


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



**MODEL 18 - 18X - 18XM – 18M**

**2-OUTLETS MANUALLY-OPERATED GAS VALVE WITH FLAME SURVEILLANCE DEVICE**

 Gas Safety Certified			
<b>AS 4624</b>		<b>EN 126 EN13611</b>	
models	18 - 18X – 18XM - 18M (SAI-400154)	models	18 - 18X - 18XM – 18M (51CL4024)

## GENERAL INSTRUCTIONS

Feature	Description
type	2 - conical plug valve
applications	hot plates, ovens, grills etc.
types of gas used	1 <sup>st</sup> – 2 <sup>nd</sup> – 3 <sup>rd</sup> 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° & 2° output max – 90° A)	0.29 m <sup>3</sup> /h (test gas: air - pressure drop 125 Pa - AS 4624) 0.26 m <sup>3</sup> /h (test gas: air - pressure drop 100 Pa - EN 126)
Reduced flow rate (1° outlet min – 230°A)	0.056 m <sup>3</sup> /h (test gas: air - pressure drop 125 Pa - AS 4624) 0.05 m <sup>3</sup> /h (test gas: air - pressure drop 100 Pa - EN 126)
opening angle of max. flow rate	90°A
opening angle of min. flow rate	230°A
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

If applicable,

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	I
Pollution situation	standard
Heat-resistance	category D
Tracking index	PTI250

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).

## 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, by continuing the rotation up to 160° is reached the maximum flow-rate of the first outlet and the reduced flow-rate of the second outlet. At 200°A 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 230°. The second outlet, from 200°A to 230°A, remains always closed.

The valves model 18X are equipped with an interdiction device (external spring) that doesn't allow to use, for the regulation, the interval of rotation between 160°A and 200°A.

The valves model 18X, M variant (valves model 18XM) aren't equipped with an interdiction device (external spring)

If the valve has a microswitch, press down on the control shaft activating the microswitch which drives the thermoelectric lighting device (see table 1).

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.

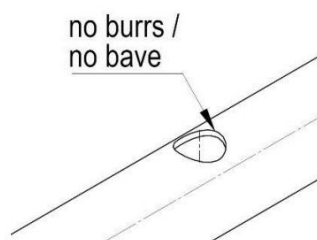
## ASSEMBLY INSTRUCTIONS

**The valves are designed to be used inside the 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.

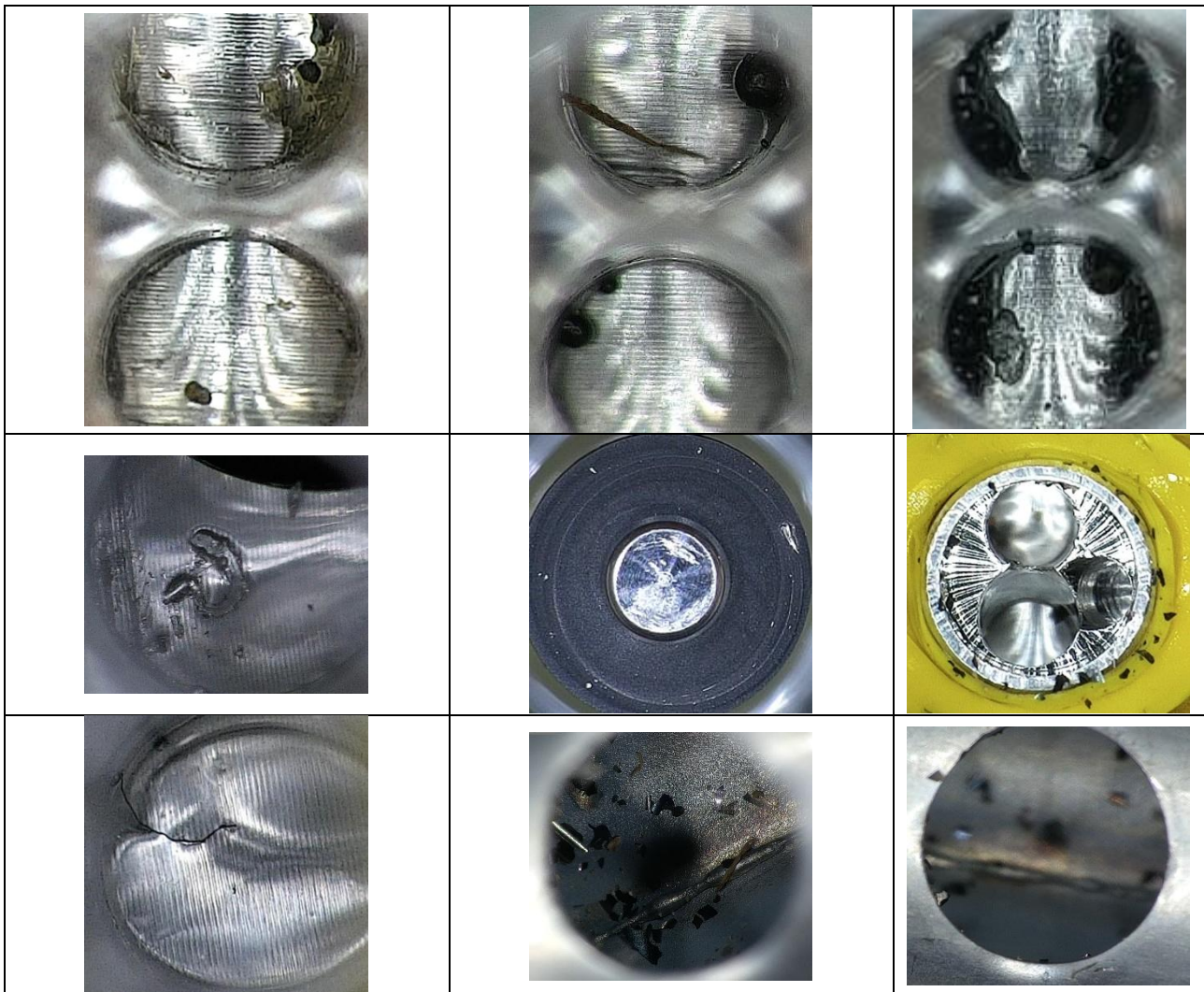
To avoid damage that may compromise correct functionality of the valve, do not exceed the tightening torques listed in the table "maximum torque value".

