



Marine
approved industrial
butterfly valve
in high quality

Merkur Marine

Butterfly valve PN10/16

- LUG DN40–DN600
- Marine approved high quality industrial butterfly valve with replaceable liner, on solid phenol backup ring
- LUG design with fixed threaded holes
- ISO5211 connection for direct actuator assembly
- Ductile iron body with industrial epoxy coating at 200µ
- Approvals: Lloyd's, DNV, ABS og CCS



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Butterflyventil PN10/16 • LR, DNV, ABS, CCS, CE ATEX, PED

Flange connection (LUG)

DN40-DN150: DIN PN16

DN200-DN600: DIN PN10

Options on request

Dimension: DN700-DN1000

Surface paint: C4, C5M

Pressure / rating

DN40-DN150: PN16

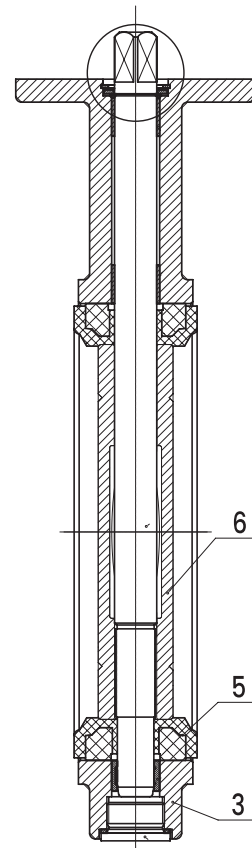
DN200-DN600: PN10

Accessories

- Handle
- Gearbox
- Mechanical feedback
- Inductive feedback
- Locking pad

Parts description, excerpt

Pos	Description.....	Material
3	Valve body	GGG40
5	Liner.....	EPDM / NBR / FPM
6	Disc.....	Alu-Bronze



Developed for your industry



Additional specification can be requested.

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➤ Improve the quality

We help Engineers to improve the quality of your manufacturing process.

➤ Optimize total cost

We help Purchasing Officers to optimize total cost of production, prevent downtime and safeguard your brand.

➤ Work smarter

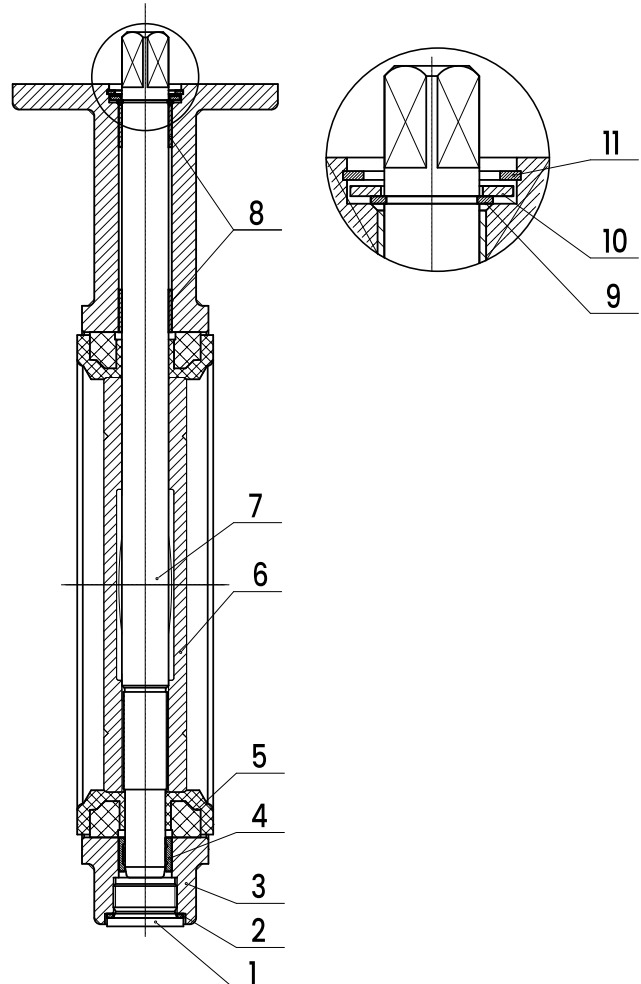
We help Maintenance Crews to work smarter, while preventing time-consuming mistakes.

