Lever 1163 in aluminum 0510 finish.
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Getting a grip on architecture: It’s in your hands.

FSB has grown from a manufacturer focused on designing handles that are comfortable to the hand into a company that has taken our “hand culture” and extended the concept of linking architecture to people with all our products. Today we combine our handles (levers and knobs) with high quality locksets for swinging and sliding doors, door pulls for glass, wood and metal doors, hinges, bathroom accessories, and a host of supporting hardware in matching styles and finishes.

A capacity for technological innovation, for reflecting critically upon what we do, and also for delivering at the cultural level is part and parcel of the way we see ourselves. Taking our products made in Germany and integrating with high quality electrified and mechanical locking devices for the North American market is a natural extension of our European heritage. Thus it comes as no surprise that our design solutions set the standard for noted architects here and the world over when the emphasis is on style.

Design for doors, windows – museums

Architecture brands began to emerge during West Germany’s “economic miracle” of the 1950’s. Design and architecture, which had gone into retreat with the closure of the Bauhaus and the turmoil of the war, were now substantively revived. Great names such as Ray and Charles Eames provided inspiration with their functional furniture designs.

The Dane Arne Jacobsen designed classics like the stackable “Series 7” chair and buildings in the spirit of the Bauhaus. Dieter Rams started pulling the (design) strings at Braun and authored products whose styling has now become the blueprint for products by a Californian company with an apple in its logo.

The debate about “good form” was joined by FSB too, decisively so in the decade between 1953 and 1963. Johannes Potente created his seminal molded-to-the-hand style that is still applicable today. Inspired by Potente, Ott Aicher created his “Four-Point Guide to Good Grip” which is still applicable today. Specialists and the general public caught on to Johannes Potente’s unsung industrial design in a big way after his death, when his work joined important collections of models such as the permanent exhibition at the Museum of Modern Art in New York.

At the same time as steadily growing our design excellence, we have never ceased refining our manufacturing processes either: an ongoing policy of modernizing and optimizing production technologies and routines has colluded with our predilection for “feisty” materials like fine-grade steel, aluminium, brass and bronze to ensure our products last far longer than ought to be to our liking from a business economics point of view.
Publishers with a sideline in door handles

We again took our future into our own hands in the 1980’s. Under the intellectual guidance of designer Otl Aicher, we subjected our activities to critical analysis and in the process came up with a series of guiding principles that are still valid today. A fundamentally new design culture was born that, as well as addressing itself to the company’s origins and tradition, is also rooted in the cultural history of handles in particular and the concept of holding things in general.

Mr. Aicher devised his “Four-Point Guide to Good Grip, for us, which states that any good handle will feature a thumb rest, a forefinger furrow, support for the palm, and sufficient gripping bulk. As an outcrop of the process of critical analysis and re-orientation was the edition of books that now are part of the standard repertoire of some college design programs.

Names wanted (but not for dropping)

Our legendary Door Handles Workshop held in 1986 at our facility in Brakel, Germany was attended by celebrities such as Mario Botta, Peter Eisenman, Hans Hollein, Alessandro Mendini, and Dieter Rams sent out quite a shock wave.

Even those who had previously managed to grasp the world without FSB were soon cognizant with the workshop findings. Overnight, a product that had long been considered of little interest was turned into a design theme by one of the first “name design” projects. Noted architects and designers now started to apply lock designs to support their creative visions.

It all started with cabinet fittings

FSB was originally located not in B for Brakel but in Iserlohn. This is where Franz Schneider set up shop in 1881 as a maker of antique-style cabinet fittings and sober devotional items in brass. Both were exceedingly modern at the time - and our founder was good at catering to prevailing trends: by the turn of the century his product offering already filled a handy catalogue. 1909 saw the company’s domicile move from a provincial town in the Sauerland to one in eastern Westphalia. Frank Schneider promptly added B for Brakel to his initials and the proud FSB brand was born. Then as now, a key focus of its trade concerned classic hardware for doors and windows.

Otl Aicher “rewarded” us for our analytic probings by producing the stylized-handle logo so popular amongst handle culture enthusiasts today for FSB. It was inspired by a handle as unfussy as it was clever which the philosopher Ludwig Wittgenstein designed for the house built between 1926 and 1928 in Vienna for his sister.

“A rod only becomes a lever through the nature of its use”, is how Wittgenstein summed up the simplicity underpinning his design. His handle was something of an ideal for Otl Aicher. He viewed it not as an optimum moulded-to-the-hand design but as a handle for all conceivable forms of operation – including with one’s little finger. It is the sum of all handles, their quintessence. A fitting logo for us as we see it.
Terms and Conditions

Prices
Please note that all list prices given in this guide are in US dollars.

Freight
F.O.B. Berlin, Connecticut

Terms
Payment in full required within 30 days.

Acknowledgements
When FSB North America receives an order an “Order Acknowledgment” is issued to the customer which details the order and gives the expected shipment date. Please check the items and pricing on the acknowledgement thoroughly to ensure accuracy.

Returns
Provided goods are in saleable condition, FSB North America accepts returns of stock items for a restocking charge of 45% with a $75.00 minimum.

Please contact FSB North America in writing for a “Return Goods Authorization” (RGA). Goods are only credited if a customer has been issued a RGA and the goods are received in saleable condition. Once the goods are received, FSB North America will issue a credit memo, which can be applied to your next payment. If the items are not returned within 45 days, the RGA is voided. Custom special order products are not returnable.

Order Cancellations
FSB will do our best to accommodate order changes and or cancellations prior to production. Orders in production cannot be modified or cancelled.

Minimum Order Size
There is a $75.00 minimum order requirement. Orders for parts will be allowed below the minimum order size but will be invoiced at full list price. No discount will apply.

Standard Discount
Standard discount is 50% off current published list price. All parts are sold at standard discount regardless of customer buying program.
Product Warranties and Liability

1. All goods sold are warranted to be free from defects in material and workmanship, the foregoing comprise seller’s sole and entire warranty provided:

   a) The Company has been notified within the time frame from the purchase date from FSB as listed under “Term” in the chart below, and been given the opportunity of inspection by return of any alleged defective Product to the Company, free and clear of all liens and encumbrances, transportation prepaid, accompanied by the statement of defects and proof of purchase: and

   b) The Product has not been modified, abused, misused, or improperly installed, maintained and/or repaired during such period. All other warranties, written or oral, expressed or implied, and including but not limited to warranties of merchantability or fitness for intended purpose, are expressly excluded.

2. Seller’s sole obligation under these warranties, during the period after date of manufacture as listed below, shall be to issue credit, repair or replace any item or part thereof, which is proved to be other than as warranted. Seller shall have the sole right to determine whether such parts shall be repaired or replaced or whether credit shall be issued. No allowances shall be made for any labor charges for replacement of parts, adjustments or repairs, or any other work. In no event shall seller be liable for collateral or consequential damages.

3. We do not warrant against defects caused by improper installation nor against the consequences of uses for which our products were not designed, especially if an FSB lever handle is used with a non-FSB component part such as a mortise lock or tubular latch other than recommended. Our warranty shall only apply if, and to the extent that the purchaser can show that the FSB Product itself was defective and the defect was not related to alteration or to adverse effects of such use with a non-FSB Product or components.

4. If goods are claimed to be other than as warranted, seller, upon notice promptly given, will either examine the goods at the buyer’s site or issue shipping instructions for return to seller (transportation costs prepaid by buyer). These warranties shall not extend to any goods or parts thereof which have been subjected to misuse or neglect, damage by accident, rendered defective by reason of improper installation or by the performance of repairs, modifications or attachment to other products outside of seller’s plant.

   Care/Cleaning

   Stainless steel needs to be cleaned for aesthetic considerations and to preserve corrosion resistance. Stainless steel is protected from corrosion by a thin layer of chromium oxide. Oxygen from the atmosphere combines with the chromium in the stainless steel to form this passive chromium oxide film that protects from further corrosion. Any contamination of the surface by dirt, or other material, hinders this passivation process and traps corrosive agents, reducing corrosion protection. Thus, some form of routine cleaning is necessary to preserve the appearance and integrity of the surface. Stainless steel surfaces thrive with frequent cleaning because there is no surface coating to wear off. A soft cloth and clean water should always be the first choice for mild stains, loose dirt and soil. For more aggressive cleaning, a small amount of vinegar can be added to warm water. A final rinse with clean water and a dry wipe will complete the process and eliminate the possibility of water spots. Cleaning with solutions containing chlorine, such as acetone, methyl alcohol, and mineral spirits must be avoided.

   Brass and Bronze are both copper alloys (Brass is copper and zinc, Bronze is copper and tin) and when exposed to air and moisture, they will develop a greenish layer of build-up on its surface called patina. While this darkened finish does add character to the brass and bronze, some consider it unsightly, and would prefer their bronze to look clean and shiny. To clean the patina, rinse the brass or bronze with warm water and dry thoroughly to remove dust and particles. Mix two tablespoons of baking soda and a teaspoon of lemon juice until a soft paste forms. Wearing rubber gloves apply the paste with a polishing cloth and rub in small circular motions and repeat until the desired effect is reached. Let sit for 20 to 30 minutes and then rinse with thoroughly with warm water to remove the paste. Buff dry with clean towel. If patina still remains repeat process. Cleaning with solutions containing chlorine, such as acetone, methyl alcohol, and mineral spirits must be avoided.

   Aluminum is the earth’s most abundant metal element and is used for a wide array of applications ranging from aircraft skins to baseball bats. Anodizing provides aluminum a very durable, corrosion resistant, and long lasting finish. To clean, squeeze one or two drops of mild dish washing detergent into a cup of water. Apply the soapy water to a sponge and scrub the aluminum surface vigorously. Rinse the anodized aluminum surface with clean water and then dry it with towels. Cleaning with solutions containing harsh acidic or alkaline cleaners as they may destroy your finish and should be avoided.

<table>
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<tr>
<th>Product Description</th>
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<td>SML/SMT, NML/NMT Mechanical Mortise Locks</td>
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<td>EML Mechanical Mortise Locks</td>
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<tr>
<td>HLL/HLT, HDD/HDT, KDD/KDT Mechanical Tubular Latches and Dead Bolts</td>
<td>3 years</td>
</tr>
<tr>
<td>SDL, SPL, SLU/SLT Mechanical Sliding Door Locks</td>
<td>5 years</td>
</tr>
<tr>
<td>ESL, EPL, ESN Mechanical European Sliding Door Locks</td>
<td>3 years</td>
</tr>
<tr>
<td>EGS, EGR, EGC Mechanical European Glass Door Locks</td>
<td>3 years</td>
</tr>
<tr>
<td>Electrified Locks All Electrified Locks and Components</td>
<td>2 years</td>
</tr>
<tr>
<td>Trim, Pulls, Hinges, and Accessories</td>
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Ordering Guidelines

To place an order direct with FSB North America please email orderdesk@fsbna.com. You can also watch a video on how to create an FSB Ordering String on our YouTube Channel. Watch the video by clicking on this link or typing this into your web-browser: bit.ly/FSB-String

When ordering locksets such as an SML you will use a numbering string as shown in our example below.

**Example: Standard Mortise Lock – SML**

```
SML-E-1147-RA-SI-6204-234-M1-RH-134
```

When adding options, use the **bold** codes found in the options area at the end of each pricing section as a suffix.

Using the same example as above, we have added the “Less Cylinder” option designated as LC and listed as a suffix to our standard ordering string below.

```
SML-E-1147-RA-SI-6204-234-M1-RH-134-LC
```

A more complex example may be as follows:

**SML-JEU-1147-RA-6204-234-M1-RH-134-12V-RX-LC**

In this example we have ordered an Electrified Storeroom, Fail Secure function lock signified by added four options, which are 12V for the electrified voltage (12 or 24 volt are available and must be specified), RX for a Request to Exit switch, and LC for Less Cylinder. The order of your options is not important.
FSB Hardware is available in twenty-three (23) finishes from our three series of door furniture: Premium, Elements and Transitions.

**Premium Series** offers natural stainless steel and bronze finishes. **Elements Series** utilizes aluminum and our state-of-the-art anodizing capability which allows us to offer an assortment of rich, yet rugged colors. We also offer black or white powder coated colors standard. **Transitions Series** comes with both plated and natural finishes on forged brass.

We invite you to contact us if you have special color requirements.

Our finishes are listed below showing the base material and the color code for natural, anodized, and plated finishes. On the following pages the finish illustrations are close approximations of the actual finish. FSB offers physical finish samples should you require this for your decision-making process.

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<tr>
<td>Stainless Steel</td>
<td>6204 Satin (630) [US32D]</td>
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<td></td>
<td>6205 Polished (629) [US32]</td>
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<tr>
<td>Bronze</td>
<td>7305 Polished, Waxed (611) [US9]</td>
</tr>
<tr>
<td></td>
<td>7615 Aged, Waxed (615)</td>
</tr>
<tr>
<td></td>
<td>7625 Dark Oxidized, Waxed (613) [US10B]</td>
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<tr>
<td><strong>Elements</strong></td>
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<tr>
<td>Aluminum Anodized</td>
<td>0105 Natural Color (628)</td>
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<td></td>
<td>0205 Champagne Silver Color</td>
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<tr>
<td></td>
<td>0410 Bronze Color</td>
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<td></td>
<td>0510 Medium Bronze Color</td>
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<tr>
<td></td>
<td>0710 Dark Bronze Color (710)</td>
</tr>
<tr>
<td></td>
<td>0810 Black Color (711)</td>
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<tr>
<td>Aluminum Powder Coated</td>
<td>8120 Black (671)</td>
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<td></td>
<td>8220 White (714)</td>
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<td><strong>Transitions</strong></td>
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<td>014 Polished Nickel (618) [US14]</td>
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<td>015 Satin Nickel (619) [US15]</td>
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<td>026 Polished Chrome (625) [US26]</td>
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<tr>
<td>Plated</td>
<td>003 Polished Brass (605) [US3]</td>
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<tr>
<td>Natural</td>
<td>004 Satin Brass (606) [US4]</td>
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<td>10B Satin Brass Dark Oxidized (607)</td>
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<td>4205 Polished, Lacquered (605) [US3]</td>
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<tr>
<td>Bronze</td>
<td>4305 Polished, Waxed [US3]</td>
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<tr>
<td>Aluminum</td>
<td>4404 Oxidized, Waxed (607)</td>
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<tr>
<td>Brass</td>
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Materials & Finishes Overview

**Premium**

- **Stainless Steel**

  - 6204 Satin (630) [US32D]
  - 6205 Polished (629) [US32]

**Bronze**

- 7305 Polished, Waxed (611) [US9]
- 7615 Aged, Waxed (615)
- 7625 Dark Oxidized, Waxed (613) [US10B]

**Elements**

- **Aluminum Anodized**

  - 0105 Natural Color (628)
  - 0205 Champagne Silver Color

  - 0410 Bronze Color
  - 0510 Medium Bronze Color
  - 0710 Dark Bronze Color
  - 0810 Black Color

- **Aluminum Powder Coated**

  - 8120 Black (671)
  - 8220 White (714)
Transitions

**Plated Brass Finishes**

- **014** Polished Nickel (618) [US14]
- **015** Satin Nickel (619) [US15]
- **026** Polished Chrome (625) [US26]
- **03P** Polished Brass, PVD (605) [US3]

**Natural Brass Finishes**

- **003** Polished Brass (605) [US3]
- **004** Satin Brass (606) [US4]
- **10B** Satin Brass Dark Oxidized (607)

**Door Pulls and Accessories**

**Stainless Steel**

- **Bronze**

**Aluminum**

**Brass**

- **4205** Polished, Lacquered (605) [US3]
- **4305** Polished, Waxed [US3]
- **4404** Oxidized, Waxed (607)
Materials & Finishes

Premium

Stainless Steel

- 6204
  - Satin
  - (630) [US32D]

- 6205
  - Polished
  - (629) [US32]
Premium

Bronze

- **7305**
  Polished, Waxed
  (611) [US9]

- **7615**
  Aged, Waxed
  (615)

- **7625**
  Dark Oxidized, Waxed
  (613) [US10B]
Materials & Finishes

Elements

Aluminum Anodized

- **0410**
  Bronze Color

- **0510**
  Medium Bronze Color

- **0710**
  Dark Bronze Color
  (710)

- **0810**
  Black Color
  (711)
Elements

- Aluminum Anodized
  - 0105 Natural Color (628)
  - 0205 Champagne Silver Color

- Powder Coated
  - 8120 Black (671)
  - 8220 White (714)
Transitions

Plated Brass Finishes

014
Polished Nickel
(618) [US14]

015
Satin Nickel
(619) [US15]

026
Polished Chrome
(625) [US26]

03P
Polished Brass, PVD
(605) [US3]
Transitions

Natural Brass Finishes

- **003**
  Polished Brass
  (605) (US3)

- **004**
  Satin Brass
  (606) (US4)

- **10B**
  Satin Brass Dark Oxidized
  (607)
FSB is known for the cool clean lines of our product designs. Using stainless steel and aluminum we have become the “go-to” for modern and contemporary projects. As you browse this catalog/pricework, our website, and our literature you will quickly realize that our greatest selection of products come in stainless steel and aluminum. But don’t box FSB into one corner of your creative mind.

As new materials are used to achieve new design elements in building architecture, FSB has expanded its use of bronze, brass, and aluminum to offer more warm colors, finishes, and textures while staying true our German design influence. The preceding and following pages attempt to give you a better understanding and feel for the width and depth of FSB.

Contact us for specific design needs.

**Stainless Steel**

- **1078**
  There are 41 levers available in stainless steel. See page 21 for the full overview of levers.

- **23 0803**
  There are 8 fixed knobs available in stainless steel. See page 293 for the full overview of fixed knobs.

- **66 6540**
  There are 51 pulls available in stainless steel. See page 293 for the full overview of door Pulls.

**Aluminum**

- **1107**
  There are 50 levers available in aluminum. See page 21 for the full overview of levers.

- **23 0844**
  There are 8 fixed knobs available in aluminum. See page 293 for the full overview of fixed knobs.

- **66 6643**
  There are 18 pulls available in aluminum. See page 293 for the full overview of door Pulls.

**FSB Material Identifier**

Next to each product number you will find a key of colored boxes detailing which base material that product is available in. For example, if a product in available in aluminum you will find a grey colored box to the right of the product number (■). After determining the base metal you can then choose which finish fits your design needs and there are 8 different standard aluminum finishes to choose from in that base metal.

- ■ Stainless Steel
- Bronze
- Aluminum
- Brass
Bronze Collection

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1015  Page 28
1016  Page 29
1020  Page 30
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Bronze Trim Overview

RA - 55mm  RD - 65mm  RM - 55mm  RF  RF  ED

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FSB North America Materials & Finishes
Introduction Lever Handles

In this manual, FSB presents its three series of door furniture. The Premium Series is our naturally finished stainless steel and bronze designs, Transitions Series which is our forged brass value program, and the Elements Series which is comprised of our aluminum anodized finishes.

These lever and knob designs, as well as all complementary trim can be used with our wide selection of American and European locking systems. Many designs also have complementary door pulls that are shown where available.

The material number for stainless steel – similar to ASTM 304 – is: 1.4301, based on DIN 17440.

The material numbers for aluminum – similar to ASTM B179-75 – are:
- AlMg3: 3.3541.02
- AlMg1: 3.3315
- AlMgSi0.5: 3.3206,
all based on DIN 1725.

FSB would like to point out that aluminum is the most recyclable material currently being used to manufacture door hardware.

Symbol explanations

- ADA compliant products

All FSB lever handles are manufactured in compliance with the Americans with Disabilities Act (ADA).

- Return Compliant products

Selected FSB lever handles as indicated are designed in compliance with local codes requiring the lever to return to within one-half inch of the door face (i.e. California Title 24).
## Lever Overview

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Levers
Premium Elements Transitions

Materials and Finishes
- Stainless Steel: 6204 (630), 6205 (629)
- Bronze: 7305 (611), 7615 (615), 7625 (613)

Elements
- Aluminum: 0105 (628), 0205, 0410, 0510, 0710 (710), 0810 (711)

Transitions
- Brass: 014 (618), 015 (619), 026 (625), 03P (605)
- Plated Brass: 003 (605), 004 (606), 10B (607)
- Natural Brass: 003 (605), 004 (606), 10B (607)
Architect Peter Bastian wanted his handle to be a graceful presence on tall, large doors as well as representing an almost doctrinaire reduction of the geometry. The result is a very accurately made door handle with a square cross-section that fits comfortably into your hand.
Door handle 1002 is in no way inferior to the original model 1001 designed by Peter Bastian. The only addition is a return, which ensures design consistency.
The FSB 1003 door handle, which takes the shape of a slim door, is a model for real aficionados. Johannes Potente took up the design concept and implemented it in aluminium and stainless steel.
David Chipperfield’s design for the FSB 1004 bears the hallmark of the pioneers of modernism. It is based on a clear formal concept which meets all of the functional requirements while giving expression to his formal idea in both public and private spheres.
There are a lot of wedge-shaped door handles. Almost every manufacturer offers its own version of this basic shape. The original design for this door handle was most probably produced by Professor Max Burchartz. The FSB 1005 version by Johannes Potente is characterized by its slender proportions.

### Premium Materials and Finishes
- Stainless Steel
- 6204 (630)
- 6205 (629)

### Elements
- Aluminum
- 0105 (628)
- 0205
- 0410
- 0510
- 0710 (710)
- 0810 (711)
- Powder Coated

### Transitions
We presume that the basic shape of our FSB 1015 model was conceived in the 1930s by a company called Wehag. This version by Johannes Potente has a very clear handle shape which creates a lot of interest, especially in the Netherlands.
In 1990, FSB introduced a door handle to the market which originated in the 1920s. The FSB 1076 model has since become the most-copied door handle of the last century. The version shown here, FSB 1016, is a more closed-off counterpart to it.
The FSB 1020 model is the clearest embodiment of the “good form” of the 1950s. This is a handle with a flourish in the organic flow of its moulded-to-the-hand design and it looks symmetrical without actually being so. FSB 1020 is one of four models designed by FSB Designer Johannes Potente which have been added to MoMA’s permanent collection.
Catalogue No. 6 published by the S. A. Loevy bronzeware factory in the 1930s includes a variety of door fittings by Rachlis, Grenander, Behrens, Wagenfeld and Paul in which a round shank is combined with a flat grip section.

![Lever Handle 1021](image)

### Premium

- Stainless Steel
- 6204 (630)
- 6205 (629)

### Elements

- Aluminum
- 0105 (628)
- 0205
- 0410
- 0510
- 0710 (710)
- 0810 (711)
- Powder Coated
In the 1950s, the Swiss architect, sculptor and designer Max Bill got together with Ernst Moeckel to fashion a door handle that made design history as the “Ulm handle”. From this, Johannes Potente created the 1023 model, which has been an alternative to common U-shaped models ever since.
The design parameters of the FSB 1025 are plain to see. A straight grip is joined to the pivotal point on the shank. The handle has a droplet-shaped cross-section. With its no-frills looks, this is a design that offers up its services humbly. The FSB 1025 is brought to life by the way it seems to capture the light along its edges.
The FSB 1027 model is a stock item in the trade. It is rather disparagingly referred to as the “shoe horn”. The underlying design is from Professor Max Burchartz. The handle lies extremely snug in your hand and unobtrusiveness is its watchword. The FSB version of the “shoe horn” is by Johannes Potente.
The FSB 1028 is a variation on the parameters used in the FSB 1025, without neglecting the ergonomic qualities. This is a design that both pleases the eye and is pleasant to touch. The undulating handle looks great and it nestles into your hand.

Design: Hartmut Weise

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It is not only the return that makes this version of door handle 1035 by Heike Falkenberg different from the original model. Model 1031 also features an inner steel core, creating a larger cross section and a greater grip area.

Materials and Finishes
- Stainless Steel
- 6204 (630)
- 6205 (629)

Premium

Elements
- Aluminum
- 0105 (628)
- 0205
- 0410
- 0510
- 0710 (710)
- 0810 (711)
- Powder Coated

Transitions

Design: Heike Falkenberg
The FSB 1034 handle was Johannes Potente’s first major design. He produced it in 1952. Once the copyright lapsed, it was imitated by the million throughout the world. It even had to suffer being remodelled in grey plastic in the days before plastic gained some color.
In the autumn of 1996, Düsseldorf-based interior designer Heike Falkenberg asked FSB to recreate an old handle design for a renovation job. Using the sketch she submitted, FSB’s developers milled a prototype from an FSB 1076 handle. This looked so good that we decided to market our gripping idea.

Design: Heike Falkenberg

**Lever Handle 1035**

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66 6540, refer to Pulls
FSB 1045 is based on FSB model 1015, which was conceived in the 1930s by a company called wehag. Given the unceasing use of the FSB 1015 model in commercial buildings, we have added a return variant of this design.

Lever Handle 1045

2 1/8” (54) 19/16” (40)

5 3/16” (132)

**Materials and Finishes**
- Stainless Steel
  - 6204 (630)
  - 6205 (629)
- Bronze
  - 7305 (611)
  - 7615 (613)

**Elements**
- Aluminum
  - 0105 (628)
  - 0205
  - 0410
  - 0510
  - 0710 (710)
  - 0810 (711)
  - Powder Coated
The FSB 1051 handle has come to epitomise FSB. The “Schneider Handle” became Johannes Potente’s supreme creation and a market leader in the 1960s. It is typified by its harmonised parts carefully shaped to the hand. FSB 1051 is one of four models designed by Johannes Potente which were added to MoMA’s permanent collection in the summer of 1998.
In the 1950s, Swiss architect, sculptor and designer Max Bill got together with Ernst Moeckel to fashion a door handle for the new Ulm Design College building that drew on the handles common on railway carriage doors in Switzerland and has made design history as the “Ulm handle”. 1053 is a slightly reworked version of the 1023.
Model FSB 1057 is the work of Munich-based designer Jan Roth. Unimpressed by the handles then on sale he designed a handle of his own for his doors. After the first casting in aluminium, he took the polished parts home with him and fitted them to his doors, which is where they can still be found.
FSB 1058 was Johannes Potente’s favorite model. It is not known why, only two years after designing FSB 1051, his supreme creation, he followed up with this redesign. FSB 1058 is one of four models designed by Johannes Potente which have been added to MoMA’s permanent collection.

