

... one of 9 design alternatives

Design + Security



Criminal statistics show that doors and windows are the most popular points of entry for intruders. Police and insurance sources therefore advise paying special attention to ensuring doors and windows are secure.

The industry has taken appropriate measures in this respect. German industrial standards drawn up to aid orientation include 'Burglar-resistant windows, doors and additional barriers' (DIN 18 103) and 'Builders hardware and security furniture (concepts and definitions, dimensions, requirements, testing and labelling)' (DIN 18 257).

Alongside this, the newest standards pr. EN 1906 and DIN V ENV 1627 - 1630 have been developed.

With the publication of Manual 2000, FSB posed the rhetorical question as to whether this purely technical approach is the only way to proceed and promptly answers it with its 'Design + Security' deal.

On the pages that follow, FSB sets forth no fewer than nine different hardware design options for main and internal entrance doors that vary in terms of their backplate, knobs or lever handle designs. The nine designs are available in either stainless steel or aluminium, moreover.

With this design-driven deal, FSB takes the worry out of security for architects, interior designers, joiners and end-users. In the first instance they buy what appeals to them; only then do they specify the level of protection they want. We've dubbed it 'Design + Security'. Having opted for a particular design, all you have to do is tick Security Class box 1, 2, 3 or 4. FSB will then slot the security technology selected into the design package chosen.

Gone are the days when you had to make do with the cheapest design if you wanted the lowest security rating and the best designs were only to be had for the top rating. FSB is turning the tables. Only once a given design has been chosen the purchaser's must decide the appropriate security rating to be chosen.

The FSB design range is spaciouly and clearly set out on pp. 296-. Browse through at your leisure until you're sure which one pleases you most. Next to the design selection you will find a technical question sheet on which you are asked to tick the technical specifications you desire. Simple as that.

For the technically curious, we explain the essence of the four security ratings alongside. At European level, the German three-rating industrial norms currently in force are to be revised in such a way that, under EN 1906, there will in future be four security ratings. We have matched these with the current DIN classifications:

Security class 1 (EN 1906)
open version (ES 0)

Strength of backplates 7 kN
Maximum flexion ≤ 5 mm
Tensile force of fastening 10 kN
Maximum deformation ≤ 5 mm

Security class 2 (EN 1906)
open version
(ES-1 K Reg.-No. 4X078)
(ES-1 L Reg.-No. 4X076)

Strength of backplates 10 kN
Maximum flexion ≤ 5 mm
Tensile force of fastening 15 kN
Maximum deformation ≤ 5 mm
Drill resistance 30 s
Chisel test resistance 3 blows

Security class 2 (EN1906)
with anti-tamper device (ZA)
(ES-1 K-ZA Reg.-No. 4X077)
(ES-1 L-ZA Reg.-No. 4X079)

Strength 10 kN
Maximum flexion ≤ 5 mm
Tensile force of fastening 15 kN
Maximum deformation ≤ 5 mm
Drill resistance 30 s
Chisel test resistance 3 blows
Strength of ZA 10 kN

Security class 3 (EN 1906)
with anti-tamper device (ZA)
(ES-2 L-ZA Reg.-No. 4X080)

Strength 15 kN
Maximum flexion ≤ 5 mm
Tensile force of fastening 20 kN
Maximum deformation ≤ 5 mm
Drill resistance 3 min
Chisel test resistance 6 blows
Strength of ZA 15 kN

Security class 4 (EN 1906)
with anti-tamper device (ZA)
(ES-3 L-ZA Reg.-No. 4X081)

Strength 20 kN
Maximum flexion ≤ 5 mm
Tensile force of fastening 30 kN
Maximum deformation ≤ 5 mm
Drill resistance 5 min
Chisel test resistance 12 blows
Strength of ZA 20 kN

Design + Security

In Security Class 1, open version (fig. 2), FSB supplies all eight design options with long backplates that accommodate cylinder projections of approx. 11 mm in the cylinder area (fig. 1)

In Security Class 2, open and anti-tamper versions (fig. 3), there is a choice between long and short backplate variants for all eight design options. In Security class 2 FSB supplies a counter-rose version (see page 305) in addition to the counter-backplate variante. The same dimensional stipulations as set out for Security Class 1 apply for the open version. In the anti-tamper version (ZA), cylinder projections of 8 - 16 mm are catered for.

The design stipulations as set out for Security Class 2, anti-tamper version (ZA), also apply for Security Classes 3 and 4.

To aid comprehension of the engineering involved, the relevant designs are shown alongside.



fig. 1



fig. 2



fig. 3

FSB's 'Design + Security' hardware package draws on a proven laminar construction technique developed within the company that is now a benchmark for the industry. The security specified in standards is enhanced from rating to rating by exchanging and adding materials. Technical refinement of the new security concept was achieved with the able help of the Engineering chair at Paderborn, where the Finite Element Method (FEM) was utilised.

