

## ABU10F

DOUBLE FLANGED BUTTERFLY VALVES  
DN50 - DN2000



LEVER OPERATED



GEARBOX OPERATED

### FEATURES

- Designed and manufactured to AS4795.
- Phenolically backed replaceable liner.
- Rated to 1600kpa from 50mm up to 600mm and 1000kpa from 700mm up to 1200mm.
- 316 Stainless steel fasteners.
- Bi-directional bubble-tight sealing, with no leakage under pressure.
- ISO top mounting flange for easy actuation.
- Gearbox fitted as standard on all sizes 350mm and above.

### OPTIONS

- Above 600mm available in 1600kpa version.
- Full 316 stainless steel lever for valves 300mm and below.
- Gearboxes available for valves 300mm and below.
- Pneumatic and electric actuation.
- Limit switches and positioners.
- Extension fixed and non-fixed.
- Wide selection of body & disc materials:
  - Cast Iron
  - Ductile Iron
  - Aluminium Bronze
  - Stainless Steel
  - Other specialty materials on request
- Wide selection of seal materials:
  - EPDM
  - PTFE (Teflon) coated EPDM
  - NBR
  - FPM (Viton)
- Connections to suit a wide range of flanging standards:
  - AS2129 T/E
  - AS4087 CL16 (AS2129 T/D)
  - ANSI 150
  - EN 1092

### ACCORDING TO

- ✓ AS4795
- ✓ API609
- ✓ MSS SP67
- ✓ ISO5752
- ✓ EN1092

### TECHNICAL DATA

Size Range:	DN50 - DN2000
Pressure Classes:	PN10, PN16
Face to face:	According to AS4795
Top Flange:	According to ISO 5211
Flange Drilling:	AS4087 CL16
Temperature Range:	-10°C to +90°C (EPDM standard)
Leakage Tests:	According to AS4795
Coating:	Fusion Bonded Epoxy (For all cast and ductile iron bodied valves)

### FACTORY ACCREDITED:



# ABU10F

DOUBLE FLANGED BUTTERFLY VALVES  
DN50 - DN2000



Quality  
ISO 9001  
SAI GLOBAL

## DESCRIPTION & MATERIALS

Figure 1. AVFI's ABU10F is a Double Flanged Seal on Body Butterfly Valve used extensively in the water and wastewater market.

### SS431 STEM CONFIGURATION

Round with key, square, double "D" and 45° square options.

### EPDM DOUBLE O-RING

Prevents leakage from stem.

### PTFE BUSHING

Stem bushing reduces valve torque and prevents stem corrosion.

### DOUBLE FLANGED

Drilled to AS4087CL16 (others on request).

### EPDM SEAT (LINER)

Replaceable, phenollically backed & non-collapsible. Vulcanised liner and other materials available on request.

### TOP FLANGE

Top flange as per ISO 5211 standard for simple fitting of lever, gearbox or actuator.

### SHAFT SEAL

Bonding of elastomer to phenolic backing ring protects against distortion. A common cause of shaft leakage.

### SS316 DISC

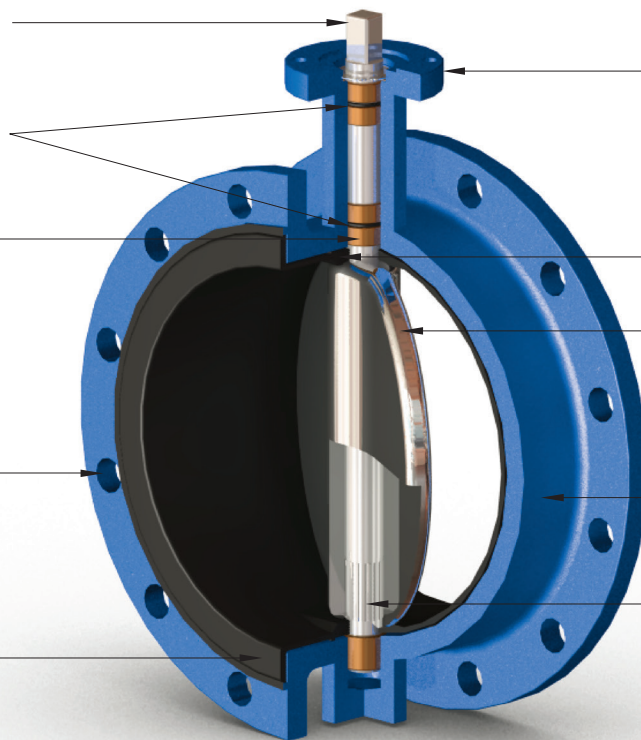
Precision profile disc provides bubble-tight shut-off and assures minimum torque value and long seal life. (other materials available)

### DUCTILE IRON (FUSION BONDED EPOXY COATED) BODY

For superior strength.

