Honeywell
ECLIPSE

Packaged burner systems HeatPak

TECHNICAL INFORMATION

- Robust burner design for applications in industry
- Easy to install thanks to compact design and complete pre-assembly and pre-wiring
- Various options for temperature control signals ensure easy integration into existing control systems
- Large temperature range
- Direct Ignition and flame control
- Large capacity range up to 1100 kW (3.9 MMBtu/h)
- Preset for safe ignition

EAC

EN
Edition 02.24

Contents

1 Application

The compact burner systems HeatPak are completely pre-assembled and pre-wired burner packages based on the time-tested Eclipse air heating burners RatioAir and RatioMatic. The burner systems are designed for industrial applications and comprise an integrated combustion air fan, a gas safety and control system and a burner control unit. Typical applications include drying systems, hot air generation or process gas heating.

Their compact design enables simple conversions of existing systems and initial installations to be completed within a very short time.

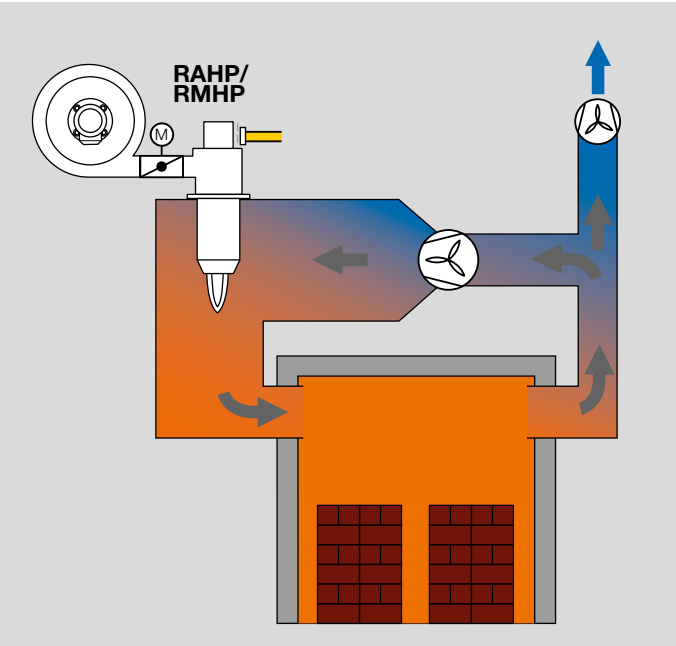
The RatioAir HeatPak RAHP and the RatioMatic HeatPak RMHP are controlled in a pneumatic ratio control system (modulating air/gas ratio control). The RMHP features a patented burner head with a baffle plate which creates a very stable, uniform flame. This makes it possible to create fewer emissions with low process temperatures and shorter flame lengths. The RMHP is available in all design sizes with a flame rod. The RatioAir HeatPak RAHP operates with the ThermJet excess air head for higher turndown and greater flexibility. Depending on the application, the RAHP is available with a straight or tapered burner tube.

More detailed information on the RatioAir and RatioMatic burners is available in the relevant documentation in the Docuthek.

The burner control unit BCU takes charge of the control, ignition and monitoring of the burner in the HeatPak packaged burner systems. Various solutions can be configured.

1.1 Application examples

1.1.1 Recirculating air heating



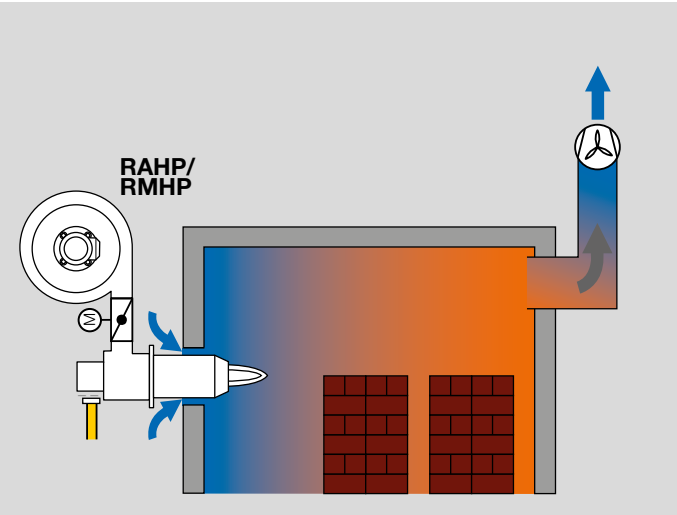
For a recirculating, direct fired system, the burner is continuously supplied with fresh air.

The flue gases are returned and reheated. At least the same volume of air must be discharged as is supplied.

Thanks to this direct firing system, optimal utilization of the heat generated is possible, e.g. in directly heated drying systems.

Maximum inlet temperature: 20 to 150°C, maximum outlet temperature: 250 to 500°C.

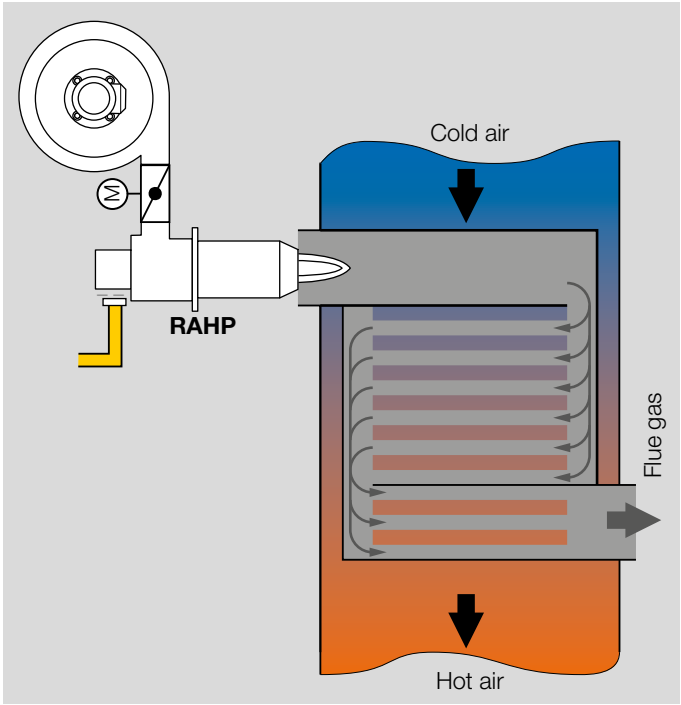
1.1.2 Static (non-recirculating) air heating



For a non-recirculating, direct fired system, the process is continuously supplied with fresh air.

