ProMinent Industrial
Hose Pump Product Line

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WHY PERISTALTIC PUMPS?

The operating principle of a peristaltic pump is defined by its simplicity and advantages. A tubular element with accurate dimensions manufactured in different types of elastomer or thermoplastic is housed into the pump body.

When the hose is compressed by the rotor and its corresponding shoes or rollers this is called occlusion and restitution. This action creates a vacuum during the restitution stage and subsequently creates the flow of product on the suction side.

The Product fills the cavity between the shoes or rollers and is delivered towards the discharge.

This positive displacement pump offers a choice for transfer and dosing of abrasive, high viscosity, and harsh applications.

Feature:	Benefits:
Positive Displacement Pump Design (w/Hose, Shoe, & Rollers)	Self Priming up to 30 Feet of Water
	Dry Running
	Seal-Less
	Abrasion Resistant
	Excellent Accuracy to +/- 1%
Hose Pump Motor Design	Allows Reversible Operation
Pump Head Connection Design	Allows 4 Position Mounting for Application Process Improvement
Leak Detection Capable	Prevents Environmental Hazards
	Warning Alerts to Pump Performance Changes
Tubing / Hose is the Product Chamber	Easy to Clean
Quick Hose Access and Automated Hose Change	Ease of In Place Maintenance
Multiple Tubing/Hose materials and Halar Coating	Corrosion Resistant
Common Controls (DFXa & DFYa)	Reduced Operator Training
	Ease of HMI Menu Selections

APPLICATION EXAMPLES:

WATER TREATMENT:

Sampling, Muds transfer, Abrasive products dosing: Lime slurry, Carbon slurry, Potassium Permanganate, etc... Chemicals dosing: Ferric Chloride, Sodium Hypochlorite, Sodium Bisulphite, Polymers, etc...

CHEMICAL INDUSTRY:

Dosing of all kinds of liquids in process, Dyes, Pigments, Paints, Detergents, Cosmetic creams, Gel, Resins, Latex, Corrosive acids, Inks, Anti-foaming, Glue, Oils, Peroxide, etc...

FOOD AND BEVERAGE:

Additives dosing in bakery, Beverages, Juices, Sauces, Enzymes, Syrup, Milk, Oils, Enology additives, Liquid egg, Jams, Marmalades, Meat products, Mayonnaise, etc...

OTHER:

Laboratory, Paper industry, Printing and packaging, Mortars, Ceramics, Agriculture, Mining, Pharmaceutical industry, Engineering, etc...

BREWERY LACTIDE ACID

EMULSIFIED SULFUR TRANSFER

DULCOFLEX (DFXa)

Intelligent peristaltic metering pump!

Capacity range 0.038 GPD (6 ml/h) to 17.7 gph (65 l/h)

The ProMinent® DULCOFLEX (DFXa) is an intelligent peristaltic metering pump that is valve-free and has the accuracy of a diaphragm pump. Applications include gaseous, highly viscous, abrasive, shear-sensitive and chemically aggressive fluids.

The liquid end of the pump is designed for a quick and simple replacement of the tubing, utilizing a unique exchange process. The pump display provides precise instructions on the steps required for the tube replacement. High-performance tubing consists of a TPV (Santoprene) or PUR (Polyurethane) material that provides excellent chemical resistance and a long service life.

The DULCOFLEX (DFXa) is powered by a DC motor and will provide continuous metering from 0.038 GPD (6 ml/h) to 17.7 gph (65 l/h). Additional features such as communication protocol includes PROFIBUS, CANbus, Modbus and PROFINET.

