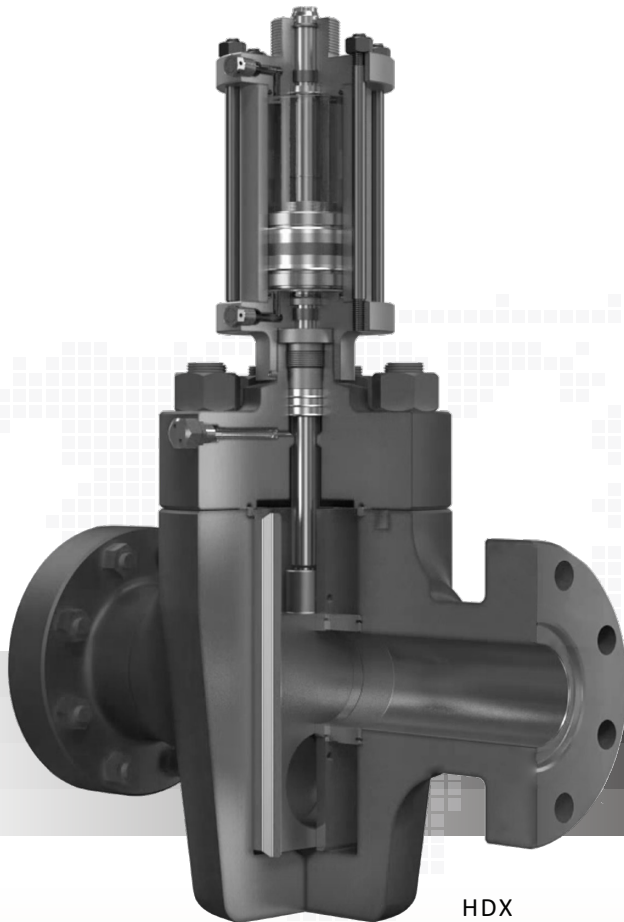




HYDRAULIC DOUBLE ACTING



HDX

# Model HDX

## Hydraulic Double-Acting Piston Actuator

For surface safety and other energy production, distribution and storage applications.

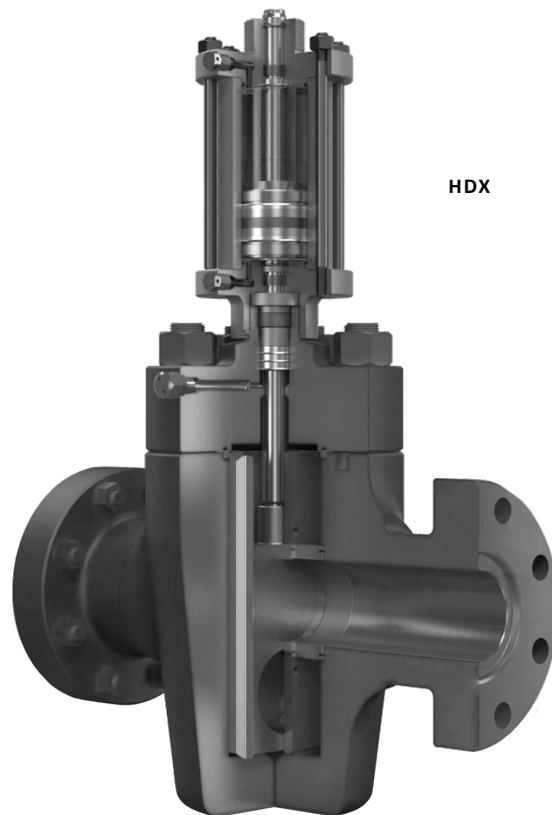
- API 6A Monogrammed
- Highest Quality
- Delivered to Exact Customer Specifications
- Engineered for Years of Trouble Free Service

# Model HDX - Hydraulic Double-Acting Actuator

Model HDX actuators are designed to operate surface safety or shutdown valves on oil & gas wellhead, transmission, storage, manifold or other applications where fail-safe capability is required. Omni provides **API Monogrammed** surface safety valve assemblies, or actuator/bonnet assemblies ready to mount on valves from other manufactures.

