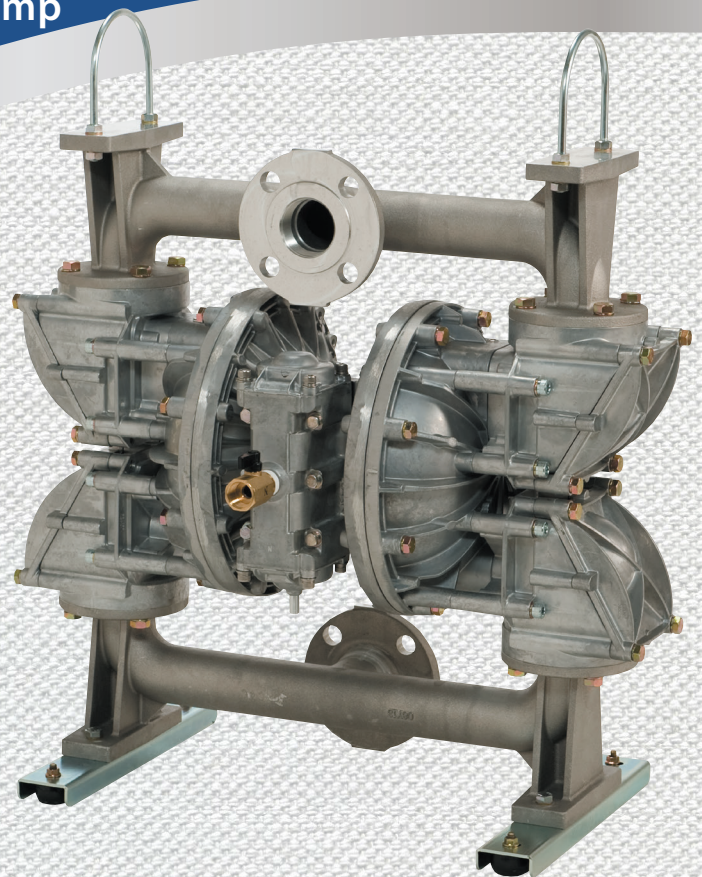


Flap Valve “Flapper” Diaphragm Pumps

The Yamada “Flapper” Pump is designed to pump fluids containing solids up to 2 inches (50mm) in diameter. Build on the foundation of the NDP series line of pumps, the “Flapper” Pumps feature Yamada’s patented stall-free/lube-free air valve and rugged, easy-to-service bolted construction. Designed for durability in the field, the “Flapper” Pumps’ innovative flap-type check valve technology provides streaming passage of solids while minimizing clogging and downtime. Four external bolts release valve covers on either side permitting service and maintenance without removing the pump from installation.

Plus.....All the benefits of every Yamada Pump

- *Non-lubricated Air-Valve*
- *Bolted Construction*
- *Short Stroke, Technology-allowing for longer diaphragm life*
- *Outside-Accessible Air Valve*
- *Modular Pilot-Valve Design-no dynamic O-Rings to replace or repair*

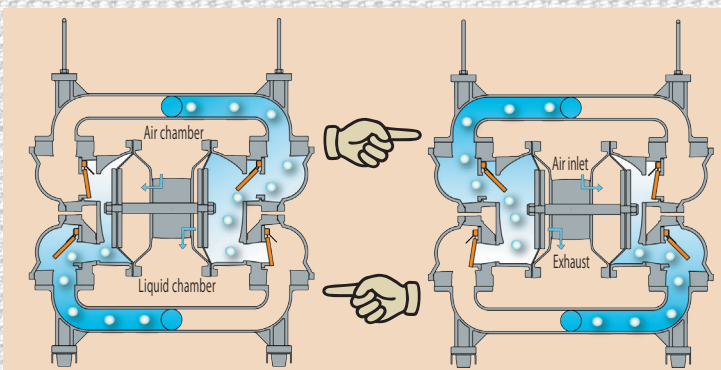


■ Principle of Operation

Compressed air enters the left air chamber, moving the center rod to the left, forcing liquid out of the left liquid chamber, while at the same time drawing liquid into the right liquid chamber.

When the center rod is fully to the left the pneumatic logic system switches the supply of air from the left air chamber to the right air chamber.

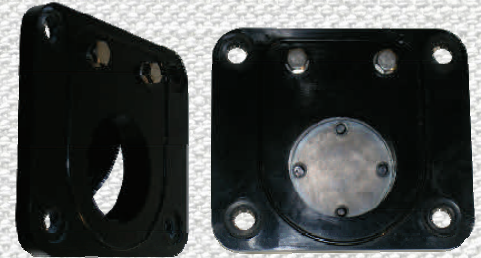
The center rod then moves to the right, forcing out the liquid from the right liquid chamber, while at the same time the left liquid chamber. Through of this action a constant flow of liquid is achieved.



