

Sociological survey of HVAC operating modes

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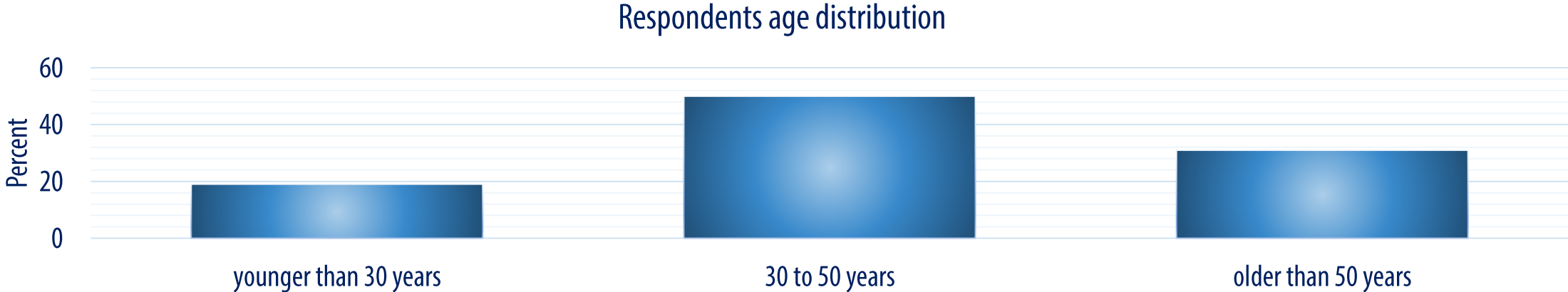


Sociological survey design

The aim of sociological survey was to investigate car Heating, Ventilation and Air Conditioning (HVAC) system operation modes settings among of private car owners

Questionnaire with 33 question was prepared

100 respondents took part in the survey (61 female and 39 mail)



The survey was carried out on the Central scientific research automobile and automotive engine institute (NAMI) in it's Testing Centre - Dmitrov proving ground (Moscow region)

