Honeywell
THE POWER OF **CONNECTED**

HeatPak

Packaged air heating burner systems

- Robust burner design for industrial applications
- Easy to install thanks to compact design, complete pre-assembly and pre-wiring
- Different temperature control signal options permit easy integration into existing control systems
- Wide temperature range due to excess air operation
- Direct ignition and monitoring
- Large capacity range up to 1100 kW
- Pre-set for safe ignition

ECLIPSE® kromschroder

Application

HeatPak

HeatPaks are completely pre-assembled and pre-wired burner packages based on the time-tested Eclipse air heating burners RatioAir, RatioMatic and ThermAir. The packages include integral combustion air blower, gas safety system, gas control system and burner control unit for industrial application. Typical applications include drying systems, hot air generation or process gas heating.

Thanks to the compact design, both conversion of existing systems and initial installation can be executed quickly and easily.

Control is carried out in a pneumatic ratio control system (modulating air/gas ratio control) on the RatioAir HeatPak RAHP and the RatioMatic HeatPak RMHP. RMHP has a patented disc nozzle that produces a very stable and uniform flame yielding slightly lower emissions at low process temperatures and shorter flame lengths. The RMHP is available with flame rod sensing on all sizes. The RatioAir HeatPak RAHP utilizes the ThermJet cup nozzle providing additional turn-down and flexibility. RAHP is available with either a straight or medium velocity combustor to suit the needs of the application.

On the ThermAir HeatPak TAHP, control is carried out in the gas circuit only with a linear flow control IFC at a set air volume (fixed air control). The TAHP uses the same cup nozzle as the RAHP.

For more detailed information on each of these burners (RM, RA and TA), refer to their documentation available in Docuthek.

Control, ignition and monitoring of the burner is ensured by a burner control unit BCU. Various solutions can be configured.

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 in 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 blower motor and the ignition unit are accommodated in the panel. The BCU 570 can be optionally expanded using a bus module BCM 500. This allows communication, control and visualization via Profinet.

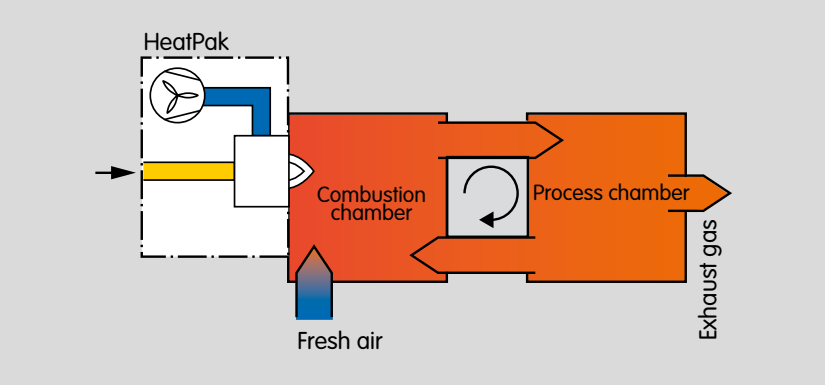
HeatPak with BCU 370

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 blower motor, are directly wired to the BCU 370. Control and fusing of the blower 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.

HeatPak with terminal box

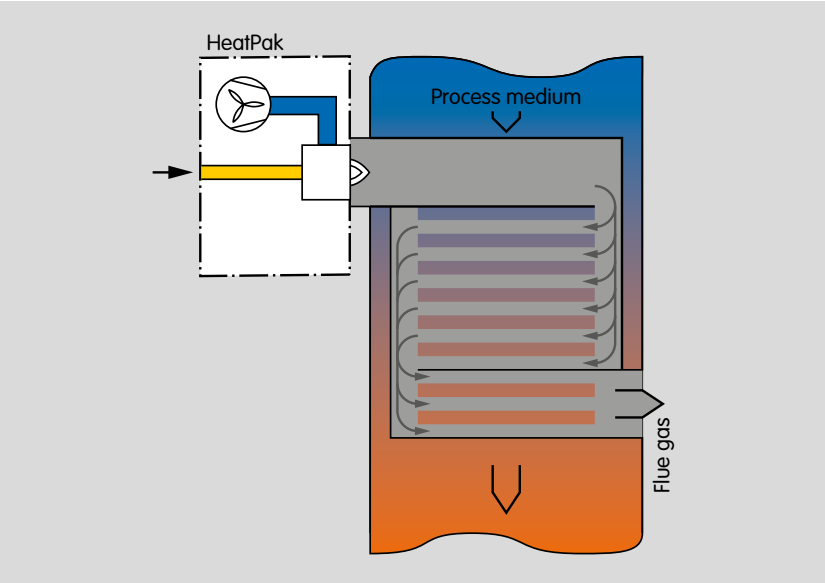
In this configuration, all electrical components are pre-wired to a terminal box which is mounted to the burner. The burner control unit and switching devices necessary for the control, ignition and monitoring of the burner are to be provided by the customer..

