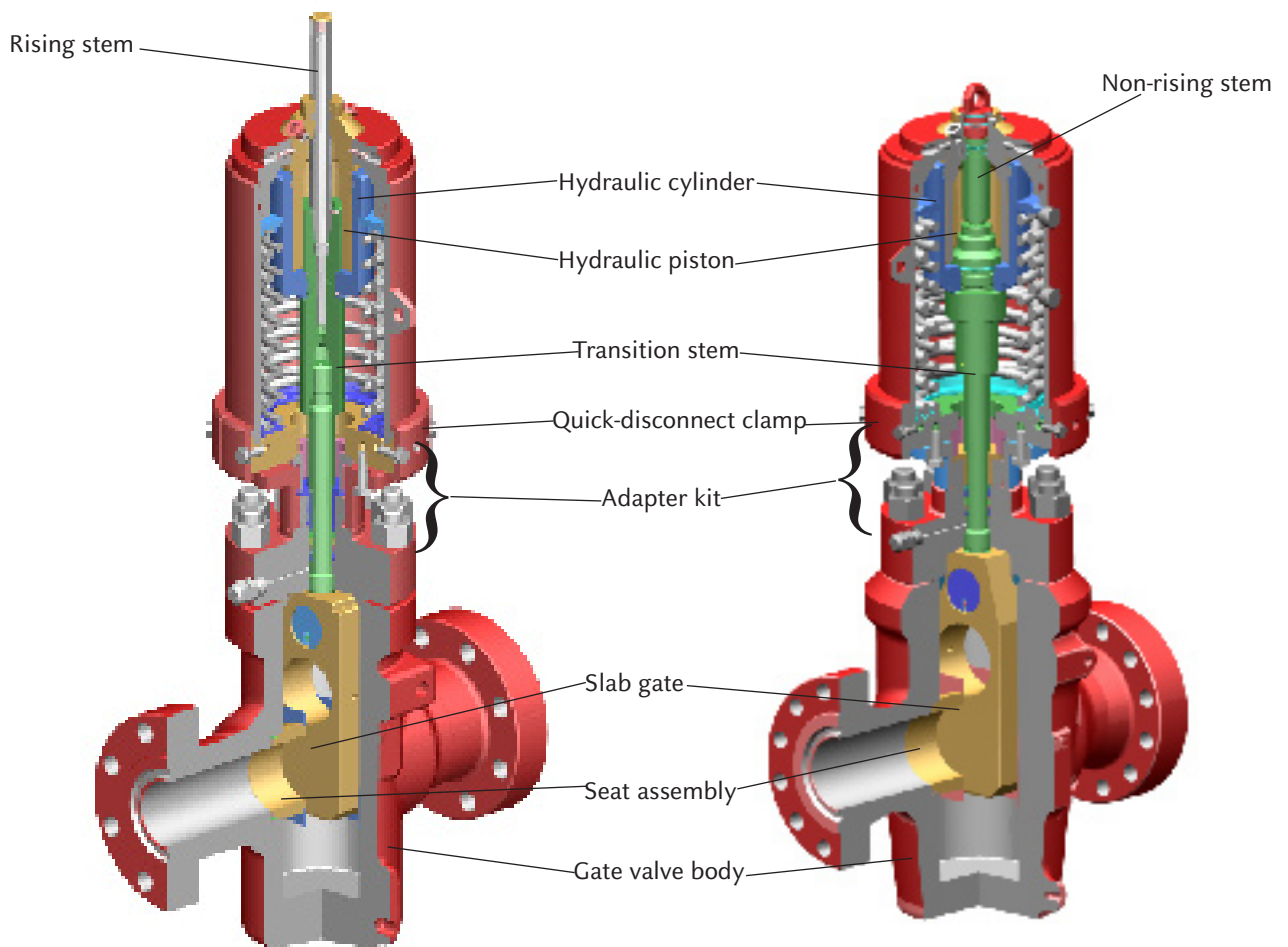


HY Hydraulic Actuators



The HY Hydraulic Actuator is a ratio-piston-type actuator mounted on a reverse-acting gate valve, designed to be “fail-safe and fail-close.” Recommended for use in high-pressure and/or large-bore applications, this hydraulically controlled actuator operates using a closed hydraulic system completely independent of well fluids and pressure; the hydraulic pressure on the piston holding the valve open. An integral part of a safe wellhead system, it will automatically close with the loss of control pressure and open automatically when the control pressure is restored. As an added safety feature, in the event of a fire, the metal-to-metal seal between bonnet and lower stem acts as a secondary seal if the stem packing is damaged. They are used as secondary master valves and/or wing valves of trees, flow lines, header valves, and gathering lines and pipelines.

Features like a heavy-duty coated spring package are designed to accommodate closing force at low or zero pressure, with back-seat sealing capability. In addition, the quick-disconnect and spring box design reduces time required during maintenance operations, in particular when paired with the lifting eye to facilitate removing the actuator when mounted horizontally. The control line port can be rotated 360 degrees for easy alignment of the power-source control line. HY Hydraulic Actuators are designed to accept FMC’s full range of accessories; i.e., stem protectors, fusible lockout caps, and so on. To further improve operation, the HY Hydraulic Actuator contains a Nipoloy coating (electrolysis nickel) on the hydraulic cylinder and piston for corrosion resistance; and a back-seat/ packing leak detection port to gauge wearability.

HY Hydraulic Actuators

Reference Charts

When Ordering Actuators:

Customer Data		Gate Valve Specifications	
Actuator Specifications & Requirements		Emergency Shutdown	
