ANNEX C

INSTALLATION, USE AND MAINTENANCE

SPG-SP Single Wall series

1) INSTALLATION

● The installation of the flue begins by fixing the first support to the floor or to the wall. For floor application, the first element to install is the “base support with condensate drain”; for wall application, the first element is the “chimney support”. These elements are fixed to the floor/wall through 8 mm diameter bolts, which are not included in the supply. For wall application follows upwards the tee pieces to connect the flue to the connecting flue pipe, the straight elements and the end piece (see *Picture 1*).

● Each element could be supplied on request with locking band, which guarantee stability to mechanical stress.
For flue installed inside shafts and from the top of the building, it is compulsory the use of locking band.

● The allowed maximum load on chimney support and on tee elements (up to standard diameter ϕ 400 mm) are shown in *Table 1* (maximum load is indicated with static height of chimney section).

● The roof outlet can be sealed through the use of flat/slanted flashing and storm collar (see *Picture 2*); the base plate gives to the flashing an easy adaptability to every type of roof covering. For flue elements passing through the roof and continuing outside of the building, DP double wall elements have to be used (see *Picture 1*).
The SPG-SP single wall series is directly compatible with the DP double wall series.

● For installation outside the building, the wind load resistance of chimney system is determined until outer diameter 350 mm:
- brackets, on vertical sections, must have a maximum distance of 2,5 m from each other;
- the maximum chimney height above the last support is 1,5 m (only n°1 joint to be included); if a bigger height is requested, special support pole/trestle is needed.

● Non vertical installation is permitted for liner and connecting flue pipe, with maximum deflection of 90°; the maximum length of the slope is:
- 2 m for diameters up to ϕ 200 mm;
- 3 m for diameters included between ϕ 250 and 700 mm.

● The junction between different elements is made up through a fast coupling system with “tongue and groove joint”. This product is suitable also for condensing application when silicone seals are employed. To lubricate the seals only water has to be used.

Picture 1

Picture 2

● To avoid the accumulation of condensate, the sub-horizontal sections must be installed with a slope of 3 degrees.

● All the vertical elements must be installed with male side downwards to avoid condensate leaks.

● For any possible adjustment during the installation:
- the cutting of the pipe section has to be done with a corner of 90°, removing burrs;
- the screws through the wall of the pipe section must not to be used.

● Appropriate protections around the flue should be used for installations where accidental contact of people/animals is possible.

● Installation according to national regulations.

Diameter (mm)	80	100	120	130	140	150	160	180	200	250	300	350	400
Static heigth of chimney section (m) *for chimney support SPG 517 - SPG 617 - SP 219*	50	48	48	46	45	45	44	42	40	35	30	27	25
Static heigth of chimney section (m) *for 87°-90° tee elements* *SPG 506 - SPG 606 - SPG 5112 - SPG 6112 - SP 206*	110	100	90	85	80	75	70	62	60	45	38	32	28

Table 1

2) USE

The choice of flue diameter has to meet the boiler heat output and the current standards.

3) KIND OF WORKING : • with N1 positive pressure
• with P1 negative pressure

3.1) N1 negative pressure operation

Flue working with N1 negative pressure does not have the silicone seal.

The product designations according to EN 1856-1:2009 standard is:
Chimney system EN 1856-1
T250 N1 W V2 L50050 O60 for diameters up to 300 mm
T250 N1 W V2 L50050 O90 for diameters 350 - 400 mm
T250 N1 W V2 L50060 O90 for diameter 450 mm
T250 N1 W V2 L50060 O120 for diameters from 500 to 600 mm
T250 N1 W V2 L50060 O240 for diameters 650 - 700 mm

