

**TORQ**®



VALVES WITH THE LEADING ENGINEERING TORQUE

## QUALITY

QUALITY IS IN ITS ESSENCE A WAY OF MANAGING THE ORGANIZATION AND QUALITY IS IN OUR SOUL.

## VISION

THE COMPANIES THAT SURVIVE LONGEST ARE THE ONE'S THAT WORK OUT WHAT THEY UNIQUELY CAN GIVE TO THE WORLD—NOT JUST GROWTH OR MONEY BUT THEIR EXCELLENCE, THEIR RESPECT FOR OTHERS, OR THEIR ABILITY TO MAKE PEOPLE HAPPY. SOME CALL THOSE THINGS A SOUL.

## MISSION

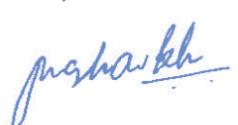
WHEN YOU DISCOVER YOUR #MISSION, YOU WILL FEEL ITS DEMAND. IT WILL FILL YOU WITH ENTHUSIASM AND A BURNING DESIRE TO GET TO WORK ON IT.

## CMD MESSAGE

TORQ IS A DEDICATED VALVE COMPANY-OUR NAME EXPANDS TO "VALVES, ACTUATORS, AUTOMATION" SOLUTIONS. OUR EXTENSIVE RANGE ALLOWS CUSTOMERS A ONE STOP SHOP FOR ALL INDUSTRIAL VALVE NEEDS WITH CONSISTENCY IN QUALITY, EFFICIENCY AND UPDATE TO MARKET ANALYSIS WITH COMPREHENSIVE PRICE.

STRINGENT QUALITY CONTROL IS THE KEY TO THE HIGH PERFORMANCE OF OUR PRODUCTS. TORQ HAS AN ENTENSIVE LIST OF SATISFIED USERS IN A VARIETY OF INDUSTRIES WHICH INCLUDE THERMAL POWER, PULP & PAPER, CEMENT, PHARMA, CHEMICAL, WATER TREATMENT AND MANY MORE. WE HAVE SOUND CUSTOMER BASE THROUGE DEALER NETWORK THROUGHOUT THE COUNTRY AND DIRECT INTERACTION WITH GOVERNMENT DEPARTMENT AND PUBLIC SECTOR UNDERTAKINGS.

OUR MISSION AT TORQ IS TO BE A LEADER IN INDUSTRIAL VALVE TECHNOLOGY BY OFFERING SOLUTIONS FOR CUSTOMER'S VARIED AND DIFFICULT APPLICATIONS. WE ASSURE YOU OF THE SAME QUALITY, SERVICE THAT YOU ARE SO USED TO FROM TORQ VALVES INLINE WITH OUR PHILOSOPHY OF PROVIDING TIMELY QUALITY, SERVICE BY SYSTEMATIC IMPROVEMENTS IN ALL FACETS OF OUR ACTIVITIES.

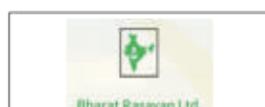


ZUBAIR A. SHAIKH

## CERTIFICATES



## DIRECT &amp; INDIRECT CLIENTS



## INTRODUCTION

TORQ VALVES PVT. LTD is a manufacturing activity that started off in one small industrial building and is now conducting in few well equipped manufacturing units today. TORQ has walked through several years, gaining valuable experience and reputation of quality manufacturer from all spheres of engineering.

We are highly quality conscious and take every initiative to meet and exceed the international quality standards in our products. To ensure the supreme quality finishing in our products, we procure premium quality raw materials from renowned and reliable suppliers of the industry.

We conduct stringent quality test and implement rigid quality control techniques at every stage of production to ensure flawless products. All products are tested for operation and performance as per the test plans drawn from prevailing industry standards.

Our clients are from industries including Steel, Aluminum, Chemical, Pharmaceutical, Fertilizer, Oil and Gas, Manufacturing, Power, Petrochemical, Electronics, Water Treatment, Food Processing, Hydro Carbon, Paper, Sugar, Fire Fighting, Railways, Consumer Products and other industries.

Our Conviction in long term relationship has a major contribution to our position in the industry today, Reassurance and inspiration from our customers even during unfavorable times has supported us battling all the hurdles in our journey.

We are very sure that, there is a product in vast range of TORQ, which will meet your expectation and requirements.

We celebrate our success in our customer's success and this is what we take pride in.

## MANUFACTURING PROCESS

### **RAW MATERIAL:**

We procure all raw material from our approved vendors. In the manufacturing process we require steel casting of various grades, stainless steel round bars, stainless steel pipes, forging, hardware, gaskets, paint & packing material.

### **QUALITY ASSURANCE:**

All raw materials are checked by our internal quality assurance department prior to infusion into the manufacturing process. Only approved material is sent for electro plating and then maintained in store.

### **MACHINING:**

The raw material is issued to the machine shop as per schedule from administration. Machined valve parts are examined as per machining drawing from design department. Machining is done on CNC & lathes and drilling is done on drilling machine with the help of jigs fixtures for uniformity and interchangeability.

### **ASSEMBLY & IN PROCESS TESTING:**

Hydrostatic test is done on valve body dimensionally and visually approved components and then all approved material is sent to fitting / assembling unit. Valve assembly is done, duly handled with care so that there are no scratches on the machining surface and again are sent for hydro – pneumatic leakage test with theory of zero tolerance.

### **FINISHING / PAINTING:**

On cast steel products, one coat of corrosion resistant primer (red oxide) is sprayed and if any uneven surface is observed a high temperature putty is used, after which selected colours for different type of valves are sprayed twice for superior surface look.

### **FINAL INSPECTION:**

Final inspection is done by our Quality Assurance Department whose responsibility now is to co-relate and check all records relating to the valve concerned.

### **PACKING:**

In packing department all the valves are covered with polythene bags air bubbles and placed into wooden case, with a bed of paper waste for non-damage of valves.

### **DISPATCH:**

Dispatch department checks all the details mentioned in the packing note, invoice and purchase order and send parcel to the transport.

**LIST OF MACHINERY****PLANT**

- 1) COVERED AREA – 800 SQUARE YARD
- 2) UNCOVERED AREA – 350 SQuRE YARD
- 3) CONNECTED LOAD – 45 K.W

**LIST OF MACHINERY****A) CNC**

- 1) ACE MICROMATIC - MODELSUPER JOBBER LM 500 TURNNING CENTER – 1 No. (FANUC OITD MATE)
- 2) ACE MICROMATIC - MODELSUPER JOBBER LT20 C TURNNING CENTER– 1 No. (FANUC OITD MATE)
- 3) PRIDE MACHINE TOOLS – MODEL DHANUS-12 TURNNING CENTRE – 1 No. (FANUC OITF)
- 4) PRIDE MACHINE TOOLS – MODEL PARAM-350 TURNNING CENTRE – 1 No. (FANUC OITF)

**B) LATHE TURNNING MACHINES**

- 1) 18" HEIGHT CENTER LATHE (HEAVY DUTY) – 1 No.
- 2) 15" HEIGHT CENTER LATHE (HEAVY DUTY) – 1 No.
- 3) 10" HEIGHT CENTER LATHE (HEAVY DUTY) – 1 No.
- 4) 8" HEIGHT CENTER LATHE (HEAVY DUTY) – 3 No.
- 5) 4" HEIGHT CENTER LATHE (HEAVY DUTY) – 6 No.

**C) DRILL MACHINES**

- 1) RADIAL DRILL MACHINE – 1" – 1 No.
- 2) DRILL MACHINE –  $\frac{3}{4}$ "- 2 Nos.
- 3) DRILL MACHINE – 1"- 2 Nos.
- 4) DRILL MACHINE – 1 1/2"- 1 No.

**D) OTHER MACHINES**

- 1) ELECTRIC WELDING MACHINE
- 2) ARGON WELDING MACHINE (TOSHIBA INVERTER 01 SET WELDING MACHINE)
- 3) AIR COMPRESSORS – 3 Nos.

**E) TESTING ARRANGEMENTS**

- 1) HYDRO TESTING BENCH – 1 No.
- 2) PNEUMATIC TESTING BENCH – 3 No.
- 3) HYDRO PNEUMATIC TESTING UNIT – 1 No.
- 4) ELECTRICAL TESTING UNIT – 1 No.

## TESTING FACILITIES

“TORQ” is well equipped with testing facilities to thoroughly check product suitability to the design & performance requirement. Major facilities are in-house and we outsource special tests.

### **VALVE AUTOMATION:**

#### **Routine Pneumatic Actuator Test**

- Leakage Test
- Operating Test
- Min. Operating Pressure

#### **Type Test**

- Torque out Put Test
- Cycle Test
- Response Time Test

#### **Special Test**

- Radiation & LOCAL Qualifications
- Helium Leak Detection Test
- Vibration Test
- Seismic Qualification as per IEEE 323, 344 & 383

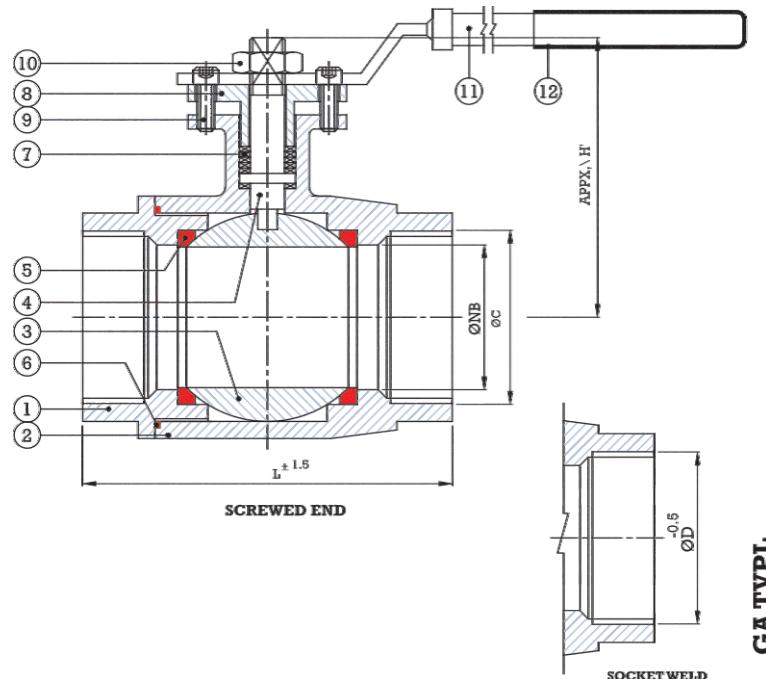
#### **Valve Automation Systems**

- Seat Leak Test
- Pneumatic Operating Pressure Test with Valve on Hydro Pressure
- 4 to 20 Operation & Feedback testing
- 2 No + 2 NC Feedback & Report test

#### **Testing Arrangements**

- Hydro Testing Bench – 2 Nos.
- Pneumatic Testing Bench – 3 No.
- Hydro Pneumatic Testing Bench – 1 No.
- Feedback Reporting Test Bench – 1 No.
- Coil Testing – 1 No.

## SINGLE PIECE BALL VALVE



## TECHNICAL DATA

- MANUFACTURING STD.: BS 5351
- INSPECTION & TESTING STD.: BS 6755 (PART 1)
- END CONNECTION : SCREWED ENDS TO BSP / BSPT / NPT  
: SOCKET WELD ENDS TO ANSI B 16.11

## TEST PRESSURE

CLASS	HYDROSTATIC		PNEUMATIC
	BODY	SEAT & BACK SEAT	AIR
150#	30 Kg/cm <sup>2</sup>	21 Kg/cm <sup>2</sup>	7 Kg/cm <sup>2</sup>

Part	Nomenclature	Material	Qty
1	BODY	ASTM A 216 Gr.WCB ASTM A 351 Gr. CF8 / CF8M	1
2	CONNECTOR	ASTM A 216 Gr.WCB ASTM A 351 Gr. CF8 / CF8M	1
3	BALL	ASTM A 351 Gr. CF8 / CF8M	1
4	STEM	AISI 304 / AISI 316	1
5	BALL SEALS	PTFE / GFT	2
6	BODY SEALS	PTFE / GFT	1
7	STEM PACKING	PTFE / GFT	5 min
8	GLAND	ASTM A 216 Gr.WCB ASTM A 351 Gr. CF8 / CF8M	1
9	GLAND BOLT	CARBON STEEL / STAINLESS STEEL	2
10	STEM NUT	CARBON STEEL / STAINLESS STEEL	1
11	LEVER	CARBON STEEL / STAINLESS STEEL	1
12	SLEEVE	PVC	1

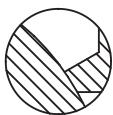
SIZE	NB	L	&	ØD	'H'
15	12.5	65	1/2"	22.22	41
20	17	75	3/4"	27.56	49
25	25	85	1"	34.29	57.5
32	30	110	1 1/4"	43.05	70
40	38	114	1 1/2"	49.15	77
50	49	125	2"	61.62	85.5
65	64	150	2 1/2"	74.45	108
80	75	175	3"	90.42	116
100	98	210	4"	116.08	165

ALL DIMENSIONS ARE IN MM

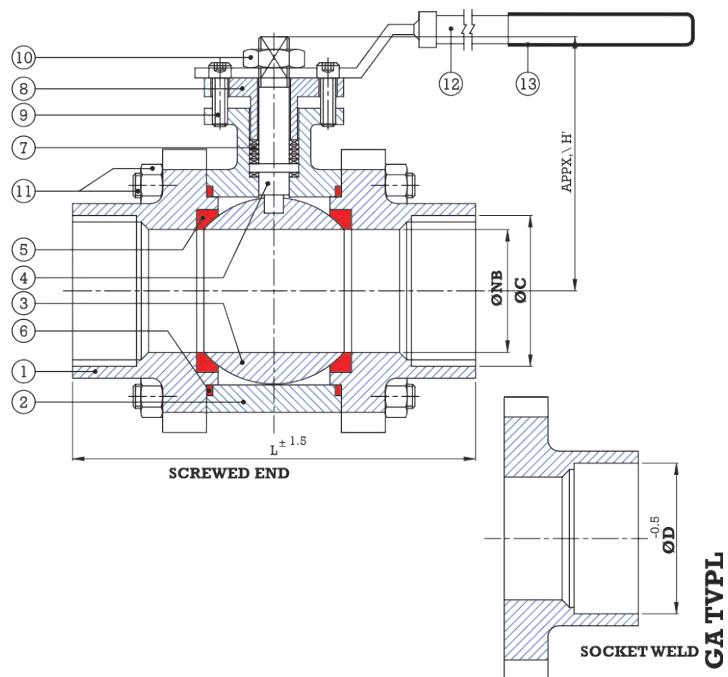
## 3 PC BALL VALVE SCREWED END 150#



Before Fire



After Fire



## TECHNICAL DATA

- MANUFACTURING STD.: BS 5351
- INSPECTION & TESTING STD.: BS 6755 (PART 1)
- END CONNECTION : SCREWED ENDS TO BSP / BSPT / NPT  
: SOCKET WELD ENDS TO ANSI B 16.11

