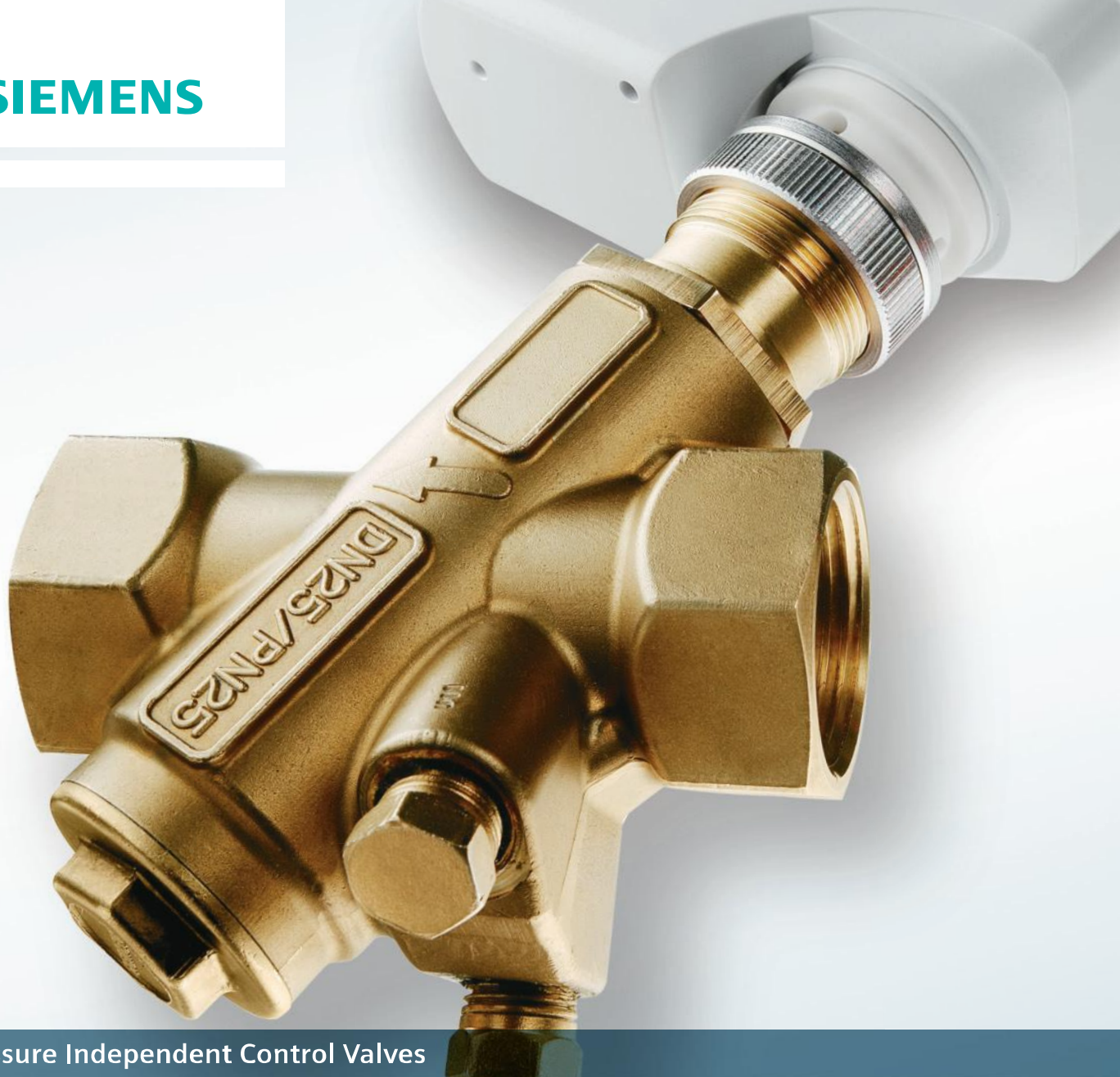


SIEMENS



Pressure Independent Control Valves

Three functions. One streamlined device.

