

A100

Advanced™ Series **PLASTIC** Pumps

EOM

Engineering
Operation &
Maintenance



Advance your process



ACCUFLO™
SOLENOID PUMP TECHNOLOGY

WILDEN®

A **DOVER** COMPANY



WIL-11040-E-04
REPLACES WIL-11040-E-03

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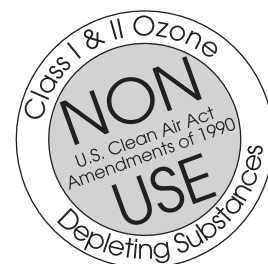
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CAUTION – READ FIRST!

TEMPERATURE LIMITS:
Wetted Path

Polypropylene	0°C to 79.4°C	32°F to 175°F
PVDF	-12.2°C to 107.2°C	10°F to 225°F

Elastomers

Buna-N	-12.2°C to 82.2°C	10°F to 180°F
Viton®	-40°C to 176.7°C	-40°F to 350°F
Wil-Flex™	-40°C to 107.2°C	-40°F to 225°F
Polyurethane	12.2°C to 65.6°C	10°F to 150°F
PTFE	4.4°C to 104.4°C	40° F to 220°F
Saniflex™	-28.9°C to 104.4°C	-20°F to 220°F



CAUTION: When choosing pump materials, be sure to check the temperature limits for all wetted components. Example: Viton® has a maximum limit of 176.7°C (350°F) but polypropylene has a maximum limit of only 79°C (175°F).



CAUTION: Maximum temperature limits are based upon mechanical stress only. Certain chemicals will significantly reduce maximum safe operating temperatures. Consult engineering guide for chemical compatibility and temperature limits.



CAUTION: Always wear safety glasses when operating pump. If diaphragm rupture occurs, material being pumped may be forced out air exhaust.



WARNING: Prevention of static sparking — If static sparking occurs, fire or explosion could result. Proper grounding of pump, valves, and containers is critical when handling flammable fluids and whenever discharge of static electricity is a hazard.



CAUTION: Do not exceed 8.6 bar (125 psig) air supply pressure.



CAUTION: Advanced™ series plastic pumps are made with plastic that is not UV stabilized. Direct sunlight for prolonged periods can cause deterioration of plastics.



CAUTION: Before any maintenance or repair is attempted, the compressed air line to the pump should be disconnected and all air pressure allowed to bleed from pump. Disconnect all intake, discharge and air lines. Drain the pump by turning it upside down and allowing any fluid to flow into a suitable container.



CAUTION: Blow out air line for 10 to 20 seconds before attaching to pump to make sure all pipe line debris is clear. Use an in-line air filter. A 5μ (micron) air filter is recommended.



NOTE: Tighten all bolts prior to installation. Fasteners may loosen during transportation.



NOTE: When installing PTFE diaphragms, it is important to tighten outer pistons simultaneously (turning in opposite directions) to ensure tight fit.



CAUTION: Verify the chemical compatibility of the process and cleaning fluid to the pump's component materials in the Chemical Resistance Guide (see E4).



CAUTION: When removing the end cap using compressed air, the air valve end cap may come out with considerable force. Hand protection such as a padded glove or rag should be used to capture the end cap.



CAUTION: Do not over-tighten the air inlet reducer bushing. Additionally, too much torque on the muffler may damage the air valve muffler plate.



CAUTION: The A100 Advanced™ pump is not submersible.



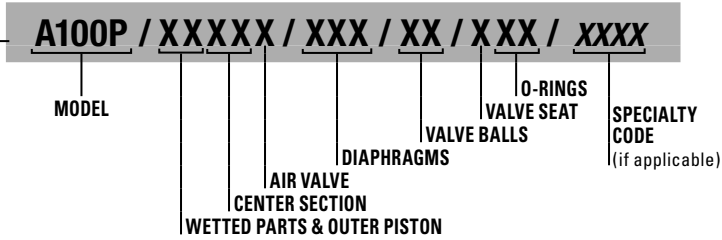
CAUTION: Only explosion proof (NEMA 7) solenoid valve should be used in areas where explosion proof equipment is required.

