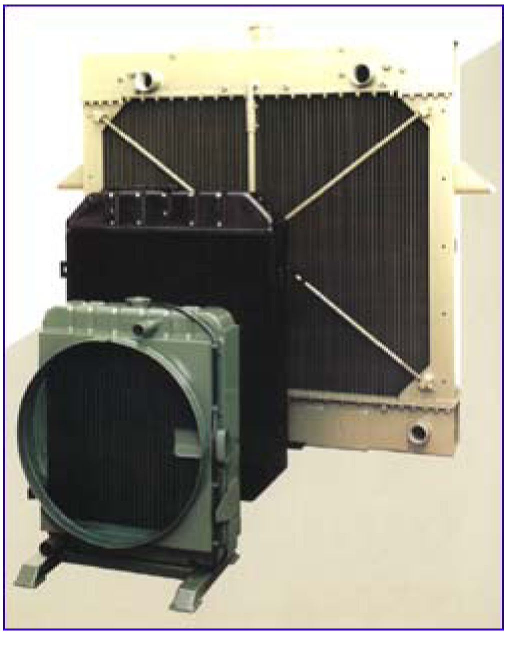
2005

The Market for Radiators for motor vehicles in Germany



The Market for Radiators for motor vehicles in Germany

2005

This Market Brief has not been formally edited by the
International Trade Centre UNCTAD/WTO

Prepared by Mr. Thorsten Stahl under the supervision of Prof. Dr. Frank Gogoll and
Prof. Dr. Wolfgang Veit of the University of applied sciences of Cologne
For additional information, please contact: mb@intracen.org

M.DPMD/05/154

Cover image: courtesy of RAC Radiateurs autos challandais
Parc d'activité de la Romazière, sq. J.Cugnot, 85300 CHALLANS, France,
http://www.rac-radiateurs.com/index.htm

Abbreviations

AG	Aktiengesellschaft (joint-stock company)
BMW	Bayerische Motoren Werke
CC	Cubic centimetre
CIF	Cost, Insurance, Freight
DIN	Deutsche Industrie Norm (German Industrial Standard)
EU	European Union
FOB	Free On Board
HS	Harmonized System
ITC	International Trade Centre
MFN	Most favoured nation
MIO	million
P.A.	per annum (yearly)
PCS	pieces
UK	United Kingdom
USA	United States of America
VAT	Value added tax
VW	Volkswagen

Executive Summary

This market brief describes the German market for radiators for motor vehicles and the opportunities for new suppliers to enter this market.

The German motor vehicle industry is characterized by close and long-term relationships between vehicle manufacturers and suppliers of parts and accessories. It seems therefore necessary for new entrants to offer a high quality, low price product to be competitive on this market.

Germany is the second world largest importer of radiators for motor vehicles after the United States. In 2003 its imports amounted to US$ 290 million (11% of world's imports),[1] around 90% of which came from EU countries. France was the leading supplier (20%), followed by the UK (15%) and Poland (12%).[2]

Germany is also a major producer of radiators for motor vehicles as well as the second world exporter after the United Sates. Its domestic production[3] amounted to (US$ 741.2 million)[4] in 2002 and its exports amounted to US$ 275.9 million (11% of world exports).[5]

German production rose by 50% between 2002 and 2003, jumping from 12.058.100 units in 2002 to 18.115.800 units in 2003. Nevertheless, despite this growth, the unit value decreased by 33.5%, from US$ 61,46 in 2002 to US$ 40,87 in 2003[6]. This decrease of unit values puts domestic producers and importers under enormous cost pressure. It could indicate of a tough price war, which could make it more difficult for new exporters to offer a competitive product.

In addition, new EU countries (e.g. Poland, the Czech Republic, Slovakia, etc.) have pushed into the market. Due to their low unit labour costs and their proximity to the German market, they benefit from important competitive advantages compared to non-EU countries with low wages (e.g. Brazil, Mexico, Taiwan PoC, South Africa).

Moreover, close and long-term relationships between suppliers and customers, existing business connections and good reputation grown over years, make it mandatory for new companies to offer an excellent high quality/low price ratio to have a chance to step into the market.