FSB security hardware is supplied as standard for the following door thicknesses:

Internal doors	40 - 42 mm
Main entrance doors	
	67 - 69 mm
Fire doors	53 - 57 mm

Besides standard-compliant security fittings, FSB also supplies other items of architectural hardware with preventive capabilities. These include:

- circular armoured roses, open version, 10 and 14 mm thick
- circular armoured roses with anti-tamper devices (ZA), 15 mm thick
- rectangular and oval armoured roses with anti-tamper devices, 16 mm thick
- rectangular and oval slide-on roses 6, 9 and 14 mm thick

These anti-bandit features are designed to frighten off would-be burglars or at the very least to make breaking in an extremely arduous undertaking.

The industry has likewise addressed itself to window security. A wealth of security fittings for windows have been developed that comply with the German industrial norm already referred to - 'Burglar-resistant windows, doors and additional barriers' (DIN 18 103). Included in the FSB range of security hardware for windows (cf. pp 154-160) are:

- lockable window handles
- lockable adaptors to accommodate window handles
- adaptors with combination locks to accommodate window handles
- frame locks

The FSB range of security features for windows may not be able to rule burglaries out but will certainly serve to delay them. The degree of physical resistance afforded by security features of this sort can generally only be overcome by making a lot of noise, and this will tend to deter most people from trying to enter in the first place. Assuming the right window design and security accessories have been selected, would-be burglars will be forced to turn their attention to the glass itself. If they want to get at the handle on the inside, their only option is to smash, cut a whole in or remove the pane. The presence of lockable window handles and concealed frame locks will contrive to make their task even more difficult.

Security fitting Design 7381



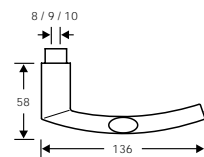
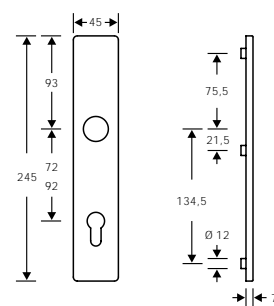
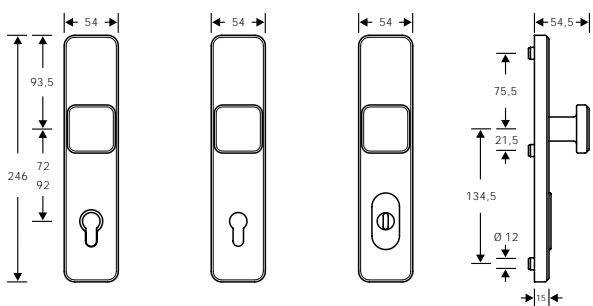
- | | |
|--------------------------------------|--|
| Order details standard | <input type="checkbox"/> Design 7381 |
| Fire and smoke-stop door* (F) | <input type="checkbox"/> Design 7581 (only Stainless steel) |
| Knob furniture | <input type="checkbox"/> |
| Lever handle furniture | <input type="checkbox"/> |
| Security class | <input type="checkbox"/> S1 11 mm
<input type="checkbox"/> S1 15 mm
<input type="checkbox"/> S2 11 mm
<input type="checkbox"/> S2 15 mm
<input type="checkbox"/> S2 - ZA 8 - 16 mm
<input type="checkbox"/> S3 - ZA 8 - 16 mm
<input type="checkbox"/> S4 - ZA 8 - 16 mm |
| Handing of door | <input type="checkbox"/> DIN r.h., inward opening
<input type="checkbox"/> DIN l.h., inward opening |
| to suit door thickness | _____ mm |
| Spacing | <input type="checkbox"/> 72 mm <input type="checkbox"/> 92 mm
<input checked="" type="checkbox"/> 72 mm |
| Spindle | <input type="checkbox"/> 8 mm <input type="checkbox"/> 10 mm
<input checked="" type="checkbox"/> 9 mm |
| Material/colour | Aluminium <input type="checkbox"/> 01 <input type="checkbox"/> _____
Alu + colour <input type="checkbox"/> white <input type="checkbox"/> _____
Stainless steel <input type="checkbox"/> 6204 <input type="checkbox"/> _____ |

4



Order quantity _____ sets

* acc. to German DIN standard



Security fitting Design 7382



- Order details standard
 - Design 7382
 - Fire and smoke-stop door* (E)
 - Design 7582 (only Stainless steel)
- Knob furniture
- Lever handle furniture
- Security class
 - S1 11 mm
 - S1 15 mm
 - S2 11 mm
 - S2 15 mm
 - S2 - ZA 8 - 16 mm
 - S3 - ZA 8 - 16 mm
 - S4 - ZA 8 - 16 mm
- Handing of door
 - DIN r.h., inward opening
 - DIN l.h., inward opening
- to suit door thickness _____ mm
- Spacing
 - 72 mm 92 mm
 - 72 mm
- Spindle
 - 8 mm 10 mm
 - 9 mm
- Material/colour

