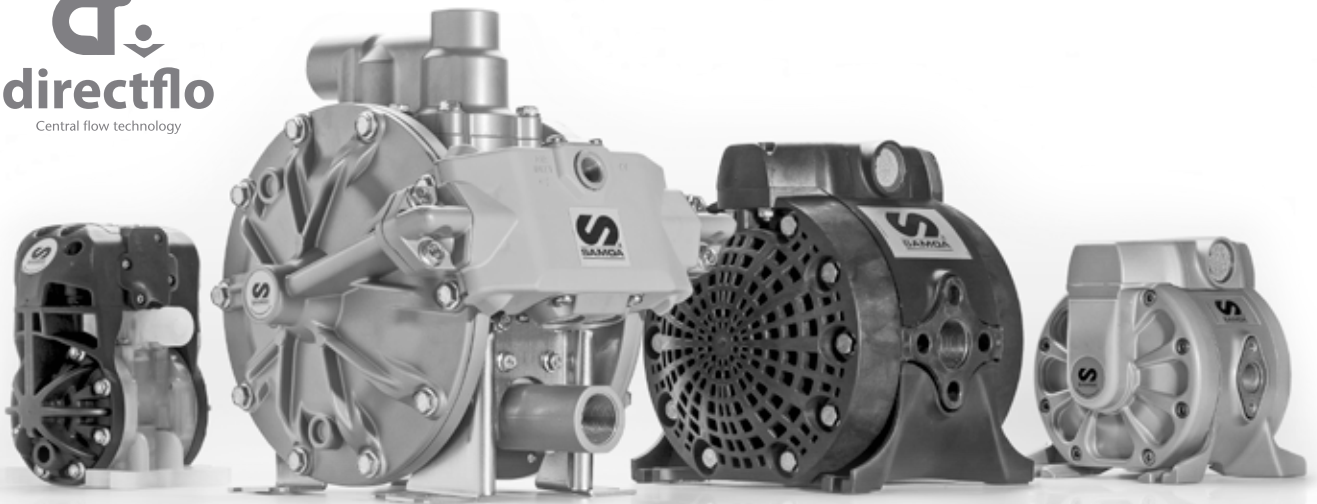


AIR OPERATED DOUBLE DIAPHRAGM PUMPS

CENTRAL FLOW DESIGN PUMPS


directflo
Central flow technology



PIVOT
UNIVERSAL PUMP

UNIVERSAL DESIGN PUMPS



 **SAMOA**
LEADING THROUGH INNOVATION

AIR OPERATED DIAPHRAGM PUMP RANGE

PLASTIC PUMPS

Plastic Directflo® and **Universal Pivot** pump fluid bodies are compatible with even the most aggressive chemicals. Air sections (air chambers and housings) are suitable for use in corrosive environments.



	DC20	DF30	DF50	DF100
Pressure ratio	1:1	1:1	1:1	1:1
Maximum free delivery ⁽¹⁾	5 US gal/min (20 l/min)	10 US gal/min (38 l/min)	14 US gal/min (50 l/min)	28 US gal/min (100 l/min)
Delivery per stroke approx. ^{(1) (2)}	0.008 US gal (0,03 litres)	0.02 US gal (0,07 litres)	0.026 US gal (0,1 litres)	0.07 US gal (0,25 litres)
Delivery per cycle (2 x strokes) ^{(1) (2)}	0.016 US gal (0,06 litres)	0.04 US gal (0,14 litres)	0.05 US gal (0,2 litres)	0.13 US gal (0,5 litres)
Air pressure operating range	22 to 100 psi (1,5 to 7 bar)	22 to 115 psi (1,5 to 8 bar)	22 to 115 psi (1,5 to 8 bar)	22 to 115 psi (1,5 to 8 bar)
Solids in suspension max. size	3/32" (2 mm)	1/8" (3 mm)	1/8" (3 mm)	3/16" (4 mm)
Maximum dry suction lift ⁽¹⁾	6 1/2' (2 m)	13' (4 m)	20' (6 m)	15' (4,5 m)
Maximum wet suction lift ⁽¹⁾	23' (7 m)	26' (8 m)	26' (8 m)	23' (7 m)
Weight	2,65 lb (1,2 kg)	4.19 lb (1,9 kg)	4.85 lb (2,2 kg)	11.24 lb (5,1 kg)
Fluid inlet connection	Int.: 1/4" NPT/ BSP (F) Ext.: 3/4" NPT (M)	1/2" NPT/ BSP (F)	1/2" NPT/ BSP (F)	1" NPT/ BSP (F)
Fluid outlet connection	Int.: 1/4" NPT/ BSP (F) Ext.: 3/4" NPT (M)	1/2" NPT/ BSP (F)	1/2" NPT/ BSP (F)	1" NPT/ BSP (F)
Air inlet connection	3/8" NPSM (F)	3/8" NPSM (F)	3/8" NPSM (F)	3/8" NPSM (F)



