

WIDDER® TOOLS



HPICAL-15000 Calibration Station

1. TEST SET-UP

- a. Be sure air and water supply lines are installed per basic set-up & installation instructions supplied with calibration station.
- b. Be sure air pressure regulator is backed all the way off, (Counter-clockwise) and air & water valves are turned to “**OFF**”
- c. Open Calibration Station bleed valve at **LEAST** 1-2 turns from closed.
- d. Turn on Calibration Station digital gauge.
- e. Zero the Calibration Station gauge.
- f. Start Data Logging according to the DATA LOGGING Instructions (pg. 21 in gage manual).
 - a. Be sure all data on the gage is saved on a computer and deleted from the gage before starting another logging session.
 - b. Optimal interval is 3-5 seconds for a standard gage calibration.
 - c. The % sign on the gage should be flashing to indicate the data logging is active.
- g. Close bleed valve firmly. (Clockwise)
- h. Attach system or gauge that is to be tested or calibrated to the Calibration Station using one of the following options:

I. MAIN TEST PORT

- a. Remove cap from main test pressure port on the right side of the Calibration Station.
- b. Be sure plug for auxiliary test port is installed and tightened fully.
- c. Attach test hose to the test port.
- d. Attach appropriate adapter to system to be tested/calibrated. **NOTE:** Hose end is 9/16” ‘M’ fitting. One adapter to ½” NPT is supplied, others are available if required.

- e. Be sure output and bleed valve on system to be tested are closed or plugged tightly.
- f. Turn Calibration Station water valve to “ON”
- g. Crack bleed valve on system to be tested, removing as much trapped air as possible; then close tightly.
- h. Crack bleed valve on Calibration Station slightly, to remove any residual trapped air, then close tightly.

II. AUXILLARY TEST PORT

- a. Remove plug from auxiliary test port.
- b. Remove hose from the main test port & install cap. Tighten firmly.
- c. Attach appropriate test adapter to auxiliary test port and tighten firmly.
NOTE: Calibration Station is supplied with adapters for ¼” NPT & 1/8” NPT. Others are available if necessary.
- d. Install gauge to be tested/calibrated & tighten fully. **NOTE:** for NPT fittings on gauges and adapters, use Teflon tape.
- e. Be sure bleed valve is closed tightly.
- f. Turn calibration station’s water valve to “ON”
- g. Crack bleed valve on calibration station slightly to remove any trapped air.
- h. Close bleed valve tightly.

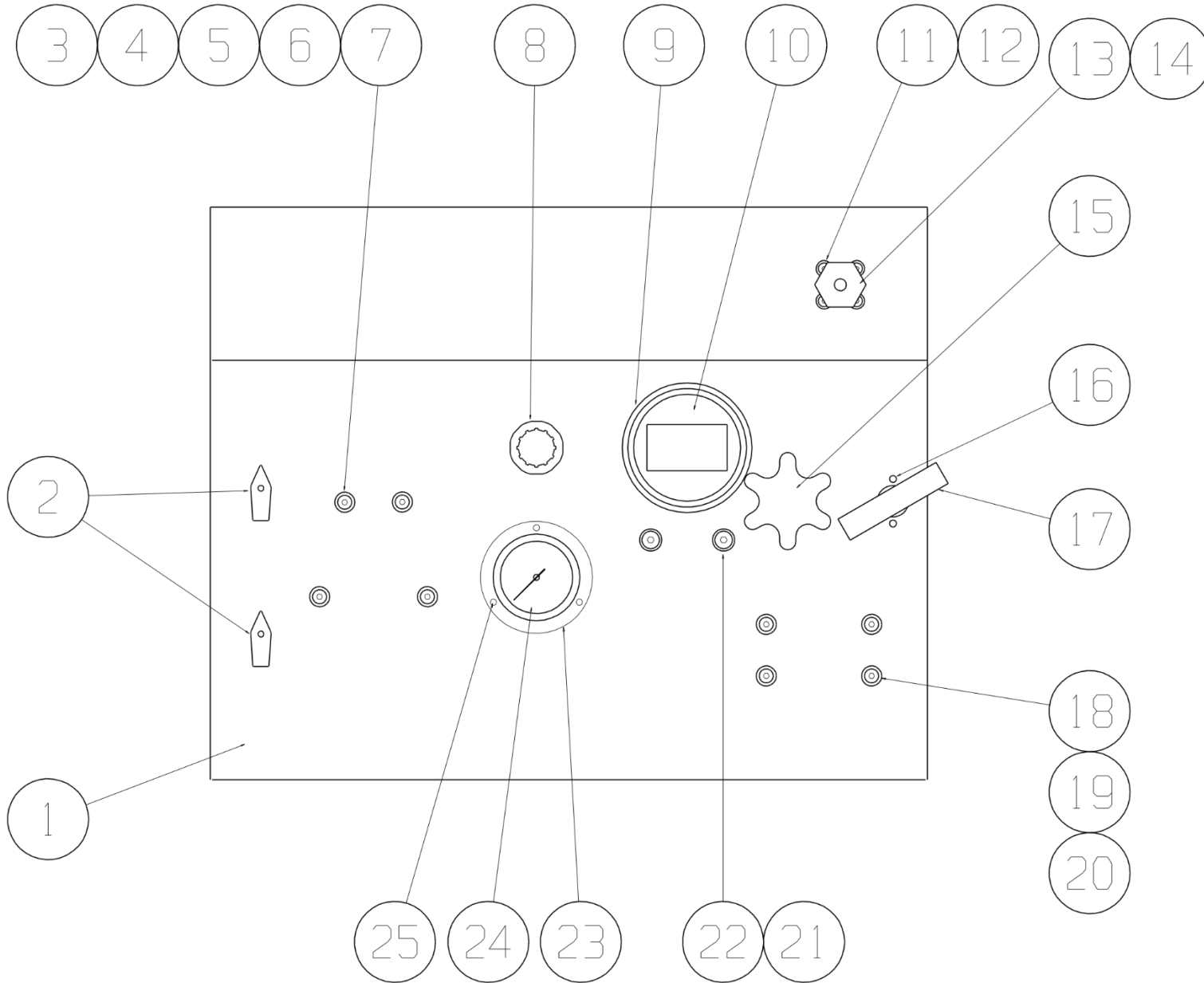
2. OPERATION - STANDARD CALIBRATION OR PRESSURE TEST