Part	Nomenclature	Material	Qty
1	BODY	ASTM A 216 Gr. WCB ASTM A 351 Gr. CF8 / CF8M	1
2	CONNECTOR	ASTM A 216 Gr. WCB ASTM A 351 Gr. CF8 / CF8M	2
3	BALL	ASTM A 351 Gr. CF8 / CF8M	1
4	STEM	AISI 304 / AISI 316	1
5	BALL SEALS	PTFE / GFT	2
6	BODY SEALS	PTFE / GFT	2
7	STEM PACKING	PTFE / GFT	5 min
8	GLAND	ASTM A 216 Gr. WCB ASTM A 351 Gr. CF8 / CF8M	1
9	GLAND BOLT	CARBON STEEL / STAINLESS STEEL	2
10	STEM NUT	CARBON STEEL / STAINLESS STEEL	1
11	BODY STUD & NUTS	CARBON STEEL / STAINLESS STEEL	4/8
12	LEVER	CARBON STEEL / STAINLESS STEEL	1
13	SLEEVE	PVC	1

## TEST PRESSURE

CLASS	HYDROSTATIC		PNEUMATIC
	BODY	SEAT & BACK SEAT	AIR
150#	30 Kg/cm2	21 Kg/cm2	7 Kg/cm2

SIZE	NB	L	ØC	ØD	'H'
15	12.5	65	1/2"	22.22	41
20	17	75	3/4"	27.56	49
25	25	85	1"	34.29	57.5
32	30	110	1 1/4"	43.05	70
40	38	114	1 1/2"	49.15	77
50	49	125	2"	61.62	85.5
65	64	150	2 1/2"	74.45	108
80	75	175	3"	90.42	116
100	98	210	4"	116.08	165

ALL DIMENSIONS ARE IN MM

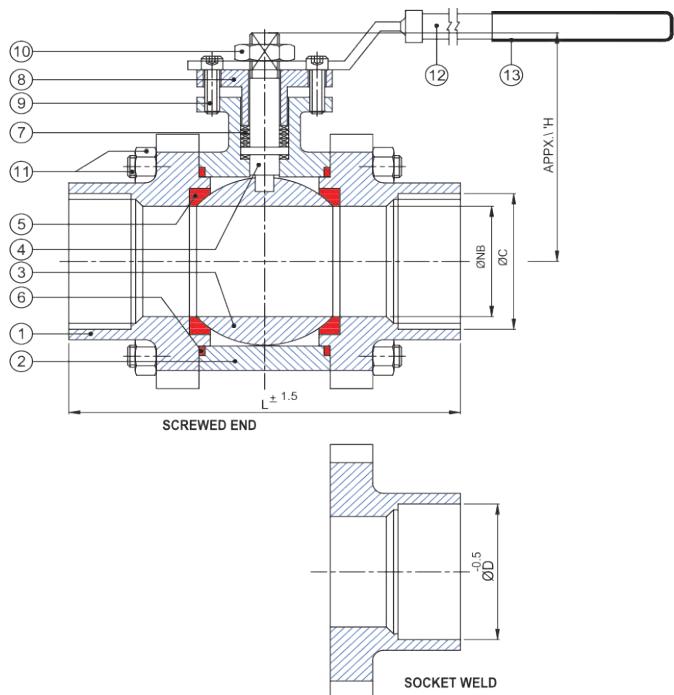
## FORGED STEEL BALL VALVE 800# TO 1500#



Before Fire



After Fire



GATVPL

## TECHNICAL DATA

- MANUFACTURING STD. : BS 5351
- INSPECTION & TESTING STD.: BS 6755 (PART-1)
- END CONNECTION : SCREWED ENDS TO BSP / BSPT / NPT  
: SOCKET WELD ENDS TO ANSI B 16.11

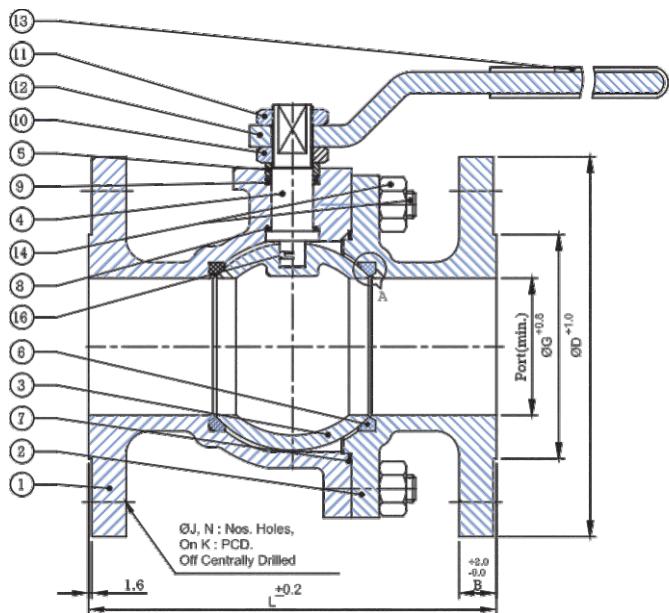
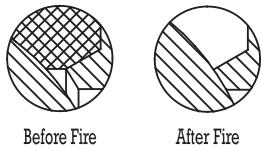
CLASS	TEST PRESSURE		
	HYDROSTATIC		PNEUMATIC
	BODY	SEAT	AIR
800#	212 Kg/cm <sup>2</sup>	141 Kg/cm <sup>2</sup>	7 Kg/cm <sup>2</sup>
1500#	392 Kg/cm <sup>2</sup>	287 Kg/cm <sup>2</sup>	7 Kg/cm <sup>2</sup>

Part	Nomenclature	Material	Qty
1	BODY	ASTM A 105 / ASTM A 182-F316	1
2	CONNECTOR	ASTM A 105 / ASTM A182-F316	2
3	BALL	ASTM A 351 Gr. CF8 / CF8M	1
4	STEM	AISI 304 / AISI 316	1
5	BALL SEALS	PTFE	2
6	BODY SEALS	PTFE	2
7	STEM PACKING	PTFE	5min
8	GLAND	ASTM A 216 Gr. WCB ASTM A 351 Gr. CF8 / CF 8M	1
9	GLAND BOLT	CARBON STEEL / STAINLESS STEEL	2
10	STEM NUT	CARBON STEEL / STAINLESS STEEL	1
11	BODY STUD & NUTS	ASTM A 193 Gr. B7 & ASTM A 194 Gr. 2H	4/8
12	LEVER	CARBON STEEL / STAINLESS STEEL	1
13	SLEEVE	PVC	1

SIZE	NB	L	ØC	ØD	'H'
15	12.5	92	1/2"	22.22	65
20	18	111	3/4"	27.56	75
25	23.5	127	1"	34.29	85
32	28	140	1.1/4"	43	98
40	35	152	1.1/2"	49	105
50	49	172	2"	61.62	115

ALL DIMENSIONS ARE IN MM

## 2 PIECE BALL VALVE FLANGED ENDS 150 #



CATVPL

TECHNICAL DATA

- MANUFACTURING STD.: BS EN 17292 (Replace of BS 5351)
- INSPECTION & TESTING STD.: ISO 5208 (Replace of BS 6755)
- END CONNECTION: FLANGED ENDS AS PER ASME B 16.5 RF 150#
- FACE TO FACE: AS PER ASME B16.10
- FIRE SAFE DESIGN: AS PER API 607 4th Edition

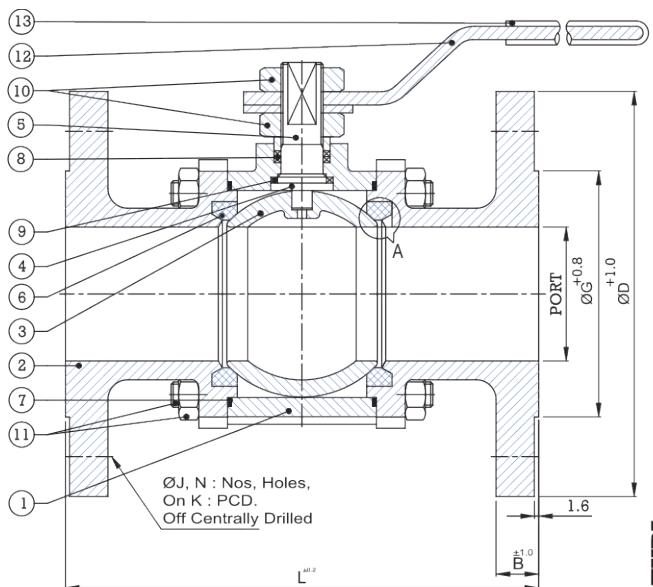
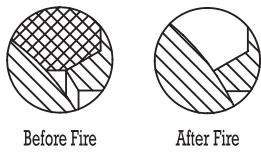
CLASS	TEST PRESSURE		PNEUMATIC
	HYDROSTATIC	SEAT	
150#	30 Kg/cm2	21 Kg/cm2	7 Kg/cm2

Part	Nomenclature	Material	Qty
1	BODY	ASTM A 216 Gr. WCB / ASTM A351 Gr.CF8 ASTM A 351 Gr. CF8M / CAST IRON	1
2	CONNECTOR	ASTM A 216 Gr. WCB / ASTM A351 Gr.CF8 ASTM A 351 Gr. CF8M / CAST IRON	1
3	BALL	AISI 304 / AISI 316 / AISI 304 L / AISI 316 L / ALLOY 20	1
4	STEM	AISI 304 / AISI 316 / AISI 304 L / AISI 316 L / ALLOY 20	1
5	GLAND	AISI 304 / AISI 316 / AISI 304 L / AISI 316 L / ALLOY 20	1
6	BALL SEAL	PTFE / GFT / CFT	2
7	BODY SEAL	PTFE / GFT / CFT	1
8	GLAND PACKIN	PTFE / GFT / CFT	Req..
9	STEM PACKIN	PTFE / GFT / CFT	2
10	GLAND & STEM	MS / SS / SS 304 / SS 316	2
11	BODY STUD & N	MS / SS / AISI 304 / AISI 316	4/8
12	LEVER	MS / SS	1
13	SLEEVE	PVC	1

SIZE	PORT	L	ØD	ØG	B	ØJ	N	K:PCD
15	12.5	108	89	35	9.65	15.75	4	60.5
20	17	117.3	98.5	43	10.41	15.75	4	70
25	25	127	108	50.8	11.17	15.75	4	79
32	30	139.7	117.3	63.5	12.7	15.75	4	89
40	38	165	127	73	14.2	15.75	4	98.5
50	49	179	152.4	92	15.75	19	4	120.6
65	64	190.5	177.8	104.6	17.53	19	4	140
80	75	203	190.5	127	19	19	4	152.4
100	98	228.6	228.6	157.2	23.88	19	8	190.5
125	125	254	254	186	23.88	22.35	8	216
150	148	266.7	279.4	216	25.4	22.35	8	241
200	198	292	343	269.7	28.45	22.35	8	298.5
250	248	330	405.4	323.9	30.23	25.4	12	362
300	298	609	482.6	381	31.75	25.4	12	432

ALL DIMENSIONS ARE IN MM

## 3 PIECE BALL VALVE FLANGED ENDS 150 #



## TECHNICAL DATA

- MANUFACTURING STD.: BS EN 17292 (Replace of BS 5351)
- INSPECTION & TESTING STD.: ISO 5208 (Replace of BS 6755)
- END CONNECTION: FLANGED ENDS AS PER ASME B 16.5 RF 150#
- FACE TO FACE: AS PER ASME B16.10
- FIRE SAFE DESIGN: AS PER API 607 4th Edition

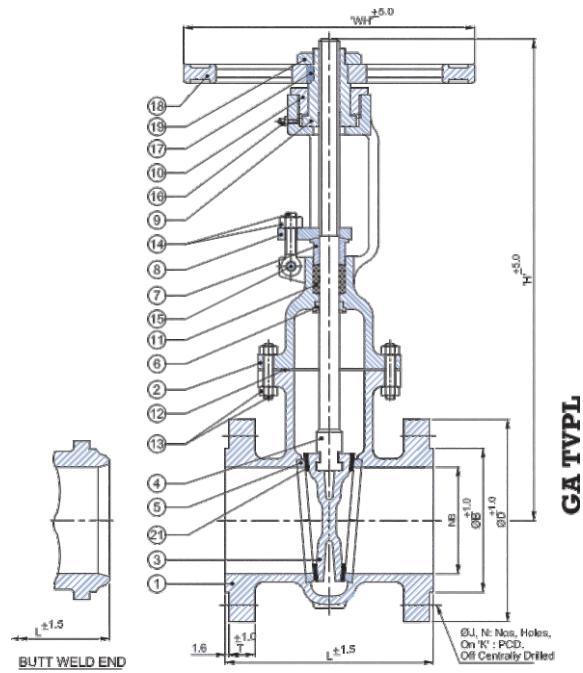
CLASS	TEST PRESSURE		
	HYDROSTATIC	PNEUMATIC	
150#	BODY 30 Kg/cm <sup>2</sup>	SEAT 21 Kg/cm <sup>2</sup>	AIR 7 Kg/cm <sup>2</sup>

## DIMENTION TABLE

SIZE	PORT	L	ØD	ØG	B	ØJ	N	K:PCD
15	12.5	108	89	35	9.65	15.75	4	60.5
20	17	117.3	98.5	43	10.41	15.75	4	70
25	25	127	108	50.8	11.17	15.75	4	79
32	30	139.7	117.3	63.5	12.7	15.75	4	89
40	38	165	127	73	14.2	15.75	4	98.5
50	49	179	152.4	92	15.75	19	4	120.6
65	64	190.5	177.8	104.6	17.53	19	4	140
80	75	203	190.5	127	19	19	4	152.4
100	98	228.6	228.6	157.2	23.88	19	8	190.5
125	125	254	254	186	23.88	22.35	8	216
150	148	266.7	279.4	216	25.4	22.35	8	241
200	198	292	343	269.7	28.45	22.35	8	298.5
250	248	330	405.4	323.9	30.23	25.4	12	362
300	298	609	482.6	381	31.75	25.4	12	432