[1] See table 2.
[2] See table 3.
[3] See table 1.
[4] Assuming an exchange rate of US-$1,20/€1.
[5] Information based on ITC statistics.
[6] Assuming an exchange rate of US-$1,20/€1.

A. Product description

This Market Brief is intended for producers and exporters in developing countries. It covers the German market for radiators for motor vehicles, classified under the following code of the Harmonised System (HS):

HS: 870891 Radiators for motor vehicles

The radiator is part of the motor cooling system of a vehicle. The motor cooling system has to: keep the operating temperature within a designated range, keep the heat load of the engine components such as piston, cylinder and cylinder head within certain limits, in order to avoid any damage to the material and to avoid that the lubricating oil evaporates or burns and thus looses its lubricating ability.[7] There are two different motor cooling systems, each one using two methods:

The air-cooling system

- The "air-stream cooling" used for motor bicycles: cylinder and cylinder head are equipped with cooling fins to enlarge the heat dissipation surface. The air stream surrounds the cylinder and lowers the temperature.
- The "air-blower-cooling" used for trucks: a blower produces the cooling air stream. Air baffles lead the air to the cylinders.[8]

The water-cooling system

- The "pump-circulation-cooling-system" is the common motor cooling system used for passenger cars. It consists of the radiator, the cutting oil, the water pump and the thermostat.[9]
- The "heat-circulation-cooling", not utilized in motor cooling systems for vehicles.

"Common radiators" contain an upper and a lower water box and the radiator bloc. Side frames are installed to fix the radiator onto the auto body. The radiator bloc consists of thin-walled metal tubes made out of brass, which connect the upper and lower water box. The cutting oil runs through these metal tubes. Cooling fins made out of copper or aluminium sheets are placed between the metal tubes to enlarge the cooling surface.

The cutting oil streams from top to bottom through the radiator. The inlet neck and the water inlet nipple with the radiator-cover-plate are located in the upper water box whereas the cutting-oil-exit-nipple is located in the bottom water box. An overflow pipe in the inlet neck allows water or steam to escape if high-pressure arises.

"Cross-flow radiators" are a variant of the "common radiators". The water boxes are located on the left and right side of the radiator. The cooling water streams through horizontal tubes from one water box to the other. The advantage of this type of radiator is its low installation height.[10]

[7] Staudt, Wilfried: Kraftfahrzeugtechnik, p. 289.
[8] Staudt, Wilfried: Kraftfahrzeugtechnik, p. 294.
[9] Staudt, Wilfried: Kraftfahrzeugtechnik, p. 290.
[10] Staudt, Wilfried: Kraftfahrzeugtechnik, p. 290-291.

B. Production, foreign trade and consumption

Production

Germany produced 18,115,844 units of radiators in 2003, an increase of more than 6 million units compared to 12,058,073 units in 2002. Despite the unit increase, the turnover declined from € 617.64 million in 2002 to € 617.05 million in 2003, which lead to a reduction in the price per unit from € 51,22 in 2002 to € 34,06 in 2003 (-33,5%)[11]. Taking into account the figures for 2001 (10,900,211 units, € 556.25 million, € 51,03/unit) a significant collapse of the unit price could be seen, which was compensated through a higher output in 2003.
Sixteen companies produce radiators for motor vehicles in Germany. The country's production was valued at € 227.02 million in 2002 and was three times as high as it's imports[12]. These figures highlight the competitiveness of the German production.

Table 1
Production of radiators for motor vehicles in Germany

Description	2001		2002		2003		Companies
	Units in 1000 pcs.	Value in 1000 Euro	Units in 1000 pcs.	Value in 1000 Euro	Units in 1000 pcs.	Value in 1000 Euro	
Radiators	**10900**	**556245**	**12058**	**617646**	**18116**	**617048**	**16**

Source: Federal Statistical Office Germany (Statistisches Bundesamt)

Foreign trade

As shown in table 2, Germany was the second largest world importer of radiators for motor vehicles in 2003, after the United States. Its imports were valued at US$ 290 million or 11% of world imports.

During the period 1999-2003, the annual growth rate of German imports was of 4% in value and declined by 3% in quantity. However, these growth rates have to be considered cautiously, taken into account the collapse of the unit price mentioned above[13], which may lead to price battles on the attractive German market.

