



Controls Ltd.

## INSTALLATION INSTRUCTIONS

### CVS 67CFR Pressure Reducing Instrument Supply Regulator

#### INTRODUCTION

The CVS Controls 67CFR Filter regulator is a pressure reducing supply regulator typically used for pneumatic and electro-pneumatic controllers, as well as other instrumentation equipment. The CVS 67CFR provides constant, clean air or gas supply to devices requiring reduced pressures for control.

These Installation Instructions provide installation and Start Up procedures for the CVS 67CFR Regulator. Should additional maintenance or part information be required, please refer to the CVS 67 CFR Instruction Manual.

#### SPECIFICATIONS

##### Temperature – Nitrile Standard

-40°C to 82°C (-40°F to 180°F)

##### Maximum Inlet Pressure:

250 psig (17.2 bar)

##### Maximum Outlet Pressure:

50 psi (3.4 bar) over outlet pressure setting



CVS 67CFR, Panel Mount Vented Spring Case



CVS 67CFR Regulator with optional gauge

##### Outlet Pressure Ranges:

0 to 35 psig (0 to 2.4 bar)

0 to 60 psig (0 to 4.1 bar)

0 to 125 psig (0 to 8.6 bar)

##### Approximate shipping weight:

1 lb (.45 kg)

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## INSTALLATION

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It is recommended that only qualified or authorized personnel install and maintain the CVS 67CFR regulator.

Prior to installing, make sure there is no damage to the regulator, as well as foreign debris in all tubing or piping connections to the installation.

Ensure proper safety procedures are adhered to during installation and maintenance.

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### Warning

**Do not install any pressure equipment where service conditions exceed the manufacturer's specifications. Over pressuring of regulator may result in leakage, equipment damage or injury. Excessive pressure can cause the pressure-containing parts to burst, or accumulated gas to explode. The CVS 67CFR Filter Regulator should not be used with hazardous gas unless vented to a safe area.**

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The CVS 67CFR regulators internal relief valve does not provide overpressure protection. The internal relief valve is designed for minor seat leakage only. Additional overpressure protection may be required should the inlet pressure exceed the maximum pressure rating of the downstream equipment, or maximum allowable outlet. Periodically inspect the regulator for damage, and after an overpressure condition. Remove from service and replace or maintain the regulator as required.

1. Install the regulator so that the direction of flow is from the IN to the OUT, as marked on the regulators housing.
2. For best drainage, install the regulator so that the drain valve (12) is at the lowest possible point.

3. Prevent plugging of the spring case vent and keep the spring case from collecting moisture, corrosive chemicals or other materials by orienting the vent to the lowest possible point on the spring case. For panel mounted vented installations, the 1/4" NPT spring case vent may be remotely vented by installing tubing or piping.
  4. To change the filter/drain orientation, rotate the filter cap with regards to the regulator body. Change the spring case/vent orientation by rotating the spring case in relation to the regulator body.
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### Warning

**Never adjust the control spring to produce pressure beyond its highest outlet pressure range. Over pressuring the spring can cause bursting of pressure containing parts, or explosion of accumulated gas. If the range of the control spring does not reach the desired outlet pressure install a spring with the proper range according to the maintenance section.**

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5. Suitable means of venting the regulator inlet and outlet pressures for regulator shutdown may be achieved by installing upstream block and vent valves and downstream block and vent valves if required.
6. Apply pipe compound or suitable Teflon tape to the male pipe threads prior to making connections, take care not to get excess pipe compound inside piping or regulator.
7. Install 1/4" NPT supply tubing or pipe fitting to the inlet of the regulator body marked "IN". Proceed to install 1/4" tubing or pipe fitting to the other side of the regulator body marked "OUT".
8. The additional 1/4" NPT outlet may be used for an optional CVS pressure gauge. If a gauge is not being utilized, a 1/4" NPT plug must be used.
9. Should the CVS 67CFR regulator be installed in an existing installation, it may be necessary to install spacers on the mounting bolts to adapt to the installation. If mounting bolts are too long place a spacer on the mounting bolt and ensure at least two full threads of engagement.