ALL DIMENSIONS ARE IN MM

## GATE VALVE / FLANGED ENDS / 150 #



## TECHNICAL DATA

- MANUFACTURING STD. : API 600
- INSPECTION & TESTING STD. : API 598
- END CONNECTION : FLANGED ENDS AS PER ASME B 16.5 RF 150#
- FACE TO FACE : AS PER ASME B16.10

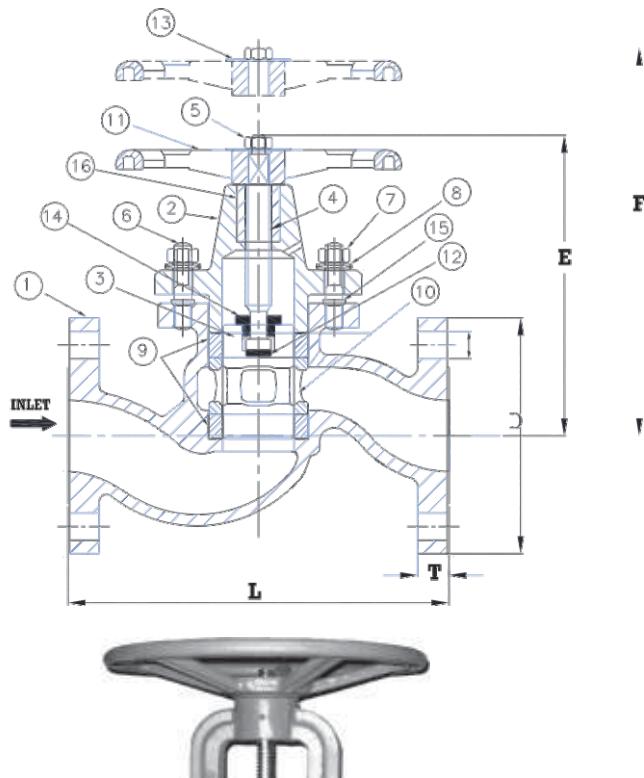
CLASS	TEST PRESSURE		PNEUMATIC		
	HYDROSTATIC	BODY	SEAT & BACK SEAT	SEAT	
150#	30 Kg/cm <sup>2</sup>		22 Kg/cm <sup>2</sup>		7 Kg/cm <sup>2</sup>

Part	Nomenclature	Material	Qty
1	BODY	WCB / CF8M / CF8 / CAST IRON	1
2	BONNET	WCB / CF8M / CF8 / CAST IRON	1
3	WEDGE	13% Cr. + STELLITED / CF8M / CF8	1
4	STEM	AISI 410 / AISI 304 / AISI 316	1
5	SEAT RING	13% Cr. STEEL. / AISI 304 / AISI316	2
6	BACK SEAT	AISI 410 / AISI 304 / AISI 316	1
7	GLAND	AISI 410 / AISI 304 / AISI 316	1
8	GLAND FLANGE	WCB / CF8M / CF8 / CAST IRON	1
9	YOKE SLEEVE	NI - RESIST / S.G. IRON	1
10	YOKE	S.G. IRON	1
11	GLAND PACKING	GRAPHITE ASBESTOS WIRE MESH	5 min
12	BONNET GASKET	SS 304/ SS 316 SPIRAL WOUNDED WITH CAF	1
13	BONNET STUDS & NUTS	ASTM A193 Gr. B7 & ASTM A194 Gr. 2H / SS	Req.
14	GLAND EYE BOLTS & NUTS	ASTM A193 Gr. B7 & ASTM A194 Gr. 2H / SS	2
15	GLAND LUD BOLTS & NUTS	ASTM A193 Gr. B7 & ASTM A194 Gr. 2H / SS	2
16	GREASE NIPPLE	BRASS / STEEL	1
17	KEY	CARBON STEEL	1
18	HAND WHEEL	CAST IRON / MALLEABLE IRON	1
19	HAND WHEEL NUT	CARBON STEEL / STAINLESS STEEL	2
20	NAME PLATE	ALUMINUM	1

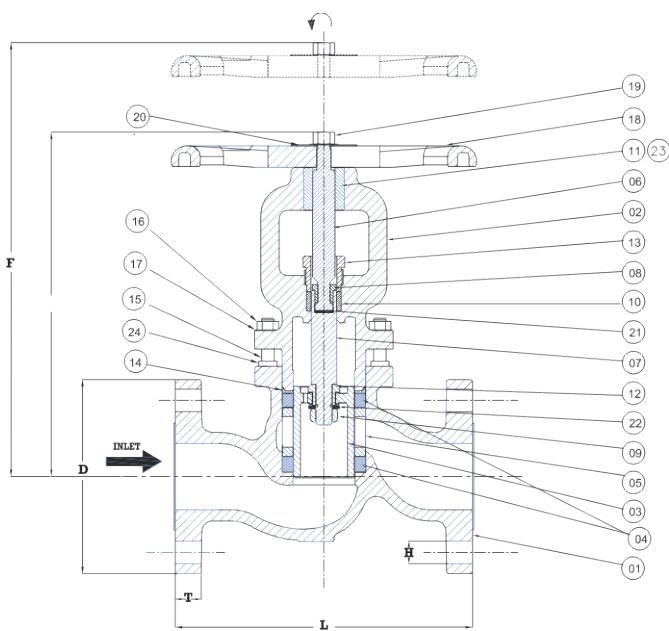
SIZE	NB	L	ØD	ØB	T	ØJ	N	K	'H'	'WH'
25	25	127	108	50.8	11.2	15.7	4	79.3	250	152
32	32	139.7	117.3	63.5	12.7	15.7	4	88.3	300	152
40	38	165	127	73.2	14.2	15.7	4	98.6	330	152
50	50	178	152.4	92	15.8	19	4	120.7	360	203
65	64	190.5	177.8	104.6	17.5	19	4	139.7	415	203
80	76	203	190.5	127	19	19	4	152.4	425	254
100	102	229	228.6	157.2	23.9	19	8	190.5	510	254
125	127	254	254	185.7	23.9	22.3	8	215.9	595	305
150	152	267	279.4	215.9	25.4	22.3	8	241.3	685	305
200	203	292	343	269.7	28.5	28.5	8	298.5	770	305

ALL DIMENSIONS ARE IN MM

## PISTON VALVE

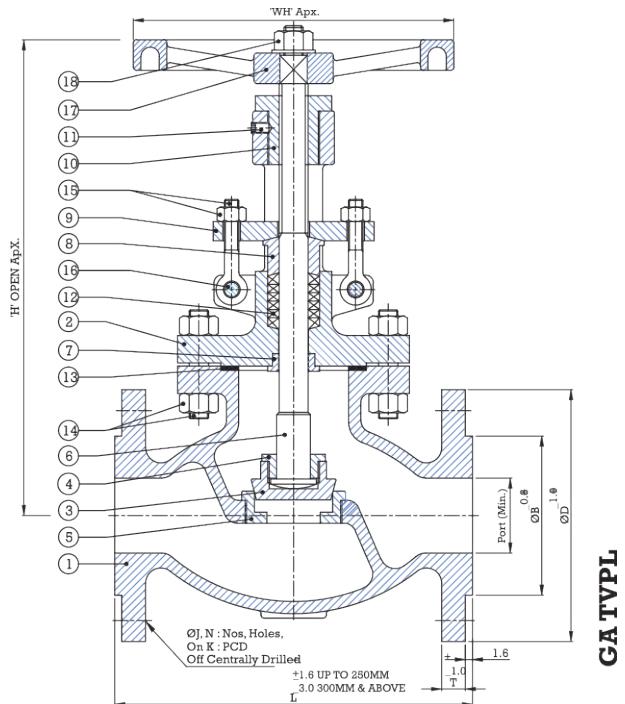


Part	Nomenclature	Material	Grade
1	Body	Cast Steel	ASTM A 216 Gr.WCB
2	Bonnet	Cast Steel	ASTM A 216 Gr.WCB
3	Piston	Stainless Steel	ASTM A 276 TYPE 304
4	Spindle	Stainless Steel	ASTM A 276 TYPE 410
5	Nyloc Nut	Carbon Steel	
6	Stud	Carbon Steel	ASTM A 193 Gr. B7
7	Nut	Carbon Steel	ASTM A 193 Gr. 2H
8	Belleville Washer	Spring Steel	50CrV4
9	Sealing stack	S/S Reinforced Graphite	
10	Spacer	Stainless Steel	ASTM A 743 Gr.CA15
11	Handwheel	SG Iron	
12	Thrust Plate	Stainless Steel	ASTM A 276 TYPE 420
13	Name Plate	Stainless Steel	ASTM A 240 TYPE 304
14	Solit Nut	Brass	DIN EN 12164
15	Gap Rings	Stainless Steel	ASTM A 276 TYPE 410
16	Bush	Bronze	



Part	Nomenclature	Material	Grade
1	Body	Cast Steel	ASTM A 216 Gr.WCB
2	Bonnet (100-250NB) Bonnet (65-80NB)	Cast Steel Forged Carbon Steel	ASTM A 216 Gr.WCB ASTM A 105N
3	Piston	Stainless Steel	ASTM A 351 CF8
4	Body sealing stack	S/S Reinforced Graphite	
5	Spacer	Stainless Steel	ASTM A 743 CA 15
6	Spindle	Stainless Steel	ASTM A 276 Type 410
7	Stem	Stainless Steel	ASTM A 276 Type 304
8	Split Nut	Brass	DIN EN 12164
9	LH Nut	Stainless Steel	ASTM A 276 Type 304
10	Gland Sealing Stack	S/S Reinforced Graphite	
11	Threaded Bush	Ph. Broze	
12	Back Seat	Stainless Steel	ASTM A 276 Type 410
13	Hex.Gland Nut	Stainless Steel	ASTM A 276 Type 410
14	Bonnet Sealing Ring	Graphite	
15	Stud	Carbon Steel	ASTM A 193 Gr.B7
16	Nut	Carbon Steel	ASTM A 194 Gr.2H
17	Beleville Washer	Spring Steel	50CrV4
18	Handwheel	S.G. Iron	
19	Nyloc Nut	Carbon Steel	
20	Name Plate	Stainless Steel	ASTM A 240 TYPE 304
21	Thrust Plate	Stainless Steel	ASTM A 276 TYPE 420
22	Washer	Stainless Steel	ASTM A 240 TYPE 304
23	Grud Screw	Hardened Steel	I.S. 12.9
24	Gap Rings	Stainless Steel	ASMT A 276 TYPE 410

## GLOBE VALVE / FLANGED ENDS / 150 #



## TECHNICAL DATA

- MANUFACTURING STD. : BS 1873
- INSPECTION & TESTING STD. : API 598 / BS 6755 (PART-1)
- END CONNECTION : FLANGED ENDS AS PER ASME B 16.5 RF 150#
- FACE TO FACE : AS PER ASME B16.10

## TEST PRESSURE

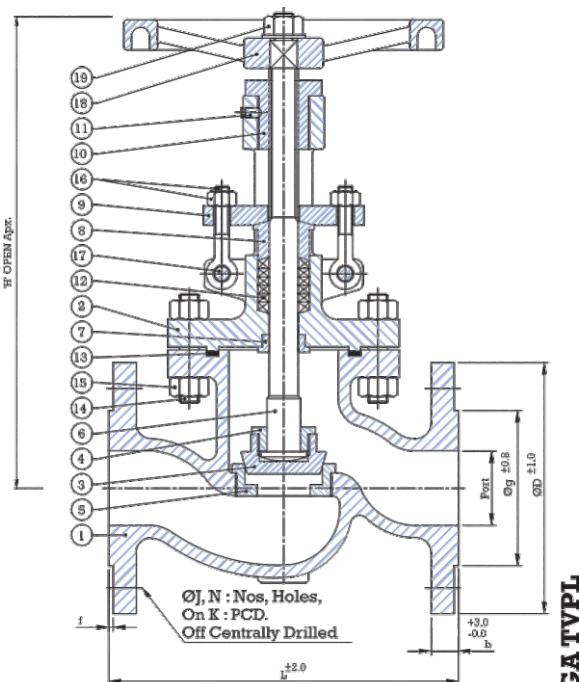
CLASS	HYDROSTATIC		PNEUMATIC
	BODY	SEAT & BACK SEAT	SEAT
150#	30 Kg/cm2	22 Kg/cm2	7 Kg/cm2

Part	Nomenclature	Material	Qty
1	BODY	WCB / CF8M / CF8 / CAST IRON	1
2	BONNET	WCB / CF8M / CF8 / CAST IRON	1
3	PLUG	AISI 410 / AISI 304 / AISI 316	1
4	PLUG NUT	AISI 410 / AISI 304 / AISI 316	1
5	SEAT RING	AISI 410 / AISI 304 / AISI 316	1
6	STEM	AISI 410 / AISI 304 / AISI 316	1
7	BACK SEAT BUSHING	AISI 410 / AISI 304 / AISI 316	1
8	GLAND	AISI 410 / AISI 304 / AISI 316	1
9	GLAND FLANGE	WCB / CF8M / CF8 / CAST IRON	1
10	YOKE NUT	S.G. IRON	1
11	GRUB SCREW	CARBON STEEL / STAINLESS STEEL	1
12	STEM PACKING	GRAPHITE ASBESTOS	5 min
13	BONNET GASKET	SS 304 / SS 316 SPIRAL WOUND	1
14	BONNET STUDS & SUTS	ASTM A193 Gr. B7 & ASTM A194 Gr. 2H / SS	Req.
15	GLAND EYE BOLTS & NUTS	ASTM A193 Gr. B7 & ASTM A194 Gr. 2H / SS	2
16	GLAND LUG BOLTS & NUTS	STAINLESS STEEL	2
17	HAND WHEEL	CARBON STEEL / CAST IRON	1
18	WHEEL NUT & WASHER	CAST IRON / STAINLESS STEEL	1
19	NAME PLATE	ALLUMINIUM	1

SIZE	NB	L	ØD	ØB	T	ØJ	N	K	'H'	'WH'
25	25	127	108	50.8	11.2	15.7	4	79.3	200	150
32	32	140	117.3	63.5	12.7	15.7	4	88.3	250	150
40	38	165	127	73.2	14.2	15.7	4	98.6	270	185
50	51	203	152.4	92	15.8	19	4	120.7	320	200
65	64	216	177.8	104.6	17.5	19	4	139.7	330	200
80	76	241	190.5	127	19	19	4	152.4	380	250
100	102	292	228.6	157.2	23.9	19	8	190.5	480	300
125	127	356	254	185.7	23.9	22.3	8	215.9	525	300
150	152	406	279.4	215.9	25.4	22.3	8	241.3	575	350
200	203	495	343	269.7	28.5	28.5	8	298.5	650	450

ALL DIMENSIONS ARE IN MM

## ND 40 GLOBE VALVE



GATVPL

TECHNICAL DATA

- MANUFACTURING STD.: DIN 3356
- INSPECTION & TESTING STD.: BS 6755
- END CONNECTION : FLANGED ENDS AS PER DIN 2545
- FACE TO FACE : AS PER DIN STD.

