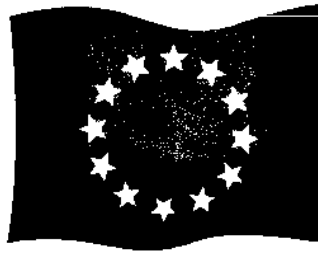


# **EUROPE AND US**



**New Europe for me as**

**DENTAL  
LABORATORY  
TECHNICIAN**

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**Using example of EUROFIT Austria**

# 1. DENTAL LABORATORY TECHNICIAN IN **XXXXXX**

## COMPARISON WITH DENTAL LABORATORY TECHNICIANS IN PARTICULAR EU MEMBER COUNTRIES

We chose for the comparison mainly Germany and Austria; but in some cases you can gain the picture about situation in some other European countries as well. Let us start with comparison of the number of the dentists and dental laboratory technicians per particular number of inhabitants in Germany, Austria and Switzerland.

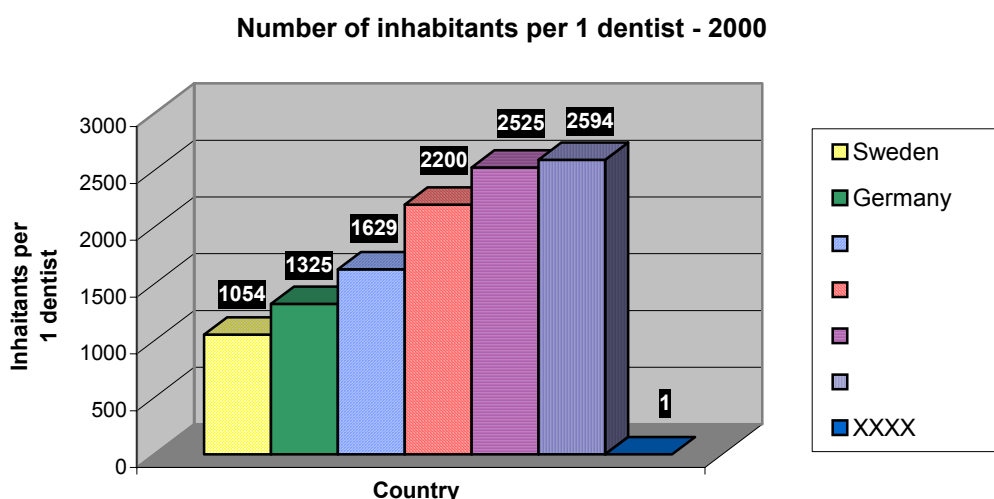
Country in year 2000	Inhabitants	Dentists	Chair side Assistants	Dental Laboratory Technicians	Dentists per 100.000 inhabitants	Inhabitants per 1 dentist	Dental laboratory technicians per 100.000 inhabitants
Germany	82.536.680	62.277	120.000	80.000	75	1325	97
Switzerland	7.169.000	4.400	7200	1100	61	1629	15
Austria	8.074.000	3112	7500	5.000	39	2594	62
<b>XXXXXX</b>							

**Dentists and dental laboratory technicians**

Source: [www.who.int](http://www.who.int); <http://www.whocollab.od.mah.se>

In the following graphs you can clearly see quite big differences between various European countries concerning the number of dentists and dental laboratory technicians per particular number of inhabitants in the year 2000:

