DJ Series Butterfly Valves

KITZ CORPORATION

International Edition

Standard Product Range

Standard		ASME		EN						JIS			
Pressure		150/200 psi		PN10		PN16		PN25		10K		16K	
Connection		Wafer	Lugged	Wafer	Lugged	Wafer	Lugged	Wafer	Lugged	Wafer	Double Flanged	Wafer	Double Flanged
Nominal size / Product code		*1 150/200 DJ	*1 150/200 DJL	PN16DJ	PN16DJL	PN16DJ	PN16DJL	PN25DJ	PN25DJL	10DJ	*2 10DJF	16DJ	*2 16DJF
inch	mm												
2	50	●	●	●	●	●	●	●	●	●	—	●	—
2 1/2	65	●	●	●	●	●	●	●	●	●	—	●	—
3	80	●	●	●	●	●	●	●	●	●	—	●	—
4	100	●	●	●	●	●	●	●	●	●	●	●	●
5	125	●	●	●	●	●	●	●	●	●	●	●	●
6	150	●	●	●	●	●	●	●	●	●	●	●	●
8	200	●	●	●	—	●	●	●	●	●	●	●	●
10	250	●	●	●	—	●	●	●	●	●	●	●	●
12	300	●	●	●	—	●	●	●	●	●	●	●	●
14	350	●	●	●	—	●	●	—	—	●	●	●	●
16	400	●	●	—	—	●	●	—	—	●	●	●	●
18	450	●	●	—	—	●	●	—	—	●	●	●	●
20	500	●	●	—	—	●	●	—	—	●	●	●	●
22	550	—	—	—	—	—	—	—	—	—	●	—	●
24	600	●	●	—	—	●	●	—	—	●	●	●	●

● : Available
*1 : 200 psi for size 2 to 12, 150 psi for size 14 to 24
*2 : Not shown in this catalog

Explanation of Product Code

G - PN16 DJ L U E

① ② ③ ④ ⑤ ⑥

① Valve operation

None .....Lever handle
G .....Gear
VG .....Vertical gear
B .....Type B pneumatic actuator
BS .....Type BS pneumatic actuator
FA .....Type FA pneumatic actuator
FAS .....Type FAS pneumatic actuator
EXS110/200 ...Type EXS KELMO® electric actuator
EXC110/200...Type EXC KELMO® electric proportional control actuator

② Class

150..... ASME 150 psi
200..... ASME 200 psi
PN16... EN PN16
PN25... EN PN25
10..... JIS 10K
16..... JIS 16K

③ Valve material and design

DJ..... Ductile iron DJ series
*Cast iron for JIS10K, Size 350-600
FDDJ.... Ductile iron for JIS10K, Size 350-600 (Option)

④ Connection

None....Wafer
L..... Lugged
F.....Double flanged

⑤ Disc material

None....Ductile iron (Ni-plated)
U..... 304 stainless steel
M..... 316 stainless steel
A..... Aluminum bronze

⑥ Seat material

None....NBR (Buna-N)
E..... EPDM

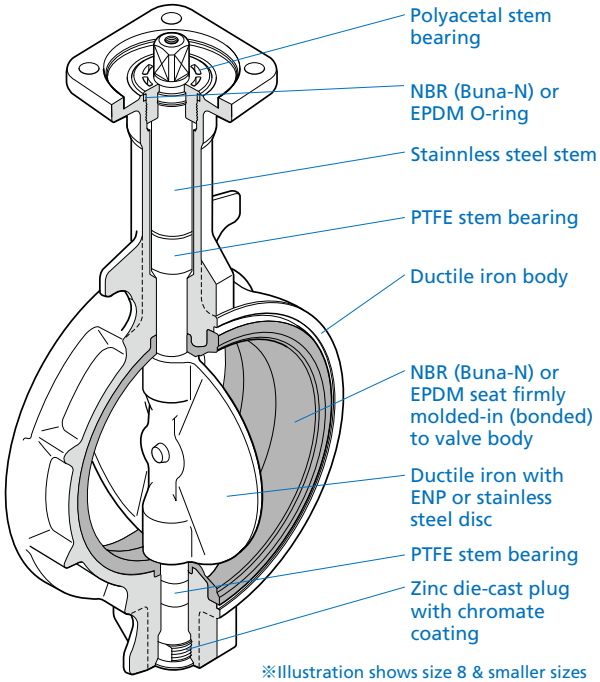
This catalog uses **MPa**, a SI unit, for indication of pressures.
For readers' convenience, however, **kgf/cm²** is also used as an additional information.

