

The whole is more than the sum of its parts.

(Aristoteles)



An Insight into the European Standards (EN)

November 2005 Version

Dear Sir or Madam,

For decades, we have been researching, developing and producing in keeping with the claim „Systems Engineering for Doors“. But what does the term „Systems Engineering“ mean exactly? Aristotle brought this to the point in a single sentence: „The whole is more than the sum of its parts“. Naturally, each of our products also function alone, their real class makes itself known in the interaction with our other products - the system can only work in an optimal way if the individual elements perfectly harmonise with each other.

This is now implemented in the European Standards. The requirement of a perfect interaction between the individual components makes a decisive contribution to the security of an object and above all, the protection of human life.

For us, the standards form the basis for each product development, but we also design products which go further than the requirements of the standards.

As a partner for innovative systems engineering, the European Standards have been more than a pure vision for a long period of time. We have understood the importance of the standards.

Yours sincerely



Ernst Schulte
President
ECO Schulte GmbH & Co.KG

Yours sincerely



Heinz Schulte
Managing Director
ECO Schulte GmbH & Co.KG

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The highest priority should be attached to the safety of human beings. This is of a higher priority than the protection of the object. The highest safety level must be guaranteed where human life is at risk.

These meet the „**Human before Object**“ of EN 1125. Emergency exit doors constructed according to the EN 1125 should provide a means of escape in panic situations, including for people who are not acquainted with the environment and handling of such doors. EN 1125 is without a doubt the most effective contribution to the safety of human beings in emergency and panic situations, thereby providing the best solution.

DIN EN 1125

Panic Locks

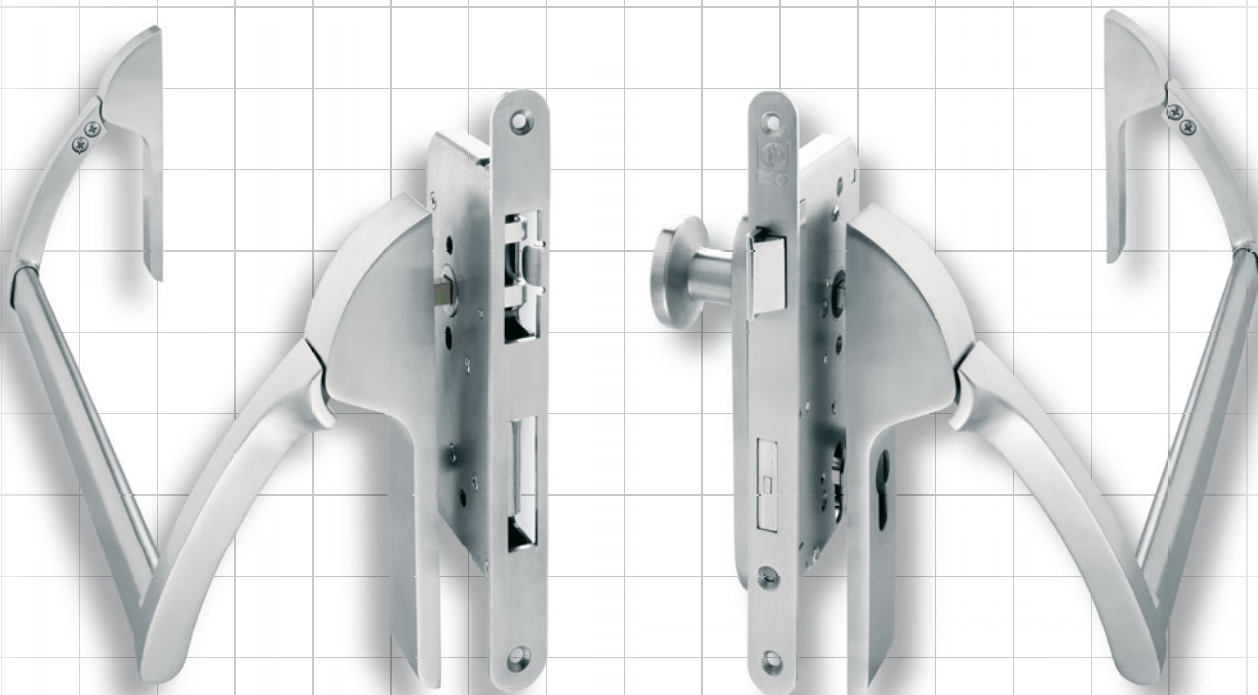
Operated by a Horizontal Bar



ECO

DIN EN 1125

SWISSDOOR
DØRTEKNIK FOR PROFESSIONELLE



ECO EPN 900

Surface-mounted / double-leaf Panic Bar System
with concealed mortise locks

Application Ranges

The standard defines the requirements with regard to the manufacture, suitability for use and the testing of panic locks. These are only valid for use with leaf doors with a maximum weight of 200 kg, height of 2,500 mm, and width of 1,300 mm.

The standard specifies testing procedures and requirements with regard to:

- mechanical panic locking system with a horizontally-operated handle-bar.
- mechanical panic locking system with a horizontally-operated pushbar.
- **the currently valid DIN EN 1125 was issued in June 2002, and replaced the DIN EN 1125 including its revised modifications ZA which had existed since 1997.**

Classification Key

The standard stipulates that all of the tested products are to be classified in accordance with a 9-digit key.

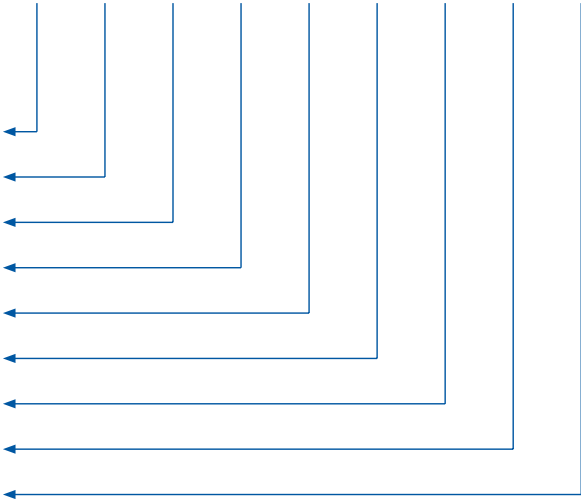
** Corresponds to: ECO EPN 900

The classification key is derived from points 1-9 below.

* Please kindly refer to the Certificate of Conformity with No. 210003750-01 MPA NRW for the proven fire-resistance capability.

1) Category of use (Class 3)
2) Durability (Class 6, 7)
3) Weight of the tested door (Class 5, 7)
4) Fire resistance (Class 0, 1)
5) Safety – Personal security (Class 1)
6) Corrosion resistance (Class 3, 4)
7) Security – anti-burglary (Class 2)
8) Handles projection (Class 1, 2)
9) Type of operation (Type A, B)

**								
3	7	6	1*	1	3	2	1	A





ECO

DIN EN 1125

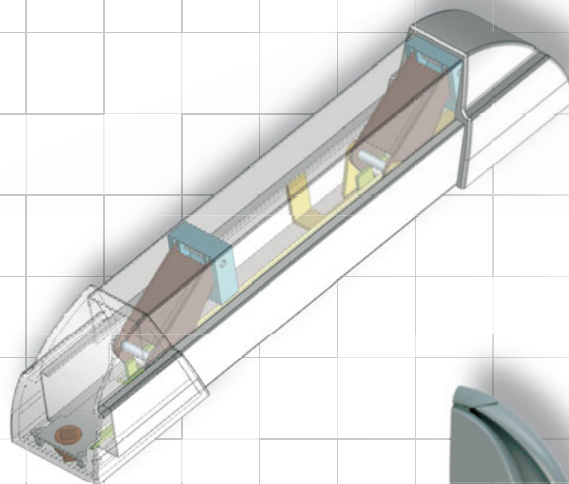
SWISSDOOR
DØRTEKNIK FOR PROFESSIONELLE



ECO GBS 93
for double-leaf
wooden und steel doors



ECO GBS 94
for double-leaf
wooden und steel doors



ECO PushBar
surface-mounted
panic Bar System
with concealed mortise lock



ECO EPN 500
surface-mounted
panic Bar System
with surface mounted lock

1. Category of use (only defined one Class)

Class 3: use by people with little incentive to a careful application, where accidents or misuse are possible.

2. Durability

Class 6: 100,000 tested cycles

Class 7: 200,000 tested cycles

3. Door mass

Class 6: 100 kg

Class 7: 200 kg

4. Fire resistance

Class 0: not approved for use on fire / smoke doors

Class 1: allowable for use on fire / smoke door, unless other satisfying evaluations for some technical parts of a panic locking system are provided in relation to certain fire / smoke resistance.*

5. Safety – Personal security

Class 1: each panic locking system commits to fulfilling even a critical safety function, therefore exists here and furthermore determines only the highest Class.

6. Corrosion resistance

Class 3: high corrosion resistance

Class 4: very high and defined corrosion resistance

7. Security – Anti-burglary resistance

Class 2: the safety of human beings should be attached with the highest priority, and also, under this circumstance, the anti-burglary resistance is of relatively less significance, furthermore, this anti-burglary attribute is not explicitly mentioned.

