

# TECHNICAL CHARACTERISTICS INSTRUCTIONS FOR USE, ASSEMBLY INSTRUCTIONS, MAINTENANCE INSTRUCTIONS



MODEL 52 – 52X

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

Gas Safety Certified		CE	
AS 4624 - 2005			EN 126:2012 EN 13611:2007
models	52 – 52X (SAI-400154)	models	52 – 52X (51CQ4632)

Model 52-52X
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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	1
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	0.36 m <sup>3</sup> /h (test gas: air - pressure drop 125 Pa - AS 4624-2005)
(except inlet variants 15-16)	0.32 m <sup>°</sup> /h (test gas: air - pressure drop 100 Pa - EN 126-2012)
nominal flow rate	0.14 m <sup>3</sup> /h (test gas: air - pressure drop 125 Pa - AS 4624-2005)
(inlet variants 15-16)	0.13 m <sup>°</sup> /h (test gas: air - pressure drop 100 Pa - EN 126-2012)
reduced flow rate	0.067 m3/h (test gas: air - pressure drop 125 Pa - AS 4624-2005)
	0.06 m3/h (test gas: air - pressure drop 100 Pa - EN 126-2012)
opening angle of max. flow rate	
opening angle of min. flow rate	160°
external leak tightness	leakage ≤ 60 cc/h (1 ml/min) (air - pressure 15 kPa)
internal leak tightness	leakage $\leq$ 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)
	10,000 cycles (AS 4624 – 2005)
Flame supervisor device continued	10,000 cycles (EN 126:2012 - EN 13611:2007 + A2:2011)
operation	2,000 cycles (AS 4624 – 2005)
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	≤ 180 mA / ≥ 60 mA (version 1)
(safety device)	≤ 110 mA / ≥ 20 mA (version 2)
	<u>&lt; 60 mA / &gt; 10 mA (version 3)</u>
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 150°C while nitrile elastomer gaskets are resistant up to 80°C.

(See the table of manifold connection diagrams)

To avoid dirt or other material entering the equipment which may affect functioning and safety of the thermostat, a suitable filter should be mounted on the manifold supply inlet.



## **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.

When it's indicated on the assembly drawing the ignition of the valve can only be done with the spindle in 90°A position.

Maximum flow-rate is reached after turning the control shaft through 90°; reduced flow-rate is reached by continuing the rotation up to 160°.

The gas valve can be equipped with one or more microswitches, which can be firmly fastened by means of a metal staff. The microswitches are activated by simply pushing the spindle inward or by rotation of the spindle – see table 1.

As regards the gas valve model 52 X variant (cap marked X), the control shaft can be also turned 90° clockwise, without any passing of gas, to operate one or more microswitches.

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 an adjustable perforated metering screw (by-pass) which fixes the reduced flow-rate 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-pass beside the cap with a screwdriver.

TABLE 1 - MICROSWITCH CHARACTERISTICS		
Nominal tension	250 V	
Method for operation	push-button	
Max. operating temperature	125 °C	
Contact distance	small – standard	
Protection level	IP00	
Insulation class	1	
Pollution situation	standard	
Heat-resistance	category D	
Tracking index	PTI250	

Microswitches approved by UL and/or AGA/CSA.

## **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.

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	denomina	ation	asse	embly	
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	single bracket	1 screw	tube diameter 16 mm	(hole diameter	8.2 mm)

## **OUTLET VARIANTS**

outlet	denomination	assembly	
A	injector	injector + external thread	
В	injector	injector	
С	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	
Н	M 16 x 1.5	flared tube	
	tube diameter 6 mm	compression fitting	
K	tube diameter 4 mm	compression fitting	
J	injector	injector	
L	tube diameter 7 mm	compression fitting	
М	tube diameter 8 mm	compression fitting	
N	tube diameter 10 mm	compression fitting	
0	tube diameter 6.35 mm	compression fitting	
Р	tube diameter 6 mm	compression fitting	
Q	tube diameter 6.35 mm	compression fitting	
R	injector	injector	
S	tube diameter 6 mm	compression fitting	
Τ	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	
Х	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	



	MANUFACTU	RING
MONTH	CODE	
JANUARY	N	
FEBRUARY	0	
MARCH	Р	
APRIL	R	
MAY	S	
JUNE	Т	
JULY	U	
AUGUST	V	
SEPTEMBER	W	
OCTOBER	X	
NOVEMBER	Y	
DECEMBER	Z	

DATE CODES		
YEAR	CODE	
1992	A	
1993	В	
1994	С	
1995	D	
1996	E	
1997	F	
1998	Н	
1999	I	
2000	J	
2001	K	
2002	L	
2003	М	
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 14<sup>TH</sup> WEEK OF 2004 IS MARKED

1404