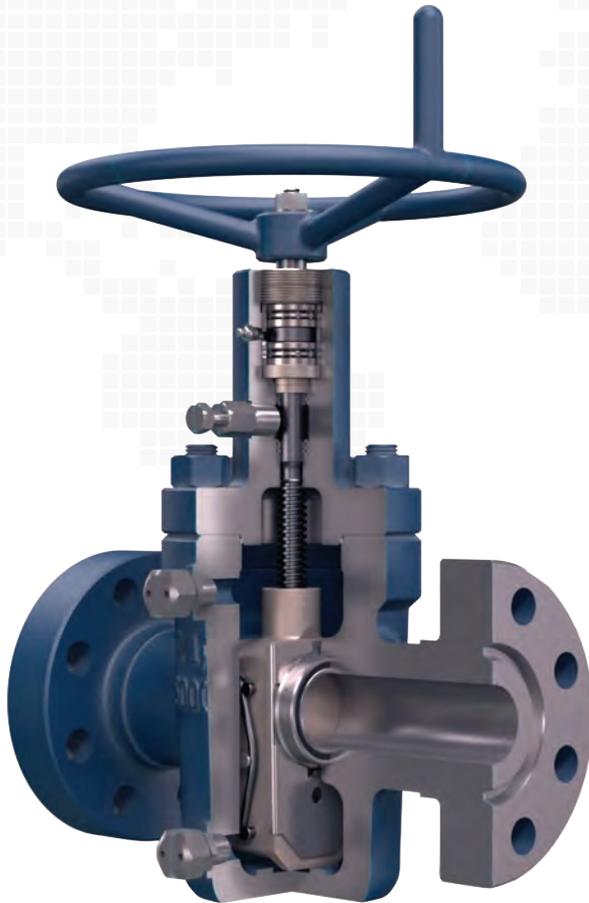


MODEL CX

Cast Body Handwheel Operated Expanding Gate Valves



Cast Body Gate Valves



INTRO

Omni Model CX cast-body expanding gate valves are designed for oil and natural gas wellhead or other critical service applications with operating pressures from 2,000 to 5,000 psi.

All Model CX expanding gate valves are API 6A 20th Edition monogrammed equipment and are available in bore sizes ranging from 2 $\frac{1}{16}$ " through 7 $\frac{1}{16}$ ".

FEATURES

Operating Temperatures

Model CX valves are available with API 6A Temperature ratings of L (-50 F) through Y (650 F). Valves for API Temperature ratings of X and Y are pressure de-rated as required per Annex G of API 6A 20th Edition.

Expanding Gate

The expanding gate is field-replaceable and provides a tight mechanical seal that does not rely on line pressure. This ensures seal integrity at both high and low pressures.

Seat Designs

The standard gate to seat and seat to body sealing interface is a slip-fit design, assisted by inserts in the face and rear of each seat. Metal-to-metal gate to seat and pressed-fit seat to body sealing is used for high-temp valves and is otherwise available upon request.

Packing Design

Chevron style stem packing is replaceable and can be re-energized by injection between the packing stacks. This ensures efficient sealing for the life of the valve. Graphite packing is used for high-temperature applications.

Body Lubricant

All Model CX valves are shipped with body filler grease appropriate for the material class and temperature rating of the valve to ensure smooth operation of the valve under pressure and to prevent corrosion during storage prior to deployment.

Grease Fittings

The valve body may be lubricated through the grease fittings provided in the valve body. All fittings meet the requirements of NACE MR0175.

Exposed Bolting

All exposed bolting meets the requirements of NACE MR0175.

Full Through Conduit Bore

The full through conduit bore provides for smooth flow with minimal turbulence. It also provides an unobstructed passage for well intervention tools.