[11] See table 1.
[12] See table 1+2., assuming an exchange-rate of US-$1,20/€1.
[13] See chapter B. Production.

Table 2

World imports of radiators for motor vehicles (HS-Code: 870891) in 2003

Importers	Ranking	Value imported in 2003, in US-$ thousand	Share in world imports, in %	Annual growth in quantity 1999-2003, in %	Annual growth in value 1999-2003, in %
World estimation		2,629,857	100		19
USA	1	466,408	17	0	8
Germany	2	290,669	11	-3	7
Canada	3	225,063	8		-3
France	4	208,517	7	4	17
Spain	5	138,723	5	-12	33
Belgium	6	136,645	5	-3	4
Mexico	7	134,025	5		2
United Kingdom	8	107,779	4	18	79
Italy	9	107,653	4	-5	25
Sweden	10	87,830	3	22	101
Austria	11	82,706	3	-2	20
Netherlands	12	70,668	2	8	21
Slovakia	13	47,826	1	44	296
Czech Rep.	14	44,431	1	31	63

Source: ITC statistics based on COMTRADE database, United Nations Statistics Division.

Table 3 below shows that 90% of German imports of radiators for motor vehicles come from EU countries. France is the major supplier (20% of the German market) with 4,602 tons valued at US$ 58.4 million in 2003, followed by the United Kingdom (15%) with 3,707 tons valued at US$ 44.1 million.

As shown in table 3, the unit value of the radiators exported to Germany by leading supplier, France, the United Kingdom, Austria and the Netherlands, is above the average unit value of total German imports. New EU countries (Poland, Czech Republic) represent 23% of supplies to Germany with products priced at lower unit value.

Table 3

German imports of radiators for motor vehicles (HS-Code 870891) in 2003, by origin

Exporters	Imported value 2003, in US$ thousand	Share in Germany's imports, in %	Imported quantity 2003, in Tons	Unit value (US$/Ton)	Import trend in value 1999-2003, in % p.a.	Import trend in quantity 1999-2003, in % p.a.
World	**290,669**	**100**	**23,820**	**12,203**	**4**	**-3**
France	58,437	20	4,602	12,698	4	1
UK	44,104	15	3,707	11,897	-4	-8
Poland	33,651	12	3,219	10,454	168	147
Czech Rep.	32,887	11	3,904	8,424	36	34
Austria	22,781	8	1,318	17,285	3	-1
Netherlands	20,749	7	1,045	19,856	-6	-7
Spain	12,264	4	975	12,578	-25	-43
South Africa	10,438	4	945	11,046		27
Italy	9,014	3	719	12,537	-6	-27
Sweden	7,819	3	752	10,398	2	10
Portugal	7,359	3	397	18,537	28	13
Hungary	5,590	2	428	13,061	-19	-23
Japan	4,346	1	121	35,917	5	-9
USA	4,179	1	239	17,485	16	20

Source: ITC statistics based on COMTRADE, United Nations Statistics Division database.

Apparent consumption

Table 4 below shows the estimated value of German apparent consumption of radiators for motor vehicles, which increased by 11.05% between 2002 and 2001. This estimate corresponds to total domestic production plus total imports minus exports.

Table 4

Estimated apparent consumption of radiators for motor vehicles in Germany

Description	2001 Value in Euro	2002 Value in Euro
Radiators for motor vehicles	553.577.562	614.765.166

Source: calculations based on Federal Statistical Office Germany and ITC figures.

C. Market characteristics[14]

The German market is clearly structured: most of the demand for radiators comes from vehicle manufacturers. Demand from the retail trade and garages is of minor importance and results from repairing and replacing parts, for instance after an accident.

Due to their market power, German vehicle manufacturers have a high bargaining power vis-à-vis radiator suppliers and thus a significant influence on prices, quality and equipment standards. Therefore, suppliers depend significantly on their requirements and specifications. When they develop new vehicle series (e.g. VW Golf 4, BMW 3er), vehicle manufacturers define specifications for the required parts, and call for tender. The ensuing negotiations include issues such as prices, terms of payment and delivery, quality standards and the exact layout of each part. The length of the ensuing contract corresponds to the planned production period of the vehicle series.

