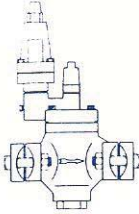


**HA4A MODULAR PRESSURE REGULATOR**

**SOME VARIATIONS OF MODULES AVAILABLE FOR HA4A SERIES**

**HA4A—INLET PRESSURE REGULATOR**

This most common refrigeration pressure regulator modulates to control evaporator pressure, condensing pressure, pressure in a vessel, or pressure in a portion of a system. Frequently called evaporator pressure regulator, EPR, or back pressure regulator. This regulator controls inlet pressure, opening on rising pressure.



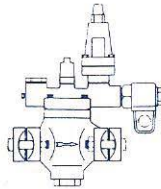
**HA4AO—OUTLET PRESSURE REGULATOR**

Controls outlet pressure by opening as downstream pressure falls below setting. Used for hot gas to control defrost supply pressure or artificial refrigeration loading, for condenser and receiver pressure control by means of gas bypass, limiting hot gas pressure to defrosting evaporator in conjunction with liquid drainage, or for compressor suction pressure limitation. Can be combined with electric shut-off or dual features.



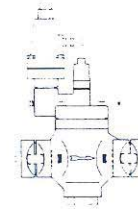
**HA4AS—REGULATOR WITH ELECTRIC SHUT-OFF**

This control is commonly used for temperature control or defrost. Regulates at its set-for inlet pressure when energized; when de-energized valve closes regardless of pressure setting.



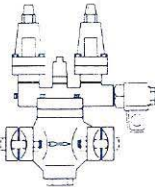
**HA4AP—PNEUMATICALLY COMPENSATED REGULATOR**

Commonly used for precise air or liquid temperature control via pneumatic controller. Air, vapor or liquid pressure signal to the regulator control module bonnet increases inlet pressure from set-for pressure values at a 1:1 ratio.



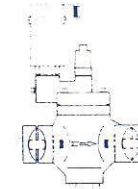
**HA4AD—REGULATOR WITH DUAL PRESSURE SETTINGS**

Regulates inlet (evaporator) pressure at a setting when energized, and at a higher setting for defrost, temperature control or pressure relief when de-energized.



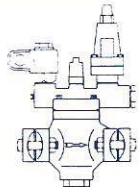
**HA4AJ—ELECTRONICALLY CONTROLLED REGULATOR**

State-of-the-art electronic pilot and controller provides very precise temperature control of various cooled media under fluctuating load conditions.



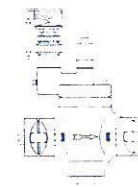
**HA4AB—REGULATOR WITH WIDE OPENING FEATURE**

Commonly regulates for defrost or temperature, but opens wide for maximum cooling. Regulating at set inlet pressure when de-energized, this control opens wide when energized.



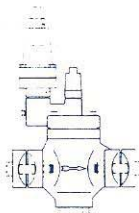
**HA4AT—TEMPERATURE COMPENSATED REGULATOR**

Vapor pressure capillary tubing and bulb system modulates regulator open as temperature increases to control air or liquid temperature.



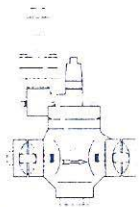
**HA4AK—RESEATING RELIEF REGULATOR**

Used for defrost, high to low side relief, or non-atmosphere relief to other parts of the system. This control opens when system upstream pressure is above the tagged and sealed set point pressure, and repeatedly reseats after operation.



**HA4AL—DIFFERENTIAL PRESSURE REGULATOR**

Used commonly as liquid pump relief, condenser-receiver pressure difference control, discharge pressure boosting for defrosting or heat recovery, and other similar applications. This control modulates to maintain the set-for difference between inlet and outlet pressure.



**NOTE:** Many other control functions can be achieved by **COMBINING** the control modules in different arrangements. Examples: dual regulator with electronic pressure controlled modules (pilot).