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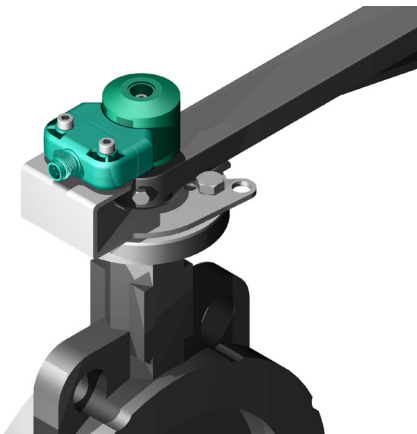
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Materials

Pos	Description	Material
1	Plug	Steel, galvanized
2	Gasket	PTFE
3	Valve body	GGG40
4	Bushing	Bronze composite
5	Liner	EPDM / NBR / FPM
6	Disc	Alu-Bronze
7	Stem	Stainless steel AISI410
8	Bushing	Bronze composite PAP
9	Locking ring	.65Mn
10	Locking plate	Steel, galvanized
11	Locking ring	.65Mn



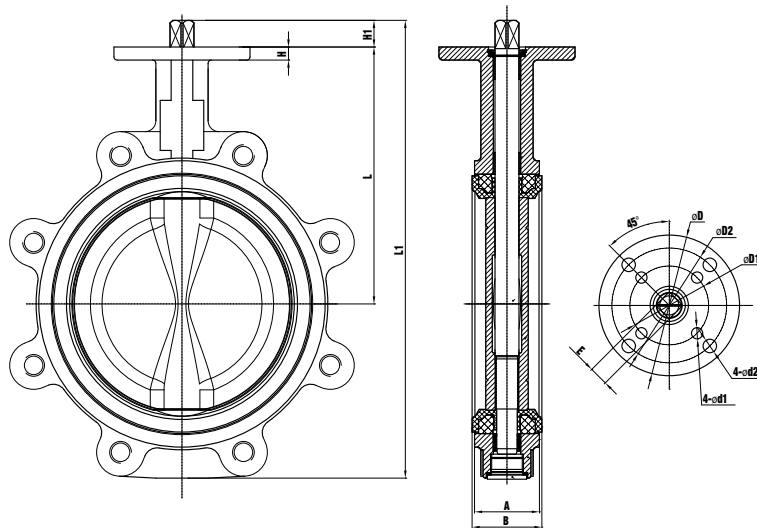
Example of inductive feedback mounted onto a manual butterfly valve



