



**ALCOA WHEELS**  
WHEELS YOU CAN TRUST

# ALCOA WHEELS

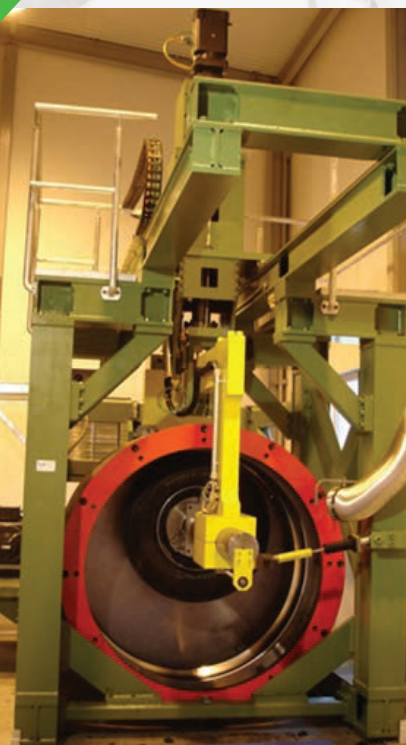
The best solution for your business

## LEADING MANUFACTURER OF ALUMINIUM WHEELS

Alcoa Wheels can count on many years of experience in the field of aluminium wheels. We actually invented the forged aluminium wheel in 1948. Our wheels are manufactured in a highly automated, state of the art factory and this is according to a special forging process designed by Alcoa.

In 2016 Alcoa separated into 2 companies: Alcoa and Arconic. Alcoa Wheels are produced by Arconic Wheel and Transportation Products which is part of the Arconic group.

We offer the widest range of wheel dimensions, from 17.5"/19.5" to an extensive variety of 22.5" wheels. We can proudly state that our wheels are the first aluminium wheels to be tested and approved by all the European truck and coach manufacturers. Our high quality products are included in all the truck and bus OEM option books.



## ALCOA WHEELS ARE DURABLE

Alcoa Wheels successfully pass the LBF test and by doing so they meet the requirement truck manufacturers insist on.

The LBF test is a biaxial fatigue test for truck wheels. Actual driving conditions (rotating, bending and operational loading conditions) are taken into account when testing the wheel life durability.

The Association of European Wheel Manufacturers (EUWA) states that wheels need to sustain load for an equivalent 1.5 million kilometres of testing.

## ARCONIC IS MORE THAN JUST ALCOA WHEELS

Arconic is literally everywhere! We not only pioneered the aluminium industry but we are also a global leader in lightweight metals technology, engineering and manufacturing. We innovate multi-material solutions that advance our world. Our technologies enhance transportation and improve consumer electronics and industrial products. Today we employ 42250 people and are a fixed value in 25 countries.



# ALCOA WHEELS

Your benefits, our commitment

Alcoa Wheels are forged from one solid block of aluminium. With an 8000 tons press, the block is forged into a wheel shape. Once forged, the wheels are heat-treated to maximize overall mechanical strengths. The Alcoa Wheels forging process aligns the grain flow of aluminium with the shape of the wheel, even in the critical area where disc and rim meet. This process results in wheels with unrivalled forged strength that withstand the most severe tests. We are so confident in the durability and quality of our wheels, we give a 5 year unlimited mileage warranty.

Alcoa Wheels are a must. The ultimate choice for your vehicle. Compared to steel and cast aluminium wheels, Alcoa Wheels offer numerous benefits.

## Weight saving

### UP TO 47% LIGHTER THAN STEEL

By switching from steel to aluminium Alcoa Wheels you can easily save up to 47% in weight, depending on the wheel size, allowing you to:

- Increase the vehicle's payload
- Reduce your operating costs
- Boost your profitability

Configuration Truck (Artic/Rigid)	Wheel size Front axle	Wheel size Std. Drive Axle	Wheel size Add. Axle(s)	# of wheels	Total weight saving (kg)
4x2 - Option I	2x 22.5x8.25	4x 22.5x8.25		6	89.4
4x2 - Option II	2x 22.5x9.00	4x 22.5x9.00		6	93.0
8x4	2x 22.5x9.00	4x 22.5x9.00	6x 22.5x9.00	12	186.0
Trailer - Super Single	Used Wheel Type			# of wheels	Total weight saving (kg)
3 Axle (9 ton)	6x 22.5x11.75 ET120			6	112.2
Bus (City/Coach)	Used Wheel Type			# of wheels	Total weight saving (kg)
4x2 (City)	6x 22.5x7.50			6	73.8

Depending on the configuration and wheel size Alcoa Wheels guarantee weight savings up to 250 kg!

