INTRODUCTION

Sinclair Collins has been setting the standards for control valves used in industrial processes for over 50 years. Our reputation has been built on supplying valves that work where others fail.

Sinclair Collins diaphragm-operated valves are used for automatic control of steam, raw water, hot and cold liquids, vacuum and oil in the most rugged and demanding industrial applications.

Sinclair Collins Valves can be found curing tires, making steel, handling paint products, filling hand soap containers, making cores in foundries, in industrial lubrication systems, making foam cups, in home products manufacturing and countless other industrial applications.

Valve components are machined in our own plant, giving us 100% control of mechanical properties and quality. Each valve is fully tested prior to shipment and covered by an unconditional one-year warranty.

STEAM, HOT & COLD WATER AIR & INERT GAS SERVICE

Diaphragm-operated valves are employed for directional control, mixing and diverting applications.

Sinclair Collins 500F Pressure control valves are offered in both soft and hard-seat (metal-to-metal) construction. Soft seat is a blend of PTFE with the toughness of stainless steel. Valve bodies are machined from the highest quality steam bronze with stainless steel stem and seats, spring-loaded packers and stainless steel spiral wound gaskets.

Internal areas in the valves are designed for higher Cv ratings. Higher Cv ratings offer faster recovery times for temperature and faster cycle rates.

- Exclusive swivel stem design.
- Skirted seats provide closed crossover for gradual reduction of flow prior to seating and minimal losses during cycling.
- Higher flow or Cv ratings for a given pipe size.

MODULATING CONTROL VALVES

M SERIES

Sinclair Collins Modulating Valves are a solution to temperature or pressure modulation applications. Designed for instrument air actuation, they provide variable metering for extremely accurate and consistent flow control of steam, inert gas or hot or cold liquids.

Available with bronze or stainless steel body material and hard or soft-seated trim. Three standard actuators are used for all sizes of valves, whether they are Normally Open or Normally Closed. Field reversibility can be achieved without disturbing the valve body.

- 250 PSI, 400°F 1/2" to 2" NPTF.
- Self-adjusting PTFE packers.
- 2-way, Normally Open or Normally Closed.
- 3 actuator sizes – 37, 64, and 135.
- 12 PSI control band.

STEAM, HOT & COLD LIQUIDS, AIR & INERT GAS SERVICE

Diaphragm operated valves for directional control, mixing and diverting applications.

These valves are designed for low pressure service and where compactness is desired. The stem and disc are machined from a single piece of stainless steel. Seat rings are 17-4 stainless steel for better corrosion resistance. The diaphragm actuator permits maximum rated pressure at any port with recommended actuator pressure of 35 PSI.

1/4", Model L204-0003 valves are constructed with stainless steel bodies, integral seats, and stem with soft seats of stainless steel filled PTFE. The soft seat design provides leak-free performance in the most demanding industrial applications. The packers are spring loaded for reduced maintenance and longer packer life.

The valve’s compact design is ideally suited for instrumentation protection and for 2-way and 3-way applications.

CONTROL MODULE

SERIES C500

The control module is designed to provide an interface between steam or hot water and pre-selected pilot air pressures. It is a simple air-loaded device with built-in feedback port.

The control module senses system pressure, balances that pressure against a preset air signal and reacts to open or close the modulating valve. Typical applications are tire shaping control, autoclaving, textile production, batching operations and sterilization.

Three control modules are available: Model C500-4000 produces a ratio of 1:1, Model C500-4000 produces a ratio of 1:1.7 and Model C500-4000 produces a ratio of 1:6.
HIGH PRESSURE SERVICE

4000 PSI and 6000 PSI SERIES CM

Sinclair Collins 4000 PSI and 6000 PSI high-pressure valves are available in 2-way Normally Open or Normally Closed, and 3-way types. Bodies for 6000 PSI valves are machined from aluminum bronze billets. Bodies for 4000 PSI valves are machined from high-quality ASTM-B61 bronze. Both employ a hardened stainless steel seat-sleeve construction. All ports in the seat-sleeve of 3-way valves are spaced to prevent water loss when the stem is moved from one seat to another. Because of the port spacing in the seat-sleeve, the seats are protected from the cutting action of the hydraulic medium.

- Stainless steel stem with welded hard-faced seats.
- Chrome-plated packer bearing surface for long wear.
- For raw water, oil, water and soluble oil.
- Maximum temperature: 160°F (71°C).

TWO-PRESSURE HYDRAULIC CONTROL VALVES

For raw water, oil, water and soluble oil SERIES CM

Two-Pressure Hydraulic Control Valves (4000 PSI) are widely used in press operations where low and high pressure are employed. They are designed to control two pressure systems — low pressure ranging from 75 to 1000 PSI and high pressure up to 4000 PSI. In most press operations, high-flow, low pressure is used to close the ram. As the ram closes and resistance increases in the system, the resulting low-pressure build-up moves the plunger of the high-pressure inlet “kick-in” valve introducing low-flow, high pressure for the squeeze function. An integral check valve prevents high pressure from entering the low-pressure side.

- Low pressure: 75 to 1000 PSI.
- High pressure: 4000 PSI.
- Sizes are available in 3/4", 1", 1-1/2" and 2" NPTF.
- Maximum temperature: 160°F (71°C).

PRESSURE REGULATING/PRESSURE RELIEF

For raw water, oil, water and soluble oil

Tapped 1/2", 3/4" & 1"

Both Pressure Regulating and Pressure Relief-type Valves have 4000 PSI maximum input ratings. The Pressure Regulating Valve will provide and maintain an output pressure below that of the input pressure in response to the level of the diaphragm top signal air pressure. The Pressure Relief Valve will vary the set-point at which the system pressure will be relieved depending on the magnitude of the diaphragm top signal air pressure. In this, and in the Pressure Regulating configuration, the means of adjusting the diaphragm top pressure can be a remote air pressure regulator.

PRIMARY METAL INDUSTRIES (PMI) DIRECTIONAL CONTROL VALVES

For raw water, oil, water and soluble oil

SERIES PM

Sinclair Collins 4000 to 5000 PSI, manifold-mounted, high-pressure valves are designed for applications in steel mills, petroleum and similar industries where service conditions are severe and down-time is critical. The modular design allows the same module to be used on all manifold bases for 2, 3 and 4-way operation. Pneumatically-piloted, spring return, cylinder-operated valves employ the same seat-sleeve principle and quality materials typical of Sinclair Collins high-pressure hydraulic valves. The manifolds are available with port tapping from 1/2" through 2" as well as a variety of alternate styles such as direct socket weld and SAE 4-bolt flanges.

- Stainless steel stem with welded hard-faced seats.
- Chrome-plated packer bearing hard-faced surface for long wear.
- Sizes are available in 1/2" through 2".
- Maximum temperature: 160°F (71°C).

4000 PSI CHECK VALVE

For raw water, oil, water and soluble oil

Tapped 1/2", 1", 1-1/2" & 2"

4000 PSI Check Valve contains the same parts and operates in the same manner as the low-pressure inlet portion of our two-pressure valves. As an individual check valve it provides the same reliability and performance with the utility of being able to be applied at any convenient location in a circuit where a quality, trouble-free check valve is required.