



Haldex Air Suspension Control



COLAS®

Raise/Lower Valve with Reset-to-Ride and Dead Man Function

In recent years, air suspension has taken over from mechanical spring suspension as the prime carrier of European freight.

A large proportion of air suspended vehicles are fitted with raise/lower valves on trucks and trailer units, allowing the vehicle deck height to be matched to the height of loading. However, standard raise/lower valves are subject to human error.

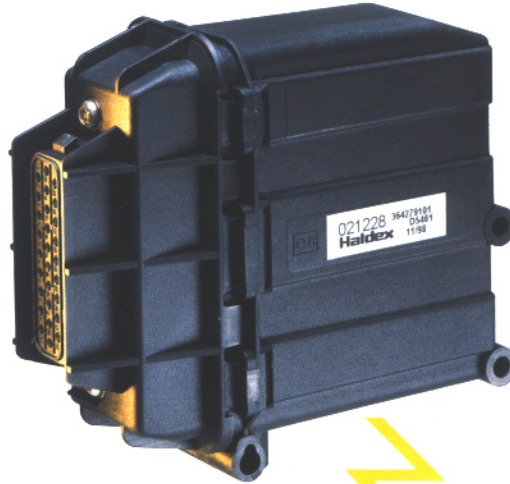
If the vehicle is driven away with the deck height in the wrong position, this can result in severe damage to important trailer components and, indeed the trailer body, itself.

COLAS solves these problems in the most cost-effective way possible by benefiting from the most technically advanced versions of Haldex ABS systems.

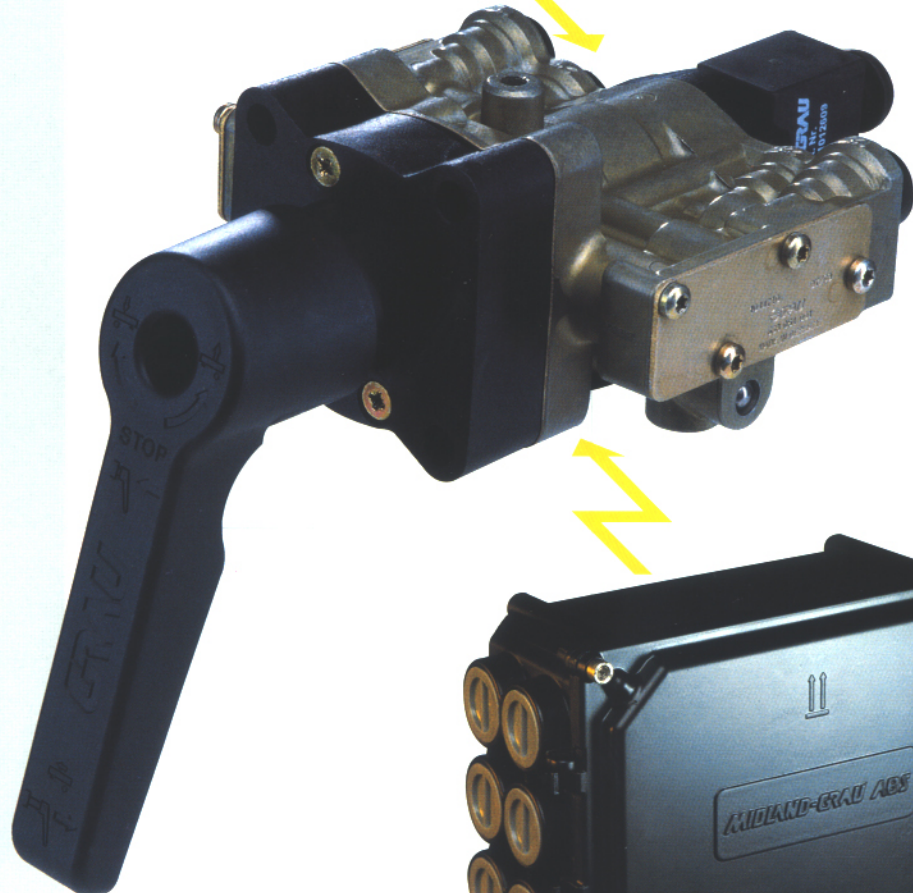
The ABS monitors the speed of rotation of the trailer wheels. As soon as the vehicle starts moving above a speed of 10 kph (chosen so that shunting without reset is possible), the ABS passes an electrical signal to COLAS which then automatically resets the suspension to ride height.

At the same time, COLAS offers a "dead man" handle facility, likely to be incorporated in future legislation.

Modular



COLAS works in conjunction with the latest generation of Haldex ABS systems for trailers.