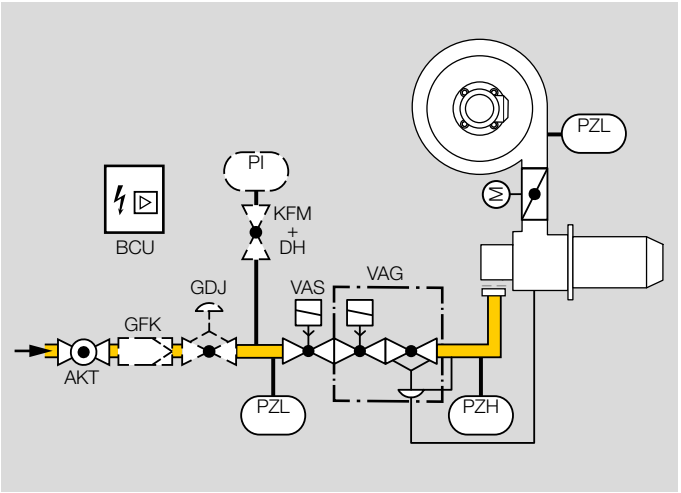
Flue gases are vented straight to a safe area.

1.1.3 Indirect heating



HeatPak fires into the combustion chamber which heats the process medium indirectly via a heat exchanger. This applies for applications in which combustion gases must be kept separate from the product, e.g. for hot air generation or process gas heating.

1.1.4 Modulating air/gas ratio control



The burner capacity is controlled in modulating mode by adjusting the air butterfly valve in the air circuit. The air/gas ratio control regulates the ratio of gas to air.

As an option, the gas pressure control system can be supplied with a gas filter GFK, a pressure gauge with capsule element KFM with manual cock DH and a gas pressure regulator GDJ.

2 Certification

2.1 Eurasian Customs Union

EAC

The products HeatPak meet the technical specifications of the Eurasian Customs Union.

2.2 Declaration of Incorporation pursuant to the Machinery Directive

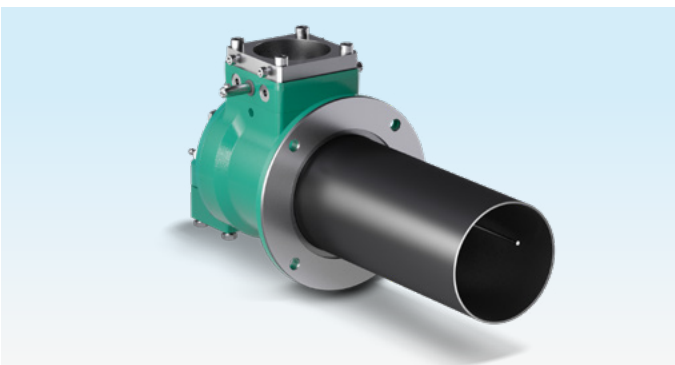
The HeatPak complies with the requirements of EN 746-2, the Machinery Directive 2006/42/EC and all the provisions of the Low Voltage Directive 2014/35/EU. This is confirmed by the manufacturer's Declaration of Incorporation.

3 Mechanical construction

The HeatPak is a completely pre-assembled and pre-wired packaged burner. With its mounted fan, gas safety system, gas control system and burner control unit, the burner constitutes a coordinated system. Thanks to its compact design, both conversion of existing systems and initial installation can be implemented within a very short time.

3.1 Burner

The burner is made up of three parts: burner body, burner insert and burner tube.



The entire HeatPak is fastened to the furnace using the burner body. The burner body accommodates the burner insert and the burner tube, and routes the combustion air.

3.2 Burner insert

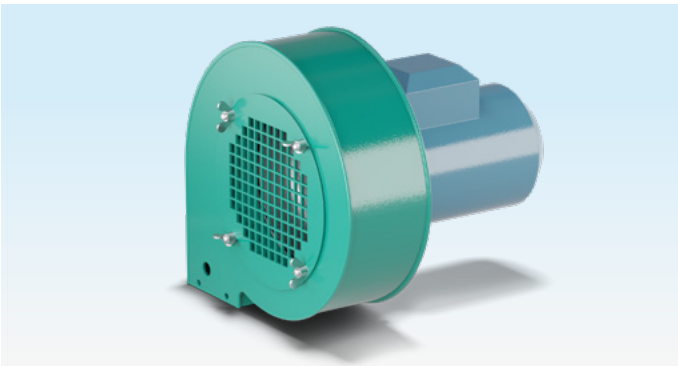
RAHP

RMHP

There are two different burner inserts, depending on the type of HeatPak. The RMHP features a patented burner head with a baffle plate which creates a very stable, uniform flame. The RAHP operates with an excess air head for higher turndown and greater flexibility. The fuel gas is supplied to the burner head via the gas connection and the gas

connector. The burners are nozzle-mixing burners. Gas and air are mixed only once they are in the burner head. This prevents explosive gases from being generated in the pipelines. Spark electrode and flame rod are screwed into the connection flange and can be replaced without removing the burner insert.