WILDEN PUMP DESIGNATION SYSTEM

**A100 ADVANCED™
PLASTIC**

13 mm (1/2") Pump
Maximum Flow Rate:
42.4 lpm (11.2 gpm)

LEGEND



MATERIAL CODES

AIR SYSTEM BASE TYPE

P = PRO-FLO®
B = ADAPTER BLOCK

WETTED PARTS & OUTER PISTON

KK = PVDF / PVDF
PP = POLYPROPYLENE / POLYPROPYLENE

CENTER SECTION

PP = POLYPROPYLENE

AIR VALVE

P = POLYPROPYLENE

DIAPHRAGMS

BNS = BUNA-N (Red Dot)
FSS = SANIFLEX™ [HytreI® (Cream)]
PUS = POLYURETHANE (Clear)
THU = PTFE W/HIGH-TEMP BUNA-N BACK-UP (White)
TNU = PTFE W/NEOPRENE BACK-UP (White)
TNL = PTFE W/NEOPRENE BACK-UP O-RING, IPD (White)
VTS = VITON® (White Dot)
WFS = WIL-FLEX™ [Santoprene® (Orange Dot)]

VALVE BALL

BN = BUNA-N (Red Dot)
FS = SANIFLEX™ [HytreI® (Cream)]
PU = POLYURETHANE (Brown)
TF = PTFE (White)
VT = VITON® (White Dot)
WF = WIL-FLEX™ [Santoprene® (Orange Dot)]

VALVE SEAT

K = PVDF
P = POLYPROPYLENE

VALVE SEAT O-RING

BN = BUNA-N
FS = SANIFLEX™ [HytreI® (Cream)]
PU = POLYURETHANE (Brown)
TV = PTFE ENCAP. VITON®
WF = WIL-FLEX™ (Santoprene®)

SPECIALTY CODES

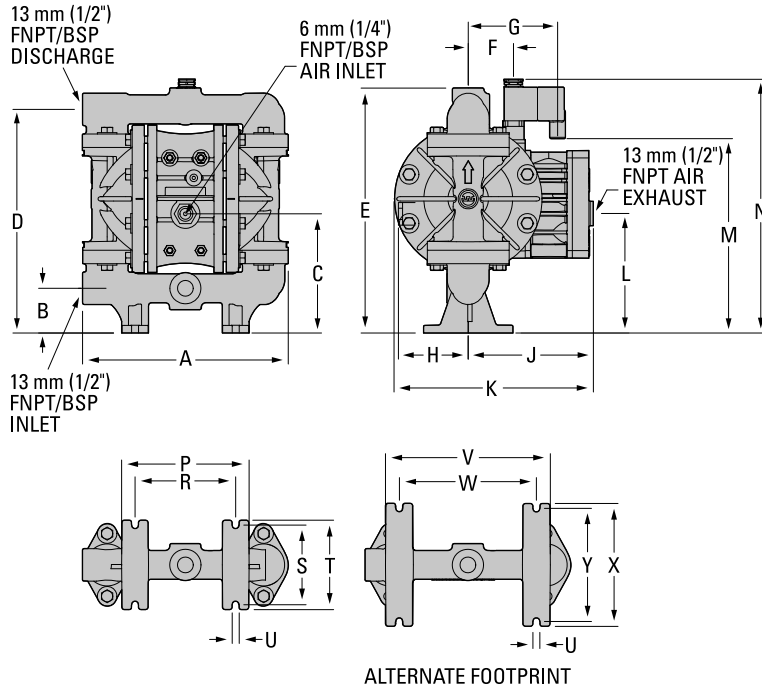
- 0150 Accu-Flo™, 24V DC coil
- 0151 Accu-Flo™, 24V AC / 12V DC coil
- 0155 Accu-Flo™, 110V AC coil
- 0160 Accu-Flo™, 24V DC coil, BSPT
- 0512 Adapter block, no muffler, Pro-Flo®, center section
- 0682 P100 with OEM manifold, Accu-Flo™ 24V DC Coil

NOTE: MOST ELASTOMERIC MATERIALS USE COLORED DOTS FOR IDENTIFICATION.

