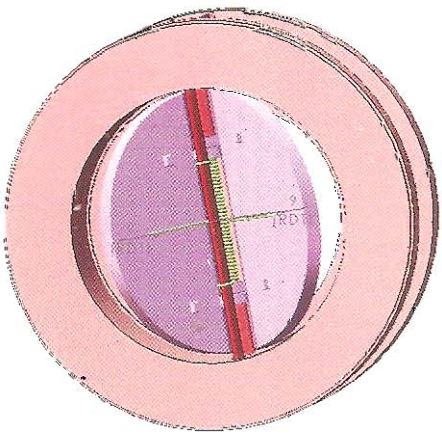
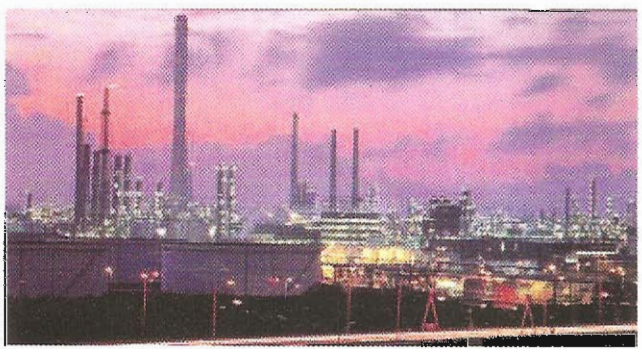
Chemtrols-Samil

DUAL PLATE CHECK VALVES





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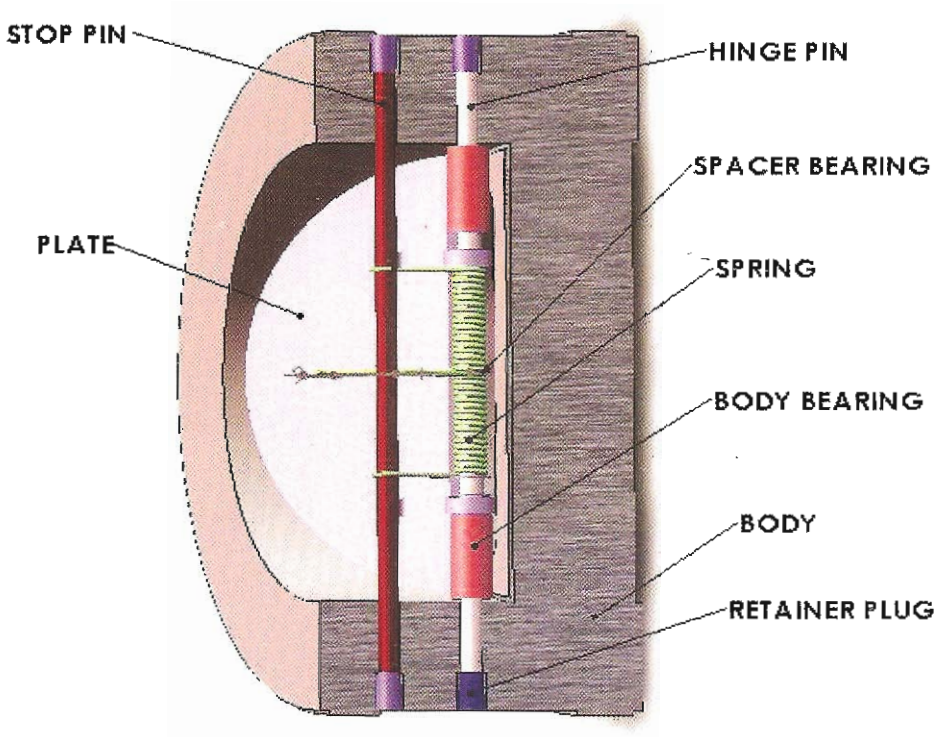

Dual Plate Check valves salient features

- Most cost effective
- Reduced weight compared conventional check valve
- Over all size much less to conventional valves
- Straight flow pattern
- Low pressure drop(high Cv/Kv values)
- Spring assisted closing instead of gravity dependent
- A truly zero velocity valve
- Very low crack opening pressure
- Versatile mounting possibilities including vertical up pipe lines
- Non slamming characteristic upto reverse flow velocity of 0.3 M/sec and deacceleration rate upto 9.8 M/sec2
- Functions as anti surge protection device in rising mains

Flow factor Kv
(125#.150#.300#)

VALVE SIZE	Kv
40	20
50	50
80	125
100	225
150	735
200	1050
250	2260
300	3200
350	4500
400	6800
450	8800
500	12000
600	22000