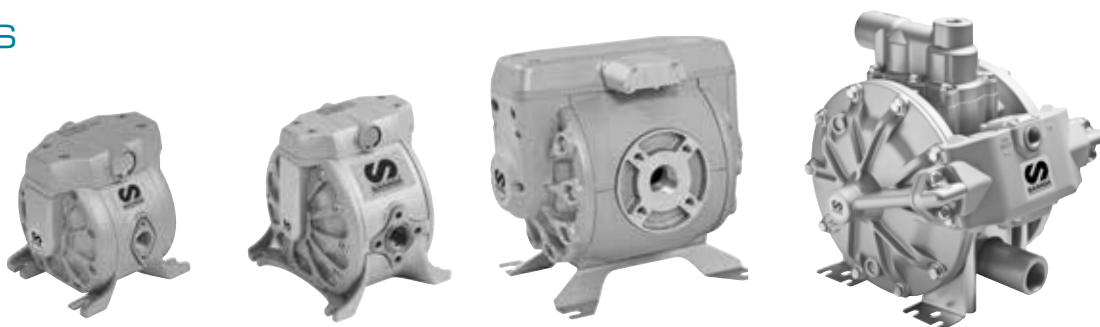
	DP200	UP20
Pressure ratio	1:1	1:1
Maximum free delivery ⁽¹⁾	53 US gal/min (200 l/min)	172 US gal/min (650 l/min)
Delivery per stroke approx. ^{(1) (2)}	0.13 US gal (0,5 litres)	0.68 US gal (2,55 litres)
Delivery per cycle (2 x strokes) ^{(1) (2)}	0.26 US gal (0,1 litres)	1.35 US gal (5,1 litres)
Air pressure operating range	22 to 115 psi (1,5 to 8 bar)	22 to 100 psi (1,5 to 7 bar)
Solids in suspension max. size	1/4" (6 mm)	1/4" (6 mm)
Maximum dry suction lift ⁽¹⁾	16' (5 m)	16' (5 m)
Maximum wet suction lift ⁽¹⁾	26' (8 m)	26' (8 m)
Weight	23.15 lb (10,5 kg)	62 lb (28 kg)
Fluid inlet connection	1" DIN PN-10 DN25 flange and ANSI B16.5 1" 150 lb flange	2" ANSI/DIN. Side ends
Fluid outlet connection	1" DIN PN-10 DN25 flange and ANSI B16.5 1" 150 lb flange	2" ANSI/DIN. Side ends
Air inlet connection	3/8" NPSM (F)	3/4" NPT (F)

(1) Data measured with water, air inlet pressure 100 psi (7 bar) with DC models 115 psi (8 bar) with DF and DP models), 68 °F (20 °C) and flooded fluid inlet.

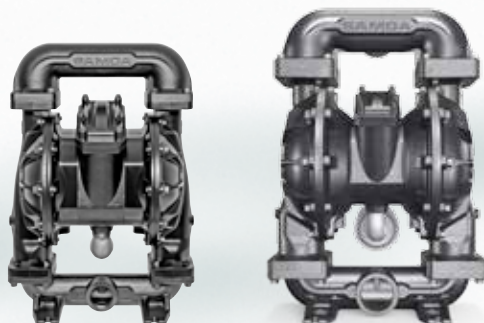
(2) Approximate value; real value may vary depending on working conditions, fluid pumped and pump materials.

METAL PUMPS

Metal Directflo® and **Universal Pivot** models handle a wide range of materials.



