



VALVE AUTOMATION  
ISO 9001 CO.



# Handle / Worm GEAR OPERATED BUTTERFLY VALVES



"aira" offers Manul (Gear / Handle) Double Flanged Butterfly Valve, engineered for multiple ON/OFF operations in the larger pipe line and full flow down streams.



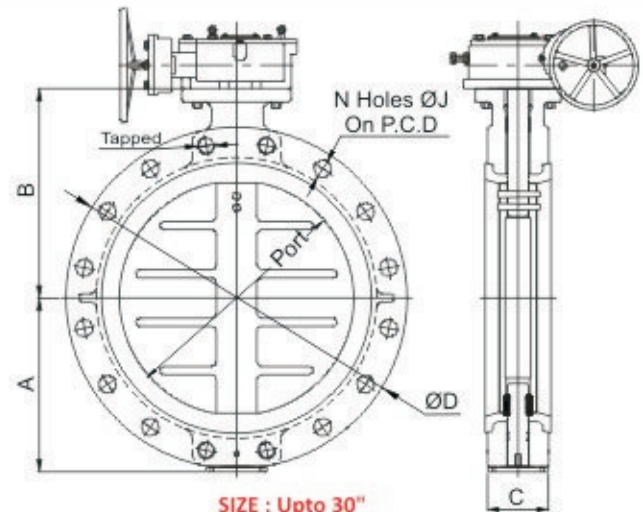
**Size Range : 3" to 48"**

**Key Feature :**

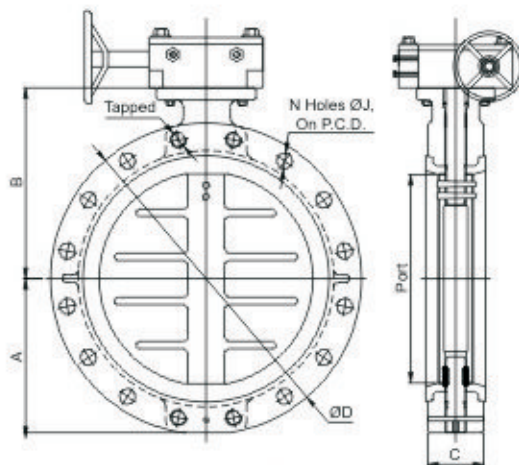
- Integrally moulded seat liner on the body, which ensures excellent dimensional stability & guaranteed seat tightness.
- Seat liner extending on to the contact faces ensures perfect sealing and eliminates the need for separate flange gaskets.
- Narrow land disc ensures perfect sealing with least operating torque requirements.
- A fully universal body design ensures fitting of the valve between companion flanges of all popular standards (viz : ANSI, BS, DIN, JIS, IS etc.)
- The notch disc & band lever ensures locking of the valve in 8 intermediate position in addition to close and open position. Hand lever can be locked through pad lock.
- Body casting made of superior FG 260 grade cast iron to ensure additional strength.
- Valve disc made of stainless steel / ductile cast iron which enable protection against possible water hammer or pressure surges.
- A truly line size body bone to ensure maximum flow capacity with the lowest pressure drop.

**PRESSURE / TEMPERATURE RATING**

PRESSURE	TEMPERATURE
PN 10 / PN 16 ( PN 20 ON REQUEST )	-20 to 80 °C For Nitrile Seat Depending On MOC



**Note : (Valve F to F will be as per Wafer type) (Flange Thickness Non - STD As per Mfg. Std Wafer short Double Flange Body)**



**Dimensions :** (All Dimensions are in mm)

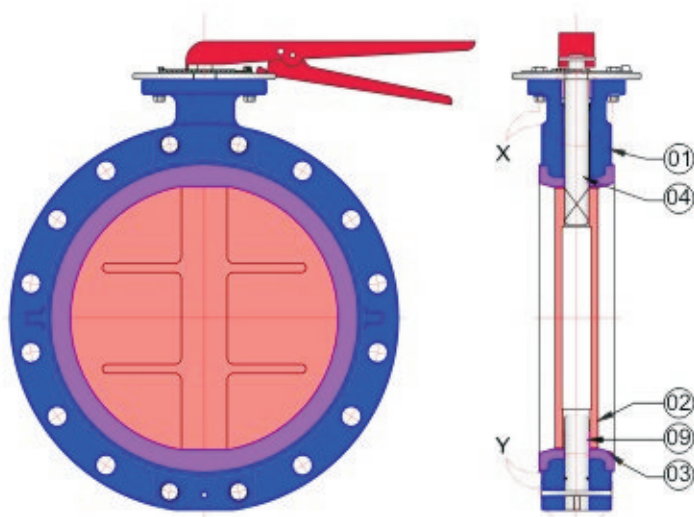
Valve Model	Valve Size		Port	A	B	C	ØD	N	ØJ	Tapped	PCD
	MM	Inch									
DFW-ECO-80	80	3"	80	95	129	46	190	4	19.05	--	152.4
DFW-ECO-100	100	4"	100	113	147	52	230	8	19.05	--	190.5
DFW-ECO-150	150	6"	150	136	177	56	280	8	22.2	--	241.3
DFW-ECO-200	200	8"	200	174	214	60	345	8	22.2	--	298.5
DFW-ECO-250	250	10"	241	201	265	68	405	12	25.4	--	362
DFW-ECO-300	300	12"	286	236	303	78	485	12	25.4	--	431.8
DFW-ECO-350	350	14"	333	248	345	78	535	12	28.6	--	476.3
DFW-ECO-400	400	16"	382	300	364	102	595	16	28.6	--	539.8
DFW-ECO-450	450	18"	433	322	381	114	635	16	31.75	1" UNC	577.9
DFW-ECO-500	500	20"	476	354	436	127	700	20	31.75	1" UNC	635
DFW-ECO-600	600	24"	590	405	515	154	815	20	34.9	1.1/4" UNC	749.3
DFW-ECO-650	650	26"	635	435	490	165	870	24	34.9	1.1/4" UNC	806.4
DFW-ECO-700	700	28"	680	462	543	165	925	28	34.9	1.1/4" UNC	863.6
DFW-ECO-750	750	30"	725	482	576	190	985	28	34.9	1.1/4" UNC	914.4
DFW-ECO-800	800	32"	785	533	618	190	1060	28	41.3	1.1/2" UNC	977.9
DFW-ECO-900	900	36"	885	576	675	203	1170	32	41.3	1.1/2" UNC	1085.8
DFW-ECO-1000	1000	40"	965	640	720	216	1290	36	41.3	1.1/2" UNC	1200.2
DFW-ECO-1200	1200	48"	1170	750	865	254	1510	44	41.3	1.1/2" UNC	1422.4

**Standard**

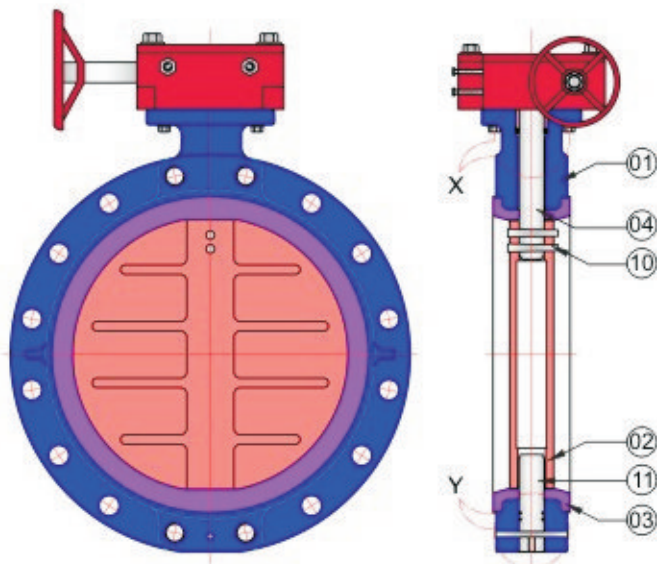
Design And Manufacturing : API 609 category A / IS : 13095 / BS EN 593  
 Valve Face To Face Dimensions : Short Wafer As Per ISO 5752 TAB 5 / API 609 Category A / ISO 5752 TAB 1 (BS 5155)  
 Flange Standard Conformity : ASME B 16.5 / ASME B 16.47 Class 150, BS 10 TAB D, E & F  
 Inspection & Testing : API 598 / BS EN 12266-1  
 Top Flange Drilling : ISO 5211

**TEST PRESSURE**

TESTING	BODY	SEAT
HYDRAULIC	16 KG/CM <sup>2</sup>	10 KG/CM <sup>2</sup>



No.	Description	Material	Qty.
1	Body	ASTM - A 126 Grade B ( Gry Iron )	1
		ASTM - A 216 Grade WCB ( Cast Steel )	
		ASTM - A 536 Grade 65-45-12 ( Ductile Iron )	
		ASTM - A 351 Grade CF8 / CF8M / CF3M / CD4MCuN	
2	Disc	ASTM - A 126 Grade B ( Gry Iron ) + Powder Coated	1
		ASTM - A 216 Grade WCB ( Cast Steel ) + Powder Coated	
		ASTM - A 536 Grade 65-45-12 ( Ductile Iron ) + Powder Coated	
		ASTM - A 351 Grade CF8 / CF8M / CF3M / CD4MCuN	
		S.G. Iron with Teflon / Powder / Nylon Coated & Rubber Line	
3	Seat	Nitrile / EPDM / Viton / Hypelcon / Silicon / Neopren	1
4	Shaft	AISI 410 / AISI 304 / AISI 316 / AISI 316L	1
5	Bering Bush	Metal Bush PTFE Coated	2
6	Bush	PTFE ( Teflon )	1
7	'O' - Ring	Nitrile / EPDM / Viton / Hypelcon / Silicon / Neopren	2
8	Dowel Pin	M.S. / AISI 410 / AISI 304 / AISI 316 / AISI 316L	1
9	Bottom Pin	AISI 410 / AISI 304 / AISI 316 / AISI 316L	1



No.	Description	Material	Qty.
1	Body	ASTM - A 126 Grade B ( Gry Iron )	1
		ASTM - A 216 Grade WCB ( Cast Steel )	
		ASTM - A 536 Grade 65-45-12 ( Ductile Iron )	
		ASTM - A 351 Grade CF8 / CF8M / CF3M / CD4MCuN	
2	Disc	ASTM - A 126 Grade B ( Gry Iron ) + Powder Coated	1
		ASTM - A 216 Grade WCB ( Cast Steel ) + Powder Coated	
		ASTM - A 536 Grade 65-45-12 ( Ductile Iron ) + Powder Coated	
		ASTM - A 351 Grade CF8 / CF8M / CF3M / CD4MCuN	
		S.G. Iron with Teflon / Powder / Nylon Coated & Rubber Line	
3	Seat	Nitrile / EPDM / Viton / Hypelcon / Silicon / Neopren	1
4	Shaft	AISI 410 / AISI 304 / AISI 316 / AISI 316L	1
5	Bering Bush	Metal Bush PTFE Coated	2
6	Bush	PTFE ( Teflon )	1
7	'O' - Ring	Nitrile / EPDM / Viton / Hypelcon / Silicon / Neopren	2
8	Dowel Pin	MS / AISI 410 / 304 / 316 / 316L	1
9	'V' Seal	Nitrile / EPDM / Viton / Hypelcon / Silicon / Neopren	1
10	Taper Pin	AISI 410 / AISI 304 / AISI 316 / AISI 316L	2
11	Bottom Pin	AISI 304 / AISI 316 / AISI 316L	1

"aira" Offers Manual (Handle / Gear) Operated Damper Valve for flow Control of Air & Gas.