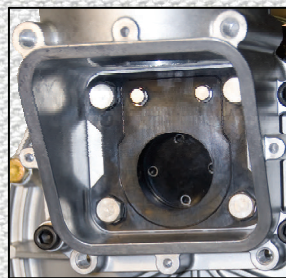
Flap Valve “Flapper” Diaphragm Pumps

Design Features

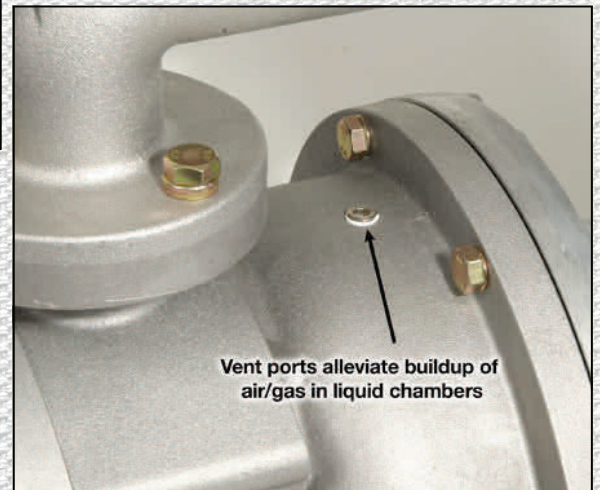
- Heavy-duty flap check valve permits passage of up to 30mm solids
- Easy access to valve chambers for ease of maintenance
- In-line maintenance facilitates servicing pump without removal from installation
- Top suction / bottom-discharge design keeps solids from settling in pump
- Vented diaphragm chambers alleviate problems associated with trapped air/gas
- Non-lubricated air valve
- Outside-accessible air valve
- Bolted construction
- Short-stroke technology improves diaphragm life
- Modular pilot valve design requires no dynamic O-rings to replace or repair



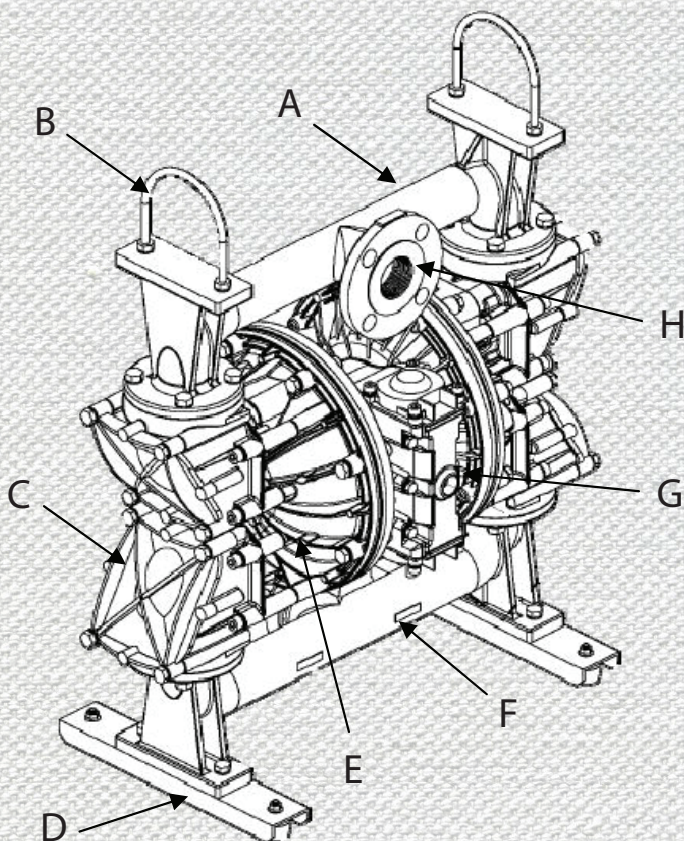
Heavy Duty Flap Check Valve



Just 4 bolts
remove the
side plate



Vent ports alleviate buildup of
air/gas in liquid chambers



A. Suction Manifold

B. U-Bolts

C. Check Valve Chambers w/access ports

D. Removable/Replaceable Legs

E. Liquid Chamber

F. Discharge Manifold

G. Non-Lube Air Motor

H. 2" Multi-port (Flange with Rc or NPT)

Advantages

| | Yamada NDP-50FAN | Leading Competitor |
|--------------------------|---|--|
| Weight | 52kg | 45kg |
| Dimensions | H 31" x W 25-1/2" x D 14-1/8" | H 20-5/6" x W 21-3/4" x D 13-5/8" |
| Intake & Discharge Ports | 2" Multi-port Flange with Rc or NPT | Only NPT offered |
| Flow | 158 gpm (600Lpm) max | 140 gpm (530Lpm) max |
| Air Valve | | |
| Lubrication | No Lubrication Required | Lubrication Required |
| Manual Override | Yes | None |
| Liquid Side | | |
| In Place Clean Out Ports | Yes - can do flapper/seal assembly maintenance without pump removal | None - must be removed from service |
| Flapper Mating Surfaces | Rubber / Rubber (no gaskets / o'rings) | Rubber / Metal (with gaskets) |
| Flapper Seal | Raised angled seat compensates for normal wear and faster seating of flap valve | Once worn, will not seal |
| Flow Through Ports | Angled for maximum flow through | 90 degree turns lead to clogging |
| Diaphragms | Short stroke technology for longer diaphragm life | Over stressed diaphragms lead to accelerated failure |

