



FEATURING  
CUSTOMIZABLE  
COMPONENTS TO  
MEET SPECIFIC  
APPLICATION  
REQUIREMENTS

**CHECK VALVES,  
PUMPS, & MORE**

**SMARTPRODUCTS.COM**  
**TOLL FREE: 1800.338.0404**





# OEM PARTS MADE TO ORDER

OUR CHECK & PRESSURE RELIEF VALVES AND LIQUID & AIR PUMPS PROVIDE ACCURATE, RELIABLE FLOW CONTROL IN ADVANCED, LOW PRESSURE, LOW FLOW SYSTEMS. ADDITIONALLY, OUR PRODUCTS ARE:

CUSTOMIZABLE • PRECISE • ECONOMICAL • HIGHEST QUALITY •  
IDEAL FOR LIQUID AND GAS • FDA & NSF COMPLIANT MATERIAL •  
CORROSION RESISTANT

SMART PRODUCTS ALSO PROVIDES ADDITIONAL SERVICES SUCH AS SPECIAL TESTING, CLEANROOM MOLDING & ASSEMBLY, HOT MELT GLUING, AND OTHER VALUE-ADDED SOLUTIONS. WE USE OUR EXPERTISE TO CREATE QUALITY AND PRECISE PRODUCTS TO MEET YOUR EXACTING REQUIREMENTS.





# SERIES 100 STANDARD CARTRIDGE

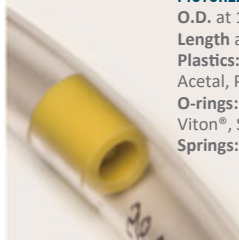
SMOOTH BODY DESIGN  
IN A VARIETY OF SIZES



**MODEL #170 -  
STANDARD CARTRIDGE 3/4"**  
PICTURED IN GREEN POLYPROPYLENE  
& IN ACRYLIC WITH SILICONE O-RING  
O.D. at 3/4" (19.05mm)  
Length at 1.125" (28.58mm)  
Plastics: Polypropylene, Nylon,  
Acrylic, Acetal, PVDF, ABS  
O-rings: Buna-N, EPDM,  
Viton®, Silicone  
Springs: 0.16 - 3 PSI



**MODEL #174 -  
STANDARD CARTRIDGE 3/4"**  
PICTURED IN ABS WITH BUNA-N O-RING  
O.D. at 3/4" (19.05mm)  
Length at 0.835" (21.21mm)  
Plastics: Polypropylene,  
Nylon, PVDF, ABS  
O-rings: Buna-N, EPDM,  
Viton®, Silicone  
Springs: 0.16 - 3 PSI



**MODEL #140 -  
STANDARD CARTRIDGE 1/2"**  
PICTURED IN YELLOW POLYPROPYLENE  
O.D. at 1/2" (12.70mm)  
Length at 0.625" (15.88mm)  
Plastics: Polypropylene, Nylon,  
Acetal, PVDF, ABS  
O-rings: Buna-N, EPDM,  
Viton®, Silicone  
Springs: 0.17 - 20 PSI



**MODEL #130 -  
STANDARD CARTRIDGE 3/8"**  
PICTURED IN ACRYLIC WITH VITON® O-RING  
O.D. at 3/8" (9.53mm)  
Length at 0.640" (16.26mm)  
Plastics: Polypropylene, Nylon,  
Acrylic, Acetal, PVDF,  
Polycarbonate, Ultem®, ABS  
O-rings: Buna-N, EPDM,  
Viton®, Silicone  
Springs: 0.17 - 20 PSI



**MODEL #157 -  
MANUAL RELIEF BLEED VALVE 5/8"**  
PICTURED IN POLYCARBONATE WITH KALREZ® O-RING  
O.D. at 5/8" (15.88mm)  
Length at 0.630" (16.00mm)  
Plastics: Polypropylene, Nylon, Acrylic,  
Acetal, PVDF, Polycarbonate, Ultem®, ABS  
O-rings: Buna-N, EPDM, Viton®, Silicone,  
Fluorosilicone, Aflas®†, Kalrez®†  
Springs: 0.11 - 8 PSI