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Dimensions



DIM	L	LI	A	B	øD	øD1	4-ød1	øD2	4-ød2	E	H1	H	Torque* [Nm]		MAST** [Nm]	Kv-value [m ³ /t]	Weight [Kg]	Bolt*** M x l x a
													NBR EPDM	FPM				
All dimension in [mm]																		
DN40 PN16	110	191.5	33.0	38.0	65	50	4-ø7	70	4-ø10	11	13.5	12	9	11	63	60	2.3	M16x40x8
DN50 PN16	143	228.5	42.0	46.1	65	50	4-ø7	70	4-ø10	11	13.5	12	10	14	63	100	3.6	M16x40x8
DN65 PN16	156	247.5	45.0	49.1	65	50	4-ø7	70	4-ø10	11	13.5	12	13	17	63	201	4.2	M16x45x8
DN80 PN16	162	265.5	45.0	49.1	65	50	4-ø7	70	4-ø10	11	13.5	12	19	27	63	395	5.1	M16x45x16
DN100 PN16	177	299.5	51.0	55.3	90	50	4-ø7	70	4-ø10	14	17.5	12	28	40	125	785	7.2	M16x50x16
DN125 PN16	190	327.5	54.5	58.8	90	70	4-ø10	-	-	14	17.5	12	47	78	125	1230	9.2	M16x50x16
DN150 PN16	205	356.5	54.5	59.1	90	70	4-ø10	-	-	17	18.5	12	67	106	250	1901	11.4	M20x50x16
DN200 PN10	236	420.5	59.6	64.1	125	70	4-ø10	102	4-ø12	17	18.5	12	110	146	250	3410	16.0	M20x55x16
DN250 PN10	267	493.5	67.0	71.8	125	102	4-ø12	-	-	22	24.5	18	180	266	500	5600	27.0	M20x60x24
DN300 PN10	308	564.5	75.5	79.5	125	102	4-ø12	125	4-ø14	27	30.0	19	260	403	1000	8799	43.0	M20x65x24
DN350 PN10	368	670.0	75.5	79.5	175	102	4-ø12	140	4-ø18	27	30.0	19	330	449	1000	10254	53.0	M20x65x32
DN400 PN10	400	777.0	102.0	106.5	175	102	4-ø12	140	4-ø18	27	30.0	19	540	925	1000	13329	88.0	M24x75x32
DN450 PN10	422	839.0	114.0	118.5	210	140	4-ø18	165	4-ø22	36	39.0	20	750	1184	2000	16956	120.0	M24x80x40
DN500 PN10	480	931.0	127.0	131.5	210	140	4-ø18	165	4-ø22	46	49.0	22	1000	1599	4000	20564	165.0	M24x100x40
DN600 PN10	562	1077.0	154.0	158.5	300	165	4-ø22	254	8-ø18	46	49.0	22	1500	2300	4000	30020	210.0	M27x100x40

- * Max breakaway torque for common use in liquid systems.
>See below for actuator sizing.
- ** Maximum stem torque according to ISO5211
- *** Bolts for one valve (2 flanges) (Thread x Length x Amount) M x l x a

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Pressure- / temperature

Liner / Rating	-20°C	-10°C	0°C	20°C	40°C	60°C	80°C	100°C	120°C	140°C	160°	170°C
	Max pressure in [bar]											
NBR / PN16	-	16.0	16.0	16.0	15.8	15.0	14.2	-	-	-	-	-
NBR / PN10	-	10.0	10.0	10.0	9.8	9.2	8.8	-	-	-	-	-
EPDM / PN16	-	16.0	16.0	16.0	15.8	15.0	14.2	13.8	13.4	-	-	-
EPDM / PN10	-	10.0	10.0	10.0	9.8	9.2	8.8	8.5	8.2	-	-	-
FPM / PN16	16.0	16.0	16.0	16.0	15.8	15.0	14.2	13.8	13.4	13.3	13.1	13.0
FPM / PN10	10.0	10.0	10.0	10.0	9.8	9.2	8.8	8.5	8.2	8.1	8.1	8.0

Keep in mind that the lifetime of the liner is reduced if you operate near the temperature limit of the rubber. Rubber will over time lose its flexibility and become less compressible.

Liner material

NBR:

Good resistance to alkaline hydrocarbons in medium temperature range. Resistant to mineral oil, hydraulic oil and gasoline. Can not withstand ozone and UV radiation.

EPDM:

Really good resistance to hot water and low pressure steam. Resistant to esters, ketones and glycols. Ozone resistant. Does not tolerate mineral oils.

FPM:

Good resistance to most chemicals, even at high temperatures. Oil resistant. Can not withstand steam.

Please contact MODU Valves regarding choice of liner material.

Actuator sizing

Media factor	Multiply by
Clean, particle free, lubricating (oil, hydraulic fluid, etc.)	1.00
Clean, particle free, non-lubricating (water, alcohol, etc.)	1.25
Moisture gas	1.25
Dry gas or air	1.50
Gas, dirty unfiltered eg natural gas	1.80

Service factor	Multiply by
Simple on / off maneuvering	1.00
Regulating / Throttling	1.20
Maneuvering once per week	1.20
Maneuvering every second week or critical component	1.50

For actuator dimensioning:

Torque x Media factor x Service factor

Polluted systems will reduce the expected life span of the seat rings

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