CAMTECH MANUFACTURING FZCO

Empowering Global Flow Control

API 6A VALVES

CAMTECH

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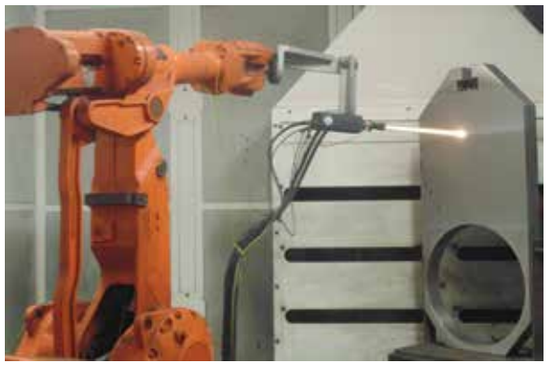


CAMTECH MANUFACTURING FZCO is the first and only API accredited valve manufacturing company among UAE, Middle East and GCC, engaged in this business since 1999 for manufacturing mainly Ball Valves, Gate, Globe, Check valves, Butterfly valves, Plug valves, Pig valves & Choke valves in metallurgy such as carbon steel, Stainless steel, Duplex and Super duplex steel, for size range from ½" to 56" and class rating from 150 to 2500.

Our state of the art manufacturing facility based in Jebel Ali Free Zone (UAE) is spread over an area of 260,000 Sq.Ft, is fully equipped with modern six axis flexible machining center supported by standalone CNC and associated sub-systems fully equipped to manufacture and supply complete range of valves for Pipelines, Oil and Gas sector, petrochemical, Refineries, Pharmaceutical, Power, Construction, Water Industries and other process industries.

Camtech Manufacturing FZCO is API (6D, 6A, 600 & Q1)accredited and an ISO 9001, ISO 14001, ISO 45001 Certified company with CE PED 2014/68/EU, ATEX 2014/34/EU and SIL Certification for all products. All our valves are designed, engineered and manufactured in strict conformance to API, ASME , ASTM, ANSI, BS, EN, DIN and other recognized international standards where ever applicable. Our continuous and stringent quality consistency is achieved through rigorous quality control processes and latest testing equipment for Fugitive Emission test, Fire safe test, Positive material identification, Cryogenic test, Hydro test, Pneumatic test, High pressure gas test.

Over the recent years there is a dramatic increase in facilities handling H2S bearing hydrocarbons. Hence parameters like Hydrogen sulfide concentration, Total system pressure, application temperature, existence of elemental sulfur and chloride content have a bearing on appropriate material selection in this severe environment. Hence all CAMTECH valves are manufactured in strict compliance with NACE MR0175/ISO 15156 to meet customer requirement.

Our central geographical location along with the long term association with major forge masters and foundries locally as well as overseas and with qualified and experienced staff , we are proud to say that our commitment are always achieved on time and every time.

CAMTECH MANUFACTURING FZCO

Camtech API 6A valves provide highest level of quality and value to oil and gas application. These valves have optimized flow path and proper selection of trim style and material for longer life, proper performance and function.

Camtech valves can be used in drilling and production applications with the security and reliability of metal to metal sealing in a wide range of working pressure. All these valves are available in all popular bore sizes and pressure rating from 2000 psi to 15,000 PSI. these valves are offered in all API temperature classes and product specification levels PSL 1 through 4.

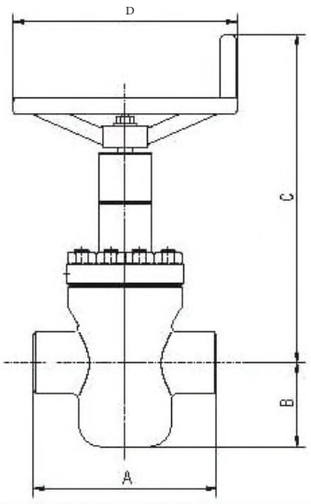
Design & Manufacturing Std	API 6A, ASME VIII, API 6FA
Face to Face Std	API 6A
Size Range	2 1/16" to 4 1/16"
Pressure Class	API 2000, 3000, 5000,10000 &15000
Product specification level	PSL 1, 2, 3, 3G, 4
End connection	Flanged, Butt-weld , Socket weld, Hub Connector.