A control valve, adjustable flow limiter, and automatic pressure regulator combine to simplify installation and commissioning.

www.usa.siemens.com/hvac

Choose a better solution

With Siemens new 2-Way Pressure Independent Control Valves you have the freedom to choose a better solution when trying to achieve hydronic balancing in room, zone and many other HVAC applications.

Uniquely designed with three functions integrated into one single device: control valve, adjustable flow limiter, and automatic pressure regulator. This 3-in-1 device improves accuracy and reliability -- regardless of pressure fluctuations. Count on them to help prolong maintenance and preserve the life of HVAC equipment, enhance room comfort and optimize energy efficiency.

The combination of control valve and differential pressure regulator in one valve simplifies installation and makes commissioning fast and easy. Pair them with trusted Siemens Electronic Valve Actuators and you have the ideal team for renovations, expansions, and new construction projects.



Comprehensive, straightforward, and convenient

Our 2-way valves feature an integrated differential pressure regulator that keeps the pressure across the internal control valve constant, while also keeping volumetric flow constant, regardless of pressure fluctuations in the hydronic system. This ensures a higher level of comfort under all operating conditions and maintains return temperatures at the right level. Now HVAC equipment, such as pumps, can work easier, generating greater savings in maintenance and repair costs while significantly reducing heating and cooling costs.

Our valve actuators feature a modular design for straightforward and consistent installations across the product offering. Our “right-from-the-box” installation philosophy helps save time and money. Known as highly dependable, these actuators are the perfect companion to our innovative valves and provide years of precise control.

FREE sizing and selection tool, SimpleSelect™

Our new Valve Sizing and Selection tool, SimpleSelect™, quickly and accurately sizes, selects, schedules and simplifies time-consuming work. The SimpleSelect tool quickly narrows your search from our entire portfolio of valves down to the products you need.

An intuitive, easy-to-use interface helps you quickly size the valve you need with menus that allow you to:

- Select type of valve from the range
- Choose the medium being controlled
- Determine the correct Cv
- Calculate pressure drop and quantity of steam

FREE factory assembly and valve tagging

Valves and valve actuators are assembled and tagged for direct delivery to any job-site, free of charge. All you have to do is specify each valve's location when placing your initial order and we will tag them before shipping to save you installation time and expense. Request this complimentary service when ordering by phone or online at usa.siemens.com/buildingtechnologiesonlineordering



Here's what makes our PICVs better:



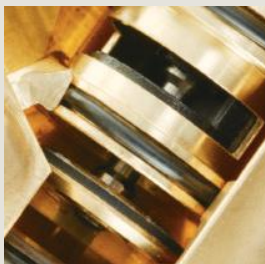
1 Valve Actuator

- Spring return and non-spring return actuators to meet most control requirements
- Visual position indication
- Manual override