3.3 Fan



On the HeatPak, the fan is flange-mounted directly onto the burner body air connection. No other complex pipework is required. A pressure switch fitted to the fan housing acts as the low air pressure protection device in accordance with the requirements of EN 746-2. A fan filter can be installed as an option and is available separately, see page 18 (7.1 Fan filter).

3.4 Actuator

The actuator for controlling the capacity is an IC 20. The IC 20..T or IC 20..E are available as options to allow a three-point step or analogue control. During the start of the HeatPak module, the motor is actuated by the burner control unit. Following controller enable, the motor can be actuated by the temperature controller of the process heating system. Further information can be found in TI Actuator IC 20 at www.docuthek.com.

3.5 Gas control system

The HeatPak comprises a complete gas control system to comply with the requirements of EN 746-2. The RAHP and RMHP are controlled by a pneumatic ratio control system using a modulating air/gas ratio control. The gas control system can be configured variably.

Versions are available in the form of 3D models in the Docuthek, see valVario VAx/VCx 1 to 3, document type: CAD data (2D/3D), www.docuthek.com (login required).

3.5.1 HeatPak with BCU 570

In this configuration, the burner control unit BCU 570 which is required for control, ignition and monitoring of the burner is accommodated on a panel mounted to the burner. All electrical burner components are pre-wired to this panel. An operator-control unit OCU 500 and all the switching devices required for burner operation, such as control and safeguarding of the fan motor and the ignition unit are accommodated on the panel. The BCU 570 can be optionally expanded using a bus module BCM 500. This allows communication, control and visualization via PROFINET.

Further information can be found in TI Burner control unit BCU 570 at www.docuthek.com.

3.5.2 HeatPak with BCU 370

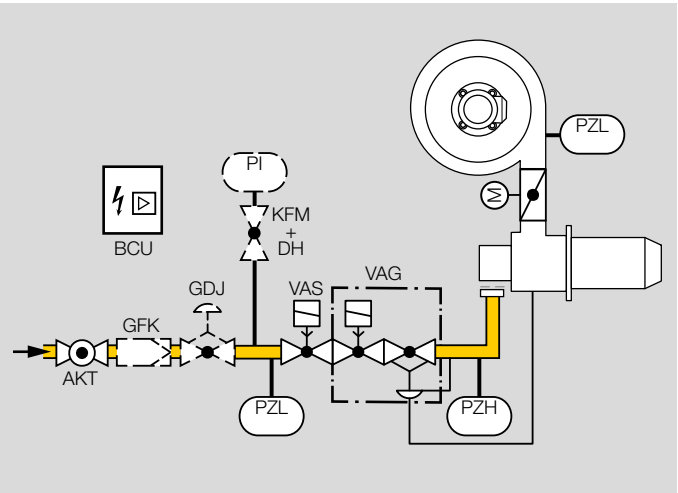
In this configuration, a burner control unit BCU 370 is mounted directly to the burner for control, ignition and monitoring of the burner. All electrical components, apart from the fan motor, are directly wired to the BCU 370. Control and fusing of the fan motor is to be provided by the customer. The BCU 370 is also available with a bus interface as an option. This allows communication, control and visualization via PROFIBUS.
Further information can be found in TI Burner control unit BCU 370 at www.docuthek.com.

3.5.3 HeatPak with terminal box

In this configuration, all electrical components are pre-wired to a terminal box which is mounted to the burner. The burner control unit and switching devices necessary for the control, ignition and monitoring of the burner are to be provided by the customer.

4 Function

4.1 RAHP or RMHP with modulating air/gas ratio control



The burner control unit BCU actuates the fan and pre-purge is carried out in the combustion chamber. After pre-purge, the air butterfly valve moves to the ignition position. The gas is released and the safety valves open. The gas flows through the burner insert and the air flows through the burner body as far as the burner head. The combustible gas/air mixture is produced downstream of the burner head and is electrically ignited directly by a spark electrode. The resulting flame is controlled by the flame rod. After pre-purge and burner start, the controller enable signal is issued to an external controller which positions the air butterfly valve in accordance with the capacity demand. The air/gas ratio control VCG regulates the gas volume on the basis of the air volume.

As an option, the gas pressure control system can be supplied with a gas filter GFK, a pressure gauge with capsule element KFM with manual cock DH and a gas pressure regulator GDJ.

5 Selection

The choice of forced draught burner depends on the capacity and process conditions. The desired operating mode determines whether modulating air/gas ratio control or modulating gas control is most suitable.

5.1 Burner type

Two burner types are available as HeatPak modules: RatioMatic and RatioAir.

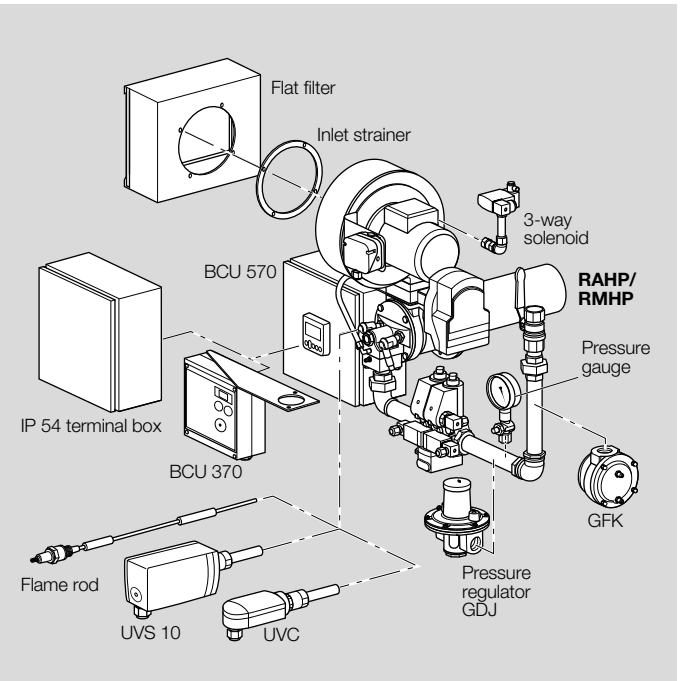
The RatioMatic is controlled exclusively by a pneumatic ratio control system. The modulating air/gas ratio control produces good emission values and is not affected by external influences in the application.