Data of survey May 2018

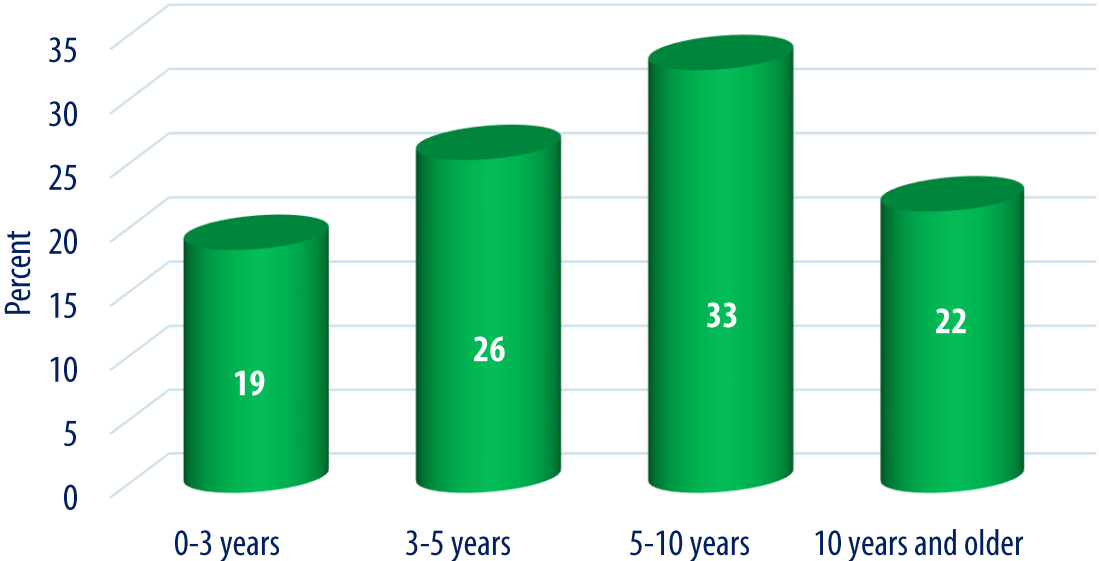


Cars age and HVAC system type