Viton is a registered trademark of DuPont Dow Elastomers.

DIMENSIONAL DRAWINGS

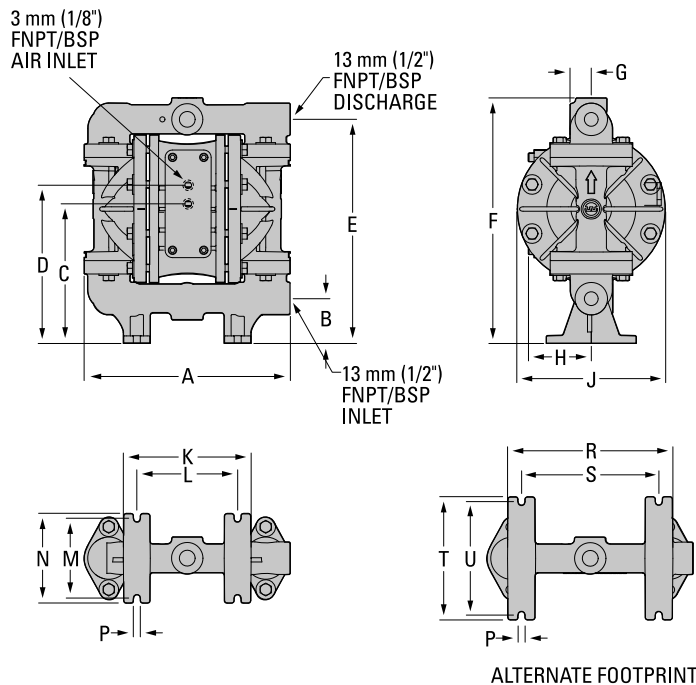
A100 ADVANCED™ PLASTIC



DIMENSIONS

ITEM	METRIC (mm)	STANDARD (inch)
A	234	9.2
B	51	2.0
C	135	5.3
D	254	10.0
E	279	11.0
F	51	2.0
G	102	4.0
H	79	3.1
J	142	5.6
K	226	8.9
L	137	5.4
M	224	8.8
N	277	10.9
P	145	5.7
R	114	4.5
S	91	3.6
T	102	4.0
U	8	0.3
V	188	7.4
W	155	6.1
X	140	5.5
Y	130	5.1

A100B ADVANCED™ PLASTIC



DIMENSIONS

ITEM	METRIC (mm)	STANDARD (inch)
A	234	9.2
B	51	2.0
C	157	6.2
D	180	7.1
E	254	10.0
F	279	11.0
G	25	1.0
H	66	2.6
J	168	6.6
K	145	5.7
L	114	4.5
M	91	3.6
N	102	4.0
P	8	0.3
R	188	7.4
S	155	6.1
T	140	5.5
U	130	5.1

