

RSP BURNER

The 'RSP' series of gas burners are pre-packaged fan assisted units designed to suit virtually all types of low temperature gas fired application; typical applications include the firing of industrial ovens and dryers.

The RSP can be fitted into process air ducts having air velocities of 5 to 25m/sec. (recommended = 7.5m/sec)
- Air flow should be uniform across the air duct, both upstream and downstream of the burner.

- ◆ **The burners can be installed in a process plant recirculation system were it is not possible to construct a combustion chamber and install a conventional type of burner assembly.**

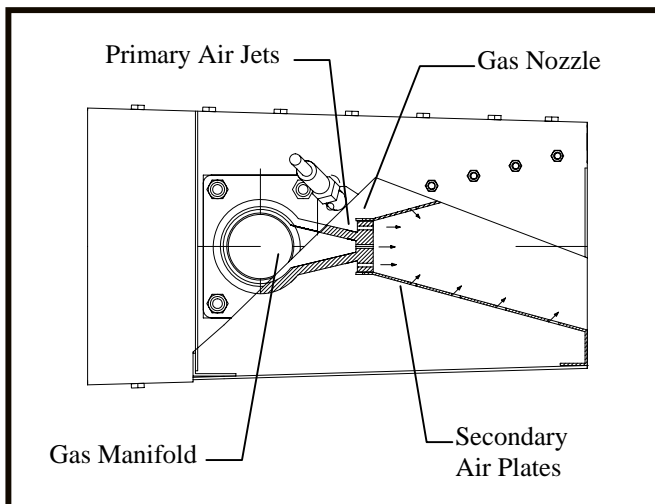
The 'RSP' burners consist of an 'in-line PH' type combustion head mounted on a sideplate so as to fire parallel to the sideplate in the direction of air flow.

All the air required for combustion is supplied by a combustion air fan mounted on the outside of the sideplate - air is passed to the burner head via an integral air duct.

Process air temperatures up to 400C can be accepted upstream of the burner - downstream temperatures should be limited to 700C

A heat resistant viewing window and small access plate is fitted into the sideplate and allows visual inspection of the flame during operation.

The nozzle mix design of the burner and the progressive air mixing feature of the combustion head ensure that burners can operate with high turn down capability; turndown ratios up to 40:1 are possible depending on burner applications and selection.



PREPACKAGED ASSEMBLIES

Each burner unit is supplied with a packaged and pre-piped valve assembly, including the safety valves and controls necessary to form a fully pre-packaged combustion module.

All burners have an integral combustion air pressure switch, ignition spark plug and flame sensor; all the electrical components on the burner are pre-wired to a terminal enclosure mounted on the burner assembly.

The electrical terminal enclosure would normally be fitted with burner run and flame failure indication lights.

Burners are normally supplied complete with a gas valve assembly consisting of pilot/start valve assembly, safety shut off valves, pressure switches and governors; the exact type of valve assembly will depend on the application and the country of installation.

Burners are normally fitted with complete prewired automatic ignition and flame safety equipment.

Most types of flame failure and automatic ignition control units can be supplied; utilising either flame rectification or ultra-violet flame sensing equipment. Burners can be supplied with extra large control consoles containing special control gear and switchgear to suit the requirements of any specific application; burners can be supplied with special valve arrangements; burners are supplied with left handed (SF) valve assemblies unless otherwise specified.

Fully pre-built burner packages are fully tested and the operation of all components checked before despatch from the factory.

SPECIAL APPLICATIONS

The standard range of RSP burners are designed to be installed on the suction (negative) side of the oven/dryer process air fan.

Burners can be supplied fitted with higher pressure combustion air fans so that burners can be installed on the pressure side of the process air fan..

Burners supplied for installation into positive chamber/duct pressures are fitted with a three way solenoid valve system designed to ensure correct supervision of the combustion air fan pressure switch.

GAS SUPPLY

Series RSP burners can be supplied for operation on natural or LP gases and are available in a wide range of

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NOTICE: Ordan practices a policy of continuous improvement in the design of its products. It reserves the right to change the specifications at any time without prior notice.

