

# CVS CONTROLS LTD.

product catalogue



*CVS Controls Ltd. provides a quality product at an economical price, and backs it with first-rate service.*

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CVS Controls is a certified and registered ISO 9001:2008 Canadian manufacturing facility, with its head office located in Edmonton, Alberta and an additional sales office located in Calgary, Alberta. CVS has grown to proudly offer its worldwide customer base, several highly reliable and cost effective replacement control valves and associated instrumentation. Our products are interchangeable, and are a direct replacement with the industry's leading brands.



# PRODUCTS

## CONTROL VALVES

### CVS Series D Globe Valves & DA Angle Valves

#### 1 & 2 Inch

The CVS Series D is a single port, screwed-in metal seated globe style valve with unbalanced post-guided plug and "push down to close" plug action used for high pressure applications. These valves are used in oil & gas production, distribution systems, and power plants.



These valves are especially useful for throttling or on/off control of liquids or gases. The flow characteristic is equal percent, and the flow direction is up through the seat ring and past the valve plug. This valve is available with cast integral flanges, welded flanges, or screwed connections. The valve plug and seat ring can be fitted with tungsten carbide inserts or stellite overlay.

## CVS Series E Globe Valves & EA Angle Valves

### 1-8 Inch

The CVS Series E is a single port, globe style body with composition or metal seats, and a balanced valve plug with push down to close action.

### Design ED

Intended for general control application over a wide variety of temperature & pressure drops. The ED has an upper piston ring seal & metal to metal seating.

### Design ET

Used in applications requiring low leakage rates.

The flow direction for standard cages is flow down, with the following flow characteristics available: linear, whisper, quick opening, and equal percent. The end connections are ASME Class 150, 300 and 600 raised face or ring type joint flanges as per ASME B16.34-latest edition, and butt weld, threaded on the 1" & 2" only.



## CVS Series EWD, EWS, & EWT

The CVS Series EWD valve bodies are single port, globe style bodies with cage guiding, clamped seat rings and push down to close valve plug action.

The series features large end connections and expanded internal flow cavities. The series is available 8x6, 10x8, 12x6, 12x8 and 16x12 inch sizes. The first number refers to the line size, and the other refers to the trim and bonnet size.

### Design EWD

- Intended for general control applications over a wide variety of temperatures and pressure drops. This design has a balanced valve plug with metal-to-metal seating.

### Design EWS

- Intended for applications requiring better shut off capabilities than the EWD. This valve uses an unbalanced valve plug with metal-to-metal seating, or optional metal-to-TFE seating.

### Design EWT

- Suitable for applications with stringent shutoff requirements. Uses a balanced valve plug with metal-to-TFE seating, or metal-to-metal seating for use in higher temperatures.



## CVS Series H900 / H1500 / H2500

The H2D Design is a single port, globe style body with cage guiding, and balanced valve plug with push down to close action. Metal seat, piston rings are used to provide the seal between the valve plug and cage. This configuration is used for general applications where tight shutoff is not required.

The H5T design is a single port, globe style body with cage guiding, balanced valve plug, metal seat, and pressure assisted spring seal to provide the seal between the valve plug and cage. It is designed for applications that require low leakage rates.



## CVS Series V100 Ball Valve

Available in 2 through 12 Inch Sizes

The CVS V100 Ball Valve design utilizes a standard ball with a triangular shaped wedge formed in it. This design allows for both throttling control and on/off service used in conjunction with a variety of actuators.

Typical actuators used; are the pneumatic spring and diaphragm rotary actuator (CVS 1051), and the pneumatic piston rotary actuator (CVS 1061). These actuators can be mounted either horizontally or vertically on the right or left-hand side viewed from forward flow inlet.



## CVS Series HPX / HPAX

### 2-6 Inch, 2 Inch Angle Valves

CVS HPX Control Valves are designed for high pressure applications in the process industry.

Valves are cage guided, with metal seats and quick change trim. Balanced plugs are push down to close.

The HPX is a straight globe valve while the HPAX is an angled valve.

### Series HPX2D & HPAX2

A piston ring provides the seal between the cage and the balanced valve plug.

### Series HPX5D & HPAX5

Sealing is provided by pressure assisted seal ring.

## CVS Series 128 PQC

The CVS Series 128-PQC Control Valves are suitable for on/off dump valve service in oil & gas production applications, in either sweet or sour gas conditions. These valves are also useful for on/off high pressure control of numerous gases and liquids, and can be used with materials that are viscous or erosive.