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Features & Benefits

- NSF61 Approved
- Volume adjustment in GPH or LPH
- Manual, Analog, Contact and Batch modes optional
- High visibility of LED-indicator lights
- Large, illuminated display
- New configurable input/output port
- Pump is available as an FDA design
- CIP (cleaning in place) enabled system
- Turn down ratio up to 3,000:1
- Reverse flow is possible
- Dosing head can be aligned in four directions: Left, Right, Up, and Down
- Integrated 7-day timer
- Viscosities to 10,000 cPs
- Leak Detection

Application Examples:

- Drinking water and wastewater treatment
- Food and beverage industry
- Paper industry
- Chemical industry
- All industrial applications, either as a stand-alone unit or integrated in a complete system

Capacity Data

Pump Version	Capacity at Maximum Backpressure				Max. Speed	Connector Size	Suction Lift		Shipping Weight	
	psig	(bar)	gph	(l/h)	rpm	in	ft	(m)	lbs	(kg)
DULCOFLEX - DFXa										
0530	73	(5)	8.00	(30)	100	1/2” x 3/8”	29.5	(9)	12.8	(5.8)
0730	102	(7)	8.00	(30)	100	1/2” x 3/8”	29.5	(9)	12.8	(5.8)
0365	44	(3)	17.17	(65)	100	1/2” x 3/8”	29.5	(9)	12.8	(5.8)
0565	73	(5)	17.17	(65)	100	1/2” x 3/8”	29.5	(9)	12.8	(5.8)

DULCOFLEX (DFYa)

Intelligent peristaltic metering pump!

Capacity range 108.3 gph (410 l/h) at pressures up to 116 psig (8 bar)

The new DULCOFLEX (DFYa) metering pump adds an intelligent peristaltic offering to our established line of ProMinent pumps

This new design of peristaltic pump is controlled electronically via an HMI controller thus allowing for greater turndown in our DULCOFLEX pump series. All the benefits of a peristaltic pump are retained including off-gasing fluids, high viscosity and abrasive media, and shear-sensitive liquids.

Like the DFXa, the DFYa offers simple and easy hose replacement via the HMI controller. When the hose needs replaced, the pump displays instructions for the user to step-through the replacement process.

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Features & Benefits

- Control via contact, batch, manual or analog modes
- Adjustment of the metering rate directly in gph or l/h
- Connection to process control systems via BUS interfaces, such as PROFIBUS®, Profinet or CANbus
- Large, illuminated display
- Pump is available as an FDA design
- Reverse flow is possible
- Viscosities to 40,000 cPs
- No problems with very gaseous media or air locks
- Simple, menu-guided hose change

Application Examples:

- Mining
- Potable water and wastewater industry
- Chemical industry
- Paper industry
- Food and beverage industry
- All industrial applications, either as a stand-alone unit or integrated in a complete system

Capacity Data										
Pump Version	**Capacity at Maximum Backpressure**				**Max. Speed**	**Connector Size**	**Suction Lift**		**Shipping Weight**	
	GPH (± 10 %)	**(L/H) (± 10 %)**	**PSIG**	**(bar)**	**rpm**	**in**	**ft**	**(m)**	**lbs**	**(kg)**
DULCO flex Control (DFYa)										
04410	108.3	(410)	58.0	(4)	80	3/4”	26.25	(8)	66	(30)
06410	108.3	(410)	87.0	(6)	80	3/4”	26.25	(8)	66	(30)
08410	108.3	(410)	116.0	(8)	80	3/4”	26.25	(8)	66	(30)

DULCOFLEX DFBu Series

INDUSTRIAL HOSE PUMPS

The DFBu Series hose pumps are industrial pumps for dosing or transfer fluids at low flow and low pressure. The hose element is easy to replace and is available in six different internal diameters for the same pump model. They are reversible, self-priming pumps and can pump fluids with small solids or particles in suspension, and are highly useful for pumping fluids in liquid status but which contain air or other gases or vapors.

The standard version is equipped with a Dual Roller Rotor. An optional Triple Roller Rotor is available for maximum accuracy and minimum pulsation.

Applications

Water treatment:
Sampling, feeding filtering membranes, metering of chemical products: iron chloride, sodium hypochlorite, iron sulphate, etc. Metering of products with solids in suspension: lime milk, potassium permanganate, active charcoal, etc., metering of polymers, etc.

Food & beverage:
Dosing of additives in bread- and pastry-making, drinks, juices, sauces, colorants, lactic ferments, etc.

