



Type 1227 High Flow Gas Pressure Regulator

The Type 1227 High Flow Gas Pressure Regulator is used with natural gas, compressed air, and other gases. Depending on the configured model, the maximum possible inlet pressure is 2000 psi (138 bar) and the temperature limits are -40°F to 180°F (-40°C to 82°C). Please refer to the Type 1227 Product Specifications section to determine your model's exact specifications. The application of your regulator should not exceed any of the specified ratings.

WARNING

The ControlAir Type 1227 Pressure Regulator does not include internal relief. A pressure relieving or pressure limiting device should be used to ensure that the outlet pressure does not exceed the regulator's specifications while in service. Leakage, equipment damage, or personal injury can result from over-pressuring the regulator.

NOTE: *If you suspect that a product is defective, contact the factory or the ControlAir Representative in your area for a return material authorization number (RMA). This product should only be installed by trained and competent personnel.*

WARNING

All ControlAir instructions, as well as applicable local, state, and federal codes and regulations should be adhered to when performing installation, operation, or maintenance of a regulator. Personal injury, equipment damage, or leakage can occur if the regulator is over-pressured or physically damaged. To avoid physical damage the regulator should be installed in a safe location. The regulator should not be installed in systems that could exceed its specified pressure limits (as listed in Table 1). If leakage develops, then immediate service is required. Failure to remove the regulator from service immediately may create a hazardous situation.



Table of Contents

Section	Description	Page
1.0	Specifications	2
2.0	Installation	4
3.0	Calibration	5
4.0	Maintenance	5
	Rotating the Spring Case	5
	Adjusting the Diaphragm Casing Orientation	5
	Replacing the Range Spring	6
	Replacing the Orifice	6
	Replacing the Valve Disk Assembly	6
	Replacing the Diaphragm	7
	Replacing the Diaphragm Casing, Stem O-Ring, and Stem Backup O-Rings	8
5.0	Parts List	9
6.0	Repair Kits	10
7.0	Dimensions	11
8.0	Troubleshooting	12
9.0	Warranty	12



8 Columbia Drive / Amherst, NH 03031 USA
Website: www.controlair.com
Email: sales@controlair.com
603-886-9400 FAX 603-889-1844
An ISO-9001:2015 Certified Company

1. SPECIFICATIONS

Body Sizes (inches)	1" or 2" NPT	
Output Ranges	5-20 psig (0.4-1.4 bar), 15-40 psig (1.0-2.8 bar), 10-95 psig (0.7-6.4 bar), 35-80 psig (2.4-5.5 bar), 70-150 psig (4.8-10.3 bar)	
Max. Inlet Pressure	See Table 1	
Body Inlet Pressure Rating	LCC Steel: 2,000 psi (138 bar)	
Valve Disk Inlet Pressure Rating	Nitrile (NBR) Disk: 1,000 psi (69 bar) Nylon (PA) Disk: 2,000 psi (138 bar) Fluorocarbon (FKM) Disk: 300 psi (20.7 bar)	
Orifice Sizes	3/32", 1/8", 3/16", 1/4", 3/8", 1/2"	
Maximum Flow Coefficients (Cv)	See Table 2	
Flow Capacities	See Table 3	
Temperature Limits	Elastomer Material Valve/Disk Diaphragm	Body Material
	Nitrile (NBR) & Nylon (PA): -40° to 180° F (-40° C to 82° C) Fluorocarbon (FKM): 0° to 180° F (-18° to 82° C)	LCC Steel: -40° to 180° F (-40° C to 82° C)
Weight	1" NPT Body: 6.5 lbs. (3 kg) 2" NPT Body: 10 lbs. (4.5 kg)	
Operating Media	compressed air, natural gas, other inert gasses	

MATERIALS OF CONSTRUCTION

	Standard (S)	NACE (N)
Body	LCC Steel	LCC Steel
Bonnet, Diaphragm Case	Ductile Iron	LCC Steel
Diaphragm	Nitrile	Fluorocarbon
Valve Disk	Nitrile Nylon (option)	Fluorocarbon
Trim	Aluminum Stainless (option)	Stainless Steel

