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#### 4.4.4 Test procedures

Mount the product in accordance with the manufacturer's installation instructions with the attack side confronting the test operative.

Secure all opening elements in the minimum or optimum locked condition, as appropriate.

Complete a full series of attack tests on the product using tools of the appropriate category relative to the security rating expectation.

Continue each individual attack test until either:

- the objective is achieved; or
- the maximum test duration is exceeded; or
- the team leader decides that the attack is ineffective for classification purposes.

Undertake additional attack tests as necessary to demonstrate all aspects of the product offer resistance to attack from the defined attack side(s), irrespective of height constraints, commensurate with the minimum resistance to attack defined for that security rating in Table 4.

Attack tests shall only be aimed at areas or features which, in the opinion of the team leader, have not been weakened by previous tests. Where necessary, the manufacturer shall provide additional samples so that the laboratory can complete any necessary additional tests on those areas or features.

The timing device used to measure test duration shall remain activated during each individual attack test. The resolution of this device shall be at least 1 second. The timing devices(s) used to record working time shall have a resolution of at least 0.01 second. At the conclusion of the test the working time shall be rounded to the next full second.

#### 4.4.5 Attack tools

The tool manifest for the manual intervention attack tests and ascribed tool category is described below.

All dimensions are the maximum permitted unless otherwise specified.

No alterations shall be made to the tools other than those required to maintain the tools in good working order. Likewise, tool safety devices such as guards, fuses and other current limiting features and/or maximum speed controls, shall not be removed or altered.

The test team and anyone else present during the tests shall wear appropriate personal protective equipment.

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### **TOOL CATEGORY A**

Adhesive tape  
 1 Cable cutter - 150 mm long  
 Fishing line (e.g. polypropylene multi fibre)  
 Flexible plastic coupon  
 1 Glass cutter  
 Hexagon wrenches - selection 120 mm long  
 Hooks  
 1 Knife - blade 125 mm long x 3 mm thick  
 1 Lever - 0.7 kg/300 mm long  
 Pliers (including self gripping) - selection 200 mm long  
 Punches  
 Rope  
 1 Screwdriver - 6.5 mm diameter/square x 150 mm long  
 Spanners - selection 150 mm long  
 Tweezers  
 Wire  
 Wood/plastic wedges

*Note: The tools of this category are selected in order to simulate an opportunist attack by bodily physical force and by stealth using minimal tools.*

### **TOOL CATEGORY B**

Tool category A plus:

1 Bolt cutter - 350 mm long  
 1 Claw hammer - 350 mm long/0.7kg  
 1 Drill bit (6 mm diameter jobber - HSS / HSCO / Carbide)  
 1 Hand drill - 400 mm long/1.5kg  
 1 Junior hacksaw plus 2 HSS blades  
 1 Metal plate shears - 200 mm long  
 1 Multiple slip joint pliers - 250 mm long  
 1 Pipe wrench - 250 mm long  
 Pliers (including self gripping) - selection 250 mm long  
 1 Screwdriver - 7 mm diameter/square x 250 mm long  
 1 Screwdriver - 14 mm diameter/square x 400 mm long  
 1 Tube - 38 mm diameter x 300 mm long

*Note: This tool category provides a more determined opportunist attack by bodily physical force and tools with a higher mechanical advantage.*

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### **TOOL CATEGORY C**

Tool category A and B plus:

- 1 Axe - 350 mm long/1.5 kg
- Brick bolsters - 250 mm long x 75 mm wide blade
- Cold chisels - 250 mm long x 25 mm wide blade
- 1 Crowbar - 700 mm long/2.5 kg
- 1 Drill (cordless with rotary action only) - 7.2 V d.c\*
- 1 Drill bit (10 mm diameter jobber - HSS / HSCO / Carbide)
- 1 Gas torch (Butane / Propane)
- 1 Hacksaw plus 2 HSS blades
- 1 Hammer - 400 mm long/1.5 kg
- 1 Pad saw plus 2 HSS blades
- 1 Scissor jack – 750 kg capacity, 100 mm minimum retracted, 200 mm stroke
- Wood chisels - 250 mm long x 25 mm wide blade

*\* Complete with a spare power pack.*

*Note: The tool category is for deliberate forced entry of well-protected premises using bodily physical force and a wide selection of attack options.*

### **TOOL CATEGORY D**

Tool category A, B and C plus:

- 1 "A-tool" lock puller - 500 mm long
- 1 Bolt cutters - 500 mm long
- 1 Disc grinder (cordless)\* - 12 V d.c with 3 cutting discs
- 1 Drill (cordless with rotary action only) - 12 V d.c\*
- 5 Drill bits (13 mm diameter jobber - HSS / HSCO / Carbide)
- 1 Felling/fire axe - 850 mm long/3 kg
- 1 General purpose saw
- 1 Hole saw - 50 mm diameter
- 1 Hooligan bar - 760 mm long
- 1 Jigsaw (cordless) - 12 V d.c with 3 HSS / HSCO / Carbide blades\*
- 1 "K-tool" lock remover
- 1 Plate shears - 300 mm long
- 1 Sledgehammer - 750 mm long/3 kg
- Steel wedges - 150 mm long
- 1 Tube - 75 mm diameter x 500 mm long