**Size Range : 1.1/2" to 20"**

**TEST PRESSURE**

TESTING	BODY	SEAT
HYDRAULIC	10 kg/CM <sup>2</sup>	5% Leakage

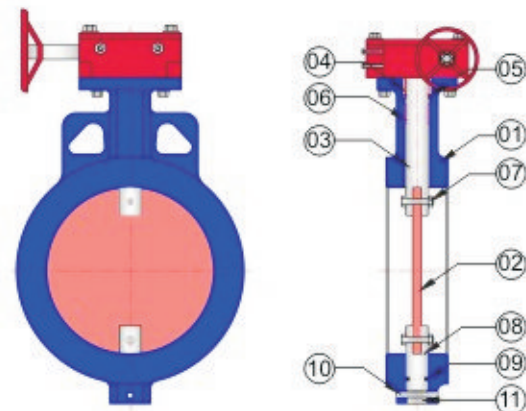
**PRESSURE / TEMPERATURE**

PRESSURE RATING	PN 6 ( MAXIMUM )
OPERATING TEMPERATURE RANGE	-25 °C TO 400 °C (DEPENDING ON MOC ) UPTO 600 °C



**SIZE : Upto 1.1/2" to 8"**

No.	Description	Material	Qty.
1	Body	Gry Iron / C.S. / D.I. / CF8 / CF8M	01
2	Disc	C.S. / WCB / CF8 / CF8M	01
3	Shaft	AISI 410 / AISI 304 / AISI 316 / AISI 316L	01
4	Teflon Bush	Teflon	01
5	Graphoile Ring	Graphite	01
6	Bering Bush	Metal Bush PTFE Coated	01
7	Nut & Bolt	S.S. 202 / S.S. 304	02
8	Bottom Shaft	AISI 410 / AISI 304 / AISI 316 / AISI 316L	01
9	Graphoile Ring	Graphite	01
10	Dowel Pin	IS 2062 Gr. B	01
11	Bottom Cover	IS 2062 Gr. B	01

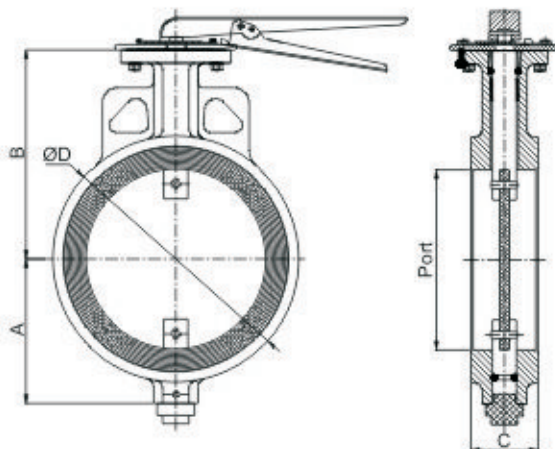


**SIZE : Upto 10" to 20"**

No.	Description	Material	Qty.
1	Body	Gry Iron / C.S. / D.I. / CF8 / CF8M	01
2	Disc	C.S. / WCB / CF8 / CF8M	01
3	Shaft	AISI 410 / AISI 304 / AISI 316 / AISI 316L	01
4	Teflon Bush	Teflon	01
5	Graphoile Ring	Graphite	01
6	Bering Bush	Metal Bush PTFE Coated	01
7	Nut & Bolt	S.S. 202 / S.S. 304	02
8	Bottom Shaft	AISI 410 / AISI 304 / AISI 316 / AISI 316L	01
9	Graphoile Ring	Graphite	01
10	Dowel Pin	IS 2062 Gr. B	01

**Dimensions :** (All Dimensions are in mm)

Valve Model	Valve Size		Port	A	B	C	ØD
	MM	Inch					
DP - 40	40	1.1/2"	40	55.5	81.5	33.5	85
DP - 50	50	2"	50	60.5	100	43.5	80
DP - 65	65	2.1/2"	65	68	107.5	46	102
DP - 80	80	3"	80	75.5	115	46	125
DP - 100	100	4"	100	85.5	125	52	139
DP - 125	125	5"	125	108.5	167.5	56	168
DP - 150	150	6"	150	121	180	56	204
DP - 200	200	8"	200	146	205	60	252
DP - 250	250	10"	245	221	271	68	316
DP - 300	300	12"	295	252	296	78	362
DP - 350	350	14"	340	271	312	78	410
DP - 400	400	16"	388	300	365	102	470
DP - 450	450	18"	450	332	368	90	540
DP - 500	500	20"	490	377	420	90	622

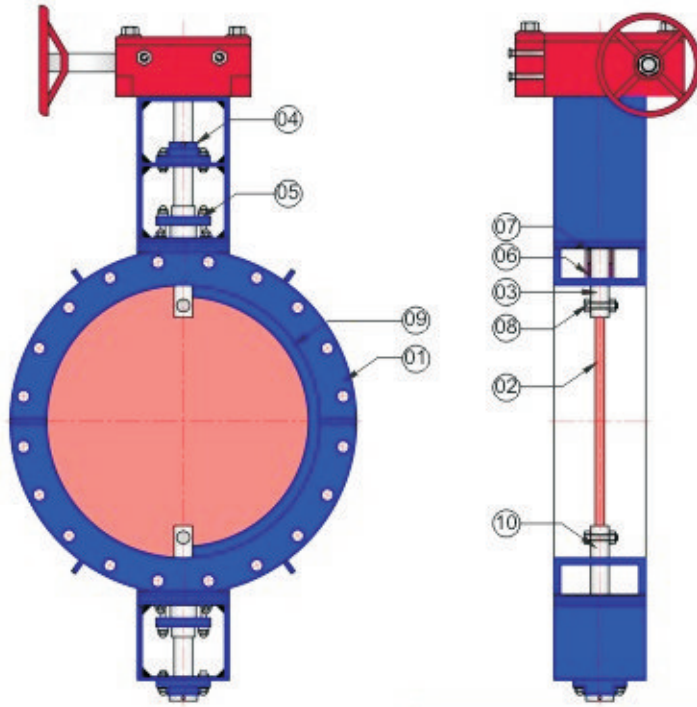


"aira" Gear Operated MS Fabricated Body With MS Fabricated Disc

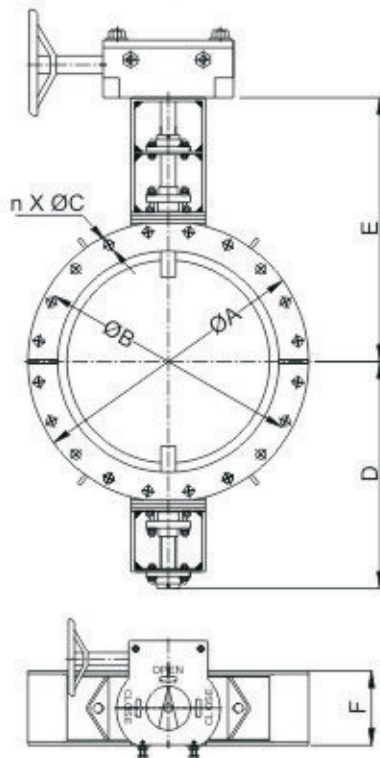
Size Range : 8" to 80"

PRESSURE / TEMPERATURE

WORKING RATING	5 KG/CM <sup>2</sup>
TEMPERATURE	UPTO 1200 °C



No.	Description	Material	Qty.
1	Body	IS 2062 Gr. B	01
2	Disc	IS 2062 Gr. B	01
3	Shaft	AISI 410	01
4	Bearing	Standard	02
5	Gland Pata	IS 2062 Gr. B	02
6	Teflon Bush	Teflon	02
7	Graphite Ring	Graphite	02
8	Hex Bolt	S.S. 202 / S.S. 304	02
9	Seat Ring	IS 2062 Gr. B	02
10	Bottom Shaft	AISI 410	01



Dimensions :

(All Dimensions are in mm)

Valve Model	Valve Size		ØA	ØB	n	ØC	D	E	F
	MM	Inch							
AFT-MS-G-200	200	8"	320	280	8	18	340	440	150
AFT-MS-G-250	250	10"	375	335	12	18	366	466	150
AFT-MS-G-300	300	12"	440	395	12	22	398	498	150
AFT-MS-G-350	350	14"	490	445	16	22	450	550	150
AFT-MS-G-400	400	16"	540	495	16	22	450	550	150
AFT-MS-G-450	450	18"	595	550	16	22	478	578	150
AFT-MS-G-500	500	20"	645	600	20	22	502	602	200
AFT-MS-G-550	550	22"	749	692	20	22	610	710	200
AFT-MS-G-600	600	24"	755	705	20	26	610	710	200
AFT-MS-G-650	650	26"	785	744	20	26	635	735	200
AFT-MS-G-700	700	28"	860	810	24	26	610	710	200
AFT-MS-G-750	750	30"	887	846	24	26	633	723	200
AFT-MS-G-800	800	32"	975	920	24	30	678	768	200
AFT-MS-G-850	850	34"	1005	957	24	30	692	782	200
AFT-MS-G-900	900	36"	1075	1020	24	30	728	818	250
AFT-MS-G-1000	1000	40"	1175	1120	28	30	778	868	250
AFT-MS-G-1100	1100	44"	1276	1222	32	33	948	1038	250
AFT-MS-G-1200	1200	48"	1405	1340	32	33	1022	1112	250
AFT-MS-G-1400	1400	56"	1630	1560	36	36	1025	1095	300
AFT-MS-G-1600	1600	64"	1830	1760	40	36	1125	1195	300
AFT-MS-G-1800	1800	72"	2045	1970	44	39	1252	1302	300
AFT-MS-G-2000	2000	80"	2265	2180	48	42	1462	1562	300

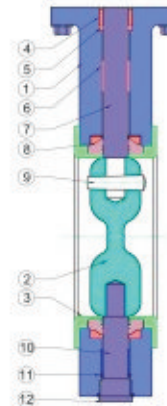
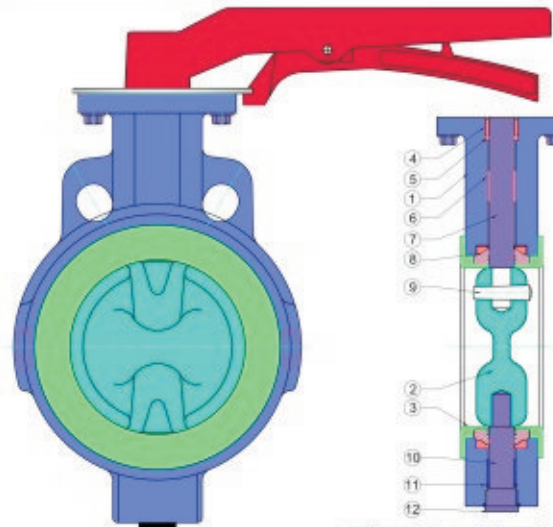
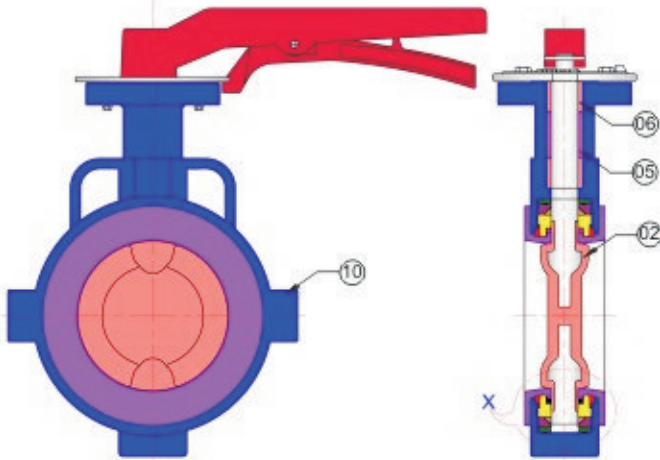
Size Upto 3000 MM On Request

**"aira"** Offers FEP / PFA Lined Butterfly Valve for Corrosive Application. The FEP / PFA Seat Lined Covers the entire Wetted Surface of the body and Extends on to the Flanged Contact Faces, Thus elimination as possibility of any media contact with the body.

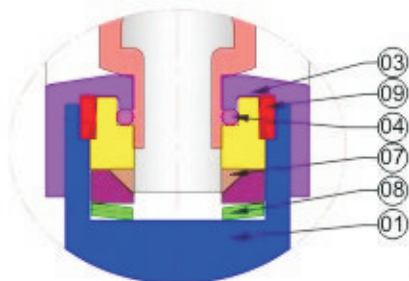
**Size Range : 2" to 12"**

**Standard**

Design and manufacturing : API 609 category A/BS 5155 / MSS SP-67 / C-504  
 Valve face to face dimensions : Short wafer as per ISO 5752 Tab 5 / API 609 Category A  
 Top flanged drilling : ISO 5211 Part II  
 Inspection and testing : API 598 / BS 6755 / FCI-702  
 Flanged standard conformity : ANSI 150, DIN PN 10 / 16



No.	Description	Material
1	Body	C.I. / D.I. / CF8 / CF8M
2	Disc	C.I. / I.I. / CF8 / CF8M
3	Seat	PTFE
4	Collar	PTFE
5	"O" Ring	Viton
6	Metal Bush	PTFE Coated
7	Top Shaft	AISI 410
8	Pad	Silicon
9	Disc Pin	S. S. 304
10	Bottom Shaft	AISI 410
11	"O" Ring	Viton
12	Plug	M. S.



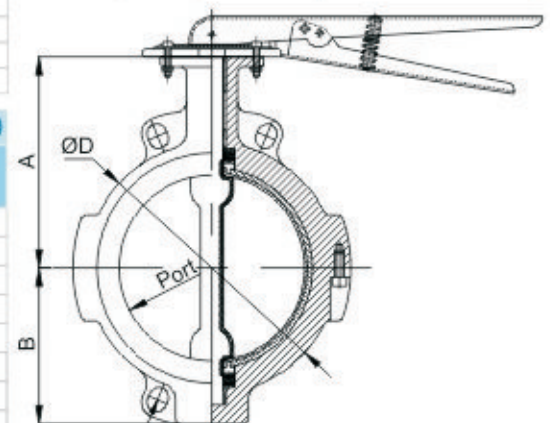
Details X

No.	Description	Material	Qty.
1	Body	C.I. / C.S. / CF8 / CF8M	01
2	Disc	C.I. / C.S. / CF8 / CF8M	01
3	Sleeve	FEP / PFA	01
4	'O' Ring	Viton	02
5	Bush	PTFE ( Teflon )	02
6	Bush	Metal Bush S.S. 304	02
7	Truth Bush	S.S. 304	02
8	Washer	Spring Steel	04
9	Gasket	Silicon Big	02
10	L. N. Bolt	S.S. 304	02

**Dimensions :**

(All Dimensions are in mm)

Valve Model	Valve Size		Port	A	B	F to F	ØD
	MM	Inch					
FEP - SGI - 50	50	2"	48	107	65	44	101
FEP - SGI - 65	65	2.1/2"	62	118	65	46	112
FEP - SGI - 80	80	3"	78	122	83	46	130
FEP - SGI - 100	100	4"	98	153	98	52	163
FEP - SGI - 125	125	5"	---	---	---	---	---
FEP - SGI - 150	150	6"	148	193	122	57	218
FEP - SGI - 200	200	8"	196	223	167	63	273
FEP - SGI - 250	250	10"	---	---	---	---	---
FEP - SGI - 300	300	12"	291	271.5	244.5	78	380



ON & ABOVE 200 NB.