Selection and installation notes and precautions

- These valves are not recommended for pulsating flow application like out let of reciprocating machines
- Consult Chemtrols Samil in case the intended usage is air and gaseous media
- Valve sizing shall be based on normal water velocity of around 3 M/sec for optimum performance
- The piping design shall ensure uniform velocity across the full valve cross section
- Avoid installation of DPCV in close proximity of other valve, eccentric and concentric reducers, pump outlet, elbows and tees. Refer installation guide lines
- Consult Chemtrols Samil for installation in vertical pipe line with down ward flow
- Install DPCV in Horizontal pipe line with hinge pin vertical

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Chemtrols Samil Dual plate check valves are manufactured

- At an ISO 9000 accredited facility
- Comply with API 594 type A . Type B as optional
- Tested as per API 598, other Standards as an option
- Valves in Wafer, Lugged, and double flanged available as standard
- Valves in sizes range DN 50(2") to DN 600(24") as standard, Size upto DN1000(40")as special
- Pressure Temperature Rating ANSI 125 to ANSI 1500
- Retainer Less design offered as optional to comply with fugitive emission requirements
- Valves offered in soft seated, and metal to metal seating
- Metal seated valves and soft seated valves are of fire safe design
- Valves with body lining and cladding as optional
- Independent springs for each plate
- Spring acting on plate at mid plane ensuring uniform movement
- The spring are guaranteed for minimum 1 lakh cycles (design basis 1-10 lakh Cycles)
- Valve crack opening pressure less than 15 milli bar (0.2 psi) and critical velocity 3 M/sec,
- Special spring for different crack openings pressure and critical velocity available
- Independent plate suspension for valve sizes above DN 300(12")
- Scrub Free opening and closing of plate
- Hub ended valves , Butt weld end valve and Extended length valves available as optional
- Can offer valves complying with API 6A and 6D
- Valves designs developed using latest 3Dmodelling software
- Structural and fluid flow analysis carried out using latest FEA And CFD soft wares
- Valves for low temperature and cryogenic applications

APPLICATIONS

Power Generation Steam Condensate Boiler Feed Pumps Cooling Towers Service Water Recirculators River Water Intake	**Steel/Primary Metals** Quench Lines De-Scaling Continuous Casters Steam Condensate Strippers Electro-Galvanizing	**Marine** Oil Tankers Tanker Loading Terminals Offshore Platforms Sub-Sea Manifolds Terminal Transfer Lines Barge Unloading Lines Shipboard Services	**Water and Wastewater** Distribution Lines Pumping Stations Sewage Plant Blower Discharge Chemical Treatment Fire Protection Systems HVAC Systems
Petroleum Refining Hydrogen service Hydro cracking Steam Crude Oil Gasoline Visbreakers Naptha Sulfur recovery	**Chemicals** Chlorine Phosgene Aromatics Polymers Acids Air Separation Caustics	**Oil and Gas Production** Centrifugal Compressor Discharge Fire Water Lines Oil/Steam Separation Steam and CO_2 Injection Water injection plat forms Gas/Oil Gathering Systems Flowlines Wellheads	**Pulp and Paper** Bleaching Lines Black Liquor Green Liquor White Water Steam Chemical Recovery
Petrochemicals Ethylene Propylene Steam Reboilers Gases			

Material of construction of body and plate

CAST IRON,SG IRON, AUSTENETIC DUCTILE IRON (VALVE BODY ONLY)
WCB,LCB,LCC,WC6,WC9
CA 15,CA6NM
CF8,CF8M,CF3,CF3M
DUPLEX ,SUPER DUPLEX
MONEL
ALUMINIUM BRONZE
HASTELLOY
ALLOY 20

Material of construction Spring and Temperature limitation

SS 316	-196 to 120 Deg C
INCONAL 750	-196 to 550 Deg C
INCONEL 625	-196 to 340 Deg C
INCONEL 718	-196 to 550 Deg C