PERFORMANCE

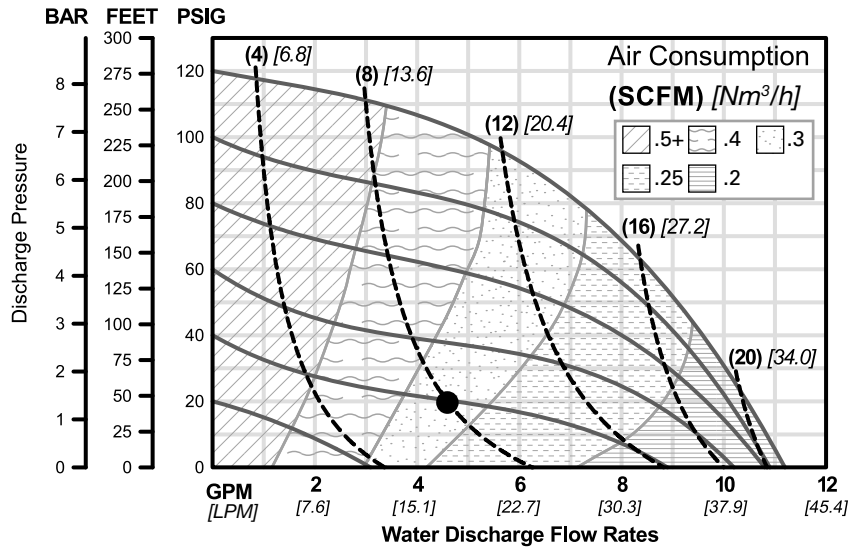
A100 PLASTIC RUBBER-FITTED

Height..... 277 mm (10.9")
 Width..... 234 mm (9.2")
 Depth 226 mm (8.9")
 Est. Ship Weight..... Polypropylene 4 kg (8 lbs)
 PVDF 5 kg (10 lbs)
 Air Inlet..... 6 mm (1/4")
 Inlet..... 13 mm (1/2")
 Outlet 13 mm (1/2")
 Suction Lift Dry 6.6 m (21.5')
 Wet 9.0 m (29.5')
 Displacement / Stroke 0.11 l (0.03 gal)
 Max. Flow Rate..... 42.4 lpm (11.2 gal)
 Max. Size Solids 1.6 mm (1/16")

Displacement per stroke was calculated at 4.8 bar (70 psig) air inlet pressure against a 2.0 bar (30 psig) head pressure.

Example: To pump 17.4 lpm (4.6 gpm) against a discharge head pressure of 1.4 bar (20 psig) requires 2.8 bar (40 psig) and 13.6 Nm³/hr (8 scfm) air consumption. (See dot on chart.)

Caution: Do not exceed 8.6 bar (125 psig) air supply pressure.



Flow rates indicated on chart were determined by pumping water.

For optimum life and performance, pumps should be specified so that daily operation parameters will fall in the center of the pump performance curve.

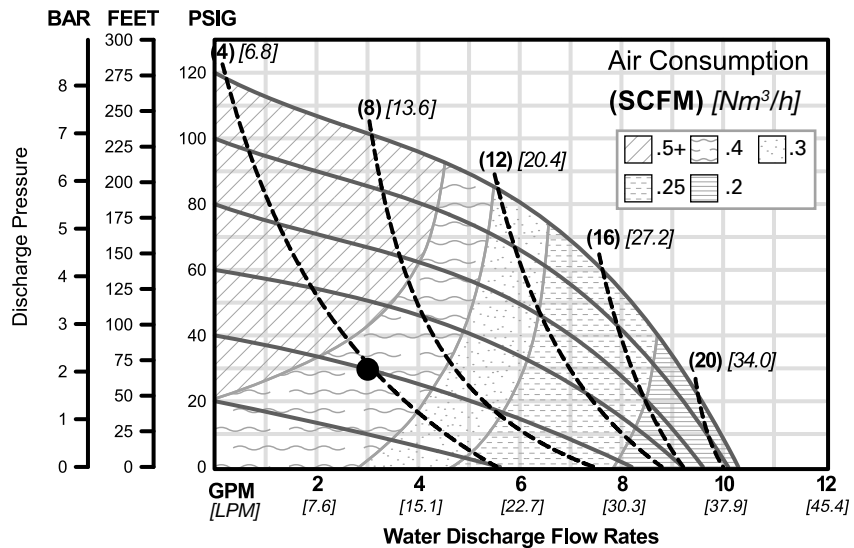
A100 PLASTIC PTFE-FITTED

Height..... 277 mm (10.9")
 Width..... 234 mm (9.2")
 Depth 226 mm (8.9")
 Est. Ship Weight..... Polypropylene 4 kg (8 lbs)
 PVDF 5 kg (10 lbs)
 Air Inlet..... 6 mm (1/4")
 Inlet..... 13 mm (1/2")
 Outlet 13 mm (1/2")
 Suction Lift Dry 5.7 m (18.7')
 Wet 9.3 m (30.6')
 Displacement / Stroke 0.11 l (0.03 gal)
 Max. Flow Rate..... 38.2 lpm (10.1 gal)
 Max. Size Solids 1.6 mm (1/16")

Displacement per stroke was calculated at 4.8 bar (70 psig) air inlet pressure against a 2.0 bar (30 psig) head pressure.