- a. Turn the Calibration Station water valve to “OFF”, and be sure air pressure regulator is backed **ALL THE WAY OFF**. (Counter-clockwise)
- b. Back off pressure adjust valve all the way. (Counter-clockwise)
- c. Open Calibration Station bleed valve 1-2 turns from closed to relieve all pressure on system.
- d. Calibration Station digital gauge should read “0”. If not, re-zero the Calibration Station digital gauge.
- e. **At this point (zero system pressure) you can set “0” point on gauge to be calibrated, according to specific gauge calibration instructions.**
- f. Close bleed valve.
- g. Turn Calibration Station water valve to “ON”.
- h. Crack bleed valve on Calibration Station slightly, to remove any residual trapped air, then close tightly.
- i. Turn Calibration Station air valve to “ON”.
- j. Slowly increase air pressure by turning air pressure regulator knob clockwise. Pump will begin building test pressure, noted on the digital gauge.
- k. Slowly increase test pressure until you are **approximately 500 psi below** desired test pressure.
- l. Back off the air pressure regulator all the way. (Counter-Clockwise)
NOTE: This isolates the pump from the test system, and typically results in a slight test pressure drop as the check valves seat themselves.
- m. Use the pressure adjust valve to set test pressure to the desired point. (Move clockwise to increase pressure, counter-clockwise to decrease pressure.) This adjustment valve provides **very** fine control – **adjust slowly!**
- n. Calibrate gauge **according to specific instructions for the gauge being calibrated**, using the Calibration Station to build and release pressure as required. Use pressure adjust valve for fine control. Use bleed valve (cracked open slightly, then closed firmly) and air pressure regulator (turned CW to build pressure, then backed off) for gross adjustments.
- o. When gauge calibration procedure is complete, turn calibration station air and water valves to “OFF” and use bleed valve to release system pressure before disconnecting any fittings.
- p. Stop Data Logging on the Calibration Station gage and output the data to a computer according to the DATA LOGGING Instructions (pg. 21 in gage manual).