Table 1 Maximum Inlet Pressure by Output Range, Orifice Size, and Disk Material

Output Range**	Maximum Inlet Pressure							
	Orifice Size		Nitrile (NBR) Disk		Fluorocarbon (FKM) Disk		Nylon (PA) Disk (option)	
	in.	mm	psi	bar	psi	bar	psi	bar
5-20 psi (0.4-1.4 bar)	3/32	2.4	300	20.7	1000	69	2000	138
	1/8	3.2	300	20.7	1000	69	1000	69
	3/16	4.8	300	20.7	750	51.7	750	15.7
	1/4	6.4	300	20.7	500	34.5	500	34.5
	3/8	9.5	300	20.7	300	20.7	300	20.7
	1/2	13	300	20.7	250	17.2	250	17.2
15-40 psi (1.0-2.8 bar)	3/32	2.4	300	20.7	1000	69	2000	138
	1/8	3.2	300	20.7	1000	69	1500	103
	3/16	4.8	300	20.7	1000	69	1000	69
	1/4	6.4	300	20.7	750	51.7	750	51.7
	3/8	9.5	300	20.7	500	34.5	500	34.5
	1/2	13	300	20.7	300	20.7	300	20.7

Table 1 Maximum Inlet Pressure by Output Range, Orifice Size, and Disk Material – continued

35-80 psi (2.4-5.5 bar)	3/32	2.4	300	20.7	1000	69	2000	138
	1/8	3.2	300	20.7	1000	69	2000	138
	3/16	4.8	300	20.7	1000	69	1750	121
10-95 psi (0.7-6.4 bar)	1/4	6.4	300	20.7	1000	69	1500	103
	3/8	9.5	300	20.7	1000	69	1000	69
	1/2	13	300	20.7	750	51.7	750	51.7
70-150 psi (4.8-10.3 bar)	3/32	2.4	300	20.7	1000	69	2000	138
	1/8	3.2	300	20.7	1000	69	2000	138
	3/16	4.8	300	20.7	1000	69	2000	138
	1/4	6.4	300	20.7	1000	69	1750	121
	3/8	9.5	300	20.7	1000	69	1250	86.2
	1/2	13	300	20.7	750	51.7	750	51.7

Table 2 Cv Values

Orifice Size		Cv Value	
in.	mm	1" NPT Body	2" NPT Body
3/32	2.4	0.24	0.23
1/8	3.2	0.43	0.42
3/16	4.8	0.93	1.02
1/4	6.4	1.71	1.66
3/8	9.5	3.42	3.39
1/2	13	5.29	5.01

Table 3 Flow Capacities in SCFH at 20% droop of Natural Gas (0.6 Specific Gravity)

Output Range	Set Point (psi)	Inlet Pressure (psi)	Orifice Size (in.)												
			1" NPT Body Size						2" NPT Body Size						
			3/32	1/8	3/16	1/4	3/8	1/2	3/32	1/8	3/16	1/4	3/8	1/2	
5-20 psi (0.4-1.4 bar)	5	10	170	330	710	1100	1900	2500	170	330	710	1080	1700	2400	
		20	290	500	1160	2060	3400	4450	290	500	1160	1900	2650	3900	
		60	640	1170	2600	4710	8140	13700	640	1170	2600	4750	7250	17800	
		100	990	1800	4070	7310	12500	16000	990	1790	4070	7310	16200	28700	
	10	15	210	375	880	1590	2480	3300	210	375	880	1220	1860	2670	
		30	380	670	1560	2800	4720	6840	380	670	1560	2760	3640	6460	
		75	770	1410	3150	5710	9790	14500	770	1410	3150	5700	8060	22400	
		150	1420	2580	5850	10500	17000	18000	1420	2580	5850	10500	23300	25900	
		300	2700	4910	11200	19800	20000		2700	4910	11200	10300	12800		
		750	5400	12000	18000				6600	12000	27200				
		1250	6300						11000						
		1750	6800						15000						
	2000	7600						6300							
	20	30	350	620	1450	2580	4360	6290	350	62	145	2350	4300	6110	
		60	640	1170	2640	4750	9690	14500	640	1170	2640	4750	8400	15700	
		150	1420	2580	5850	10500	17700	34200	1420	2580	5850	10500	23300	29000	
		300	2700	4910	11200	20100	37000		2700	4910	11200	20100	19600		
		750	6600	12000	23600				6600	12000	27200				
		1250	10000						11000						
		1750	12000						15000						
		2000	14000						6300						
	15-40 psi (1.0-2.8 bar)	40	60	610	1090	2530	4510	9290	9420	610	1090	2530	4370	8680	13300
			100	990	1790	4070	7310	14700	21900	990	1800	4070	7310	16200	25400
			200	1850	3370	7630	13700	27100	46400	1850	3370	7630	13700	30400	53900
500			4400	8090	18300	32900	63900		4400	8090	18300	32900	22000		
1000			8700	16000	36100				8700	16000	36100				
1500			13000	22000					13000	22000					
2000			17000						17000						

Table 3 Flow Capacities in SCFH at 20% droop of Natural Gas (0.6 Specific Gravity) - continued

