

DOME CO., LTD. DOME CARBON MAGIC DOME COMPOSITES THAILAND



DOME CARBON MAGIC

Welcome to

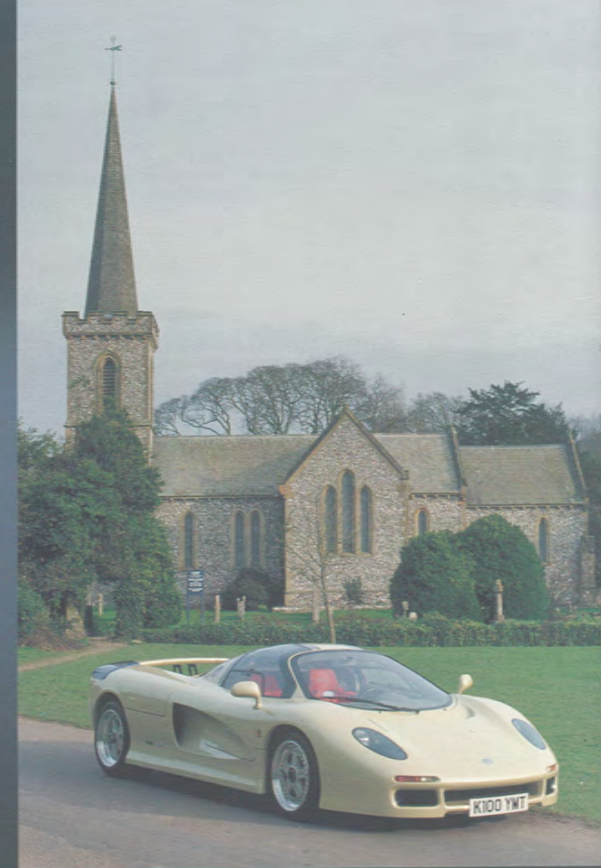
DOME RA



PING VILLAGE









DOME GROUP

子供の頃から、模型飛行機やオーディオ機器の製作に熱中していた林少年が、14歳のときに初めてスーパーカブに乗った途端に、バイク、自動車に夢中になってしまいました。何に夢中になるかと言うと、もちろん造ることです。しかし、この趣味は大変にお金がかかりますから、若い頃の林にとっては、この趣味を仕事にすることが夢でした。途中までは、自動車メーカーの試作車の開発などを受託して、その利益をレーシングカー造りにつぎ込むという形で夢を実現していましたが、少し余裕が出来た頃に、理想形である趣味そのものを実業にしようと考えようになりました。しかし、一歩踏み込んでみると、ビジネス面から見る限り、あまり魅力のある業界とは言えず挫折。もともと童夢は、日本の技術で世界のライバルと戦うことを目標としてきたために、ほとんどの主要技術を独自に開拓してきたおかげで、いつしか、高度な空力開発技術とカーボンコンポジット製品の開発生産技術が身につけていました。折から、航空機をはじめ、一般工業製品においてもカーボンコンポジットの需要が高まってきた時期でもあり、そのレーシングカーの開発から生まれた特殊技術を一般工業製品に活かせる可能性が高まっていた。そこで2001年、童夢カーボンマジックを設立し、それにより得られた収益で車造りを楽しむという、趣味と実益の絶妙な融合を実現しつつあるところです。つまり、童夢グループというのは、あくまでも、車造りを楽しむ会社と言うことです。