# Hand Lever / Worm Gear Operated Double Eccentric Design Off - Set Disc "Wafer" Type Butterfly Valve

"aira" offers Manual Worm Gear / Lever Operated Off - Set Disc Butterfly Valve "WAFER" Type Construction engineered for multiply ON/OFF Operation in the large Pipe line and full flow down Stream.

**Size Range : 2.1/2" to 48"**

### Standard

Design And Manufacturing	API 609 Category "B" / MSS SP - 68
Valve Face to Face Dimensions	API 609 Category "B" / ISO 5752 / MSS SP-68
Flange Standard Conformity	ASME B 16.5 Class 150 ASME B 16.47Series "A" Class 150
Inspection & Testing	API 59B
Pressure Temperature Rating	ASME B16.34
Top Flange Dimensions	Bolt Hole ISO 5211
Stem Dimensions	Square Drive to ISO 5211
Leakage Class	Class VI as per ANSI B 16, 16.104

### PRESSURE / TEMPERATURE RATING

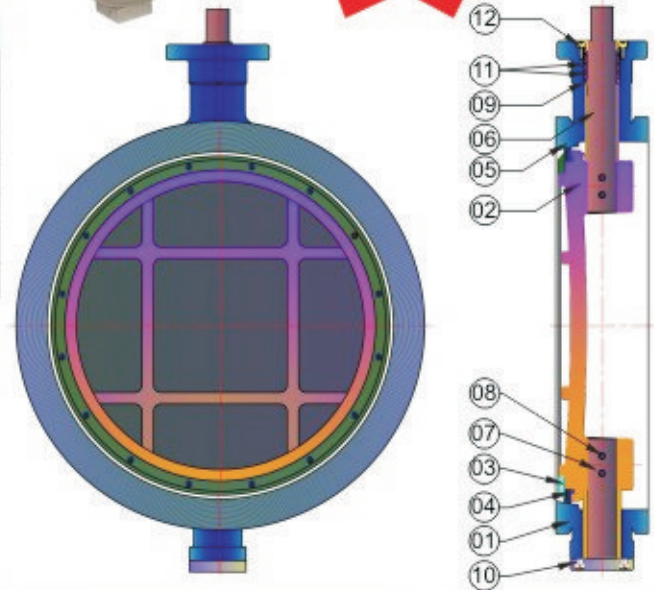
PRESSURE RATING	150# (PN 10 / PN 16 / PN 25 )
OPERATING TEMPERATURE	NBR - -10 °C TO +90 °C EPDM - -20 °C TO +120 °C VITON - 0 °C TO +220 °C PTFE - -25 °C TO +180 °C RPTFE - -25 °C TO +220 °C TFM -25 °C TO +250 °C

No.	Description	Material	Qty.
1	Body	C.I. / WCB / CF8 / CF8M / D.I.	1
2	Disc	C.I. / WCB / CF8 / CF8M / D.I.	1
3	Retainer	M.S. / CF8 / CF8M	1
4	Disc Seal Ring	PTFE / RPTFE / NBR / EPDM / Viton	1
5	Body Seal Ring	S.S. 304 / 316	1
6	Shaft	S.S. 304 / 316 / 410	1
7	Stem Shaft	S.S. 304 / 316 / 410	1
8	Disc Pin	S.S. 304 / 316 / 410	4
9	Flange Side Washer	S.S. 304 / 316 / 410	1
10	Stem Square	M.S. / CF8 / CF8M	1
11	Gland Seal Set	PTFE / NBR / EDPM / Viton	5
12	Gland Plate	M.S. / CF8 / CF8M	1



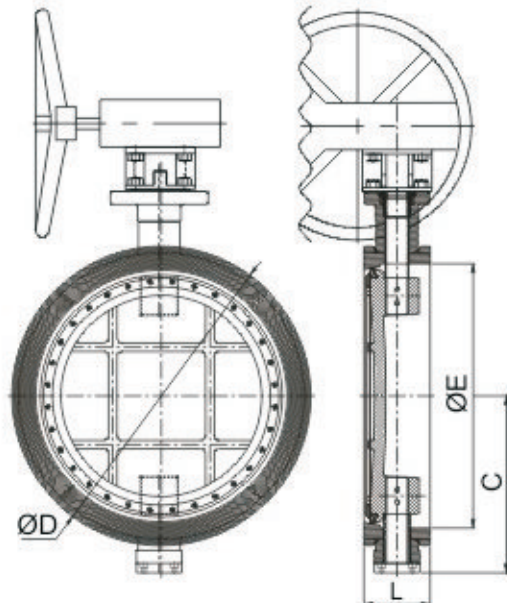
609 - 0055

**Fire Safe  
Design**



Dimensions : (All Dimensions are in mm)

Valve Model	Valve Size		L	øD	øE	C
	MM	Inch				
BOD-100	100	4"	54	158	110	96
BOD-125	125	5"	56	185.87	120	112
BOD-150	150	6"	57	216	152	115
BOD-200	200	8"	64	270	200	141
BOD-250	250	10"	72	325	255	179
BOD-300	300	12"	81	373	306	210
BOD-350	350	14"	92	412	355	234
BOD-400	400	16"	102	472	400	275
BOD-450	450	18"	114	532	450	327.5
BOD-500	500	20"	127	584	505	359
BOD-600	600	24"	154	692.2	612	409
BOD-650	650	26"	165	749.3	640	640
BOD-700	700	28"	165	800.1	705	500
BOD-750	750	30"	190	857.25	725	571
BOD-800	800	32"	190	915	810	630
BOD-850	850	34"	205	965.2	850	655.5
BOD-900	900	36"	205	1022.35	900	680
BOD-1000	1000	40"	300	1124	1000	735
BOD-1200	1200	48"	350	1359	1200	915



"aira" offers Manual Worm Gear / Lever Operated Off - Set Disc Butterfly Valve in Double Flange Construction engineered for multiple ON / OFF Operation in the large Pipe line and full flow down Stream.



609 - 0055



**Size Range : 2.1/2" to 48"**

### Standard

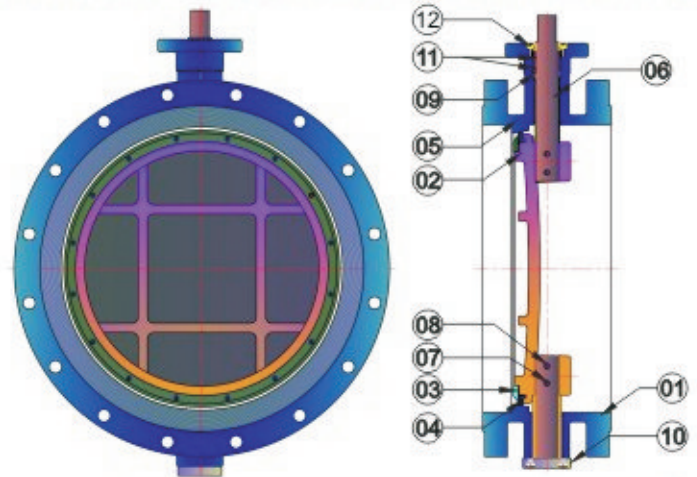
Design And Manufacturing	API 609 / BS 5155 / BSEN 593 / IS 13095 / AWWA C-504
Valve Face to Face Dimensions	API 609 (Short Pattern) / BS 5155 (Short Pattern) / IS 13095 (Short Pattern) / AWWA C - 504 (Short Pattern)
Flange Standard Conformity	ASME B16.5 Class 150 (Upto 24") ASME B16.47 Series "A" Class 150 (Above 26" to 48") AWWA C-207, IS1538, BS5404, IS 6392
Inspection & Testing	API 598 / BS 6755 / AWWA C - 504
Pressure Temperature Rating	ASME B16.34
Top Flange Dimensions	Bolt Hole ISO 5211
Stem Dimensions	Square Drive To ISO 5211
Leakage Class	Class VI As Per ASME B 16, 16.104

**Note.: For, Sea Water Application, Ebonite Lining On Request.**

### PRESSURE / TEMPERATURE RATING

PRESSURE RATING	150# ( PN 10 / PN 16 / PN 25 )
OPERATING TEMPERATURE	NBR -- -10 °C TO +90 °C EPDM - -20 °C TO +120 °C VITON - 0 °C TO +220 °C PTFE -- -25 °C TO +180 °C RPTFE - -25 °C TO +220 °C

No.	Description	Material	Qty.
1	Body	C.I. / WCB / CF8 / CF8M / D.I	01
2	Disc	WCB / CF8 / CF8M / D.I	01
3	Retainer	M.S. / CF8 / CF8M	01
4	Disc Seal Ring	RPTFE / PTFE / NBR / EPDM / Viton	01
5	Body Seat Ring	S.S. 304 / 316	01
6	Shaft	S.S. 304 / 316 / 410	01
7	Stem Shaft	S.S. 304 / 316 / 410	01
8	Disc Pin	S.S. 304 / 316 / 410	04
9	Flange Side Washer	S.S. 304 / 316 / 410	01
10	Stem Square	M.S. / CF8 / CF8M	01
11	Gland Seal Set	PTFE / NBR / EDPM / Viton / RPTFE	05
12	Gland Plate	M.S. / CF8 / CF8M	01

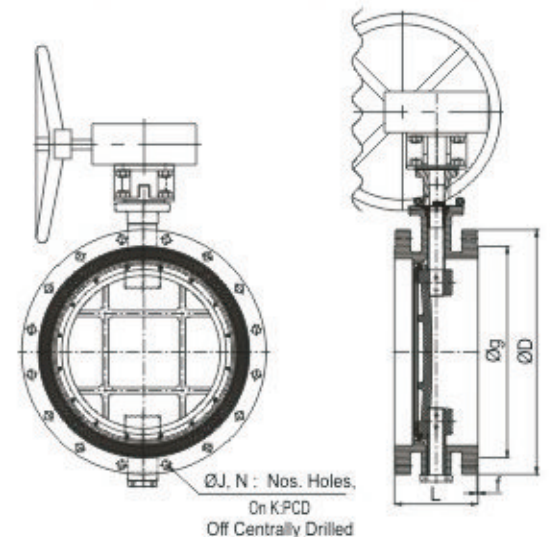


### Notes :

**We Have Successfully Carried Out Proof of Design Test on these Rubber Seated Butterfly Valve as per AWWA C - 504**

### Dimensions : B 16.5 150# & B 16.47 "A" 150# (All Dimensions are in mm)

Valve Model	Valve Size		L	ØD	Øg	f	ØJ	N	K:PCD
	MM	Inch							
BOD - 65	65	2.1/2"	112	180	104.8	2	19.05	04	139.7
BOD - 80	80	3"	114	190	127	2	19.05	04	152.4
BOD - 100	100	4"	127	230	157.2	2	19.05	08	190.5
BOD - 125	125	5"	140	255	185.7	2	22.2	08	215.9
BOD - 150	150	6"	140	280	215.9	2	22.2	08	241.3
BOD - 200	200	8"	152	345	269.9	2	22.2	08	298.5
BOD - 250	250	10"	165	405	323.8	2	25.4	12	362
BOD - 300	300	12"	178	485	381	2	25.4	12	431.8
BOD - 350	350	14"	190	535	412.8	2	28.6	12	476.3
BOD - 400	400	16"	216	595	469.9	2	28.6	16	539.8
BOD - 450	450	18"	222	635	533.4	2	31.75	16	577.9
BOD - 500	500	20"	229	700	584.2	2	31.75	20	635
BOD - 600	600	24"	267	815	692.2	2	34.9	20	749.3
BOD - 650	650	26"	292	870	749	2	34.9	24	806.4
BOD - 700	700	28"	292	925	800	2	34.9	28	863.6
BOD - 750	750	30"	318	985	857	2	34.9	28	914.4
BOD - 800	800	32"	318	1060	914	2	41.3	28	977.9
BOD - 850	850	34"	324	1110	965	2	41.3	32	1028.7
BOD - 900	900	36"	330	1170	1022	2	41.3	32	1085.8
BOD - 1000	1000	40"	410	1290	1124	2	41.3	36	1200.2
BOD - 1050	1050	42"	410	1345	1194	2	41.3	36	1257.3
BOD - 1200	1200	48"	470	1510	1359	2	41.3	44	1422.4





Dimensions :		PN 10		(All Dimensions are in mm)					
Valve Model	Valve Size		L API 609	ØD	Øg	f	ØJ	N	K:PCD
	MM	Inch							
BOD - 80	80	3"	114	200	133	3	18	04	160
BOD - 100	100	4"	127	220	153	3	19	08	180
BOD - 150	150	6"	140	285	209	3	23	08	240
BOD - 200	200	8"	152	340	264	3	23	08	295
BOD - 250	250	10"	165	395	319	3	23	12	350
BOD - 300	300	12"	178	445	367	4	23	12	400
BOD - 350	350	14"	190	505	427	4	23	16	460
BOD - 400	400	16"	216	565	477	4	28	16	515
BOD - 450	450	18"	222	615	527	4	28	20	565
BOD - 500	500	20"	229	670	582	4	28	20	620
BOD - 600	600	24"	267	780	682	5	31	20	725
BOD - 650	650	26"	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
BOD - 700	700	28"	292	895	797	5	31	24	840
BOD - 750	750	30"	318	960	857	5	31	24	900
BOD - 800	800	32"	318	1015	904	5	34	24	950
BOD - 900	900	36"	330	1115	1004	5	34	28	1050
BOD - 1000	1000	40"	410	1230	1111	5	36	28	1160
BOD - 1200	1200	48"	470	1455	1328	5	40	32	1380

