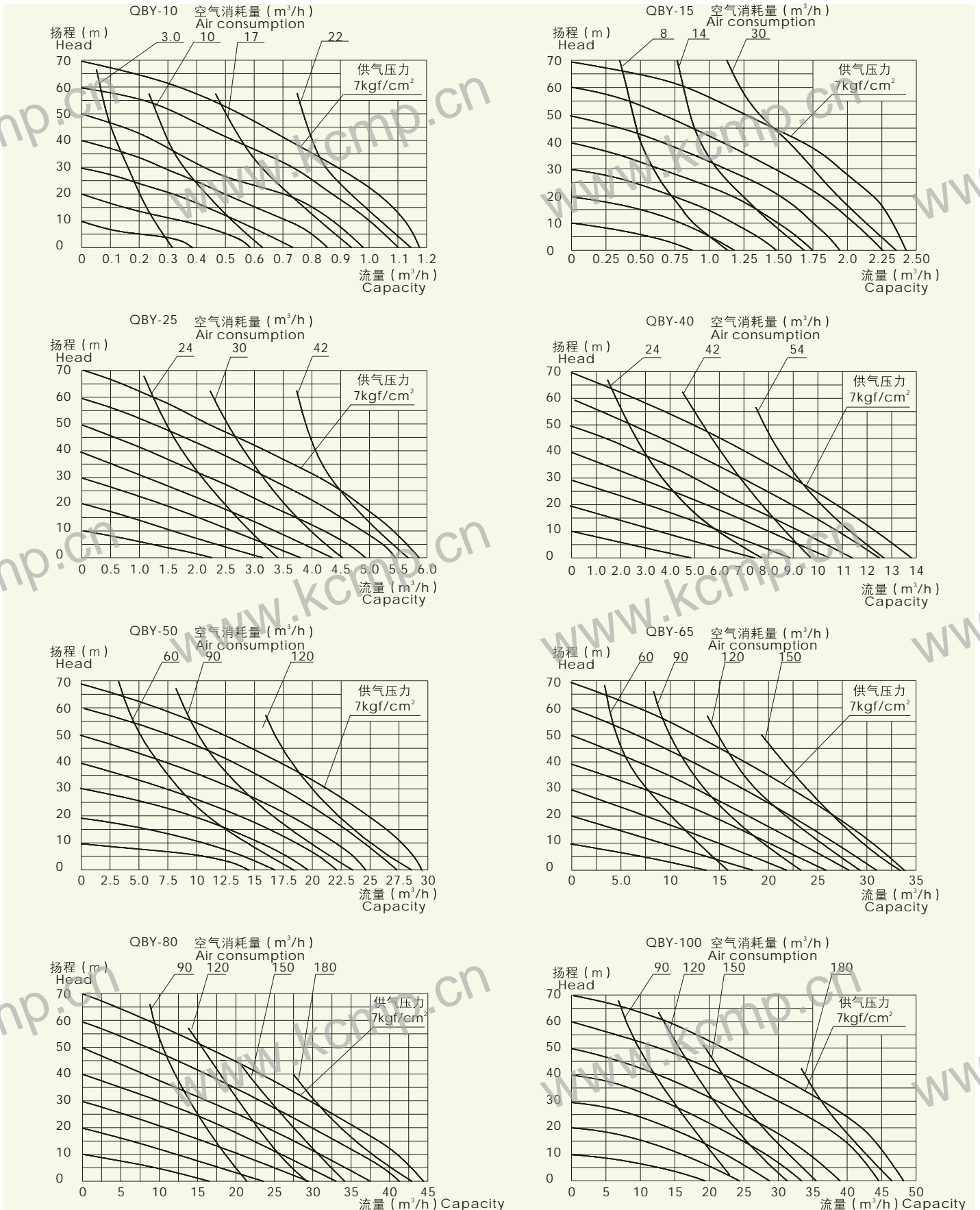


主要零件材料 Major parts material form



QBY 系列气动隔膜泵 QBY Air operated diaphragm pump						
No	零件名称 accessory name	数量 Amount	材料 Material			
1	底座 Bottom	1	不锈钢 Stainless steel	铝合金 Aluminum alloy	铸铁 Cast iron	塑料 Engineering plastic
2	球座 Tee	4	氯丁 Neoprene	丁晴 Buna-N	四氟 Teflon	氟橡胶 Viton
3	球芯 Ball	4	氯丁 Neoprene	丁晴 Buna-N	四氟 Teflon	陶瓷 Argil
4	立柱 Stand column	2	不锈钢 Stainless steell	铝合金 Aluminum alloy	铸铁 Cast iron	塑料 Engineering plastic
5	隔膜外压板 Outside platen	2	Q235-A			
6	隔膜 Diaphragm	2	氯丁 Neoprene	丁晴 Buna-N	四氟 Teflon	氟橡胶 Viton
7	隔膜内压板 Endo platen	2	Q235-A			
8	螺母 Nut	3	Q235-A			
9	垫圈 Gasket	6	Q235-A			
10	螺栓 Stud	3	Q235-A			
11	O型圈 O Ring	4	丁晴 Buna-N			
12	上盖 Top	1	不锈钢 Stainless steel	铝合金 Aluminum alloy	铸铁 Cast iron	塑料 Engineering plastic
13	隔膜排 Clapboard	2	铸铁 Cast iron		铝合金 Aluminum alloy	
14	中间体垫 block Gasket	2	丁晴 Buna-N			
15	中间体组件 Center pump body	1	铸铁 Cast iron		铝合金 Aluminum alloy	