Throughout childhood, Minoru Hayashi was absorbed in assembling model planes and audio equipment. But when he first rode on a Honda Super Cub motorcycle at the age of 14, he immediately became engrossed in motorcycles and automobiles—more specifically, he became immersed in producing them. The young Minoru Hayashi soon realized that this new target of interest was highly costly and that he could not afford to be engaged in it solely for fun. Therefore he started to think about how he could become a maker of motor vehicles by trade. Later he eventually succeeded in realizing this dream when indeed he did become a producer of racing cars. During the initial years of his business, Minoru Hayashi profited mainly from trial-car developments subcontracted to him by automakers. He spent these earnings on the production of racing cars and in that way was able to realize his dream. When the company began to enjoy success and some financial allowance, Minoru Hayashi considered turning his target of interest into a profitable business and making a living from it, which would be ideal, he thought. Once he started the business, however, Mr. Hayashi realized that it was not very profitable and gave it up. Nevertheless, there was another dream, the one that has been built into his company from its earliest days. This dream was to construct Dome-built cars that would compete in international car races with equipment that used purely Japanese technologies. Little by little, as Dome expanded and became a respected name in the international racing-car industry, the dream moved closer to reality. Within a few years after its start and side by side with its many innovations in aerodynamic technology, the company had developed an impressive succession of almost all major technologies being used in the racing-car industry. Further, Dome was by then also a highly respected developer and producer of carbon composite products specifically for racing cars. Coincidentally, the demand for carbon composite materials had recently increased for use in general industrial products, including aircraft. Since the carbon composite technologies Dome had developed specifically for racing cars had a growing potential for use in these products, Dome established Dome Carbon Magic in 2001. Minoru Hayashi now enjoys the perfect combination of a profitable business and his target of interest: he produces racing cars from the profits earned through carbon composite technologies. Thus the Dome Group is essentially an outgrowth of companies that since their establishment have enjoyed fabricating cars and their specialized components.

INFORMATION

ORGANIZATION

童夢、風流舎、童夢カーボンマジックは、他資本を導入していない独立した企業ですが、タイの童夢コンポジット・タイランドは、タイのSAHAグループとの合弁企業です。Dome, Furyusha, and Dome Carbon Magic are independent companies with no outside investors. Dome Composites Thailand Co., Ltd., (DCT) is a joint venture with the Thailand-based Saha Group.



DOME WEB SITE

www.dome.co.jp

This web site has summaries partially in English.



LOGOS



DOME CO., LTD.
DOME TUNNEL
DOME RACING TEAM
DOME CARBON MAGIC
DOME COMPOSITES THAILAND

ACCESS

新幹線 米原駅下車。西口を出てタクシーに「米原工業団地の童夢」と言って下さい。約6分
自動車 名神高速道路から北陸自動車道に入っすぐの米原ICを出て下さい。約3分



MAIN ACTIVITY

ENGINEERING DESIGN



DESIGN ROOM

最適化をとことん追求するレーシングカー開発で培われた設計/解析技術を駆使し、自動車に限らず、さまざまな分野の開発に挑んでいます。得意とする最適化課題は、軽量化、高強度化、高剛性化、省力化、コンパクト化で、童夢の有する空力、コンポジット、車両運動などのノウハウを活かしています。

We are highly committed to technology development not only for automotive applications but also in many other areas, taking advantage of expertise in design and analysis gained through racing-car development, which involves relentless effort for optimization. The areas we specialize weight reduction, strength increase, rigidity improvement, labor reduction and miniaturization. DCT makes good use of Dome's know-how in aerodynamics, composite processing, and vehicle behavior analysis.

STYLING DESIGN



DESIGN SKETCH

スタイリング・デザインの専門会社ではありませんが、デザイン的な感性の導入は童夢の製品開発の特徴となっています。もちろん、チーフデザイナーは林みのる、& そのデザイン界での幅広いネットワークが高度なデザイン開発を支援します。

We are not a styling design company, but we place great importance on design in our product development. Our sophisticated design support is provided under the direction of Chief Designer Minoru Hayashi, who provides us with the advantages of his many networks in the automotive design industry.

CAR DEVELOPMENT

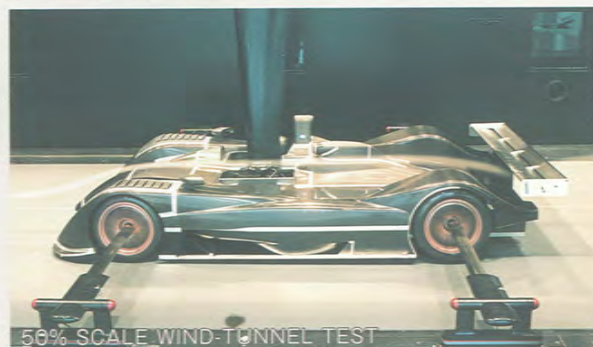


5 AXIS NC MACHINE

デザインモデルから試作車まで幅広い開発が可能ですが、特に、設計技術力の必要なシャシー開発や実走行モデルの開発、製作が得意分野です。現在までに、自動車メーカーから、100車種を超える車両の開発、製造を受託しています。

We are engaged in the development of various types of vehicles, ranging from design models to prototype cars. In particular, we specialize in creating and manufacturing chassis and running prototypes, which require advanced design and engineering skills. So far, we have developed and produced more than 100 types of vehicles for automobile manufacturers.

