Manually operated safety shut-off valve

HSAV/6

DUNGS®

Normally closed safety shutoff valve with the following approvals.

UL Listed
- **UL 429**
- **File # MH16727**

CSA Certified
- **ANSI Z21.21 / 6.5 CI**
- **File # 157406-101989**

FM Approved
- **Class 7411**
- **File # J.I.0V9A8.AF**

US and Canadian Models
- **HSAV 707/6 - HSAV 730/6**
- **3/4 in. NPT - 3 in. NPT**

Description

The DUNGS HSAV/6 is a manual operated safety shut-off valve for gas burners and gas appliances.

- Manual opening only when operating voltage applied
- Normally closed
- Closing time <1s.
- Max. operating pressure up to 7 PSI (500 mbar)
- 120 VAC/ 60 Hz, 24 VAC/ 60 Hz(in some models)
- 1/2" NPT conduit connection
- Optional field installable visual indicator (VI) or CPI 400 with indication lamps and SPDT interlock switch for valve position.
- Reliable, quiet operation; rugged and low maintenance.

Application

The DUNGS HSAV/6 is recommended for industrial and commercial heating applications that require a shut-off valve that can only be opened manually when the operating voltage is applied. The HSAV/6 is suitable for natural gas, propane, butane, air and other inert gases.

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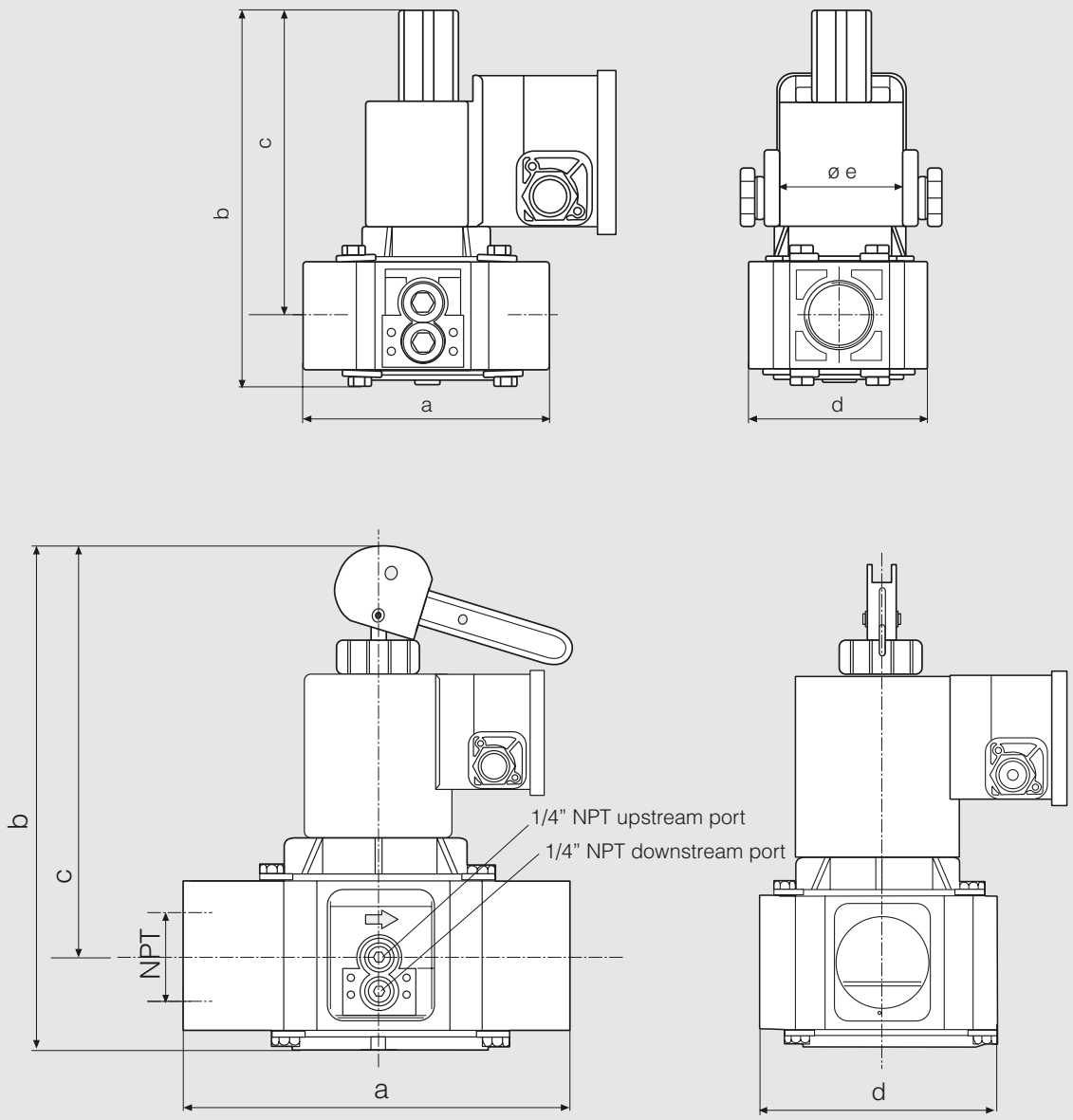
HSAV/6 Normally closed manually opening safety shutoff valve, manual operating voltage applied, fast closing.

