

Fittings for gas

Weishaupt valve proving system type W-DK 3/01S-2, with venting into the combustion chamber

– weishaupt –

The Weishaupt valve proving system W-DK 3/01 is used with valve trains VGD40.125 and 150 in conjunction with mechanical compound regulation, as well as with simultaneous burners and on customer request. As the W-DK 3/01 with venting into the combustion chamber now has CE approval, it is also used as a replacement for WDK 02 with diaphragm pump on MVD.

Construction

The valve proving system W-DK3/01 consists of two main part:

- Programmer fitted into the control panel of the plant
- Gas pressure switch fitted to the test section between the solenoid valves

Function

The soundness of the solenoid valves in the gas valve train is checked prior to each burner start

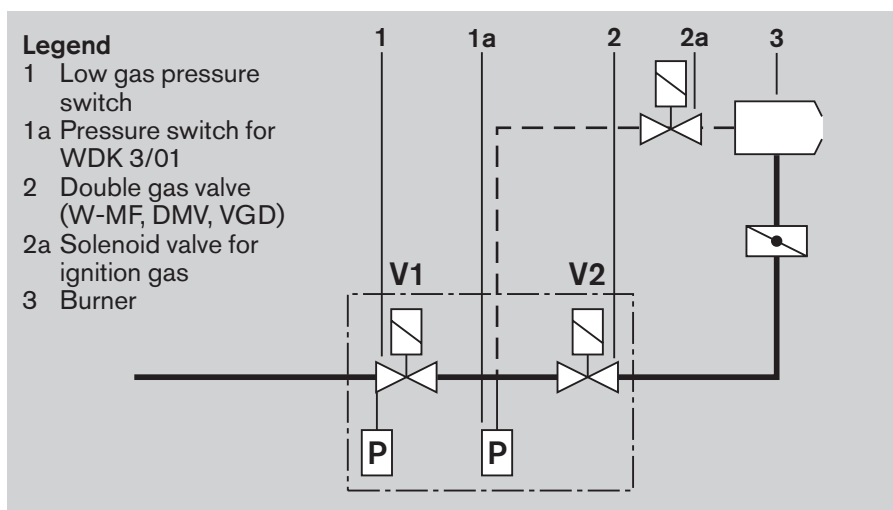
Operation

Test phase 1: At the start of pre-purge both solenoid valves are closed. The second solenoid valve is then opened briefly to vent the section between the valves. If pressure builds up, possibly due to the first solenoid valve leaking, the pressure increase is detected by the gas pressure switch.

Test phase 2: If the first solenoid valve is gas tight, it is opened momentarily. Gas pressure is now in the section between the two solenoid valves. Now a test is carried out to establish if the pressure in the test section reduces. The test program is controlled by the programmer.

Test result

If a pressure increase (test phase 1) or a pressure decrease (test phase 2) is detected, the burner cannot start. Otherwise the solenoid valves are sound and the burner starts.



Gas valve train with valve proving system W-DK 3/01

Technical data

Weishaupt valve proving system	Type	W-DK 3/01
Test label	CE-PIN	CE-0085BN0181
Mains voltage	V	230 ± 15 %
Frequency	Hz	50 or 60
Fusing	in accordance with the pre-fusing of the burner control	
Permissible ambient temperature	°C	- 10 to +60
Programmer	Order No.	109 000 0117/2
Test times		
– Pressure switch test with/without pressure	secs.	8
– Fill test section	secs.	2
– Test time with test pressure	secs.	9
Type of protection		IP40
Consumption	VA	approx. 4
Installation		optional
Weight	kg	0.790
Pressure switch	Type	GW50 A5/1, A6/1
	Order No.	691 378, 691 381
Setting range	mbar	5 to 50
Pressure switch	Type	GW150 A5/1, A6/1
	Order No.	691 379, 691 382
Setting range	mbar	10 to 150
Controller for valve proving (to be fitted into control panel), consists of:		
Control lamp "Lockout", push button "Reset", programmer (wiring only)		
Space required for controller	cm ²	260

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Weishaupt valve proving system type W-DK 3/01S-2, for gas valve trains with vent line

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The Weishaupt valve proving system W-DK 3/01 is used on gas valve trains with single solenoid valves. A vent valve (leakage gas valve) and a valve leakage indicator are required with this type of valve proving system..

Construction

The valve proving system W-DK3/01 consists of four main parts:

- Programmer fitted into control panel of plant
- Gas pressure switch fitted to the test section between the solenoid valves
- Vent valve (normally open) fitted into the vent line
- Leakage indicator fitted into the vent line

Function

The tightness of the solenoid valves in the gas valve train is checked prior to each burner start.

