

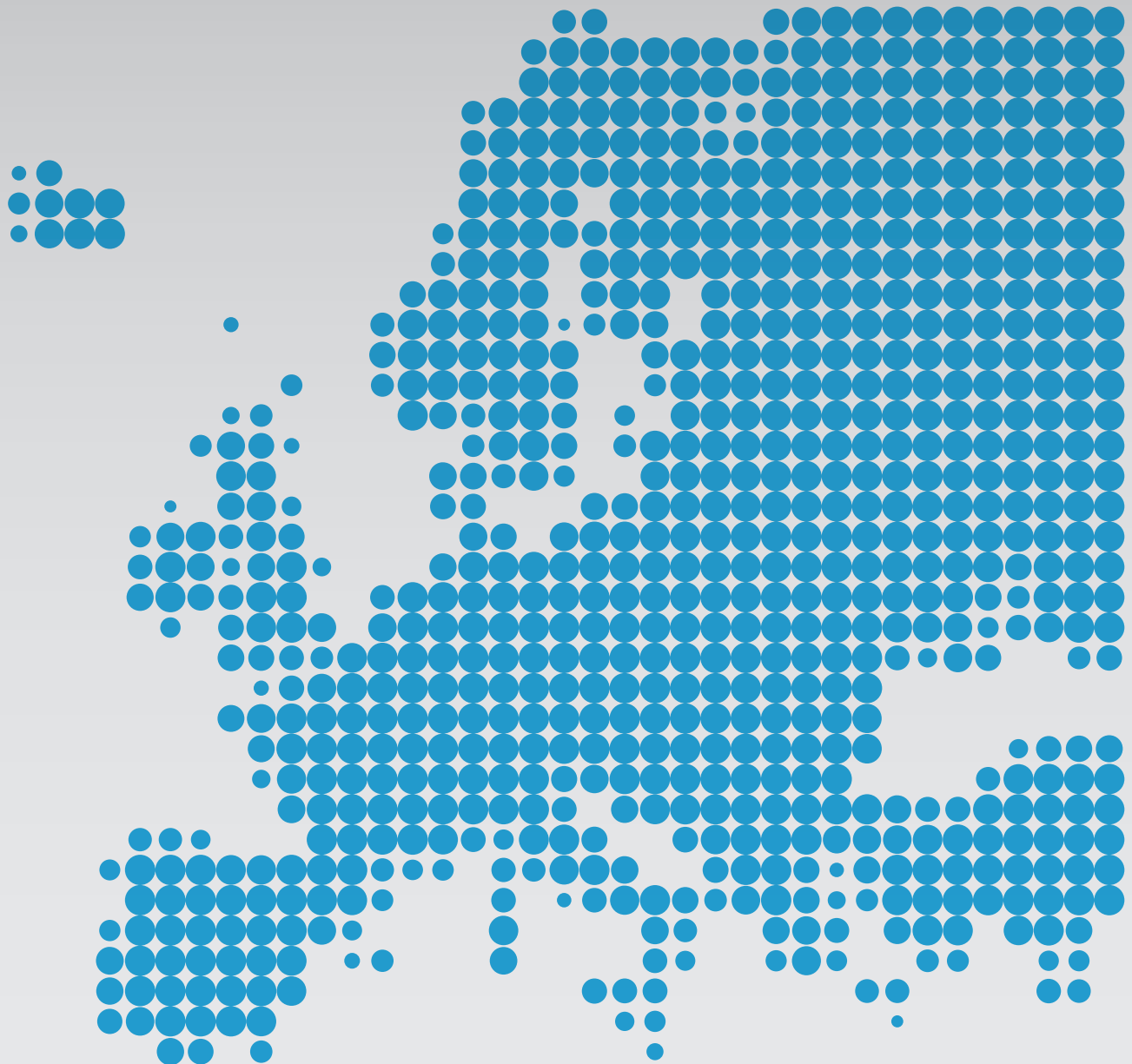
MAINTENANCESAFETYVALUES
SAFE DOORSPOLICIESCUSTOMER
MANUFACTURERINSTALLER
RESPONSIBILITYOWNER
VISIONNATIONALLEGISLATION
MAINTENANCESAFETYVALUES
SAFE DOORSPOLICIESCUSTOMER
MANUFACTURERINSTALLER
RESPONSIBILITYOWNER
VISIONNATIONALLEGISLATION

E.D.S.F.