The RatioAir is also controlled by a pneumatic ratio control system. RatioAir burners are available with two different outlet tube velocities of up to 75 m/s.

For further information on burner and fan capacities, see page 19 (8 Technical data).

5.2 Configuring HeatPak

Modularly configurable, see page 12 (5.3 Selection table).



For dimensional drawings for the gas inlet section for all nominal sizes and the corresponding components, seeww.docuthek.com, HeatPak, Drawing (registration required).

5.3 Selection table

Description	Code	RAHP20.	RMHP30.	Condition
Burner and fan				
100 kW RA0040 with standard fan	**040**	•		
200 kW RA0075 with 4" fan	**075**	•		
300 kW RA0100 with standard fan	**100**	•		
600 kW RA0200 with standard fan	**200**	•		
950 kW RA0300 with standard fan	**300**	•		
200 kW RM0075 with 4" fan	**075**		•	
340 kW RM0100 with 4" fan	**100**		•	
520 kW RM0200 with 6" fan	**200**		•	
700 kW RM0300 with 7" fan	**300**		•	
1100 kW RM0400 with standard fan	**400**		•	
Gas type				
Natural gas L	**L**	•	•	
Natural gas H	**L**	•	•	
Propane	**P**	•	•	
Butane	**B**	•	•	
Burner tube for two outlet velocities				
Tapered (medium velocity)	**M**	•		Up to 75 m/s
Straight	**S**	•		
Mains voltage				
120 V AC, 50/60 Hz	**L**	•	•	
230 V AC, 50/60 Hz	**L**	•	•	
Air butterfly valve actuator				
Three-point step control	**T**	•	•	
Controlled by continuous signal (4–20 mA)	**E**	•	•	
Burner control unit				
Control cabinet, IP 54	**2**	•	•	
BCU 570 with Modbus TCP	**6**	•	•	
BCU 570	**7**	•	•	
BCU 570 with PROFINET	**8**	•	•	
BCU 370	**9**	•	•	
BCU 370 with PROFIBUS DP interface	**0**	•	•	

Description	Code	RAHP20.	RMHP30.	Condition
Fan test (no air check)				
No 3/2-way solenoid valve	**X**	•	•	
3/2-way solenoid valve	**C**	•	•	
Flame control				
Flame rod	**F**	•	•	
UV sensor UVS 10	**U**	•	•	With BCU 370 or BCU 570
UV sensor for continuous operation UVC 1	**D**	•	•	With BCU 370 or BCU 570
Fan filter				
No filter	**X**	•	•	
Flat filter	**F**	•	•	
Gas supply pressure				
50–100 mbar	**X**	•	•	
100–400 mbar	**H**	•	•	
Gas filter				
No GFK	**X**	•	•	
GFK	**G**	•	•	
Gas inlet pressure gauge				
No pressure gauge	**X**	•	•	
Pressure gauge	**P**	•	•	

Order example

RMHP30.0200L2E8CDFHGP

6 Project planning information

6.1 Combustion chamber conditions

The burner type depends on the application.

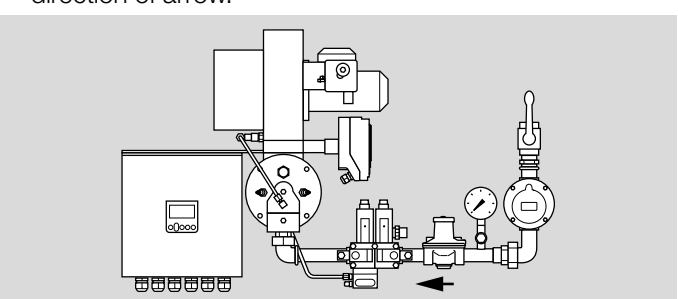
Burner RAHP can be used in closed combustion chambers or furnaces.

The RMHP is exclusively designed for hot air applications.

» The flames must not be influenced by the process air in the application. This would result in increased emissions. A vertical air flow on the flame must be avoided at all costs. The flame can be protected by a flame tube.

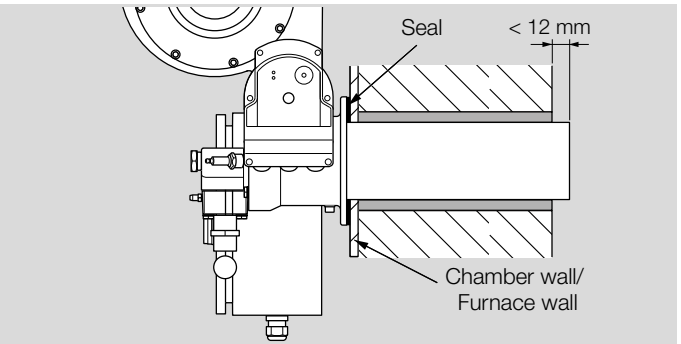
6.2 Installation position

» Only install the HeatPak in the alignment described. The gas flows from right to left in the gas control system, see direction of arrow.