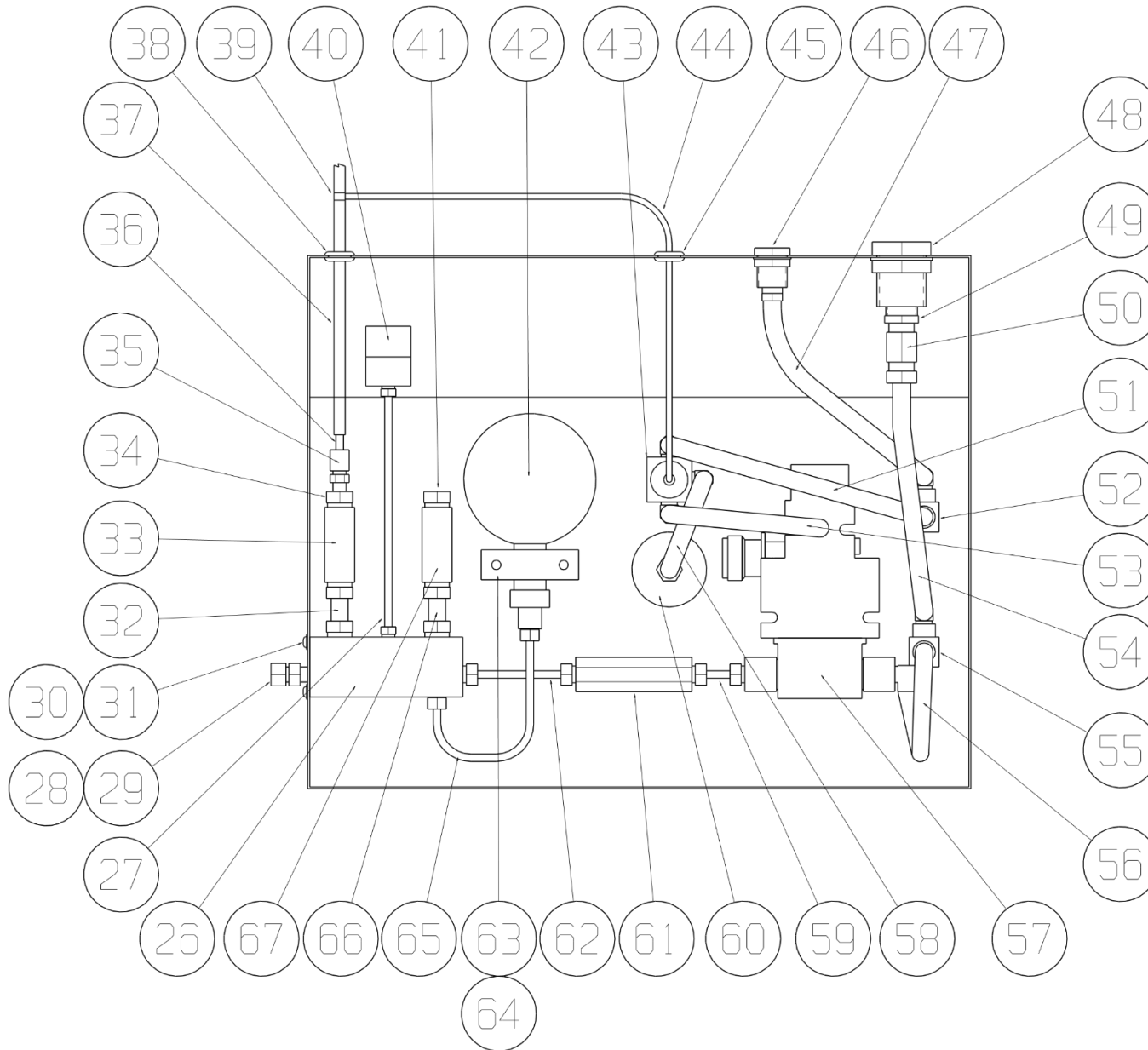
3. **OPERATION – CONTINUOUS LEAK TEST**

- a. Ensure that Calibration Station water valve is “**ON**”, and air pressure regulator is backed ALL THE WAY off. (Counter-clockwise)
- b. Back off pressure adjust valve all the way. (Counter-clockwise)
- c. Turn Calibration Station air valve to “**ON**”.
- d. Slowly increase air pressure by turning air pressure regulator knob clockwise. Pump will begin building test pressure, noted on the digital gauge.
- e. Slowly increase test pressure until desired level is reached.
- f. At this point the Calibration Station will maintain set pressure so physical leak test can be performed. If system leak is causing drop in pressure, Calibration Station will cycle on as required to try and maintain set pressure.
- g. When leak test is complete, back off the air pressure regulator all the way (Counter-Clockwise). Turn Calibration Station air and water valves to “**OFF**”. Then use bleed valve to release the system pressure.

