SABAF S.p.A.
Via dei Carpini, 1
25035 Ospitaletto (Brescia) Italia

TECHNICAL CHARACTERISTICS

INSTRUCTIONS FOR USE, MAINTENANCE INSTRUCTIONS

MODELS 16 – 16C – 16S

2-OUTLETS MANUALLY-OPERATED GAS VALVE WITH FLAME SURVEILLANCE DEVICE FOR COOKING APPLIANCES

Gas Safety Certified		CE	
AS 4624		**EN 126 EN13611**	
models	**16 (SAI-400154)**	**models**	**16 - 16S – 16C (51CL4024)**

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GENERAL INSTRUCTIONS

Feature	Description
Type	2 - conical plug valve
applications	hot plates, ovens, grills etc
types of gas used	1st – 2nd – 3rd family
group	1
number of outlets	2
nominal diameter	8
maximum working pressure	6.5 kPa
minimum working temperature (body)	0°C
maximum working temperature (body)	80/130°C
nominal flow rate (model 16)	0.302 m³/h (test gas: air - pressure drop 125 Pa - AS 4624) 0.27 m³/h (test gas: air - pressure drop 100 Pa - EN 126)
reduced flow rate (model 16)	0.05 m³/h (test gas: air – pressure drop 125 Pa - AS 4624) 0.045 m³/h (test gas: air – pressure drop 100 Pa- EN 126)
nominal flow rate (model 16S)	0.28 m³/h (test gas: air - pressure drop 125 Pa - AS 4624) 0.25 m³/h (test gas: air - pressure drop 100 Pa - EN 126)
reduced flow rate (model 16S)	0.067 m³/h (test gas: air – pressure drop 125 Pa - AS 4624) 0.06 m³/h (test gas: air – pressure drop 100 Pa- EN 126)
opening angle of max. flow rate	180° (150° model 16S)
opening angle of min. flow rate	130° (210° model 16S)
external leak tightness	leakage ≤ 60 cc/h (1 ml/min) (air - pressure 15 kPa)
internal leak tightness	leakage ≤ 20 cc/h (0.3 ml/min) (air - pressure 15 kPa)
gas valve continued operation	40,000 cycles (EN 126 - EN 13611) 10,000 cycles (AS 4624)
Flame supervisor device continued operation	10,000 cycles (EN 126 - EN 13611) 2,000 cycles (AS 4624)
inlet gas connection	bracket, flange (see attached sheets)
outlet gas connection	see attached sheets
storage temperature range	-15°C to +50°C
hold-on current/drop-out current (safety device)	≤ 180 mA / ≥ 60 mA (version 1) ≤ 110 mA / ≥ 20 mA (version 2) ≤ 60 mA / ≥ 10 mA (version 3)
Themocouples maximum closing time	90 sec

INSTRUCTIONS FOR USE

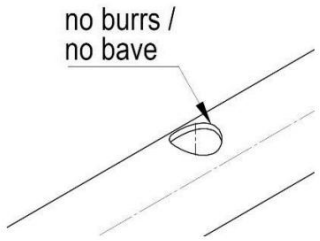
Mod 16:
To turn the valve on, simultaneously press and turn the control shaft.
Holding down the control shaft and turning it anti-clockwise allows the gas to pass to the burner.
A few seconds after the burner ignites, the thermocouple generates enough current to hold the safety magnet open. The control shaft needs no longer be pressed down.
Starting from the “closed” position (0°A), after turning the control shaft through 90° is reached the maximum flow-rate of the first outlet. The reduced flow-rate of the first outlet is reached by continuing the rotation up to 130°. The second outlet, from 0°A to 130°A remains always closed.
The valve is equipped with an interdiction device (external spring) that doesn’t allow to use, for the regulation, the interval of rotation between 130°A and 180°A.
At 180°A is reached the maximum flow-rate of both the outlets, the reduced flow-rate of both the outlets is reached by continuing the rotation up to 230°.
If the flame should accidentally go out, the thermocouple cools and the current is reduced, the safety magnet is closed and the flow of gas is blocked after a few seconds.
The valve has two adjustable perforated metering screws (by-pass) which fix the reduced flow-rate of the two outlets at a preset value when fully tightened. If a different type of gas is used, the amount of reduced flow can be adjusted by turning the by-passes beside the cap with a screwdriver.

Mod 16S:
To turn the valve on, simultaneously press and turn the control shaft.
Holding down the control shaft and turning it anti-clockwise allows the gas to pass to the burner.
A few seconds after the burner ignites, the thermocouple generates enough current to hold the safety magnet open. The control shaft needs no longer be pressed down.
Starting from the “closed” position (0°A), after turning the control shaft through 60° is reached the maximum flow-rate of the pilot outlet. The maximum flow-rate of the second outlet is reached by continuing the rotation up to 150°. The reduced flow-rate of the second outlet is reached by continuing the rotation up to 210°
If the flame should accidentally go out, the thermocouple cools and the current is reduced, the safety magnet is closed and the flow of gas is blocked after a few seconds.
The valve has one adjustable perforated metering screws (by-pass) which fix the reduced flow-rate of the outlets at a preset value when fully tightened. If a different type of gas is used, the amount of reduced flow can be adjusted by turning the by-passes beside the cap with a screwdriver.