**MODEL #150 -  
STANDARD CARTRIDGE 5/8"**  
PICTURED IN RADEL® WITH AFLAS® O-RING  
O.D. at 5/8" (15.88mm)  
Length at 0.630" (16.00mm)  
Plastics: Polypropylene, Nylon, Acrylic,  
Acetal, PVDF, Polycarbonate, Ultem®,  
ABS, Radel®  
O-rings: Buna-N, EPDM, Viton®,  
Silicone, Fluorosilicone, Aflas®†,  
Kalrez®†  
Springs: 0.11 - 8 PSI



**MODEL #160 -  
STANDARD CARTRIDGE 5/8"**  
PICTURED IN BLACK NYLON  
O.D. at 5/8" (15.88mm)  
Length at 0.630" (16.00mm)  
Plastics: Polypropylene, Nylon, Acrylic, Acetal,  
PVDF, Polycarbonate, Ultem®, ABS  
O-rings: Buna-N, EPDM, Viton®, Silicone  
Springs: 0.17 - 20 PSI



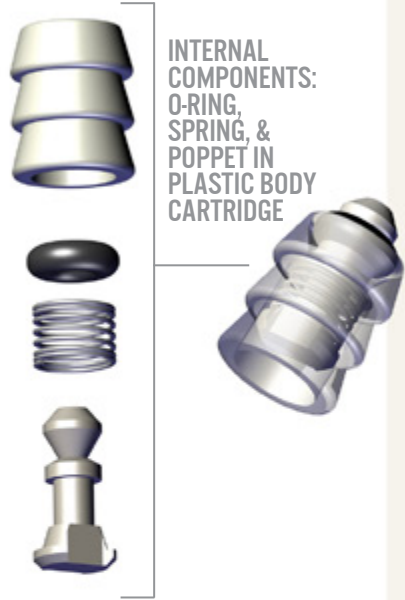
**MODEL #110 -  
STANDARD CARTRIDGE 1/4"**  
PICTURED ABOVE IN ULTEM® WITH EPDM O-RING  
& BELOW IN ACETAL WITH BUNA-N O-RING  
O.D. at 1/4" (6.35mm)  
Length at 0.500" (12.70mm)  
Plastics: Polypropylene, Nylon,  
Acrylic, Acetal, PVDF, Polycarbonate,  
Ultem®, ABS  
O-rings: Buna-N, EPDM, Viton®,  
Silicone, Fluorosilicone  
Springs: 0.09 - 20 PSI

†NOT AVAILABLE WITH SPRINGS LESS THAN 0.5 PSI.

NOTE: VALVES ARE NOT PICTURED TO ACTUAL SIZE. OUR PRODUCTS ARE SUBJECT TO CONTINUOUS IMPROVEMENT. WE RESERVE THE RIGHT TO CHANGE FEATURES, PROCESSES, MATERIALS, TESTING, & OTHER SPECIFICATIONS, AS NECESSARY. SMART PRODUCTS USA STRONGLY RECOMMENDS CUSTOMERS TEST PRODUCTS FOR EACH APPLICATION-SPECIFIC USE.

ALL MODEL #S ARE CUSTOMIZABLE BY PLASTIC BODY, O-RING, & OPENING PSI. NEED A MATERIAL OR OPENING PSI NOT LISTED? JUST ASK OUR SALES DEPARTMENT FOR ASSISTANCE.





INTERNAL COMPONENTS:  
O-RING,  
SPRING, &  
POPPET IN  
PLASTIC BODY  
CARTRIDGE

# SERIES 100 SPECIALTY SMALL SIZES, MANY STYLES

**MODEL #101 - MICRO BARBED 1/8"**  
**PICTURED IN POLYCARBONATE WITH SILICONE CONE SEAL**  
 Fits Tubing I.D. at 1/8" (3.175mm)  
 Length at 0.375" (9.53mm)  
 Plastics: Polypropylene, Nylon, PVDF, Polycarbonate, Ultem®, Radel®  
 O-rings: Buna-N, Silicone  
 Springs: 0.58 - 20 PSI