## Model HDX Applications

Model HDX actuators are used to control the linear position of the valve gate and are used to either open or close the valve through application of hydraulic pressure to one of the actuator's designated pressure inlet ports.



### Flexibility

Model HDX actuators can be adapted to operate valves from any manufacturer (interface information is required) and can be delivered with alternate materials of construction if required by field conditions.

### Over-Pressure Protection

The HDX come equipped with pressure relief devices to protect personnel and guard against damage to the actuator in case of an over pressure condition. The pressure relief device is easily inspected and is field-replaceable.

### Non-Pressurized Actuator Housing

The outer housings that are structural and protective only – they are not under hydraulic pressure. This helps protect personnel and equipment in the event of damage to the outer housing.

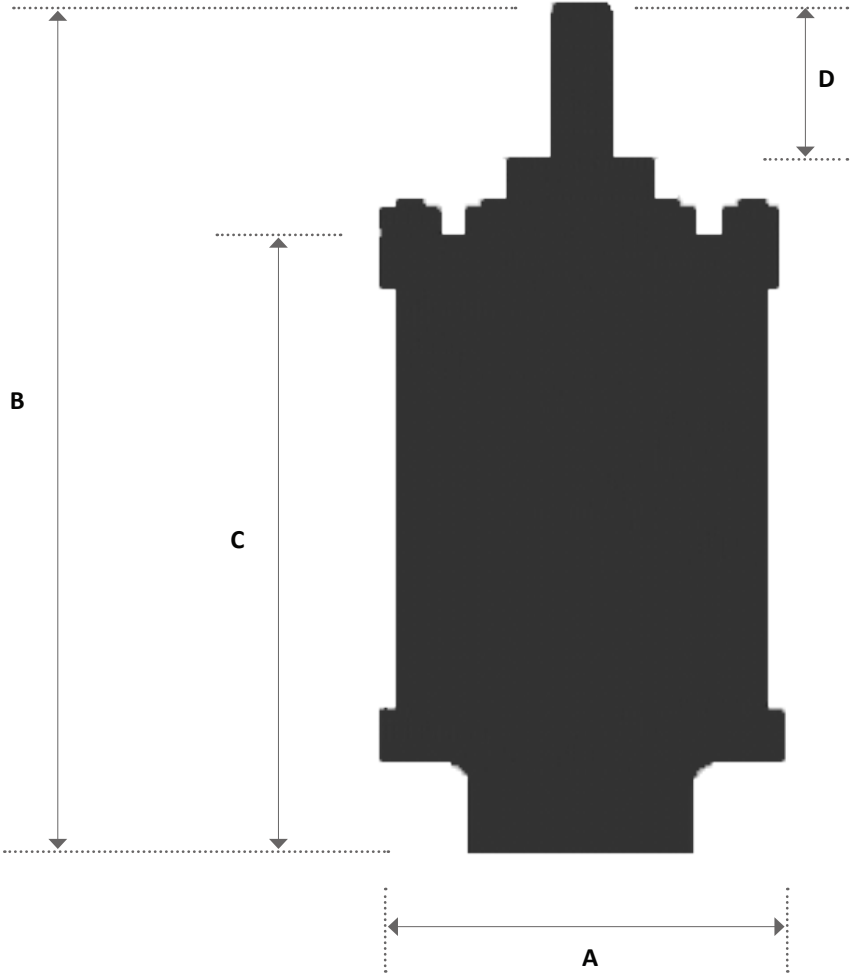
### Corrosion Protection

Model HDX's are internally and externally coated to prevent corrosion due to environmental conditions. All internal components are either stainless steel or are coated to prevent corrosion due to any contamination that might be present in the control pressure source.

