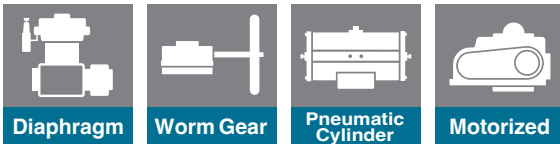
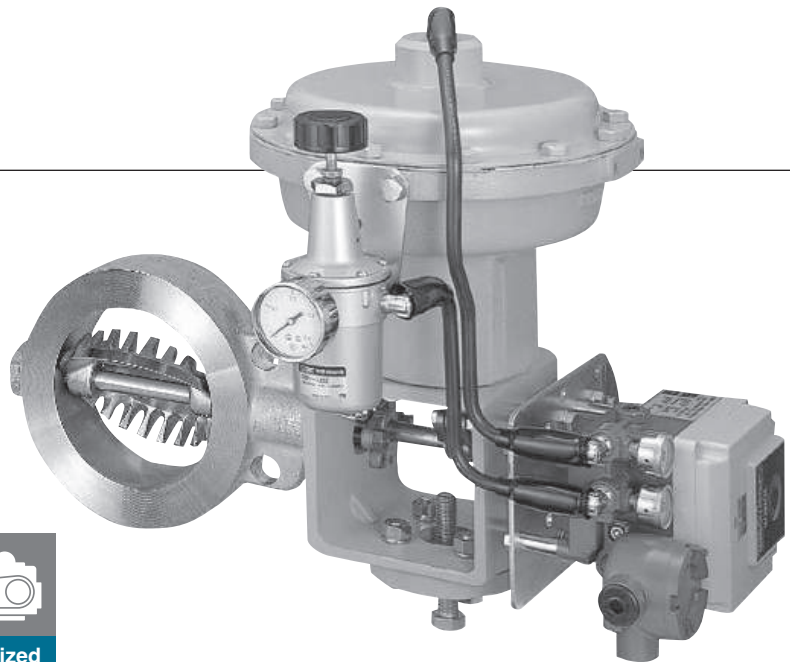


507V



Features and Benefits

For various applications such as air conditioning systems, pulp and paper mills, steel mills, chemical plants, food processing and many other process industries, the 507V rotary control valve will support your fluid control requirements.

Flexible control over a wide range

The 507V allows complete control over the full range from the open to the closed position. The valve can also handle high temperatures of up to 400 degrees C such as in steam lines and it will respond quickly and flexibly to any changes within the operating parameters of the process line. The 507V therefore is the optimum valve for any control system processing multiple products where the operating conditions change from time to time in accordance with process requirements.

Model 507V is the high temperature version of our rotary control valve designed for exclusive use in the regulation of fluids.

Cost-effective rotary control valve

In spite of its compact size and light weight, the 507V has a large valve capacity that minimises the energy loss of fluid at the fully open position.

This compact design reduces the required size of the actuator, installation space and piping supports. It also minimises vibration of control systems and increases the operating life.

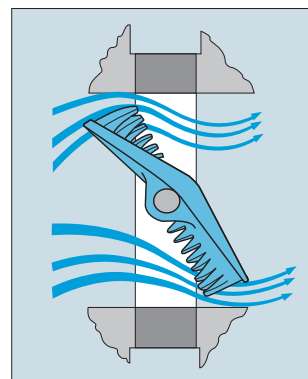
These features provide the benefit of reducing the total operating cost of your plant.

General Description

The high performance characteristics of this model originate from its unique design with a teeth and gull-wing shaped disc that touches the seat at a certain angle (Fig.1). The teeth are arranged on the circumference of the disc towards either direction of flow. The 'touch-at-an-angle' disc assists the reduction of seating and unseating torque and facilitates smooth control of the valve.

Other benefits include high rangeability, low noise level and anticavitation.

This model covers a wide temperature range in the fluid control of air conditioning systems, pulp and paper mills, chemical plants, steel mills and food processing applications.