**MODEL #111 - BARBED 1/4"**  
**PICTURED IN ULTEM® WITH VITON® O-RING**  
 Fits Tubing I.D. at 1/4" (6.35mm)  
 Length at 0.475" (12.07mm)  
 Plastics: Polypropylene, Nylon, Acrylic, Acetal, PVDF, Polycarbonate, Ultem®, ABS  
 O-rings: Buna-N, EPDM, Viton®, Silicone, Fluorosilicone  
 Springs: 0.09 - 20 PSI

**MODEL #118 - BARBED 1/4" REVERSE FLOW OF #111**  
**PICTURED IN ACRYLIC WITH SILICONE O-RING**  
 Fits Tubing I.D. at 1/4" (6.35mm)  
 Length at 0.475" (12.07mm)  
 Plastics: Polypropylene, Nylon, Acrylic, Acetal, PVDF, Polycarbonate, Ultem®, ABS  
 O-rings: Buna-N, EPDM, Viton®, Silicone, Fluorosilicone  
 Springs: 0.09 - 20 PSI

**MODEL #13A - FLANGED INLET 3/8"**  
**PICTURED IN POLYCARBONATE WITH SILICONE ORING**  
 Body O.D. at 0.375" (9.53mm)  
 Length at 0.640" (16.26mm)  
 Flange at 0.42" (10.668mm)  
 Plastics: Polypropylene, PVDF, Polycarbonate  
 O-rings: Buna-N, EPDM, Viton®, Silicone  
 Springs: 0.17 - 20 PSI

**MODEL #14C - TAPERED FLANGED INLET 1/2"**  
**PICTURED IN BLACK NYLON**  
 Body O.D. at 0.50" (12.70mm)  
 Length at 0.69" (17.526mm)  
 Flange at 0.62" (15.748mm)  
 Plastics: Polypropylene, Nylon  
 O-rings: Buna-N, EPDM, Viton®, Silicone  
 Springs: 0.17 - 20 PSI

**MODEL #15B - FLANGED OUTLET 5/8"**  
**PICTURED IN ACETAL WITH BUNA-N O-RING**  
 Body O.D. at 0.625" (15.88mm)  
 Length at 0.58" (14.732mm)  
 Flange at 0.685" (17.399mm)  
 Plastics: Polypropylene, Nylon, Acetal  
 O-rings: Buna-N, EPDM, Viton®, Silicone, Fluorosilicone, Aflas®†, Kalrez®†  
 Springs: 0.11 - 8 PSI



**MODEL #103 - NPT 1/8"**  
**PICTURED IN ACETAL WITH SILICONE O-RING**  
 NPT Size at 0.438" (11.13mm)  
 Note: fits 7/16" wrench or socket  
 Length at 0.590" (14.99mm)  
 Plastics: Polypropylene, Nylon, Acetal, Polycarbonate, Ultem®  
 O-rings: Buna-N, EPDM, Viton®, Silicone, Fluorosilicone  
 Springs: 0.09 - 20 PSI

**MODEL #122 - SIDE SEAL 5/16"**  
**PICTURED IN RADEL® WITH EPDM O-RINGS**  
 O.D. at 0.305" (7.747mm)  
 Length at 0.5" (12.7mm)  
 Plastics: Polypropylene, Nylon, Acrylic, Acetal, PVDF, Polycarbonate, Ultem®, ABS, Radel®  
 O-rings: Buna-N, EPDM, Viton®, Silicone  
 Springs: 0.09 - 20 PSI

**MODEL #154 - SIDE SEAL & FLANGED INLET 5/8"**  
**PICTURED IN PVDF WITH VITON® O-RINGS**  
 O.D. at 0.625" (15.88mm)  
 Length at 0.455" (11.56mm)  
 Flange at 0.680" (17.27mm)  
 Plastics: Polypropylene, Nylon, Acrylic, PVDF, Polycarbonate, Ultem®, ABS  
 O-rings: Buna-N, EPDM, Viton®, Silicone, Fluorosilicone, Aflas®†  
 Springs: 0.11 - 8 PSI

†NOT AVAILABLE WITH SPRINGS LESS THAN 0.5 PSI.