16	消声器 Muffler	1	ABS			
17	中间轴 Shaft	1	不锈钢 Stainless steel			
18	配气阀 Air distributive valve	1	黄铜 Brass			

■ QBY 性能曲线图 QBY Performance curve Sheet

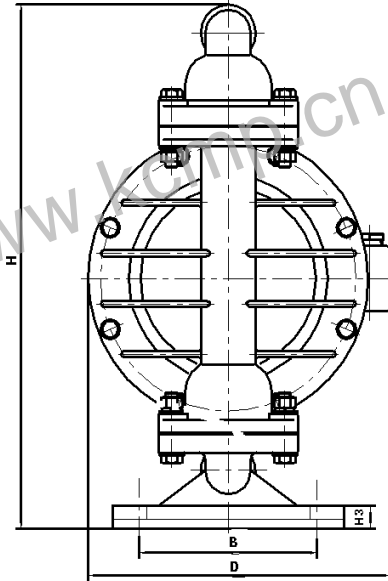
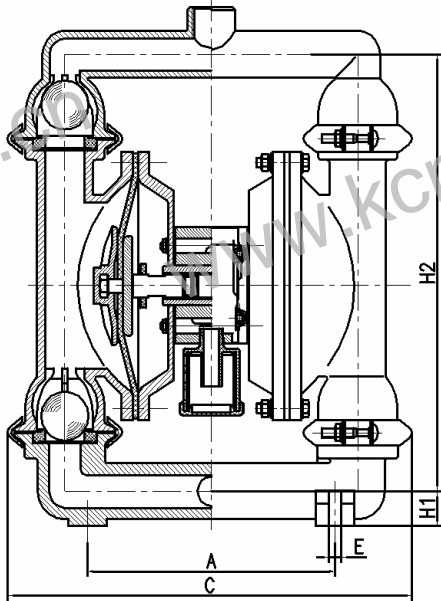


性能参数表 Performance data table

型号 Type	流量 Capacity m ³ /h	扬程Head (m)	出口压力 (kgf/cm ²) Outlet pressure	吸程 (m) Prime distance	最大允许 颗粒直径 (mm) Max solids Diameter	最大供 气压力 (kgf/cm ²) Max air pressure	最大空 气消耗量 (m ³ /min) Max air Consumption	材料 Material				整机质量 (kg) Total pump
								铝 Aluminum	不锈钢 Stainless steel	铸铁 Cast iron	增强聚丙烯 Heavy Polypropylene	
QBY-10	0~0.8	0~50	6	5	1	7	0.3	★	★	★	★	14
QBY-15	0~1	0~50	6	5	1	7	0.3	★	★	★	★	14
QBY-25	0~2.4	0~50	6	7	2.5	7	0.6	★	★	★	★	34
QBY-40	0~8	0~50	6	7	4.5	7	0.6	★	★	★	★	40
QBY-50	0~12	0~50	6	7	8	7	0.9	★	★	★	★	80
QBY-65	0~16	0~50	6	7	8	7	0.9	★	★	★	/	95
QBY-80	0~24	0~50	6	7	10	7	1.5	★	★	★	/	120
QBY-100	0~30	0~50	6	7	10	7	1.5	★	★	★	/	130

