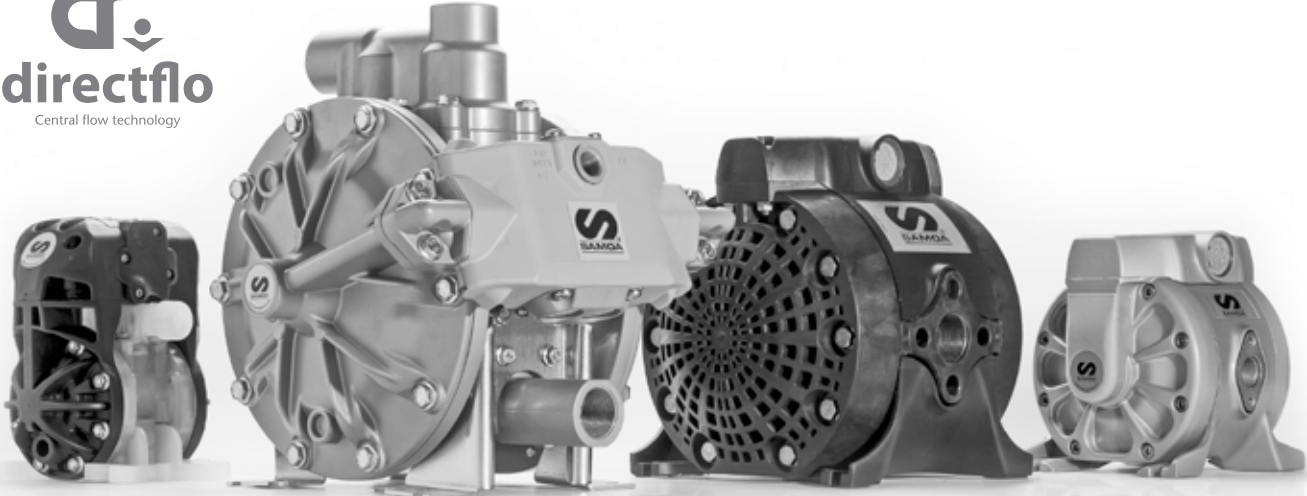


# AIR OPERATED DOUBLE DIAPHRAGM PUMPS

CENTRAL FLOW DESIGN PUMPS



UNIVERSAL DESIGN PUMPS



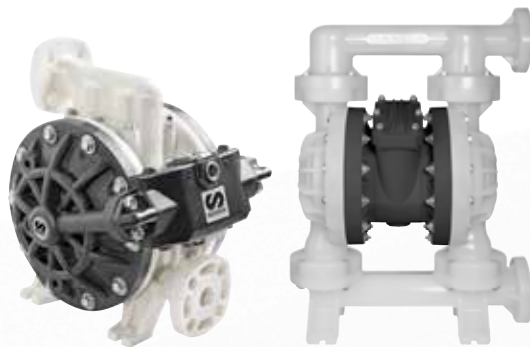
# AIR OPERATED DIAPHRAGM PUMP RANGE

## 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                        |
|--|---|------------------------------|------------------------------|------------------------------|
| <b>Pressure ratio</b>                                    | 1:1   | 1:1                          | 1:1                          | 1:1                          |
| <b>Maximum free delivery<sup>(1)</sup></b>               | 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)    |
| <b>Delivery per stroke approx.<sup>(1)(2)</sup></b>      | 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)    |
| <b>Delivery per cycle (2 x strokes)<sup>(1)(2)</sup></b> | 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)     |
| <b>Air pressure operating range</b>                      | 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) |
| <b>Solids in suspension max. size</b>                    | 3/32" (2 mm)                                  | 1/8" (3 mm)                  | 1/8" (3 mm)                  | 3/16" (4 mm)                 |
| <b>Maximum dry suction lift<sup>(1)</sup></b>            | 6 1/2' (2 m)                                  | 13' (4 m)                    | 20' (6 m)                    | 15' (4,5 m)                  |
| <b>Maximum wet suction lift<sup>(1)</sup></b>            | 23' (7 m)                                     | 26' (8 m)                    | 26' (8 m)                    | 23' (7 m)                    |