### SS316 CONNECTION BETWEEN DISC & SHAFT

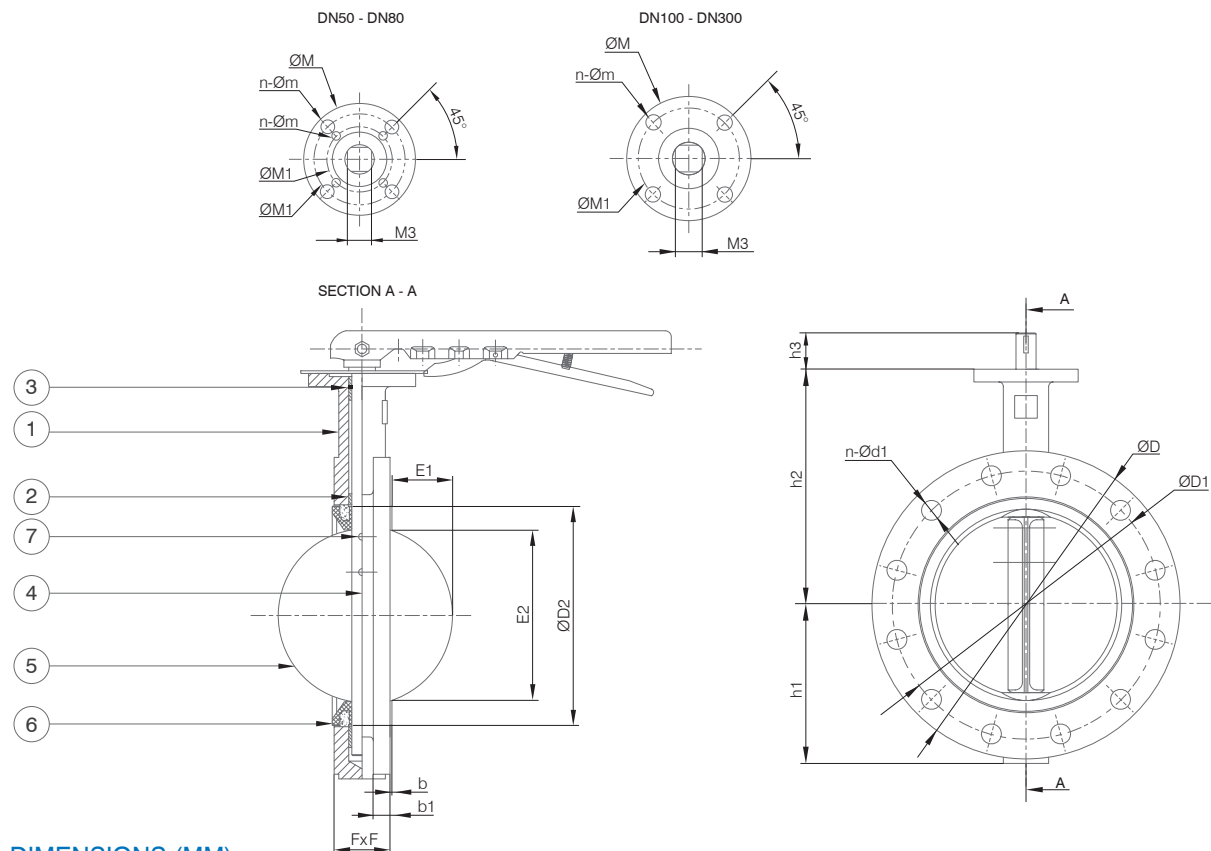
Pin, spline or square connection are all available.



