

GLOBE VALVES

Bolted Bonnet, Rising Stem and Disc, Outside Screwed & Yoke, API 623 Design

E300

CAT-E300-20R0



NPS
2-24

DN
50-600

Class
150- 2500

E3 SERIES GLOBE VALVES

API 623 & BS 1873

**Carbon Steel or
Stainless Steel**

Bolted Bonnet

**Outside Screwed &
Yoke**

**Rising Stem and
Disc**

**Disc for Throttling
and Open/Close**

**Soft or Metal to
Metal Seat Faces**

**SWG or RTJ Gasket
Between Body and
Bonnet**

**Different Types of
Stem Packing Upon
Request**

Features

Globe valves are designed for perfect fitness in throttling and regulating services. These valves perform a positive closure by means of the spherical-plug type disc hence any erosion don't occur on the seat faces caused by flowing fluid during throttling and closing. There is also no need for excessive thrust force to full closure. The valve stem is hardened and ground precisely, hence the service life of packing rings is highly increased.

Packing rings can easily be renewed through the back sealing feature when the valve is fully open. The valves resist well to shocks and vibrations too.

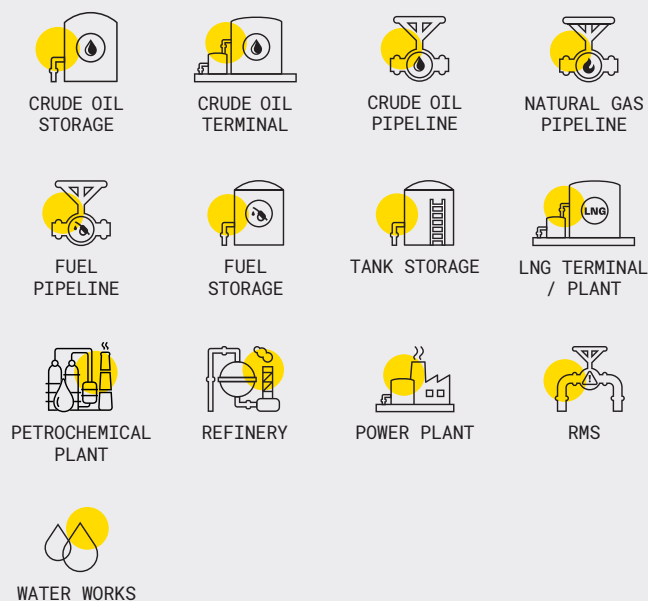
Globe Valves are produced with steel body and API Trim No. 8 as standard, ends being flanged to ASME B16.5 or Buttwelding to ASME B16.25 and Face to Face Dimensions complying with ASME B16.10 standard. Mating Flanges (WN), Fasteners (2H&B7) and Gaskets (SWG) are supplied upon request. Vastas gaskets for sealing of flanged connections are made of non-asbestos materials and are fireproof even for 150 class, spiral wounded 316SS & Graphite or RJ type for higher classes.

	STANDARDS
Design	BS 1873 / API 623
End Connection	ASME B16.5 or ASME B16.25
FTF&ETE	ASME B16.10
Test	API 598



Manuel Operated Globe Valves with Gearbox

Project Types



Applications

Globe valves are used widely especially for service purposes at all industrial plants, water, steam and oil lines. Not recommended for fluids carrying mud, solid particles and grains. The pressure/temperature ratings, shocks/vibrations and corrosion of the flowing fluid are to be considered during selection of valve.

Pressure Rating

Figure marks are indicated below for Vastas Globe Valves, according to pressure classes.

See page 7 for figure description.

Figure	Size	Class	PRESSURE		
			MPa	Bar	Psig
E310.13	2"-24"	150	1.9	19.6	285
E320.13	2"-24"	300	5.1	51.1	740
E330.13	2"-24"	600	10.2	102.1	1480
E340J.13	2"-12"	900	15.3	153.2	2220
E350J.13	2"-12"	1500	25.5	255.3	3705
E360J.13	2"-6"	2500	42.5	425.5	6170

For ASME B16.34 Group 1.1 Material, -29 +38°C

Coating

Vastas applies epoxy paint system for valves to be located above ground / on shore with RAL7037 Aluminium color as standard.

Special paint systems can be applied according to customer's request;

- for Offshore / corrosive atmosphere, ISO 12944 C5M certified paint system
- Heat Resistant paint system up to 538°C
- NORSOK 7B certified paint system for Submerged Valves
- PUR coating for valves to be used underground.



4" Globe Valve with Butt-Weld End

High Temperature

Valves made of special alloyed steel are offered for high temperatures between 425°C and 593°C.

Stellite™

CoCr-A faced seat faces are offered for high temperature valves upon request.

Stellite is a trademarked name of Kennametal Inc.

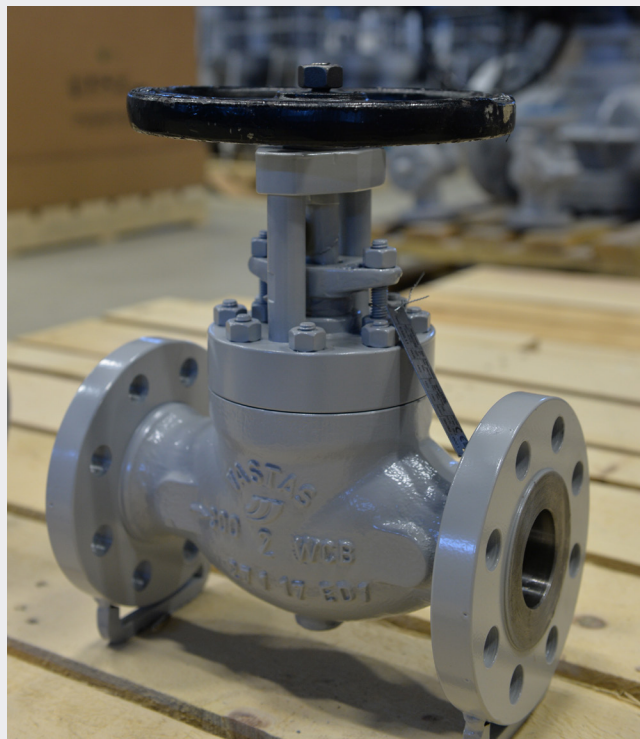
Important Notice

If you receive this catalog as attachment of Vastas offer, please note that, this catalog includes standard product with standard options. The special requirements will be indicated at the offer and the proforma invoice, together with other supporting documents.