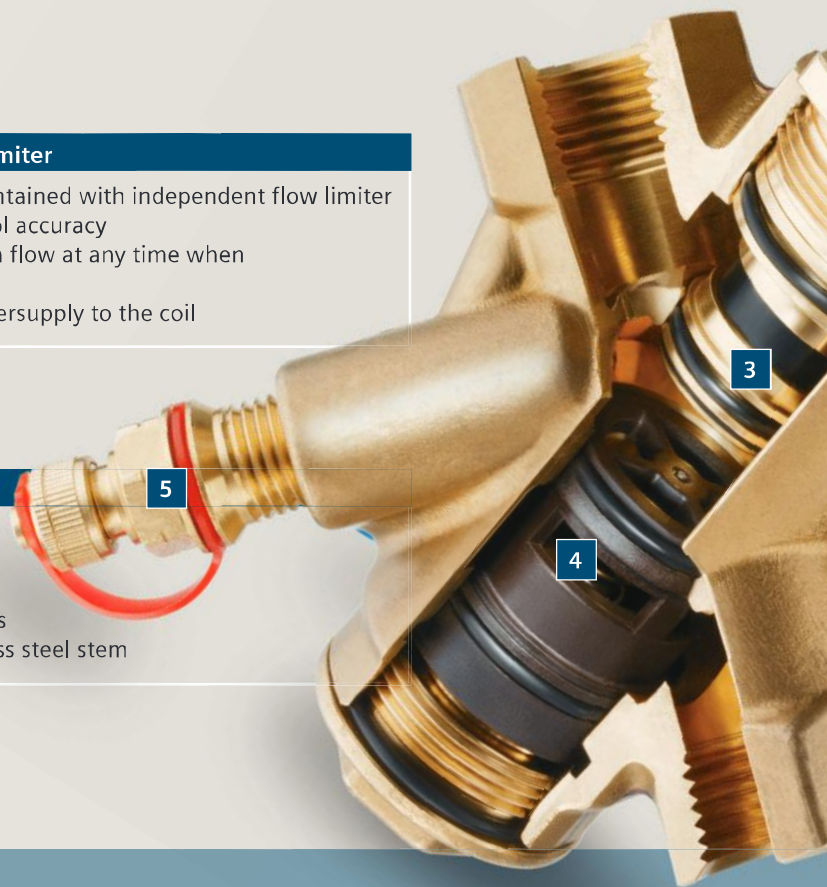
2 Field Adjustable Flow Limiter

- Full stroke always maintained with independent flow limiter enabling higher control accuracy
- Easily adjust maximum flow at any time when usage patterns change
- Presetting prevents oversupply to the coil



3 Control Valve

- ANSI 250 rating
- Low ANSI Class IV leakage on 1/2 to 1-1/4 inch valves
- Brass trim with stainless steel stem



Here's how it works:

Hot/chilled water or 50% water-glycol solutions in closed loop systems enter the valve and pass through a variable rectangular adjustable flow limiter (C) that is connected to the ring with the dial (A) for presetting the maximum volumetric flow.

The medium then flows through the temperature control valve (D) with a linear characteristic and a stroke of 5 or 6.5 mm. A powerful spring (B) ensures safe closing.

The SSD and SQD Series actuators open and accurately position the valve (not shown here).

Before leaving the valve, the medium passes through a second throttling point (E) controlled by the built-in mechanical automatic differential pressure regulator (F). *This regulator is the heart of the valve and ensures that the selected volumetric flow is maintained across the whole differential pressure working range.*



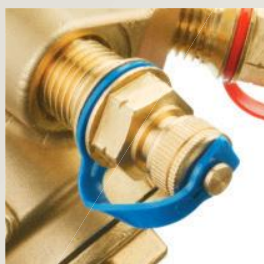
4 Automatic Differential Pressure Regulator

- Automatically adjusts to pressure fluctuations in the system, maintaining consistent flow at any given control setting, providing better comfort and lower energy consumption.
- No mutual hydronic interaction between branches with different operational situations, preventing over- or under-supply.
- Fast commissioning with extremely simplified hydronic balancing

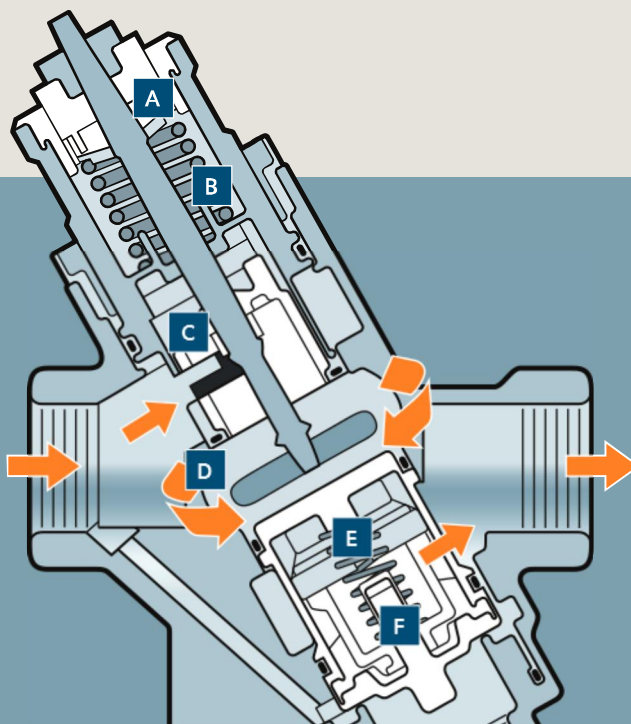


5 Optional P/T (pressure/temperature) Test Points

- Straightforward testing and setting of optimum differential pressure when commissioning
- Allow simplified troubleshooting during system operation
- P/T plug set accessory kit part number 599-10079



- A. Presetting dial
- B. Closing spring
- C. Throttling point linked to A
- D. Control seat and plug
- E. Pressure regulator's throttling point
- F. Differential pressure regulator
- Flow path



Pair Valves with Electronic Non-spring Return



SSD Series Electronic Valve Actuators are for use with 1/2-inch to 1-1/4-inch Pressure Independent Control Valves.