Example: To pump 11.4 lpm (3.0 gpm) against a discharge head pressure of 2.1 bar (30 psig) requires 2.8 bar (40 psig) and 6.8 Nm³/hr (4 scfm) air consumption. (See dot on chart.)

Caution: Do not exceed 8.6 bar (125 psig) air supply pressure.

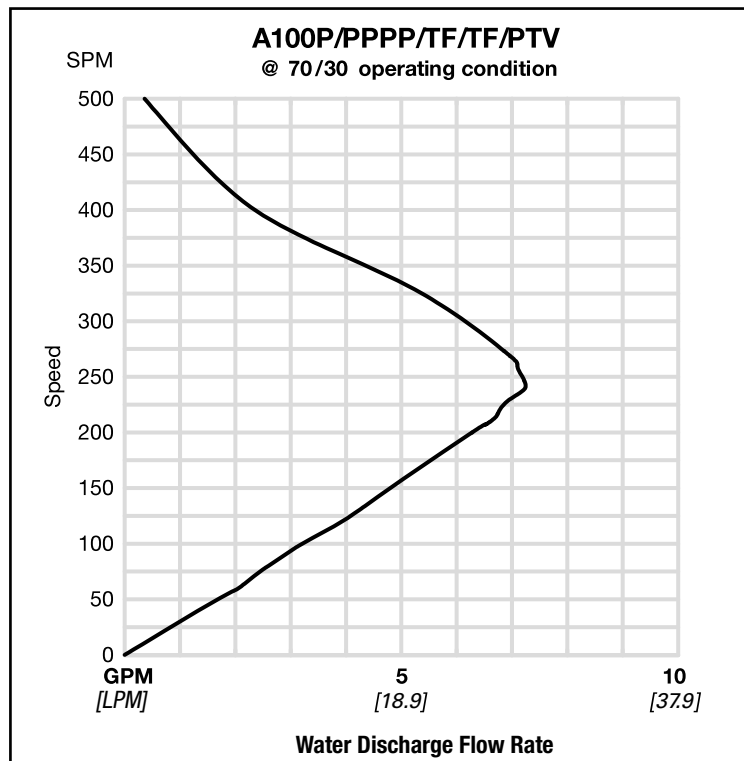
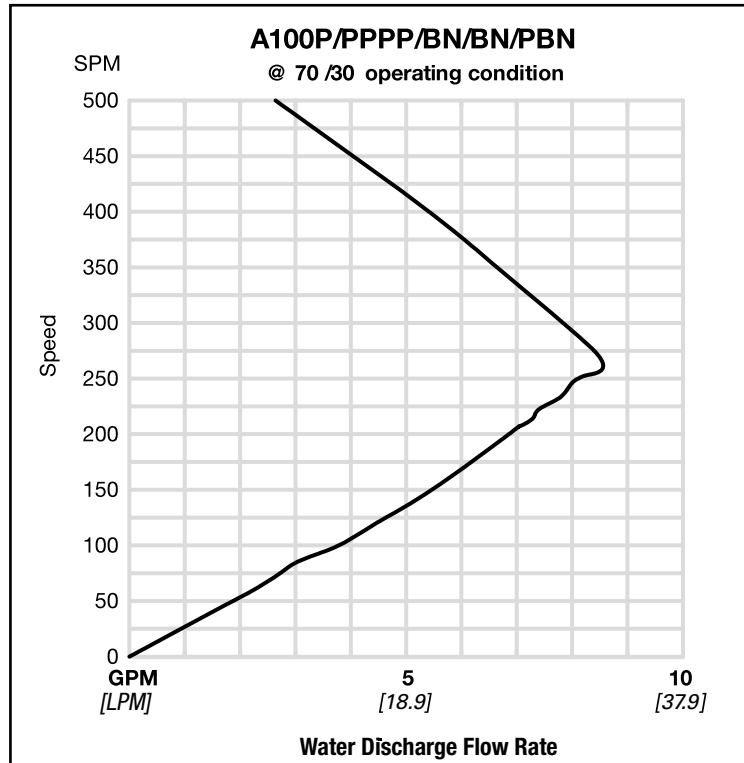


Flow rates indicated on chart were determined by pumping water.