This is a single port valve with unbalanced stem-guided valve plug and push down to close valve plug action. Operated by a type 128 spring and diaphragm actuator, the assembly can be operated in a normally open or normally closed application. This setting can be reversed in the field with minimum disruption and no additional parts.





## CVS Valve Trim

CVS offers a selection of standard, and NACE compliant trim and trim kits. All of CVS Controls trim, and trim kits are completely compatible and interchangeable with industry leading products. Stellite coated plugs and stems are available upon request.

Please consult a CVS sales representative regarding size, availability, delivery, and special orders. Ceramic trim also available.

# ACTUATORS

## CVS Series 657 & 667

### Sizes 30 - 80

The **CVS Series 657** is a direct acting, spring opposed diaphragm actuator with a 3 inch maximum travel. Signal pressure supplied to the upper housing chamber forces the stem downward. When the signal pressure is reduced, the compressive force on the spring moves the stem upward. If the signal pressure should fail, the spring will force the stem in the upward direction providing "fail-open action" for "push down to close" valves.

The **CVS Series 667** is a reverse acting, spring opposed, diaphragm actuator with a 3 inch maximum travel. When the signal pressure increases to the lower diaphragm casing, the actuator stem is forced upward compressing the spring. When the signal pressure is reduced, the spring moves the actuator stem in the downward position. If the signal pressure should fail, the spring will force the stem in the downward position providing "fail closed action" for "push down to close" valves.

Both the **CVS 657 & 667** actuators are used for automatic operation of control valves used in applications where throttling or on/off service is required.



CVS Series 657



CVS Series 667

## CVS Series 1051 Rotary Actuator



### Sizes 30 - 70

CVS Type 1051 Diaphragm Rotary Actuator is a pneumatic spring return design for rotary shaft control valves.

It is suitable for on/off service or throttling service when used with a valve positioner.

Air is supplied to the top of the actuator, as air pressure increases it compresses the spring and the diaphragm rod travels down. The rod is connected to a lever which causes the valve shaft to rotate. When air supply fails the spring expands and the valve shaft rotates the opposite direction.

Stroking time is dependant on actuator size, spring rate, and supply pressure.

The travel indicator is a combination graduated disc and pointer on the actuator end.

Fixed travel stops are an available option.

## CVS Rack and Pinion Actuator

Rack and Pinion Actuators are used to open or close ball or butterfly valves with 90° rotation. Rack and Pinion Actuators are activated by pneumatic or hydraulic fluid. The supply pressure pushes pistons together or apart causing the pinion shaft to rotate opening or closing the valve.

The actuators can be double acting or spring return. Double acting requires supply pressure to open and close the actuator.

Single acting actuators require supply pressure to open the actuator, when the supply pressure is removed the springs push the pistons back to the original position.

Single acting actuators can be fail open or fail closed.

CVS actuators are available in sizes 50 to 800 with torques 50 in/lbs to 1,565,000 in/lbs.



CVS actuators are temperature rated from - 50°C (-58°F) to 80°C (176°F) with standard seals made of low temperature nitrile. The actuators adhere to ISO 9001: ISO5211, DIN3337, and VDI/VDE 3845 NAMUR standards. Each actuator has position indication with NAMUR drive slot for positioners and pneumatic connections. The output shaft and valve mounts meet NAMUR standards. Each actuator has stroke adjustment 0° to 90°, +/-4 degrees. Direction of shaft rotation can be done easily by inverting the pistons.

## CVS Series 35-70 Scotch Yoke Actuator

CVS 35 – 70 actuator uses a scotch yoke mechanism for high break away and reset torques. Used for opening and closing quarter turn ball and butterfly valves. The CVS scotch yoke actuator is a single acting hydraulic actuator which uses pressurized hydraulic fluid to open the actuator. As the fluid is pressurized, the piston moves and compresses the spring. When the hydraulic fluid is depressurized, the spring expands and pushes the piston back to its starting position.



Piston movement causes the yoke to move and rotate the shaft that is connected to the valve. The actuator is temperature rated to -50°C (-58°F) using low temperature nitrile seals. Hydraulic supply pressure is 200 to 2000 psi and the hydraulic and spring torques are 1500 to 27700 in/lbs. The actuator can be used in fail open or fail closed applications.

## PRESSURE CONTROLLERS

### CVS Series 4150 / 4150LE / 4160

CVS Controls offers three types of Pressure Controllers:

- Proportional (CVS 4150)
- Proportional Reset (CVS 4160)
- 4150 LE Low Emission

The CVS 4150 and 4160 are pneumatic pressure controllers that utilize a bourdon tube or bellows for sensing vapor, liquid or gas pressure, and differential pressure. The CVS controller can be reconfigured from direct, to reverse acting or vice versa without any additional parts.