8. Projecting height of garniture

Class 1: projecting height up to 150 mm (Standardized projection)

Class 2: projecting height up to 100 mm (Less projection)

9. Type of operation

Type A: panic locking system with handle-bar

Type B: panic locking system with press-bar



DIN EN 1125 for escape doors
Stipulations for panic locks operated by a horizontal bar on escape doors
European standard in relation to lock and handle handles
Suitable for applications in building with high frequency of use
Suitable for people who are not familiar with escape routes and their functions
Safeguarding escape route – Humans before materials
Application in tested combination with panic lock / push bar / counter handle / accessories
Stipulated in the building standard guideline
Separate test for fire / smoke doors



Consequences / Effects
System components should be harmonized with each other
Panic bar / handle handles / lock / accessories should be tested, approved and labelled together
Door leaf should be furnished with installation points for panic bar system
Obligatory for each escape door, recommended for fire exit



Ranges of applications		
Administration building	Sports venues	Authorities
Hotels	Hospitals	Airports
Exhibition centres	Cinema / Theatre / Opera	Shopping centres



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EG-KONFORMITÄTSZERTIFIKAT

0432 – BPR – 0042

Gemäß der Richtlinie des Rates der Europäischen Gemeinschaften vom 21. Dezember 1988 zur Angleichung der Rechts- und Verwaltungsvorschriften der Mitgliedstaaten über Bauprodukte –89/108/EWG– (Bauproduktenrichtlinie – BPR), geändert durch die Richtlinie des Rates der Europäischen Gemeinschaften vom 22. Juli 1993 –93/68/EWG–, umgesetzt in Deutschland durch das Bauproduktengesetz – BauPG vom 28. April 1998, wird hiermit bestätigt, dass das Bauprodukt

ECO Paniktürverschlüsse

Paniktürverschluss mit horizontaler Betätigungsstange für 1- und 2flügelige Türen
gemäß der Zusammenstellung und Klassifikation in der Anlage 2,

in Verkehr gebracht durch

ECO Schulte GmbH & Co. KG
Iserlohner Landstrasse 117
D-58706 Menden

und hergestellt in den Herstellwerken

gemäß Anlage 1

einer werkseigenen Produktionskontrolle und einer zusätzlichen Prüfung von im Werk entnommenen Proben nach festgelegtem Prüfplan durch den Hersteller unterzogen wurde und dass durch die anerkannte Stelle eine Erstprüfung des Produkts für die relevanten Eigenschaften, eine Erstinspektion des Werkes und der werkseigenen Produktionskontrolle, die laufende Überwachung, Beurteilung und Anerkennung der werkseigenen Produktionskontrolle durchgeführt worden ist.

Dieses Zertifikat bescheinigt, dass alle Vorschriften des Anhangs ZA der harmonisierten Norm

EN 1125:1997 + A1:2001

die die Bescheinigung der Konformität und die Leistungseigenschaften des Produkts betreffen, angewendet wurden und dass das Bauprodukt alle darin vorgeschriebenen Anforderungen erfüllt. Dieses Zertifikat wurde erstmals am 19.07.2004 ausgestellt und gilt solange, wie sich die Festlegungen in der oben angeführten harmonisierten Norm nicht ändern und die Herstellbedingungen im Werk oder in der werkseigenen Produktionskontrolle sich nicht wesentlich verändert haben.

Dortmund, 07.01.2005



Dip.-Phys. Karrenberg
Leiter der Zertifizierungsstelle

DIESES ZERTIFIKAT UMFASST 1 SEITE UND 3 ANLAGEN



The whole is more than the sum of its parts.

„Humans before materials “ – this is the basic requirement of EN 1125.

Door function systems which are exactly harmonised with each other are required in order to open escape routes to people in an emergency. The different elements of a door should be technically harmonized in the same way as the teeth mesh in cog wheels.

The door only attains its full functionality even under extreme stress after all of the elements have been meshed, resulting in a harmonious system. The perfect interplay between the ECO components, the door becomes a „whole“ and opens up new ways.

The highest priority has to be attached to the safeguarding of human beings.

One does not achieve safety by erecting fences; one achieves safety by opening doors. (Urho Kekkonen)

The objective of EN 179 is to open doors for those in an emergency situation. Thus, tested handleless allow people to leave a building through the emergency exists. This standard assumes however that the people concerned are familiar with the escape routes and the operation of emergency exits.

In case of doubt, the standard also refers to EN 1125 - panic locks operated by a horizontal bar.

DIN EN 179

Fire Exit Locking System
with Handles and Push Plate



ECO

DIN EN 179

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ECO D 110, U-Shape

Rose handles
stainless steel

ECO GBS 92

for single-leaf
wooden and steel doors

ECO D 110, U-Shape

Handles on round short plate
stainless steel

Application ranges

The standards define the manufacturing, suitability for use and testing requirements concerning fire exit locking systems. These requirements are only valid for leaf doors with a maximum weight of 200 kg, height of 2,500 mm, and width of 1,300 mm.

The standard specifies testing procedures and the technical requirements with regard to:

- mechanical fire exit locking systems which are operated using an operational handle.
- mechanical fire exit locking systems which are operated using a push plate.
- the currently valid DIN EN 179 was issued in June 2002, and replaced the DIN EN 179 including its revised modifications ZA which had existed since 1997 and has the status of a national standard.

Note : If it is not certain that all of the people in the building are familiar with fire exits and their operations, and / or there is a risk of panic, use must be made of the products tested according to EN 1125 (panic locks operated by a horizontal bar).

Classification Key

The standard stipulates that all of the tested products are to be classified in accordance with a 9-digit key.

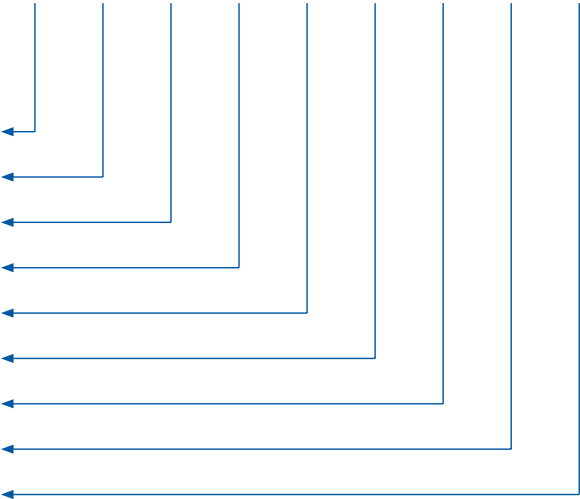
**Suitable for: ECO D 110, U-Shape handle and ECO GBS 96

The classification key coding-system derives from the under-stated points 1-9.

* Please kindly refer to the Certificate of Conformity with No. 210003750-01 MPA NRW for the proven fire-resistance capability.

1) Category of use (Class 3)
2) Durability (Class 6, 7)
3) Weight of the tested door (Class 5, 7)
4) Fire resistance (Class 0, 1)
5) Safety – Personal security (Class 1)
6) Corrosion resistance (Class 3, 4)
7) Security – anti-burglary (Class 2)
8) Handles projection (Class 1, 2)
9) Type of operation (Type A, B)

**								
3	7	6	1*	1	3	2	1	A

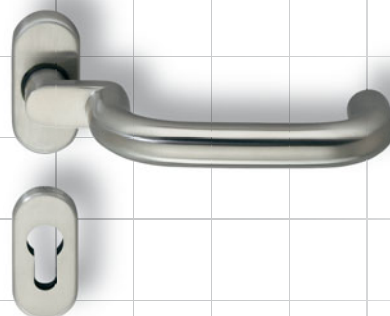
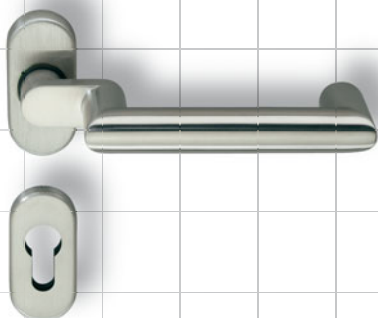




ECO

DIN EN 179

SWISSDOOR
DØRTEKNIK FOR PROFESSIONELLE



ECO D 335, CL-Shape
fitting on oval rose
closed / angular
stainless steel

ECO GBS 97
for double-leaf
section frame doors

ECO D115, U-Shape
fitting on oval rose
closed / angular
stainless steel

Explanations for the classification key

DIN EN 179

1. Category of use (only one Class defined)

Class 3: use by people with little incentive to a careful application, where accidents or misuse are possible.

2. Durability

Class 6: 100,000 tested cycles

Class 7: 200,000 tested cycles

3. Weight of the tested door

Class 6: 100 kg

Class 7: 200 kg

4. Suitability as fire /smoke doors

Class 0: not approved for use on fire / smoke doors,

Class 1: permitted for use on fire / smoke doors, unless other satisfying evaluations for some technical parts of a fire exit locking system are provided in relation to some certain fire / smoke doors.

5. Safety – personal security

Class 1: each fire exit locking system commits to fulfilling a critical safety function, therefore. For this reason, the highest class is determined for use.

