



HIPPS Gate Valve Brochure

Licensed:
Valve Spec 6D-0169
Valve Spec 6A-0477



AMERICAN ENERGY SERVICES

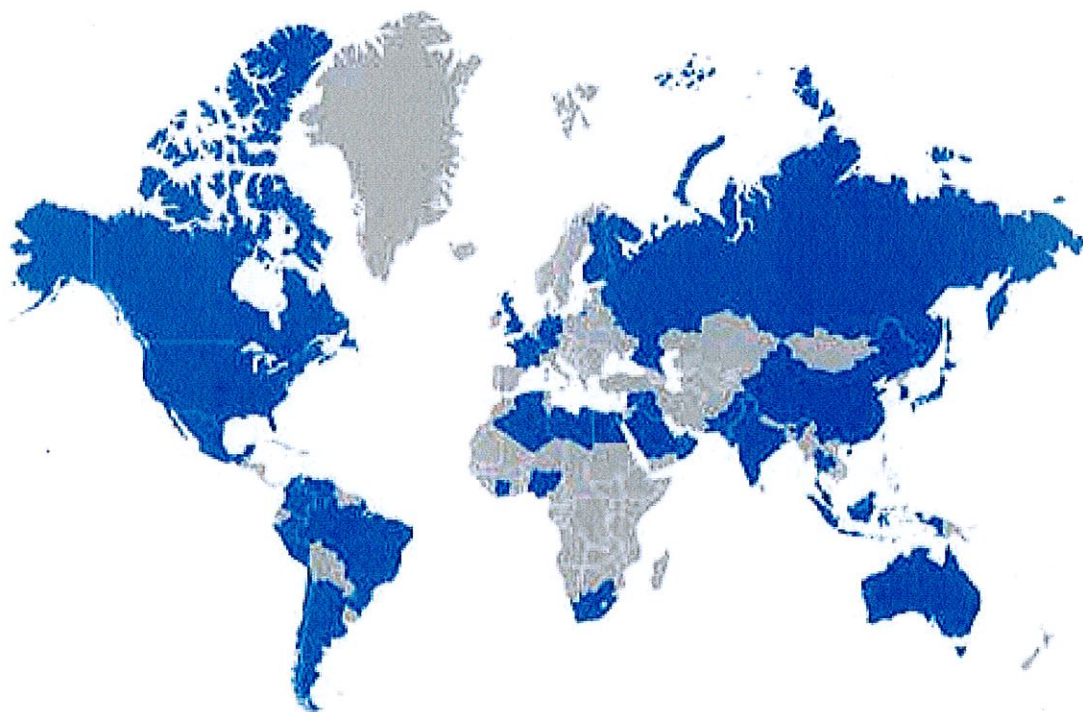
INTRODUCTION

ABOUT AES VALVES, LLC

We offer a wide array of premium commodity and specialty valves meeting the flow control requirements of the oil & gas, petrochemical and hydro-flow industries.

AES Valves, LLC is a global leader in valve manufacturing and design. The AES Valve Brand is recognized worldwide and installed in over 35 countries around the world, covering standard to severe service applications. Over 30 years of reliable service and smooth operation in the most difficult industrial applications make AES Valves the top choice of API 6A and API 6D valve manufacturers.

‘We Win on Quality’ by maintaining our focus on meeting and exceeding industry standards on valve solutions. Thank you for your interest in AES Valves, LLC. Our valve professionals look forward to assisting you, in any way we can, to provide results that meet your valve needs.