Specifications

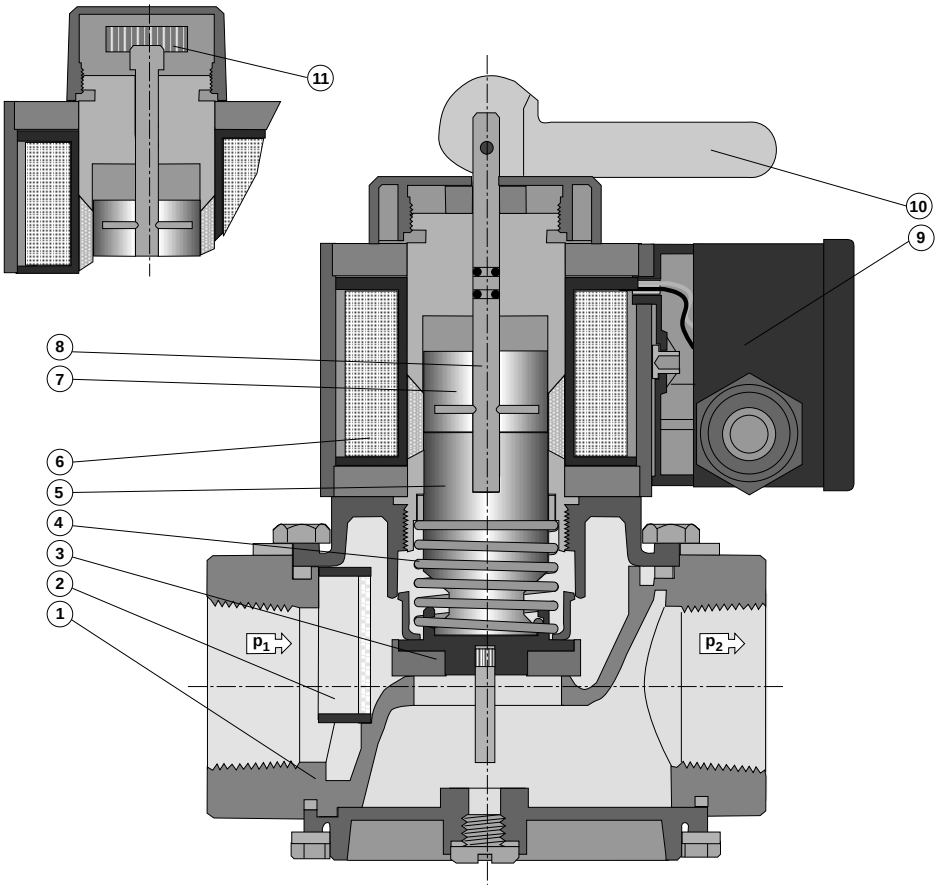
Pipe thread (NPT)	3/4" 1" 1 1/4" 1 1/2" 2" 2 1/2" 3"
Max. operating pressure	7 PSI (500 mbar) FM, UL 5 PSI (360 mbar) CSA
Max. body pressure	15 PSI (1000 mbar)
Max. close off pressure	15 PSI (1000 mbar)
Electrical ratings (-10 % to +15 %)	110 - 120 VAC /50 - 60 Hz, 24 VAC / 50 - 60 Hz (available in some models)
Power ratings	See type overview
Enclosure rating	NEMA Type 12
Electrical connection	Screw terminals with 1/2" NPT conduit connection
Operating time	100 % duty cycle
Closing time	< 1 sec
Opening	Manual, when operating voltage applied
Materials in contact with gas	Aluminum, steel, brass / Seals: NBR-based rubber
Ambient temperature rating	UL -30°F to +140°F (-35°C to +60°C) FM - 30°F to +140°F (-35°C to +60°C) CSA -40°F to +140 °C (-40°C to +60°C)
Installation position	Safety shut off valve from vertically upright to horizontal
Test ports	Two 1/4" NPT upstream and two 1/4" NPT downstream ports
Gas strainer (standard)	Installed in the housing upstream (23 mesh)
Position indication (order separately)	CPI 400 with indication lamps and SPDT interlock switch or Visual indicator (VI)