Chemical industry:
Dosing of all kinds of fluids in processes, colorants, pigments, resins, latex, acids, inks, anti-foaming agents, etc.

Other sectors:
Laboratories, paper industry, printing and packing, ceramics, agriculture, mining, etc.

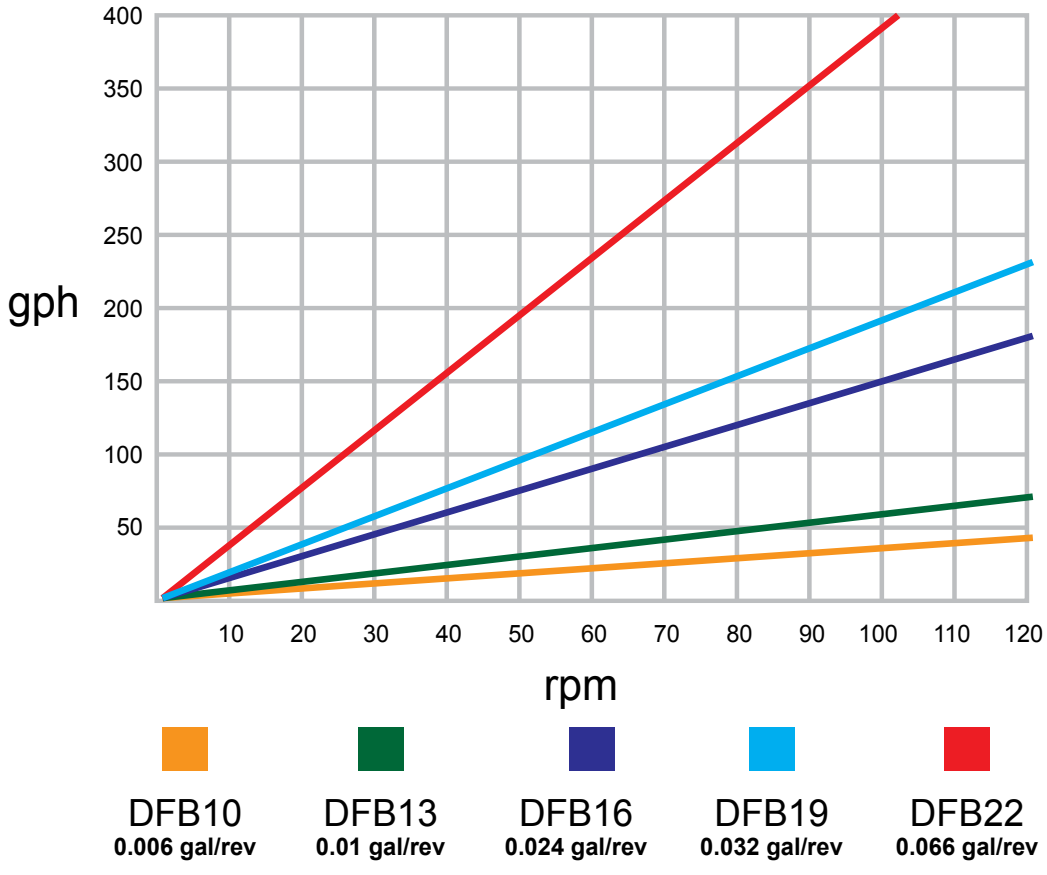
Technical Data

Capacity Data					
	DFB10	**DFB13**	**DFB16**	**DFB19***	**DFB22**
DFBu Series					
Compression	Roller	Roller	Roller	Roller	Roller
Connection	3/8"	3/8"	3/4"	1"	1"
Capacity gal/rev	0.006	0.01	0.024	0.032	0.066
Max. Flow gph	31	51	122	163	337
Max. Pressure Reinforced Hoses	116 psi	116 psi	116 psi	N/A	116 psi
Tubing	Norprene	Norprene	Norprene	Norprene	Norprene
Max. Presure Tubing	30 psi	30 psi	30 psi	30 psi	30 psi

Models are available with one of the following reinforced hoses: Natural Rubber, Buna, EPDM, Hypalon

* DFB19 is not available with reinforced hoses

DFB Series Flow Rates



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DULCOFLEX DFCu Series

The DULCOFLEX DFCu is a hose pump designed for difficult pumping applications. Unlike typical shoe pumps, it incorporates a roller design, which eliminates the need for cumbersome lubricants. The DFC can reach pressures up to 116 psi and flow rates up to 106 gpm and is ideal for difficult industrial and municipal applications.