Offered options are supported with additional technical documents.

Licence & Approvals

- Vastas Globe Valves are designed according to API 623, BS1873 and ASME B16.34 standards.
- Corrosion Resistance Test Cert. As per NACE 0175&0103.
- Committee Europe 2014/68/EU-CE 0408
- SIL Certificate IEC61508.



Manual Operated Globe Valves with Handwheel

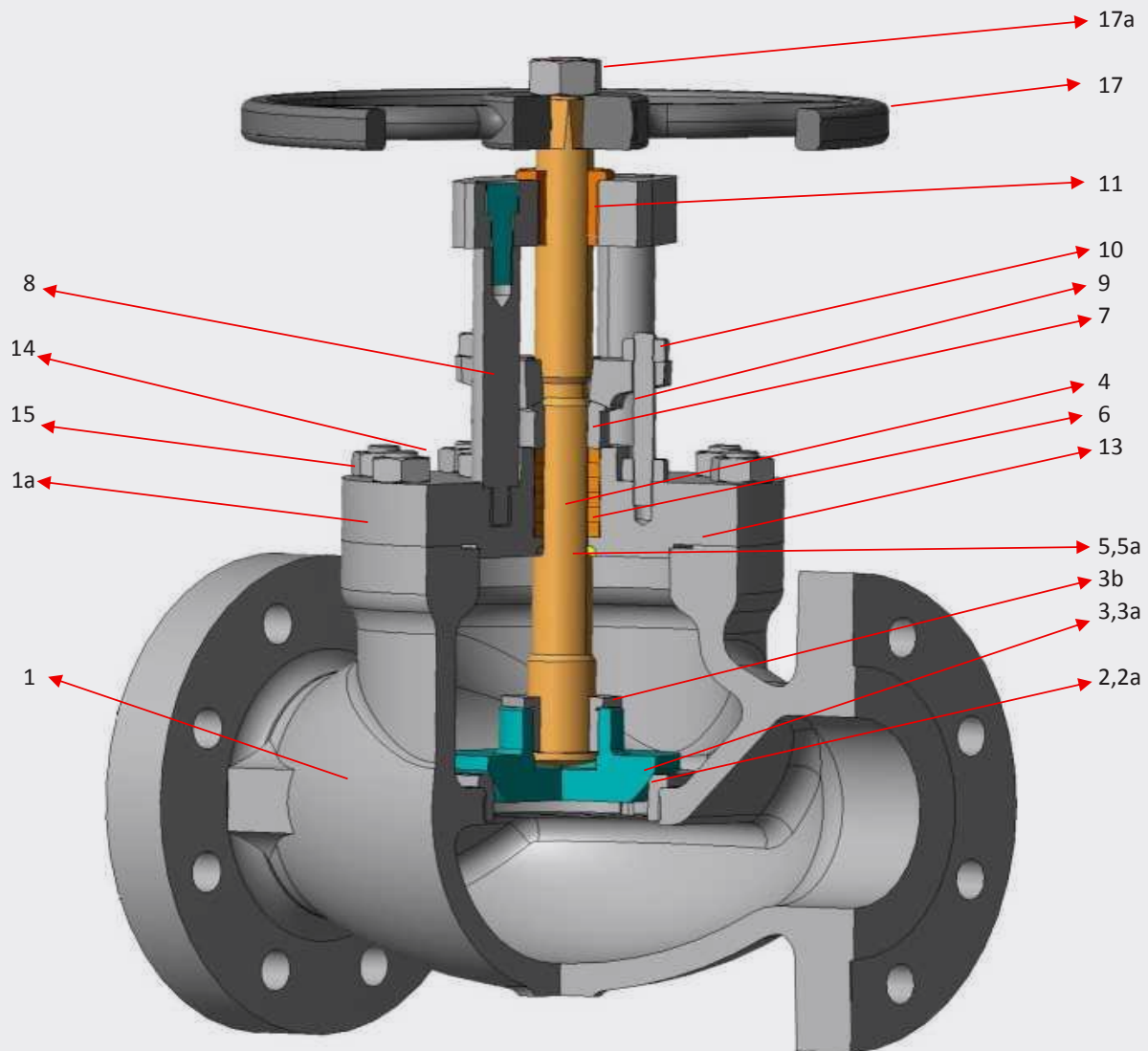
Certificates

CERTIFICATE NAME	INSTITUTION	CERTIFICATE NUMBER
ATEX-Certificate Conformity to Ex	Energy Petroleum Institute	IEP 17 EX 10013
ATEX-Internal Production Control Certificate	Energy Petroleum Institute	IEP 17 ATEX 0512X
NACE Certificate	TUV SUD Turkey	15-B-00828
SIL 2&3 Certificate	TUV Rheinland	968/V 1017.00/17
Fugitive Emission Type Test	TUV SUD Turkey	17-IS-0290-34-B/01
ISO 14001:2015	TUV Rheinland	01 104 031931
ISO 9001:2015	TUV Rheinland	01 100 032841
ISO 45001:2018	TUV Rheinland	01 113 030063
Certificate of Conformity to Turkish Standards	Turkish Standard Institution	001041-TSE-01/01

Vastas Figure Description

XXX E3X0 X. X X

Size (NPS) 002:2" 003:3" . . . 024:24"				
Valve Fig. E310:150 Class E320:300 Class E330:600 Class E340:900 Class E350:1500 Class E360:2500 Class				
End Type W: Butt-Weld End J: Ring Joint				
Body Material No: 1: WCB/LCB 2: CF8/CF3 3: CE3MN (5A) / CD3MWCuN (6A) 4: CF8M/CF3M/CF8C 5: C5 6: WC6 7: C12 9: WC9				
Trim Material No: 2:316 / 316 3⁽¹⁾ : 13Cr / HF* 4: 316 / HF 5: HF / HF 6: 316+HF / 316+HF 7: Alloy 20 / Alloy 20 - ASTM A351 8: C276 / C276 - ASTM A494 9: Monel	(1): Standard offer *HF: Hard facing is weld deposited Cobalt base alloy (STL) Note: For seating surfaces, coatings carried out using HVOF (High Velocity Oxygen Fuel) process, such as TCC or CCC is optional.			
	Materials of Construction Cast steel bolted bonnet valves described in this catalog are typically manufactured of carbon steel (WCB). When specified, the valves are available in the alloys shown above which are suitable for water, oil, gas and general services. Please contact factory or customer service for availability and material breakdowns.			