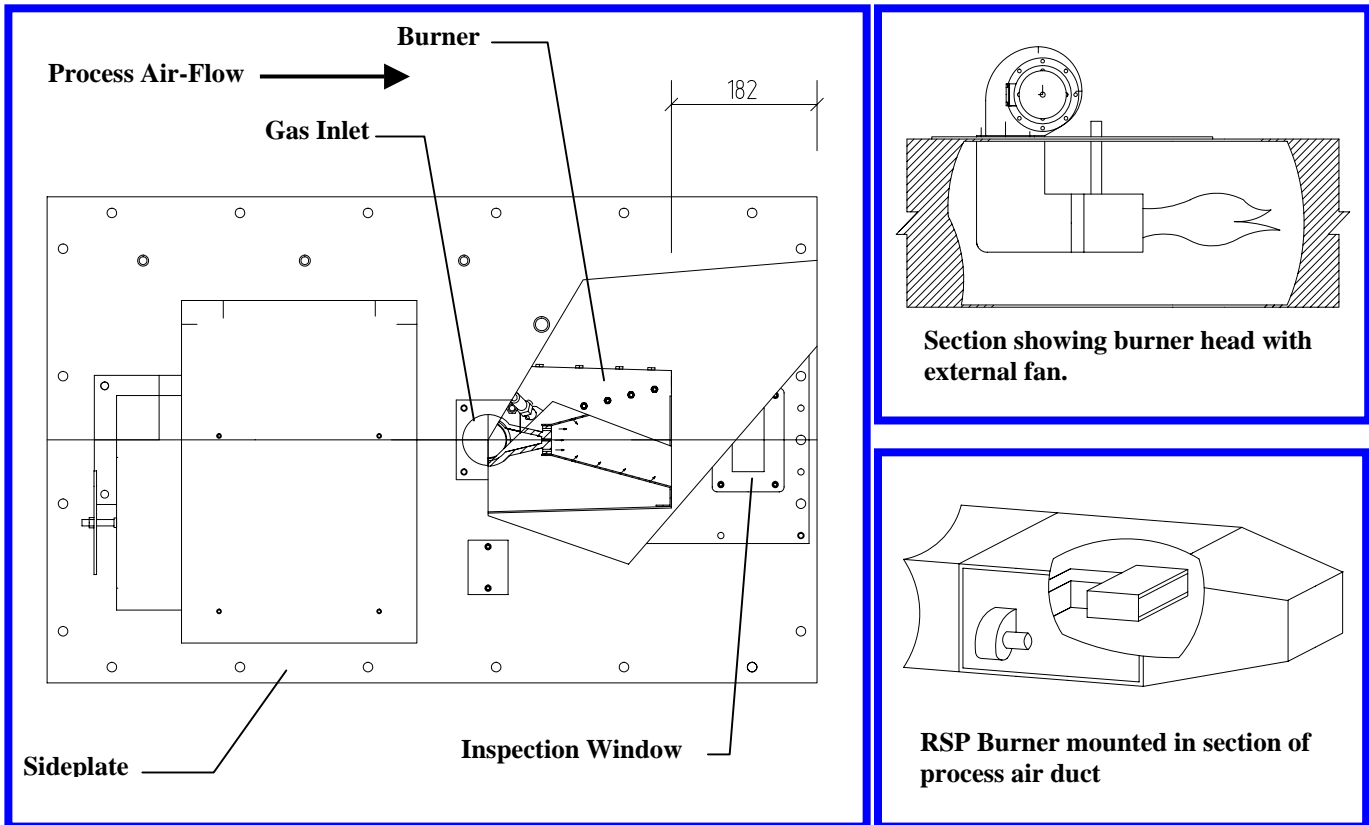
sizes and shapes, ranging from nominal thermal capacities of 150KW to more than 20MW.

All valve assemblies on the burners are sized to suit an inlet gas pressure of 17.5 mbar (natural gas) or 30mbar (LP gases) unless otherwise specified. Burners can be supplied to suit other gas types and supply pressures.

The control valves can be fitted with all types of control motor to accept all types of input control signal.

ELECTRICAL SUPPLY

Because RSP burners are generally installed into



BURNERS FOR HIGH TEMPERATURES

Standard RSP burners are supplied with un-insulated sideplates; when burners are required for high oven temperatures the sideplate can be insulated.

Insulation is of a high quality type with excellent insulation properties; insulation thicknesses of either 100mm or 150mm can be supplied.

To prevent ingress of insulation material in to the process air stream the insulation is completely clad and welded to the sideplate with stainless steel.

TYPES OF CONTROL AVAILABLE

RSP burners can be supplied suitable for high-low control operation; however the majority of burners are supplied as fully modulation controlled units.

