EWELLIX Aerodynamic Booster Actuator

EWELLIX CAWD and CAHB series for tractor truck roof air deflector

We pioneer motion

SCHAEFFLER

Move towards electrification

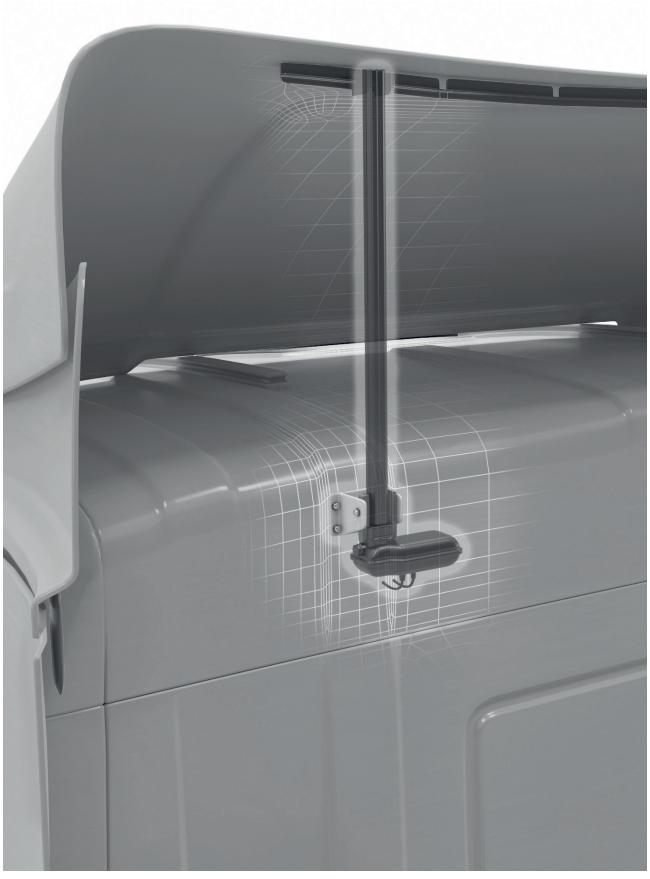
Schaeffler contributes to reducing fuel consumption for the long-haul tractor truck fleet

A solution that decrease the aerodynamic drag without compromising efficiency, comfort and safety for the driver.

Fuel is a heavy cost for the road transportation sector. The long-haul tractor trucks in particular, where the travel speed is higher, experience a higher aerodynamic drag in combination with longer travel distance. In a highly competitive environment the profit levels are at a few percent for many of the companies active in the business. With the EWELLIX Aerodynamic Booster Deflector offered by Schaeffler the adjustment of the roof deflector is continuous and the driver can easily set the deflector in an optimized position resulting in reducing wind resistance, fuel consumption and CO_2 emissions. A solution that provides value and improves the Return On Investment for truck operators.

Benefits

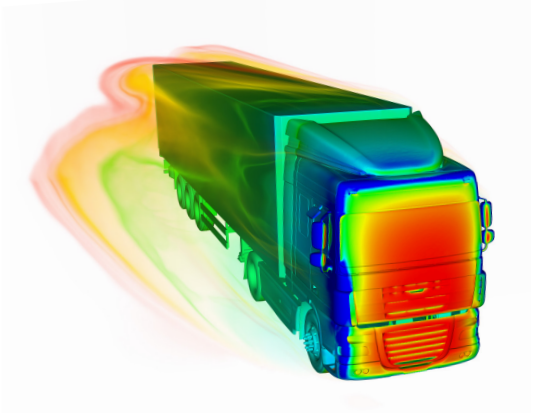
- Optimized roof deflector position in few seconds
- Maintenance free
- Possible retrofit with backward compatibility
- Possible upgrade of manual version to electrical version



