

HIGH PRESSURE CONTROL VALVE

CLEAN, LOW COST, AND ENVIRONMENTALLY
FRIENDLY HIGH PRESSURE CONTROL



KIMRAY
INC.®

INTRODUCTION

High pressure in upstream production can mean problems when it comes to control — Kimray has the solution. The High Pressure Control Valve has been designed to handle the demands of oil and gas production.

Open Yoke Design with Visible Travel Indicator

Teflon Packed Stuffing Box for Leak Free Seal

Large variety of end connections for simplified installation

Field Reversible Topworks - Easily change from fail open to fail closed



OPERATING PRINCIPLE

Kimray control valves have been designed to work with any controller that sends a pneumatic signal of 45 psig or less. The valve has a fail state reversible actuator, allowing either fail open or fail closed operation. When a pneumatic signal is sent to the linear actuator, a diaphragm actuates against a spring, opening or closing the valve. Multiple spring ranges are available to match the output range of the controller.

Seals Meet ANSI Leakage Classifications

The Kimray control valves are sealed one of two ways, metal to metal or bubble tight.

Metal to Metal - Class IV Leakage Class

At Kimray, the ball and seat are produced as a matched pair, producing a Class IV fit.

Bubble Tight - Class VI Leakage Class

The cage guided control valve has a soft seat that the piston closes against, providing a bubble tight shut off.

Trim Options

Steel Body Ductile Topworks

Components	Material Options
Body	Ductile, WCB, LCC, CF8M
Body Style	Through, Angle or 3-Way
Stuffing Box	Steel, 316SS (option)
Trim	Zirconia, 316SS6, 17-4 SS, Carbide 440C, 303 SS (standard) with a carbide ball below 1/2"
Stem Seal	Teflon and Buna, Grafoil (option), Vee
Cage	316SS, 440C
Connections	NPT, Flanged
Seat	Steel, Polyurethane, Zirconia
Springs	1" HPCV 10 1" HPCV 20 1" HPCV 30 2" HPCV 15 2" HPCV 20 2" HPCV 30 2" HPCV 45 65 Topworks

DESIGNS

1 AND 2 HPCV

STEM GUIDED HIGH PRESSURE CONTROL VALVE

The stem guided control valve is available in 1 and 2 inch line sizes and comes in both NPT and flanged connections. It is available with numerous inner valve sizes and flow characteristics, allowing the valve to be sized in the optimal control range. Trim ranges span from 1/8" to 1" inner valve size.

OPTIONS

KIMRAY PS2 BY SIEMENS

Kimray PS2 by Siemens is an electro-pneumatic positioner that offers position control of pneumatic valves. The Kimray PS2 sends a pneumatic signal to the control valve to activate the valve. The valve is then monitored by a travel detection system connected to the valve stem.

This controller can be operated either manually or electronically. It utilizes binary inputs and outputs and has multiple functions including diagnostic and blocking. The Kimray PS2 utilizes a 4 to 20 mA connection. It is available in the standard, explosion proof and stainless steel enclosures.



65 TOPWORKS, 1" & 2"

The 65 Topworks is an optional actuator that allows a wider spring adjustment range. It can be used as an actuator on the high pressure control valve or the non-freeze dump valve. It is typically used when large differentials are present in the valve, allowing the operator to adjust the amount of closing force needed.

PISTON BALANCED

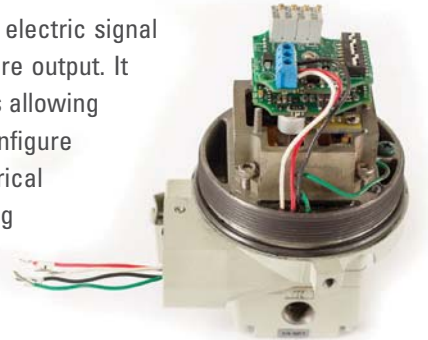
CAGE GUIDED HIGH PRESSURE CONTROL VALVE

The cage guided HPCV, often called "Piston Balanced" is balanced with the pressure under the piston "communicated" to the top of the piston, eliminating variations in force from the seat and allowing more consistent actuation pressures. Trim ranges span from 1 1/2" to 8", either at full line size or in a reduced inner valve.

Has your flow reduced through a HPCV leaving you with a larger valve than you needed? Rather than replace your valve, Kimray offers a large range of trim sizes and reduced flow ratio plugs.

I / P CONTROLLER

The I/P Controller uses an electric signal to regulate precise pressure output. It features onboard switches allowing the user to easily reconfigure the I/P for several electrical inputs, direct/reverse acting or output split-ranging high/low.



HPCV 3-WAY

The High Pressure Control Valve 3-Way provides a convenient means for diverting flow from one outlet to another. This can be used for bypass applications or as a mixing valve, combining two fluid streams and discharging them through a common outlet port. An optional "metal to metal" seat is available and recommended for high temperature.

NON-FREEZE DUMP VALVE

The Non-Freeze Dump Valve is used to discharge liquid from vessels in cases where freezing may occur due to high pressure drop. The valve is screwed into the vessel with the seat and base of the stem inside the vessel, allowing the heat from the fluid to counteract the drop in temperature when the pressure is reduced.

WHO WE ARE

Kimray is a world-class manufacturer of oil and gas control equipment based in Oklahoma City, Oklahoma, USA. Trusted for generations, Kimray has been creating simple, effective products for temperature, level, flow, and pressure control since 1948.

Kimray products are known for being reliable, easy to operate, and low maintenance. Common applications include compression, gas dehydration, gas sweetening, separation, heaters, artificial lift, gas regulation skids, measurement stations and more.

Buying from Kimray is about much more than the product. The relationships between our representatives and our customers extend from before the sale through the life of the product. Those relationships, along with quality Kimray products, are the result of a company striving for excellence for our customers, our company, and our community.



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