CVS Pressure Controllers offer dependability, toughness, sturdy construction, reliable performance, and accurate service. With regular scheduled maintenance, the Pressure Controller will provide continuous service for many years.

The CVS 4150 and CVS 4160 Pressure Controller is a weatherproof unit, and can be either mounted on the yoke of a control valve, wall mounted or panel mounted.



CVS Controls Ltd. Low Emission Series



The CVS 4150LE low emissions pressure controller uses six times less fuel than a standard 4150 pressure controller.



# POSITIONERS

## CVS-1000R Electro-Pneumatic Positioner



The CVS Electro-Pneumatic Positioner CVS-1000R is used for operation of pneumatic rotary valve actuators by means of electric control for systems pneumatic output signals of 3 - 15 psi or 6 - 30 psi.

Input signal is DC 4 - 20 mA.

The positioner is CSA approved and rated EXdmlIBT5 explosion proof zone 1, class 1, division 1.

Can be reverse acting or direct acting and is suited for single or double acting actuators.

It is possible to prevent hunting with the correct orifice size for smaller actuators.

This positioner has very low air consumption.

Easy to read dome indicator allows for positioner monitoring from a distance.

It is possible to control the ½ split ranges with simple adjustments without replacing parts.

## CVS-1000L Electro-Pneumatic Positioner

The CVS Electro-Pneumatic Positioner CVS-1000L is used for operation of pneumatic linear valve actuators by means of electric control for pneumatic output signals of 3 - 15 psi or 6 - 30 psi.

The positioner is CSA approved and rated EXdmlIBT5 explosion proof zone 1, class 1, division 1.

Can be reverse acting or direct acting and is suited for single or double acting actuators.

It is possible to prevent hunting with the correct orifice size for smaller actuators.

This positioner has very low air consumption.

It is possible to control the ½ split ranges with simple adjustments without replacing parts.



## CVS 1200 Pneumatic Positioner



CVS1200 uses a block structure and multi-port design. There are two types of positioners available, a rotary positioner for rotary pneumatic actuators, and a linear positioner for linear pneumatic actuators. Valve stroke is quickly and accurately controlled with an input signal of 3 - 15 psi or 6 - 30 psi. It can be reverse acting or direct acting and is suited for single or double acting actuators. It is possible to prevent hunting with the correct orifice size for smaller actuators. This positioner has very low air consumption and it is possible to control the ½ split ranges with simple adjustments without replacing parts.

## CVS-2400 Smart Positioner

The CVS -2400 Smart Positioner accurately controls valve stroke using an input signal of 4 - 20 mA from the controller.

The smart positioner is CSA approved and rated EXdmlIBT6 + H<sub>2</sub> explosion proof zone 1, class 1, division 1.

On board micro processing optimizes the positioner performance and allows for auto calibration, PID control, alarm and HART protocol.

Output characteristics are linear, equal percent, quick open and user specified. The LCD display enables easy monitoring of the positioned.

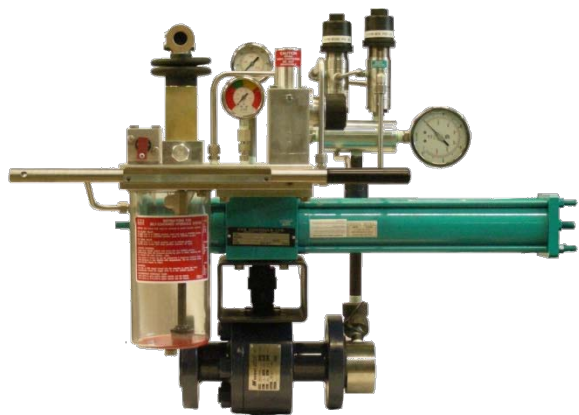
PID parameters can be easily adjusted in the field by push button; information is transferred with a HART communicator.

The smart positioner has analog feedback signal capability.



# HYDRAULIC PUMP

## CVS Self Contained Hydraulic Pump



The CVS Self Contained Pump provides reliable emergency shutdown when an external power source or fuel gas is not available. The unit uses clean hydraulic fluid which is contained in the pump.

Used in conjunction with linear or rotary spring return actuators the SCHA is a fail safe system which is suitable for ball, plug, quarter turn or linear operated valves.