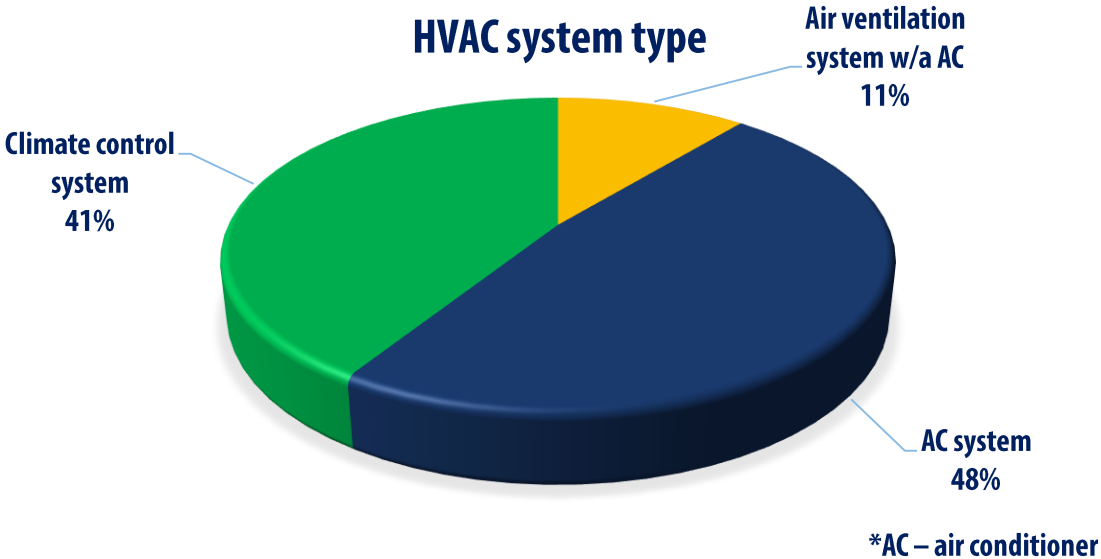
Cars by fuel type

- 90% gasoline
- 10% diesel

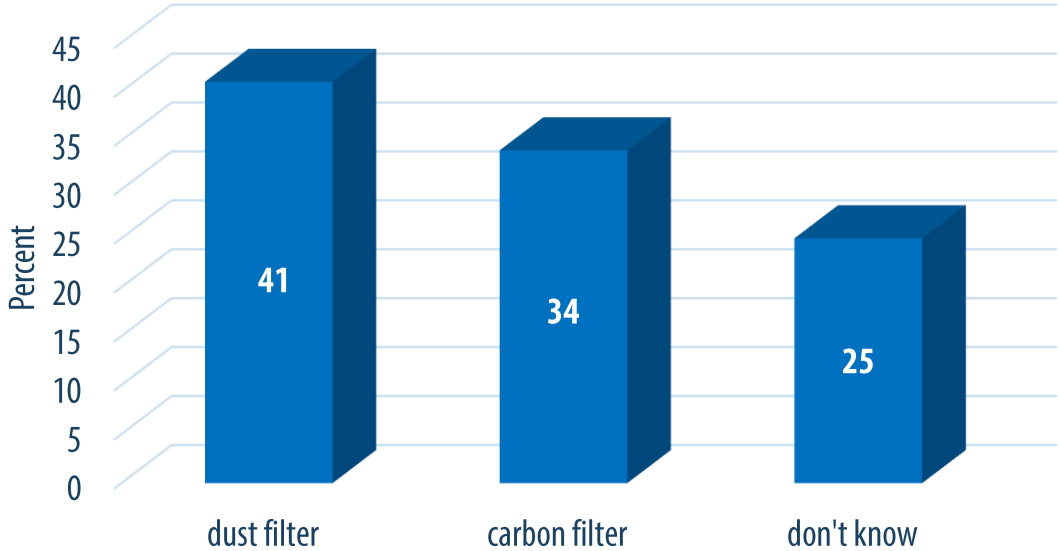