TEST PRESSURE

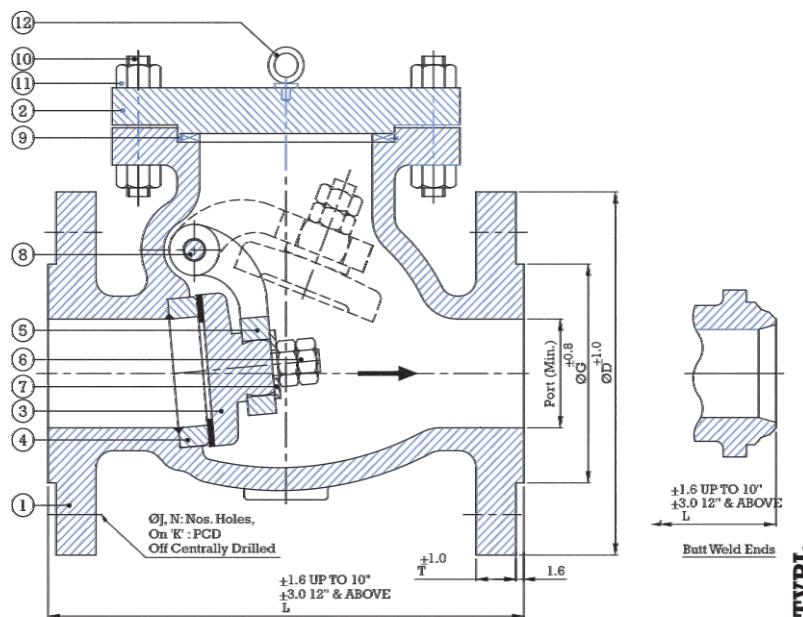
CLASS	HYDROSTATIC		PNEUMATIC
	BODY	SEAT & BACK SEAT	SEAT
ND 40	60 Kg/cm <sup>2</sup>	40 Kg/cm <sup>2</sup>	7 Kg/cm <sup>2</sup>

Part	Nomenclature	Material	Qty
1	BODY	WCB / CF8M / CF8 / CAST IRON	1
2	BONNET	WCB / CF8M / CF8 / CAST IRON	1
3	PLUG	AISI 410 / AISI 304 / AISI 316	1
4	PLUG NUT	AISI 410 / AISI 304 / AISI 316	1
5	SEAT RING	AISI 410 / AISI 304 / AISI 316	1
6	STEM	AISI 410 / AISI 304 / AISI 316	1
7	BACK SEAT BUSHING	AISI 410 / AISI 304 / AISI 316	1
8	GLAND	AISI 410 / AISI 304 / AISI 316	1
9	GLAND FLANGE	WCB / CF8M / CF8 / CAST IRON	1
10	YOKE NUT	S.G. IRON	1
11	GRUB SCREW	CARBON STEEL / STAINLESS STEEL	1
12	STEM PACKING	GRAPHITE ASBESTOS	5 min
13	BONNET GASKET	SS 304 / SS 316 SPIRAL WOUND	1
14	BONNET STUDS & NUTS	ASTM A193 Gr. B7 & ASTM A194 Gr. 2H / SS	Req.
15	GLAND EYE BOLTS & NUTS	ASTM A193 Gr. B7 & ASTM A194 Gr. 2H / SS	2
16	GLAND LUG BOLTS & NUTS	STAINLESS STEEL	2
17	HAND WHEEL	CARBON STEEL / CAST IRON	1
18	WHEEL NUT & WASHER	CARBON STEEL / STAINLESS STEEL	1
19	NAME PLATE	ALUMINIUM	1

SIZE	A	B	ØC	ØD	ØM	N	PCD	ØJ
25	160	160	68	115	14	4	85	125
40	200	200	88	150	18	4	110	175
50	230	230	102	165	18	4	125	175
65	290	290	122	185	18	8	145	225
80	310	310	138	200	18	8	160	225
100	350	350	162	235	22	8	190	250
125	400	400	188	270	26	8	220	250
150	480	480	218	300	26	8	260	312
200	600	600	285	375	30	12	320	375
250	730	730	345	450	33	12	385	500

ALL DIMENSIONS ARE IN MM

## SWING CHECK VALVE / FLANGED ENDS / 150#



CATVPL

## TECHNICAL DATA

- MANUFACTURING STD. : BS 1868
- INSPECTION & TESTING STD. : API 6D / ISO 5208 / BS 6755 (Part-1)
- END CONNECTION : FLANGED ENDS AS PER ASME B 16.5 RF 150#  
BUTT WELD ENDS TO ASME B 16.25
- FACE TO FACE : AS PER ASME B16.10

Part	Nomenclature	Material	Qty
1	BODY	ASTM A216 Gr. WCB / ASTM A 351 Gr. CF8M	1
2	TOP COVER	ASTM A216 Gr. WCB / ASTM A 351 Gr. CF8M	1
3	DISC	13% Cr. FACING ON WCB + STELLITED	1
4	SEAT RING(SEAT WELD)	13% Cr. + STELLITED	1
5	HINGE	ASTM A216 Gr. WCB / ASTM A 351 Gr. CF8M	1
6	DISC NUT	CARBON STEEL / STAINLESS STEEL	2
7	DISC WASHER	CARBON STEEL / STAINLESS STEEL	1
8	HING PIN	AISI 410 / AISI 304 / AISI 316	1
9	COVER GASKET	SS 304/ SS 316 SPIRAL WOUNDER WITH CAF	1
10	COVER STUD	ASTM A193 Gr. B7	Req.
11	COVER NUTS	ASTM A194 Gr. 2H	Req.
12	LIFTING EYE BOLT	ASTM A 105	1
13	NAME PLATE	ALUMINIUM	1

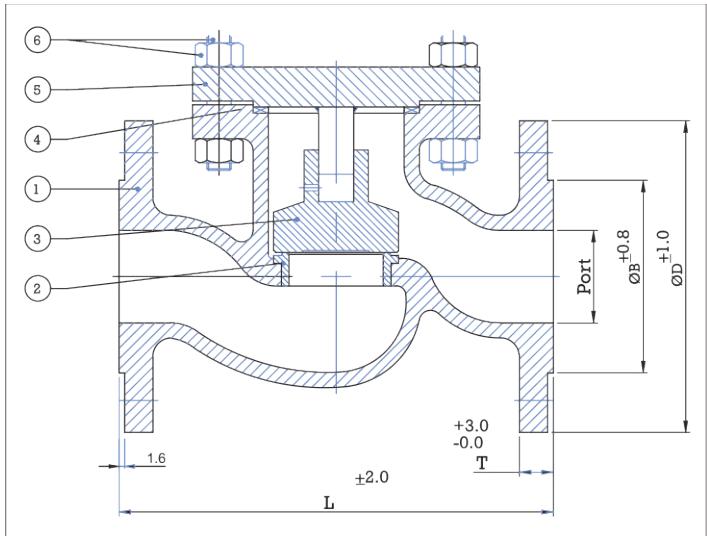
## TEST PRESSURE

CLASS	HYDROSTATIC	
	BODY	SEAT
150#	31 Kg/cm2	22 Kg/cm2

SIZE	NB	L	ØD	ØB	T	ØJ	N	ØK
25	25	127	108	50.8	11.2	15.7	4	79.3
32	32	139.7	117.3	63.5	12.7	15.7	4	88.3
40	38	165	127	73.2	14.2	15.7	4	98.6
50	51	203	152.4	92	15.8	19	4	120.7
65	64	216	177.8	104.6	17.5	19	4	139.7
80	76	241.3	190.5	127	19	19	4	152.4
100	102	292	228.6	157.2	23.9	19	8	190.5
125	127	330	254	185.7	23.9	22.3	8	215.9
150	152	355.6	279.4	215.9	25.4	22.3	8	241.3
200	203	495.3	343	269.7	28.5	22.3	8	298.5
250	254	622	406.4	324	30.2	25.4	12	362
300	305	698.5	483	381	31.8	25.4	12	431.8
350	337	787	533	413	35.1	28.5	12	476.3
400	387	864	597	470	36.6	28.5	16	539.8
450	438	978	635	533	39.6	31.8	16	577.9
500	489	978	698	584	42.9	31.8	20	635
600	591	1295	813	692	47.8	35.1	20	749.3

ALL DIMENSIONS ARE IN MM

## PISTON LIFT VALVE



GATVPL

### TECHNICAL DATA

- MANUFACTURING STD.: GENERALLY CONFORMING TO BS 1868 / DIN 3356
- INSPECTION & TESTING STD.: GENERALLY CONFORMING TO BS 6755 (PART-1)
- END CONNECTION : FLANGE O.D AS PER CLIENT REQUIREMENT AND OTHER DIMENSION AS PER DIN 2545 (PN-40)
- FACE TO CAFE : DIN 3202 (PART-1)(AS PER CLIENT REQUIREMENT)
- RATING : PN 40

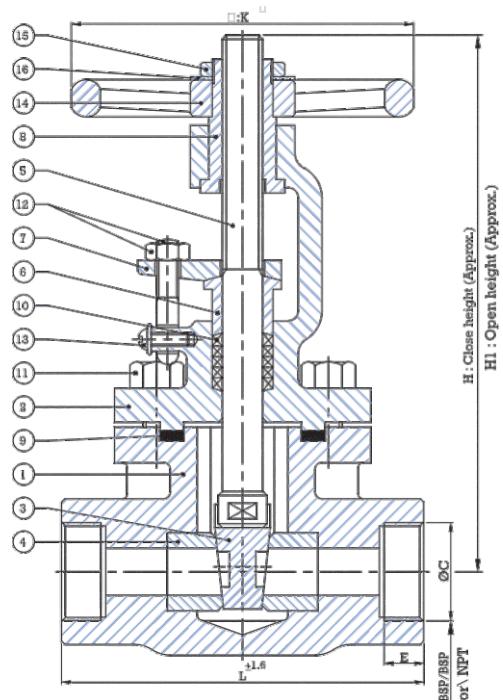
TEST PRESSURE			
CLASS	HYDROSTATIC		PNEUMATIC
	BODY	SEAT & BACK SEAT	-
PN 40	60 Kg/cm <sup>2</sup>	40 Kg/cm <sup>2</sup>	-

Part	Nomenclature	Material	Qty
1	BODY	WCB / CF8M / CF8	1
2	SEAT	13 Cr. Steel to AISI 410 / AISI 304-316	1
3	DISC	13 Cr. Steel to AISI 410 / WCB+13 Cr	1
4	GASKET	Asbestos filler SS 304 spiral wounded	1
5	COVER	WCB / CF8M / CF8 / CAST IRON	1
6	BODY STUDS & NUTS	ASTM A192 Gr B7 & ASTM A 194 Gr 2H	1
7	NAME PLATE	ALLUMINIUM	1

SIZE	PORT	L	ØD	b	Øg	f	ØJ	N	K : PCD
15	13	130	98	16	45	2	14	4	65
20	19	150	150	18	58	2	14	4	78
25	25	160	115	18	68	2	14	4	85
32	32	180	140	18	78	2	18	4	100
40	38	200	150	18	88	3	18	4	110
50	50	230	165	20	102	3	18	4	125
65	64	290	185	22	122	3	18	8	145
80	76	310	200	24	138	3	18	8	160
100	102	350	235	24	162	3	22	8	190
125	127	400	270	26	188	3	26	8	220
150	152	480	300	28	218	3	26	8	250
200	203	600	375	34	285	3	30	12	320

ALL DIMENSIONS ARE IN MM

## FS GATE VALVE 800#



## TECHNICAL DATA

- MANUFACTURING STD.: BS 5352
- INSPECTION & TESTING STD.: API 602
- END CONNECTION : SCREWED ENDS TO BSP/BSPT/NPT  
SOCKET-WELD ENDS TO ANSI B16.11  
BUTT WELD ENDS TO ASME B 16.25

## TEST PRESSURE

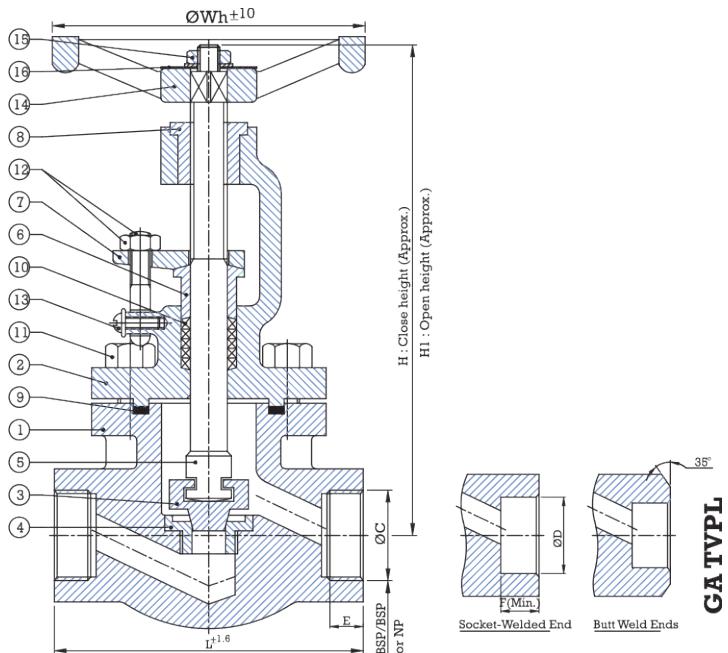
CLASS	HYDROSTATIC		TEMP
	BODY	SEAT & BACK SEAT	
ASA 800#	211 Kg/cm <sup>2</sup>	141 Kg/cm <sup>2</sup>	427°C

Part	Nomenclature	Material	Qty
1	BODY	ASTM A105	1
2	BONNET	ASTM A105	1
3	WEDGE	ASTM A217 CA15 + STELLITED	1
4	SEAT RING	AISI 410 + STELLITED	1
5	SPINDLE	AISI 410 (13% Cr.)	2
6	GLAND	AISI 410 (13% Cr.)	1
7	GLAND FLANGE	ASTM A105	1
8	YOKE BUSH	S.G. IRON	1
9	GASKET	ASBESTOS FILLER SS 304 SPIRAL WOUNDED	1
10	GLAND PACKINGS	GRAPHI.ASB.INHIB.&INCONEL WIRE REIN.	Req.
11	BONNET BOLTS	ASTM A193 Gr. B7	4
12	EYE BOLTS & NUTS	ASTM A193 Gr.B7 & ASTM A194 Gr.2H	2
13	SCREW & WASHERS	ASTM A193 Gr. B7	2
14	HAND WHEEL	DUCTILE IRON / MALLEABLE IRON	1
15	YOKE NUT & WASHER	CARBON STEEL	1
16	NAME PLATE	ALLUMINIUM	1

