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Cylinder Locks
EN1303: 2005

SCOPE
The European standard to which this document relates applies to cylinders intended for use on locks in buildings. It identifies just one grade for category of use, three grades of durability, two grades of fire resistance, four grades of corrosion and temperature resistance, six grades of key related security based on design requirements, and three grades of attack resistance based on mechanical performance tests.

The suitability of cylinders for use on fire/smoke door assemblies is determined by fire performance tests conducted in addition to the mechanical performance testing required by the European standard. Suitability for use on fire resisting doors may not be essential in every situation.

On occasions there may be a need for additional functions within the design of the cylinder not covered by the European standard. In such cases purchasers should ensure that the products are suitable for their intended use. This is particularly important when the operation of such additional functions is safety related.

CLASSIFICATION

EN1303: 2005 classifies cylinders for locks using an 8 digit coding system. A broadly similar classification system is used for other building hardware product standards. Each digit refers to a particular feature of the product measured against the standard’s performance requirements.

Digit 1
Category of use
One category is identified:
Grade 1: Keys shall resist a torque of 2.5Nm and still be usable.

Digit 2
Durability
Three grades are identified according to the number of test cycles achieved:
Grade 4: 25,000 cycles
Grade 5: 50,000 cycles
Grade 6: 100,000 cycles

Digit 3
Door mass
No requirement.

Digit 4
Fire resistance
Two grades are identified as follows:
Grade 0: Not suitable for fire/smoke resistant door assemblies.
Grade 1: Suitable for fire/smoke resistant door assemblies subject to satisfactory assessment of the contribution of the cylinder to the fire resistance of the specified fire/smoke door assemblies. Such assessment is beyond the scope of this European standard (see EN1634-1).

 CYFM / CYEU / CYEM Series Cylinders
are tested to the following classification

1 6 0 1 0 C 5 2

 Successfuly passed and exceeded 240-minutes fire test of metal fire door assemblies to EN1634-1:2014
Digit 5
Safety
No requirement.

Digit 6
Corrosion and temperature resistance
Four grades are identified as follows:
Grade 0: No corrosion or temperature resistance requirements.
Grade A: BS EN 1670 Grade 3 corrosion resistance (96 hours NSS): no temperature resistance requirement.
Grade B: No corrosion resistance requirement: resistance to -20/+80°C temperature extremes.
Grade C: BS EN 1670 Grade 3 corrosion resistance: resistance to -20/+80°C temperature extremes

Note:
- No distinction is made between the inside and the outside of either the cylinder and/or the door.
- On completion of the test, the cylinder must operate using a maximum 1.5 Nm torque on the key.

Digit 7
Key related security
Six grades are identified and the principal requirements are summarised in Table 1 below:

<table>
<thead>
<tr>
<th>Table 1: Key related security</th>
<th>Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1 2 3 4 5 6</td>
</tr>
<tr>
<td>Minimum number of effective differs</td>
<td>100 300 15 000 30 000 30 000 100 000</td>
</tr>
<tr>
<td>Minimum number of movable levers, pins, discs, etc.</td>
<td>2 3 5 5 6 6</td>
</tr>
<tr>
<td>Coding on key could disclose combination</td>
<td>Yes Yes No No No No</td>
</tr>
<tr>
<td>Torque resistance of plug</td>
<td>2.5Nm 5Nm 15Nm 15Nm 15Nm 15Nm</td>
</tr>
</tbody>
</table>

Digit 8
Attack resistance
Three grades are identified and the principal requirements are summarised in Table 2 below:

<table>
<thead>
<tr>
<th>Table 2: Attack resistance</th>
<th>Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0 1 2</td>
</tr>
<tr>
<td>Resistance to drilling (net drilling time)</td>
<td>- 3 mins 5 mins</td>
</tr>
<tr>
<td>Resistance to chisel attack (number of defined blows)</td>
<td>- 30 40</td>
</tr>
<tr>
<td>Resistance to twisting attack (number of defined twists)</td>
<td>- 20 30</td>
</tr>
<tr>
<td>Resistance to plug/cylinder extraction (pull load)</td>
<td>- 15 kN 15 kN</td>
</tr>
<tr>
<td>Torque resistance of plug/cylinder</td>
<td>- 20 Nm 30 Nm</td>
</tr>
</tbody>
</table>