Dimensions



Type	NPT	Order No.	$p_{max.}$ [PSI]	$P_{max.}$ [VA]	Opening time	Dimensions [inch] Dimensions [mm] a	b	c	d	Weight [lbs] [kg]
HSAV 507/6	3/4	46070-3	**7**	6	< 1 s	**3.9** 100	**5.7** 145	**4.7** 120	**2.9** 73	**2.9** 1.30
HSAV 510/6	1	46070-4	**7**	6	< 1 s	**4.3** 110	**5.9** 150	**4.7** 120	**3.4** 85	**3.3** 1.5
HSAV 512/6	1 1/4	46070-5	**7**	9	< 1 s	**5.9** 150	**7.9** 200	**6.3** 160	**4.3** 110	**5.5** 2.5
HSAV 515/6	11/2	46070-6	**7**	9	< 1 s	**5.9** 150	**7.9** 200	**6.3** 160	**4.3** 110	**5.5** 2.5
HSAV 520/6	2	46070-8	**7**	10	< 1 s	**6.7** 170	**8.3** 210	**6.5** 165	**4.9** 125	**7.7** 3.5
HSAV 525/6	2 1/2	46070-10	**7**	20	< 1 s	**11.4** 290	**12.8** 325	**9.3** 235	**7.3** 185	**17.6** 8.0
HSAV 530/6	3	46070-12	**7**	35	< 1 s	**12.2** 310	**13.0** 330	**9.7** 245	**7.9** 200	**25.1** 11.4

HSAV sectional drawing



1	Housing	5	Armature	9	Electrical connection
2	Sieve	6	Solenoid coil	10	Lever
3	Valve plate	7	Auxiliary armature	11	Knurled screw: on 507, 510
4	Closing spring	8	Tension rod		

Technical description

The DUNGS manual operated shut-off valve is semi-automatic, operated with power. The electromagnetic drive opens against the force of the closing spring **4** only with manual action.

If power is interrupted the spring **4** closes the valve within 1 second.