Design: Johannes Potente

### Premium
- Stainless Steel: 6204 (630), 6205 (629)
- Bronze: 7305 (611), 7615 (615), 7625 (613)

### Elements
- Aluminum:
  - 0105 (628)
  - 0205
  - 0410
  - 0510
  - 0710 (710)
  - 0810 (711)
- Powder Coated

### Transitions
- Brass:
  - 014 (618)
  - 015 (619)
  - 026 (625)
  - 03P (605)
- Plated Brass:
  - 003 (605)
  - 004 (606)
  - 10B (607)

Lever Handle 1058

Design: Johannes Potente
This is a handle design that became “really famous” during the period of bright colors in the 1970s. For many architects who were schoolchildren at the time this handle epitomizes the architecture of the age.

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Hadi Teherani delivers the function of a cranked lever handle, while averting the danger of a user’s thumb hitting the frame, by shifting the handle’s point of rotation leftwards. The designer’s model 1074 sports a similarly radical return to the door: he simply takes a third of the grip section and attaches it to the same at right angles.
In the 1920s Mr. Mallet-Stevens mitred two sections of cylindrical tubing together: FSB 1076. Mr. Wittgenstein bent a cylindrical brass tube: FSB 1147. Messrs Gropius and Meyer married an angled piece of square section material to a handle bushing: FSB 1102. However, we still don’t know today who it was that picked up a saw and “liberated” FSB 1147 from its hemispherical tip.
The architect Robert Mallet-Stevens (1886 – 1945) was the one who hit upon the idea of cutting a round tube in two and mitring the ends together again at a right angle. His creation is today known as the “Frankfurt Model”. The handle was rediscovered when the Architecture Museum was rebuilt and proceeded to take the market by storm.

![Lever Handle 1076](image)

**Measurements:**
- **Premium and Elements**
  - 2 1/4" (57)
  - 5 3/16" (132)
- **Transitions**
  - 2 1/4" (57)
  - 5 3/16" (132)

**Materials and Finishes**
- **Premium**
  - Stainless Steel: 6204 (630), 6205 (629)
  - Bronze: 7305 (611), 7615 (615), 7625 (613)
- **Elements**
  - Aluminum
    - 0105 (628), 0205, 0410, 0510, 0710 (710), 0810 (711)
    - Powder Coated
- **Transitions**
  - Brass
    - Plated Brass: 014 (618), 015 (619), 026 (625), 03P (605)
    - Natural Brass: 003 (605), 004 (606), 10B (607)

66669, refer to Pulls Measurements:
The idea behind the FSB 1077 lever handle series was to give architects and end-users an opportunity to have a say in the choice of grip section for their door handles. The FSB range provides for the following combinations: angled section and roses silver anodized aluminum, grip stainless steel.
Christoph Ingenhoven was inspired by the quintessential “classic”, FSB 1076, which he reinterpreted both in the mitring and the grip. The particular attraction of the FSB 1078 is the transition from the round shank to the flat surfaces on the grip. The associated return version complements the open model with a closed design.

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**Lever Handle 1078**

**Materials and Finishes**

**Premium**

- Stainless Steel
  - 6204 (630)
  - 6205 (629)

**Elements**

- Aluminum
  - 0105 (628)
  - 0205
  - 0410
  - 0510
  - 0710 (710)
  - 0810 (711)
  - Powder Coated
Most probably it was some blacksmith way back when hammering steel tubing into the shape of a handle on their anvil. The phrase “stable door handle” has long been common parlance — the end bent back towards the door was presumably intended to prevent bridles from snagging.
Door handle model 1078 by Christoph Ingenhoven is now complemented by return version 1088, which features a closed design.
Helmut Jahn and Yorgo Lykouria approached handle design without any preconceptions whatsoever. They freed their minds from the constraints of industrial production processes and sought a shape that combines geometrical elements with ergonomic needs. The result is a genuine innovation for a hand-held shape.

Design: Jahn/Lykouria

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FSB 1102 is rooted in Alessandro Mendini’s redesign of the celebrated Gropius handle by choosing a different material and adding a groove during one of our design workshops. Owing to the popularity of this design, we now supply FSB 1102 in three materials. For heavily used doors we would recommend using the rugged stainless steel version.

Design: Alessandro Mendini

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66 6546, refer to Pulls
The FSB 1106 is characterized by its traditional style which is based on its little brother the 1135. Reworking the form and size of the lever handle gave it the look and feel wanted for rugged applications.
FSB 1107 is related to FSB 1108. FSB’s in-house designer Hartmut Weise has imbued his “Brakel Lightweight” with the curve of a door in motion. Matching the door handles for framed doors, it was not a long wait for the return version of the FSB 1107 model.
FSB’s in-house designer Hartmut Weise was wondering what gives the “Frankfurt Model” and “Wittgenstein’s Handle” their particular appeal. He jotted down the words “unpretentious presence”. He then produced a plain design that was at the very least on a par with them. The FSB 1108, a round tube combined with a mitred, oval section grip. The “Brakel Model”.

Design: Hartmut Weise

Materials and Finishes

**Premium**
- Stainless Steel
- 6204 (630)
- 6205 (629)

**Elements**
- Aluminum
- 0105 (628)
- 0205
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- 0510
- 0710 (710)
- 0810 (711)
- Powder Coated
FSB 1119 incorporates insights gained by FSB in cooperation with the Fraunhofer Institute. While when producing the FSB 7655 utmost importance was given to the rigorous implementation of ergonomic parameters, for the FSB 1119 formal aesthetic considerations took precedence.

Design: Hartmut Weise

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David Chipperfield’s design was influenced by the pioneers of the Modern movement. The simple formal concept was devised to work across all functional variants and to express an architectural philosophy which addresses domestic as well as public spaces.
The FSB 1144 door handle is as pleasing to the eye as to the hand. Designer Jasper Morrison lets our eyes know that this door handle is a manual tool. Your eyes relax and your hand takes over. Your thumb finds its place, your forefinger finds its hollow and your hand finds plenty to get hold of. This is precisely what the “Four-Point Guide to Good Grip” drawn up by FSB and Otl Aicher requires.

Design: Jasper Morrison

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In the early 1990s we gave the plain round rod of the stable-door handle a going over. The shank was conically widened and a hemispherical tip was added to the bent end. Two small but important special features that have given the FSB 1146 model a character all of its own.

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    - 0710 (710)
    - 0810 (711)
  - Powder Coated

**Transitions**

66 6662, refer to Pulls
The FSB logo echoes a lever handle designed by the Austrian philosopher Ludwig Wittgenstein in the mid-1920s in Vienna. This is the original upon which all similar door handle shapes are based. By adding a conical shank and spherical tip we aimed to set ourselves apart from the many other variants of this handle on the market.
Lever Handle 1160

Works design FSB 1160 is based on the “dynamic golden growth spiral”. It has a round cross-section, with the lever handle also tapering from the shank to the end of the handle following the rule of the golden ratio.

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Berlin-based architect Hans Kollhoff devised a handle design for his projects that consciously accommodates design elements from the 1930s. His plain door handles, window handles and window fasteners were immediately adopted as authentic interpretations by the market.

Design: Hans Kollhoff

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Door handle model 1164 is the return version of design 1163, which was conceived by Hans Kolloff. This return model is particularly charming when made from bronze with an artificial patina to give it an antiqued finish.
The design of FSB 1176 is based on a classic model from the FSB range. The shank and tip of this handle were originally made of rolled steel, then later of cast aluminium. The grip itself was a chunky affair made of black plastic. FSB’s toolmakers succeeded in fashioning this familiar design out of stainless steel tubing.
Model 1177 is the return version of model 1107, which was developed by in-house FSB designer Hartmut Weise. The new model was created in very little time to complement the lever handles on the frame door.

Design: Hartmut Weise

<table>
<thead>
<tr>
<th>Premium</th>
<th>Elements</th>
<th>Transitions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stainless Steel</td>
<td>Aluminum</td>
<td></td>
</tr>
<tr>
<td>6204 (630)</td>
<td>0105 (628)</td>
<td></td>
</tr>
<tr>
<td>6205 (629)</td>
<td>0205</td>
<td></td>
</tr>
<tr>
<td></td>
<td>0410</td>
<td></td>
</tr>
<tr>
<td></td>
<td>0510</td>
<td></td>
</tr>
<tr>
<td></td>
<td>0710 (710)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>0810 (711)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Powder Coated</td>
<td></td>
</tr>
</tbody>
</table>

66 6537, refer to Pulls
The FSB 1178 model is the return version of the “Brakel Model” 1108 by Hartmut Weise. Originally developed as a lever handle for framed doors, it is a distinctive variant of the FSB 1108 model with its round rose.
For framed doors we are familiar with offset handle shapes on the closing side of the door, and standard shapes on the other side, the so-called “Wittgenstein solution”. Hadi Teherani solved the function of the offset handle to avert the risk of skinning your thumb on the door frame, by simply shifting the handle’s axis of rotation to the left.

Design: Hardi Teherani

Materials and Finishes

<table>
<thead>
<tr>
<th>Premium</th>
<th>Elements</th>
<th>Transitions</th>
</tr>
</thead>
<tbody>
<tr>
<td>✿ Stainless Steel</td>
<td>✿ Aluminum</td>
<td>✿ Powder Coated</td>
</tr>
<tr>
<td>6204 (630)</td>
<td>0105 (628)</td>
<td></td>
</tr>
<tr>
<td>6205 (629)</td>
<td>0205</td>
<td></td>
</tr>
<tr>
<td></td>
<td>0410</td>
<td></td>
</tr>
<tr>
<td></td>
<td>0510</td>
<td></td>
</tr>
<tr>
<td></td>
<td>0710 (710)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>0810 (711)</td>
<td></td>
</tr>
</tbody>
</table>
FSB 1185 unites different requirements in an overall concept that Andreas Heupel has appropriately titled "Folded": How a sheet can be folded several times, then follows the flat appearance of tasks arising from structural requirements or standards. The pusher shows a simple outward Clarity and surprised when accessing the ergonomic pleasant softness of the semicircle.

Design: Andreas Heupel

<table>
<thead>
<tr>
<th>Premium</th>
<th>Elements</th>
<th>Transitions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Materials and Finishes</td>
<td>0105 (628) 0205 0410 0510 0710 (710) 0810 (711)</td>
<td>Powder Coated</td>
</tr>
</tbody>
</table>
A door handle designed by the RDAI agency using a rectangular section at the point of fixation which is morphed into an elliptical section as it forms the lever. A dialogue between a rational rectilinear form and an organic ergonomy.
A brand new lever from in-house designer Hartmut Weise comes in answer to the request to update the traditional wave designs of old. Mr. Weise has created a new shape that comfortably spans the most contemporary environment to a very traditional setting.
Our new "Square" design brings together very simple lines to create a look that is bold yet not overstated. In line with FSB hand culture in-house designer Hartmut Weise has created yet another FSB original.

Materials and Finishes

- **Premium**
  - Stainless Steel
  - 6204 (630)
  - 6205 (629)

- **Elements**
  - Brass
  - 014 (618)
  - 015 (619)
  - 026 (625)
  - 03P (605)

- **Transitions**
  - Plated Brass
  - 003 (605)
  - 004 (606)
  - 10B (607)
  - Natural Brass
Without compromising our design intent the 1252 adds a "return" to the 1251 in order to satisfy fire code requirements where necessary.
Designers the world over have struggled to bring lever designs to the market that satisfy both our aesthetic sensibilities and local fire codes. In-house designer Hartmut Weise masterfully blends flat surface area with contours that are graceful and majestic.
The "V-Line" designed by in-house designer Hartmut Weise features a concave front which provides both visual and functional benefits. Our eyes find pleasure in the play of light and shadows created and the decorative effect provides ergonomic guidance for the thumb keeping with the Four-Point Guide to Good Grip originated by FSB.

Design: Hartmut Weise

<table>
<thead>
<tr>
<th>Materials and Finishes</th>
<th>Premium</th>
<th>Elements</th>
<th>Transitions</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Aluminum</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>0105 (628)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>0205</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>0410</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>0510</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>0710 (710)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>0810 (711)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Powder Coated</td>
<td></td>
</tr>
</tbody>
</table>
The "C-Line" handle designed by in-house designer Hartmut Weise utilizes the same principles as the 1257 but features a rounded profile. Our eyes find pleasure in the play of light and shadows created and the decorative effect provides ergonomic guidance for the thumb keeping with the Four-Point Guide to Good Grip originated by FSB.
Standard Mortise Lock
SML & SMT Series

<table>
<thead>
<tr>
<th>Quality</th>
<th>Design Advantage</th>
</tr>
</thead>
<tbody>
<tr>
<td>The FSB Standard Mortise Lock (SML/SMT) is a Grade 1 mortise lock</td>
<td>FSB has the widest selection of designer levers and</td>
</tr>
<tr>
<td>manufactured in the United States to meet the stringent demands of</td>
<td>trim in the industry. With more than 100 designer</td>
</tr>
<tr>
<td>high-traffic commercial, institutional, and governmental applications.</td>
<td>levers and trim that can also be suited with our</td>
</tr>
<tr>
<td>Built using a heavy-gauge steel case, the lock features a fast field</td>
<td>narrow and European mortise locks, tubular locks,</td>
</tr>
<tr>
<td>reversible latchbolt and a stainless steel deadbolt. The lock is backed</td>
<td>sliding door locks, sliding door hardware, and door</td>
</tr>
<tr>
<td>by a 10 year limited warranty.</td>
<td>pulls FSB will complement your design vision.</td>
</tr>
</tbody>
</table>
## Specifying Mortise Locksets
(SML) Available with Premium Series and Elements Series Trim
(SMT) Available with Transitions Series Trim

<table>
<thead>
<tr>
<th>Lock Type</th>
<th>Lock Function</th>
<th>Lever Design</th>
<th>Trim Set</th>
<th>Thumbturn and Indicator</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SML</strong></td>
<td><strong>E</strong></td>
<td>1147</td>
<td><strong>RA</strong></td>
<td><strong>SN</strong></td>
</tr>
<tr>
<td></td>
<td>Insert your choice of function using one of the letter codes below.</td>
<td>Insert your choice of lever design using one of the four digit codes.</td>
<td>Insert your choice of rose or escutcheon using one of the letter codes.</td>
<td>Insert your choice of thumbturn and indicator if necessary using the codes provided.</td>
</tr>
<tr>
<td><strong>SML</strong></td>
<td><strong>A</strong> Store Door</td>
<td>Premium/Elements</td>
<td>Premium/Elements</td>
<td>Premium/Elements</td>
</tr>
<tr>
<td></td>
<td><strong>B</strong> Dormitory</td>
<td>1001* 1078</td>
<td><strong>RA</strong> Rose 2½&quot; (55 mm)</td>
<td>Standard thumbturn available with roses and escutcheons</td>
</tr>
<tr>
<td></td>
<td><strong>C</strong> Passage</td>
<td>1002* 1080</td>
<td><strong>RD</strong> Rose 2½&quot; (65 mm)</td>
<td>ADA thumbturn available with RA and RD roses only</td>
</tr>
<tr>
<td></td>
<td><strong>D</strong> Hotel</td>
<td>1003 1088</td>
<td><strong>RF</strong> Narrow Rose</td>
<td>Crescent thumbturn available with RF</td>
</tr>
<tr>
<td></td>
<td><strong>E</strong> Privacy</td>
<td>1004 1093</td>
<td><strong>RJ</strong> Flush Rose</td>
<td>Premium, Elements and Transitions</td>
</tr>
<tr>
<td></td>
<td><strong>F</strong> Public Restroom</td>
<td>1005 1102</td>
<td><strong>RM</strong> Square Rose (55 mm)</td>
<td>Emergency Releases</td>
</tr>
<tr>
<td></td>
<td><strong>G</strong> Classroom</td>
<td>1015 1106</td>
<td><strong>ED</strong> Long Rectangular</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>H</strong> Entrance</td>
<td>1016 1107</td>
<td></td>
<td>^ Stainless Only</td>
</tr>
<tr>
<td></td>
<td><strong>I</strong> Office</td>
<td>1020* 1108</td>
<td></td>
<td>* Elements Only</td>
</tr>
<tr>
<td></td>
<td><strong>J</strong> Storeroom</td>
<td>1021 1119</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>K</strong> Apartment</td>
<td>1023 1134</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>M</strong> Single Key Deadlock</td>
<td>1025 1144</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>N</strong> Key × Key Deadlock</td>
<td>1027 1146</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>P</strong> Key × Thumbturn Deadlock</td>
<td>1028 1147</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>R</strong> Thumbturn Deadlock with Emergency Release (Privacy)</td>
<td>1031 1160</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>S</strong> Thumbturn Deadlock</td>
<td>1034* 1163</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>T</strong> Patio</td>
<td>1035 1164</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>V</strong> Institutional</td>
<td>1045 1176</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Y</strong> Active Double Dummy</td>
<td>1051* 1177</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>YS</strong> Active Double Strike</td>
<td>1053 1178</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Z</strong> Active Single Dummy</td>
<td>1057 1183</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>ZS</strong> Active Single Strike</td>
<td>1058 1185*</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>JEU</strong> Storeroom Fail Secure</td>
<td>1070 1241*</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>JEL</strong> Storeroom Fail Safe</td>
<td>1074 1251*</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>VEU</strong> Institutional Fail Secure</td>
<td>1075 1257*</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>VEL</strong> Institutional Fail Safe</td>
<td>1076 1259*</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>1077</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Thumbturn and/or Indicator choices are only necessary with the B, D, E, H, K, P, R, S, and T lock functions.
Example for Specifying

**SML - E - 1147 - RA - SN - 6204 - 234 - M1 - RH - 134**

### Material and Finish

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Optionalon Codes</th>
</tr>
</thead>
<tbody>
<tr>
<td>6204</td>
<td>Insert your choice of material and finish using one of the codes below.</td>
<td></td>
</tr>
<tr>
<td><strong>Premium Stainless Steel</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6204</td>
<td>Satin (630)</td>
<td></td>
</tr>
<tr>
<td>6205</td>
<td>Polished (629)</td>
<td></td>
</tr>
<tr>
<td><strong>Bronze</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7305</td>
<td>Polished, Waxed (611)</td>
<td></td>
</tr>
<tr>
<td>7615</td>
<td>Aged, Waxed (615)</td>
<td></td>
</tr>
<tr>
<td>7625</td>
<td>Dark Oxidized, Waxed (613)</td>
<td></td>
</tr>
</tbody>
</table>

### Elements

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Optionalon Codes</th>
</tr>
</thead>
<tbody>
<tr>
<td>0105</td>
<td>Aluminum Anodized Natural Color (628)</td>
<td></td>
</tr>
<tr>
<td>0205</td>
<td>Champagne Silver Color</td>
<td></td>
</tr>
<tr>
<td>0410</td>
<td>Bronze Color</td>
<td></td>
</tr>
<tr>
<td>0510</td>
<td>Medium Bronze Color</td>
<td></td>
</tr>
<tr>
<td>0710</td>
<td>Dark Bronze Color (710)</td>
<td></td>
</tr>
<tr>
<td>0810</td>
<td>Black Color (711)</td>
<td></td>
</tr>
</tbody>
</table>

### Aluminum Powder Coated

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Optionalon Codes</th>
</tr>
</thead>
<tbody>
<tr>
<td>8120</td>
<td>Black (671)</td>
<td></td>
</tr>
<tr>
<td>8220</td>
<td>White (714)</td>
<td></td>
</tr>
</tbody>
</table>

### Transitions

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Optionalon Codes</th>
</tr>
</thead>
<tbody>
<tr>
<td>014</td>
<td>Polished Nickel (618)</td>
<td></td>
</tr>
<tr>
<td>015</td>
<td>Satin Nickel (619)</td>
<td></td>
</tr>
<tr>
<td>026</td>
<td>Polished Chrome (625)</td>
<td></td>
</tr>
<tr>
<td>03P</td>
<td>Polished Brass PVD (605)</td>
<td></td>
</tr>
</tbody>
</table>

### Natural

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Optionalon Codes</th>
</tr>
</thead>
<tbody>
<tr>
<td>003</td>
<td>Polished Brass (605)</td>
<td></td>
</tr>
<tr>
<td>004</td>
<td>Satin Brass (606)</td>
<td></td>
</tr>
<tr>
<td>10B</td>
<td>Satin Brass Dark Oxidized (607)</td>
<td></td>
</tr>
</tbody>
</table>

### Backset

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Optionalon Codes</th>
</tr>
</thead>
<tbody>
<tr>
<td>234</td>
<td>Insert your choice of backset using one of the three digit codes below.</td>
<td></td>
</tr>
<tr>
<td><strong>Standard</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>234</td>
<td>2 3/4” Backset</td>
<td></td>
</tr>
<tr>
<td><strong>Special Order</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>212</td>
<td>2 1/4” Backset</td>
<td></td>
</tr>
<tr>
<td>334</td>
<td>3 3/4” Backset</td>
<td></td>
</tr>
<tr>
<td>500</td>
<td>5” Backset</td>
<td></td>
</tr>
<tr>
<td>600</td>
<td>6” Backset</td>
<td></td>
</tr>
</tbody>
</table>

### Strike

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Optionalon Codes</th>
</tr>
</thead>
<tbody>
<tr>
<td>M1</td>
<td>Insert your choice of strike using one of the two letter codes below</td>
<td></td>
</tr>
</tbody>
</table>

### Handing

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Optionalon Codes</th>
</tr>
</thead>
<tbody>
<tr>
<td>RH</td>
<td>Insert your choice of hand using one of the two letter codes below</td>
<td></td>
</tr>
<tr>
<td><strong>Right Hand</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RR</td>
<td>Right Hand Reverse</td>
<td></td>
</tr>
<tr>
<td>LH</td>
<td>Left Hand</td>
<td></td>
</tr>
<tr>
<td>LR</td>
<td>Left Hand Reverse</td>
<td></td>
</tr>
</tbody>
</table>

### Door Thickness

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Optionalon Codes</th>
</tr>
</thead>
<tbody>
<tr>
<td>134</td>
<td>Insert your choice of door thickness using one of the three digit codes.</td>
<td></td>
</tr>
<tr>
<td><strong>Standard</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>134</td>
<td>1 3/4”</td>
<td></td>
</tr>
<tr>
<td><strong>Special Order</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>138</td>
<td>1 3/8”</td>
<td></td>
</tr>
<tr>
<td>200</td>
<td>2”</td>
<td></td>
</tr>
<tr>
<td>214</td>
<td>2 1/4”</td>
<td></td>
</tr>
</tbody>
</table>

All sizes over 2 1/4” thick please consult FSB.
Function A

Store Door

ANSI Code F14

Description
Latch bolt by handle either side.
Deadbolt by key either side.
No emergency egress.

Premium and Elements Series Trim Sets

<table>
<thead>
<tr>
<th>RA</th>
<th>RD</th>
<th>RF</th>
<th>RM</th>
<th>ED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ø</td>
<td>Ø</td>
<td>Ø</td>
<td>Ø</td>
<td>Ø</td>
</tr>
<tr>
<td>Ø</td>
<td>Ø</td>
<td>Ø</td>
<td>Ø</td>
<td>Ø</td>
</tr>
</tbody>
</table>

Transitions Series Trim Sets

<table>
<thead>
<tr>
<th>RA</th>
<th>RD</th>
<th>RM</th>
<th>RS</th>
<th>ED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ø</td>
<td>Ø</td>
<td>Ø</td>
<td>Ø</td>
<td>Ø</td>
</tr>
<tr>
<td>Ø</td>
<td>Ø</td>
<td>Ø</td>
<td>Ø</td>
<td>Ø</td>
</tr>
</tbody>
</table>

Series SML & SMT

Standard Mortise Lock

Federal Specifications
ANSI A 156.13, Series 1000,
Mortise Locks and Latches, Grade 1

C-UL-US Listing
File No. R 16617

Backsets
2½" (64 mm)
2¾" (70 mm)
3¼" (95 mm)
5" (127 mm)
6" (152 mm)

Strike
See page 110 for strike information.

Lock Body
All SML and SMT use the same lock bodies.
Standard Mortise Locks
Series SML and SMT Functions

Function B
Dormitory

ANSI Code F13

Description
Latch bolt by handle either side. Deadbolt by key outside and thumbturn inside. Use of inside handle retracts latch and deadbolt simultaneously, automatically unlocking outside handle. Outside handle is rigid when deadbolt is thrown by key or thumbturn.

Premium and Elements Series Trim Sets

<table>
<thead>
<tr>
<th>RA-S</th>
<th>RD-S</th>
<th>RM-S</th>
<th>RJ-S</th>
<th>ED-S</th>
<th>RF-C</th>
</tr>
</thead>
</table>

Split Spindle

Transitions Series Trim Sets

<table>
<thead>
<tr>
<th>RA-S</th>
<th>RD-S</th>
<th>RM-S</th>
<th>ED-S</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>RA-D</th>
<th>RD-D</th>
</tr>
</thead>
</table>
Standard Mortise Locks
Series SML and SMT Functions

Function C
Passage

Description
Latch bolt by handle either side.

ANSI Code F01

Premium and Elements Series Trim Sets

<table>
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<tr>
<th>RA</th>
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Transitions Series Trim Sets

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</table>
Standard Mortise Locks
Series SML and SMT Functions

Function D

Description
Latch bolt by handle inside and guest or master key outside. Outside handle always rigid. Deadbolt by thumbturn inside and service key only outside. Use of inside handle retracts latch and deadbolt simultaneously. Auxiliary latch deadlocks latch bolt.

Hotel

ANSI Code F15

Split Spindle

Premium and Elements Series Trim Sets

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<tr>
<th>RA-S</th>
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<th>RJ-S</th>
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</table>
Standard Mortise Locks
Series SML and SMT Functions

Function E
Privacy

ANSI Code F19

Description
Latch bolt by handle either side.
Deadbolt by thumbturn inside and emergency release outside.
Use of inside handle retracts latch and deadbolt simultaneously, automatically unlocking outside handle.
Outside handle is rigid when deadbolt is thrown by thumbturn.

Premium and Elements Series Trim Sets

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Transitions Series Trim Sets

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### Function F
**Public Restroom**

ANSI Code F09

Description
Latch bolt by handle either side unless outside handle is locked by master key from inside. When outside handle is locked, latch bolt by key outside and handle inside.
Auxiliary latch deadlocks latch bolt.

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### Function G
**Classroom**

ANSI Code F05

Description
Latch bolt by key outside and handle either side unless outside handle is locked by key outside.
Auxiliary latch deadlocks latch bolt.