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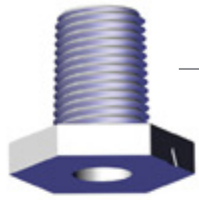
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**MODEL #109 - NPT 1/8" REVERSE FLOW OF MODEL #103**  
**PICTURED IN ULTEM® WITH FLUOROSILICONE O-RING**  
 NPT Size at 0.438" (11.13mm)  
 Note: Fits 7/16" wrench or socket  
 Length at 0.590" (14.99mm)  
 Plastics: Polypropylene, Nylon, Acetal, Polycarbonate, Ultem®  
 O-rings: Buna-N, EPDM, Viton®, Silicone, Fluorosilicone  
 Springs: 0.09 - 20 PSI

**MODEL #132 - SIDE SEAL 3/8"**  
**PICTURED IN ABS WITH VITON® O-RINGS**  
 O.D. at 0.365" (9.27mm)  
 Length at 0.392" (9.96mm)  
 Plastics: Polypropylene, Nylon, Acrylic, Acetal, PVDF, Polycarbonate, Ultem®, ABS, Radel®  
 O-rings: Buna-N, EPDM, Viton®, Silicone, Fluorosilicone  
 Springs: 0.09 - 20 PSI

**MODEL #152 - SIDE SEAL 5/8"**  
**PICTURED IN ACRYLIC WITH FLUOROSILICONE O-RINGS**  
 O.D. at 0.625" (15.88mm)  
 Length at 0.515" (13.08mm)  
 Plastics: Polypropylene, Nylon, Acrylic, PVDF, Polycarbonate, Ultem®, ABS, Radel®  
 O-rings: Buna-N, EPDM, Viton®, Silicone, Fluorosilicone, Aflas®†  
 Springs: 0.11 - 8 PSI

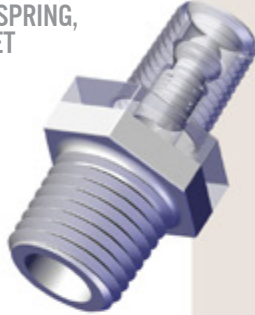
**MODEL #191 - SIDE SEAL & FLANGED OUTLET 5/8"**  
**PICTURED IN PURPLE POLYPROPYLENE WITH EPDM O-RINGS**  
 O.D. at 0.625" (15.88mm)  
 Length at 0.455" (11.56mm)  
 Flange at 0.680" (17.27mm)  
 Plastics: Polypropylene, Nylon, Acrylic, PVDF, Polycarbonate, Ultem®, ABS  
 O-rings: Buna-N, EPDM, Viton®, Silicone, Fluorosilicone, Aflas®†  
 Springs: 0.11 - 8 PSI



MIX & MATCH  
NPT & METRIC  
STYLE OPTIONS



INTERNAL  
COMPONENTS:  
O-RING, SPRING,  
& POPPET



# SERIES 200 MALE NPT & METRIC STYLES



MIX & MATCH MALE NPT -  
1/4" & 1/8": MODEL #212/214  
PICTURED IN BLUE ABS

May combine Model #212 and #214 or  
use the same NPT size on both ends



MODEL #214-  
MALE NPT 1/8"  
PICTURED IN BLACK NYLON

Overall Size at 0.67"  
Length at 1.37"  
Plastics: Polypropylene, Nylon, ABS  
O-rings: Buna-N, EPDM, Viton®,  
Silicone, Fluorosilicone  
Springs: 0.09 - 20 PSI



MODEL #212-  
MALE NPT 1/4"  
PICTURED IN BLUE ABS

Overall Size at 0.67"  
Length at 1.37"  
Plastics: Polypropylene, Nylon, ABS  
O-rings: Buna-N, EPDM, Viton®,  
Silicone, Fluorosilicone  
Springs: 0.09 - 20 PSI

MODEL #M10/212 -  
METRIC WITH MALE 1/4"

PICTURED IN PVDF WITH EPDM O-RINGS

Overall Size at 0.67"  
Length at 1.26"  
Plastics: Polypropylene, Nylon, Acetal, PVDF  
O-rings: Buna-N, EPDM, Viton®, Silicone, Fluorosilicone  
Springs: 0.09 - 20 PSI