| <b>Weight</b>  | 2.65 lb (1,2 kg)                              | 4.19 lb (1,9 kg)             | 4.85 lb (2,2 kg)             | 11.24 lb (5,1 kg)            |
| <b>Fluid inlet connection</b>                            | Int.: 1/4" NPT/ BSP (F)<br>Ext.: 3/4" NPT (M) | 1/2" NPT/ BSP (F)            | 1/2" NPT/ BSP (F)            | 1" NPT/ BSP (F)              |
| <b>Fluid outlet connection</b>                           | Int.: 1/4" NPT/ BSP (F)<br>Ext.: 3/4" NPT (M) | 1/2" NPT/ BSP (F)            | 1/2" NPT/ BSP (F)            | 1" NPT/ BSP (F)              |
| <b>Air inlet connection</b>                              | 3/8" NPSM (F)                                 | 3/8" NPSM (F)                | 3/8" NPSM (F)                | 3/8" NPSM (F)                |

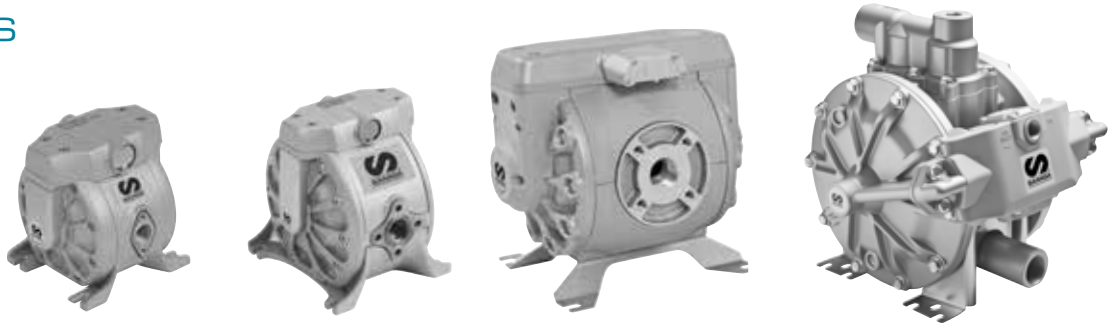


|  | DP200   | UP20                         |
|--|---|------------------------------|
| <b>Pressure ratio</b>                                    | 1:1   | 1:1                          |
| <b>Maximum free delivery<sup>(1)</sup></b>               | 53 US gal/min (200 l/min)                            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

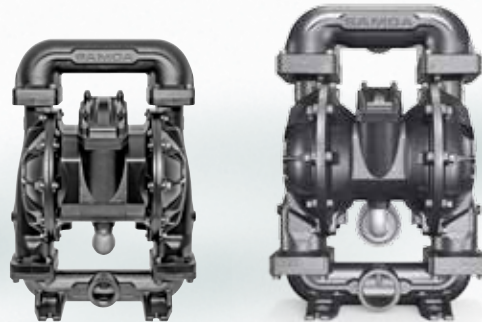
(1) Data measured with water, air inlet pressure 100 psi (7 bar) with DC models 115 psi (8 bar) with DF and DP models), 68 °F (20 °C) and flooded fluid inlet.  
 (2) Approximate value; real value may vary depending on working conditions, fluid pumped and pump materials.