Part List For E310.13

Item	Part Name	Symbol	Material
1	Body	WCB	ASTM A216 Gr. WCB
1a	Bonnet	WCB	ASTM A216 Gr. WCB
2	Body Seat Ring	A515	ASTM A515
2a	Body Seat Face	STL	AWS A5.13 ER CoCr-A
3	Disc	13Cr	ASTM A276 T410 or T420
3a	Disc Seat Face	INT	INTEGRAL
3b	Disc Nut	13Cr	ASTM A276 T410 or T420
4	Stem	13Cr	ASTM A276 T410 or T420
5	Back Ring	INT	INTEGRAL
5a	Back Ring Face	13Cr	AWS ER430
6	Packing	GRF	GRAPHITE
7	Gland	13Cr	ASTM A276 T410 or T420
7e	Washer	ST	STEEL

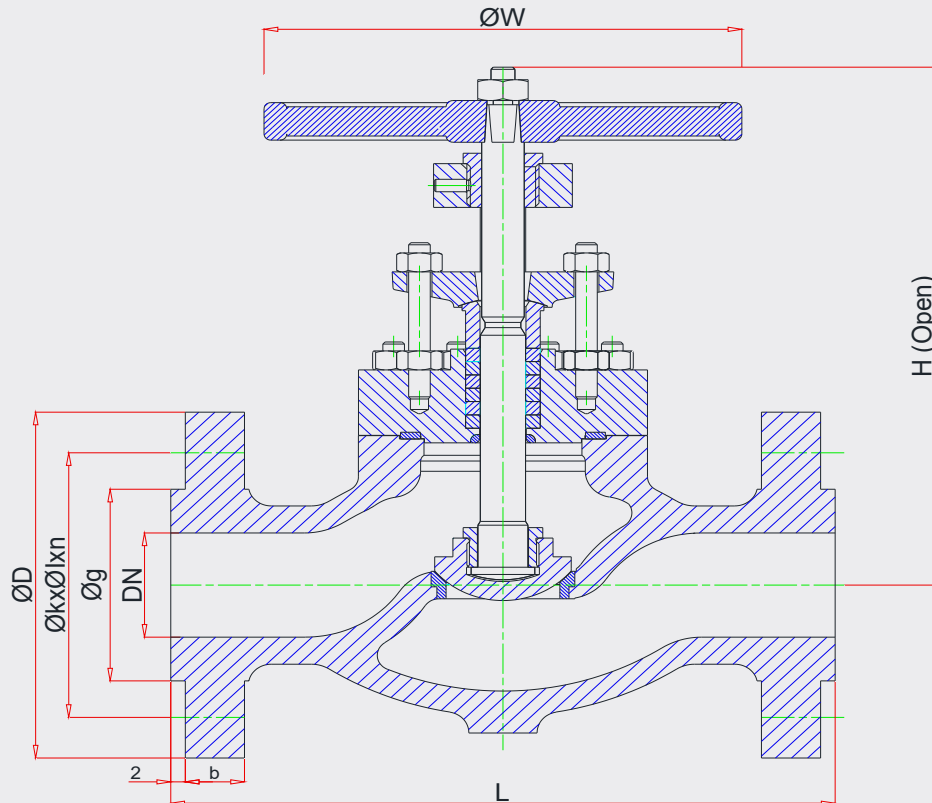
Item	Part Name	Symbol	Material
8	Gland Flange	ST	ASTM A515
9	Gland Bolt	CS	CARBON STEEL
10	Gland Nut	2H	ASTM A194 Gr. 2H
11	Stem Bushing	BZ	ASTM B148
12c	Set Screw	B	ASTM A307 Gr. B
13	Gasket	SWG	GRAPHITE+316
14	Stud Bolt	B7	ASTM A193 Gr. B7
15	Nut	2H	ASTM A194 Gr. 2H
17	Handwheel	DI	ASTM A536
17a	Wheel Nut	B	ASTM A307 Gr. B
18	Name Plate	304	AISI 304
19	Paint	EP	EPOXY
19a	End Cover	PVC	PLASTIC

Figure: E310

Class: 150

STANDARDS

Design	API 623
Face to Face	ASME B16.10
Flange	ASME B16.5



Test Pressure

PN	Class	Shell	Closure	Air
20	150	30 Bar	22 Bar	6 Bar

Working Pressure (for group 1.1 materials)