ASSEMBLY INSTRUCTIONS

The valves are designed to be used inside the gas cooking appliances, protected from any possible infiltrations of liquid or dirt and from any atmospheric agents. The non-observance of this prescription can compromise the correct functionality and the safety of the product.
The valves are designed to be used with manifolds with different diameters using flange or bracket fastenings.
To ensure a perfect seal:

- Place an elastomer gasket between the manifold tube and the valve
- Realize, on the manifold, the seating holes according to the table “inlet variants” and ensure they are free of burrs (see following sketch)



The outlet is designed for a burner connection by pipe or injector.
To avoid damage that may compromise correct functionality of the valve, do not exceed the tightening torques listed in the table “maximum torque value”.
To avoid dirt or other material (solid or liquid) entering the appliance which may affect functionality of the valve, a suitable filter must be mounted on the manifold inlet.
The valve has to be stored and assembled in a cleaned area to avoid any contamination.
To avoid any damage on the valve, the manifold must be completely cleaned and free of burrs before the valve assembling. In order to guarantee a cleaned manifold, moreover an air blowing process, a degreasing washing system has to be considered, like an ultrasonic system.

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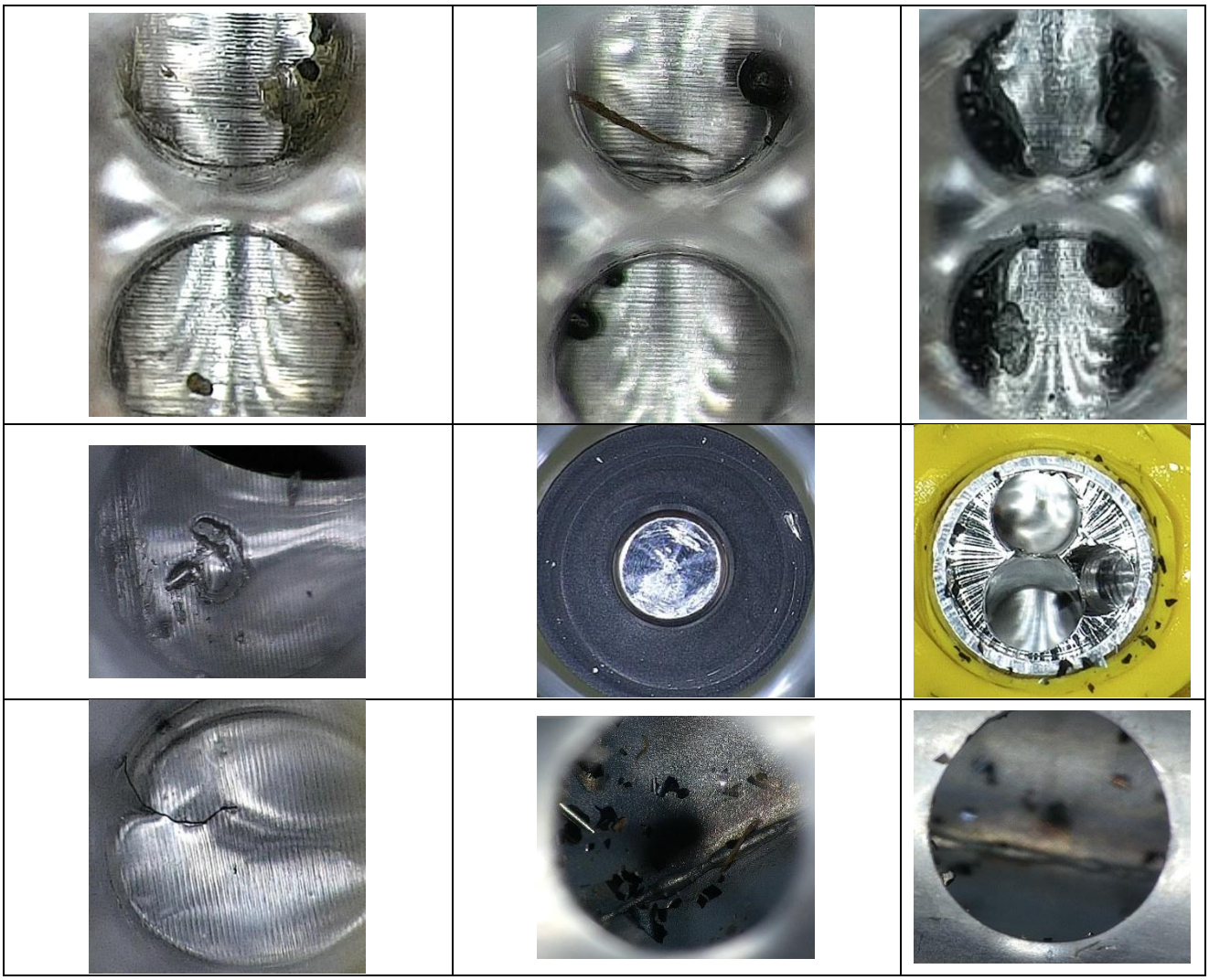
Examples of possible particles contamination that could come in the valve from the inlet compromising its functionality:



MAINTENANCE INSTRUCTIONS

Maintenance of the taps is not foreseen, in case of failure or incorrect operation replace the tap with a new one (same model and same characteristics).