## METAL PUMPS

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



|   | DF50                         | DF100                        | DF250  | DP200                        |
|---|------------------------------|------------------------------|--|------------------------------|
| <b>Pressure ratio</b>                                     | 1:1                          | 1:1                          | 1:1  | 1:1                          |
| <b>Maximum free delivery<sup>(1)</sup></b>                | 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)    |
| <b>Delivery per stroke approx.<sup>(1) (2)</sup></b>      | 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)     |
| <b>Delivery per cycle (2 x strokes)<sup>(1) (2)</sup></b> | 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)       |
| <b>Air pressure operating range</b>                       | 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) |
| <b>Solids in suspension max. size</b>                     | 1/8" (3 mm)                  | 3/16" (4 mm)                 | 1/4" (6 mm)  | 1/4" (6 mm)                  |
| <b>Maximum dry suction lift<sup>(1)</sup></b>             | 20' (6 m)                    | 15' (4,5 m)                  | 16,4' (5 m)  | 16' (5 m)                    |
| <b>Maximum wet suction lift<sup>(1)</sup></b>             | 26' (8 m)                    | 23' (7 m)                    | 26' (8 m)  | 26' (8 m)                    |
| <b>Weight</b>   | 7.72 lb (3,5 kg)             | 16 lb (7,2 kg)               | 45 lb (20 kg)  | 23.35 lb (11,5 kg)           |
| <b>Fluid inlet connection</b>                             | 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)              |
| <b>Fluid outlet connection</b>                            | 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)              |
| <b>Air inlet connection</b>                               | 3/8" NPSM (F)                | 3/8" NPSM (F)                | 1/2" NPSM (F)  | 3/8" NPSM (F)                |



|   | UP20   | UP30                             |
|---|--|----------------------------------|
| <b>Pressure ratio</b>                                     | 1:1  | 1:1                              |
| <b>Maximum free delivery<sup>(1)</sup></b>                | 172 US gal/min (650 l/min)                       | 264 US gal/min (1,000 l/min)     |
| <b>Delivery per stroke approx.<sup>(1) (2)</sup></b>      | 0.68 US gal (2,55 litres)                        | 1.3 US gal (5,1 litres)          |
| <b>Delivery per cycle (2 x strokes)<sup>(1) (2)</sup></b> | 1.35 US gal (5,1 litres)                         | 26 US gal (10,2 litres)          |
| <b>Air pressure operating range</b>                       | 22 to 100 psi (1,5 to 7 bar)                     | 22 to 100 psi (1,5 to 7 bar)     |
| <b>Solids in suspension max. size</b>                     | 1/4" (6 mm)                                      | 1/2" (127 mm)                    |
| <b>Maximum dry suction lift<sup>(1)</sup></b>             | 16' (5 m)  | 19.7' (6 m)                      |
| <b>Maximum wet suction lift<sup>(1)</sup></b>             | 26' (8 m)  | 26.2' (8 m)                      |
| <b>Weight</b>   | 101 lb (46 kg) / 163 lb (74 kg) / 168 lb (76 kg) | 150 lb (68 kg) / 270 lb (120 kg) |
| <b>Fluid inlet connection</b>                             | 2" ANSI/DIN flanged                              | 3" NPT / 3" ANSI/DIN flanged     |
| <b>Fluid outlet connection</b>                            | 2" NPT / 2" ANSI/DIN flanged                     | 3" NPT / 3" ANSI/DIN flanged     |
| <b>Air inlet connection</b>                               | 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 II2 GD IIB/IIc 95 °C.

## MATERIALS AVAILABLE FOR DC20:

| PLASTIC PUMPS | AIR MOTOR  | PUMP BODY   | DIAPHRAGMS Overmolded   | CHECK VALVE SEATS  | CHECK VALVE BALLS  |
|---------------|--|---|---|--|--|
|               | <ul style="list-style-type: none"> <li>Conductive polypropylene</li> </ul> | <ul style="list-style-type: none"> <li>Polypropylene®</li> <li>PVDF</li> <li>Conductive acetal</li> </ul> | <ul style="list-style-type: none"> <li>TPE (Hytre®)</li> <li>Santoprene®</li> <li>PTFE (Teflon®)</li> </ul> | <ul style="list-style-type: none"> <li>Acetal</li> <li>Polypropylene®</li> <li>PVDF</li> </ul> | <ul style="list-style-type: none"> <li>PTFE (Teflon®)</li> </ul> |