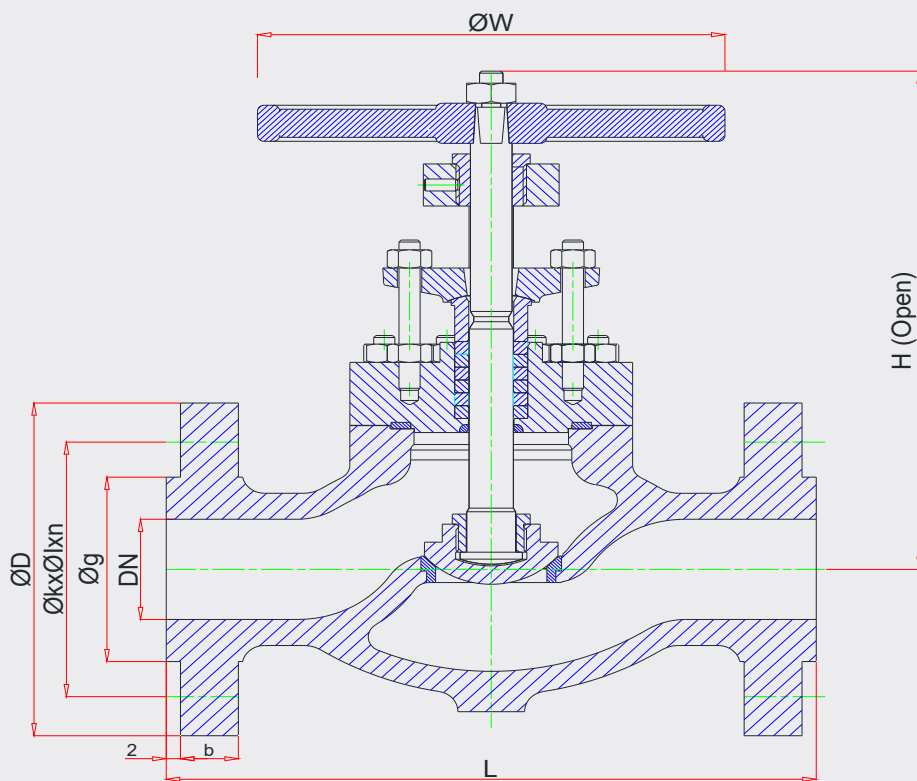
-29 +38°C	+425°C Max
19.6 Bar	5.5 Bar

Dimensions & Weight

NPS	ØID	Kv	Torque	Thrust	ØD	b	Øg	Øk	n	ØI	L	H	ØW	~ Wt
inch	mm	m ³ /h	Nm	kN	mm	mm	mm	mm	no	mm	mm	mm	mm	kg
2	42	30	21	10	150	14.3	92	121	4	19	203	350	210	19
3	69	75	42	17	190	17.5	127	152	4	19	241	425	265	37
4	90	150	60	25	230	22.3	157	190	8	19	292	435	310	50
6	135	360	134	44	280	23.9	216	241	8	22	406	530	360	96
8	182	680	220	72	345	27	270	299	8	22	495	640	410	174
10	224	1100	380	104	405	28.6	324	362	12	25	622	897	455	255
12	275	1650	556	152	485	30.2	381	432	12	25	698	930	605	380
14	303	2100	835	183	535	33.4	413	476	12	29	787	1250	605	471
16	349	2800	1243	240	595	35	470	540	16	29	914	1480	700	630
18	396	3800	1770	306	635	38.1	533	578	16	32	978	1120	900	1150
20	444	4500	2551	380	700	41.3	584	635	20	32	978	1288	900	1680
24	539	5500	3727	556	815	46.1	692	749	20	35	1295	1330	1000	2240

Figure: E320
Class: 300
STANDARDS

Design	API 623
Face to Face	ASME B16.10
Flange	ASME B16.5


Test Pressure

PN	Class	Shell	Closure	Air
50	300	77 Bar	57 Bar	6 Bar

Working Pressure (for group 1.1 materials)

-29 +38°C	+425°C Max
51.1 Bar	28.8 Bar

Dimensions & Weight

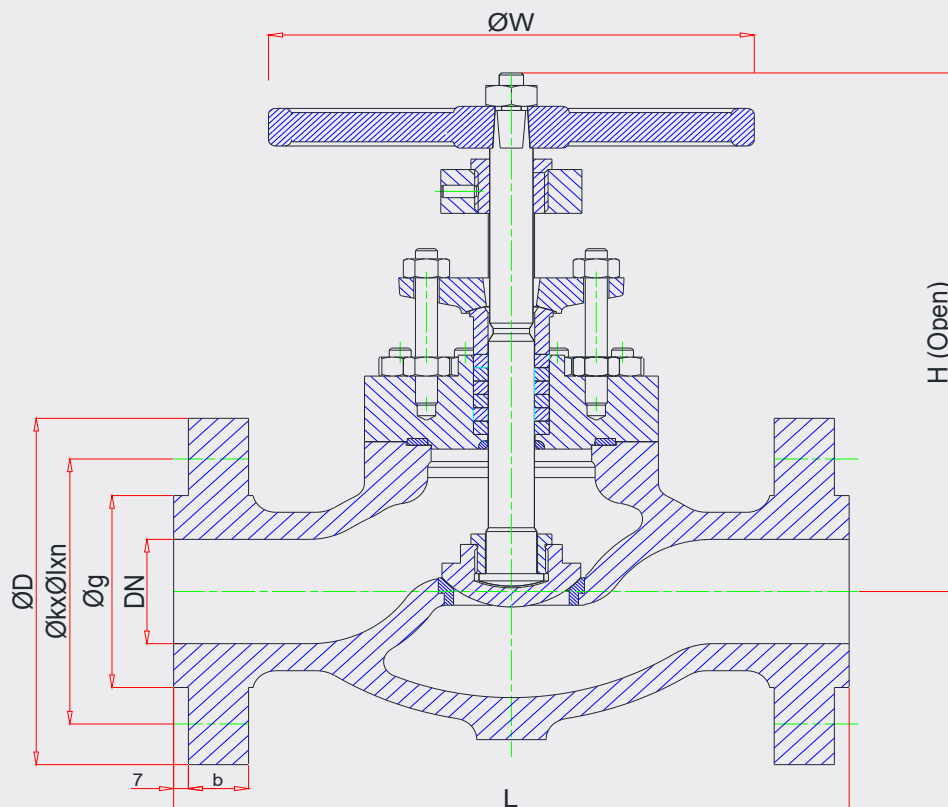
NPS	ØID	Kv	Torque	Thrust	ØD	b	Øg	Øk	n	ØI	L	H	W	~ Wt
inch	mm	m ³ /h	Nm	kN	mm	mm	mm	mm	no	mm	mm	mm	mm	kg
2	42	30	31	15	165	20.7	92	127	8	19	267	358	210	22
3	69	75	74	30	210	27	127	168	8	22	318	418	265	49
4	90	150	114	47	255	30.2	157	200	8	22	356	476	310	74
6	135	360	288	95	320	35	216	270	12	22	444	630	410	130
8	182	680	654	165	380	39.7	270	330	12	25	559	900	605	240
10	224	1100	1277	246	445	46.1	324	387	16	29	622	982	700	367
12	275	1650	2113	365	520	49.3	381	451	16	32	711	1070	900	800
14	303	2100	2950	440	585	52.4	413	514	20	32	838	1130	1000	1100
16	349	2800	3889	580	650	55.6	470	572	20	35	864	1310	1000	1400
18	396	3800	4229	730	710	58.8	533	629	24	35	978	1460	1000	1880
20	444	4500	6131	914	775	62	584	686	24	35	1016	1632	1000	2350
24	539	5500	9003	1343	915	68.3	692	813	24	41	1346	1820	1000	3800