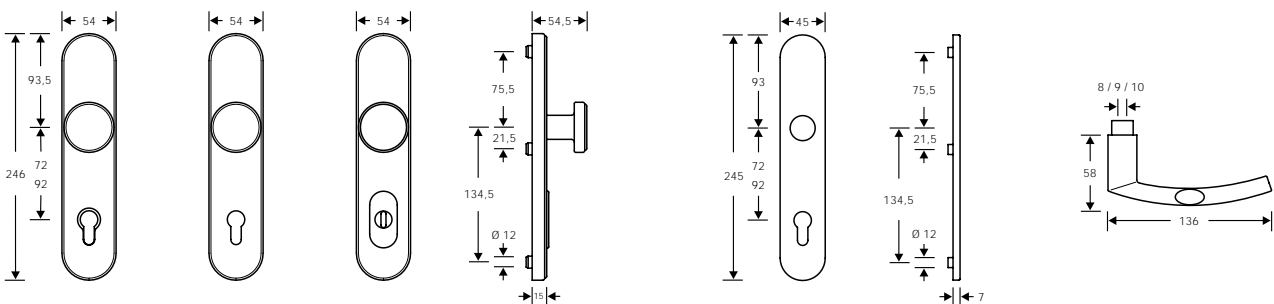
Aluminium	<input type="checkbox"/> 01	<input type="checkbox"/> _____
Alu + colour	<input type="checkbox"/> white	<input type="checkbox"/> _____
Stainless steel	<input type="checkbox"/> 6204	<input type="checkbox"/> _____

4



Order quantity _____ sets

* acc. to German DIN standard



Security fitting Design 7383



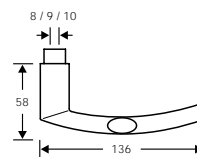
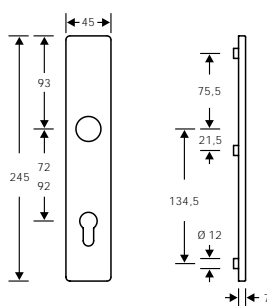
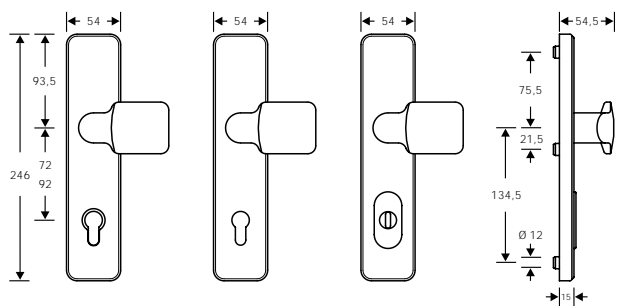
- Order details standard Design 7383
Fire and smoke-stop door* (F) **Design 7583 (only Stainless steel)**
- Knob furniture
 Lever handle furniture
- Security class S1 11 mm
 S1 15 mm
 S2 11 mm
 S2 15 mm
 S2 - ZA 8 - 16 mm
 S3 - ZA 8 - 16 mm
 S4 - ZA 8 - 16 mm
- Handing of door DIN r.h., inward opening
 DIN l.h., inward opening
- to suit door thickness _____ mm
- Spacing 72 mm 92 mm
 72 mm
- Spindle 8 mm 10 mm
 9 mm
- Material/colour Aluminium 01 _____
 Alu + colour white _____
 Stainless steel 6204 _____

4



Order quantity _____ sets

* acc. to German DIN standard



Security fitting Design 7384



- Order details standard Design 7384
Fire and smoke-stop door* (E) Design 7584
- Knob furniture
- Lever handle furniture
- Security class
 - S1 11 mm
 - S1 15 mm
 - S2 11 mm
 - S2 15 mm
 - S2 - ZA 8 - 16 mm
 - S3 - ZA 8 - 16 mm
 - S4 - ZA 8 - 16 mm
- Handing of door
 - DIN r.h., inward opening
 - DIN l.h., inward opening
- to suit door thickness _____ mm
- Spacing
 - 72 mm 92 mm
 - 72 mm
- Spindle
 - 8 mm 10 mm
 - 9 mm
- Material/colour

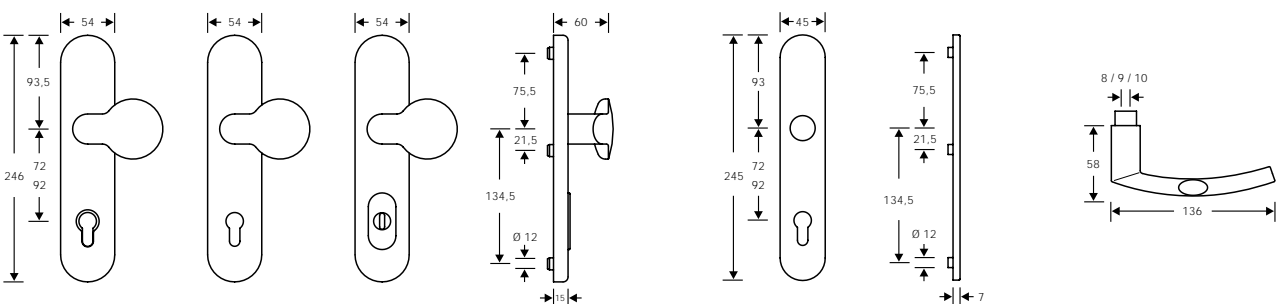
Aluminium	<input type="checkbox"/> 01	<input type="checkbox"/> _____
Alu + colour	<input type="checkbox"/> white	<input type="checkbox"/> _____
Stainless steel	<input type="checkbox"/> 6204	<input type="checkbox"/> _____