### 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.*

|                      | AIR MOTOR   | PUMP BODY   | DIAPHRAGMS   | CHECK VALVE SEATS  | CHECK VALVE BALLS  |
|----------------------|---|---|--|--|--|
| <b>METAL PUMPS</b>   | <ul style="list-style-type: none"> <li>Aluminum</li> </ul>                  | <ul style="list-style-type: none"> <li>Aluminum</li> <li>Stainless steel AISI 316</li> </ul>              | <b>Overmolded</b> <ul style="list-style-type: none"> <li>TPE (Hytrel®)</li> <li>Santoprene®</li> <li>Buna-N</li> <li>PTFE (Teflon®)</li> </ul> | <ul style="list-style-type: none"> <li>Stainless steel AISI 316</li> </ul>               | <ul style="list-style-type: none"> <li>Acetal</li> <li>Buna-N</li> <li>Stainless steel AISI 316</li> <li>PTFE (Teflon®)</li> </ul> |
| <b>PLASTIC PUMPS</b> | <ul style="list-style-type: none"> <li>Conductive polypropylene®</li> </ul> | <ul style="list-style-type: none"> <li>Polypropylene®</li> <li>PVDF</li> <li>Conductive acetal</li> </ul> | <b>Overmolded</b> <ul style="list-style-type: none"> <li>TPE (Hytrel®)</li> <li>Santoprene®</li> <li>PTFE (Teflon®)</li> </ul>                 | <ul style="list-style-type: none"> <li>Stainless steel AISI 316</li> <li>PVDF</li> </ul> | <ul style="list-style-type: none"> <li>Acetal</li> <li>Stainless steel AISI 316</li> <li>PTFE (Teflon®)</li> </ul>                 |



| 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/II C 95 °C.

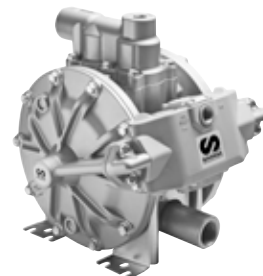
## MATERIALS AVAILABLE FOR DP PUMPS:

|                      | AIR MOTOR   | PUMP BODY   | DIAPHRAGMS<br>Overmolded   | CHECK VALVE<br>SEATS   | CHECK VALVE<br>BALLS   |
|----------------------|---|---|--|--|--|
| <b>METAL PUMPS</b>   | <ul style="list-style-type: none"> <li>Aluminum</li> </ul>                  | <ul style="list-style-type: none"> <li>Aluminum</li> <li>Stainless steel AISI 316</li> </ul>              | <ul style="list-style-type: none"> <li>TPE (Hytrel®)</li> <li>Santoprene®</li> <li>Buna-N</li> <li>PTFE (Teflon®)</li> </ul> | <ul style="list-style-type: none"> <li>Aluminum</li> <li>TPE (Hytrel®)</li> <li>Santoprene®</li> <li>Buna-N</li> <li>Stainless steel AISI 316</li> </ul> | <ul style="list-style-type: none"> <li>Acetal</li> <li>Buna-N</li> <li>Stainless steel AISI 316</li> <li>PTFE (Teflon®)</li> </ul> |
| <b>PLASTIC PUMPS</b> | <ul style="list-style-type: none"> <li>Conductive polypropylene®</li> </ul> | <ul style="list-style-type: none"> <li>Polypropylene®</li> <li>PVDF</li> <li>Conductive acetal</li> </ul> | <ul style="list-style-type: none"> <li>TPE (Hytrel®)</li> <li>Santoprene®</li> <li>PTFE (Teflon®)</li> <li>Buna-N</li> </ul> | <ul style="list-style-type: none"> <li>Acetal</li> <li>TPE (Hytrel®)</li> <li>Polypropylene®</li> <li>Santoprene®</li> <li>Buna-N</li> </ul>             | <ul style="list-style-type: none"> <li>Acetal</li> <li>Stainless steel AISI 316</li> <li>PTFE (Teflon®)</li> <li>Buna-N</li> </ul> |