AERODYNAMICS

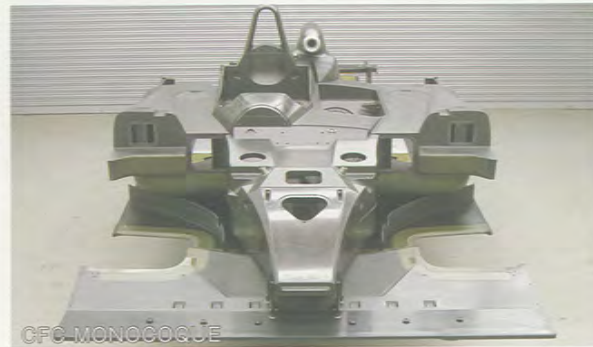


56% SCALE WIND-TUNNEL TEST

童夢では、最初の作品である童夢一号の開発当時から熱心に空力開発と取り組んできました。誰もが見えない空気の処理に無関心だった時代でしたから、使える風洞を探すのが一苦勞でしたが25%の自社風洞建設から技術が開花しました。

Since the production of Dome's first creation, the Dome Zero, we have energetically worked to develop aerodynamic technology. In those days, when no one showed interest in the treatment of invisible air, we had difficulty in finding wind-tunnel facilities available. So we built our own, a 25% scale wind-tunnel facility from which our proprietary technology has blossomed.

CARBON COMPOSITES



CFR MONOCOQUE

1985年頃、CFRPが急激にレーシングカーの必需品となりつつある頃、童夢は、安易に海外の技術を導入することなく、日本の素材メーカーと協力して、一から開発技術を開拓してきました。だから、開発に強い実力派と評価されています。

About 1985, when carbon composites (CFRP) increasingly drew attention as a necessity for the development of racing cars, Dome refused the easy way of importing foreign technologies as it worked with Japanese material manufacturers to explore and develop necessary technologies from scratch. That's why the company has been highly valued for its edge in development.

MOTOR SPORTS



LE MANS 24 RACE

童夢は、もちろんコンストラクターが本業ですがレースも大好きです。レーシングカーを開発する技術と走らせる技術には共通点が多く、童夢の技術力が十分に活かされた科学的なレース活動は高い評価を得ています。

Dome specializes in the construction of racing cars, and it also has a strong interest in racing activities. Racing-car development technologies and driving techniques have much in common; Dome's scientific approach to racing activities, taking full advantage of its sophisticated technology, has earned the company an excellent international reputation.

