FOUROKM
515A
BUTTERFLY VALVES

FOURESS ENGINEERING (INDIA) LTD.
Under Licensed Collaboration With :
Okumura Engineering Corp., Japan

BUTTERFLY VALVE

FOUROKM unique seat sealing design offers no frictional contact between valve disc and seat:

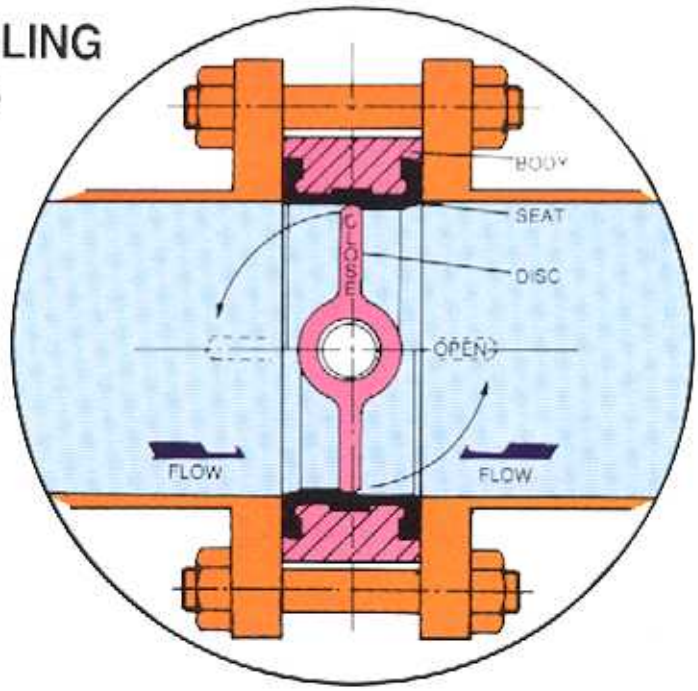
- **Zero leakage, tight shut off**
- **Lower torque**

This Model 515A butterfly valve excels other conventional valves such as gate valve and globe valve in all aspects, especially in terms of light weight (1/3-1/5 of conventional valves), less number of component parts, no flange gaskets required and economical operation and maintenance costs.

The valve seat is constructed by a strong replaceable synthetic rubber. FOUROKM'S own seating mechanism of pressure-touch system offer a very low torque, tight shut-off with no leakage, compact actuator selection, long life service.

This valve is used successfully in a wide variety of application such as industrial plants, shipbuilding, air conditioning of building, fire alarm system, water treatment and so on.

VALVE SEAT SEALING STRUCTURE AND FEATURES



1. Lower torque

There is no frictional contact between disc and rubber seat, which makes frictional resistance almost close to zero, thus markedly reducing operating torque.

2. Low torque with any fluid

There is no point at which frictional resistance occurs. Therefore, torque is always low, regardless of the fluid, air, water or oil.

3. Longer service life

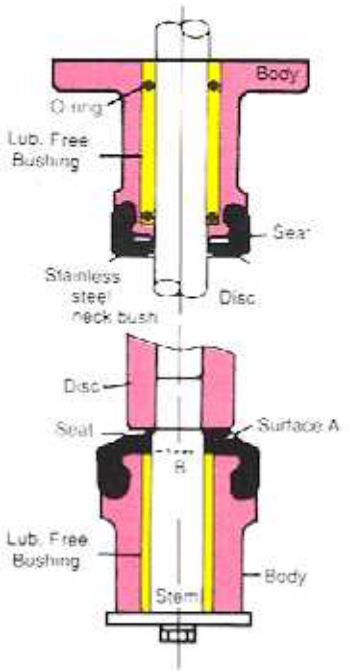
When the disc contacts the tapered projection of the rubber seat, a complete seal is attained which results in longer service life.

4. Greater sealing capacity

When the disc is pressed against the projection on the valve seat, the fully closed position becomes 90° + α to attain a more complete seal.

5. No leakage at a pressure of 10 Kg/Cm²

Is the disc sealed completely when it contacts the rubber seat? There is no need to be concerned about that. In lever handle valve, the lever stopper fixes the disc. Gear-operated valves employ worm gears. Therefore, there is no need to worry on this point.



- **Triple seal against external leakage**

The first seal is applied across the surface A of disc and seat ring, the second across the surface B of seat ring and stem. The O-ring also serves as a seal across stem and duracon bushing. Thus, the triple seal completely prevents external leakage.

- **Smooth flow**

The valve disc and stem are jointed by male and female serrations (50-350 mm). They have no protruding surface on disc, such as pins or screws. Valve shape, thus designed in conformity with fluid dynamics, hinders any problems due to fluid resistance.