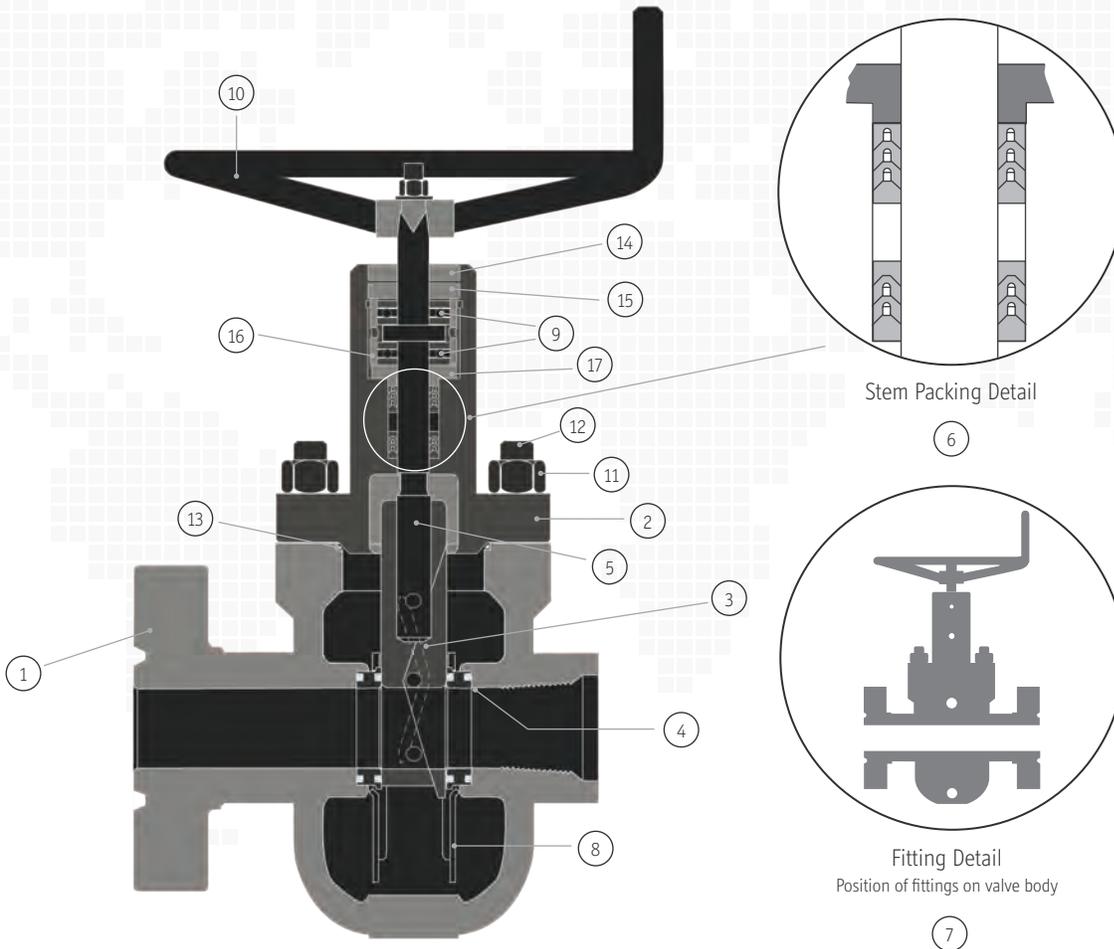
All Model CX valves are drift tested in accordance with API 6A 20th Edition requirements.

INTERNAL CONFIGURATION

Valve depicted with one flanged and one threaded end.
Internal components are identical.