# Model HDX - Hydraulic Double-Acting Actuator



## Actuator Specifications

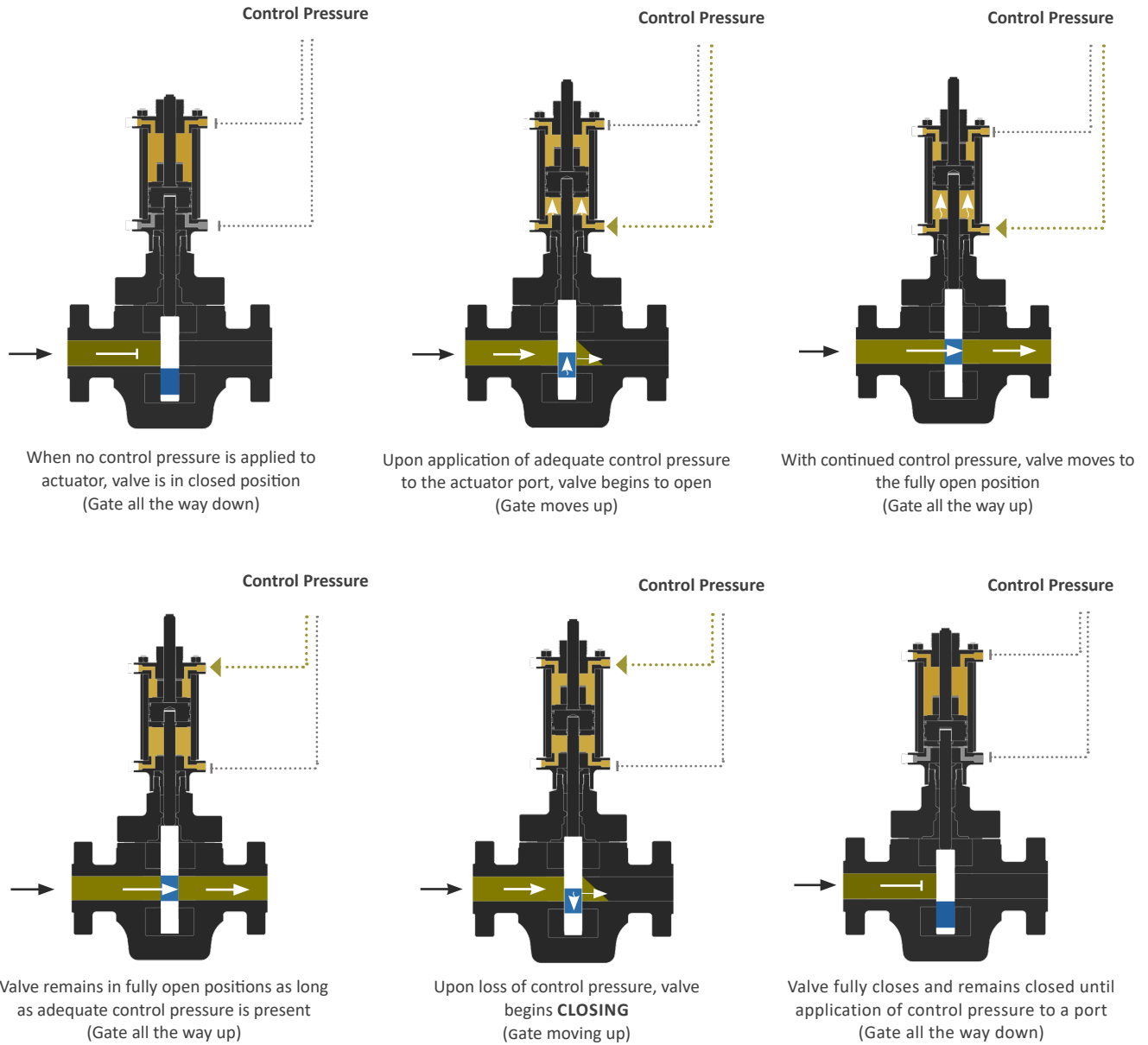


Available Sizes														
Actuator Model	Size	Max Valve Stroke	A		B		C		D		Swept Volume		Weight	
			in	mm	in	mm	in	mm	in	mm	in (3)	cm (3)	lbs	kgs
HDX-40	4.5"	7 1/16	7.75	197	19.07	484	13.86	352	3.48	88	80	1,303	91	41
HDX-60	6.5"	7 1/16	9.75	248	24.07	611	17.86	454	8.10	206	258	4227	145	66
HDX-90	9"	7 1/16	12.75	324	24.07	611	17.86	454	8.10	206	590	9668	218	99

# Model HDX - Operational Stages

Fail “CLOSED” operation is depicted. Fail “OPEN” operation is available upon request.