Cars age



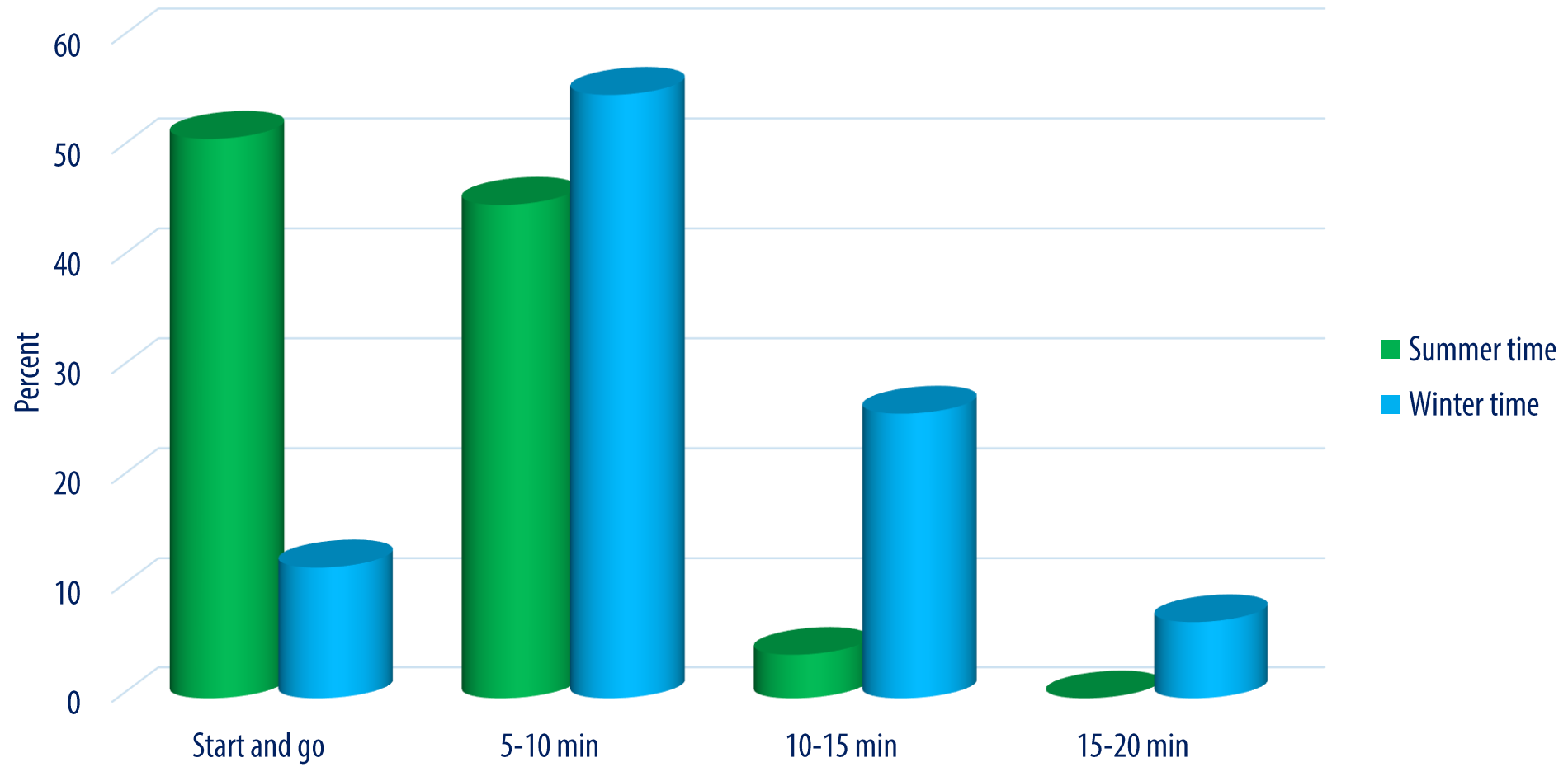
HVAC system type



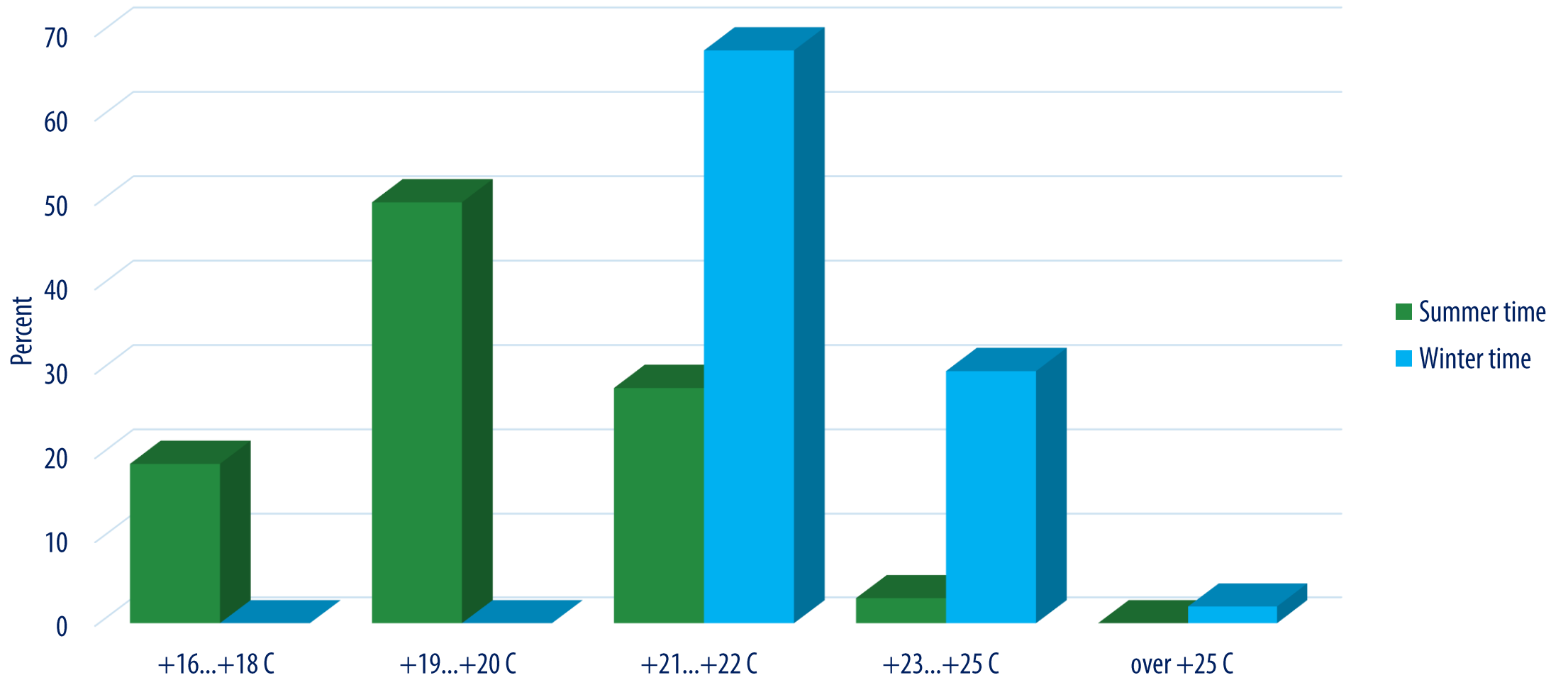
