

BBS JAPAN Brand Book

Beauty forged from extreme function. What the wheels themselves demanded.



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Here we have an innovation.

The functional beauty of cross spokes that are crystallizations of running dynamics.

Mass production of the world's first forged aluminum wheels achieved
by original forging technology.

The ultimate in lightness and strength which we pursued for the ultimate
in running performance.

Thus far, we have unswervingly sought the ideal in wheels on another level,
embodying the best in technology, and are committed to keep doing so into the future.

Overwhelming innovation for all BBS wheels.

Do you have the resolution to enjoy?

BBS, Luxury but High Performance.

BBS
The Finest Choice





The ultimate in circularity

The degree of circularity is the size of the deviation from a perfect circle.

For wheels as rolling components, the degree of circularity is an extremely important part of performance.

At each stage of the manufacturing process, our craftsmen check the deviation and balance of the rims, and aim for the very highest precision. This is directly linked to the smooth running and superb handling.

It is proof of the high quality delivering a comfortable ride and sure handling stability.



The ultimate in forging technology

The advantage of the cross-spoke design, which show that the wheels are made by BBS at a glance,

lies in the balance between the dispersion of stress and rigidity. This is made possible by our original forging technology.

By compressing the raw-material billets down to one-fourth of their original size or even less, we turn the cast structure into a forged structure.

Their cross sections have fine metal flow lines that are ordinarily not found on forged metal.

In our quest for ever stronger, lighter, and pliant wheels, we are promoting the further advancement of forging technology.

Innovative Selection -1

FORTEGA, the high-performance EV material sought by BBS

[FORTEGA×Porsche Taycan]

Forged one-piece wheel made of the new material FORTEGA

We developed FORTEGA, a new aluminum alloy material offering both high rigidity and lower weight, for response to the age of EVs. Besides extending the distance of continuous driving, it brings a performance improvement only BBS could offer, and beautifully tightens up the undercarriage.



Taking up the challenge of developing the new material FORTEGA

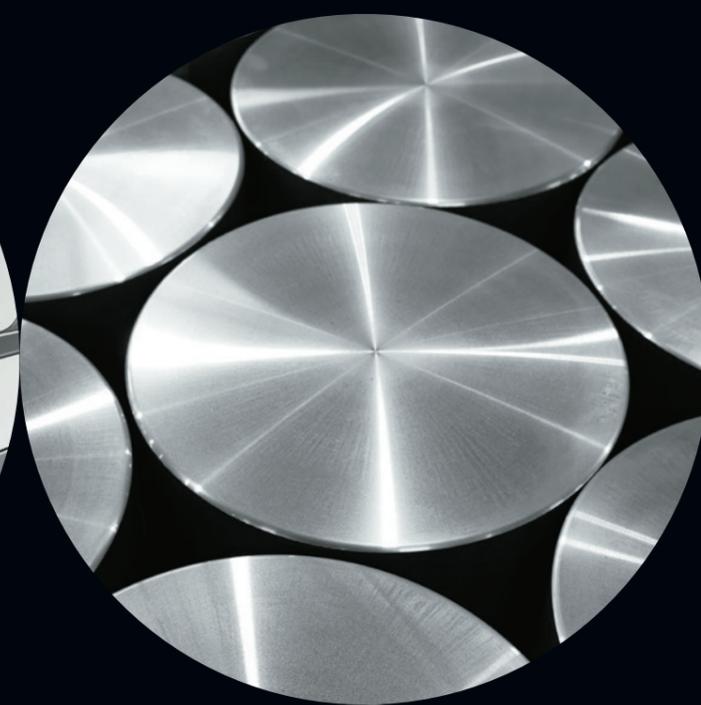
The switch to EVs is accelerating amid the worldwide movement to build a carbon-neutral society. What kind of wheel performance is required for the heavier EVs? The optimal reply that we arrived at is FORTEGA, a new aluminum alloy material of our own original development. The name is a coinage combining *forte* and *lega*, meaning “strong” and “alloy,” respectively, in Italian. As this suggests, the alloy is characterized by a high rigidity. FORTEGA manages to provide both the strength needed for rigidity and lightness needed for pliancy. As compared to conventional aluminum alloys, it is about 10 percent lighter while delivering a high rigidity. By lightening the wheels, we achieved nimble handling and a smooth driving feel.