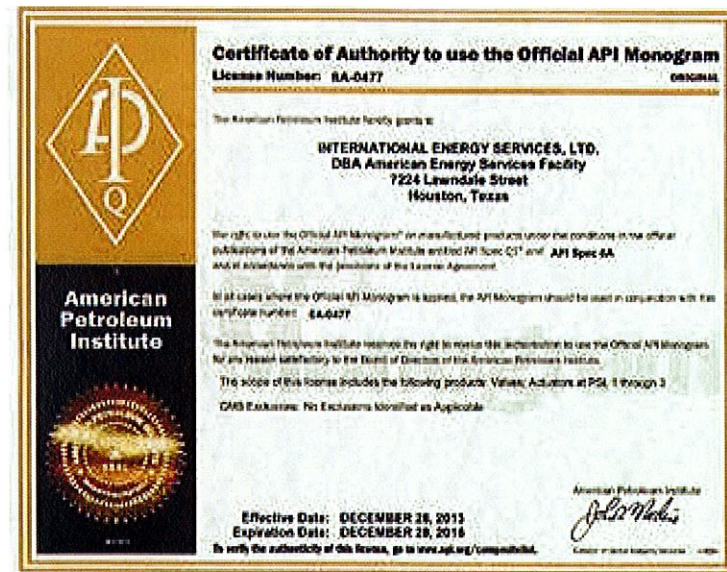
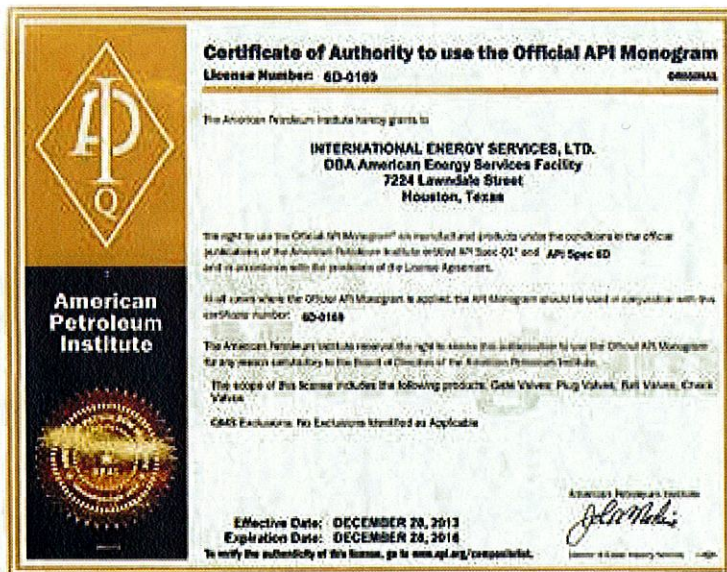
INTRODUCTION

HISTORY

AES Valves, a Texas based enterprise, began operations in 1953 with a vision of providing commodity and specialty valves to the worldwide energy marketplace. That tradition continues today as AES serves energy companies, processing manufacturers, and engineering/construction contractors globally. Our corporate offices, manufacturing plant and warehousing facilities are located in Houston, TX. We are an API 6A and API 6D monogram license holder. AES Valves, LLC is a rapidly growing company with continually increasing revenues and planned facilities expansion.

QUALITY COMMITMENT

AES Valves, LLC is committed to maintaining excellence in our quality and dependability by striving for zero defect products. Our valves are designed and tested in accordance with API, ASME, and ANSI standards, offered in all ANSI and API pressure classes, and manufactured to accommodate any customer requirements, no matter how complex or extraordinary.



MOUNT CONTROL SYSTEM

ABOUT AES VALVES, LLC

The Actuator Control Manifold is a self-contained hydraulic power unit for providing hydraulic pressure via a single stage hand pump to operate a single acting hydraulic actuator. The system is comprised of a two gallon reservoir, single stage hand pump with 5000 psi capability, high and low high pressure sensors, relief valve, hydraulic accumulator, ESD ball valve, low pilot override valve mounted on a rigid mounting plate for direct mounting to the actuator, with provided U-bolts, in either the horizontal or vertical configuration.

INSTALLATION

The unit is mounted along the axial plane of the actuator so that the handle for the hand pump is accessible from the stem end of the actuator for horizontal mounted actuators. For vertical configurations, the system is mounted to provide the most convenient access to the pump handle. The mounting plate has structural supports on the bottom with form fitting gussets to match the diameter of the actuator. The unit is placed on the actuator and the supplied U-bolts are placed over the actuator and through holes in the mounting plate and fixed in place with lock washers and hex nuts. Torque U-bolts are used as necessary so no movement is possible during pump actuation. The units' pressure outlet connection on the pressure manifold is connected directly to the actuator inlet port with 3/8" .065 wall SS tubing. The sensing port of the pressure sensor manifold bar is connected to the flow line at the desired sensing location with suitable tubing based on pressure requirement.