3%

Fuel saving

› Compare a roof deflector with a misalignment of 10 cm



For more sustainable transport

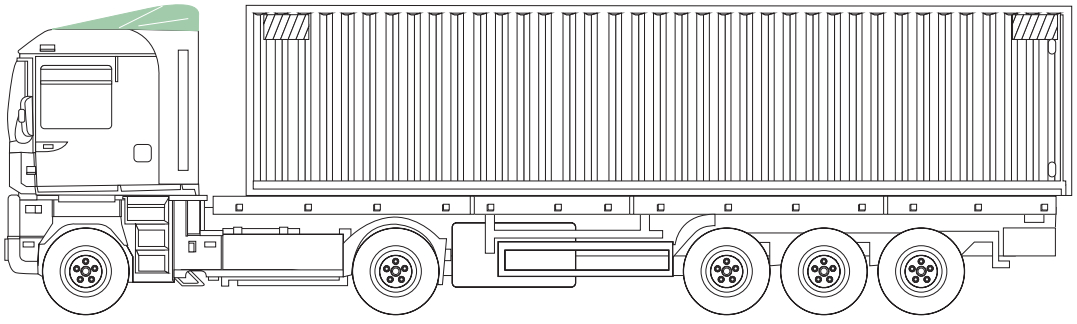
Fuel is a major part of the total operating costs of a truck – so finding ways to improve fuel efficiency pays off. Reducing harmful emissions is also an important aspect of sustainable development efforts.

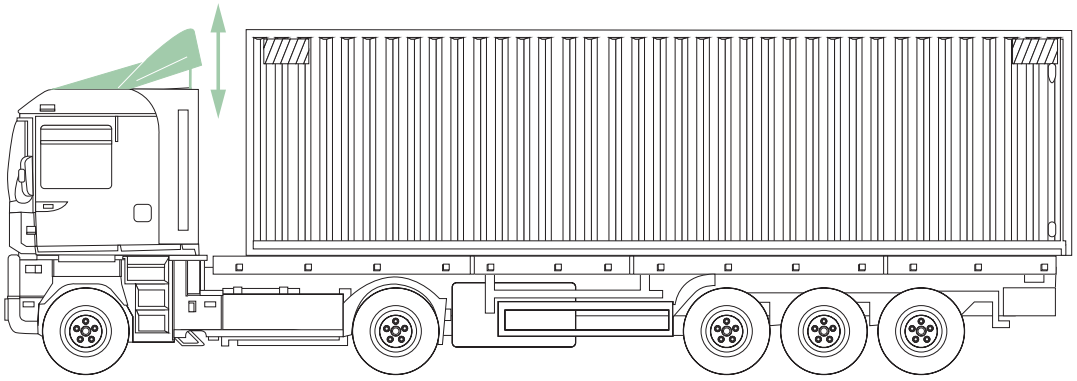
EWELLIX Aerodynamic Booster Actuators offered by Schaeffler reduce the aerodynamics drag by 3,5% compared to typical mechanical setting by step, improving tractor truck fuel efficiency by around 3%. This represents a yearly decrease in CO_2 emissions of 3,5 tons per tractor truck in yearly long-haul traffic or 52 tons after a mileage of 1,5 million km.

Cut the cost

Long haul tractor trucks must operate with efficiency in all kinds of weather and work conditions. On highway, the aerodynamic drag is 3 times more important than the rolling resistance. One way to cut the fuel consumption is to decrease the aerodynamic drag and the first contributor.

The distance and the roof fairing is the height of the roof compare the trailer need to be well adjusted. Just 10 cm gap compare the optimum position will increase the fuel consumption by 3%. And it is well adjusted for a trailer , change it or change the load will affect the height difference between the roof of the cabin and the trailer. With the EWELLIX Aerodynamic Booster Actuators by Schaeffler, you can readjust continuously without step.





Safe and easy to use whatever the climate
The driver can fine tune the height adjustment easily and in a safe mode from the catwalk. When the driver changes the trailer or just remove it, it is beneficial to adjust the height of the roof deflector to decrease the aerodynamic drag. The manual version is activated by a crank from the catwalk and the electrical version is controlled by a switch inside the cabin. So simple and safe for the driver who doesn't need to climb to the roof. And the manual version could be replaced later by an electrical version.

