Brenner Einstell- und Wartungsprotokoll

Datum:

☐ Erst-Inbetriebnahme
☐ Wartung (nach jeweils 6 Monaten)

Honeywell
krom schroder

Brennertyp:
Gasart:
Auftrags-Nr.:
Heizwert Hi: kWh/m³ (Anlagenbetreiber fragen)

1. Sollwerte Leistungen Flamme: kW Flameless: kW

2. Prüfung (ggf. Ausbau) der Dicke der Distanzscheiben an der Primärluftdrossel: Dicke: mm (für Flameless Leistung)

(siehe auch BA ECOMAX LE)

Gasdruck Druckregelstrecke: mbar
Gebläse-Luftdruck: mbar
Differenz = Gasdruck - Luftdruck mbar **muss >10 mbar sein**

Hinweis: Der Gasdruck der Gasdruckregelstrecke muss 10 mbar **höher** als der Gebläseluftdruck sein. Explosionsgefahr bei zu gering eingestelltem Gasdruck!
Falls Gasdruck der Druckregelstrecke < Gebläse-Luftdruck, dann kann Spülluft bei verstopfter Gaslanze in die Gasleitung strömen!

3. Einstellung / Prüfung aller Druckwächter (DW):
für 2 DW Luft (Brennerbetrieb mit Leistungsprung Flamme/Flammenlos):
DW Luft 1 (bei Flamme) als Luftmangelsicherung auf z.B. 80%* vom Differenzdruck-Ist-Wert an der Gesamtluftblende einstellen und Auslösewert in Tabelle notieren.
DW Luft 2 (bei Flameless) als Luftmangelsicherung auf z.B. 80%* vom Differenzdruck-Ist-Wert an der Gesamtluftblende einstellen und Auslösewert in Tabelle notieren.
für 1 DW Luft (mit konstanter Leistung Flamme / Flammenlos):
Mittels der Luftklappe für beide Betriebsarten Flamme und Flameless einen identischen Luft-Differenzdruck an der Gesamtluftblende einstellen.
DW Luft als Luftmangelsicherung auf z.B. 80%* vom Differenzdruck-Ist-Wert an der Gesamtluftblende einstellen und Auslösewert in Tabelle notieren.

Betriebs-Art:	**Flamme**							**Flameless**						**Ejektor**	**Stopp**
	∆p Gas	∆p Luft	DW Luft 1	Signal	O2	CO	NOx	∆p Gas	∆p Luft	DW Luft 2	O2	CO	NOx	Unter-	Spülluftdruck
Soll-Werte 1:				> 10										druck	Gaslanze
Soll-Werte 2:				> 10										Abgas	-4 bis -8mbar
IST-Werte:	mbar	mbar	mbar	µA	%	ppm	ppm	mbar	mbar	mbar	%	ppm	ppm	mbar	mbar
Brenner 1															
Brenner 2															
Brenner 3															
Brenner 4															
Brenner 5															
Brenner 6															
Brenner 7															
Brenner 8															
Brenner 9															
Brenner 10															
Brenner 11															

* 80%-Druckwert gültig für Brennereinstellung bei 3% O2 im trockenen Abgas; für andere Einstellungen Druckwert prüfen und ggf. anpassen.

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Betriebs-Art:	**Flamme**							**Flameless**						**Ejektor**	**Stopp**
	Δp Gas	Δp Luft	DW Luft 1*	Signal	O2	CO	NOx	Δp Gas	Δp Luft	DW Luft 2*	O2	CO	NOx	Unter-	Spülluftdruck
Soll-Werte 1:				> 10										druck	Gaslanze
Soll-Werte 2:				> 10										Abgas	-4 bis -8mbar
IST-Werte:	mbar	mbar	mbar	µA	%	ppm	ppm	mbar	mbar	mbar	%	ppm	ppm	mbar	mbar
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Burner setting and maintenance report

date:

☐ first commissioning
☐ maintenance (every 6 month)

Honeywell
krom schroder

burner type: order no. :
gas type: calorific value Hs: kWh/m³ (ask plant operator)

1. setpoints capacities flame: kW flameless: kW
2. Check (dismantling) thickness spacer washer at primary air restrictor: thickness: mm (for Flameless capacity)
(see operation instructions ECOMAX LE)

gas pressure control system: mbar
blower air pressure: mbar
difference = gas pressure - air pressure mbar **has to be > 10 mbar**

Note: The gas pressure of the gas pressure control system has to be 10 mbar **higher** than the blower air pressure. Risk of explosion if the gas pressure is set too low!
If gas pressure of pressure control system < blower air pressure, purging air can flow into the gas pipe if the gas lance is blocked!