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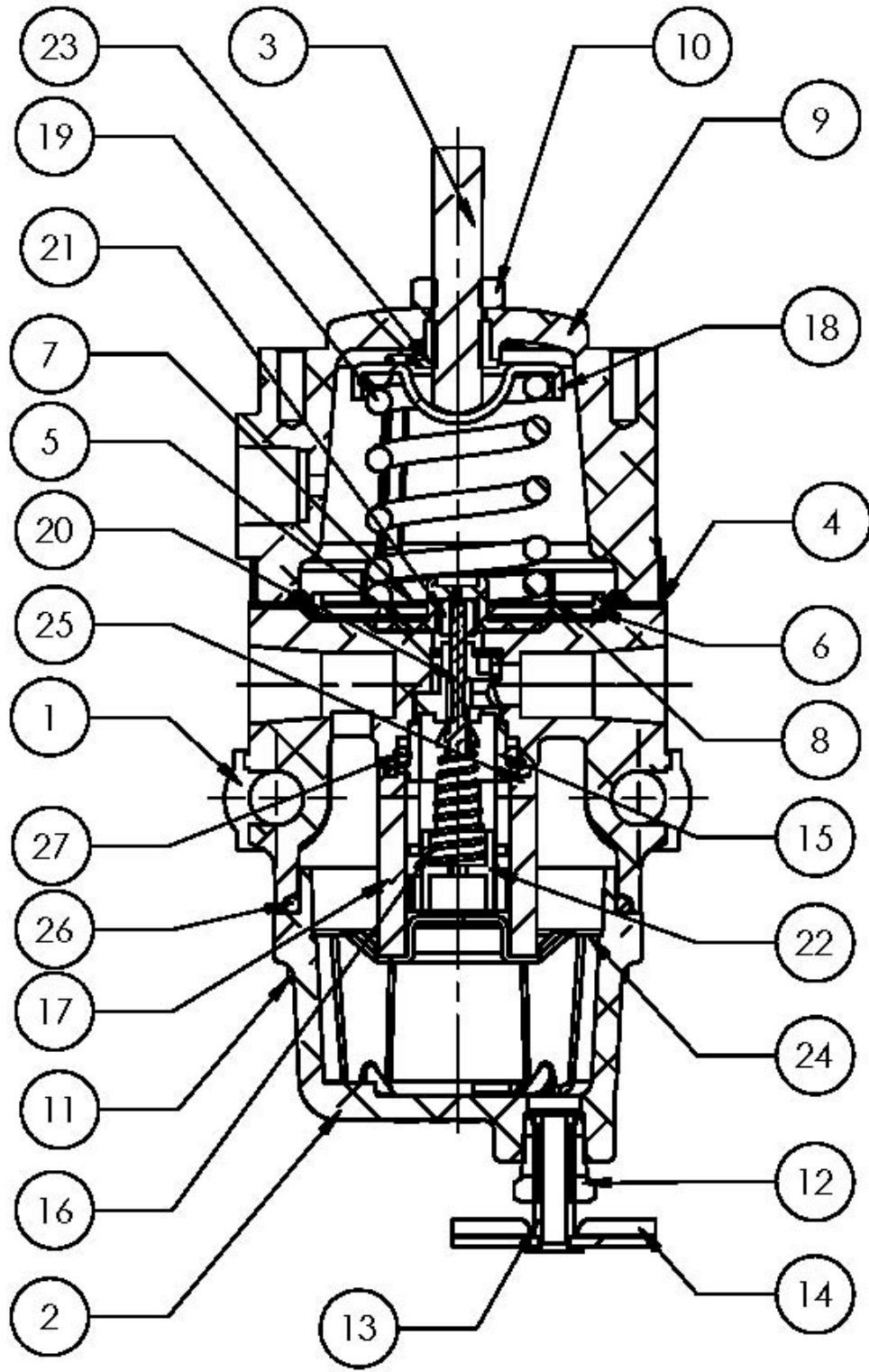
## START UP AND ADJUSTMENT