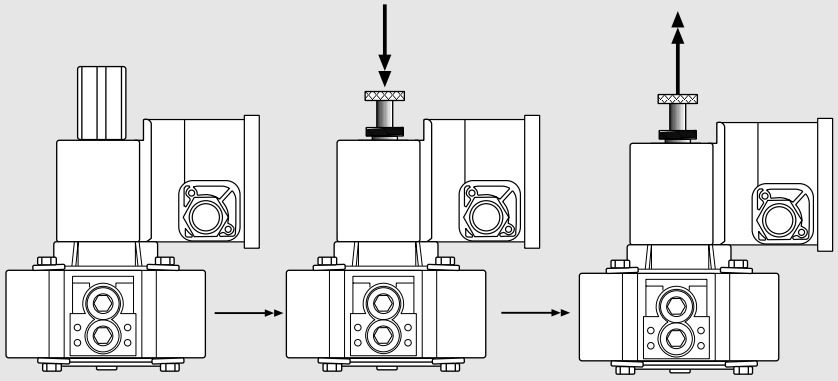
If gas supply is interrupted and auxiliary power is applied again, the shut-off valve will not open.

The valve closing function cannot be influenced externally. The position of the valve can be monitored by a proof of closure switch (CPI 400).

Opening Procedure
HSAV 507/6, HSAV 510/6

1.Remove protection cap.
2.Set knurled nut into closed position.
3.Switch on voltage.
4.Set knurled nut to open position by pulling.

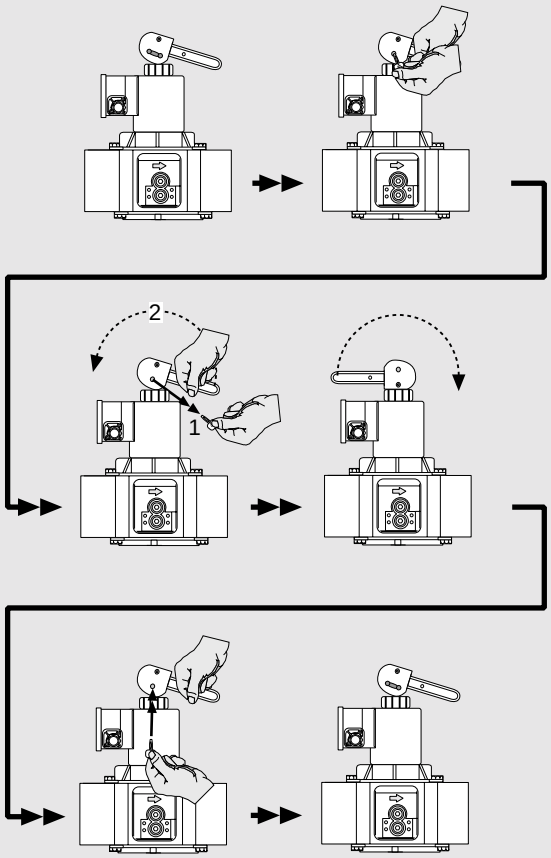
When voltage is applied, the HSAV remains open.



Opening Procedure
HSAV 512/6, HSAV 515/6, HSAV 520/6, HSAV 525/6, HSAV 530/6

1.Remove locking pin.
2.Swivel lever through 180^0.
3.Apply voltage
4.Swivel lever through 180^0 again.
5.Push locking pin through hole.

When voltage is applied, the HSAV remains open.



$$\dot{V}_{\text{gas used}} = \dot{V}_{\text{Natural Gas}} \times f$$

f = correction factor to determine flow through valves with other gases.

$$f = \sqrt{\frac{\text{Spec. gravity of Natural Gas}}{\text{Spec. gravity of gas used}}}$$

Type of gas	Density [kg/m^3]	sg	f
Natural gas	0.81	0.65	1.00
Butane	2.39	1.95	0.58
Propane	1.86	1.50	0.66
Air	1.24	1.00	0.80

