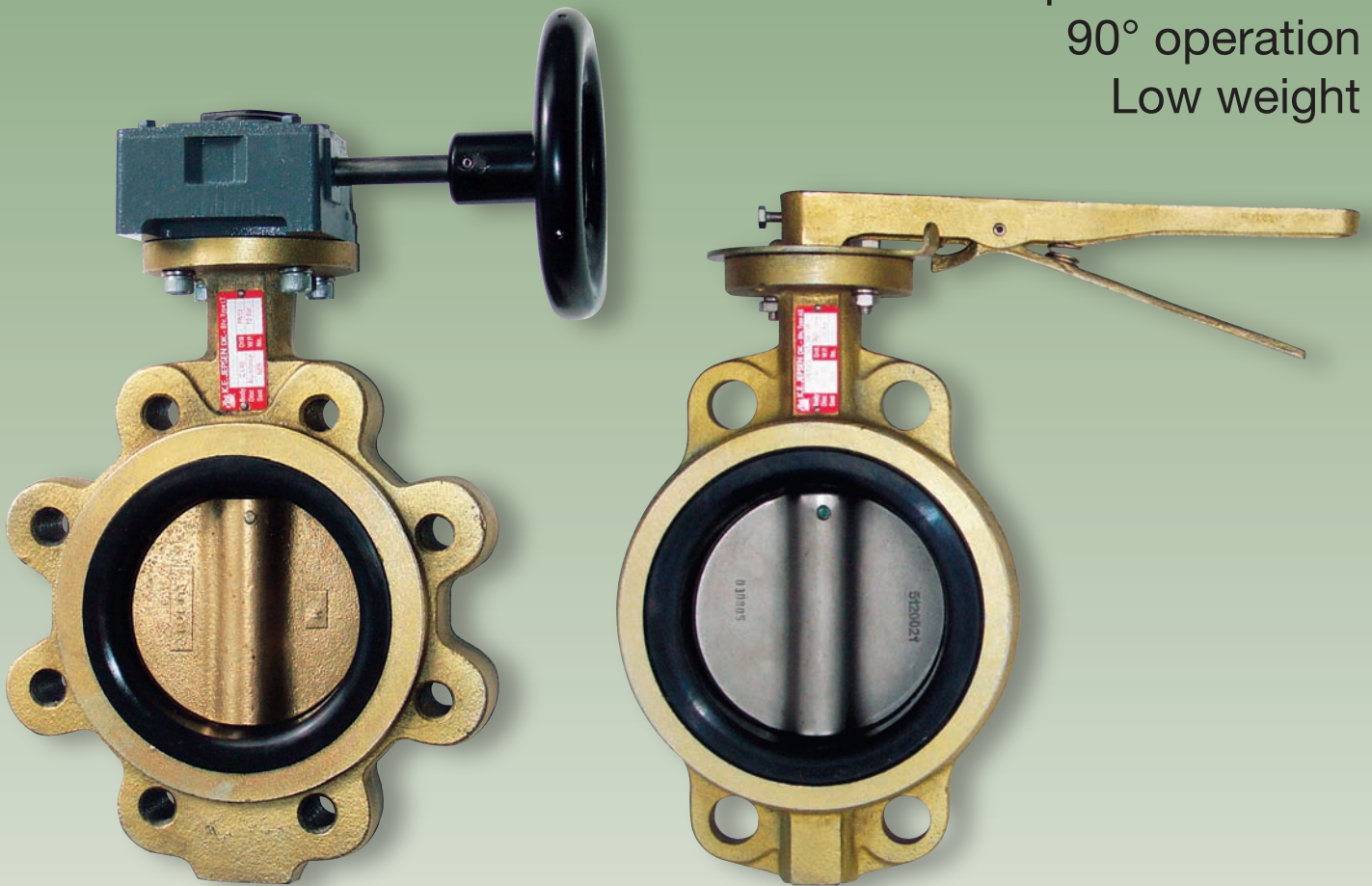


# Butterfly Valves

Low operating torques  
Low installation cost  
Bubble tight shut-off  
Replaceable seat  
90° operation  
Low weight



**K. E. JEPSEN**

P.O. Box 301 . Ambolten 2  
DK-2970 Hørsholm, Denmark  
Telf. 45 57 04 04 - Fax 45 57 12 27  
E-mail: [jepsen@jepsen.dk](mailto:jepsen@jepsen.dk)  
Web-site: [www.jepsen.dk](http://www.jepsen.dk)