注：★-有 无/-

■ 主要外形尺寸 Tables of setting data



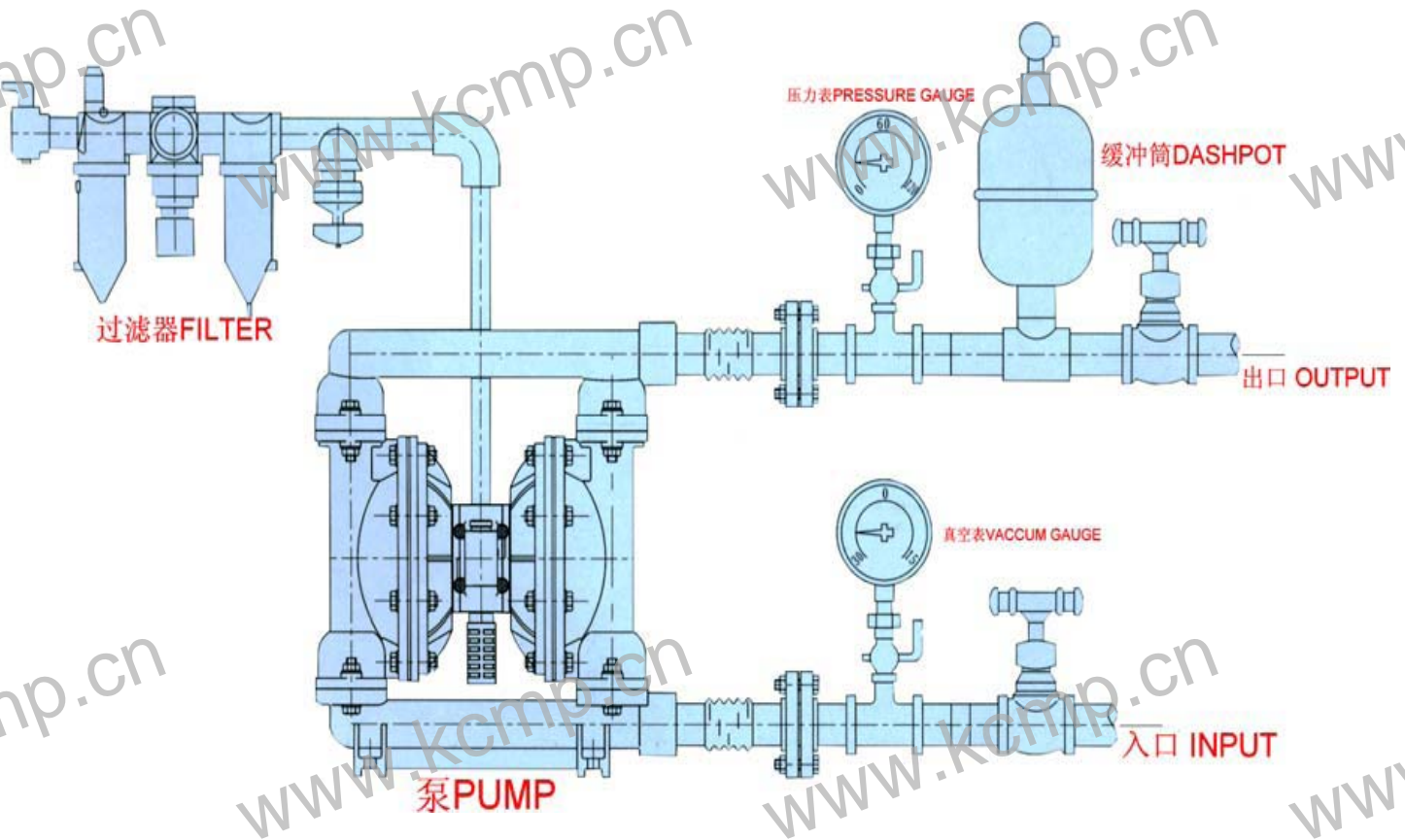
主要外形尺寸表 Tables of setting data

型号	A	B	C	D	E	H1	H2	H3	H	螺纹	法兰 Flanged	
Type	A	B	C	D	E	H1	H2	H3	H	Threaded	ANSI	DIN
										NPT/BSPT		
QBY-10	120	55	205	140	10	27	201	10	255	3/8"	-	-
QBY-15	120	55	205	140	10	27	201	10	255	1/2"	-	-
QBY-25	220	125	330	230	14	43	414	18	500	1"	-	-
QBY-40	215	125	330	230	14	65	370	18	500	1½"	•	•
QBY-50	310	230	460	340	14	70	560	27	700	2"	•	•
QBY-65	290	230	460	340	14	75	550	50	700	-	•	•
QBY-80	420	220	560	450	18	100	645	50	845	-	•	•
QBY-100	420	220	560	450	18	100	665	50	865	-	•	•

法兰端尺寸根据相应的标准设计，按设计给定，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.

■ 系统连接示意图 System connection schematic diagram



备注：在使用 QBY 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.

另一功能:将泵浸在液体中，可替代潜水泵使用。

Another function: diving the pump into water and it can be used as submersible pump.



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