		Orifice Size (in.)													
35-80 psi (2.4-5.5 bar)	60	100	970	1740	4010	7000	13000	19300	970	1740	4010	7000	15000	20400	
		200	1850	3370	7630	13700	24000	42200	1850	3370	7630	13700	30400	53900	
		500	4400	8090	18300	32900	64000	94300	4400	8090	18300	32900	73000	38800	
		1000	8700	16000	36100	50300	67700		8700	16000	36100	43000	52000		
		1500	13000	22000	54000	63000			13000	22000	54000	43000			
		2000	17000	28000					17000	28000					
35-80 psi (2.4-5.5 bar)	80	150	1410	2580	5850	10500	21100	33600	1410	2580	5850	10500	23300	41300	
		300	2700	4910	11200	20100	43300	75400	2700	4910	11200	20100	44600	79000	
		750	6600	12000	27200	48900	105500	135000	6600	12000	27200	48900	87000	44000	
		1250	11000	19000	45000	80000			11000	19000	45000	63000			
		1750	15000	25000	63000				15000	25000	63000				
70-150 psi (4.8-10.3 bar)	100	50	1170	2510	5540	8710	16000	24000	1170	2510	5540	8600	16000	22000	
		300	2700	4910	11200	19400	30100	53200	2700	4910	11200	20100	35000	65300	
		500	4400	8090	18300	31800	66500	83900	4400	8090	18300	32900	73000	129000	
		1000	8700	16000	36100	59700	100000		8700	16000	36100	64800	82000		
		1500	13000	22000	54000	86000			13000	22000	54000	96000			
		2000	17000	28000	71000				17000	2800	7100				
	70-150 psi (4.8-10.3 bar)	125	200	1830	3320	7550	13400	28100	32800	1830	3320	7550	13700	24000	36000
			500	4400	8090	18300	32900	70800	109000	4400	8090	18300	32900	73000	129000
			1000	8700	16000	36100	64800	138000	160000	8700	16000	36100	64800	58000	
			1500	13000	22000	54000	96000			13000	22000	54000	96000		
			2000	17000	28000	71000				17000	28000	71000			
70-150 psi (4.8-10.3 bar)	150	300	2700	4910	11200	17200	4010	55900	2700	4910	11200	20100	44600	64200	
		750	6600	12000	27200	48900	104000	160000	6600	12000	27200	48900	108000	62000	
		1250	1100	1900	45000	80000	150000		11000	19000	45000	80000	81000		
		1750	15000	25000	63000	112000			15000	25000	63000	112000			

Note: To convert SCFH to Nm³/h, multiply the SCFH flow capacity by 0.02832

2. INSTALLATION

See page 9 for Parts List references.

NOTE: If continued operation is necessary during installation or maintenance then a three-valve bypass should be installed around the position the regulator.

1. Remove all packaging plugs from the regulator body inlet and outlet connections.
2. Carefully inspect the regulator for damage or debris. The regulator’s inlet and outlet connections should be cleaned and free of debris before installation.
3. Ensure that all piping that is to be connected to the regulator is clean of foreign matter as well.
4. Apply pipe joint material to the piping threads that will be connected to the regulator.
5. Shut down the process before connecting the regulator.
6. Connect the regulator so that the process flows in the direction of the arrow on the body (9).

WARNING

Under certain conditions, this regulator may vent gas to the atmosphere. If operating in a hazardous process, this gas must not be allowed to accumulate and/or ignite. The user must be sure to vent the exhaust to a safe location away from any air intakes or possible ignition sources. The vent line must also be protected against clogging and condensation. Failure to safely vent hazardous gas from the regulator exhaust could result in personal injury, death, or property damage if a fire or explosion were to occur.

7. The regulator must be oriented such that the vent assembly (26) is protected against clogging. If the regulator is being installed outside, position the vent facing downward to prohibit moisture and debris from falling directly into the vent. This may require the stem guide (14) and/or diaphragm housing (10) to be repositioned.

NOTE: Refer to Page 5 for assistance with “Rotating the Spring Case” procedure.

NOTE: Refer to Page 6 for assistance with “Adjusting the Diaphragm Casing Orientation”.

WARNING

Use pressure gauges to monitor the outlet pressure of the regulator during startup and vent the downstream pressure if necessary. The presence of downstream pressure during the startup of the regulator may cause the diaphragm of the regulator to be over-pressured. This condition could cause personal injury or property damage if the regulator is over-pressured to the point of explosion.

8. Slowly begin flowing gas through the regulator.
9. Verify that the regulator is not leaking from any connection points.
10. Proceed to the Calibration section.

3. CALIBRATION

CAUTION

While calibrating the unit always use a pressure gauge to monitor the pressure.