Particularity about manual work for uncompromising high quality

To produce both racing wheels and wheels for the street “at the same factory, with the same technology, and with the same hands”—this is the BBS philosophy on manufacturing. We extensively apply the latest technology in development, and are promoting machine processing and other automation in production. Nevertheless, there are things that only people can make judgments on and handle. Our professional workers bring to bear all of their expertise when using their eyes and hands in intermediate work such as removing unevenness after machining and inspection of finished products. This is why BBS wheels are likened to works of art. Various phenomena can occur with each type of product, and the craftsmanship needed to not miss even the slightest scratches or cloudiness is linked to the high level of trust we enjoy.

One-piece in pursuit of performance and two-piece to heighten the degree of freedom

BBS forging stemming from multi-piece wheels is being used to manufacture two types of wheels: one-piece and two-piece. In the case of one-piece wheels, the rim and the disk have an integrated structure, which gives them a high strength and light weight. This design facilitates the search for performance adapted to racing cars and sports cars. Their casual look is a feature unique to the one-piece type. Two-piece wheels, on the other hand, facilitate the setting of size and enable processing of rims and disks separately. This expands the breadth of combinations of rim width and inset. In addition, the adoption of a bolt-tightened design also has the effect of enhancing the decorative dimension of the bolt nuts.





Driving the streets on wheels cultivated in motor sports

[RI-D × Nissan FAIRLADY Z]

Forged extra-super duralumin one-piece wheel

In 2011, BBS became the first company in the world* to market a forged extra-super duralumin one-piece wheel. Extra-super duralumin boasts the highest levels of strength and durability, and is also used for airplanes. This ultra-lightweight model with five cross spokes embodies the characteristics of this material.

*According to a study by BBS (conducted in January 2017)



The ultimate in lightness and strength
BBS for Formula 1®



Overwhelming strength and rigidity
BBS for NASCAR®

Racing is at the origin of BBS. Our forged cross-spoke wheels are a technology created through numerous triumphs and setbacks.

BBS has always stayed with motorsports. In 1992, we made the world's first forged magnesium wheels for F1 racing in response to a request from Ferrari. These wheels supported racing on another level, where competitors put their heart and soul into shaving even 0.1 seconds off their time, and contributed to the decade of glory enjoyed by the Ferrari-Schumacher team.

Since the 2022 season, we have been supplying components on a one-make basis.

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BBS has also been a one-make supplier for teams in NASCAR, the pinnacle of U.S. motorsports, since 2022.

In NASCAR racing, battles with maximum speeds exceeding 320 kilometers per hour are fought on oval courses. What is needed in such contests are wheels strong enough to withstand the furious bumping and jostling between machines.

After repeated attempts, BBS came up with an extremely thick specification for the spoke height in the mesh portion, and attained it with its outstanding technology.

The wheel model code RE1948 comes from the year in which NASCAR was born.