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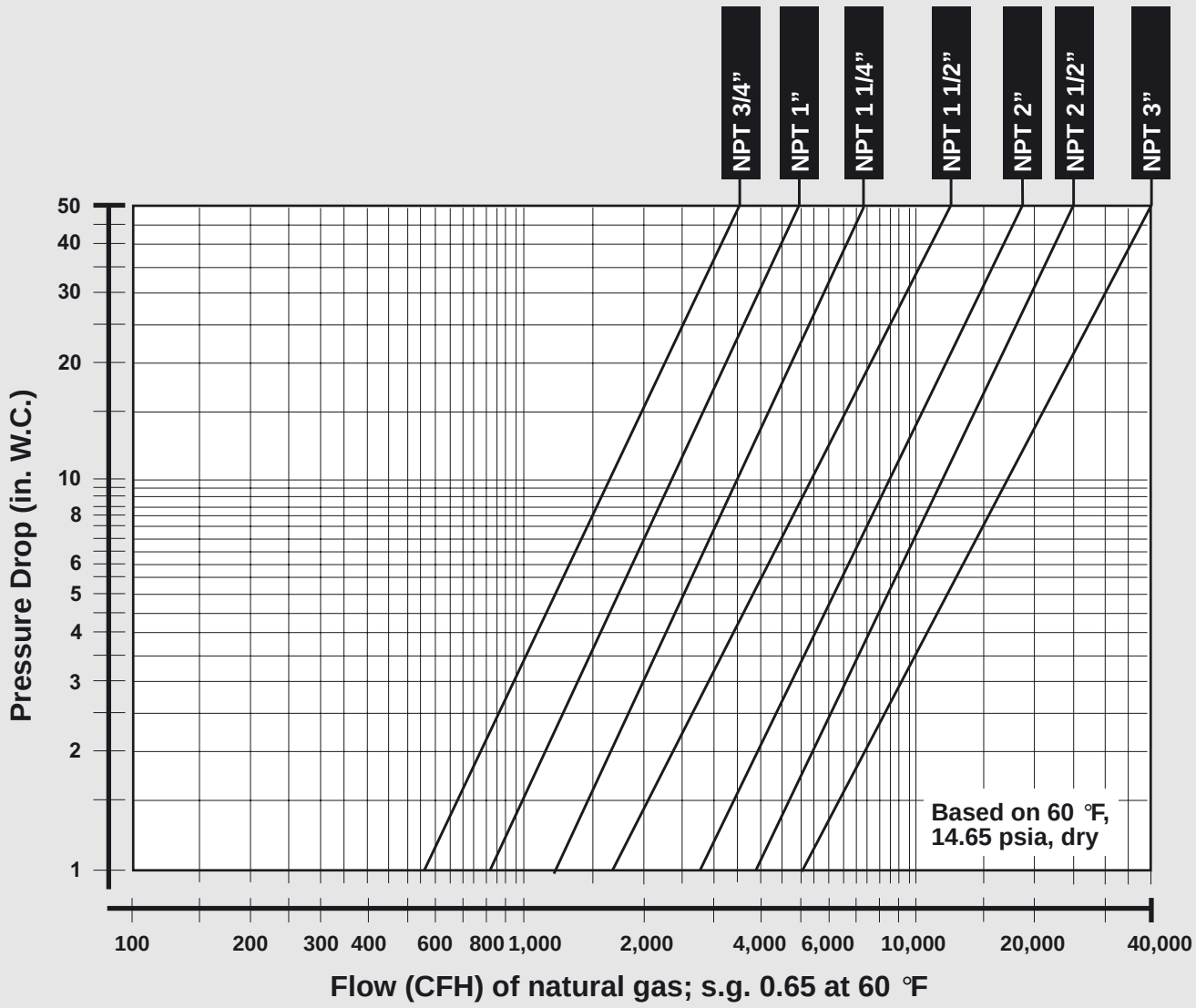
Flow diagram



We reserve the right to make any changes in the interest of technical progress.

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