## General technical data

### Specifications:

Butterfly valves series AS (wafer)  
Butterfly valves series LD/LT (Lugged)\*  
Pressure class: PN10 option: PN16  
Size: DN25 - DN600 mm  
Drilling: DIN PN 10/16, ANSI 125/150  
Face to face dimension: ISO 5752/5 short  
Topflange: ISO 5211, Part1

### Materials:

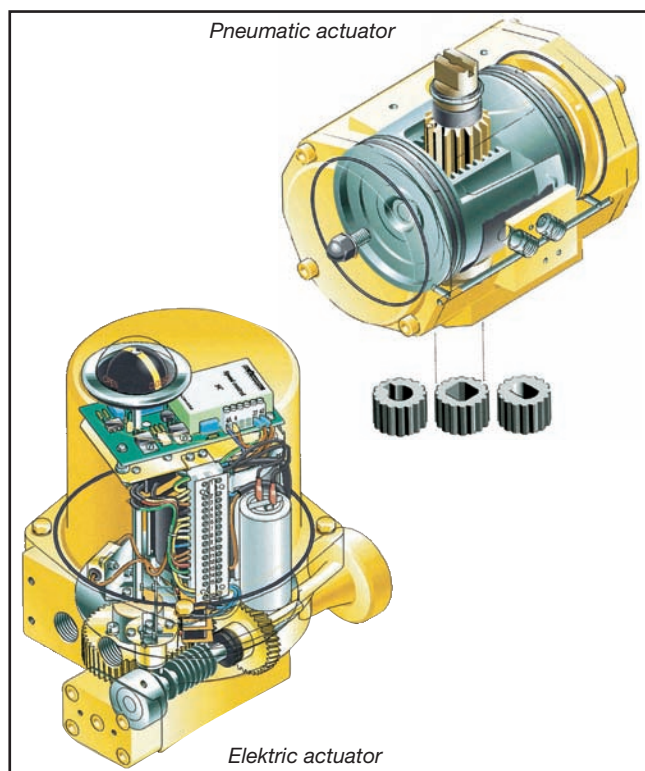
Body: Ductile cast iron GGG40,  
Alu-bronze, Steel.  
Disc: Alu-bronze, Nickel-plated ductile iron,  
Stainless steel AISI 316.  
Spindle: Stainless steel AISI 316,  
Stainless steel AISI 416,  
Monel K 500, 17-4 PH SS.  
Seat/liner: Buna N, EPDM, Neoprene\*\*,  
Silicone-rubber, Hypalon\*\*, Viton\*\*, PTFE.  
Bushes: Bronze, self lubricating.  
Taper pins: Monel K 500, stainless steel AISI 316.

\*) Approved as over board and ship side valves.  
LD: Drilled holes.  
LT: Threaded holes.

\*\*\*) DuPont registered trade mark.

### Operation:

- Hand lever with 10 positions.
- Gearbox.
- Hydraulic actuator.
- Pneumatic actuator, double acting or single acting with spring return.  
Electro-pneumatic positioner, microswitch, solenoid valve.
- Elektric actuator. Reversible motor.  
1×115 V AC, 1×230 V AC, 3×400 V AC, 24 V DC



### Disc:

- Profiled for careful compression to the seat.
- Only disc and seat are wetted, which make the valve very competitive in corrosive liquids.
- High flow capacity.
- Streamlined profile.

### Spindle:

- Robust 1-piece spindle secure safe operation even at high differential pressures.
- Supported in three-point-bearing.
- Firm connection to the shaft with properly fitted precision made taper pins.

### Seat:

- Replaceable, non-collapsible blow-out proof.
- Bi-directional line flow.
- Dry back-side for maximum corrosion resistance.
- Flow media are isolated from the valve body, spindle and external parts.
- Accomodates also rubber lined pipe flanges – no spacers required.
- Different type elastomers to suit actual service conditions (see list).
- Operating temperatures: -40°C to +150°C.



### Applications:

Fresh water, sea water, demineralized water, low pressure steam, oil, gasoline, air, biogas, chemical liquids, sludge etc.

### Approved by

Lloyds Register of Shipping  
Lloyds Fire Safe  
Det Norske Veritas  
Bureau Veritas  
American Bureau of Shipping  
U.S. Coast Guard  
Germanischer Lloyd

## Resilient seat materials

**Buna N (CL 1):** Nitrile elastomer for general purpose applications. High tensile strength, low compression, good resistance to ageing. It is very resistant to water, air, non-aromatic oils, alcohol and abrasive media.

Operating range: -10°C to +80°C.

**Neoprene\*\* (CL 21):** Excellent service in water, some oils, lubricants greases, industrial chemicals and some solvents.

Operating range: -10°C to +105°C.

**White neoprene\*\* (CL 21F):** Specially suitable in food product services.

Operating range: -10°C to +99°C.

