

## Classification and labeling of the Almeva® plastic exhaust system



The Almeva® plastic exhaust system is properly labeled and classified according to the general national standards, harmonized according to European standards. This is particularly important for assigning the system to the respective category of exhaust systems. This facilitates the determination of the type of flue system required for the boiler.

Below we mention two cases of wrong connection of the boilers with the exhaust system, which we encounter in practice:

- 1) The condensing boiler is connected to a classic underpressure chimney, which is unacceptable.
- 2) The so-called "turbo" boiler, with a temperature of the exhaust gases often up to 145°C, is connected directly to the plastic exhaust system, as if it were a condensing boiler, exceeding the maximum flue gas temperature of 120°C. In these cases, the safety criterion must be 150°C. This is the upper limit of the temperature range at which the plastic material retain its excellent properties for a short time effect (plastic exhaust systems are normally tested at 150°C).

It is imperative to avoid these errors, to respect the relevant laws, regulations, and especially to comply with the applicable standards, so as not to endanger people's health and life.

### Classification and labeling of the system elements

All chimney parts of the Almeva® exhaust system are classified according to EN 1443 standard, which specifies the general requirements and the basic operating conditions for plastic exhaust systems. The marking is in accordance with EN 14471, which defines the characteristics of plastic exhaust systems. The pipes are usually marked with a printed line with all the prescribed data. Molded parts are marked with an "identification mark" (summary of prescribed data stamped on the sleeve). The entire system and all its elements are certified and have a CE mark. This complies with Directive 93/68 / EC and is placed on the individual components in the form of a sticker together with the certificate number 0036 CPD 9165 001.

#### Example of pipe marking:

Almeva PP DN 80x1,9 Z-7.2-3128 TÜV / VKF Nr. Z 14700 / T120 H1 W 2 O-20 R00 EI00 / Charge 07 053

#### Example of molded part marking:

Almeva PP  
T120;H1;W;2;O-20  
R00;EI 00(nbb)  
Z-7.2-3128 TÜV  
VKF Nr. Z 14700

Explanatory notes:

- Almeva \_\_\_\_\_ Manufacturer's trademark  
 PP \_\_\_\_\_ Type of used material PP (polypropylene), sometimes exact type of Polypropylene, e.g. PPH (polypropylene homopolymer)  
 DN 80x1,9 \_\_\_\_\_ Nominal diameter (outer diameter and thickness of the wall)  
 Z-7.2-3128 TÜV \_\_\_\_\_ Certificate No. (issued by the German Institute for Civil Engineering)  
 VKF Nr. Z 14700 \_\_\_\_\_ Number of the Swiss national fire safety certificate  
 T120 \_\_\_\_\_ Temperature class (for flue gas temperature of up to 120°C)  
 H1 \_\_\_\_\_ Pressure class (for high pressure chimneys up to 5000 Pa)  
 W \_\_\_\_\_ Class of condensate resistance (for chimneys designed in wet operation)  
 2 \_\_\_\_\_ Class of corrosion resistance (for gaseous fuel or natural gas (L, H) and liquid fuels (LTO with sulfur content  $\leq 0,2\%$ , kerosene)  
 O \_\_\_\_\_ Class of resistance to soot fire (for chimneys without resistance against soot fire)  
 20 \_\_\_\_\_ Distance to flammable materials (distance 20mm)  
 R00 \_\_\_\_\_ Thermal resistance ( $0 \text{ m}^2 \text{ K/W}^{-1}$ )  
 EI00 \_\_\_\_\_ Fire resistance (0 minutes)  
 Charge 07 053 \_\_\_\_\_ Batch No. (e.g. in the case of a manufacturing defect it is used for product recall, also used for statistical purposes)

Example of a chimney label:

Although the individual pipes and molded parts are marked as such by the manufacturer, each chimney, after installation in the building, must be marked by a chimney label (chimney sign) in a visible position and the descriptions must be clearly legible. This label characterizes the flue gas path as a whole according to the respective standards. The label must be easy to read, indelible, made of durable material, not over-sprayed, painted over, removed or otherwise damaged. It must contain the name of the company or the manufacturer's trademark, the marking in accordance with the EN 14471 standard, the nominal diameter and thermal resistance of the chimney, information on the manufacturer and boiler type, the overall performance of the installation, information about the installation company (address, telephone, etc.), the installation date and the number of the revision report. A well-placed and properly installed exhaust system is one of many factors that testify to the knowledge of the installer who carried out the work.

Chimney label:

**CE 0036 CPD 9165 001** 

**Almeva AG**  
Industriestrasse 6,  
CH-9220 Bischofszell

**Bis und mit Ø160**

0.1 Easy (eime.)	T120-H1-W2-020-LI-E-U	<input type="checkbox"/>
0.3 Double (DK)	T120-H1-W2-000-LI-E-U1	<input type="checkbox"/>
0.5 Double (LB/LIL)	T120-H1-W2-000-LI-E-U0	<input type="checkbox"/>
0.7 Double (LAB/LAL/LAM/LAC)	T120-H1-W2-000-LE-E-U0	<input type="checkbox"/>
0.9 Schacht	T120-H1-W2-000-LI-E-U0	<input type="checkbox"/>

Temperatur-Stufe: T120  
 Gasdichtheit: H1  
 max. Höhe: 30 m

Windlastbeständigkeit: 0.7: 3 m nach der letzten Befestigung  
 4 m zwischen zwei Befestigungen

Wärmedurchlass-Widerstand: R00

Distanz zu brennbaren Stoffen: 0.0-0.1:  $\geq 20 \text{ mm}$   
 0.2-0.9:  $\geq 00 \text{ mm}$

 Einbaudatum: \_\_\_\_\_  
 Installateur: \_\_\_\_\_

**CE 0036 CPD 9165 001** 

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**Grösser als Ø160**

0.0 Easy (eime.)	T120-P1-W2-020-LI-E-U	<input type="checkbox"/>
0.2 Double (DK)	T120-P1-W2-000-LI-E-U1	<input type="checkbox"/>
0.4 Double (LB/LIL)	T120-P1-W2-000-LI-E-U0	<input type="checkbox"/>
0.6 Double (LAB/LAL/LAM/LAC)	T120-P1-W2-000-LE-E-U0	<input type="checkbox"/>
0.8 Schacht	T120-P1-W2-000-LI-E-U0	<input type="checkbox"/>

Temperatur-Stufe: T120  
 Gasdichtheit: P1  
 max. Höhe: 30 m

Windlastbeständigkeit: 0.6: 3 m nach der letzten Befestigung  
 4 m zwischen zwei Befestigungen

Wärmedurchlass-Widerstand: R00

Distanz zu brennbaren Stoffen: 0.0-0.1:  $\geq 20 \text{ mm}$   
 0.2-0.9:  $\geq 00 \text{ mm}$

 Einbaudatum: \_\_\_\_\_  
 Installateur: \_\_\_\_\_

Ing. Jaroslav Malůšek