The product designations according to EN 1856-2:2009 standard is:
Liner EN 1856-2
T600 N1 W V2 L50050 G for diameters from 80 to 400 mm
T600 N1 W V2 L50060 G for diameters from 80 to 700 mm
Connecting flue pipe EN 1856-2
T600 N1 W V2 L50050 G375 NM for diameters up to 120 mm
T600 N1 W V2 L50050 G390 NM for diameter 130 mm
T600 N1 W V2 L50050 G420 NM for diameter 140 mm
T600 N1 W V2 L50050 G450 NM for diameter 150 mm
T600 N1 W V2 L50050 G480 NM for diameter 160 mm
T600 N1 W V2 L50050 G540 NM for diameter 180 mm
T600 N1 W V2 L50050 G600 M for diameter from 200 to 400 mm
T600 N1 W V2 L50060 G600 M for diameter from 200 to 700 mm

Where:
T600, T250 : temperature class
N1: pressure level
W: condensate resistance, the flue is fit for wet working
V2: corrosion resistance class
L50050, L50060: specification of wall material;
L50: material 1.4404 (AISI 316L)
050: thickness 0,50 mm
060: thickness 0,60 mm

O60, O90, O120, O240: chimney system is not sootfire resistant and the minimum distance from combustible materials is 60, 90, 120, 240 mm (the distances are referred to each diameter above mentioned in the chimney system designations)
G: liner is sootfire resistant
G375, G390, G420, G450, G480, G540, G600: connecting flue pipe is sootfire resistant and the minimum distance from combustible materials is 375, 390, 420, 450, 480, 540, 600 mm (the distances are referred to each diameter above mentioned in the connecting flue pipe designations)
NM: not measured value
M: measured value

The available diameters for N1 negative pressure operation are:
80, 100, 120, 130, 140, 150, 160, 180, 200, 250, 300, 350, 400, 450, 500, 550, 600, 650, 700.

3.2) P1 positive pressure operation

Flue working with P1 positive pressure have the silicone seals to obtain a perfect tightness of elements.

The product designations according to EN 1856-1:2009 standard is:
Chimney system EN 1856-1
T200 P1 W V2 L50050 O60 for diameters up to 300 mm
T200 P1 W V2 L50050 O90 for diameters 350 - 400 mm
T200 P1 W V2 L50060 O90 for diameter 450 mm
T200 P1 W V2 L50060 O120 for diameter 500 mm

The product designations according to EN 1856-2:2009 standard is:
Liner EN 1856-2
T200 P1 W V2 L50050 O for diameters from 80 to 400 mm
T200 P1 W V2 L50060 O for diameters 80 - 500 mm

Connecting flue pipe EN 1856-2
T200 P1 W V2 L50050 O60 M for diameters from 80 to 400 mm
T200 P1 W V2 L50060 O60 M for diameters 80 - 500 mm

Where:
T200: temperature class
P1: pressure level
W: condensate resistance, the flue is fit for wet working
V2: corrosion resistance class
L50050, L50060: specification of wall material;
L50: material 1.4404 (AISI 316L)
050: thickness 0,50 mm
060: thickness 0,60 mm
O: liner is not sootfire resistant
O60, O90, O120: chimney system / connecting flue pipe is not sootfire resistant and the minimum distance from combustible materials is 60, 90, 120 mm (the distances are referred to each diameter above mentioned in the designations)
M: measured value

The available diameters for P1 positive pressure operation are:
80, 100, 120, 130, 140, 150, 160, 180, 200, 250, 300, 350, 400, 450, 500.

4) IDENTIFICATION METAL PLATE OF CHIMNEY SYSTEM
At the end of installation, the installer shall compile the identification metal plate of flue and shall put it near or at the base of the system.
On this metal plate shall be written the installer data, the designation of flue (according to EN 1443 standard), the nominal diameter and the distance from combustible materials declared by manufacturer.

