

## IMPLEMENTATION AND INSTALLATION ADVICE

### STORAGE

Pipes and fittings for ventilation must **be stored under shelters whatever the materials**

### METHOD OF CONNECTING PVC VENTILATION PIPES AND FITTINGS

Up to a diameter of 250 mm, the connection can be made by gluing with SANIPLAS R glue, after having stripped the end of the pipe and the inside of the socket with AK BOSTIK SOLVENT.

From diameter 315 mm to diameter 1200 mm, connection by welding with 5/3/3 or 7/5/5 GREY PVC triangular rod, after cleaning the welding surfaces.

From a diameter of 500 mm, we recommend making flanged connections for all connections with wearing parts (valves, all types of dampers).

### INSTALLATION OF PVC PIPES

The pipes must be supported at most every 2.5 meters by collars with threaded rods. For supporting cylindrical pipes, it is strongly recommended not to use a half-clamp fixed to a rail. Dampers and dampers must be supported at each end.

### CONNECTION METHOD FOR PP AND PE VENTILATION PIPES AND FITTINGS

In the case of using end-to-end polyfuse fittings up to 140 mm diameter, we recommend the use of a machine with heated mirror and plane to carry out the polyfusion.

From diameter 160 mm to diameter 1400 mm, we offer female fittings which allow, using at least 3 round rods with a diameter of 3 mm, to weld with a hot air blowlamp.

### INSTALLATION OF PP AND PE PIPES

Given the significant expansion coefficients, we recommend continuous support up to a diameter of 125 mm. For larger diameters, support by collars and threaded shafts between 2 meters and 2.5 meters depending on the diameters .

Linear expansion coefficients	
PVC	<i>0.08 mm per meter per degree C</i>
PP from 0 to 30°C	<i>0.105 mm per meter per degree C</i>
PP from 30 to 60°C	<i>0.14 mm per meter per degree C</i>
PP from 60 to 90°C	<i>0.17 mm per meter per degree C</i>
PE HD	<i>0.20 mm per meter per degree C</i>
PVDF	<i>0.12 mm per meter per degree C</i>

ALL OUR DIMENSIONS ARE EXPRESSED IN MM

## MATERIAL CHARACTERISTICS

	PVC (Polyvinyl chloride)	PPh (Homopolymer polypropylene)	PPs (Retardantly flammable homopolymer polypropylene)	PPs-EL (Polypropylene copolymer) Electro conductive	HDPE (High density polyethylene)	PVDF (Polyvinylidene fluoride)
Operating temperature	0°C to +50°C	0°C to +80°C	0°C to +100°C	0°C to +80°C	-50°C to +70°C	-30°C to +140°C
Density g/cm <sup>3</sup>	1.42	0.91	0.95	1.13	0.95	1.78
Electrical insulation	Excellent	Excellent	Excellent	None	Excellent	Excellent
Behavior in fire	M1 French Standards	B2 German Standards	B1 German Standards	V0 German Standards	B2 German Standards	V0 German Standards
Chemical resistance (Ask for the chemical resistance sheet)	Acids, Bases and certain solvents	Acids, bases, salts in aqueous solution	Acids, bases, salts in aqueous solution	Acids, bases, salts in aqueous solution	Acids, bases, salts in aqueous solution	Acids, bases, salts in aqueous solution, chloride, gasoline
Chromic Acid Resistance	Good with risk of cracking on the welds	Bad	Bad	bad	OK if diluted	Very good
Impact resistance	Weak at low temperature	Good	Good	Good	Excellent	Average
Physiological safety	No	Yes	No	No	Yes	Yes
Different colors, depending on pipes and fittings	GREY RAL 7011 White	Beige RAL 7032	GREY RAL 7037	Black	Black	Natural
UV resistance Storage	Very weak Under shelters	Weak Under shelters	Good Under shelters	Good Under shelters	Good Under shelters	Good Under shelters
Assembly methods	Bonding up to Ø 250mm, beyond by welding	Welding	Welding	Welding	Welding	Welding
Cold forming	difficult	Good	Good	Good	Good	Good