Environmental benefits

- Fuel saving 3%
- CO_2 emission reduction, 52 ton after 1,5 M km
- Safe adjustment for the driver with manual or electrical movement operated from the catwalk or the cabin

Tractor truck roof air deflect EWELLIX actuator

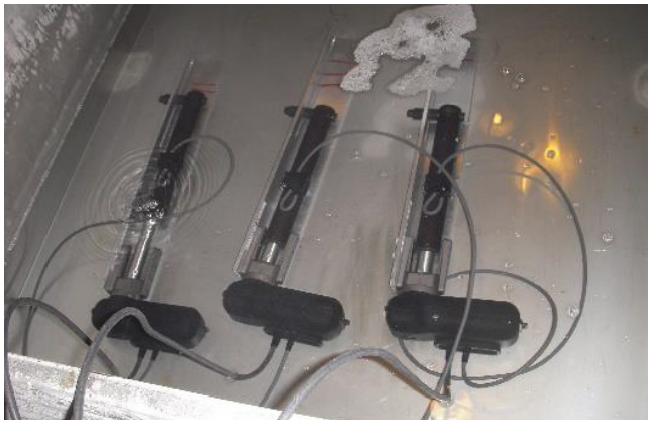
Trunnion mount with multiple position to be backward compatible with a possible retrofit

Features

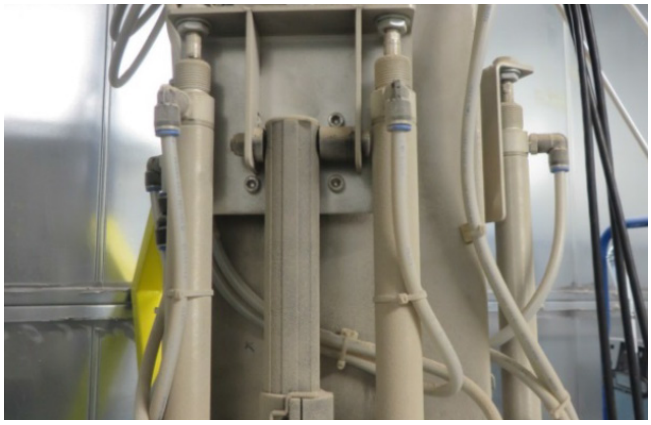
- 3 sizes, manual and electrical versions backward compatible
- Compact design to fit on existing roof fairing
- High stability and corrosion resistance
- Tested for Truck industry/chassis requirements and regulations: Environmental, Electrical and mechanical tests
- Electronic force monitor and overload protection for enhanced safety

A joint initiative with one major truck manufacturer

The EWELLIX Aerodynamic Booster Actuator offered by Schaeffler is the result of a close collaborative project with a large Truck manufacturer. What started out as a quest for improved efficiency and durability has evolved into a thoroughly tested and proven solution.



Complete actuator system exposed to ice water (ISO 16750-4) and Arizona dust (ISO 20653)



Extensive duration tests have validated a life target of more than 17000 cycles over 15 years

EWELLIX actuators solutions offered by Schaeffler for Aerodynamic wind deflector

		CAWD Manual	CAWD Electrical	CAHB-10-xx	CAHB-20-xxE	CAHB-21-xxE	CAHB-22-xxE
Productivity	High speed, the best › 40 mm/s	–	○	●	○	●	●
	Manual version	○	–	–	–	–	–
	Manual override	–	–	–	○	○	○
Realiability	High holding force, the best 2 Ton	○	○	○	●	●	●
	Overload protection	–	○	–	○	○	○
	Thermal switch	–	○	○	○	○	○
	IP 66S, best IP 69K	●	●	●	●	●	●
	IP66M, best with Vent	○	○	–	●	●	●
	Salt spray test perf. 96 h or 250 h, the best 336 h	●	●	○	○	○	○
	Pass test for vehicle, the best is for road vehicle	●	●	●	○	○	○
	Operating temperature –40 to +85 °C	○	○	○	○	○	○
Save development time	Pull & push rated load, the best is › 4500 N up to 10000 N	○	○	○	●	●	●
	Long strocke, the best is 500 mm and more	●	●	○	●	●	●
	Compact, the best is ‹ stroke +100	●	●	○	○	○	○
	Limit switch (depending the version)	–	○	○	○	○	○
	Potentiometer	–	–	○	○	○	○
	Encoder	–	–	○	○	○	○
	Absolute analogue position output	–	–	○	○	○	○
Cost effectiveness	Cost level, the best is lower	●	○	●	○	○	○

● the best ○ available – not available

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