Dimensions :		PN 16		(All Dimensions are in mm)					
Valve Model	Valve Size		L API 609	ØD	Øg	f	ØJ	N	K:PCD
	MM	Inch							
BOD - 65	65	2.1/2"	112	185	122	3	18	04	145
BOD - 80	80	3"	114	200	138	3	18	08	160
BOD - 100	100	4"	127	220	158	3	18	08	180
BOD - 150	150	6"	140	285	212	3	22	08	240
BOD - 200	200	8"	152	340	268	3	22	12	295
BOD - 250	250	10"	165	405	320	3	26	12	355
BOD - 300	300	12"	178	460	378	4	26	12	410
BOD - 350	350	14"	190	520	438	4	26	16	470
BOD - 400	400	16"	216	580	490	4	30	16	525
BOD - 450	450	18"	222	640	490	4	30	20	585
BOD - 500	500	20"	229	715	610	4	33	20	650
BOD - 600	600	24"	267	840	725	5	36	20	770
BOD - 650	650	26"	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
BOD - 700	700	28"	292	910	795	5	36	24	840
BOD - 750	750	30"	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
BOD - 800	800	32"	318	1025	900	5	39	24	950
BOD - 900	900	36"	330	1125	1000	5	39	28	1050
BOD - 1000	1000	40"	410	1255	1115	5	42	28	1170
BOD - 1200	1200	48"	470	1485	1330	5	48	32	1390

Dimensions :		AWWA C - 207		(All Dimensions are in mm)					
Valve Model	Valve Size		L AWWA C - 504	ØD	b	ØJ	N	K:PCD	
	MM	Inch							
BOD - 65	65	2.1/2"	127	180	16	19.05	4	139.7	
BOD - 80	80	3"	127	190	16	19.05	4	152.4	
BOD - 100	100	4"	127	228.6	16	19.05	8	190.5	
BOD - 125	125	5"	127	254	16	19.05	8	215.9	
BOD - 150	150	6"	127	279.4	17.5	22.35	8	241.3	
BOD - 200	200	8"	152	343	17.5	22.35	8	298.45	
BOD - 250	250	10"	203	406.4	17.5	25.4	12	361.95	
BOD - 300	300	12"	203	482.6	20.6	25.4	12	431.8	
BOD - 350	350	14"	203	533.4	23.8	28.45	12	476.25	
BOD - 400	400	16"	203	596.9	25.5	28.45	16	539.75	
BOD - 450	450	18"	203	635	27	31.75	16	577.85	
BOD - 500	500	20"	203	698.5	28.5	31.75	20	635	
BOD - 600	600	24"	203	812.8	30.2	35.05	20	749.3	
BOD - 650	650	26"	305	869.9	31.5	35.05	24	806.45	
BOD - 700	700	28"	305	927.1	35.5	35.05	28	863.6	
BOD - 750	750	30"	305	984.25	35.5	35.05	28	914.4	
BOD - 800	800	32"	305	1060.45	38	41.15	28	977.9	
BOD - 850	850	34"	305	1111.25	38	41.15	32	1028.7	
BOD - 900	900	36"	305	1168.4	41	41.15	32	1085.85	
BOD - 1000	1000	40"	305	1289	41	41.15	36	1200.15	
BOD - 1050	1050	42"	305	1346.2	44.5	41.15	36	1257.3	
BOD - 1200	1200	48"	381	1511.3	47.5	41.15	44	1422.4	

“aira” offers Manual Worm Gear / Lever Operated Off - Set Disc Butterfly Valve in Double Flange Construction engineered for multiply ON / OFF Operation in the large Pipe line and full flow down Stream.



609 - 0055

**Size Range : 2" to 24"**

**Applicable Standard**

Design And Manufacturing	API 609 / BS 5155 / BSEN 593 / IS 13095
Valve Face to Face Dimensions	API 609 ( Short Pattern ) / BS 5155 ( Long Patern ) IS 13095 ( Long Patern )
Flange Standard Conformity	ASME / ANSI B 16.5 Class 300
Inspection & Testing	API 598

### PRESSURE / TEMPERATURE RATING

PRESSURE RATING	300# ( PN 25 / PN 40 )
OPERATING TEMPERATURE	NBR --10 °C TO +90 °C / EPDM --20 °C TO +120 °C VITON - 0 °C TO +220 °C / PTFE - -25 °C TO +180 °C RPTFE - -25 °C TO +220 °C

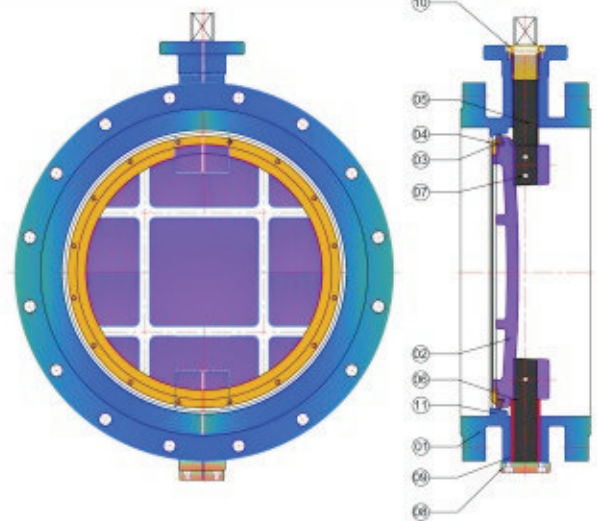
No.	Description	Material	Qty.
1	Body	ASTM A 216 Gr. WCB / A 351 Gr. CF8 / CF8M	01
2	Disc	ASTM A 216 Gr. WCB / A 351 Gr. CF8 / CF8M	01
3	Disc Seal Ring	PTFE / RPTFE / NBR / EPDM / Viton	01
4	Retainer	IS 2062 Gr B M.S. / ASTM A 351 Gr. CF8 / CF8M	01
5	Shaft	ASTM A 479 Type 410 / 304 / 316	01
6	Steam Shaft	ASTM A 479 Type 410 / 304 / 316	01
7	Disc Pin	S.S. 202	02
8	Steam Plate	M.S.	01
9	Shaft Bush	ASTM A - 479 Type 410 / 300 / 316	02
10	Gland Plate	M.S.	01
11	Body Seat Ring	ASTM A 479 Type 304 / 316	01

### Butterfly Valve CV Values 300#

Valve Size	10°	20°	30°	40°	50°	60°	70°	80°	90°
MM Inch									
150 6"	17.4	61	120	190	290	420	680	770	870
200 8"	27.2	100	200	300	460	640	1070	1200	1370
250 10"	42	150	290	460	690	980	1630	1840	2090
300 12"	59	200	410	650	970	1390	2300	2600	2950
350 14"	73	260	510	800	1200	1710	2840	3200	3640
400 16"	100	350	700	1100	1660	2360	39140	4410	5010
450 18"	120	440	870	1360	2040	2900	4810	5430	6170
500 20"	170	580	1160	1810	2720	3870	640	7250	8250
600 24"	260	900	1800	2830	4250	6050	10000	11300	12900

### Valve Torque 300#

Valve Size	10 Bar	20 Bar	25 Bar	35 Bar	40 Bar	50 Bar
MM Inch	N - m	N - m	N - m	N - m	N - m	N - m
80 3"	55	62	70	75	76	80
100 4"	72	89	104	111	114	125
125 5"	96	127	137	148	160	178
150 6"	126	138	178	194	205	220
200 8"	205	252	281	304	328	354
250 10"	325	468	503	560	594	663
300 12"	465	685	777	868	937	1005
350 14"	747	1126	1461	1776	1836	2021
400 16"	1065	1654	2020	2204	2448	2700
450 18"	1346	2143	2458	2938	3183	3428
500 20"	2014	3056	3590	3852	4244	4570
600 24"	3052	4578	5223	5876	6464	6921

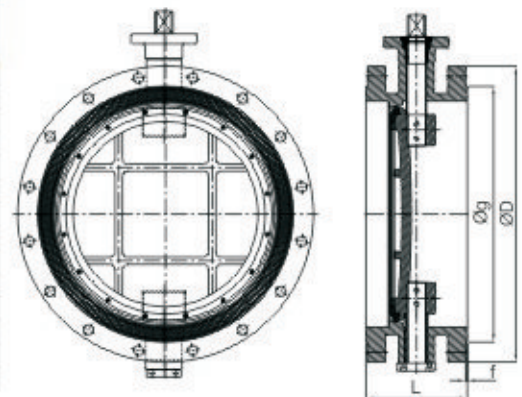


### Dimensions :

300#

(All Dimensions are in mm)

Valve Model	Valve Size	L	øD	øg	b	f	øJ	N	K-PCD
	MM Inch								
BOD3C-50	50 2"	150	165.1	91.9		1.6	19.05	08	127
BOD3C-65	65 2.1/2"	170	190.5	104.6		1.6	22.35	08	149.35
BOD3C-80	80 3"	180	209.55	127	28.45	1.6	22.35	08	168.14
BOD3C-100	100 4"	190	254	157.2	31.75	1.6	22.35	08	200.0
BOD3C-125	125 5"	200	279.4	185.6	35.05	1.6	22.35	08	234.9
BOD3C-150	150 6"	210	317.5	215.9	36.5	1.6	22.35	12	269.9
BOD3C-200	200 8"	230	381	270	41.15	1.6	25.4	12	330.2
BOD3C-250	250 10"	250	444.5	323.8	47.75	1.6	28.5	16	387.35
BOD3C-300	300 12"	270	520.7	381	50.8	1.6	31.75	16	450.9
BOD3C-350	350 14"	290	584.2	412.75	53.85	1.6	31.75	20	514.35
BOD3C-400	400 16"	310	647.7	469.9	57.15	1.6	35.0	20	571.5
BOD3C-450	450 18"	330	711.2	533.4	60.45	1.6	35.0	24	628.6
BOD3C-500	500 20"	350	774.7	584.2	63.5	1.6	35.0	24	685.8
BOD3C-600	600 24"	390	914.4	692.15	69.85	1.6	41.14	24	812.8



# Hand Lever / Worm Gear Operated Double Eccentric Design Off - Set Disc Double Flange Butterfly Valve 600 Class

“aira” offers Manual Worm Gear / Lever Operated Off - Set Disc Butterfly Valve Double Flange Construction engineered for multiply ON/OFF Operation in the large Pipe line and full flow down Stream.

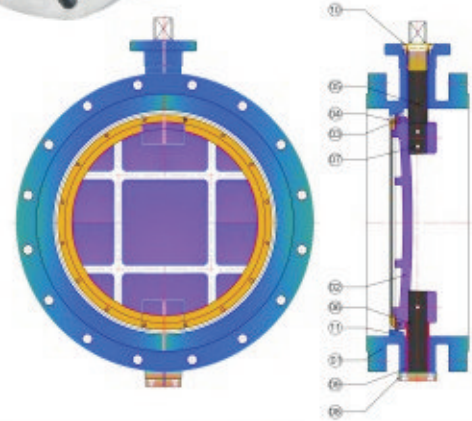
**Size Range : 3" to 24"**

**Standard**

Design And Manufacturing	API 609 / BS 5155 / BSEN 593 / IS 13095
Valve Face to Face Dimensions	API 609 ( Short Pattern ) / BS 5155 ( Long Pattern ) IS 13095 ( Long Pattern )
Flange Standard Conformity	ASME / ANSI B 16.5 Class 600
Inspection & Testing	API 598

**PRESSURE / TEMPERATURE**

PRESSURE RATING	600# ( PN 60 )
OPERATING TEMPERATURE	NBR - -10 °C TO +90 °C / EPDM - -20 °C TO +120 °C VITON - 0 °C TO +220 °C / PTFE - -25 °C TO +180 °C RPTFE - -25 °C TO +250 °C



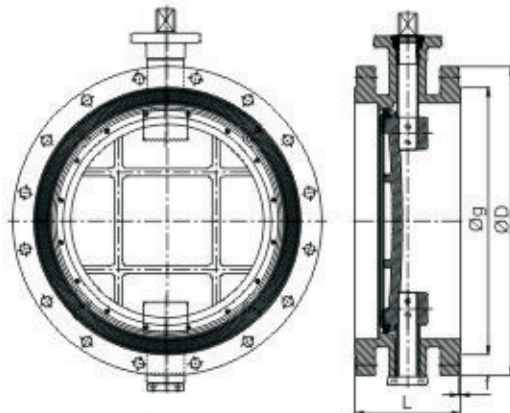
No.	Description	Material	Qty.
1	Body	ASTM A 216 Gr. WCB / A 351 Gr. CF8 / CF8M	01
2	Disc	ASTM A 216 Gr. WCB / A 351 Gr. CF8 / CF8M	01
3	Disc Seal Ring	PTFE / RPTFE / NBR / EPDM / Viton	01
4	Retainer	IS 2062 Gr B M.S. / ASTM A 351 Gr. CF8 / CF8M	01
5	Shaft	ASTM A 479 Type 410 / 304 / 316	01
6	Steam Shaft	ASTM A 479 Type 410 / 304 / 316	01
7	Disc Pin	S.S. 304	02
8	Steam Plate	M.S.	01
9	Shaft Bush	ASTM A - 479 Type 410 / 304 / 316	01
10	Gland Plate	M.S.	01
11	Body Seat Ring	ASTM A 479 Type 304 / 316	01