- **Smoothest opening / closing operation in the world**

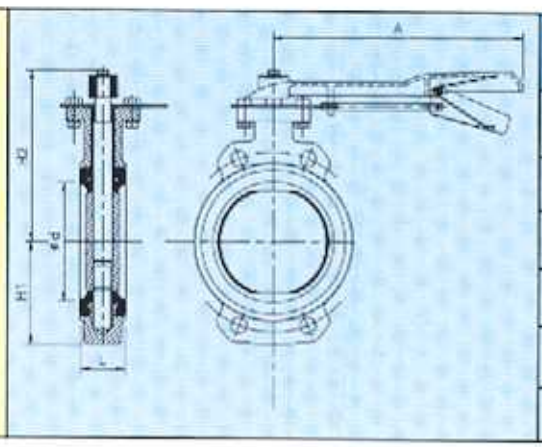
Unique valve seat sealing structure permits lower stem torque than that of any other conventional butterfly valve and compact and lightweight cylinder, motor, and gear driving portions, resulting in an energy-saving and cost-efficient butterfly valve.

As shown in the drawing, surfaces A & B are double sealed to prevent external leakage. In 8 inch and larger sizes, the bottom cover provided completely eliminates such leakage.

STANDARD SPECIFICATIONS

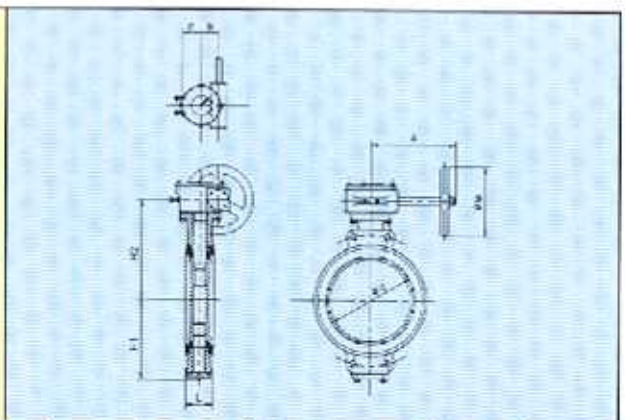
APPLICABLE FLANGES	JIS 5 Kg / Cm², 10 Kg/Cm², BS / DIN / ISO-PN6 / PN10, ANSI 125lb/150 lb
MAX. SERVICE PRESSURE	10 Kg / Cm²
SERVICE TEMPERATURE	NBR (-10°C to + 80°C), EPDM (-20°C to 120°C)
HYDROSTATIC TEST PRESSURE	Shell test at 20 Kg/Cm²; Seat at 12 Kg/Cm²
STANDARD MATERIAL	Body (BS 1452 GR FG 260 / ASTM A 126 Cl.B / IS 210 GR. FG 260; ASTM A 216 GR WCB) Seal (NBR, EPDM) Disc (BS 2789 GR. 500 / 7 / ASTM A 536 GR 65-45-12 / IS 1865 GR FG 500/ 7: ASTM A 351 GR CF8 / CF8M)

MODEL 515A WITH 10-POSITION LOCK LEVER



SIZE (mm)	d (mm)	L (mm)	H_1 (mm)	H_2 (mm)	A (mm)	Weight (Kgs.)
50	57	43	63	151	230	2.9
65	70	45	70	161	230	3.5
80	82	46	92	171	230	6.0
100	104	50	103	197	300	8.2
125	127	55	125	212	300	11.3
150	150	60	137	227	300	13.7

MODEL 515A WITH WORM GEAR



VALVE SIZE (mm)	d (mm)	L (mm)	H_1 (mm)	H_2 (mm)	A (mm)	B (mm)	C (mm)	W (mm)	Weight (Kgs.)
50	57	43	63	145	164	41	47	125	6.7
65	70	45	70	155	164	41	47	125	7.3
80	82	46	92	165	164	41	47	125	9.8
100	104	50	103	180	164	41	47	125	12
125	127	55	125	195	194	41	47	160	15
150	150	60	137	210	194	41	47	160	17
200	194	65	192	250	247	64	69	200	28
250	247	80	229	285	247	64	69	200	39
300	294	90	264	325	282	64	69	200	52
350	332	100	289	350	317	64	69	315	65
400	387	110	315	408	363	91	98	315	104
450	436	120	348	433	363	91	98	400	140
500	488	140	377	473	363	91	98	450	172
550	535	150	427	503	448	91	98	500	207
600	585	160	432	528	448	91	98	500	238