*\* Complete with one spare power pack.*

*Note: This tool category is for experienced attempts at forced entry.*

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### **TOOL CATEGORY D+**

Tool category A, B and C plus:

- 1 "A-tool" lock puller - 500 mm long
- 1 Bolt cutters - 500 mm long
- 1 Circular saw (cordless) - 18V d.c./200mm diameter with 3 blades
- 1 Disc grinder (cordless)\* - 18 V d.c with 3 cutting discs
- 1 Drill (cordless with rotary action only) - 18 V d.c\*
- 5 Drill bits (13 mm diameter jobber - HSS / HSCO / Carbide)
- 1 Felling/fire axe - 850 mm long/3 kg
- 1 General purpose saw
- 1 Hole saw - 50 mm diameter
- 1 Hooligan bar - 760 mm long
- 1 Jigsaw (cordless) - 18 V d.c with 3 HSS / HSCO / Carbide blades\*
- 1 "K-tool" lock remover
- 1 Plate shears - 300 mm long
- 1 Reciprocating saw - 18 V d.c with 3 HSS / HSCO / Carbide blades\*
- 1 Sledgehammer - 750 mm long/3 kg
- Steel wedges - 150 mm long
- 1 Tube - 75 mm diameter x 500 mm long

\* Complete with one spare power pack.

*Note: This tool category is for experienced attempts at forced entry.*

### **TOOL CATEGORY E**

Tool category A, B, C and D+ plus:

- 1 Circular saw - 1100 W/200 mm diameter with 3 blades
- 1 Disc grinder - 1100 W/125 mm diameter with 3 cutting discs
- 1 Drill (with rotary / hammer action) - 750 W
- 5 Drill bits (13 mm diameter jobber and long series - HSS / HSCO / Carbide)
- 1 "Glasmaster" saw
- 1 Hole saw - >50 mm diameter
- 1 Pinch bar - 1500 mm long
- 1 Reciprocating saw - 750 W with 3 HSS / HSCO / Carbide blades
- 1 Sledgehammer - 750 mm long/6 kg
- 1 Tube - 75 mm diameter x 1000 mm long
- 2 Wood boring spade bits

*Note: This tool category provides a professional means of attempting forced entry into higher value storage areas generally after penetrating the facade.*

*Although the tool category incorporates mains powered tools, this serves to cover those risks where the criminal may use tools of powers greater than those permitted in tool kit D, including battery powered, petrol driven and mains powered up to that possible with the tools specified in this tool kit.*

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### **TOOL CATEGORY F**

Tool category A, B, C, D+ and E plus:

- 1 Circular saw - 2100 W/300 mm diameter with 3 blades
- 1 Disc grinder - 2300 W/250 mm diameter with 3 cutting discs
- 1 Drill (with rotary / hammer action) - 2000 W
- 5 Drill bits (20 mm diameter - HSS / HSCO/ Carbide)
- 1 Enforcer - 450 mm long/12kg
- 1 Hooligan bar - 910 mm long
- 1 Oxyacetylene "Saffire Portapak" cutting kit - 50l/min oxygen consumption\*
- 1 Reciprocating saw - 2000 W with 3 blades
- 1 Tube - 75 mm diameter x 1500 mm long

*\*Measured at standard ambient temperature and pressure, purity <99.0%.*

*Note: This tool category is an enhancement of category E.*

*Although the tool category incorporates mains powered tools, this serves to cover those risks where the criminal may use tools of powers greater than those permitted in tool kit D, including battery powered, petrol driven and mains powered up to that possible with the tools specified in this tool kit.*

### **TOOL CATEGORY G**

Tool category A, B, C, D+, E and F plus:

- 1 Breaker - 1900 W / 15 kg plus up to 3 bits
- 1 Concrete chainsaw (2-stroke) - 15kg / 300 mm maximum cut depth
- 1 Cut-off ("Stihl") saw - 5kW / 450 mm diameter / 15 kg with three blades
- 1 Diamond core drill bit - 125 mm diameter
- 1 Enforcer - 600 mm long/15kg
- 1 Hydraulic head and toe jack ("Rabbit tool") - 15kg/ 5 tonne (S.W.L) output/180 mm spread
- 1 Oxyacetylene cutting kit - 250l/min oxygen consumption\*
- 1 Pneumatic impact tool (self contained with one spare air cartridge) - 600 blows per minute/ 48.263301052 kPa pressure

*\*Measured at standard ambient temperature and pressure, purity <99.0%.*

*Note: This tool category provides extreme means of attempting forced entry into higher value storage areas before resorting to the use of vehicles, firearms or explosives.*

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## 5 CLASSIFICATION AND DESIGNATION

Products are attributed a security rating as detailed in Table 4 when the product meets all the requirements defined in Sections 3 and 4.

**Table 4** Security rating requirements for manual intervention attack tests

Security rating classification	Tool category	Maximum working time (minutes)	Maximum test duration (minutes)
1	A	1	10
2	B	3	15
3	C	5	20
4	D	10	30
5	D+	10	30
6	E	10	30
7	F	10	30
8	G	20	60

## 6 MARKING

All specimens submitted for test shall be marked with the manufacturer/ supplier's name or trademark, product type designation and either a batch number or date of manufacture. The sample shall also be marked to indicate the attack face.