Features & Benefits

- Sizes: 30, 40, 50, 60, 70 mm
- Flows to 106 gpm
- Disaster proof hose connections
- Roller Technology - Lower hose stress
- Easy maintenance
- Reinforced hose
- Can run dry
- Self priming
- Great for solids handling
- Reversible
- No seals
- No valves
- Leak Detection

Application Examples:

- Sludge transfer
- Lime slurry
- NaOCl transfer
- Inks
- Dyes
- Acids
- Caustics
- Wine barrel filling
- Water & Wastewater
- Chemicals
- Breweries & Wineries
- Pulp & Paper

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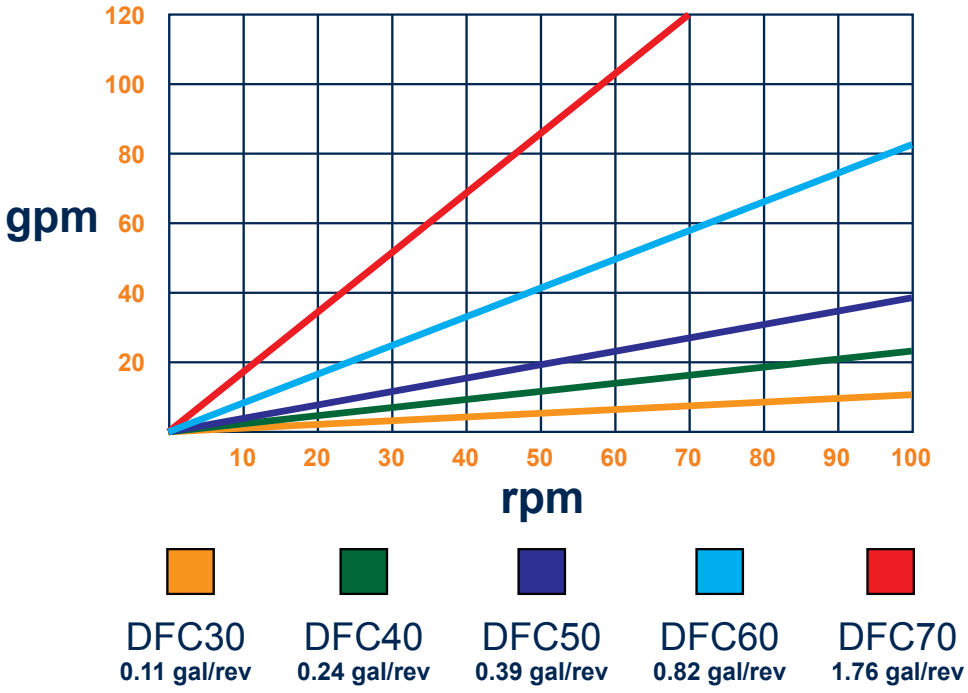
Technical Data

Capacity Data					
	DFC30	DFC40	DFC50	DFC60	DFC70
DFCu Series					
Compression	Roller	Roller	Roller	Roller	Roller
Connection	1 1/4"	1 1/2"	1 1/2"	2"	2 1/2"
Capacity gal/rev	0.11	0.24	0.39	0.82	1.76
Max. Flow gpm	7.4	14.4	23.2	41.2	106.4
Max. Pressure Reinforced Hoses	116 psi	116 psi	116 psi	116 psi	116 psi
Tubing	N/A	Norprene	N/A	N/A	N/A
Max. Presure Tubing	N/A	30 psi	N/A	N/A	N/A