1	Bonnet Type: A (extended) or B (flush mount)	12	Special material and/or processing requirements
2	Actuator Type: Pneumatic or Hydraulic	13	System requirements
3	Available Pneumatic/Hydraulic Pressure	Actuator Accessories & Requirements	
4	Maximum Shut-in Well Pressure	14	Solid lockout cap
5	Wire or Cable Size to Cut	15	Fusible lockout cap (rated 138°C)
6	Closing Time for Actuator	16	Hydraulic or manual override
7	Regulatory Requirements	17	Limit switch: Go type intrinsically safe
8	Special API 6A Requirement	18	Limit switch housing: Stainless Steel or Aluminum
9	Slam Test Required during SIT/FAT	19	Stem protector: Slotted metal, transparent
10	As in accordance with customer tender specification attached (if no, please state alternate.)	20	Repair kit: consists of elastomers for the power section
11	Special requirement/certification/witnessing required	21	Special accessories needed and/or additional comments related to the inquiry

HY Hydraulic Actuators w/ FMC Gate Valves

Size (inches)	Working Pressure (psi/Bar)	Valve Bore (inches/ mm)	Model Number	Cylinder Working Pressure (psi/Bar)
2-1/16"	5,000/344.7	2.06/ 52.32	HY80	5,000/344.7
2-1/16"	10,000/ 689.4	2.06/ 52.32	HY80	5,000/344.7
2-9/16"	5,000/344.7	2.56/ 65.02	HY80	5,000/344.7
2-9/16"	10,000/ 689.4	2.56/ 65.02	HY120-S	5,000/344.7
3-1/8"	5,000/344.7	3.12/ 79.25	HY80	5,000/344.7
3-1/16"	10,000/ 689.4	3.06/ 77.72	HY120-S	5,000/344.7
4-1/16"	5,000/344.7	4.06/ 103.12	HY120-S	5,000/344.7
4-1/16"	10,000/ 689.4	4.06/ 103.12	HY120-S	5,000/344.7
5-1/8"	5,000/344.7	5.12/ 130.05	HY120-L	5,000/344.7
5-1/8"	10,000/ 689.4	5.12/ 130.05	HY155	5,000/344.7
6-3/8"	5,000/344.7	6.38/ 162.05	HY120-L	5,000/344.7
6-3/8"	10,000/ 689.4	6.38/ 162.05	HY175	5,000/344.7

Wireshear versions of the FMC HY Hydraulic Actuator are available. These feature similar designs but include larger spring packages designed to cut specific wire sizes during wireline operations.