Examples of application



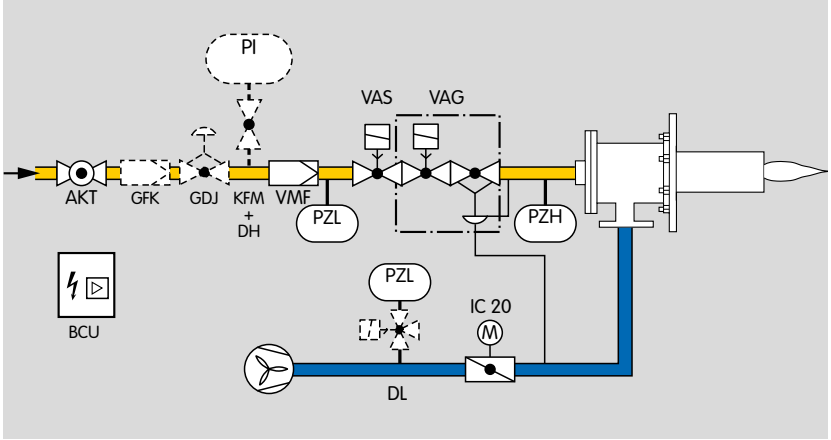
Direct heating

HeatPak fires into a combustion chamber which is directly connected to the process chamber. Thanks to this direct firing system, optimal utilization of the heat generated is possible, e.g. in directly heated drying systems.



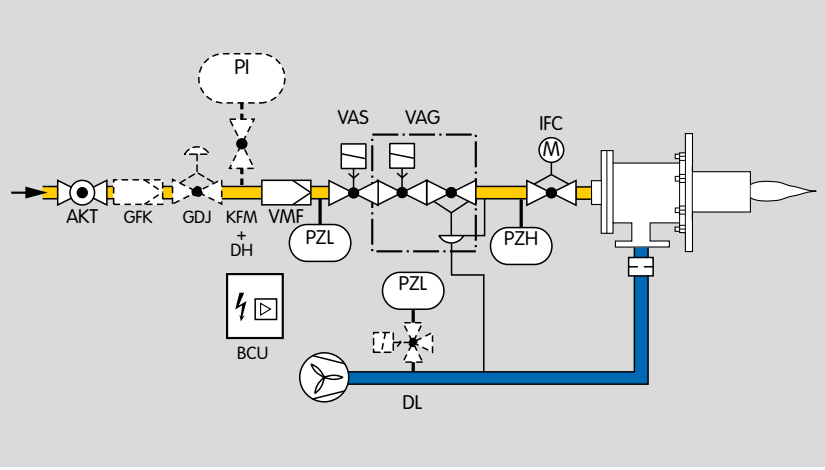
Indirect heating

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



HeatPak RAHP and RMHP with modulating air/gas ratio control

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



HeatPak TAHP with modulating gas control

The burner capacity is controlled in modulating mode by adjusting the linear flow control with actuator IFC in the gas circuit. The air flow rate remains constant.

Technical data

Gas types: natural gas, propane or butane

Min. gas supply pressure: 50 mbar

Max. gas supply pressure:
100 mbar (standard)
400 mbar (optional with GDJ)

Blower voltage: 400 V, 3 phases – 50/60 Hz,
Control voltage: 230 V, 50/60 Hz or
120 V, 50/60 Hz.

Burner	Max. capacity [kW*]	Min. capacity [kW*]	Flame length [m]	Combustion air blower motor [kW*]
RAHP 20.040..S	110	9	0.4	0.18
RAHP 20.075..S	250	9	0.7	0.25
RAHP 20.100..S	300	10	0.8	0.37
RAHP 20.200..S	650	15	0.7	0.75
RAHP 20.300..S	900	20	1.3	0.75
RAHP 20.040..M	100	9	0.5	0.18
RAHP 20.075..M	200	9	0.7	0.25
RAHP 20.100..M	250	10	1.0	0.37
RAHP 20.200..M	600	15	0.9	0.75
RAHP 20.300..M	800	20	1.6	0.75
RMHP 30.075	200	9	0.8	0.25
RMHP 30.100	350	15	1.0	0.37
RMHP 30.200	500	20	1.5	0.55
RMHP 30.300	750	35	1.7	0.75
RMHP 30.400	1100	50	1.8	1.5
TAHP 10.040	100	8	0.9	0.18
TAHP 10.075	200	8	1.0	0.37
TAHP 10.100	264	8	1.2	0.37
TAHP 10.200	545	20	1.4	1.1
TAHP 10.300	900	30	1.8	1.5
TAHP 10.400	1045	40	1.9	1.5

* Capacities are based on the lower heating value LHV, with neutral process pressure and without air filter.

Type of control: modulating

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

Actuator running time: 30 s/90°

Direct spark ignition

Flame control:
flame rod (standard), standard UV scanner or self-checking UV scanner

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

Combustion chamber pressure: -2.5 to +2.5 mbar

Type code

Code	Description
RAHP 20. RMHP 30. TAHP 10.	RatioAir HeatPak burner v2.0 RatioMatic HeatPak burner v3.0 ThermAir HeatPak burner v1.0
040 – 400	Burner size
L N P B	Natural gas type L Natural gas type H Propane Butane
S* M*	Combustor type: Straight Medium velocity
X** B**	No adjusting damper Adjusting damper in air
1 2	Supply voltage: 100 V, 1 Ph / 400 V, 3 Ph - 50/60 Hz 230 V, 1 Ph / 400 V, 3 Ph - 50/60 Hz
T E	control motor: 3-point stepping IC-20 4 – 20 mA IC-20E
2 7 8 9 0	Wired to terminal box IP 54 Panel with BCU 570 Panel with BCU 570 and Profinet BCU 370 BCU 370 with PROFIBUS-DP
X C	No 3-way solenoid valve 3-way solenoid valve (continuous fan)
F U D	Flame rod UV scanner UVS 10 UV scanner UVC 1 for continuous operation
X F	Inlet screen Flat filter
X H	Gas supply pressure: 50 – 100 mbar 100 – 400 mbar
X G	No gas filter Gas filter
X P	No inlet pressure gauge Inlet pressure gauge

* RAHP only
** TAHP only

Maintenance

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

Technical Information bulletin for this product

www.docuthek.com
Search term: HeatPak

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