## MATERIAL SPECIFICATIONS & PARTS LIST

NO.	DESCRIPTION	MATERIAL
1	Body	Ductile Iron (fusion bonded epoxy coated)
2	Bushing	PTFE
3	O-Ring	EPDM
4	Stem	SS431
5	Disc	SS316
6	Seat	EPDM
7	Pin	SS316

## DIMENSIONAL DRAWINGS



## DIMENSIONS (MM)

DOUBLE FLANGED BFLY DN50 - DN300									AS4087 CL16			ISO 5211 TOP FLANGE							
DN	FxF	b	b1	h1	h2	h3	E1	E2	ØD	ØD1	n-Ød1	ØD2	FLANGE NO.	ØM	n-Øm	ØM1	M3	Weight (kg)	
50	43	12.5	2	83	161	29	3.2	25.1	168	114	4-18	77	F05	65	4-8	50	12.6 x 12.6	4.95	
65	46	13	2.2	93	175	29	7.6	41.4	188	127	4-18	89	F05	65	4-8	50	12.6 x 12.6	5.5	
80	46	14.5	1.9	100	181	29	14.9	61.8	201	146	4-18	104	F05	65	4-8	50	12.6 x 12.6	6.82	
100	52	13	1	110	200	29	25.1	89.1	220	178	4-18	135	F07	90	4-10	70	15.8 x 15.8	10.12	
125	56	16	1.8	125	213	29	32.6	108.7	250	210	8-18	159	F07	90	4-10	70	18.9 x 18.9	12.76	
150	56	18	1.2	143	226	29	48.9	144.6	288	235	8-18	189	F07	90	4-10	70	18.9 x 18.9	14.52	
200	60	20	1.2	170	260	35	70	192.5	343	292	8-18	239	F10	125	4-12	102	22.1 x 22.1	23.1	
250	68	22	2.2	203	292	35	90.3	240.5	408	356	8-22	293	F10	125	4-12	102	28.5 x 28.5	34.1	
300	78	22	1.5	230	337	35	111	290.8	480	406	12-22	345	F10	125	4-12	102	31.6 x 31.6	51.04	

Note: Flange dimensions may vary from AS4087.  
For lever handle dimensions, refer to pg 6.

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# ABU10F

DOUBLE FLANGED BUTTERFLY VALVES  
DN50 - DN2000

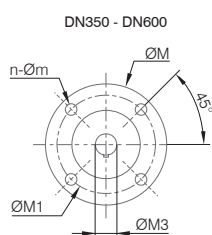


Quality  
ISO 9001  
SAI GLOBAL

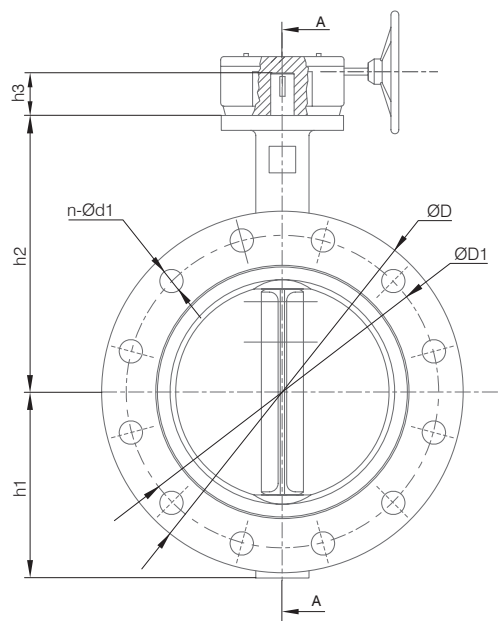
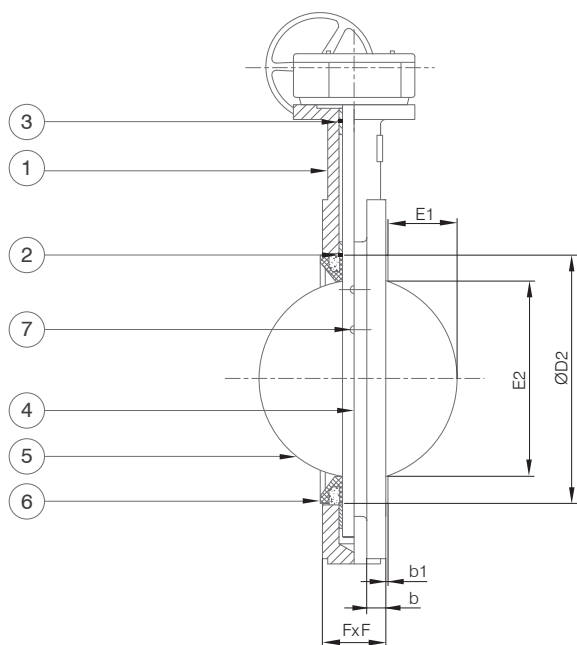
## MATERIAL SPECIFICATIONS & PARTS LIST