- Positioning force >56 lbs (250 N)
- Floating or 0 to 10 Vdc control
- Spring return and non-spring return variants
- Automatic stroke calibration on the SSD61U and SSD61.5U
- Reduced power consumption in holding position

SQD Series Valve Actuators are for use with 1-1/2-inch to 2-inch Pressure Independent Control Valves.

- Positioning force > 90 lbs (400 N)
- Floating or 0 to 10 Vdc control
- Non-spring return
- Reversible synchronous motor
- Antilocking gear train

1/2 to 3/4 Inch 2-Way Valve and Actuator Assembly Part Numbers

Valve Body			Non-spring Return Actuator		Spring Return Actuator	
Part No.	Valve Size Inch (mm)	Factory Preset Max. GPM	SSD81U Floating	SSD61U 0-10V	SSD81.5U Floating	SSD61.5U 0-10V
			Prefix Code			
			230	231	232	233
599-04300-0.5	 1/2 (15)	0.5	230-04300-0.5	231-04300-0.5	232-04300-0.5	233-04300-0.5
599-04300-1		1.0	230-04300-1	231-04300-1	232-04300-1	233-04300-1
599-04300-1.5		1.5	230-04300-1.5	231-04300-1.5	232-04300-1.5	233-04300-1.5
599-04300-2		2.0	230-04300-2	231-04300-2	232-04300-2	233-04300-2
599-04300-2.5		2.5	230-04300-2.5	231-04300-2.5	232-04300-2.5	233-04300-2.5
599-04301-3		3.0	230-04301-3	231-04301-3	232-04301-3	233-04301-3
599-04301-3.5		3.5	230-04301-3.5	231-04301-3.5	232-04301-3.5	233-04301-3.5
599-04301-4		4.0	230-04301-4	231-04301-4	232-04301-4	233-04301-4
599-04301-4.5		4.5	230-04301-4.5	231-04301-4.5	232-04301-4.5	233-04301-4.5
599-04301-5		5.0	230-04301-5	231-04301-5	232-04301-5	233-04301-5
599-04301-5.5		5.5	230-04301-5.5	231-04301-5.5	232-04301-5.5	233-04301-5.5
599-04301-6		6.0	230-04301-6	231-04301-6	232-04301-6	233-04301-6
599-04301-6.5		6.5	230-04301-6.5	231-04301-6.5	232-04301-6.5	233-04301-6.5
599-04301-7		7.0	230-04301-7	231-04301-7	232-04301-7	233-04301-7
599-04302-1	 3/4 (20)	1.0	230-04302-1	231-04302-1	232-04302-1	233-04302-1
599-04302-1.5		1.5	230-04302-1.5	231-04302-1.5	232-04302-1.5	233-04302-1.5
599-04302-2		2.0	230-04302-2	231-04302-2	232-04302-2	233-04302-2
599-04302-2.5		2.5	230-04302-2.5	231-04302-2.5	232-04302-2.5	233-04302-2.5
599-04302-3		3.0	230-04302-3	231-04302-3	232-04302-3	233-04302-3
599-04302-3.5		3.5	230-04302-3.5	231-04302-3.5	232-04302-3.5	233-04302-3.5
599-04302-4		4.0	230-04302-4	231-04302-4	232-04302-4	233-04302-4
599-04302-4.5		4.5	230-04302-4.5	231-04302-4.5	232-04302-4.5	233-04302-4.5
599-04303-5		5.0	230-04303-5	231-04303-5	232-04303-5	233-04303-5
599-04303-5.5		5.5	230-04303-5.5	231-04303-5.5	232-04303-5.5	233-04303-5.5