MODEL #M10/214-  
METRIC WITH MALE NPT 1/8"

PICTURED IN BLACK NYLON WITH SILICONE O-RINGS

Overall Size at 0.67"  
Length at 1.26"  
Plastics: Polypropylene, Nylon, Acetal, PVDF  
O-rings: Buna-N, EPDM, Viton®, Silicone, Fluorosilicone  
Springs: 0.09 - 20 PSI



MODEL #224-  
COMPRESSION FITTING 1/4"  
PICTURED IN POLYPROPYLENE

Size O.D. at 0.713"  
Length at 0.625"  
Plastics: Polypropylene  
Note: Compression Fitting at 1/4" size  
for use with Model #212 (shown) or  
Model #214 on inlet or outlet sides



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# SERIES 300 MODULAR MIX & MATCH END FITTINGS



**MODEL #315 - FOOT FILTERING  
PAIRED WITH MODEL #312**  
PICTURED IN BLUE / WHITE POLYPROPYLENE  
Plastics: Polypropylene, Nylon,  
PVDF, Ultem®, ABS  
O-rings: Buna-N, EPDM, Viton®,  
Silicone, Fluorosilicone, Aflas®†, Kalrez®†  
Springs: 0.11 - 20 PSI



**MODEL #314 - NPT 1/8"  
PAIRED WITH SAME MODEL #314**  
PICTURED IN RADEL® WITH FLUOROSILICONE O-RINGS  
NPT Size at 1/8"  
Plastics: Polypropylene, Nylon,  
PVDF, Ultem®, ABS, Radel®  
O-rings: Buna-N, EPDM, Viton®,  
Silicone, Fluorosilicone, Aflas®†, Kalrez®†  
Springs: 0.11 - 20 PSI



**MODEL #305 - BARBED 5/16"  
PAIRED WITH SAME MODEL #305**  
PICTURED IN ABS  
Tubing I.D. at 5/16" (7.94mm)  
Plastics: Polypropylene, Nylon,  
PVDF, Ultem®, ABS  
O-rings: Buna-N, EPDM, Viton®,  
Silicone, Fluorosilicone, Aflas®†, Kalrez®†  
Springs: 0.11 - 20 PSI



**MODEL #302 - BARBED 1/8"  
PAIRED WITH SAME MODEL #302**  
PICTURED IN ULTEM® WITH BUNA-N O-RINGS  
Tubing I.D. at 1/8" (3.18mm)  
Plastics: Polypropylene, Nylon,  
PVDF, Ultem®, ABS  
O-rings: Buna-N, EPDM, Viton®,  
Silicone, Fluorosilicone, Aflas®†, Kalrez®†  
Springs: 0.11 - 20 PSI



**MODEL #300 - BARBED 1/16"  
PAIRED WITH SAME MODEL #300**  
PICTURED IN RED POLYPROPYLENE  
Tubing I.D. at 1/16" (1.58mm)  
Plastics: Polypropylene, Nylon,  
PVDF, Ultem®, ABS  
O-rings: Buna-N, EPDM, Viton®,  
Silicone, Fluorosilicone, Aflas®†, Kalrez®†  
Springs: 0.11 - 20 PSI



**MODEL #308 - BARBED 1/2"  
PAIRED WITH MODEL #304**  
PICTURED IN BLACK NYLON  
Tubing I.D. at 1/2" (12.70mm)  
Plastics: Polypropylene, Nylon,  
PVDF, Ultem®, ABS  
O-rings: Buna-N, EPDM, Viton®,  
Silicone, Fluorosilicone, Aflas®†, Kalrez®†  
Springs: 0.11 - 20 PSI



**MODEL #304 - BARBED 1/4"  
PAIRED WITH SAME MODEL #304**  
PICTURED IN RADEL® WITH EPDM O-RINGS  
Tubing I.D. at 1/4" (6.35mm)  
Plastics: Polypropylene, Nylon, PVDF,  
Ultem®, ABS, Radel®  
O-rings: Buna-N, EPDM, Viton®, Silicone,  
Fluorosilicone, Aflas®†, Kalrez®†  
Springs: 0.11 - 20 PSI



