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Air Operated Double Diaphragm Pump Instructions

MODEL: QBK-40L / QBY4-50L / QBY4-25L / QBY4-25LF46 / QBY-15PP / QBK-15P / QBK-15

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NEED HELP? CONTACT US!

Have product questions? Need technical support? Please feel free to contact us:

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This is the original instruction, please read all manual instructions carefully before operating. VEVOR reserves a clear interpretation of our user manual. The appearance of the product shall be subject to the product you received. Please forgive us that we won't inform you again if there are any technology or software updates on our product.

Warning-To reduce the risk of injury, user must read instructions manual carefully.

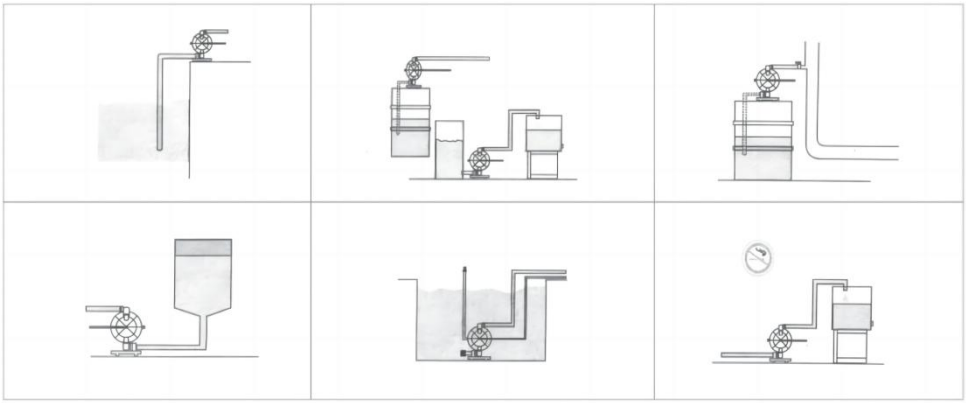
PRODUCT PRESENTATION

This series of diaphragm pumps are the latest model at home.They are functioned to take out and suck in various corrosiveiquid containing granules,viscous,volatile,inflammabale,explosive or poisonous liquid,porcelain slurry,mashed fruit,flue.the reclamation of residual oil in tanker.temporary reversionof tanker,etc,The performanceparametersofthis series are close to shat of Germam WLLDENPUMPS and American MARI0-WPUMPS The componentsin contact with flow are made of stainlesssteel.aluminium alloy , castirron andenineerina plastics.while diaphraammav be NBR.viton.neoprene or PTFE.

MAIN APPLICATION

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 glezed slurries of tile,porcelain,brck and chinaware etc.
4.The pump can suck various grnding materials,corrosive agent and cean 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 canbe used as a front-step transmisson device of the solid and ligiud separation equipment.

WAY TO INSTALL



PERFORMANCE CHARACTERISTICS

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

1.It's unnecessary to pour the drawing water,the suction lift reaches7m height,The delivery lift reaches50m lenath and the exportpressure>6kgf/cm²;

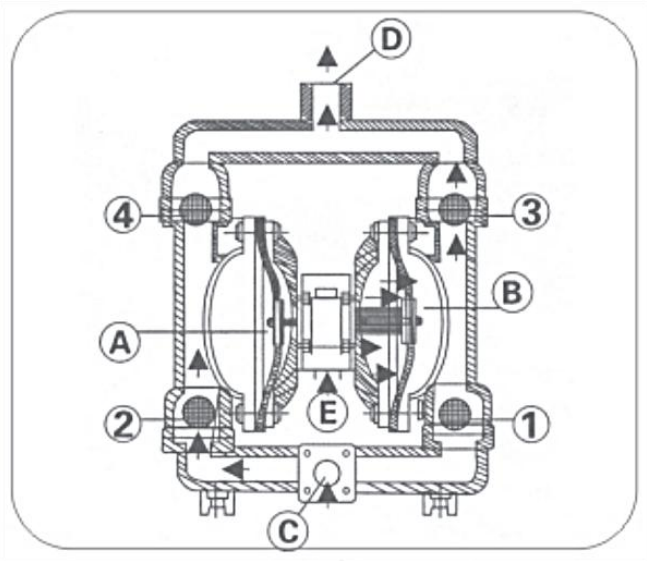
2.Wide flow and good performace.The diameter allowed to pass the max grain reaches 10mm.The damage is very less to the pump while exhausting the slurry andimpurity;