**Graph 1**



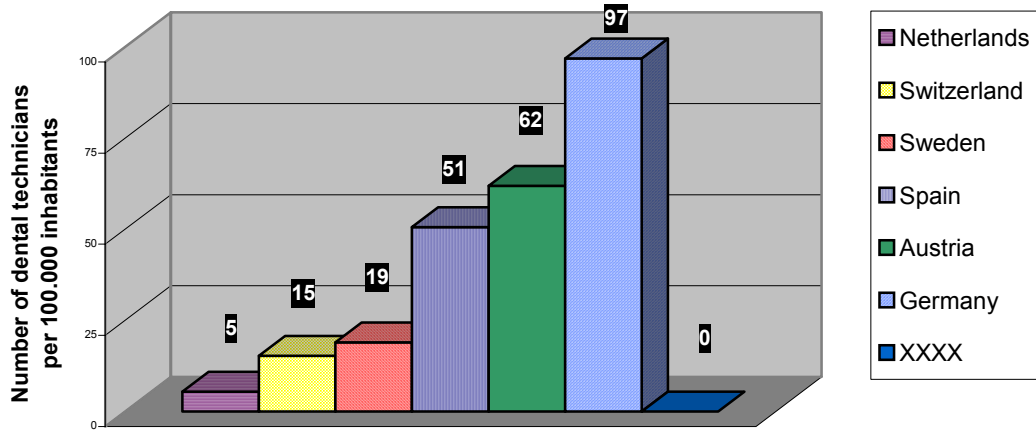
**Inhabitants per 1 dentist**

Source: <http://www.whocollab.od.mah.se>

**Graph 2**

**Number of dental laboratory technicians per 100.000 inhabitants - 2000**

**Dental labours per 100.000 inhabitants**



Source: <http://www.whocollab.od.mah.se>

How is the structure of our enterprises in comparison with those in another e.g. Germany or Austria?

**Company size**

<b>Dental laboratories and companies</b>					
<b>Company size</b>	<b>Germany - year '00</b>	<b>Size</b>	<b>Austria - year '02</b>	<b>Size</b>	<b>xxxx - year 200x</b>
1-4	3999	1	346		
5-9	3001	2-5	269		
10-12	1204	6-10	36		
12 -	404	11 -	6		
<b>Total</b>	<b>8600</b>		<b>657</b>		

Source: [www.kzbv.de](http://www.kzbv.de)

**Development in Germany**

We offer you as well the information about development of technical and dental labours in Germany in last decade.

<b>Germany - development of market shares of technical and dental labours</b>					
<b>Year</b>	<b>Material and labour</b>	<b>Craft technical labours</b>		<b>Dental labours</b>	
	<b>Costs in Mrd. EUR</b>	<b>Prothetic</b>	<b>Orthodontics</b>	<b>Prothetik</b>	<b>Orthodontics</b>
<b>1991</b>	3,45	74,2%	2,0%	18,9%	5,0%
<b>1992</b>	4,78	76,0%	1,4%	18,2%	4,5%
<b>1993</b>	4,02	78,4%	2,2%	14,0%	5,5%
<b>1994</b>	4,84	77,9%	2,1%	14,2%	5,9%
<b>1995</b>	5,04	78,1%	2,0%	14,4%	5,7%
<b>1996</b>	5,48	77,6%	1,9%	14,8%	5,6%
<b>1997</b>	5,66	77,7%	1,6%	15,2%	5,6%
<b>1998</b>	---	---	---	---	---
<b>1999</b>	4,62	72,7%	1,9%	17,4%	8,1%
<b>2000</b>	5,02	74,0%	1,6%	17,5%	7,1%
<b>2001</b>	5,37	74,4%	1,5%	17,5%	6,8%

Source: [www.kzbv.de](http://www.kzbv.de)

## **2. DESCRIPTION OF PROFESSION AND ACTIVITY FIELDS**

### **AUSTRIA**

Production, refurbishment, widening and professional appropriate cleaning for the material used of permanent and removable dental prostheses from metals, alloys, ceramics, synthetic materials, other suitable materials and their combinations, implant constructions, orthopedic and prophylactic equipments and tools, various kinds of splints e.g. splint for fracture of jaw, sport protections, ectomy prosthesis and production, refurbishment of joints, attachments, telescopes, crowns and fine mechanical and other hold and support elements. The dental technician may not come to interaction with the patient directly. He works at dentist's disposition.

### **GERMANY**

Production and repair of permanent and removable dental prostheses from synthetic materials, metal, chrome cobalt alloy, ceramics and various kinds of splints, implants, production of fillings, production, refurbishment of joints, attachments. The dental technician may not interact with the patient directly. He works at dentist's disposition.