For optimum life and performance, pumps should be specified so that daily operation parameters will fall in the center of the pump performance curve.

These curves demonstrate the flow created when the stroke rate is modified under static air and fluid pressure condition. This curve can be applied to different pressure conditions to estimate the change in flow due to stroke rate.

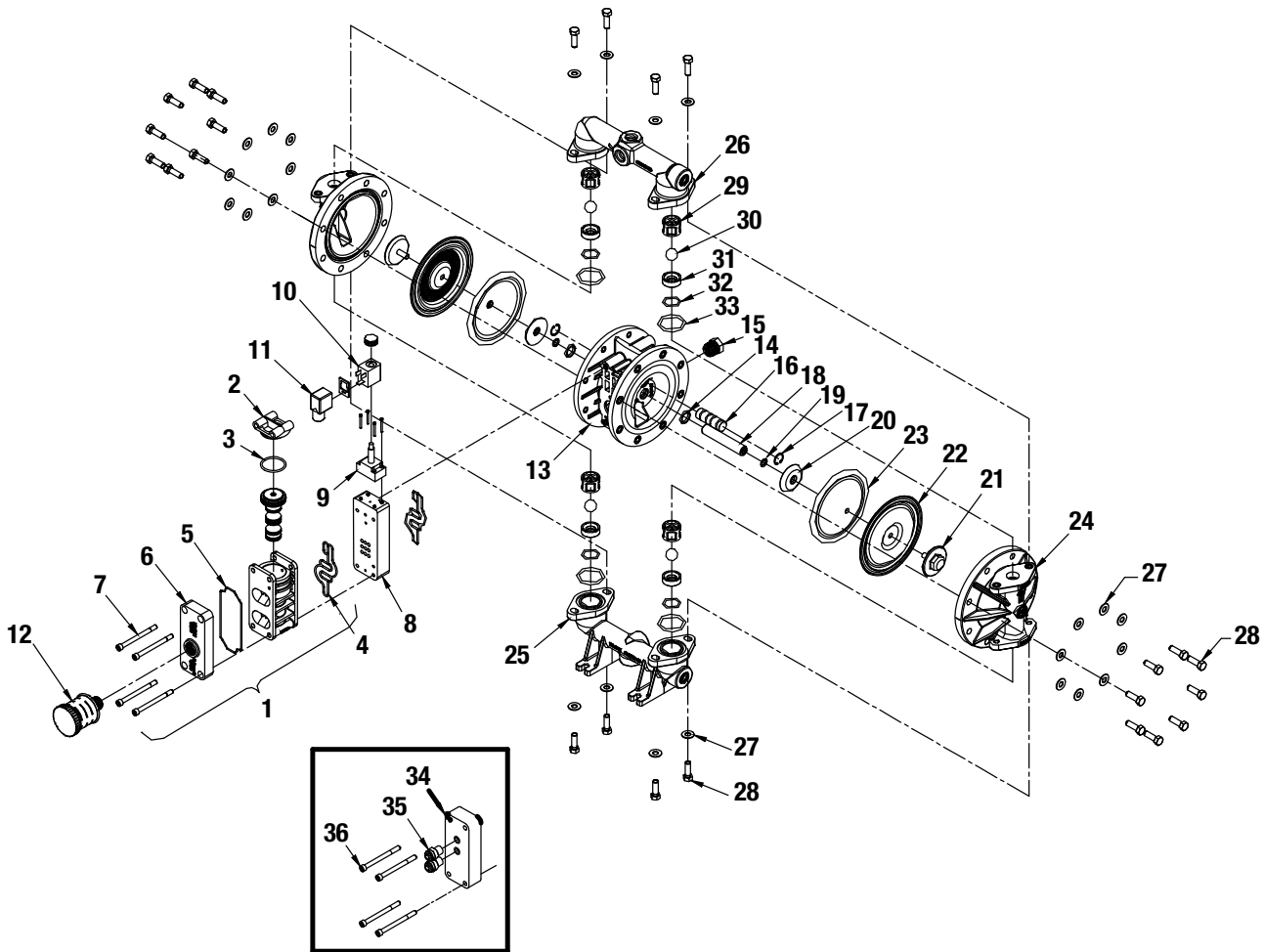
A100 PLASTIC



EXPLODED VIEW & PARTS LISTING

A100 ADVANCED PLASTIC

EXPLODED VIEW



ADAPTER BLOCK VERSION

EXPLODED VIEW & PARTS LISTING

A100P & A100B ADVANCED PLASTIC PTFE-FITTED PARTS LISTING

Item	Description	Qty.	A100P/PKPPP/0151 P/N	A100P/KKPPP/0151 P/N
1	Air Valve Assembly ¹	1	01-2010-20	01-2010-20
2	End Cap	1	01-2332-20	01-2332-20
3	O-ring, (.103 x 1.362)	1	01-2395-52	01-2395-52
4	Gasket, Air Valve	2	01-2615-52	01-2615-52
5	Gasket, Muffler Plate	1	01-3505-52	01-3505-52
6	Muffler Plate	1	01-3181-20	01-3181-20
7	Air Valve Screws, SHC, 1/4-20 x 4.5	4	01-6000-03	01-6000-03
8	Solenoid Spacer Plate	1	01-2160-20	01-2160-20
9	Operator, Solenoid, Nema 4	1	00-2120-99	00-2120-99
10	Coil	1	00-2110-99-151	00-2110-99-151
11	Terminal Connector	1	00-2130-99	00-2130-99
12	Muffler, 1/2"	1	02-3510-99	02-3510-99
13	Center Section	1	01-3141-20	01-3141-20