NO.	DESCRIPTION	MATERIAL
1	Body	Ductile Iron (fusion bonded epoxy coated)
2	Bushing	PTFE
3	O-Ring	EPDM
4	Stem	SS431
5	Disc	SS316
6	Seat	EPDM
7	Pin	SS316

## DIMENSIONAL DRAWINGS



SECTION A - A



## DIMENSIONS (MM)

DOUBLE FLANGED BFLY DN350 - DN600										AS4087 CL16			ISO 5211 TOP FLANGE						
DN	FxF	b	b1	h1	h2	h3	E1	E2		ØD	ØD1	n-Ød1	ØD2	FLANGE NO.	ØM	n-Øm	ØM1	ØM3	Weight (kg)
350	78	24	1.6	260	368	45	126.9	323.7		529	470	12-26	376	F10	125	4-12	102	31.6	75
400	102	24	2	290	400	51.2	149.7	378.8		588	521	12-26	440	F14	175	4-18	140	33.2	132
450	114	26	2	324	422	51.2	166	427.3		650	584	12-26	491	F14	175	4-18	140	38	171
500	127	34	4	358	480	64.2	178.4	472.8		715	641	16-26	536	F14	175	4-18	140	41.2	215
600	154	36	5	420	562	70.2	218.4	571.9		845	756	16-30	655	F16	210	4-22	165	50.7	341

Note: Flange dimensions may vary from AS4087.  
For gearbox dimensions, refer to pg 7.

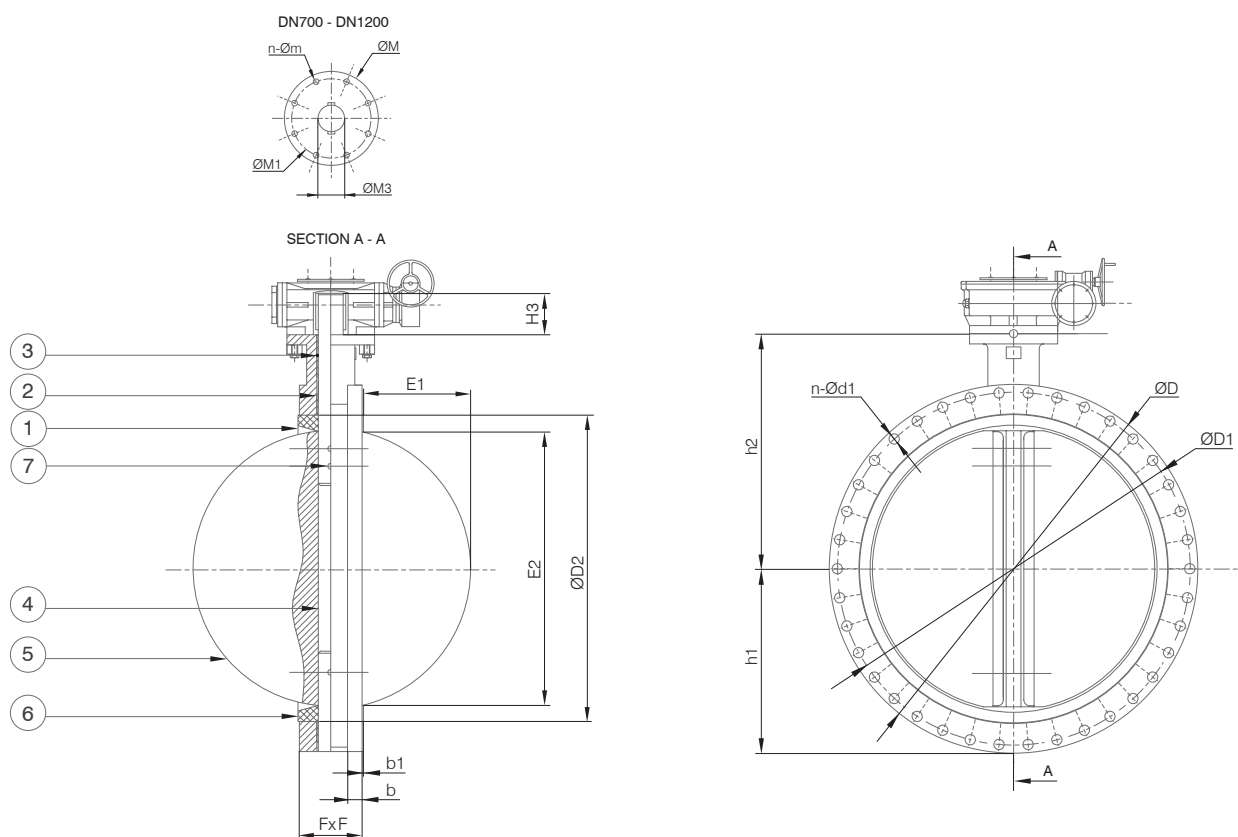
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## MATERIAL SPECIFICATIONS & PARTS LIST