3.The delivery life and flow can pass the pneumatic valve open to realize the stepless adiustment(The pneumatic pressuseadjustmentis between2-8kgf/cm²):

4.This pump has no rotary parts and no bearing seals.The diaphragm will completely separate theexhaustedmedium anopump running parts,working medium.The conveyed medium can't be leaked outside.Thus it wil not cause the environmentapollution and humenbody safety dengerous whileexhausting the toxin and flammable or corrosuve medim:

5.No electricityIt's safe and reliable while using in the flammable and explore places:
6.It can be soakedin medium;
7.It's convenient to use and reliable to work.Only open or close the gas valve body while starting or stopping.Even itno medium operation or pausing suddenly for long time because of accident matters,the pump wil not bedamagedaused bvthis Once ocer-oadinc.The pump wil automaticallv stop and possesses the selforotectionfunction.when the loarecovers normally,It also can start automaticelly;
8.Simple structure and less wearing parts.Thisp pump is simple in structure.Installation and maintenance.The me dium conveyecbythe pumpwillnot touch the matched pneumatic valve and coupling lever etc.Not like other kinds pumps ,the perform Ancewill drop down graduallydecauseof 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 isa characteristic of this pump

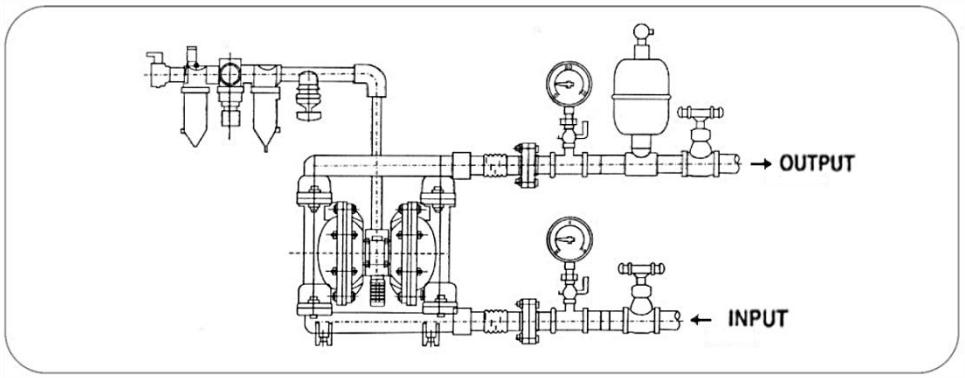
OPERATIONAL PRINCIPLE



There installs each diaphragm in both aligned working cavities(A)&(B),which can be connected together with acentralcoupling lever.The compression air enters the air distribution valve from the air entrance of the pump,the compression airinto one cavity through the air distribution mechanism,push out the diaphragm movementin the cavity.The gas in anothercavity will be drained.Once reachi.ng the stroke terminal,the air distribution mechanicm will automatically draw thecomperession air into aanother working cavity,push out the diaphragm tomove towa rds the opposite direction,so as to le.tthe both diaphragms continuously reciprocate motion in synchronism.

The compression air enters the air distribut valve fr'om(E)shown as the diagram,let the diaphragm piece movetowards theright direction.An:d the suction force i'n(A)chamber lets the medium flow into from(C)entrance,push out the ball valve(2)toenter(A)chamber,the ball valve(4)will be locked due to the suction force;The medium in(B)chamber will be pressed rpush outthe ball valve(3)to flow out from the exit(D).Meanwhile,let the ball valve(I)close,prevent backflow.Such mocement in circleswill let the medium uninterruptedly suck from(C)entrance anddrain from(D)exit.