**Butterfly Valve CV Values**

Valve Size		10°	20°	30°	40°	50°	60°	70°	80°	90°
MM	Inch									
80	3"	4	15.6	31.5	47.6	74.5	110	180	200	230
100	4"	8	27.9	56	90	130	190	310	350	400
125	5"	13.1	46	92	150	220	310	520	580	670
150	6"	19.9	70	140	220	330	480	780	890	1000
200	8"	36.3	130	260	400	610	860	1430	1600	1830
250	10"	56	200	390	620	920	1300	2170	2450	2780
300	12"	84	290	590	930	1400	1980	3290	3700	4200
350	14"	100	370	730	1140	1700	2500	4060	4570	5200
400	16"	140	480	960	1500	2300	3220	5340	6020	6840
450	18"	1180	640	1260	2000	3000	4220	7000	7900	9000
500	20"	240	840	1680	2600	3950	5630	9300	10500	12000
600	24"	380	1300	2630	4200	6200	8800	14600	16500	18700

**VALVE TORQUE 600#**

Valve Size		30 Bar	40 Bar	60 Bar	80 Bar	100 Bar
MM	Inch	N - m	N - m	N - m	N - m	N - m
150	6"	600	700	850	1000	1300
200	8"	1000	1150	1400	1650	2100
250	10"	1650	1900	2300	2800	3800
300	12"	2400	2850	3450	4100	4900
350	14"	3400	4300	5350	6300	7500
400	16"	5000	6900	8900	9700	11500
450	18"	7000	9400	12000	14500	17000
500	20"	8700	12000	15000	18000	21000
600	24"	15000	21000	25700	30500	36000



**Dimensions :**

Valve Model	Valve Size		L	ØD	Øg	b	f	ØJ	N	K.PCD
	MM	Inch								
BOD3C-80	80	3"	180	210	127	31.75	6.35	22.0	08	168.3
BOD3C-100	100	4"	190	275	157	38.1	6.35	25.4	08	215.9
BOD3C-125	125	5"	210	330	185	44.4	6.35	28.5	08	266.7
BOD3C-150	150	6"	210	355	216	47.75	6.35	28.5	12	292.1
BOD3C-200	200	8"	230	420	270	55.63	6.35	32.0	12	349.2
BOD3C-250	250	10"	250	510	324	63.5	6.35	35.0	16	431.8
BOD3C-300	300	12"	270	560	381	66.55	6.35	35.0	20	489.5
BOD3C-350	350	14"	290	605	413	69.85	6.35	38.1	20	527.0
BOD3C-400	400	16"	310	685	470	76.2	6.35	41.15	20	603.2
BOD3C-450	450	18"	330	745	534	82.6	6.35	44.45	20	654.0
BOD3C-500	500	20"	350	815	584	88.9	6.35	44.45	24	723.9
BOD3C-600	600	24"	390	940	692	101.6	6.35	50	24	838.2

Precised & Strong Durable to 240 °C / 500 °C Temperature And  
10 Kg/cm<sup>2</sup> / 20 Kg/cm<sup>2</sup> Pressure

## 5 Special Effects

- Compact Design - Full Port - Offers Max Flow
- Simple Structure, Light & Smooth - Takes Very Short Time For Opening & Closing With Very Low Torque
- Easy Maintenance - Replaceable Seal Design
- Self Sealing - Self Clearing The Under Cut Disc Segment And Seal Tends To Wipe Away The Material From The Sealing Area.
- Gland Pressing Plate - Ensure Complete Utilization of Gland Seal

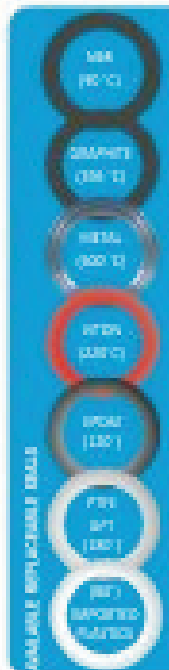
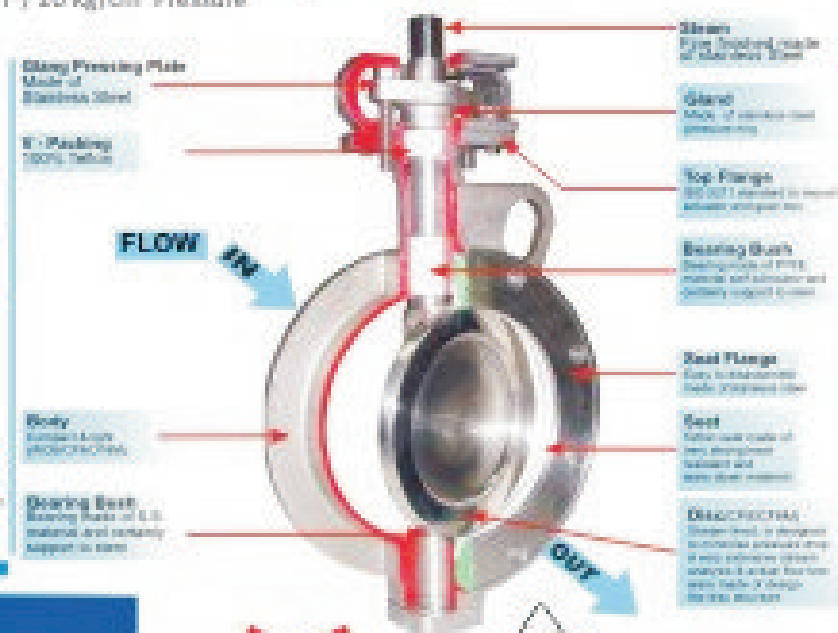
## Application

Hygienic Powder & Slurries, especially in Pharmaceutical Industries.  
Chemical and Dyeing Fluids in Textile Processing  
Brine Waters & Oils.  
Steam Lines, Air / Gas Lines / Vacuum.

*Spherical Disc Valve has been Proved as Superior to Other Valves in Many Aspects, Particularly in...*

- Weight
- Space
- Pressure Range
- Multiple Operations
- Maintenance Ease
- Torque & Economy

Spherical Disc Valve	Technical Specifications :
Size Range	1.1/2" to 36"
Construction Type	Double Flanged Disc Design
Body	WCB / CF8 / CF8M
Disc	CF8 / CF8M
Seat	PTFE / PTFE/EPDM / Metal to Metal
Blind	ANSI 500 / 500 / 500
Flange Mounting	Non-Standard
Pressure Rating	ANSI 150 Class
	ANSI 300 / 600 Class
End Connection	Welder Standardized Lug Type
Operating Temp. Range	-28 °C to 180 °C (Soft Sealing) -28 °C to 500 °C (Metal to Metal Sealing)
Operating	Hard Seats, Water Oiler Box.

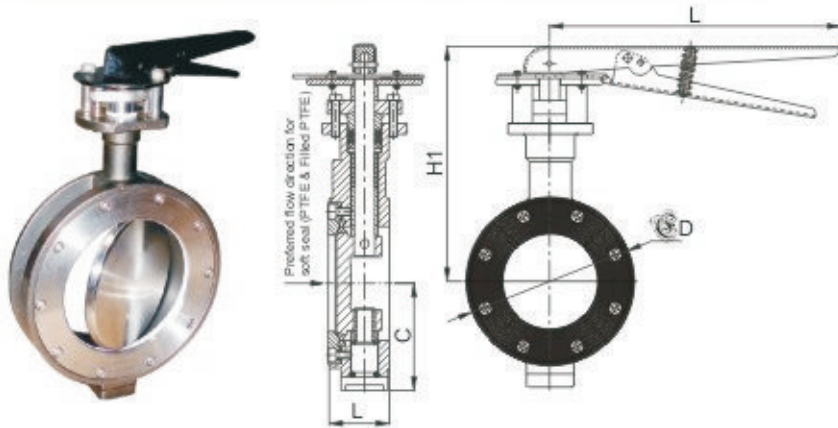


CV Value in GPM		
Valve Size	CV Full Open 90° (API Class 150)	
MM	Inch	
100	4.127	70
150	5"	90
200	6.312	150
300	7"	280
400	8"	580
500	9"	980
600	10"	1380
700	11"	1780
800	12"	2180
900	13"	2580
1000	14"	3080
1100	15"	3580
1200	16"	4080
1300	17"	4580
1400	18"	5080
1500	19"	5580
1600	20"	6080
1700	21"	6580
1800	22"	7080
1900	23"	7580
2000	24"	8080

CV Value in GPM					
Valve Size	Inch	Differential Pressure (MP)			
		5 Kg/cm <sup>2</sup>	10 Kg/cm <sup>2</sup>	15 Kg/cm <sup>2</sup>	20 Kg/cm <sup>2</sup>
100	4.127	0.8	1.0	1.2	1.5
150	5"	0.9	1.2	1.5	1.7
200	6.312	1.8	2.2	2.8	3.0
300	7"	3.2	4.0	5.2	5.0
400	8"	5.8	6.8	8.8	8.4
500	9"	8.8	10.8	12.8	14.8
600	10"	12.8	15.8	18.8	20.8
700	11"	16.8	20.8	25.8	28.8
800	12"	20.8	25.8	32.8	35.8
900	13"	24.8	30.8	37.8	40.8
1000	14"	28.8	35.8	42.8	45.8
1100	15"	32.8	40.8	47.8	50.8
1200	16"	36.8	45.8	52.8	55.8
1300	17"	40.8	50.8	57.8	60.8
1400	18"	44.8	55.8	62.8	65.8
1500	19"	48.8	60.8	67.8	70.8
1600	20"	52.8	65.8	72.8	75.8
1700	21"	56.8	70.8	77.8	80.8
1800	22"	60.8	75.8	82.8	85.8
1900	23"	64.8	80.8	87.8	90.8
2000	24"	68.8	85.8	92.8	95.8

Standards	Series S250 (40 MB To 600 NB)	Series G150 (600 NB To 1200 NB)
Design and Manufacturing	API 607 Category II	MS 1P - 68
Valve face to face dimensions	API 607 Category II / ANSI B 16.30	153.1512 Series 20; MS 1P - 68
Flange standard conforms	ANSI B 16.5 Class 150	ANSI B 16.5 / ISO 5167 Series 'E'
Inspection & Testing Standard	API 598 / ANSI FC 17 - 2	API 598 / BS 6755
Fire safe testing	API 607	API 607
Pressure temperature rating	ANSI / API B 16.30	ANSI / ANSI B 16.30

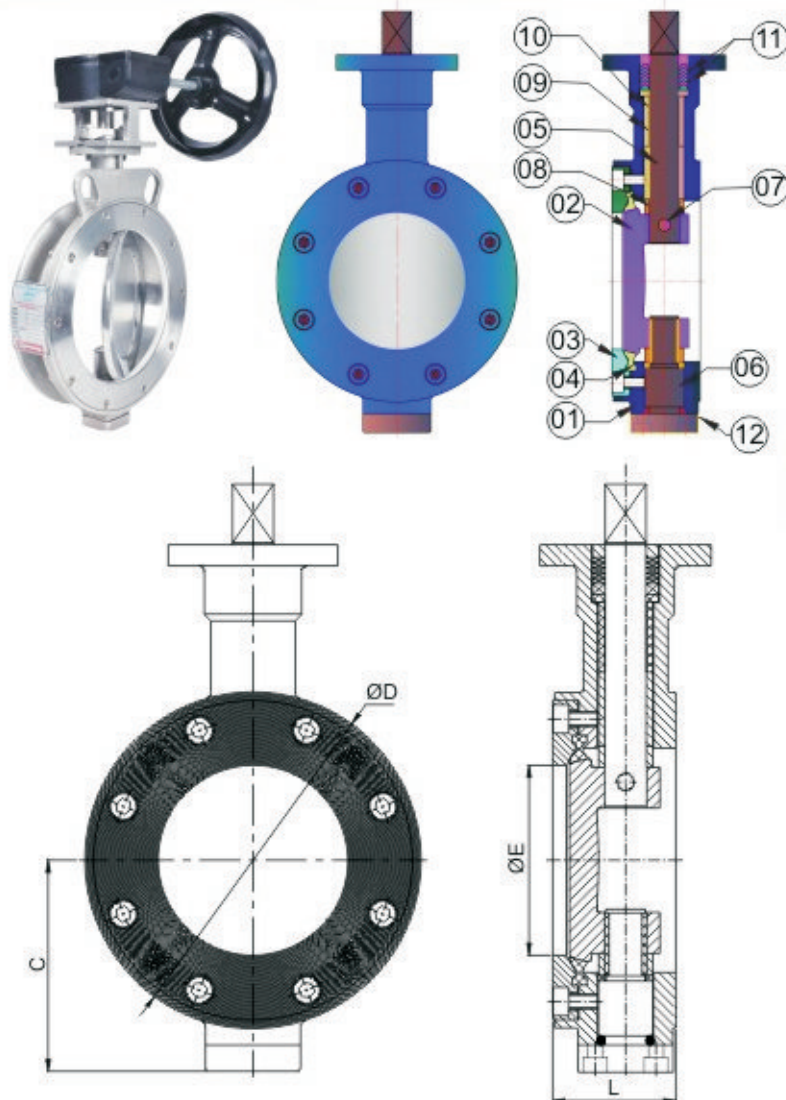
Handle Operated Spherical Disc Valve Upto 6" ( 150 MM )



Dimensions : (All Dimensions are in mm)

Valve Size		L	C	ØD	H1	L1	Weight (Approx.)
MM	Inch						
40	1.1/2"	42	57	82	146	265	2.250
50	2"	45	68.5	95	150	265	2.600
65	2.1/2"	48	74.5	108	172	265	3.550
80	3"	48	80	127	181	265	4.300
100	4"	54	96	159	197	265	6.100
125	5"	57	117	186	231	265	8.600
150	6"	57	132	217	245	265	11.050