## CALCULATE YOUR RETURN ON INVESTMENT IN ALCOA WHEELS!

With our ROI calculator you can quickly analyse how soon you can recover your investment in Alcoa Wheels.

Visit our website [www.alcoawheelseurope.com](http://www.alcoawheelseurope.com) and be amazed by how fast our wheels pay themselves back.

**RETURN ON INVESTMENT CALCULATOR**

CURRENCY: EUR

wheel type	price per wheel EUR	number of wheels	total weight Alcoa wheels kg	total weight steel wheels kg	weight saving kg
TRUCK/BUS 22.5 x 11.75 offset 120 4.5T	500.00	4	90.4	174	83.6
22.5 x 9.00	500.00	4	92.8	156	63.2
TRAILER 22.5 x 11.75 offset 120 4.5T	500.00	6	135.6	201	125.4

**TOTAL WEIGHT SAVING: 272.2**

**ROI based on invoiced kilometres per year**

Empty vehicle weight	14	tons
Gross vehicle weight	40	tons
Amount invoiced	1.20	EUR/km
Annual mileage	120000	km/year

**Extra revenue: 1508 EUR/year**  
**Alcoa ROI per vehicle: 4 years 8 months**

**ROI based on invoiced tons per trip**

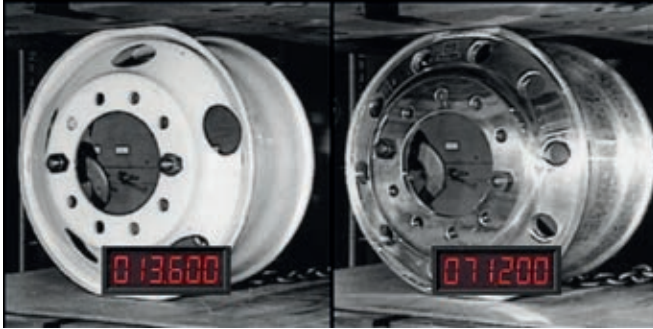
Yearly working days	220	days/year
Trips per day	3	
Amount invoiced	1500	EUR/tons/trip

**Extra revenue: 2695 EUR/year**  
**Alcoa ROI per vehicle: 2 years 7 months**

HELP  
PRINT  
ALCOA

# Unrivalled forged strength

Stronger than steel and longer lasting. Forged aluminium Alcoa Wheels are literally stronger than steel.



## HIGH STRENGTH TEST RESULTS

Wheels are placed in a press and closed until the wheel deforms by 5 cm.

- A forged wheel from Alcoa Wheels withstands a load of 71,200 kg before deforming
- The rim of the steel wheel deforms at only 13,600 kg

***Alcoa Wheels are 5 times stronger!***

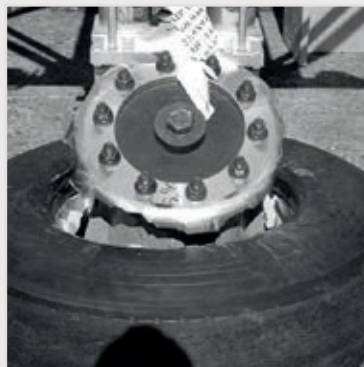
## IMPACT TEST RESULTS - JAPANESE JWJ TEST

Simulates a vehicle hitting a high curb at a speed of 50 km/h. A 910 kg weight is dropped onto the tyre and wheel assembly.

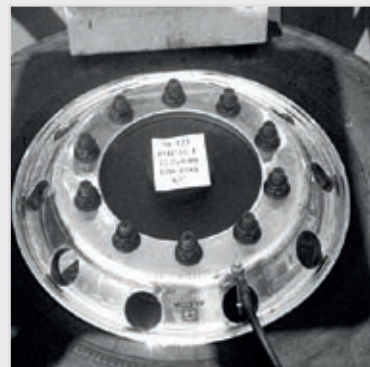
- Steel wheels show excessive rim deformation and air loss
- Cast aluminium wheels break
- Alcoa Wheels pass the test successfully



*Steel wheel*



*Cast aluminium wheel*



*Forged aluminium wheel of Alcoa Wheels*

This all translates into less downtime for fleets. Forged aluminium Alcoa Wheels regularly last for 20 years or more in service.

