

GLOBAL STUDENT COMPETITION

THEME:

Door stop for stepless positioning of vehicle doors

START DATE

April 8, 2019

DEADLINE

September 30, 2019

CONTACT

innovace@ace-int.eu
Toni Riediger

AWARD CEREMONY

November 2019

QUESTIONS

If you have any questions, please do not hesitate to contact us by mail at innovace@ace-int.eu

TECHNICAL FRAMEWORK

Installation space:

H 150mm x W 190mm x D 30mm

Life cycle:

Min. 50,000 cycles (opening and closing)

Tensile strength:

8.500N with door open (misuse)

Connection:

Use existing connection points of a car door

CALL FOR COMPETITION

A design draft with technical proof of function and feasibility is expected.

The adjusting element to be developed should, in contrast to existing door stops/door catch hinges with pre-defined detents or holding stops, realize an infinitely variable positioning and holding function of a vehicle door. This will provide the operator with greater comfort, e.g. in tight parking situations.

The installation position of the adjustment element and the mounting points are to be adopted from existing door stops, i.e. centrally between the door hinges (see technical framework).

The opening range of the door and thus the infinitely variable functional range of the adjustment element is between 0° and 90°. The adjustment force during door movement should be <20N and the holding force of the positioned door between 30-50N, both measured at the center of the outer door handle.

For the competition, we expect a target price calculation with regard to cost for planned quantities of more than 50,000 units per year.

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REGISTRATION

Candidates/applicant teams must register by sending an email to innovace@ace-int.eu. The accompanying chair/professor must be named.

PRIZE

The winning team or individual will receive \$5,000 in prize money. The accompanying chair receives an additional \$2,000.

EVALUATION CRITERIA

Design (30 points):

Concept with mounting points/mounting position

Function (30 points):

Functional verification with corresponding load cases

Price concept (40 points):

Plausible cost estimate