This pump has been proven reliable under the most demanding operating conditions and it is designed to be the foundation for a flexible sensing control system and has built in temperature compensation and pressure relief.

The pump can be ordered in pressure configurations from 100 to 2250 psi. The self contained hydraulic pump can be used in remote locations and operates in temperature as low as  $-46^{\circ}\text{C}$  ( $-50.8^{\circ}\text{F}$ ).

# PRESSURE PILOT

## CVS 7970 Pressure Pilot

The CVS 7970 is a versatile stainless steel sensor that can be programmed to detect and react to increasing or decreasing pressure. The 7970 is available with adjustable pressure range from 2 to 10,000 psi (0.138 to 689.5 bar)

The pressure pilot monitors the process pressure source for changes in the normal operating range. If the pressure drops within the control circuit it will start a shutdown sequence or trigger an alarm.

The 7970 can also indirectly operate on/off flow control valves or pneumatic driven pumps. This valve is a two position, 3-way pilot with universal ports (H, O, L), automatic spring return reset and pressure balanced spool.

Each unit also contains the necessary components for four different piston arrangements.



# CVS 2000 PRESSURE PILOT

## CVS 2000 Pressure Pilot

The CVS 2000 Pressure Pilot is a High and Low pressure sensing unit, used to monitor process or pipeline pressure in high/low pressure shutdown installation. This unit utilizes a spring loaded piston to sense the set pressure settings and activate a pilot valve, and can be operated by either a hydraulic or pneumatic signal.

Features:

- Adjustable pressure range from 10psi to 6000psi (0.7bar to 413 bar)
- Easy field adjustable set points
- Ambient temperature range from -46C to 100C (-50F to 212F), Process temperature range from -46C to 200C (-50F to 392F)



- Available in both manual and automatic reset configurations
- Ideal for use as part of a complete CVS Shutdown System (ESD)
- Signal/Supply pressure up to 150 psig
- Standard 2" NPT threaded input connection (additional options available upon request)

## 3-WAY VALVES

### CVS Series 4057 Type CP, CG & CE

The 4057 is a two position three way valve that can be used for actuator control, hydraulic, pneumatic panel, and safety control systems.

They feature balanced force design where pressure can be applied to any port.

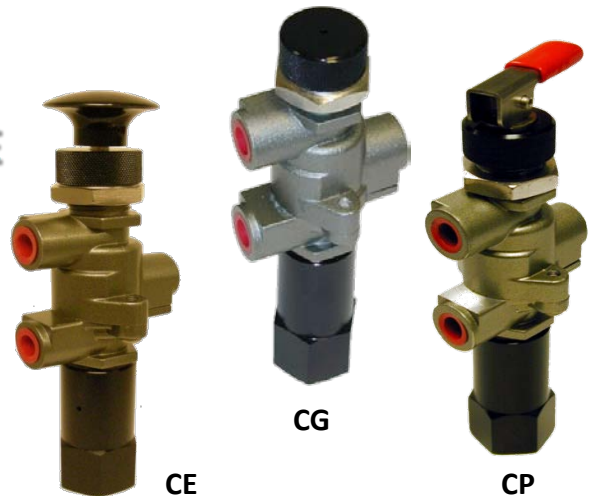
Standard center dead spot, port overlap is optional. It is designed for panel or bracket mounting available in aluminum or 316 stainless steel. They are temperature rated from 120°C to -40°C with a maximum pressure of 125 psi.

#### 4057 CG

This valve features a spring loaded spool that is pneumatically or hydraulically piloted.

#### 4057 CP

This valve features a spring loaded spool that is pneumatically or hydraulically piloted with a manual over ride lever.



#### 4057 CE

This valve is manual or pressure operated spring return, 27psi or 16lbs to operate.

# LIMIT SWITCH



## CVS-500

The CVS-500 is designed for valves and actuators in hazardous locations. The limit switch is CSA approved and is rated EXdIIBT6 explosion proof zone 1, class 1, division 1.

Equipped with standard NAMUR shaft and bracket for easy mounting to NAMUR actuators, and secure waterproof case with multi angle top and side visual indicator.

Available switch configurations are 2 single pole single throw through 4 single pole double throw. Optional proximity sensors are also available.

## CVS410-3W

The CVS410-3W is designed for valves and actuators in hazardous locations.

The pneumatic solenoid valve is a two position three way valve and electrically actuated with a spring return spool.

The limit switch with pneumatic solenoid valve is CSA approved and is rated EXdIIBT6 explosion proof zone 1, class 1, division 1.

