

Classification and designation of Almeva plastic flue exhaust system



The Almeva plastic flue exhaust system must be as any other flue exhaust system duly designated and classified according to respective national standards, which are currently harmonized with European standards. These tasks are important particularly for inclusion of the flue system into the respective category of flue exhaust systems. This subsequently allows determination of what kind of flue gas ducting is required for the respective appliance. As an example I present two situations of incorrect connection of a boiler to a flue gas path, which can often be seen in practice. 1) a condensing boiler is connected to a standard fireclay brick chimney for underpressure, which is inadmissible. 2) the so-called "turbo" boiler with the flue gas temperature at the flue gas duct orifice of up to 145 °C is connected directly to the flue gas path as if it was a condensing boiler, which severely exceeds the max. permissible safe temperature of flue gas of 120 °C. Unfortunately, in such cases the safety criterion of 150 °C must be applied. It is the temperature top limit, when plastic in a short-term exposure still preserves its exquisite properties (plastic flue exhaust systems are normally tested for 150 °C). The stated examples are the common mistakes made not only by various mounting crews but also by expertly trained chimney sweeps. It is necessary to prevent these mistakes, observe the respective laws, regulations, decrees and last, but not least, follow the effective standards and make sure that your work may not endanger people's health or lives.

Detailed classification and designation

All flue gas parts of the Almeva system are classified according to ČSN EN 1443, which determines general requirements and basic functional conditions for chimneys and are designated according to ČSN EN 14471, the subject of which is the assessment of properties of system chimneys with plastic liners. Tubes are usually marked with printed lines including all the required data. Adapting pieces include the so-called "identification mark" (a list of required data pressed on the neck).

The whole system and all its elements are certified and have the CE mark, which corresponds to 93/68/EC Directive. CE symbol is placed together with the certificate number 0036 CPD 9165 001 on individual components in the form of a label.

Example of tube designation:

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 adapting piece designation:

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 a detailed specification of the polypropylene may be provided, e.g. PPH (polypropylen-homopolymer)
DN 80x1,9	nominal bore (with plastic tubes the external size is given plus wall thickness)
Z-7.2-3128 TÜV	certificate No. (issued by German Institute for Civil Engineering)
VKF Nr. Z 14700	number of Swiss national fire safety certificate
T120	thermal class (for flue gas temperature of up to 120 °C)
H1	pressure class (up to 5000 Pa for overpressure chimneys)
W	resistance class to condensate effects (for chimneys with designed wet operation)
2	class of resistance to corrosion (for gaseous fuel or natural gas (L, H) and liquid fuel (LTO with sulphur content $\leq 0,2\%$, kerosene))
O	resistance class to chimney fire (for chimneys without resistance to chimney fire)
20	distance to flammable construction materials (distance 20mm)
R00	thermal resistance ($0 \text{ m}^2 \cdot \text{K} \cdot \text{W}^{-1}$)
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:

		Almeva East Europe s.r.o. 24. dubna 78, 664 43 Zelešice u Brna Czech Republic tel.: +420 545 246 114, fax: +420 545 246 115 mobile: +420 774 222 501 Internet: www.almeva.eu E-mail: info@almeva.eu	
One-layer system chimney EN 14471 O T120 H1/P1 O W 2 O20 I D L EN 1443 T120 H1/P1 W 2 O20 EI00		Two-layer system chimney EN 14471 O T120 H1/P1 O W 2 O00 I D L1 O T120 H1/P1 O W 2 O00 E D L0 O T120 H1/P1 O W 2 O00 E D L0 EN 1443 T120 H1/P1 W 2 O00 EI00	
Chimney heat resistance 0,00 m ² .K.W ⁻¹			
Rated diameter mm		Rated diameter mm	
Manufacturer and type of appliances:			
Gross power of appliances:			
Assembly organization, address, tel:			
Date of installation:			
Number of inspection report:			
NOTE: Chimney tag must be visibly mounted on combustion gas routes Almeva, always visible, may not be painted over, removed or otherwise damaged!			

Although individual tubes and adapting pieces are duly marked by the manufacturer, each chimney must additionally have a chimney label because after incorporating the chimney system into a structure the said markings are not always legible or placed at an accessible spot. The label describes the given flue gas path as a whole according to respective standards. It must be indelible, distinct, made of durable material, placed on a visible spot, it must not be covered with paint, removed or damaged in any way. It contains the name of the company or manufacturer's trade name, designation according to ČSN EN 14471, nominal diameter and thermal resistance of the chimney, manufacturer and the type of appliances, total output of appliances, information about the installation and mounting company (address, tel. No., etc.), date of installation and the No. of the inspection report. The correctly attached and filled in chimney label is one of the many factors proving the expertise of the installation worker, who performed the work.

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