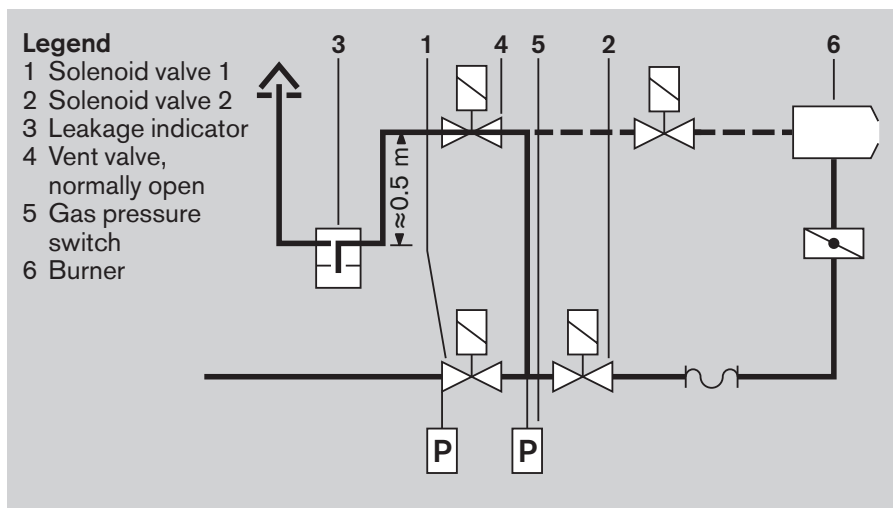
Operation

Test phase 1: During pre-purge, all three solenoid valves are closed. If pressure builds up due possibly to the first valve leaking, the pressure increase is detected by the gas pressure switch.

Test phase 2: If the first solenoid valve is gas tight, it is opened momentarily, but the vent valve remains closed. Gas pressure is now in the section between the three solenoid valves. It is tested for a reduction in pressure in the test section. The test time is carried out by the programmer.

Test results

If a pressure increase (test phase 1) or pressure decrease (test phase 2) is detected, the burner start is inhibited. Otherwise the solenoid valves are tight and the burner starts.



Gas valve train with valve proving system W-DK 3/01

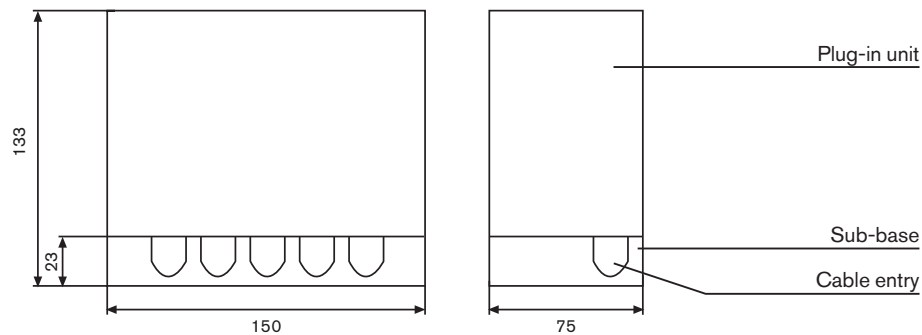
Technical data

Weishaupt valve proving system	Type	W-DK 3/01
Test label	CE-PIN	CE-0085BN0181
Mains voltage	V	230 ± 15 %
Frequency	Hz	50 or 60
Fusing	in accordance with the pre-fusing of the burner control	
Permissible ambient temperature	°C	– 10 to +60
Programmer	Order No.	109 000 0117/2
Test times		
– Pressure switch test with/without pressure	secs.	8
– Fill test section	secs.	2
– Test time with test pressure	secs.	9
Type of protection		IP40
Consumption	VA	approx. 4
Installation		optional
Weight	kg	0.790
Pressure switch	Type	GW50 A6/1
Setting range	Order No.	691 381
	mbar	5 to 50
Pressure switch	Type	GW150 A6/1
Setting range	Order No.	691 382
	mbar	10 to 150
Vent valve	Type	LGV 507/5
Nominal diameter	Order No.	605 707
Weight	R	3/4"
	kg	1.200
Leakage indicator	Order No.	151 327 8501/0
Nominal diameter	R	3/4"
Weight (without glycerine)	kg	0.875
Program controller for valve proving (to be fitted into control panel), consists of:		
"Valve proving fault", push button "Reset VP fault", programmer (only fitting and wiring)		
Space required for controller	cm ²	260

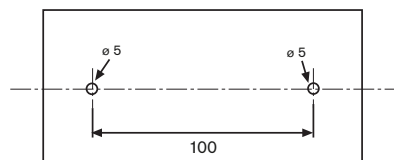
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Fitting dimensions



Dimensions (in mm)

Cause and rectification of lockouts

Time of lockout	Possible fault
Controller is closed, valve proving is not started (yellow operating lamp is not illuminated)	Check connection to terminal 12, valve proving programmer defective
Lockout at beginning of depressurised test phase, burner is switched off (lockout lamp only on, once the burner control has returned to start position)	Test pressure switch not connected correctly, test section has not been vented
Lockout during depressurised test phase, burner is switched off (lockout lamp only on, once the burner control has returned to start position)	Pressure switch switch point exceeded = pressure increase in the test section, solenoid valve V1 is not sound
Lockout immediately after the test section has been filled, burner is switched off (lockout lamp only on, once the burner control has returned to start position)	Solenoid valve V1 not opened for filling, check valve and connection; test pressure switch has not switched over, check pressure switch
Lockout during test time pressure phase burner is switched off (lockout lamp only on, once the burner control has returned to start position)	Pressure switch switch point not reached = pressure decrease in test section, leakage at valve V2, at vent valve or at the test section