Standard NAMUR shaft and bracket for easy mounting to NAMUR actuators.

Secure waterproof case with multi angle top and side visual indicator.

Uses two single pole, double throw mechanical switches rated (0.6A 125VDC, 0.3A 250VDC, 16A 125/250VAC).

Optional two proximity sensors for sensing switch location (8-30VDC,  $\leq 150\text{mA}$  or 8VDC, detected  $\leq 1\text{mA}$ , not detected  $\geq 3\text{mA}$ ).

The solenoid coil is 24VDC (1.2W) or optional 48, 220, 380VAC.

Solenoid valve is available as a 3/2 or 5/2 valve.



# CHEMICAL PUMPS

## CVS Series 51 Chemical Injector

The Series 51 Chemical Pump is used for the introduction of de-emulsifiers, corrosion inhibitors, de-scaling agents, solvents, and methanol. The pump is a positive displacement pump that uses air or process gas to drive the pump.

It uses a molded diaphragm to drive a piston through chevron packing making it a positive displacement pump with a spring return. Discharge pressures up to 6000 psi with a maximum output volume of 30 gallons per day. The pump is controlled by a 2 position 3-way valve in 3 configurations:

- Standard micro switch, -Traegyr switch,
- Pilot valve



Supply pressures are 15 - 35 psi and the pump will operate at 0 to 30 strokes per minute with a 1 inch stroke. Available injection plungers are 3/16", 1/4", 3/8", and 1/2". The pump housing is constructed out of powder coated cast aluminum. Plunger packing material can be Buna-N, Viton, Teflon, or Flourosilicone. O-ring suction and discharge seals can be Buna -N, Viton, or Flourosilicone.

## CVS Series 50 Chemical Injector

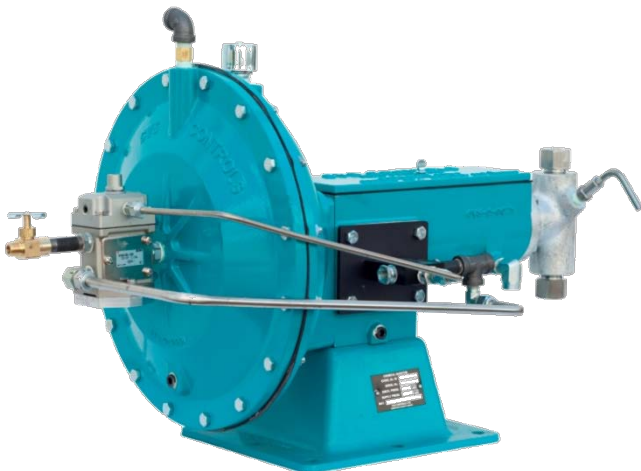
The Series 50 Chemical Pump is used for the introduction of de-emulsifiers, corrosion inhibitors, de-scaling agents, solvents, and methanol.

The pump is a positive displacement pump that uses air or process gas to drive the pump.

It uses a molded diaphragm to drive a piston through chevron packing making it a positive displacement pump with a spring return. Discharge pressures up to 12,000 psi with a maximum output volume of 500 gallons per day at 60 strokes per minute. The pump is controlled by a 2 position 3-way micro valve.

Supply pressures are 15 - 35 psi and the pump will operate at 0 to 60 strokes per minute with a 1 1/4 inch stroke. Available injection plungers are 1/4", 3/8", 1/2", 3/4", 1", and 1 1/4".

The pump housing is constructed out of powder coated cast aluminum. Plunger packing material can be Buna-N, Viton, Teflon or Flourosilicone. O-ring suction and discharge seals can be Buna-N, Viton or Flourosilicone.



## CVS Low Emissions Pump

The CVS LE Chemical Pump is used for the introduction of de-emulsifiers, corrosion inhibitors, de-scaling agents, solvents, and methanol. This pump will do the same job as the Series 51 using a fraction of the supply gas, making it low emission.

The pump is a positive displacement pump that uses air or process gas to drive the pump. It uses pneumatic double acting cylinder to drive a piston through chevron packing making it a positive displacement pump.

The pump has a 5/2 pneumatic control valve with flow control to actuate the cylinder with pilot valves in the end caps to control the main valve spool.

Discharge pressures up to 6000 psi with a maximum output volume of 120 gallons per day.



Supply pressures are 3 - 150 psi and the pump will operate at 0 to 100 strokes per minute with a 1 inch stroke.

Available injection plungers are 3/16", 1/4", 3/8", and 1/2".

