

Butterfly Control Valve

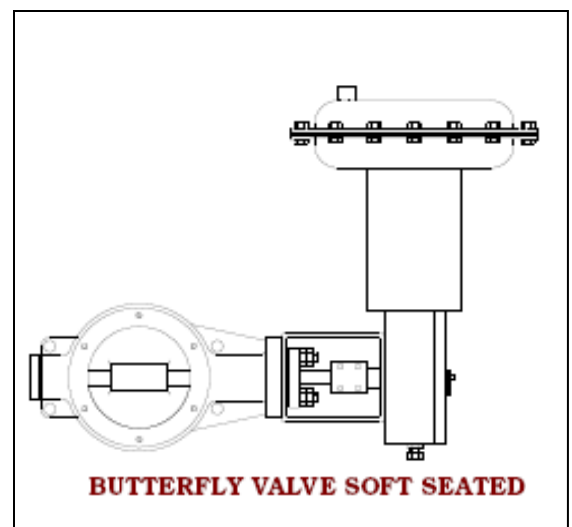
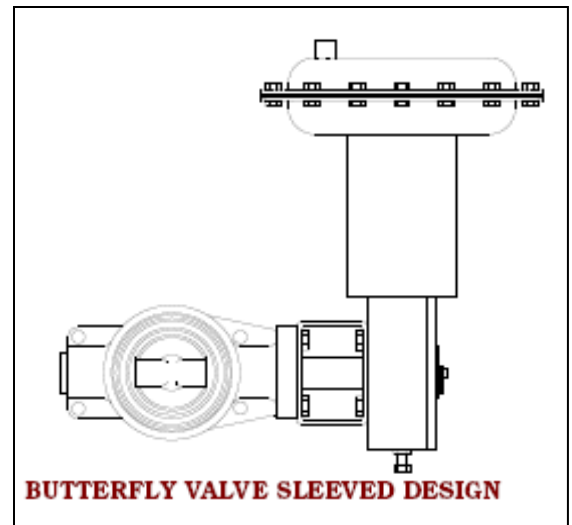
INTRODUCTION

Butterfly Valve design is the most common type of rotary valve and provides low weight to Cv Ratio combined with simplicity of design and comparatively low cost. It is simple device to control or block the flow, a single vane or wafer disc pivots in the valve body and find wide application for throttling or two position control in the chemical, paper & pulp, sugar industries, cooling water circulation, water treatment plants, compressed air, gas plant, flue gas desulphurization plants etc.

Butterfly Valves have been around industry for decades, performing well defined tasks and are Economic alternative to Gate valve, Ball valve, Plug valve etc.

SPECIFICATIONS

DESIGN	: Wafer
SIZE	: 50 to 900 mm (2" to 36")
RATING	: 150 ANSI
FLOW Characteristic.	: Throttling, On-Off.
MATERIAL	
Body	: Cast Iron, Carbon Steel, Stainless Steel etc.
Vane	: Stainless Steel.
Body Sleeve	: Neoprene, Nitrile, Teflon, EPDM, Silicon, Butyl, Viton etc.
Soft Seat	: Teflon.
Gland Packing	: PTFE V Rings upto 180° C Grafoil upto 400° C.
ACTUATOR TYPE	: Diaphragm, Rotary, Piston, Electric
DIAPHRAGM	: Nitrile / Neoprene.
SPRING RANGE	: 3 - 15 Pstg (0.2 - 1.0 Kg/cm ²) : 6 - 30 Pstg (0.4 - 2.0 Kg/cm ²)
AIR SUPPLY	: 20 - 35 Pstg (1.4 - 2.5 Kg/cm ²)
AIR CONNECTION	: 1/ 4" or 1/ 2" NPT
ACCESSORIES OPTIONAL	: Valve Positioner - Pneumatic, Electro Pneumatic, Airset, Solenoid Valve, Air Lock, Volume Booster, I/P Converter, Position Transmitter, Limit - Proximity Switches etc. Top or Side Mounted Handwheel



