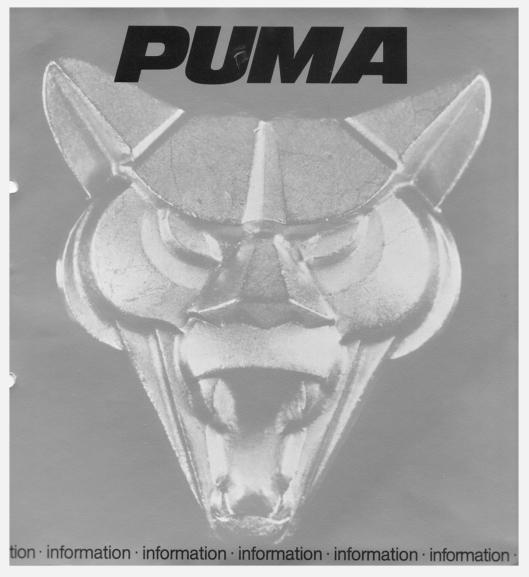


Die Pressemappe der Firma Glasflügel – deutsch-brasilianische Flugzeug- und Fahrzeugbau GmbH vom 24.02.1979



Source: Kopie des Originalkatalogs der Firma Glasflügel GmbH, dieser wurde damals durch Firma Komplett-Büro für Pressearbeit München erstellt

GLASFLÜGEL

information

GLASS FIBER - A VERSATILE MATERIAL WITH A PROMISING FUTURE
The newly-founded "Glasflügel - deutsch-brasilianische Flugzeug- und
Fahrzeugbau GmbH" (German-Brazilian Aircraft and Automobile Construction Co.) operates worldwide

Lenningen - 20 years of production experience in GFK (= glass fiber plastics = GFP) and an increase of 2.1 million Deutsche Mark in capital stock. That is the sound basis of the "Glasflügel - deutsch-brasilianische Flugzeug- und Fahrzeugbau GmbH", Lenningen, founded at the end of 1978. All partners from Brazil, Germany and Italy possess long years of experience and know how in the field of high-quality fiber technology, which includes the processing of carbon and glass fiber as well as plastics. Objective: international activities in the fields of automobile construction, aviation and high-quality industrial products and sub-products.

The search for a qualified processing firm ended in South Germany: for almost 20 years now the "Glasflügel" company has been actively engaged in the GFK field with its own developmental work and production, the main emphasis being placed on the construction of all-glass fiber gliders. More than 1300 machines and 7 different types from the simple training plane up to the 22 meter world record plane "604" have left the factories to date and are flying in 30 countries all over the world. The "Libelle", developed by company founder Eugen Hänle in 1960, was the first glider to be made solely of GFK up to the very last part. And also the most successful. More than 700 pieces could be sold. Today fancy prices are being paid for the legendary "Kestrel", a 17 meter camber flap aircraft of GFK construction whose precision technology and finishing was never again achieved - but which nobody could ever pay for either. Today production centers around the "Mosquito". With its 15 m wing span it was made fit for the FAI racing class.

The strict regulations and the high quality demands on airplane construction are the basis for Glasflügel's engagement in the fields of industrial products and automobile construction. In cooperation with "Puma Industria de Veiculos S.A. Sao Paulo, Brazil" production of the glass fiber body

- 2 -

of the PUMA is being started. The qualities of the glass fiber material harmonize well with the function and the styling of this automobile which is new to Europe and was predominantly found in Brazil up to now. The special features in this connection are corrosion and impact resistance as well as power saving through styling and low weight.

The third branch of the "Glasflügel - deutsch-brasilianische Flugzeugund Fahrzeugbau GmbH" is the production of industrial products and subproducts. The participating partners are able to invest a great amount of their own experience ranging from the development and production of wind power wings, rotor blades, fan blades, antenna housing to braking screws. The company has its own testing organisation so that parts produced in documented production can be supplied.