4



Order quantity _____ sets

* acc. to German DIN standard



Security fitting
Design 7385



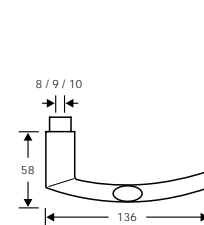
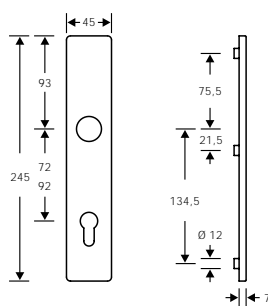
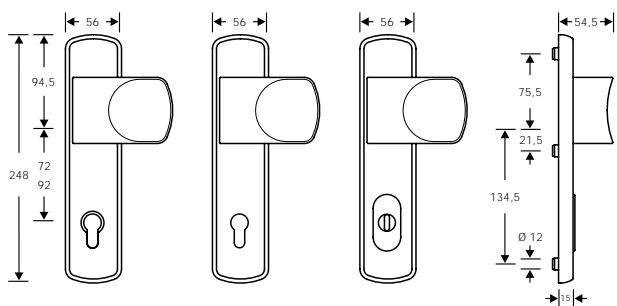
- Order details standard Design 7385
Fire and smoke-stop door* (F) **Design 7585 (only Stainless steel)**
- Knob furniture
 Lever handle furniture
- Security class S1 11 mm
 S1 15 mm
 S2 11 mm
 S2 15 mm
 S2 - ZA 8 - 16 mm
 S3 - ZA 8 - 16 mm
 S4 - ZA 8 - 16 mm
- Handing of door DIN r.h., inward opening
 DIN l.h., inward opening
- to suit door thickness _____ mm
- Spacing 72 mm 92 mm
 72 mm
- Spindle 8 mm 10 mm
 9 mm
- Material/colour Aluminium 01 _____
 Alu + colour white _____
 Stainless steel 6204 _____

4



Order quantity _____ sets

* acc. to German DIN standard



Security fitting Design 7386



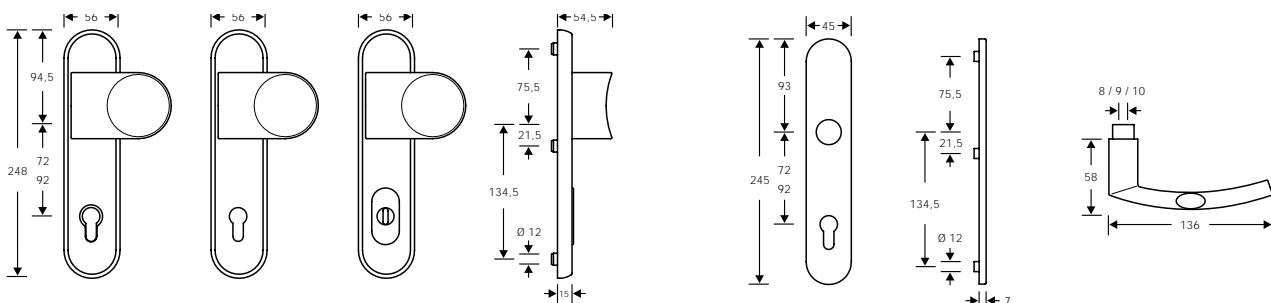
- | | | | | | | | | | | |
|-------------------------------|--|--------------------------------|-----------------------------|--------------------------------|--------------|--------------------------------|--------------------------------|-----------------|-------------------------------|--------------------------------|
| Order details standard | <input type="checkbox"/> Design 7386 | | | | | | | | | |
| Fire and smoke-stop door* (E) | <input type="checkbox"/> Design 7586 (only Stainless steel) | | | | | | | | | |
| Knob furniture | <input type="checkbox"/> | | | | | | | | | |
| Lever handle furniture | <input type="checkbox"/> | | | | | | | | | |
| Security class | <input type="checkbox"/> S1 11 mm
<input type="checkbox"/> S1 15 mm
<input type="checkbox"/> S2 11 mm
<input type="checkbox"/> S2 15 mm
<input type="checkbox"/> S2 - ZA 8 - 16 mm
<input type="checkbox"/> S3 - ZA 8 - 16 mm
<input type="checkbox"/> S4 - ZA 8 - 16 mm | | | | | | | | | |
| Handing of door | <input type="checkbox"/> DIN r.h., inward opening
<input type="checkbox"/> DIN l.h., inward opening | | | | | | | | | |
| to suit door thickness | _____ mm | | | | | | | | | |
| Spacing | <input type="checkbox"/> 72 mm <input type="checkbox"/> 92 mm
<input checked="" type="checkbox"/> 72 mm | | | | | | | | | |
| Spindle | <input type="checkbox"/> 8 mm <input type="checkbox"/> 10 mm
<input checked="" type="checkbox"/> 9 mm | | | | | | | | | |
| Material/colour | <table border="0"> <tr> <td>Aluminium</td> <td><input type="checkbox"/> 01</td> <td><input type="checkbox"/> _____</td> </tr> <tr> <td>Alu + colour</td> <td><input type="checkbox"/> white</td> <td><input type="checkbox"/> _____</td> </tr> <tr> <td>Stainless steel</td> <td><input type="checkbox"/> 6204</td> <td><input type="checkbox"/> _____</td> </tr> </table> | Aluminium | <input type="checkbox"/> 01 | <input type="checkbox"/> _____ | Alu + colour | <input type="checkbox"/> white | <input type="checkbox"/> _____ | Stainless steel | <input type="checkbox"/> 6204 | <input type="checkbox"/> _____ |
| Aluminium | <input type="checkbox"/> 01 | <input type="checkbox"/> _____ | | | | | | | | |
| Alu + colour | <input type="checkbox"/> white | <input type="checkbox"/> _____ | | | | | | | | |
| Stainless steel | <input type="checkbox"/> 6204 | <input type="checkbox"/> _____ | | | | | | | | |