D. Market access

Tariffs

A third country duty of 3% or 4.5%, depending on the type of radiator, is levied on radiators for motor vehicles imported into the EU (see annex 5). The EU waives this third country duty for imports from certain countries with special trade agreements.[15]

Standards

The German Organisation for Standardisation (DIN) set up a standard for cooling methods for combustion engines[16] (DIN 6266). Basic Information can be obtained from the German Organisation for Standardization[17] or can be attained by consulting the website www.din.de.

E. Prices

Prices of radiators depend on factors such as the vehicle model, the volume (quantity) and terms of a contract or the quality standards (legal and specified by the customer).

As a consequence of specific requirements and specifications and of the fact that contracts in this industrial sector are always negotiated bilaterally between radiator producers and vehicle manufacturers, there is no price transparency.

The prices in table 5 below were estimated at the retail trade level, which is, as already mentioned[18], of minor importance.

[14] Information based on statements from vehicle manufacturers.
[15] http://europa.eu.int/comm/taxation_customs/dds/en/tarhome.htm
[16] FAKRA-Handbuch, Normen für den Kraftfahrzeugbau Teil 1.
[17] See annex 2: Other useful addresses.
[18] See chapter C. Market Characteristics.

Table 5

Retail-prices for radiators in Germany in July 2004

Description	Lower car segment (e.g. VW Polo, Ford Fiesta)	Middle car segment (e.g. BMW 3er, Audi A3)	Upper car segment (e.g. Mercedes CLK, BMW 7er)
Value in Euro, excl. VAT	92,50 to 125	129,90 to 189,60	170 to 312,10

Source: Prices based on offers from German retailers (Auto Teile Unger 50939 Köln, Wessels & Müller AG 51465 Bergisch-Gladbach)

F. Distribution channels[19]

There are two main distribution channels:

Direct links between radiator manufacturers and vehicle producers: radiators are mainly delivered by truck, especially when both supplier and buyer are located in Germany or in the European Union. Sometimes parcel services (United Parcel, Fed Ex, DHL, TNT, etc.) are used; mainly when a product is needed urgently or when small quantities are needed.

Links between radiator manufacturers and retailers and garages: distribution is generally made by parcel services due to the smaller quantities traded and to the variety of destinations.

Only few producers use their own vehicle fleet.

Due to high airfreight costs, radiators are generally shipped by sea from overseas (mainly USA, Taiwan and Japan) to the main German/EU trading centres: Hamburg, Bremerhafen, Rotterdam and Antwerp.

G. Commercial practices

As a consequence of the market power of vehicle manufacturers and their close cooperation with radiator suppliers, the German market is characterised by long-term relationships. Buyers and sellers are well known to each other and most contracts are based on mutual terms. However, it is worthwhile for sellers to compare their arrangements with the terms offered by other buyers.

Usual terms of payment are either 30/60 days net or 10/14 days minus 2/3% discount. Often, radiators are traded on an “ex-works” basis and “without packaging”. This is due to the high cost of the packaging used to protect radiators during transport. However, occasionally, radiators are traded on a CIF or FOB basis. The letter of credit (L/C) is hardly used.

A bonus is usual (e.g. 2% of the turnover) and is given after a year’s period, when the quantity or turnover agreed upon[20] have been reached.

[19] Information based on statements from German radiator manufacturers.
[20] Information based on statements from car manufacturers and radiator producers.

H. Quality

Vehicle manufacturers set quality standards according to the standard DIN 6266.[21]. Radiators should comply with the quality specifications of the buyers. Most manufacturers, (e.g. VW, Ford, BMW, Daimler Chrysler etc), sign a contract only if quality controls are carried out during the production process of radiators.[22] The length of the contract generally corresponds to the scheduled production period of a specific vehicle model.

J. Packaging and labelling

Packaging

Generally, pallet measures are: 120x80x100 cm or 120x100x100 cm. The quantity of radiators per pallet depends on their dimension, the packaging used and the transport method. Around 15 radiators fit in one special container or pallet[23] .