Cast Body Gate Valves



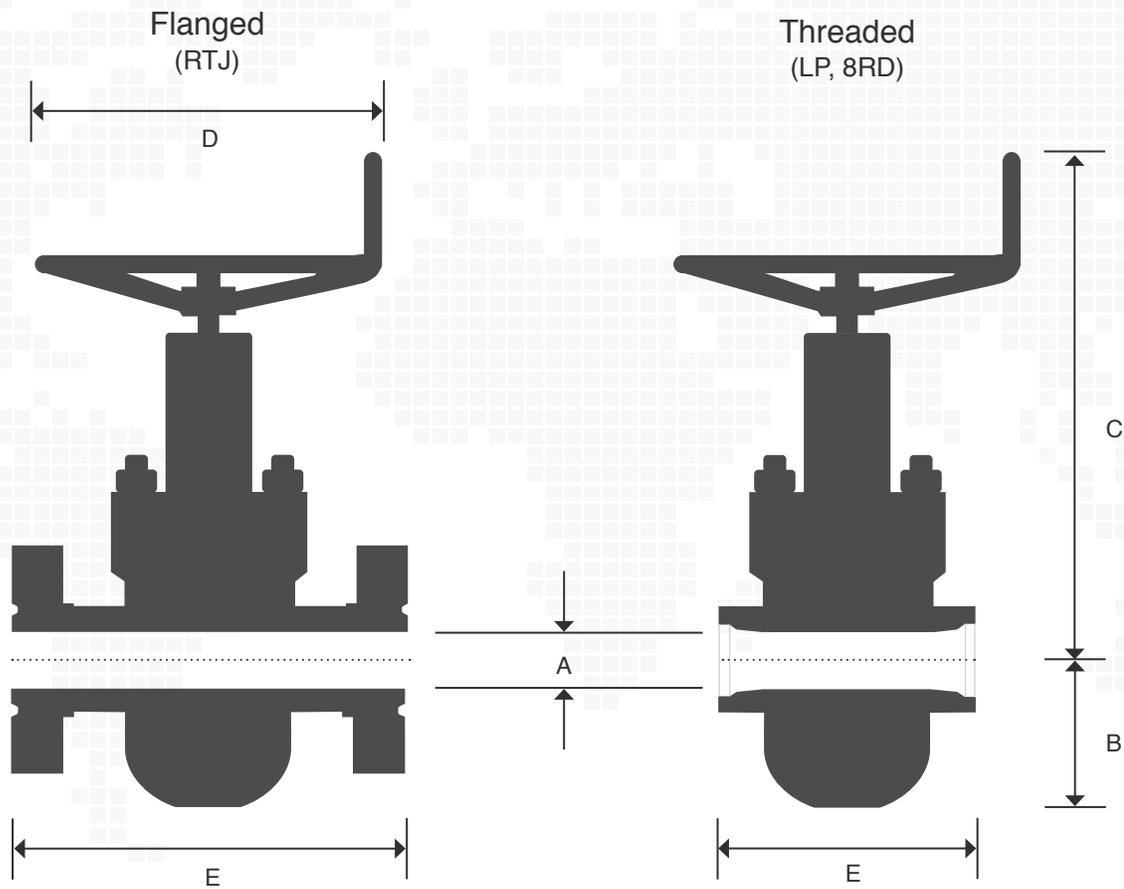
Component	Description	Qty
1	Valve Body	1
2	Valve Bonnet	1
3	Expanding Gate Assembly	1
4	Seat	2
5	Operating Stem	1
6	Stem Packing Set	1
7	Grease Zerk (1) , Packing Injection Fitting (1) , Body Grease Fittings (2)	
8	Gate Guide	2
9	Thrust Bearings	2
10	Handwheel with nut and washer	1
11	Nut	8*
12	Stud	8*
13	Bonnet Seal Ring	1
14	Jam Nut	1
15	Stem Nut	1
16	Bearing Spacer Sleeve	1
17	Packing Retainer	1

