





The stepping motor has two windings. The windings are energized in a special order with short pulses. This makes the motor move in short steps, which is how it got its name. The direction of rotation can be changed. When the motor is stationary, both the windings are energized continuously to lock the motor. The stepping motor does not require a feed-back coupling to the control module (position sensor). By sending a known number of pulses, the control module always knows how far the flap has moved. This is possible on condition that the control module has calibrated itself by turning the flap to its respective end positions so that it knows the position of the flap.

Calibration is performed by pressing the AUTO and OFF buttons. Calibration must be performed if the battery has been disconnected/discharged, if the ACC unit or stepping motor has been changed, or if its position has been changed.

The climate system has two air distribution flaps, one twin-flap for the driver's zone and the front seat passenger, and one for the rear seat passengers that is linked to the front flap. The two flaps are manoeuvred by a stepping motor fitted to the **passenger side of the heating and ventilation unit**. Consequently, the air distribution is common for the passenger and the driver zones. The air is distributed to the defroster, floor/rear door windows or the dashboard/rear centre vents.

The stepping motor for the air distribution flap is supplied with current from the ACC unit pins 27 and 8 (winding 1) and pins 28 and 9 (winding 2).

The air distribution is controlled depending on the requested mixed-air temperature for the driver's zone.

Defrost is selected first after cold starting, see [Starting from cold in auto](#).

The desired air distribution can also be set manually on the panel. Air distribution is shown with a symbol on the ACC display.

When OFF, the flap stops at the current position.

Diagnostics

In the event of an open circuit or short circuit, diagnostic trouble code B2400 is set and 12 is displayed instead of right-hand temperature when calibrating.

If the motor jams, diagnostic trouble code B2406 is set and 13 is displayed instead of right-hand temperature when calibrating.

DTC B2405 will be generated if there is no mechanical connection between the motor and the flap, 14 will be shown instead of the right-hand temperature for calibration.

The diagnostics tool shows 100% in defrost position and 0% in panel position.