European Door and Shutter Federation e. V.
Neumarktstraße 2 b
58095 Hagen · Germany

Fon +49 2331 2008-0
Fax +49 2331 2008-40
info@edsf.com
www.edsf.com





The E.D.S.F. Mission: Safe passage of people and goods through doors.

Contents

04 - 05	E.D.S.F. – for safe doors	Safe passage of people and goods through doors
06 - 07	Legislation & Responsibility	It is the responsibility of everyone involved to follow the current European and national legislation applying to doors
08 - 11	Performance levels	Competent and qualified service engineers/ technicians are necessary to maintain and improve the safety level of doors in accordance with the current EU and national legislations
12 - 13	Maintenance requirements/ service agreements	Regular maintenance secures accessibility, minimizes hazards and extends product lifetime
14 - 15	Upgrading requirements	Maintain or improve performance but do not add risks
16 - 17	Sustainability	Doors have a much higher impact on building sustainability than previously known
18	References	





E.D.S.F. – for safe doors

Safe passage of people and goods through doors

General door market conditions

Automated or manually operated doors are used by millions of people every day. It is estimated that more than 15 million industrial, commercial and automated pedestrian doors have been installed in the market during the last 10 years – unfortunately less than 1/3 of these doors are properly maintained.

The European standards EN 13241-1 and EN 16005 state that the manufacturer is responsible for the definition of adequate maintenance, maintenance intervals, and the cycle time of spare parts, for the intended use of the equipment. After the product is installed, the owner of the building is responsible for the safe and secure function of the door – this includes providing regular service by professional service companies.

To be considered by

- **Manufacturers / Installation companies**
Are your products safe and in compliance with the present European standards and directives?
- **Owners / Customers**
Are your doors safe? Are you aware of the present legal requirements? Do you know that maintaining the safe function of the doors in your building is your responsibility?
- **Service providers**
Do you have the requisite skills and competencies?

About E.D.S.F.

The E.D.S.F. European Door and Shutter Federation e.V. is the umbrella organisation for Europe's associations and manufacturers of doors, gates, shutters and components. Founded in 1985, the federation has members from several European countries with a growing network. E.D.S.F. is currently representing over 1,000 manufactures, installers and service providers. E.D.S.F. is the main leader in development of the product and supporting standards for doors such as EN 13241-1, EN 16005, etc. and represents the position of the European door and shutter industry in meetings with European Commission, CEN Committees, etc.

E.D.S.F.-Position

E.D.S.F. promotes the development of safe and reliable doors in the market which are delivered according to the current European and national legislation, and seeks to ensure that they are safely maintained during their economic life time in accordance with the manufacturers' specification. Therefore it is necessary that performance levels be kept, no risks be added, and both international and national standards and codes be considered.

Upgrading to the latest European and national legislation and "state of the art" level for e.g. safety, convenience, security, and energy consumption level, is brought to the attention of the owner / customer by qualified service companies. With this brochure E.D.S.F. seeks to give you answers to the questions raised.

§

Automated or manually operated doors are used by millions of people every day. It is estimated that more than 15 million industrial, commercial and automated pedestrian doors have been installed in the market during the last 10 years – unfortunately less than 1/3 of these doors are properly maintained.

Modern and regular maintained doors are safe – Are your doors safe?
With this brochure E.D.S.F. seeks to give you answers to the questions raised.