SIZE	L	H	H1	ØWh	SCR. ENDS		S.W. ENDS		
					ØC	E	ØD MAX.	ØD Min.	F(Min.)
15	87	141	154	95	1/2"	13.56	22.22	21.72	9.65
20	92	148	163	95	3/4"	13.87	27.56	27.05	12.7
25	106	173	196	95	1"	17.35	34.29	33.78	12.7
40	127	193	233	150	1.1/2"	18.38	49.15	48.64	12.7
50	142	235	278	150	2"	19.23	61.62	61.11	15.75

ALL DIMENSIONS ARE IN MM

## FS GLOBE VALVE 800#



## TECHNICAL DATA

- MANUFACTURING STD. : BS 5352
- INSPECTION & TESTING STD. : API 598 / BS 6755 (PART-1)
- END CONNECTION : SCREWED ENDS TO BSP/BSPT/NPT  
SOCKET-WELD ENDS TO ANSI B16.11  
BUTT WELD ENDS TO ASME B 16.25

## TEST PRESSURE

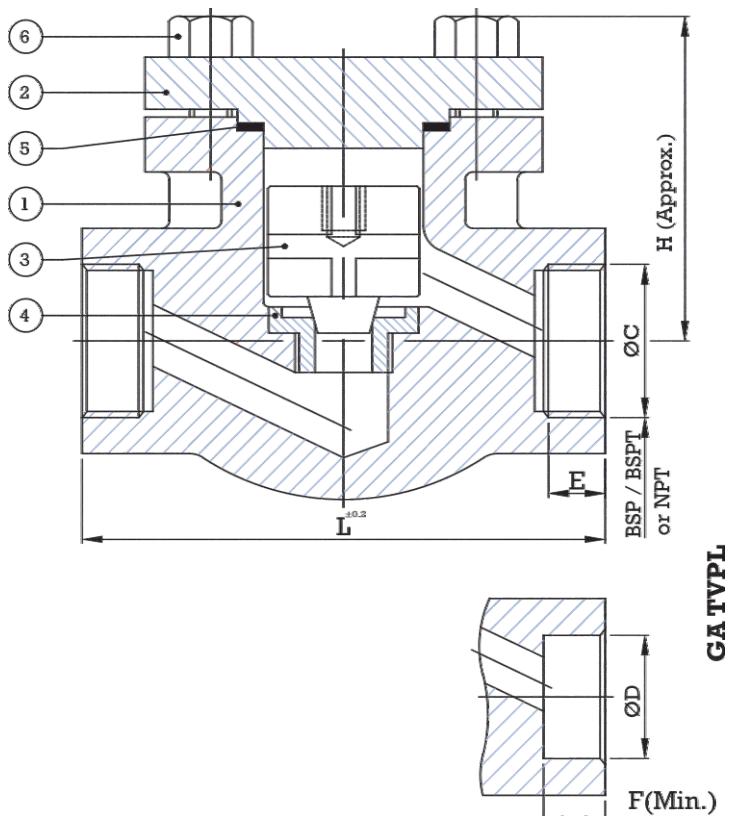
CLASS	HYDROSTATIC		TEMP.
	BODY	SEAT & BACK SEAT	
ASA 800#	211 Kg/cm <sup>2</sup>	141 Kg/cm <sup>2</sup>	427°C

Part	Nomenclature	Material		Qty
1	BODY	ASTM A105		1
2	BONNET	ASTM A105		1
3	DISC	AISI 410 + STELLITED		1
4	SEAT RING	AISI 410 + STELLITED		1
5	SPINDLE	AISI 410 (13% Cr.)		2
6	GLAND	AISI 410 (13% Cr.)		1
7	GLAND FLANGE	ASTM A105		1
8	YOKE BUSH	S.G. IRON		1
9	GASKET	ASBESTOS FILLER SS 304 SPIRAL WOUNDED		1
10	GLAND PACKINGS	GRAPHI.ASB.INHIB.&INCONEL WIRE REIN.	Req.	
11	BONNET BOLTS	ASTM A193 Gr. B7		4
12	EYE BOLTS & NUTS	ASTM A193 Gr.B7 & ASTM A194 Gr.2H		2
13	SCREW & WASHERS	ASTM A193 Gr. B7		2
14	HAND WHEEL	DUCTILE IRON / MALLEABLE IRON		1
15	YOKE NUT & WASHER	ASTM A194 Gr. 2H		1
16	NAME PLATE	ALLUMINIUM		1

SIZE	L	H	H1	ØWh	SCR. ENDS		S.W. ENDS		
					ØC	E	ØD		F(Min.)
							MAX.	Min.	
15	87	160	168	95	1/2"	13.56	22.22	21.72	9.65
20	92	170	180	95	3/4"	13.87	27.56	27.05	12.7
25	106	180	192	95	1"	17.35	34.29	33.78	12.7
40	127	242	257	150	1.1/2"	18.38	49.15	48.64	12.7
50	142	255	272	150	2"	19.23	61.62	61.11	15.75

ALL DIMENSIONS ARE IN MM

## PISTON LIFT CHECK VALVE 800#



Socket-Welded Ends

## TECHNICAL DATA:-

- MANUFACTURING STD.: BS 5352
- INSPECTION & TESTING STD.: BS 6755 (Part-1)
- END CONNECTION : Screwed Ends to BSP/BSPT/NPT  
Socket-Weld Ends to ANSI B16.11  
Butt Weld Ends to ASME B 16.25

Part	Nomenclature	Material	Qty
1	BODY	ASTM A105	1
2	BONNET	ASTM A105	1
3	DISK	AISI 410 + STELLITED	1
4	SEAT RING	AISI 410 + STELLITED	1
5	SPINDLE	AISI 410 (13%Cr.)	2
6	GLAND	AISI 410 (13%Cr.)	1
7	GLAND FLANGE	ASTM A105	1
8	TOKE BUSH	S.G. IRON	1
9	GASKET	ASBESTOS FILLER SS 304 SPIRAL WOUNDED	1
10	GLAND PACKINGS	GRAPHI.ASB.INHIB.&INCONEL EIIRE REIN.	Req.
11	BONNET BOLTS	ASTM A193 Gr. B7	4
12	EYE BOLTS & NUTS	ASTM A193 Gr. B7& ASTM A194 Gr.2H	2
13	SCREW & WASHER	ASTM A193 Gr. B7	2
14	HAND WHEEL	DUCTILE IRON / MALLEABL IRON	1
15	WHEEL NUT & WASHER	ASTM A194 Gr. 2H	1
16	NAME PLATE	ALUMINIUM	1

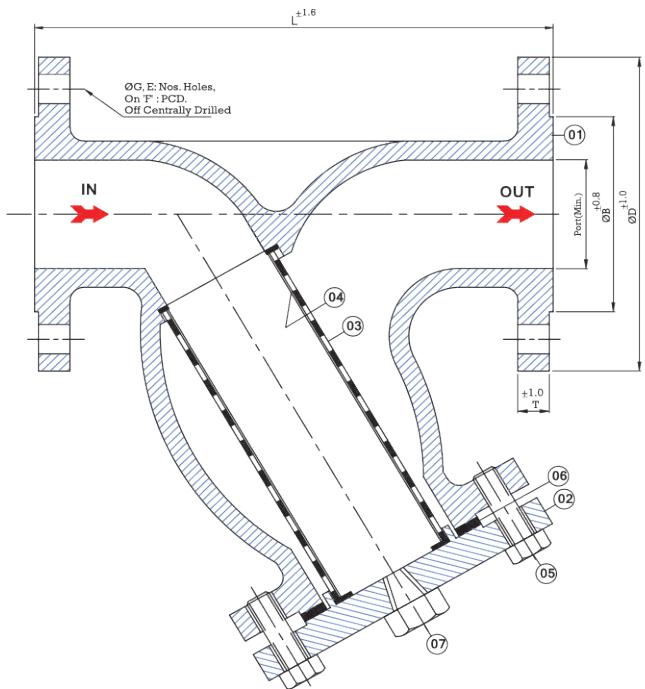
## TEST PRESSURE

CLASS	HYDROSTATIC		TEMP. MAX. 427°C
	BODY	SEAT & BACK SEAT	
ASA 800#	211 Kg/cm <sup>2</sup>	141 Kg/cm <sup>2</sup>	

SIZE	L	H	SCR. END		S.W. ENDS		F (Min.)
			ØC	E	Max.	Min.	
15	87	61	1/2"	13.56	22.22	21.72	9.65
20	92	67	3/4"	13.87	27.56	27.05	12.7
25	106	73	1"	17.35	34.29	33.78	12.7
40	127	95	1.1/2"	18.38	49.15	48.64	12.7
50	142	100	2"	19.23	61.62	61.11	15.75

ALL DIMENSIONS ARE IN MM

## STRAINER



GA TVPL

## TECHNICAL DATA

- MANUFACTURING STD.: AS PER TVPL - 017
- INSPECTION & TESTING STD.: AS PER TVPL - 017
- END CONNECTION: FLANGED ENDS TO ASME B16.5 RF 150#

## TEST PRESSURE

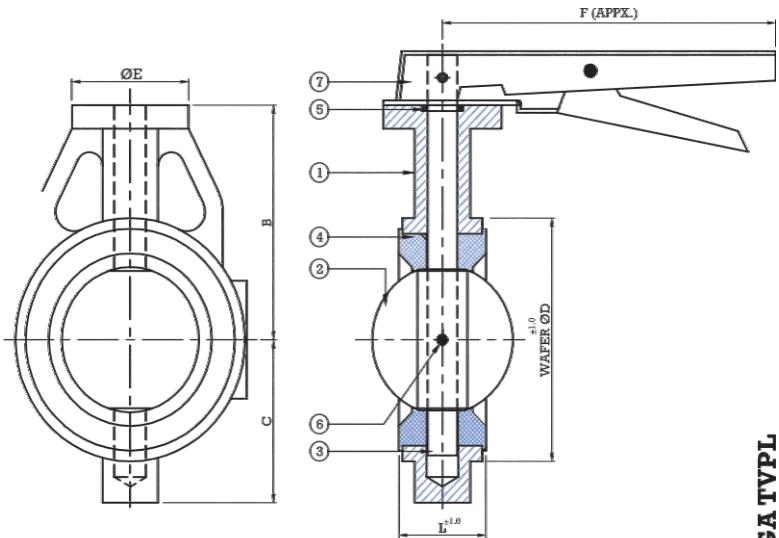
CLASS	HYDROSTATIC	
	BODY	SEAT & BACK SEAT
150#	30 Kg/cm <sup>2</sup>	-

Part	Nomenclature	Material	Qty
1	BODY	WCB / CF8M / CF8 / CAST IRON	1
2	COVER	WCB / CF8M / CF8 / CAST IRON	1
3	PERFORATED SHEET	SS 304 / SS 316 - 3 mm Thick	1
4	SCREEN	SS 304 / SS 316 ( 40 MESH )	1
5	COVER BOLT	CARBON STEEL / STAINLESS STEEL	REQ.
6	GASKET	SS 304 / SS 316 SPIRAL WOUND	1
7	DRAIN	CARBON STEEL / STAINLESS STEEL	1
8	NAME PLATE	ALUMINIUM	1



ALL DIMENSIONS ARE IN MM

## BUTTERFLY VALVE WAFER TYPE LEVER OPERATED



CATVPL

TECHNICAL DATA

- MANUFACTURING STD.: BS 5155/API 609/IS 13095
- INSPECTION AND TESTING STD.: BS 6755 (PART-I)/ API 598 / EN 12266-1
- END CONNECTION : WAFER TO SUIT ANSI B 16.5 150# / BS 10 TAB D & E
- FACE TO FACE : BS 5155/ ISO 5752 / API 609
- TOP FLANGE DRILLING : ISO 5211

TEST PRESSURE

CLASS	HYDROSTATIC	
	BODY	SEAT
PN 10	15 Kg/cm <sup>2</sup>	10 Kg/cm <sup>2</sup>
PN 16	22 Kg/cm <sup>2</sup>	16 Kg/cm <sup>2</sup>

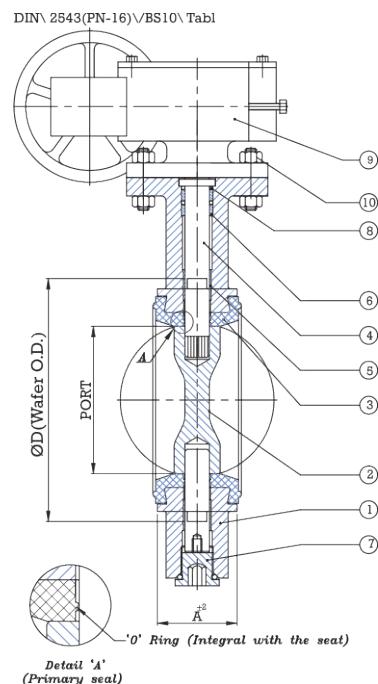
MATERIAL OF CONSTRUCTION

Part	Nomenclature	Material	Qty
1	BODY	CAST IRON / S.G.IRON / ASTM A 216 Gr.WCB ASTM A 351 Gr.CF8 / ASTM A 351 Gr.CF8M	1
2	DISC	CAST IRON / S.G.IRON / ASTM A 216 Gr.WCB ASTM A 351 Gr.CF8 / ASTM A 351 Gr.CF8M	1
3	SPINDLE	AISI 410 / AISI 304 / AISI 316	1
4	BODY LINING	NITRILE / EPDM / SILICON / VITON / HYPALON	1
5	'O' RING	NITRILE / EPDM	1
6	PIN	SS 304 / SS 316	1
7	LEVER	M.S. FABRICATED	1
8	NAME PLATE	ALUMINIUM	1

SIZE	A	B	C	ØD	ØE	F
40	36	92	52	81.5	65	180
50	43	103	70	95	65	180
65	46	110	76	108	65	180
80	46	118	85	126	65	215
100	52	148	102	157	65	215
125	56	164	115	189	65	215
150	56	176	130	211	65	265
200	60	230	156	266	75	325