Fighting in SUPER GT and polishing BBS's DNA

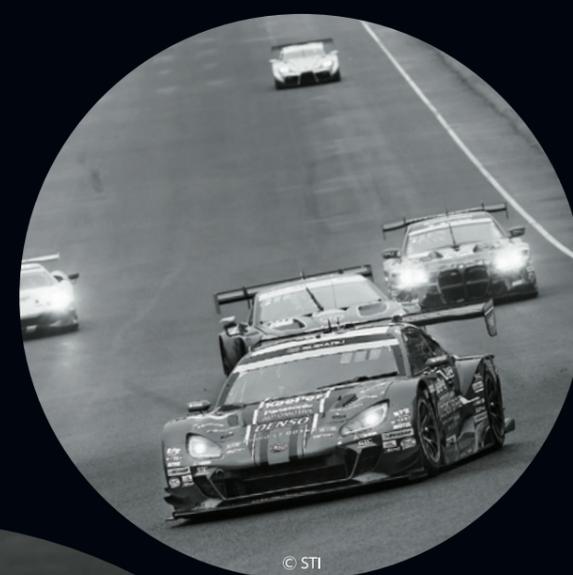
Super GT is at the apex of racing with GT cars in Japan. BBS supplies wheels to SUBARU BRZ R&D SPORT, which is competing in the GT300 class, as well as Studie BMW M4 and UNI-ROBO BLUEGRASS FERRARI (in the 2024 season). Engines and tires of GT machines, which are steadily making new advances, are approaching their limits. In this situation, a difference in wheels can significantly affect cornering performance. For these and other reasons, teams are having even higher hopes for products from BBS. Size, weight, and materials are strictly regulated in GT racing. The question is how to successfully make wheels that can contribute to victory under these regulations. GT is one of the few races in the world that permits teams to choose their wheel suppliers. Through the competition in Super GT, BBS is determined to polish its own DNA.

Opening up new possibilities in wheel performance

Circuits are a grand test ground for manufacturers, constructors, and BBS. One of the tasks is to improve aerodynamic performance with wheels. We began by looking for rim shapes that would curtail the entrainment of air flowing over the body side and rectify the flow to make it smoother. We attached a vertical wall to the rim and adopted a structure that would expel air that was about to be entrained. At the same time, we made full use of the know-how we had gained through our trials with LMP1. As for effects, we found that the innovations not only delivered the targeted aerodynamic performance but also improved the vertical rigidity of the wheels. We were convinced that the changes would help the machine to hang on when braking and entering/exiting corners. The expansion of the role demanded of wheels has become a key driving force for innovation.

What is needed in wheels to win

— Hideharu Tatsumi, former General Manager of the Subaru Technical International team —
To get results in racing, it is vital for the machine to go through corners without loss. The “bend” and “tenacity” brought by BBS forged wheels help the tires to grab the road surface, thereby increasing the area of contact with the road, and to firmly hang on when cornering. Even when entering turns at high speeds, the steering wheel delivers a solid response. Because they can feel this responsiveness, the drivers can push the accelerator down further and exceed their previous limits. When the drivers have a positive impression of the wheels after finishing, their time is bound to be good. The feel during driving and the results are in proportion with each other. For us who race to win, I believe that BBS is an ideal partner.





The evolution of successive GT-R generations traces the story of trust in BBS forged wheels

Beginning with the Nissan R32 Skyline GT-R machine in 1989, genuine BBS wheels have been adopted for the succeeding two generations represented by the R33 and R34 GT-R machines, for a total of three. The performance DNA required of wheels by these generations of GT-R machines may be defined as reliability under extreme conditions and reduction of weight beneath the springs. For this DNA, our GT-R wheels attracted keen attention even in the after-market, which was an arena of intense competition revolving around power. The forged aluminum two-piece wheel LM that appeared in 1994 continues to be preferred by drivers who love driving over the more than 30 subsequent years to the present, and is synonymous of BBS. In addition to the feature of both light weight and high rigidity deriving directly from the crystallizations of technology polished on circuit racing, it is equipped with Black Bright Diamond-cut rims that shine like mirrors and make the undercarriage stand out. The diversity of types and ability to finish the wheels in accordance with the customer's preferences are another big part of their appeal. Taking the royal road, the LM has not changed because there is no need for it to change. The times are finally catching up with LM's innovative nature.





Brimming with dynamic beauty even when stopped

[LM × Lexus LM]

Forged aluminum two-piece wheel

This is a long-selling model (as indicated by the “LM” in the name) based on BBS racing wheels, which have constantly been selected for machines running in the 24 Hours of Le Mans race.

Although it projects an orthodox image, the styling conveys a look that, while basic, is imbued with a distinctive character.