* Depends on valve size

DIMENSIONAL DATA



Cast Body Gate Valves



Bore Size	Pressure (psi)	Common Dimensions									Flanged				Threaded			
		A		B		C		D		# Turns To Open	E		Weight		E		Weight	
		in	mm	in	mm	in	mm	in	mm			in	mm	lbs	kgs	in	mm	lbs
2 1/16"	2,000	2.06	52	4.81	122	19.25	489	11	279	13	11.62	295	120	54	9.62	244	90	41
	3-5,000	2.06	52	5.06	129	19.43	494	13	330	13	14.62	371	160	73	9.62	244	110	50
2 9/16"	2,000	2.56	65	5.62	143	20.18	513	13	330	15-1/2	13.12	333	180	82	10.25	260	125	57
	3-5,000	2.56	65	5.93	151	20.43	519	16	406	15-1/2	16.62	422	235	107	10.25	260	160	73
3 1/8"	2,000	3.12	79	6.93	176	22.5	572	13	330	20	14.12	359	220	100	11.38	289	190	86
	3,000	3.12	79	7.31	186	22.75	578	16	406	20	17.12	435	300	136	11.38	289	230	104
	5,000	3.12	79	7.31	186	22.75	578	16	406	20	18.62	473	335	152	11.38	289	230	104
4 1/16"	2,000	4.06	103	8.62	219	25.93	659	16	406	24-1/2	17.12	435	430	195	13	330	320	145
	3,000	4.06	103	9.06	230	26.37	670	20	508	24-1/2	20.12	511	520	236	13	330	420	190
	5,000	4.06	103	9.06	230	26.37	670	20	508	24-1/2	21.62	549	633	287	13	330	420	190
5 1/8"	2,000	5.12	130	11.62	295	32.5	826	20	508	31	22.12	562	800	363	N/A			
	3,000	5.12	130	11.62	295	32.5	826	24	610	31	24.12	613	900	408				
	5,000	5.12	130	11.62	295	32.5	826	24	610	31	28.62	727	986	447				
7 1/16"	2,000	7.06	179	13.87	352	33.1	841	20	508	40	26.12	663	1021	463				
	3,000	7.06	179	13.87	352	34.1	866	24	610	40	28.12	714	1118	507				
	5,000	7.06	179	13.87	352	34.1	866	30	762	40	32	813	1190	540				

TRIM CHART



Cast Body Gate Valves

Materials of construction listed below are provided in Omni's standard valve configurations. Alternate materials are available upon customer request.

NON-NACE TRIMS

NACE TRIMS

API Mat'l Class	AA	BB	CC	DD-NL	EE-0,5	EE-1,5	EE-NL	FF-0,5	FF-1,5	FF-NL
Service	General	General	General	Sour	Sour	Sour	Sour	Sour	Sour	Sour
Trim	Standard	SS Trim	Full SS	Standard	SS Trim	SS Trim	SS Trim	Ful SS	Full SS	Full SS
Corrosive	No	Slightly	Moderate	No	Moderate	Moderate	Moderate	Highly	Highly	Highly
Avail API Temp	L to Y	L to Y	P to Y	L to Y	L to Y	L to Y	L to Y	P to Y	P to Y	P to Y