ALL DIMENSIONS ARE IN MM

## BUTTERFLY VALVE GEAR OPERATED



CATVPL

### TECHNICAL DATA

- MANUFACTURING STD. : BS 5155/API 609/IS 13095
- INSPECTION AND TESTING STD.:BS 6755 (PART-I)/API 598/IS 13095
- END CONNECTION : WAFER TO SUIT ANSI B 16.5 150# / DIN 2542(PN-10)
- FACE TO FACE : BS 5155/API 609 (CATEGORY A)/IS 13095

### TEST PRESSURE

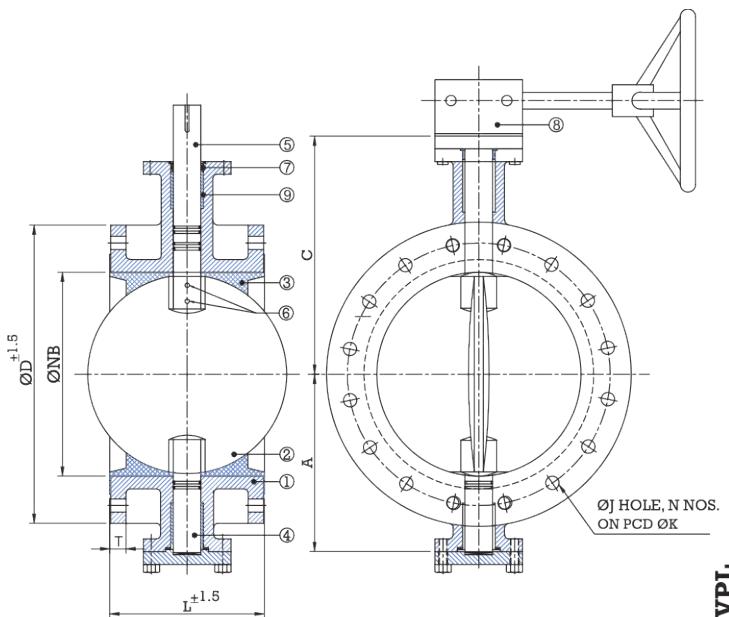
CLASS	HYDROSTATIC	
	BODY	SEAT
PN 10	15 Kg/cm <sup>2</sup>	10 Kg/cm <sup>2</sup>

Part	Nomenclature	Material	Qty
1	BODY	CAST IRON / S.G.IRON ASTM A216 Gr. WCB / A351 Gr.CF8M / CF8	1
2	DISK	CI / C.S. / S.G.IRON / CF8/CF8M/NITRILE/EPDM Neopren & Hypalon on Available Epoxy Coated	1
3	STAT	PTFE / NITRILE / EPDM / VITON / NEOPRENE	1
4	STEM	AISI 410 / AISI 304 / AISI 316	1
5	BEARING BUSH	BRASS / GM / STEEL	2
6	BUSH	PTFE / POLY ACETAL	2
7	BOTTOM NUT	CARBON STEEL / STAINLESS STEEL	1
8	'O' RING	NITRILE RUBBER	3
9	GEAR	STD	1
10	BOLTS & NUTS	ASTM A193 Gr. B7 & ASTM A194 Gr. 2H	Req.
11	NAME PLATE	ALUMINIUM	1

SIZE	ØPORT	A	ØD
40	38	33	81.5
50	50	43	95
65	62	46	108
80	76	46	126
100	100	52	157
125	125	56	189
150	150	56	211
200	198	60	266
250	250	68	328
300	300	78	378.5
350	333	78	436

ALL DIMENSIONS ARE IN MM

## DOUBLE FLANGE BUTTERFLY VALVE



GA TVPL

## TECHNICAL DATA

- MANUFACTURING STD. : API 609
- INSPECTION & TESTING STD. : BS 5155
- END CONNECTION : FLANGED END AS PER ANSI B 16.5 150#

## TEST PRESSURE

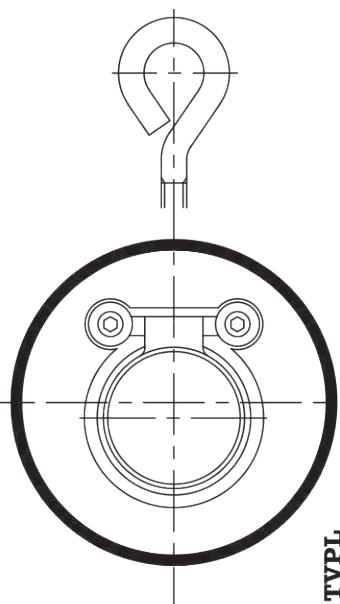
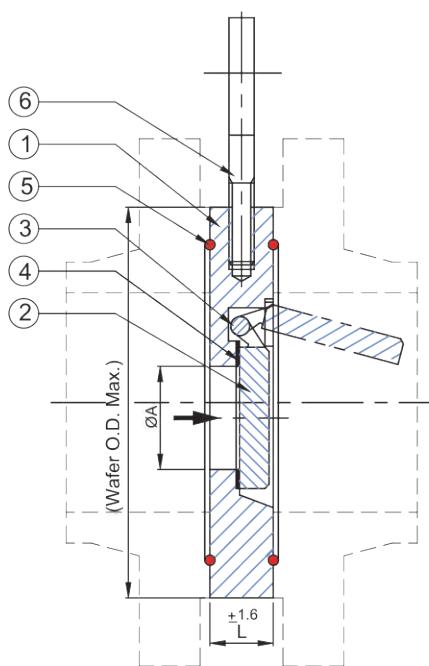
CLASS	HYDROSTATIC	
	BODY	SEAT
PN 16	15 Kg/cm <sup>2</sup>	11 Kg/cm <sup>2</sup>

Part	Nomenclature	Material	Qty
1	BODY	CI/ASTM A 216 Gr. WCB/ASTM A 351 Gr. CF8M	1
2	DISC	CI/ASTM A 216 Gr. WCB/ASTM A 351 Gr. CF8M	1
3	SEAT	EPDM / VITON / PTFE	1
4	BOTTOM STEM	AISI 410 / AISI 304 / AISI 316	1
5	UPPER STEM	AISI 410 / AISI 304 / AISI 316	1
6	HEX BOLT	CS / SS 304 / SS 316	2
7	'O' RING	NITRILE RUBBER	REQ
8	GEAR	STD	1
9	SHAFT BUSHING	SP. SYNTHETIC BUSHING	2
10	NAME PLATE	ALUMINIUM	1

SIZE	ØNB	L	A	C	ØD	T	ØJ	N	ØK
200	200	152	175	250	597	36.6	28.5	16	539.8
250	250	165	208	285	406.4	30.2	25.4	12	362
300	300	178	227	310	483	31.8	25.4	12	431.8
350	350	190	308	376	533	35.1	28.5	12	476.3
400	400	216	308	376	597	36.6	28.5	16	539.8
450	450	222	373	390	635	39.6	31.8	16	577.9
500	500	229	408	425	698	42.9	31.8	20	635
600	600	267	464	500	813	47.8	35.1	20	749.3

ALL DIMENSIONS ARE IN MM

## WAFER CHECK VALVE



GATVPL

TECHNICAL DATA

- MANUFACTURING STD.: BS 1868
- INSPECTION & TESTING STD.: API 6D / API 598
- END CONNECTION: WAFER TO SUIT ANSI B 16.5 150#/ DIN 2542(PN-10)/DIN 2543(PN-16)

**TEST PRESSURE**

CLASS	HYDROSTATIC	
	BODY	SEAT
PN 10	10 Kg/cm <sup>2</sup>	6 Kg/cm <sup>2</sup>

Part	Nomenclature	Material	Qty
1	BODY	IS 210 FG. 200 / ASTM A 216 Gr. WCB ASTM A 351 CF8 / ASTM A 351 Gr. CF8M	1
2	CLAPPER	IS 210 FG. 200 / ASTM 216 Gr. WCB ASTM A 351 CF8 / ASRM A 351 Gr. CF8M	1
3	CLAPPER PIN	AISI 410 / AISI 304 / AISI 316	1
4	CLAPPER SEAT	NIRTILE / EPDM / VITON / SILICON / PEFE	1
5	BODY SEAL	NIRTILE / EPDM / VITON / SILICON / PEFE	1
6	LIFTING EYE	M.S. / STAINLESS STEEL	2
7	NAME PLATE	ALLUMINIUM	1

SIZE	ØA	ØB	L
50	30	109	19
65	40	129	19
80	52	144	19
100	71	164	19
125	93	194	19
150	114	220	19
200	157	275	28
250	195	330	28
300	230	380	38
350	270	440	41
400	310	491	51
450	360	541	51
500	406	596	60
600	490	698	70
1000	910	1200	180

ALL DIMENSIONS ARE IN MM

**DISC CHECK VALVE**

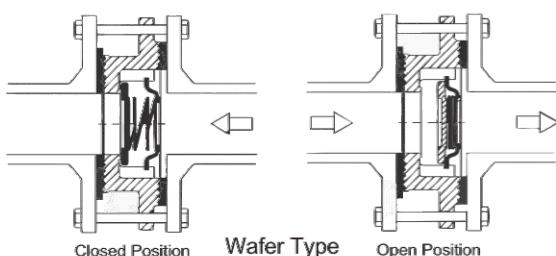
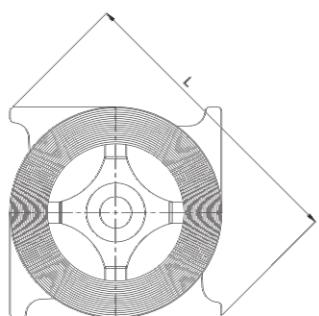
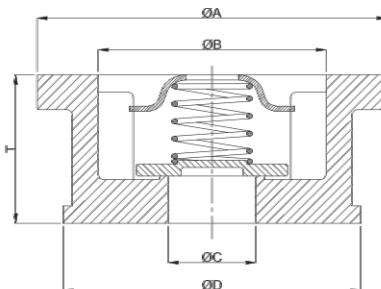
Model : ADCV

"TORQ" OFFERS DISC TYPE NON SLAM CHECK VALVE (NRV) FOR TEXTILES, PULP AND PAPER, PHARMACEUTICALS, CHEMICAL, FOOD PROCESSING & OIL LINES ETC..

Size Range Upto : 15 MM To 200 MM Wafer Type

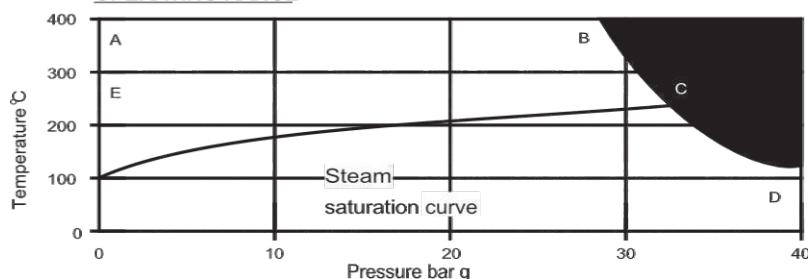
Technical Specifications :

Body Construction	ASTM A 351 Gr. CF8 / CF8M
Disc	AISI 304 or AISI 316 (Bar Stock)
Spring	AISI 304 or AISI 316 (Standard)
Spring Retainer	AISI 304 or AISI 316
Disc Seat	Metal to Metal
Pressure Rating	PN 40.
Flange Standard	1. BS 10 Tabel D,E & H (65NB & 80 NB will not be fitted between 'E' flanges) 2. DIN : Pn6, 10, 16, 25, 40. 3. JIS 5,10, 16, 20 (40NB, 50NB, 80NB & 100 NB will not be fitted between JIS 5 flanges )

DIMENSION

SIZE MM	IN.	A		B	C	D	T	L	Approx Weight
		43	29	20	45	19	70		
15	1/2"	43	29	15	38	16	60	0.400	
20	3/4"	53	36	20	45	19	70	0.640	
25	1"	63	44	25	56	22	80	0.954	
32	1.1/4"	73	55	32	65	28	90	1.425	
40	1.1/2"	83	66	40	74	31	98	1.972	
50	2"	93	77	50	85	40	112	2.666	
65	2.1/2"	114	98	65	107	46	141	4.130	
80	3"	132	111	80	122	50	151	5.802	
100	4"	153	130	100	142	60	181	8.425	
125	5"	185	161	125	170	90	215	-	
150	6"	212	190	150	202	105	255	-	
200	8"	277	250	200	261	140	320	-	

All Dimensions are in (mm.)

OPERATING RANGE

The product must not be used in the ███████████ region.  
A - B - C - D = DCV without spring or with high temperature spring.  
E - C - D = DCV with Standard Spring.