Butterfly Control Valve

DESIGN FEATURES

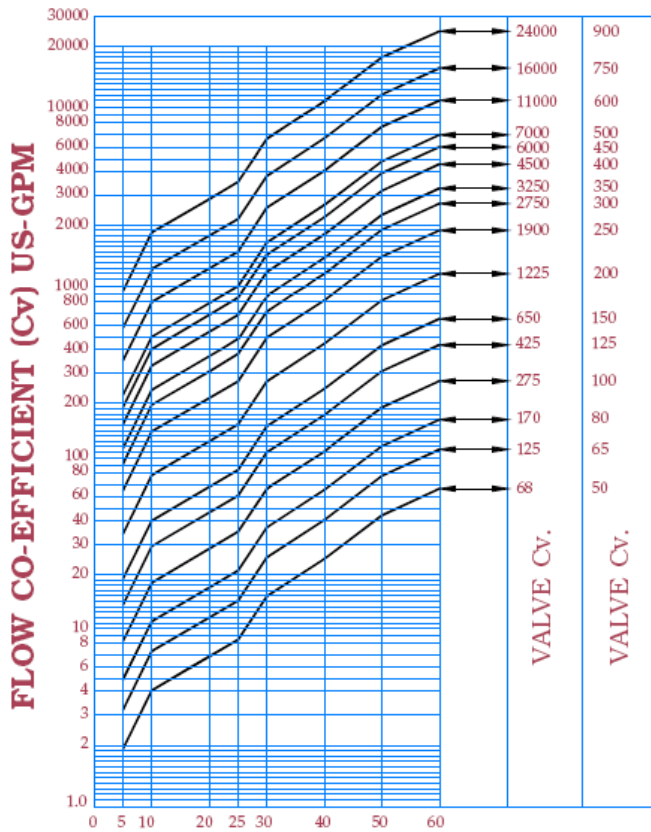
- Compact & simple design, low cost and maintenance free.
- Very high Cv to body size ratio.
- Reliable smooth operation and flow control with assured product quality.
- Bubble tight shut off, leakage Class - VI.
- Rangeability of 33:1 in the control range.
- Flow characteristic throttling for modulating duty.
- Replaceable elastomer liner.

VALVE SIZING CO-EFFICIENT Cv RATING

SIZE (mm)		50	65	80	100	125	150	200	250	300	350	400	450	500	600	750	900
Cv AT FULL BORE	60°	68	125	170	275	425	650	1225	1900	2750	3250	4500	6000	7000	11000	16000	24000
	90°	136	250	340	550	850	1300	2450	3800	5500	6500	9000	12000	14000	22000	32000	48000

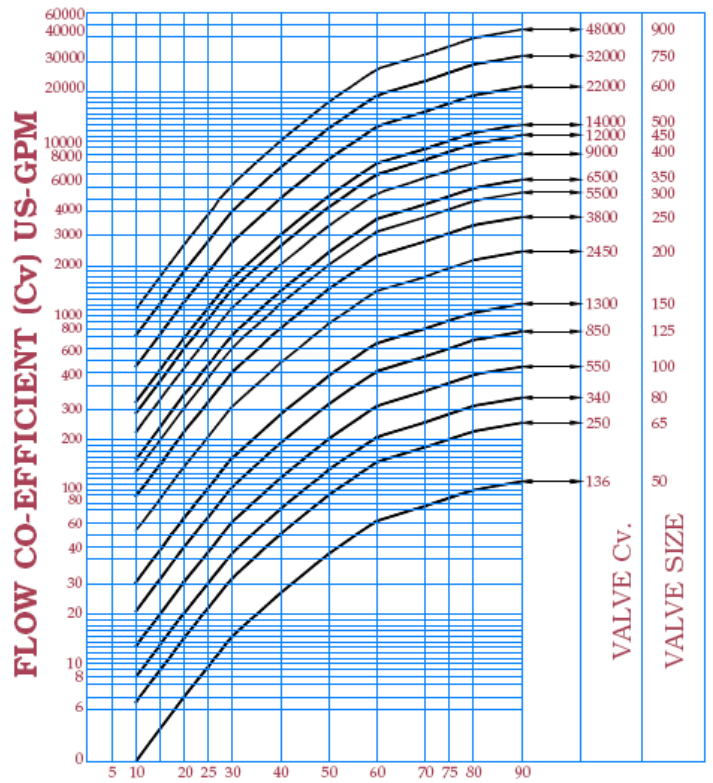
DEGREE OF OPENING Vs PERCENT OF FLOW

60° OF OPENING



DEGREE VALVE OPENING

90° OF OPENING



DEGREE VALVE OPENING

Butterfly Control Valve

TEMPERATURE RATINGS FOR UNLINED BUTTERFLY VALVES

BODY MATERIAL	USEFUL TEMPERATURE RATING
Cast Iron (A – 126 Class B)	-25° to 200°C
Steel (Carbon Steel, WCB - 28°C, LCB -45°C)	-25° to 400°C
Stainless Steel (CF8, CF8M)	-250° to 830°C

TEMPERATURE RATING FOR SLEEVED BUTTERFLY VALVES

ELASTOMER	TEMPERATURE LIMITS (°C)		SERVICE
	LOW LIMIT	HIGH LIMIT	
Natural Rubber	-28	70	Air, Water.
Neoprene	-17	80	Air, Water, Freon 12, 114.
Nitrile (Buna N, Hycar)	-12	80	Freon 11, 12, 13, Air, Water, Alcohols, Aromatic hydrocarbon.
Hypalon	-9	105	Acids, Alkalis.
EDPM	-35	120	Acids, Alkalis, Steam.
Butyl	-23	150	Acids, Alkalis, Steam, Alcohols.
Viton	-6	200	Aromatic, Degresed, High Temp, Air and Gas.
Silicon	-60	225	High Temperature Air.