In Germany, environmental issues are of high importance. Regarding packaging, the **EU Directive 94/62/EC**[24] of 20 December1994 on packaging and packaging waste, which took effect in June 1996 (transferred into German Law by "Kreislaufwirtschafts- u. Abfallgesetz" in 1996), commits all EU member states to adopt policies to reduce the production of packaging wastes and facilitate their recovery, recycling and re-use. Member states shall even take measures to prevent the formation of packaging waste.[25].

In the EU, packaging consists of re-usable boxes, containers and pallets, which are returned to the supplier after usage. Packaging for overseas shipments is mainly non-returnable because of cost constraints.

The ITC publication **PACKit: Importing Country Profile, EU, 2002** contains, among other topics, helpful information on the impact of packaging and waste legislation on imported packaging from developing countries.

Labelling

Exporters are advised to write labels in at least one official EU language in addition to German including:[26]

- Name and address of seller and buyer
- Name and exact description of the product
- Country of origin
- Amount (e.g. per pallet and total amount)
- Net weight
- Instructions for handling and storage.

[21] See chapter D. Market access.
[22] Information based on statements from car manufacturers and mirror producers.
[23] Information based on statements from radiator manufacturers.
[24] To see the entire text of the Directive: http://europa.eu.int/smartapi/cgi/sga_doc?smartapi!celexplus!prod!DocNumber&lg=en&type_doc=Directive&an_doc=1994&nu_doc=62" \o "full text of the act
[25] http://europa.eu.int/scadplus/leg/en/lvb/l21207.htm.
[26] Handelskammer Hamburg, Exportnachschlagewerk "K und M", Juni 2003, p. 21-22.

K. Trade promotion

There is no extensive trade promotion since sellers and buyers often know each other well and since direct sales to private persons do not exist. Nevertheless, exporters can place advertisements in specialized magazines, many of which are published in Germany,[27] or through the web. In addition, international trade fairs offer good opportunities to introduce new contacts, especially for new exporters. The trade fairs listed below could be suggested:

Automechanika
Frankfurt/Main, Germany
Organizer: Messe Frankfurt GmbH
Ludwig Erhard Anlage 1
60327 Frankfurt/Main
Germany
Tel.: +49 69 7575 0
Fax: +49 69 7575 6433

Essen Motorshow
Essen, Germany
Organizer: Messe Essen GmbH
Norbertstrasse
45131 Essen
Germany
Tel.: +49 201 7244 0
Fax: +49 201 7244 248

Internationale Automobilausstellung für Nutzfahrzeuge
Hannover, Germany
Organizer: Messe Hannover GmbH
Messegelände
30521 Hannover
Germany
Tel.: +49 511 89 0
Fax: +49 511 89 32626

Salon de l'auto et accessoires
Geneva, Switzerland
Next event: March 2006
Organizer: Geneva Palexpo
P.O. Box 112
1218 Grand-Saconnex
Switzerland
Tel.: +41 22 761 1111
Fax: +41 798 01 00

Internationale Automobilausstellung
Frankfurt/Main, Germany
Next event: September 2005
Organizer: Messe Frankfurt GmbH
Ludwig Erhard Anlage 1
60327 Frankfurt/Main
Germany
Tel.: +49 69 7575 0
Fax: +49 69 7575 6433

[27] See annex 3.

L. Market prospects

The close links between the automobile supply industry including radiators and the automobile manufacturing industry considerably influence the market.

Figures given in annex 4 show that German production of motor vehicles grew by 0.7% between 2002 and 2003. Nevertheless, the German automobile industry anticipates a slight decrease of production of vehicles during the next two years. This is mainly due to low domestic demand, especially for passenger cars; to the increasing price of steel as a consequence of the sizable Chinese demand,[28] to the high level of German wages as well as to the still awaited economic recovery.

However, signals show that market prospects for radiators remain positive. European sales of German vehicles were positive in the first half of 2004 compared to the same period in 2003 (e.g. BMW +7,5%, VW +1,7%, Daimler/Chrysler +1,7%).[29] In addition, the total share of automobile part supplies to the vehicle manufacturing industry is expected to grow from 65% to 75% in 2015[30] as a consequence of a demand for more and more sophisticated equipment for motor vehicles and to the strategy of vehicle producers to concentrate on their core production.[31].