	DF50	DF100	DF250	DP200
Pressure ratio	1:1	1:1	1:1	1:1
Maximum free delivery⁽¹⁾	14 US gal/min (50 l/min)	28 US gal/min (100 l/min)	66 US gal/min (250 l/min)	53 US gal/min (200 l/min)
Delivery per stroke approx.^{(1) (2)}	0.026 US gal (0,1 litres)	0.07 US gal (0,25 litres)	0.16 US gal (0,6 litres)	0.13 US gal (0,5 litres)
Delivery per cycle (2 x strokes)^{(1) (2)}	0.05 US gal (0,2 litres)	0.13 US gal (0,5 litres)	0.32 US gal (1,2 litres)	0.26 US gal (1 litres)
Air pressure operating range	22 to 115 psi (1,5 to 8 bar)	22 to 115 psi (1,5 to 8 bar)	22 to 115 psi (1,5 to 8 bar)	22 to 115 psi (1,5 to 8 bar)
Solids in suspension max. size	1/8" (3 mm)	3/16" (4 mm)	1/4" (6 mm)	1/4" (6 mm)
Maximum dry suction lift⁽¹⁾	20' (6 m)	15' (4,5 m)	16,4' (5 m)	16' (5 m)
Maximum wet suction lift⁽¹⁾	26' (8 m)	23' (7 m)	26' (8 m)	26' (8 m)
Weight	7.72 lb (3,5 kg)	16 lb (7,2 kg)	45 lb (20 kg)	23.35 lb (11,5 kg)
Fluid inlet connection	1/2" NPSM (F)	1" NPT/ BSP (F)	1 1/2" NPT (F) and ANSI 1" B16.5 150 lb flange or 1 1/2" BSP (F) and DIN PN-10 DN40 flange	1" NPT/ BSP (F)
Fluid outlet connection	1/2" NPSM (F)	1" NPT/ BSP (F)	1 1/2" NPT (F) and ANSI 1" B16.5 150 lb flange or 1 1/2" BSP (F) and DIN PN-10 DN40 flange	1" NPT/ BSP (F)
Air inlet connection	3/8" NPSM (F)	3/8" NPSM (F)	1/2" NPSM (F)	3/8" NPSM (F)



	UP20	UP30
Pressure ratio	1:1	1:1
Maximum free delivery⁽¹⁾	172 US gal/min (650 l/min)	264 US gal/min (1,000 l/min)
Delivery per stroke approx.^{(1) (2)}	0.68 US gal (2,55 litres)	1.3 US gal (5,1 litres)
Delivery per cycle (2 x strokes)^{(1) (2)}	1.35 US gal (5,1 litres)	26 US gal (10,2 litres)
Air pressure operating range	22 to 100 psi (1,5 to 7 bar)	22 to 100 psi (1,5 to 7 bar)
Solids in suspension max. size	1/4" (6 mm)	1/2" (127 mm)
Maximum dry suction lift⁽¹⁾	16' (5 m)	19.7' (6 m)
Maximum wet suction lift⁽¹⁾	26' (8 m)	26.2' (8 m)
Weight	101 lb (46 kg) / 163 lb (74 kg) / 168 lb (76 kg)	150 lb (68 kg) / 270 lb (120 kg)
Fluid inlet connection	2" ANSI/DIN flanged	3" NPT / 3" ANSI/DIN flanged
Fluid outlet connection	2" NPT / 2" ANSI/DIN flanged	3" NPT / 3" ANSI/DIN flanged
Air inlet connection	3/4" NPT (F)	3/4" NPT (F)

(1) Data measured with water, air inlet pressure 100 psi (7 bar) with DC models 115 psi (8 bar) with DF and DP models), 68 °F (20 °C) and flooded fluid inlet.

(2) Approximate value; real value may vary depending on working conditions, fluid pumped and pump materials.

DC PUMPS SERIES

COMPACT DESIGN



CENTER FLOW DESIGN

Mini-manifolds for installation flexibility.

SMALL & COMPACT

Smaller design, produces equivalent to higher flow rate than competitive models.

UTILIZES UNBALANCED SPOOL VALVE

Operates at lower air inlet pressures.
Built-in air exhaust muffler, adaptable for remote exhaust installations.

ADJUSTABLE PORTS

DC20 inlet and outlet ports can be rotated.

FLOW RATE - 5 US GAL/MIN (20 L/MIN)



ATEX Certified versions available
Ex II 2 GD IIB/IIC 95 °C.