OPERATION

Initial Start-up Process

1. Verify hydraulic reservoir contains 1-1/2 gallon of hydraulic fluid.
2. Nitrogen pre-charge is required on the hydraulic accumulator in order for the system to maintain proper pressure during thermal changes that will occur due to environmental temperature variations. This accumulator will absorb slight increases and "make-up" pressure during pressure loss from thermal expansion and contraction. The pre-charge should be applied with a charge hose to the Schrader valve located on the top side of the accumulator. The initial recommended charge pressure is 500 psi.

MOUNT CONTROL SYSTEM

OPERATION (CONT.)

3. Close Low Pilot Override Ball Valve (LPOBV) located on the right side of the unit. This valve is connected to the pressure distribution bar and feeds the low pilot supply.
4. Manually operate hand pump to begin pressurization of the system. As pressure increase, the pressure gauge should begin to register the increasing pressure and the stem on the actuator should begin to retract. Continue the pump operation until required pressure is obtained on the gauge or the actuator is fully retracted.
5. When flow line pressure has normalized within desired operating range, open the low pilot override ball valve (LPOBV) to place the system in automatic mode. At this point, the pressure sensors are in control of the system. If upon opening of the LPOBV, the actuator begins to close and flow line pressure is within allowed limits, immediately re-close the LPOBV and reset the low pilot trip range to required trip setting to maintain in service condition.

