#### yamada

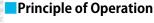
# Flap Valve "Flapper" Diaphragm Pumps

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 stallfree/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 Storoke, Technology-allowing for longer diaphragm life
- Outside-Accessible Air Valve
- Modular Pilot-Valve Design-no dynamic O-Rings to replace or repair

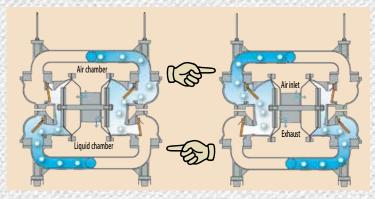




Compressed air enters the left air chamber, moving the center rod to the left, forcing liquid out of the left liquid chamber, while at the same time drawing liquid into the right liquid chamber.

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.



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# Flap Valve "Flapper" Diaphragm Pumps

### **Design Features**

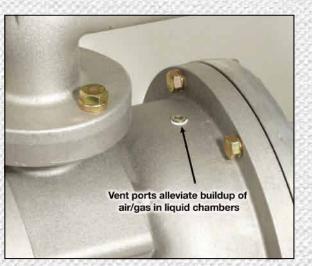
- · Heavy-duty flap check valve permits passage of up to 30mm solids
- · Easy access to valve chambers for ease of maintenance
- ·In-line maintenance facilitates servicing pump without removal from installation
- Top suction / bottom-discharge design keeps solids from settling in pump
- Vented diaphragm 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



Just 4 bolts remove the side plate



Heavy Duty Flap Check Valve



- 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)

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### **Advantages**

	Yamada NDP-50FAN	Leading Competitor	
Weight	52kg	45kg	
Dimensions	H 31" x W 25-1/2" x D 14-1/8"	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 V	alve	
Lubrication	No Lubrication Required	Lubrication Required	
Manual Override	Yes	None	
	Liquic	l 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		Over stressed diaphragms lead to accelerated failure	

### Applications

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

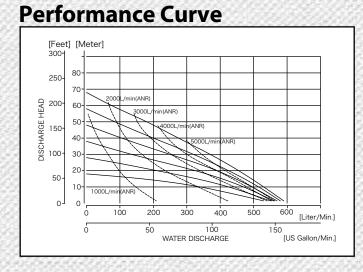
#### Industries Served

Mining General Industrial Construction Refineries Oil & Gas Municipalities Food Processing

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# Flap Valve "Flapper" Diaphragm Pumps

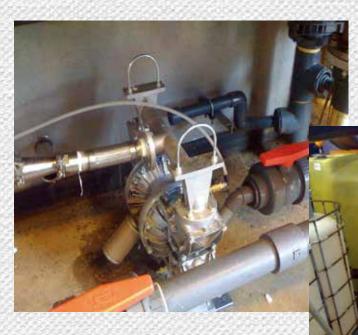


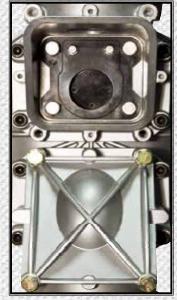
#### **Specification**

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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 (intergral type)
Center Disk	A5056
*Material of the	insert





#### YAMADA CORPORATION International Department No.1-3, 1-Chome, Minami-Magome, Ohta-ku,Tokyo 143-8504, Japan

Phone +81-(0)3-3777-0241 Fax +81-(0)3-3777-0584

E-mail: intl@yamadacorp.co.jp Web: www.yamadacorp.co.jp/global

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