6.3 Installation in a combustion chamber

6.3.1 RatioAir HeatPak RAHP



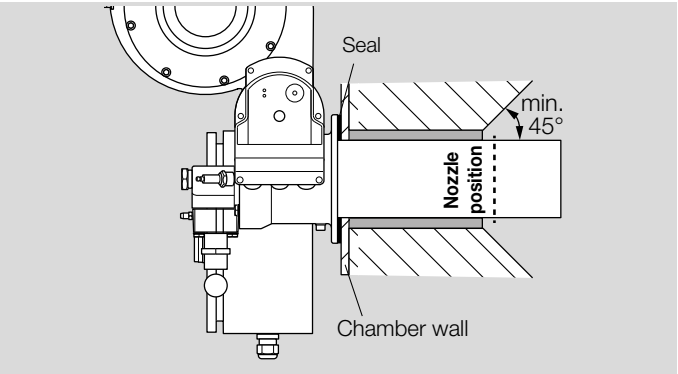
The recommendations of the supplier relating to the thermal expansion of refractory materials must be noted for the furnace wall. The wall must not transfer any tension to the burner tube or the surrounding refractory coating. The refractory wall and the furnace casing may expand unevenly. Expansion gaps in the furnace wall allow the uniform movement of the furnace casing, burner quarl bracket, burner tube and the surrounding refractory material.

The burner tube may expand by a maximum of 25.4 mm (1") over the inside of the furnace wall. If it expands further, install a spacer (12 mm (1/2")) on the outside of the furnace. This will hold the end of the burner tube within 12 mm (1/2") of the wall end.

If the burner tube is shorter than the furnace wall thickness, the burner tube should be recessed into the wall. The angle for this should be at least 45° to prevent overheating the refractory material.

Detailed information can be found in the RatioAir operating instructions at www.docuthek.com.

6.3.2 RatioMatic HeatPak RMHP

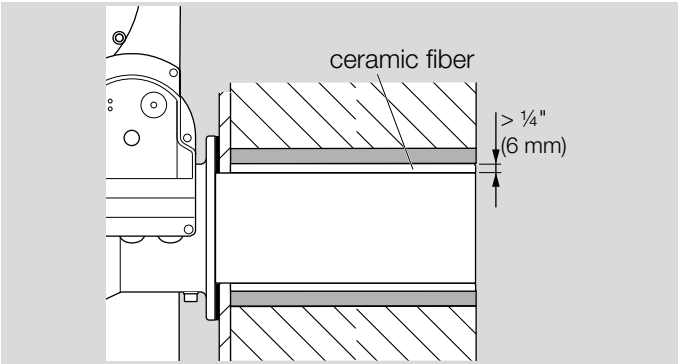


If the burner is used in heat exchangers at low temperatures, it can be installed directly on the combustion chamber. There is no need for a refractory lining.

If the chamber insulation extends beyond the nozzle position of the burner, cut the insulation at the end of the burner tube at an angle of at least 45°. Detailed information can be found in the RatioMatic operating instructions at www.docuthek.com.

6.3.3 Burner installation

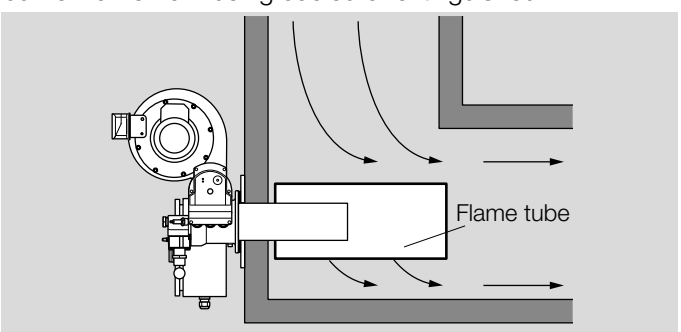
Install the HeatPak on the chamber wall using the four (or eight) nuts and washers provided by the customer. The seal must be located between the burner and the chamber wall. The burner tube must be wrapped in insulation made of fibre material. The insulation must not project beyond the nozzle position (see figure below, RAHP).
If the size of the opening around the burner tube is greater than 12 mm (1/2"), this gap must be sealed using ceramic fibres.



RAHP

6.3.4 Flame tube

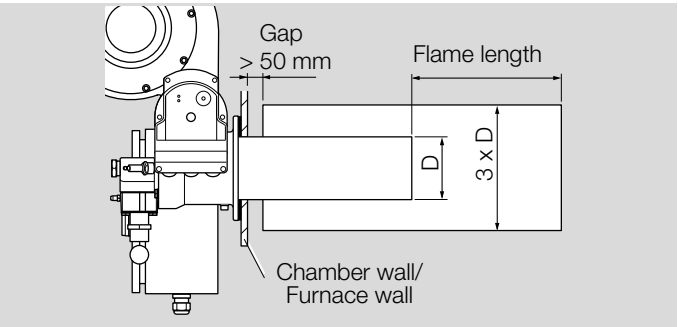
For air heating applications, the process air is generally heated by the hot flue gases from the burner. A flame tube is recommended for flow velocities > 15 m/s to protect the burner flame from being cooled or extinguished.



The flame tube is positioned around the burner tube and the flame. The diameter of the flame tube should be around 3 x the burner tube diameter. The length of the flame tube

must cover the full length of the flame, see Technical data, page 19 (8.2 Flame length).

A gap (> 50 mm) is required on the burner side. This allows a small volume of process air in the tube to cool the combustion chamber and to prevent pressure building up and pulsating flow in the flame tube.



6.4 Gas supply

» The gas pressure for the HeatPak must be at least 50 mbar (19.7 "WC). A pressure regulator is recommended for a pressure of over 100 mbar (39.4 "WC). A GDJ is available as an option to reduce the inlet pressure from 400 mbar (160 "WC) to 100 mbar (39.4 "WC).

» Flexible tubes or bellows units should be installed to prevent mechanical stress or transmission of vibrations.