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1. Once installation is complete and downstream equipment is properly adjusted, slowly open the supply and downstream shutoff valves (if installed) while using pressure gauges to monitor supply and outlet pressure.
2. Should outlet pressure adjustment be required, install and monitor outlet pressure using a gauge during the start-up procedure. The CVS 67CFR regulator outlet pressure can be raised or lowered by loosening the locknut
- (10), and turning the adjustment screw (3), clockwise to increase outlet pressure, or counter clockwise to decrease outlet pressure.
3. Tighten the locknut (10) once the desired outlet pressure has been properly set as required.
4. Periodically inspect the regulator for signs of wear or damage, and repair or replace as necessary.

For more information or questions, please contact a CVS Controls representative.

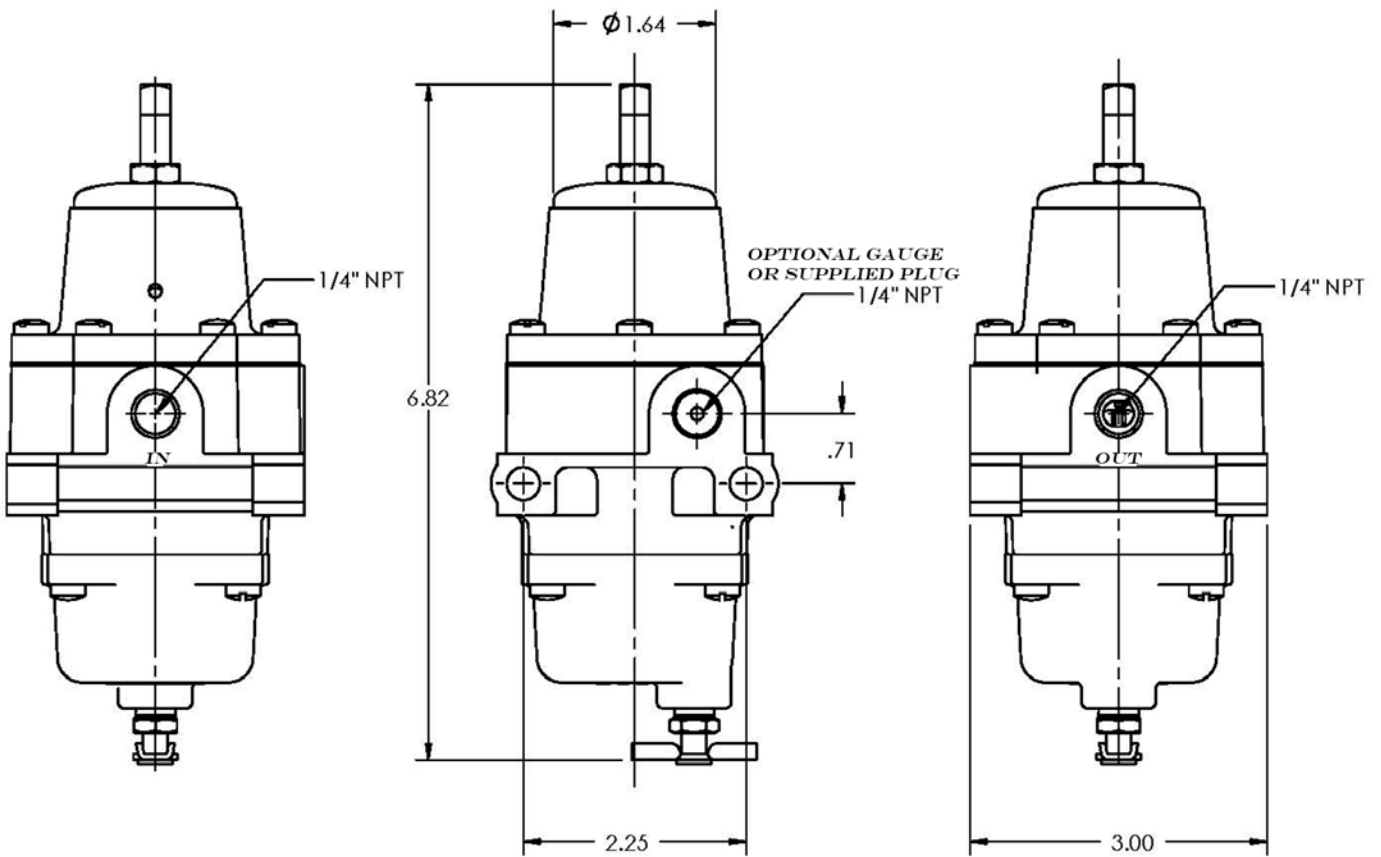
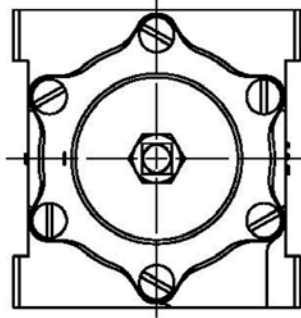
CVS 67 CFR Assembly



