## DBI-Gastechnologisches Institut gGmbH Freiberg Feuerstättenprüfstelle

Halsbrücker Straße 34; D-09599 Freiberg



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Accredited testing laboratory by regional building order, index number SAC 24

Accredited testing laboratory by construction products directive 89/106/EEC, notified body number: 1721

Accredited DIN CERTCO testing laboratory, registry number PL 015

Accredited testing laboratory by the Swiss Assoc. of Fire Insurance Companies VKF

Report on the type test of a Pellet burner in accordance with DIN EN 15270:2008-03

File no. /

DBI F 10/03/0107

Test report no.

NEW 2007

**Test object** Pellet burner DIN EN 15270

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Type

SPL35S

Version

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heat input

35 kW

Wood pellet burner for utilization in boilers for solid fuels. The appliance consists of a burner with igniter and a centrifugal fan. Furthermore the system consists of a fuel store box and a fuel supply system by screw and hose for gravity feeding. All fire exposed components are made of high temperature resistant steel. The applianace works with an electrical panel and programming system for completely automatic operation.

Client

Termocabi S.r.l. Biomass Burners Technology

Via Borghisani 13

26035 Pieve San Giacomo (CR) Italy

Manufacturer

Like Client

Scope of testing

(Initial) type test in the context of the conformity assessment procedure and assessment of the appliance for compliance with

the product requirements as per DIN EN 15270, Annex I.2

**Test basis** 

DIN EN 15270:2008-03

DBI-GT

The essential product features in accordance with Annex I.2 to DIN EN 15270 for pellet burners were reviewed and were found to comply with the requirements.

Dipl.-Ing. Ronald Aßmann

Signature of director of laboratoy

Sachsen\* Dipl.-Ing. (BA) Rico Eßbach

Signature of test engineer

Freiberg, 05.03.2010

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#### **Summary**

**Test period** 

14.04. - 23.04.2009

**Test location** 

Test laboratory Freiberg

Client / Manufacturer

Termocabi S.r.l. Biomass Burners Technology

Via Borghisani 13

26035 Pieve San Giacomo (CR) Italy

**Test object** 

Pellet burner fo small heating boilers, DIN EN 15270

Conveyor type

Automatic

Type designation

SPL35S

Design, allowing for various versions

Body enclosure

Closed sheet-steel body with opening for

combustion air,

Connection/Mounting of the burner via bolted

joint to a suitable heating boiler, Viewing window for optical control of

combustion

Type of burner

Multistage burner,

Feeding the pellets from top (vertical) into the

burner head

Conveyor system

Via adjustable feed screw,

From a fuel hopper over a tube (drop chute)

into the burner head

Ignition device

Electric glow plug in burner head,

Ignites automatically

Fuel hopper

External (separate from the burner)

Ash discharge

Semi automatic,

Automatic ash discharge from burner head via

air pressure system,

manual ash discharge from combustion

chamber via opening the combustion chamber

**Betriebsweise** 

Depending on

ambient air conditions

Fuel

Wood pellets

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### 1 Keydata of the burner<sup>1)</sup>

Burner	Type: SPL35S Version:				
Fuel		Wood pellets			-
Fuel throughput	kg/h	7,52			
Heat input	kW	36,2			
Heat output (indirect)	kW	33,4			
CO emission based on 10% O <sub>2</sub>	mg/m³	81,8			
CO-emission – referred to fuel	mg/MJ	54,5			
OGC-emission emission based on 10% O <sub>2</sub>	mg/m³	0,49			
OGC-emission – referred to fuel	mg/MJ	0,33			
NO <sub>x</sub> -emission based on 10% O <sub>2</sub> (NO <sub>2</sub> )	mg/m³	183,5			
NO <sub>x</sub> -emission – referred to fuel (NO <sub>2</sub> )	mg/MJ	122,3		1	
Dust-emission based on 10% O <sub>2</sub>	mg/m³	18,9			
Dust-emission – referred to fuel	mg/MJ	12,6			
Emission class acc. to DIN EN 15270		5			
Efficiency (indirect)	%	92,3			
Flue gas temperature	°C	151,1			
Flue gas mass flow	g/s	18,5	-		
Distance between burner and bottom	mm	670			
Height of the combustion chamber	mm	500			
Width of the combustion chamber	mm	334			
Minimum clearance distances from exposed / combustible materials:	from rear wall from side walls from floor from ceiling			  	mm mm mm mm

<sup>1)</sup> All values refer to firing stage 5 of the burner

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For contestation the German version is essential.