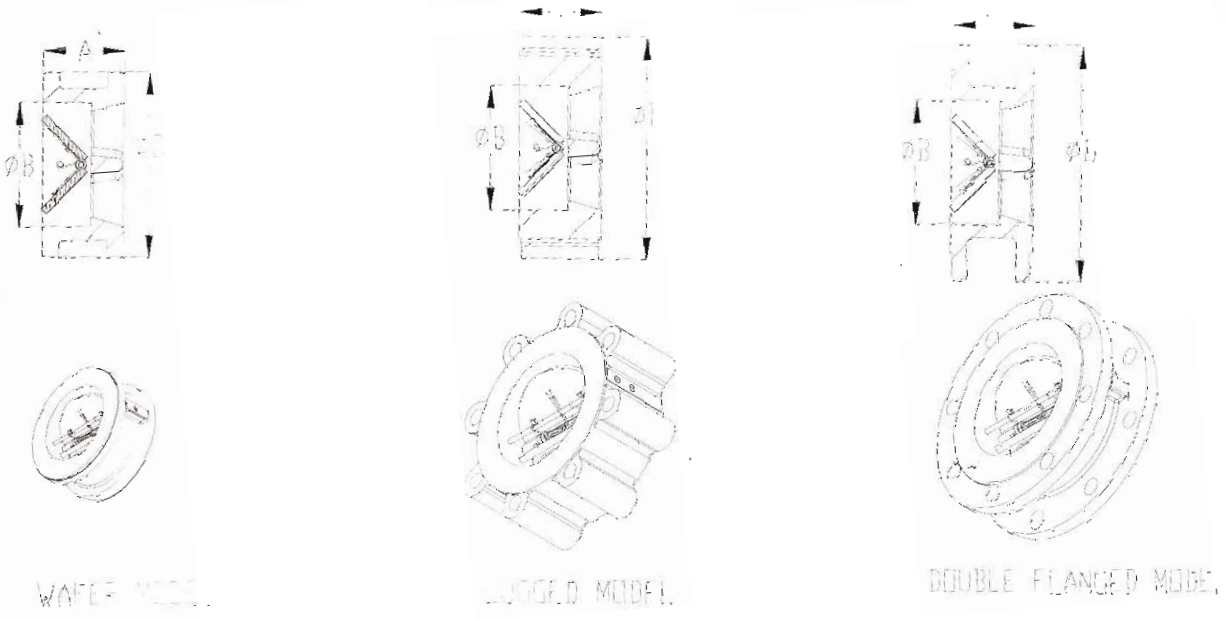
Material of soft seats and soft lining and temperature limitation

Body seat or lining	Plate seat	Min Temp	Max Temp
EPDM	Virgin plate material or Weld overlay	-50 Deg C	120 deg C
BUNA N	Virgin plate material or Weld overlay	-50Deg C	120 deg C
VITON A/ VITON B	Virgin plate material or Weld overlay	-40Deg C	204 deg C

Welded seat over lay on Body and Plate (Except for CI,SG Iron, Aust.Ductile Iron, Al.Bronze) (Note Depends on weldability with Parent Material)

13% Cr overlay
SS 304 Overlay
SS 316 Overlay
Stellite 6
INCONEL 625

NOTE:- The overall temperature limitation of the valve will be based on ANSI B16.34 and limited by the Spring material temperature limitation and the soft seat or body lining material temperature limitation



SIZE	RATING	A	B	C	D
40(1.5")	150	54	40	82	NA
	300	54	40	91	NA
50(2")	125#	54	54	101	NA
	150#	60	54	101	NA
	300#	60	54	107	NA
	600#	60	54	107	NA
	900#	70	47.5	140	NA
	1500#	70	47.5	140	NA
65(2.5")	125#	60	62	120	NA
	150#	67	62	120	NA
	300#	67	62	127	NA
	600#	67	62	127	NA
	900#	83	57	162	NA
	1500#	83	57	162	NA
80(3")	125#	67	78	133	NA
	150#	73	78	133	NA
	300#	73	78	145	NA
	600#	73	73	145	NA
	900#	83	73	165	NA
	1500#	83	70	171	NA
100(4")	125#	67	97	171	NA
	150#	73	97	171	NA
	300#	73	97	177	NA
	600#	79	97	190	NA
	900#	102	97	203	NA
	1500#	102	92	206	NA
150(6")	125#	95	152	218	NA
	150#	98	152	218	NA
	300#	98	152	247	NA
	600#	136	152	263	NA
	900#	159	146	285	NA
	1500#	159	136	279	NA
200(8")	125#	127	203	276	343
	150#	127	203	276	343
	300#	127	203	304	NA
	600#	165	200	317	NA
	900#	206	190	355	NA
	1500#	206	177	380	NA

SIZE	RATING	A	B	C	D
250(10")	125#	140	254	335	407
	150#	146	254	335	407
	300#	146	254	358	NA
	600#	213	247	396	508
	900#	241	238	431	546
	1500#	248	222	431	NA
300(12")	125#	181	305	406	483
	150#	181	305	406	483
	300#	181	305	419	521
	600#	229	298	453	559
	900#	292	282	495	610
	1500#	305	263	518	NA
350(14")	125#	184	336	447	534
	150#	184	336	447	534
	300#	222	333	482	585
	600#	273	326	488	604
	900#	356	311	517	642
400(16")	125#	191	387	511	597
	150#	191	387	511	597
	300#	232	387	536	648
	600#	305	362	562	686
	900#	384	355	584	705
450(18")	125#	203	438	546	635
	150#	203	438	546	635
	300#	264	432	593	712
	600#	362	419	609	743
500(20")	125#	213	489	603	699
	150#	219	489	603	699
	300#	292	482	650	775
	600#	368	463	679	813
600(24")	125#	222	590	714	813
	150#	222	590	714	813
	300#	318	584	771	915
	600#	438	558	791	939

NA = NOT AVAILABLE IN DOUBLE FLANGED DUE TO SPACE LIMITATION