6. Corrosion resistance

Class 3: high corrosion resistance

Class 4: very high defined corrosion resistance

7. Security – Anti-burglary resistance

Class 2: 1,000 N

Class 3: 2,000 N

Class 4: 3,000 N

8. Projection of handles

Class 1: max. projection of 150 mm (Standardized projection)

Class 2: max. projection 100 mm (Less projection)

9. Type of operation

Type A: fire exit locking system with an operational handle

Type B: fire exit locking system with an operational push plate


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BESCHEINIGUNG

NR. 0432-EN 179-DO 20.3

Über die Konformität von Drückergarnituren mit den Anforderungen der DIN EN 179: 2002-06

Die Drückergarnituren nach DIN 18273 des Herstellers:	ECO Schulte GmbH + Co KG Iserlohner Landstraße 117 D-58706 Menden
mit der Kennzeichnung:	DO 20.1.01 DO 20.1.02
Ausführung	Kunststoff, Aluminium, Edelstahl

 werden als Drücker in zertifizierten Notausgangsschlössern gemäß DIN EN 179: 1997 + A1:2001 des
folgend aufgeführten Herstellers verwendet:

Verschlusshersteller	Nummer des EU-Konformitätszertifikates
BKS GmbH	0423-BPR-0003
Beyer & Müller GmbH & Co. KG	0432-BPR-0041
WILKA Schließtechnik GmbH	0432-BPR-0021
NEMEF BV	0432-BPR-0038

Die Bestimmungen der den EU-Konformitätszertifikaten zugeordneten Dokumente sind zu beachten.

 Dortmund, den 10.09.2004
 Im Auftrag

 RBOAR Dipl.-Ing. H. Jansen
 Stellv. Leiter der Zertifizierungsstelle


The safest way is to follow the narrow path of liability.

(Friedrich Schiller)

Only those who actively concern themselves with the standards can open the door for greater safety. The EN 1906 is for door handles with a high operational demand. Besides, the high durability and loading stress of handles is one of the important basic requirements for increased safety in public buildings.

DIN EN 1906

Door Handles and Door Knobs



ECO

DIN EN 1906

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ECO D 310, CL-Shape
handles set on rose
stainless steel

ECO D 110, U-Shape
security handles
stainless steel

ECO D 410, U-Design
handle set on rose
stainless steel

Application ranges

The standard is only valid for door handles and knobs (with or without high effective spring in the door plate rose), through which a latch bolt or a mortise lock can be operated.

The standard specifies testing procedures and requirement with regard to:

- square spindles and fixing elements
 - operational torque moments
 - tolerable free play and reliability
 - unrestricted angle movement and offsets
 - durability
 - statistic strength and corrosion resistance
-
- the current DIN EN 1906 was published in May 2002, and had the status of a national standard in each EU member country. The supplementary German standards are DIN 18255: 2002-05 and DIN 18257: 2003-03.

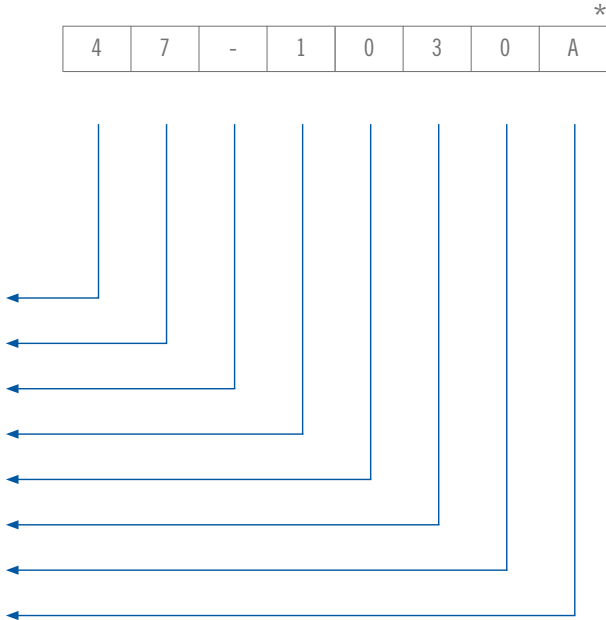
Classification Key

The standard stipulates that all of the tested products are to be classified in accordance with a 8-digit key.

* Corresponds to ECO D 210, U-Shape (Object handle set on rose with ball-bearing technology)

The classification key derives from points 1-8 stated below.

1) Category of use (Class 1-4)
2) Durability (Class 6, 7)
3) Door mass (No indication)
4) Fire resistance (Class 0, 1)
5) Safety – personal security (Class 0, 1)
6) Corrosion resistance (Class 0-4)
7) Security – anti-Burglary (Class 0-4)
8) Type of design (Type A, B, U)





ECO

DIN EN 1906

SWISSDOOR
DØRTEKNIK FOR PROFESSIONELLE



ECO D 310, CL-Shape
handle set on rose
stainless steel

ECO D 335, CL-Shape
handle set on oval rose
closed and angular
stainless steel

ECO D 110, U-Shape
handle set on short plate
aluminium

Explanations for the classification key

DIN EN 1906

1. Category of use (4 classes are defined here)

- Class 1:** average frequency of use by people with a high incentive to a careful application, where misuse is less possible, e.g. interior residential doors.
- Class 2:** average frequency of use by people with a little incentive to a careful application, where a certain chance of misuse still exists, e.g. interior office doors.
- Class 3:** high frequency of use by people with little incentive to a careful application, where misuse is more possible, e.g. doors in offices with visitors from the public.
- Class 4:** high frequency of use with doors which are subject to violent usage or damage, e.g. football stadiums or schools, etc.

2. Durability

- Class 6:** average frequency of use: 100, 000 tested cycles
- Class 7:** high frequency of use: 200,000 tested cycles

3. Door weight

No classification

4. Fire resistance

- Class 0:** not approved for use on fire / smoke doors
- Class 1:** allowable for use on fire / smoke doors

5. Safety – personal security

- Class 0:** for normal usage
- Class 1:** in case of requirements on safety requirements

6. Corrosion resistance

- Class 0:** no defined corrosion resistance
- Class 1:** mild corrosion resistance
- Class 2:** moderate corrosion resistance
- Class 3:** high corrosion resistance
- Class 4:** very high corrosion resistance

7. Security – anti-burglary

- Class 0:** not approved for use on anti-burglary doors
- Class 1:** mild anti-burglary resistance
- Class 2:** moderate anti-burglary resistance
- Class 3:** high anti-burglary resistance
- Class 4:** very high anti-burglary resistance

8. Type of operation

- Type A:** spring-assisted handle sets
- Type B:** spring-loaded handle sets
- Type U:** unsprung handle sets



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PRÜFZERTIFIKAT

Nr. 120002246.30

Aufgrund der in der bauaufsichtlich anerkannten Prüfstelle für Baubeschläge des MPA NRW durchgeführten Prüfungen wird bestätigt, dass

die Bauprodukte ECO Drückergarnituren in Ausführungen entsprechend der Zusammenstellung in der Anlage 1

der Firma ECO Schulte GmbH & Co. KG
Iserlohner Landstrasse 117
D-58706 Menden

mit den wesentlichen Anforderungen der DIN EN 1906: 2002-05 „Türdrücker und Türkäufe“;
Anforderungen und Prüfverfahren, Deutsche Fassung
EN 1906:2002

Übereinstimmen und wie nebenstehend klassifiziert werden können
Beschläge mit 9mm Vierkantstift

X	7	-	Z	0	3	0	Y
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Die Klassifizierungsschlüssel sind den Anlagen zu entnehmen.

Diesem Zertifikat liegt der Prüfbericht Nr. 120002246.10 des MPA NRW als Beurteilungsgrundlage zugrunde.

Dortmund, den 08.12.2004
Im Auftrag

Jansen

RBOAR Dipl.-Ing. H. Jansen
Prüfstellenleiter





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PRÜFZERTIFIKAT

Nr. 120002246.40

Aufgrund der in der bauaufsichtlich anerkannten Prüfstelle für Baubeschläge des MPA NRW durchgeführten Prüfungen wird bestätigt, dass

die Bauprodukte ECO Drückergarnituren in Ausführungen entsprechend der Zusammenstellung in der Anlage 1

der Firma ECO Schulte GmbH & Co. KG
Iserlohner Landstrasse 117
D-58706 Menden

mit den wesentlichen Anforderungen der DIN EN 1906: 2002-05 „Türdrücker und Türknäufe“; Anforderungen und Prüfverfahren, Deutsche Fassung EN 1906:2002

Übereinstimmen und wie nebenstehend klassifiziert werden können Beschläge mit 8mm Vierkantstift

X	7	-	0	0	3	0	Y
---	---	---	---	---	---	---	---

Die Klassifizierungsschlüssel sind den Anlagen zu entnehmen.

Diesem Zertifikat liegt der Prüfbericht Nr. 120002246.20 des MPA NRW als Beurteilungsgrundlage zugrunde.

Dortmund, den 08.12.2004
Im Auftrag

RBOAR Dipl.-Ing. H. Jansen
Prüfstellenleiter



Functionality

Security

Aesthetics



ECO - The system

The integrated door system solutions meet the highest requirements with regard to functionality, security and aesthetics.