CE MARKING
EN1303 has not been designated as a harmonised product standard under the Construction Products Directive and therefore CE marking of cylinders to this standard is NOT permitted.
### How to Order

#### Product Identification

<table>
<thead>
<tr>
<th>CYEM</th>
<th>-3030</th>
<th>TK</th>
<th>-SN</th>
<th>-KA</th>
<th>-AD</th>
</tr>
</thead>
</table>

- **CYEM** = Standard Euro Cylinder  
- **CYEU** = Master Keyable Cylinder  
- **CYFM** = Dimple Keyed Security Cylinder

- **-AD** = Optional Suffix for "Anti-Drill"  
  - *Only Available in CYFM*

#### Keying

- **Blank** = Keyed Differ  
- **KA** = Keyed Alike  
- **MK** = Master Key*  
- **GMK** = Grand Master Key*  
- **CMK** = Construction Master Key*  
  - *Only Available in CYEU*

#### Finish

- **PB** = Polished Brass  
- **NP** = Nickel Plated  
- **SN** = Satin Nickel (S/S Look-Alike)

#### Model:

- **Blank** = Key x Key (Entry)  
- **TK** = Key x Thumb-turn (Privacy)  
- **WC** = Turn x Release (Bathroom)

#### Cylinder Size:

- **1030** = 10/30 (40mm)  
- **1035** = 10/35 (45mm)  
- **1040** = 10/40 (50mm)  
- **1045** = 10/45 (55mm)  
- **1050** = 10/50 (60mm)  
- **3030** = 30/30 (60mm)  
- **3035** = 30/35 (65mm)  
- **3040** = 30/40 (70mm)  
- **3045** = 30/45 (75mm)  
- **3050** = 30/50 (80mm)  
- **3535** = 35/35 (70mm)  
- **3540** = 35/40 (75mm)  
- **3050** = 30/50 (80mm)  
- **4040** = 40/40 (80mm)  
- **4045** = 40/45 (90mm)  
- **4050** = 40/50 (90mm)  
- **4545** = 45/45 (90mm)  
- **5050** = 50/50 (100mm)
Euro Cylinder CYFM Series

Application
INOX CYFM series cylinder is euro cylinder with dimpled pin system suitable for commercial or residential application to provide extra security.

Specifications and Features
- Standard euro profile dimension according to DIN18252
- Solid brass body and keys
- Reversible key operation (double sided dimpled keys)
- Various lengths available for different door thickness
- Symmetrical and asymmetrical variant available to work with different lock installation position
- 6 pins construction to maximize key combination and security
- Anti-drill pins available upon request
- Enhanced attack resistance provided by INOX security escutcheons

Standards and Certification
Successfully type-tested for conformity to all of the requirements of EN1303:2005
Successfully passed 240-minutes fire test of metal door assemblies to EN1634-1:2014
All test performed independently and certified by Exova/Warringtonfire/ Warrington APT. Test reports and/or certificates are available on request

Finishes
- Satin Nickel (SN)
- Nickel Plated (NP)
- Brass Polished (BP)
* Other finish available on request

INOX Mortise Lock Options
- MB7200 Series
- MB8500 Series
- MD7200 Series
- MD8500 Series

INOX Security Escutcheons
EC-SE30: Security Escutcheon for Euro Cylinder
EC-SE35: Security Escutcheon for Euro Cylinder with Cover Protection Rose

EN1303:2005 Classification
1 6 0 1 0 C 5 2
Euro Cylinder CYFM Series

Available Functions

**Double Profile Cylinder**
Application: Keyed operation from either side (inside or outside).

<table>
<thead>
<tr>
<th>Item No</th>
<th>CYFM-3030</th>
<th>CYFM-3035</th>
<th>CYFM-3535</th>
<th>CYFM-4040</th>
</tr>
</thead>
</table>

* Dimensions in mm

**Double Profile Cylinder with Thumb-turn**
Application: Keyed operation from one side (outside) and thumb-turn operated from the other side (inside).