FACILITY





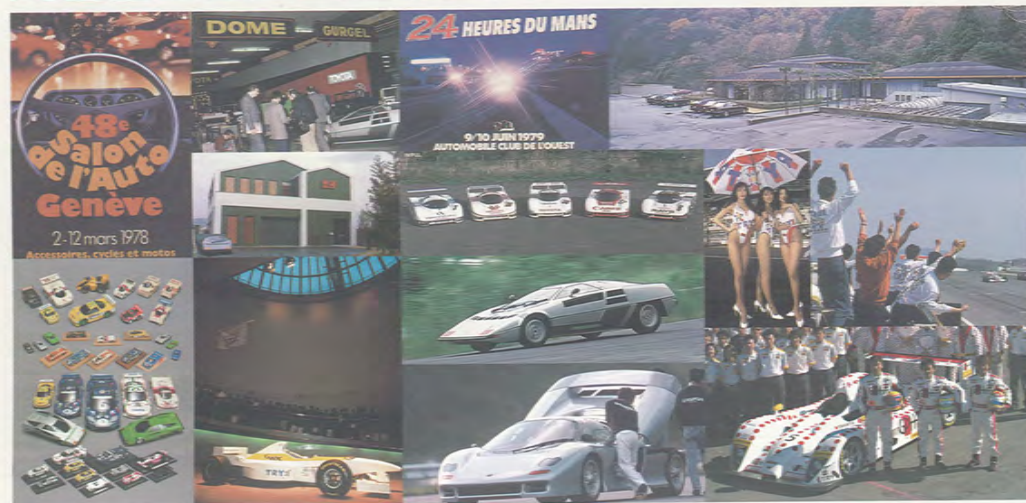
童夢



1975年、創業者である林みのるが、レーシングカーやスポーツカーを造りたい為に創業したレーシングカー・コンストラクター&カロッツェリアで、童夢一零を皮切りに、約40車種のレーシングカーと100台以上のショーモデル、試作車などを開発製作しています。童夢グループの中核企業であり、主として、技術開発や車両の製造、レース活動を担当しています。

Established in 1975 by the group founder, Minoru Hayashi, Dome Co., Ltd., is a car constructor, or carrozzeria, specializing in racing cars and sports cars. Since the production of its first car, the Dome Zero, the company has developed and produced about 40 models of racing cars and more than 100 car prototypes and models for exhibition at car shows. It is the core company of the Dome Group, and its major business lines are technology development, car construction, and racing activities.

RECOLLECTION



風流舎



2001年に建設した「風流舎」は、50%スケール、ムービングベルト装備のF1仕様の風洞実験設備です。機密保持の為に、クライアントが独自に操作できるシステムや個別のモデル保管庫など各種の用途に対応していますが、もちろん、一番お役に立つのは、童夢の経験豊富な空力開発技術力です。モデル開発や試験結果の分析などにもご利用ください。

Furyusha was constructed in 2001 as an experimental facility specially designed for F1 racing cars. Featuring a 50%-scale wind tunnel and moving belt system, it also has a highly advanced security system and provides clients with various services, which include renting the warehouse for storing automobile models, or renting the entire facility for their exclusive use. Among other things, Dome is proud to provide aerodynamic technologies it has developed that are based on the company's broad experience. These technologies are also suitable for the development of automobile models and the analysis of experimental results.

MOVING BELT



現在7基の納入実績を持つ、国内トップブランドの童夢製ムービングベルトです。新たにカーボンコンポジット化されたローラーは、軽量、高剛性化によって、飛躍的に性能が向上しました。また、きめ細かい蛇行制御技術、偏ヨー角実験等、童夢ならではのノウハウが活かされています。

Having produced and shipped seven moving belts, Dome is the leading brand of moving belts in Japan. The rollers, whose material has newly been changed to carbon composite material, are light in weight and high in rigidity, significantly improving belt performance. The belt has many advantages only Dome can provide, such as delicate meander control and applicability to yaw angle testing.

SPECIFICATIONS

Wind Tunnel	Wind Tunnel Type	Horizontal closed-return Gettingen type wind tunnel
	Tunnel Length	99m
	Basic Structure	Steel-framed steel plate structure
Basic Dimensions	Test Section Type	Closed section
	Contraction Ratio	8.3 : 1
	Test Section Size	W 2.75m, H 2.50m, L 8.00m
	Max. Air speed	60m/s
	Main Fan	Axial-flow type, 600kW
Facilities	Air Conditioning	25±1°C
	Moving Belt	W 2.00m, L 5.50m, 60m/s
	Turn Table	±5° Yaw
Data Acquisition	Model Mounting	Overhead Strut
	6 Component Balance	Located within model
	Model Motion Control	Around 3 axes and rideheight
	Data processing	Automatic measuring, calculation and collection



童夢のカーボンコンポジットの開発技術は、レーシングカーの開発過程に必要不可欠な要素として身についた技術です。かなり特殊な技術ですが、将来的には、一般産業分野にも需要が広まるものと予測し、2001年、開発型カーボンコンポジット製品メーカーとして、「童夢カーボンマジック」を設立。レーシングカーで鍛えられた極限の開発技術力が特長です。

Dome acquired expertise in the development of carbon composites as an essential technology in the racing-car development process. Although this technology is highly specialized, Dome established Dome Carbon Magic in 2001 as a carbon-composite product developer-manufacturer, expecting that the demand for technology of this kind would increase for use in general industrial products. The company features ultimate developmental and technological expertise acquired through the production of racing cars.

