ETEM SECURITY SYSTEMS

for private and professional use
SECURITY IS OFTEN A CONCERN IN COMMERCIAL OR RESIDENTIAL BUILDINGS. STANDARD ARCHITECTURAL SYSTEMS FOR MAIN ENTRANCES, DOORS, WINDOWS OR EVEN CURTAIN WALLS, CAN BE BROKEN WITHIN A VERY SHORT TIME FRAME AND WITH VERY SIMPLE LEVERAGE TOOLS.

ETEM offers a variety of products for protection against Vandalism, Burglary and Ballistic Attack. Identifying the risk is essential in choosing the proper product. With comprehensive and extended testing from accredited laboratories, ETEM security systems deliver their claim.

In designing ETEM security products, our objective is to create systems that will work together with the rest of ETEM’s product range and offer the realized benefits of ETEM systems. Aesthetics, functionality and longevity are characteristics that are present in ETEM’s security systems allowing the freedom of creation and their architectural integration in the building.

Combining experience and expertise, ETEM has been selected in a large number of security systems installations. ETEM security systems have been used in Banks, insurance companies, post offices, institutional organizations, shopping malls, private residences and more.
BURGLAR RESISTANCE

Special classes, known as resistance classes RC1 –RC6, have been created to differentiate between these products. These classes are determined using test procedures, in which break-ins are simulated with a variety of different perpetrators.

The present standards are:

- European standard EN 356 for testing and classifying security glazing, with a resistance to burglary.
- European standard EN 1627, for burglar resistance of windows, doors and shutters.

### EN 1627 Burglary Resistance standard provides for three resistance tests:

- Resistance to static loading in accordance with standard EN 1628
- Resistance to dynamic loading in accordance with standard EN 1629
- Resistance to manual burglary attempts in accordance with standard EN 1630

<table>
<thead>
<tr>
<th>Resistance Class (RC) or (WK)</th>
<th>Tools – Method used</th>
<th>Perpetrator</th>
<th>Resistance test time (min) per selected point on sample</th>
<th>Total resistance time (min) per sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Kicking, pressing, jumping against.</td>
<td>Vandalism</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Little protection against levering</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Bodily force, simple tools e.g. screwdriver, shim, pliers</td>
<td>Opportunist</td>
<td>3</td>
<td>15</td>
</tr>
<tr>
<td>3</td>
<td>Additional second screwdriver and crowbar</td>
<td>Opportunist</td>
<td>5</td>
<td>20</td>
</tr>
<tr>
<td>4</td>
<td>Additional use of saw and tools such as axe and chisel, hammer, electric drill</td>
<td>Experienced perpetrator</td>
<td>10</td>
<td>30</td>
</tr>
<tr>
<td>5</td>
<td>Additional use of electric tools, such as drill, jigsaw or saber saw</td>
<td>Experienced perpetrator</td>
<td>15</td>
<td>40</td>
</tr>
<tr>
<td>6</td>
<td>Additional use of more powerful electric tools than WK5</td>
<td>Experienced perpetrator</td>
<td>20</td>
<td>50</td>
</tr>
</tbody>
</table>
EN 1522 Windows, doors, shutters and blinds – resistance to ballistic attacks. Standard EN 1522 defines 7 resistance levels for pistols, rifles and assault rifles (FB1 to FB7) and for shotguns (FSG).

<table>
<thead>
<tr>
<th>Class Threat Level</th>
<th>Type of Weapon</th>
<th>Calibre</th>
<th>Ammunition</th>
<th>Nº of Shots</th>
<th>Velocity (m/s)</th>
<th>Test Range (m)</th>
<th>Spacing (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>FB1</td>
<td>Rifle</td>
<td>.22LR</td>
<td>L/RN</td>
<td>3</td>
<td>360+/- 10</td>
<td>10</td>
<td>120+/- 10</td>
</tr>
<tr>
<td>FB2</td>
<td>Handgun</td>
<td>9mm Luger</td>
<td>FJ1/RN/SC</td>
<td>3</td>
<td>400+/- 10</td>
<td>5</td>
<td>120+/- 10</td>
</tr>
<tr>
<td>FB3</td>
<td>Handgun</td>
<td>.357 Magnum</td>
<td>FJ1/CB/SC</td>
<td>3</td>
<td>430+/- 10</td>
<td>5</td>
<td>120+/- 10</td>
</tr>
<tr>
<td>FB4</td>
<td>Handgun</td>
<td>.44 Rem Magnum</td>
<td>FJ2/FN/SC</td>
<td>3</td>
<td>440+/- 10</td>
<td>5</td>
<td>120+/- 10</td>
</tr>
<tr>
<td>FB5</td>
<td>Rifle</td>
<td>.5.56x45</td>
<td>FJ2/PB/SCP 1</td>
<td>3</td>
<td>950+/- 10</td>
<td>10</td>
<td>120+/- 10</td>
</tr>
<tr>
<td>FB6</td>
<td>Rifle</td>
<td>7.62x51</td>
<td>FJ1/PB/SC</td>
<td>3</td>
<td>830+/- 10</td>
<td>10</td>
<td>120+/- 10</td>
</tr>
<tr>
<td>FB7</td>
<td>Rifle</td>
<td>7.62x51</td>
<td>FJ2/PB/HC 1</td>
<td>3</td>
<td>820+/- 10</td>
<td>10</td>
<td>120+/- 10</td>
</tr>
<tr>
<td>FSG</td>
<td>Shot Gun</td>
<td>12/70</td>
<td>Solid Slug 3</td>
<td>3</td>
<td>420+/- 20</td>
<td>10</td>
<td>-</td>
</tr>
</tbody>
</table>

EN 1063 Security glazing – resistance to ballistic attacks. European standard EN 1063 defines 7 resistance levels for pistols and for pistols and rifles (BR1 to BR7) and 2 for shotguns (SG1 and SG2).
SYSTEMS FOR COMMERCIAL USE

CONTROLLED ENTRANCES

**E2004**
*With thermal break:*
Burglar Resistance RC2 (WK2) / RC3 (WK3)

CURTAIN WALL SYSTEMS

**E85**
*System type:* Stick Façade System
*Burglar resistance:* RC3 (WK3), RC4 (WK4)
*Bullet Resistance:* FB4, FB6
MAIN ENTRANCES

**E2004**

Burglar resistance: RC2, RC3
Frame Depth: 67.5 mm

**E2004**

Burglar resistance: RC3
Frame depth: 63.5 mm
**MAIN ENTRANCES**

**Burglar resistance:** RC3  
**Thermal insulation:** $U_{st} = 1.31 \text{ W/m}^2\text{K}$

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**OPENING SYSTEMS FOR DOORS AND WINDOWS**

**E77**

**ECS**

**Bullet resistance:** FB6  
**Fixed frame (min depth):** 100 mm  
**Thermal insulation:** $U_f=3.8 \text{ W/m}^2\text{K}$
**E45\textsubscript{ECS}**
Burglar resistance: RC2
Fixed Frame (min depth): 60 mm
Thermal insulation: $U_f=1.9 \text{ W/m}^2\text{K}$

**E52\textsubscript{ECS}**
Burglar resistance: RC2
Sash (min depth): 38 mm
Thermal insulation: $U_f=3 \text{ W/m}^2\text{K}$