Figure: E330

Class: 600

STANDARDS

Design	API 623
Face to Face	ASME B16.10
Flange	ASME B16.5



Test Pressure

PN	Class	Shell	Closure	Air
100	600	154 Bar	113 Bar	6 Bar

Working Pressure (for group 1.1 materials)

-29 +38°C	+425°C Max
102.1 Bar	57.5 Bar

Dimensions & Weight

NPS	ØID	Kv	Torque	Thrust	ØD	b	Øg	Øk	n	ØI	L	H	W	~ Wt
inch	mm	m ³ /h	Nm	kN	mm	mm	mm	mm	no	mm	mm	mm	mm	kg
2	42	30	50	24	165	26	92	127	8	19	292	490	230	26
3	69	75	130	53	210	32	127	168	8	22	356	585	310	65
4	90	150	257	84	275	38	157	216	8	25	432	650	360	106
6	135	360	829	181	355	48	216	292	12	29	559	820	730	278
8	182	680	1862	321	420	56	270	349	12	32	660	990	900	420
10	222	1100	3179	474	510	64	324	432	16	35	787	1295	900	711
12	250	1650	3986	595	560	67	381	489	20	35	838	1370	1000	865
14	294	2100	9628	1436	605	70	413	527	20	38	889	1453	1000	1900
16	*	2800	11262	1679	685	76	470	603	20	41	991	1619	1000	2350
18	*	3800	12428	2146	745	83	533	654	20	44	1092	1784	1000	3000
20	*	4500	18065	2694	815	89	584	724	24	44	1194	1950	1000	3600
24	*	5500	26589	3965	940	102	692	838	24	51	1397	2280	1000	5600

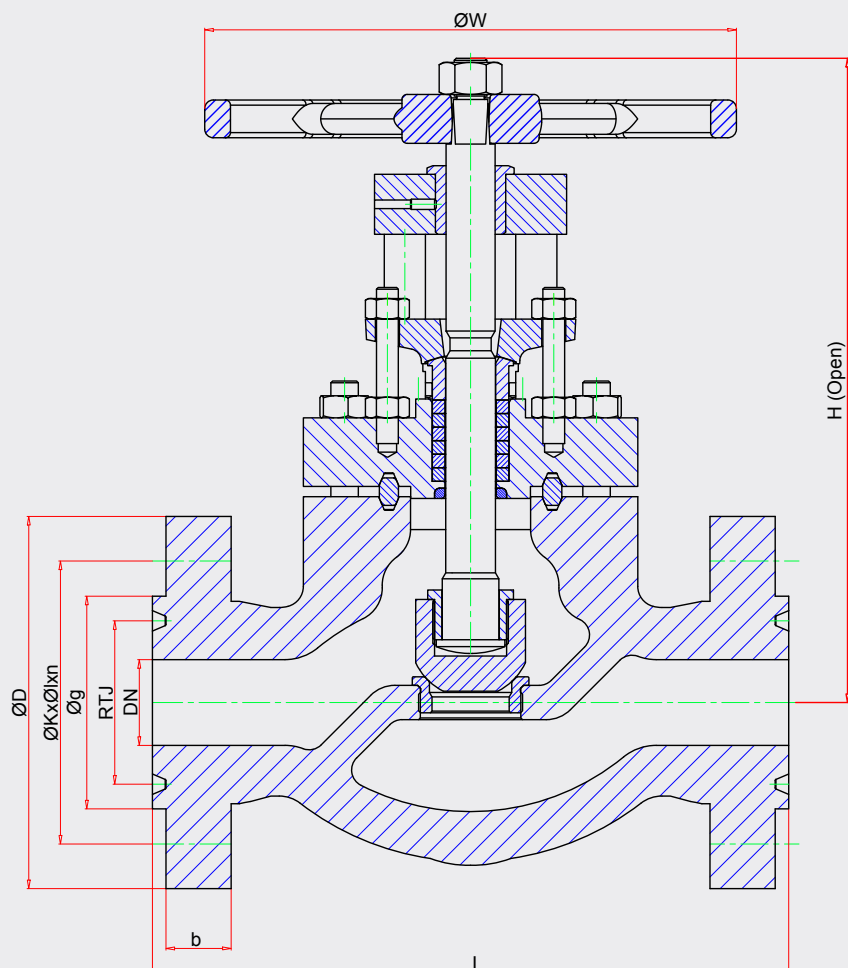
* Unlisted seat diameter shall be in agreement between the manufacturer and the purchaser

Figure: E340J
Class: 900

Ring Type Joint Flange End

STANDARDS

Design	API 623
Face to Face	ASME B16.10
Flange	ASME B16.5


Test Pressure

PN	Class	Shell	Closure	Air
160	900	230 Bar	169 Bar	6 Bar

Working Pressure (for group 1.1 materials)

-29 +38 °C Max	+425 °C Max
153.2 Bar	86.3 Bar

Dimensions & Weight

NPS	ØID	Kv	Torque	Thrust	ØD	b	Øg	Øk	n	ØI	L	H	W	RTJ	~ Wt
inch	mm	m ³ /h	Nm	kN	mm	mm	mm	mm	no	mm	mm	mm	mm	no	kg
2	42	30	80	33	215	38	124	165	8	25	368	550	265	R24	73
3	69	75	234	77	240	38	157	191	8	25	381	620	410	R31	102
4	90	150	496	125	290	45	181	235	8	32	457	730	605	R37	146
6	132	360	1326	256	380	56	241	318	12	32	610	800	700	R45	350
8	172	680	2858	426	470	64	308	394	12	38	737	920	1000	R49	670
10	215	1100	4607	657	545	70	362	470	16	38	838	1200	1000	R53	980
12	250	1650	6191	883	610	80	419	533	20	38	965	1600	1000	R57	1680