**MODEL #301 - BARBED 3/32"  
PAIRED WITH SAME MODEL #301**  
PICTURED IN BLACK NYLON  
Tubing I.D. at 3/32" (2.38mm)  
Plastics: Polypropylene, Nylon,  
PVDF, Ultem®, ABS  
O-rings: Buna-N, EPDM, Viton®,  
Silicone, Fluorosilicone, Aflas®†, Kalrez®†  
Springs: 0.11 - 20 PSI



**MODEL #306 - BARBED 3/8"  
PAIRED WITH SAME MODEL #306**  
PICTURED IN ULTEM® WITH AFLAS® O-RINGS  
Tubing I.D. at 3/8" (9.525mm)  
Plastics: Polypropylene, Nylon,  
PVDF, Ultem®, ABS  
O-rings: Buna-N, EPDM, Viton®,  
Silicone, Fluorosilicone, Aflas®†, Kalrez®†  
Springs: 0.11 - 20 PSI



**MODEL #303 - BARBED 3/16"  
PAIRED WITH SAME MODEL #303**  
PICTURED IN BLUE POLYPROPYLENE  
Tubing I.D. at 3/16" (4.76mm)  
Plastics: Polypropylene, Nylon,  
PVDF, Ultem®, ABS, Radel®  
O-rings: Buna-N, EPDM, Viton®,  
Silicone, Fluorosilicone, Aflas®†, Kalrez®†  
Springs: 0.11 - 20 PSI



**MODEL #312 - NPT 1/4"  
PAIRED WITH MODEL #302**  
PICTURED IN PVDF WITH BUNA-N O-RINGS  
NPT Size at 1/4"  
Plastics: Polypropylene, Nylon,  
PVDF, Ultem®, ABS  
O-rings: Buna-N, EPDM, Viton®,  
Silicone, Fluorosilicone, Aflas®†, Kalrez®†  
Springs: 0.11 - 20 PSI



**MODEL #361 - SMOOTH STEM 3/8"  
PAIRED WITH MODEL #314**  
PICTURED IN ABS  
Tubing I.D. at 3/8" (9.525mm)  
Plastics: Polypropylene, Nylon, PVDF,  
Ultem®, ABS, Radel®  
O-rings: Buna-N, EPDM, Viton®,  
Silicone, Fluorosilicone, Aflas®†, Kalrez®†  
Springs: 0.11 - 20 PSI



**MODEL #330 - MANUAL RELIEF  
PAIRED WITH MODEL #302**  
PICTURED IN RED POLYPROPYLENE  
Unique style provides pressure or vacuum relief at the touch of a button. Threaded for panel mounting; 5/8-18 thread pitch  
Plastics: Polypropylene  
O-rings: Buna-N, EPDM, Viton®,  
Silicone, Fluorosilicone, Aflas®†, Kalrez®†

†NOT AVAILABLE WITH SPRINGS LESS THAN 0.5 PSI.

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# SERIES 500 MINIATURE MODULAR MIX & MATCH END FITTINGS

4+ BARB & LUER  
STYLE OPTIONS

INTERNAL CARTRIDGE  
VALVE & ADDITIONAL  
O-RINGS FOR SUPERIOR  
SEALING



MODELS #500/502  
IN POLYCARBONATE  
& ULTEM® WITH  
BUNA-N O-RINGS

MODEL #502/502  
IN ULTEM® WITH  
BUNA-N O-RINGS

MODEL #541/502  
IN PURPLE  
POLYPROPYLENE

MODEL #541/541  
IN PVDF WITH  
FLUOROSILICONE  
O-RINGS

MODEL #500/500  
IN POLYCARBONATE  
WITH SILICONE O-RINGS



**MODEL #500 - BARBED 1/16"**  
**PAIRED WITH MODEL #502**

**PICTURED IN POLYCARBONATE WITH BUNA-N O-RINGS**  
Tubing I.D. at 1/16" (1.58mm)  
Plastics: Polypropylene, PVDF,  
Polycarbonate, Ultem®  
O-rings: Buna-N, EPDM, Viton®,  
Silicone, Fluorosilicone  
Springs: 0.09 - 20 PSI