Worm Gear Operated Spherical Disc Valve 1.1/2" (40 MM) TO 36" (900 MM)



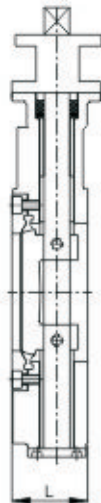
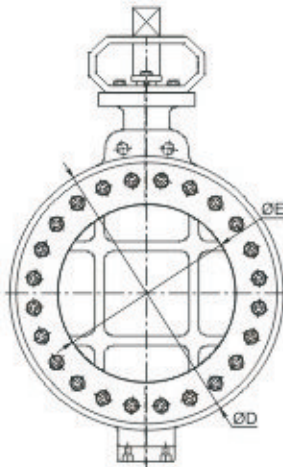
No.	Description	Material	Qty.
1	Body	WCB / CF8 / CF8M	1
2	Disc	WCB / CF8 / CF8M	1
3	Retainer	M.S. / CF8 / CF8M	1
4	Seal Ring	NBR / PTFE / Viton / GFT	1
5	Shaft	S.S. 304 / 316	1
6	Stem Shaft	S.S. 304 / 316	1
7	Disc Pin	S.S. 304 / 316 / 410	1
8	Shaft Collar	S.S. 304 / 316 / 410	4
9	Shaft Bush ( PTFE )	S.S. 304 / 316 / 410	1
10	Shaft Bush	M.S. / CF8 / CF8M	1
11	Gland Seal Set	PTFE / GFT	5
12	Gland Plate	M.S. / CF8 / CF8M	1

Dimensions : (All Dimensions are in mm)

Valve Size		L	C	ØE	ØD	Weight (Approx.)
MM	Inch					
40	1.1/2"	42	57	38	82	1.600
50	2"	45	68.5	50.8	95	2.200
65	2.1/2"	48	74.5	60.6	108	3.000
80	3"	48	80	72	127	3.800
100	4"	54	96	100	159	5.600
125	5"	57	117	123	186	7.700
150	6"	57	132	143	217	10.400
200	8"	64	157	192	270	15.000
250	10"	72	187	239	322	25.750
300	12"	82	218	290	382	36.000
350	14"	92	242	335	436	46.900
400	16"	102	270.5	387.5	495	66.850
450	18"	114	362	425	540	117.000
500	20"	127	400	475	595	146.500
600	24"	154	454	560	705	290.000
650	26"	165	478	608	755	360.000
700	28"	165	505	661.5	810	390.000
750	30"	190	542	696	855	475.000
800	32"	190	580	755	913	524.000
900	36"	203	640	864	1032	675.000



609 - 0055



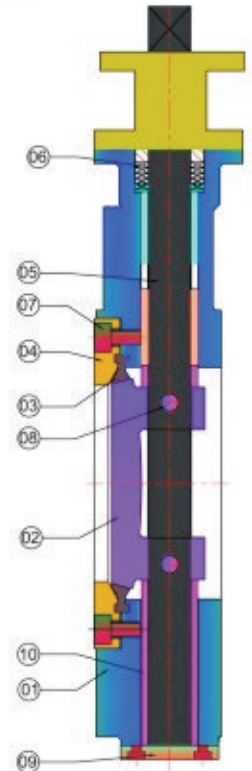
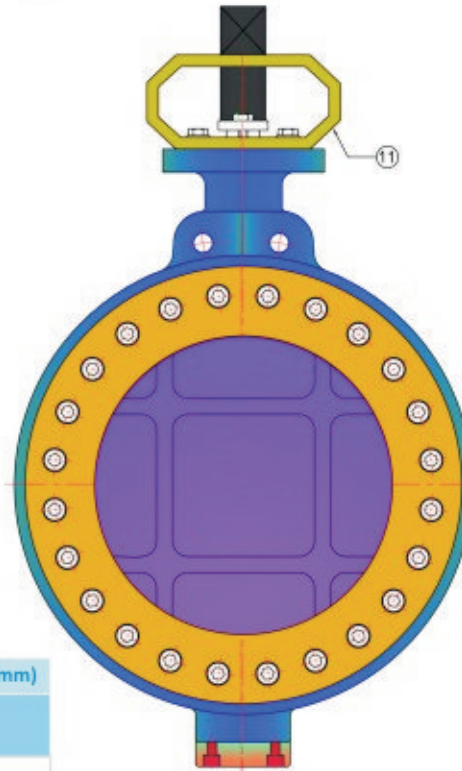
**Size Range : 1.1/2" to 24"**

**Standard**

Design And Manufacturing : API 609 Category "B"  
Valve Face to Face Dimensions : API 609 Category "B"  
Flange Standard Conformity : ASME / ANSI B 16.5 Class 300  
Inspection & Testing : API 598

**Pressure / Temperature Rating**

Pressure : 300# Pressure Rating  
Temperature : 180 °C  
Seat Pressure : 57 Kg/cm<sup>2</sup>  
Shell Pressure : 79 Kg/cm<sup>2</sup>



Dimensions : (All Dimensions are in mm)

Valve Model	Valve Size		L	ØD	ØE
	MM	Inch			
SDV-3-40	40	1.1/2"	42	88	38
SDV-3-50	50	2"	45	101	50.8
SDV-3-65	65	2.1/2"	48	108.5	60.6
SDV-3-80	80	3"	48	127	72
SDV-3-100	100	4"	54	159	100
SDV-3-125	125	5"	59	187	123
SDV-3-150	150	6"	59	219	143.2
SDV-3-200	200	8"	64	270	192
SDV-3-250	250	10"	87	340	239.2
SDV-3-300	300	12"	92	394	290
SDV-3-350	350	14"	117	436	335
SDV-3-400	400	16"	133	500	387.5
SDV-3-450	450	18"	149	540	425
SDV-3-500	500	20"	159	595	475
SDV-3-600	600	24"	181	705	560

No.	Description	Material
1	Body	ASTM A 216 Gr. WCB A 351 Gr. CF8 / CF8M
2	Disc	ASTM A 351 Gr. CF8 / CF8M
3	Replaceable Seat	PTFE / GFT
4	Retainer	M.S. / S.S. 304 / 316
5	Shaft	S.S. 410 / S.S. 304 / 316
6	Gland Packing	PTFE / GFT
7	Retainer Bolt	S.S.
8	Disc Pin	S.S. 304 / 316
9	Steam Plate	M.S. / S.S. 304 / 316
10	Shaft Bush	M.S. / S.S. 304 / 316
11	Bracket	M.S.

"aira" offers Manual Worm Gear / Lever Operated Off - Set Disc Butterfly Valve in Wafer & Double Flange Construction engineered for multiply ON / OFF Operation in the large Pipe line and full flow down Stream.

**Size Range : 2" to 12" ( 150# )**

**Standard**

Design And Manufacturing : API 609  
Valve Face to Face Dimensions : API 609 Category "B"  
Flange Standard Conformity : ASME / ANSI B 16.5 Class 150  
Inspection & Testing : API 598  
Leakage Class : ASME B 16, 16.104 Leakage Class VI

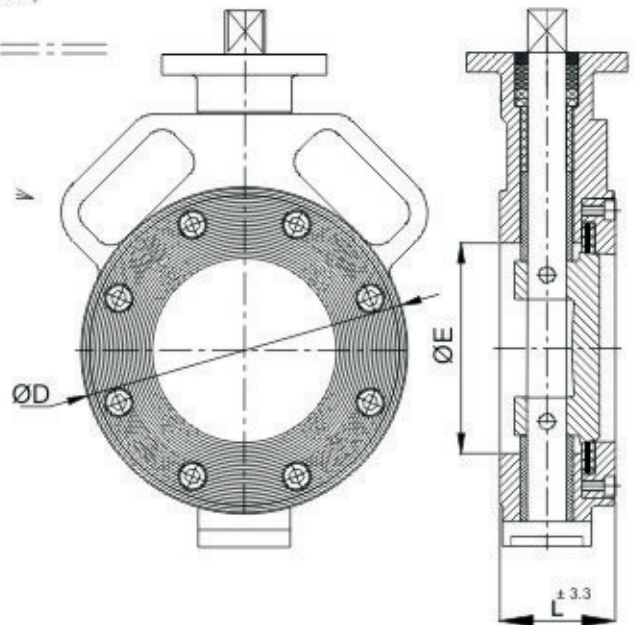
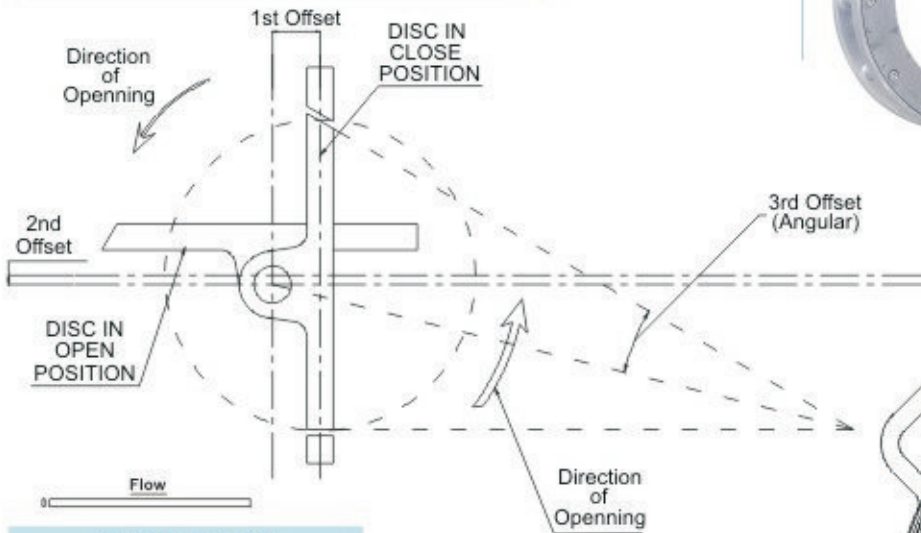
**Pressure / Temperature Rating**

Pressure : As Per 150# B16.34  
Temperature : 550 °C ( Above 550 °C On Request )



609 - 0055

**Fire Safe Design**



**VALVE TORQUE 150#**

Valve Size	5 Bar	10 Bar	20 Bar
MM Inch	N - m	N - m	N - m
50 2"	11	15	21
65 2.1/2"	20	28	38
80 3"	38	43	63
100 4"	50	58	80
125 5"	73	100	144
150 6"	113	144	181
200 8"	175	219	350
250 10"	294	331	375
300 12"	400	450	625

**CV Values**

Valve Size	10°	20°	30°	40°	50°	60°	70°	80°	90°
MM Inch									
50 2"	2	5	11	19	28	41	58	77	85
65 2.1/2"	2	9	20	28	45	60	80	120	130
80 3"	3	10	22	42	64	96	150	157	160
100 4"	6	17	41	75	116	174	273	284	290
125 5"	6	45	75	170	280	478	650	707	795
150 6"	7	51	119	221	340	510	799	833	850
200 8"	4	103	239	445	684	1026	1607	1676	1710
250 10"	50	151	353	655	1008	1515	2369	2470	2520
300 12"	79	236	552	1024	1576	2364	3704	3861	3940

**Dimensions : (All Dimensions are in mm)**

Valve Model	Valve Size	L	ØD	ØE
	MM Inch			
SDVTOB - 50	50 2"	47	95	50.8
SDVTOB - 65	65 2.1/2"	52	108	60.6
SDVTOB - 80	80 3"	52	127	72
SDVTOB - 100	100 4"	57	159	100
SDVTOB - 125	125 5"	60	186	123
SDVTOB - 150	150 6"	60	217	143
SDVTOB - 200	200 8"	67	270	192
SDVTOB - 250	250 10"	72	322	239
SDVTOB - 300	300 12"	75	382	290

"aira" Handle & Gear Operated SMT Model metal to metal replaceable seat design Spherical Disc Valve. Temperature upto 400°C flat metal seat leakage Class VI.