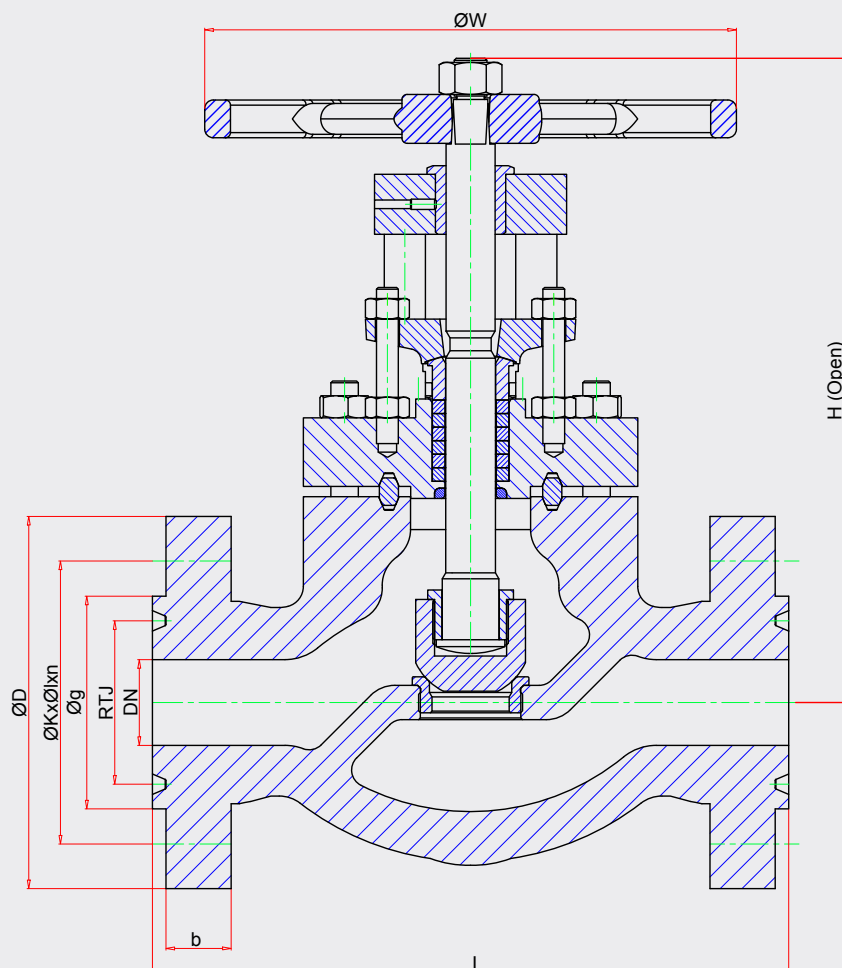
Figure: E350J

Class: 1500

Ring Type Joint Flange End

STANDARDS

Design	API 623
Face to Face	ASME B16.10
Flange	ASME B16.5



Test Pressure

PN	Class	Shell	Closure	Air
250	1500	383 Bar	281 Bar	6 Bar

Working Pressure (for group 1.1 materials)

-29 +38°C	+425°C Max
255.3 Bar	143.8 Bar

Dimensions & Weight

NPS	ØID	Kv	Torque	Thrust	ØD	b	Øg	Øk	n	ØI	L	H	W	RTJ	~ Wt
inch	mm	m ³ /h	Nm	kN	mm	mm	mm	mm	no	mm	mm	mm	mm	no	kg
2	42	30	122	50	215	38	124	165	8	25,5	371	560	310	R24	73
3	63	75	376	103	265	48	168	203	8	32	473	640	455	R35	180
4	83	150	788	172	310	54	194	241	8	35	549	750	730	R39	300
6	123	360	2454	366	395	83	248	318	12	38	711	850	900	R46	503
8	160	680	4084	609	485	92	318	394	12	44	841	1100	1000	R50	807
10	200	1100	7454	941	585	108	371	483	12	51	1000	1200	1000	R54	1320
12	238	1650	10484	1323	675	124	438	572	16	54	1146	1280	1000	R58	2260

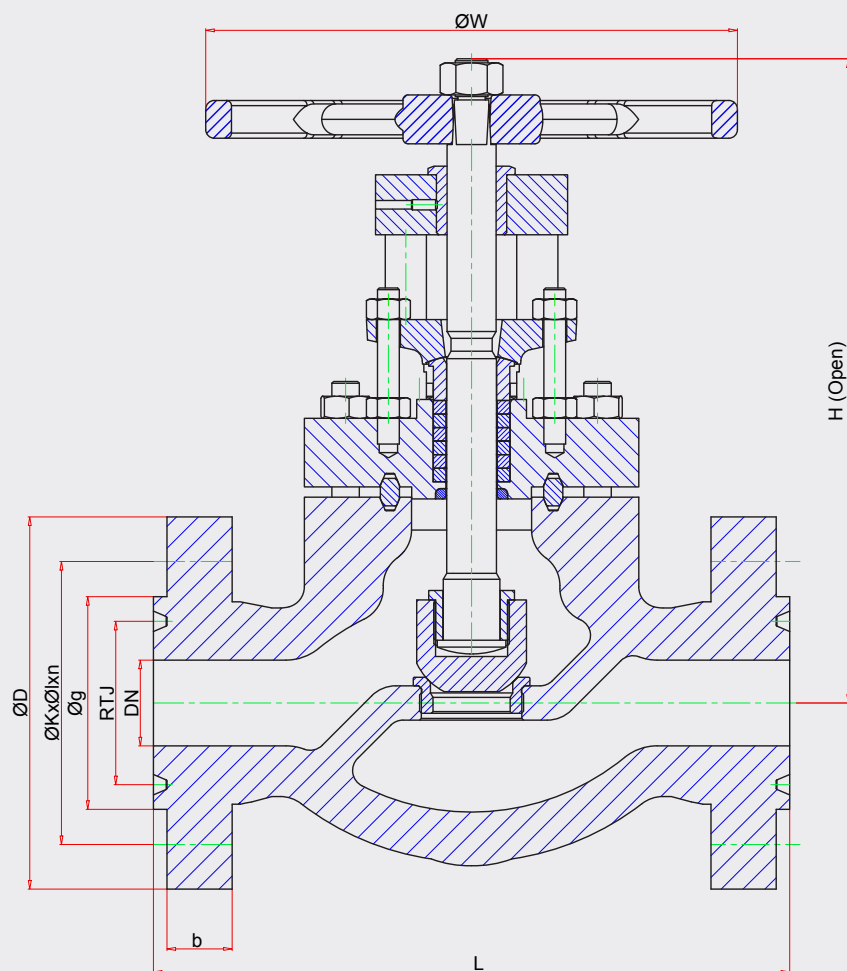
Figure: E360J

Class: 2500

Ring Type Joint Flange End

STANDARDS

Design	API 623
Face to Face	ASME B16.10
Flange	ASME B16.5



Test Pressure

PN	Class	Shell	Closure	Air
420	2500	639 Bar	469 Bar	6 Bar

Working Pressure (for group 1.1 materials)