### **ITALY**

Production of dental technical apparatuses at dentist's disposition. The dental technician may not carry out any direct performance in the mouth of the patient.

## **SWITZERLAND**

Production of artificial tooth implants as well as teeth fixing devices, fractured jaw splints. In three cantons is the dental technician entitled to work directly in the mouth of the patient.

## **BELGIUM**

Preparations, production and repair of dental prostheses or teeth fixing devices as well as all appliances for the substitution of tooth or a part of tooth. The dental technician does not work directly in the mouth of the patient.

## **DENMARK**

The lab dental technician produces all kinds of prostheses at disposition of dentist or clinical dental technician. The clinical dental technician may work directly in the mouth of the patient.

## **FRANCE**

Draft, production and repair of dental technical apparatuses or the restoration of the oral cavity at dentist's disposition. Activities allowed exclusively in the lab.

## **GREECE**

Production of all kinds of dental prosthesis and orthopedic elements, like partial or complete dental prosthesis, insertions, crowns, bridges, made of various for each case appropriate materials, orthopedic elements and dental works for the recovery of abnormalities in the oral cavity area. These works can be performed exclusively in the lab at dentist's disposition. Dentist can control these works.

## **IRELAND**

Production of artificial teeth, teeth fixing and other tooth technical devices at dentist's disposition. Dental technician can come to the direct connection with the patient only by repairs of removable dental prosthesis or teeth fixing devices.

## **LUXEMBOURG**

Dental technician produces tooth crowns, permanent or removable dental prosthesis; repairs the prosthesis; makes orthopedic apparatuses and appliances at dentist's disposition.

## **THE NETHERLANDS**

Production of artificial sets of teeth, appliance apparatuses for regulator of sets of teeth and permanent dental prosthesis from the usual materials. No direct care of the patient.

## **PORTUGAL**

There is no description for this profession of the dental technician available.

## **SPAIN**

Draft, preparation, advancement, production and repair of dental prosthesis at dentist's disposition. A direct kind of activity in the mouth of the patient is possible at dentist's disposition.

## **THE UNITED KINGDOM**

Production of technical tooth products from all appropriate materials usual for their production at dentist's disposition. The dental technician may not exercise active performance in the patient's mouth. He replaces the lost teeth with crowns or artificial teeth, constructs devices for linguistic and chewing help with curable defects in the natural set of teeth and produces cosmetic, and technical tooth products.

### **3. EXPECTATIONS AND FEARS FROM EU ENTRY**

	<b>ASPECT</b>	<b>OUR OPINION ON EFFECTS OF EU ENTRY</b>
1.	Big labs from the EU countries (from Germany, Holland, Belgium) will replace ours and therefore our dental technicians will lose their jobs.	The position and competitiveness of our dental labors can be strengthened by: - Quality policy - Reliability and - Flexibility
2.	Competition from the far East (Hong Kong, Thailand, Japan) can be risky for my enterprise.	Due to high quality requirements asked by the European dental industry, is competition from the Far East no theme at the moment.

3.	Bureaucracy: Brussels dictates laws; our country will not have sufficient voice in these issues. Laws and regulations are not executable.	It is not and will be not possible to manage everything completely without bureaucracy in a big union consisting of various nations with different mentality, culture and languages. The voice of comparatively small member states – is disproportional high.
4.	There will be a drain of qualified dental technicians.	It is possible in case that three presuppositions for this profession in xxxxxxx are not fulfilled: - Good image of the profession running in xxxxxx - Adaptation of the wage level to the neighbouring countries - Attractiveness of the profession for the dental technicians
5.	Migrating citizens from other EU countries will replace xxxxxx dental technicians.	This can be the case if the presuppositions from the point 8 are not fulfilled in another EU member countries.
6.	The free labour market will bring more chances and possibilities in form of more offers for both – employers and employees.	We can only agree with this opinion.
7.	The product variety is wide already now and it will not be changed considerably after EU entry.	Yes. The EU membership will provide us with faster access to the up-to-date technology and participation by developing of standards and directives.
8.	Material purchasing prices become more convenient.	We can agree with these opinions. But sometimes not only price but as well some other factors play a considerable role. These factors in form of e.g. additional performances can be often offered only by domestic enterprises.
9.	The bigger common market will bring advantages in purchase as well as in sales.	
10.	After removing of duties and customs will be the direct purchase by a manufacturer more simple, convenient and faster.	
11.	When our country is a member of EU, I would try to expand in the EU market.	Our country is going to be EU member. Such intentions are supported and recommended.