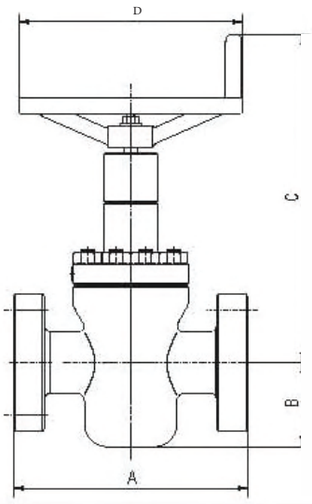
API 6A TEMPERATURE RATING

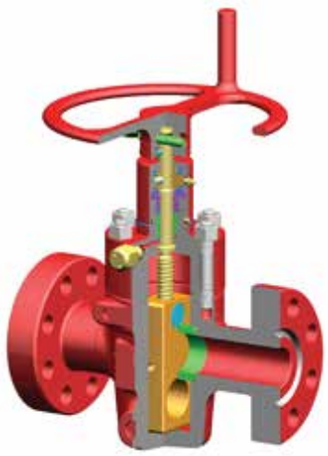
	-100	-50	0	50	100	150	200	250	300	350
K	-75						180			
L		-50					180			
P			-20				180			
R					ROOM TEMPERATURE					
S			0			150				
T			0				180			
U			0					250		
X			0							350

STANDARD VALVE TRIM MATERIALS					
API 6A Material Classification	Body & Bonnet Material	Stem Material / Coating	Gate Material / Coating	Seat Material / Coating	Coke Trim / Bean
AA – General Service	Low alloy steel	AISI 41XX nitrided	AISI 41XX nitrided	AISI 41XX nitrided	Stainless Steel & Tungsten carbide
BB – General Service	Low alloy steel	AISI 410 SS nitrided	AISI 410 SS chrome plated	Stellited	Stainless Steel & Tungsten carbide
CC – General Service	AISI 410 SS	AISI 410 SS nitrided	AISI 410 SS chrome plated	Stellited	Stainless Steel & Tungsten carbide
DD – Sour Service *	Low Alloy Steel	AISI 41XX nickel plated	AISI 41XX hard faced	Stellited	Stainless Steel & Tungsten carbide
EE – Sour Service *	Low Alloy Steel	AISI 410 SS nitrided	AISI 410 SS hard faced	Stellited	Stainless Steel & Tungsten carbide
FF – Sour Service *	AISI 410 SS	AISI 410 SS nitrided	AISI 410 SS hard faced	Stellited	Stainless Steel & Tungsten carbide
HH – Sour Service *	Low alloy steel clad with alloy 625 or solid alloy 718	Alloy 718	Alloy 718 hard faced	Stellited	Corrosion resistant alloy & Tungsten carbide

API 6A GATE VALVE







DESIGN FEATURES:

- The body and trim materials are available to fit operating conditions. Refer to the trim chart.
- Full open through conduit construction to eliminate turbulence and pressure drop.
- The gate and seat assembly is easily and quickly replaceable without special tools.
- The gate construction helps prevent line sediment from entering the body cavity and also prevents pressure locks when the upstream pressure is reduced to zero.
- Bi-directional sealing
- Non-Rising stem.
- Gate is guided smoothly with guides.
- The shoulder on the stem can be seated against the bonnet flange to seal off the stuffing box. permitting the replacement of the stem packing while the valve is under pressure.
- The stem pin protects the stem and other internal parts from failure by shearing if a high overload torque is accidentally applied to the handwheel.
- The two thrust bearings of high capacity absorbs the opening or closing loads of the gate reducing the turning effort to a minimum.
- The grease injection port permits lubrication of the gate and seat assembly and is used to vent trapped body pressure after stem back seating.
- The threaded packing retainer allows the replacement of the bearing or the stem pin while the valve is under pressure by holding the stem packing inside the stuffing box.
- Expanding gate also available on request.

API 6A GATE VALVE

2000 PSI WORKING PRESSURE - FLANGED END							
SIZE	BORE	A	B	C	D	N	Wt (Kg)
2-1/16	52.4	295	135	515	250	13.0	50
2-9/16	65.0	333	165	530	250	15.5	65
3-1/8	80.0	359	195	585	350	20.0	90
4-1/16	103.2	435	235	665	350	24.5	170

3000 PSI WORKING PRESSURE - FLANGED END							
SIZE	BORE	A	B	C	D	N	Wt (Kg)
2-1/16	52.4	371	135	515	350	13.0	80
2-9/16	65.0	422	165	530	350	15.5	105
3-1/8	80.0	435	195	585	350	20.0	120
4-1/16	103.2	511	235	665	450	24.5	215

5000 PSI WORKING PRESSURE - FLANGED END							
SIZE	BORE	A	B	C	D	N	Wt (Kg)
2-1/16	52.4	371	135	515	350	13.0	80
2-9/16	65.0	422	165	530	350	15.5	105
3-1/8	80.0	473	205	585	350	20.0	140
4-1/16	103.2	549	255	680	450	24.5	260