# Contribution to fuel efficiency, CO<sub>2</sub> reduction and improved tyre performance

## FUEL EFFICIENCY

Choosing forged aluminium wheels offers unequivocal advantages. Not only for fleets and manufacturers, but also for cities, municipalities, citizens and tax payers - and more importantly - the environment. Forged aluminium Alcoa Wheels are fitted on a number of hybrid buses. The essential parameters are systematically measured and compared with buses fitted on steel wheels. Over the period of 6 to 7 months significant fuel savings of over 1% on the hybrid buses are reported, defining further cost savings and stating a clear contribution to a greener environment.

## CO<sub>2</sub> REDUCTION

Alcoa Wheels dramatically cut the carbon footprint of commercial vehicles:

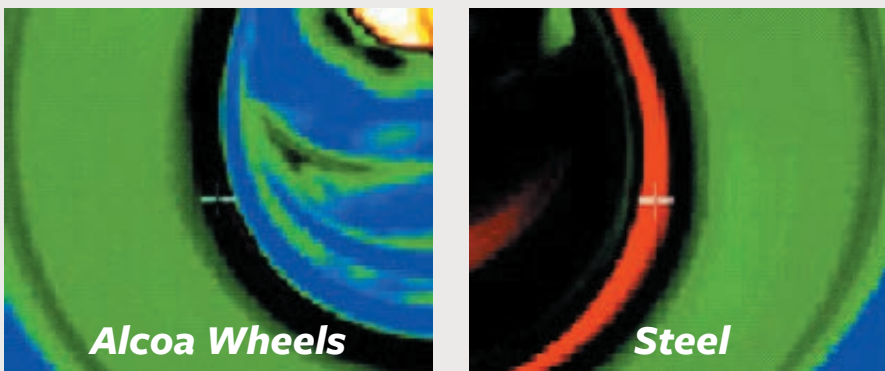
- Replacing 12 steel wheels with aluminium cuts 13.3 metric tons of CO<sub>2</sub> emissions over the lifetime of the wheels (1,5 million km)
- Alcoa Wheels are Cradle to Cradle Certified<sup>CM</sup>, confirming that they are a safe and environmentally conscious product



## TYRE PERFORMANCE

Alcoa Wheels are forged and 100% CNC machined. They run truer and exhibit better tyre wear than a stamped and welded steel wheel. This also supports rolling resistance.

That's not all! Aluminium is 3 times more conductive than steel and the material of choice for heat sinks in laptops and radiator fins for cars and trucks as it helps to dissipate heat. Heat is the number one enemy to tyre life, brake performance and brake pad life.



Thermal images of aluminium vs. steel in identical operation conditions show how aluminium Alcoa Wheels run up to 22°C cooler.

# ALCOA WHEELS' FINISHES

**DURA-BRIGHT® EVO**

**LVL**



Great looks, easy maintenance

Entry level wheel w



**ONE®**

**BRUSHED**



with a brilliant finish

Basic maintenance finish

# ALCOA WHEELS' FINISHES

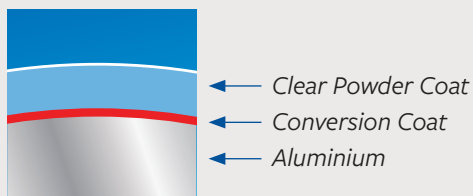
## Dura-Bright® EVO

GREAT LOOKS, EASY MAINTENANCE

Alcoa Wheels are available with patented Dura-Bright® EVO surface treatment that keeps wheels looking bright and shiny for years without polishing. Maintenance is extremely easy thanks to the enhanced protection of the specialist aluminium surface. Dura-Bright® EVO wheels can withstand cleaning chemicals ranging from pH2 to pH12.



### CONVENTIONAL COATING



Dura-Bright® is not a coating, but a surface treatment that penetrates the aluminium and becomes an integral part of the wheel. It will not chip, crack, peel or corrode, like conventional coatings do.

### ALCOA WHEELS PATENTED TREATMENT

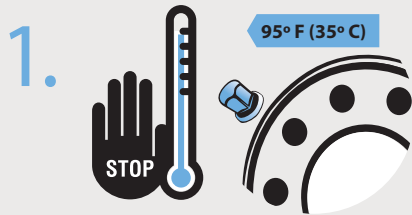


The Dura-Bright® treatment is available on almost all Alcoa Wheels sizes. For more information refer to the Alcoa Wheels specification sheet, available for download on our website [www.alcoawheelseurope.com](http://www.alcoawheelseurope.com).