Applications

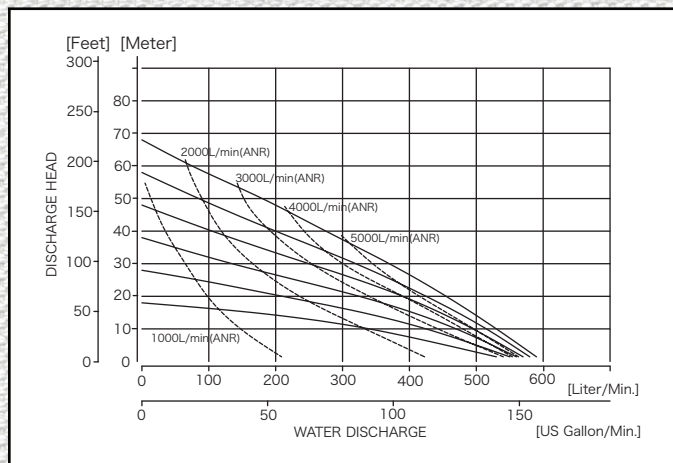
Mine Dewatering
 Sumps
 Drillers Mud
 Powder
 Food Process Waste
 DAF Sludge
 Deactivated Sludge

Industries Served

Mining
 General Industrial
 Construction
 Refineries
 Oil & Gas
 Municipalities
 Food Processing

Flap Valve “Flapper” Diaphragm Pumps

Performance Curve



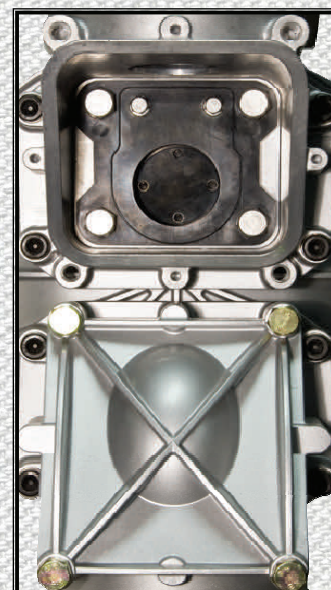
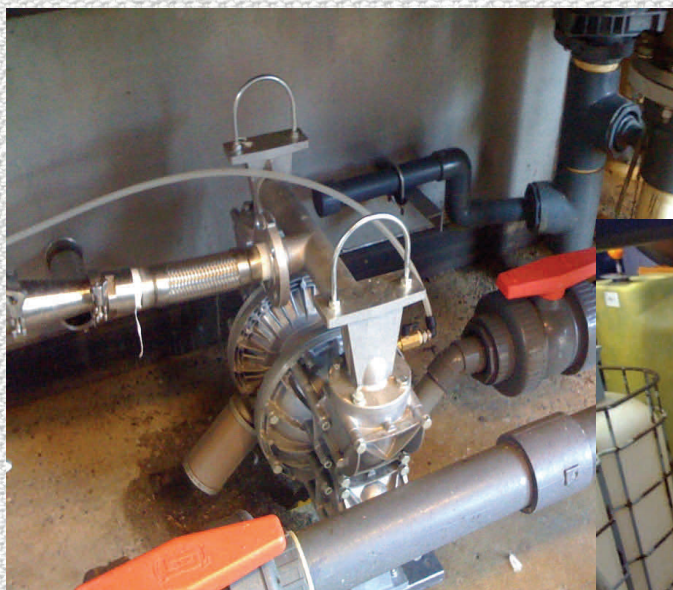
Specification

| | | |
|----------------------------|------------------------|---|
| Model No. | 854296(Rc)/854251(NPT) | |
| Model | NDP-50FAN | |
| Port Size | 2"(50A) | |
| Liquid | Intake | JIS/DIN/ANSI Compatible Flange W/Rc2" or NPTF2" |
| | Discharge | JIS/DIN/ANSI Compatible Flange W/Rc2" or NPTF2" |
| Air | Supply | Rc3/4" or NPT3/4" includes ball valve |
| | Exhaust | Rc1" or NPT1" w/silencer |
| Air Supply Pressure | 0.2-0.7MPa | |
| Maximum Discharge Pressure | 0.7MPa | |
| Discharge Volume Per Cycle | 2.4L | |
| Maximum Size Solid | 30mm | |
| Maximum Dry Suction Lift | 4M | |
| Net Weight | 52.0kg | |

Material

| | |
|-------------|--------------------------|
| Body | Aluminum (ADC12) |
| Flap Valve | HNBR (SPCC*) |
| Valve Seat | HNBR (SPCC*) |
| Valve Guide | Aluminum (integral type) |
| Center Disk | A5056 |

*Material of the insert



Your Local Distributor:

Form no.:910-448E

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