Butterfly Valve
TRITEC
TT2
334A
344Q
302A/303Q
304A/304Q
304YA
302Y/304Y
304M (HLV)
507V/508V
DTM
846T/847T/847Q
841T/842T
700Z
700G/704G/705G
72WG/72SG/72LG
731P/732P/732Q/752W
731R
700E/700K/700S
704G/722F/720F
227P
907T/908H (MKT)
903L/901C/905C (Beta-check)

General

With guide-vane-like teeth around the disc edge, and the disc touching the seat at a certain angle, this product is a compact, lightweight and highly cost-effective, high-performance rotary control valve that exhibits outstanding control characteristics. The valve provides steady control over a wide range with higher rangeability, better cavitation resistance, lower dynamic torque, lower noise level, and a better leakage rate than any other rotary control valve.

Two models, the 507V and 508V, are available for a range of severe applications. The 507V is the optimum type for fluid control of high pressure, high temperature systems. The 508V is characterized by its rubber seat ring, and eliminates the need for any additional stop valve because of its complete sealing capability.

Fundamental Structure

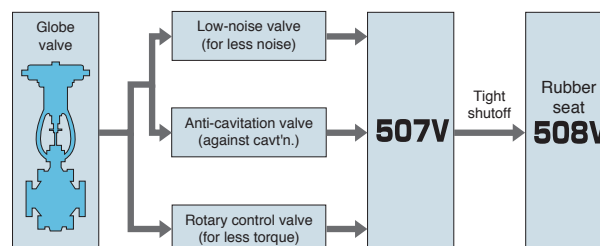
This product has two basic design features that are responsible for the outstanding performance. One is the teeth around the disc and

the other is the gull-wing-like design of the disc.

The teeth on the circumference of the disc break up the fluid energy acting on it with a resultant reduction of pressure recovery.

Unlike conventional flat discs, the gull-wing-like disc of the product touches the seat at a certain angle for reduced seating/unseating torque. This results in steady control of the valve.

Recent trend toward rotary type control valves



Standard Specifications

Product characteristics		Wafer type	
Valve size	50, 80, 100, 150, 200mm	250, 300, 350, 400mm	
Applicable flange standard	JIS 10K/16K/20K, ASME Class150/300, DIN NP10, BS 4504 PN10	JIS 10K, ASME Class150, DIN NP10, BS 4504 PN10	
Face to face dimensions	Manufacturer's standard		
Max.working pressure	Refer to "Allowable differential pressure"		
Seat leakage ※1	FCI 70-2 Class II		
Flow direction	One way (Flow direction marked on body)		
Test Pressure	Body shell	Working pressure x 1.5 times (Max 1.5Mpa)	
	Seat leak	Measure clearance between body and disc at fully closed position	
Working temperature range ※2	Cast steel	-10 to 400 degrees C Following materials are used for 200 degrees C and over; Bearings :Carbon Packing: exfoliated graphite	
	Stainless steel	-50 to 400 degrees C Following materials are used for 200 degrees C and over; Bearings :Carbon Packing: exfoliated graphite	
Standard Materials	Body	Cast steel SCPH2 (A216 WCB)	Stainless steel SCS14
	Disc ※3	Stainless steel SCS14 (A351 CF8M)	
	Stem ※4	Stainless steel SUS630 (SUS316) ※4	
	Bearings	Reinforced PTFE, Carbon graphite (200 degrees C and over)	
	Packings	Exfoliated graphite	
Rangeability	100:1		
Valve opening	Max. 70°		
Flow characteristics	Equal percent		
Top flange	Manufacturer's standard		
Piping flange gasket	Required		
Coating	Silicon resin coating (Grey N7) for 200 degrees C or lower. Heat resistant silver coating for over 200 degrees C. No painting for stainless steel.		

※1 The disc is gull wing shaped and touches the metal seat at an angle. This design minimises leakage to a level less than 0.5% of the rated Cv which is equal to or lower than the leakage permitted on a double-seat globe control valve.

※2 Please consult us if the application is in the range of 400 to 600 degrees C.

※3 The disc is electroless plated with nickel.

※4 Please consult us if an SUS316 stem is required.

507V Seat leakage

■ FCI 70-2, under Class II (Cv rating 0.5%)

Nominal size		% of Max.Cv
mm	inch	
50	2	0.5
80	3	0.5
100	4	0.5
150	6	0.5
200	8	0.5
250	10	0.5
300	12	0.5
350	14	0.5
400	16	0.5