4



Order quantity _____ sets

* acc. to German DIN standard



Security fitting Design 7387

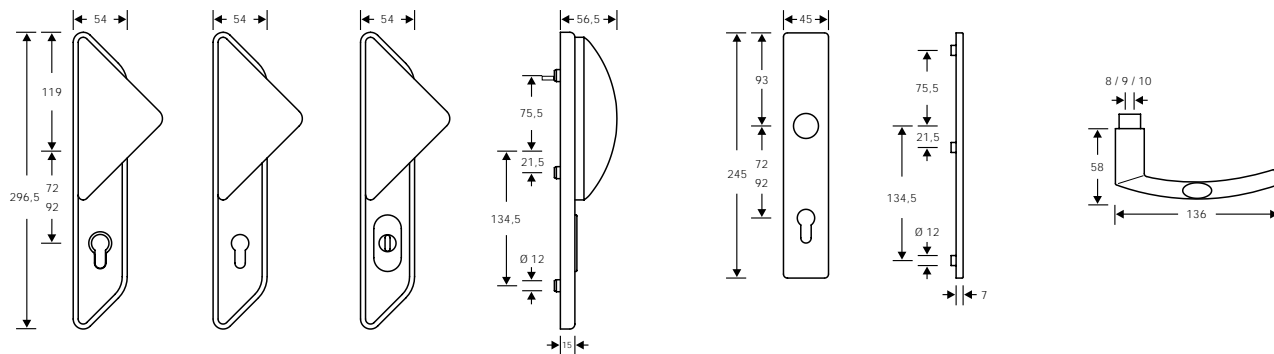


- Order details standard Design 7387
Fire and smoke-stop door* (F) Design 7587 (only Stainless steel)
- Knob furniture
 Lever handle furniture
- Security class S1 11 mm
 S1 15 mm
 S2 11 mm
 S2 15 mm
 S2 - ZA 8 - 16 mm
 S3 - ZA 8 - 16 mm
 S4 - ZA 8 - 16 mm
- Handing of door DIN r.h., inward opening
 DIN l.h. inward opening
- to suit door thickness _____ mm
- Spacing 72 mm 92 mm
 72 mm
- Spindle 8 mm 10 mm
 9 mm
- Material/colour Aluminium 01 _____
 Alu + colour white _____
 Stainless steel 6204 _____