## 4. PRESUPPOSITIONS FOR PROFESSION ACCREDITATION

### IN PARTICULAR EU MEMBER COUNTRIES

Education / qualification requirements on the educators / Exam requirements / Legal requirements on exercise of the dental laboratory technician profession on the self-employment basis						
	Required education	Education and training	Qualification requirements on the educators or training supervisors	Education and training completions	Exam requirements	Legal requirements on exercise of dental laboratory technicians on self-employment basis
Germany	Conclusion of 9 years compulsory education; In the practice is required: Conclusion of secondary school or school leaving exam	3 1/2 years of dual education (apprenticeship + 12 classes / week of vocational school); journeyman exam; Vocational training to full-scale proof of competence: 3 years of experience + master exam	For teaching in an enterprise is allowed only dental technician master	Vocational school; 7 master schools + Number of institutions providing preparation courses for master exam	Obligatorily: within the education passing of intermediate exams, journeyman exams, practical and theoretical written exams; Duration: journeyman work 40 hours, 8 hours of work testing, written test 8 hours, oral test 2 hours Obligatorily: Meister exam as a presupposition for an independent activity: presupposition journeyman final exam + 3 years of journeyman experience; Duration: examination master work 10 working days, 16 hours of work testing, written exam 12 hours, oral exam 1/2 hour Master examination committee	Entry in the official register of handicrafts (Presupposition: Master certificate or exception grant), Master certificate: Journeyman exam + 3 years journeyman experience + Master exam

<b>Italy</b>	Conclusion of 10 years Compulsory education; secondary school leaving exam	4 years of school education; school leaving exam		130 public schools + Private vocational education institutes	Obligatory: School leaving exam (Diploma di Lizenza per Odontotecnico); Examining commission – 8 persons	School leaving exam (Diploma di Lizenza per Odontotecnico); Entry in the handicraft register
<b>Austria</b>	Conclusion of 9 years compulsory education	4 years dual education (apprenticeship + 29 weeks of vocational school); journeyman exam; vocational training 2 years + master exam + entrepreneur exam + training certificate	Training certificate	2 vocational schools; 1 master school	School leaving exam: Technical and practical part with 24 working hours, technical theoretical part: 3,5 hours Master exam: Technical practical part: 60 hours; technical theoretical part: 4,5 hours Master exam commission	School leaving exam + 2 years practical experience + Master exam + Entrepreneur exam.
<b>Denmark</b>	9 years compulsory education attendance + Arrangement of practical education in a dental labour	3 years of education: 1 year basis course for Labortechniker+ 2 year's additional vocational education for dental laboratory technicians; School leaving exam: the higher technical exam. Vocational further education for clinical dental Technician: additional 2 years (2.442 hours)		1 state school	Not obligatory: school leaving exam: the higher technical exam (laboratory dental technician) Exam of the clinical dental technician obligatory: written + practical test, duration 2 weeks, examining commission - 9 persons	Labour dental technician: no legal preconditions; Clinical dental technicians: Leaving exam on the Dental College in Aarhus + Accreditation from Health authority + 1 year of practical experience
<b>Greece</b>	Final secondary school examination or diploma of a secondary technical schools + Exam	6 terms (3 years) Education at vocational schools + 1 term of vocational training		Technological vocational training institutes (advanced technical colleges), Faculties in field of health care and precaution	Obligatory completion of Advanced technical college with Certificate of competence for <b>Dental technician craft</b>	Accreditation for profession, precondition: certificate of competence as Dental technician

All these regulations may be changed in the near future by the new “mutual recognition of diplomas” directive.