Cabin filter type



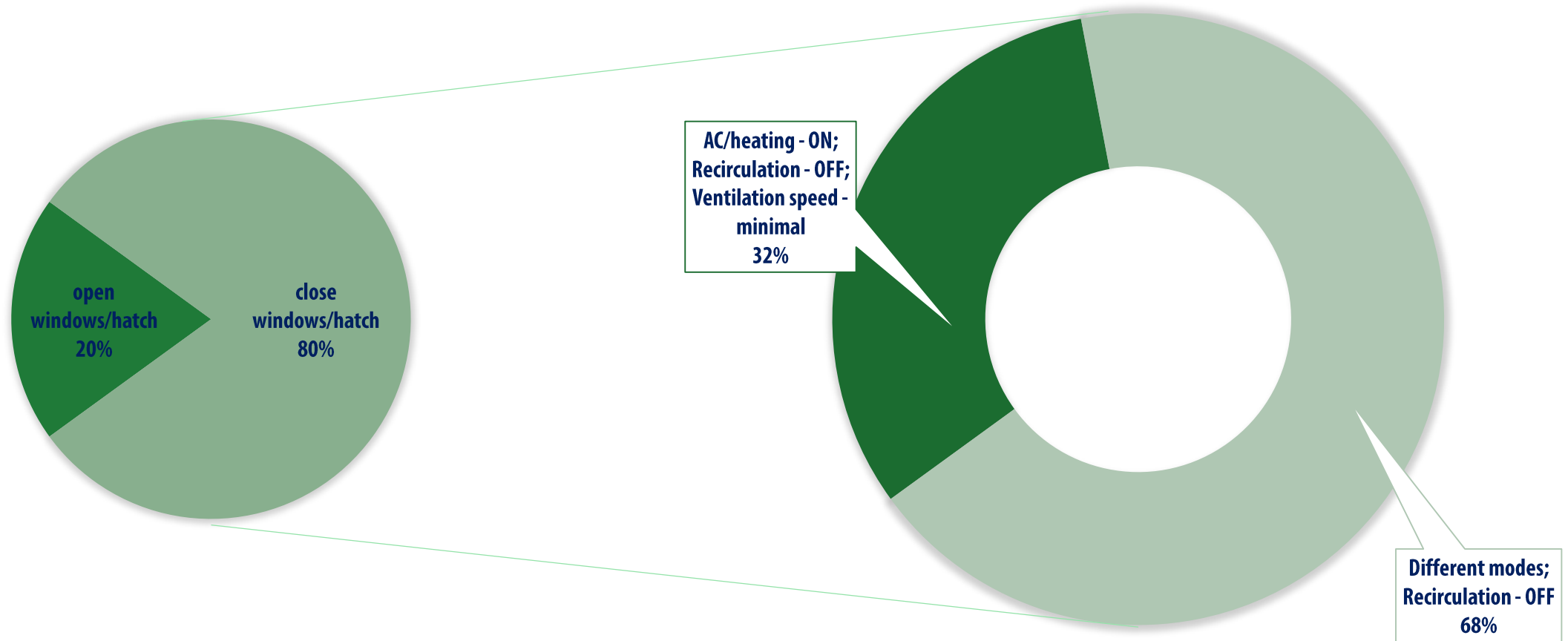
The time between engine start and movement start