CAUTION

Under normal circumstances, the outlet pressure should not exceed the output range of the spring.

1. Remove the adjustment screw cap (27).
2. Loosen the hex nut (32).
3. To increase the set point, rotate the adjustment screw (34) clockwise.
4. To decrease the set point, rotate the adjustment screw (34) counter-clockwise.
5. Once desired set point has been achieved, re-tighten the hex nut (32) while keeping the adjustment screw's (34) position fixed.
6. Reinstall the adjustment screw cap (27) to prevent accidental set point adjustment.

4. MAINTENANCE

Regulators accumulate general wear over time and must be inspected/evaluated for the possible need to repair or replace the instrument in accordance with local, state, and federal rules and regulations. ControlAir offers spare parts and repair kits for customers to order and keep on hand for routine maintenance.

WARNING

To avoid personal injury or equipment damage resulting from sudden release of pressure or ignition of accumulated gas, isolate the regulator from the system and bleed all of its internal pressure before attempting maintenance procedures.

ROTATING THE SPRING CASE

CAUTION

Before proceeding, remove the adjustment screw cap (27), loosen the hex nut (32), and release all spring tension by rotating the adjustment screw (34) counter-clockwise until the range spring (21) is completely relaxed.

1. Remove the eight build bolts (33) and rotate the stem guide (14) into the desired orientation.
2. Insert and hand-tighten the build bolts (33) back into the stem guide (14).
3. Rotate the adjustment screw (34) clockwise putting tension back on the range spring (21) and slack in the diaphragm (23).
4. Complete tightening the build bolts (33).

IMPORTANT

Tighten the eight build bolts (33) in a crisscross pattern.

5. Re-calibrate the regulator to the desired set point per Calibration procedure.

ADJUSTING THE DIAPHRAGM CASING ORIENTATION

CAUTION

Before proceeding, remove the adjustment screw cap (27), loosen the hex nut (32), and add spring tension by rotating the adjustment screw (34) clockwise for 6 complete turns past the point it first contacts the spring guide (20). This separates the disk assembly (31) from the orifice (22) so neither becomes damaged during maintenance.

1. Remove the two body screws (28) that hold the body (9) and diaphragm housing (10) together.
2. With the body (9) and diaphragm housing (10) disconnected, reorient them to the desired position and reconnect.

NOTE: *When reassembling the body (9) and diaphragm housing (10), the pitot tube extending off the booster insert (17) must be inserted into the outlet side of the regulator body (9).*

3. Insert the body screws (28) and tighten.
4. Re-calibrate the regulator to the desired set point per calibration procedure.

REPLACING THE RANGE SPRING

CAUTION

Before proceeding, remove the adjustment screw cap (27), loosen the hex nut (32), and release all spring tension by rotating the adjustment screw (34) counter-clockwise until the range spring (21) is completely relaxed.

1. Remove the eight build bolts (33) and separate the stem guide (14) and diaphragm housing (10) exposing the range spring (21).
2. Remove the original range spring (21) and replace with new desired range.
3. Put the stem guide (14) and diaphragm housing (10) back together. Insert and hand-tighten the build bolts (33) back into the stem guide (14).
4. Rotate the adjustment screw (34) clockwise putting tension back on the spring and slack in the diaphragm (23).
5. Complete tightening the build bolts (33).

IMPORTANT

Tighten the eight build bolts (33) in a crisscross pattern.

6. Re-calibrate the regulator to the desired set point per Calibration procedure.

REPLACING THE ORIFICE

CAUTION

Before proceeding, remove the adjustment screw cap (27), loosen the hex nut (32), and add spring tension by rotating the adjustment screw (34) clockwise for 6 complete turns past the point it first contacts the spring guide (20). This separates the disk assembly (31) from the orifice (22) so neither becomes damaged during maintenance.

1. Remove the two body screws (28) that hold the body (9) and diaphragm housing (10) together.
2. The orifice (22) is threaded into the body (9). Remove the worn orifice.

IMPORTANT

Before installing the replacement orifice (22) into the body (9), apply lubricant to the orifice threads.

3. Attach the replacement orifice (22) to the body (9) and tighten.

NOTE: *When reassembling the body (9) and diaphragm housing (10), the pitot tube extending off the booster insert (17) must be inserted into the outlet side of the regulator body (9).*

4. Ensure the body (9) and diaphragm housing (10) are positioned correctly and then insert the body screws (28) and tighten.
5. Re-calibrate the regulator to the desired set point per Calibration procedure.