Our system solutions combine a high quality with an aesthetic design. The year-long experience in the development and manufacturing of handles, locks, door closers and hinges, coupled with our extensive technical know-how make ECO a competent provider of door system technology.

■ SYSTEM TECHNOLOGY FOR THE DOOR

The standard EN 1154 always comes into play when it must be ensured that a manually opened door is recloses automatically. This is because this standard specifies the requirements of corresponding door closing means and pays an important contribution to ensuring that a door closes reliably in a controlled manner.

DIN EN 1154

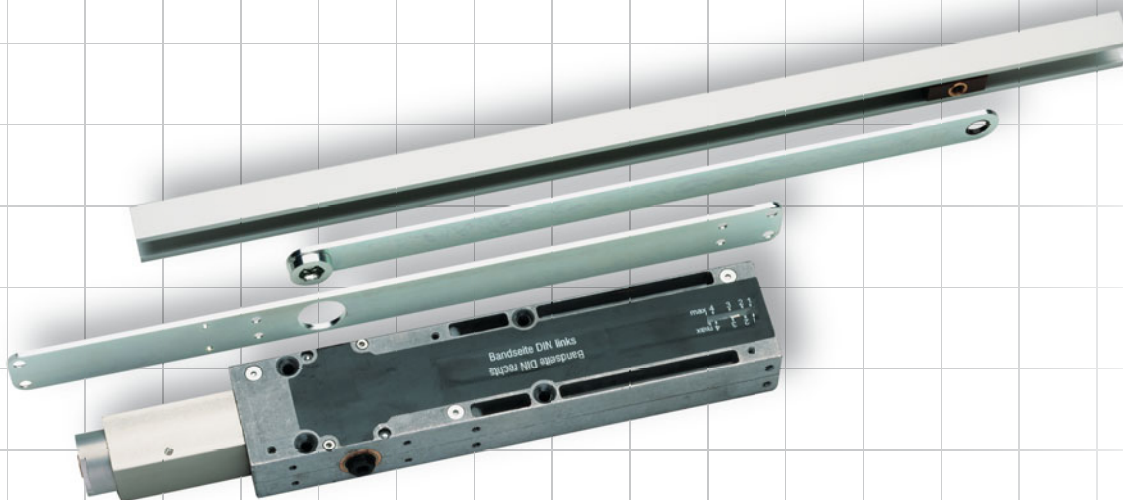
Door Closers with a Controlled
Closing-Sequence



ECO

DIN EN 1154

SWISSDOOR
DØRTEKNIK FOR PROFESSIONELLE



ECO Multi Genius
door closer with sliding arm
stainless steel

ECO Multi Genius
concealed door closer
with concealed sliding arm

Application ranges

The standard defines the related technical requirements of door closers with a controlled closing-sequence for swing doors.
By means of the testing procedures and the technical requirements, the following points are fixed on:

- installed on or in the door frame
 - installed on or in the door
 - installed in the floor
-
- the currently valid DIN EN 1154 was published in April 2003, and replaced EN 1154, including the revised modification A1 2002, which had existed since 1996. It also has the status of a national standard. It has been included in the German Building Standards Guidelines B/Part 1 since 2005, meaning that it is anchored in the German Building Laws.

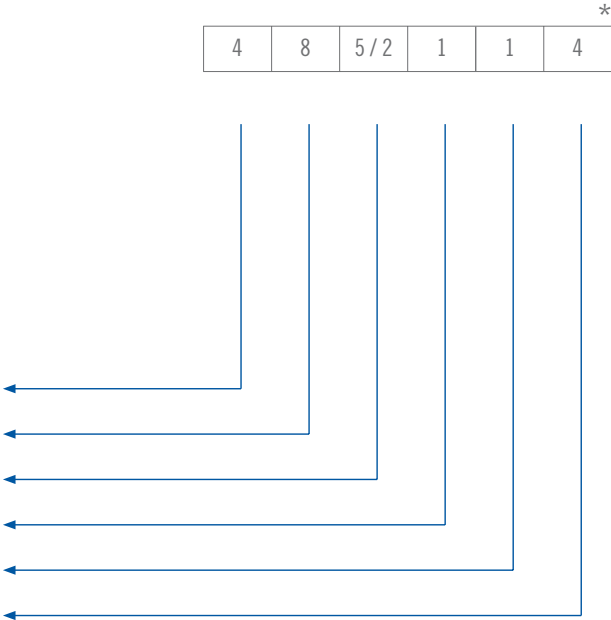
Classification Key

The standard stipulates that all of the tested products are to be classified in accordance with a 6-digit key.

* Corresponds to: ECO Multi Genius

The classification key derive from points 1-6 stated below.

1) Category of use (Class 3, 4)
2) Durability (Class 8)
3) Door closer size (Class 1-7)
4) Fire resistance (Class 0, 1)
5) Safety (Class 1)
6) Corrosion resistance (Class 0-4)





ECO

DIN EN 1154

SWISSDOOR
DØRTEKNIK FOR PROFESSIONELLE



ECO TS 61
door closer with sliding arm
stainless steel

Explanations for the classification key coding-system

DIN EN 1154

1. Category of use (only 2 classes were defined)

- Class 3:** to close doors from a minimum opening angle of 105°
Class 4: to close doors from an opening angle of 180°

2. Durability

- Class 8:** 500,000 tested cycles

3. Door closer size

Sizes 1-7 are defined here. The minimum and maximum sizes are to be stated for door closers which are suitable for various sizes.*

Closer size	Recom-mended door leaf width	Weight of test door	Closing moment				Opening moment	Door closer efficiency
			between 0° and 4°	between 88° and 92°	all opening angles		between 0° and 60°	between 0° and 4°
	mm max.	kg	Nm min.	Nm max. <	Nm min.	Nm min.	Nm max.	% min.
1	750	20	9	13	3	2	26	50
2	850	40	13	18	4	3	36	50
3	950	60	18	26	6	4	47	55
4	1,100	80	26	37	9	6	62	60
5	1,250	100	37	54	12	8	83	65
6	1,400	120	54	87	18	11	134	65
7	1,600	160	87	140	29	18	215	65

4. Fire resistance

- Class 0:** not approved for use on fire / smoke doors
Class 1: suitable for use on fire / smoke doors

5. Safety

- Class 1:** the basic requirements on the using safety of door should be reached, therefore, here defined only one Class.

6. Corrosion resistance

- Class 0:** no defined corrosion resistance
Class 1: mild corrosion resistance
Class 2: moderate corrosion resistance
Class 3: high corrosion resistance
Class 4: very high corrosion resistance



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EG-KONFORMITÄTSZERTIFIKAT

0432 – BPR – 0030

Gemäß der Richtlinie des Rates der Europäischen Gemeinschaften vom 21. Dezember 1988 zur Angleichung der Rechts- und Verwaltungsvorschriften der Mitgliedstaaten über Bauprodukte –89/106/EWG– (Bauproduktenrichtlinie – BPR), geändert durch die Richtlinie des Rates der Europäischen Gemeinschaften vom 22. Juli 1993 –93/88/EWG–, umgesetzt in Deutschland durch das Bauproduktengesetz – BauPG vom 28. April 1998, wird hiermit bestätigt, dass das Bauprodukt

Türschließmittel der Scherengestänge ESB

Türschließmittel mit kontrolliertem Schließablauf gemäß der Zusammenstellung und Klassifikation in der Anlage 1,

in Verkehr gebracht durch

ESB Schulte Baubeschläge GmbH & Co. KG
Industriestraße 2
D- 14943 Luckenwalde

und hergestellt durch

Herstellwerke DO 2.17 und DO 2.23

einer werkseigenen Produktionskontrolle und einer zusätzlichen Prüfung von im Werk entnommenen Proben nach festgelegtem Prüfplan durch den Hersteller unterzogen wurde und dass durch die anerkannte Stelle eine Erstprüfung des Produkts für die relevanten Eigenschaften, eine Erstinspektion des Werkes und der werkseigenen Produktionskontrolle, die laufende Überwachung, Beurteilung und Anerkennung der werkseigenen Produktionskontrolle durchgeführt worden ist.

Dieses Zertifikat bescheinigt, dass alle Vorschriften des Anhangs ZA der harmonisierten Norm

EN 1154: 2003-04

die die Bescheinigung der Konformität und die Leistungseigenschaften des Produkts betreffen, angewendet wurden und dass das Bauprodukt alle darin vorgeschriebenen Anforderungen erfüllt. Dieses Zertifikat wurde erstmals am 24.04.2004 ausgestellt und gilt solange, wie sich die Festlegungen in der oben angeführten harmonisierten Norm nicht ändern und die Herstellbedingungen im Werk oder in der werkseigenen Produktionskontrolle sich nicht wesentlich verändert haben.