Order quantity _____ sets

* acc. to German DIN standard



Security fitting Design 7388



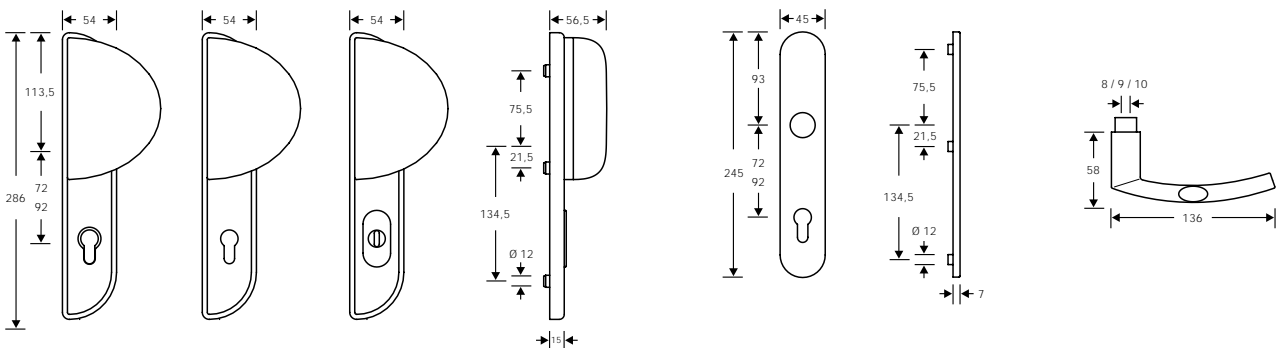
- | | | | | | | | | | | |
|-------------------------------|--|--------------------------------|-----------------------------|--------------------------------|--------------|--------------------------------|--------------------------------|-----------------|-------------------------------|--------------------------------|
| Order details standard | <input type="checkbox"/> Design 7388 | | | | | | | | | |
| Fire and smoke-stop door* (E) | <input type="checkbox"/> Design 7588 (only Stainless steel) | | | | | | | | | |
| Knob furniture | <input type="checkbox"/> | | | | | | | | | |
| Lever handle furniture | <input type="checkbox"/> | | | | | | | | | |
| Security class | <input type="checkbox"/> S1 11 mm
<input type="checkbox"/> S1 15 mm
<input type="checkbox"/> S2 11 mm
<input type="checkbox"/> S2 15 mm
<input type="checkbox"/> S2 - ZA 8 - 16 mm
<input type="checkbox"/> S3 - ZA 8 - 16 mm
<input type="checkbox"/> S4 - ZA 8 - 16 mm | | | | | | | | | |
| Handing of door | <input type="checkbox"/> DIN r.h., inward opening
<input type="checkbox"/> DIN l.h., inward opening | | | | | | | | | |
| to suit door thickness | _____ mm | | | | | | | | | |
| Spacing | <input type="checkbox"/> 72 mm <input type="checkbox"/> 92 mm
<input checked="" type="checkbox"/> 72 mm | | | | | | | | | |
| Spindle | <input type="checkbox"/> 8 mm <input type="checkbox"/> 10 mm
<input checked="" type="checkbox"/> 9 mm | | | | | | | | | |
| Material/colour | <table border="0"> <tr> <td>Aluminium</td> <td><input type="checkbox"/> 01</td> <td><input type="checkbox"/> _____</td> </tr> <tr> <td>Alu + colour</td> <td><input type="checkbox"/> white</td> <td><input type="checkbox"/> _____</td> </tr> <tr> <td>Stainless steel</td> <td><input type="checkbox"/> 6204</td> <td><input type="checkbox"/> _____</td> </tr> </table> | Aluminium | <input type="checkbox"/> 01 | <input type="checkbox"/> _____ | Alu + colour | <input type="checkbox"/> white | <input type="checkbox"/> _____ | Stainless steel | <input type="checkbox"/> 6204 | <input type="checkbox"/> _____ |
| Aluminium | <input type="checkbox"/> 01 | <input type="checkbox"/> _____ | | | | | | | | |
| Alu + colour | <input type="checkbox"/> white | <input type="checkbox"/> _____ | | | | | | | | |
| Stainless steel | <input type="checkbox"/> 6204 | <input type="checkbox"/> _____ | | | | | | | | |

4



Order quantity _____ sets

* acc. to German DIN standard



Security fitting
Design 7374



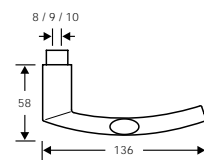
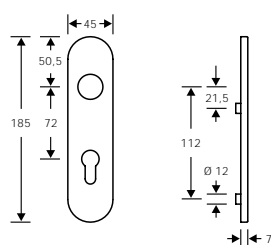
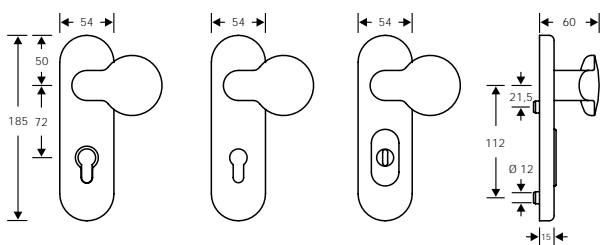
- | | |
|-------------------------------|--|
| Order details standard | <input type="checkbox"/> Design 7374 |
| Fire and smoke-stop door* (F) | <input type="checkbox"/> Design 7574 |
| Knob furniture | <input type="checkbox"/> |
| Lever handle furniture | <input type="checkbox"/> |
| Security class | <input type="checkbox"/> S2 11 mm |
| | <input type="checkbox"/> S2 15 mm |
| | <input type="checkbox"/> S2 - ZA 8 - 16 mm |
| Handing of door | <input type="checkbox"/> DIN r.h., inward opening |
| | <input type="checkbox"/> DIN l.h., inward opening |
| to suit door thickness | _____ mm |
| Spacing | <input type="checkbox"/> 72 mm |
| Spindle | <input type="checkbox"/> 8 mm <input type="checkbox"/> 9 mm |
| Material/colour | Aluminium <input type="checkbox"/> 01 <input type="checkbox"/> _____ |
| | Alu + colour <input type="checkbox"/> white <input type="checkbox"/> _____ |
| | Stainless steel <input type="checkbox"/> 6204 <input type="checkbox"/> _____ |