<table>
<thead>
<tr>
<th>Item No</th>
<th>CYFM-3030TK</th>
<th>CYFM-3035TK</th>
<th>CYFM-3535TK</th>
<th>CYFM-4040TK</th>
</tr>
</thead>
</table>

* Dimensions in mm

**Single Profile Cylinder**
Application: Keyed operation from one side (outside) only.

<table>
<thead>
<tr>
<th>Item No</th>
<th>CYFM-1030</th>
<th>CYFM-1035</th>
<th>CYFM-1040</th>
<th>CYFM-1045</th>
</tr>
</thead>
</table>

* Dimensions in mm
**Euro Cylinder CYEU Series**

**Application**
INOX CYEU series cylinder is manageable euro cylinder with keying ability suitable for commercial or residential application with specific access requirement.

**Specifications and Features**
- Standard euro profile dimension according to DIN18252
- Solid brass body and keys
- Standard SC Keyway (Schlage C Keyway) for wide compatibility
- Various lengths available for different door thickness
- Symmetrical and asymmetrical variants available to work with different lock installation positions
- Master keying service available upon request
- Keying ability to suite with INOX ANSI Mortice Cylinder (CMB Series) and Rim Cylinder (CRB Series)
- Construction keying ability for use during the construction phase of a building. Can later be easily removed and replaced with permanent keys
- Enhanced attack resistance provided by INOX Security Escutcheons

**INOX Related Products**

**ANSI Mortice Cylinder CMB Series**

**ANSI Rim Cylinder CRB Series**

**Standards and Certification**
Successfully type-tested for conformity to all of the requirements of EN1303:2005

Successfully passed 240-minutes fire test of metal door assemblies to EN1634-1:2014

All test performed independently and certified by Exova/Warringtonfire/Warrington APT. Test reports and/or certificates are available on request

**INOX Mortice Lock Options**
- MB7200 Series
- MB8500 Series

**INOX Security Escutcheons**
- EC-SE30: Security Escutcheon for Euro Cylinder
- EC-SE35: Security Escutcheon for Euro Cylinder with Cover Protection Rose

**Finishes**
- Satin Nickel (SN)
- Nickel Plated (NP)
- Brass Polished (BP)
- Other finishes available on request

**INOX Related Products**

**ANSI Mortice Cylinder CMB Series**

**ANSI Rim Cylinder CRB Series**

**Standards and Certification**
Successfully type-tested for conformity to all of the requirements of EN1303:2005

Successfully passed 240-minutes fire test of metal door assemblies to EN1634-1:2014

All test performed independently and certified by Exova/Warringtonfire/Warrington APT. Test reports and/or certificates are available on request

**EN1303:2005 Classification**
1 6 0 1 0 C 5 2
Euro Cylinder CYEU Series

Available Functions

**Double Profile Cylinder**
Application: Keyed operation from either side (inside or outside).

* Dimensions in mm

<table>
<thead>
<tr>
<th>Item No</th>
<th>CYEU-3030</th>
<th>CYEU-3035</th>
<th>CYEU-3535</th>
<th>CYEU-4040</th>
</tr>
</thead>
</table>

**Double Profile Cylinder with Thumb-turn**
Application: Keyed operation from one side (outside) and thumb-turn operated from the other side (inside).