---

[28] http://www.faz.net/IN/INtemplates/faznet/img/leer.gif" *.
[29] http://www.autobild.de/suche/artikel.php?artikel_id=6631.
[30] http://www.netzeitung.de/wirtschaft/unternehmen/284874.html.
[31] http://www.vda.de/de/aktuell/statistik/auto+wirtschaft/schluesselbranche.html.

Annex 1: Selected Potential Importers

Bayerische Motoren Werke AG
80788 München
Germany
Tel: +49 89 3 82 0
www.bmw.de

Ford-Werke AG
50725 Köln
Germany
Tel: +49 221 90 0
www.ford.de

Daimler Chrysler AG
70322 Stuttgart
Germany
Tel: +49 711 17 0
www.daimlerchrysler.com/dcom

Porsche AG
Postfach 40 06 40
70432 Stuttgart
Germany
Tel: +49 711 9 11 0
www3.porsche.de

Smart GmbH
Leibnizstraße 2
71038 Böblingen
Germany
Tel: +49 7031 907 620 0
www.smart.com

Volkswagen AG
38436 Wolfsburg
Germany
Tel: +49 53 61 9 0
www.volkswagen.de

ATU
Auto-Teile-Unger
Handels GmbH & Co. KG
Dr.-Kilian-Straße 4+11+12
92637 Weiden i. d. Opf.
Germany
Tel.: +49 180 5 27 27 27
www.atu.de

Wessels & Müller AG
Pagenstecherstrasse 121
49090 Osnabrück
Germany
Tel.: +49 541 12 15 0
www.wm-fahrzeugteile.de

Adam Opel AG
Postfach 17 10
65407 Rüsselsheim
Germany
Tel: +49 6142 7 70
www.opel.de

Annex 2: Other useful addresses

VDA
Verband der Automobilindustrie
Westendstraße 61
60325 Frankfurt/Main
Germany
Tel.: +49 69 9 75 07 0
Fax: +49 69 9 75 07 291
www.vda.de

CLEPA
European Association of Automotive Suppliers
Boulevard Brand Whitlock, 87/B1
1200 Brussels
Belgium
Tel: +32 2 743 91 30
Fax: +32 2 732 00 55
www.clepa.com

ACEA
European Automobile Manufacturers Association
Rue du Noyer 211
1000 Brussels
Belgium
Tel.: +32 2 7387 310
www.acea.be

DIN
Deutsches Institut für Normung
Burggrafenstraße 6
10787 Berlin
Germany
Tel.: +49 30 26 01 0
www.din.de

Statistisches Bundesamt
Gustav Stresemann Ring 11
65189 Wiesbaden
Germany
Tel.: +49 611 75 24 05
www.destatis.de

Hauptzollamt Frankfurt
Zoll-Infocenter
Hansaallee 141
60320 Frankfurt/Main
Germany
Tel.: +49 69 46 99 76 00

ADAC
Allgemeiner Deutscher Automobil-Club
Am Westpark 8
81373 München
Germany
Tel.: +49 180 5 10 11 12
www.adac.de

bfai
Bundesagentur für Außenwirtschaft
Agrippastraße 87-93
50676 Köln
Germany
Tel.: +49 221 20 57 0
www.bfai.de

Annex 3: Selected periodicals

Auto Bild
AS Auto Verlag GmbH
Axel-Springer-Platz 1
20350 Hamburg
Germany

Tel.: +49 40 347 00
www.autobild.de

auto motor und sport
Vereinigte Motor-Verlage GmbH & Co. KG
Leuchnerstraße 1
70174 Stuttgart
Germany

Tel.: +49 711 182 14 16
www.auto-motor-und-sport.de

Auto News (Online magazine)
NEW LOOK electronic publishing GmbH
Blumenstraße 11
85540 Haar
Germany