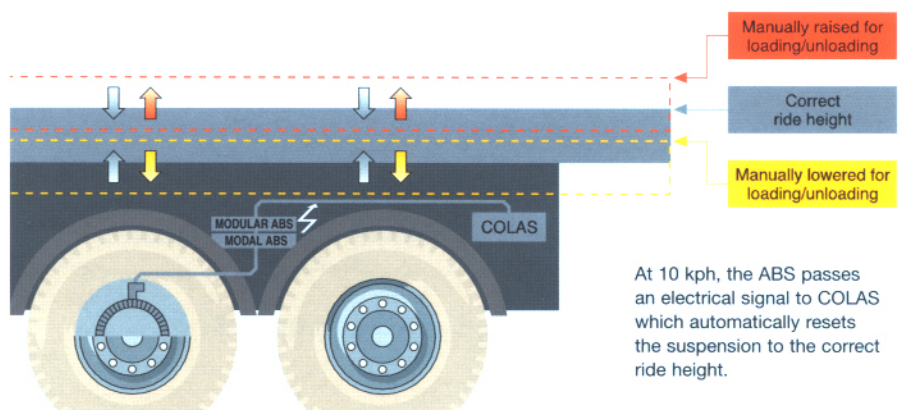


Modal

COLAS prevents:-

- Damage to the shock absorbers
- Damage to axles
- Incorrect braking (over-pressurised suspension)
- Damage to vehicle roof

COLAS® - Manual Raise/Lower and Automatic Reset-to-Ride



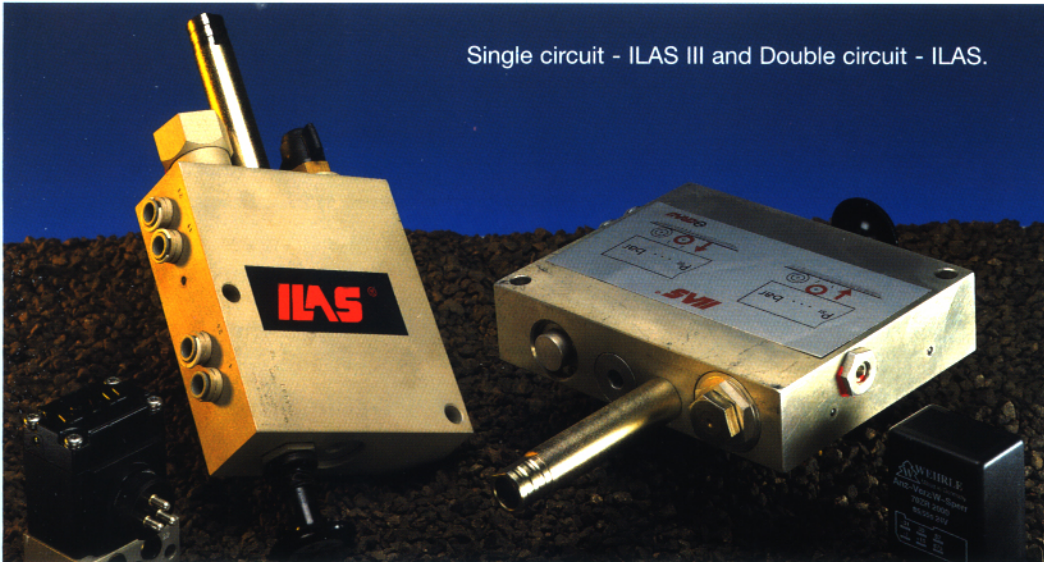
At 10 kph, the ABS passes an electrical signal to COLAS which automatically resets the suspension to the correct ride height.

ILAS®

Integrated Lift Axle System

ILAS offers the operator a single valve package capable of ensuring that the lift axle is correctly positioned at all times in order to minimise the cost of wear on tyres and running gear.

Single circuit - ILAS III and Double circuit - ILAS.



The aims of ILAS which have led to its specification by many European operators have now been taken a step further. Tests have shown that single circuit control is sufficient for most applications and ILAS III has been developed to benefit from the further reduction of complexity that this control method allows. Thus, Haldex is able to keep a step ahead by offering the minimum cost of ownership possible.

ILAS Fully Automatic - Lift and Lower

Without driver intervention this version ensures that the lift axle is positioned according to the load.

ILAS Basic - Auto Lower

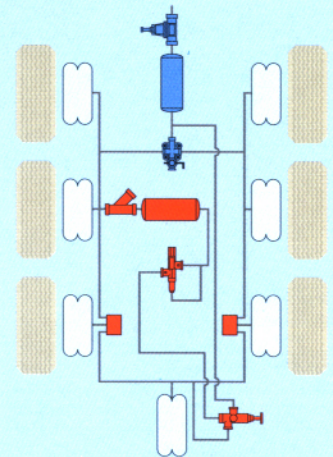
Avoids the possibility of inadvertently overloading the other axles lowering the lift axle when the vehicle is laden.

ILAS Electric - Signal from Cab

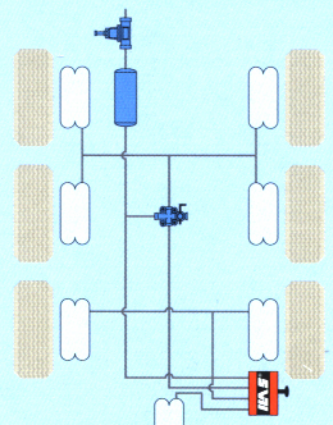
Allows the driver to lift or lower the lift axle from the cab, thus increasing the fifth wheel load to provide short term traction support in slippery conditions.