The product designations according to EN 1443 standard are:

Chimney system:	**T250 N1 W 2 O60** for diameters up to 300 mm **T250 N1 W 2 O90** for diameters 350 - 400 - 450 mm **T250 N1 W 2 O120** for diameters from 500 to 600 mm **T250 N1 W 2 O240** for diameters from 650 - 700 mm	**T200 P1 W 2 O60** for diameters up to 300 mm **T200 P1 W 2 O90** for diameters 350 - 400 - 450 mm **T200 P1 W 2 O120** for diameter 500 mm
Liner:	**T600 N1 W 2 G** for diameters from 80 to 700 mm	**T200 P1 W 2 O** for diameters from 80 to 500 mm
Connecting flue pipe:	**T600 N1 W 2 G375** for diameters up to 120 mm **T600 N1 W 2 G390** for diameter 130 mm **T600 N1 W 2 G420** for diameter 140 mm **T600 N1 W 2 G450** for diameter 150 mm **T600 N1 W 2 G480** for diameter 160 mm **T600 N1 W 2 G540** for diameter 180 mm **T600 N1 W 2 G600** for diameters from 200 to 700 mm	**T200 P1 W 2 O60** for diameters from 80 to 500 mm

Where:
T200, T250, T600 : temperature class
N1, P1: pressure level
W: condensate resistance, the flue is fit for wet working
2: corrosion resistance class
G: liner is sootfire resistant
G375, G390, G420, G450, G480, G540, G600: connecting flue pipe is sootfire resistant and the minimum distance from combustible materials is 375, 390, 420, 450, 480, 540, 600 mm (the distances are referred to each diameter above mentioned on the connecting flue pipe designations)
O: liner is not sootfire resistant
O60, O90, O120, O240: chimney system / connecting flue pipe is not sootfire resistant and the minimum distance from combustible materials is 60, 90, 120, 240 mm (the distances are referred to each diameter above mentioned in the designation)

The identification metal plate (for diameters up to 400 mm) is shown in *Table 2*.

5) MAINTENANCE
Maintenance of flue consists of regular checks of elements conditions, and visual checks. Controls are carried out also for the right connection of modular elements, the integrity of inner wall, the cleaning and removal of internal sediments (inner wall cleaning has to be carried out with materials that do not change the features of stainless steel, for example nylon brushes), the disposal of acid condensations or rain through the discharge and the inspection opening.
Clean any dirt from the exterior using a cloth dampened with water and a small amount of detergent if necessary.

6) HANDLING AND STORAGE
Products are to be stored in a suitable location (dry conditions on a level floor and in a non-corrosive environment) and left in their packaging until immediately prior to installation when the packaging should be removed. Suitable personal protection equipment should be worn when handling and installing these items.

Note: further information and translations are available on our Internet web site www.roccheggiani.it

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CE
0036

"SPG - SP" series

CHIMNEY SYSTEM EN 1856-1
T250 N1 W V2 L50050 O60 for diameters up to 300 mm
T250 N1 W V2 L50050 O90 for diameters 350-400 mm
T200 P1 W V2 L50050 O60 for diameters up to 300 mm
T200 P1 W V2 L50050 O90 for diameters 350-400 mm
Cert. N° 0036 CPD 9811 007

LINER EN 1856-2
T600 N1 W V2 L50050 G
T200 P1 W V2 L50050 O
Cert. N° 0036 CPR 9811 008

CONNECTING FLUE PIPE EN 1856-2
T600 N1 W V2 L50050 G375 NM for diameters up to 120 mm
T600 N1 W V2 L50050 G390 NM for diameters 130 mm
T600 N1 W V2 L50050 G420 NM for diameters 140 mm
T600 N1 W V2 L50050 G450 NM for diameters 150 mm
T600 N1 W V2 L50050 G480 NM for diameters 160 mm
T600 N1 W V2 L50050 G540 NM for diameters 180 mm
T600 N1 W V2 L50050 G600 M for diameters from 200 to 400 mm
T200 P1 W V2 L50050 O60 M for diameters from 80 to 400 mm
Cert. N° 0036 CPR 9811 009

Space for the installer

_____ _____ mm
Designation according to EN 1443 Diameter

_____ _____ mm
Designation according to EN 1443 Diameter

_____ mm
Distance to combustible material

Installer: _____
Name

_____
Address

Installation date: _____

ATTENTION: This metal plate shall not be removed or changed!

Table 2