## **5. EFFECTS OF THE EU ENTRY ON DENTAL LABORATORY TECHNICIANS**

### **5.1 Freedom of establishment and free movement of services**

#### **For entrepreneurs**

Under the freedom of establishment in the EU – consequence of the free movement of persons – we can understand the right of the independent person employed on the self-employment basis to establish and to run an enterprise in each EU member state, and namely at the same conditions that are applied in this state on the national citizens. This right of free establishment is in favour of all independent persons on the self-employment basis.

**Free movement of persons**

To guarantee the freedom of establishment, the citizens of one EU member country must have unrestricted right to the entrance and to the stay in any other EU member country of his choice.

The intention of long-term integration into the economy of another country is characteristic for this kind of establishment:

- Strong connections to the respective location through constant presence
- Existence of fixed office equipments.
- The core activity of the enterprise lies in the admission government.

**Some presuppositions must be fulfilled**

Services are performances provided by citizens of one state in another state without having established there the own subsidiary or enterprise.

In principle are the freedom of establishment and the free movement of services aimed at equal treatment of foreign and domestic citizens within EU member countries. That means that the same regulations as on residents are applied on foreigners within European Economic Area.

Although strong stress is put on the security and health of the EU population, there is still no common regulation concerning the dentistry, because as in many other areas, it is very difficult to gain a consensus regarding fungible minimal level, so that is why the solution is still mutual recognition of national profession qualifications instead of harmonization of the education and requirements for the accreditation for this profession.

**Accreditation for the profession: mutual recognition of national rules**

**Mutual  
recognition  
of education  
certificates  
and  
diplomas**

The EU "Education recognition directive " regulates more recognition of Certificates of competency of the dental technicians. However, this directive does not act on the assumption of the education, but of the "final product", the regularized profession. It allows requiring an additional practical experience of at least on year in case that there are differences in the lasting of education of dental technicians. Moreover the graduation of maximum 3 years long adjustment education or qualifying examination can be required if the previous education of the establishing craftsman refers to fields substantial different from those which are covered by the certificate that is required by the admission government. This can be also the case if the profession has a wider activity range than this in the country of origin of the establishing craftsman. In principle the choice between completing of the additional education or qualifying examination remains on the establishing craftsman.

How this functions in reality: persons from other EU member states have the possibility to prove their professional qualification by appropriately recognized certificates. If these certificates do not correspond with the requirements, then the above described adjustment mechanism will be applied on all citizens from other EU countries. For this purpose it will be necessary to offer courses and exams however their contents must be developed first. The national European dental technician's associations have developed an education concept (global profile), which should be realized in the future in all particular countries.

**Labour mobility for employees**

**Same  
conditions  
for all EU  
citizens**

In the EU employees will be allowed to choose freely their working place anywhere within Europe. Foreign employees from any EU country will be treated equal as the domestic employees. Reference period regarding assurance will be regulated as well within the framework of the labour mobility.

**5.2 Free movement of capital**

**Decline of  
capital costs  
and financial  
strain, easier  
access to  
credits and  
insurance  
markets**

The free movement of money and capital is an important presupposition for an unhindered exchange of goods and services. The liberalisation of markets and rising competition must contribute to decrease capital costs and to decline a financial strain of the enterprises and to enable an access of savers and credit users to the international financial and insurance market.

This free movement covers a lot of various operations for example participations, real-estate business acquisition, assurance payments, donations, caution money, guarantees as well as business with shares, bonds and credits.

The banker's discretion remains protected.

Data, which the bank uses exclusively for the business connection with the customers, may be transmitted only on judicial order.