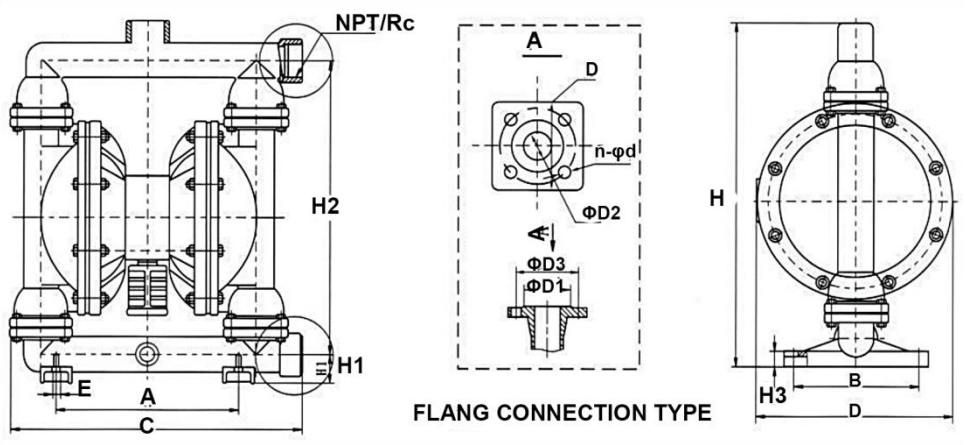
CONNECTION SCHEMATIC DIAGRAM



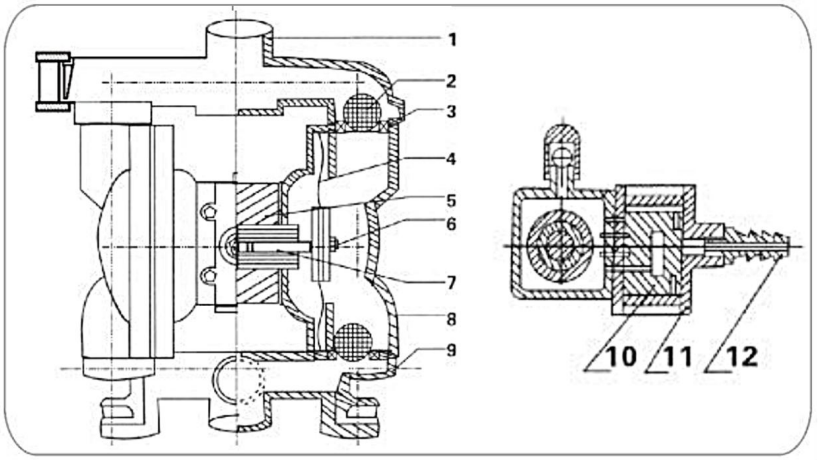
PERFORMANCE PARAMETE

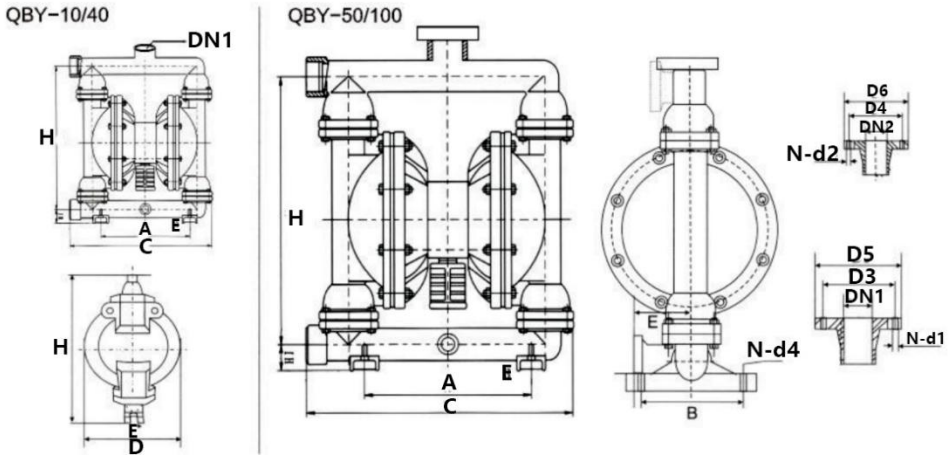
Model	Qmax (GPM)	Hmax (m)	presSUSe (kgf/cm²)	Sucked lift (m)	Max grain Dia (mm)	Max pressure (kgf/cm²)	MWP (PSI)	Pump	
								Air Inlet Size	Inlet and outlet size
QBK-40L	44	69	6.9	5	4.5	7	115	FNPT 1/4"	1.5"
QBY4-50L	75	75	8.0	7	8.0	8	113	FNPT 1/4"	2.0"
QBY4-25L	22	73	8.0	7	4.0	8	100	FNPT 1/4"	1.0"
QBY4-25LF46	24	70	8.0	7	4.0	8	100	FNPT 1/4"	1.0"
QBY-15PP	2.5	50	6.0	5	1.0	7	80	FNPT 1/4"	1/2"
QBK-15P	3	60	6.9	5	1.0	7	90	FNPT 1/4"	1/2"
QBK-15	3	60	6.9	5	1.0	7	90	FNPT 1/4"	1/2"