KITZ DJ Series Butterfly Valves

Thorough pursuit of functions required for butterfly valves
Variety of product ranges to comply with customers' requirements

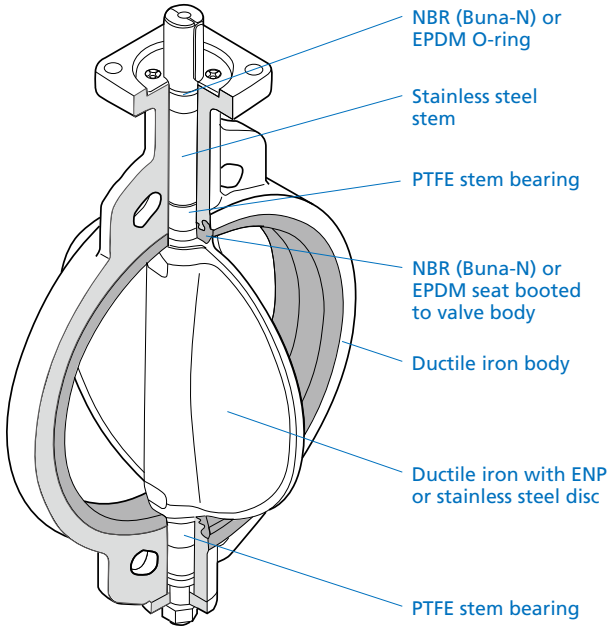
Design Features

Molded-in (bonded) seat structure
(Size 2 to 12)*1



※Illustration shows size 8 & smaller sizes

Replaceable seat structure
(Size 14 to 24)*2



Non-peeling Seat-to-body Construction

Molded-in (bonded) seat structure is employed for size **2 to 12**. Larger sized valves are provided with replaceable seat. This non-peeling seat-to-body construction assures maintenance-free application for **high fluid velocity service*1**, **vacuum service*2** and handling surging fluid velocity. It also guarantees peel-free valve mounting on pipelines.

***1 Maximum 4 meters/second for on-off service for valves up to size 12, and 3 meters/second for size 14 and larger.**

***2 Up to 30 torr. Vacuum service is option for size 14 and larger.**

Spherical design for Discs and Seats

Rubber seats are spherically designed where they contact top and bottom stems. This protects widely designed rubber seats from peeling or deformation for prolonged service life of valves. Thinly streamlined metal discs are the results of elaborate laboratory study to ultimately minimize the pressure loss.

Choice of Materials and Operating Devices

Choice among 4 disc and 2 seat materials and manual, pneumatic or electric valve operating devices makes service applications highly versatile.

Integral ISO 5211 Actuator Mounting Flange

Any pneumatic or electric valve actuators provided with ISO 5211 valve mounting flanges can be easily mounted for actuation of valves in the field.

Low Valve Operating Torque

Low operating torques are designed low for extension of valve service life and economic consideration in selection of valve operating devices.

Light-designed for Operation Efficiency

Designed much lighter than our conventional series for operation efficiency in piping

Emission-free Stem Sealing Mechanism

Prevention of external fluid leakage is maximized with a rubber O-ring assembled around the top stem and tight contact between spherically designed rubber seat and spherically designed top and bottom end of the disc.

Dew condenstation prevention

Dew condenstation prevention type is optionally available with heat insulating plate (size 2 to 6) or stainless steel stand (size 8 to 24).