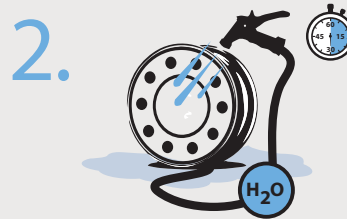


# Cleaning Dura-Bright® wheels

There is no easier wheel to maintain than a Dura-Bright® wheel.  
Just 6 steps to follow for fabulous looking wheels:



Allow wheels to cool below 35° C (95° F).  
Remove nut covers.



Rinse with water for at least 30 seconds.



Pour Dura-Bright® Wheel Wash in a bucket.  
No need to dilute with water.



Clean the wheel.



Rinse the wheel.



Repeat weekly.

For more information: [youtu.be/stBZwdOo5BU](https://youtu.be/stBZwdOo5BU) . . . . .



## LvL ONE®

### MORE EYE-CATCHING SOLUTIONS FOR CUSTOMERS

Arconic's advanced LvL ONE® process technology results in a brilliant finish. LvL ONE® has a smoother and glossier surface than Brushed but requires the usual procedure when it comes to maintenance. If a shiny surface is desired, polishing is needed. Nevertheless the wheel looks great and comes with the same advantages as the other finishes of Alcoa Wheels.



## Brushed

Brushed is a basic maintenance finish. Brushed wheels are very common in large fleets where trailers are swapped frequently. Brushed Alcoa Wheels don't rust and repainting is not necessary.

For more information about maintenance:  
[alcoa.com/alcoawheels/europe/en/info\\_page/wheelcare1.asp](http://alcoa.com/alcoawheels/europe/en/info_page/wheelcare1.asp)



# SPECIALISED APPLICATIONS

## DURA-FLANGE®

Additional protection for an even longer service life.

Dura-Flange® Alcoa Wheels have a proprietary treatment that provides a protective shield to reduce rim flange wear.

Dura-Flange® wheels are the most appropriate for transport where loads are heavy and prone to shifting, causing the tyre bead to rub against the wheel flange.

The wheels come with a Brushed finish and are available in the most common wheel sizes. For more information check the Alcoa Wheels specification sheet, available for download on our website [www.alcoawheelseurope.com](http://www.alcoawheelseurope.com).



## WORKHORSE®

Disc brake protection and increased wheel load.

WorkHorse® Alcoa Wheels are designed without ventilation holes to protect the drive/front axle disc brakes from sand and gravel.






WorkHorse® wheels are mainly suitable for construction vehicles with disc brakes.

The wheels come with a Brushed finish and are available in selected wheel sizes: 22.5"×9.00" and 22.5"×11.75", offset 120 mm.

# Alcoa Wheels perfectly fit your business

Forged aluminium Alcoa Wheels are available for all commercial vehicles and suitable for every kind of transport.

See below chart where Alcoa Wheels can support your activities.

Segment	 Profit	 Looks	 ECO	 Weight	 Strength
Tanker & Tanker chassis	★★★★★	★★★★☆	★★★★☆	★★★★★	★★★★★
Solid bulk closed (Silo)	★★★★★	★★★★☆	★★★★☆	★★★★★	★★★★☆
Solid bulk open (Tipper)	★★★★★	★★★★☆	★★★★☆	★★★★★	★★★★★
Reefer	★★★★☆	★★★★★	★★★★☆	★★★★☆	★★★★☆
Container Chassis	★★★★☆	★★★★☆	★★★★☆	★★★★☆	★★★★☆
Construction	★★★★☆	★★★★☆	★★★★☆	★★★★★	★★★★★
General Cargo	★★★★☆	★★★★☆	★★★★☆	★★★★☆	★★★★☆
Logging	★★★★☆	★★★★☆	★★★★☆	★★★★★	★★★★★
Coach	★★★★☆	★★★★★	★★★★☆	★★★★☆	★★★★☆
City bus	★★★★☆	★★★★☆	★★★★☆	★★★★☆	★★★★☆

# Useful links

 [alcoawheelseurope.com](http://alcoawheelseurope.com)

 [alcoa-accessories.com](http://alcoa-accessories.com)

 [alcoafleet.eu](http://alcoafleet.eu)

 [facebook.com/alcoawheelseurope](https://facebook.com/alcoawheelseurope)





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