Glasflügel - deutsch-brasilianische Flugzeug- und Fahrzeugbau GmbH, D-7318 Lenningen/Württ.-1, Tel. 07026/855 or 856.

240279 Copy free of charge Voucher copy on request

Redaktion: Komplett-Büro für Pressearbeit Freya Köhler/Herbert Lenz Ingolstädter Str. 62e, 8000 München 45, Tel. 0 89/31115 00 Telex: 05:216 059







Specifications		
<u>Engine</u>	o 4 cyl. flat, horizontally o Bore: o Stroke: o Displacement: o Compression ratio: o HP (SAE): o Torque: o Carburetion: o Engine location:	opposed, air cooled 85,5 mm 69 mm 1584 ccm 9,1 : 1 90 HP 13,2 mkg b/3000 U/min. 2 Solex - Brosol rear
Transmission	<pre>o 4 - speed standard o Clutch: o Final Drive: o Axle ratio:</pre>	single disc. dry Spiral bevel gears and bevel gear differential 4.125 : 1
Steering	o Typ: o Ratio: o Turns, lock to lock: o Turning diameter:	Worm and roller 14,3 : 1 2,7 right 9,7 m, left 10,8 m
Tires	o Pirelle Radial CN 36	185/70 HR 14 front 195/70 HR 14 rear
Brakes	o Disc: o Drum:	front rear
Dimensions Weights and Capacities:	o Overall length: o Overall width: o Overall height: o Wheelbase: o Front track: o Rear track: o Curg weights: o Fuel capacity: o Oil capacity:	4000 mm 1665 mm 1200 mm 2150 mm 1388 mm 1400 mm 750 kg 40 lt. 2,5 lt. SAE 30 HD



KOMPLETT - BILD

Perfection in Aviation

is the prerequisite for the international engagement of "Glasflügel - deutsch-brasilianische Flugzeug- und Fahrzeugbau GmbH", Lenningen, in the field of high-quality fiber technology including the processing of carbon and glass fiber as well as plastics.

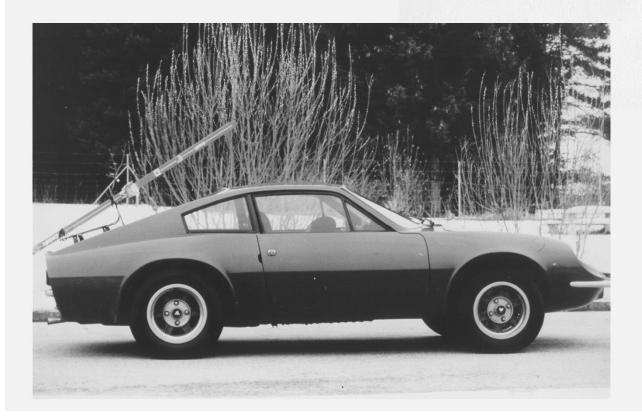
To date already more than 1300 gliders, starting from the simple training plane up to the 22 meter world record plane "604" have left the factory. In addition there is the production of the fiber glass body of the PUMA as well as activities in the field of industrial products and sub-products.



Ingolstädter Str. 62e 8000 München 45 Tel.: 089/3111500

PUMA GTE

The PUMA GTE, designed as a two-seater only, is now tailor-made for the technical demands of the European market. The streamlined body consists of rustfree, reinforced fiber glass which is better and cheaper to repair in case of more extensive damages than a sheet steel body would be.



Belegexemplar erbeten



Ingolstädter Str. 62e 8000 München 45 Tel.: 089/3111500

The PUMA is loose

The Coupe GTE and the Spider GTS versions of the PUMA from Brazil habe prepared for the leap onto the European automobile market.

The PUMA, developed on VW basis, is accelerated to 100 km/h in somewhat less than 10 seconds through an air-cooled 90 SAE-HP (66.2 KW) engine and is convincing through its outstanding roadability. Due to its fiber glass light-weight body and fine aerodynamics it only consumes 8.85 l Super/Regular per 100 km.