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Standard Mortise Locks
Series SML and SMT Functions

Function H
Entrance

Description
Latch bolt by key outside and handle either side unless outside handle is locked by toggle. Deadbolt by key outside and thumbturn inside. Inside handle retracts latch and deadbolt simultaneously. Outside handle is rigid when deadbolt is thrown by key or thumbturn.

ANSI Code F12

Split Spindle

Premium and Elements Series Trim Sets

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Standard Mortise Locks
Series SML and SMT Functions

Function I
Office

Description
Latch bolt by key outside and handle either side unless outside handle is locked by toggle. Auxiliary latch deadlocks latch bolt.

 ANSI Code F04

Premium and Elements Series Trim Sets

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Transitions Series Trim Sets

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Function J
Storeroom

Description
Latch bolt by handle inside and key outside. Outside handle always rigid. Auxiliary latch deadlocks latch bolt.

 ANSI Code F07

Premium and Elements Series Trim Sets

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Transitions Series Trim Sets

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</table>
Standard Mortise Locks
Series SML and SMT Functions

Function K
Apartment

Description
Latch bolt by key outside and lever either side, unless outside lever is locked by toggle-action stop. Deadbolt by key outside and turn piece inside. Turning inside lever retracts latch and deadbolt simultaneously. Outside lever remains locked until manually unlocked by toggle. Auxiliary latch dead locks latch bolt and prevents manipulation of locked toggle-action stop.

Premium and Elements Series Trim Sets

<table>
<thead>
<tr>
<th>RA-S</th>
<th>RD-S</th>
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Transitions Series Trim Sets

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</table>
Standard Mortise Locks
Series SML and SMT Functions

Function M
Single Key Deadlock

Description
Deadbolt by key outside.
No operation inside.

ANSI Code F18

Premium and Elements Series Trim Sets

Transitions Series Trim Sets

Function N
Key × Key Deadlock

Description
Deadbolt by key either side.

ANSI Code F16

Premium and Elements Series Trim Sets

Transitions Series Trim Sets
# Standard Mortise Locks

## Series SML and SMT Functions

### Function P

**Key × Thumbtturn**

**Deadlock**

Description

Deadbolt by key outside and thumbtturn inside.

ANSI Code F17

### Premium and Elements Series Trim Sets

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### Transitions Series Trim Sets

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<th>RS-D</th>
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### Standard Mortise Locks
#### Series SML and SMT Functions

**Function R**  
**Thumbturn Deadlock**

**Description**  
Deadbolt by thumbturn inside.  
No operation outside.

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<th>RA-S</th>
<th>RD-S</th>
<th>RM-S</th>
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**Transitions Series Trim Sets**

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</table>
Standard Mortise Locks
Series SML and SMT Functions

Function S
Thumbturn Deadlock with Emergency Release (Privacy)

Description
Deadbolt by thumbturn inside and emergency release outside.

Premium and Elements Series Trim Sets

Transitions Series Trim Sets
RA-SN/SI   RD-SN/SI   RM-SN/SI   ED-SN/SI
RA-DN/DI   RD-DN/DI   RM-DN/DI   RS-DN/DI
Function T

**Patio**

**Description**
Latch bolt by handle either side.
Deadbolt by thumbturn inside.
Outside handle is rigid when deadbolt is thrown by thumbturn.
Use of inside handle retracts latch and deadbolt simultaneously.

**Premium and Elements Series Trim Sets**

<table>
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<th>RA-S</th>
<th>RD-S</th>
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**Transitions Series Trim Sets**

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### Standard Mortise Locks

**Series SML and SMT Functions**

---

#### Function V

**Institutional**

**ANSI Code F30**

**Description**

Latch bolt by key either side. Inside* and outside handle always rigid. Auxiliary latch deadlocks latch bolt.

*Verify code compliance before using this function.

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**Transitions Series Trim Sets**

| RA | RD | RM | RS | ED |
| ![Diagram](image6.png) | ![Diagram](image7.png) | ![Diagram](image8.png) | ![Diagram](image9.png) | ![Diagram](image10.png) |

---

**Solid Spindle**
**Standard Mortise Locks**  
**Series SML and SMT Functions**

### Function Y  
(Double Lever)  
Active Dummy  
Mortise Case  

#### Description  
Active dummy handle either side.

#### Premium and Elements Series Trim Sets

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### Function YS  
(Double Lever)  
Active Dummy  
Mortise Case  
Prepared as Strike  
For Pairs of Doors  

#### Description  
Active dummy handle either side. Case front includes integrated strike and dust box to be utilized on inactive leaf.

Strike regularly supplied with curved lip.  
(ANSI Standard A 115.1)

#### Premium and Elements Series Trim Sets

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Standard Mortise Locks
Series SML and SMT Functions

**Function Z**
(Single Lever)
Active Dummy
Mortise Case

**Description**
Active dummy handle single side only with blind cover on opposing side.

**Premium and Elements Series Trim Sets**

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</table>

**Function ZS**
(Single Lever)
Active Dummy
Mortise Case

**Description**
Active dummy handle single side. Case front includes integrated strike and dust box to be utilized on inactive leaf.

Strike regularly supplied with curved lip. (ANSI Standard A 115.1)

**Premium and Elements Series Trim Sets**

<table>
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### Function JEU
**Electrified Storeroom**
**Fail Secure**

**Description**
Solenoid activated mortise lock.

EU function – Power OFF, locks outside lever (by solenoid).

Key outside retracts latch bolt, when outside lever is locked. Outside lever retracts latch bolt except when locked.

#### Premium and Elements Series Trim Sets

<table>
<thead>
<tr>
<th>RA</th>
<th>RD</th>
<th>RF</th>
<th>RM</th>
<th>RJ</th>
<th>ED</th>
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<tbody>
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#### Transitions Series Trim Sets

<table>
<thead>
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</tbody>
</table>

### Function JEL
**Electrified Storeroom**
**Fail Safe**

**Description**
Solenoid activated mortise lock.

EL function – Power ON, locks outside lever (by solenoid).

Key outside retracts latch bolt, when outside lever is locked. Outside lever retracts latch bolt except when locked.

#### Premium and Elements Series Trim Sets

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## Standard Mortise Locks
### Series SML and SMT Functions

#### Function VEU
**Electrified Institutional Fail Secure**

**Description**
Solenoid activated mortise lock.

EU function – Inside and outside handles simultaneously unlocked electronically.

Latchbolt retracted by key on either side. Switched power allows both levers to retract latchbolt. Auxiliary latch deadlocks latch bolt.

**Monitoring Options**
RX = Request to Exit Switch
LM = Latchbolt Monitor Switch
DP = Door Position Switch

### Premium and Elements Series Trim Sets

<table>
<thead>
<tr>
<th></th>
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#### Function VEL
**Electrified Institutional Fail Secure**

**Description**
Solenoid activated mortise lock.

EL function – Inside and outside handles simultaneously locked electronically.

Latchbolt retracted by key on either side. Switched power allows both levers to retract latchbolt. Auxiliary latch deadlocks latch bolt.

**Monitoring Options**
RX = Request to Exit Switch
LM = Latchbolt Monitor Switch
DP = Door Position Switch

### Premium and Elements Series Trim Sets

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### Transitions Series Trim Sets

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</table>
Example for Specifying

SML - JEU* - 1147 - RA - 6204 - 234 - M1 - RH - 134

* Extra information required: J (EU) or (EL), 12 V or 24 V, AC or DC

Standard Mortise Locks
Power Supplies

SW 3

2.4 A, 27 VDC regulated power supply with three (3) non-fused outputs for mortise locks.

SW 3

5 A, 24 V regulated solid-state power supply for up to eight (8 I/O and fire alarm link) mortise locks.
Electrified Mortise Lock Series SML and SMT
Mortise Case and Function

Series SML EL
or SML EU

Recommended for minimum 1 ¾" (45 mm) door thickness with standard 1 ¼" (32 mm) armor front.
1" (25.4 mm) armor front available for doors with 1 ¾" (35 mm) door thickness. All SML and SMT use the same lock bodies.

SML 7158 VEU/VEL
Electrified Institutional
Lock Body

EU = fail secure
EL = fail safe

Solenoid activated mortise lock.
EL function – Inside and outside handles simultaneously locked electronically.
EU function – Inside and outside handles simultaneously unlocked electronically.
Latchbolt retracted by key on either side. Switched power allows both levers to retract latchbolt. Auxiliary latch deadlocks latch bolt.

Monitoring Options
RX = Request to Exit Switch
LM = Latchbolt Monitor Switch
DP = Door Position Switch

SML 7159 JEU/JEL
Electrified Storeroom
Lock Body

EU = fail secure
EL = fail safe

Solenoid activated mortise lock.
EL function – Power ON, locks outside lever (by solenoid).
EU function – Power OFF, locks outside lever (by solenoid).

Outside lever can only be locked with the solenoid. Inside lever always retracts latch bolt. Auxiliary latch deadlocks latch bolt.

Monitoring Options
RX = Request to Exit Switch
LM = Latchbolt Monitor Switch
DP = Door Position Switch

Power Supplies

<table>
<thead>
<tr>
<th>SW3</th>
<th>PS5-8</th>
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<tbody>
<tr>
<td>2.5A, 27 VDC regulated power supply with three non-fused outputs for mortise locks.</td>
<td>5A, 24 V regulated solid-state power supply for up to eight (8) mortise locks.</td>
</tr>
</tbody>
</table>
Electrified Mortise Lock Series SML and SMT

Installation

Optional monitoring features

RX (Request to Exit Switch)
Monitors the use of the inside lever. This feature may be used to shunt an alarm, signal a control console, activate an alarm, or control an electromagnetic lock for egress.

LM (Latchbolt Monitor Switch)
Monitors the full extension of the main latch. This feature may be used to signal a control console, activate an alarm, or control an electromagnetic lock for entrance and egress.

DP (Door Position Switch)
Available on 2 ¾" backset only. Monitors the status of both the solenoid (locked or unlocked) and the auxiliary latch (deadlatch position). This feature may be used to determine the security status (locked or unlocked), activate an alarm, or send notification to a control console.

Note: When monitoring features are required in a lockset, add RX, LM, or DP after the designation EU or EL (example: 1147 J EU/RX).

Locks are supplied with a bridge rectifier to convert AC to DC.

Specifications: Operating voltage is 12 or 24 VAC/DC plus or minus 10%. You must specify voltage when ordering. Amperage is 12 V = 700 mA or 24 V = 350 mA. Solenoid coil resistance is 12 = 18 Ω or 24 V = 69 Ω. Power consumption is 8 watts.

Typical installation

Wiring schematics by option

EL & EU – Fail Safe and Fail Secure

LM – Latchbolt Monitor Switch

RX – Request to Exit Switch

DP – Door Position Switch

Wiring leads:
- AC POWER LEADS: BLUE/BLUE
- DC POWER LEADS: WHITE/WHITE
- GREEN/BLACK: Common
- BLUE/BLACK: Closed Loop Secure
- GRAY/BLACK: Open Loop Secure
- GREEN/RED: Common
- RED/BLUE: Closed Loop Secure
- GRAY/RED: Open Loop Secure
## Trim Set Overview
### Series SML and SMT

<table>
<thead>
<tr>
<th>RA</th>
<th>55mm Round</th>
</tr>
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<tbody>
<tr>
<td>RD</td>
<td>65mm Round</td>
</tr>
<tr>
<td>RF</td>
<td>Oval</td>
</tr>
<tr>
<td>RM</td>
<td>55mm Square</td>
</tr>
<tr>
<td>RS</td>
<td>65mm Square</td>
</tr>
<tr>
<td>ED</td>
<td>Escutcheon</td>
</tr>
<tr>
<td>RJ</td>
<td>Flush</td>
</tr>
</tbody>
</table>

### Materials and Finishes
- **Premium**
  - Stainless Steel: 6204 (630), 6205 (629)
  - Bronze: 7305 (611), 7615 (615), 7625 (613)
- **Elements**
  - Aluminum:
    - Brass:
      - Plated Brass: 014 (618), 015 (619), 026 (625), 03P (605)
      - Natural Brass: 003 (605), 004 (606), 10B (607)
  - Powder Coated
Round Lever Roses
Series SML and SMT

RA
17 1731 01401
Rose 2 3⁄16" (55 mm)

RD
17 1798 02401
Rose 2 3⁄8" (65 mm)

Cylinder Ring
17 1735 02601
Cylinder must be ordered separately

Rose 2 3⁄8" (65 mm)
Rose 2 3⁄16" (55 mm)
**Thumbturns for RA 55mm & RD 65mm Roses**
Series SML and SMT

### S

17 1744 00169
Standard Thumbturn

![Thumbturn Diagram]

**RA - Configuration**
55mm S Thumbturn
55mm Lever Rose

**RD - Configuration**
55mm S Thumbturn
65mm Lever Rose

### Standard Turn with Emergency Release (SN)

17 1744 00160

**Trim Set** - Includes two rose assemblies, spindle and screws

![Emergency Release Diagram]

### Standard Turn with Emergency Release and Indicator (SI)

17 1744 00159

**Trim Set** - Includes two rose assemblies, spindle and screws

![Emergency Release with Indicator Diagram]
Thumbturms for RA | 55mm & RD | 65mm Roses
Series SML and SMT

D
17 1744 09169
ADA Thumbturn

ADA Turn with Emergency Release (DN)
17 1744 09160
Trim Set - Includes two rose assemblies, spindle and screws

ADA Turn with Emergency Release and Indicator (DI)
17 1744 09159
Trim Set - Includes two rose assemblies, spindle and screws
**Oval Rose and Thumbturn RF**
Series SML and SMT

---

**RF**
17 1758 00001
Narrow Rose

---

**Cylinder Ring**
03 0450 09000
03 0450 09001

---

**C**
03 0418 09001
Crescent Thumbturn

---

**Crescent Turn with Emergency Release and Indicator (CI)**
03 0418 09002

**Trim Set** - Includes two rose assemblies, spindle and screws

---

Cylinder must be ordered separately

---

Cylinder Ring

---

Crescent Thumbturn

---

Crescent Turn with Emergency Release and Indicator (CI)
Square Lever Roses
Series SML and SMT

RM
17 1703 01401
Square Rose

Cylinder Ring
17 1704 02601

Transitions Series SMT only
RS
17 1705 01401
Square Rose

Cylinder must be ordered separately.
Thumbtums for RM 55mm & RS 65mm Square Roses
Series SML and SMT

S
17 1712 00169
Standard Thumbturn

17 1712 00169
Standard Thumbturn

RM - Configuration
55mm S Thumbturn
55mm Lever Rose

RS - Configuration
55mm S Thumbturn
65mm Lever Rose

Standard Turn with Emergency Release (SN)
17 1712 00160

Trim Set - Includes two rose assemblies, spindle and screws

Standard Turn with Emergency Release and Indicator (SI)
17 1712 00159

Trim Set - Includes two rose assemblies, spindle and screws
Thumbturns for RM 55mm & RS 65mm Square Roses
Series SMT

D
17 1712 09169  ■ ADA Thumbturn

ADA Turn with Emergency Release (DN)
17 1712 09160  ■ Transitions Series Only
Trim Set - Includes two rose assemblies, spindle and screws

ADA Turn with Emergency Release and Indicator (DI)
17 1712 09159  ■ Transitions Series Only
Trim Set - Includes two rose assemblies, spindle and screws
Trim Sets for ED  Long Rectangular Escutcheon Plate
Series SML and SMT

ED
14 1410 09100
9 1/4" (245 mm)

Cylinder Hole
14 1410 09101

Cylinder must be ordered separately
Trim Sets for ED Long Rectangular Escutcheon Plate
Series SML and SMT

S
14 1410 09102
Standard Thumbturn

Standard Turn with Emergency Release (SN)
14 1410 09103
Trim Set - Includes two rose assemblies, spindle and screws

Standard Turn with Emergency Release and Indicator (SI)
14 1410 09113
Trim Set - Includes two rose assemblies, spindle and screws
Flush Rose and Thumbturn RJ
Series SML and SMT

**RJ**

17 1736 09011
0.118 x 2.165" (3 x 55 mm)

**Cylinder Ring**

17 1737 09005
0.118 x 2.165" (3 x 55 mm)

**Thumbturn for RJ Flush Rose**

Standard Turn with Emergency Release and Indicator (SI)

17 1737 09019

**Trim Set** - Includes two rose assemblies, spindle and screws

RJ trim cannot be purchased independently from lockset. Trim number for reference only.

RJ trim is available for 1 ¼” door thickness only.

The following lever designs are not available with the RJ Flush Rose: 1051, 1058, 1163, 1164, 1241
SML and SMT Lock Series
North American Cylinders

88 8806

- 88 8806 07165 Length X = 1"
- 88 8806 07185 Length X = 1 ⅛"
- 88 8806 07205 Length X = 1 ¼"
- 88 8806 07245 Length X = 1 ½"
- 88 8806 07285 Length X = 1 ¾"
- 88 8806 07325 Length X = 2"

FSB mortise cylinders are supplied (keyed differently) and are available in the 6 finishes below.
FSB mortise cylinders may be master-keyed up to 4 levels upon special request.
FSB mortise cylinders are machined from solid brass bar stock.
Thread size is 1.15” × 32 UNS.

Keyway
“C-type”, 5 pin (6th hole provided in 7185 and 7205).

Cap Finishes
- US28 (matches FSB 0105) Aluminum
- Natural Color Anodized
- US10B Oil Rubbed Bronze
- US19 Flat Black
- US32 Polished Stainless Steel
- US32D Satin Stainless Steel

Cam Types
- SC19 (clover cam);
  used for all mortise locks

<table>
<thead>
<tr>
<th>Trim</th>
<th>Door Thickness</th>
<th>Cylinder Length</th>
<th>Single Cylinder</th>
<th>Cylinder Length X2</th>
<th>Double Cylinder</th>
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<tbody>
<tr>
<td>All roses</td>
<td>1 ½&quot;</td>
<td>1&quot;</td>
<td>88 8806 7165sc19</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>except RJ</td>
<td>1 ¼&quot;</td>
<td>1 ¼&quot;</td>
<td>88 8806 7185sc19</td>
<td>1&quot;</td>
<td>88 8806 7165sc19</td>
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<tr>
<td>Call FSB for RJ Cyl Dimen.</td>
<td>2&quot;</td>
<td>1 ¼&quot;</td>
<td>88 8806 7205sc19</td>
<td>1 ¼&quot;</td>
<td>88 8806 7185sc19</td>
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<tr>
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<td>2 ¼&quot;</td>
<td>1 ¼&quot;</td>
<td>88 8806 7205sc19</td>
<td>1 ¼&quot;</td>
<td>88 8806 7185sc19</td>
</tr>
<tr>
<td></td>
<td>2 ½&quot;</td>
<td>1 ½&quot;</td>
<td>88 8806 7245sc19</td>
<td>Call</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3&quot;</td>
<td>1 ¼&quot;</td>
<td>88 8806 7285sc19</td>
<td>Call</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3 ¼&quot;</td>
<td>1 ¾&quot;</td>
<td>88 8806 7305sc19</td>
<td>Call</td>
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</tr>
<tr>
<td></td>
<td>3 ½&quot;</td>
<td>2&quot;</td>
<td>88 8806 7325sc19</td>
<td>Call</td>
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<tr>
<td>Escutcheons</td>
<td>1 ½&quot;</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
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<td></td>
<td>1 ¼&quot;</td>
<td>1 ¼&quot;</td>
<td>88 8806 7205sc19</td>
<td>1 ¼&quot;</td>
<td>88 8806 7185sc19</td>
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<td>2&quot;</td>
<td>1 ¼&quot;</td>
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<td>1 ¼&quot;</td>
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<td>2 ¼&quot;</td>
<td>1 ½&quot;</td>
<td>88 8806 7245sc19</td>
<td>1 ¼&quot;</td>
<td>88 8806 7185sc19</td>
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<td>1 ¾&quot;</td>
<td>88 8806 7285sc19</td>
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<td></td>
<td>3&quot;</td>
<td>1 ¾&quot;</td>
<td>88 8806 7305sc19</td>
<td>Call</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3 ¼&quot;</td>
<td>2&quot;</td>
<td>88 8806 7325sc19</td>
<td>Call</td>
<td></td>
</tr>
</tbody>
</table>

Note: For offset doors, all FSB trim is 7mm thick.
# SML and SMT Lock Series

## Strikes

**SML 1001**
SML Series Mortise Strike (ANSI/ASA Strike) with dustbox

Standard **M1** = 1¼" (32 mm)

**SML 1001 99**
SML Series Extended Lip* Mortise Strike (ANSI/ASA Strike) with dustbox

*Identify lip to center (x dimension) and specify mortise strike number

<table>
<thead>
<tr>
<th>Mortise Strike Number</th>
<th>Lip To Center Dimension (x)</th>
<th>Typical Door Thickness*</th>
<th>ANSI Strike Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>M1</td>
<td>1¼&quot;</td>
<td>1⅜&quot; - 1⅞&quot;</td>
<td>Curved Lip (Std.)</td>
</tr>
<tr>
<td>M2</td>
<td>1⅜&quot;</td>
<td>2&quot;</td>
<td>Curved Lip</td>
</tr>
<tr>
<td>M3</td>
<td>1⅝&quot;</td>
<td>2⅜&quot;</td>
<td>Curved Lip</td>
</tr>
<tr>
<td>M4</td>
<td>1⅞&quot;</td>
<td>3&quot;</td>
<td>Curved Lip</td>
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<tr>
<td>M5</td>
<td>2&quot;</td>
<td>3⅝&quot;</td>
<td>Curved Lip</td>
</tr>
<tr>
<td>M6</td>
<td>2⅝&quot;</td>
<td>4&quot;</td>
<td>Curved Lip</td>
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<tr>
<td>M7</td>
<td>3&quot;</td>
<td>5½&quot;</td>
<td>Curved Lip</td>
</tr>
<tr>
<td>M8</td>
<td>3⅝&quot;</td>
<td>5⅞&quot;</td>
<td>Curved Lip</td>
</tr>
<tr>
<td>M9</td>
<td>4′⅝&quot;</td>
<td>6½&quot;</td>
<td>Curved Lip</td>
</tr>
<tr>
<td>M10</td>
<td>4⅞&quot;</td>
<td>7½&quot;</td>
<td>Curved Lip</td>
</tr>
<tr>
<td>M11</td>
<td>5&quot;</td>
<td>8½&quot;</td>
<td>Curved Lip</td>
</tr>
<tr>
<td>M12</td>
<td>5⅝&quot;</td>
<td>9½&quot;</td>
<td>Curved Lip</td>
</tr>
<tr>
<td>M13</td>
<td>6′⅝&quot;</td>
<td>10½&quot;</td>
<td>Curved Lip</td>
</tr>
</tbody>
</table>

*Based on Lock centered in door
Functions D, F, G, I, J, and K are handed.

For custom strikes, please call FSB.
SML and SMT Lock Series
Rabbeted Strikes and Band

Standard - RFS1
Traditional - RFS2

Rabbet depth ½" deep centered within the door. Please specify lock number, door thickness, and finish.

Technical drawing for RFS1 Standard Strike.
## SML and SMT Lock Series Reverse Handing
### Technical Explanation

#### Diagram:
- **Basefront**: 3 4 5
- **Deadbolt**: 5 6 7
- **Hub handing screw**: 1 8
- **Adjustable basefront screws (2)**: 6
- **Latch handing set screw**: 1 6
- **Faceplate**: 4 1 3
- **Anti-Friction latch**: 6 7
- **Latchbolt**: 1 2 3 4 5 7

#### Table: Task

<table>
<thead>
<tr>
<th>Current Hand</th>
<th>Required Hand</th>
<th>Flip Latch</th>
<th>Reverse Hubs</th>
<th>Strike Needed*</th>
</tr>
</thead>
<tbody>
<tr>
<td>LH</td>
<td>RH</td>
<td>•</td>
<td>•</td>
<td>RH</td>
</tr>
<tr>
<td>RH</td>
<td>LH</td>
<td>•</td>
<td>•</td>
<td>LH</td>
</tr>
<tr>
<td>LR</td>
<td>RR</td>
<td>•</td>
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<td>LH</td>
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<td>RR</td>
<td>LR</td>
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<td>LH</td>
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<tr>
<td>RH</td>
<td>LR</td>
<td>•</td>
<td>•</td>
<td>RH</td>
</tr>
</tbody>
</table>

* Handed strikes are required for functions with an auxiliary deadlatch. For all other functions a universal strike is furnished.

All 2 3/4" backset locks with the exception of functions EU, EL, F and G are field reversible.
SML and SMT Lock Series Reverse Handing

Technical Explanation

To flip the latch bolt

1. Remove the faceplate A.

2. Push latchbolt B inside lock, push down anti-friction latch C and release latch so the anti-friction piece is beyond the basefront D.

3. If the lock has a deadbolt E, throw the deadbolt into projected position. Locate set screw hole F on the coverside. Insert ⅜ “ Allen wrench, fully loosen screw until it tops out against the underside of the cover. Tip: Hold latchbolt B in between fingers to apply outward pressure, while loosening the screw.

4. Pull out and FLIP latchbolt B.

5. Re-Insert latch, push in latch assembly until hole in latchbolt B is in line with the basefront D.

6. Fully tighten set screw F, while applying moderate inward pressure.

7. If lock has deadbolt E, retract deadbolt. Retract latchbolt B such that the anti-friction latch C is returned to the normal position. Test lock for proper functioning before installation.

8. Adjust the bevel G on the basefront H and re-install faceplate A.

To reverse the hubs

9. Insert a ⅜” Allen wrench into the black pan head screw, loosen and remove screw, insert and tighten the screw in the opposite side of the lock.

Test lock for proper functioning before installation.
SML and SMT Lock Series
Suggested Specification

All mortise locksets shall be provided from one manufacturer and shall be capable of providing backsets from 2 1/4" to 6" backset using the same lever and trim designs from FSB North America.

All locksets with latchbolts, regardless of trim, shall be listed by Underwriters Laboratories for A label and less class doors, 4’ x 8’ or 8’ x 8’ pair.

All levers and trim design shall be capable of being suited to operate tubular and sliding door locks to maintain the design throughout the project. All locks and trim must be provided by the same manufacturer.

Certification:
UBC – 7-2 and UL10C – Positive Pressure.
ANSI A156.13 Series 1000, Grade 1
ANSI A117.1 Accessibility Code, (formerly Title 19, California State Fire Marshal Standard) Lever handle trim.

All locks, levers, and trim shall be from one manufacturer.

All mechanical locksets shall carry a 10 year limited warranty.

All electrified locksets shall carry a 3 year limited warranty.