The temperature inside cars

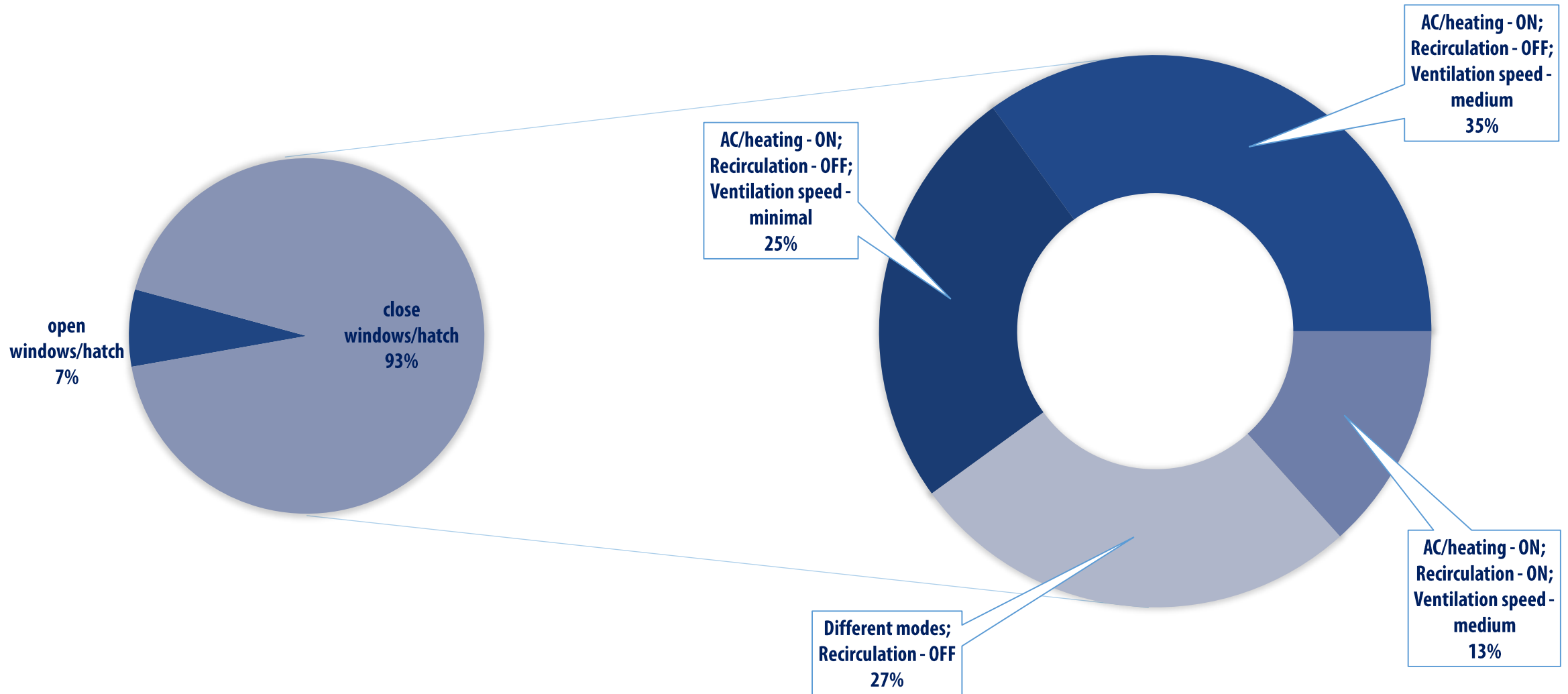


Ventilation, air conditioning/heating modes in summer time*



*At idling, when the people are sitting in a car for more than 20 minutes

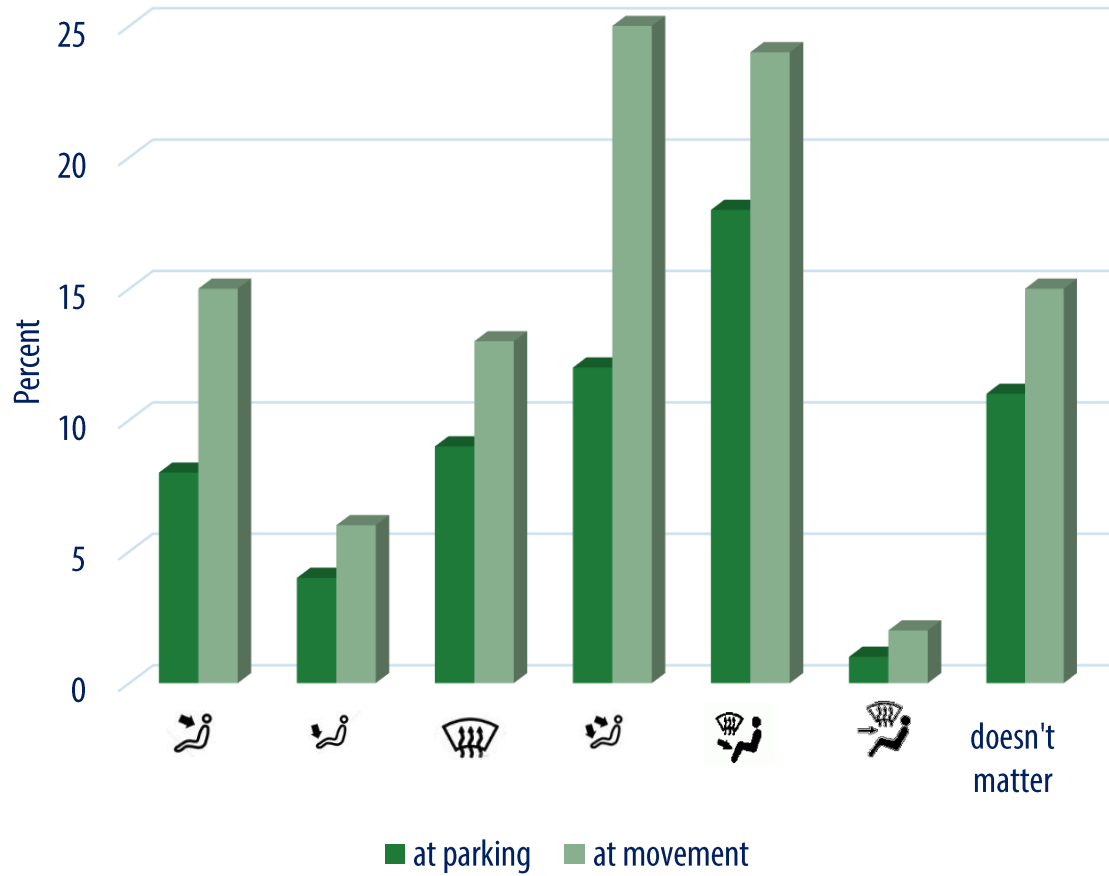
Ventilation, air conditioning/heating modes in winter time*