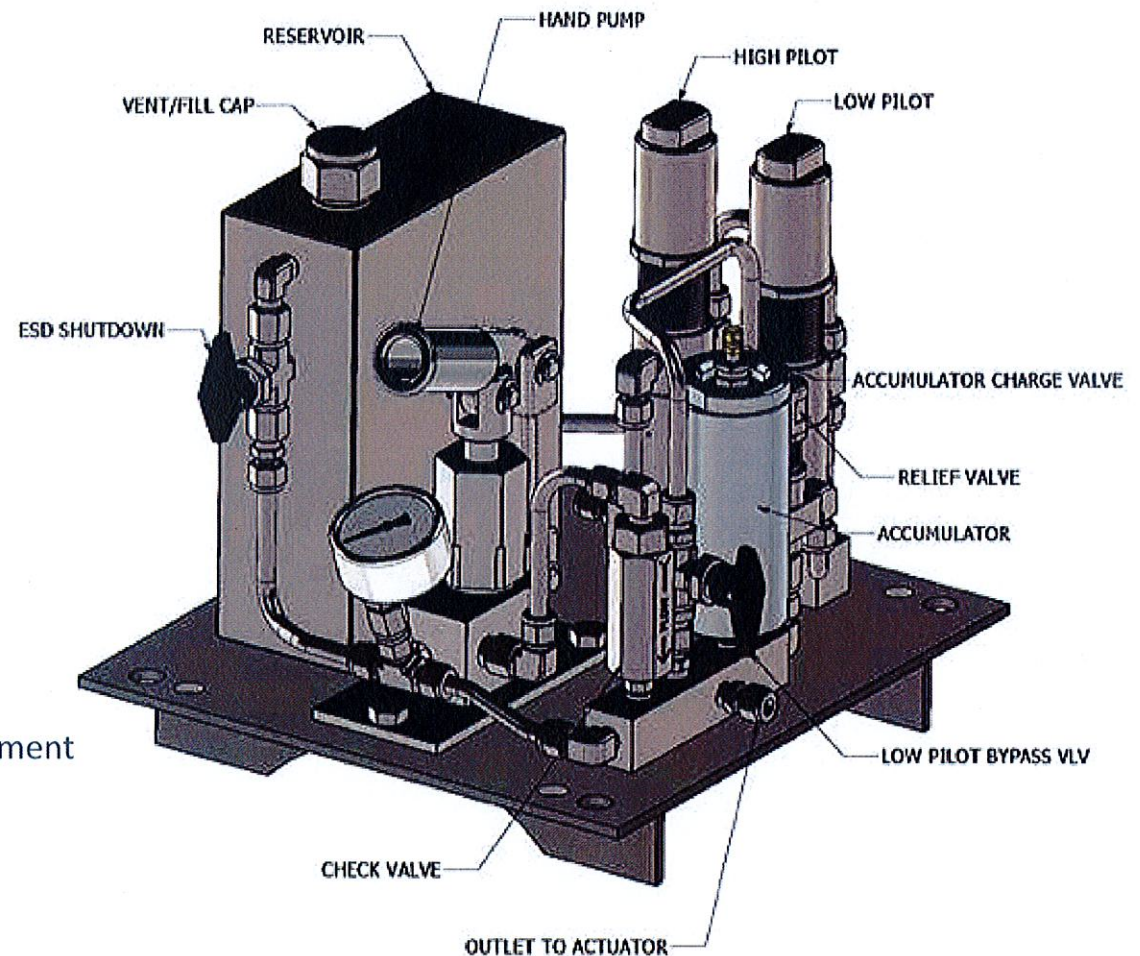
Standard Operations

1. The unit will maintain hydraulic pressure on the actuator until an abnormal condition in the sensing pilots is detected or a manual operation of the ESD ball valve is performed
2. Occasional observation of the pressure gauge and actuator stem position is recommended to make certain that normal conditions exist. Even though the system incorporates a small hydraulic accumulator, it may be necessary to “top off” the pressure with the hand pump as thermal conditions change repeatedly. In the event ambient temperatures cause an increase in hydraulic pressure due to thermal expansion beyond the acceptable range, the relief valve will operate and prevent over pressuring of the system. As the relief valve resets, the hydraulic pressure may fall below desired level and may require operation of the hand pump to reestablish proper hydraulic pressure.
3. To initiate system shutdown, simply turn the ESD ball valve to the open position which will exhaust all pressure from the actuator resulting in closure of the valve.

MOUNT CONTROL SYSTEM

FEATURES

- Hydraulic Power Unit (self-contained)
- Single stage Hand Pump (5000 psi)
- High & Low Pressure Sensors
- All 316 SS components
- Redundant Check Valve
- Relief Valve
- Hydraulic Accumulator
- ESD ¼ turn ball valve
- Low pilot override valve
- Rigid mounting plate
- Direct mount
 - Horizontal or Vertical
 - U-bolts provided
- Ideal for use in remote locations
 - Simple design with fewer components
 - Easily repaired with component replacement
- Compact footprint (35-40% smaller)
- Manual Shut-down
- Single tech installation capable