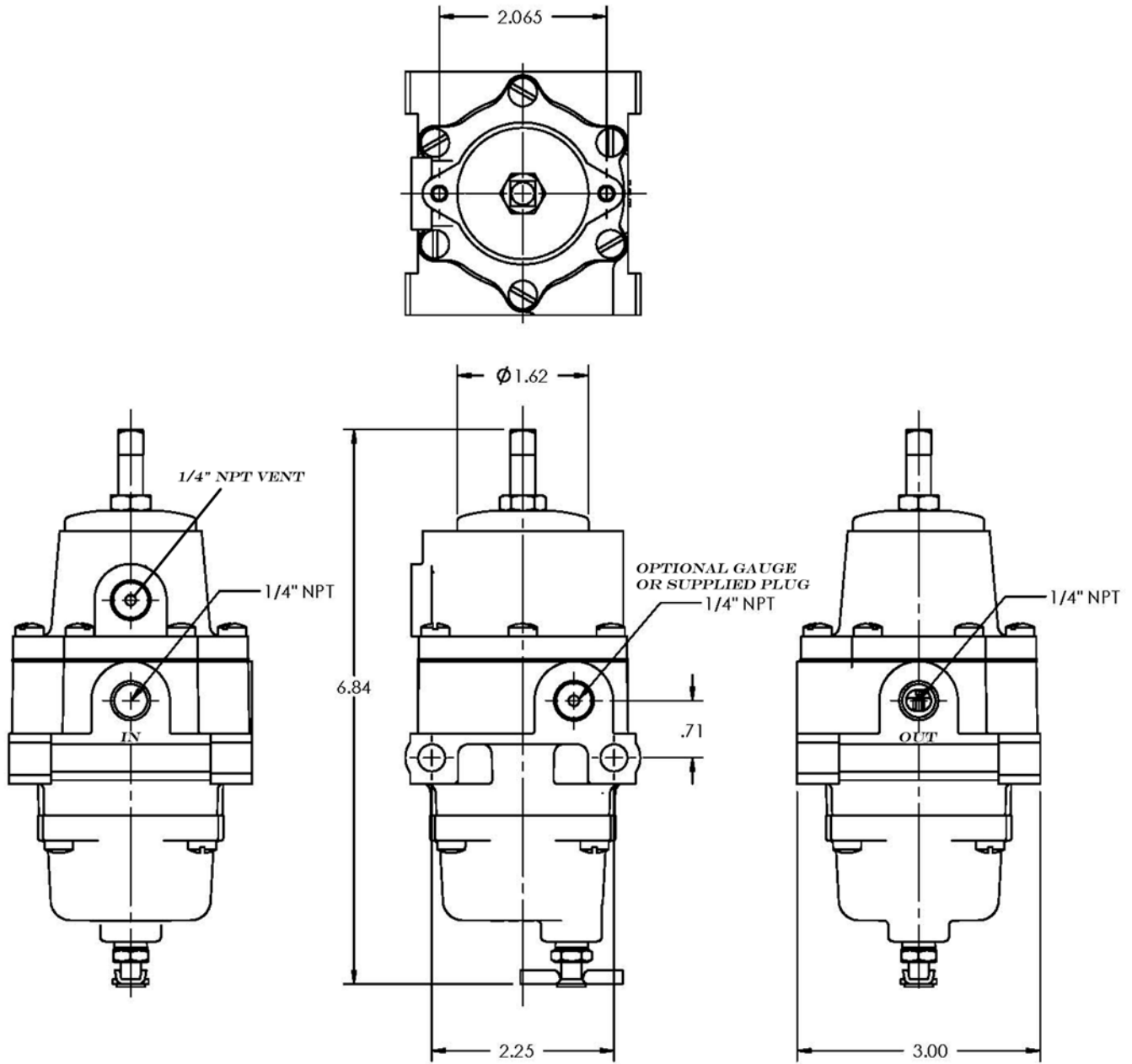
## CVS 67 CFR Parts Listing

Item	Description	Part Number	Qty
1	Body, Aluminum	CVS T40643TORG2	1
2	Dripwell, Aluminum	CVS T21040T0012	1
3	Adjusting Screw	CVS T14061T0012	1
4*	Diaphragm <sup>(1)</sup>	CVS T14119T0012-1	1
5	Push Post	CVS T14119T0012-2	1
6*	Diaphragm Plate <sup>(1)</sup>	CVS T14119T0012-3	1
7*	Diaphragm Ret. Ring <sup>(1)</sup>	CVS T14119T0012-4	1
8	Lower Spring Seat	CVS T14119T0012-5	1
9	Spring Case – 1/4" NPT Vent	CVS T14070T0042	1
	Spring Case – Vent to atmosphere (drilled)	CVS T140707T0012	1
10	Lock Nut	CVS 1A946324122	1
11	Flange Screw	CVS 1B784028982	10
12	Drain Valve Body	CVS 1K418918992-1	1
13	Drain Valve Plug	CVS 1K418918992-2	1
14	Drain Valve Handle	CVS 1D5604000A2-3	1
15	Valve Cartridge Body	CVS T80434T0012	1
16	Valve Spring	CVS T14105T0012	1
17*	Filter Element	CVS GE32761X012	1
18	Upper Spring Seat	CVS T14051T0012	1
19	Spring – 0 to 35 psig	CVS T14059T0012	1
	Spring – 0 to 60 psig	CVS T14058T0012	1
	Spring – 0 to 125 psig	CVS T14060T0012	1
20*	Valve Plug	CVS T14053T0042	1
21*	Soft Seat	CVS T14055T0012	1
22	Valve Retainer	CVS T14071T0012	1
23	Spring Case Insert	CVS T14070T0052	1
24	Filter Retainer	CVS T14052T0012	1
25	Filter Gasket	CVS T14081T0012	1
26	O-Ring	CVS T14380T0012	1
27	O-Ring	CVS T14063T0012	1
<sup>(1)</sup> Items 4, 6 and 7 are included in Diaphragm Assembly		CVS T14119T0022 Nitrile (no relief)	1
		CVS T14119T0012 Nitrile (with relief)	1
*Included in CVS 67CFR Repair Kit		CVS67CFR-RK	1

CVS 67 CFR Dimensions – Inches (vent to atmosphere)



CVS 67CFR Dimensions – Inches (panel mount, 1/4" vented spring case)



# CVS

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