**EPDM (CL 25):** Hydrocarbon-elastomer with good resistance to cold and hot water, low pressure steam, many solvents some acids and alkalis.

Operating range: -30°C to +121°C.

**Silicone rubber (CL81):** Very good resistance at low and high temperatures.

Operating range: -40°C til +150°C.

**Hypalon\*\* (CL 61):** Very good chemical resistance and medium high temperature qualities. Will give good service in many solvents, oil and greases.

Should not be used in steam.

Operating range: -20°C til +135°C.

**Viton\*\* (CL 71):** High chemical resistance particularly at elevated temperature service. Give good service in gasoline, fuels, oils, solvents, mineral acids and aromatic hydrocarbons.

Will not be take steam.

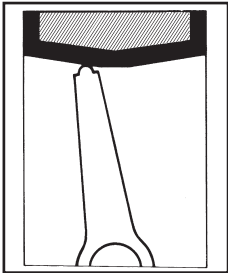
Operating range: -10°C til +135°C.

**PTFE (CL 91) on nitrile:** Unique chemical resistance.

Operating range: -10°C til +110°C.

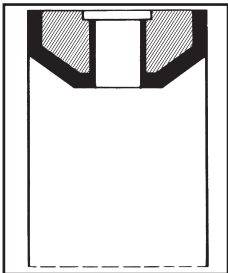
## Valve seat construction

### Our seat design:

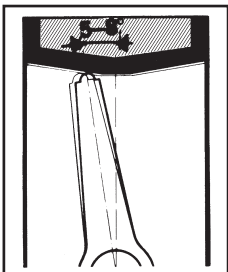


The advanced design of seat and disc ensures careful compression. The rolling action on the elastomer and the stability of the seat eliminates tearing and bunching thus minimizing damage.

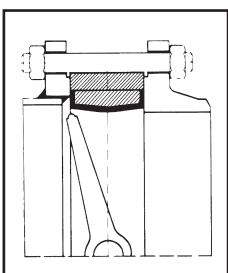
Low torque requirements.



The elastomer is bonded to a solid backing ring. This design ensures support and increased stability to the seat preventing distortion particularly in the spindle sealing area. This minimize risk of leakage alongside the spindle.

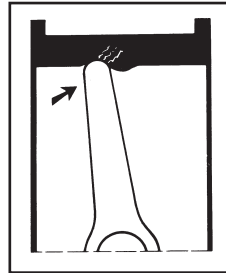


As the seat only has a small volume of elastomer bonded to the backing ring swelling is minimal. This design ensure low torque requirement and long life.



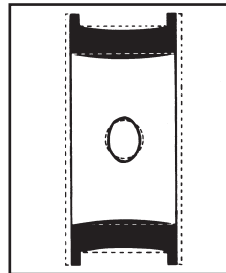
Installation is possible with all types of flanges without need for extra gaskets. Although the seat is integrally bonded it is easily replaceable.

### Traditional seat design:



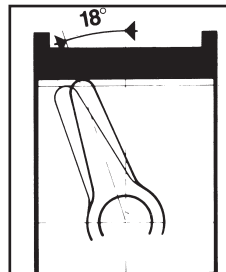
The traditional design of sealing a butterfly valve relies on stretching and bunching of the elastomer.

This will place undue stress on the soft elastomer, increasing the risk of damaging the seat.

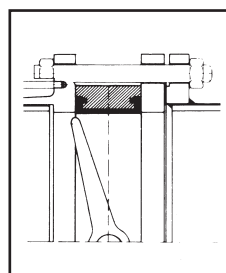


The traditional loose-liner is liable to a wide variation of distortion when opening and closing the valve.

Risk of distortion in the unsupported spindle sealing area and following leakage alongside the spindle.



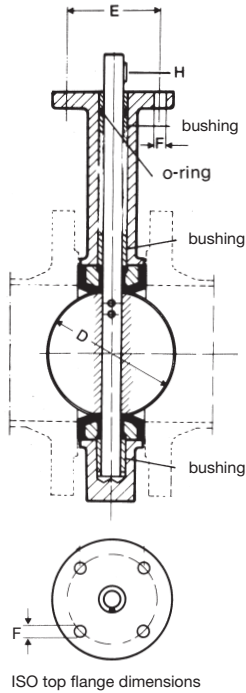
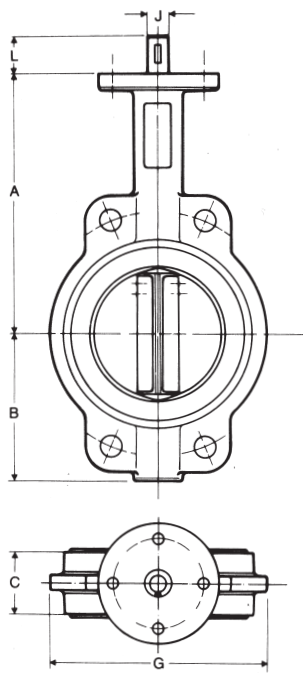
All elastomers are subject to a little swelling in most media. The greater volume of elastomer used, the greater risk of higher torque requirements and possible damage.