DN	15 MM	20 MM	25 MM	40 MM	50 MM	65 MM	80 MM	100 MM	125 MM	150 MM	200 MM
↑	25	25	25	28	29	30	31	33		On Request	
→	22.5	22.5	22.5	24.5	24.5	25.5	25.5	26.5		On Request	
↓	20	20	20	20	20	20	20	20		On Request	

(➡ Indicates Flow Direction)

The Valves can be installed, without spring in vertical pipe. line with bottom to top flow,  
Where lowest opening pressures are required.  
without spring :

DN	15 MM	20 MM	25 MM	40 MM	50 MM	65 MM	80 MM	100 MM	125 MM	150 MM	200 MM
↑	2.5	2.5	2.5	3.5	4	4.5	5.5	6.5		On Request	

**ALL DIMENSIONS ARE IN MM**

## PNEUMATIC ACTUATOR OPERATED HIGH PERFORMANCE REPLACEABLE SEAT SPHERICAL DISC BUTTERFLY VALVE

Model : TBFV

"TORQ" OFFERS SPHERICAL DISC VALVE WITH COMPACT & EASY REPLACEABLE SEAL DESIGN FOR 10KG/CM<sup>2</sup>/CM<sup>2</sup>  
20KG/CM<sup>2</sup>& TO WITH STAND 80 C TO 600 C TEMPERATURE

SIZE RANGE : 1½" TO 12" (14" TO 24" ON REQUEST)



### Actuator

Type	Rack and Pinion Type
Actuation	Double Acting / Single Acting (Spring Return)
Mounting Std.	ISO 5211 An International Standard
Pneumatic Connections	NAMUR Standard

### Valve

Body	WCB/CF8/CF8m/Cast Iron
Disc	WCB/CF8/CF8m/Cast Iron
Seat	PTFE Replaceable (available EPDM / Viton / Metal to Metal)
Plate Mounting	NAMUR Standard
Operation	Hand Lever Type, Worm Gear Box Type, Pneumatic Actuated, Electrical Actuated

GATVPL

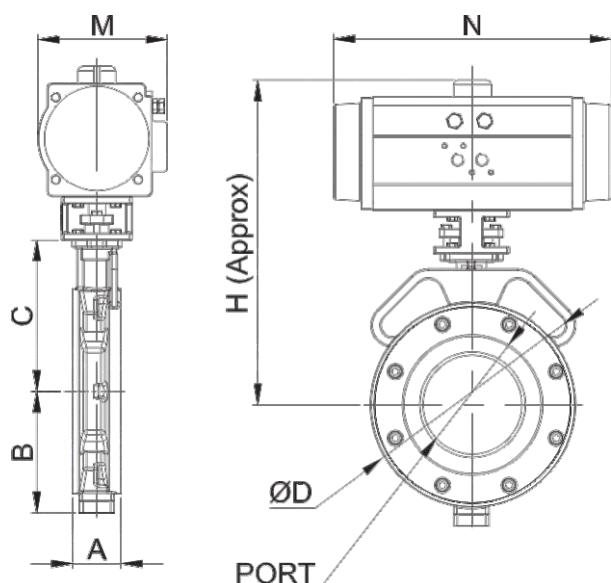
### APPLICATION

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

### DIMENSIONS :

SIZE		A	B	C	H	PORT	ØD	N	M	Approx Weight
MM	IN.									
40	1.1/2"	42	58	86	220	38	82	169	73	3.100
50	2"	45	68	88	222	51	96	169	73	3.400
65	2.1/2"	48	70	100	234	60	112	169	73	4.100
80	3"	48	79	109	255	72	131	216	84	5.700
100	4"	54	95	131	277	100	160	216	84	7.300
125	5"	57	118	155	315	123	188	232	93	10.050
150	6"	57	132	170	342	144	219	272	105.5	13.200
200	8"	64	161	201	390	192	271	293	122	19.850

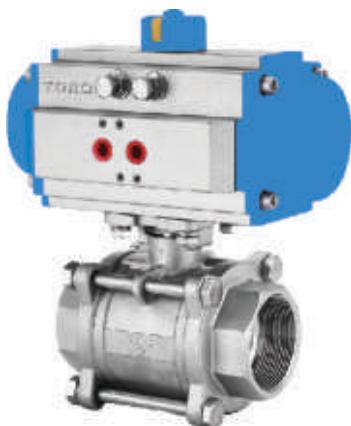
ALL DIMENSIONS ARE IN MM



**PNEUMATIC ACTUATOR OPERATED BALL VALVE**

Model : TBV

"TORQ" OFFERS INVESTMENT CASTING CAST STEEL / CF8 / CF8M / CF3M BALL VALVE IN TWO PIECE AND THREE PIECE DESIGN WITH ON-OFF AND MODULATING TYPE PNEUMATIC OPERATION.



**Size Range : 1/2" to 20" Screwed / Flange / Triclover / Socket weld  
Actuator**

Type	Rack and Pinion Type
Actuation	Double Acting / Single Acting (Spring Return)
Mounting Std.	ISO 5211 An International Standard
Pneumatic Connections	NAMUR Standard

**Valve**

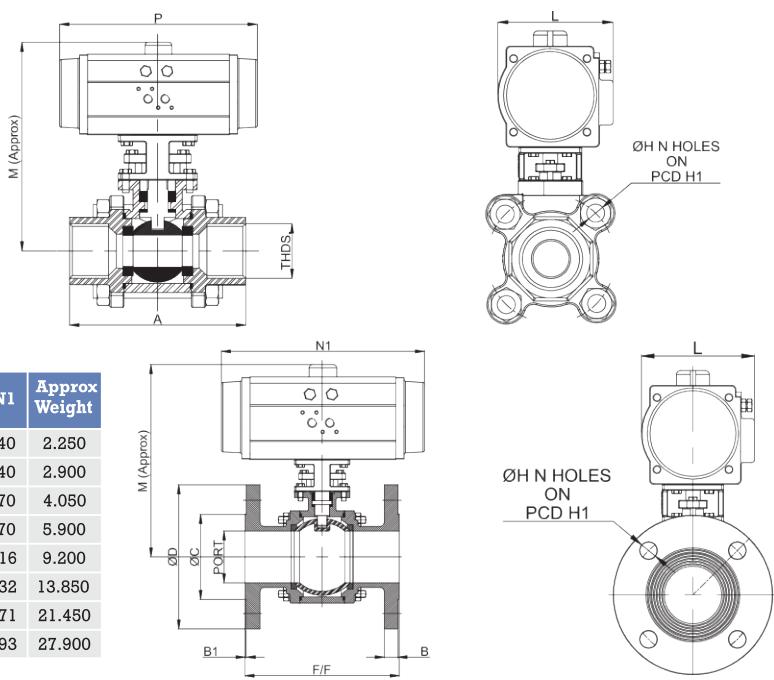
Body	ASTM A216 Gr. WCB / ASTM A351 Gr. CF8 / CF8M
Ball	ASTM A351 Gr. CF8 / CF8M
Stem	Stainless Steel AISI 304 / AISI 316 / AISI 410
Gland	Stainless Steel AISI 304 / AISI 316 / M.S.
Seat Packing	PTFE (Gland Filled, Carbon Filled, Teflon - Optional in case of high Temperature)
End Connection	Screwed to - BSP / NPT / Socket Weld Ends to ANSI )B 16.11 Flange to - ANSI B 16.5 Class 15/300 Table - D,E,F, (On Request) Triclover Ends - (On Request) Socket Weld - (On Request)

Item	Type of Test	Hydro Testing Pressure	Working Pressure	Operating Temperature (high Temp. On Request)
Actuator	Pneumatic Bubble Test	180 PSIG	45 to 150 PSIG	-20°C to 80°C
Valve Body Screwed End	Hydraulic	435 PSIG	335 PSIG	Max. 180°C
Valve Body Flange 150#	Hydraulic	435 PSIG	335 PSIG	Max. 180°C
Valve Body Flange 300#	Hydraulic	1130 PSIG	840 PSIG	Max 180°C

**DIMENSIONS :**

SIZE	A	THDS. BSP	ØH	H1	N	L	P	M	Approx Weight	
MM	IN.									
15	1/2"	68	1/2"	8	42.5	4	65	140	160	1.160
20	3/4"	72	3/4"	8.5	53	4	65	140	160	1.620
25	1"	84	1"	9	59	4	73	170	180	1.920
40	1.1/2"	119	1.1/2"	11	87.5	4	73	170	190	4.070
50	2"	130	2"	10	103	4	85	216	216	4.970

SIZE	B	B1	C	D	PORT	H	H1	N	F/F	L	M	N1	Approx Weight	
MM														
15	1/2"	10.5	1.5	35	89	12.5	15.5	60	4	108	65	160	140	2.250
20	3/4"	10.5	1.5	43	98.5	18	16	70	4	117	65	160	140	2.900
25	1"	12	1.5	51	108	25	16	79.5	4	127	73	180	170	4.050
40	1.1/2"	14	1.5	73	127	37	16	98.5	4	165	73	190	170	5.900
50	2"	16	1.5	92	152	50	19	120	4	178	85	210	216	9.200
65	2.1/2"	17.5	1.5	105	178	64	19	140	4	190.5	94	242	232	13.850
80	3"	21	1.5	127	190.5	75	19	152	4	203	105.5	260	271	21.450
100	4"	23.5	1.5	157	228.5	98	19	190	8	228	122	310	293	27.900

**ALL DIMENSIONS ARE IN MM**

**PNEUMATIC ACTUATOR OPERATED BUTTERFLY VALVE**

Model : TBFV

"TORQ" OFFERS CAST IRON AND CAST STEEL BODY WITH CF8 / CF8M / CF3M DISC BUTTERFLY VALVE WITH ON-OFF AND MODULATING TYPE PNEUMATIC OPERATION.

**Size Range : 1/2" to 40"****Actuator**

Type	Rack and Pinion Type
Actuation	Double Acting / Single Acting (Spring Return)
Mounting Std.	ISO 5211 An International Standard
Pneumatic Connections	NAMUR Standard

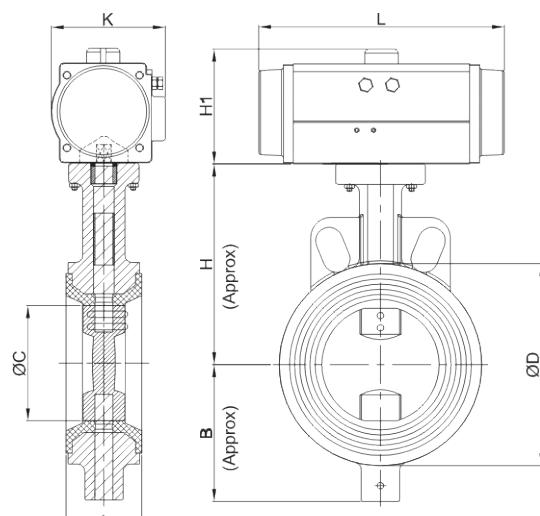
**Valve**

Body	I.C./ CI (IS 210 Gr. FG 200 / 220) WCB / S.S. 304 / S.S. 316
Disc	CF8 / CF8M / CF3M / S.G. Iron / Teflon Coated / Powder Coated" Nylon Coated / Rubber Line
Seat	EPDM / Nitrile / Hayplon / Viton / Moulded or Replaceable muffler type
Shaft	AISI 410 / CF8 / CF8M / CF3M
Valve Type	Centric Disc Butterfly Valve with a single piece rubber lined body
Body Type	Short wafer (sandwiched between flanges)
Seat Type	Integrally moulded with the body
End Connection	Wafer Sandwiched (Lug Type On Request)
Pressure rating	PN 10 / PN 16 (On Request)
Oper. Temp. range	-25°C to 130°C (depending on MOC)
Seat Leakage	Tight shut off
Operation	Hand leaver for sizes from 40 mm to 350 mm Worm gear boxes for 40 mm to 1000 mm

Item	Type of Test	Hydro Testing Pressure	Operating Temperature (Normal)	Operating Temperature (High)
Actuator	Pneumatic Bubble Test	180 to 150 PSIG	-20°C to 80°C	High Temp. On request
Valve Body	Hydraulic	300 PSIG	Max. 80°C	High Temp. On request
Seat	Hydraulic	228 PSIG	Max. 80°C	High Temp. On request

**DIMENSION :**

SIZE MM IN.	A	B	ØC	ØD	H	L	H1	K	Approx Weight
40 1 1/2"	33	60	38	80	105	136.3	92	62	2,200
50 2"	43	60	48	90	115	168	101.5	72.5	3,000
65 2 1/2"	46	65	63	105	120	168	101.5	72.5	3,600
80 3"	46	75	76	122	130	168	101.5	72.5	4,200
100 4"	52	92	100	147	150	217	114	84.5	6,100
125 5"	56	105	125	175	155	232.5	127	93.5	8,200
150 6"	56	120	150	200	175	271	135	105	10,850
200 8"	60	150	201	255	205	293	152	122	16,600
250 10"	68	190	240	320	255	405	181	149	32,450
300 12"	78	225	290	375	285	487	322	226	35,450

**ALL DIMENSIONS ARE IN MM**

## ANGLE TYPE CONTROL VALVES

Model : TYCV

"TORQ" OFFERS 2/2 WAY PNEUMATIC ACTUATOR OPERATED ANGLE TYPE CONTROL VALVE NORMALLY CLOSE & NORMALLY OPEN TYPE PN 16.

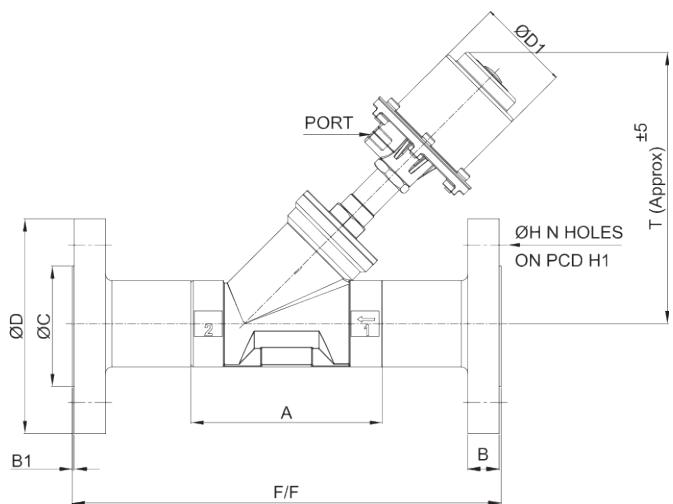
Size Range : 1/2" to 3"

Actuator

<b>Body</b>	SS 304 Pressed
<b>Cover Flange</b>	ASTM A351 Gr. CF8 (SS 304) Investment Die-Cast
<b>Spring</b>	Spring Steel (IS 4454 Gr. III)
<b>Port Connection</b>	1/4" BSP (NPT on request)
<b>Operating Pressure</b>	3.5 to 7 Bar
<b>Position Indicator</b>	Nylon
<b>Operating Cycles</b>	350 to 650 Cycles / Hr
<b>Media</b>	Dry Lubricated Air/Innert Gasses Asten Moisture Separators are advised to use in line

Valve

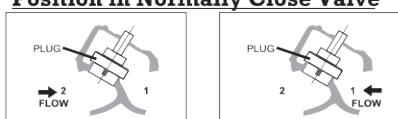
<b>Size</b>	1/2" to 3" Screwed / Flange
<b>Body</b>	ASTM A351 Gr. CF8 / CF8M / CF3M
<b>Steam Packing</b>	PTFE upto 180 C, Self-compensating (Spring Loaded)
<b>Trim / Spindle</b>	Stainless Steel 304/316/316L
<b>Seat</b>	Soft Seat (PTFE)
<b>Gland Packing</b>	Teflon 'V' seals, backed by graphite wiper seal (Self Compensating)
<b>Body Test Pressure</b>	24 Bar Maximum
<b>End Connections</b>	Female Screwed to BSP or NPT / Flange / Triclover
<b>Working Fluid Press</b>	Refer to table
<b>Leakage</b>	Drop tight / bubble tight, class IV ANSI B 16, 104, 1976
<b>Operating Temp.</b>	On steam - Continues 155°C, Intermittent 180 °C Maximum (High Temp. above 180°C - On Request)
<b>Media</b>	Air, Water, Oil, Gas, Steam & Chemical