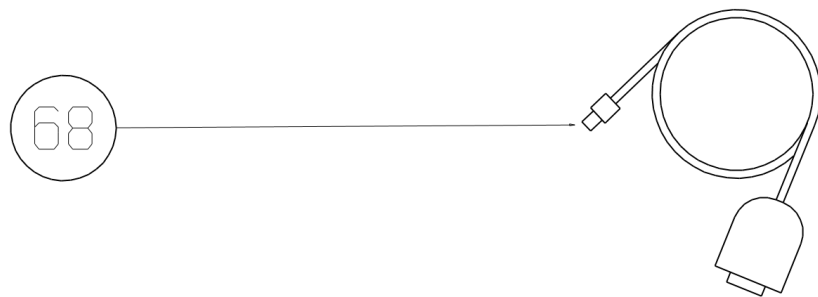
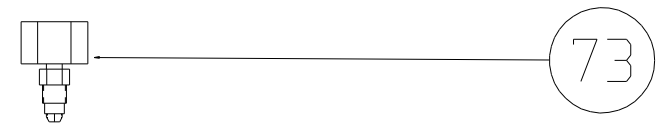
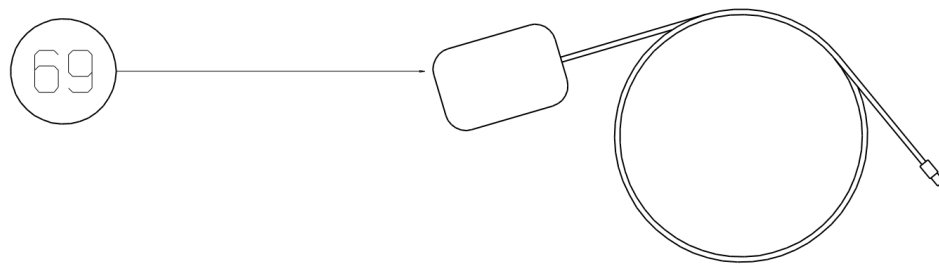
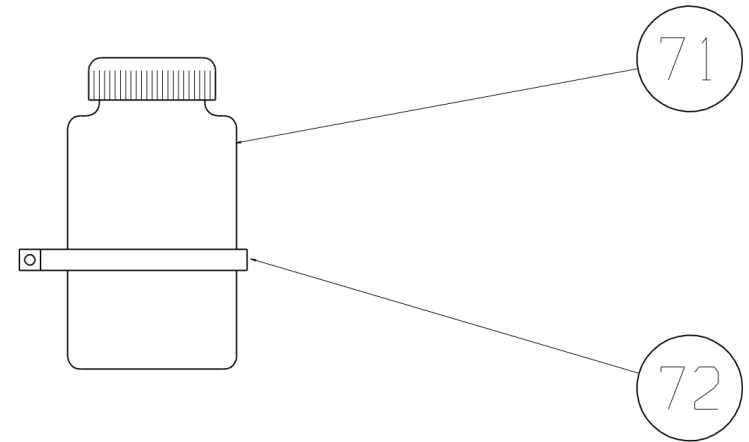
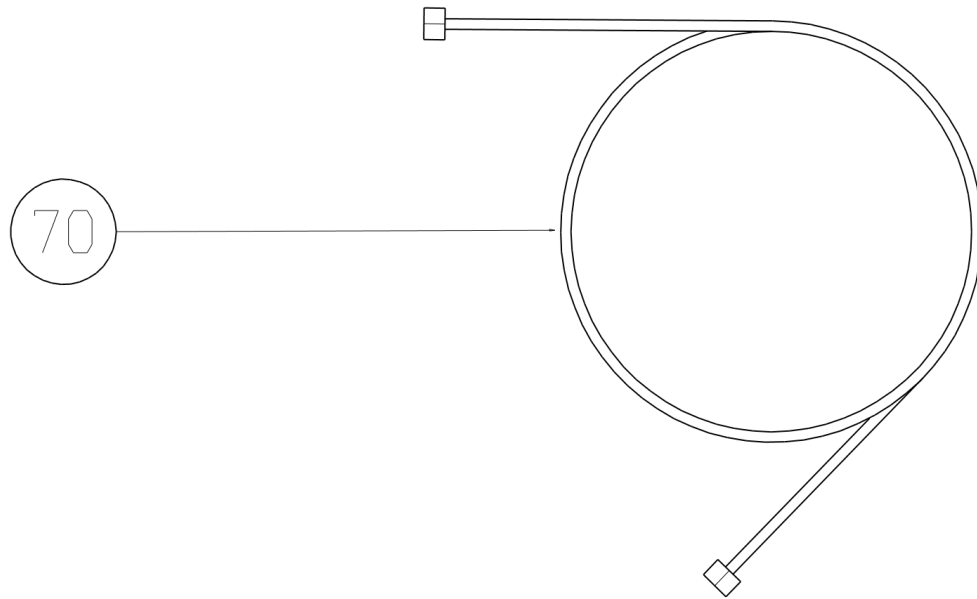
WIDDER® HPICAL-15000 Calibration Station Top View