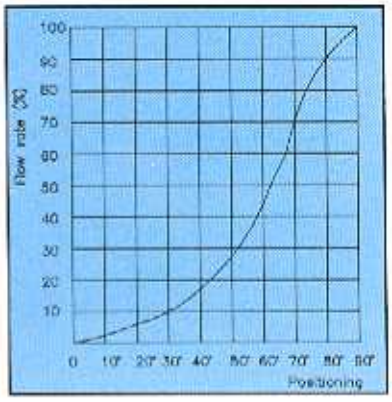
MODEL 515A WITH PNEUMATIC ACTUATION

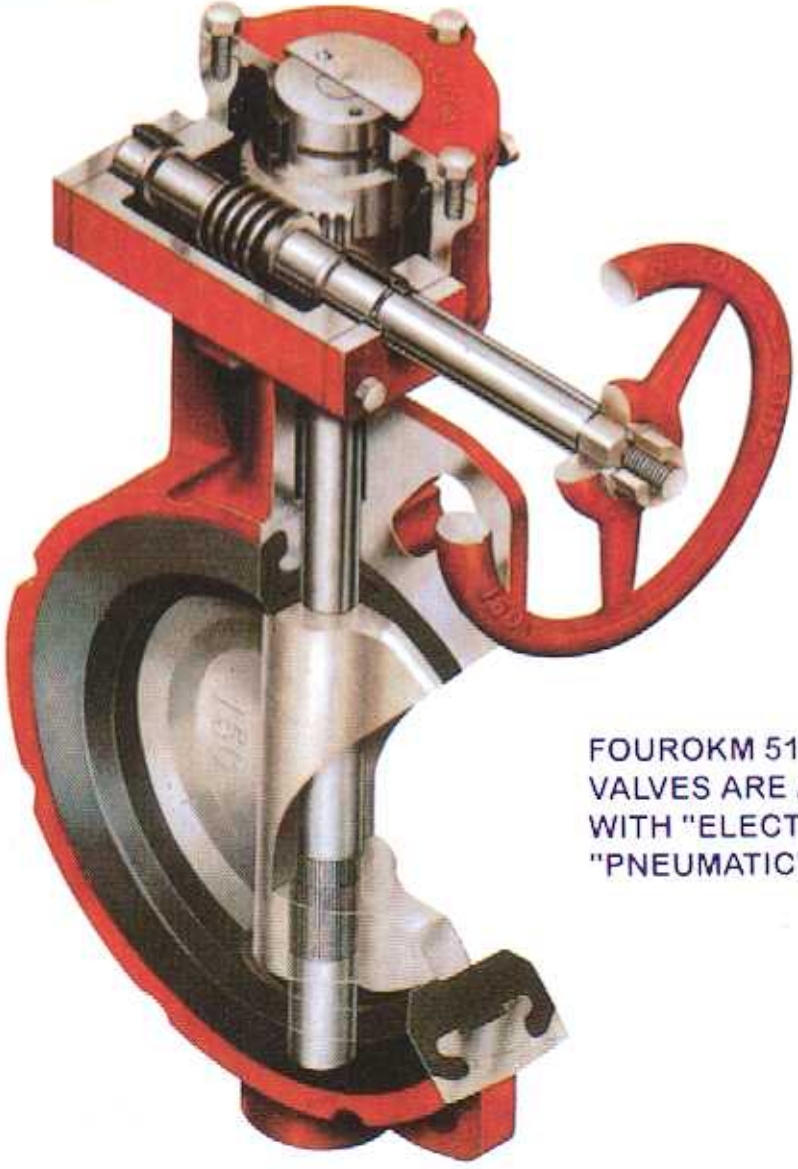
TYPICAL APPLICATIONS

- In pump rooms of large airconditioning plants, as well as in cooling towers.
- At heat exchanger inlet/outlet, as as control butterfly valve.
- In ships, for engine room cooling water, ballast control, etc.
- For smoke discharge and desulfurization in power plants or in denitration plants.
- In paper and pulp industry, Oil Refineries, Steel and Fertilizer Plants.
- In Sewage treatment plants.
- For Water Supply Schemes.
- In Air and Gas lines.

CV VALUE AND FLOW RATE CHARACTERISTIC CURVE

Dia	50	65	80	100	125	150	200	250	300	350	400	450	500	550	600
20°	5	11	14	28	47	68	120	210	300	370	520	670	840	1070	1230
30°	12	23	31	62	103	150	270	380	540	670	940	1340	1670	1900	2200
40°	21	38	50	101	170	245	440	670	960	1180	1770	2280	2840	3400	4200
50°	35	63	84	168	280	410	740	1090	1560	1920	2700	3620	4500	5800	6700
60°	59	107	143	286	479	693	1250	1940	2810	3440	4880	6260	7850	9900	11100
70°	92	168	224	460	770	1100	1980	2950	4190	5170	7280	9500	11900	15100	17200
80°	110	200	266	530	890	1290	2330	3790	5380	6640	9360	12100	15100	19200	22200
90°	115	210	280	560	940	1360	2450	4210	5980	7380	10400	13400	16700	21300	24600





515E LUGGED WAFER
BUTTERFLY VALVE

FOUROKM 515A BUTTERFLY
VALVES ARE ALSO AVAILABLE
WITH "ELECTRICAL" OR
"PNEUMATIC" ACTUATORS