3. Setting / check of all pressure switches (DW):
for 2 DW air (variable capacity in Flame/Flameless mode):
Set DW Air 1 (at flame) as air flow monitoring to e.g. 80% * of the actual differential pressure value on the total air measuring orifice and note the trigger value in the table.
Set DW Air 2 (at flameless) as air flow monitoring to e.g. 80% * of the actual differential pressure value on the total air measuring orifice and note the trigger value in the table.
With 1 DW air (constant capcity flame/ flameless)
Use the air butterfly valve to set an identical air differential pressure on the total air measuring orifice for both operating modes flame and flameless.
Set DW Air as air flow monitoring to e.g. 80% * of the actual differential pressure value on the total air measuring orifice and note the trigger value in the table.

operation mode	**Flame**							**Flameless**						**Ejector**	**Stop**
	Δp gas	Δp air	DW air 1	signal	O2	CO	NOx	Δp gas	Δp air	DW air 2	O2	CO	NOx	negative	purge air press.
setpoint 1:				> 10										pressure	gas lance
setpoint 2:				> 10										flue gas	-4 to -8mbar
actual values:	mbar	mbar	mbar	µA	%	ppm	ppm	mbar	mbar	mbar	%	ppm	ppm	mbar	mbar
burner 1															
burner 2															
burner 3															
burner 4															
burner 5															
burner 6															
burner 7															
burner 8															
burner 9															
burner 10															
burner 11															

* 80% pressure value valid for burner setting at 3% O2 in the dry flue gas; check pressure value for other settings and adjust if necessary.

Burner setting and maintenance report

date: ____________

☐ first commissioning
☐ maintenance (every 6 month)

Honeywell krom schroder

burner type: ____________ order no. : ____________

operation mode	Flame							Flameless							Ejector	Stop
	Δp gas	Δp air	DW air 1*	signal	O2	CO	NOx	Δp gas	Δp air	DW air 2*	O2	CO	NOx	negative	purge air press.
setpoint 1:				> 10										pressure	gas lance
setpoint 2:				> 10										flue gas	-4 to -8mbar
actual values:	mbar	mbar	mbar	µA	%	ppm	ppm	mbar	mbar	mbar	%	ppm	ppm	mbar	mbar
burner															
burner															
burner															
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Burner setting and maintenance report

date:

☐ first commissioning
☐ maintenance (every 6 month)

Honeywell
krom schroder

burner type: order no. :
gas type: calorific value Hs: BTU/SCF (ask plant operator)

1. setpoints capacities flame: BTU/hr flameless: BTU/hr
2. Check (dismantling) thickness spacer washer at primary air restrictor: thickness: inch (for Flameless capacity)
(see operation instructions ECOMAX LE)

gas pressure control system: inch wc
blower air pressure: inch wc
difference = gas pressure - air pressure inch wc **has to be > 4.0 inch wc**

Note: The gas pressure of the gas pressure control system has to be 4.0 inch wc **higher** than the blower air pressure. Risk of explosion if the gas pressure is set too low!
If gas pressure of pressure control system < blower air pressure, purging air can flow into the gas pipe if the gas lance is blocked!

3. Setting / check of all pressure switches (DW):
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Set DW Air 1 (at flame) as air flow monitoring to e.g. 80% * of the actual differential pressure value on the total air measuring orifice and note the trigger value in the table.
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Use the air butterfly valve to set an identical air differential pressure on the total air measuring orifice for both operating modes flame and flameless.
Set DW Air as air flow monitoring to e.g. 80% * of the actual differential pressure value on the total air measuring orifice and note the trigger value in the table.

operation mode	**Flame**							**Flameless**						**Ejector**	**Stop**
	Δp gas	Δp air	DW air 1	signal	O2	CO	NOx	Δp gas	Δp air	DW air 2	O2	CO	NOx	negative pressure	purge air press. gas lance
setpoint 1:				> 10										flue gas	-1.6 to -3.1inch wc
setpoint 2:				> 10											
actual values:	inch wc	inch wc	inch wc	µA	%	ppm	ppm	inch wc	inch wc	inch wc	%	ppm	ppm	mbar	inch wc
burner 1															
burner 2															
burner 3															
burner 4															
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burner 6															
burner 7															
burner 8															
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* 80% pressure value valid for burner setting at 3% O2 in the dry flue gas; check pressure value for other settings and adjust if necessary.

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Honeywell kromschröder

burner type: order no. :

operation mode	Flame							Flameless						Ejector	Stop
	Δp gas	Δp air	DW air 1*	signal	O2	CO	NOx	Δp gas	Δp air	DW air 2*	O2	CO	NOx	negative	purge air press.
setpoint 1:				> 10										pressure	gas lance
setpoint 2:				> 10										flue gas	-1.6 to -3.1inch wc
actual values:	inch wc	inch wc	inch wc	µA	%	ppm	ppm	inch wc	inch wc	inch wc	%	ppm	ppm	mbar	inch wc
burner															
burner															
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