14	Glyd-Ring II, (.618 x .136)	2	01-3220-55	01-3220-55
15	Reducer Bushing	1	01-6950-20	01-6950-20
16	Pilot Plug Assy	1	01-2285-99	01-2285-99
17	Retaining Ring	2	00-2650-03	00-2650-03
18	Shaft	1	01-3810-03	01-3810-03
19	Disc Spring (.331 x .512)	2	01-6802-08	01-6802-08
20	Piston, Inner, (Combo)	2	01-3711-08	01-3711-08
21	Piston, Outer, (Combo)	2	01-4570-21-500	01-4570-21-500
22	Diaphragm, Primary, PTFE	2	01-1010-55	01-1010-55
23	Diaphragm, Back-Up, Neoprene	2	01-1060-51	01-1060-51
24	Liquid Chamber	2	01-5005-20	01-5005-21
25	Inlet Manifold	1	01-5095-20	01-5095-21
26	Discharge Manifold	1	01-5035-20	01-5035-21
27	Washer (.343 x .750 x .05)	24	01-6732-03	01-6732-03
28	Screw, HHC, 5/16-18 x 1.13	24	01-6191-03	01-6191-03
29	Ball Cage	4	01-5355-20	01-5355-21
30	Valve Ball	4	01-1080-55	01-1080-55
31	Valve Seat	4	01-1125-20	01-1125-21
32	Valve Seat O-ring (.924 x .103)	4	01-1205-60	01-1205-60
33	Manifold O-ring (1.484 x .139)	4	05-1370-60	05-1370-60
34	Adapter Block	1	01-2155-20	01-2155-20
35	Adapter Block Air Fittings	2	00-2170-20	00-2170-20
36	Air Valve Screws, SHC, 1/4-20 x 2	4	04-6000-03	04-6000-03
	Alternate OEM Manifold (not shown)	1	01-5097-20	01-5097-21
	Drum Pump Manifold (not shown)	1	01-5094-20	01-5094-21
	Pipe Plug (not shown)	1	01-7101-20	01-7101-21