6.5 Power supply

The HeatPak can be operated with a control voltage of 230 V/50 Hz or 110 V/50 Hz. However, the fan must be always be supplied with 400 V/50 Hz.

6.6 Purge air/Cooling air

While the burner is switched off and depending on the furnace temperature, a certain air flow must be maintained to ensure safe ignition and monitoring of the burner and for cooling the burner components. The air fan must remain active for this purpose until the furnace has cooled down completely (< 100°C (212°F)). The air volume for purging/cooling is defined by the calibrated minimum position of the IC 20.

6.7 Build up of noise

The following table shows the volume of a burner without a filter operating in the open air. If the burner is installed in a furnace, the volume will be greatly reduced by the furnace insulation.

Burner	(1 m distance, measured without a filter) dB(A)
RAHP 20.040..S	–
RAHP 20.075..S	77
RAHP 20.100..S	80
RAHP 20.200..S	79
RAHP 20.300..S	85
RAHP 20.040..M	–
RAHP 20.075..M	77
RAHP 20.100..M	80
RAHP 20.200..M	79
RAHP 20.300..M	85
RMHP 30.075	77
RMHP 30.100	79
RMHP 30.200	80
RMHP 30.300	80
RMHP 30.400	85

7 Accessories

7.1 Fan filter

An air filter can be installed on the fan housing as an option.

8 Technical data

Min. gas supply pressure: 50 mbar (19.7 "WC).

Max. gas supply pressure:
100 mbar (39.4 "WC) (standard),
400 mbar (157 "WC) (optional with GDJ).

Control voltage: 230 V, 50/60 Hz or 120 V, 50/60 Hz.

Fan voltage: 400 V, 3 phases, 50/60 Hz.

Burner capacities, see page 20 (8.4 Burner capacities at combustion chamber pressure (0 mbar)).

Control type: modulating.

Control input: three-point-point step or analogue (4–20 mA, 0–20 mA or 0–10 V).

Actuator running time: 30 s/90°.

Ignition: direct ignition.

Flame control: flame rod (standard), standard UV sensor or UV sensor for continuous operation.

Combustion chamber temperature: max. 1050°C (~1900°F).

Combustion chamber pressure: -2.5 to +2.5 mbar (-0.98 to +0.98 "WC).

8.1 Gas types

	Code letter	Heating value range		Density	
		kWh/m(n)	BTU/scf	kg/m	lb/scf
Natural gas L and H	B	8–12	810–1215	0.7–0.9	0.041–0.053
Propane, propane/butane, butane	M	25–35	2480–3472	2.0–2.7	0.118–0.159

8.2 Flame length

Burner	Flame length	
	m	ft
RAHP 20.040..S	0.6	2
RAHP 20.075..S	1	3.3
RAHP 20.100..S	1.1	3.6
RAHP 20.200..S	1.4	4.6
RAHP 20.300..S	1.7	5.6
RAHP 20.040..M	0.5	1.6
RAHP 20.075..M	0.7	2.3
RAHP 20.100..M	1.0	3.3
RAHP 20.200..M	0.9	3.0
RAHP 20.300..M	1.6	5.3
RMHP 30.075	0.8	2.6
RMHP 30.100	1.0	3.3
RMHP 30.200	1.5	4.9
RMHP 30.300	1.7	5.6
RMHP 30.400	1.8	5.9

8.3 Fan capacity

Burner	Fan
	kW
RAHP 20.040..S	0.18
RAHP 20.075..S	0.25
RAHP 20.100..S	0.37
RAHP 20.200..S	1.1
RAHP 20.300..S	1.5
RAHP 20.040..M	0.25
RAHP 20.075..M	0.37
RAHP 20.100..M	0.55
RAHP 20.200..M	0.75
RAHP 20.300..M	1.5
RMHP 30.075	0.25
RMHP 30.100	0.37
RMHP 30.200	0.55
RMHP 30.300	0.75
RMHP 30.400	1.5

8.4 Burner capacities at combustion chamber pressure (0 mbar)

Burner type	Burner capacity[1)2)]	
	kW	kBTU/h
RAHP 20.040..S	110	413
RAHP 20.075..S	250	939
RAHP 20.100..S	300	1126
RAHP 20.200..S	650	2440
RAHP 20.300..S	900	3379
RAHP 20.040..M	100	375
RAHP 20.075..M	200	751
RAHP 20.100..M	240	901
RAHP 20.200..M	600	2253
RAHP 20.300..M	845	3172
RMHP 30.075	200	751
RMHP 30.100	350	1314
RMHP 30.200	500	1877
RMHP 30.300	750	2816
RMHP 30.400	1100	4130

1) kW for LHV (H_i, H_u)
2) BTU/h for HHV (H_s, H_o)

8.5 Burner size – capacities at various reverse flow pressures

Burner	Burner capacity[1)2)]						Low-fire rate	
	-2.5 mbar (-0.98 "WC)		0 mbar (0 "WC)		2.5 mbar (0.98 "WC)			
	kW	kBTU/h	kW	kBTU/h	kW	kBTU/h	kW	kBTU/h
RAHP 20.040..S	123	462	110	413	100	375	9	34
RAHP 20.075..S	303	1138	250	939	239	897	9	34
RAHP 20.100..S	320	1201	300	1126	264	991	10	38
RAHP 20.200..S	675	2534	650	2440	603	2264	15	56
RAHP 20.300..S	949	3563	900	3379	854	3206	20	75
RAHP 20.040..M	113	424	100	375	98	368	9	34
RAHP 20.075..M	212	796	200	751	182	683	9	34
RAHP 20.100..M	260	976	240	901	218	818	10	38
RAHP 20.200..M	640	2403	600	2253	560	2102	15	56
RAHP 20.300..M	886	3326	845	3172	805	3022	20	75
RMHP 30.075	220	826	200	751	180	676	9	34
RMHP 30.100	367	1378	350	1314	333	1250	15	56
RMHP 30.200	522	1960	500	1877	478	1795	20	75
RMHP 30.300	776	2913	750	2816	724	2718	35	131
RMHP 30.400	1141	4284	1100	4130	1059	3976	50	188

1) kW for LHV (H_i, H_u)
2) BTU/h for HHV (H_s, H_o)

8.6 RAHP settings

Depending on the application, the RAHP is available with a straight or tapered (MV = medium velocity) burner tube.