Suspension Part Numbers	
Dual ride height cylinder	341 032 011
Solenoid Timer	360 014 001 003 6076 09
EGP levelling valve	612 035 ---
ILAS	
Auto lower	352 028 ---
Auto lift/lower	352 035 ---
Auto lift/lower & traction control	352 037 ---
ILAS III	
Auto lower	352 047 ---
Auto lift/lower	352 051 ---

Conventional System



ILAS® System



For further information:

AUSTRIA

Graubremse Wien GesmbH
Tel: INT +43 1865 16 40
Fax: INT +43 1865 16 4027

BELGIUM

Haldex NV
Tel: INT +32 2725 3707
Fax: INT +32 2725 4099

BRAZIL

Haldex do Brasil Ind. e Com. Ltda
Tel: INT +55 11 531 4159
Fax: INT +55 11 531 9515

CHINA

Haldex International Trading (Shanghai) Co. Ltd.
Tel: INT +86 21 6289 44 69
Fax: INT +86 21 6279 05 54

FRANCE

Haldex Europe S.A.
Tel: INT +333 88 68 22 00
Fax: INT +333 88 68 22 09

GERMANY

Haldex Brake Products GmbH
Tel: INT +49 711 934 91 70
Fax: INT +49 711 934 91 740

GREAT BRITAIN

Haldex Ltd.
Tel: INT +44 1 325 310 110
Fax: INT +44 1 325 311 834

POLAND

Haldex Sp. Zo.o
Tel: INT +48 438 434 614/516
Fax: INT +48 438 433 689

SOUTH KOREA

Haldex Korea Ltd.
Tel: INT +82 2 749 3650
Fax: INT +82 2 749 3652

SPAIN

Haldex España, S.A.
Tel: INT +34 9 3573 1030
Fax: INT +34 9 3573 0728

SWEDEN

Haldex Brake Products AB
Tel: INT +46 418 57700
Fax: INT +46 418 24435

USA

Haldex Midland Corp.
Tel: INT +1 816 891 2470
Fax: INT +1 816 891 9447



The Haldex group is a global supplier of proprietary products for trucks, cars and industrial vehicles, with special emphasis on performance and safety. The Group is organized in Divisions which focus on their respective product niche:

Haldex Brake Systems supplies ABS systems and brake components for heavy vehicle air brakes.

Haldex Midland Services supplies spare parts and remanufactured components for the heavy vehicle aftermarket.

Haldex Barnes Hydraulics supplies gear pumps and hydraulic systems for power steering and lifting functions on industrial vehicles and trucks.

Haldex Garphyttan Wire supplies specialty steel-alloyed wire products mainly for applications in combustion engines.

Haldex Traction Systems supplies 4WD systems for cars and trucks.

Sales companies are established in Europe, North & South America and Asia. Production takes place in 9 factories in USA; 9 factories in Europe and 1 joint venture in India.

The Haldex Group is listed on the Stockholm Stock Exchange.

EGP levelling valves

The levelling valve controls ride height in vehicles fitted with air suspension systems. Haldex latest high quality valves are using EGP (Engineering Grade Plastic) for enhanced performance.

They have been designed to benefit from the advantages of high technology plastics, including low weight, excellent corrosion resistance, as well as incorporating other important design features.

These include a wide range of flow rates, well matched for charging and discharging, push-in fittings as an option, improved lateral flow rates for better cornering and design by finite element computer simulation.

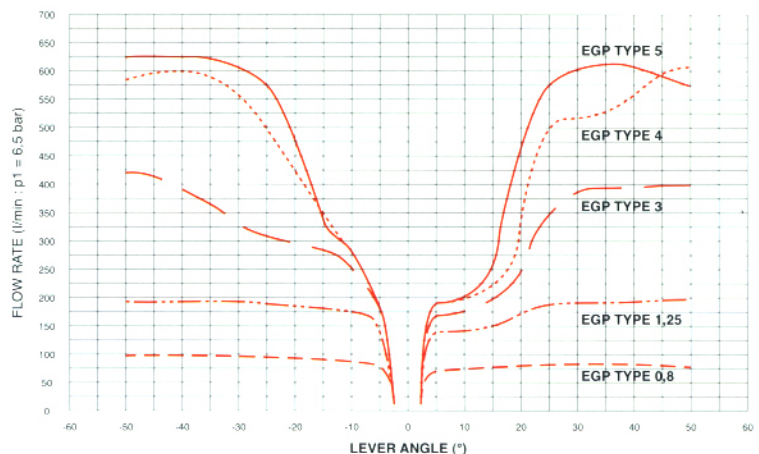


Standard EGP levelling valve.

Haldex has now added to the range of EGP levelling valves the following combined functions:

- **Levelling Valve with Height Limitation**
- **Levelling Valve with Rapid Exhaust.**
- **Levelling Valve with Dual Ride Height**

Airflow Comparison - EGP range



All charged/discharged via two ports. Nominal values.



Performance & Safety in Vehicles