**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).

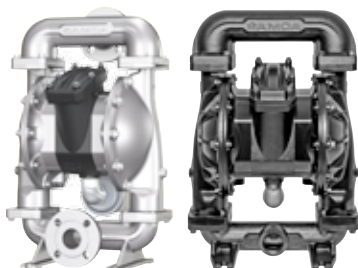


**ATEX Certified versions available**  
Ex II 2 GD IIB/II C 95 °C.



### MATERIALS AVAILABLE FOR UP PUMPS:

|                      | CENTER BODY & AIR CHAMBERS   | FLUID CHAMBERS & MANIFOLDS  | DIAPHRAGMS  |   | CHECK VALVE SEATS   | CHECK VALVE BALLS  |
|----------------------|--|---|---|---|---|--|
| <b>METAL PUMPS</b>   | <ul style="list-style-type: none"> <li>Aluminum</li> <li>Conductive polypropylene with stainless steel air chambers</li> </ul> | <ul style="list-style-type: none"> <li>Aluminum</li> <li>Ductile iron</li> <li>Stainless steel</li> </ul>       | <b>Conventional</b> <ul style="list-style-type: none"> <li>Santoprene®</li> <li>TPE (Hytrel®)</li> <li>Buna-N</li> <li>FKM (Viton®)</li> </ul> <b>Two-piece</b> <ul style="list-style-type: none"> <li>PTFE (Teflon® with Santoprene backer)</li> </ul> | <b>Overmolded</b> <ul style="list-style-type: none"> <li>TPE (Hytrel®)</li> <li>Santoprene®</li> <li>Buna-N</li> <li>PPTFE / EPDM (Bonded)</li> </ul> | <ul style="list-style-type: none"> <li>Aluminum</li> <li>Hardened stainless steel AISI 440</li> <li>TPE (Hytrel®)</li> <li>Santoprene®</li> <li>Buna-N</li> <li>Stainless steel AISI 316</li> <li>PTFE (Teflon®)</li> </ul> | <ul style="list-style-type: none"> <li>Acetal</li> <li>Buna-N</li> <li>Stainless steel AISI 316</li> <li>PTFE (Teflon®)</li> </ul>                 |
| <b>PLASTIC PUMPS</b> | <ul style="list-style-type: none"> <li>Conductive polypropylene</li> </ul>   | <ul style="list-style-type: none"> <li>Polypropylene</li> <li>PVDF</li> <li>Conductive polypropylene</li> </ul> | <b>Conventional</b> <ul style="list-style-type: none"> <li>Santoprene®</li> <li>TPE (Hytrel®)</li> <li>Buna-N</li> <li>FKM (Viton®)</li> </ul> <b>Two-piece</b> <ul style="list-style-type: none"> <li>PTFE (Teflon® with Santoprene backer)</li> </ul> | <b>Overmolded</b> <ul style="list-style-type: none"> <li>TPE (Hytrel®)</li> <li>Santoprene®</li> <li>Buna-N</li> <li>PPTFE / EPDM (Bonded)</li> </ul> | <ul style="list-style-type: none"> <li>Polypropylene</li> <li>PTFE (Teflon®)</li> </ul>   | <ul style="list-style-type: none"> <li>TPE (Hytrel®)</li> <li>Santoprene®</li> <li>Buna-N</li> <li>PTFE (Teflon®)</li> <li>FKM (Viton®)</li> </ul> |



**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) |



**SAMOA CORPORATION**

NORTH AMERICA  
90 MONTICELLO ROAD  
WEAVERVILLE, NC 28787, USA  
TEL. +1 (828) 645-2290  
FAX: +1 (828) 645-2607

**SAMOA INDUSTRIAL, S.A. - HEADQUARTERS**

SPAIN AND EXPORT MARKETS  
POL. IND. PORCEYO, I-14 - CAMINO DEL FONTÁN, 831  
E-33392 GIJÓN (ASTURIAS), SPAIN  
TEL.: +34 985 381 488  
FAX: + 34 985 147 213

©Copyright, SAMOA Industrial, S.A.

SAMOA Industrial, S.A. is an ISO 9001, ISO 14001  
and ISO 45001 certified company.



**CONTACT US TODAY!**

Visit [www.samoaindustrial.com](http://www.samoaindustrial.com) for more information.