**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.**

*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.

**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)
3 - 3N	bracket 1 screw	tube diameter 16 mm (hole diameter 8.2 mm)
4 - 4N	bracket 1 screw	tube diameter 16 mm (hole diameter 8.2 mm)
4a - 4aN	bracket 2 screws	tube diameter 16 mm (hole diameter 8.2 mm)
5 - 5N	single bracket 1 screw	tube diameter 18 mm (hole diameter 8.2 mm)
6 - 6N	bracket 1 screw	tube diameter 18 mm (hole diameter 8.2 mm)
7 - 7N	bracket 1 screw	tube diameter 18 mm (hole diameter 11 mm)
8 - 8N	bracket 1 screw	tube diameter 18 mm (hole diameter 8.2 mm)
8a - 8aN	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)
10 - 10N	bracket 1 screw	tube diameter 1/2"gas (hole diameter 8.2 mm)
11 - 11N	bracket 1 screw	tube diameter 1/2"gas (hole diameter 8.2 mm)
12 - 12N	bracket 2 screws	tube diameter 15 mm (hole diameter 8.2 mm)
13 - 13N	bracket 2 screws	tube diameter 16 mm (hole diameter 8.2 mm)
13a - 13aN	bracket 2 screws	tube diameter 14 mm (hole diameter 8.2 mm)
13b -13bN	single bracket 1 screw	tube diameter 16 mm (hole diameter 8.2 mm)
14	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	bracket 2 screws	tube diameter 16 mm (hole diameter 6.2 mm)
17a	bracket 2 screws	tube diameter 16 mm (hole diameter 6.2 mm)
18 - 18N	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)
21 - 21N	single bracket 1 screw	tube diameter 8 mm (hole diameter 5.7 mm)
22 - 22N	single bracket 1 screw	shaped tube (hole diameter 8.2 mm)

**OUTLET VARIANTS**

outlet	denomination	assembly
A	injector	injector + external thread
B	injector	injector
C	tube diameter 6.35 mm	compression fitting
D	tube diameter 6.35 mm	compression fitting
E	G 1/4"gas	flared tube
F	M 14 x 1.5	flared tube
G	M 15 x 1.5	flared tube
H	M 16 x 1.5	flared tube
I	tube diameter 6 mm	compression fitting
L	tube diameter 7 mm	compression fitting
M	tube diameter 8 mm	compression fitting
N	tube diameter 8 mm	compression fitting
O	M 12 x 1	flared tube
P	tube diameter 9.525 mm	compression fitting
R	injector	injector
S	tube diameter 7 mm	compression fitting
T	tube diameter 6 mm	compression fitting
W	M 16 x 1.25	flared tube

Max. torque values:

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

MANUFACTURING DATE CODES			
MONTH	CODE	YEAR	CODE
JANUARY	N	1992	A
FEBRUARY	O	1993	B
MARCH	P	1994	C
APRIL	R	1995	D
MAY	S	1996	E
JUNE	T	1997	F
JULY	U	1998	H
AUGUST	V	1999	I
SEPTEMBER	W	2000	J
OCTOBER	X	2001	K
NOVEMBER	Y	2002	L
DECEMBER	Z	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 14<sup>TH</sup> WEEK OF 2004 IS MARKED

**1404**