REPLACING THE VALVE DISK ASSEMBLY (included in ControlAir Valve Disk Repair Kit)

CAUTION

Before proceeding, remove the adjustment screw cap (27), loosen the Hex nut (32), and add spring tension by rotating the adjustment screw (34) clockwise for 6 complete turns past the point it first contacts the spring guide (20). This separates the disk assembly (31) from the orifice (22) so neither becomes damaged during maintenance.

1. Remove the two body screws (28) that hold the body (9) and diaphragm housing (10) together.
2. The disk assembly (31) is attached to the stem (15) with a retainer clip (29). Remove the hairpin clip and worn disk assembly.
3. Align the hole in the stem (15) with the hole in the replacement disk assembly (31) and secure using the retainer clip (29).
4. With the body (9) and diaphragm housing (10) disconnected, reorient them to the desired position and reconnect.

NOTE: When reassembling the body (9) and diaphragm housing (10), the pitot tube extending off the booster insert (17) must be inserted into the outlet side of the regulator body (9).

5. Insert the body screws (28) and tighten.
6. Re-calibrate the regulator to the desired set point per Calibration procedure.

REPLACING THE DIAPHRAGM (included in ControlAir Valve Disk Repair Kit)

CAUTION

Before proceeding, remove the adjustment screw cap (27), loosen the Hex nut (32), and release all spring tension by rotating the adjustment screw (34) counter-clockwise until the range spring (21) is completely relaxed.

1. Remove the eight build bolts (33) and separate the stem guide (14) and diaphragm housing (10).
2. Tilt the diaphragm housing (10) so that the pusher post (28) slides off the lever (13) allowing the diaphragm assembly to be removed.

NOTE: The diaphragm assembly consists of the pusher post (28), diaphragm (23), diaphragm head (16), lower spring seat (17), and hex head screw (5).

3. Unscrew the hex head screw (5) from the pusher post (28) and separate them. Remove the worn diaphragm (23).
4. Install the replacement diaphragm (23) onto the hex head screw (5) and thread the hex head screw (5) back into the pusher post (28) until hand-tight.
5. Attach the underside of the pusher post (28) onto the lever (13) by hooking it into place. Rotate the diaphragm (23) until the holes in the diaphragm (23) are aligned with the holes in the stem guide (14).
6. Now that the diaphragm (23) is oriented properly, remove the diaphragm assembly by unhooking the pusher post (28) from the lever (13). Complete tightening the hex head screw (5).
7. As done in step 5, re-hook the pusher post (28) back onto the lever (13) and double-check to ensure the diaphragm (23) and stem guide (14) holes are still aligned.

IMPORTANT

If the diaphragm (23) and stem guide (14) holes have become misaligned, undo the hex head screw (5), turn the diaphragm (23) so the holes match up again, and then re-torque the hex head screw (5) back into the pusher post (28).

8. Install the range spring (21) on top of the lower spring seat (17) and place the spring guide (20) atop the range spring (21).

IMPORTANT

Apply lubricant to the spring guide (20) before assembling with the range spring (21).

9. Place the stem guide (14) back on top of the diaphragm housing (10) and ensure the location of the screen vent (24) is in the desired position.
10. Insert and hand-tighten the build bolts (33) back into the stem guide (14).

11. Rotate the adjustment screw (34) clockwise putting tension back on the range spring (21) and slack in the diaphragm (23).
12. Complete tightening the build bolts (33).

IMPORTANT

Tighten the eight build bolts (33) in a crisscross pattern.

13. Re-calibrate the regulator to the desired set point per Calibration procedure.

REPLACING THE DIAPHRAGM CASING, STEM O-RING, AND STEM BACKUP O-RINGS (included in ControlAir Valve Disk Repair Kit)

CAUTION

Before proceeding, remove the adjustment screw cap (27), loosen the hex nut (32), and add spring tension by rotating the adjustment screw (34) clockwise for 6 complete turns past the point it first contacts the spring guide (20). This separates the disk assembly (31) from the orifice (22) so neither becomes damaged during maintenance.

1. Remove the two body screws (28) that hold the body (9) and diaphragm housing (10) together.
2. The disk assembly (31) is attached to the stem (15) with a retainer clip (29). Remove the retainer clip (29) and disk assembly (31) and set aside for reassembly.

NOTE: Removing the disk assembly (31) allows access to the stem assembly which is connected to the lever (13). The stem assembly consists of the booster insert (17), stabilizer gasket (24), stem guide (14), and stem (15).

3. From the diaphragm housing (10), remove the booster insert (17), stabilizer gasket (24), and stem guide (14) and set aside for reassembly.
4. Disconnect the stem (15) by unhooking it from the end of the lever (13), remove it from the diaphragm housing (10) and set aside for reassembly.
5. Replace the diaphragm casing O-ring (2) which is located on the outside of the booster insert (17).