Federal Specification
Conforms to all performance and structural specifications of ANSI A 156.13, Series 1000, Grade 1 Mortise Locks and Latches.

UL Listing
3 Hour rated by Underwriters Laboratories, Inc. on all series of single-point locks or latches illustrated within this section.
UL File No. R16617

Steel Case
Size varies according to backset. Heavy gauge .093” (2.36 mm) thick, corrosion resistant zinc dichromate finish.

Armor Front and Scalp
.218” x 1.25” x 8”
(5.5 x 32 x 203 mm) or
.218” x 1” x 8’
(5.5 x 25.4 x 203 mm).
Adjustable for beveled conditions from flat to standard bevel.
.125” on 2” (3 on 51 mm).

Faceplate (Scalp only)
.062” x 1.25” x 8”
(1.57 x 32 x 203 mm) or
.062” x 1” x 8’
(1.57 x 25.4 x 203 mm).
Wrought stainless steel, bronze or brass substrate.

Anti-Friction Latch Bolt
.625” x 1” x .75” (12 x 25.4 x 19 mm)
throw.
Two-piece mechanical oil impregnated sintered stainless steel.

Deadbolt
.5625 x 1.25” x 1” (14 x 32 x 25.4 mm)
throw.
Solid forged stainless steel throw with free-rotating hardened steel saw-proof inserts.

Hub (Split)
Providing emergency egress.
.315" (8 mm) square oil impregnated, copper infiltrated sintered steel with one way rotation for levers (LS) and two-way rotation for knobs (KS).

Thumbturn Hub
.2” (5 mm) diamond, oil impregnated, copper infiltrated sintered steel, 28 degree rotation.

Backsets
2.50” (64 mm), 2.75” (70 mm), 3.75 (95 mm), 5” (127 mm) and 6” (152 mm).

Spacing
3.625” (92 mm) center lever hub to center cylinder, 2.4375” (62 mm) center lever hub to thumbturn hub.

Through-bolting
1.5” (38 mm) to 1.6875” (43 mm) center to center.

Strike
4.875” x 1.25” (124 x 32 mm) lip to center. Wrought stainless steel, bronze, and brass substrate finished to match.
Supplied to ANSI Standard A 115.1.
Regularly furnished with curved lip strike with plastic dust box. Flat lip, full lip, special length strikes and wrought dust boxes may be had on a special order basis.

Template
Metal doors and frames to be prepared in accordance with ANSI A 115.11.

Face cutouts and center to center dimensions are subject to variation.
Always review trim requirements prior to door preparation.

Field Reversibility
All 2 3/4” backset locks with the exception of functions EU, EL, F and G are field reversible.
FSB Subrose

FSB ASL® Subrose

Product variants
- Roses RA, RD, RM and ED escutcheons
- All fixed levers with above trim

Adaptor
Base rose is screwed to the door leaf first, without the cover or the lever. Additionally, it is no longer necessary to “screw past” the handle shank.

Fasteners
Fastening by means of through-fixed bolting with retention lugs and machine screws.

Solid spindle
The 8 mm solid spindle caters to standard door thicknesses from 1 5/8 to 2 1/4 inches.

Availability
The new FSB ASL® will be supplied with all FSB North America locksets.

FSB Original Subrose

Product variants
- Roses RA, RD, RF, RM and ED escutcheons

Fasteners
Fastening by means of through-fixed bolting with retention lugs and machine screws.

Spindle
Solid and split spindles depending on lock type and function.

FSB Original Subrose

Levers used on the FSB Original Subrose do not have a neck.

FSB ASL® Subrose

Levers used on the FSB ASL® Subrose have a neck that installs into the subrose.

Discontinued
## Narrow Mortise Lock
### NML & NMT Series

<table>
<thead>
<tr>
<th>Quality</th>
<th>Design Advantage</th>
</tr>
</thead>
<tbody>
<tr>
<td>The FSB Narrow Mortise Lock (NML/NMT) is manufactured in the United States to meet the stringent demands of high-traffic commercial, institutional, and governmental applications. Built using a heavy-gauge steel case, the lock features the ability to fit very narrow style door conditions. Also an excellent choice for high end residential applications. The lock is backed by a 10 year warranty.</td>
<td>FSB has the widest selection of designer levers and trim in the industry. With more than 100 designer levers and trim that can be suited with our standard and European mortise locks, tubular locks, sliding door locks, sliding door hardware, and door pulls FSB will complement your design vision.</td>
</tr>
</tbody>
</table>
### Specifying Narrow Mortise Locksets

(NML) Available with Premium Series and Elements Series Trim  
(NMT) Available with Transitions Series Trim

<table>
<thead>
<tr>
<th>Lock Type</th>
<th>Lock Function</th>
<th>Lever Design</th>
<th>Trim Set</th>
<th>Thumbturn and Indicator</th>
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</thead>
<tbody>
<tr>
<td><strong>NML</strong></td>
<td><strong>E</strong></td>
<td>1147</td>
<td><strong>RA</strong></td>
<td>SN*</td>
</tr>
<tr>
<td>Premium</td>
<td>Elements</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A</td>
<td>Store Door</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>Dormitory</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>C</td>
<td>Passage</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>E</td>
<td>Privacy</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>F</td>
<td>Public Restroom</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>G</td>
<td>Classroom</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>H</td>
<td>Entrance</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I</td>
<td>Office</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>J</td>
<td>Storeroom</td>
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<td></td>
</tr>
<tr>
<td>M</td>
<td>Single Key Deadlock</td>
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</tr>
<tr>
<td>N</td>
<td>Key x Key Deadlock</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>P</td>
<td>Key x Thumbturn Deadlock</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>R</td>
<td>Thumbturn Deadlock</td>
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<tr>
<td>S</td>
<td>Thumbturn Deadlock with Emergency Release (Privacy)</td>
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<td>T</td>
<td>Patio</td>
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</tr>
<tr>
<td>ZS</td>
<td>Active Single Strike</td>
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<th>Transitions</th>
<th>Transitions</th>
<th>Transitions</th>
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</thead>
<tbody>
<tr>
<td>RA</td>
<td>Rose 2⅛&quot; (55 mm)</td>
<td></td>
</tr>
<tr>
<td>RD</td>
<td>Rose 2⅜&quot; (65 mm)</td>
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</tr>
<tr>
<td>RM</td>
<td>Square Rose (55 mm)</td>
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</tr>
<tr>
<td>RS</td>
<td>Square Rose 2⅛&quot; (65 mm)</td>
<td></td>
</tr>
<tr>
<td>ED</td>
<td>Long Rectangular</td>
<td></td>
</tr>
</tbody>
</table>

* ^ Stainless Only  
  * Elements Only

Transitions:
- Standard thumbturn available with all roses and escutcheons
- ADA thumbturn available with roses only

* Indicator choices are only necessary with the B, E, H, P, R, S, and T lock functions.
### Example for Specifying

**NML - E - 1147 - RA - SN - 6204 - 200 - N1 - RH - 134**

<table>
<thead>
<tr>
<th>Material and Finish</th>
<th>Backset</th>
<th>Strike</th>
<th>Handing</th>
<th>Door Thickness</th>
</tr>
</thead>
<tbody>
<tr>
<td>6204</td>
<td>112</td>
<td>N1</td>
<td>RH</td>
<td>134</td>
</tr>
</tbody>
</table>

**Material and Finish**

**6204**

Insert your choice of material and finish using one of the codes below.

#### Premium Stainless Steel
- 6204 Satin (630)
- 6205 Polished (629)

#### Bronze
- 7305 Polished, Waxed (611)
- 7615 Aged, Waxed (615)
- 7625 Dark Oxidized, Waxed (613)

#### Elements
- Aluminum Anodized
  - 0105 Natural Color (628)
  - 0205 Champagne Silver Color
  - 0410 Bronze Color
  - 0510 Medium Bronze Color
  - 0710 Dark Bronze Color (710)
  - 0810 Black Color (711)

- Aluminum Powder Coated
  - 8120 Black (671)
  - 8220 White (714)

#### Transitions
- Plated
  - 014 Polished Nickel (618)
  - 015 Satin Nickel (619)
  - 026 Polished Chrome (625)
  - 03P Polished Brass PVD (605)

- Natural
  - 003 Polished Brass (605)
  - 004 Satin Brass (606)
  - 10B Satin Brass Dark Oxidized (607)

---

**Insert your choice of backset using one of the three digit codes below**

#### Standard
- 200 2” Backset

#### Special Order
- 112 1 ½” Backset (Only available with RF, ED Trim)
- 134 1 ¾” Backset (Not available with RD Trim)
- 214 2 ¼” Backset

**Insert your choice of strike using one of the two letter codes below**

#### Standard
- N1

#### Special Order
- N2
- N3
- N4
- N5
- N6
- N7
- N8
- N9
- N10
- N11
- N12
- N13

**Insert your choice of hand using one of the two letter codes below**

#### RH
- Right Hand

#### RR
- Right Hand Reverse

#### LH
- Left Hand

#### LR
- Left Hand Reverse

**Insert your choice of door thickness using one of the three digit codes.**

#### Standard
- 134 1 ¾”

#### Special Order
- 138 1 ½”
- 200 2”
- 214 2 ¼”

All sizes over 2 ¼” thick please consult FSB.

---

[Diagram of door thickness specifications]
Narrow Mortise Locks
Series NML and NMT Functions

Series NML & NMT
Narrow Mortise Lock

Backsets
1 1/8" (38 mm)*
1 3/8" (45 mm)**
2" (51 mm)
2 1/4" (57 mm)

* Only available with RF and ED Trim
** Not available with RD Trim

Strike
See page 140 for strike information.

Lock Body
All NML and NMT use the same lock bodies.

Function A
Store Door

Description
Latch bolt by handle either side.
Deadbolt by key either side.
No emergency egress.

ANSI Code F14

Premium and Elements Series Trim Sets

<table>
<thead>
<tr>
<th>RA</th>
<th>RD</th>
<th>RF</th>
<th>RM</th>
<th>ED</th>
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<tbody>
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Transitions Series Trim Sets

<table>
<thead>
<tr>
<th>RA</th>
<th>RD</th>
<th>RM</th>
<th>RS</th>
<th>ED</th>
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<tr>
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</tbody>
</table>
**Narrow Mortise Locks**

**Series NML and NMT Functions**

---

**Function B**

**Dormitory**

ANSI Code F13

**Description**

Latch bolt by handle either side. Deadbolt by key outside and thumbturn inside. Use of inside handle retracts latch and deadbolt simultaneously, automatically unlocking outside handle. Outside handle is rigid when deadbolt is thrown by key or thumbturn.

---

**Premium and Elements Series Trim Sets**

<table>
<thead>
<tr>
<th>RA-S</th>
<th>RD-S</th>
<th>RM-S</th>
<th>ED-S</th>
<th>RF-C</th>
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</thead>
<tbody>
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<table>
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<tr>
<th>RA-D</th>
<th>RD-D</th>
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<tbody>
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**Transitions Series Trim Sets**

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<th>RM-S</th>
<th>ED-S</th>
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</thead>
<tbody>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>RA-D</th>
<th>RD-D</th>
<th>RM-D</th>
<th>RS-D</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="TransitionsTrimSets" alt="Diagram" /></td>
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</tr>
</tbody>
</table>
### Narrow Mortise Locks
#### Series NML and NMT Functions

**Function C**  
**Description**  
Latch bolt by handle either side.

**ANSI Code F01**

#### Premium and Elements Series Trim Sets

<table>
<thead>
<tr>
<th>RA</th>
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<th>ED</th>
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<td><img src="RD.png" alt="Image" /></td>
<td><img src="RF.png" alt="Image" /></td>
<td><img src="RM.png" alt="Image" /></td>
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#### Transitions Series Trim Sets

<table>
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<th>RM</th>
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<th>ED</th>
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<td><img src="RD.png" alt="Image" /></td>
<td><img src="RM.png" alt="Image" /></td>
<td><img src="RS.png" alt="Image" /></td>
<td><img src="ED.png" alt="Image" /></td>
</tr>
</tbody>
</table>
Narrow Mortise Locks
Series NML and NMT Functions

Function E
Privacy

ANSI Code F19

Description
Latch bolt by handle either side.
Deadbolt by thumbturn inside and emergency release outside.
Use of inside handle retracts latch and deadbolt simultaneously, automatically unlocking outside handle.
Outside handle is rigid when deadbolt is thrown by thumbturn.

Premium and Elements Series Trim Sets

<table>
<thead>
<tr>
<th>RA-SN/SI</th>
<th>RD-SN/SI</th>
<th>RM-SN/SI</th>
<th>ED-SN/SI</th>
<th>RF-CI</th>
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</thead>
<tbody>
<tr>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>RA-DN/DI</th>
<th>RD-DN/DI</th>
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<tbody>
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Transitions Series Trim Sets

<table>
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<th>RD-SN/SI</th>
<th>RM-SN/SI</th>
<th>ED-SN/SI</th>
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</thead>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>RA-DN/DI</th>
<th>RD-DN/DI</th>
<th>RM-DN/DI</th>
<th>RS-DN/DI</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</tr>
</tbody>
</table>
Function F
Public Restroom

Description
Latch bolt by handle either side unless outside handle is locked by master key from inside. When outside handle is locked, latch bolt by key outside and handle inside. Auxiliary latch deadlocks latch bolt.

Premium and Elements Series Trim Sets

<table>
<thead>
<tr>
<th>RA</th>
<th>RD</th>
<th>RF</th>
<th>RM</th>
<th>ED</th>
</tr>
</thead>
<tbody>
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Transitions Series Trim Sets

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</tbody>
</table>

Function G
Classroom

Description
Latch bolt by key outside and handle either side unless outside handle is locked by key outside. Auxiliary latch deadlocks latch bolt.

Premium and Elements Series Trim Sets

<table>
<thead>
<tr>
<th>RA</th>
<th>RD</th>
<th>RF</th>
<th>RM</th>
<th>ED</th>
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Transitions Series Trim Sets

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Function H

**Entrance**

<table>
<thead>
<tr>
<th>Description</th>
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<tbody>
<tr>
<td>Latch bolt by key outside and handle either side unless outside handle is locked by toggle. Deadbolt by key outside and thumbturn inside. Inside handle retracts latch and deadbolt simultaneously. Outside handle is rigid when deadbolt is thrown by key or thumbturn.</td>
</tr>
</tbody>
</table>

**ANSI Code F12**

**Premium and Elements Series Trim Sets**

<table>
<thead>
<tr>
<th>RA-S</th>
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<th>RF-C</th>
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**Transitions Series Trim Sets**

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<table>
<thead>
<tr>
<th>RA-D</th>
<th>RD-D</th>
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<tbody>
<tr>
<td>![Image of RA-D]</td>
<td>![Image of RD-D]</td>
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</tbody>
</table>
Narrow Mortise Locks
Series NML and NMT Functions

Function I
Office

**Description**
Latch bolt by key outside and handle either side unless outside handle is locked by toggle.
Auxiliary latch deadlocks latch bolt.

**ANSI Code F04**

**Premium and Elements Series Trim Sets**

<table>
<thead>
<tr>
<th>RA</th>
<th>RD</th>
<th>RF</th>
<th>RM</th>
<th>ED</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1.png" alt="Image" /></td>
<td><img src="image2.png" alt="Image" /></td>
<td><img src="image3.png" alt="Image" /></td>
<td><img src="image4.png" alt="Image" /></td>
<td><img src="image5.png" alt="Image" /></td>
</tr>
</tbody>
</table>

**Transitions Series Trim Sets**

<table>
<thead>
<tr>
<th>RA</th>
<th>RD</th>
<th>RM</th>
<th>RS</th>
<th>ED</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image6.png" alt="Image" /></td>
<td><img src="image7.png" alt="Image" /></td>
<td><img src="image8.png" alt="Image" /></td>
<td><img src="image9.png" alt="Image" /></td>
<td><img src="image10.png" alt="Image" /></td>
</tr>
</tbody>
</table>

Function J
Storeroom

**Description**
Latch bolt by handle inside and key outside. Outside handle always rigid.
Auxiliary latch deadlocks latch bolt.

**ANSI Code F07**

**Premium and Elements Series Trim Sets**

<table>
<thead>
<tr>
<th>RA</th>
<th>RD</th>
<th>RF</th>
<th>RM</th>
<th>ED</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image11.png" alt="Image" /></td>
<td><img src="image12.png" alt="Image" /></td>
<td><img src="image13.png" alt="Image" /></td>
<td><img src="image14.png" alt="Image" /></td>
<td><img src="image15.png" alt="Image" /></td>
</tr>
</tbody>
</table>

**Transitions Series Trim Sets**

<table>
<thead>
<tr>
<th>RA</th>
<th>RD</th>
<th>RM</th>
<th>RS</th>
<th>ED</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image16.png" alt="Image" /></td>
<td><img src="image17.png" alt="Image" /></td>
<td><img src="image18.png" alt="Image" /></td>
<td><img src="image19.png" alt="Image" /></td>
<td><img src="image20.png" alt="Image" /></td>
</tr>
</tbody>
</table>
Narrow Mortise Locks
Series NML and NMT Functions

Function M
Single Key Deadlock

Description
Deadbolt by key outside.
No operation inside.

ANSI Code F18

Premium and Elements Series Trim Sets

Transitions Series Trim Sets

Function N
Key x Key Deadlock

Description
Deadbolt by key either side.

ANSI Code F16

Premium and Elements Series Trim Sets

Transitions Series Trim Sets
# Narrow Mortise Locks
## Series NML and NMT Functions

### Function P

**Key x Thumbturn**

**Deadlock**

**Description**

Deadbolt by key outside and thumbturn inside.

**ANSI Code F17**

<table>
<thead>
<tr>
<th>Premium and Elements Series Trim Sets</th>
</tr>
</thead>
<tbody>
<tr>
<td>RA-S</td>
</tr>
<tr>
<td><img src="image1.png" alt="Image" /></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Transitions Series Trim Sets</th>
</tr>
</thead>
<tbody>
<tr>
<td>RA-S</td>
</tr>
<tr>
<td><img src="image6.png" alt="Image" /></td>
</tr>
</tbody>
</table>

| RA-D | RD-D | RM-D | RS-D |
| ![Image](image10.png) | ![Image](image11.png) | ![Image](image12.png) | ![Image](image13.png) |
### Function R

**Thumbturn Deadlock**

<table>
<thead>
<tr>
<th>Description</th>
<th>Thumbturn Deadlock</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deadbolt by thumbturn inside.</td>
<td>No operation outside.</td>
</tr>
</tbody>
</table>

#### Premium and Elements Series Trim Sets

<table>
<thead>
<tr>
<th>RA-S</th>
<th>RD-S</th>
<th>RM-S</th>
<th>ED-S</th>
<th>RF-C</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1.png" alt="Image" /></td>
<td><img src="image2.png" alt="Image" /></td>
<td><img src="image3.png" alt="Image" /></td>
<td><img src="image4.png" alt="Image" /></td>
<td><img src="image5.png" alt="Image" /></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>RA-D</th>
<th>RD-D</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image6.png" alt="Image" /></td>
<td><img src="image7.png" alt="Image" /></td>
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</tbody>
</table>

#### Transitions Series Trim Sets

<table>
<thead>
<tr>
<th>RA-S</th>
<th>RD-S</th>
<th>RM-S</th>
<th>ED-S</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image8.png" alt="Image" /></td>
<td><img src="image9.png" alt="Image" /></td>
<td><img src="image10.png" alt="Image" /></td>
<td><img src="image11.png" alt="Image" /></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>RA-D</th>
<th>RD-D</th>
<th>RM-D</th>
<th>RS-D</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image12.png" alt="Image" /></td>
<td><img src="image13.png" alt="Image" /></td>
<td><img src="image14.png" alt="Image" /></td>
<td><img src="image15.png" alt="Image" /></td>
</tr>
</tbody>
</table>
Narrow Mortise Locks
Series NML and NMT Functions

Function S
Thumbturn Deadlock with Emergency Release
(Privacy)

Description
Deadbolt by thumbturn inside and emergency release outside.

Premium and Elements Series Trim Sets

<table>
<thead>
<tr>
<th>RA-SN/SI</th>
<th>RD-SN/SI</th>
<th>RM-SN/SI</th>
<th>ED-SN/SI</th>
<th>RF-CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>[Diagram]</td>
<td>[Diagram]</td>
<td>[Diagram]</td>
<td>[Diagram]</td>
<td>[Diagram]</td>
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</tbody>
</table>

Transitions Series Trim Sets

<table>
<thead>
<tr>
<th>RA-SN/SI</th>
<th>RD-SN/SI</th>
<th>RM-SN/SI</th>
<th>ED-SN/SI</th>
</tr>
</thead>
<tbody>
<tr>
<td>[Diagram]</td>
<td>[Diagram]</td>
<td>[Diagram]</td>
<td>[Diagram]</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>RA-DN/DI</th>
<th>RD-DN/DI</th>
<th>RM-DN/DI</th>
<th>RS-DN/DI</th>
</tr>
</thead>
<tbody>
<tr>
<td>[Diagram]</td>
<td>[Diagram]</td>
<td>[Diagram]</td>
<td>[Diagram]</td>
</tr>
</tbody>
</table>
## Narrow Mortise Locks
### Series NML and NMT Functions

#### Function T

**Patio**

**Description**
Latch bolt by handle either side.
Deadbolt by thumbturn inside.
Outside handle is rigid when deadbolt is thrown by thumbturn.
Use of inside handle retracts latch and deadbolt simultaneously.

#### Premium and Elements Series Trim Sets

<table>
<thead>
<tr>
<th>RA-S</th>
<th>RD-S</th>
<th>RM-S</th>
<th>ED-S</th>
<th>RF-C</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1.png" alt="Image" /></td>
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<td><img src="image3.png" alt="Image" /></td>
<td><img src="image4.png" alt="Image" /></td>
<td><img src="image5.png" alt="Image" /></td>
</tr>
</tbody>
</table>

#### Transitions Series Trim Sets

<table>
<thead>
<tr>
<th>RA-S</th>
<th>RD-S</th>
<th>RM-S</th>
<th>ED-S</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1.png" alt="Image" /></td>
<td><img src="image2.png" alt="Image" /></td>
<td><img src="image3.png" alt="Image" /></td>
<td><img src="image4.png" alt="Image" /></td>
</tr>
</tbody>
</table>

---

**Solid Spindle**

---

Narrow Mortise Locks

fsbna.com

136
Narrow Mortise Locks
Series NML and NMT Functions

Function Y
(Double Lever)
Active Dummy
Mortise Case

Description
Active dummy handle either side.

Premium and Elements Series Trim Sets

<table>
<thead>
<tr>
<th>RA</th>
<th>RD</th>
<th>RF</th>
<th>RM</th>
<th>ED</th>
</tr>
</thead>
<tbody>
<tr>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
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</table>

Transitions Series Trim Sets

<table>
<thead>
<tr>
<th>RA</th>
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<th>RM</th>
<th>RS</th>
<th>ED</th>
</tr>
</thead>
<tbody>
<tr>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
</tbody>
</table>

Function YS
(Double Lever)
Active Dummy
Mortise Case
Prepared as Strike
For Pairs of Doors

Description
Active dummy handle either side. Case front includes integrated strike and dust box to be utilized on inactive leaf.

Strike regularly supplied with curved lip. (ANSI Standard A 115.1)

Premium and Elements Series Trim Sets

<table>
<thead>
<tr>
<th>RA</th>
<th>RD</th>
<th>RF</th>
<th>RM</th>
<th>ED</th>
</tr>
</thead>
<tbody>
<tr>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
</tbody>
</table>

Transitions Series Trim Sets

<table>
<thead>
<tr>
<th>RA</th>
<th>RD</th>
<th>RM</th>
<th>RS</th>
<th>ED</th>
</tr>
</thead>
<tbody>
<tr>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
</tbody>
</table>
Narrow Mortise Locks
Series NML and NMT Functions

Function Z
(Single Lever)
Active Dummy
Mortise Case

Description
Active dummy handle single side only with blind cover on opposing side.

Premium and Elements Series Trim Sets

<table>
<thead>
<tr>
<th>RA</th>
<th>RD</th>
<th>RF</th>
<th>RM</th>
<th>ED</th>
</tr>
</thead>
<tbody>
<tr>
<td>○</td>
<td>○</td>
<td>○</td>
<td>□</td>
<td>○</td>
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</tbody>
</table>

Transitions Series Trim Sets

<table>
<thead>
<tr>
<th>RA</th>
<th>RD</th>
<th>RM</th>
<th>RS</th>
<th>ED</th>
</tr>
</thead>
<tbody>
<tr>
<td>○</td>
<td>○</td>
<td>□</td>
<td>□</td>
<td>○</td>
</tr>
</tbody>
</table>

Function ZS
(Single Lever)
Active Dummy
Mortise Case

Description
Active dummy handle single side. Case front includes integrated strike and dust box to be utilized on inactive leaf.