NO.	DESCRIPTION	MATERIAL
1	Body	Ductile Iron (fusion bonded epoxy coated)
2	Bushing	PTFE
3	O-Ring	EPDM
4	Stem	SS431
5	Disc	SS316
6	Seat	EPDM
7	Pin	SS316

## DIMENSIONAL DRAWINGS



## DIMENSIONS (MM)

DOUBLE FLANGED BFLY DN700 - DN1200									AS4087 CL16				ISO 5211 TOP FLANGE					
DN	FxF	b	b1	h1	h2	h3	E1	E2	ØD	ØD1	n-Ød1	ØD2	FLANGE NO.	ØM	n-Øm	ØM1	ØM3	Weight (kg)
700	165	37	3.5	455	624	66	265.5	679.3	915	845	20-30	745	F25	300	8-18	254	55	511
750	165	37	4.5	499	646	66	284.9	724	1000	927	20-33	795	F25	300	8-18	254	55	556
800	190	37	4	513	672	66	299.5	769.7	1060	984	20-36	850	F25	300	8-18	254	55	614
900	203	40	4.5	563	720	118	326.7	838.3	1175	1092	24-36	947	F25	300	8-18	254	75	756
1000	216	45	4.5	628	800	142	370.1	937.8	1255	1175	24-36	1053	F25	300	8-18	254	85	804
1050	216	67	4.5	720	770	150	382.7	992.7	1335	1251	28-36	1164	F25	300	8-18	254	76	900
1200	254	46	5	844	940	160	436.3	1122.6	1500	1410	32-36	1265	F30	350	8-22	298	105	1251

Note: Sizes above DN1200 available on request.  
Flange dimensions may vary from AS4087.  
For gearbox dimensions, refer to pg7.