IMPORTANT

Apply lubricant to the replacement diaphragm casing O-ring (2) before installing it onto the booster insert (17).

6. Replace the stem O-ring, -010 B-N 70D (2) and stem backup rings (5) which are located on the stem (15).

NOTE: The main stem O-ring, -010 B-N 70D (2) is colored black while the stem backup rings (5) are colored white. The main stem O-ring, -010 B-N 70D (2) will be installed between the stem backup rings (5).

IMPORTANT

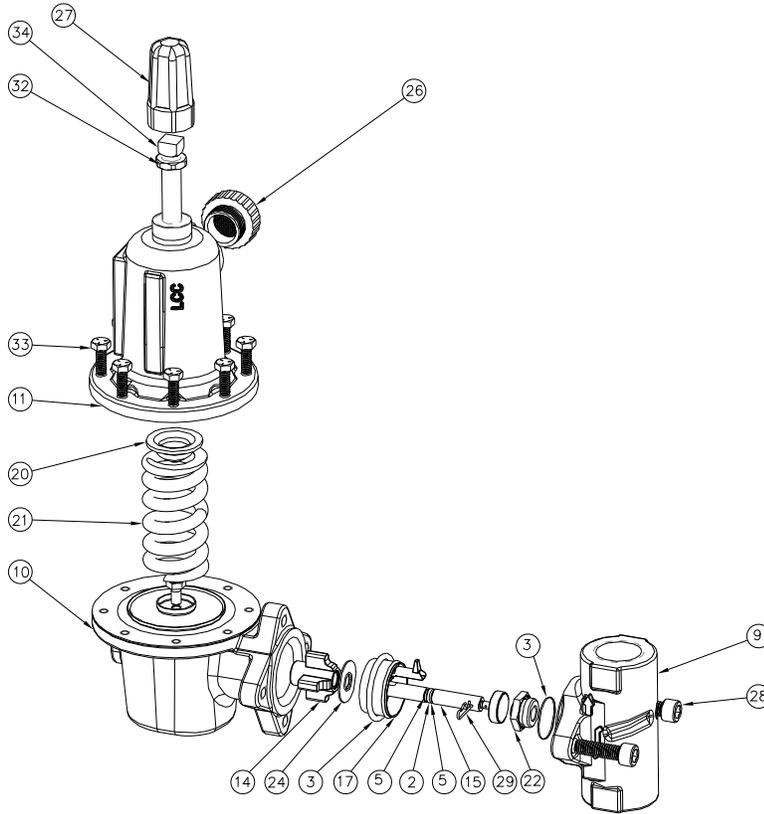
Apply lubricant to the replacement stem O-ring, -010 B-N 70D (2) and stem backup rings (5) before installing them onto the stem (15).

7. Before reinstalling the stem (15), locate the lever (13) at the bottom of the diaphragm housing (10). Lubricate the contact points of the lever (13) as well as the hooking point where the stem (15) and lever (13) connect.
8. Insert the stem (15) back into the diaphragm housing (10) and hook it back onto the lever (13).
9. Slide the stem guide (14) onto the stem (15) and insert the stem (15) back into the diaphragm housing (10).
10. Slide the stabilizer gasket (24) onto the stem (15) followed by the booster insert (17) and push the booster insert (17) forward so that it is seated into the diaphragm housing (10).
11. Insert the end of the disk assembly (31) into the stem (15), align the holes, and secure in place using the retainer clip (29).
12. With the body (9) and diaphragm housing (10) disconnected, reorient them to the desired position and reconnect.

NOTE: When reassembling the body (9) and diaphragm housing (10), the pitot tube extending off the booster insert (17) must be inserted into the outlet side of the regulator body (9).

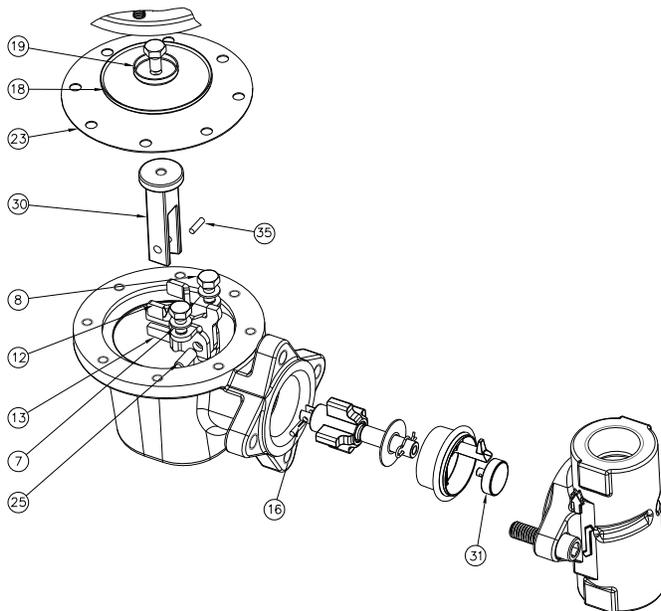
13. Insert the body screws (28) and tighten.
14. Re-calibrate the regulator to the desired set point per Calibration procedure.