Dortmund, 24.03.2004



Dipl.-Phys. Karrenberg
Leiter der Zertifizierungsstelle



MATERIALPRÜFUNGSAMT NORDRHEIN-WESTFALEN

Marsbruchstraße 186 • 44287 Dortmund-Aplerbeck • Telefon (0231) 4502-480 • Telefax (0231) 4502-586 • Internet www.mpanrw.de

EG-KONFORMITÄTSZERTIFIKAT

0432 – BPR – 0032

Gemäß der Richtlinie des Rates der Europäischen Gemeinschaften vom 21. Dezember 1988 zur Angleichung der Rechts- und Verwaltungsvorschriften der Mitgliedstaaten über Bauprodukte –89/106/EWG– (Bauproduktenrichtlinie – BPR), geändert durch die Richtlinie des Rates der Europäischen Gemeinschaften vom 22. Juli 1993 –93/68/EWG–, umgesetzt in Deutschland durch das Bauproduktengesetz – BauPG vom 28. April 1998, wird hiermit bestätigt, dass das Bauprodukt

Türschließmittel mit Gleitschienengestänge ESB

Türschließmittel mit kontrolliertem Schließablauf gemäß der Zusammenstellung und Klassifikation in der Anlage 1,

in Verkehr gebracht durch

ESB Schulte Baubeschläge GmbH & Co. KG
Industriestraße 2
D- 14943 Luckenwalde

und hergestellt durch

Herstellwerke DO 2.19, DO 2.22 und DO 2.30

einer werkseigenen Produktionskontrolle und einer zusätzlichen Prüfung von im Werk entnommenen Proben nach festgelegtem Prüfplan durch den Hersteller unterzogen wurde und dass durch die anerkannte Stelle eine Erstprüfung des Produkts für die relevanten Eigenschaften, eine Erstinspektion des Werkes und der werkseigenen Produktionskontrolle, die laufende Überwachung, Beurteilung und Anerkennung der werkseigenen Produktionskontrolle durchgeführt worden ist.

Dieses Zertifikat bescheinigt, dass alle Vorschriften des Anhangs ZA der harmonisierten Norm

EN 1154: 2003-04

die die Bescheinigung der Konformität und die Leistungseigenschaften des Produkts betreffen, angewendet wurden und dass das Bauprodukt alle darin vorgeschriebenen Anforderungen erfüllt. Dieses Zertifikat wurde erstmals am 24.03.2004 ausgestellt und gilt solange, wie sich die Festlegungen in der oben angeführten harmonisierten Norm nicht ändern und die Herstellbedingungen im Werk oder in der werkseigenen Produktionskontrolle sich nicht wesentlich verändert haben.

Dortmund, 19.07.2004



Dipl.-Phys. Karrenberg
Leiter der Zertifizierungsstelle



The new Multi Genius Door Closer

With the new Multi Genius Door Closer, ECO has successfully further developed its first dual-use closer system – ITS Multi Genius. This successor system is even compacter and more elegant. It was developed according to the current standards, and furthermore, this system combines all of the technical requirements of a flexible and reliable door closer system.

This new Multi Genius Door Closer can be installed both in the door leaf and on the door and thereby combines intelligent door closing technology and practical user benefits. As an external system, its extremely slim design, it can be positioned between the wall and the door even in the narrowest of spaces.

If used inside, it is installed in the door leaf so that it is concealed. The new Multi genius is the smallest door closer to be developed according to EN standards.

This compact design and its high flexibility in application meet our high innovation demands.

The most secure close door is the one which can be left open.

(Chinese saying)

The door should be automatically closed in case of fire in order to minimise the risk of fire and smoke spreading of fire and smoke could be minimized on some certain extents. Therefore, even a closed door can mean safety because it protects people from dangerous smoke.

DIN EN 1155

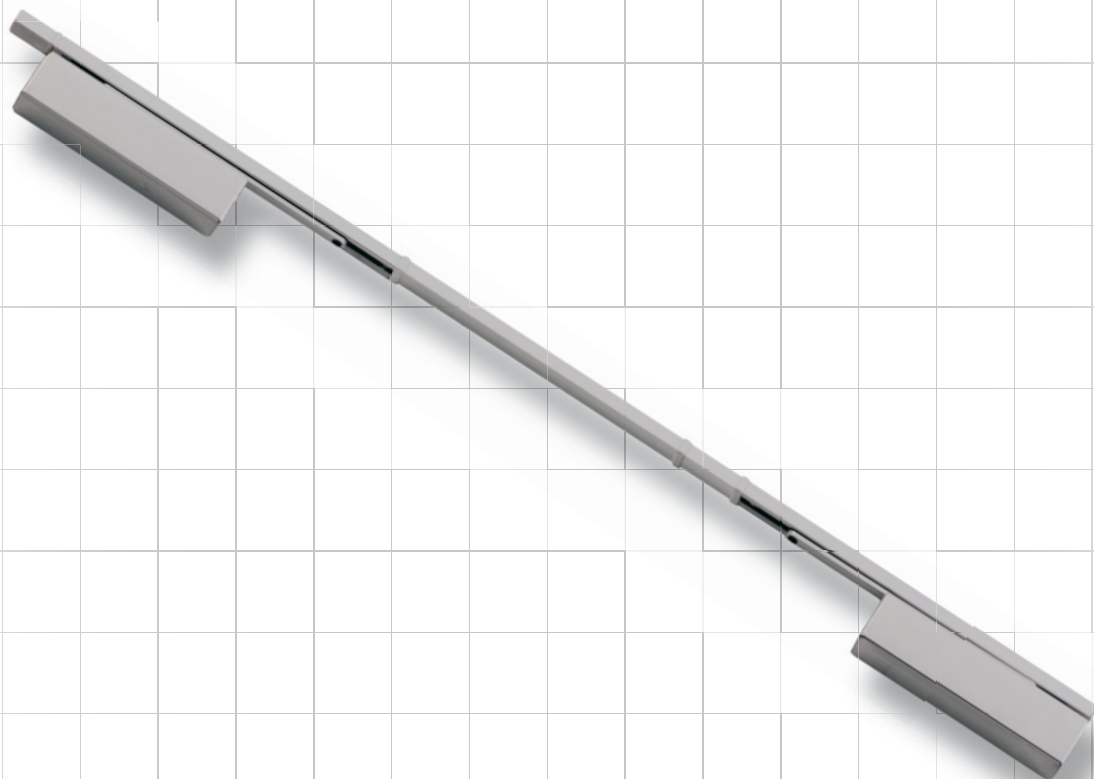
Electrically Operated Hold-open devices
for Swing Doors



ECO

DIN EN 1155

SWISSDOOR
DØRTEKNIK FOR PROFESSIONELLE



ECO Typ SR-EF
with 2 door closers
ECO TS 61

Application ranges

The standard defines the requirements for:

- hold-open devices which are independent of door closers
 - hold-open devices which are integrated in fire / smoke-rated door closers
 - the compulsory closing of a door fitted with a door closer in the case of a power failure.
-
- the currently valid DIN EN 1155 was published in April 2003, and replaced EN 1155, including the revised modification A1 2002, which had existed since 1997. It also has the status of a national standard. It has been included in the German Building Standards Guidelines B/Part 1 since 2005, meaning that it is anchored in the German Building Laws.

Classification Key

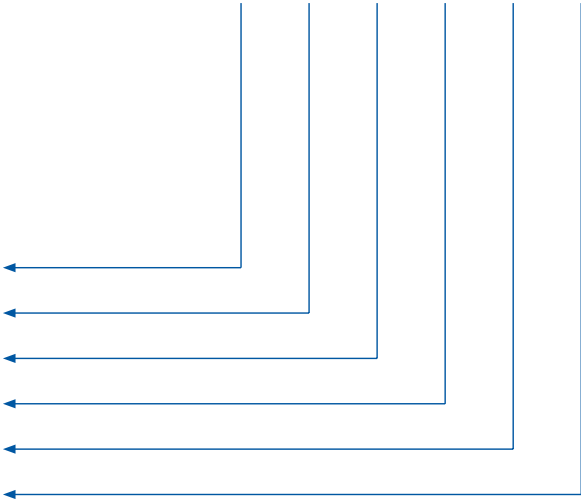
The standard stipulates that all of the tested products are to be classified in accordance with a 6-digit key.

* Corresponds to: ECO Typ SR-EF

The classification key derives from points 1-6 stated below.

1) Category of use (Class 3)
2) Durability (Class 5, 8)
3) Hold-open size (Class 3-7)
4) Fire resistance (Class 1)
5) Safety (Class 1)
6) Corrosion resistance (Class 0-4)

*					
3	5	6 / 3	1	1	0



DIN EN 1155

Explanations of the classification key

1. Category of use (only one class was defined here.)

Class 3: for doors in public buildings with little incentive for careful use. The probability of an incorrect use of the door is given.

2. Durability

Class 5: 50,000 tested cycles

Class 8: 500,000 tested cycles

3. Door closer size

Sizes 3-7 are defined here. For electrically operated hold-open devices with adjustable and different sizes, they should be indicated with their minimal and maximum fixing sizes.

Hold-open size	Recommended door leaf width mm/max.	Weight of test door kg	Overload of drop hammer kg	Drag torque of test door Nm / max.
3	950	60	15	0,3
4	1,100	80	18	0,4
5	1,250	100	21	0,5
6	1,400	120	27	0,6
7	1,600	160	36	0,8

4. Fire resistance

Class 1: suitable for use on fire / smoke doors

5. Safety

Class 1: the basic requirements on the using safety of door should be reached; therefore, only one class has been defined here.