609 - 0055

**Fire Safe  
Design**

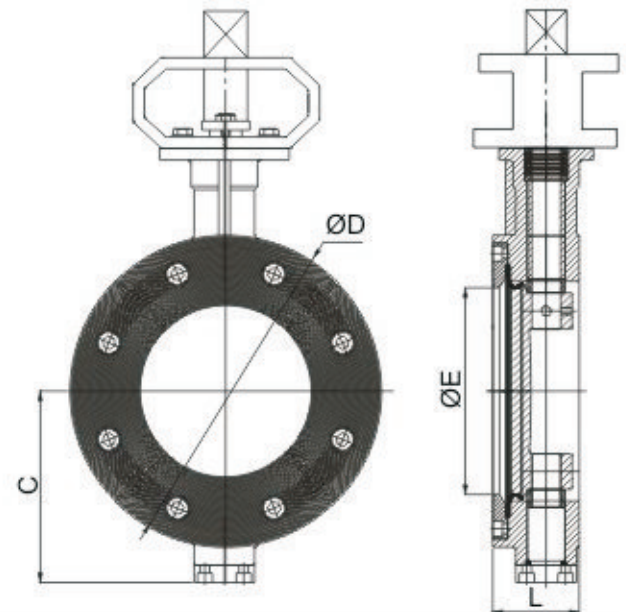
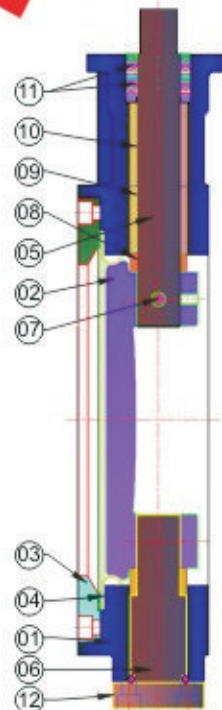
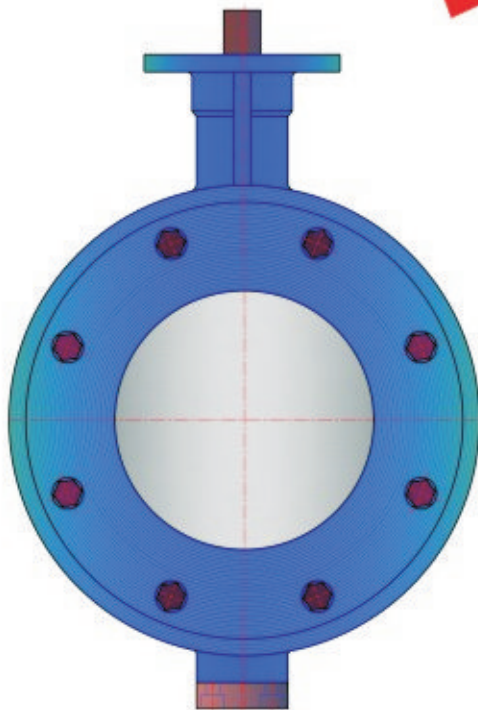
**Size Range : 2" to 18"**

**Standard**

Design And Manufacturing	API 609
Valve Face to Face Dimensions	API 609 Category "B"
Flange Standard Conformity	ASME B 16.5 Class 150
Inspection & Testing	API 598
Leakage Class	ASME B 16, 16.104 Leakage Class VI

**PRESSURE / TEMPERATURE**

PRESSURE RATING	PN 10
OPERATING TEMPERATURE	-50 °C TO 400 °C



Dimensions : (All Dimensions are in mm)

Valve Model	Valve Size		L	C	ØE	ØD
	MM	Inch				
SMT - 50	50	2"	47	65	50.8	95
SMT - 65	65	2.1/2"	52	66.5	60.6	108
SMT - 80	80	3"	52	77	72	127
SMT - 100	100	4"	57	93	100	159
SMT - 125	125	5"	60	117	123	186
SMT - 150	150	6"	60	131	143	217
SMT - 200	200	8"	67	167	192	270
SMT - 250	250	10"	72	196	239	322
SMT - 300	300	12"	85	218	290	382
SMT - 350	350	14"	92	242	335	436
SMT - 400	400	16"	102	270.5	387.5	495
SMT - 450	450	18"	114	362	425	540

No.	Description	Material	Qty.
1	Body	WCB / CF8 / CF8M	1
2	Disc	CF8 / CF8M	1
3	Retainer	M.S. / CF8 / CF8M	1
4	Seat Ring	CF8 / CF8M	1
5	Shaft	S.S. 304 / 316	1
6	Stem Shaft	S.S. 304 / 316 / 410	1
7	Disc Pin	S.S. 304 / 316 / 410	1
8	Shaft Collar	S.S. 304 / 316 / 410	4
9	Shaft Bush	S.S. 304 / 316	1
10	Shaft Bush	Graphite	1
11	Gland Seal Set	Graphite	5
12	Gland Plate	M.S. / CF8 / CF8M	1



**“aira”** Gear Operated MS Fabricated Double Flange Butterfly Valve Construction engineered for multiply ON / OFF Operation in the large Pipe line and full flow down Stream.

**Size Range : 50" to 104" (12" to 48" On Request)**

**Standard**

Design And Manufacturing	AWWA C - 504
Valve Face to Face Dimension Upto 72"	AWWA C - 504
Valve Face to Face Dimension Upto 72"	As Per Manufacturer Standard
Flange Standard Conformity	AWWA C - 207 Class "D"
Inspection & Testing	AWWA C - 504
Rating	PN 6 / PN 10

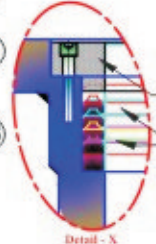
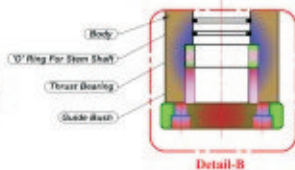
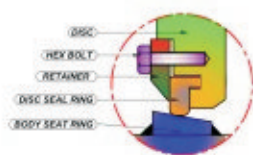
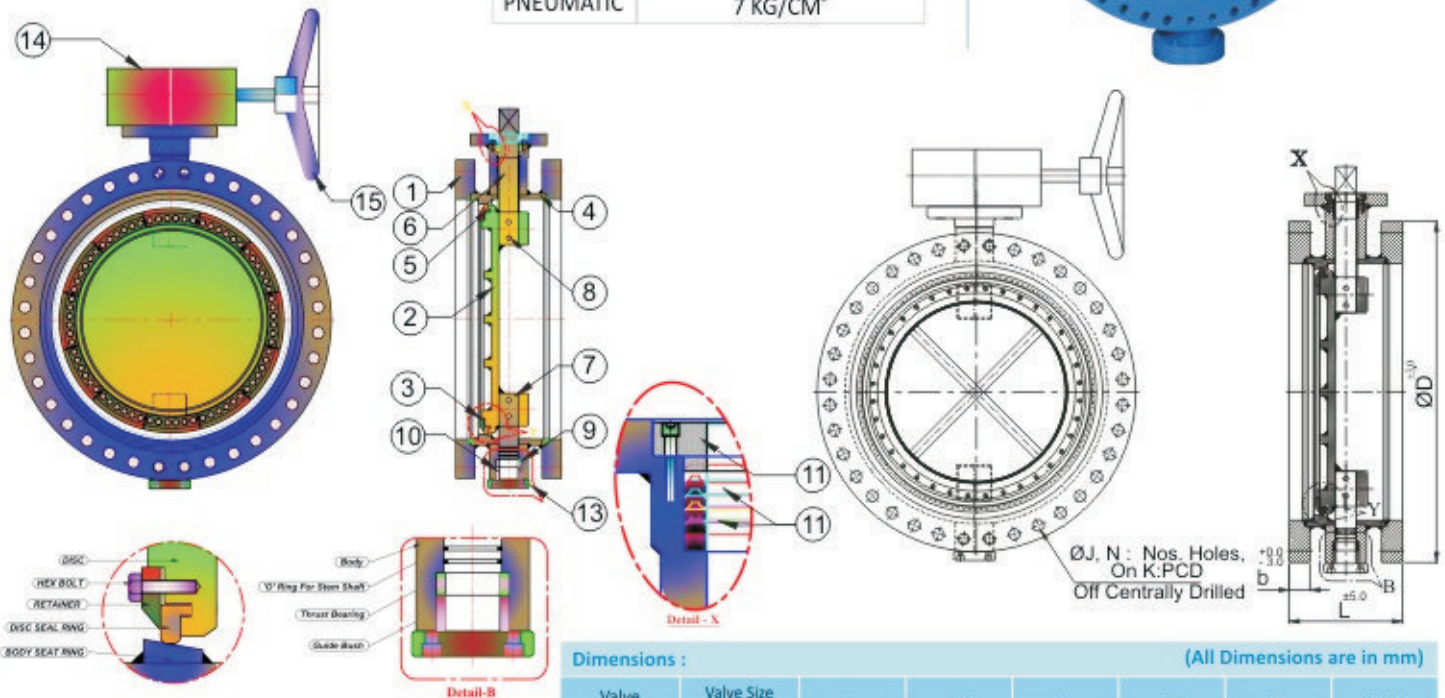


**PRESSURE / TEMPERATURE RATING**

PRESSURE RATING	PN 10
OPERATING TEMPERATURE	180 °C

**PRESSURE / TEMPERATURE RATING**

TESTING	BODY	SEAT
HYDRAULIC	16 KG/CM <sup>2</sup>	10 KG/CM <sup>2</sup>
PNEUMATIC	7 KG/CM <sup>2</sup>	



No.	Description	Material
1	Body	IS 2062 Gr. B M. S.
2	Disc	IS 2062 Gr. B M. S.
3	Retainer	IS 2062 Gr. B / ASTM A - 240 S.S. 304 / 316
4	Body Seat Ring	ASTM A - 479 Type 304 / 316
5	Disc Seal Ring	EPDM / NBR / Viton
6	Shaft	ASTM A - 479 Type 410 / 304 / 316
7	Stem Shaft	ASTM A - 479 Type 410 / 304 / 316
8	Disc Pin	ASTM A - 479 Type 410 / 304 / 316
9	Bearing	Double Thrust Bearing
10	Guide Bush	Bronze
11	Seal Set	EPDM / NBR / Viton
12	Gland Plate	M. S.
13	Stem Plate	IS 2062 Gr. B
14	Gear	Standard
15	Wheel	M. S.

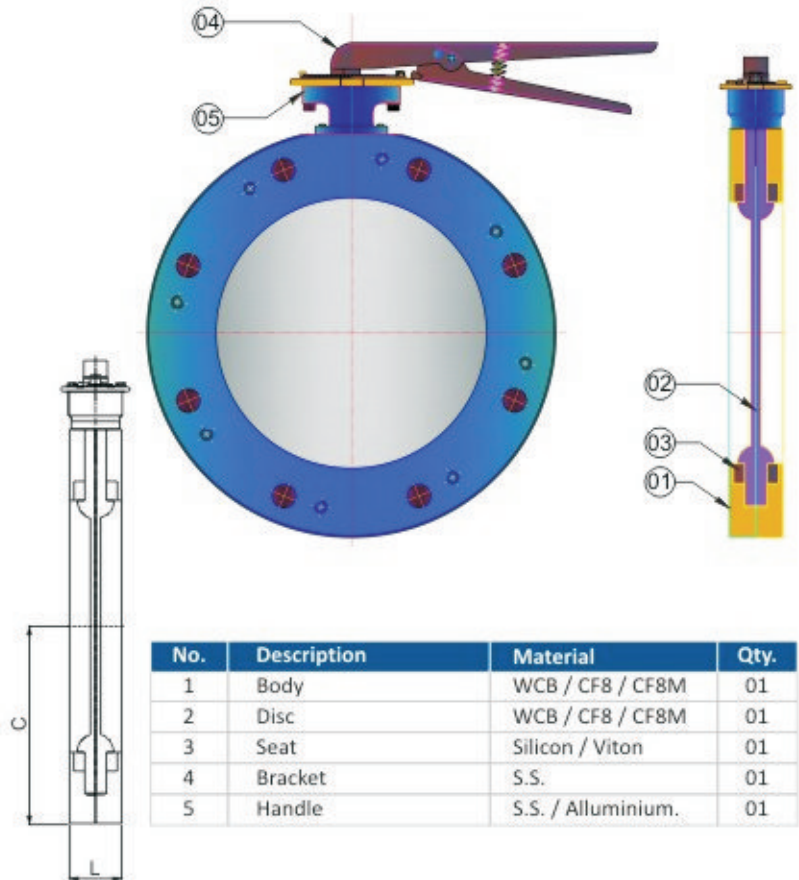
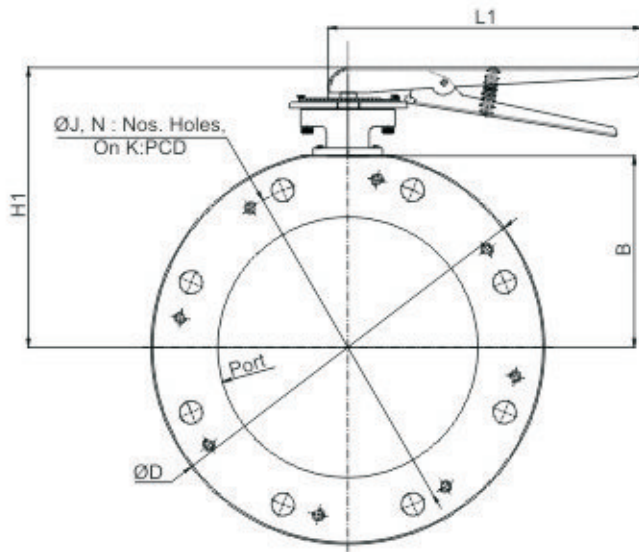
**Dimensions :** (All Dimensions are in mm)

Valve Model	Valve Size		L	ØD	b	ØJ	N	K.PCD
	MM	Inch						
OBV - 1250	1250	50"	381	1568.5	51.00	44.45	44	1479.6
OBV - 1300	1300	52"	381	1626.0	51.00	44.45	44	1536.7
OBV - 1350	1350	54"	381	1682.8	54.00	44.45	44	1593.8
OBV - 1400	1400	56"	381	1770.0	57.15	44.45	52	1670.0
OBV - 1500	1500	60"	381	1854.2	57.15	44.45	52	1758.95
OBV - 1600	1600	64"	381	1915.0	60.00	44.45	52	1820.0
OBV - 1650	1650	66"	457	2032.0	63.5	44.45	52	1930.4
OBV - 1800	1800	72"	457	2197.1	66.5	44.45	60	2095.5
OBV - 1950	1950	78"	760	2362.2	69.9	50.8	64	2260.6
OBV - 2000	2000	80"	760	2449.0	70.00	50.8	64	2342.0
OBV - 2100	2100	84"	830	2533.7	73.00	50.8	64	2425.7
OBV - 2200	2200	88"	830	2800.0	77.00	58.0	68	2673.5
OBV - 2400	2400	96"	910	2876.6	82.6	58.0	68	2755.9
OBV - 2500	2500	100"	990	3048.0	82.6	63.5	72	2908.3
OBV - 2600	2600	104"	990	3138.0	86.00	63.5	72	2994