5. PARTS LIST



Item	Description	Qty.
2	O-RING, -.010 B-N 70D	1
3*	O-RING, -.222 B-N 75D	1
4	O-RING, -.017 B-N 90D	1
5	BACKUP RING	2
9	BODY	1
10	DIAPHRAGM HOUSING	1
11	SPRING BONNET	1
14	STEM GUIDE	1
15	STEM	1
17	BOOSTER INSERT	1
20	SPRING GUIDE	1
21	RANGE SPRING	1
22	ORIFICE	1
24	STABILIZER GASKET	1
26	VENT ASSEMBLY	1
27	ADJUSTMENT SCREW CAP	1
28	BODY SCREW	2
29*	RETAINER CLIP	1
32	HEX NUT	1
33	BUILD BOLTS	8
34	ADJUSTMENT SCREW	1

*Included with ControlAir Regulator Repair Kit



Item	Description	Qty.
7	LOCK WASHER	2
8	LEVER SCREW	3
12	LEVER RETAINER	1
13	LEVER	1
16	GROOVED PIN	1
18	PISTON	1
19	LOWER SPRING GUIDE	1
23*	DIAPHRAGM	1
25	LEVER PIN	1
30	PUSHER POST	1
31*	DISK ASSEMBLY	1
35	PUSHER POST PIN	1

*Included with ControlAir Regulator Repair Kit

6. REPAIR KITS

ORIFICE REPLACEMENT KITS

Material	O-Ring Material*	Size		Part No.
Aluminum	Nitrile (NBR)	3/32"	2.4 mm	449-871-179
		1/8"	3.2 mm	449-871-180
		3/16"	4.8 mm	449-871-181
		1/4"	6.4 mm	449-871-182
		3/8"	9.5 mm	449-871-183
		1/2"	13 mm	449-871-184
Stainless Steel		3/32"	2.4 mm	449-871-185
		1/8"	3.2 mm	449-871-186
		3/16"	4.8 mm	449-871-187
		1/4"	6.4 mm	449-871-188
		3/8"	9.5 mm	449-871-189
		1/2"	13 mm	449-871-190
Aluminum	Fluorocarbon (FKM)	3/32"	2.4 mm	449-871-191
		1/8"	3.2 mm	449-871-192
		3/16"	4.8 mm	449-871-193
		1/4"	6.4 mm	449-871-194
		3/8"	9.5 mm	449-871-195
		1/2"	13 mm	449-871-196
Stainless Steel		3/32"	2.4 mm	449-871-197
		1/8"	3.2 mm	449-871-198
		3/16"	4.8 mm	449-871-199
		1/4"	6.4 mm	449-871-200
		3/8"	9.5 mm	449-871-201
		1/2"	13 mm	449-871-202

*O-Ring Material will match Diaphragm Material when ordered as a complete assembled.

Replacement Springs

Color (Range)	Part No.
Yellow Spring 5-20 psig (0.3-1.4 bar)	446-755-202K
Green Spring 15-40 psig (1-2.8 bar)	446-755-203K
Blue Spring 35-80 psi (2.4 bar)	446-755-204K
Blue Spring 10-95 psi (0.7-6.4 bar)	446-755-204K
Red Spring 70-150 psi (4.8-10.3 bar)	446-755-205K