All models are available with one of the following reinforced hoses: Natural Rubber, Buna, EPDM, Hypalon

DFC Series Flow Rates



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DULCOFLEX DFDu Series

The DULCOFLEX DFDu is a hose pump designed for pressures up to 232 psi and flow rates up to 160 gpm. Ask about our Duplex Design to reach 360 gpm. The unique shoe design is made of steel for smoother and cooler compression. The DFD uses safe DulcoLube oil for the shoe lubrication. With suction lifts up to 29 feet, the DULCOFLEX DFDu is a great choice for difficult pumping applications.

Features & Benefits

- Sizes: 25, 32, 40, 70, 80, 100mm.
- Flows to 160 gpm
- Suction lifts up to 29 ft.
- Disaster proof hose connections
- DulcoLube food grade glycerin lubricant
- Designed heat sink fins for cooler operation
- Steel shoes for a smoother and cooler compression
- Run dry capabilities
- Leak Detection

Application Examples:

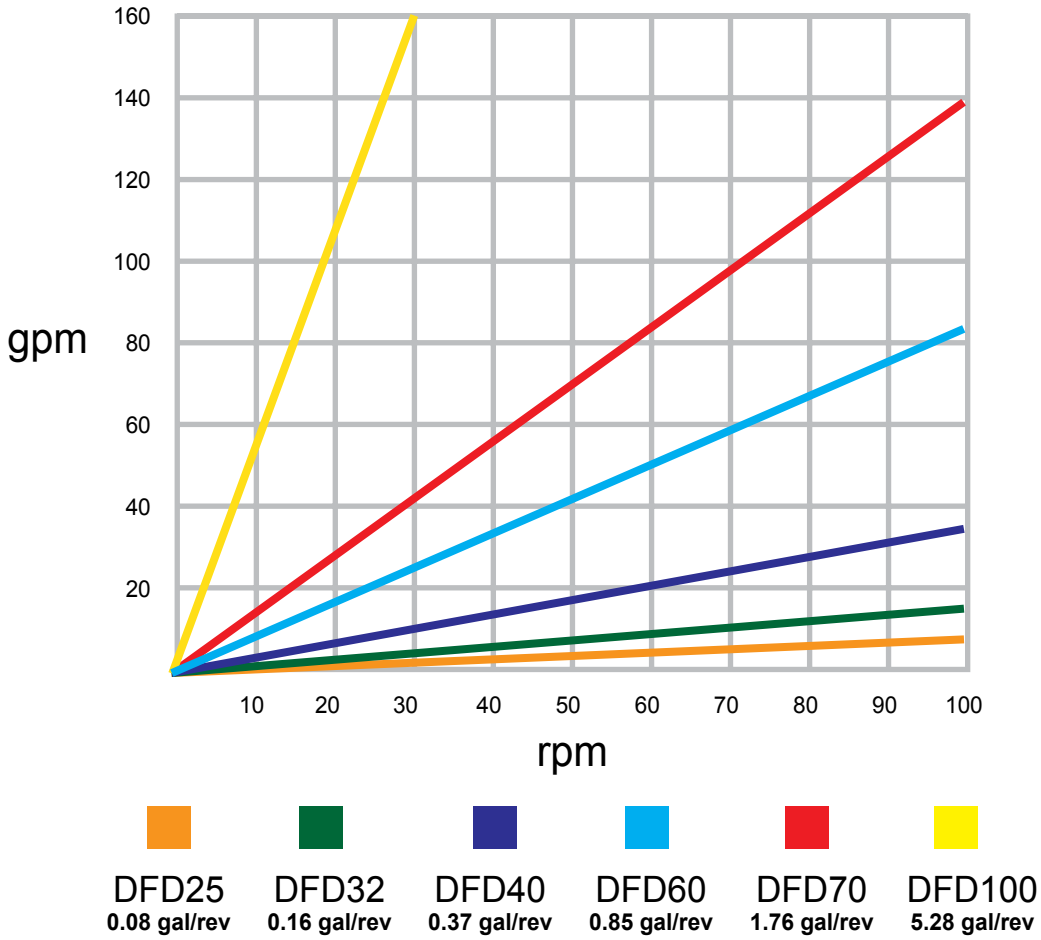
- Sludge transfer
- Lime slurry
- NaOCl transfer
- Inks
- Dyes
- Acids
- Caustics
- Wine barrel filling
- Water & Waste water
- Chemicals
- Breweries & Wineries
- Pulp & Paper