-29 +38°C	+425°C Max
425.5 Bar	239.7 Bar

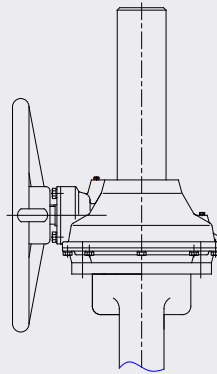
Dimensions & Weight

NPS	ØID	Kv	Torque	Thrust	ØD	b	Øg	Øk	n	ØI	L	H	W	RTJ	~ Wt
inch	mm	m³/h	Nm	kN	mm	mm	mm	mm	no	mm	mm	mm	mm	no	kg
2	38	30	249	68	235	51	133	171	8	29	454	680	455	R26	150
3	57	75	507	139	305	67	168	229	8	35	584	768	605	R32	300
4	73	150	1006	220	355	77	203	273	8	41	683	900	730	R38	500
6	111	360	3318	495	485	108	279	368	8	54	927	1020	1000	R47	700

Optional Requirements

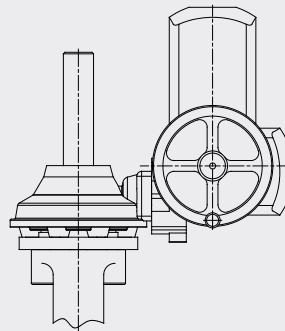
Operation options are as follows.

G: Gearbox should be preferred when torque values are beyond 150 Nm for the differential pressure indicated on tables. Reduction devices are added when available gear box is not sufficient.

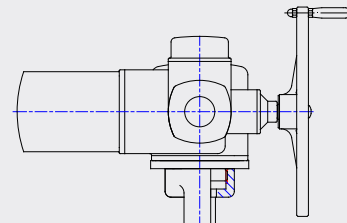


G (Gearbox)

GE/E: Electric actuators are recommended for quick & easy operation of valves, together with remote control circuits when required.

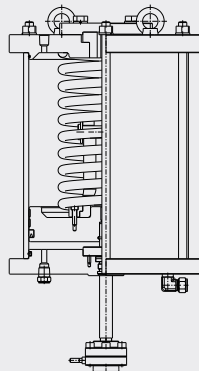


GE (Electric Actuator with Gearbox)

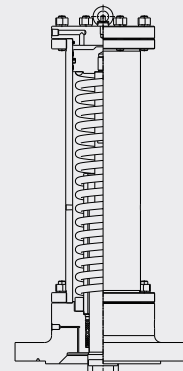


E (Electric Actuator)

P/H: Pneumatic or hydraulic actuators are equipped if pressurised air or hydraulic power is available.



P (Pneumatic Linear Spring Return Actuator)



H (Hydraulic Linear Spring Return Actuator)

Other Globe Valve Types

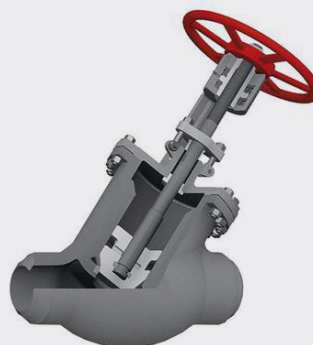
Globe-Check Valves (E30B): They have all the features of globe valves and additionally they prevent back flow when needed in the system, so eliminating the usage of an extra check valve. They are called as controllable check valves for the above reason. The valve disc shall be center guided at both ends with an integral shaft and shall be spring loaded for silent operation. These valves can be produced between 2-24 inch and up to class 600.



Angle-Globe Valves: These are most ideal and economical solution for application at the corners. Other features are same as that of globe valves. These valves can be produced between ½-12 inch and up to class 600.



Y Body Globe Valves (E30Y): Seat and stem are angled at approximately 45°, which gives a straighter flow path at full opening and offer the least resistance to flow. They can be cracked open for long periods without severe erosion. They are extensively used for throttling during seasonal or start up operations. These valves can be produced between 2-12 inch and up to class 600.



Globe Type Control Valves (E30C): The small size types are with conic and spheric disc. Big size and high pressure series are manufactured as balance type. It is diversified as Diaphragm, Hydraulic and Pneumatic and it is used as control valve with these applications. This type Globe Valves are used for regulating and throttling at various pressures or flow rates and they can provide pressure and flow control as it can operate in semi-open positions. It can be used in Natural Gas and Crude Oil Pipelines, Compressor and Metering Stations, Regulating and Metering Stations, Pumping and Filling Stations.





REFERENCE PROJECTS, E300



BP Sangachal Terminal	BP	Fuel Oil Storage	Azerbaijan	3"	2010
Kandym - Khauzak - Shady Natural Gas Production Complex	Lukoil	CO-Refining	Uzbekistan	4" - 6"	2012
Khouribga-Jorf Lasfar Phosphate Slurry Pipeline System	Groupe OCP S.A.	Slurry Transportation Line	Morocco	8"	2012
EPC Central Processing Facilities Phase - 1, Badra Oil Field Development	Gazprom	CO-Refining	Iraq	4" - 6"	2013
Gardabani Combined Cycle Power Plant	GOGC (Georgian Oil and Gas Company Corporation)	Power Plant	Georgia	2" - 4"	2014
Pamukoren 3-4-5 Geothermal Power Plant	Exergy Spa	Geothermal Water	Turkey	1" - 6"	2014
Pengadaan MR/S Untuk Lokasi Ngoro dan Pier	Pratiwi Putri Sulung	NG-Storage	Indonesia	2"	2015
Tupras Izmit Refinery	Tupras	CO-Refining	Turkey	1 1/2", 3/4"	2015

E300 REFERENCE, CLIENT LIST

- ADCO, Abu Dhabi
- Ak-Kim Kimya, Turkey
- Aksa, Turkey
- Axion Energy, Argentina
- Aygaz, Turkey
- Azersun, Azerbaijan
- Botas, Turkey
- BP