Technical Specifications

Maximum Service Pressure

ASME 150 psi	1.03MPa
ASME 200 psi	1.38MPa
EN PN16	1.6 MPa
EN PN25	2.5 MPa
JIS 10K	0.98MPa
JIS 16K	1.57MPa

Body Material

Ductile iron	ASTM A536 Gr. 65-45-12 *1

*1 JIS 10K design, size 14" & larger: Cast iron ASTM A126 Class B

Service Temperature Range

NBR (Buna-N) seat	0°C to +70°C
EPDM seat	−20°C to +130°C *2
Continuous service temperature range	0°C to +100°C

*2 There are some fluid type restrictions for the service at 130°C. Contact KITZ for the details.

Applicable Standards

Valve design	API 609, MSS-SP 67, EN 593, JIS B 2032
Face to face dimensions	API 609 Category A, MSS-SP 67 W-1 : Size 2 to 14 W-2 : Size 16 to 24 EN 558 basic series 20, ISO 5752 20 Series, JIS B 2002 46 Series

Coupling Flanges

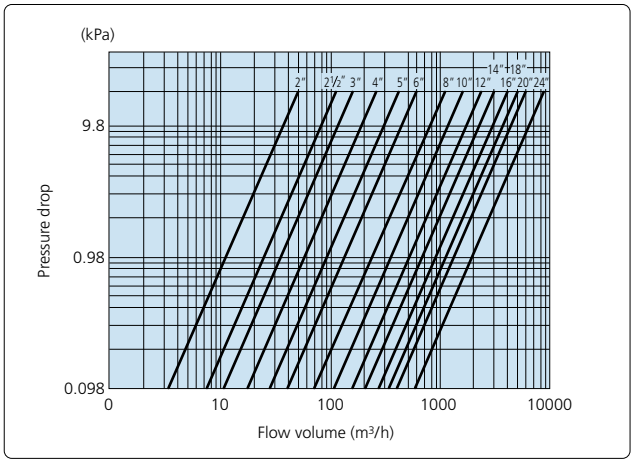
Wafer type	ASME Class 125/150 EN 1092 PN 10: DN 50 to DN 350, PN 16: All Sizes PN 25: DN 50 to DN 300 BS 10 Table D/Table E JIS 10K/16K
Lugged type	ASME Class 125/150 EN 1092 PN 10: DN 50 to DN 150, PN 16: All Sizes PN 25: DN 50 to DN 300

Flow Coefficient (Cv)

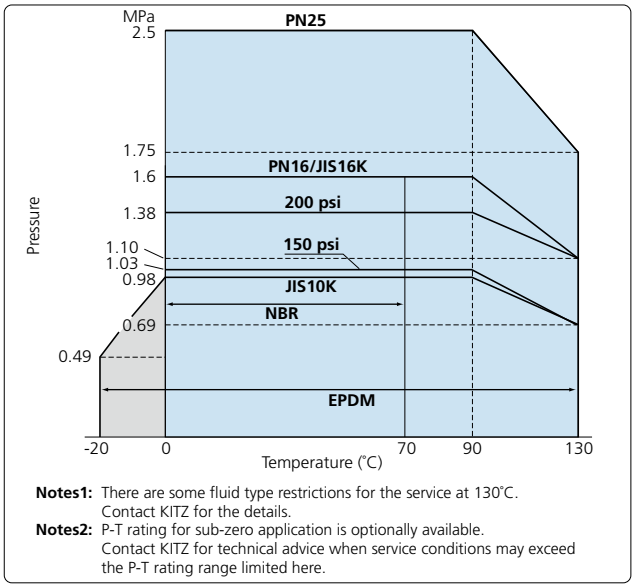
Size		Valve opening			
inch	mm	30˚	45˚	60˚	90˚
2	50	10	23	47	124
2½	65	22	50	102	270
3	80	33	74	149	397
4	100	55	125	252	671
5	125	83	189	381	1013
6	150	126	286	576	1532
8	200	230	522	1050	2792
10	250	325	743	1514	4025
12	300	493	1123	2260	6010
14	350	617	1371	2829	7525
16	400	826	1787	3760	10080
18	450	1076	2441	4933	13120
20	500	1311	2969	6012	15990
24	600	1942	4449	8907	23690

Pressure Loss

(for handling static clean water with valve fully open)