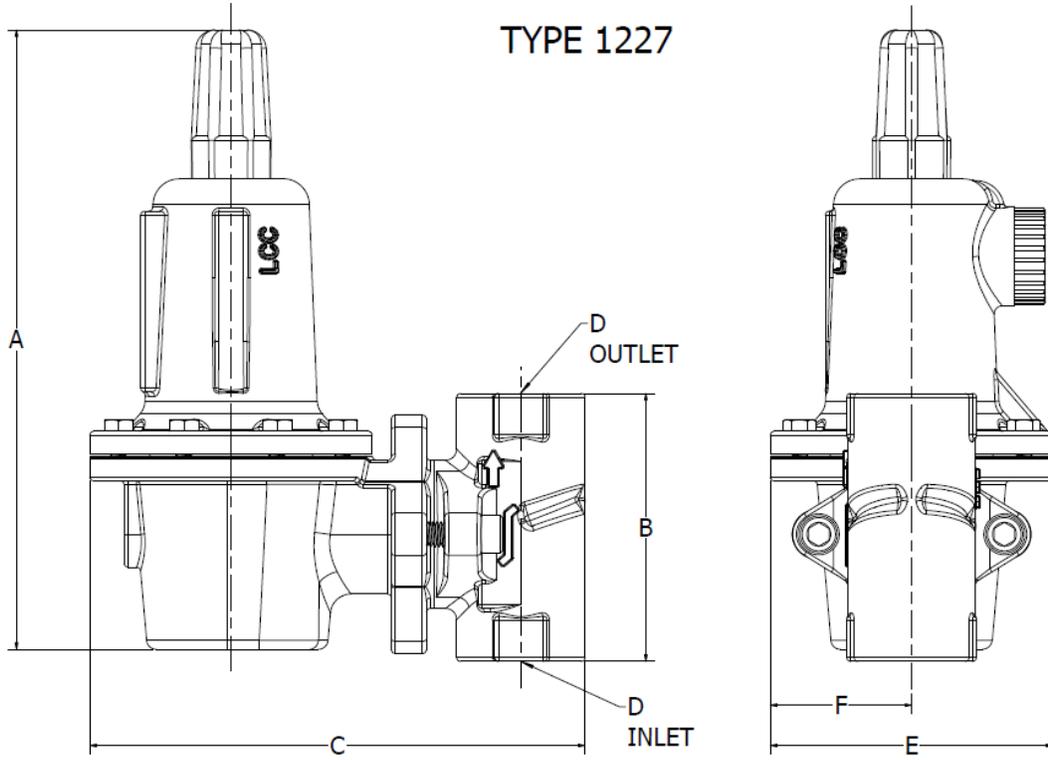
Regulator Repair Kit

Materials of Construction	Part No.
Nitrile / Aluminum Trim	449-871-175
Nitrile / Stainless Steel Trim	449-871-176
Fluorocarbon / Aluminum Trim	449-871-177
Fluorocarbon / Stainless Steel Trim	449-871-178

Regulator Repair Kits include: O-Ring and Backup O-Rings, Diaphragm Casing O-Ring, Diaphragm, Retainer Clip, and Disk Assembly.

NOTE: The Regulator Repair Kits listed in this General Instructions use Nitrile (NBR) for the Diaphragm material. Repair Kits with alternative Regulator/Trim/Diaphragm material combinations can be provided upon request. Consult factory for details.

7. DIMENSIONS



PORT SIZE (NPT)	A	B	C	D	E	F
1"	9.41 [239.0]	4.07 [103.4]	7.52 [191.1]	1" NPT	4.29 [109.0]	2.15 [54.5]
2"	9.41 [239.0]	5.00 [127.0]	8.57 [217.8]	2" NPT	4.29 [109.0]	2.15 [54.5]

in [mm]

8. TROUBLESHOOTING

WARNING

To avoid personal injury or equipment damage resulting from sudden release of pressure, or ignition of accumulated gas, isolate the regulator from the system and bleed all of its internal pressure before attempting troubleshooting procedures.

Symptom	Probable Cause(s)	Corrective Action(s)
Leak occurring at body, detected through performance and/ or the sound of gas leaking	Unit is improperly installed	Refer to Installation procedure on page 4
Unit does not hold pressure	Set point is not adjusted properly and is set too low	Refer to Calibration procedure on page 5
No outlet pressure from unit	Set point is not adjusted properly and is set too high	Refer to Calibration procedure on page 5
	Inlet and outlet connections installed with opposite orientation relative to pipeline flow	Refer to Installation procedure on page 4. Additionally, there is an arrow marked on the Type 1227 body indicating the direction of gas flow through the regulator inlet and outlet connections.

9. WARRANTY & DISCLAIMER

ControlAir LLC products are warranted to be free from defects in materials and workmanship for a period of eighteen months from the date of sale, provided said products are used according to ControlAir LLC recommended usages. ControlAir LLC liability is limited to the repair, purchase price refund, or replacement in kind, at ControlAir's sole option, of any products proved defective. ControlAir LLC reserves the right to discontinue manufacture of any products or change products materials, designs or specifications without notice. Note: ControlAir does not assume responsibility for the selection, use, or maintenance of any product. Responsibility for the proper selection, use, and maintenance of any ControlAir product remains solely with the purchaser and end user.

WARNING

These products are intended for use in industrial compressed-air systems only. Do not use these products where pressures and temperatures can exceed those listed under Specifications.