**MODEL #502 - BARBED 1/8"**  
**PAIRED WITH SAME MODEL #502**  
**PICTURED IN PVDF WITH SILICONE O-RINGS**

Tubing I.D. at 1/8" (3.18mm)  
Plastics: Polypropylene, PVDF,  
Polycarbonate, Ultem®  
O-rings: Buna-N, EPDM, Viton®,  
Silicone, Fluorosilicone  
Springs: 0.09 - 20 PSI



**MODEL #541 - FEMALE LUER LOCK**  
**PAIRED WITH MODEL #502**

**PICTURED IN ULTEM® WITH FLUOROSILICONE O-RINGS**  
Plastics: Polypropylene, PVDF,  
Polycarbonate, Ultem®  
O-rings: Buna-N, EPDM, Viton®,  
Silicone, Fluorosilicone  
Springs: 0.09 - 20 PSI



**MODEL #542 - MALE LUER**  
**PAIRED WITH SAME MODEL #542**

**PICTURED IN ORANGE / WHITE POLYPROPYLENE**  
Plastics: Polypropylene  
O-rings: Buna-N, EPDM,  
Viton®, Silicone, Fluorosilicone  
Springs: 0.09 - 20 PSI



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# SERIES 3000 LIQUID PUMPS

ENERGY-EFFICIENT, DURABLE, & DEPENDABLE

## FEATURES

### PUMP OVERVIEW

Self-priming, single diaphragm positive displacement, runs wet or dry

### PORTS

Choice of 1/8" or 1/4" FNPT

### VOLTAGE

12-24 VDC

### MAX START UP CONSUMPTION

1500 mA

### ELECTRICAL CONNECTIONS

Spade type terminals

### SIZE

1.66"W x 3.0"L x 3.7"H  
(42.16 x 76.20 x 93.98 mm)

### MOTOR

Permanent magnet DC

### WEIGHT

9.3 oz. (263 g)

### TEMPERATURE RANGE

220°F (104°C) maximum

### DUTY CYCLE

1000 hours continuous duty @ 12 VDC\*

### PUMP BODY

Nylon 6

### O-RINGS

Buna-N, EPDM, Viton®, Silicone

### DIAPHRAGMS

Teflon®

### SPRINGS

316 stainless steel or Hastelloy-C\*\*

### VALVES

Spring-loaded poppet, molded as part of the body

All standard materials are FDA compliant

\*Lifetime will vary depending on usage \ \*\*Hastelloy-C only available with 1/4" FNPT ports

NOTE: Pumps are not pictured to actual size. Our products are subject to continuous improvement. We reserve the right to change features, processes, materials, testing, & other specifications as necessary. Smart Products strongly recommends that customers test products for each application-specific use.

## OPTIONS BY MODEL

MODEL	#SP3210 (1/8" FNPT PORT) #SP3410 (1/4" FNPT PORT)	#SP3215 (1/8" FNPT PORT) #SP3415 (1/4" FNPT PORT)	#SP3220 (1/8" FNPT PORT) #SP3420 (1/4" FNPT PORT)
POWER CONSUMPTION	~300-500 mA	~300-600 mA	~300-700 mA
MAX OUTPUT PRESSURE	40 PSI @ 12 VDC (2.8 Bar) 60 PSI @ 24 VDC (4.1 Bar)	26 PSI @ 12 VDC (1.8 Bar) 60 PSI @ 24 VDC (4.1 Bar)	19 PSI @ 12 VDC (1.3 Bar) 45 PSI @ 24 VDC (3.1 Bar)
MAX FLOW RATE	9.1 GPH @ 12 VDC (34.4 LPH)	12.7 GPH @ 12 VDC (48.1 LPH)	16.6 GPH @ 12 VDC (62.8 LPH)
VACUUM	18 inHg wet, 3.6 inHg dry @12 VDC (457 mmHg wet, 91 mmHg dry)	21 inHg wet, 5.3 inHg dry @12 VDC (533 mmHg wet, 135 mmHg dry)	22 inHg wet, 8.6 inHg dry @12 VDC (559 mmHg wet, 218 mmHg dry)





