

# Soft Docking

Haldex

## Technical Info

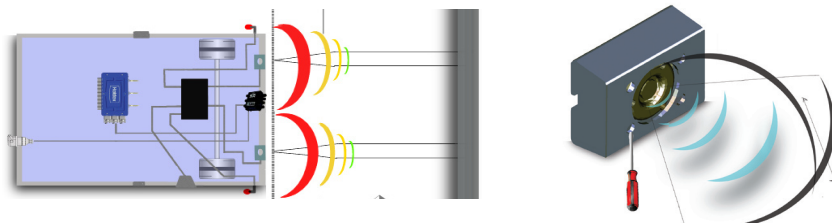


## Increased control into reversing through innovation and engineering

Reversing into docking bays has always been an area where damage is likely to occur to the vehicle or the dock if the vehicle is allowed to hit the dock at speed.

Several systems are available to assist the driver when reversing by visual or audible indication of the distance to the dock.

Haldex offers added security with Soft Docking, when linked to the Haldex EB+ EBS braking system which can apply the brakes automatically when reversing into a loading bay.



Permanent Tone / Lamp	●	< 0.5 meters
8 Beeps per sec (8 Hz) / Flashes	●	0.5 - 1.0 meters
5 Beeps per sec (8 Hz) / Flashes	●	1.0 - 2.0 meters
3 Beeps per sec (3 Hz) / Flashes	●	2.0 - 3.0 meters
No Beep/Flashes	●	> 3 meters

### Liability Exclusion

The system is not totally accurate under all circumstances. The driver must manoeuvre with care up to the dock. Haldex cannot be held responsible for any damage that may occur when using the system. It is the driver's responsibility to reverse safely.

### Conditions of no detection

The system will not detect the dock when the vehicle is not in reverse. System will not operate if the speed of the vehicle is excessive (more than 20 km per hour).

The system cannot replace the driver's responsibility to ensure a clear passage when manoeuvring. The operation needs to be tested on a vehicle after installation. The vehicle requires Haldex EB+ 1M, 2M or 3M system to function.

The detection can be adjusted with 10° horizontal and vertical angle. This requires a DIN 546 nut tool. Detection can be adjusted by rotating the 3 fixing nuts and should only be made with an obstacle in place.

The Soft Docking system will automatically apply the brakes when within 1m distance from the docking bay.



### Soft Docking operation

The HalDEX Soft Docking system uses timely application of the brakes when reversing towards a loading bay. The brakes are applied automatically based on wheel speed, trailer load and distance to the loading bay.

The Soft Docking system is activated when the driver selects reverse gear. The controlled automatic braking commences at 1 meter distance from the dock. The system is equipped with distance sensors and distance from the dock is first detected when the trailer is in reverse and less than 3 meters away from the dock.

The braking command is delivered from the HalDEX EB+ system via an auxiliary port. The Braking at 1 meter distance lasts for 2 seconds before the system releases the brakes giving control back to the driver.

#### Added Safety Features:

HalDEX offers additional aids to the driver that indicate the distance to the dock by audible beeping and visual flashing lights.

The additional aids operate in light and dark conditions and offering a quick and easy installation. They are ADR Zone 2 approved.

Acoustics can be turned off for night operation by simply selecting reverse gear twice within two seconds.

### Part Numbers

Complete System with Acoustic and Optical Aids	815 024 001
Kit with Acoustic Aid	815 025 001
Kit with Optical Aid	815 026 001
Basic Kit	815 027 001
Sensor Adjusting Tool	042 708 309

### Dimensions

Width:	234.5 mm
Height:	155.5 mm

### Specifications

Nominal Voltage	24V
Operating Temperature	-30 to +65°C
Current Consumption (total system)	< 300 mA
Ultrasonic Sensors	
Max Range	2 500 mm
Min Range	350 mm
Detection Angle	15°
Max current consumption	< 35 mA
Frequency	180 kHz

Reversing Alarm	
Max current consumption	< 35 mA

Superpoint LED	
Max current consumption	< 35 mA