Plunger packing material can be Buna-N, Viton, Teflon, or Fluorosilicone.

O-ring suction and discharge seals can be Buna-N, Viton, or Fluorosilicone. Double head low emission pump also available.

## CVS Low Pressure Portable Hand Pump

The CVS Chemical Hand Pump effectively de-ices valves and lines with just a few strokes. The Hand Pump is mounted on a 20 liter (5 gallon) metal container and has a rubber core steel braided discharge hose and integrated pressure relief valve.

### Low Pressure Pump

Discharge stroke volume is 2.29 cu/in. or 37.5mL per stroke.

Discharge pressures of 0 - 1000 psi.

### High Pressure Pump

Discharge stroke volume is 0.73 cu/in. or 11.96mL per stroke.

Adjustable discharge pressures of 0 - 3000 psi.



# REGULATORS

## CVS Series 670 Panel Mounted Loading Regulator Assemblies

The main application for the CVS 670 Panel Mounted Loading Regulator Assemblies for the manual control of the pressure to diaphragm control valves.

May be also used as remote pressure loaders for pressure balanced gas regulators and the control of gas pressure to burners in refinery tube stills, power plants, and other process furnaces.

Instrument and manual loading pressures are read from the pressure gauges of the regulator.

Pressure is easily adjusted by turning the regulator hand wheel.



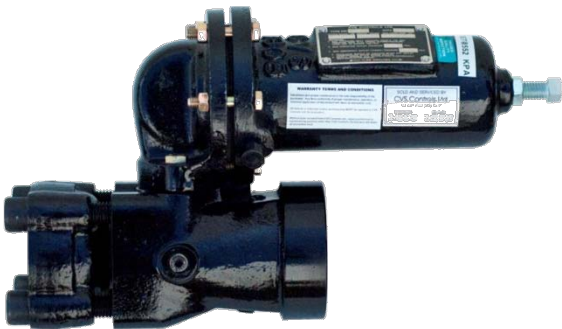
## CVS Series 630 HP Regulator

The CVS 630 HP Series consists of a high pressure reducing regulator, and CVS 630R relief valve. These regulators and relief valves are furnished in either spring loaded or pressure loaded construction with 1 or 2 inch NPT screwed connections.

Pressure loaded Type 630 HP regulators are normally furnished without a main regulator spring and use a Bellofram 7360 or a Bellofram P39 regulator.

Pressure loaded Type 630R relief valves are furnished with a light rate relief valve spring and use Bellofram 7360 or a Bellofram P39 regulator.

The outlet pressure limits for the spring loaded 630 HP low pressure regulator is 3 - 40 psi while the high pressure regulator is 27 - 500 psi. The Bellofram 7360 has a maximum inlet pressure of 250 psi and the P39 has a maximum of 6000 psi. The outlet pressure ranges are 0 - 500 psi.





## CVS Series 67 AFR Filter Regulator

The 67AFR Filter Regulator is a self-operated unit which provides continuous reduced pressures in a variety of applications and service conditions.

A cellulose or stainless steel filter is used to remove particles greater than 0.0016 inch (0.040 mm) in diameter. In addition these regulators contain integral low capacity relief valves. It uses a valve stem that sits against an orifice in the diaphragm assembly.

When downstream pressure increases above the set point, the diaphragm assembly moves off the valve stem and vents the excess pressure through a tapped hole. Maximum allowable inlet pressure is 250 psi and the outlet pressure ranges 3 - 100 psi.



**1301F**



**1301G**

## CVS Series 1301F & 1301G

CVS Types 1301F and 1301G Regulators are a self-operated high pressure regulator. They are used where high pressure gas must be reduced for use as pilot supply pressure, or as loading pressure in pressure loaded regulators.

The **Type 1301F** Regulator provides outlet pressures to 225 psi (15.5 bar) in three spring ranges. Inlet pressures can range up to 6000 psi (414 bar).

The **Type 1301G** Regulator provides outlet pressures from 200 to 500 psi. Inlet pressures can range up to 6000 psi (414 bar).

# CENTRIFUGES

## CVS Series 18800 - Hand Driven

The 18800 hand driven centrifuge delivers reliable durable construction ideal for field use.

It uses a smooth dual gear driven system with a gear ratio of 16:1 to ensure efficient centrifugal force for sediment and water testing.

The crank design provides ample clearance in all directions when tubes shields and samples are in motion.

Can easily be clamped to surfaces with the integral serrated clamp.