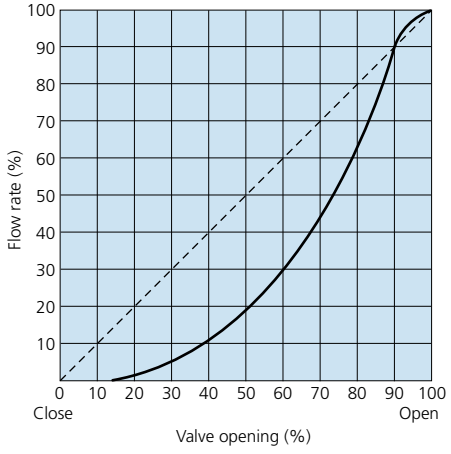
P-T Rating



Notes1: There are some fluid type restrictions for the service at 130˚C. Contact KITZ for the details.

Notes2: P-T rating for sub-zero application is optionally available. Contact KITZ for technical advice when service conditions may exceed the P-T rating range limited here.

Flow Characteristics



Standard Materials

Parts		Material
Body		Ductile Iron
		Cast Iron (JIS 10K design Size 14˝ to 24˝)
Stem Bottom stem		410 Stainless Steel / 420 Stainless Steel
Disc		Ductile Iron (Ni-plated) /304SS / 316SS / Aluminum Bronze (See Explantation of Product Code)
Seat O-ring		NBR (Buna-N) / EPDM (See Explantation of Product Code)
Bearing		Polyacetal / Glass Filled PTFE / Metal Backed PTFE
Plug (Size 2˝ to 8˝)		Zinc die-cast (Chromate Coating)
Operator	Lever	Aluminum Die-cast
	Gear	Aluminum Die-cast (Size 2˝ to 12˝) Cast-Iron (Size 14˝ to 24˝)
	Vertical gear	Cast-Iron

Wafer Type Lever Operated

ASME 150/200 psi Design
200DJ□□

EN PN16 Design
PN16DJ□□

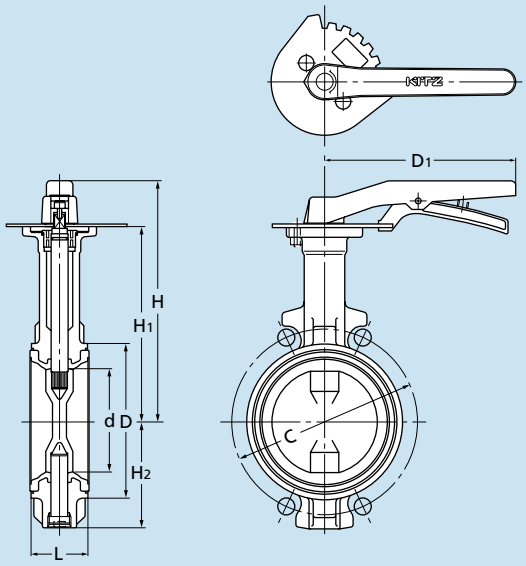
EN PN25 Design
PN25DJ□E

JIS 10K Design
10DJ□□

JIS 16K Design
16DJ□□

□□ of product coding are disc and seat material coding

Please refer to page 1.



ASME 200 psi • EN PN16 • EN PN25 • JIS 10K • JIS 16K Design Dimensions (mm)

Nominal Size		d	H	H1	H2	L	D	C					D1
inch	mm							ASME 200	EN PN16	EN PN25	JIS 10K	JIS 16K	
2	50	50	191	147	67	43	90	120.5	125	125	120	120	180
2½	65	65	199	155	75	46	104	139.5	145	145	140	140	180
3	80	80	217	173	91	46	124	152.5	160	160	150	160	180
4	100	100	227	183	101	52	146	190.5	180	190	175	185	180
5	125	125	265	211	127	56	176	216	210	220	210	225	230
6	150	150	277	223	139	56	206	241.5	240	250	240	260	230
8	200	197	295	248	169	60	257	298.5	295	—	290	305	350

✻EN PN25 is from DN50 to DN150.
✻EN PN25 is EPDM Seat only.