**Size Range : 2.1/2" to 16"**

**PRESSURE / TEMPERATURE RATING**

WORKING PRESSURE	MAX. 3 TO 4 KG/CM <sup>2</sup>
OPERATING TEMPERATURE	-50 °C TO +400 °C



No.	Description	Material	Qty.
1	Body	WCB / CF8 / CF8M	01
2	Disc	WCB / CF8 / CF8M	01
3	Seat	Silicon / Viton	01
4	Bracket	S.S.	01
5	Handle	S.S. / Alluminium.	01

**Dimensions :**

(All Dimensions are in mm)

Valve Model	Valve Size		Port	L	ØD	N	ØJ	K:PCD	B	C
	MM	Inch								
PBV - 65	65	2.1/2"	65	26	178	4	19.05	139.7	---	---
PBV - 80	80	3"	80	26	190	4	19.05	152.4	---	---
PBV - 100	100	4"	100	28	150	4	9	134	---	---
PBV - 150	150	6"	150	30	227	6	11	202.8	111	113.5
PBV - 200	200	8"	200	30	285	6	9.5	264	137	139.5
PBV - 250	250	10"	250	32	354.5	6	11	327	173	177.25
PBV - 300	300	12"	300	35	405	8	13.5	378	199	202.5
PBV - 350	350	14"	350	40	527	12	25.4	469.9	260.5	261
PBV - 400	400	16"	400	40	577.9	12	25.4	520.7	285	290

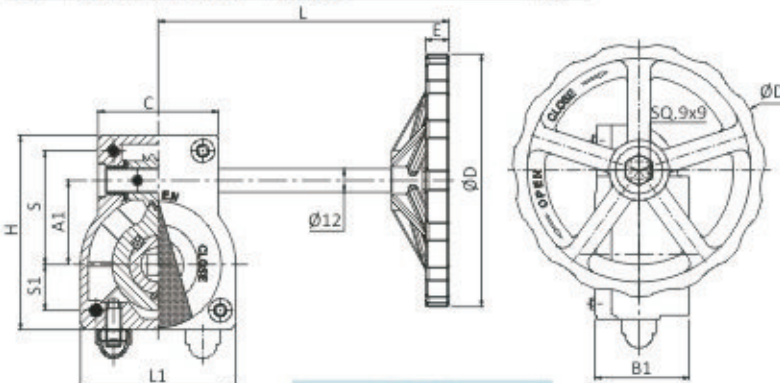
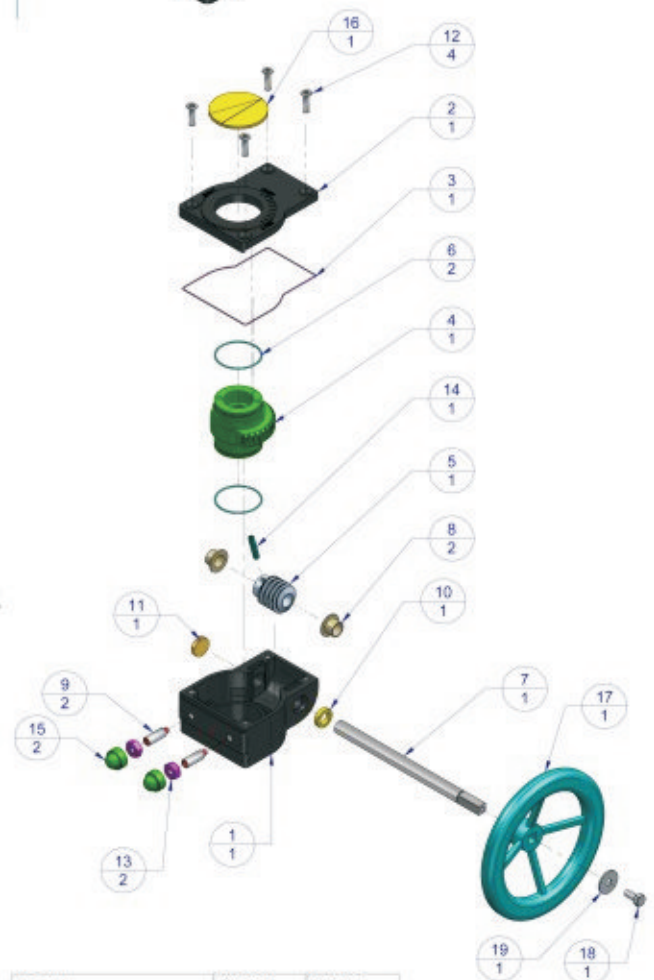
**Gear Box Model : AEA 18 / AEA 20**

**Specification**

Enclosure : Weatherproof ( IP 65 ) ( IP 67 & IP 68 - Optional )  
 Lubrication : NLGI - 2  
 Indicator : Plastic Yellow  
 Paint : Powder Coated  
 Travel : 0 - 90° ±5° Travel  
 Shaft Position : As Shown  
 Hardware : S. S.  
 Hand Wheel : AEA 18 - Ø130 / AEA 20 - Ø224  
 Chain Pully On Request.



No.	Description	Material	Qty.
1	G. B. Housing	Allu. Alloy ALsi - 132	01
2	G. B. Cover	Allu. Alloy ALsi - 132	01
3	Body Cover 'O' Ring	Nitrile Buna - N Gr. 80	01
4	Worm Gear	ASTM A 536 Gr. 65-45-12 ( Ductile Iron ) S. G. Iron	01
5	Worm	BS-970-90, EN-8, (080M40)	01
6	'O' Ring Worm Gear	Nitrile Buna - N Gr. 80	02
7	Shaft	BS 970-90, EN 8, (080M40)	01
8	Shaft Coller	BS 970-90, EN 8, (080M40)	02
9	Adjustable Bolt	S. S. 202	02
10	Packing Ring	Nitrile Buna - N Gr. 80	01
11	Packing Bush	Nitrile Buna - N Gr. 80	01
12	Cover Bolt	S. S. 202	04
13	Adjustable Nut	S. S. 202	02
14	Dowel Pin	Spring Steel	01
15	Cap	Nitrile Buna - N Gr. 80	02
16	Indicator	ABS Resin	01
17	Hand Wheel	Allu. / MS Fabricated	01
18	Hand Wheel Bolt	S. S. 202	01
19	Hand Wheel Washer	S. S. 202	01



AEA - 18		AEA - 20	
A	B	A	B
SQ. 8 X 8	11.3	SQ. 8 X 8	11.3
SQ. 9 X 9	12.7	SQ. 9 X 9	12.4
SQ. 11 X 11	15.6	SQ. 11 X 11	15.3
SQ. 14 X 14	19.8	SQ. 14 X 14	19.6
		SQ. 17 X 17	23.6

Model	AEA 18	AEA 20
Ratio	40 : 1	37 : 1
Rated Output Torque (Nm)	180	300
ISO Flange	F05, F07	F07, F10

**Dimensions :**

(All Dimensions are in mm)

Valve Model	L	L1	H	ØD	S	S1	C	B1	A1	E	*Weight
AEA - 18	150	80	100	130	58.5	24	82	48.5	43	12	1.100
AEA - 20	178	100	115	224	62	33	85	54	50	14	2.100

\*Without Hand Wheel Weight

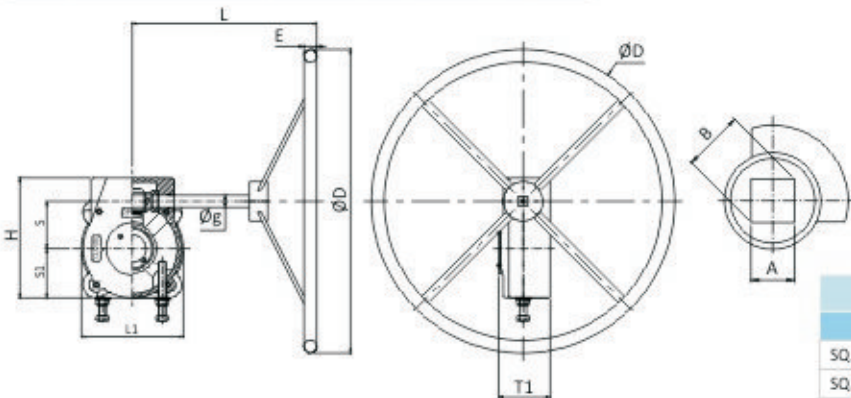
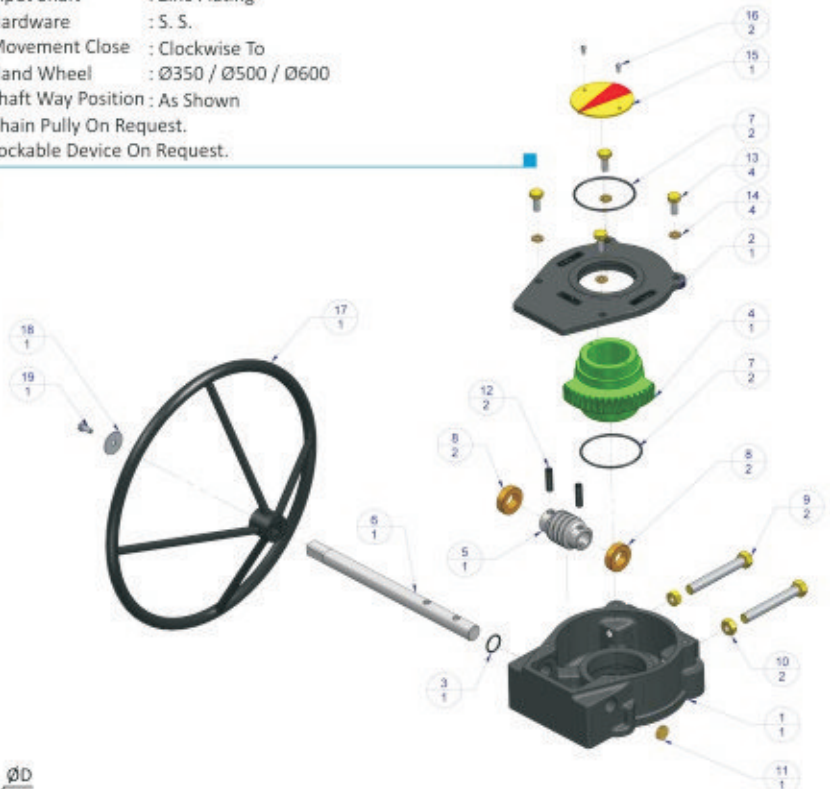


**Gear Box : AEA 30 / AEA 50 / AEA 70**

**Specification**

- Enclosure : Weatherproof ( IP 65 ) ( IP 67 & IP 68 - Optional )
- Lubrication : NLGI - 2
- Indicator Stopper : Mechanical
- Paint : Powder Coated
- Travel : 90° ±5° Travel
- Shaft Position : As Shown
- Input Shaft : Zinc Plating
- Hardware : S. S.
- Movement Close : Clockwise To
- Hand Wheel : Ø350 / Ø500 / Ø600
- Shaft Way Position : As Shown
- Chain Pully On Request.
- Lockable Device On Request.

No.	Description	Material	Qty.
1	G. B. Housing	Cast Iron (IS 210 Gr. FG 220)	01
2	G. B. Cover	Cast Iron (IS 210 Gr. FG 220)	01
3	'O' Ring For Housing	Nitrile Buna - N Gr. 80	01
4	Worm Gear	ASTM A536 Gr 65-45-12 (Ductile Iron) S.G. Iron	01
5	Worm	BS 970-90. EN-8, (080M40)	01
6	Shaft	BS 970-90, EN 8, (080M40)	01
7	'O' Ring For Housing & Cover	Nitrile Buna - N Gr. 80	02
8	Brass Bush	Brass	02
9	Adjustable Bolt	BS 970-90, EN 8, (080M40)	02
10	Adjustable Nut	BS 970-90, EN 8, (080M40)	02
11	Packing Bush	Nitrile Buna - N Gr. 80	01
12	Dowel Pin	BS 970-90, EN 8, (080M40)	02
13	Hex Bolt	BS 970-90, EN 8, (080M40)	04
14	Hex Bolt Washer	BS 970-90, EN 8, (080M40)	04
15	Indicator	BS 970-90, EN 8, (080M40)	01
16	Indicator Bolt	BS 970-90, EN 8, (080M40)	02
17	Hand Wheel	M.S. ( Fabricated )	01
18	Hand Wheel Bolt	BS 970-90, EN 8, (080M40)	02
19	Hand Wheel Washer	BS 970-90, EN 8, (080M40)	02



Model	AEA 30	AEA 50	AEA 70
Ratio	40 : 1	48 : 1	73 : 1
MA	10	14	20
Rated Output Torque (Nm)	700	1500	3500
ISO Flange	F07, F10, F12	F10, F12, F14, F16	F14, F16, F25
MAX Drive Bore	Ø32	Ø50	Ø60

AEA - 30		AEA - 50		AEA - 70	
A	B	A	B	A	B
SQ. 22 X 22	30.7	SQ. 36 X 36	49	SQ. 46 X 46	64
SQ. 27 X 27	37			SQ. 36 X 36	49

**Dimensions :**

(All Dimensions are in mm)

Valve Model	L	L1	H	ØD	Øg	S	S1	E	T1	*Weight
AEA - 30	288	128	162	350	20	67.5	64	15	76	6.400
AEA - 50	330	172	198	500	20	78	81.5	21	86	11.300
AEA - 70	400	253	284	600	25	131.5	104	21	119	30.400

\*Without Hand Wheel Weight