Strike regularly supplied with curved lip. (ANSI Standard A 115.1)

Premium and Elements Series Trim Sets

<table>
<thead>
<tr>
<th>RA</th>
<th>RD</th>
<th>RF</th>
<th>RM</th>
<th>ED</th>
</tr>
</thead>
<tbody>
<tr>
<td>○</td>
<td>○</td>
<td>○</td>
<td>□</td>
<td>○</td>
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</table>

Transitions Series Trim Sets

<table>
<thead>
<tr>
<th>RA</th>
<th>RD</th>
<th>RM</th>
<th>RS</th>
<th>ED</th>
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<tbody>
<tr>
<td>○</td>
<td>○</td>
<td>□</td>
<td>□</td>
<td>□</td>
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</table>
### Trim Set Overview
Series NML and NMT

<table>
<thead>
<tr>
<th>RA</th>
<th>55mm Round</th>
</tr>
</thead>
<tbody>
<tr>
<td>RD</td>
<td>65mm Round</td>
</tr>
<tr>
<td>RF</td>
<td>Oval</td>
</tr>
<tr>
<td>RM</td>
<td>55mm Square</td>
</tr>
<tr>
<td>RS</td>
<td>65mm Square</td>
</tr>
<tr>
<td>ED</td>
<td>Escutcheon</td>
</tr>
</tbody>
</table>

#### Premium
- Stainless Steel: 6204 (630), 6205 (629)
- Bronze: 7305 (611), 7615 (615), 7625 (613)

#### Elements
- Aluminum
  - 0105 (628)
  - 0205
  - 0410
  - 0510
  - 0710 (710)
  - 0810 (711)
  - Powder Coated

#### Transitions
- Brass
  - Plated Brass: 014 (618), 015 (619), 026 (625), 03P (605)
  - Natural Brass: 003 (605), 004 (606), 10B (607)
  - Powder Coated
Round Lever Roses
Series NML and NMT

<table>
<thead>
<tr>
<th>RA</th>
<th>17 1731 01401</th>
<th>Rose 2(^{3/16})&quot; (55 mm)</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Cylinder Ring</th>
<th>17 1735 02601</th>
<th>Cylinder must be ordered separately</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>RD</th>
<th>17 1798 02401</th>
<th>Rose 2(^{3/16})&quot; (65 mm)</th>
</tr>
</thead>
</table>
Thumbturns for RA 55mm & RD 65mm Roses
Series NML and NMT

S
17 1744 00169
Standard Thumbturn

RA - Configuration
55mm S Thumbturn
55mm Lever Rose

RD - Configuration
55mm S Thumbturn
65mm Lever Rose

Standard Turn with Emergency Release (SN)
17 1744 00160
Trim Set - Includes two rose assemblies, spindle and screws

Standard Turn with Emergency Release and Indicator (SI)
17 1744 00159
Trim Set - Includes two rose assemblies, spindle and screws
Thumbturns for RA 55mm & RD 65mm Roses
Series NML and NMT

D
17 1744 09169
ADA Thumbturn

RA - Configuration
55mm DThumbturn
55mm Lever Rose

RD - Configuration
55mm D Thumbturn
65mm Lever Rose

ADA Turn with Emergency Release (DN)
17 1744 09160

Trim Set - Includes two rose assemblies, spindle and screws

ADA Turn with Emergency Release and Indicator (DI)
17 1744 09159

Trim Set - Includes two rose assemblies, spindle and screws
**Trim Set RF** Narrow Rose
Series NML

**RF**
17 1758 00001
Narrow Rose

![RF Diagram](image1)

**Cylinder Ring**
03 0450 09000
03 0450 09001

![Cylinder Ring Diagram](image2)

**C**
03 0418 09001
Crescent Thumbturn

![C Diagram](image3)

**Crescent Turn with Emergency Release and Indicator (CI)**
03 0418 09002

**Trim Set** - Includes two rose assemblies, spindle and screws

![CI Diagram](image4)

Cylinder must be ordered separately
Square Lever Roses
Series NML and NMT

**RM**
17 1703 01401
Square Rose

Transitions Series NMT only

**RS**
17 1705 01401
Square Rose

Cylinder Ring
17 1704 02601

Cylinder must be ordered separately
Thumbturns for RM 55mm & RS 65mm Square Roses
Series NML and NMT

S

17 1712 00169
Standard Thumbturn

<table>
<thead>
<tr>
<th>2\frac{3}{16}&quot; (55)</th>
</tr>
</thead>
<tbody>
<tr>
<td>\frac{3}{4}&quot; (7.2)</td>
</tr>
</tbody>
</table>

RM - Configuration
55mm S Thumbturn
55mm Lever Rose

<table>
<thead>
<tr>
<th>2\frac{3}{16}&quot; (55)</th>
</tr>
</thead>
<tbody>
<tr>
<td>\frac{3}{4}&quot; (7.2)</td>
</tr>
</tbody>
</table>

RS - Configuration
55mm S Thumbturn
65mm Lever Rose

Standard Turn with Emergency Release (SN)
17 1712 00160

Trim Set - Includes two rose assemblies, spindle and screws

Standard Turn with Emergency Release and Indicator (SI)
17 1712 00159

Trim Set - Includes two rose assemblies, spindle and screws
Thumbturns for RM 55mm & RS 65mm Square Roses
Series NMT

D
17 1712 09169
ADA Thumbturn

ADA Turn with Emergency Release (DN)
17 1712 09160  Transitions Series Only
Trim Set - Includes two rose assemblies, spindle and screws

ADA Turn with Emergency Release and Indicator (DI)
17 1712 09159  Transitions Series Only
Trim Set - Includes two rose assemblies, spindle and screws
Trim Sets for ED Long Rectangular Escutcheon Plate
Series NML and NMT

ED
14 1410 09100
9 5/6" (245 mm)

Cylinder Hole
14 1410 09101

Cylinder must be ordered separately
Trim Sets for ED Long Rectangular Escutcheon Plate
Series NML and NMT

S
14 1410 09102
Standard Thumbturn
1 25⁄32" (45)
9 31⁄32" (245)
3 15⁄32" (88)
9⁄32" (7)
2 7⁄16" (62)

Standard Turn with Emergency Release (SN)
14 1410 09103
Trim Set - Includes two rose assemblies, spindle and screws

Standard Turn with Emergency Release and Indicator (SI)
14 1410 09113
Trim Set - Includes two rose assemblies, spindle and screws
FSB mortise cylinders are supplied (keyed differently) and are available in the 6 finishes below.
FSB mortise cylinders may be master-keyed up to 4 levels upon special request.
FSB mortise cylinders are machined from solid brass bar stock.
Thread size is 1.15" × 32 UNS.

**Keyway**
"C-type", 5 pin (6th hole provided in 7185 and 7205).

**Cap Finishes**
- US28 (matches FSB 0105) Aluminum Natural Color Anodized
- US10B Oil Rubbed Bronze
- US19 Flat Black
- US32 Polished Stainless Steel
- US32D Satin Stainless Steel

**Cam Types**
- SC19 (clover cam);
  used for all mortise locks

<table>
<thead>
<tr>
<th>Trim</th>
<th>Door Thickness</th>
<th>Cylinder Length</th>
<th>Single Cylinder</th>
<th>Cylinder Length X</th>
<th>Double Cylinder</th>
</tr>
</thead>
<tbody>
<tr>
<td>All roses except RJ</td>
<td>1 1/8&quot;</td>
<td>1&quot;</td>
<td>88 8806 7165sc19</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Call FSB for RJ Cyl Dimen.</td>
<td>1 3/4&quot;</td>
<td>1 1/2&quot;</td>
<td>88 8806 7185sc19</td>
<td>1&quot;</td>
<td>88 8806 7165sc19</td>
</tr>
<tr>
<td></td>
<td>2&quot;</td>
<td>1 3/4&quot;</td>
<td>88 8806 7205sc19</td>
<td>1 1/8&quot;</td>
<td>88 8806 7185sc19</td>
</tr>
<tr>
<td></td>
<td>2 1/4&quot;</td>
<td>1 1/4&quot;</td>
<td>88 8806 7205sc19</td>
<td>1 1/4&quot;</td>
<td>88 8806 7185sc19</td>
</tr>
<tr>
<td></td>
<td>2 1/8&quot;</td>
<td>1 1/2&quot;</td>
<td>88 8806 7245sc19</td>
<td>Call</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3&quot;</td>
<td>1 3/4&quot;</td>
<td>88 8806 7285sc19</td>
<td>Call</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3 1/4&quot;</td>
<td>1 3/4&quot;</td>
<td>88 8806 7305sc19</td>
<td>Call</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3 1/2&quot;</td>
<td>2&quot;</td>
<td>88 8806 7325sc19</td>
<td>Call</td>
<td></td>
</tr>
<tr>
<td>Escutcheons</td>
<td>1 3/4&quot;</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td></td>
<td>2&quot;</td>
<td>1 3/4&quot;</td>
<td>88 8806 7205sc19</td>
<td>1 1/8&quot;</td>
<td>88 8806 7185sc19</td>
</tr>
<tr>
<td></td>
<td>2 1/4&quot;</td>
<td>1 1/4&quot;</td>
<td>88 8806 7205sc19</td>
<td>1 1/4&quot;</td>
<td>88 8806 7185sc19</td>
</tr>
<tr>
<td></td>
<td>2 3/4&quot;</td>
<td>1 1/4&quot;</td>
<td>88 8806 7285sc19</td>
<td>Call</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3&quot;</td>
<td>1 3/4&quot;</td>
<td>88 8806 7305sc19</td>
<td>Call</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3 1/4&quot;</td>
<td>2&quot;</td>
<td>88 8806 7325sc19</td>
<td>Call</td>
<td></td>
</tr>
</tbody>
</table>

Note: For offset doors, all FSB trim is 7mm thick.

**Cyl Dimen.**
88 8806 07165 Length X = 1"
88 8806 07185 Length X = 1 1/8"
88 8806 07205 Length X = 1 1/4"
88 8806 07245 Length X = 1 1/2"
88 8806 07285 Length X = 1 3/4"
88 8806 07325 Length X = 2"
Narrow Mortise Locks

Strikes

NML 1001
NML Series Mortise Strike (ANSI/ASA Strike) with dustbox

Standard N1 = 1 ¼" (32 mm)

NML 1001 99
NML Series Extended Lip* Mortise Strike (ANSI/ASA Strike) with dustbox

* identify lip to center (x dimension) and specify mortise strike number

<table>
<thead>
<tr>
<th>Mortise Strike Number</th>
<th>Lip To Center Dimension (x)</th>
<th>Typical Door Thickness*</th>
<th>ANSI Strike Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>N1</td>
<td>1 ¼&quot;</td>
<td>1 ⅛&quot; - 1 ¾&quot;</td>
<td>Curved Lip (Std.)</td>
</tr>
<tr>
<td>N2</td>
<td>1 ⅝&quot;</td>
<td>1½&quot;</td>
<td>Curved Lip</td>
</tr>
<tr>
<td>N3</td>
<td>1 ¾&quot;</td>
<td>2&quot;</td>
<td>Curved Lip</td>
</tr>
<tr>
<td>N4</td>
<td>1 ⅞&quot;</td>
<td>2 ¼&quot;</td>
<td>Curved Lip</td>
</tr>
<tr>
<td>N5</td>
<td>2 ⅛&quot;</td>
<td>2 ½&quot;</td>
<td>Curved Lip</td>
</tr>
<tr>
<td>N6</td>
<td>2 ⅜&quot;</td>
<td>3&quot;</td>
<td>Curved Lip</td>
</tr>
<tr>
<td>N7</td>
<td>2 ⅞&quot;</td>
<td>3 ¼&quot;</td>
<td>Curved Lip</td>
</tr>
<tr>
<td>N8</td>
<td>2 ¾&quot;</td>
<td>4&quot;</td>
<td>Curved Lip</td>
</tr>
<tr>
<td>N9</td>
<td>3&quot;</td>
<td>5&quot;</td>
<td>Curved Lip</td>
</tr>
<tr>
<td>N10</td>
<td>1 ¾&quot;</td>
<td>2 ¾&quot;</td>
<td>Open Back</td>
</tr>
<tr>
<td>N11</td>
<td>2&quot;</td>
<td>3 ¼&quot;</td>
<td>Open Back</td>
</tr>
<tr>
<td>N12</td>
<td>2 ¹⁄₁₆&quot;</td>
<td>3 ⅛&quot;</td>
<td>Open Back</td>
</tr>
<tr>
<td>N13</td>
<td>2 ⅞&quot;</td>
<td>3 ⅛&quot;</td>
<td>Open Back</td>
</tr>
</tbody>
</table>

* Based on Lock centered in door
Strikes are handed. Please specify hand.

Rabbeted Strikes

Standard - NRFS1
Traditional - NRFS2

Rabbeted depth 1/2" deep centered within the door.
Please specify lock number and door thickness.

For custom strikes, please call FSB.
All mortise locksets shall be provided from one manufacturer and shall be capable of providing backsets from 1½" to 2¼" backset using the same lever and trim designs from FSB North America.

All levers and trim design shall be capable of being suited to operate tubular and sliding door locks to maintain the design throughout the project. All locks and trim must be provided by the same manufacturer.

Certification:
ANSI A117.1 Accessibility Code, (formerly Title 19, California State Fire Marshal Standard) Lever handle trim.

All locks, levers, and trim shall be from one manufacturer.

All mechanical locksets shall carry a 10 year limited warranty.

Steel Case
Size varies according to backset. Heavy gauge .093" (2.36 mm) thick, corrosion resistant zinc dichromate finish.

Armor Front and Scalp
.218" × 1.25" × 8" (5.5 × 32 × 203 mm) or .218" × 1" × 8" (5.5 × 25.4 × 203 mm). Adjustable for beveled conditions from flat to standard bevel .125" on 2" (3 mm on 51 mm).

Faceplate (Scalp only)
.062" × 1.25" × 8" (1.57 × 32 × 203 mm) or .062" × 1" × 8" (1.57 × 25.4 × 203 mm). Wrought stainless steel, bronze or brass substrate.

Latch Bolt
.5" × 1" (12.7 × 25.4 mm) × .5" (12.7 mm) throw. One-piece solid brass.

Deadbolt
.625" × .75" (16 × 19 mm) × 1" (25.4 mm) throw with hardened steel saw-proof inserts. Solid brass.

Hub (Solid)
.315 (8 mm) square solid brass with one way rotation for levers (LS) and two-way rotation for knobs (KS).

Thumbtturn Hub
.2" (5 mm) diamond, solid brass, 90 degree rotation.

Backsets
1.50" (38 mm), 1.75" (45 mm), 2.00" (51 mm), 2.25" (57 mm).

Spacing
3.625" (92 mm) center hub to center cylinder, 2.4375" (62 mm) center lever hub to thumbtturn hub.

Through-bolting
1.5" (38 mm) to 1.6875" (43 mm) center to center.

Strike
4.875" × 1.25" (124 × 32 mm) lip to center. Wrought stainless steel, bronze, and brass substrate finished to match. Supplied to ANSI Standard A 115.1. Regularly furnished with curved lip strike with plastic dust box. Flat lip, full lip, special length strikes and wrought dust boxes may be had on a special order basis.

Template
Metal doors and frames to be prepared in accordance with ANSI A 115.11.

Face cutouts and center to center dimensions are subject to variation. Always review trim requirements prior to door preparation.
FSB Subrose

FSB ASL® Subrose

Product variants
- Roses RA, RD, RM and ED escutcheons
- All fixed levers with above trim

Adaptor
Base rose is screwed to the door leaf first, without the cover or the lever. Additionally, it is no longer necessary to “screw past” the handle shank.

Fasteners
Fastening by means of through-fixed bolting with retention lugs and machine screws.

Solid spindle
The 8 mm solid spindle caters to standard door thicknesses from 1\(\frac{1}{8}\) to 2\(\frac{1}{4}\) inches.

Availability
The new FSB ASL® will be supplied with all FSB North America locksets.

FSB Original Subrose

Product variants
- Roses RA, RD, RF, RM and ED escutcheons

Fasteners
Fastening by means of through-fixed bolting with retention lugs and machine screws.

Spindle
Solid and split spindles depending on lock type and function.

Availability
Discontinued

Discontinued

FSB ASL® Subrose
Levers used on the FSB ASL® Subrose do not have a neck.

FSB Original Subrose
Levers used on the FSB Original Subrose have a neck that installs into the subrose.
European Mortise Lock
EML Series

<table>
<thead>
<tr>
<th>Quality</th>
<th>Design Advantage</th>
</tr>
</thead>
<tbody>
<tr>
<td>The FSB European Mortise Lock (EML) is a DIN 18251-1 Class 3 mortise lock manufactured in Germany. It is field reversible and available to accept a European style profile cylinder. This is a high end residential favorite in the US as it will fit an $1\frac{3}{8}$&quot; thick door.</td>
<td>FSB has the widest selection of designer levers and trim in the industry. With more than 100 designer levers and trim that can be suited with our standard and narrow mortise locks, tubular locks, sliding door locks, sliding door hardware, and door pulls FSB will complement your design vision.</td>
</tr>
</tbody>
</table>
### Specifying Locksets

#### European Mortise Locks (EML)

<table>
<thead>
<tr>
<th>Lock Type</th>
<th>Lock Function</th>
<th>Lever Design</th>
<th>Trim Set</th>
<th>Thumbturn and Indicator</th>
</tr>
</thead>
<tbody>
<tr>
<td>EML</td>
<td>E</td>
<td>1147</td>
<td>RA</td>
<td>SN*</td>
</tr>
</tbody>
</table>

- **Lock Type**: EML
- **Lock Function**: E
- **Lever Design**: 1147
- **Trim Set**: RA
- **Thumbturn and Indicator**: SN*

**Insert your choice of function using one of the letter codes below**

- A: Store Door
- B: Dormitory
- C: Passage
- E: Privacy

**European Mortise Locks do not have Emergency Egress Function.**

**Premium/Elements**

- 1001* 1078
- 1002* 1080
- 1003 1088
- 1004 1093
- 1005 1102
- 1015 1106
- 1016 1107
- 1020* 1108
- 1021 1119
- 1023 1134
- 1025 1144
- 1027 1146
- 1028 1147
- 1031 1160
- 1034* 1163
- 1035 1164
- 1045 1176
- 1051* 1177
- 1053 1178
- 1057 1183
- 1058 1185*
- 1070 1241*
- 1074 1251*
- 1075 1257*
- 1076 1259*
- 1077*  

- * Stainless Only
- * Elements Only

**Trim Set**

- **Premium/Elements**
  - RA: Rose 2¾" (55 mm)
  - RF: Narrow Rose
  - RJ: Flush Rose (55 mm)
  - RM: Square Rose (55 mm)
  - ED: Long Rectangular

**Thumbturn and Indicator**

- **Premium, Elements**
  - Standard thumbturn available with roses and escutcheons

**Premium, Elements**

- Emergency Releases
  - N
  - I

* Thumbturn and/or Indicator choices are only necessary with the B and E lock functions.

All details subject to modification.
**Example for Specifying**

EML - E - 1147 - RA - SN - 6204 - 231 - E1 - RH - 134

<table>
<thead>
<tr>
<th>Material and Finish</th>
<th>Backset</th>
<th>Strike</th>
<th>Handing</th>
<th>Door Thickness</th>
</tr>
</thead>
<tbody>
<tr>
<td>6204</td>
<td>231</td>
<td>E1</td>
<td>RH</td>
<td>134</td>
</tr>
</tbody>
</table>

Insert your choice of material and finish using one of the codes below.

**Premium**
- Stainless Steel
  - 6204 Satin (630)
  - 6205 Polished (629)

**Bronze**
- 7305 Polished, Waxed (611)
- 7615 Aged, Waxed (615)
- 7625 Dark Oxidized, Waxed (613)

**Elements**
- Aluminum Anodized
  - 0105 Natural Color (628)
  - 0205 Champagne Silver Color
  - 0410 Bronze Color
  - 0510 Medium Bronze Color
  - 0710 Dark Bronze Color (710)
  - 0810 Black Color (711)

- Aluminum Powder Coated
  - 8120 Black (671)
  - 8220 White (714)

Note: EML mortise lock scalp only comes in stainless steel.

**Backset**
- Standard
  - 231 2¾” Backset (55 mm)
- Special Order
  - E2

**Strike**
- Standard
  - E1
- Special Order
  - E2

**Handing**
- RH Right Hand
- RR Right Hand Reverse
- LH Left Hand
- LR Left Hand Reverse

**Door Thickness**
- Insert your choice of door thickness using one of the three digit codes.
- Standard
  - 134 1¾"
  - 138 1⅜"
- Special Order
  - 200 2"
  - 214 2¼"

All sizes over 2¼” thick please consult FSB.
European Mortise Locks
Series EML Functions

Function A
Store Door

Description
Latch bolt by handle either side.
Deadbolt by key either side.
European profile cylinder.
European levers come with set screw on the side.

Lever to cylinder center-to-center:
$2\frac{3}{4}$" (72 mm).

Premium and Elements Series Trim Sets

<table>
<thead>
<tr>
<th>RA</th>
<th>RF</th>
<th>RM</th>
<th>RJ</th>
<th>ED</th>
</tr>
</thead>
<tbody>
<tr>
<td>$\circ$</td>
<td>$\circ$</td>
<td>$\circ$</td>
<td>$\circ$</td>
<td>$\circ$</td>
</tr>
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<td>$\circ$</td>
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<td>$\circ$</td>
<td>$\circ$</td>
<td>$\circ$</td>
</tr>
</tbody>
</table>

Specifications

DIN Grade 3 Mortise Lock field reversible
PZ = $2\frac{3}{4}$" (72 mm) CTC
WC = $3\frac{1}{2}$" (78 mm) CTC

Backset
2$\frac{3}{4}$" (55 mm) only

Strike
Curved lip (function specific) without dustbox.

Series EML is not available with emergency egress or UL rating.

Lock Scalp is only available in Stainless Finish.

All details subject to modification.
European Mortise Locks
Series EML Functions

Function B
Dormitory

Description
Latch bolt by handle either side. Deadbolt by key outside and turnpiece inside.
European profile cylinder.
European levers come with set screw on the side.

Lever to thumbturn center-to-center:
2 1/8" (72 mm).

Premium and Elements Series Trim Sets

<table>
<thead>
<tr>
<th>RA-S</th>
<th>RM-S</th>
<th>RJ-S</th>
<th>ED-S</th>
<th>RF-C</th>
</tr>
</thead>
<tbody>
<tr>
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<td>☐</td>
<td>☐</td>
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<tr>
<td>☜</td>
<td>☜</td>
<td>☜</td>
<td>☜</td>
<td>☜</td>
</tr>
</tbody>
</table>

Function C
Passage

Description
Latch bolt by handle either side.
European levers come with set screw on the side.

Premium and Elements Series Trim Sets

<table>
<thead>
<tr>
<th>RA</th>
<th>RF</th>
<th>RM</th>
<th>RJ</th>
<th>ED</th>
</tr>
</thead>
<tbody>
<tr>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
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</tr>
<tr>
<td>☜</td>
<td>☜</td>
<td>☜</td>
<td>☜</td>
<td>☜</td>
</tr>
</tbody>
</table>

Function E
Privacy

Description
Latch bolt by handle either side.
Deadbolt by emergency release outside and thumbturn inside connected by
8 mm spindle on the square.
European levers come with set screw on the side.

Lever to thumbturn center-to-center:
3 1/8" (78 mm).

Premium and Elements Series Trim Sets

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
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<tr>
<td>☜</td>
<td>☜</td>
<td>☜</td>
<td>☜</td>
<td>☜</td>
</tr>
</tbody>
</table>
Trim Set Overview
Series EML

RA
55mm Round

RF
Oval

RM
55mm Square

ED
Escutcheon

RJ
Flush

Premium
- Stainless Steel
  - 6204 (630)
  - 6205 (629)
- Bronze
  - 7305 (611)
  - 7615 (615)
  - 7625 (613)

Elements
- Aluminum
  - 0105 (628)
  - 0205
  - 0410
  - 0510
  - 0710 (710)
  - 0810 (711)
- Powder Coated
Round and Narrow Lever Roses
Series EML

RA
12 1731 00101
Rose 2 3/8" (55 mm)

Cylinder must be ordered separately

RF
17 1758 00001

Cylinder Ring
17 1735 00210
Trim Set - Includes two rose assemblies and screws

Cylinder must be ordered separately

Emergency Release with Indicator

Set with Crescent Thumbturn (CI) 03 0418 09002
Thumbturns for RA 55mm Rose
Series EML

S
17 1735 00210
Standard Thumbturn

Cylinder must be ordered separately

RA - Configuration
55mm S Thumbturn
55mm Lever Rose

RD - Configuration
55mm S Thumbturn
65mm Lever Rose

Standard Turn with Emergency Release (SN)

12 1735 x0054

Trim Set - Includes two rose assemblies, spindle and screws

12 1735 10054 = 1 3/8” - 2” Door Thickness
12 1735 20054 = 2 1/4” - 2 3/4” Door Thickness
12 1735 30054 = 2 3/8” - 3 3/4” Door Thickness

Standard Turn with Emergency Release and Indicator (SI)

12 1735 x0055

Trim Set - Includes two rose assemblies, spindle and screws

12 1735 10054 = 1 3/8” - 2” Door Thickness
12 1735 20054 = 2 1/4” - 2 3/4” Door Thickness
12 1735 30054 = 2 3/8” - 3 3/4” Door Thickness
Thumbturns for RM 55mm Square Rose
Series EML

S
17 1703 00210
Standard Thumbturn

Cylinder must be ordered separately

RM - Configuration
55mm S Thumbturn
55mm Lever Rose

RS - Configuration
55mm S Thumbturn
65mm Lever Rose

Standard Turn with Emergency Release (SN)
12 1704 x0054
Trim Set - Includes two rose assemblies, spindle and screws

Standard Turn with Emergency Release and Indicator (SI)
12 1704 x0055
Trim Set - Includes two rose assemblies, spindle and screws
Trim Set RJ  Flush Rose  European Mortise Locks (EML)

**RJ**
17 1736 09011
0.118 × 2.165" (3 × 55 mm)
*Trim only sold in Sets*  
(Includes two rose assemblies, spindle and screws)

**Cylinder Ring**
17 1737 09002
0.118 × 2.165" (3 × 55 mm)
*Trim only sold in Sets*  
(Includes two rose assemblies, spindle and screws)

**SI**
17 1737 09020
Standard Thumbturn and Emergency Release with Indicator  
*Trim only sold in Sets* - Set with Standard Thumbturn (SI) 17 1737 09020  
(Includes two rose assemblies, spindle and screws)

---

RJ trim cannot be purchased independently from lockset.  
Trim number for reference only.

RJ trim is available for 1 ¼" door thickness only.

The following lever designs are not available with the RJ Flush Rose: 1051, 1058, 1163, 1164, 1241
Trim Set ED Long Rectangular Escutcheon Plate
European Mortise Locks (EML)

**ED**
14 1410 08101
9⅛" (245 mm)

**Cylinder Hole**
14 1410 08110

**Cylinder**
8812
Profile Cylinder used on A and B Functions.
Cylinder must be ordered separately

All details subject to modification
Trim Set ED Long Rectangular Escutcheon Plate European Mortise Locks (EML)

S
Standard Thumbrturn

Cylinder must be ordered separately

Standard Turn with Emergency Release (SN)
14 1410 08055
Trim Set - Includes two rose assemblies, spindle and screws

Standard Turn with Emergency Release and Indicator (SI)
14 1410 08054
Trim Set - Includes two rose assemblies, spindle and screws

Cylinder must be ordered separately
## European Mortise Locks

### European Profile Cylinder (PZ)

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
<th>Keyway Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>88 8812 00064</td>
<td>63.5 mm for 1⅛ – 1¾&quot; door thickness</td>
<td>Key × Key</td>
</tr>
<tr>
<td>88 8812 00070</td>
<td>71 mm for 2 – 2¼&quot; door thickness</td>
<td></td>
</tr>
<tr>
<td>88 8812 00164</td>
<td>63.5 mm for 1⅛ – 1¾&quot; door thickness</td>
<td>Key × Thumbtturn (Standard)</td>
</tr>
<tr>
<td>88 8812 00170</td>
<td>71 mm for 2 – 2¼&quot; door thickness</td>
<td></td>
</tr>
<tr>
<td>88 8812 00230</td>
<td>42 mm Cylinder Length (1⅛&quot;) for 1¾ – 1¾&quot; door thickness</td>
<td>⅛ Cylinder Thumbtturn (Standard) only</td>
</tr>
<tr>
<td>88 8812 00235</td>
<td>46 mm Cylinder Length (1⅜&quot;) for 2 – 2¼&quot; door thickness</td>
<td></td>
</tr>
</tbody>
</table>

### Door thickness based on 7 mm rose/escutcheon

#### Keyway

“C-type” 5 pin on each side and are supplied keyed different as standard. May be master keyed on special request.