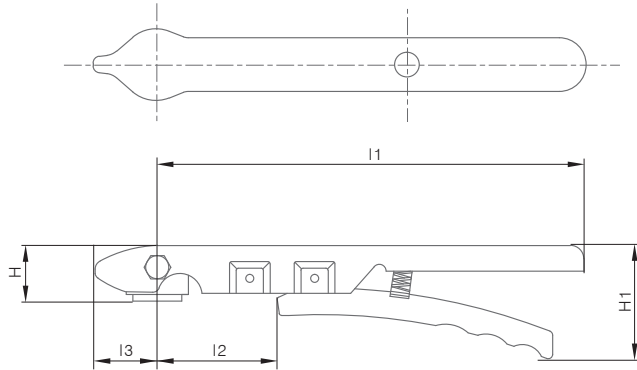
# AB-LEVER

LEVER HANDLE & NOTCH PLATE  
DN50 - DN300



## DIMENSIONAL DRAWINGS

Figure 1. Lever handle



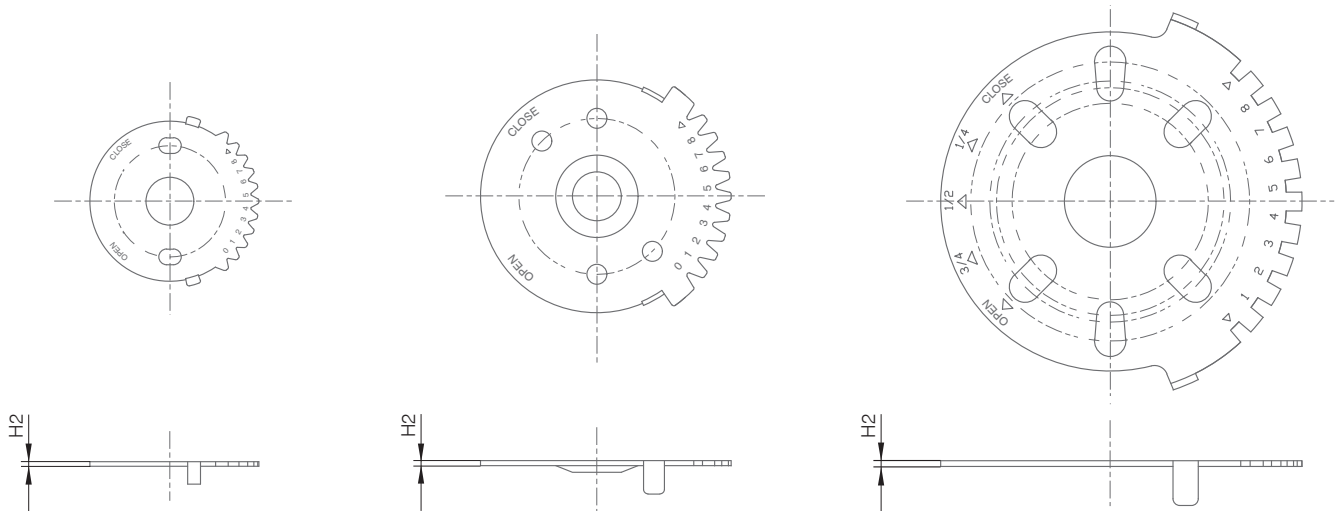
Note: Also available in stainless steel.

Figure 2. Notch plate

DN50 - DN80

DN100 - DN150

DN200 - DN300



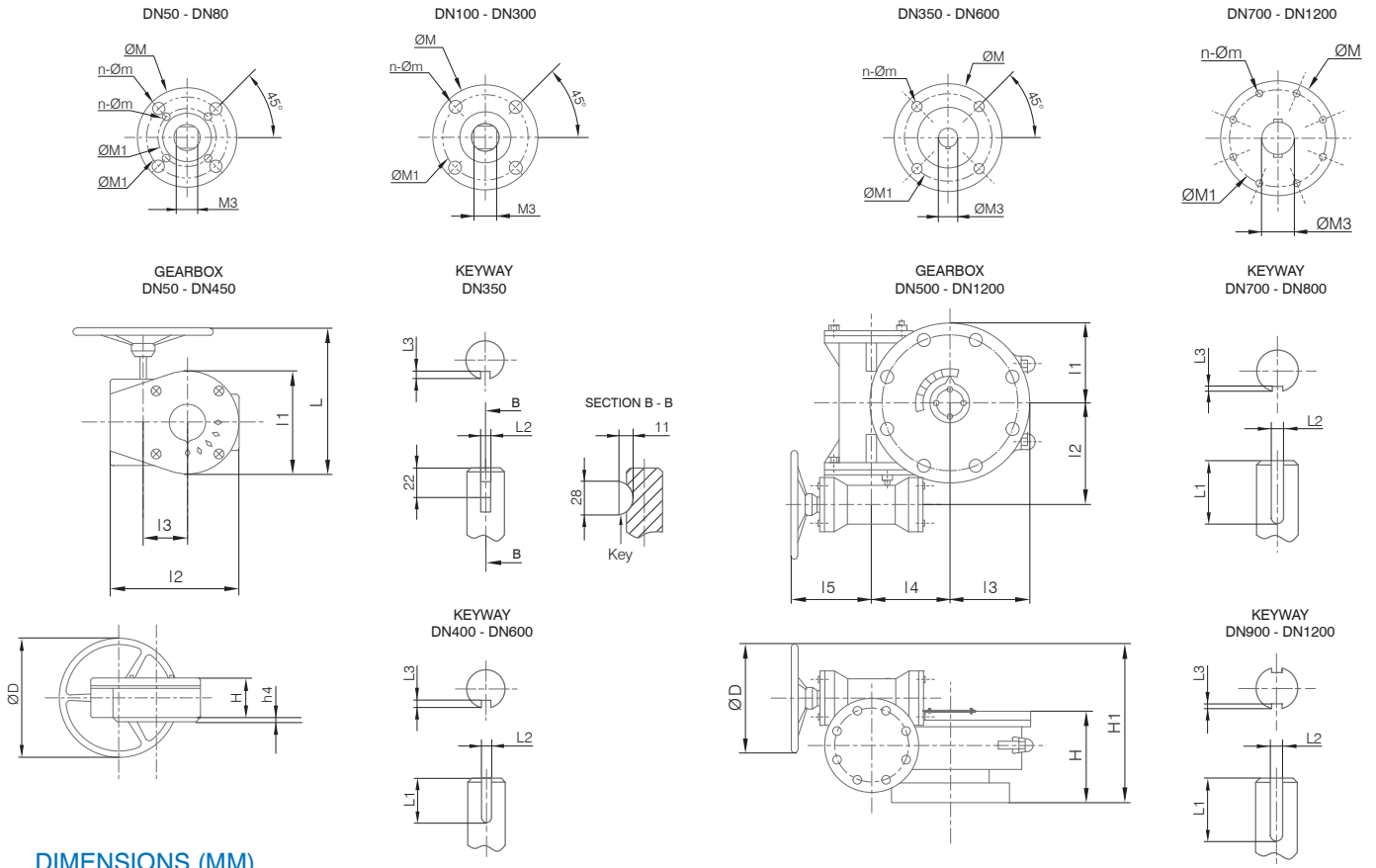
## DIMENSIONS (MM)

