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

TECHNICAL CHARACTERISTICS

INSTRUCTIONS FOR USE, ASSEMBLY INSTRUCTIONS,

MAINTENANCE INSTRUCTIONS

MODEL 16C

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

		CE	
		EN 126:2012 EN 13611:2007+A1:2011 EN 437:2003 + A1:2009	
models		**models**	**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	1^{st} – 2^{nd} – 3^{rd} 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 (1^{ST} + 2^{ND} outlet – 90°)	0.50 m^3/h (test gas: air - pressure drop 100 Pa - EN 126-2012)
reduced flow rate (1^{ST} + 165°)	0.15 m^3/h (test gas: air – pressure drop 100 Pa- EN 126-2012)
opening angle of max. flow rate (1^{ST} outlet)	165°
opening angle of min. flow rate (1^{ST} outlet)	210°
Opening angle of max. flow rate (1^{ST} + 2^{ST} outlet)	90°
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 126:2012 - EN 13611:2007 + A2:2011)
Flame supervisor device continued operation	10,000 cycles (EN 126:2012 - EN 13611:2007 + A2:2011)
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

These valves can be used with pipes of various diameters and flat manifolds.
To ensure a perfect seal, place an elastomer gasket between the manifold and the valve.
Gaskets of different materials can be used for the manifold depending on the temperature reached: silicon elastomer gaskets are resistant up to 130°C (all colors except black) while nitrile elastomer gaskets are resistant up to 80°C (black gasket).

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INSTRUCTIONS FOR USE

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 both the outlets. The reduced flow-rate of the second outlet is reached by continuing the rotation up to 130°. The first outlet, from 0°A to 130°A, remains always at maximum flow-rate.
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 165°A.
At 165°A is reached the maximum flow-rate of first outlet, while the second outlet is closed. The reduced flow-rate of first outlet is reached by continuing the rotation up to 210°. The second outlet, from 165°A to 210°A, remains always closed.
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.

ASSEMBLY INSTRUCTIONS

The valves are designed to be used inside the cooking appliances, protected from any possible infiltrations of liquid or dirt and from the atmospheric agents. The non-observance of this prescription can compromise the correct working and the safety of the product.
The valves are designed to be used with manifolds of different diameters using flange or bracket fastenings.
To ensure a perfect seal, place an elastomer gasket between the ramp and the valve.
The outlet is designed for an injector or connection pipe to the burner.
To avoid damage that may compromise correct functioning of the valve, do not exceed the tightening torques listed in the attached tables.
The thermocouple must be positioned in correspondence of the burner connected with the valve's first outlet.
To avoid dirt or other material entering the equipment which may affect functioning of the valve, a suitable filter should be mounted on the manifold supply inlet.

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.

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VARIANTS

INLET VARIANTS

inlet	denomination		assembly	
1	single bracket	1 screw	tube diameter 14 mm	(hole diameter 8.2 mm)
2	single bracket	1 screw	tube diameter 16 mm	(hole diameter 8.2 mm)
5	single bracket	1 screw	tube diameter 18 mm	(hole diameter 8.2 mm)
8	bracket	2 screws	tube diameter 18 mm	(hole diameter 8.2 mm)
9	bracket	2 screws	tube diameter 1/2"gas	(hole diameter 8.2 mm)
13	bracket	2 screws	tube diameter 16 mm	(hole diameter 8.2 mm)
14	flange	2 screws	flat tube	(hole diameter 5.7 mm)
15	bracket	2 screws	tube diameter 8 mm	(hole diameter 5.7 mm)
16	bracket	2 screws	tube diameter 10 mm	(hole diameter 5.7 mm)
17	bracket	2 screws	tube diameter 14 mm	(hole diameter 8.2 mm)
19	bracket	2 screws	tube diameter 19 mm	(hole diameter 8.2 mm)
20	bracket	2 screws	tube diameter 17 mm	(hole diameter 8.2 mm)
27	bracket	2 screws	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 1/4”	flared tube
F	M 140 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	injector
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

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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
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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