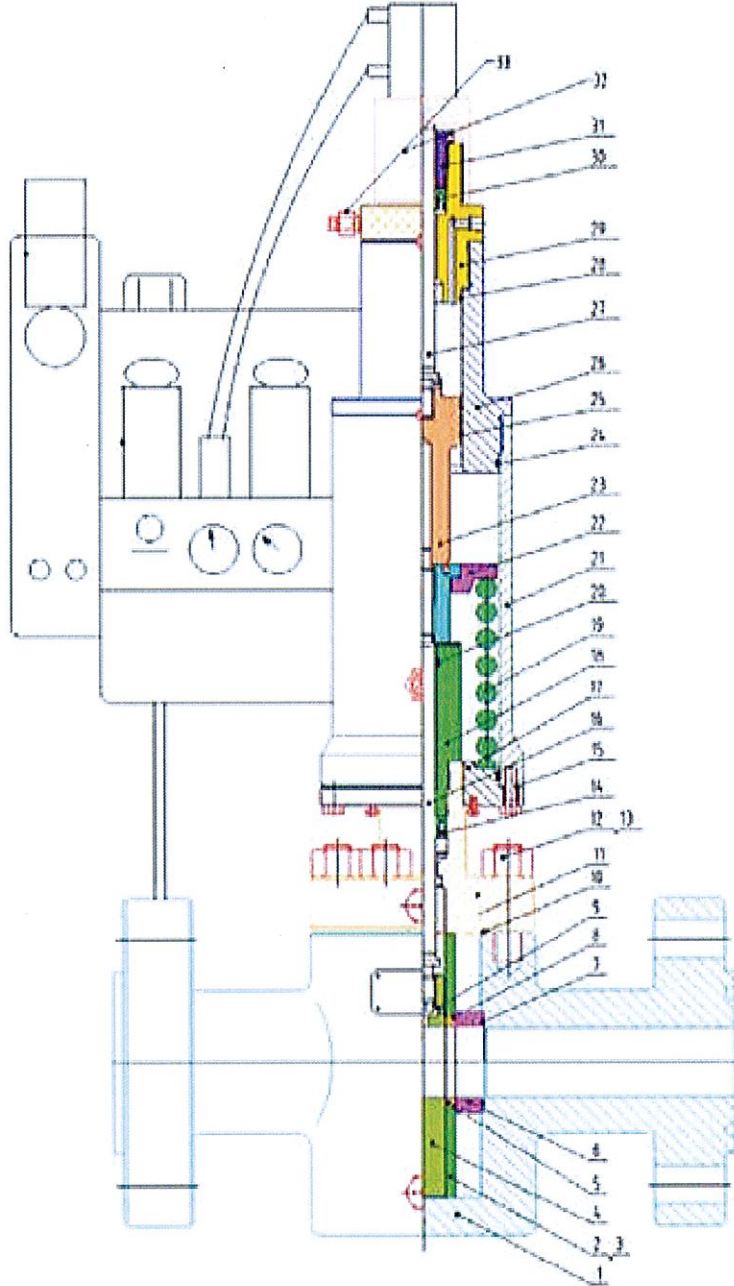
MOUNT CONTROL SYSTEM

MAINTENANCE

Under normal conditions, no routine maintenance is required. It is recommended that the pressure sensors be operated every six months to verify settings. The components in the system are designed to operate for extended periods without any maintenance. Repair Kits for the pressure sensors and relief valve are available should the system experience contamination that warrants rebuild of these major operating components.

AES VALVES	OTHERS
Component Level Block Design	Modular Block Design with internal valves
All Stainless Steel components	Various
High & low pilots with narrow ranges	Single remote pilot
Compact & Simple Design	More Complex Circuitry
Fewer Components – Lighter System (65 lbs.)	More components- more weight
Element Protection Cover (optional)	No advertised cover
Field Dependable - Components have 40 year history of extended use without service required	Field repairable - Disassembly required making troubleshooting more difficultrequired
Mount Vertical or Horizontal	Primarily Vertical Mount
Single Pressure Design simplifies operation	High/Low pressure design requires more components
Manual ESD with Red handle ¼ turn ball valve	Manual ESD – Lever

BILL OF MATERIALS



NO.	PART	QTY	MATERIAL
33	Safety Valve	1	ASSY
32	Lock Open Cap	1	CS
31	Top Shaft Packing Retainer	1	420
30	Seal Ring	1	PFE + SS
29	Cylinder Head	1	4130
28	O-Ring	1	Viton
27	Top Shaft	1	17-4PH
26	Cylinder	1	4130
25	Wear Bearing	2	PTFE
24	O-Ring	2	Viton
23	Piston	1	420
22	Spring Plate	1	420
21	Housing	1	1045
20	Wear Bearing	1	PTFE
19	Spring	1	1566
18	Packing Retainer	1	4130
17	Bonnet Ring	1	1045
16	Stem	1	17-4PH
15	Screw	12	A2-70
14	Packing	1	PTFE + SS
13	Nut	8	A194 2H
12	Stud	8	A193 B7
11	Bonnet	1	4130
10	Ring Gasket	1	304
9	Pin	1	304
8	Seal Ring	2	R-PTFE
7	Seal Ring	2	R-PTFE
6	Body Bushing	2	F316
5	Seat Ring	2	410 + TC
4	Gate	1	410 + TC
3	Guide	2	304
2	Retainer Plate	2	1025
1	Body	1	4130