* Dimensions in mm

<table>
<thead>
<tr>
<th>Item No</th>
<th>CYEU-3030TK</th>
<th>CYEU-3035TK</th>
<th>CYEU-3535TK</th>
<th>CYEU-4040TK</th>
</tr>
</thead>
</table>

**Single Profile Cylinder**
Application: Keyed operation from one side (outside) only.

* Dimensions in mm

<table>
<thead>
<tr>
<th>Item No</th>
<th>CYEU-1030</th>
<th>CYEU-1035</th>
<th>CYEU-1040</th>
<th>CYEU-1045</th>
</tr>
</thead>
</table>
Euro Cylinder CYEM Series

Application
INOX CYEM series cylinder is standard euro cylinder designed for INOX or any euro cylinder fitted mortice lock to provide necessary security for commercial or residential applications.

Specifications and Features
- Standard euro profile dimension according to DIN18252
- Solid brass body and keys
- Various lengths available for different door thickness
- Symmetrical and asymmetrical variants available to work with different lock installation positions
- Advanced key differ combination security with 5 pin design
- 3 keys per cylinder as standard
- Enhanced attack resistance provided by INOX Security Escutcheons

Standards and Certification
- Successfully type-tested for conformity to all of the requirements of EN1303:2005
- Successfully passed 240-minutes fire test of metal door assemblies to EN1634-1:2014
- All tests performed independently and certified by Exova/Warringtonfire/Warrington APT. Test reports and/or certificates are available on request.

EN1303:2005 Classification
1 6 0 1 0 C 5 2

Finishes
- Satin Nickel (SN)
- Nickel Plated (NP)
- Brass Polished (BP)
* Other finish available on request

INOX Mortice Lock Options
- MB7200 Series
- MB8500 Series
- MD7200 Series
- MD8500 Series

INOX Security Escutcheons
EC-SE30: Security Escutcheon for Euro Cylinder
EC-SE35: Security Escutcheon for Euro Cylinder with Cover Protection Rose
Euro Cylinder CYEM Series

Available Functions

**Double Profile Cylinder**
Application: Keyed operation from either side (inside or outside).

**Double Profile Cylinder with Thumb-turn**
Application: Keyed operation from one side (outside) and thumb-turn operated from the other side (inside).

**Single Profile Cylinder**
Application: Keyed operation from one side (outside) only.

**Privacy/Bathroom Cylinder**
Application: Thumb-turn operated from inside and emergency release slot operated from outside.

<table>
<thead>
<tr>
<th>Item No</th>
<th>CYEM-3030</th>
<th>CYEM-3035</th>
<th>CYEM-3535</th>
<th>CYEM-4040</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>17</td>
<td>17</td>
<td>17</td>
<td>17</td>
</tr>
<tr>
<td>B</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>Dimensions in mm</td>
<td>22.5</td>
<td>22.5</td>
<td>22.5</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Item No</th>
<th>CYEM-3030TK</th>
<th>CYEM-3035TK</th>
<th>CYEM-3535TK</th>
<th>CYEM-4040TK</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>17</td>
<td>17</td>
<td>17</td>
<td>17</td>
</tr>
<tr>
<td>B</td>
<td>12.8</td>
<td>12.8</td>
<td>12.8</td>
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<tr>
<td>Dimensions in mm</td>
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<th>CYEM-1030</th>
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<th>CYEM-1040</th>
<th>CYEM-1045</th>
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</thead>
<tbody>
<tr>
<td>A</td>
<td>17</td>
<td>17</td>
<td>17</td>
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</tr>
<tr>
<td>B</td>
<td>10</td>
<td>10</td>
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<tr>
<td>Dimensions in mm</td>
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</table>

<table>
<thead>
<tr>
<th>Item No</th>
<th>CYEM-3030WC</th>
<th>CYEM-3035WC</th>
<th>CYEM-3535WC</th>
<th>CYEM-4040WC</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>17</td>
<td>17</td>
<td>17</td>
<td>17</td>
</tr>
<tr>
<td>B</td>
<td>14</td>
<td>14</td>
<td>14</td>
<td>14</td>
</tr>
<tr>
<td>Dimensions in mm</td>
<td>27.8</td>
<td>27.8</td>
<td>27.8</td>
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</tbody>
</table>
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http://www.inoxproducts.com
for more technical and new product information.