COMPONENTS

Body	ASTM A487 CL 4 60K ALLOY	ASTM A487 CL 4 60K ALLOY	ASTM A217 or A487 CA-15 60K SS	ASTM A487 CL 4 60K ALLOY	ASTM A487 CL 4 60K ALLOY	ASTM A487 CL 4 60K ALLOY	ASTM A487 CL 4 60K ALLOY	ASTM A217 or A487 CA-15 60K SS	ASTM A217 or A487 CA-15 60K SS	ASTM A217 or A487 CA-15 60K SS
Bonnet	AISI 4130 60K ALLOY	AISI 4130 60K ALLOY	AISI 410 60K SS	AISI 4130 60K ALLOY	AISI 4130 60K ALLOY	AISI 4130 60K ALLOY	AISI 4130 60K ALLOY	AISI 410 60K SS	AISI 410 60K SS	AISI 410 60K SS
Gate	AISI 4130 75K NITRIDED	AISI 410 SS 75K NITRIDED	AISI 410 SS 75K NITRIDED	AISI 4130 75K NITRIDED	AISI 410 SS 75K NITRIDED	AISI 410 SS 75K NITRIDED	AISI 410 SS 75K NITRIDED	AISI 410 SS 75K NITRIDED	AISI 410 SS 75K NITRIDED	AISI 410 SS 75K NITRIDED
Seats	AISI 4130 75K NITRIDED	AISI 410 SS 75K NITRIDED	AISI 410 SS 75K NITRIDED	AISI 4130 75K NITRIDED	AISI 410 SS 75K NITRIDED	AISI 410 SS 75K NITRIDED	AISI 410 SS 75K NITRIDED	AISI 410 SS 75K NITRIDED	AISI 410 SS 75K NITRIDED	AISI 410 SS 75K NITRIDED
Stem	AISI 4130 75K NITRIDED	ASTM A564 GR 630 (17-4) 105K NITRIDED	ASTM A564 GR 630 (17-4) 105K NITRIDED	AISI 4130 75K NITRIDED	ASTM A564 GR 630 (17-4) 105K NITRIDED	CRA (2) PER NACE	CRA (2) PER NACE	ASTM A564 GR 630 (17-4) 105K NITRIDED	CRA (2) PER NACE	CRA (2) PER NACE
Bonnet Seal Ring	AISI 1018/1020	AISI 316 SS	AISI 316 SS	AISI 1018/1020	AISI 316 SS	AISI 316 SS	AISI 316 SS	AISI 316 SS	AISI 316 SS	AISI 316 SS
Studs	ASTM A193 GR B7 or ASTM A320 GR L7	ASTM A193 GR B7 or ASTM A320 GR L7	ASTM A193 GR B7 or ASTM A320 GR L7	ASTM A193 GR B7M or ASTM A320 GR L7M	ASTM A193 GR B7M or ASTM A320 GR L7M	ASTM A193 GR B7M or ASTM A320 GR L7M	ASTM A193 GR B7M or ASTM A320 GR L7M	ASTM A193 GR B7M or ASTM A320 GR L7M	ASTM A193 GR B7M or ASTM A320 GR L7M	ASTM A193 GR B7M or ASTM A320 GR L7M
Nuts	ASTM A194 GR 2H	ASTM A194 GR 2H	ASTM A194 GR 2H	ASTM A194 GR 2HM	ASTM A194 GR 2HM	ASTM A194 GR 2HM	ASTM A194 GR 2HM	ASTM A194 GR 2HM	ASTM A194 GR 2HM	ASTM A194 GR 2HM
Packing	25% GLASS FILLED PTFE (3)	25% GLASS FILLED PTFE (3)	25% GLASS FILLED PTFE (3)	25% GLASS FILLED PTFE (3)	25% GLASS FILLED PTFE (3)	25% GLASS FILLED PTFE (3)	25% GLASS FILLED PTFE (3)	25% GLASS FILLED PTFE (3)	25% GLASS FILLED PTFE (3)	25% GLASS FILLED PTFE (3)

NOTES

1	Nitriding is standard on all gates and seats. Tungsten Carbide, HF6 or other hardfacing techniques are also available.
2	Corrosion resistant alloy per NACE MR0175/ISO 15156.
3	High temperature (API Temp Ratings X,Y) valves use graphite packing. Other special packing is available upon request.
4	Teflon inserts on seat faces are standard in Omni valves. Metal-to-metal seats are available upon request.
5	Charpy impact test results are provided as required by API according to the temperature rating and material class.
6	Materials for sour service trims conform to latest edition of NACE MR0175. Explanation for suffixes used for sour trims: 0,5 = 0.5 psi maximum partial pressure of hydrogen sulfide 1,5 = 1.5 psi maximum partial pressure of hydrogen sulfide NL = No limit to hydrogen sulfide exposure.
7	Omni reserves the right to use material class ZZ when customers request materials of construction that do not comply with current NACE MR0175/ISO standards.

OMNI GATE VALVE PRODUCTS

Model CX



Cast Body Gate Valves

Omni offers a full range of gate valves for wellhead, manifold, fracture and safety shutdown applications.

WELLHEAD, MANIFOLD AND FRAC VALVES

Model	Description
CX	Cast Body Expanding Gate Valves for 2-3-5,000 psi Service
CS	Cast Body Slab Gate Valves for 2-3-5,000 psi Service
FX	Forged Body Expanding Gate Valves for 2-3-5,000 psi Service
FS	Forged Body Slab Gate Valves for 2-15,000 psi Service
FSB	Forged Body Slab Gate Valves for 10-15,000 psi Fracture Service