Legislation & Responsibility

It is the responsibility of everyone involved to follow the current European and national legislation applying to doors

European and national legislation

The relevant European and national legislation has to be followed. The chapters related to inspection, maintenance, repair and upgrading in the product and supporting standards, directives and regulations, should be considered, e.g.:

- Industrial / commercial / garage doors and gates EN 13241-1 – product standard
- Power-operated pedestrian doorsets – Safety in use EN16005
- Machinery Directive (2006/42/EC)
- Construction Products Regulation – CPR (305/2011/EC)
- European Health and Safety Directives as: 89/391/EEC, 89/654/EEC and 89/655/EEC
- National health and safety requirements and building regulations

CE-marking

Safety in Use and CE marking (2008/768/EC) have to be considered when putting doors on the market. The CE marking of a product is the visible proof of a whole process comprising conformity assessment in a broad sense and enables free trade in the EU. At the same time it ensures a high level of protection of public interests, such as health and safety, and the protection of consumers and of the environment, at the same time guaranteeing fair competition on the Community market. CE marking also ensures traceability of a product throughout the whole supply chain and helps to make market surveillance simpler and more efficient.

§

The manufacturer has to provide clear installation, dismantling and maintenance instructions!

Manufacturers and installers responsibility

The manufacturers and installers are responsible to bring safe doors in the market in line with the European standards and national legislation:

- Installation instructions should be detailed and clear enough to ensure safe installation.
- Instructions for use shall be delivered in local languages.
- Maintenance instructions must include the replacement cycles of parts exposed to wear and tear in order to keep the doors safe.



Owners responsibility

Industrial & Commercial buildings

The owner of an industrial and/or commercial building has the responsibility and liability for safe operation of the door in his or her premises. The Workplace Directive 89/391/EEC establishes the employer's responsibility for the safety and health of employed workers. In short, a workplace must be safe and what is dangerous has to be replaced by safe standards and processes. Also, the Directives for the workplace and work equipment have to be considered by the owner (89/654/EEC and 89/655/EEC).

Private Residential buildings

Without access to public area

Unfortunately there is no existing EU legislation making the private building owner responsible for regular servicing or inspection of doors (e.g. garage doors) to ensure their safety.

With access to public area

The owner of a building with access to a public area is responsible and liable under Product Standard EN 13241-1 for safe operation of the door on his or her premises.

In most EU countries there are national building regulations which state that the owner has to ensure a safe and functional door to avoid public damage and protect life and health.

Service company's responsibility

Companies providing service are responsible to ensure that the qualifications of their employees fulfil the EN 12635 standard and national health, safety and building regulations.

Note: In case of product modification or an upgrade of doorsets, the service companies must ensure compliance with the relevant directive, expressed by the CE marking.



§

The owner of an industrial and/or commercial building has the responsibility and liability for safe operation of the door in his or her premises.



Companies providing service are responsible to ensure that the qualifications of their employees fulfil the EN 12635 standard and national health, safety and building regulations.

Performance levels

Competent and qualified service engineers/technicians are necessary to maintain and improve the safety level of doors in accordance with the current EU and national legislations

Criteria are needed with respect to technical competencies, codes & regulations, with regard to quality, safety, legal obligations, training and certification. The qualification / criteria are derived from the part "Terms and definitions" of EN 12635:

- **Professional installer (service provider)**
Competent person or organisation offering third parties door installation services incl. upgrading.
- **Competent person (service engineer / technician)**
A person, suitably trained, qualified by knowledge and practical experience, and provided with the necessary instructions to enable the required installation to be carried out correctly and safely.

Qualified service provider (installer)

A "qualified service provider" – as qualified by this E.D.S.F. definition – has to meet the requirements listed here below.

- **Expertise in the field** recognized experience within the industry
- **Knowledge**
 - Industry specific processes and tools
 - Understanding of legal requirements in respect to safety, reliability and functionality of product / service in accordance with codes / regulations.
 - Membership of professional bodies / associations to gain awareness of his / her limitations of knowledge and experience. This should be combined with the willingness and ability to supplement existing experience and knowledge.
 - Understanding both the financial and operational risks involved in the business and best practice of controlling them. Having access to product, health, safety, EU code regulation.
- **Providing such regular information**, instruction, training and supervision as is necessary to ensure the product, health, safety, EU code regulation at work for all employees and its business partner.
- **Understanding** of relevant best practices
- **Elements** of health, safety, quality and environmental management system related to product, service and repair are available in some format. These can be:
 - A documented health, safety, quality and environmental policy
 - Health, safety, quality, environment, codes and regulation available to all employees
 - Well-defined health, safety, quality, environmental objectives & targets which are reviewed and archived
 - Maintenance and service repair visits documented by using a logbook
 - Product & service-related health and safety risk assessments
 - Health, safety, quality, environment, code & regulation trainings for employees for all relevant activities

§

A qualified service provider has expertise and knowledge in the door field. He provides regular information for his service engineers and has an understanding of relevant best practice.