- BP, Azerbaijan
- Bulgartransgaz, Bulgaria
- Calik Enerji, Turkey
- Celikler Enerji, Turkey
- Erdemir, Turkey
- Exergy Spa
- Exergy Spa, Turkey
- Gazprom

- Gazprom, Iraq
- GOGC, Georgia
- Groupe OCP S.A., Morocco
- IGA, Turkey
- Izgaz, Turkey
- Izmir Demir Celik San. A.S., Turkey
- Jordan Industrial Ports Company, Jordan



Ceanu Mare Natural Gas Pipeline	Transgaz	NG-Transportation	Romania	2" - 6"	2016
Rehabilitation of Natural Gas Pipeline Projects	Bulgartransgaz	NG-Transportation	Bulgaria	2" - 12"	2016
Supply of Crude Oil from La Plata Region to New Terminal Project	YPF S.A.	CO-Transportation	Argentina	8" - 14"	2017
Trans Anatolian Natural Gas Pipeline (TANAP), Edirne, Eskisehir and Ardahan Compressor Stations Project	Tanap Project Company	NG-Measure & Compression	Turkey	2" - 6"	2017
Construction of Flowlines & Associated Works at SEK	Kuwait Oil Company (KOC)	D Distribution	Kuwait	6"	2018
IGA Airport	IGA	PL Pipeline	Turkey	4"	2018
Star Refinery	Socar	R Refinery	Turkey	2" - 6"	2019

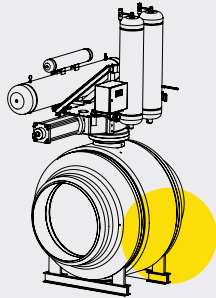
- Kar Group, Iraq
- KOC, Kuwait
- Lukoil
- Lukoil, Uzbekistan
- Meci S.A.S., France
- Petrom, Romania
- PT Perusahaan Gas Negara, Indonesia
- PT. Pratiwi Putri Sulung, Indonesia

- Sasa Polyester San. A.S., Turkey
- Socar, Turkey
- Socar Star Refinery, Turkey
- Steg, Tunisia
- TANAP Project Company, Turkey
- Toros Agri-Industry and Trade Co., Turkey
- Turkish Petroleum, Turkey

- Transgaz, Romania
- Tumad Mining Industry and Trade Co., Turkey
- Tupras, Turkey
- Unienergy, Afghanistan
- YPF S.A., Argentina

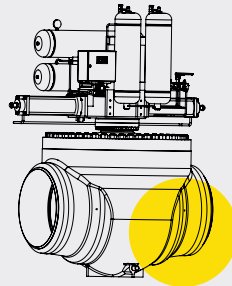
PRODUCT RANGE

Main Product Range are Ball Valves, Gate Valves, Check Valves, Globe Valves, Plug Valves, Hydraulic Actuators & Pneumatic Actuators.



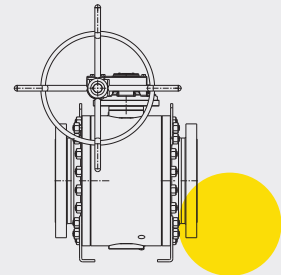
FULL WELDED BALL VALVES

API 6D monogrammed
Safety Integrity Level
(SIL) 2 & 3, ATEX, PED



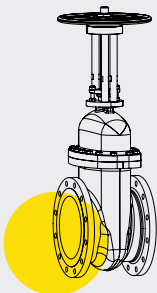
TOP ENTRY BALL VALVE

API 6D monogrammed
Safety Integrity Level (SIL)
2 & 3, ATEX, PED



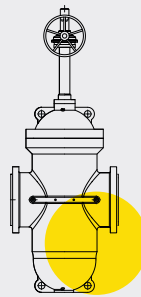
SPLIT BODY BALL VALVES

API 6D monogrammed
Safety Integrity Level (SIL)
2 & 3, ATEX, PED



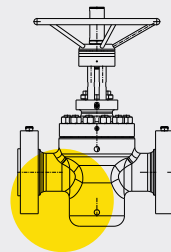
WEDGE GATE VALVES

API 600 monogrammed
Safety Integrity Level (SIL) 2 & 3,
ATEX, PED



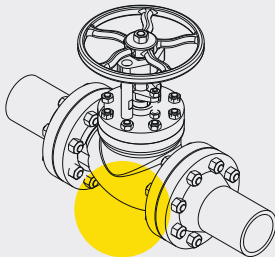
CONDUIT GATE VALVES

API 6D monogrammed
Safety Integrity Level (SIL) 2 & 3,
ATEX, PED



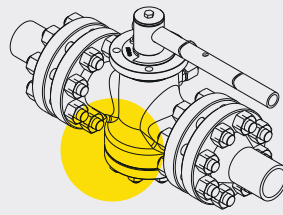
API 6A GATE VALVES

API 6A monogrammed
Safety Integrity Level (SIL)
2 & 3, ATEX, PED



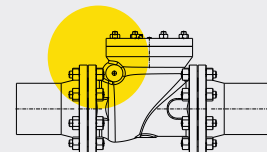
GLOBE VALVES

BS 1873 / API 623
Safety Integrity Level (SIL)
2 & 3, ATEX, PED



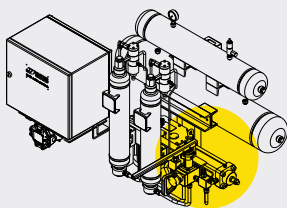
PLUG VALVES

API 6D monogrammed
ATEX, PED



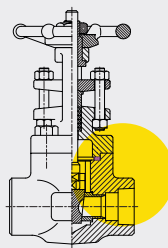
CHECK VALVES

API 6D monogrammed
ATEX, PED



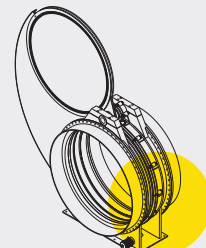
HYDRAULIC & PNEUMATIC ACTUATORS

ASME U-Stamp, Safety Integrity
Level (SIL) 2 & 3, ATEX, PED



COMPACT FORGED VALVES

API 6D / API 602 / API 608/ BS 5352
/ISO 17292
Safety Integrity Level (SIL)
2 & 3, (E604 & E60T)



TAILOR MADE

As a designing and manufacturing
company we are not limited with the
product range, we offer tailor made
valve and actuator solutions as well.



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