10,000 PSI WORKING PRESSURE - FLANGED END							
SIZE	BORE	A	B	C	D	N	Wt (Kg)
2-1/16	52.4	521	350	480	400	12.0	220
2-9/16	65.0	565	425	530	400	15.0	260
3-1/16	78.0	619	530	710	450	18.0	380
4-1/16	103.2	670	660	920	450	23.0	490

15,000 PSI WORKING PRESSURE - FLANGED END							
SIZE	BORE	A	B	C	D	N	Wt (Kg)
2-1/16	52.4	483	360	560	480	12.0	260
2-9/16	65.0	533	440	580	550	15.0	320
3-1/16	78.0	598	560	760	600	18.0	430
4-1/16	103.2	737	700	940	650	23.0	650

2000 PSI WORKING PRESSURE - THREADED END							
SIZE	BORE	A	B	C	D	N	Wt (Kg)
2-1/16	52.4	235	135	515	250	13.0	40
2-9/16	65.0	261	165	530	250	15.5	55
3-1/8	80.0	290	195	585	350	20.0	70
4-1/16	103.2	330	235	665	350	24.5	130

3000 PSI & 5000 PSI WORKING PRESSURE - THREADED END							
SIZE	BORE	A	B	C	D	N	Wt (Kg)
2-1/16	52.40	245	135	515	350	13.0	50
2-9/16	65.00	261	165	530	350	15.5	70
3-1/8	80.00	290	195	585	350	20.0	100
4-1/16	103.20	330	250	665	450	24.5	175

■ All dimension are in mm ■ 10,000 psi valve shall be with rising stem design with lower balancing stem. ■ Expanding style Gate also available on request. ■ N-Number of returns to open the valve.

API 6A CHOKE VALVE

Camtech manufacture both Positive and adjustable choke valves in Pressure rating up to 15,000 PSI working pressure. Each choke can be interchanged and configured in to positive choke, adjustable choke, and actuated choke.

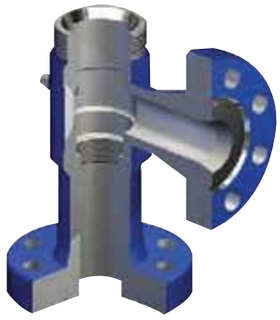
Depending upon the requirement in the site, well conditions, life, and these chokes can be converted in to different types as required. The majority of the components are interchangeable, which makes it easy for manufacturing and maintenance.

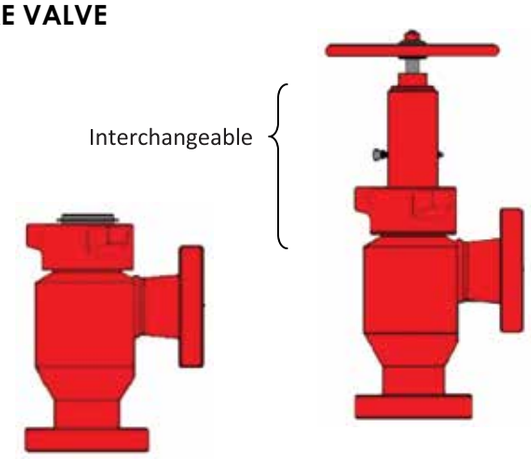
POSITIVE BEANS **NEEDLE AND SEA** **CAGE TYPE**

HAMMER LUG BONNET

BODY CONFIGURATION WITH INLET AND OUTLET OPTIONS

- FLANGED
- THREADED
- BUTT-WELD
- HUB





POSITIVE CHOKE ADJUSTABLE CHOKE

These chokes are available in different configurations as below,

- Positive Bean configuration
- Needle and Seat configuration
- Cage type configuration

Positive Bean configuration

It is the most inexpensive and simplest among all chokes. It is simpler in maintenance at site with interchangeable features,. It is rigid, heavy duty and maintenance free construction.

Needle and Seat configuration

These are meant for variable flow. It has externally controlled indicator showing orifice size in the increment of 1/16th inch. These are suitable for low to medium pressure drops, less severe service and applications that do not require positive shutoff.