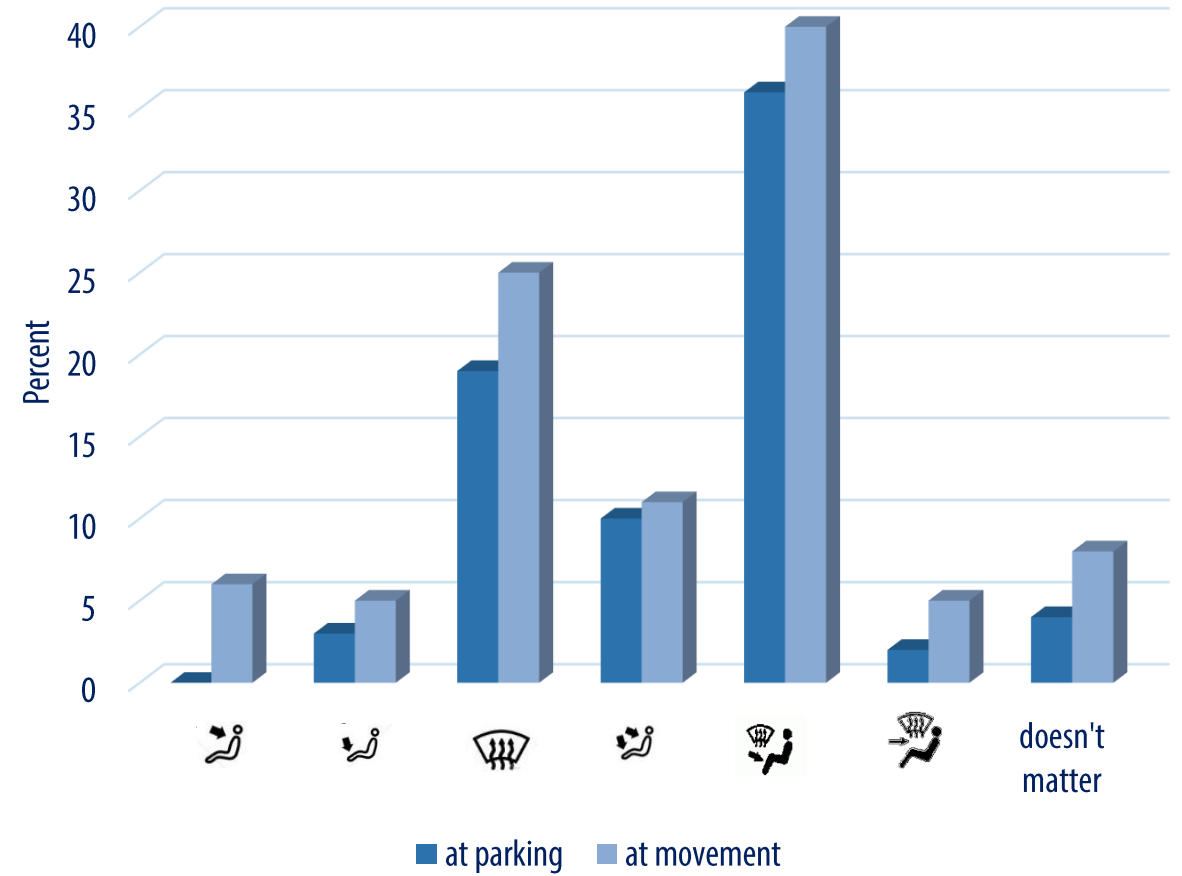
*At idling, when the people are sitting in a car for more than 20 minutes

Ventilation direction

Summer time



Winter time



1. Analysis of HVAC operating modes was carried out among 100 private car owners.
2. Around 50% of people at summer time and around 90% at winter time are waiting for cabin air cooling down or warming up for more than 5 minutes.
3. Most people set inside temperature in the car cabin in the range from 19 till 22°C.
4. Most frequently used HVAC modes in summer time are with recirculation is OFF and different ventilation speed, in winter time with recirculation is OFF and minimal or medium ventilation speed.

Thank you for your attention!