4

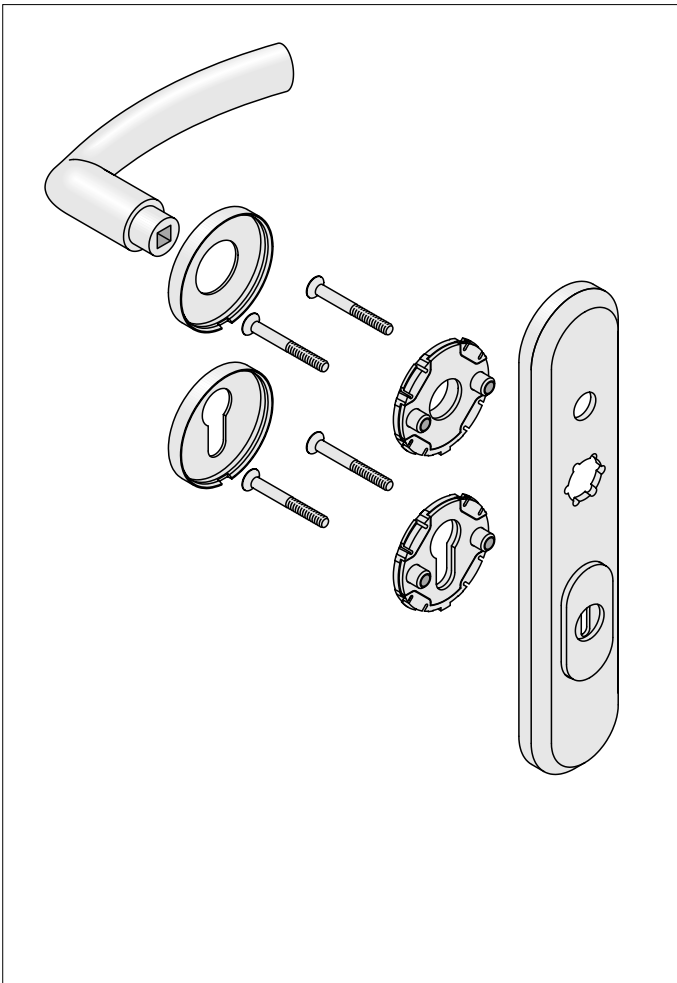


Order quantity _____ sets

* acc. to German DIN standard



Security fitting + Internal roses



Order details standard

- Design 7381
- Design 7382
- Design 7383
- Design 7384
- Design 7385
- Design 7386
- Design 7387
- Design 7388
- Design 7374

Order details Fire and smoke-stop door* (F)

- Design 7581 (only Stainless steel)
- Design 7582 (only Stainless steel)
- Design 7583 (only Stainless steel)
- Design 7584
- Design 7585 (only Stainless steel)
- Design 7586 (only Stainless steel)
- Design 7587 (only Stainless steel)
- Design 7588 (only Stainless steel)
- Design 7574

Knob furniture
Lever handle furniture

Security class S2 11 mm
 S2 15 mm
 S2 - ZA 8 - 16 mm

Handing of door DIN r.h., inward opening
 DIN l.h., inward opening

to suit door thickness _____ mm

Spacing 72 mm 92 mm
(except 7374/7574)
 72 mm

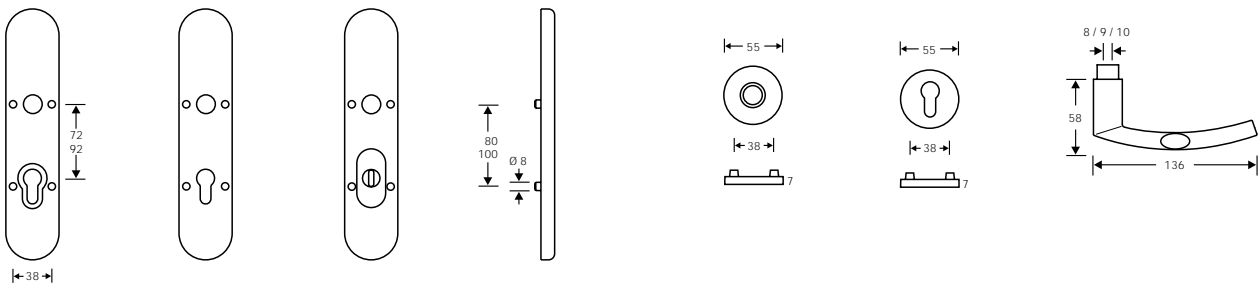
Spindle 8 mm 10 mm
(except 7374)
 9 mm

Material/colour Aluminium 01 _____
Alu + colour white _____
Stainless steel 6204 _____