Burners are normally fitted with electrical motorised butterfly valves although other types of control valve can be fitted when required (e.g. pneumatic).

industrial process plants were reliability and easy maintenance is an important feature, RSP burners are fitted with combustion air fans fitted with industrial quality three phase electric motors.

Burners can be supplied to suit almost all types of electrical power supply; including all common industrial three phase (50 or 60Hz) power supplies and with 110/120v or 220/240v control circuits. Burners to suit other electrical supply voltages can be supplied.

USEFUL FACTS TO ASSIST IN BURNER SELECTION.

1KW = 3412 Btu.hr = 859Kcal.hr = 3.6MJ.hr.

1mbar = 0.4" w.c. = 10mm w.c. = 100Pa.

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PRODUCT INFORMATION SHEET

THERMAL CAPACITIES OF TYPE RSP PROCESS GAS BURNERS (CAPACITIES ARE NOMINAL FOR BURNERS RATED AT 293kW per 304mm)

Burner Size	BTU/hr	KW	MJ/hr	Kcal/hr
50	500,000	146	525	125,000
100	1,000,000	293	1054	250,000
150	1,500,000		1580	375,000
200	2,000,000	586	2109	500,000
250	2,500,000	732	2635	625,000
300	3,000,000	879	3164	750,000
350	3,500,000	1025	3690	875,000
400	4,000,000	1172	4219	1,000,000
450	4,500,000	1318	4744	1,125,000
500	5,000,000	1465	5274	1,250,000
550	5,500,000	1611	5799	1,375,000
600	6,000,000	1758	6328	1,500,000
650	6,500,000	1905	6858	1,625,000
700	7,000,000	2051	7383	1,750,000
750	7,500,000	2198	7912	1,875,000
800	8,000,000	2344	8438	2,000,000
850	8,500,000	2491	8967	2,125,000
900	9,000,000	2637	9493	2,250,000

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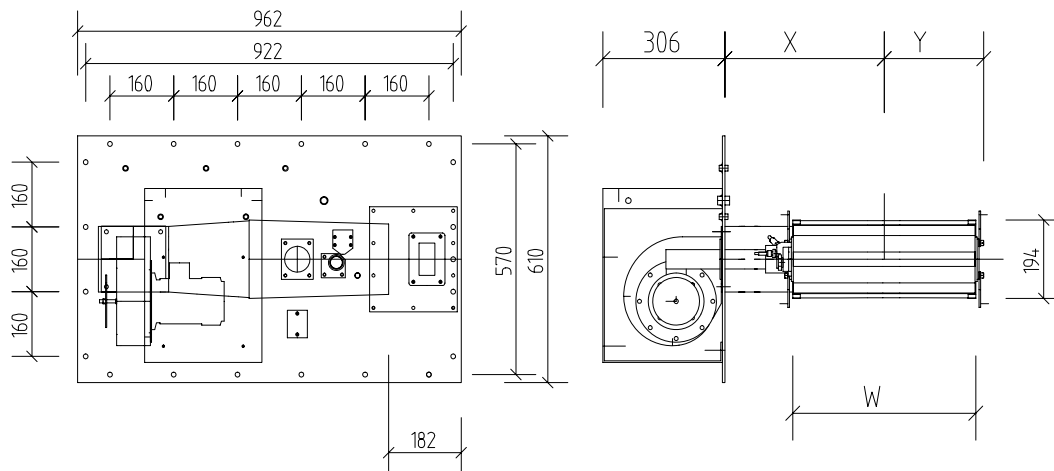
GENERAL DIMENSIONS OF TYPE RSP PROCESS GAS BURNERS BASIC DIMENSIONS OF BURNER SIZES 50RSP to 200RSP

BURNER TYPE	W	Y	X	OPTIONAL 'X' DIMENSIONS AVAILABLE ON REQUEST						
50RSP	155	98	300	250	350	400	450	500	550	600
100RSP	307	174	300	350	400	450	500	550	600	650
150RSP	459	250	400	450	500	550	600	650	700	750
200RSP	611	326	500	550	600	650	700	750	800	850

All dimensions are in mm.

NOTE - FIXING HOLES IN FLANGES ARE DRILLED 12mm DIA.

NOTE - DRAWING DOES NOT SHOW VALVE ASSEMBLY & CONTROLS ETC.



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