Besides, insurance contracts can be concluded with insurance companies coming from any EU country and it does not lead to tax disadvantages.

## **5.3 Free movement of goods**

### **Mutual recognition of standards and certificates**

There are already for a long time substantial efforts to remove technical trading obstacles within the EU namely through detailed harmonization in individual member states. However this seems to be less target-oriented. Therefore the EU has passed over in the „ new concept " to the definition of fundamental security requirements for separate product groups. The development of appropriate technical specifications will be passed to the European standardization organizations. In those areas, where is present no harmonized EU regulation, will be applied furthermore the principle of the mutual recognition. In principle this mutual recognition of standards and certificates refers to the regulation that every product, which is produced according to legal regulations of the one EU country of origin and correspond with the compulsory minimal requirements will be admitted elsewhere in the EU. Exceptions are allowed only if one member state proves an endangerment for health, security or environment and with this no discrimination of the goods movement is connected.

### **Mutual recognition of standards and certificates**

The European standardization organizations (CEN/CENELEC) were asked to develop standards that would determine technical details for national standards compliant with EU standards. The application of the European standards is voluntary. The manufacturers who deviate from these standards must keep the minimal standard of the EU-harmonization directive and it is in their charge to submit the proof of corresponding with these minimal requirements.

Products that correspond with requirements of the EU directive aimed at particular appropriate goods group may be marked with the CE mark. This CE marking is interrelated with assumption of liability for the compliance with the directive. Products with the CE mark are considered as standardized. Compliance with the quality requirements is also agreed if an enterprise complies with the EN 29000 (quality assurance standards) or if he gets a certification at certification body in accordance with EN 45000 (accreditation of certification bodies). The advantage of the mutual recognition will be noticeable first of all by technical devices and by food. There are further

regulations within the EU regarding the protection of the public health, consumers' protection, competition and for the official monitoring of food.

Technical dental products are subject of the medicine product law.

## 6. QUESTIONS

**Chances and Risks can be after all defined only individually**

To define chances and risks of the business and to draw from it the correct conclusions means, to answer as precise as possibly a multitude of questions, which refer:

- \* to the analysis of an own enterprise and his position in the competitive environment,
- \* to the developing goals
- \* to the appropriate strategies and measures.

Appropriate questions for the enterprise or competition analysis can be, for example:

- \* What kind of products / services do we offer?
- \* What can we do we particularly well?
- \* With what kind of products do we achieve what kind of results?
- \* With what kind of customer groups will we handle?
- \* By what kind of customer groups do we achieve what kind of results?
- \* What is our market?
- \* Why do we restrict our performance to this market?
- \* Which kind of advantages and disadvantages does have our location?
- \* Who are our strongest competitors, measured by the capital or sales?
- \* Which of our competitors are the most innovative?
- \* Which are our most important strengths and weaknesses?
- \* Which planning and control instruments are available for us?
- \* What accuracy has achieved our pre calculation in comparison with post calculation?

Questions to the developing goals can be for example:

- \* What are our substantial strengths that we can sell to our customers particularly well and that can distinguish us clearly from our competitors?
- \* Why would customer choose our product even if the distance would be bigger?

- \* What chances do we have by export deliveries to the previous target groups?
- \* What chances have we if we want to attend new export target groups or delivery chains?
- \* Which additional costs appear, if we perform our services to the more distant customer?
- \* Which target groups do we want to address more intensively / particularly / exclusively?
- \* Which products or product groups should be further supported / launched?
- \* Which service performances should we strengthen?
- \* Which marketing activities can strongly influence our sales?

Questions to the definition of appropriate strategies and measures are, for example:

- \* What do we have to do in order to achieve our goals in for example these areas?
  - Customer relations
  - Offered assortment
  - Service performance
  - Marketing and advertisement
  - Cost structure
  - Planning and control
  - Calculation
- \* Who is responsible for the execution of the measures?
- \* What deadlines do we have to pay attention to for the separate measures?
- \* Who is responsible for coordination and control of the specified measures?