MATERIALS AVAILABLE FOR DC20:

PLASTIC PUMPS	AIR MOTOR	PUMP BODY	DIAPHRAGMS	CHECK VALVE SEATS	CHECK VALVE BALLS
	Conductive polypropylene	- Polypropylene® - PVDF - Conductive acetal	Overmolded - TPE (Hytre®) - Santoprene® - PTFE (Teflon®)	- Acetal - Polypropylene® - PVDF	PTFE (Teflon®)



DC20

PUMP BODY	MAX FREE FLOW DELIVERY
Plastic	5 US gal/min (20 l/min)

DF PUMP SERIES

DIRECTFLO® TECHNOLOGY

EQUIPPED WITH FRICTIONLESS PIVOT VALVE TECHNOLOGY

Provides fast reciprocal action, minimizing flow pulsation and pump vibration. Contributes to reduce air consumption.

CENTER FLOW DESIGN

Has no manifolds. Reduced internal pressure loss for improved performance.

SMALL & COMPACT

Smaller overall size produces equivalent to higher flow rates than competitive models.

FLEXIBLE INSTALLATION

Ball guides allow DF models to be installed in horizontal and vertical positions, without any loss in flow or suction.

CAN BE REPAIRED IN-LINE

Easy, quick and cost saving



FLOW RATE - RANGE FROM A MIN OF 10 US GAL/MIN (38 L/MIN) TO A MAX OF 66 US GAL/MIN (250 L/MIN)



ATEX Certified versions available
Ex II 2 GD IIB/IIC 95 °C.

MATERIALS AVAILABLE FOR DF PUMPS:

**Not all materials listed are available for all models and sizes. Check materials available to each model.*

METAL PUMPS	AIR MOTOR • Aluminum	PUMP BODY • Aluminum • Stainless steel AISI 316	DIAPHRAGMS Overmolded • TPE (Hytrel®) • Santoprene® • Buna-N • PTFE (Teflon®)	CHECK VALVE SEATS • Stainless steel AISI 316	CHECK VALVE BALLS • Acetal • Buna-N • Stainless steel AISI 316 • PTFE (Teflon®)
PLASTIC PUMPS	AIR MOTOR • Conductive polypropylene®	PUMP BODY • Polypropylene® • PVDF • Conductive acetal	DIAPHRAGMS Overmolded • TPE (Hytrel®) • Santoprene® • PTFE (Teflon®)	CHECK VALVE SEATS • Stainless steel AISI 316 • PVDF	CHECK VALVE BALLS • Acetal • Stainless steel AISI 316 • PTFE (Teflon®)



DF30



DF50



DF100



DF250

PUMP BODY	MAX FREE FLOW DELIVERY	PUMP BODY	MAX FREE FLOW DELIVERY	PUMP BODY	MAX FREE FLOW DELIVERY	PUMP BODY	MAX FREE FLOW DELIVERY
Plastic	10 US gal/min (38 l/min)	Plastic Metal	14 US gal/min (50 l/min)	Plastic Metal	28 US gal/min (100 l/min)	Metal	66 US gal/min (250 l/min)

DP PUMP SERIES

DIRECTFLO® DESIGN WITH ADDITIONAL FLEXIBILITY



EQUIPPED WITH FRICTIONLESS PIVOT VALVE TECHNOLOGY

Provides fast reciprocal action, minimizing flow pulsation and pump vibration. Contributes to reduce air consumption.

CENTER FLOW DESIGN

Mini-manifolds for additional installation flexibility

SMALL & COMPACT

Smaller overall size produces equivalent to higher flow rates than competitive models.

ADJUSTABLE INLET AND OUTLET PORTS

Increased installation versatility.

FLOW RATE – UP TO 53 US GAL/MIN (200 L/MIN)



ATEX Certified versions available

Ex II/2 GD IIB/IIIC 95 °C.