Open and Close lines Dependent upon configuration



Standard Actuator Specifications		
Maximum Operating Pressure	3,000 PSI	Pressure relief device on actuator is set at 3,000 PSI
API Material Class	AA/BB/CC	Not appropriate if control source contains H2S (is sour)
API Temperature Rating	P (-20 F to 180 F)	(-29 C to 82 C)

Available in API pressure ratings of between **2,000** and **15,000** psi.

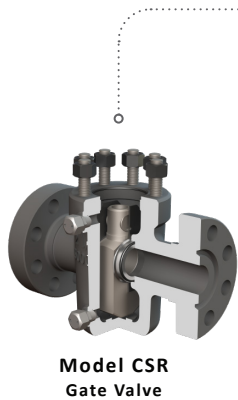
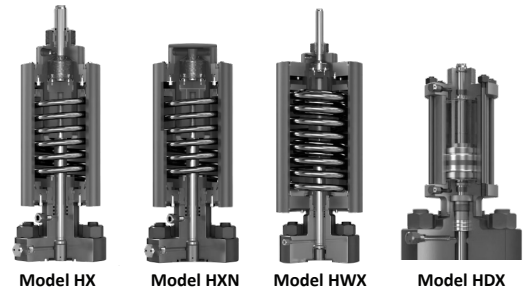
Can be used in conjunction with our **Hydraulic**, **Pneumatic** or **Electric** actuators from most manufacturers.

# Model HDX - Hydraulic Double-Acting Actuator

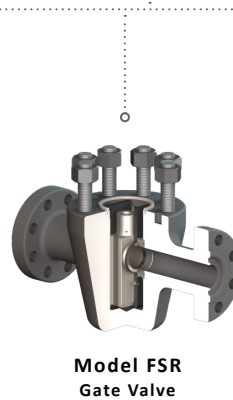


## Valve Body Specifications

- » Model CS-R and FS-R surface safety valves with Model HDX actuators are available in most API 6A material classes, PSL, PR and Temperature Ratings.
- » Model HDX actuator/bonnet assemblies are built to customer specifications and are also available in most API 6A Material Classes. PSL, PR and Temperature Ratings.
- » All Model CS-R and FS-R surface safety valves with Model HX actuators are API 6A 21st Edition monogrammed equipment.
- » All Model CS-R and FS-R surface safety valves with Model HDX actuators have successfully passed the API 6AV1 - Validation of Safety and Shutdown Valves for Sandy Service test and can be designated as API 6A-SSV Class 1 or Class 2 for use in Federal Offshore Waters.



Bore Size	Pressure (psi)	API Ring #
2 1/16"	2,000	R23
	3-5,000	R24
2 9/16"	2,000	R26
	3-5,000	R27
3 1/8"	2-3,000	R31
	5,000	R35
4 1/16"	2-3,000	R37
	5,000	R39
5 1/8"	2-3,000	R41
	5,000	R44
7 1/8"	2-3,000	R45
	5,000	R46



Bore Size	Pressure (psi)	API Ring #
1 13/16"	10,000	BX151
	15,000	BX151
2 1/16"	10,000	BX152
	15,000	BX152
2 9/16"	10,000	BX153
	15,000	BX153
3 1/16"	10,000	BX154
	15,000	BX154
4 1/16"	10,000	BX155