Competent service engineer / technician

A „competent service engineer / technicians“ – as certified by a qualified service provider or manufacturer – has to meet the requirements listed here below.

A combination of knowledge, skills and practical experiences is required which a person needs in order to perform his tasks properly. Frequently documented training of the engineer / technician is needed to keep their knowledge up to date.

• Knowledge

- Technical (product, maintenance & methods training)
- Safety, health, quality, environment
- Legal & codes (product standard for doors, etc.)
- Certification (including the products)

• Skills

- Industry specific (professional education in mechanical / electronic)
- Good oral and written communication
- Transferable skills in communicating & sharing the lessons learned during the work activities

• Practical experience

- Experienced in the door and gate industry
- Installation, upgrading, replacement and maintenance:
Has successfully demonstrated his skills and ability in inspection, risk assessment, maintenance (inc. functional safety tests) upgrading and replacing the product in accordance with the manufacturer's specification, so that a doorset remains reliable, safe, functional and durable.

§

A combination of knowledge, skills and practical experiences is required which a person needs in order to perform his tasks properly. Frequently documented training of the engineer / technician is needed to keep their knowledge up to date.

Content of a service training

E.D.S.F. objectives for a competent service engineer / technician:

A “competent service engineer / technician” is someone who, by possession of a recognized degree, certificate, or professional standing, and by extensive knowledge, training, and experience, has successfully demonstrated his ability to inspect, maintain, (incl. functional safety test of e.g. dropdown devices, safety edge, passdoor switch etc) and upgrade the product, in accordance with the manufacturer's specification and the present legislation so that it remains reliable and keeps its safety, function, and durability level. E.D.S.F. has therefore defined relevant training modules for different type of doors which can be found at www.edsf.com.



Maintenance in accordance with the manufacturer's specification shall take place at least: “once per year” for all power-operated doorsets and “twice per year” for escape power-operated doorsets.

Maintenance requirements / service agreements

Regular maintenance secures accessibility, minimizes hazards and extends product lifetime



Current Situation

"Maintenance" and "service" are often used indifferently with the same meaning. Typically, the market prefers maintenance as the use of periodical service to sustain the existing safety operation and product life cycle.

The European Standards EN 13241-1 / EN 12635 and EN 16005 state that the manufacturer is responsible for the definition of adequate maintenance, its maintenance intervals, and the cycle time of wear-and-tear parts, for the intended use of the equipment.

After the product is installed, the owner of the building is responsible for the safe and secure function of the door – this includes providing regular maintenance.

Safe Service and Maintenance on power-operated pedestrian doorsets

Since 2012 the European standard EN 16005 – safety in use – covers all safety-in-use aspects for power operated doorsets. This standard states that the manufacturer is responsible for defining the maintenance (service) and replacement cycles. Hereafter power-operated doors are called "doorset".

Maintenance (excluding inspection by a third party¹⁾) in accordance with the manufacturer's specification shall take place at least:

- **once per year** for all power-operated doorsets
- **twice per year** for escape power-operated doorsets

to maintain the existing safety level of the doors.

Maintenance of powered pedestrian doors (doorsets) shall always include technical and visual risk assessments by competent engineers / technicians in order to advise possible upgrade of the doorset according to the state of the art to ensure that all the latest safety and the reliability requirements are met.

For all doorsets placed on the market, a documented risk assessment is necessary if the originally intended use has changed. After the correct installation of the doorset, the building's owner²⁾ is responsible for the safety function of the doorsets – this includes regular service.

Safe Service and Maintenance on industrial, commercial and garage doorsets

The European Product Standard for industrial / commercial / garage doors and gates EN 13241-1 / EN 12635 states that the manufacturer is responsible for defining the service (maintenance) and replacement cycles. Hereafter industrial/commercial/garage doors and gates are called "doorset".