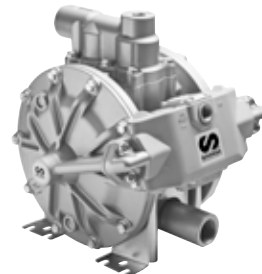
MATERIALS AVAILABLE FOR DP PUMPS:

METAL PUMPS	AIR MOTOR • Aluminum	PUMP BODY • Aluminum • Stainless steel AISI 316	DIAPHRAGMS Overmolded • TPE (Hytrel®) • Santoprene® • Buna-N • PTFE (Teflon®)	CHECK VALVE SEATS • Aluminum • TPE (Hytrel®) • Santoprene® • Buna-N • Stainless steel AISI 316	CHECK VALVE BALLS • Acetal • Buna-N • Stainless steel AISI 316 • PTFE (Teflon®)
PLASTIC PUMPS	AIR MOTOR • Conductive polypropylene®	PUMP BODY • Polypropylene® • PVDF • Conductive acetal	DIAPHRAGMS Overmolded • TPE (Hytrel®) • Santoprene® • PTFE (Teflon®) • Buna-N	CHECK VALVE SEATS • Acetal • TPE (Hytrel®) • Polypropylene® • Santoprene® • Buna-N	CHECK VALVE BALLS • Acetal • Stainless steel AISI 316 • PTFE (Teflon®) • Buna-N



DP200

PUMP BODY	MAX FREE FLOW DELIVERY
Plastic	53 US gal/min (200 l/min)



DP200

PUMP BODY	MAX FREE FLOW DELIVERY
Metal	53 US gal/min (200 l/min)

UP PUMP SERIES

UNIVERSAL PIVOT PUMP

EQUIPPED WITH FRICTIONLESS PIVOT VALVE TECHNOLOGY

Provides fast reciprocal action, improves pump performance and contributes to reduce air consumption.

UNIVERSAL DESIGN

The inlet/outlet ports and the pump mounting feet align with top competitive suppliers to make for an easy change.

ALL BOLTED CONSTRUCTION

Better seal and eliminates pump leaks. Same bolt size for air and fluid housings facilitates maintenance.

SUPERB ABRASION RESISTANCE

Optimized design manifolds and fluid paths reduce fluid speed and reduce abrasion wear.

FLOW RATE – UP TO 264 US GAL/MIN (600 L/MIN).

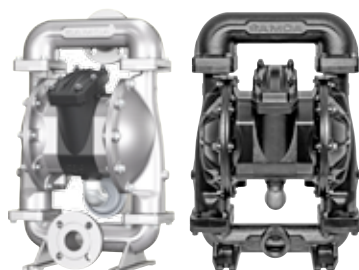


ATEX Certified versions available
Ex II/2 GD IIB/IIC 95 °C.



MATERIALS AVAILABLE FOR UP PUMPS:

METAL PUMPS	CENTER BODY & AIR CHAMBERS	FLUID CHAMBERS & MANIFOLDS	DIAPHRAGMS	Overmolded	CHECK VALVE SEATS	CHECK VALVE BALLS
	- Aluminum - Conductive polypropylene with stainless steel air chambers	- Aluminum - Ductile iron - Stainless steel	Conventional - Santoprene® - TPE (Hytrel®) - Buna-N - FKM (Viton®) Two-piece - PTFE (Teflon® with Santoprene backer)	- TPE (Hytrel®) - Santoprene® - Buna-N - PPTFE / EPDM (Bonded)	- Aluminum - Hardened stainless steel AISI 440 - TPE (Hytrel®) - Santoprene® - Buna-N - Stainless steel AISI 316 - PTFE (Teflon®)	- Acetal - Buna-N - Stainless steel AISI 316 - PTFE (Teflon®)
PLASTIC PUMPS	CENTER BODY & AIR CHAMBERS	FLUID CHAMBERS & MANIFOLDS	DIAPHRAGMS	Overmolded	CHECK VALVE SEATS	CHECK VALVE BALLS
	Conductive polypropylene	- Polypropylene - PVDF - Conductive polypropylene	Conventional - Santoprene® - TPE (Hytrel®) - Buna-N - FKM (Viton®) Two-piece - PTFE (Teflon® with Santoprene backer)	- TPE (Hytrel®) - Santoprene® - Buna-N - PPTFE / EPDM (Bonded)	- Polypropylene - PTFE (Teflon®)	- TPE (Hytrel®) - Santoprene® - Buna-N - PTFE (Teflon®) - FKM (Viton®)



UP20

PUMP BODY	MAX FREE FLOW DELIVERY
Metal	172 US gal/min (650 l/min)



UP20

PUMP BODY	MAX FREE FLOW DELIVERY
Plastic	172 US gal/min (650 l/min)



UP30

PUMP BODY	MAX FREE FLOW DELIVERY
Metal	264 US gal/min (1.000 l/min)



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