BILL NUMBER	TYPE	QUANTITY PER BILL	UNIT OF MEASURE	DESCRIPTION
256035-001	STD	1.00	EACH	ACTUATOR CONTROL MANIFOLD 25VACM35
COMPONENT CODE	TYPE	QUANTITY PER BILL	UNIT OF MEASURE	DESCRIPTION
251200-001	STD	1.00	EACH	25ACM UNIVERSAL HORIZONTAL MOU
250880-002		1.00	EACH	HAND PUMP SP2A 3/4" PISTON, 5
250212-001		1.00	EACH	RESERVOIR 25C134 F/25ACM1
725200-062	STD	2.00	EACH	72HPH62 HP BLDR PLT NC.6M 130
243100-002	STD	1.00	EACH	24SRV12 ARV 4 K316 6,000 TEST PER SVTS24 2
210350-001	STD	1.00	EACH	HA 6 CI 1/4 FNPT HC 6M
140660-001	STD	1.00	EACH	CV HYD 1/4 FNPT 10M TEST PER SVTS14 2
120360-001	STD	1.00	EACH	12RS45 COMPACT 1"MNPT VENT CAP
251215-001		1.00	EACH	SWAGELOK BALL VALVE 43GS6 RD R
380200-002	STD	1.00	EACH	PILOT MANIFOLD BAR, W/O BOTTOM
191395-001	STD	1.00	EACH	19MM226 MNFLD BAR F/ ACM SYS
760340-001		8.00	EACH	MALE ELBOW SS 600 2 4
760330-001		3.00	EACH	MALE CONNECTOR SS 600 1 4 , SW
250130-001		3.00	EACH	PIPE PLUG 14SDS 1/4NPT SKT HD
251115-001		2.00	EACH	REDUCING BUSHING SS 6 RB 4
760385-001		4.00	EACH	MALE BRANCH TEE SS 600 3TMM
251130-001		1.00	EACH	TUBE SS 6 TA 7 4 STUB, FEMALE
490270-001		1.00	EACH	HEX NIPPLE SS 4 HN
251120-001		2.00	EACH	TUBE STUB SS 6 TA 1 4, MALE
760385-001		2.00	EACH	UNION TEE SS 600 3
250716-001		1.00	EACH	GUAGE 0 5000 3/8" TUBING MOUNT
740150-001		3.00	EACH	HEX HEAD BOLT 1/2 13 X 1 SS
730250-001		3.00	EACH	JAM NUT 1/2 13JAM , 1/2 13 316
760336-001		1.00	EACH	MALE CONNECTOR SS 600 1 8
130940-001	STD	1.00	EACH	QEV HYD 1/2 6M TEST PER SVTS13 2
253000-004		1.00	EACH	UNIVERSAL CONTROL SYSTEM MOUNT
253000-007		1.00	EACH	UNIVERSAL MOUNT COVER ASSEMBLY
250660-001		2.25	FEET	TUBING, .375 X .035, 316SS SEA
250670-001		4.00	FEET	TUBING, .375 X .049, 316SS SEA
BILL NUMBER	TYPE	QUANTITY PER BILL	UNIT OF MEASURE	DESCRIPTION
03CG25JXXX	STD	1.00	EACH	3" CL 2500 SLAB GATE VALVE; RTJ; BARE STEM
COMPONENT CODE	TYPE	QUANTITY PER BILL	UNIT OF MEASURE	DESCRIPTION
03CG25-RG10	STD	1.00	EACH	304SS RING GASKET
03CG25-PIN9	STD	1.00	EACH	304SS PIN
03CG25-SR08	STD	2.00	EACH	RPTFE SEAL RING
03CG25-SR07	STD	2.00	EACH	2.RPTFE SEAL RING

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