# SERIES 8000 AIR PUMPS

ENERGY-EFFICIENT, DURABLE, & DEPENDABLE

## FEATURES

MODEL	#SP8000		
PUMP OVERVIEW	Single diaphragm, positive displacement	TYPICAL PERFORMANCE	0.035 CFM @ 14.5 PSI (1.0 LPM @ 1 Bar)
PORTS	3/16" barb	VACUUM	18 inHg (457 mmHg)
APPROVALS	FAA approved (D0160C)	MOTOR	Permanent magnet DC
VOLTAGE RANGE	12 or 24 VDC	SIZE	1.5"W x 2.28"L x 3.7"H (38.1 x 57.9 x 93.98 mm)
POWER CONSUMPTION	Less than 1 amp	WEIGHT	0.5 lb. (227 g)
ELECTRICAL CONNECTIONS	Spade type terminals	TEMPERATURE RANGE	32° - 220° F (0° - 104° C) estimated
MAX OUTPUT PRESSURE	20 PSI (1.38 Bar)	DUTY CYCLE	1000 hours @ 100% duty cycle*
MAX FLOW RATE	0.14 CFM (4 LPM), 8.5 CFH (240 LPH)	MATERIALS	Pump body: Nylon FDA Diaphragm & Valves: Buna-N FDA, Viton® FDA

\*Lifetime will vary depending on usage

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AP-3P04



AP-2P02A



AP-2P01



# SERIES AP MICRO PRESSURE PUMPS

## MICRO SIZE WITH MAXIMUM DURABILITY

### FEATURES

#### PUMP OVERVIEW

Rotary diaphragm, miniature, ideal for battery powered applications

#### PUMP BODY & RETAINER BASE

Celcon® M90 Natural

#### TOP COVER

ABS 757 Natural (N/A for #AP-3P04)

#### ELECTRICAL CONNECTIONS

Terminals extend from top of pump

#### PISTON

Delrin® 500 AL

#### DIAPHRAGM

Buna 50° A

#### VALVES

Suction valve in Buna 50° A, discharge valve in Buna 45-50° A

#### CAP

ABS 757 Natural

#### FUNCTION

Creates pressure for air flow

NOTE: Pumps are not pictured to actual size. Our products are subject to continuous improvement. We reserve the right to change features, processes, materials, testing, & other specifications as necessary. Smart Products strongly recommends that customers test products for each application-specific use.

### OPTIONS BY MODEL

MODEL	#AP-2P01	#AP-2P02A	#AP-3P04
PORTS	3mm outlet	3mm outlet	4mm outlet
VOLTAGE RANGE	Nominal 3 VDC, 2.0 - 3.2 VDC	Nominal 3 VDC, 1.9 - 3.1 VDC	Nominal 12 VDC
POWER CONSUMPTION	Max 460 mA	Max 320 mA	Max 270 mA
NOISE	<60 dBA @10cm	<65 dBA @10cm	<55 dBA @1ft
MAX OUTPUT PRESSURE	6.76 PSI (350mmHg)	6.76 PSI (350mmHg)	11.0 PSI (570mmHg)
MAX FLOW RATE	1.48 SCFH (0.7 LPM)	0.42 SCFH (0.2 LPM)	3.18 SCFH (1.5 LPM)
PRESSURE DROP	<2 mmHg/min from 300 mmHg	<2 mmHg/min from 300 mmHg	<3 mmHg/min from 525 mmHg
SIZE	1.566"W x 0.472"L x 0.827"H (39.78 x 11.99 x 21.00 mm)	1.301"W x 0.394"L x 0.650"H (33.04 x 10.01 x 16.51 mm)	2.550"L x 1.18" Diameter (64.77 x 29.97 mm)
WEIGHT	0.55 oz. (15.5 g)	0.28 oz. (8.0 g)	2.12 oz. (60.0 g)
DUTY CYCLE	Tested to 30,000 operating cycles	Tested to 30,000 operating cycles	Tested to >80,000 operating cycles







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