PROTEK
Processteknik GH AB

TOMOE

General purpose high temperature and high pressure service valves

302Y

304Y

Features and benefits

Ideal shut-off with new stopper mechanism. Two types of seat – metal and Teflon – for optimum performance in your application.

New Stopper Device (Japan Patent NO. 1769954)

For the 40 to 300mm models, automatic aligning and disc overrun prevention are ensured by the special spherical design of the inner surface of the body disc hub edge. Disc overrun is prevented by a protrusion on the inner surface of the body.

Double eccentric structure

The disc is rotated easily by minimal torque and unseats after turning only a small angle. Moreover, seat abrasion is prevented for a long life of reliable sealing.

Thin disc with a rigid construction

The disc is thin but ribbed for extra rigidity. The disc reduces thermal expansion and provides consistent sealing even in changing temperature or pressure situations.

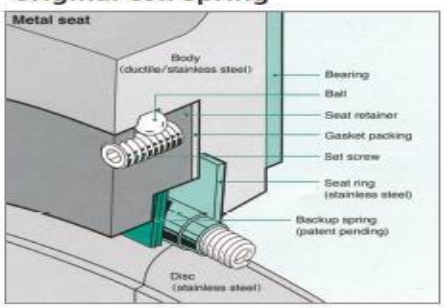
Seal the flow from both directions

Seals flow in both directions. Valve can be used as is, even if the flow changes direction. (There are pressure limitations for each direction of flow. See Pressure-temperature leakage chart for recommended specifications.)

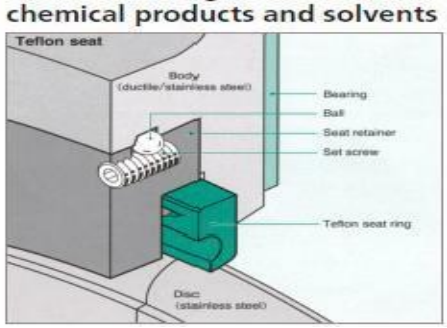
Easy replacement of the seat ring

The ball lock method is used to simplify replacement of the seat ring.

302Y
Resilient metal seat ring with original coil spring



304Y
Teflon seat ring is inert to most chemical products and solvents



TOMOE

302Y 304Y

General Description

The 300 series is optimal for applications that cannot be handled by valves with rubber seats because of the temperature, pressure, fluid velocity or fluid itself. Two types are available: the 302Y with a metal seat for steam line applications and the 304Y with a Teflon seat for chemical line applications.

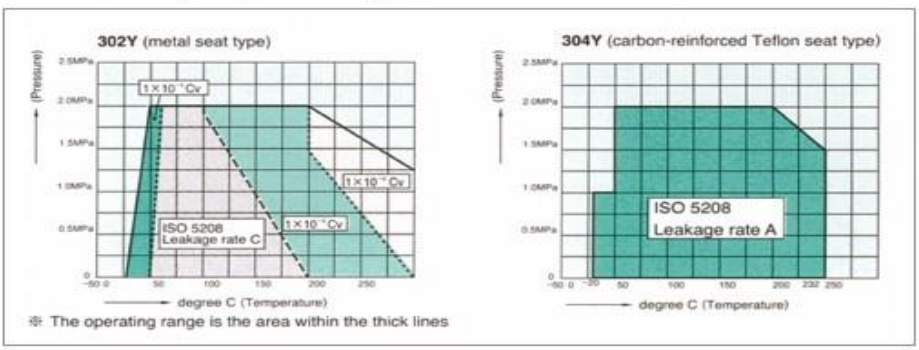
Standard Specification

Valve type		302Y	304Y
Seat type		Metal seat type	Teflon seat type
Valve nominal size #1		40mm to 300mm	40mm to 300mm
Applicable flange standard		JIS 50K/10K/16K/20K, ANSI 150lb, BS10 Table E/F, BS4504, PN 6/10/16, DIN NP 6/10/16 etc	
Face-to-face dimensions		JIS B 2002 (46 series) / ISO 5752 (20 series)	
Actuator mounting flange		ISO 5211	
Pressure rating		ANSI (B16.34, B16.42) Class 150 lb	
Max. working pressure #2		2.0MPa (250, 300mm: 1.6MPa)	2.0 MPa
Body shell test		Max. 3.0MPa	
Seat leak test		Max. 2.2MPa	
Flow direction		On the valve disc side: 2.0MPa On the valve stem side: 1.0MPa The max. pressure on the valve disc side for 250mm and 300mm valves is 1.6MPa	Bi-directional On the valve disc side: 2.0MPa
Seat leakage		ISO 5208 leakage rate C	ISO 5208 leakage rate A (tight shut-off)
Working temperature range #2		-20 to 250 degrees C	-20 to 200 degrees C
Standard materials	**Body #3**	FCD450 (Tufftride treated) OR SCS13A	
	Disc	SCS13A (HdCr plating)	
	Stem	SUS420J2 or SUS3291J1	
	Seat ring	SUS316	RPTFE (with carbon graphite) or the optional specification PFA + PTFE (white)
	Gland packing	Teflon with carbon graphite	
Bonnet type		Open bonnet	
Actuators	**Lock lever**	40 to 150mm #2	
	Worm gear	40 to 300mm #2	
	Pneumatic cylinder	40 to 300mm #2	
	Motorised	40 to 300mm #2	
Coating		Under 200 degrees C: Modified silicon resin coating (Munsell N7). Over 200 degrees C (Heat resistant paint – silver)	