DN	LEVER HANDLE					NOTCH PLATE	
	H	H1	I1	I2	I3	FLANGE NO.	H2
40-80	29	55.5	192	37	26.5	F05	2
100-150	29	46	259	54	24	F07	2.5
200-250	33	78	350	81	29	F10	2.5
300	32	73	375	81	25	F10	2.5

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### DIMENSIONAL DRAWINGS



### DIMENSIONS (MM)

	GEARBOX DN50 - DN1200										ISO 5211 TOP FLANGE						KEYWAY				
MODEL	DN	H	L	I1	I2	I3	Max. GB Torque (N.m)	Drive Ratio	Turns	Weight (Kg)	ØD	ØM	ØM1	M3	ØM3	n-Øm	L1	L2	L3		
3DE-15	50	65	205	106	127	45	150	24:1	6	3.65	146	92	50	11x11	—	4-8	—	—	—		
3DE-15	65	65	205	106	127	45	150	24:1	6	3.65	146	92	50	11x11	—	4-8	—	—	—		
3DE-15	80	65	205	106	127	45	150	24:1	6	3.65	146	92	50	11x11	—	4-8	—	—	—		
3DE-15	100	65	205	106	127	45	150	24:1	6	3.65	146	92	70	11x11	—	4-10	—	—	—		
3DE-15	125	65	205	106	127	45	150	24:1	6	3.65	146	92	70	14x14	—	4-10	—	—	—		
3DE-15	150	65	205	106	127	45	150	24:1	6	3.65	146	92	70	14x14	—	4-10	—	—	—		
3DE-50	200	69	295	145	170	63	500	32:1	8	5.82	287	125	102	17x17	—	4-12	—	—	—		
3DE-50	250	69	295	145	170	63	500	32:1	8	5.82	287	125	102	22x22	—	4-12	—	—	—		
3DE-120	300	71	291	156	190	80	1200	50:1	12.5	5.82	287	125	102	22x22	—	4-12	—	—	—		
3DE-120	350	71	291	156	190	80	1200	50:1	12.5	5.82	287	125	102	—	31.6	4-12	22	8	8		
3DE-180	400	97	291	249	278	118	1800	80:1	20	20.15	385	175	140	—	33.2	4-18	45	10	5		
3DE-180	450	97	291	249	278	118	1800	80:1	20	20.15	385	175	140	—	38	4-18	45	10	5		
MODEL	DN	H	H1	I1	I2	I3	I4	I5	Max. GB Torque (N.m)	Drive Ratio	Turns	Weight (Kg)	ØD	ØM	ØM1	M3	ØM3	n-Øm	L1	L2	L3
3D-30/250	500	125	271	107	168	107	100	156	2500	640:1	160	37	285	175	140	—	41.2	4-18	56	10	5
3D-30/400	600	136	330	131	193	131	125	160	4000	640:1	160	47	385	210	165	—	50.7	4-22	58	16	6
3D-60/800	700	158	373	173	245	173	162	197	8000	704:1	176	84	425	300	254	—	55	8-18	60	16	6
3D-60/800	750	158	373	173	245	173	162	197	8000	704:1	176	84	425	300	254	—	55	8-18	60	16	6
3D-60/800	800	158	373	173	245	173	162	197	8000	704:1	176	84	425	300	254	—	55	8-18	60	16	6
3D-120/1500	900	185	409	201	279	201	196	203	15000	748:1	187	110	425	300	254	—	75	8-18	110	22	9
3D-120/1500	1000	185	409	201	279	201	196	203	15000	748:1	187	145	425	300	254	—	85	8-18	125	22	9
3D-120/2500	1200	216	423	255	311	185	240	203	25000	850:1	212.5	205	425	350	298	—	105	8-22	150	28	10