Tel.: +49 89 46 23 70 0
www.auto-news.de

Auto Zeitung
Heinrich Bauer LAPIS KG
Industriestraße 16
50735 Köln
Germany

Tel.: +49 221 770 91 57
www.autozeitung.de

Trucker
Verlag Heinrich Vogel GmbH
Neumarkter Straße 18
81664 München
Germany

Tel: +49 89 4372 2387
www.trucker.de

Annex 4: Statistics

German production of motor vehicles

Description	2002 Amount in pieces	2003 Amount in pieces	Change In %
Passenger Cars	5.123.238	5.145.403	0,4
Commercial vehicles of which:	346.071	361.226	4,4
Trucks up to 6 tons	212.358	219.375	3,3
Trucks over 6 tons	123.968	131.428	6,0
Busses	9.745	10.423	7,0
Total	5.469.309	5.506.629	0,7

Source: German Association of the Automotive Industry (Verband der Automobilindustrie)

German production of tools and accessories for motor vehicle

Description	2002 Value in mio €	2003 Value in mio €	Change In %
Domestic turnover	33.465	35.358	5,7
Turnover abroad	23.235	24.593	5,8
Total	56.699	59.951	5,7

Source: German Association of the Automotive Industry (Verband der Automobilindustrie)

Annex 5: Tariffs

List of products at tariff line level imported by Germany in 2004

87089190: Radiators for tractors, motor vehicles for the transport of ten or more persons, motor cars and other motor vehicles principally designed for the transport of persons, motor vehicles for the transport of goods and special purpose motor vehicles (excl. those for the industrial assembly of certain motor vehicles of subheading N0 8708 91 10).

87089110: Radiators for the industrial assembly of: pedestrian-controlled tractors; motor cars and vehicles principally designed for the transport of persons; vehicles for the transport of goods with compression ignition internal combustion piston engines of a cylinder capacity =<2500 CC or with spark-ignition internal piston engines of a cylinder capacity =<2800 CC; special purpose motor vehicles of heading 8705.

Product Code	Imported value 2004 in USD thousand	Share in Germany's imports, %	Imported quantity 2004	Quantity unit	Unit value (USD/unit)	Imported value 2003 in USD thousand	Imported quantity 2003	Imported value 2002 in USD thousand	Imported quantity 2002
Total	328,159	100				295,020		269,978	
87089190	284,455	87	24,431	Tons	11,643	247,441	21,192	217,499	21,160
87089110	43,704	13	2,601	Tons	16,803	47,579	2,943	52	

ITC calculations based on Eurostat statistics

Tariff (2003) and non-tariff (1999) barriers reported by Germany for product 87089110

Tariffs and non-tariff measures	Tariff ad-valorem	Tariff specific	Agreement with the following countries	Non-tariff measures or product description
MFN duties (Applied)	3%			
European Union rate	0%			
Preferential tariff for Iceland	0%			
Preferential tariff for Liechtenstein	0%			
Preferential tariff for Norway	0%			
Preferential tariff for Overseas Countries and Territories	0%			
Preferential tariff for countries fighting drug	0%			
Preferential tariff for Generalized System of Preferences countries	0%			
Preferential tariff for Least Developed Countries	0%			
Preferential tariff for African, Caribbean and Pacific States (associated with EEC) countries	0%			
Preferential tariff for Andorra	0%			
Preferential tariff for Bulgaria	0%			
Preferential tariff for Romania	0%			
Preferential tariff for Albania	0%			
Preferential tariff for Bosnia and Herzegowina	0%			
Preferential tariff for Croatia	0%			
Preferential tariff for Macedonia	0%			
Preferential tariff for Yugoslavia	0%			
Preferential tariff for Algeria	0%			
Preferential tariff for Morocco	0%			
Preferential tariff for Tunisia	0%			
Preferential tariff for Egypt	0%			
Preferential tariff for Gaza strip	0%			
Preferential tariff for Jordan	0%			
Preferential tariff for Lebanon	0%			
Preferential tariff for Syria	0%			
Preferential tariff for Chili	0%			
Preferential tariff for Faroe Islands	0%			
Preferential tariff for Israel	0%			
Preferential tariff for Mexico	0%			
Preferential tariff for South Africa	1.5%			
Preferential tariff for Switzerland	0%			
Preferential tariff for Turkey	0%			

Tariff (2003) and non-tariff (1999) barriers reported by Germany for product 87089190