6. Corrosion resistance

Class 0: no defined corrosion resistance

Class 1: mild corrosion resistance

Class 2: moderate corrosion resistance

Class 3: high corrosion resistance

Class 4: very high corrosion resistance



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EG-KONFORMITÄTSZERTIFIKAT 0432 – BPR – 0034

Gemäß der Richtlinie des Rates der Europäischen Gemeinschaften vom 21. Dezember 1988 zur Angleichung der Rechts- und Verwaltungsvorschriften der Mitgliedstaaten über Bauprodukte –89/106/EWG– (Bauproduktenrichtlinie – BPR), geändert durch die Richtlinie des Rates der Europäischen Gemeinschaften vom 22. Juli 1993 –93/68/EWG–, umgesetzt in Deutschland durch das Bauproduktengesetz – BauPG vom 28. April 1998, wird hiermit bestätigt, dass das Bauprodukt

Gleitschienentürschließer mit integrierter elektrisch betriebener Feststellvorrichtung ESB

Elektrisch betriebene Feststellvorrichtungen für Drehflügeltüren gemäß der Zusammenstellung und Klassifikation in der Anlage 1.

in Verkehr gebracht und hergestellt durch

ESB Schulte Baubeschläge GmbH & Co. KG
Industriestrasse 2
D-14943 Luckenwalde

einer werkseigenen Produktionskontrolle und einer zusätzlichen Prüfung von im Werk entnommenen Proben nach festgelegtem Prüfplan durch den Hersteller unterzogen wurde und dass durch die anerkannte Stelle eine Erstprüfung des Produkts für die relevanten Eigenschaften, eine Erstinspektion des Werkes und der werkseigenen Produktionskontrolle, die laufende Überwachung, Beurteilung und Anerkennung der werkseigenen Produktionskontrolle durchgeführt worden ist.

Dieses Zertifikat bescheinigt, dass alle Vorschriften des Anhangs ZA der harmonisierten Norm

EN 1155: 2003-04

die die Bescheinigung der Konformität und die Leistungseigenschaften des Produkts betreffen, angewendet wurden und dass das Bauprodukt alle darin vorgeschriebenen Anforderungen erfüllt. Dieses Zertifikat wurde erstmals am 19.04.2004 ausgestellt und gilt solange, wie sich die Festlegungen in der oben angeführten harmonisierten Norm nicht ändern und die Herstellbedingungen im Werk oder in der werkseigenen Produktionskontrolle sich nicht wesentlich verändert haben.

Dortmund, 19.04.2004



Dipl.-Phys. Karrenberg
Leiter der Zertifizierungsstelle

In an emergency situation, people must be provided with the best possible protection. They must have faith in the safety provided to them by fire-rated and smoke-rated doors. Therefore, it is absolutely indispensable that the doors close reliably even in an extreme situation so as to confine the risks and prevent the situation from worsening.

DIN EN 1158

Closing Sequence
Controller



ECO Typ SR-EFR
with 2 door closers
ECO TS 61

Application ranges

The standard defines the requirements of the following sequence controller for double-leaf swing doors.

The standard defines the testing procedures and technical requirements with regard to the following:

- separately installed closing sequence controller
 - closing sequence control function integrated into door closer
 - closing sequence control function integrated into door closer, with electrically operated hold-open devices
-
- the currently valid DIN EN 1158 was published in April 2003, and replaced EN 1158, including the revised modification A1 2002, which had existed since 1997. It also has the status of a national standard. It has been included in the German Building Standards Guidelines B/Part 1 since 2005, meaning that it is anchored in the German Building Laws.

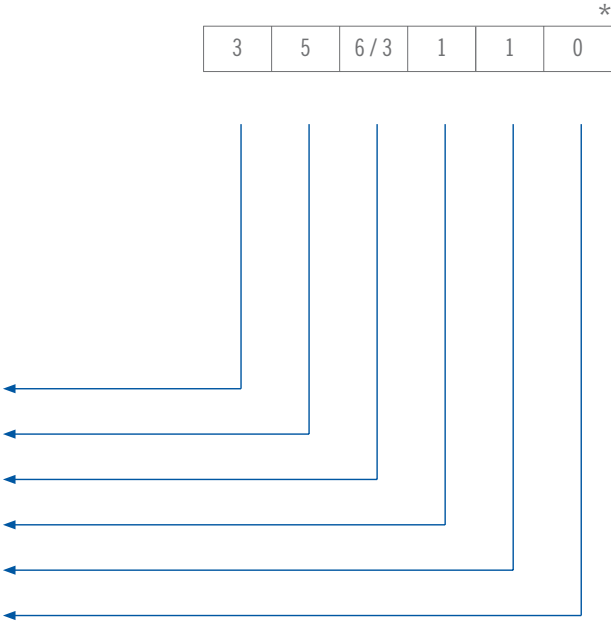
Classification key

The standard stipulates that all of the products tested according to it should be classified in accordance with a 6-digit-system.

* Suitable for: ECO Typ SR

The classification key is derived from points 1-6 below:

1) Category of use (Class 3)
2) Durability (Class 5, 8)
3) Hold-open size (Class 3-7)
4) Fire resistance (Class 0, 1)
5) Safety (Class 1)
6) Corrosion resistance (Class 0-4)



DIN EN 1158

Explanations of the classification key

1. Category of use (there defined only one Class)

Class 3: for doors in public buildings with little incentive for careful use. The probability of an incorrect use of the door is given.

2. Durability

Class 5: 50,000 tested cycles

Class 8: 500,000 tested cycles

3. Door closer size

Sizes 3-7 are defined. For closing sequence controller with adjustable and different sizes, they should be indicated with their minimal and maximal hold-open sizes.

Hold-open size	Recommended door leaf width mm / max.	Weight of test door kg	Overload of drop hammer mm / max	Drag torque of test door Nm / max.
3	950	60	1,900	0,3
4	1,100	80	2,200	0,4
5	1,250	100	2,500	0,5
6	1,400	120	2,800	0,6
7	1,600	160	3,200	0,8

4. Fire resistance

Class 0: not approved for use on fire / smoke doors

Class 1: allowable for use on fire / smoke doors

5. Safety

Class 1: the basic requirements on the using safety of door should be reached, therefore, here defined only one Class.

6. Corrosion resistance

Class 0: no defined corrosion resistance

Class 1: mild corrosion resistance

Class 2: moderate corrosion resistance

Class 3: high corrosion resistance

Class 4: very high corrosion resistance



The world *does not have any wonders* to give. Every possible movement forwards, every attempt to achieve a certain progress requires *implementation, studiousness* and *endurance*; it especially requires our *mind*, our *willingness* as well as our *professional ability* to grasp the existing. (Jürgen Ponto)

Planning at the highest safety level

Preventative fire prevention is gaining in importance and complexity in all of the planning and constructing fields. In Germany alone, around 600 people lose their life each year as a result of almost 200,000 fires. But often, it is not the fire that costs people's life, but rather the smoke and panic. Diverse fire catastrophes in the past have already sensitized the public to this subject and created a new sense of safety.

The way to a progressive safety consideration is only free if the ethics harmonize with the demands on security and safeguarding of human beings.

Increasing legal requirements have brought with them the highest prioritizing of fire prevention in buildings for planners and architects. The choice and implementation of materials which minimise the chances of a fire breaking out and its spreading, are imperative.

At ECO, the planners and architects can find out a competent partner for the implementation of their design concepts at the highest safety level.

The ECO group responded to the increasing requirements a long time ago, and always manufactures the technical products according to the most current European standards.

At an initial glance, the standards are often an additional responsibility. The extent to which a hinge should hold a door or window enables standards to provide the basis technical developments. Standard EN 1935 exactly classifies the various hinge types and their areas of use, thereby guaranteeing a secure hold for a door.

DIN EN 1935

Uniaxial Door
and Window hinges



ECO

DIN EN 1935

SWISSDOOR
DØRTEKNIK FOR PROFESSIONELLE



ECO 0BX
20-1531 / 160
stainless steel

ECO 0BN
20-4141 / 160
aluminium

ECO 0BX
18-2541 / 160
zinc-plated steel

Application ranges

The standard divides the hinges in four use classes, and defines the maximal hinge moment that results from the generated frictional resistance in a hinge during its endurance test. This standard is valid for door and window hinges for door leafs with a maximum weight of 160 Kg.

The standard specifies testing procedures and requirements with regard to:

- uniaxial screw-on hinges
 - hinges with consolidated bolts
 - for use on entrance doors and windows
-
- the currently valid DIN EN 1953 was published in April 2002 and has the status of a national standard. It has been included in the German Building Standards Guidelines B/Part 1 since 2005, meaning that it is anchored in the German Building Laws.