## TORQUE VALUE AT PRESSURE CONDITION (EPDM SEAT - 68 DURO HARDNESS)

VALVE SIZE (DN)		CLOSE-OFF TORQUE	
mm	inch	PN10	PN16
50	2"	11	15
65	2.5"	16	21
80	3"	21	30
100	4"	39	55
125	5"	56	79
150	6"	94	132
200	8"	135	197
250	10"	284	335
300	12"	440	520
350	14"	572	676
400	16"	648	843
450	18"	989	1286
500	20"	1237	1608
600	24"	2472	3214
700	28"	3370	5512
750	30"	3370	5512
800	32"	3370	5512
900	36"	4888	6834
1000	40"	5516	7722
1200	48"	7478	9722

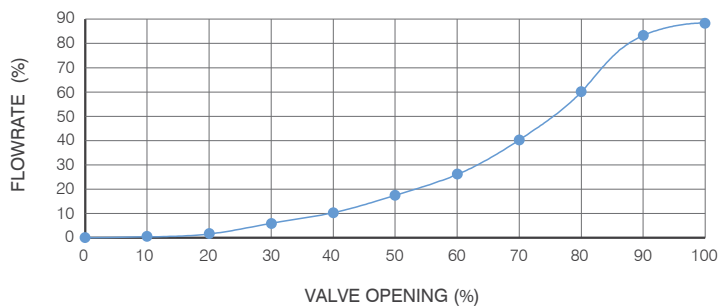
Note: All torque value in left chart were derived from the actual test data using water at 20°C. For torque used in other media, please contact AVFI directly. Torques shown do not include safety factor.

For actuator selection, AVFI recommends:

- For EPDM, NBR, VITON and HYPOLEN seat, these valves be multiplied by 1.35 to 1.5 for single valve applications.
- For PTFE seat, multiply the above numbers by 2.

Kindly note under certain conditions, hydrodynamic torque can meet or exceed seating and unseating torques.

## FLOWRATE



## CV VALUES FOR AB SERIES

VALVE SIZE (DN)		CV VALUE									
mm	inch	10%	20%	30%	40%	50%	60%	70%	80%	90%	
40	1 1/2	0.06	3	7	14	25	36	51	70	76	
50	2	0.1	5	12	24	45	64	90	125	135	
65	2 1/2	0.2	8	20	37	65	98	144	204	220	
80	3	0.3	12	22	39	70	116	183	275	302	
100	4	0.5	17	36	78	139	230	364	546	600	
125	5	0.8	29	61	133	237	392	620	930	1022	
150	6	2	45	95	205	366	605	958	1437	1579	
200	8	3	89	188	408	727	1202	1903	2854	3136	
250	10	4	151	320	694	1237	2047	3240	4859	5340	
300	12	5	234	495	1072	1911	3162	5005	7507	8250	
350	14	6	338	715	1549	2761	4568	7230	10844	11917	
400	16	8	464	983	2130	3797	6282	9942	14913	16388	
450	18	11	615	1302	2822	5028	8320	13168	19752	21705	
500	20	14	791	1674	3628	6465	10698	16931	25396	27908	
550	22	17	965	2042	4426	7887	13052	20655	30983	34048	
600	24	22	1222	2587	5605	9989	16528	26157	39236	43116	
650	26	26	1434	3036	6578	11723	19397	29263	46047	50600	
700	28	30	1663	3522	7630	12599	20036	30482	46899	58696	
750	30	35	1912	4050	8142	13152	20411	31226	47562	63328	
800	32	45	2387	4791	8736	13788	20613	31395	48117	68250	
850	34	51	2697	5414	9872	15580	23293	35476	54372	77123	
900	36	60	3021	6063	11055	17449	26086	39731	60895	86375	
1000	40	84	4183	8395	15307	24159	36166	55084	84425	119750	
1050	42	350	4095	9040	17108	27150	43640	70500	106890	117500	
1200	48	455	5365	11840	22400	30600	51200	92300	140000	154000	