E.D.S.F. advice: Maintenance (excluding inspection by a third party¹⁾) in accordance with the manufacturer's specification shall take place at least once per year for all manually or power-operated doorsets.

For doorsets placed on the market before 2005 (not CE-marked against EN 13241-1) the maintenance should always include risk assessments in order to update the doorset (proposal to upgrade including such compo-

nents as drives, control units or implementation of a new door / gate) according to state of the art (technology) to ensure safety and that reliability is met.

For all doorsets placed on the market, a risk assessment is necessary if the originally intended use has changed. After the correct installation of the door / gate, the building's owner²⁾ is responsible for the safety function of the doorsets – this includes regular service.

§

Maintenance (excluding inspection by a third party¹⁾) in accordance with the manufacturer's specification shall take place at least once per year for all manually or power-operated doorsets.



1) In addition to regular maintenance as prescribed by the manufacturer for adequate performance of the door, some countries may require periodical technical inspection by independent third parties.

2) In some countries the building's owner and the user are responsible for safety, e.g. if the building is rented.

Upgrading requirements

Maintain or improve performance but do not add risks

§

When the existing safety, reliability, functionality, classification or durability level of the door are not sustained, the CE-marking has to be evaluated and reconfirmed.

Replacement of components or products of industrial / commercial / garage doorsets and gates

The European Product Standard for industrial/commercial/garage doors EN 13241-1 / EN 12635 states that the manufacturer is responsible for defining the service (maintenance) and replacement cycles for components or products. Basically, when components or products are replaced during maintenance, repair or upgrading, it has to be ensured, as a minimum, that the safety, reliability, functionality, classification and durability level of the doors is maintained. In other words: retain the performance and don't add risks.

The Service provider is also obliged to offer the customer the 'state of the art' safety level.

Use of original components is preferred, but if non-original or 'look-alike' components are used which may affect the declared characteristics, or safety level, conformity to the relevant directive shall be reviewed for applicability by a qualified service provider.

Replacement of components or products of power operated pedestrian doorsets

A powered pedestrian doorset is a machine. The machinery sector is an important part of the engineering industry and is one of the industrial mainstays of the UE economy. The social cost of accidents caused directly by the use of machinery can be reduced by inherently safe design and construction of machinery and by proper installation and maintenance.

The European Standard EN 16005 for Safety in use of powered pedestrian doorsets states that the manufacturer is responsible for defining the service (maintenance) and replacement cycles for components or products. Replacement of components has to follow the manufacturer's specification for maintenance, including the relevant documentation and with due regard for current directives (e.g. the Machinery Directive) and standards (e.g. EN 16005).

Basically, when components or products are replaced during maintenance, repair or upgrading, it has to be ensured, as a minimum, that the safety, reliability, functionality, classification and durability level of the doors is retained. In other words: sustain the performance and don't add risks.



2) In some countries the building owner and the user is responsible for the safety, e.g. if the building is rent.



CE-marking, Declaration of Conformity and Technical File

When the existing safety, reliability, functionality, classification or durability level of the door are not sustained, the CE-marking has to be evaluated and reconfirmed. According to the Machinery Directive when:

- Manually operated doors are changed into electrically operated doors
- An existing electrically operated door is moved to another place in the building
- Hold to run operation is changed into impulse operation, or automatic closing is added

- Components are replaced which effects the declared characteristics
- When the original intended use is changed

The CE marking has to be done by the Service Provider. This includes a risk analysis establishing a Technical File, and a signed Declaration of Conformity, in accordance with the Machinery Directive (2006/42/EC).

After the correct installation of the door/gate the building owner²⁾ is responsible for the safety function of the doorsets – this includes a regularly service.

§

The CE marking has to be done by the Service Provider. This includes a risk analysis establishing a Technical File, and a signed Declaration of Conformity, in accordance with the Machinery Directive (2006/42/EC).