NB.: Leak test should be performed using a suitable appliance. Leak test mustn't be done by means of a flame or immersion of the valve in water or other liquids. The non-observance of this prescription can compromise the correct working and the safety of the product.

SAFETY & ENVIRONMENT INSTRUCTIONS

Please note that none of our products / components contain substances that may be released intentionally during normal or reasonably foreseeable use.
The normal or reasonably foreseeable use of our items does not involve particular precautions; only for disposal at the end of their life, it is recommended not to subject the products / components to mechanical processing such as cutting or drilling, which could cause exposure to the substances contained in the products / components or their dispersion into the environment.

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VARIANTS

INLET VARIANTS

inlet	denomination		assembly		
1 -1N	single bracket	1 screw	tube diameter 14 mm	(hole diameter	8.2 mm)
2 – 2N	single bracket	1 screw	tube diameter 16 mm	(hole diameter	8.2 mm)
5 – 5N	single bracket	1 screw	tube diameter 18 mm	(hole diameter	8.2 mm)
8 – 8N	bracket	2 screws	tube diameter 18 mm	(hole diameter	8.2 mm)
9 – 9N	bracket	2 screws	tube diameter 1/2"gas	(hole diameter	8.2 mm)
13 – 13N	bracket	2 screws	tube diameter 16 mm	(hole diameter	8.2 mm)
14 – 14N	flange	2 screws	flat tube	(hole diameter	5.7 mm)
15 – 15N	bracket	2 screws	tube diameter 8 mm	(hole diameter	5.7 mm)
16 – 16N	bracket	2 screws	tube diameter 10 mm	(hole diameter	5.7 mm)
17 – 17N	bracket	2 screws	tube diameter 14 mm	(hole diameter	8.2 mm)
19 – 19N	bracket	2 screws	tube diameter 19 mm	(hole diameter	8.2 mm)
20 – 20N	bracket	2 screws	tube diameter 17 mm	(hole diameter	8.2 mm)
27 – 27N	Single bracket	1 screw	tube diameter 16 mm	(hole diameter	8.2 mm)

OUTLET VARIANTS

outlet	denomination	assembly
A	injector	injector + external thread
B	injector	injector
C	tube diameter 8 mm	compression fitting
D	tube diameter 6 mm	compression fitting
E	G ¼" gas	flared tube
F	M 14 x 1.5	flared tube
G	tube diameter 7 mm	compression fitting
H	M 16 x 1.5	flared tube
I	tube diameter 6 mm	compression fitting
J	M 6 x 0.75	flare tube
K	tube diameter 4 mm	compression fitting
L	tube diameter 7 mm	compression fitting
M	tube diameter 8 mm	compression fitting
N	tube diameter 10 mm	compression fitting
O	tube diameter 6.35 mm	compression fitting
P	tube diameter 6 mm	compression fitting
Q	tube diameter 6.35 mm	compression fitting
R	injector	injector
S	tube diameter 6 mm	compression fitting
T	tube diameter 8 mm	compression fitting
U	tube diameter 8 mm	compression fitting
V	G 1/8"	various
W	M 16 x 1.25	flared tube
Y	tube diameter 7 mm	compression fitting
X	Gc 1/8" angle 6°	various
Z	tube diameter 8 mm	compression fitting

Max. torque values:

maximum torque value		
Component	**Nm**	**lbf.in**
Nut + (olive) + tube for outlet of valves	15	133
Screws for fixing brackets	1.5	13
Injectors	4	35

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MANUFACTURING DATE CODES

MONTH	CODE
JANUARY	N
FEBRUARY	O
MARCH	P
APRIL	R
MAY	S
JUNE	T
JULY	U
AUGUST	V
SEPTEMBER	W
OCTOBER	X
NOVEMBER	Y
DECEMBER	Z

YEAR	CODE
1992	A
1993	B
1994	C
1995	D
1996	E
1997	F
1998	H
1999	I
2000	J
2001	K
2002	L
2003	M
2004	4
2005	5
2006	6
2007	7
2008	8
2009	9
2010	0
2011	1
2012	2
2013	3
2014	4
2015	5
2016	6

EXAMPLE: A COMPONENT PRODUCED IN APRIL 2004 IS MARKED

R4

Alternatively, on the component can be marked a five digit code indicating the day (first two digits), the month (third digit – according with the code in table above) and the year of production (last two digits).

EXAMPLE: A COMPONENT PRODUCED IN APRIL, 19 2004 IS MARKED

19 R 04

Alternatively, on the component can be marked a four digit code indicating the week (first two digits) and the year of production (last two digits).

EXAMPLE: A COMPONENT PRODUCED THE 14TH WEEK OF 2004 IS MARKED

1404