### CVS 18801 Centrifuge

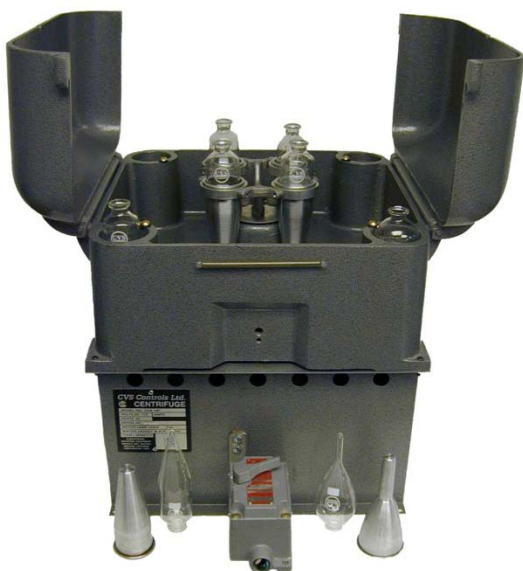
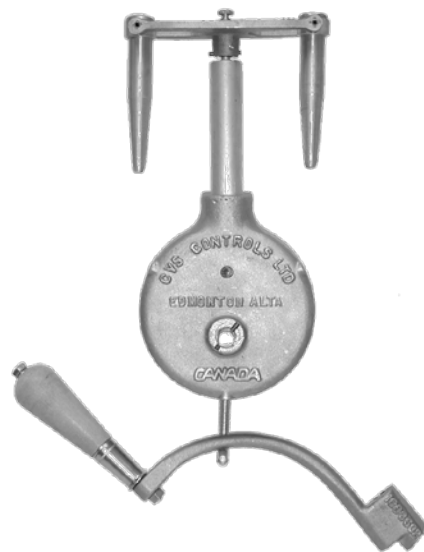
Hand driven, 12.5ml, 2-place finger type comes with 2 finger shields less tubes.

### CVS 18811 Centrifuge

Hand driven, 100ml or 200%, 2-place finger type comes with 2 finger shields less tubes.

### CVS 18821 Centrifuge

Hand driven, 100ml or 200%, 2-place short cone type comes with 2 short cone shields less tubes.



## CVS Series 18000 Thermo-Cycle Heated Centrifuge

The CSA approved explosion proof Thermo-Cycle Heater is mounted on an explosion proof electric centrifuge. The thermostatically controlled heating element will heat and by thermal cycling action circulate hot water throughout the heating chamber in the base of the machine. An electric level switch is used to shut down the heater in case of low water volume. A separate oil sample heater is not required. The unique feature of this machine is the square design with dual lids. This allows for preheated pockets to be placed inside the unit for better heating.

The hole in the center of the lids allows the operator to check speeds using a hand held tachometer. The centrifuge meets the requirements of API MPMS 10.4" Determination of Water and Sediment in Crude Oil by the centrifuge method. Single Phase, 60Hz, 1-9 Amp, Class 1, Div 1, Group C, D.

# CVS Sample Heaters

The CVS Sample Heaters are a hot water bath used for heating samples. It will accept various sizes, quantities, and configurations including:

- Pear shaped tubes
- Short cone tubes
- Long cone tubes
- Stainless steel construction
- Easily maintained
- Sample jars
- Sample heat temperature range is 10° C – 120° C.
- Graduated cylinders

Other configurations include a chamber that will pre-heat a quantity of products used for cutting samples, and clean-up purposes.

CVS Sample Heaters are approved for:

- Class 1, Group C & D Hazardous Locations
- 120 VAC, 60 HZ, 1000 Watts



## Tubes & Shields

### TUBES:

#### Model 45170

12.5mL finger tube made to API standards

#### Model 45244 – 100

100mL pear shaped tube made to API standards

#### Model 45244 – 200

200% pear shaped tube made to API standards

#### Model 45243 – 100

100mL short cone tube made to API standards

#### Model 45243 – 200

200% short cone tube made to API standards

### SHIELDS:

Finger Tube - CVS18371

Short Cone - CVS18081-R

Pear Shaped - CVS18080-R



# PRESSURE GAUGES

## CVS Pressure Gauges

CVS Controls offers a wide range of rugged, reliable, and dependable pressure gauges.

- Stainless Steel Construction
- Liquid Filled Gauges  
(Glycerin, Silicone, or other fillings available upon request)
- Diaphragm
- Safety
- Econoline
- Well-Head Gauges

CVS also calibrates, certifies, and repairs all brand name gauges. Custom emblems are available on all gauge dials upon request.