Belegexemplar erbeten





PRESSE DOKUMENTATION

THE PUMA IS LOOSE The Brazilian sports car is now tailor-made für the European market

For the first time officially available in Germany and displaying numerous modifications, the Brazilian sports car PUMA now presents itself at the Geneva Automobile Show 1979. Lovers of fast, sporty automobiles, for whom the acquisition of this Brazilian flounder was either not possible at all or else entailed a veritable maze of obstacles, can now be the proud owners of an automobile which is just as exclusive as it is roadworthy in everyday use. The justified criticism voiced in the past of some details which were partially designed to meet the needs of the Brazilian market has been taken into consideration in the production of the new PUMA generation. The "Glasflügel - deutsch-brasilianische Flugzeug und Fahrzeugbau GmbH" (German-Brazilian Aircraft and Automobile Construction Co.) was responsible for the modification work on the PUMA, not only adapting the PUMA to European specifications, but also incorporating considerable improvements.

No doubt the most interesting feature of the sports car which was developed on VW basis is its body. It consists of reinforced fiber glass, complies with the international crash regulations and has, in addition to its handsome, elegant styling, the practical advantage that you will never have to worry about rust during the PUMA's lifetime. What's more, in case of more extensive damages, the extremely shock-proof body is better and cheaper to repair than sheet-steel housing would be.

The modifications made in the tail area of the PUMA, which is either available as coupe (GTE) or Spider (GTS), decisively improve the rear vision. The complete body was increased somewhat in width and height through which the crouching look of the PUMA has lost nothing of its dynamics (the PUMA, by the way, is only 1,20 m high and runs on wide tires, 185/70 HR 14 in the front and 195/70 HR 14 in the rear).

Redaktion: Komplett-Büro für Pressearbeit Freya Köhler/Herbert Lenz Ingolstädter Str. 62e, 8000 München 45, Tel. 0 89/31115 00 Telex: 05-216 059



The interior decor will no doubt meet the expectations of the sports car fan. The PUMA GTE and GTS offer neither the plushy sofa style nor the impersonal racing look, but rather a well-balanced mixture of streamlined comfort an functional design. The bucket seats, a standard fitting, not only make a good impression from the optical point of view, they are also convincing through their body-countoured design and best possible support in curves. The dashboard with its circular dial instruments was re-designed with a view to obtaining easier access and a better view. Speedometer, revmeter, gasoline meter, oil pressure gauge and oil temperature indicator are arranged directly within your field of vision and can be read at a glance.

The tail of the two-seater PUMA GTE and GTS houses a tried an tested engine which ensures the right power supply. The air-cooled 1.6 l VW engine with a performance of 90 SAE-HP (66.2 KW) allows the light-weight wildcat (dead weight only 750-kg) to sprint from 0-100 km/h in less than 10 seconds. With such an acceleration rate and a top speed of 182 km/h, the PUMA numbers among the fast ones in the country. And among the most economical. Due to its light-weight construction and fine aerodynamics it consumes onty 8,85 l Super/Regular per 100 km.

With its solid standard equipment which e.g. also includes light-alloy rims, ist outstanding driving performance and economical qualities considering its capacity and horsepower/KW category, the new PUMA is an attraction for all sports car enthusiasts. Especially the Spider will soon find friends in an age in which convertibles habe become fewer and fewer.

The sturdy VW mechanics behind it all are no doubt part of the success which the PUMA has been able to achieve up to the present day.

PUMA Vertriebsgesellschaft Europa P.O. Box 36 Tobelwasen D-7315 Weilheim/Teck Tel. 07023/2051/3181 Telex 07267857 PUMA Generalvertretung Deutschland Tobelwasen 7315 Weilheim/Teck Tel. 07023/2051 Telex 07267857 PUMA Generalvertretung Switzerland/Austria/ France/Benelux countries Hohlstrasse 100 CH-8026 Zurich Tel. 01/2423834

240279 / copy free of charge / voucher copy on request