¹Air Valve Assembly includes items 2 & 3

All Boldface items are primary wear parts

ELASTOMER OPTIONS

A100P & A100B ADVANCED PLASTIC PUMPS

MATERIAL	Diaphragm P/N	VALVE BALL P/N	VALVE SEAT P/N	VALVE SEAT O-RING P/N	MANIFOLD O-RING P/N
Polyurethane	01-1010-50	01-1080-50	N/A	01-1200-50	02-1230-50
Buna-N	01-1010-52	01-1080-52	N/A	00-1260-52	02-1230-52
Viton	01-1010-53	01-1080-53	N/A	N/A	N/A
Wil-Flex™	01-1010-58	01-1080-58	N/A	00-1260-58	01-1370-58
Saniflex™	01-1010-56	01-1080-56	N/A	01-1200-56	01-1370-56
PTFE	01-1010-55	01-1080-55	N/A	N/A	N/A
PTFE with Integral Piston	01-1030-55	N/A	N/A	N/A	N/A
Encapsulated/Viton	N/A	N/A	N/A	01-1205-60	05-1370-60
PVDF	N/A	N/A	01-1125-21	N/A	N/A
Polypropylene	N/A	N/A	01-1125-20	N/A	N/A

COIL OPTIONS

Specialty Code	Part Number	Description
150	01-2110-99-150	24V DC
154	01-2110-99-154	24V DC, NEMA 7
157	01-2110-99-157	24V DC, International
151	01-2110-99-151	24V AC/12V DC
153	01-2110-99-153	24V AC/12V DC, NEMA 7
155	01-2110-99-155	110V AC
156	01-2110-99-156	110V AC, NEMA 7

ADAPTER BLOCK OPTIONS

Part Number	Description
01-2155-13	Acetal
01-2155-20	Polypropylene

OPERATOR OPTIONS

Part Number	Description
00-2120-99	Nema 4
00-2121-99	Nema 7

WARRANTY

Each and every product manufactured by Wilden Pump and Engineering, LLC is built to meet the highest standards of quality. Every pump is functionally tested to insure integrity of operation.

Wilden Pump and Engineering, LLC warrants that pumps, accessories and parts manufactured or supplied by it to be free from defects in material and workmanship for a period of five (5) years from date of installation or six (6) years from date of manufacture, whichever comes first. Failure due to normal wear, misapplication, or abuse is, of course, excluded from this warranty.

Since the use of Wilden pumps and parts is beyond our control, we cannot guarantee the suitability of any pump or part for a particular application and Wilden Pump and Engineering, LLC shall not be liable for any consequential damage or expense arising from the use or misuse of its products on any application. Responsibility is limited solely to replacement or repair of defective Wilden pumps and parts.

All decisions as to the cause of failure are the sole determination of Wilden Pump and Engineering, LLC.

Prior approval must be obtained from Wilden for return of any items for warranty consideration and must be accompanied by the appropriate MSDS for the product(s) involved. A Return Goods Tag, obtained from an authorized Wilden distributor, must be included with the items which must be shipped freight prepaid.

The foregoing warranty is exclusive and in lieu of all other warranties expressed or implied (whether written or oral) including all implied warranties of merchantability and fitness for any particular purpose. No distributor or other person is authorized to assume any liability or obligation for Wilden Pump and Engineering, LLC other than expressly provided herein.

PLEASE PRINT OR TYPE AND FAX TO WILDEN

PUMP INFORMATION

Item # _____

Serial # _____

Company Where Purchased _____

YOUR INFORMATION

Company Name _____

Industry _____

Name _____

Title _____

Street Address _____

City _____

State _____

Postal Code _____

Country _____

Telephone _____

Fax _____

E-mail _____

Web Address _____

Number of pumps in facility? _____ Number of Wilden pumps? _____

Types of pumps in facility (check all that apply): Diaphragm Centrifugal Gear Submersible Lobe

Other _____

Media being pumped? _____

How did you hear of Wilden Pump? Trade Journal Trade Show Internet/E-mail Distributor

Other _____

ONCE COMPLETE, FAX TO (909) 783-3440

NOTE: WARRANTY VOID IF PAGE IS NOT FAXED TO WILDEN

WILDEN PUMP & ENGINEERING, LLC