Technical Data

Capacity Data						
	DFD25	DFD32	DFD40	DFD60	DFD70	DFD100
DFDu Series						
Compression	Shoe	Shoe	Shoe	Shoe	Shoe	Shoe
Connection	1"	1 1/2"	1 1/2"	2 1/2"	2 1/2"	4"
Capacity gal/rev	0.08	0.16	0.37	0.85	1.76	5.28
Max Flow gpm	5.2	9.6	20.4	42.4	88	160
Max. Pressure Reinforced Hose	232 psi	232 psi	232 psi	232 psi	232 psi	232 psi

All models are available with one of the following reinforced hoses: Natural Rubber, Buna, EPDM, Hypalon

DFD Series Flow Rates



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DULCOFLEX Hoses

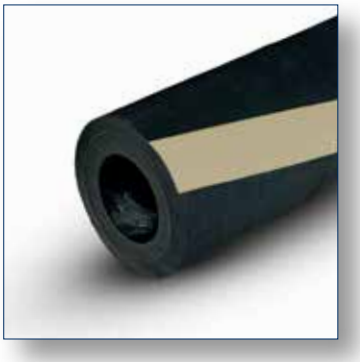
Black = Natural Rubber (NR) No Color Marking

Red = Natural Buna Rubber (Reinforced)

Blue = EPDM Ethylene Propylene Diene Monomer

Green = Hypalon or CMS (Reinforced)

Beige = Neoprene "Tubing"



Beige Stripe = Food Grade NBR known as NBR-A (The "A" is for Alimento" which translated is food.

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PUMP MODEL	MATERIALS
DFB-13	NR, NBR, EPDM, Hypalon NBR-A
DFB-16	NR, NBR, EPDM, Hypalon NBR-A
DFB-22	NR, NBR, EPDM, Hypalon NBR-A
DFC-30	NR, NBR, EPDM, Hypalon NBR-A
DFC-40	NR, NBR, EPDM, Hypalon NBR-A
DFC-50	NR, NBR, EPDM, Hypalon NBR-A
DFC-60	NR, NBR, EPDM, Hypalon NBR-A
DFC-70	NR, NBR, EPDM, Hypalon NBR-A
DFD-25	NR, NBR, EPDM, Hypalon NBR-A
DFD-32	NR, NBR, EPDM, Hypalon NBR-A
DFD-40	NR, NBR, EPDM, Hypalon NBR-A
DFD-60	NR, NBR, EPDM, Hypalon NBR-A
DFD-70	NR, NBR, EPDM, Hypalon NBR-A
DFD-80	NR, NBR, EPDM, Hypalon NBR-A
DFD-10	NR, NBR, EPDM, Hypalon NBR-A

ProMinent Fluid Controls, Inc. Pittsburgh PA USA Facility

Manufacturing, Engineering & Design, Fabrication, Integration, and System Certified Testing done in Pittsburgh, PA

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INDUSTRIAL

Peristaltic & Hose Pumps

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ProMinent Fluid Controls, Inc. (USA)
136 Industry Drive ● Pittsburgh, PA 15275
Ph: (412) 787-2484 ● email: prominentcsd-us@prominent.com
www.prominent.us

ProMinent Fluid Controls, Ltd. (Canada)
490 Southgate Drive • Guelph, N1G 4P5
(519) 836-5692 • Fax: (519) 836-5226 • Toll Free1-888-709-9933
email: sales-can@prominent.com • www.prominent.ca

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