

**CUSTOMER REFERENCE  
SERVICE TROLLEYS  
WITH AVIANA LIGHT**



**TENTE**

BETTER MOBILITY. BETTER LIFE.



# A CASTOR THAT HELPS US MAKE A SPECIAL PARTNER HAPPY: THE ENVIRONMENT

We would like to introduce you to a special number: 11,000,000. What does it represent? The number of litres of kerosene that a leading German airline saves each year with the help of the TENTE Aviana light castor. This castor reduces the weight of service trolleys and thus ensures a reduction in fuel consumption. Now we have another number for you: 28,000 tonnes. This represents the reduction achieved in carbon emissions thanks to the decrease in kerosene consumption and demonstrates that a smart solution can really give wings to climate protection.

## THE STARTING POINT

In aviation, lightweight construction plays a decisive role, in both passenger transport and logistics, particularly when it comes to a responsible attitude to the environment. Every kilogram that a major airline can save in its fleet saves 31,000 litres of kerosene per year and thus avoids around 78,000 kilograms of CO<sub>2</sub> emissions. The companies are therefore constantly on the lookout for new potential savings, as well as partners who know how to achieve them.

## THE SERVICE TROLLEY – A WEIGHTY CHALLENGE

Service trolleys have become an indispensable feature in aeroplanes. They are used to stow away snacks, drinks and consumer articles, as well as manoeuvre them through the aisles. SPIRIANT GmbH produces such solutions and decided to put their trolleys to the test. The goal: lighter models whose reduced weight helps cut down on aircraft fuel consumption and CO<sub>2</sub> emissions. With this in mind, the company contacted TENTE and asked if we could fit the new service trolleys with suitable castors. Our answer? With pleasure!

## OUR SMART MOBILITY SOLUTION

We had already developed an impressively low-weight castor at the turn of the millennium: the TENTE Aviana. So, in close cooperation with SPIRIANT GmbH and a leading German airline, we set about making the castor even better for use in aircraft fleets. The wheel, fork and bearings were modified using ultralight synthetic material, while aluminium was introduced for the fixings. The result: The 0.35 kilogram TENTE Aviana light. Achieving minimal weight was only one of our focus points though. Our engineers considered it essential to tackle the challenge from a holistic point of view. Since high standards of hygiene, stability, safety and design also had to be met. The synthetic material used to manufacture the castor fork, for example, is particularly stable, yet still





guarantees a high degree of flexibility. The contours of the fork were designed to allow effortless manoeuvrability in the service kitchen and the narrow aisles of the aircraft. Our engineers also designed the locking system of the castor with flight operations in mind, so the trolley stands firm and secure even in turbulence and when climbing and descending. Of course, we left nothing to be desired with regard to corporate design either. We also supplied the TENTE Aviana light in the typical corporate colours of the leading German airline.

#### **LOWER KEROSENE CONSUMPTION AND SIGNIFICANTLY REDUCED CO<sub>2</sub> EMISSIONS**

With our smart solution we were able to improve the mobility of the service trolley. The TENTE Aviana light ensures excellent stability, effortless manoeuvrability and has an impressively low weight.

The German airline profits from a saving of 1.3 kg per set of castors and service trolley. What is remarkable though, is that a small castor can positively influence the overall result of the sustainability report of one of the largest aviation groups in the world.

**In the meantime, the German airline relies on 30,000 of the new ultra-light service trolleys fitted with the TENTE Aviana light. The castors save the company 11 million litres of kerosene per year and protect the environment with a 28 million kilogram reduction in CO<sub>2</sub>.**



*“TENTE has exploited every possibility to the full in achieving a reduction in weight.”*

**Joachim Frösche**  
Manager Engineering of SPIRIANT GmbH, Member of LSG Group





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PRODUCTIVITY



SAFETY



DESIGN



DURABILITY



ENVIRONMENT