WIDDER® HPICAL-15000 Calibration Station Inside View



WIDDER® HPICAL-15000 Calibration Station Accessories



Item	Description	Part #
Top View		
1	Cabinet	PC-1001
2	On/Off Valves	PC-1006
3	Pump Mounting Screw	PC-1040
4	Washer (Outer)	PC-1043
5	Pump Standoff	PC-1045
6	Washer (Inner)	PC1043
7	Locknut	PI7000-27
8	Air Filter/Regulator	PC-1009
9	Gage Trim	PI7000-214P1
10	Digital Logger Gage, 15K	PC-1003
11	Aux. Port Block Mounting Screw	PC-1042
12	Washer	PC-1044
13	Auxiliary Plug	PC-1031
14	Gland Nut	PC-1020-3
15	Pressure Adjust Valve	PC-1017PA
16	Valve Mounting Screw	PC-1042
17	Bleed Valve	PC-1017BV
18	Manifold Mounting Screw	PC-1041
19	Washer	PC-1043
20	Manifold Standoff	PC-1046
21	Cap Screw	PI7000-212
22	Washer	PI7000-213
23	2 ½" Flange	PI7000-11A
24	2 ½" -160 psi Gage	PI7000-11
25	Flange Screw, 2 ½" Gage	PI7000-20

Item	Description	Part #
Inside View		
26	Manifold	PC-1004
27	Tube, Manifold to Aux. Block	PC-1016A
28	Test Port Adapter, 9/16" M	PC-1029
29	Adapter Cap	PC-1032
30	Manifold Mounting Screw	PC-1042
31	Washer	PC-1044
32	Tube, Manifold to Bleed Valve	PC-1014A
33	Bleed Valve	PC-1017BV
34	Adapter	PC-1026
35	Flareless Adapter	PI7000-78
36	Bleed Tube (St. Steel)	PI7000-82
37	Bleed Tube (Plastic)	PC-1048
38	Bleed Tube Grommet	PC-1047
39	Tee	PC-1050
40	Aux. Port Block	PC-1011
41	Plug Assy.	PC-1021A
42	Digital Logger Gage	PC-1003
43	Air Filter/Regulator	PC-1009
44	Tube, Filter Drain	PC-1049
45	Filter Drain Tube Grommet	PC-1047S
46	Air Inlet Bulkhead	PC-1008
47	Hose, Air Inlet to Valve	PC-1051A
48	Water Inlet Bulkhead	PC-1007
49	Reducer Bushing	PC-1033
50	Inline Strainer	PC-1039
51	Hose, Air Valve to Regulator	PC-1052A
52	Air On/Off Valve	PC-1006
53	Hose, Air Regulator to Pump	PC-1055A

Item	Description	Part #
54	Hose, Water Inlet to Valve	PC-1053A
55	Water On/Off Valve	PC-1006
56	Hose, Water Valve to Pump	PC-1054A
57	Pump	PC-1002
58	Hose, Air Regulator to Gage	PC-1056A
59	Tube, Pump to Check Valve	PC-1013A
60	2 ½” -160 psi Gage	PI7000-11
61	Check Valve	PC-1010
62	Tube, Check Valve to Manifold	PC-1015A
63	Digital Gage Bracket, Upper	PI7000-210
64	Digital Gage Bracket, Lower	PI7000-211
65	Tube, Manifold to Gage	PC-1012A
66	Tube, Manifold to Pressure Adj.	PC-1014A
67	Pressure Adjust Valve	PC-1017PA
Accessories		
68	Gage Data Cable	PC-1003-DC
69	Gage Power Cable	PC-1003-PA
70	Test Hose	PC-1019
71	Drain Bottle	PC-1057
72	Clamp, Drain Bottle	PC-1058
73	¼” NPT Adapter	PC-1020-1/4NPT
74	“C” Cabinet Adapter	PC-1030