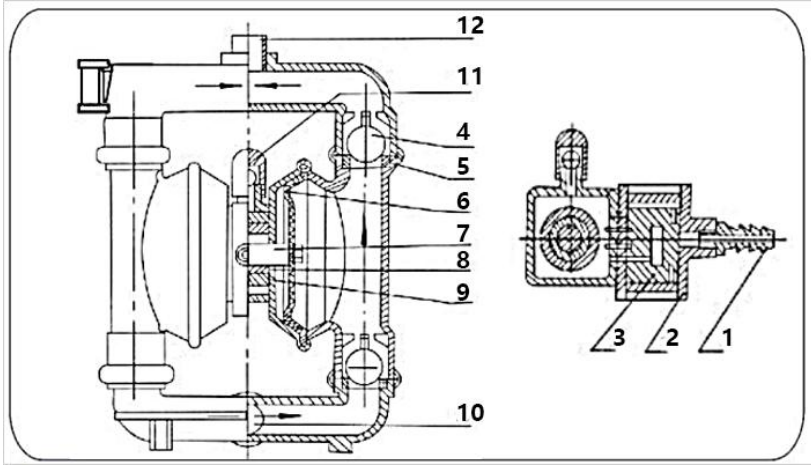
Note: Affected by the stability of gas supply and the environment, the parameters may have certain fluctuations or errors, which is a normal phenomenon.



QBY- $\frac{10}{40}$ Structural drawing	
01.Outlet pipe	02.Ball sealer
03.Seal seat	04.Diaphragm vane
05.Intermediate	06.Connecting components
07.Copperroads	08.Pump body
09.Inlet pipe	10.Valve pluy
12.Admi ion piece	13.Air distrbution valve







QBY-50~100 Structural drawing	
01.Admi ion piece	02.Air distrbution valve
03.Air distrbution valve	04Ball sealor
05.Seal seat	06.Diaphragm vane
07.Connecting components	08.Copper roads
09.Intermediate	10.Inlt pipe
11.Air outlet	12.Outlet pipe

Model	A	B	D5	D6	C	H	H1	H2	DH1	DN2	N-d1	N-d2	D3	D4	E	N-d4	Ouside dameer of ar inkt	Materials
QBY-10	135	53	/	/	190	235	35	220	3/8" Threaded	/	/	/	/	/	**12**	/	8	(HT200) **(ZL104)** **(1Cr18Ni9Ti)** (PP)
QBY-15	135	53	/	/	190	235	35	220	1/2" Threaded	/	/	/	/	/	12	/	8	
QBY-25	255	150	100	100	380	530	70		1" Threaded	1" **Threaded**	4-φ11	4-φ11	75	75	55	4-φ10	10	**(PP)** impats and exports are facing the edge
QBY-40	255	150	130	120	380	530	70		11/2" **Threaded**	11/2" **Threaded**	4-φ13.5	4-φ13.5	100	90	55	4-φ10	10	
QBY-25	220	160	100	100	370	460	50	410	1" **Threaded**	1" flange	4-φ11	4-φ11	75	75	80	4-φ12	10	(HT200' (1Cr18Ni9Ti) (ZL104)
QBY-40	220	160	130	120	370	460		410	11/2" Threaded	11/4" **Threadex**	4-φ13.5	4-φ13.5	100	90		4-φ12	10	
QBY-50	340	215	140	140	550	715	95		2" flange	2" flange	4-φ13.5	4-φ13.5	110	110	145	4-φ17.5	12	
QBY-65	340	215	160	140	550	715	95		2½" flange	22" **flange**	4-φ13.5	4-φ13.5	130	130	145	4-φ17.5	12	
QBY-80	360	260	190	190	580	950	100		3" flange	3" fange	4-φ17.5	4-φ17.5	150	150	130	4-φ17.5	12	
QBY-100	360	260	210	190	580	950	100		4" flange	3" **flange**	4-φ17.5	4-φ17.5	170	170	130	4-φ17.5	12	