Sustainability

Doors have a much higher impact on building sustainability than previously known

Today the impact of energy-saving potential of automated doors is not well known within the Green Building certification bodies and building owners. A door is a small financial investment (2% - 3% of the main investment cost of a building) in comparison to all materials used for a new building, BUT the door has a high financial impact on the whole life-time cycle – if the right components are used! A thermally well-insulated door with low U-Value has no impact on energy saving if it is open all day or the open cycles are very long and velocity is slow. An intelligent, automated door could save a lot of energy and money. Additionally, CO₂ pollution could be reduced!

With the E.D.S.F. Door Energy Calculator possible energy losses of buildings in correlation between door parameters like U-value, Air-Leakage, Opening time depending on building

volume, door size, etc. can be displayed.

The solution is an "Intelligent door automation in combination with thermally optimized door", an intelligent door system. E.D.S.F.-members provide such products to fulfil the requirements of energy & sustainability. Such door solutions could save a lot of energy and money. Also, the higher investment costs amortize in a short period of time. Besides the energy saving aspects and reduction of CO₂ pollution

- as a benefit, comfort, safety and accessibility will be improved.
- regular maintenance extends product life time and also contributes to energy saving.
- upgrading of doors has a big potential for the optimization of existing buildings.

The door industry is well prepared and can make a big contribution to sustainable energy saving!



Please scan the barcode with your smartphone and try out the calculator on the E.D.S.F. website.

www.edsf.com/calculator

Upgrading of doors has a big potential for the optimization of existing buildings. The door industry is well prepared and can make a big contribution to sustainable energy saving!

References

Standards

- **EN 13241-1:2011-06** - Industrial, commercial and garage doors and gates
- Product standard - Part 1: Products without fire resistance or smoke control characteristics (incl. Amendment A1:2011)
- **prEN 16361** - Powered operated pedestrian doors
- Product standard, performance characteristics - Pedestrian doorsets, other than swing type, initially designed for installation with power operation without resistance to fire and smoke leakage characteristics
- **EN 12635:2002+A1:2008** - Industrial, commercial and garage doors and gates
- Installation and use
- **EN 16005:2013-01** - Power operated pedestrian doorsets
- Safety in use - Requirements and test methods

Directives and Regulations

- **Machinery Directive 2006/42/EC**
- **Construction Products Directive 89/106/EEC** (CPD)
- **Construction Products Regulation 305/2011/EC** (CPR)
- **89/391/EEC** - EU Workplace Health and Safety Directive
- 12 June 1989 on the introduction of measures to encourage improvements in the safety and health of workers at work
- **89/654/EEC** - workplace requirements
- of 30 November 1989 concerning the minimum safety and health requirements for the workplace
- **89/655/EEC** - use of work equipment
- of 30 November 1989 concerning the minimum safety and health requirements for the use of work equipment by workers at work
- **768/2008/EC** - of the European Parliament and of the Council
- of 9 July 2008 on a common framework for the marketing of products
- **85/374/EEC**
- of 25 July 1985 on the approximation of the laws, regulations and administrative provisions of the Member States concerning liability for defective products

E.D.S.F. Guideline-Papers

- **01** - Safe Service and Maintenance "industrial/commercial/garage doorsets and gates"
- **02** - Safe Service and Maintenance "power operated pedestrian doorsets"
- **03** - Sustainable impact of doors during the life cycle of buildings
- **04** - Maintenance, Repair, Upgrade and Replacement of components or products of "industrial/commercial/garage doorsets and gates"



Published by:

E.D.S.F.

European Door and Shutter Federation e.V.

Hochstrasse 113-115
58095 Hagen · Deutschland
Fon +49 2331 2008-0
Fax +49 2331 2008-40

info@edsf.com
www.edsf.com

Text / Editorial team:

E.D.S.F. - WG "Service and Maintenance" Jan Persson, Christian Grabitz

The information on which this publication is based has been researched and processed with the greatest of care. We cannot, however, accept liability for any injuries, expenses or loss incurred which could in any degree be attributed to the use of the information contained in this text. Reprinting or copying in whole or in part is only permitted with the written permission of the publisher and clear reference to the publication source.

I Status: May 2013