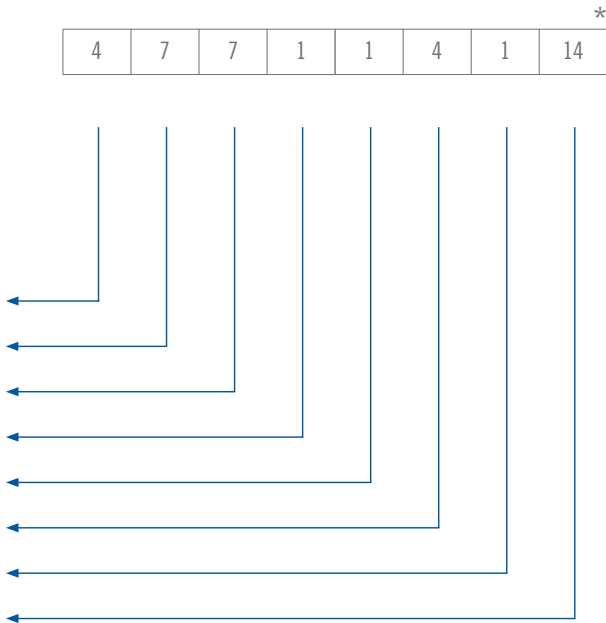
Classification key

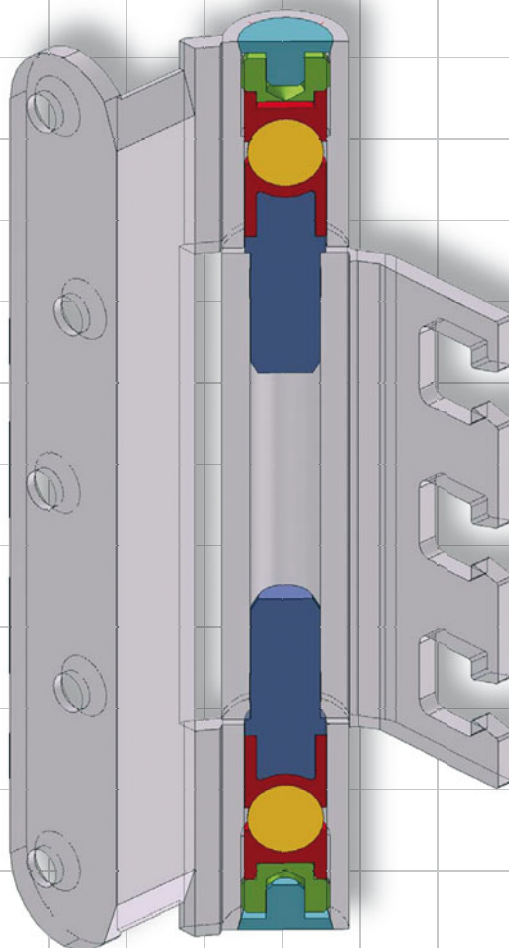
The standard stipulates that all of the products tested according to it should be classified in accordance with an 8-digit-system.

* Suitable for all ECO OBX- and OBN 20 hinges

The classification key is derived from points 1-8 below:

1) Category of use (Class 1-4)
2) Durability (Class 3, 4, 7)
3) Door mass (Class 0-7)
4) Fire resistance (Class 0, 1)
5) Safety (Class 1)
6) Corrosion resistance (Class 0-4)
7) Security (Class 0, 1)
8) Class of hinge (Class 0-14)





ECO paumelles
with concealed
ball-bearing technology

Explanations of the classification key

DIN EN 1935

1. Category of use (four classes were defined)

- Class 1:** **slight usage.** Application in Building, houses or other residential areas with a lower of frequency of use by people with a high incentive to a careful use, where misuse and risks are less possible.
- Class 2:** **medium usage.** Application in Buildings, houses or other residential areas with a medium using frequency and with a certain incentive to a careful use, where misuse and risks are still possible.
- Class 3:** **intensive usage.** Application in Buildings with a high usage frequency by people with little careful use, where misuse and risks are possible.
- Class 4:** **forcible usage.** The hinges are used on doors that are usually often subject to violent uses.

2. Durability

- Class 3:** 10,000 tested cycles (Only for window hinges)
- Class 4:** 25,000 tested cycles (Door and window hinges)
- Class 7:** 200,000 tested cycles (Only for door hinges)

3. Door mass

- Class 0:** 10 kg **Classe 4:** 80 kg
- Class 1:** 20 kg **Classe 5:** 100 kg
- Class 2:** 40 kg **Classe 6:** 120 kg
- Class 3:** 60 kg **Classe 7:** 160 kg

4. Fire resistance

- Class 0:** not approved for use on fire / smoke doors
- Class 1:** allowable for use on fire / smoke doors (EN 1634-1)

5. Safety – personal security

Each hinge should fulfil the basic requirements on safe usage; therefore, there is one class 1.

6. Corrosion resistance

- Class 0:** no defined corrosion resistance
- Class 1:** mild corrosion resistance
- Class 2:** moderate corrosion resistance
- Class 3:** high corrosion resistance
- Class 4:** very high corrosion resistance

7. Security – Anti-burglary

- Class 0:** not approved for use on anti-burglary doors
- Class 1:** allowable for use on anti-burglary doors
(This character is subject to the evaluations for the contributions to the burglary-resistance of each anti-burglary door, and furthermore, this evaluation does not belong to the application ranges of EN 1935.)

8. Class of hinges

There are 14 defined hinge classes as shown in the following table.

1th Position			2nd Position		3rd Position		4th Position	5th Position	6th Position	7th Position	8th Position
Category of use			Tested cycles at long-term usage		Door mass		Fire resistance	Safety	Corrosion resistance	Security	Fire class
Use	Class	Application	Class	Number of tested cycles	Class	Mass kg	Available class	Available class	Available class	Available class	Class
slight	1	window	3	10,000	0	10	0 or 1	1	0, 1, 2, 3, 4	0 or 1	1
slight	1	window	3	10,000	1	20	0 or 1	1	0, 1, 2, 3, 4	0 or 1	2
slight	1	door or window	4	25,000	1	20	0 or 1	1	0, 1, 2, 3, 4	0 or 1	3
medium	2	door	7	200,000	1	20	0 or 1	1	0, 1, 2, 3, 4	0 or 1	4
slight	1	window	3	10,000	2	40	0 or 1	1	0, 1, 2, 3, 4	0 or 1	5
slight	1	door or window	4	25,000	2	40	0 or 1	1	0, 1, 2, 3, 4	0 or 1	6
medium	2	door	7	200,000	2	40	0 or 1	1	0, 1, 2, 3, 4	0 or 1	7
slight	1	window	3	10,000	3	60	0 or 1	1	0, 1, 2, 3, 4	0 or 1	8
slight	1	door or window	4	25,000	3	60	0 or 1	1	0, 1, 2, 3, 4	0 or 1	9
medium	2	door	7	200,000	3	60	0 or 1	1	0, 1, 2, 3, 4	0 or 1	10
intensive	3	door	7	200,000	4	80	0 or 1	1	0, 1, 2, 3, 4	0 or 1	11
forcible	4	door	7	200,000	5	100	0 or 1	1	0, 1, 2, 3, 4	0 or 1	12
forcible	4	door	7	200,000	6	120	0 or 1	1	0, 1, 2, 3, 4	0 or 1	13
forcible	4	door	7	200,000	7	160	0 or 1	1	0, 1, 2, 3, 4	0 or 1	14

**MATERIALPRÜFUNGSAMT NORDRHEIN-WESTFALEN**

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EG-KONFORMITÄTSZERTIFIKAT**0432 – BPR – 0045**

Gemäß der Richtlinie des Rates der Europäischen Gemeinschaften vom 21. Dezember 1988 zur Angleichung der Rechts- und Verwaltungsvorschriften der Mitgliedstaaten über Bauprodukte –89/108/EWG– (Bauproduktenrichtlinie – BPR), geändert durch die Richtlinie des Rates der Europäischen Gemeinschaften vom 22. Juli 1993 –93/68/EWG–, umgesetzt in Deutschland durch das Bauproduktengesetz – BauPG vom 28. April 1998, wird hiermit bestätigt, dass das Bauprodukt

ECO Objektbänder

Einachsige Türbänder für Drehflügeltüren
gemäß der Zusammenstellung und Klassifikation in der Anlage 1,

hergestellt und in Verkehr gebracht durch

ECO Schulte GmbH & Co. KG
Iserlohner Landstrasse 117
D-58706 Menden

einer werkseigenen Produktionskontrolle und einer zusätzlichen Prüfung von im Werk entnommenen Proben nach festgelegtem Prüfplan durch den Hersteller unterzogen wurde und dass durch die anerkannte Stelle eine Erstprüfung des Produkts für die relevanten Eigenschaften, eine Erstinspektion des Werkes und der werkseigenen Produktionskontrolle, die laufende Überwachung, Beurteilung und Anerkennung der werkseigenen Produktionskontrolle durchgeführt worden ist.

Dieses Zertifikat bescheinigt, dass alle Vorschriften des Anhangs ZA der harmonisierten Norm

EN 1935: 2002

die die Bescheinigung der Konformität und die Leistungseigenschaften des Produkts betreffen, angewendet wurden und dass das Bauprodukt alle darin vorgeschriebenen Anforderungen erfüllt. Dieses Zertifikat wurde erstmals am 23.07.2004 ausgestellt und gilt solange, wie sich die Festlegungen in der oben angeführten harmonisierten Norm nicht ändern und die Herstellbedingungen im Werk oder in der werkseigenen Produktionskontrolle sich nicht wesentlich verändert haben.