#### Keys

Nickel plated brass, supplied with two keys per cylinder.

#### Cylinder Finish

Stainless Steel, Dark Bronze Color

#### Thumbtturn and Finishes

- Standard turnpiece
- US28 (matches FSB 0105) Aluminum Natural Color Anodized
- US32D (matches FSB 6204) Satin Stainless Steel
## Premium & Elements Series - EML
### Strikes

#### EML 1001
EML Series Mortise Strike without dustbox

**Entry/Privacy Functions**

Standard = $1\frac{3}{8}''$ (33 mm)

#### EML 1001 99
EML Series Extended Lip*
Mortise Strike without dustbox

* Identify lip to center (x dimension) specify mortise strike number

#### EML 1002
EML Series Mortise Strike without dustbox

**Passage Function**

---

**Table:**

<table>
<thead>
<tr>
<th>EML 1001 99 (x dimension)</th>
<th>EML 1002 (x dimension)</th>
</tr>
</thead>
<tbody>
<tr>
<td>6 11⁄16'' (170)</td>
<td>6 11⁄16'' (170)</td>
</tr>
<tr>
<td>3 1⁄16'' (78)</td>
<td>3 1⁄16'' (78)</td>
</tr>
<tr>
<td>3 1⁄16'' (78)</td>
<td>3 1⁄16'' (78)</td>
</tr>
<tr>
<td>15⁄32'' (12)</td>
<td>15⁄32'' (12)</td>
</tr>
<tr>
<td>1 11⁄32'' (34)</td>
<td>1 11⁄32'' (34)</td>
</tr>
<tr>
<td>1 25⁄32'' (45)</td>
<td>1 25⁄32'' (45)</td>
</tr>
<tr>
<td>1⁄16'' (1.6)</td>
<td>1⁄16'' (1.6)</td>
</tr>
<tr>
<td>1⁄4'' (6.3)</td>
<td>1⁄4'' (6.3)</td>
</tr>
</tbody>
</table>

---

*All details subject to modification*
FSB Subrose

FSB ASL® Subrose

Product variants
– Roses RA, RD, RM and ED escutcheons
– All fixed levers with above trim

Adaptor
Base rose is screwed to the door leaf first, without the cover or the lever. Additionally, it is no longer necessary to “screw past” the handle shank.

Fasteners
Fastening by means of through-fixed bolting with retention lugs and machine screws.

Solid spindle
The 8 mm solid spindle caters to standard door thicknesses from 1¾ to 2¼ inches.

Availability
The new FSB ASL® will be supplied with all FSB North America locksets.

FSB Original Subrose

Product variants
– Roses RA, RD, RF, RM and ED escutcheons

Fasteners
Fastening by means of through-fixed bolting with retention lugs and machine screws.

Spindle
Solid and split spindles depending on lock type and function.

Discontinued
European Mortise Locks
Suggested Specification

All mortise locksets shall be provided from one manufacturer and capable of accepting a European profile cylinder using the same lever and trim designs from FSB North America.

All levers and trim design shall be capable of being suited to operate Standard and narrow style mortise locks, tubular locks, and sliding door locks to maintain the design throughout the project. All locks and trim must be provided by the same manufacturer.

Certification:
DIN 18251-1 Class 3

All locks, levers, and trim shall be from one manufacturer.

Locks have a 5 year limited warranty.

**Faceplate (Scalp)**
9¼" × 1½" (235 × 24 mm). Satin stainless steel fixed to front of lock case.

**Latch**
.5" (12.7 mm) throw. Cast iron zinc galvanized.

**Deadbolt**
.315" × 1.38" (8 × 35 mm) × .827" (21 mm) throw. Material: Cast iron zinc galvanized.

**Hub**
.315" (8 mm) square PA plastic follower with steel blade, one way rotation for levers.

**Privacy set Hub**
.315" (8 mm) square, single throw action, 90 degree rotation.

**Backset**
2.19" (55 mm).

**Spacing**
2.83" (72 mm) center hub to center cylinder. 3.07" (78 mm) center lever hub to thumbturn hub.

**Through-bolting**
1.5" (38 mm) center to center.

**Strike**
Curved lip strike for hollow metal and wood frame construction without dust box. See drawings for dimensions. Flat lip, special length strikes, and wrought dust boxes may be had on a special order basis.

**Template**
Metal doors and frames to be prepared in accordance with the according FSB template.
Heavy Duty Lever Latch
HLL & HLT Series

<table>
<thead>
<tr>
<th>Quality</th>
<th>Design Advantage</th>
</tr>
</thead>
<tbody>
<tr>
<td>The FSB latch is a high quality, heavy duty tubular latch manufactured to meet stringent quality standards. This series is designed to work with a vast array of FSB lever handle designs. Built using a heavy-gauge die cast case, the latch features high strength steel compression springs for long life and durability. The FSB HLT series latches have surpassed over 400,000 operating cycles. Applications include high-end residential, hospitality, retail, and office buildings. The latch is backed by a 3 year limited warranty.</td>
<td>FSB has the widest selection of designer levers and trim in the Industry. With more than 100 lever and trim designs that can be suited with our standard, narrow style and European mortise locks, sliding door locks, sliding door hardware, and door pulls we will complement your design vision.</td>
</tr>
</tbody>
</table>
Specifying Tubular Latch Sets
(HLL) Available with Premium and Elements Series Trim
(HLT) Available with Transitions Series Trim

<table>
<thead>
<tr>
<th>Lock Type</th>
<th>Lock and Latch Function</th>
<th>Lever Design</th>
<th>Trim Set</th>
</tr>
</thead>
<tbody>
<tr>
<td>HLL</td>
<td>C</td>
<td>1147</td>
<td>RA</td>
</tr>
<tr>
<td></td>
<td>Insert your choice of function using one of the letter codes below</td>
<td>Insert your choice of lever design using one of the four digit codes.</td>
<td>Insert your choice of rose or escutcheon using one of the letter codes.</td>
</tr>
<tr>
<td>HLL</td>
<td>CU  UL Passage</td>
<td>Premium/Elements</td>
<td>Premium/Elements</td>
</tr>
<tr>
<td></td>
<td>C  Passage</td>
<td>1001* 1051* 1119</td>
<td>RA  Rose 2 3/4&quot; (55 mm)</td>
</tr>
<tr>
<td></td>
<td>E  Privacy</td>
<td>1002* 1053* 1134</td>
<td>RD  Rose 2 3/4&quot; (65 mm)</td>
</tr>
<tr>
<td></td>
<td>Y  Fixed Back to Back</td>
<td>1003* 1057* 1144</td>
<td>RF  Narrow Rose</td>
</tr>
<tr>
<td></td>
<td>Z  Fixed Single</td>
<td>1004 1058 1146</td>
<td>RJ  Flush Rose (55 mm)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1005 1070 1147</td>
<td>RM  Square Rose (55 mm)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1015^ 1074* 1160</td>
<td>RS  Square Rose* 2 3/4&quot; (65 mm) (Covers 2 3/8&quot; bore)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1016 1075 1163^</td>
<td>ED  Long Rectangular</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1020* 1076 1164</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>1021 1077* 1176</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>1023^ 1078 1177</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>1025 1080 1178</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>1027 1088 1183^</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>1028 1093 1185*</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>1031 1102 1241*</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>1034* 1106^ 1251</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>1035 1107 1257*</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>1045 1108 1259*</td>
<td></td>
</tr>
</tbody>
</table>

^ Due to weight, only bronze levers 1015, 1020, 1023, 1053, 1057, 1106, 1163 can be used for HLL Series
* Elements only
* Levers 1003, 1074, 1183 not available with E Function

<table>
<thead>
<tr>
<th>HLT</th>
<th>Transitions</th>
<th>Transitions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transitions</td>
<td>1035 1250</td>
<td>RA  Hard Edge Rose 2 3/4&quot; (55 mm)</td>
</tr>
<tr>
<td></td>
<td>1058 1251</td>
<td>RD  Rose 2 3/4&quot; (65 mm) (Covers 2 3/8&quot; bore)</td>
</tr>
<tr>
<td></td>
<td>1075 1252</td>
<td>RM  Square Rose 2 3/4&quot; (55 mm)</td>
</tr>
<tr>
<td></td>
<td>1076 1253</td>
<td>RS  Square Rose 2 3/4&quot; (65 mm) (Covers 2 3/8&quot; bore)</td>
</tr>
<tr>
<td></td>
<td>1241</td>
<td>ED  Long Rectangular</td>
</tr>
</tbody>
</table>

Trim sets are dependent on lock function. Not all trim sets are available for all functions. More details are provided on the lock function pages.
* Elements only
Example for Specifying

**HLL - C - 1147 - RA - 6204 - 238 - T1 - 134**

<table>
<thead>
<tr>
<th>Material and Finish</th>
<th>Backset</th>
<th>Strike</th>
<th>Door Thickness</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>6204</strong></td>
<td>238</td>
<td>T1</td>
<td>134</td>
</tr>
<tr>
<td>Insert your choice of material and finish using one of the codes below.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Standard</strong></td>
<td>238 2 ¾&quot; Backset</td>
<td>T1</td>
<td>Insert your choice of strike using one of the codes below</td>
</tr>
<tr>
<td><strong>Premium</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stainless Steel</td>
<td>234 2 ¾&quot; Backset</td>
<td>T1</td>
<td></td>
</tr>
<tr>
<td>Bronze</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7305 Polished, Waxed (611)</td>
<td>T1</td>
<td>Special Order</td>
<td></td>
</tr>
<tr>
<td>7615 Aged, Waxed (615)</td>
<td>T6</td>
<td>134 1 ¼&quot;</td>
<td></td>
</tr>
<tr>
<td>7625 Dark Oxidized, Waxed (613)</td>
<td>T7</td>
<td>138 1 ½&quot;</td>
<td></td>
</tr>
<tr>
<td><strong>Elements</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aluminum Anodized</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0105 Natural Color (628)</td>
<td>T2</td>
<td>Special Order</td>
<td></td>
</tr>
<tr>
<td>0205 Champagne Silver Color</td>
<td>T3</td>
<td>200 2&quot;</td>
<td></td>
</tr>
<tr>
<td>0410 Bronze Color</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0510 Medium Bronze Color</td>
<td>T4</td>
<td>214 2 ¼&quot;</td>
<td></td>
</tr>
<tr>
<td>0710 Dark Bronze Color (710)</td>
<td>T5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0810 Black Color (711)</td>
<td>T6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aluminum Powder Coated</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8120 Black (671)</td>
<td>T7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8220 White (714)</td>
<td>T8</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Transitions</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plated</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>014 Polished Nickel (618)</td>
<td>T9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>015 Satin Nickel (619)</td>
<td>T10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>026 Polished Chrome (625)</td>
<td>T11</td>
<td></td>
<td></td>
</tr>
<tr>
<td>03P Polished Brass PVD (605)</td>
<td>T12</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Natural</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>003 Polished Brass (605)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>004 Satin Brass (606)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10B Satin Brass Dark Oxidized (607)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Heavy Duty Lever Latch
Series HLL and HLT Functions

**Series HLL**
Heavy Duty Lever Latch
Passage only

**Latch**
All HLL and HLT use the same Latch.

**Specifications**
Field reversible with adjustable bevel.

**Backsets**
2 ⅛" (60 mm)
2 ¾" (70 mm)

**Strike**
Universal curved lip T-Strike with dustbox. See page 199 for other strike options.

**Faceplates**
Faceplate width 1" (25.4 mm) for minimum 1 ⅛" (35 mm) door thickness. Faceplate width 1 ¼" (28.5 mm) optional.

CU Function comes with 1 ½" (28.5 mm) width as standard.

---

**Function CU**
UL Rated Passage

**Description**
Latch bolt by handle either side.

---

**Premium and Elements Series** Trim Sets

<table>
<thead>
<tr>
<th>RA</th>
<th>RD</th>
<th>RF</th>
<th>RM</th>
<th>RJ</th>
<th>ED</th>
</tr>
</thead>
</table>
| ![Premium and Elements Series Trim Sets](image)

---

All details subject to modification.
# Heavy Duty Lever Latch
## Series HLL and HLT Functions

### Function C
**Passage**

**Description**
Latch bolt by handle either side.

### Premium and Elements Series Trim Sets

<table>
<thead>
<tr>
<th>RA</th>
<th>RD</th>
<th>RF</th>
<th>RM</th>
<th>RJ</th>
<th>ED</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1.png" alt="Diagram" /></td>
<td><img src="image2.png" alt="Diagram" /></td>
<td><img src="image3.png" alt="Diagram" /></td>
<td><img src="image4.png" alt="Diagram" /></td>
<td><img src="image5.png" alt="Diagram" /></td>
<td><img src="image6.png" alt="Diagram" /></td>
</tr>
</tbody>
</table>

### Transitions Series Trim Sets

<table>
<thead>
<tr>
<th>RA</th>
<th>RD</th>
<th>RM</th>
<th>RS</th>
<th>ED</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image7.png" alt="Diagram" /></td>
<td><img src="image8.png" alt="Diagram" /></td>
<td><img src="image9.png" alt="Diagram" /></td>
<td><img src="image10.png" alt="Diagram" /></td>
<td><img src="image11.png" alt="Diagram" /></td>
</tr>
</tbody>
</table>

### Function E
**Privacy**

**Description**
Latch bolt by handle either side. Outside handle locked by push button inside. Outside handle unlocked by retracting inside handle, emergency release tool, or closing the door.

### Premium and Elements Series Trim Sets

<table>
<thead>
<tr>
<th>RA</th>
<th>RD</th>
<th>RM</th>
<th>ED</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image12.png" alt="Diagram" /></td>
<td><img src="image13.png" alt="Diagram" /></td>
<td><img src="image14.png" alt="Diagram" /></td>
<td><img src="image15.png" alt="Diagram" /></td>
</tr>
</tbody>
</table>

**Note:** ED trim is provided as a stacked set with a tubular passage set and thumbturn deadbolt with emergency release. Function E is not available with 1003, 1074, 1183 Levers.

### Transitions Series Trim Sets

<table>
<thead>
<tr>
<th>RA</th>
<th>RD</th>
<th>RM</th>
<th>RS</th>
<th>ED</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image16.png" alt="Diagram" /></td>
<td><img src="image17.png" alt="Diagram" /></td>
<td><img src="image18.png" alt="Diagram" /></td>
<td><img src="image19.png" alt="Diagram" /></td>
<td><img src="image20.png" alt="Diagram" /></td>
</tr>
</tbody>
</table>
Heavy Duty Lever Latch
Series HLL and HLT Functions

Function Y
Fixed Back to Back Dummy

Trim Sets

<table>
<thead>
<tr>
<th>RA</th>
<th>RM</th>
</tr>
</thead>
</table>

Surface mounted subroses.

Set includes two dummy mount subroses, one pair of 2\(\frac{3}{8}\)" (55 mm) roses and two levers.

Trim Sets

<table>
<thead>
<tr>
<th>RD</th>
<th>RS</th>
</tr>
</thead>
</table>

For Elements and Transitions Series only

Surface mounted subroses.

Set includes two dummy mount subroses, one pair of 2\(\frac{3}{8}\)" (65 mm) roses and two levers.

Trim Sets

<table>
<thead>
<tr>
<th>RF</th>
</tr>
</thead>
</table>

Through bolted mounting with 1" Ø edge borehole.

Set includes one borelock, one straight spindle, one pair of narrow roses and two levers. Supplied with blank faceplate to cover edge borehole.

Minimum door thickness 1\(\frac{3}{4}\)"
Heavy Duty Lever Latches
Series HLL and HLT Functions

Function Y
Fixed Back to Back Dummy

Trim Sets

RJ

Through bolted mounting with $\frac{3}{4}''$ Ø borehole.

Set includes one mount bar, one straight spindle, one pair of $2\frac{3}{8}''$ (55 mm) flush roses and two levers. Supplied with blank faceplate to cover edge borehole.

ED

Surface mounted subplates.

Set includes two dummy mount sub-plates, two lever only escutcheons and two levers.
Heavy Duty Lever Latch
Series HLL and HLT Functions

Function Z
Fixed Single Dummy

Trim Sets

<table>
<thead>
<tr>
<th>RA</th>
<th>RM</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1.png" alt="Diagram" /></td>
<td><img src="image2.png" alt="Diagram" /></td>
</tr>
</tbody>
</table>

Surface mounted subrose. Set includes one dummy mount subrose, one 2\(\frac{3}{4}\)\" (55 mm) rose, and one lever.

Trim Sets

<table>
<thead>
<tr>
<th>RD</th>
<th>RS</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image3.png" alt="Diagram" /></td>
<td><img src="image4.png" alt="Diagram" /></td>
</tr>
</tbody>
</table>

For Elements and Transitions Series only

Surface mounted subrose. Set includes one dummy mount subrose, one 2\(\frac{3}{4}\)\" (65 mm) rose and one lever.

Trim Sets

<table>
<thead>
<tr>
<th>RF</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image5.png" alt="Diagram" /></td>
</tr>
</tbody>
</table>

Single sided with 1\" Ø edge borehole. Set includes one borelock, one half spindle (05 0423 00501), one narrow rose and one lever. Supplied with blank faceplate to cover edge borehole.

Minimum door thickness 1\(\frac{3}{4}\)\"
Heavy Duty Lever Latch
Series HLL and HLT Functions

Function Z
Fixed Single Dummy

Trim Sets
RJ

![Diagram of RJ Trim Set]

Single sided with ¾" Ø edge borehole and blank rose.

Set includes one mount bar, one half spindle, one pair of 2¾" (55 mm) flush roses and two levers. Supplied with blank faceplate to cover edge borehole.

Trim Sets
ED

![Diagram of ED Trim Set]

Surface mounted subplate.

Set includes one dummy mount subplate, one escutcheon and one lever.
Trim Set Roses
Series HLL and HLT

RA
17 1731 01401  Right Hand
Rose 2 ¾" (55 mm)

17 1731 00154  Left Hand
Privacy Roses 2 ¾" (55 mm)

RD  Designed to fit a 2 ¼" bore
17 1798 01401  Right Hand
Rose 2 ¾" (65 mm)

17 1798 00154  Left Hand
Privacy Roses 2 ¾" (65 mm)

RM
17 1703 01401  Right Hand
Square Rose

17 1703 00154  Left Hand
Privacy Roses 2 ¾" (55 mm)

RS  Designed to fit a 2 ⅜" bore
17 1705 01401  Right Hand
Square Rose

17 1705 00154  Left Hand
Privacy Roses 2 ¾" (65 mm)

All details subject to modification
Trim Sets Escutcheon Plates
Series HLL and HLT

RF
17 1758 00001
Narrow Rose

ED
14 1410 09100
9 ⅜" (245 mm)

RJ
17 1736 09011
0.118 × 2.165" | 3 × 55 mm, 1 ¾" door thickness only.
Levers 1051, 1058, 1163, 1164, 1241 not available with RJ trim.

Standard Turn with Emergency Release (SN)
14 1410 09103
Trim Set - Includes two rose assemblies, spindle and screws
### HLL Tubular Latch Strikes

#### HLL 1001
HLL Series Strike with dustbox

- **T1** = 1 ¼"

![HLL 1001 Diagram](image)

#### HLL 1003
HLL Series Strike with dustbox

- **T23** = 1 ¼"

![HLL 1003 Diagram](image)

#### HLL 1002
HLL Series Strike (ANSI/ASA Strike) with dustbox

- **T14** = 1 ¼"

![HLL 1002 Diagram](image)

### Tubular Strike Numbers and Dimensions

<table>
<thead>
<tr>
<th>Tubular Strike Number</th>
<th>Lip To Center Dimension</th>
<th>Strike Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>T1</td>
<td>1 ¼&quot;</td>
<td>&quot;T&quot; Curved Lip</td>
</tr>
<tr>
<td>T2</td>
<td>1&quot;</td>
<td>&quot;T&quot; Curved Lip</td>
</tr>
<tr>
<td>T3</td>
<td>1 ½&quot;</td>
<td>&quot;T&quot; Curved Lip</td>
</tr>
<tr>
<td>T4</td>
<td>1 ¾&quot;</td>
<td>&quot;T&quot; Curved Lip</td>
</tr>
<tr>
<td>T5</td>
<td>1 ¼&quot;</td>
<td>&quot;T&quot; Curved Lip</td>
</tr>
<tr>
<td>T6</td>
<td>1 ½&quot;</td>
<td>&quot;T&quot; Curved Lip</td>
</tr>
<tr>
<td>T7</td>
<td>2&quot;</td>
<td>&quot;T&quot; Curved Lip</td>
</tr>
<tr>
<td>T8</td>
<td>2 ¼&quot;</td>
<td>&quot;T&quot; Curved Lip</td>
</tr>
<tr>
<td>T9</td>
<td>2 ½&quot;</td>
<td>&quot;T&quot; Curved Lip</td>
</tr>
<tr>
<td>T10</td>
<td>2 ¾&quot;</td>
<td>&quot;T&quot; Curved Lip</td>
</tr>
<tr>
<td>T11</td>
<td>3&quot;</td>
<td>&quot;T&quot; Curved Lip</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Tubular Strike Number</th>
<th>Lip To Center Dimension</th>
<th>Strike Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>T12</td>
<td>1&quot;</td>
<td>ANSI Curved Lip</td>
</tr>
<tr>
<td>T13</td>
<td>1 ¼&quot;</td>
<td>ANSI Curved Lip</td>
</tr>
<tr>
<td>T14</td>
<td>1 ½&quot;</td>
<td>ANSI Curved Lip</td>
</tr>
<tr>
<td>T15</td>
<td>1 ¾&quot;</td>
<td>ANSI Curved Lip</td>
</tr>
<tr>
<td>T16</td>
<td>1 ¼&quot;</td>
<td>ANSI Curved Lip</td>
</tr>
<tr>
<td>T17</td>
<td>1 ½&quot;</td>
<td>ANSI Curved Lip</td>
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<tr>
<td>T18</td>
<td>2&quot;</td>
<td>ANSI Curved Lip</td>
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<tr>
<td>T19</td>
<td>2 ¼&quot;</td>
<td>ANSI Curved Lip</td>
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<tr>
<td>T20</td>
<td>2 ½&quot;</td>
<td>ANSI Curved Lip</td>
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<tr>
<td>T21</td>
<td>2 ¾&quot;</td>
<td>ANSI Curved Lip</td>
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<tr>
<td>T22</td>
<td>3&quot;</td>
<td>ANSI Curved Lip</td>
</tr>
<tr>
<td>T23</td>
<td>1 ¼&quot;</td>
<td>&quot;D&quot; Full Lip</td>
</tr>
</tbody>
</table>

All details subject to modification.
FSB Original Subrose

**Product variants**
- Roses RA, RD, RF, RM and ED escutcheons
- All fixed levers with above trim

**Fasteners**
Fastening by means of through-fixed bolting with retention lugs and machine screws.

**Spindle**
Solid and split spindles depending on lock type and function.

Availability
The new FSB ASL® will be supplied with all FSB North America locksets.

**Discontinued**

FSB ASL® Subrose

**Product variants**
- Roses RA, RD, RM and ED escutcheons
- All fixed levers with above trim

**Adaptor**
Base rose is screwed to the door leaf first, without the cover or the lever. Additionally, it is no longer necessary to “screw past” the handle shank.

**Fasteners**
Fastening by means of through-fixed bolting with retention lugs and machine screws.

**Solid spindle**
The 8 mm solid spindle caters to standard door thicknesses from 1 1/8 to 2 1/4 inches.

Availability
The new FSB ASL® will be supplied with all FSB North America locksets.
Tubular Latches
Suggested Specification

**HLL 7010 Passage**

**UL Listing**
3 Hour rated by Underwriters Laboratories, Inc.
UL File No. R16617

**Steel Case**
Size varies according to backset.
Heavy gauge .030” (.76 mm) thick, Stainless Steel.

**Latch Front and Faceplate**
1 ⅛” × 2 ¼” (28.5 × 57 mm).
Wrought stainless steel, satin finish.
Adjustable for beveled conditions from flat to standard bevel ½” on 2” (3 on 51 mm).

**Latch Bolt**
½” (12 mm) throw.
One-piece solid brass, nickel finish.
Field reversible.

**Hub**
.315” (8 mm) square, solid brass with one way, 28° degree rotation for levers.

**Door Thickness**
1 ⅛” – 2 ¾” (45 - 57 mm) Standard

**Backsets**
2 ⅞” (60 mm), 2 ⅜” (70 mm).

**Strike**
2 ⅞” × 1 ¼” (70 × 32 mm) lip to center.
Wrought stainless steel, satin finish.
Regularly furnished with universal curved lip T-Strike with black plastic dust box.
Flat lip, full lip, special length strikes and wrought dust boxes available on a special order basis.

**HLL/HLT 7230 Passage**

**HLL/HLT 7240 Privacy**

All heavy duty tubular latchsets shall be series HLL/HLT provided by FSB North America, Berlin, CT.

Latches shall have either a 2 ⅜” (70 mm) or 2 ⅝” (60 mm) backset and be non-handed.
Latches shall have unidirectional hubs for levers.
Strikes shall be curved lip, non-handed.

Lever and trim designs shall be capable of being suited to operate standard, narrow style and European mortise locks, and sliding lever locks to maintain the design throughout the project. All locks and trim must be provided by the same manufacturer.

All heavy duty tubular latchsets shall carry a 3 year limited warranty.

**Steel Case**
Size varies according to backset. Heavy gauge die cast alloy.

**Latch Front and Faceplate**
1” × 2 ⅜” (25.4 × 57 mm) Standard
1 ¼” × 2 ¼” (28.5 × 57 mm) Optional Stainless steel or brass, finished to match.