Note:QBY-10 and 15 cast iron/aluminum/stainless steel/plastic material import and export are threaded connection,not blue.QBY-25and 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 catalogpictures)

STRUCTURE DRAWING AND PARTS LIST

No.	Name	Qty	Material
1	Inlet pipe	1	Stainless steel,cast iron,aluminium alloy,plastic,inner lining FEP
2	Outlet pipe	1	Stainless steel,cast iron,aluminium alloy,plastic,inner lining FEP
3	Pump body	2	Stainless steel,cast iron,aluminium alloy,plastic,inner lining FEP
4	Pump chamber	2	Aluminium alloy,cast iron
5	Intermediate	1	Aluminium alloy
6	Diaphragm vane	2	PTFE
7	Diaphragm vane	2	Acrylonitrile butadiene rubber,polychloroprene
8	ntermediate sealgasket	2	Acrylonitrile butadiene rubber
9	Driving shaft housing	2	Plastic
10	Connecting rod shaft housing	2	Plastic
11	Piston bush	2	Plastic
12	Piston	2	Plastic
13	Slipper block	1	Aluminium alloy
14	Slipper block	1	Chromium-plated steel
15	Sealing slip ring	1	Plastic
16	Driving slipper block	1	Plastic
17	Cover plate	1	Aluminium alloy
18	Cover plate gasket	1	Rubber
19	Muffler	1	Plastic
20	Seal seat	4	Rubber
21	Seal seat	4	PTFE
22	Clamping bar	4	Stainless steel,carbon steel
23	Connecting rod	1	Stainless steel
24	Compression spring	1	Copper
25	Driving shaft	1	Stainless steel
26	Seal ring of driving shaft	2	Rubber
27	Y-type O-ring	4	Rubber
28	O-ring	1	Rubber
29	Butterfly-type O-ring	1	Rubber
30	Inlet nozzle	1	Copper
31	Ball sealer	4	Rubber
32	Ball sealer	4	Stainless steel,ceramic,PTFE

MATTERS NEED ATTENTION

1.If the pump vibration is very slight,there is generally no need to install the foundation bolts.
2.1f the compressed air is mixed with dirty things,normal starting of the pump will be influenced.It is suggested that the usershould 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 bestopped,please firstly close the valve,and then run the pump for several minutes to empty the media inside the pump and cleanthe 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 avoiddamaging the white PTFE seal ring.Make the reassembly as original,and the pump can be used.

Malfunction forms	Causes	Troubleshooting
No water comes out from the pump or the flow is insufficient.	1、The air pressure is insufficient. 2、The flow channel of the pump cavity is blocked 3、The valve is not opened	1、Add the air pressure 2、Open the pump cavity for cleaning 3、Open the valve
The pump stops its operation	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、Repair or replace the air distribution valve 2、Replace the diaphragm 3、Clean the muffler. 4、Replace the connecting rod seal
The lift is too low	1、The suction valve is damaged 2、The flow is too high 3、The air pressure is too low	1、Shorten the pipe and reduce elbows 2、Turn down the drain valve. 3、Add the air pressure
The noise is too low	1、The muffler is broken	1、Add the air pressure.

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