and Spring Return Actuators

3/4 to 1-1/4 Inch 2-Way Valve and Actuator Assembly Part Numbers

Valve Body			Non-spring Return Actuator		Spring Return Actuator	
Part No.	Valve Size Inch (mm)	Factory Preset Max. GPM	SSD81U Floating	SSD61U 0-10V	SSD81.5U Floating	SSD61.5U 0-10V
			Prefix Code			
			230	231	232	233
599-04303-6	 3/4 (20)	6.0	230-04303-6	231-04303-6	232-04303-6	233-04303-6
599-04303-6.5		6.5	230-04303-6.5	231-04303-6.5	232-04303-6.5	233-04303-6.5
599-04303-7		7.0	230-04303-7	231-04303-7	232-04303-7	233-04303-7
599-04303-7.5		7.5	230-04303-7.5	231-04303-7.5	232-04303-7.5	233-04303-7.5
599-04303-8		8.0	230-04303-8	231-04303-8	232-04303-8	233-04303-8
599-04303-8.5		8.5	230-04303-8.5	231-04303-8.5	232-04303-8.5	233-04303-8.5
599-04304-1	 1 (25)	1	230-04304-1	231-04304-1	232-04304-1	233-04304-1
599-04304-2		2	230-04304-2	231-04304-2	232-04304-2	233-04304-2
599-04304-3		3	230-04304-3	231-04304-3	232-04304-3	233-04304-3
599-04304-4		4	230-04304-4	231-04304-4	232-04304-4	233-04304-4
599-04304-5		5	230-04304-5	231-04304-5	232-04304-5	233-04304-5
599-04304-6		6	230-04304-6	231-04304-6	232-04304-6	233-04304-6
599-04304-7		7	230-04304-7	231-04304-7	232-04304-7	233-04304-7
599-04304-8		8	230-04304-8	231-04304-8	232-04304-8	233-04304-8
599-04304-9		9	230-04304-9	231-04304-9	232-04304-9	233-04304-9
599-04305-3	 1-1/4 (32)	3	230-04305-3	231-04305-3	232-04305-3	233-04305-3
599-04305-4		4	230-04305-4	231-04305-4	232-04305-4	233-04305-4
599-04305-5		5	230-04305-5	231-04305-5	232-04305-5	233-04305-5
599-04305-6		6	230-04305-6	231-04305-6	232-04305-6	233-04305-6
599-04305-7		7	230-04305-7	231-04305-7	232-04305-7	233-04305-7
599-04305-8		8	230-04305-8	231-04305-8	232-04305-8	233-04305-8
599-04305-9		9	230-04305-9	231-04305-9	232-04305-9	233-04305-9
599-04305-10		10	230-04305-10	231-04305-10	232-04305-10	233-04305-10
599-04305-11		11	230-04305-11	231-04305-11	232-04305-11	233-04305-11
599-04305-12		12	230-04305-12	231-04305-12	232-04305-12	233-04305-12
599-04305-13		13	230-04305-13	231-04305-13	232-04305-13	233-04305-13

1-1/2 and 2 Inch 2-Way Valve and Actuator Assembly Part Numbers

Valve Body			Non-spring Return Actuator	
Part No.	Valve Size Inch (mm)	Factory Preset Max. GPM	SQD85.03U Floating	SQD65U 0-10V
			Prefix Code	
			234	235
599-04306-10	 1-1/2 (40)	10	234-04306-10	235-04306-10
599-04306-15		15	234-04306-15	235-04306-15
599-04306-20		20	234-04306-20	235-04306-20
599-04306-25		25	234-04306-25	235-04306-25
599-04306-30		30	234-04306-30	235-04306-30
599-04307-15	 2 (50)	15	234-04307-15	235-04307-15
599-04307-20		20	234-04307-20	235-04307-20
599-04307-25		25	234-04307-25	235-04307-25
599-04307-30		30	234-04307-30	235-04307-30
599-04307-35		35	234-04307-35	235-04307-35

Looking for technical specifications or installation instructions?

Go to our online Webshop anytime to download and order what you need for smooth installation or servicing: Find Instructions for field mounting an actuator, wiring diagrams, and start-up.

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