**Latch Bolt**
½” (12 mm) throw.
One-piece, satin nickel or satin brass finish.
Field reversible.

**Hub**
.315” (8 mm) square, with one way, 28° degree rotation for levers.

**Door Thickness**
1 ⅛” – 2 ¼” (35 – 57 mm) Standard

**Backsets**
2 ⅞” (60 mm), 2 ⅜” (70 mm).

**Strike**
2 ⅞” × 1 ¼” (70 × 32 mm) lip to center.
Wrought stainless steel or brass, finished to match.
Regularly furnished with universal curved lip T-Strike with black plastic dust box.
Flat lip, full lip, special length strikes and wrought dust boxes available on a special order basis.
**Tubular Deadbolts**  
HDD/HDT and KDD/KDT Series

<table>
<thead>
<tr>
<th>Deadbolt Series HDD/HDT and KDD/KDT</th>
<th>Design Advantage</th>
</tr>
</thead>
<tbody>
<tr>
<td>The FSB deadbolt is a high quality, heavy duty tubular deadbolt manufactured to meet stringent quality standards. This series is designed to work with a wide selection of FSB trim designs. Applications include high-end residential, hospitality, retail, and office buildings. The deadbolt is backed by a 3 year limited warranty.</td>
<td>FSB has the widest selection of designer levers and trim in the industry. With more than 100 lever and trim designs that can be suited with our standard, narrow style and European mortise locks, sliding door locks, sliding door hardware, and door pulls we will complement your design vision.</td>
</tr>
</tbody>
</table>
## Specifying Deadbolts

### Deadbolt Series HDD/HDT

<table>
<thead>
<tr>
<th>Deadbolt Type</th>
<th>Lock and Latch Function</th>
<th>Trim Set</th>
<th>Thumbturn and Indicator</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>HDD</strong></td>
<td><strong>S</strong></td>
<td><strong>RA</strong></td>
<td><strong>SN</strong></td>
</tr>
<tr>
<td></td>
<td>Insert your choice of Lock Type.</td>
<td>Insert your choice of rose using one of the letter codes below.</td>
<td>Insert your choice of thumbturn using the codes provided.</td>
</tr>
<tr>
<td></td>
<td><strong>R</strong> Thumbturn Deadbolt</td>
<td><strong>Premium/Elements</strong></td>
<td>Premium/Elements</td>
</tr>
<tr>
<td></td>
<td><strong>S</strong> Thumbturn Deadbolt with Emergency Release</td>
<td>RA Rose 2(\frac{3}{4})” (55 mm)</td>
<td>Standard thumbturn available with roses and escutcheons</td>
</tr>
<tr>
<td></td>
<td></td>
<td>RF Narrow Rose</td>
<td>ADA thumbturn available with RA roses only</td>
</tr>
<tr>
<td></td>
<td></td>
<td>RJ Flush Rose (55 mm)</td>
<td>Crescent thumbturn available with RF Trim only</td>
</tr>
<tr>
<td></td>
<td></td>
<td>RM Square Rose</td>
<td>Premium, Elements and Transitions</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ED Long Rectangular</td>
<td>Emergency Releases</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>N I</td>
</tr>
</tbody>
</table>

| **HDT**       | Transitions               | Transitions |                           |
|               |                           | Standard thumbturn available with all roses and escutcheons | ADA thumbturn available with roses only |
|               | RA Rose 2\(\frac{3}{4}\)” (55 mm) |               |                           |
|               | RM Square Rose (55 mm) |               |                           |
|               | ED Long Rectangular |               |                           |
Example for Specifying

HDD - S - RA - SN - 6204 - 238 - 134

<table>
<thead>
<tr>
<th>Material and Finish</th>
<th>Backset</th>
<th>Handing</th>
<th>Door Thickness</th>
</tr>
</thead>
<tbody>
<tr>
<td>6204</td>
<td>238</td>
<td></td>
<td>134</td>
</tr>
<tr>
<td>Insert your choice of material and finish using one of the codes below.</td>
<td>Insert your choice of backset using one of the three digit codes below.</td>
<td>All sets are non-handed.</td>
<td>Insert your choice of door thickness using one of the three digit codes below.</td>
</tr>
<tr>
<td><strong>Premium</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stainless Steel</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>■ 6204 Satin (630)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>■ 6205 Polished (629)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bronze</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>■ 7305 Polished, Waxed (611)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>■ 7615 Aged, Waxed (615)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>■ 7625 Dark Oxidized, Waxed (613)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Elements</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aluminum Anodized</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>■ 0105 Natural Color (628)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>■ 0205 Champagne Silver Color</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>■ 0410 Bronze Color</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>■ 0510 Medium Bronze Color</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>■ 0710 Dark Bronze Color (710)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>■ 0810 Black Color (711)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aluminum Powder Coated</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>■ 8120 Black (671)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>■ 8220 White (714)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| Transitions         |         |         |               |
| Plated              |         |         |               |
| ■ 014 Polished Nickel (618) |         |         |               |
| ■ 015 Satin Nickel (619) |         |         |               |
| ■ 026 Polished Chrome (625) |         |         |               |
| ■ 03P Polished Brass PVD (605) |         |         |               |
| Natural             |         |         |               |
| ■ 003 Polished Brass (605) |         |         |               |
| ■ 004 Satin Brass (606) |         |         |               |
| ■ 10B Satin Brass Dark Oxidized (607) |         |         |               |
Heavy Duty Privacy Deadbolt
Series HDD and HDT Functions

Series HDD and HDT
Heavy Duty Privacy Deadbolt

Specifications
Full bolt extension achieved with 135° thumbturn rotation

Deadbolt
All HDD and HDT use the same deadbolt.

Backsets
2 ¾” (60 mm)
2 ¾” (70 mm)

Strike
Universal deadbolt strike with dustbox.

Face Plate
Faceplate width 1" (25.4 mm) standard
Faceplate width 1 ¼" (28.5 mm) optional

Function R
Deadbolt with Thumbturn

Description
Deadbolt by thumbturn inside.
No operation outside.

Premium and Elements Series Trim Sets
RA-S | RA-D | RM-S | RJ-S | ED-S | RF-C

Transitions Series Trim Sets
RA-S | RA-D | RM-S | RM-D
# Heavy Duty Privacy Deadbolt
Series HDD and HDT Functions

## Function S
Deadbolt with Thumbturn and Emergency Release

### Description
Deadbolt by thumbturn inside and emergency release outside.

<table>
<thead>
<tr>
<th>Premium and Elements Series Trim Sets</th>
</tr>
</thead>
<tbody>
<tr>
<td>RA-SN/SI</td>
</tr>
<tr>
<td>🔄 / 🟥</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Transitions Series Trim Sets</th>
</tr>
</thead>
<tbody>
<tr>
<td>RA-SN/SI</td>
</tr>
<tr>
<td>🔄 / 🟥</td>
</tr>
</tbody>
</table>
Thumbturns for RA 55mm Rose Series HDD and HDT

S
17 1744 00169
Standard Thumbturn

Standard Turn with Emergency Release (SN)
17 1744 00160
Trim Set - Includes two rose assemblies, spindle and screws

Standard Turn with Emergency Release and Indicator (SI)
17 1744 00159
Trim Set - Includes two rose assemblies, spindle and screws
Thumbturns for RA 55mm Rose Series HDD and HDT

**D**
17 1744 09169
ADA Thumbturn

 ADA Turn with Emergency Release (DN)
17 1744 09160

**Trim Set** - Includes two rose assemblies, spindle and screws

 ADA Turn with Emergency Release and Indicator (DI)
17 1744 09159

**Trim Set** - Includes two rose assemblies, spindle and screws
Thumbturns for RM 55mm Square Rose
Series HDD and HDT

S
17 1712 00169
Standard Thumbturn

Standard Turn with Emergency Release (SN)
17 1712 00160
Trim Set - Includes two rose assemblies, spindle and screws

Standard Turn with Emergency Release and Indicator (SI)
17 1712 00159
Trim Set - Includes two rose assemblies, spindle and screws
Thumbturns for RM 55mm Square Rose
Series HDT

D
17 1712 09169
ADA Thumbturn

ADA Turn with Emergency Release (DN)
17 1712 09160
Transitions Series Only
Trim Set - Includes two rose assemblies, spindle and screws

ADA Turn with Emergency Release and Indicator (DI)
17 1712 09159
Transitions Series Only
Trim Set - Includes two rose assemblies, spindle and screws
Trim Set RJ Flush Rose
Deadbolt HDD

S
17 1737 09018
Standard Thumbturn

Emergency Release with Indicator

Set with Standard Thumbturn (SI)  17 1737 09017

RJ trim cannot be purchased independently from lockset. Trim number for reference only.

RJ trim is available for 1¼" door thickness only. Using wood screws.
Trim Set RF Narrow Rose
Deadbolt HDD

Premium and Elements

C

03 0418 09001
Crescent Thumbturn

Emergency Release with Indicator

Set with Crescent Thumbturn (CI) 03 0418 09002
### HDD/HDT 7220 Privacy Deadbolt

All heavy duty tubular deadbolts shall be series HDD as provided by FSB North America, Berlin, CT.

Deadbolts shall have either a 2 \( \frac{3}{4} \)" (70 mm) or 2 \( \frac{3}{8} \)" (60 mm) backset and be non-handed. Strikes shall be non-handed.

Lever and trim designs shall be capable of being suited to operate standard, narrow style and European mortise locks to maintain the design throughout the project. All locks and trim must be provided by the same manufacturer.

All heavy duty tubular deadbolts shall carry a 3 year limited warranty.

### Steel Case

Size varies according to backset. Heavy gauge Die Cast Alloy.

### Latch Front and Faceplate

- **Standard**: 1" × 2 \( \frac{3}{4} \)" (25.4 × 57 mm)
- **Optional**: 1 \( \frac{1}{8} \)" × 2 \( \frac{1}{4} \)" (28.5 × 57 mm)

Stainless steel or brass, finished to match. Adjustable for beveled conditions from flat to standard bevel.

### Deadbolt

9\( \frac{1}{2} \)" (14 mm) throw.

One-piece, satin nickel or satin brass finish. Field reversible.

### Hub

.2" (5 mm) diamond, machined brass 135° thumbturn rotation for full extension.

### Door Thickness

1 \( \frac{3}{8} \)" – 2 \( \frac{3}{4} \)" (35 – 57 mm)

### Backsets

2 \( \frac{3}{8} \)" (60 mm), 2 \( \frac{3}{4} \)" (70 mm).

### Strike

2 \( \frac{3}{4} \)" × 1 \( \frac{1}{8} \)" (70 × 28.5 mm).

Wrought stainless steel or brass, finished to match. Regularly furnished as standard with a black plastic dust box. Special strikes and wrought dust boxes available on a special order basis.
## Specifying Deadbolt

### Keyed Deadbolt Series KDD and KDT

<table>
<thead>
<tr>
<th>Keyed Deadbolt Type</th>
<th>Lock and Latch Function</th>
<th>Trim Set</th>
<th>Thumbturn and Indicator</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>KDD</strong></td>
<td><strong>N</strong></td>
<td><strong>DA</strong></td>
<td><strong>S</strong></td>
</tr>
<tr>
<td>Insert your choice of Lock Type.</td>
<td>Insert your choice of function using one of the letter codes below.</td>
<td>Insert your choice of rose using one of the two letter codes below.</td>
<td>Only thumbturn available in KDD/KDT is the Standard Thumbturn.</td>
</tr>
<tr>
<td><strong>KDD</strong></td>
<td><strong>N</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Premium Elements</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>KDT</strong></td>
<td><strong>P</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Transitions</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Premium/Elements

<table>
<thead>
<tr>
<th>Premium/Elements</th>
<th>Transitions</th>
</tr>
</thead>
<tbody>
<tr>
<td>DA</td>
<td><strong>LA</strong></td>
</tr>
<tr>
<td></td>
<td><strong>LD</strong></td>
</tr>
<tr>
<td></td>
<td><strong>LM</strong></td>
</tr>
<tr>
<td><strong>Key x Key Deadbolt</strong></td>
<td><strong>Conical Rose</strong></td>
</tr>
<tr>
<td></td>
<td>2¾₁⁄₁₆ (55 mm)</td>
</tr>
<tr>
<td><strong>Key x Thumbturn Deadbolt</strong></td>
<td><strong>Conical Rose</strong></td>
</tr>
<tr>
<td></td>
<td>2¾₁⁄₁₆ (55 mm)</td>
</tr>
</tbody>
</table>

* LA, LD and LM Roses only available in Stainless Steel.

Trim sets are dependent on lock function. Not all trim sets are available for all functions. More details are provided on the lock function pages.

### Transitions

<table>
<thead>
<tr>
<th>Transitions</th>
<th>Transitions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>LA</strong></td>
<td><strong>S</strong></td>
</tr>
<tr>
<td><strong>LD</strong></td>
<td></td>
</tr>
<tr>
<td><strong>LM</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Conical Rose</strong></td>
<td><strong>Standard thumbturn</strong></td>
</tr>
<tr>
<td>2¾₁⁄₁₆ (55 mm)</td>
<td><strong>S</strong></td>
</tr>
<tr>
<td>2¾₁⁄₁₆ (55 mm)</td>
<td></td>
</tr>
<tr>
<td>2¾₁⁄₁₆ (55 mm)</td>
<td></td>
</tr>
</tbody>
</table>

Standard thumbturn available with all roses.
Example for Specifying

KDD - N - DA - S - 6204 - 238 - 134

<table>
<thead>
<tr>
<th>Material and Finish</th>
<th>Backset</th>
<th>Handing</th>
<th>Door Thickness</th>
</tr>
</thead>
<tbody>
<tr>
<td>6204</td>
<td>238</td>
<td>All sets are non-handed.</td>
<td>134</td>
</tr>
</tbody>
</table>

Insert your choice of material and finish using one of the codes below.

**Premium**
- Stainless Steel
  - 6204 Satin (630)
  - 6205 Polished (629)

**Elements**
- Aluminum Anodized
  - 0105 Natural Color (628)
  - 0205 Champagne Silver Color
  - 0410 Bronze Color
  - 0510 Medium Bronze Color
  - 0710 Dark Bronze Color (710)
  - 0810 Black Color (711)

- Aluminum Powder Coated
  - 8120 Black (671)
  - 8220 White (714)

**Transitions**
- Plated
  - 014 Polished Nickel (618)
  - 015 Satin Nickel (619)
  - 026 Polished Chrome (625)
  - 03P Polished Brass PVD (605)

- Natural
  - 003 Polished Brass (605)
  - 004 Satin Brass (606)
  - 10B Satin Brass Dark Oxidized (607)

Insert your choice of backset using one of the three digit codes below.

**Standard**
- 238 2 3⁄8" Backset
- 234 2 3⁄4" Backset

Insert your choice of door thickness using one of the three digit codes.

**Standard**
- 134 1 3⁄4"
- 138 1 5⁄8"

**Special Order**
- 200 2"
- 214 2 1⁄4"

All sizes over 2 1⁄4" thick please consult FSB.
Keyed Deadbolt
Series KDD and KDT Functions

Series KDD and KDT
Keyed Deadbolt

Specifications
Faceplate width 1" (25.4 mm).

Deadbolt
All KDD and KDT use the same deadbolt.

Backsets
2 3⁄8" (60 mm)
2 3⁄4" (70 mm)

Strike
Universal deadbolt strike with dustbox.

Function N
Key × Key Deadbolt

Description
Deadbolt by key either side.

Premium and Elements Series Trim Sets

<table>
<thead>
<tr>
<th>DA</th>
<th>DD</th>
<th>LA*</th>
<th>LD*</th>
<th>LM*</th>
</tr>
</thead>
</table>

| Transitions Series Trim Sets |
| LA | LD | LM |

* Stainless Steel Only
Keyed Deadbolt
Series KDD and KDT Functions

Function P
Description
Deadbolt by key outside and thumbturn inside.

Premium and Elements Series Trim Sets

<table>
<thead>
<tr>
<th>DA</th>
<th>DD</th>
<th>LA*</th>
<th>LD*</th>
<th>LM*</th>
</tr>
</thead>
</table>

Transitions Series Trim Sets

<table>
<thead>
<tr>
<th>LA</th>
<th>LD</th>
<th>LM</th>
</tr>
</thead>
</table>
## Trim Sets
### Keyed Deadbolt KDD

<table>
<thead>
<tr>
<th>Model</th>
<th>Code</th>
<th>Description</th>
<th>Dimensions</th>
</tr>
</thead>
<tbody>
<tr>
<td>DA</td>
<td>03 0450 09011</td>
<td>2½&quot; (55 mm) x ¾&quot; (19 mm)</td>
<td><img src="DA.png" alt="DA Diagram" /></td>
</tr>
<tr>
<td>DD</td>
<td>03 0450 09010</td>
<td>2½&quot; (65 mm) x ¾&quot; (19 mm)</td>
<td><img src="DD.png" alt="DD Diagram" /></td>
</tr>
</tbody>
</table>

### Cylinder Extension Ring

<table>
<thead>
<tr>
<th>Model</th>
<th>Code</th>
<th>Description</th>
<th>Dimensions</th>
</tr>
</thead>
<tbody>
<tr>
<td>LA</td>
<td>03 0450 09152</td>
<td>2¼&quot; (55 mm) x ½&quot; (14.3 mm)</td>
<td><img src="LA.png" alt="LA Diagram" /></td>
</tr>
<tr>
<td>LD</td>
<td>03 0450 09153</td>
<td>2¼&quot; (65 mm) x ½&quot; (14.3 mm)</td>
<td><img src="LD.png" alt="LD Diagram" /></td>
</tr>
</tbody>
</table>

### Thumbturn

<table>
<thead>
<tr>
<th>Model</th>
<th>Code</th>
<th>Description</th>
<th>Dimensions</th>
</tr>
</thead>
<tbody>
<tr>
<td>LA</td>
<td>03 0450 09012</td>
<td>1¼&quot; (35.2 mm)</td>
<td><img src="Thumbturn.png" alt="Thumbturn Diagram" /></td>
</tr>
</tbody>
</table>

Cylinder must be ordered separately.
Trim Sets
Keyed Deadbolt KDT

**LA**
03 0450 09152
2 3/8" (55 mm) × 9/16" (14.3 mm)

**LM**
03 0450 09154
2 3/8" (55 mm) × 9/16" (14.3 mm)

**LD**
03 0450 09153
2 3/8" (65 mm) × 9/16" (14.3 mm)

---

**Thumbturn**
03 0450 09012

Cylinder must be ordered separately
Tubular Deadbolt & Keyed Tubular Deadbolt

Suggested Specification

<table>
<thead>
<tr>
<th>HDD/HDT 7220 Privacy Deadbolt</th>
<th>KDD/KDT 7070 Keyed Deadbolt</th>
</tr>
</thead>
<tbody>
<tr>
<td>All heavy duty tubular deadbolts shall be series HDD as provided by FSB North America, Berlin, CT.</td>
<td>All keyed deadbolts shall be series KDD as provided by FSB North America, Berlin, CT.</td>
</tr>
<tr>
<td>Deadbolts shall have either a 2 3/4&quot; (70 mm) or 2 1/8&quot; (60 mm) backset and be non-handed. Strikes shall be non-handed.</td>
<td>Deadbolts shall have either a 2 3/4&quot; (70 mm) or 2 1/8&quot; (60 mm) backset and be non-handed. Strikes shall be non-handed.</td>
</tr>
<tr>
<td>Lever and trim designs shall be capable of being suited to operate standard, narrow style and European mortise locks to maintain the design throughout the project. All locks and trim must be provided by the same manufacturer.</td>
<td>Lever and trim designs shall be capable of being suited to operate standard, narrow style and European mortise locks to maintain the design throughout the project. All locks and trim must be provided by the same manufacturer.</td>
</tr>
<tr>
<td>All heavy duty tubular deadbolts shall carry a 3 year limited warranty.</td>
<td>All keyed deadbolts shall carry a 3 year limited warranty.</td>
</tr>
</tbody>
</table>

### Steel Case

Size varies according to backset. Heavy gauge Die Cast Alloy.

### Latch Front and Faceplate

1" x 2 1/4" (25.4 x 57 mm) Standard
1 1/8" x 2 1/4" (28.5 x 57 mm) Optional stainless steel or brass, finished to match. Adjustable for beveled conditions from flat to standard bevel.

### Deadbolt

9/16" (14 mm) throw.
One-piece, satin nickel or satin brass finish. Field reversible.

### Hub

.2" (5 mm) diamond, machined brass
135° thumbturn rotation for full extension.

### Door Thickness

1 3/8" – 2 1/4" (35 – 57 mm) Standard

### Backsets

2 3/8" (60 mm), 2 3/4" (70 mm).

### Strike

2 3/4" x 1 3/8" (70 x 28.5 mm).
Wrought stainless steel or brass, finished to match. Regularly furnished as standard with a black plastic dust box. Special strikes and wrought dust boxes available on a special order basis.

### Latch Front and Faceplate

1" x 2 1/4" (25.4 x 57 mm) Standard Stainless steel.

### Deadbolt

1" (25.4 mm) throw.
One-piece, solid brass, nickel finish. Field reversible.

### Hub

.3125" (8 mm) cross
90° thumbturn rotation for full extension.

### Door Thickness

1 3/8" – 2 1/4" (35 – 57 mm) Standard

### Backsets

2 3/8" (60 mm), 2 3/4" (70 mm).

### Strike

2 3/4" x 1 3/8" (70 x 28.5 mm).
Wrought stainless steel or brass, finished to match. Regularly furnished as standard with a black plastic dust box. Special strikes and wrought dust boxes available on a special order basis.
Quality
A premium quality, heavy duty commercial grade sliding and door lock series manufactured in the United States to meet the stringent demands of commercial applications. Built using a heavy-gauge steel case, the lock features a machined, solid brass deadlock with stainless steel hooks. The locks are designed to accommodate FSB trim for positive alignment of the lock case.

The lock is backed by a 10 year limited warranty.

Design Advantage
FSB has an array of aesthetically pleasing lever and trim designs to complement your design vision.

Locks are available with backsets from 2 ½” to 6”.

Available with our Premium, Elements and Transitions Series of door furniture.
Specifying Locksets
Sliding Lever Lock (SLL and SLT)

<table>
<thead>
<tr>
<th>Lock Type</th>
<th>Lock Function</th>
<th>Lever Design</th>
<th>Trim Set</th>
<th>Thumbturn and Indicator</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SLL</strong></td>
<td>B</td>
<td>1147</td>
<td>RA</td>
<td>S</td>
</tr>
<tr>
<td></td>
<td>Insert your choice of Lock Type.</td>
<td>Insert your choice of lever design using one of the four digit codes.</td>
<td>Insert your choice of rose or escutcheon using one of the letter codes.</td>
<td>Insert your choice of thumbturn and indicator if necessary using the codes provided.</td>
</tr>
<tr>
<td><strong>SLL</strong></td>
<td>B Dormitory</td>
<td>1147</td>
<td>RA</td>
<td>S</td>
</tr>
<tr>
<td>Premium</td>
<td>E Privacy</td>
<td></td>
<td>Solar</td>
<td>S</td>
</tr>
<tr>
<td>Elements</td>
<td>T Patio</td>
<td></td>
<td></td>
<td>S</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Premium/Elements</th>
<th>RA Rose 2½&quot; (55 mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1001*</td>
<td>1078</td>
</tr>
<tr>
<td>1002*</td>
<td>1080</td>
</tr>
<tr>
<td>1003</td>
<td>1088</td>
</tr>
<tr>
<td>1004</td>
<td>1093</td>
</tr>
<tr>
<td>1005</td>
<td>1102</td>
</tr>
<tr>
<td>1015</td>
<td>1106</td>
</tr>
<tr>
<td>1016</td>
<td>1107</td>
</tr>
<tr>
<td>1020*</td>
<td>1108</td>
</tr>
<tr>
<td>1021</td>
<td>1119</td>
</tr>
<tr>
<td>1023</td>
<td>1134</td>
</tr>
<tr>
<td>1025</td>
<td>1144</td>
</tr>
<tr>
<td>1027</td>
<td>1146</td>
</tr>
<tr>
<td>1028</td>
<td>1147</td>
</tr>
<tr>
<td>1031</td>
<td>1160</td>
</tr>
<tr>
<td>1034*</td>
<td>1163</td>
</tr>
<tr>
<td>1035</td>
<td>1164</td>
</tr>
<tr>
<td>1045</td>
<td>1176</td>
</tr>
<tr>
<td>1051*</td>
<td>1177</td>
</tr>
<tr>
<td>1053</td>
<td>1178</td>
</tr>
<tr>
<td>1057</td>
<td>1183</td>
</tr>
<tr>
<td>1058</td>
<td>1185*</td>
</tr>
<tr>
<td>1070</td>
<td>1241*</td>
</tr>
<tr>
<td>1074</td>
<td>1251^</td>
</tr>
<tr>
<td>1075</td>
<td>1257*</td>
</tr>
<tr>
<td>1076</td>
<td>1259*</td>
</tr>
<tr>
<td>1077*</td>
<td></td>
</tr>
</tbody>
</table>

^ Stainless Only
* Elements Only

<table>
<thead>
<tr>
<th>Transitions</th>
<th>Transitions</th>
<th>Transitions</th>
</tr>
</thead>
<tbody>
<tr>
<td>1035</td>
<td>RA Rose 2½&quot; (55 mm)</td>
<td></td>
</tr>
<tr>
<td>1058</td>
<td>RD Rose 2½&quot; (65 mm)</td>
<td></td>
</tr>
<tr>
<td>1075</td>
<td>RM Square Rose (55 mm)</td>
<td></td>
</tr>
<tr>
<td>1076</td>
<td>RS Square Rose (65 mm)</td>
<td></td>
</tr>
<tr>
<td>1241</td>
<td>ED Long Rectangular</td>
<td></td>
</tr>
</tbody>
</table>

N Emergency Releases
I

S Standard thumbturn available with all roses and escutcheons
D ADA thumbturn available with roses only
### Example for Specifying

**SLL - B - 1147 - RA - S - 6204 - 234 - RH - 134**

<table>
<thead>
<tr>
<th>Material and Finish</th>
<th>Backset</th>
<th>Handing</th>
<th>Door Thickness</th>
</tr>
</thead>
<tbody>
<tr>
<td>6204</td>
<td>234</td>
<td>RH</td>
<td>134</td>
</tr>
</tbody>
</table>

Insert your choice of material and finish using one of the codes below.