Dortmund, 23.07.2004



Dip.-Phys. Karrenberg
Leiter der Zertifizierungsstelle

A lock is much more than a simple connection between door leaves and frames. With the increasing requirements on functionality, security and materials, it has already become a complex component part. In view of the increasing product diversity, EN 12209 was created in order to provide a uniform stipulation at a European level.

DIN EN 12209

Mechanically Operated
Locks and Strike Plates



ECO

DIN EN 12209

SWISSDOOR
DØRTEKNIK FOR PROFESSIONELLE



ECO GBS 31
for single-leaf
wooden and steel doors



ECO

DIN EN 12209

SWISSDOOR
DØRTEKNIK FOR PROFESSIONELLE



ECO GBS 69
for single-leaf
wooden and steel doors

Explanations of the classification key

DIN EN 12209

1. Category of use (only three classes were defined)

- Class 1:** used by people with a high incentive to a careful application, where misuse or risks are less possible, e.g. interior residential doors.
- Class 2:** used by people with a little incentive to a careful application, where misuse or risks are possible, e.g. office doors.
- Class 3:** used by people with little incentive to a careful application, where misuse or risks are more possible, e.g. doors in public buildings.

2. Charge permanente

Class A:	50,000 tested cycles	no stress on latch bolt
Class B:	100,000 tested cycles	no stress on latch bolt
Class C:	200,000 tested cycles	no stress on latch bolt
Class F:	50,000 tested cycles	stress on latch bolt 10 N
Class G:	100,000 tested cycles	stress on latch bolt 10 N
Class H:	200,000 tested cycles	stress on latch bolt 10 N
Class L:	100,000 tested cycles	stress on latch bolt 25 N
Class M:	200,000 tested cycles	stress on latch bolt 25 N
Class R:	100,000 tested cycles	stress on latch bolt 50 N
Class S:	200,000 tested cycles	stress on latch bolt 50 N
Class W:	100,000 tested cycles	stress on latch bolt 100 N
Class X:	200,000 tested cycles	stress on latch bolt 100 N

3. Door mass and closing force

Class 1:	up to 100 kg	closing force max. 50 N
Class 2:	up to 200 kg	closing force max. 50 N
Class 3:	more than 200 kg or determined by producer	closing force max. 50 N
Class 4:	up to 200 kg	closing force max. 25 N
Class 5:	up to 100 kg	closing force max. 25 N
Class 6:	more than 200 kg or determined by producer	closing force max. 25 N
Class 7:	up to 100 kg	closing force max. 15 N
Class 8:	up to 200 kg	closing force max. 15 N
Class 9:	more than 200 kg or determined by producer	closing force max. 15 N

4. Fire resistance

- Class 0:** not approved for use on fire / smoke doors
- Class 1:** allowable for use on fire / smoke doors
 (This character is subject to the positive evaluation for the contributions of locks to the fire / smoke resistance of certain fire / smoke doors.)

5. Safety

- Class 0:** no safety requirements

6. Corrosion resistance

- Class 0:** no defined corrosion resistance, no defined temperature
- Class A:** low corrosion resistance, no defined temperature
- Class B:** mild corrosion resistance, no defined temperature
- Class C:** high corrosion resistance, no defined temperature
- Class D:** very high corrosion resistance, no defined temperature
- Class E:** mild corrosion resistance, temperature requirement between -20°C - +80°C
- Class F:** high corrosion resistance, temperature requirement between -20°C - +80°C
- Class G:** very high corrosion resistance, temperature requirement between -20°C - +80°C

7. Security and drill resistance

- Class 1:** minimum anti-burglary effect without drill resistance
- Class 2:** low anti-burglary effect without drill resistance
- Class 3:** mild anti-burglary effect without drill resistance
- Class 4:** high anti-burglary effect without drill resistance
- Class 5:** high anti-burglary effect with drill resistance
- Class 6:** very high anti-burglary effect without drill resistance
- Class 7:** very high anti-burglary effect with drill resistance

DIN EN 12209

8. Door-related application

There are 15 defined door-related applications as shown in the following table.

Classe	Type	Usage 1	Usage 2	Usage 3
A	Mortise lock	Unrestricted usage		
B	Mortise lock	Swing door leaf		
C	Mortise lock	Sliding door		
D	Box lock	Unrestricted usage		
E	Box lock	Swing door leaf		
F	Box lock	Sliding door		
G	Lock for a drilled retainer	Unrestricted usage		
H	Mortise lock	Swing door leaf	supported	
J	Box lock	Swing door leaf	opened towards inside	
K	Mortise lock	Swing door leaf		locked from inside
L	Mortise lock	Sliding door		locked from inside
M	Box lock	Swing door leaf		locked from inside
N	Box lock	Sliding door		locked from inside
P	Mortise lock	Swing door leaf	supported	locked from inside
R	Box lock	Swing door leaf	opened towards inside	locked from inside

9. Key operation and locking mechanism

Class 0 : not applicable

Class A : cylinder lock

manual locking mechanism

Class B : cylinder lock

automatic locking mechanism

Class C : cylinder lock

manual locking mechanism

with in-between locking

Class D : chubb lock

manual locking mechanism

Class E : chubb lock

automatic locking mechanism

Class F : chubb lock

manual locking mechanism

with in-between locking

Class G : lock without key operation

manual locking mechanism

Class H : lock without key operation

automatic locking mechanism

10. Spindle operation

Class 0 : lock without hub

Class 1 : lock for handle or knob operation with durable spring

Class 2 : lock for handle operation without durable spring

Class 3 : lock for knob operation with higher stress and heavy durable spring

Class 4 : lock for special handle operation (designed by producers) with higher stress and heavy durable spring

11. Key characteristic value

Class 0 : no indicated requirements

Class A : at least 3 tumblers

Class B : at least 5 tumblers

Class C : at least 5 tumblers with extended locking disparities

Class D : at least 6 tumblers

Class E : at least 6 tumblers with extended locking disparities

Class F : at least 7 tumblers

Class G : at least 7 tumblers with extended locking disparities

Class H : at least 8 tumblers with extended locking disparities

General Information

CE*Labelling

The CE-label is the „passport“ for products within the Single European Market. This label was created in the course of the technical harmonization within the EU in order to reduce trade restraints and guarantee a free movement of goods within the European Community.

The CE-label is neither an origin nor a quality symbol. With this label, the manufacturer documents that its products meet the requirements of the applicable EU-directiv4s and that it can be placed on the market.

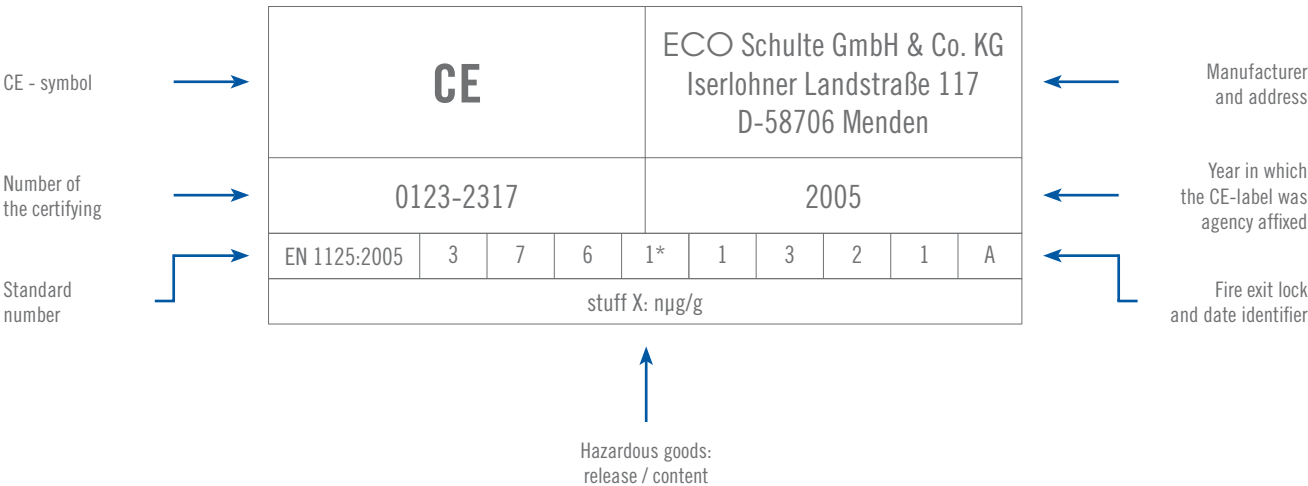
*** CE = Communauté Européenne,
the French term for the European Community**

The following information is required:

- identification number of the certifying agency
- name of the manufacturer or its identifier
- registered address of the manufacturer
- the last two digits of the year in which the label was affixed
- number of the EU-Certificate of Conformity
- reference to the European standard
- description and performance characteristics of the product

Example of a CE-label

ECO panic lock system EPN 900, tested in accordance with DIN EN 1125



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