API-6A Specifications			
PSL-1 / PSL-2	(All Bore Sizes)	PSL-1 / PSL-2 / PSL-3 / PSL-3G	(All Bore Sizes 10,000 psi)
PSL-3 / PSL-3G	(Bore Sizes 2 1/16" - 4 1/16" only)	6A PSL-3 / PSL-3G	(All Bore Sizes 15,000 psi)
SSV Class 1	(All Bore Sizes)	6A SSV Class 1	(All Bore Sizes 10,000 or 15,000 psi)
SSV Class 2 - Sandy Service	(All Bore Sizes)	6A SSV Class 2 - Sandy Service	(All Bore Sizes 10,000 or 15,000 psi)

API-6A Non-NACE Trims				API-6A NACE Trims						
API Mat'l Class	AA	BB	CC	DD	EE-0,5	EE-1,5	EE	FF-0,5	FF-1,5	FF
Service	General	General	General	Sour	Sour	Sour	Sour	Sour	Sour	Sour
Trim	Standard	SS Trim	Full SS	Standard	SS Trim	SS Trim	SS Trim	Full SS	Full SS	Full SS
Corrosive	No	Slightly	Moderate	No	Moderate	Moderate	Moderate	Highly	Highly	Highly
Avail API Temp	L to X	L to X	P to X	L to X	L to X	L to X	L to X	P to X	P to X	P to X

## Technical 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	Valves with API Temp Rating of X or Y will have the working pressure de-rated as per API 6A, Annex G
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. The acceptable limit of H2S should be noted after the trim level designation. Materials of construction for 0,5 and 1,5 are shown in the chart above however other partial pressure limits up to and including No Limit are available upon request. If an acceptable level is not noted in the valve trim/API Material Class designation it is understood to be "No Limit". 0,5 = 0.5 psi maximum limit of partial pressure of hydrogen sulfide 1,5 = 1.5 psi maximum limit of partial pressure of hydrogen sulfide
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.
8	Valves with API Temp Rating of X or Y will have high-temperature graphite packing and metal-to-metal sealing.

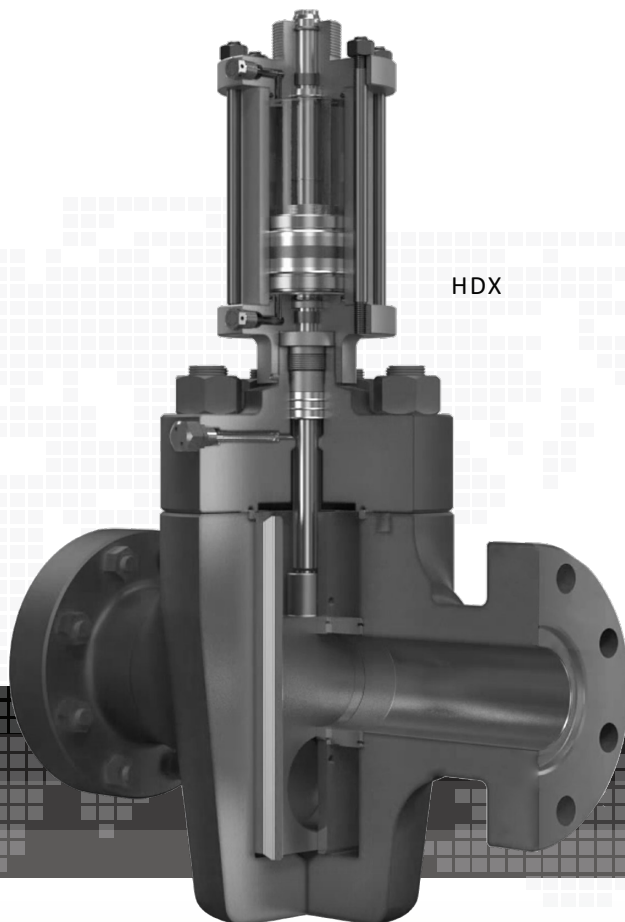


HYDRAULIC DOUBLE ACTING

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HDX

**RFQ** REQUEST FOR QUOTE  
[omnivalve.com/rfq.php](https://omnivalve.com/rfq.php)

**Product Warranty**

All products quoted are subject to omni valve's limited product warranty available at: [omnivalve.com/warranty.php](https://omnivalve.com/warranty.php)