Tariffs and non-tariff measures	Tariff ad-valorem	Tariff specific	Agreement with the following countries	Non-tariff measures or product description
MFN duties (Applied)	4.5%			
European Union rate	0%			
Preferential tariff for Iceland	0%			
Preferential tariff for Liechtenstein	0%			
Preferential tariff for Norway	0%			
Preferential tariff for Overseas Countries and Territories	0%			
Preferential tariff for countries fighting drug	0%			
Preferential tariff for Generalized System of Preferences countries	0%			
Preferential tariff for Least Developed Countries	0%			
Preferential tariff for African, Caribbean and Pacific States (associated with EEC) countries	0%			
Preferential tariff for Andorra	0%			
Preferential tariff for Bulgaria	0%			
Preferential tariff for Romania	0%			
Preferential tariff for Albania	0%			
Preferential tariff for Bosnia and Herzegowina	0%			
Preferential tariff for Croatia	0%			
Preferential tariff for Macedonia	0%			
Preferential tariff for Yugoslavia	0%			
Preferential tariff for Algeria	0%			
Preferential tariff for Morocco	0%			
Preferential tariff for Tunisia	0%			
Preferential tariff for Egypt	0%			
Preferential tariff for Gaza strip	0%			
Preferential tariff for Jordan	0%			
Preferential tariff for Lebanon	0%			
Preferential tariff for Syria	0%			
Preferential tariff for Chili	0%			
Preferential tariff for Faroe Islands	0%			
Preferential tariff for Israel	0%			
Preferential tariff for Mexico	0%			
Preferential tariff for South Africa	2.2%			
Preferential tariff for Switzerland	0%			
Preferential tariff for Turkey	0%			

Source : national data reported to UNCTAD (TRAINS) and ITC Market Access Map

Annex 6: Sources of information

Automobilzulieferer geben sich optimistisch, http://www.netzeitung.de/wirtschaft/unternehmen/284874.htm (21.05.2004).

Deutsche Automobilindustrie erhöht ihre Wettbewerbsfähigkeit, http://www.vda.de/de/aktuell/statistik/auto+wirtschaft/schluesselbranche.html (14.05.2004).

Domestic production of motor vehicles by German manufacturers, http://www.vda.de/en/aktuell/statistik/jahreszahlen/automobilproduktion/ (11.05.2004).

FAKRA-Handbuch, Normen für den Kraftfahrzeugbau Teil 1, VDA (Hrsg.), 8.Auflage, Berlin: Beuth-Verlag GmbH, 1979.

Handelskammer Hamburg (Hrsg.): Export-Nachschlagewerk “K und M” Konsulats- und Mustervorschriften, 35. Auflage, Hamburg: Carl H. Dieckmann, 2003.

Herstellung von KfZ-Teilen und –Zuberhör (Domestic production of motor vehicle tools and accessories of German manufacturers), http://www.vda.de/de/aktuell/statistik/jahreszahlen/allgemeines/index.html (17.05.2004).

http://europa.eu.int/comm/taxation_customs/dds/cgi-bin/tarduty?ProdLine=80&Type=0&Action=1&Lang=EN&SimDate=20040816&YesNo=1&Indent=-1&Flag=1&Test=tarduty&Periodic=0&Download=0&Taric=8708911000&Country=----------&Day=16&Month=08&Year=2004 (11.05.2004)

http://europa.eu.int/smartapi/cgi/sga_doc?smartapi!celexplus!prod!DocNumber&lg=en&type_doc=Directive&an_doc=1994&nu_doc=62" \o "full text of the act (17.05.2004).

http://europa.eu.int/scadplus/leg/en/lvb/l21207.htm (08.07.2004).

http://www.autokuehler-frank.de/kuehler/index.htm (21.07.2004).

http://www.faz.net/IN/INtemplates/faznet/img/leer.gif" * (14.05.2004).

PKW Verkaufszahlen in Westeuropa, http://www.autobild.de/suche/artikel.php?artikel_id=6631 (19.07.2004).

Staudt, Wilfried: Kraftfahrzeugtechnik, Technolgie, Wiesbaden: Vieweg & Sohn Verlagsgesellschaft mbH, 1995, page 289-294.