Expanding Gate



Slab Gate



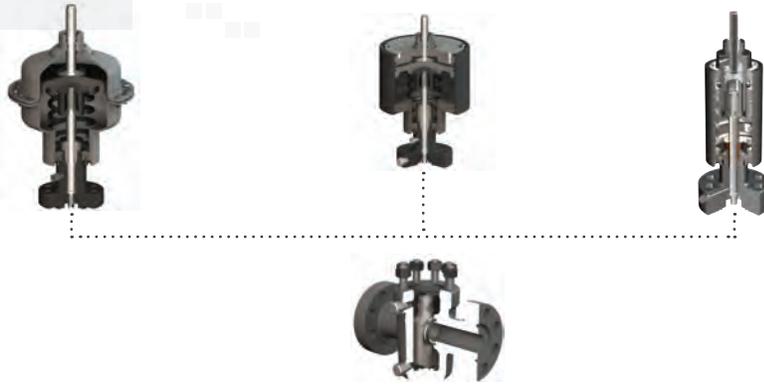
Reverse Acting Slab Gate

SAFETY VALVES PREPARED FOR ACTUATOR

Model	Description
CS-R	Cast Body Reverse Acting Slab Gate Valves Prepared for Actuator, for 2-3-5,000 psi Service
FS-R	Forged Body Reverse Acting Slab Gate Valves Prepared for Actuator, for 2-15,000 psi Service

OMNI ACTUATORS

Omni also offers a complete line of pneumatic and hydraulic actuators for manifold and safety shutdown applications. All Omni actuators can be provided as actuated valve assemblies ready to be put into service or as actuators adapted to mount on valves from any valve manufacturer.



Model	Description
DX	Pneumatic Diaphragm Actuator (Fail Safe)
PX	Pneumatic Piston Actuator (Fail Safe, Removable Manual Override)
PMX	Pneumatic Piston Actuator (Fail Safe, Integrated Manual Override)
HX	Hydraulic Piston Actuator (Fail Safe)
HWX	Hydraulic Piston Actuator (Fail Safe, Wirecutting)
HDX	Hydraulic Piston Actuator (Double Acting)



Full Assembly

MODEL CX

Product Warranty



Cast Body Gate Valves

LIMITED PRODUCT WARRANTY

All products manufactured or sold by Omni are warranted against defects of material and workmanship for a period of twelve (12) months from the date of installation or eighteen (18) months from date of shipment, whichever period first expires, when all such products are used in the service and within the pressure range for which they were manufactured.

In the case of products or parts not wholly of Omni's manufacture, Omni's liability shall be limited to the extent of Omni's recovery from the original manufacturer of such products or parts under its warranty or liability to Omni.

Any repair work performed by Omni is warranted for one year from completion of such repairs and applies only to work performed. If, within these specified periods, Omni receives notice from Buyer of any alleged defect in or nonconformance of any product or repair and if in Omni's sole judgment the product or repair does not conform or is found to be defective in material or workmanship, then, Buyer shall, at Omni's request, return the part or product F.O.B. to Omni's designated plant or service location.

Omni has no liability for removal or reinstallation of products or equipment. Omni, at its option and expense, shall repair or replace the defective part or product, or repay to Buyer the full price paid by Buyer for such defective part, repair or product. Any repayment of purchase price shall be without interest.

Omni's warranty liability, including defects caused by Omni's negligence, shall be limited to such repair, replacement or refund, and shall not include claims for labor costs, expenses of Buyer resulting from such defects, recovery under general tort law or strict liability or for damages resulting from delays, loss of use, or other direct, indirect, incidental or consequential damages of any kind.

Omni will not be responsible for failures of products which have been in any way tampered with or altered by anyone other than an authorized representative of Omni, failures due to lack of compliance with recommended maintenance procedures or products which have been repaired or altered in such a way (in Omni's judgment) as to affect the products adversely.



THIS WARRANTY IS EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES, EXPRESS, STATUTORY OR IMPLIED, INCLUDING THE WARRANTY OF MERCHANTABILITY AND FITNESS FOR PARTICULAR PURPOSE WHICH EXCEED THE FOREGOING WARRANTY.

If you have questions regarding this warranty or if you would like information about other Omni products and services please contact us at the address and phone numbers below.

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