		RAHP20.040		RAHP20.075		RAHP20.100		RAHP20.200		RAHP20.300	
		Burner tube									
		Straight	MV	Straight	MV	Straight	MV	Straight	MV	Straight	MV
High-fire rate											
Capacity (net)	kW	110	100	250	200	300	250	650	600	900	800
p_{air} – test point C[2)]	mbar	16	16	6.5	6.5	10.5	16.5	20	22	24	24
Natural gas H											
p_{gas} – test point B[2)]	mbar	13.1	14.1	5	5	8.5	8.5	19	21	18	18
Measuring orifice dia.	mm	10	10.6	18	19	18.5	18.5	23	23	25	25
Propane											
p_{gas} – test point B[2)]	mbar	14	14	5	5	8.5	8.5	16	16	18	18
Measuring orifice dia.	mm	8.3	8.2	14	14	14.5	14.5	18.5	18.5	20.5	21
Butane											
p_{gas} – test point B[2)]	mbar	13.7	13.7	5	5	8.5	8.5	16	16	18	18
Measuring orifice dia.	mm	7.6	7.9	13	13.5	13.0	13.0	17.0	17.5	19	20
Gas inlet pressure[3)]											
$p_{gas\ min.}$	mbar	50	50	50	50	50	50	50	50	50	50
Pressure switch settings											
$p_{gas\ max.}$	mbar	20	20	10	10	15	15	25	25	25	25
$p_{gas\ min.}$	mbar	35	35	35	35	40	40	40	40	40	40
$p_{air\ min.}$	mbar	10	10	3	3	7.5	7.5	12	12	17.5	17.5

1) Max. deviation -0.05/+0.1 mbar
2) Max. deviation +/- 1 mbar
3) Based on natural gas

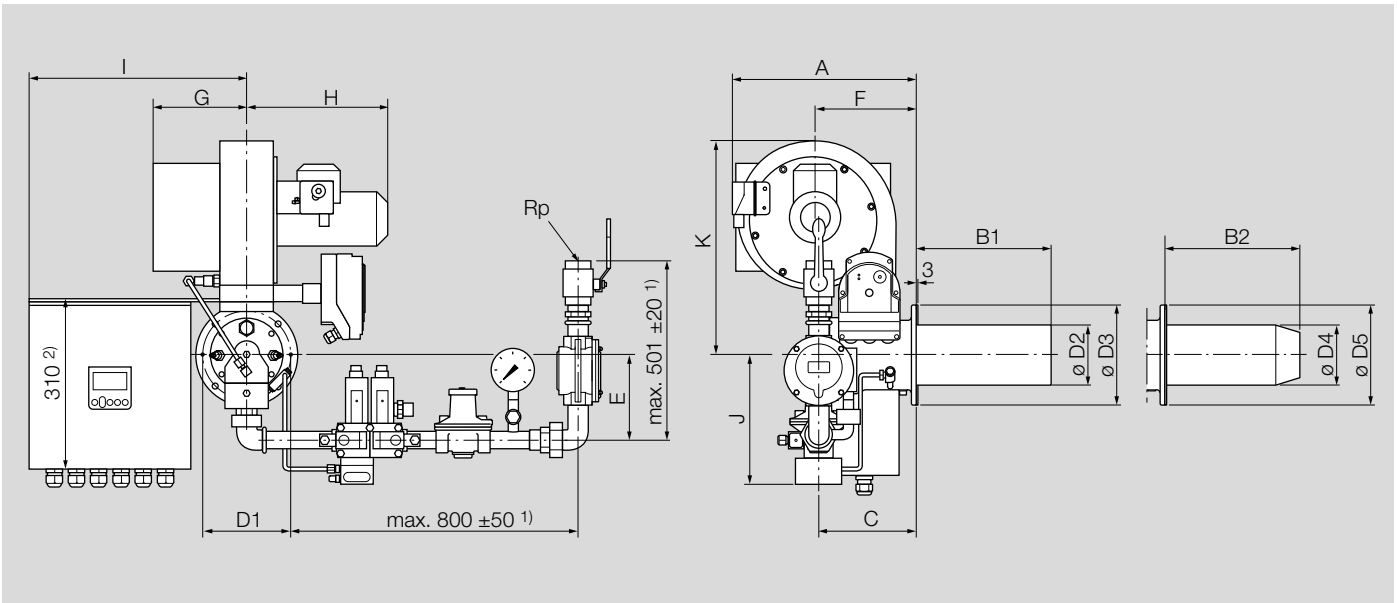
8.7 RMHP settings

		RMHP30.075	RMHP30.100	RMHP30.200	RMHP30.300	RMHP30.400
High-fire rate						
Capacity (net)	kW	200	350	500	750	1100
p_{air} – test point C[2)]	mbar	9.0	11.0	16.0	22.0	21.0
Natural gas H						
p_{gas} – test point B[2)]	mbar	8.5	10.0	15.5	21.0	20.0
Measuring orifice dia.	mm	19	29	29	30	36
Propane						
p_{gas} – test point B[2)]	mbar	7.0	9.5	15.5	17.5	20.0
Measuring orifice dia.	mm	14.0	22.5	22.5	24.5	30.0
Butane						
p_{gas} – test point B[2)]	mbar	7	8.5	14.5	17.5	20.0
Measuring orifice dia.	mm	12.7	19.0	19.0	21.0	25.0
Gas inlet pressure[3)]						
$p_{gas\ min.}$	mbar	25	50	55	65	75
Pressure switch settings						
$p_{gas\ max.}$	mbar	12	15	22	22	26
$p_{gas\ min.}$	mbar	40	40	40	40	40
$p_{air\ min.}$	mbar	3	6	8	11	15