# PRESSURE & TEMPERATURE RECORDERS

## 2 Pen & 3 Pen Chart Recorders



Chart recorders are the industry standard for accurate, reliable measurement and recording of pressure, differential pressure, and temperature in a wide variety of applications.

They feature rupture proof bellows as the actuating unit with features like over range protection and pulsation dampening.

Safe working pressure 0-2500 psi (172 bar)

Operating temperatures -40°C to 82°C (-40°F to 180°F).

# DEAD WEIGHT TESTERS



The Dead Weight Tester is an extremely compact instrument designed for pressure testing and calibration.

The unit comes complete with weights, hand jack, hand set and one of each 1/8", 1/4", and 1/2" adaptors. It has an accuracy of 1/10 of 1% of the rated pressure. Standard available ranges 1000 - 20,000 psi (7000 - 140,000 KPa) Traceable to the National Institute of Standards & Technology (NIST)

# DEW POINT TESTERS

The CVS Dew Point Tester is a chilled mirror apparatus, which operates by attaining the conditions necessary by the definition of dew point. When gas is cooled without contact with water, the content remains constant but the saturation increase until it reaches 100% and moisture begins to condense. The temperature at this point is known as the dew point.

The tester consists of a high pressure chamber through which the gas sample flows. As the operator throttles the gas a mirror is observed until condensation appears. Once condensation is seen the operator can record the temperature.

Model A-2 uses propane or carbon dioxide as a refrigerant.

Conforms to ASTM D1142, and GPA 2140 standards.



# PFORTNER

## Pfortner Thermometers & Thermowells

Pfortner Thermometers can be used wherever precise temperature and quality is required. There are five models available:

- Back Connected
- Adjustable
- Bottom Connected
- General Test Pocket Thermometer
- Magnetic Surface Thermometer

All Pfortner Thermometers are stainless steel, hermetically sealed to ensure resistance against internal corrosion, moisture, and dirty atmospheres. Standard stem lengths available are 2 1/2", to 72" with 1/4" and 1/2" connections. Temperature ranges from -100°F to 1000°F (-70°C to 550°C) and accuracy to within +/-1% of full scale range. Mercury, gas, and alcohol sensing thermometers available for vibration and special applications.



The CVS and Pfortner Thermowells can be used in a variety of different process applications where viscosity, pressure, corrosive, or abrasive materials are present. Thermowells allow removal of the temperature instrument for replacement, repair, or testing without contaminating the process media.

CVS thermowells are available in 304 and 316 stainless steel (other materials available upon request) with a standard bore of .260" and process connections of 1/2", 3/4", and 1" NPT.

## LAB THERMOMETERS

### CVS Lab Thermometers



CVS carries a wide variety of ASTM Thermometers for special use, low-temperature, oven - incubator general testing, standard laboratory, dual scale, 6" pocket/double armor, and Midget Industrial thermometers.

API Metric density dual scale thermometers are available in API degrees and metric density kg/m<sup>3</sup>. The combined form (thermometer in body) comes with dual scales of °C and °F. API and ASTM Hydrometers are also available in plain or combined form.

Please consult a CVS sales representative for additional information.

# MISCELLANEOUS

## Oil Thief & Accessories

The Oil Thief is a simple, one spring device for taking accurate samples of the tank bottom. Features include one-line, adjustable controls, adjustable hanger, and replacement valve seat. Choice of bronze or aluminum body. Weight of bronze body: Approximately 6 - 8 lbs. Weight of Aluminum body: Approximately 4 - 5 lbs. Barrel: Clear acrylic plastic, polished brass or aluminum. Available with or without sample cock. Available in the following lengths: - 12", 14", 16", 18", and 24"

### Oil Thief Lowering Accessories

Bronze lowering chain with fittings. Available in the following standard lengths: - 16 Ft, 25 Ft, or 32 Ft.



### Atlas Chrome Clad Tapes

Atlas chrome tapes have black markings bonded to the steel and recessed beneath multiple layers of nickel and chrome electroplating to provide greater resistance to wear and corrosion. A coating of 'lufkote' further enhances the long wearing properties of these tapes.

### Other

CVS Controls also offers additional miscellaneous items:

- Windcones
- Disposable Hinged Clip Circular Pens
- Gauge Line Accessories
- CVS 1000 Hand Pump Carrier

Please contact a CVS sales representative for additional information.



# NORRISEAL

- CVS Controls is a distributor for all Norriseal Products.
- We carry Series 1001A and 1005E level controllers
- We also carry a full line of Norriseal control valves.

