
ECO 260

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Bezeichnung Design Rules - ECO 260
Revision 1
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Änderungshistorie:

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ECO 260

This document provides a set of design rules in order to reach all ECO 260 technical parameters in customer specific applications. Important mechanical parameters and allowed tolerances are shown in the list below. More details are available within the installation instructions.

Design rule	Important for / Refers to	Allowed tolerance
Flatness of the rest of the designated contact surfaces	Prevent torsion of the ECO 260. Torsion can affect safe operation. Check ECO 260 installation instruction D05-M01 BL04 (rest surfaces, common tolerance range D or H)	+/- 0,05 mm
Backlash-free bracket	Ensure that the whole operating travel acts onto the leaf spring. Avoid dangling of ECO 260.	+/-0 mm
Actuation of the leaf spring at the designated points	A shortening of the effective leaf spring length below the specified measure reduces the amount of energy and (in conjunction with the selected maximum travel) may also reduce the maximum number of operating cycles. Conversely, an extension of the effective leaf spring length acts positive onto energy output and number of cycles - it must be ensured, however, that the tension spring when operating close to the outer edge cannot slide out of the actuating fork. Refers to D05-M01 BL01	+/- 0,2 mm
Compliance with the minimum actuating travel of the leaf spring	Below the minimum switching point (spring travel) a safe operation and minimum number of cycles of the ECO 260 is not guaranteed. Refers to D05-M01 BL01 View 6	> 1,4 mm
Compliance with the maximum actuating travel of the leaf spring	Displacements above the maximum switching point (spring travel) will have negative impacts on operation and life cycle. Refers to D05-M01 BL01 View 3	< 3,6 mm
Design of the actuating fork at the interface to the leaf spring	Design of this fork is the most important element to ensure the specified power output. In addition to compliance with the minimum fork opening with their tolerances the following factors have to be considered: <ul style="list-style-type: none"> - When the leaf spring is biased, such that the switching point is reached, U-core and leaf spring must be able to move without any hindrance. For this the minimum opening fork is a prerequisite, it must not be underrun. - To achieve best performance a somewhat elastic construction (for example, is always given, when a button is pressed with a finger) should be used. This relationship can be used constructively by a slightly elastic actuating mechanism, if the resulting increased operating travel is acceptable. 	Fork opening >= 0,35 mm
Dust / particle protection	Avoid getting particles or dust into the ECO 260 mechanic. Magnetic particles will get absorbed by the magnetic system of ECO 260 and will instantly destroy the ECO function	Keep assembly process clean
Housing assembly	Avoid damage or break at assembly of the ECO 260 into the designed housing, a broken interface will lead to malfunction	D05-M01 BL04
External magnets/ ferromagnetic metal parts	Avoid ferromagnetic metal parts and permanent magnets close to the ECO 260 – realize a keep out sphere with diameter of 60mm in housing design	