1) Max. deviation -0.05/+0.1 mbar
2) Max. deviation +/- 1 mbar
3) Based on natural gas

8.8 Dimensions

8.8.1 RatioAir HeatPak RAHP

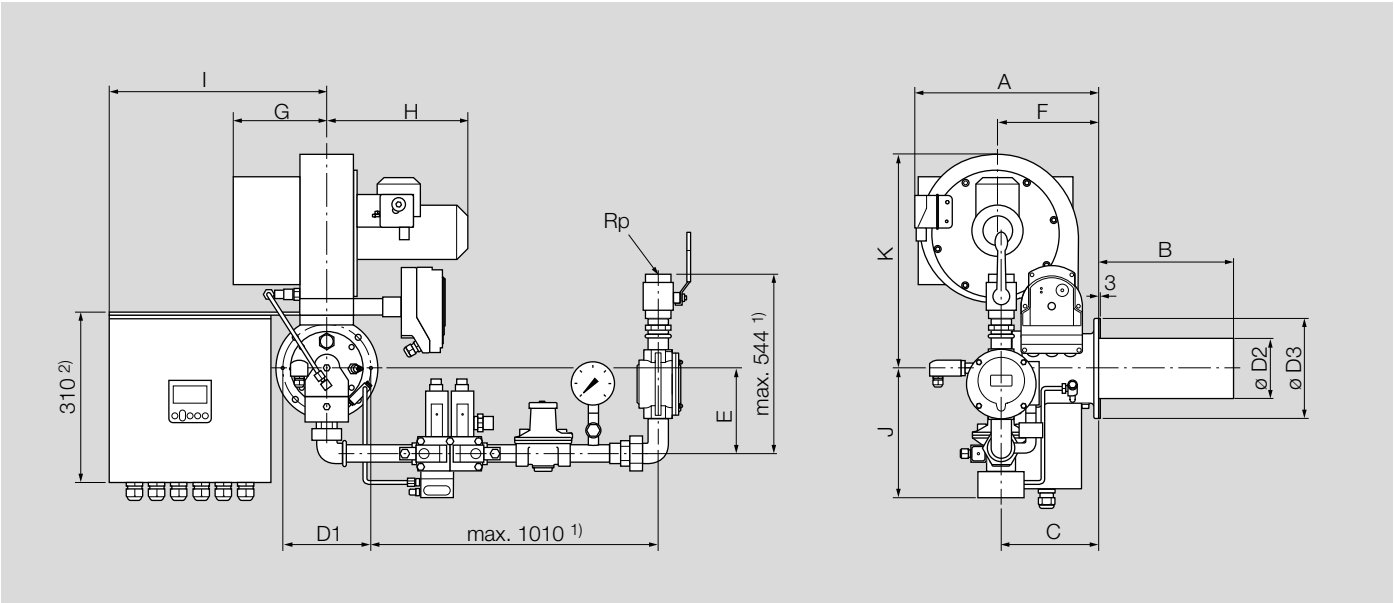


RAHP	Rp	A	B1	B2	C	D1	D2	D3	D4	D5	E	F	G	H	I	J	K
20.040	0.5"	479	240	193	167	136	89	162	63	88.9	150 ± 10	265	153	258	389	243	505
20.075	1"	388	330	230	180	165	114.3	190	77	190	153 ± 10	198	154	261	389	235	402
20.100	1"	505	330	229	198	190	141	220	80.2	220	156 ± 10	284	167	269	420	241	580
20.200	1.5"	589	330	260	198	190	141	220	105	141	175 ± 10	316	162	286	419	286	672
20.300	1.5"	613	351	351	277	263	198	290	138.5	197.8	255 ± 10	358	178	302	445	366	704

1) For dimensional drawings for the gas inlet section for all nominal sizes and the corresponding components, see www.docuthek.com, HeatPak, Drawing (registration required)

2) BCU 570 in switch box

8.8.2 RatioMatic HeatPak RMHP



RMHP	Rp	A	B	C	D1	D2	D3	E	F	G	H	I	J	K
30.075	1"	388	254	186	165	114.3	190	150 ± 10	198	154	261	404	235	406
30.100	1.5"	446	330	196	190	141	220	173 ± 10	256	162	269	420	284	520
30.200	1.5"	505	330	196	190	141	220	173 ± 10	284	162	269	420	284	580
30.300	1.5"	612	351	278	263	198	290	173 ± 10	357	178	302	445	284	704
30.400	2"	612	351	278	263	198	290	179 ± 10	357	178	302	451	313	704

1) For dimensional drawings for the gas inlet section for all nominal sizes and the corresponding components, see www.docuthek.com, HeatPak, Drawing (registration required)

2) BCU 570 in switch box

9 Maintenance cycles

Twice per year, but if the media are highly contaminated, this interval should be reduced.

For more information

The Honeywell Thermal Solutions family of products includes Honeywell Combustion Safety, Eclipse, Exothermics, Hauck, Kromschröder and Maxon. To learn more about our products, visit ThermalSolutions.honeywell.com or contact your Honeywell Sales Engineer.

Honeywell Eclipse branded products
201 E 18th Street
Muncie, IN 47302
USA
ThermalSolutions.honeywell.com

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