#1 Please use 302AS or 304A if using a nominal valve diameter of 80 to 600mm.
#2 Please refer to the pressure-temperature rating chart.
#3 For the 40mm size, only SCS13 is available for the body material

Teflon is a registered trademark for a fluoride resin produce by Mitsui-DuPont Fluorochemical Co.Ltd.

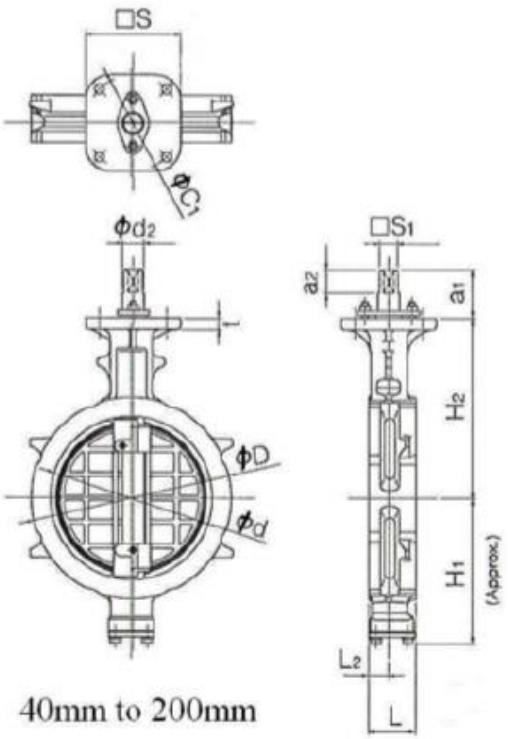
Pressure/temperature leakage chart



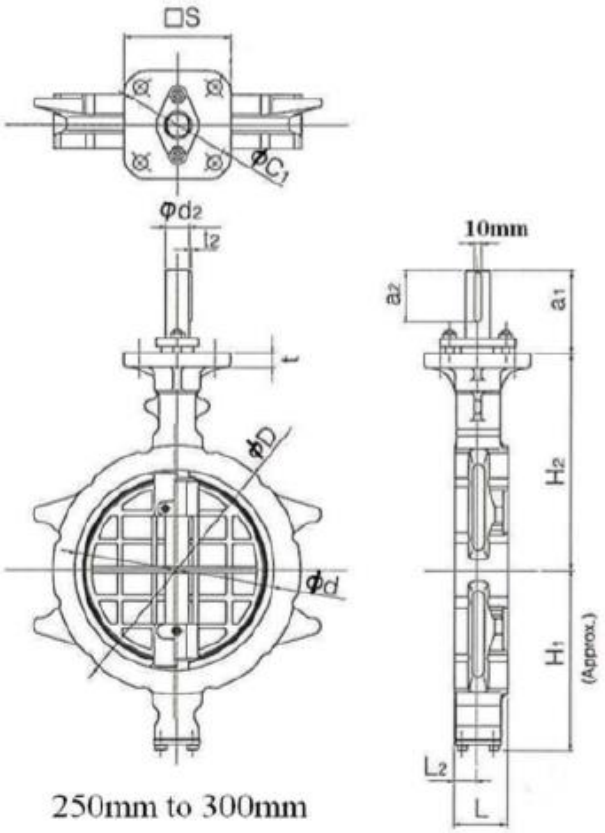
❄ The operating range is the area within the thick lines

304Y Valve Dimensions

Nominal Size		Dimensions														Approx Weight (Kg)
mm	inch	Ød	ØD	L	L2	H1	H2	a1	a2	□S1	Ød2	t	t2	□S	ØC1	
40	1.1/2	48	81	33	15	64	118	47.5	11.5	8	10	12	-	70	70	2.1
50	2	60	97	43	21	74	125	47.5	11.5	10	12	12	-	70	70	2.5
65	2.1/2	74	117	46	22	85	138	47.5	11.5	12	14	12	-	70	70	3.6
80	3	89	127	46	21	95	147	52.5	16.5	14	16	15	-	102	102	4.7
100	4	112	152	52	22	110	170	52.5	16.5	14	16	15	-	102	102	5.7
125	5	137	183	56	24	139	185	52.5	16.5	16	20	15	-	102	102	8.8
150	6	163	213	57	23	164	205	55.5	20	18	22	15	-	125	125	12
200	8	213	263	62	26	190	235	63.0	30	24	28	15	-	125	125	18
250	10	263	325	70	30	236	283	108	67	-	32	18	3	140	140	32
300	12	315	368	80	34	246	310	113	72	-	35	18	3	140	140	39



40mm to 200mm



250mm to 300mm