Order quantity _____ sets

* acc. to German DIN standard

4



Security fitting

to suit locks for framed doors
centres 92 mm



Lever handle furniture
for framed doors

7330 30 Outer backplate
14 mm
PZ 92
8 mm □-spindle

Aluminium
Stainless steel
Alu + colour

Lever handle furniture
for framed fire doors*



7530 30 Outer backplate
14 mm
PZ 92
9 mm □-spindle



Knob furniture
for framed doors

7330 31 Knob backplate
14 mm
PZ 92
8 mm □-spindle

Aluminium
Stainless steel
Alu + colour

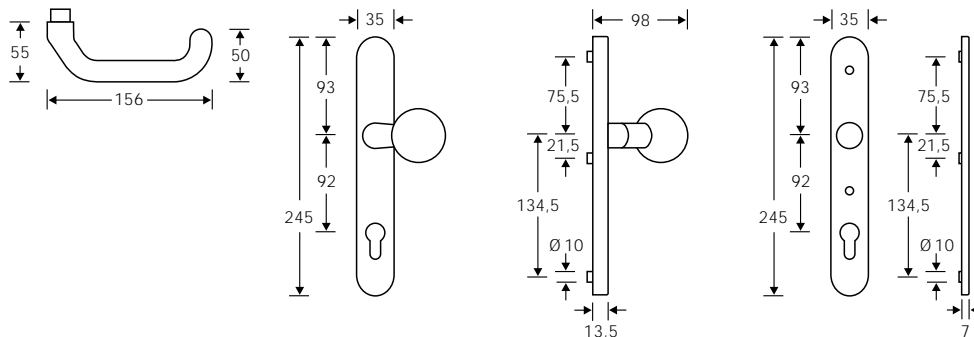
Knob furniture
for framed fire doors*



7530 31 Knob backplate
14 mm
PZ 92
9 mm □-spindle

4

* acc. to German DIN standard



Security fitting

to suit locks for framed doors
centres 92 mm



Lever handle furniture
for framed doors
suitable for cylinder projec-
tions from 8 to 13 mm

Aluminium
Stainless steel
Alu + colour

7331 30 Outer backplate
14 mm
PZ 92
8 mm □-spindle

Lever handle furniture
for framed fire doors*
suitable for cylinder projec-
tions from 8 to 13 mm



7531 30 Outer backplate
14 mm
PZ 92
9 mm □-spindle



Knob furniture
for framed doors
suitable for cylinder projec-
tions from 8 to 13 mm

Aluminium
Stainless steel
Alu + colour

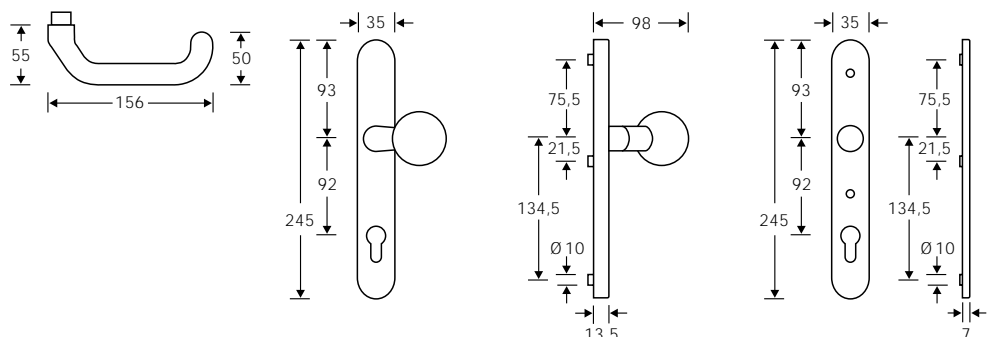
7331 31 Knob backplate
14 mm
PZ 92
8 mm □-spindle

Knob furniture
for framed fire doors*
suitable for cylinder projec-
tions from 8 to 13 mm

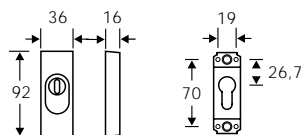


7531 31 Knob backplate
14 mm
PZ 92
9 mm □-spindle

* acc. to German DIN standard



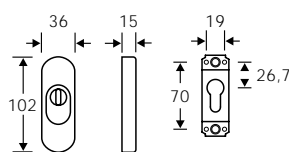
Protection roses



3244

Aluminium
Alu + colour

Screw hole - Ø 3.2 mm

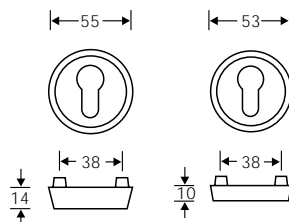
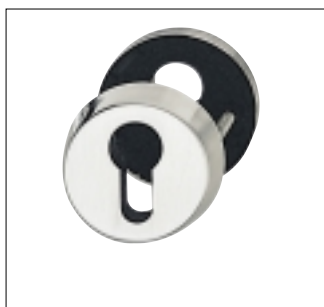


3246

Aluminium
Stainless steel
Brass
Alu + colour

Screw hole - Ø 3.2 mm

4



7391

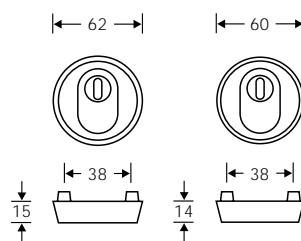
7392

7391

7392

Aluminium
Stainless steel
Brass
Alu + colour

Counter rose 1735 50



Stainless steel
Brass

Aluminium
Alu + colour

7393

Aluminium
Stainless steel
Brass
Alu + colour

Suitable for cylinder projections from 8 to 15 mm.

Counter rose 1735 50

Integrated safety engineering demands that the external dimensions of an armoured rose be 11 or 16 mm greater than its fixing centres. In particular, this needs to be borne in mind when ordering a mix of hardware.

Protection roses FSB 3244 and 3246 suit cylinder projections from 8 to 15 mm.

Technical information page 295