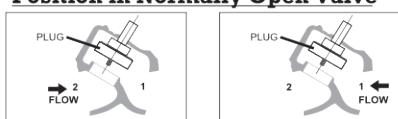
Technical Specification Table

Model	Valve Size	Orifice MM	Inlet Position	Max.Op. Press Low to Close Bar	Max.Op. Press Low to Open Bar	Flow Factor M3/hr	Air Consumption Lit./Cycle
AYCV - 15	1/2"	16	N/C	16	16	4.2	0.155
AYCV - 15		16	N/O	16	16	4.2	0.155
AYCV - 20	3/4"	16	N/C	16	16	5.5	0.155
AYCV - 20		16	N/O	16	16	5.5	0.155
AYCV - 25	1"	23	N/C	16	16	13.5	0.161
AYCV - 25		23	N/O	16	16	13.5	0.161
AYCV - 40	1.1/2"	34	N/C	15	15	31.9	0.172
AYCV - 40		34	N/O	10	10	31.9	0.172
AYCV - 50	2"	45	N/C	14	16	54.5	0.184
AYCV - 50		45	N/O	16	12	54.5	0.184
AYCV - 65	2.1/2"	62	N/C	14	16	54.5	0.184
AYCV - 65		62	N/O	16	12	54.5	0.184
AYCV - 80	3"	75	N/C	10	10	105	0.735
AYCV - 80		75	N/O	10	10	105	0.735

## Position in Normally Close Valve



## Position in Normally Open Valve



SIZE	A SCREW	ACT. BORE	ØD1 FLANGE	ØC	ØD	B	B1	H	H1	N	T FLANGE	PORT	Approx Weight	Approx Weight		
													SCREW	FLANGE		
15	1/2"	68	70	73	130	38	90	9.5	1.5	16	60	4	155	1/4" BSP	1.450	2.100
20	3/4"	75	70	73	150	43	98.5	10.5	1.5	16	70	4	160	1/4" BSP	1.450	2.300
25	1"	88	70	73	160	51	108	11	1.5	16	79.5	4	170	1/4" BSP	1.600	2.500
40	1.1/2"	125	70	73	189	73	125	11.5	1.5	16	98.5	4	191	1/4" BSP	2.350	3.950
50	2"	151	70	73	230	92	152	15.5	1.5	19	120	4	218	1/4" BSP	3.200	6.600
65	2.1/2"	195.5	120	124.5	216	104.8	178	15.9	1.5	19	139.7	4	230	1/4" BSP	-	-
80	3"	197	120	124.5	241.5	127	188	19	1.5	19	152.4	4	250	1/4" BSP	-	-

ALL DIMENSIONS ARE IN MM

**HIGH FLOW DIAPHRAGM TYPE SOLENOID VALVE**

Model : TSD

"TORQ" OFFERS NORMALLY OPEN & NORMALLY CLOSE TYPE HIGH FLOW DIAPHRAGM TYPE SOLENOID VALVE FOR AIR, WATER, LIGHT OIL, GAS, LIGHT CHEMICAL.



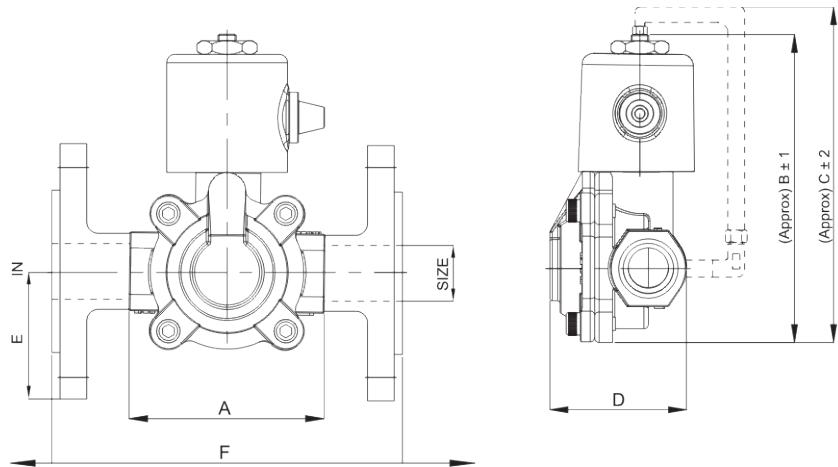
**Size Range : 1/2 To 4 Screwed / Flanged**

**Technical Specifications**

Body & Cover	ASTM A351 Gr. CF8 / CF8M / CF3M
Seals / Diaphragm	Nitrile / Neoprene (optional - silicon, viton & other)
Pressure Range	0.5 to 10 bar
Temperature Range	-5 C to 85 C (On Request upto 95 C)
Coil Voltage	12V, 24V, 48V, 110V, 230V, AC/DC
Coil Insulation	'F' Class
Coil Rating	Continuous Rated

**Applications :**

Textile Processing Machinery, Chemical Plants, Water Treatment, Sugar Machinery, Cement Machinery, Pumps, Irrigation, Combustion Equipment, Heat Exchanger, Air Dryer, Pollution Controls, Laundry Equipments and where dependable ON/OFF Type control is required.

**Dimensions :**

Valve Model	Size		Flow Factor Kv m³/hr	A Screwed	B (Approx.)	C (Approx.)	D	E	F Flange	Weight (Approx)	
	MM	Inch								S/E	F/E
ISO -6	6	1/4	2.5	65	128	170	56	-	130	-	-
ISO -10	10	3/8	2.5	65	128	170	56	-	130	0.800	-
ISO -15	15	1/2	3.5	65	128	170	56	44.5	130	0.760	-
ISO -20	20	3/4	5.0	80	136	180	74	49.5	150	1.100	1.880
ISO -25	25	1	11.0	95	152	200	80	54	160	1.500	2.720
ISO -32	32	1 1/4	13.0	118	167	212	105	58.5	200	2.340	-
ISO -40	40	1 1/2	20.0	118	167	212	105	63.5	200	3.580	6.160
ISO -50	50	2	38.0	137	190	234	120	76.5	230	3.940	-
ISO -65	65	2 1/2	67.6	172	230	298	143	89	290	6.340	-
ISO -80	80	3	97.6	195	250	318	156	95	310	13.680	-
ISO -100	100	4	-	-	250	318	156	114	350	-	-
ISO -150	150	6	-	-	-	-	-	-	-	-	-

**ALL DIMENSIONS ARE IN MM**

# Pneumatic Diaphragm Control Valves for 220°C & 450°C Temperature

Model : ACHD / ACLD

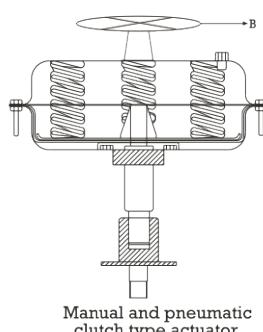
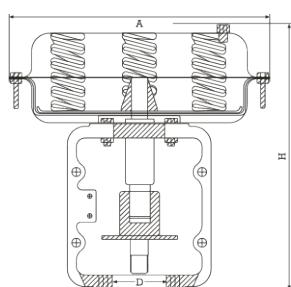
'TORQ' offers 2/2 & 3/2 way pneumatic diaphragm operated control valve for thermic fluid upto 450°C.

**Features :**

- ◆ Precise Regulating with High Flow Capacity
- ◆ Large type of trim Top Operating designs for various duty conditions
- ◆ Wide Range of actuators to meet different application
- ◆ In Line Repairable Design for easy maintenance
- ◆ Multy action type Actuator (Direct / Reverse acting)
- ◆ Tight closure even in extreme operating conditions

**SIZE RANGE : 1/2" TO 12"****Technical specification :**

Actuator	Diaphragm & Multy Spring type. Air to open / Air to close as a standard. (Piston actuators / Electrical actuators on request)
Bonnet	Standard for ('ACLD' Temperature up to 220°C) Extended with FINS for ('ACHD' Temperature up to 450°C)
Internals	S.S. 304 [316 (Hard facing when required) Other materials on request]
Gland Packings	Teflon / Grafoil
Trim Desing	Contoured parabolic / Pressure balanced
Sizes	1/2" to 12"
Characteristic	Linear / Equal percentage / ON - OFF (Quick opening)
End Connection	Flange end to end ANSI B16.5 CL 150 [300# / 600# available on request]
Pressure Ratings	ANSI B16.5 CL150/300/600
Leakage	ANSI B16.104 CL IV for metal to metal seating. (Class V & Class VI leak tightness with soft seating on request)



Manual and pneumatic clutch type actuator

**Pneumatic Diaphragm Actuator**

Type		Diaphragm area	Spring	Max stroke	Air pressure (Kg.)
DA - CHD-1	Direct	350	4~8	15~20	1.5
	Reverse				0
DA - CHD-2	Direct	350	4~8	25~30	1.5
	Reverse				0
DA - CHD-3	Direct	610	3~6	34~45	1.5
	Reverse				0
DA - CHD-4	Direct	1000	4~8	55~70	1.5
	Reverse				0
DA - CHD-5	Direct	1300	4~8	90~110	1.5
	Reverse				0

**Parameter Actuator**

Type	Size (mm)				Valve Size
	D	H	A	B	
DA-CLD - 01	60	305	288	-	DL15-DL25
DA-CLD - 02	60	325	288	-	DL32-DL50
DA-CLD - 03	80	440	360	-	DL65-DL100
DA-CLD - 04	95	545	470	-	DL125-DL200
DA-CLD - 05	100	745	560	-	DL250-DL300
Mo-DA-CLD - 02	60	-	288	250	DL15-DL25
Mo-DA-CLD - 03	80	-	288	250	DL32-DL50
Mo-DA-CLD - 04	95	-	360	350	DL65-DL100

## MOTORIZED LINEAR ACTUATOR ( 1-PHASE & 3-PHASE )



### Technical Data & Specifications

Model	Stroke Length mm	Operation Speed mm/sec	Rated Actuating force kgs.	Max Closing force kgs.	Switching frequency Operations / Hour		Motor Details					Degree of Protection	Weight kgs.
					Short time	Normal	Supply	Out Put Watt	Nominal Current mA (220V)	Class of Insulation	Amb. Temp °C		
ZR-5102-32	40	0.26	200	350	7000	1800	220/ 110 VAC 50/60 HZ 1PH	3.14	40.5	B	45	IP55	4.5
ZR-5102-33	40	0.52	200	300									
ZR-5102-34	60	0.52	200	300									
ZR-5102-35	40/60	2	75	100									
ZR-5102-61	60	0.45	600	900									
ZR-5102-76	60/75	0.8	600	750									10.5

### Accessories

- i) Standard      Travel limit switches ( 1 NO. + 1 NC ) --2 Nos., Hand wheel, Local position indicator
- ii) Optional     -- Auxilliary limit switches ( 1 NO. + 1NC ) -- 2 Nos.  
                  -- Feed back potentiometer -- 2 Nos. (Max)  
                  -- Valve positioner - field / panel mounted Input :- 4-20 mA / 0-10 V.D.C.  
                  Output :- Proportional  
                  -- Two wire transmitter - field / panel mounted Input :- From potentiometer  
                  in the actuator. Output :- 4-20 mA  
                  -- Remote position indicator with Power source -- Analogue/Digital  
                  -- Space heater,  
                  -- Linkages to operate dampers or butterfly valves.  
                  -- Special accessories on request.

## MOTORIZED QUARTER TURN VALVE ( SINGLE PHASE )



Actuator Data		Actuator Models						
		ZR-3	ZR-5	ZR-10	ZR-20	ZR-30	ZR-40	ZR-50
Rated Output Torque Kgm		3	5	10	20	30	40	50
Operating Speed Sec/90°		17	17	20	20	26	26	26
Switching Frequency								
Operations / Hour								
a) Short Time							1200	
b) Normal							600	
Weight Kg.		7.5	9	12	15.5	37	37	37
Degree of Protection		IP65/IP67						
Area of Operation		Safe						
<b>Motor Data</b>								
Type		Non-Blocking A. C. Motor						
Supply : Standard		220V AC 50Hz Single Phase						
Optional		110 V AC 50 Hz Single Phase						
		415 VAC 50 Hz Three Phase						
		24 V DC						
Output watts		90	125	175	250	290	300	320
Nominal Current Amp		0.5	0.55	0.9	1.2	1.3	1.4	1.5
Class Insulation		F						
Ambient Temperature		50°C						

### Accessories Standard

- Limit Switches (1NO +1NC) - 2 Nos.  
(Rating 10A - 250 VAC)
- Hand wheel
- Local position indicator
- Adjustable mechanical stoppers
- Space Heater



### Optional

- Auxillary limit switches - (1NO +1NC) - 4 NOs.
- Torque limit switches (1NO +1NC) - 2 NOs. (for QT10 onwards)
- Three Position switch for ON/OFF operation Field/Panel Mounted
- Feed back Potentiometer - output 100-235 ohms or 0-1000 ohms
- Two wire position transmitter 4-20mA Output field/panel mounted
- Positioner is available in field/panel mounted to accept 4-20mA/0-10 V DC control signal & Rx Output.
- IP 67 Protection ■ Remote position indicator-Digital
- Special accessories on request ■ Local control station ■ Integral Starter

## MOTORIZED QUARTER TURN VALVE ( THREE PHASE )

### Features of TORQ Actuators :

#### Standard Features

- Electric motor TEFC, 3ph, S-1 Duty
- Insulation class 'F'
- Travel Limits Switches - 2 NOs.(1 NO + 1 NC)
- Torque Limits Switches - 2 NOs. (1 NO + 1 NC)
- Continuous type local position indicator
- Handwheel with clutch mechanism
- Protection class IP 65 ■ Hammer-blow effect
- Output couplings viz A/B/C/D/E as per DIN 3210



TORQ offers various types & sizes of valves such as Butterfly, Ball, Sluice, Globe & Dampers with Electrical Actuators.

TORQ Actuators will be offered in "Ready for installation" conditions with backup services of installation & commissioning assistance.

TORQ can also offer the allied electrical & electronic accessories such as control panels, feedback & positioning devices required in close-loop system.



#### Optional Features

- Electric motor TESC, 3ph, S2 or S4 Duty
- Better class of insulation for motor
- Travel Limits Switches - 2 NO + 2 NC in place of 1 NO +1 NC - 2 NOs.
- Torque Limits Switches - 2 NO + 2 NC in place of 1 NO +1 NC - 2 NOs.
- Additional Travel limit switches (1 NO + 1 NC) - 4 NOs. (Extra) - or ( 2 NO + 2 NC ) - 2 NOs., (4 NO + 4 NC) - 2 NOs
- Feedback potentiometer
- Remote position indicators-Analogue/Digital/Bar graph
- Space heater
- Electromagnetic, Electronic brake for the motor
- Protection class IP67/IP68
- Various types of local & remote panels

**OTHER PRODUCTS**

## ACCESSORIES



## DESPATCHES





## TORQ VALVES PVT. LTD.

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Available At



19ZMAQ02304C



19ZMCK02339C