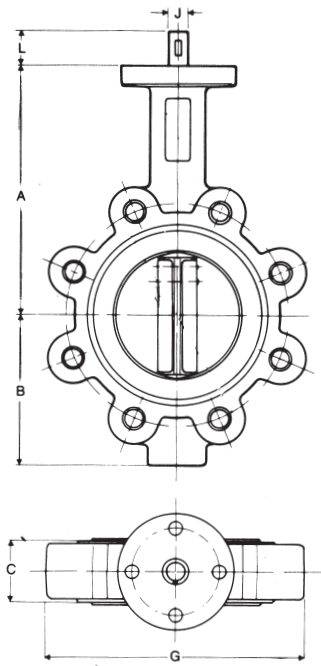
Should slip-on flanges be used it is normally recommended to use extra spacers or solid gaskets to ensure adequate face support.

# Dimensions

Series AS

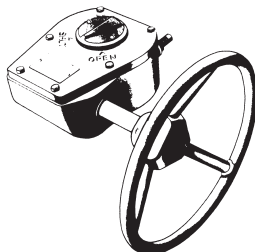
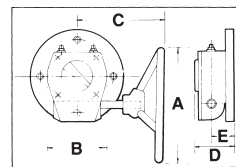


Series LT/LD

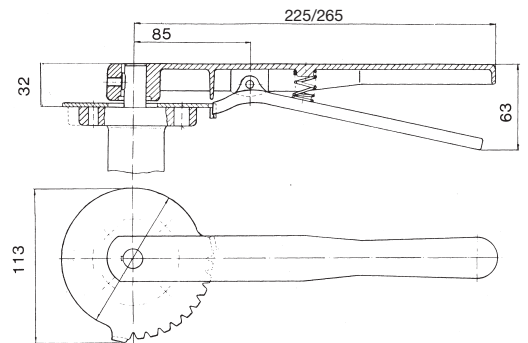


DN mm	A mm	B mm	C mm	øD mm	L mm	E mm	ISO	øF mm	G mm		H	øJ mm	Weight kg	
									AS	LT/LD			Woodroof	AS
40	120	69	33	42,6	32	50	F05	7	110	110	No. 3	10,00	2,0	2,3
50	124	80	43	52,6	32	50	F05	7	119	119	No. 3	12,70	2,7	3,5
65	134	89	46	64,3	32	50	F05	7	137	137	No. 3	12,70	3,3	4,4
80	141	95	46	78,8	32	50	F05	7	143	178	No. 3	12,70	3,8	5,7
100	156	114	52	104,0	34	50/70	F05/F07	7/9	160	206	No. 9	15,88	5,2	7,1
125	168	127	56	123,3	34	70	F07	9	190	238	No. 9	19,05	7,0	10,1
150	184	140	56	155,7	34	70	F07	9	212	266	No. 9	19,05	8,3	10,6
200	213	175	60	202,4	45	70/102	F07/F10	9/11	270	329	No. 9	22,20	13,3	19,5
250	244	220	68	250,4	45	102	F10	11	325	394	No. 15	28,58	20	27
300	283	255	78	301,5	45	125	F12	14	403	462	No. 15	31,75	31	46
350	320	267	78	333,8	45	125	F12	14	440	515	No. 15	31,75	40	56
400	400	312	102	389,6	51	125	F12	14	488	580	□ 7,9	33,34	61	97
450	422	370	114	444,2	51	140	F14	18	540	630	□ 9,5	38,00	67	111
500	480	405	127	492,2	64	140	F14	18	593	706	□ 9,5	41,15	106	158
600	562	490	154	593,0	76	254	F25	18	708	830	□ 12,7	50,80	185	290

DN mm	øA mm	B mm	C mm	D mm	E mm	Type
50, 65, 80, 100	125	88	146	58	27	M05
125, 150	160	88	150	58	27	M07
200, 250	200	116	166	67	35	M10
300, 350	250	150	207	81	42	M12
400	300	198	237	94	50	M14
450	350	198	246	94	50	M14
500, 600	457	252	336	106	50	M15



Gearbox



Hand lever