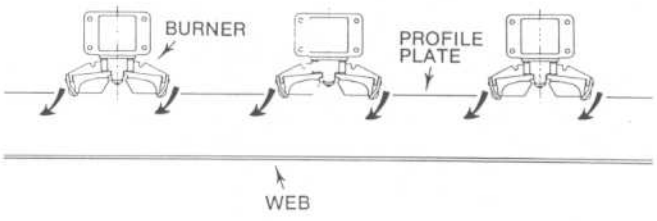
SPECIFIC INSTALLATION INSTRUCTIONS FOR MAXON SERIES INFRAWAVE® BURNER SYSTEM

Before reading following "installation instructions" please refer to the "general instructions" on burner system installation, piping lay out, pipe size and manifolding, electrical installation and burner installation.

SPECIFICALLY :

INFRAWAVE® burners work on the radiation principle. This means that the generated heat is transferred by radiation, however, only partly! Due to the high temperature of the "bricks", heat is conducted to the burner body, specifically when firing down. This heat together with convection heat should be carried away by means of moving air. Where necessary, install profile plates along side burner to force ventilation air as close to burner as possible.



AMBIENT TEMPERATURE

Do not expose the burner to an ambient temperature over 400° C. Hot convection gases should be forced away to avoid damage to the burner and its accessories such as spark ignitor, flame detection equipment etc.

INFRAWAVE® burner grids must be cured before being taken to high fire.

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After this process has taken place, the refractory grids may be fired in the normal manner without negative side effects.
Failure to cure the refractory grids in this manner may result in cracking and quick erosion of the grids, which results in shortened burner life.

SPECIFIC START-UP INSTRUCTIONS RADIANT BURNERS INFRAWAVE®

Instructions provided by the company responsible for the manufacture of a complete system incorporating Maxon burners take precedence over the installation and operating instructions provided by Maxon. If any of the instructions provided by Maxon are in conflict with local codes or regulations, please contact our nearest branch office or representative.

Before initiating the following start-up and adjustment procedure, **IT IS IMPORTANT** that a check be made to verify that all of the equipment associated with and necessary to the operation of the "INFRAWAVE®" burner system has been installed and piped in accordance with the "Specific Installation Instructions" (page 1.600.4.1). If the burner system is part of a complete system or other heating unit which has been purchased as a complete prepiped and prewired package, it may be assumed that these instructions have already been carried out by the company responsible for the overall installation.

Before starting the burner and proceeding with the adjustment of various regulators, controls, etc. first read:

Page	0.000.4.1–4.2	General instructions
	0.000.4.9	Blowers and blower-mixers if used
	1.600.4.1	Specific installation instructions
	0.000.6.1–6.2	General start-up instructions
	3.200.6.1 3.300.6.1	MULTI-RATIO® mixers or,
	4.100.6.1 4.200.6.1	Adjustment instructions for MICRO-RATIO®/SYNCHRO® valves

INTRODUCTION

The INFRAWAVE® radiant burner is a fully-premixed gas burner. It is therefore essential that a minimum differential mixture pressure of 0.5 mbar is available at all times to prevent flash-back.

1. Follow general start-up instructions.
2. Measure minimum differential mixture pressure in the burner and make sure it is not less than 0.5 mbar for natural gas firing. For other gases consult Maxon.
3. Adjust air/gas valve combination through operating range between 0.5 and 25 mbar, making sure that flame is still stable over the full length of the burner at maximum capacity.
4. Check if burner works correctly under normal operating conditions. The temperature (radiation efficiency) of the burner will be affected by the adjusted gas/air ratio!
5. This burner may run hot so check if flame rod or UV-cell are sufficiently cooled to function properly.

MAINTENANCE AND SPARE PARTS

Maxon INFRAWAVE® burners are of a rugged industrial design. However, the ceramic **grids** of the burner are **fragile** and care must be taken during storage, handling and installation to avoid damage or any foreign matter falling onto the burner.
Once installed, the burner will require relatively little maintenance.

TO REPLACE THE REFRACTORY BAFFLE GRIDS

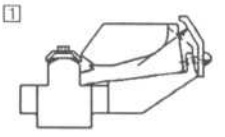
Proceed as follows:

1. Apply penetrating oil to grid clamp screws and allow to stand for a few minutes. If still tight, tap with a hammer to loosen.
2. Unscrew grid clamp screws sufficiently so that grid clamp may be tilted back to clear refractory grids as shown in sketch [1].
3. Remove broken grid section and any remaining fragments as shown in sketch [2].
4. Insert replacement grid and return grid clamp to original position holding grid firmly against grid support.
5. Centre grids on each grid clamp section so they do not overlap, then retighten grid clamp screws firmly.

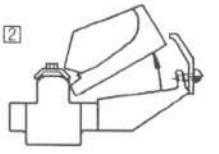
ROUTINE CHECK

1. Check the condition of the deflector rails.
2. Check the condition of the refractory grids.
3. Check the condition of the grid clamps.
4. Check if the mixture gas ports are clean and free from dirt.
5. If necessary, replace the refractory baffle grids as indicated below.

[1]



[2]



SUGGESTED SPARE PARTS

Assembly no.	Description
310457	Deflector rail - Stainless
028341	Grid clamp - Stainless
018117	Flame rod
[1]	Grid support
[1]	Baffle grid

[1] *See component identification*

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SPARK IGNITORS

Part no.	For use with :	
	single grid assemblies	Double grid assemblees
018110	054599	054604
	054601	054606
	054600	054605
	054602	054607
	054603	054608
018118	027405	027404
023739	–	054615
	054589	054594
	054609	054612
	054591	054596
		054616
	054590	054595
	054610	054613
	054592	054597
	054611	054614
	054593	054598

COMPONENT IDENTIFICATION

MODIFIED TO METRIC 1992

No	Part no	Description	Quantity per 300 mm section	
			SG	DG
1	054546	6" straight manifold	2	2
	054545	6" bottom inlet manifold	2	2
	054544	12" straight manifold	1	1
	054543	12" bottom inlet manifold	1	1
	054542	12" side inlet manifold	1	1
2	053522	6" body SG	2	—
	053524	6" body DG	—	2
	053523	12" body SG	1	—
	053525	12" body DG	—	1
3	054548	Grid support (full)	2	4
	054549	Grid support for pilot	—	—
	054550	Grid support for FR/UV	—	—
	054551	Grid support for SI	—	—
4	028341	Grid clamp 310 SS	2	4
5	024586	Baffle grid	2	4
	025898	Baffle grid for pilot	—	—
	027481	Baffle grid for FR/SI	—	—
6	310457	Deflector rail 310 SS	2	2
7	370151	Hex head screw M6 x 10 SS	8	8
8	370151	Hex head screw M6 x 10 SS	8	8
9	370189	Hex head cap screw M6 x 12	4	8
10	370027	Hex head screw M6 x 16	8	8
11	370147	Hex head screw M8 x 30	4	4
12	370023	Hex nut M8	4	4