

Questionnaire for design of a smoke extract installation based on jet fans in car park systems - Basic data for a Computational Fluid Dynamics Simulation (CFD) -

The questionnaire hereafter is made for preparing a system for smoke extraction and ventilation based on jet fans. These key information are necessary for achieving fast and efficient results in the estimation phase. Please reply to all relevant questions and mail the filled-in form back to us. For further questions or additional feed back please contact us by phone.

Sender: Company: _____ Person to be contacted: _____ Phone: _____ Fax: _____ Email: _____	Project: Designation: _____ Place: _____ Consultant / Contractor: _____ Project phase: _____
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I. Building and use of the car park:

- What type of works are under planning ?

<input type="checkbox"/> New building	<input type="checkbox"/> Conversion
<input type="checkbox"/> Extension	<input type="checkbox"/> _____
- Where is the building and the car park situated ?

<input type="checkbox"/> City centre	<input type="checkbox"/> outside centre
<input type="checkbox"/> Industrial area	<input type="checkbox"/> housing area
<input type="checkbox"/> _____	<input type="checkbox"/> _____
- Car park size:

<input type="checkbox"/> small up to app. 100 m ²	<input type="checkbox"/> Medium up to app. 1.000 m ²
<input type="checkbox"/> Large more than 1.000 m ²	<input type="checkbox"/> _____

 Number of decks: _____
- Geometric building data (please join a plan)

Length (m): _____	Width (m): _____
Height (m): _____	
Nett volume space per deck (m ³): _____	
Minimum driving through height (m): _____	
Dimensions of the columns: _____	
Are separation walls for smoke sections provided ? _____	
Size of smoke sections (m ²): _____	
- Has the size and position of the exhaust chimney been projected ?

<input type="checkbox"/> Yes	<input type="checkbox"/> No
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 Are there no restrictions for design of exhaust chimney ? Yes No

II. Use of the car park:

- What type of car park is considered ?

<input type="checkbox"/> Residential	<input type="checkbox"/> public services
<input type="checkbox"/> Office	<input type="checkbox"/> cinema
<input type="checkbox"/> Shopping centre	<input type="checkbox"/> _____
- Number of cars admitted as a maximum per deck: _____
- Type of vehicles admitted :

<input type="checkbox"/> cars only	<input type="checkbox"/> also vans and similar
<input type="checkbox"/> _____	<input type="checkbox"/> _____

III. Ventilation and smoke fighting parameters:

- | | | |
|--|--|--|
| 1. Is there already an expert's assessment of layout available ? | <input type="checkbox"/> Yes (please join to inquiry) | <input type="checkbox"/> No (continue question 2) |
| 2. How do you want the design of smoke extract installation to be made ? | <input type="checkbox"/> according to car park guide lines | <input type="checkbox"/> acc. to individual requirements (please indicate) |
| | <input type="checkbox"/> Have special local prescriptions to be respected? | |
| <hr/> | | |
| 3. Use of the jet fan ventilation installation: | <input type="checkbox"/> smoke extraction only | <input type="checkbox"/> Smoke extract and CO-control |
| 4. CO-Control: | <input type="checkbox"/> automatically | <input type="checkbox"/> by timer |
| | <input type="checkbox"/> _____ | <input type="checkbox"/> _____ |
| 5. Flow rates: | for mechanical ventilation: | _____ m ³ /h per m ² car park surface |
| | for smoke extraction: | _____ -times air changes |
| 6. Which kind of air intake has been provided ? | <input type="checkbox"/> Natural intake as ?
(e.g.. windows, Car entry/exit, Light-chimney, etc.) | _____ |
| | | _____ |
| | | <u>Number of intake openings:</u> _____ units.
(please indicate position of openings in the drawings) |
| | | dimensions of openings:
<u>L/W/H</u> _____ |
| | <input type="checkbox"/> Mechanical air intake:
(Please complete data →) | <u>Flow rate</u> _____ m ³ /h |
| | | <u>Number of air intakes:</u> _____ units.
(please indicate position of openings in the drawings) |
| | | dimensions of openings:
<u>L/W/H</u> _____ |
| | | <u>Flow velocity:</u> _____ m/S |
| 7. Is the control system designed for controlling other units or systems ? | <input type="checkbox"/> Control ventilation (On/off) | <input type="checkbox"/> Doors |
| | <input type="checkbox"/> Other systems (if yes specify) ? | _____ |

IV. Access points to car park:

- | | | |
|---|---|--------------------------------|
| 1. How openings and stair cases are kept smoke free ? | <input type="checkbox"/> Positive pressure system | <input type="checkbox"/> _____ |
| | <input type="checkbox"/> _____ | <input type="checkbox"/> _____ |
| 2. Are escape tunnels with positive pressure ventilation provided ? | <input type="checkbox"/> yes
(Please join relevant data) | <input type="checkbox"/> no |

V. Remarks:

Date: _____

Made by: _____

