



FEATURING
CUSTOMIZABLE
COMPONENTS TO
MEET SPECIFIC
APPLICATION
REQUIREMENTS

**CHECK VALVES,
PUMPS, & MORE**

SMARTPRODUCTS.COM
TOLL FREE: 1800.338.0404





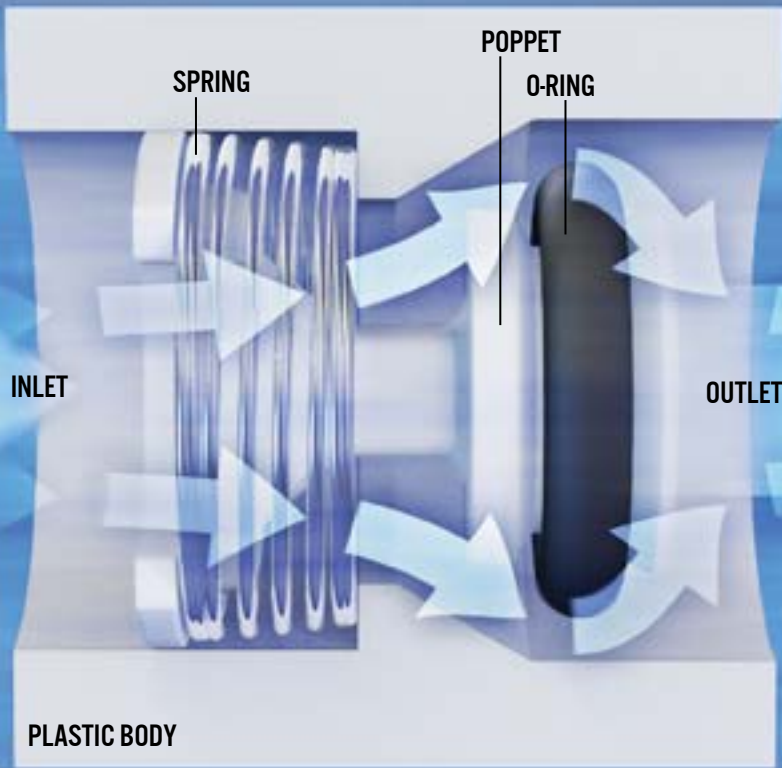
OEM PARTS MADE TO ORDER

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.





PRESSURE CAPABILITIES & LIMITATIONS IN OUR CHECK VALVES

WE'RE OFTEN ASKED: "HOW HIGH CAN YOUR VALVES GO?" OR, "HOW LOW CAN YOUR VALVES GO?"

TO GET A BETTER IDEA ABOUT PRESSURE CAPABILITIES AND LIMITATIONS IN OUR VALVES, IT'S IMPORTANT TO KNOW WHICH PRESSURE STAGE MIGHT BE MOST CRITICAL TO YOUR APPLICATION'S PERFORMANCE. DURING CHECK VALVE OPERATION, EACH VALVE GOES THROUGH FOUR DIFFERENT STAGES OF PRESSURE:

- OPENING PRESSURE
- FLOW (AKA STEADY-STATE OR REGULATED) PRESSURE
- CHECK (AKA BACK) PRESSURE
- RESEALING PRESSURE

THE OPENING PRESSURE FOR OUR VALVES RANGES FROM 0.09 TO 20 PSI. THEN, THE MAXIMUM PRESSURE IN THE FLOW DIRECTION (INLET) AND FOR THE CHECK DIRECTION (OUTLET) CAN GO UP TO 60+ PSI. FINALLY, THE RESEAL PRESSURE WILL ALWAYS BE LOWER THAN THE SELECTED OPENING PSI.

ALSO NOTE, WE CAN ADJUST A VALVE'S PRESSURE CAPABILITIES BY LOOKING AT THE O-RING'S DUROMETER (HARDNESS OF RUBBER). FOR EXAMPLE, IF YOU'RE LOOKING FOR HIGHER BACK PRESSURE PERFORMANCE IN OUR VALVES, WE MAY RECOMMEND O-RINGS AT A HIGHER DUROMETER. FOR APPROXIMATE VALVE BURST PRESSURES PER A SPECIFIC CHECK VALVE MODEL #, CONTACT A PRODUCT & APPLICATION SPECIALIST AT 1-800-338-0404. ADDITIONALLY, OUR ENGINEERS CONSISTENTLY TEST OUR VALVES AND THEIR COMPONENTS, SO IF YOUR APPLICATION REQUIRES AN OPENING OR FLOW/CHECK PRESSURE NOT MENTIONED HERE, BE SURE TO INQUIRE WITH US.

AS A CUSTOM VALVE MANUFACTURER, WE RECOMMEND THAT YOU SAMPLE THE VALVE THAT YOU ARE INTERESTED IN AND TEST IT IN YOUR APPLICATION. A PRODUCT & APPLICATION SPECIALIST CAN HELP YOU CHOOSE COMPONENTS (BODY MATERIAL, O-RING, SPRING PRESSURE, AND MORE) IDEAL FOR YOUR DEVICE REQUIREMENTS.

FOR MORE INFO ON HOW OUR VALVES WORK VISIT:
[HTTPS://SMARTPRODUCTS.COM/TECHNICAL-RESOURCES/CHECK-VALVE-OPERATION/](https://smartproducts.com/technical-resources/check-valve-operation/)





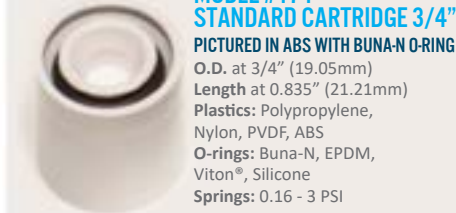
SERIES 100 STANDARD CARTRIDGE

SMOOTH BODY DESIGN
IN A VARIETY OF SIZES



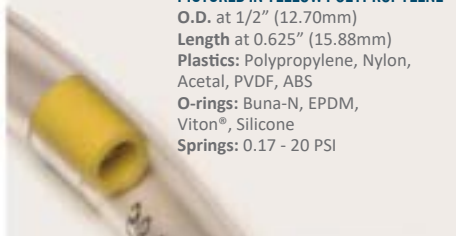
MODEL #170 - STANDARD CARTRIDGE 3/4"

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



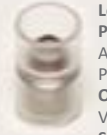
MODEL #174 - STANDARD CARTRIDGE 3/4"

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.

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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 #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 #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 #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 #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



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

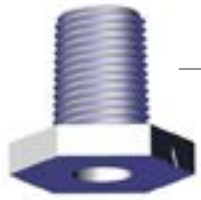
O.D. at 0.625" (15.88mm)
Length at 0.455" (11.56mm)
Flange at 0.680" (17.27mm)
Plastics: Polypropylene, Nylon, Acrylic, PVDF, Polycarbonate, Ultem®, ABS
O-rings: Buna-N, EPDM, Viton®, Silicone, Fluorosilicone, Aflas®†
Springs: 0.11 - 8 PSI

†NOT AVAILABLE WITH SPRINGS LESS THAN 0.5 PSI.

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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



13+ STYLE
OPTIONS

INTERNAL
CARTRIDGE
VALVE &
ADDITIONAL
O-RINGS FOR
SUPERIOR
SEALING

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 #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 #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 #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 #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 #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 #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 #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 #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®†

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

†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



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

ELECTRICAL CONNECTIONS

Terminals extend from top of pump

VALVES

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

PUMP BODY & RETAINER BASE

Celcon® M90 Natural

PISTON

Delrin® 500 AL

CAP

ABS 757 Natural

TOP COVER

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

DIAPHRAGM

Buna 50° A

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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