Cage type configuration

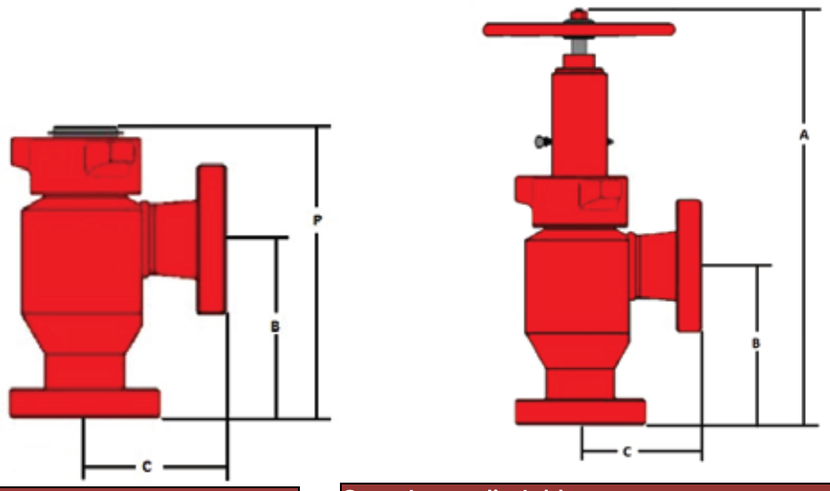
These are meant for highest seal integrity with positive shutoff. These are most suited for service that include large pressure drop, cavitations and abrasive service. Cage type construction is again sub classified in to two types depending upon the severity and life of the choke.

External / Closed cage configuration.
Designed for severe service, High pressure, multi-phase flow and erosive service.

Internal cage configuration.
Designed for medium service, medium pressure, and High flow capacity and mild erosive fluids.

This high performance Cage trim design offers advantages to noise reduction, reduced cavitations in liquid service, reduced icing in gas service, extended service in abrasive environments, and positive shut-off.

API 6A CHOKE VALVE



Cage type adjustable choke				Orifice – 1”
SIZE	CWP	A	B	C
2-1/16”	5,000	610	203	175
2-1/16”	10,000	625	225	195
2-9/16”	5,000	535	210	175
2-9/16”	10,000	640	235	210
3-1/16”	10,000	660	260	190
3-1/8”	3,000	635	230	200
3-1/8”	5,000	645	245	250

Cage type adjustable choke				Orifice – 1.5”
SIZE	CWP	A	B	C
2-1/16”	5,000	610	203	175
2-1/16”	10,000	625	225	195
2-9/16”	5,000	650	255	205
2-9/16”	10,000	650	255	205
3-1/16”	10,000	680	280	230
3-1/8”	3,000	650	260	205
3-1/8”	5,000	650	260	205
4-1/16”	5,000	685	295	245

Cage type adjustable choke				Orifice – 2”
SIZE	CWP	A	B	C
2-9/16”	5,000	830	290	225
2-9/16”	10,000	840	300	265
3-1/16”	10,000	840	300	265
3-1/8”	5,000	830	290	225
4-1/16”	5,000	865	320	260
4-1/16”	10,000	830	290	260

Cage type adjustable choke				Orifice – 3”
SIZE	CWP	A	B	C
3-1/16”	10,000	925	295	255
3-1/8”	3,000	920	290	250
3-1/8”	5,000	920	290	250
4-1/16”	3,000	920	290	250
4-1/16”	5,000	920	290	250
4-1/16”	10,000	925	295	255

Needle Type & Positive Choke					Orifice – 1”
SIZE	CWP	A	P	B	C
2-1/16”	5,000	545	350	203	175
2-1/16”	10,000	565	370	235	195
2-9/16”	5,000	550	355	210	180
2-9/16”	10,000	575	380	240	210
3-1/16”	10,000	595	410	260	190
3-1/8”	3,000	575	370	230	200
3-1/8”	5,000	595	380	245	250

Needle Type & Positive Choke					Orifice – 2”
SIZE	CWP	A	P	B	C
2-9/16”	5,000	765	465	300	225
2-9/16”	10,000	780	445	300	265
3-1/16”	10,000	780	445	300	265
3-1/8”	5,000	765	465	300	225
4-1/16”	5,000	795	495	320	260
4-1/16”	10,000	765	470	295	255

Needle Type & Positive Choke					Orifice – 3”
SIZE	CWP	A	P	B	C
3-1/16”	10,000	880	610	295	255
3-1/8”	3,000	875	595	290	250
3-1/8”	5,000	875	595	290	250
4-1/16”	3,000	875	595	290	250
4-1/16”	5,000	875	595	290	250
4-1/16”	10,000	880	610	295	255

Note :

- All dimensions are in mm.
- 4”orifices are available on request.
- Bonnet seal available with two options, O-ring seal & metal seal.
- ANSI class 600 – 2500 also available.
- All Needle type and Cage type choke can be provided with actuators on request.

Camtech reserves the right to change the content of this information without notice.

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