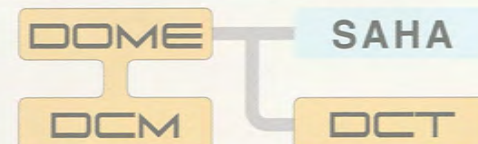
PRODUCTS



高度な開発技術が必要不可欠な重要機能部品はさておいても、コストが重要視される量産製品においては、価格において、東南アジア製の製品には太刀打ちできません。これは、単純に労働コストの問題ですが、もちろん、品質も重要です。その点タイは、労働力の質が高く安心です。DCMの技術とDCTの生産能力が、強力な相乗効果を発揮するでしょう。

Apart from the importance of functional components that require advanced technology, Japanese carbon composite manufacturers cannot match products made in Southeast Asia in terms of low-cost mass production. Low-cost production there is enabled by low labor costs; nevertheless, no compromise is allowed on the quality of products. In this regard, reliable high-quality labor is available in Thailand. The technological expertise of DCM and the production capabilities of DCT will provide excellent synergistic effects.

SAHA GROUP



SAHAグループは、以前から童夢との縁が深く、当初は、グループの小さな工場を借りて、実験的な生産から着手するつもりでしたが、最終的に合弁会社として協力して経営に当たることになりました。SAHAグループは300社からなり、そのうちの15社が上場しているタイでも有数の優良企業です。

Dome has developed a long-established close relationship with the Saha Group. Dome initially planned to perform experimental production by renting a small factory from Saha, but this idea eventually evolved into the launching of a joint venture between Dome and Saha. The Saha Group comprises some 300 companies, 15 of which are listed companies in good standing in Thailand.

ACCESS



車でバンコクから1.5時間のシラチャにあります。2006年完成予定のスワンナブーム空港からは60分です。

DCT is located in Sriracha, 90 minutes by car from Bangkok. From the Suvarnabhumi Airport, which will open in 2006, it will be only a 60-minute drive.

DOME'S CAR



"DOME Zero" 1978



"F-J Prototype" 1978



"F-J Production Car" 1978



"F-3 Production Car" 1980



"DOME P-2" 1979



"DOME Zero RL" 1979



"TOM'S Corolla G5" 1980



"DOME Celica Turbo" 1980



"DOME RL80" 1980



"DOME RL81" 1981



"TOM'S DOME Celica C" 1982



"DOME RC82" 1982



"TOYOTA TOM'S 83C" 1983



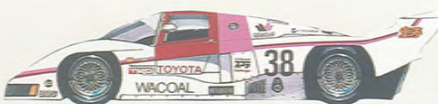
"DOME RC-83" 1983



"DOME RC-821" 1983



"TOYOTA DOME 84C" 1984



"TOYOTA DOME 85C, 85C-L" 1985



"DOME DCFI BLACK BUFFALO" 1985



"TOYOTA DOME 86C, 86C-L" 1986



"TOYOTA DOME 87C, 87C-L" 1987



"DOME F101" 1988



"TOYOTA 88C, 88C-L, 88CV, 88CV-L" 1988



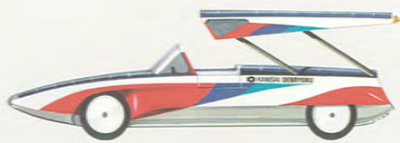
JIOTTO "CASPIA" 1989



"DOME F102" 1991



"ESPERANZA I" 1991



"ESPERANZA II" 1992



"DOME F103" 1992



"DOME F103i" 1993



"DOME F104" 1994



"DOME F105" 1996



"DOME MUGEN NSX" 1997



"DOME MUGEN NSX" 1998



"ML" prototype 1998



"FD-99" 1998



"SRS-F" 1998



"DOME MUGEN NSX" 1999



"UOVA" 2000



"DOME MUGEN NSX" 2000



"DOME MUGEN NSX" 2001



"DOME S101" 2001



"DOME MUGEN NSX" 2002



"HONDA NSX-GT" 2003



"F360-GT" 2003



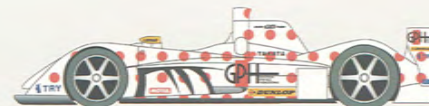
"DOME F106" 2003-2004



"HONDA NSX-GT" 2004



"HONDA NSX-GT" 2005



"DOME S101hb" 2005



"DOME F107" 2005-2006