#### Premium Stainless Steel
- 6204 Satin (630)
- 6205 Polished (629)

#### Bronze
- 7305 Polished, Waxed (611)
- 7615 Aged, Waxed (615)
- 7625 Dark Oxidized, Waxed (613)

#### Elements Aluminum Anodized
- 0105 Natural Color (628)
- 0205 Champagne Silver Color
- 0410 Bronze Color
- 0510 Medium Bronze Color
- 0710 Dark Bronze Color (710)
- 0810 Black Color (711)

-Aluminum Powder Coated
- 8120 Black (671)
- 8220 White (714)

#### Transitions Plated
- 014 Polished Nickel (618)
- 015 Satin Nickel (619)
- 026 Polished Chrome (625)
- 03P Polished Brass PVD (605)

-Natural
- 003 Polished Brass (605)
- 004 Satin Brass (606)
- 10B Satin Brass Dark Oxidized (607)

Insert your choice of backset using one of the three digit codes below.

#### Standard
- 212 2 ½” Backset
- 234 2 ¾” Backset

#### Special Order
- 334 3 ¾” Backset
- 500 5” Backset
- 600 6” Backset

Insert your choice of hand using one of the two letter codes below.

- RH Right Hand
- LH Left Hand

Insert your choice of door thickness using one of the three digit codes.

#### Standard
- 134 1 ¾”

#### Special Order
- 138 1 ⅜”
- 200 2”
- 214 2 ¼”

All sizes over 1 ¾” thick are special order. Please consult FSB.
Sliding Lever Lock
Series SLL and SLT Functions

Series SLL & SLT
Sliding Door Lock

Backsets
2 ½” (64 mm)
2 ¾” (70 mm)
3 ¾” (95 mm)
5” (127 mm)
6” (152 mm)

Strike
Deadbolt strike with dustbox.

As standard, the deadbolt is always supplied in satin chrome or satin brass. Custom finishes are available on request.

Lock Body
All SLL and SLT use the same lock body.

Lock body only: SLL 7005
Sliding Lever Lock
Series SLL and SLT Functions

Function B
Dormitory

Description
Dead bolt by handle inside only.
Dead bolt by key outside and
thumbturn inside.
Outside handle is always rigid.

ANSI Code F13

Premium and Elements Series Trim Sets

Transitions Series Trim Sets
Sliding Lever Lock
Series SLL and SLT Functions

Function E
Privacy

Description
Dead bolt by handle inside only.
Dead bolt by thumbturn inside and
emergency release outside.
Outside handle is always rigid.

Premium and Elements Series Trim Sets

### Split Spindle

Transitions Series Trim Sets
Sliding Lever Lock
Series SLL and SLT Functions

Function T
Patio

Description
Dead bolt by handle inside only.
Dead bolt by thumbturn inside.
Outside handle is always rigid.

Premium and Elements Series Trim Sets

<table>
<thead>
<tr>
<th>RA-S</th>
<th>RD-S</th>
<th>RM-S</th>
<th>ED-S</th>
<th>RF-C</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>RA-D</th>
<th>RD-D</th>
</tr>
</thead>
</table>

Transitions Series Trim Sets

<table>
<thead>
<tr>
<th>RA-S</th>
<th>RD-S</th>
<th>RM-S</th>
<th>ED-S</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>RA-D</th>
<th>RD-D</th>
<th>RM-D</th>
<th>RS-D</th>
</tr>
</thead>
</table>
Trim Set Overview
Sliding Lever Lock (SLL and SLT)

For trim set details please refer to Standard Mortise Locks Section
Sliding Lever Lock SLL and SLT 7005

All heavy duty sliding door locks shall be series SLL as manufactured by FSB North America, Berlin, CT.
Locksets shall be available with backsets ranging from 2 1/2" to 6" and be non-handed.
Trim designs shall be FSB and shall be matched to each specific lock type and function to ensure proper compatibility.

All heavy duty sliding door locks shall carry a 10 year limited warranty.

Steel Case
Size varies according to backset. Heavy gauge 0.093" (2.36 mm) thick, corrosion resistant zinc dichromate finish.

Armor Front and Scalp
0.218" × 1.25" × 8"
(5.5 × 32 × 203 mm)

Faceplate (Scalp only)
0.062" × 1.25" × 8"
(1.57 × 32 × 203 mm)
Wrought stainless steel, bronze or brass substrate. Finished to match.

Deadbolt
0.5625" × 1.25" (14 x 32 mm)
× 1" (25.4 mm) throw.
Machined solid brass with stainless steel hooks.

Thumbturn Hub
0.2" (5 mm) diamond. Oil impregnated, copper infiltrated sintered steel, 90 degree rotation.

Backsets
2.50" (64 mm)
2.75" (70 mm)
3.75" (95 mm)
5.00" (127 mm)
6.00" (152 mm)

Spacing
3.625" (92 mm) center lever hub to center cylinder, 2.4375" (62 mm) center lever hub to center thumbturn hub.

Strike
4.875" × 1.25" (124 × 32 mm) rectangular strike. Wrought stainless steel, bronze, and brass substrate. Finished to match. Wrought dust boxes also available.
Standing on the outside of a room which could be a closet, a bedroom, a bathroom, an office, etc., if the door slides to the right then you need a right-hand lock and if to the left then you need a left-hand lock.
## SDL and SPL Series

### Quality
A premium quality, heavy duty commercial grade sliding and pocket door lock/pull series manufactured in the United States to meet the stringent demands of commercial applications. Built using a heavy-gauge steel case, the lock features a machined, solid brass deadlock with stainless steel hooks. The locks are designed to accommodate FSB trim for positive alignment of the lock case. The lock is backed by a 10 year limited warranty.

### Design Advantage
FSB has an array of sliding and pocket door lock trim to complement your design vision. Locks are available with backsets from 2 ½" to 6".

## ESL and EPL Series

### Quality
A high quality sliding pocket door privacy lock/pull/passage series compatible with an array of FSB sliding door trim. The locks are manufactured in Germany and designed to accommodate FSB trim for positive alignment with the lock case. The lock is backed by a 5 year limited warranty.

### Design Advantage
FSB has an array of sliding and pocket door lock trim to complement your design vision.
## Specifying Locksets
### Sliding & Pocket Door Locks (SDL, SPL, ESL and EPL)

<table>
<thead>
<tr>
<th>Lock Types</th>
<th>Lock Functions</th>
<th>Trim Set</th>
<th>Emergency Release</th>
</tr>
</thead>
<tbody>
<tr>
<td>SDL</td>
<td>P</td>
<td>SA</td>
<td>I</td>
</tr>
<tr>
<td>Standard Sliding/Pocket Door Locks</td>
<td>SDL Insert your choice of function using one of the letter codes below.</td>
<td>Standard Sliding/Pocket Door Locks</td>
<td>Standard Sliding/Pocket Door Locks</td>
</tr>
<tr>
<td>SDL Sliding Door Lock</td>
<td>P Key × Thumbturn Deadlock</td>
<td>SA Flush Pull</td>
<td>SA</td>
</tr>
<tr>
<td>SPL Standard Pocket Lock</td>
<td>R Thumbturn Deadlock</td>
<td>SB Spring Loaded</td>
<td>N</td>
</tr>
<tr>
<td>European Sliding/Pocket Door Locks</td>
<td>SDL S Thumbturn Deadlock with Emergency Release</td>
<td>European Sliding/Pocket Door Locks</td>
<td>European Sliding/Pocket Door Locks</td>
</tr>
<tr>
<td>ESL European Sliding Lock</td>
<td>S Thumbturn Deadlock with Emergency Release</td>
<td>SA Flush Pull</td>
<td>N</td>
</tr>
<tr>
<td>EPL European Pocket Lock</td>
<td></td>
<td>SB Spring Loaded</td>
<td>I</td>
</tr>
</tbody>
</table>

Trim sets are dependent on lock function. Not all trim sets are available for all functions. More details are provided on the lock function pages.

Indicator choices are only necessary with the S lock function.
Example for Specifying

SDL - P - SA - 6204 - 234 - 134

Material and Finish

6204

Insert your choice of material and finish using one of the codes below.

Premium
Stainless Steel

6204 Satin (630)
6205 Polished (629)

Elements
Aluminum Anodized

0105 Natural Color (628)
0205 Champagne Silver Color
0410 Bronze Color
0510 Medium Bronze Color
0710 Dark Bronze Color (710)
0810 Black Color (711)

Aluminum Powder Coated

8120 Black (671)
8220 White (714)

Backset

234

Insert your choice of backset using one of the three digit codes below.

Standard Sliding/Pocket Door Locks SDL, SPL

Standard
212 2 1/2" Backset
234 2 3/4" Backset

Special Order
334 3 3/4" Backset
500 5" Backset
600 6" Backset

European Sliding/Pocket Door Locks ESL, EPL

Standard
231 2 3/8" (55 mm) Backset

Door Thickness

134

Insert your choice of door thickness using one of the three digit codes.

Standard
134 1 3/4"

SDL & SPL locking functions with SB Trim available for 1 3/4" wood doors only. Except Y & YP Dummy sets

Special Order
200 2"
214 2 1/4"

All sizes over 1 3/4" thick are special order. Please consult FSB.
Sliding Door Lock
Series SDL Functions

Series SDL
Sliding Door Lock

Backsets
2 1/2” (64 mm)
2 3/4” (70 mm)
3 3/4” (95 mm)
5” (127 mm)
6” (152 mm)

1 3/4” or greater door thickness required.

As standard, the deadbolt is always supplied in satin chrome or satin brass. Custom finishes are available on request.

Lock body only: SDL 7001

Function P
Key x Thumbturn
Deadlock

Deadbolt by key outside and thumbturn inside.

Trim Sets
SA
### Sliding Door Lock
#### Series SDL Functions

<table>
<thead>
<tr>
<th>Function R</th>
<th>Thumbturn Deadlock</th>
<th>Deadbolt by thumbturn inside. No operation outside.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>SA</td>
<td>SB</td>
</tr>
</tbody>
</table>

*SB Trim available for 1 3/4” wood doors only.*

<table>
<thead>
<tr>
<th>Trim Sets</th>
<th>SA</th>
<th>SB*</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><img src="image1" alt="SA" /></td>
<td><img src="image2" alt="SB*" /></td>
</tr>
</tbody>
</table>

#### Function S
#### Thumbturn Deadlock with Emergency Release

<table>
<thead>
<tr>
<th>Function S</th>
<th>Thumbturn Deadlock with Emergency Release</th>
<th>Deadbolt by thumbturn inside and emergency release outside.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>SA</td>
<td>SB</td>
</tr>
</tbody>
</table>

*SB Trim available for 1 3/4” wood doors only.*

**Options**

<table>
<thead>
<tr>
<th>SA</th>
<th>Options</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image3" alt="SA" /></td>
<td><img src="image4" alt="N" /> <img src="image5" alt="I" /></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SB</th>
<th>Options</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image6" alt="SB" /></td>
<td><img src="image7" alt="N" /> <img src="image8" alt="I" /></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>SC</th>
<th>Options</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image9" alt="SC" /></td>
<td><img src="image10" alt="N" /> <img src="image11" alt="I" /></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>SA-N</th>
<th>Options</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image12" alt="SA-N" /></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SB-N</th>
<th>Options</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image13" alt="SB-N" /></td>
<td></td>
</tr>
</tbody>
</table>

### Trim Sets

- SA
- SB
- SC
Standard Pocket Lock
Series SPL Functions

Series SPL
Standard Pocket Lock/Edge Pull

Backsets
2 ½” (64 mm)
2 ¾” (70 mm)
3 ¾” (95 mm)
5” (127 mm)
6” (152 mm)

1 ¾” or greater door thickness required.

As standard, the finger pull, the button and deadbolt is always supplied in satin chrome or satin brass. Custom finishes are available on request.

Lock body only: SPL 7002

Function P
Key x Thumbturn
Deadlock

Deadbolt by key outside and thumbturn inside.

Trim Sets
SA
Standard Pocket Lock
Series SPL Functions

Function R
Thumbturn Deadlock

Deadbolt by thumbturn inside. No operation outside.

* SB Trim available for 1 3/4" wood doors only.

Trim Sets
SA
SB*

Function S
Thumbturn Deadlock with Emergency Release

Deadbolt by thumbturn inside and emergency release outside.

* SB Trim available for 1 3/4" wood doors only.

Trim Sets
SA-I
SB-I
SC-I
SA-N
SB-N

Options
SA
SB
SC
N
I
Standard Pocket Lock
Series SPL Functions

Function AS
Dummy prepared as Strike/Pull

Dummy handle either side. Lock case front includes strike and pull.

Trim Sets

SPL as Strike

SPL AS
Standard Pocket Lock Strike

Backsets
2 1/2” (64 mm)
2 3/4” (70 mm)

1 3/4” or greater door thickness required.

With spring loaded cover for deadbolt.

As standard, the finger pull, the button and deadbolt is always supplied in satin stainless finish.
## Standard Pocket Lock
### Series SPL Functions

<table>
<thead>
<tr>
<th>Function Y</th>
<th>Dummy handle either side.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Double Dummy</td>
<td></td>
</tr>
</tbody>
</table>

### Trim Sets

<table>
<thead>
<tr>
<th>SA</th>
<th>SB</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="SA Trim Set" /></td>
<td><img src="image" alt="SB Trim Set" /></td>
</tr>
</tbody>
</table>
European Sliding Lock
Series ESL Function

Function S
Thumbturn Deadlock with Emergency Release

Deadbolt by thumbturn inside and emergency release outside.

Options
SA
SB
SC

Trim Sets
SA-I
SB-I
SC-I

SB-N

As standard, the deadbolt is always supplied in satin stainless finish.

Lock body only: ESL 7001

Backset
2 3/16" (55 mm)

1 3/4" door thickness required.
Series EPL
European Pocket Lock/Edge Pull
As standard, the finger pull, button and deadbolt is always supplied in satin stainless finish.

Lock body only: EPL 7002

Backset
2 ¾" (55 mm)
1 ¾" door thickness required.

Function S
Thumbturn Deadlock with Emergency Release
Deadbolt by thumbturn inside and emergency release outside.

Options
SA
SB
SC

Trim Sets
SA-I
SB-I
SC-I

SB-N
European Sliding Lock
Series EPL Functions

Function AS
Dummy prepared as Strike/Pull

Dummy handle either side. Lock case front includes strike and pull.

Trim Sets

SA
SB

EPL as Strike

EPL AS
Strike Box for ESL and EPL

As standard, the finger pull and button is always supplied in satin stainless finish.
**European Sliding Lock**

**Series EPL Functions**

### Function YP

**Dummy with Pull**

- **SA**
- **SB**

 Dummy handle either side. Lock case with pull.

### Trim Sets

- **SA**
- **SB**

### Function Y

**Double Dummy**

 Dummy handle either side.

### Trim Sets

- **SA**
- **SB**
**Trim Set SA** Flush Pull  
Sliding Door Locks (SDL, SPL, ESL and EPL)

<table>
<thead>
<tr>
<th>Trim Set SA</th>
<th>Cylinder Hole</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SA</strong></td>
<td><strong>42 4210 09000</strong></td>
</tr>
<tr>
<td></td>
<td>7” (177.5 mm)</td>
</tr>
<tr>
<td></td>
<td>Cylinder must be ordered separately</td>
</tr>
</tbody>
</table>

**Cylinder Hole**

<table>
<thead>
<tr>
<th>Cylinder Hole</th>
<th>42 4210 09001</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Cylinder must be ordered separately</td>
</tr>
</tbody>
</table>

**Thumbturn**

<table>
<thead>
<tr>
<th>Thumbturn</th>
<th>42 4210 09002</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>with 5 mm Diamond Spindle</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Privacy Set</th>
<th>42 4210 09003</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1 3/4” or greater door thickness required</td>
</tr>
</tbody>
</table>

**Set with 5 mm Diamond Spindle and Indicator**

<table>
<thead>
<tr>
<th>42 4210 09003</th>
</tr>
</thead>
</table>

**Set with 5 mm Diamond Spindle, no Indicator**

<table>
<thead>
<tr>
<th>42 4210 09005</th>
</tr>
</thead>
</table>

* Option “N” Available in Stainless only

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**Trim Set SC** Flush Ring Handle  
Sliding Door Locks (SDL, SPL, ESL and EPL)

**SC**

42 4204  
Set with Emergency Release and Indicator

Set with 5 mm Diamond Spindle 42 4204 09001  
Set with 8 mm Square Spindle 42 4204 09000  

1 3/4" or greater door thickness required.
Trim Set SB Privacy Set for Sliding Door Locks (SDL and SPL)

Privacy Set
42 4255
as Set with 5 mm Square Spindle

SB Trim for 1 3/4" wood doors only. SB Trim cannot be purchased independently from Lock. Trim number for reference only.
Trim Set SB Dummy Set for Sliding Door Locks (SDL, SPL, ESL and EPL)

**SB**

42 4255 09006 ■ Set for EPL, ESL (210 mm)
42 4255 09016 ■ Set for SDL, SPL (230 mm)

SB Trim for 1 3/4" wood doors only. SDL & SPL series
**Trim Set SB** Privacy Set for Sliding Door Locks (ESL and EPL)

Privacy Set

42 4255

as Set with 8 mm Square Spindle

SB Trim for 1 3/4" wood doors only. SB trim cannot be purchased independently from Lock. Trim number for reference only.
Sliding and Pocket Door Locks
Suggested Specification

**Sliding Door Lock SDL 7001**

All heavy duty sliding door locks shall be series SDL as manufactured by FSB North America, Berlin, CT. Locksets shall be available with backsets ranging from 2 1/2" to 6" and be non-handed. Trim designs shall be FSB and shall be matched to each specific lock type and function to ensure proper compatibility. All heavy duty sliding door locks shall carry a 10 year limited warranty.

**Steel Case**
Size varies according to backset. Heavy gauge 0.093" (2.36 mm) thick, corrosion resistant zinc dichromate finish.

**Armor Front and Scalp**
0.188" x 1" x 5.50" (4.8 x 25.4 x 140 mm).

**Faceplate (Scalp only)**
0.062" x 1" x 5.50" (1.57 x 25.4 x 140 mm). Wrought stainless steel, bronze or brass substrate. Finished to match.

**Deadbolt**
0.50" x 1.188" (12.7 x 31 mm) x 1" (25.4 mm) throw. Machined solid brass with stainless steel hooks.

**Thumbturn Hub**
0.2" (5 mm) diameter. Oil impregnated, copper infiltrated sintered steel, 90 degree rotation.

**Backsets**
2.50" (64 mm)
2.75" (70 mm)
3.75" (95 mm)
5.00" (127 mm)
6.00" (152 mm)

**Spacing**
1.18" (30 mm) center cylinder to thumbturn hub.

**Strike**
3.50" x 1" x 0.093" (89 x 25.4 x 2.36 mm) for a single door. Wrought stainless steel, bronze or brass substrate finished to match. Strike available for pairs of doors.

**Pocket Lock/Pull SPL 7002**

**Steel Case**
SPL 7002
Size varies according to backset. Heavy gauge 0.093" (2.36 mm) thick, corrosion resistant zinc dichromate finish.

**Armor Front and Scalp**
0.188" x 1" x 8" (4.8 x 25.4 x 203 mm)

**Faceplate (Scalp only)**
0.062" x 1" x 8" (1.57 x 25.4 x 203 mm). Wrought stainless steel, bronze or brass substrate. Finished to match.

**Pull**
0.50" x 2" (12.7 x 50.8 mm) x 1.25" (32 mm) throw. Machined solid brass. Standard finishes, satin chrome or satin brass.

**For SPL 7002 only:**

**Deadbolt**
0.50" x 1.188" (12.7 x 31 mm) x 1" (25.4 mm) throw. Machined solid brass with stainless steel hooks.

**Thumbturn Hub**
0.2" (5 mm) diameter. Oil impregnated, copper infiltrated sintered steel, 90 degree rotation.

**Backsets**
2.50" (64 mm), 2.75" (70 mm), 3.75" (95 mm), 5.00" (127 mm), 6.00" (152 mm)

**Spacing**
1.18" (30 mm) center cylinder to thumbturn hub.

**Strike**
3.50" x 1" x 0.093" (89 x 25.4 x 2.36 mm) Wrought stainless steel, bronze and brass substrate finished to match.

**For SPL 7003 only:**

**Strike**
Double doors: integrated dust proof strike. Wrought stainless steel, bronze or brass substrate. Finished to match.
### European Sliding and Pocket Door Locks

#### Suggested Specification

##### ESL and EPL Series

All mortise locksets shall be provided from one manufacturer and be capable of accepting a European profile cylinder using the same trim designs from FSB North America.

All Sliding door locks shall carry a 5 year limited warranty.

##### Sliding Door Lock ESL 7001

<table>
<thead>
<tr>
<th>Component</th>
<th>Type</th>
<th>Dimensions</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Steel Case</td>
<td></td>
<td>3.54&quot; × 3.35&quot; × 0.55&quot; (90 × 85 × 14 mm)</td>
<td></td>
</tr>
<tr>
<td>Faceplate</td>
<td></td>
<td>0.157&quot; × 0.79&quot; × 5.91&quot; (3 × 20 × 150 mm)</td>
<td>Stainless steel, non-corroding, precision ground. Satin stainless finish only. Flat plate with rounded ends permanently attached to the lock.</td>
</tr>
<tr>
<td>Hook Bolt</td>
<td></td>
<td>0.394&quot; (10 mm) thick × 0.87&quot; (22 mm) throw.</td>
<td>Nickel-plated steel.</td>
</tr>
<tr>
<td>Thumbturn Hub</td>
<td></td>
<td>0.315&quot; (8 mm) square. 90 degree rotation.</td>
<td></td>
</tr>
<tr>
<td>Backset</td>
<td></td>
<td>2.17&quot; (55 mm)</td>
<td></td>
</tr>
<tr>
<td>Strike</td>
<td></td>
<td>0.08&quot; × 0.79&quot; × 4.06&quot; (2 × 20 × 103 mm)</td>
<td>Stainless steel, non-corroding. Satin stainless finish. Flat strike with rounded ends.</td>
</tr>
</tbody>
</table>

##### Privacy Lock/Pull EPL 7002

<table>
<thead>
<tr>
<th>Component</th>
<th>Type</th>
<th>Dimensions</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Steel Case</td>
<td></td>
<td>6.50&quot; × 3.33&quot; × 0.55&quot; (165 × 84.5 × 14 mm)</td>
<td></td>
</tr>
<tr>
<td>Faceplate</td>
<td></td>
<td>0.157&quot; × 0.79&quot; × 10.63&quot; (3 × 20 × 270 mm)</td>
<td>Stainless steel, non-corroding, precision ground. Satin stainless finish only. Flat plate with rounded ends permanently attached to the lock.</td>
</tr>
<tr>
<td>Pull</td>
<td></td>
<td>0.394&quot; × 1.95&quot; (10 × 49.5 mm) × 1&quot; (25.5 mm) throw.</td>
<td>Nickel-plated steel.</td>
</tr>
<tr>
<td>Hook Bolt</td>
<td></td>
<td>0.394&quot; (10 mm) thick × 0.87&quot; (22 mm) throw.</td>
<td>Nickel-plated steel.</td>
</tr>
<tr>
<td>Thumbturn Hub</td>
<td></td>
<td>0.315&quot; (8 mm) square. 90 degree rotation.</td>
<td></td>
</tr>
<tr>
<td>Backset</td>
<td></td>
<td>2.17&quot; (55 mm)</td>
<td></td>
</tr>
<tr>
<td>Strike</td>
<td>Single Doors:</td>
<td>0.08&quot; × 0.79&quot; × 4.06&quot; (2 × 20 × 103 mm)</td>
<td>Stainless steel, non-corroding. Satin stainless finish. Flat strike with rounded ends.</td>
</tr>
<tr>
<td>For EPL 7003 only:</td>
<td>Strike Double Doors:</td>
<td>Integrated strike on faceplate. Stainless steel, non-corroding. Satin stainless finish. Flat strike plate with rounded ends.</td>
<td></td>
</tr>
</tbody>
</table>

Double Doors:
Refer to EPL 7003

For EPL 7003 only:

**Strike Double Doors:**
Integrated strike on faceplate. Stainless steel, non-corroding. Satin stainless finish. Flat strike plate with rounded ends.
### Overview

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Page</th>
<th>Image</th>
</tr>
</thead>
<tbody>
<tr>
<td>42 4203</td>
<td>252</td>
<td><img src="image1.png" alt="Image" /></td>
</tr>
<tr>
<td>42 4204</td>
<td></td>
<td><img src="image2.png" alt="Image" /></td>
</tr>
<tr>
<td>42 4210</td>
<td>249</td>
<td><img src="image3.png" alt="Image" /></td>
</tr>
<tr>
<td>42 4211</td>
<td>251</td>
<td><img src="image4.png" alt="Image" /></td>
</tr>
<tr>
<td>42 4212</td>
<td>251</td>
<td><img src="image5.png" alt="Image" /></td>
</tr>
<tr>
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<td>245</td>
<td><img src="image6.png" alt="Image" /></td>
</tr>
<tr>
<td>42 4251</td>
<td>246</td>
<td><img src="image7.png" alt="Image" /></td>
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<td>247</td>
<td><img src="image8.png" alt="Image" /></td>
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<td>42 4253</td>
<td>248</td>
<td><img src="image9.png" alt="Image" /></td>
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<tr>
<td>42 4254</td>
<td>247</td>
<td><img src="image10.png" alt="Image" /></td>
</tr>
<tr>
<td>42 4255</td>
<td>249</td>
<td><img src="image11.png" alt="Image" /></td>
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<tr>
<td>42 4256</td>
<td>250</td>
<td><img src="image12.png" alt="Image" /></td>
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<tr>
<td>42 4299</td>
<td>253</td>
<td><img src="image13.png" alt="Image" /></td>
</tr>
<tr>
<td>SPP 7000</td>
<td>254</td>
<td><img src="image14.png" alt="Image" /></td>
</tr>
<tr>
<td>EPP 7000</td>
<td>255</td>
<td><img src="image15.png" alt="Image" /></td>
</tr>
</tbody>
</table>
Flush Pulls
for Passage Doors

42 4250

Flush Pulls
42 4250 00000 (open)
42 4250 00001 (spring loaded cover)
42 4250 00002 (half open)

Recess 150 × R 20 × 17.5 mm
1 ¼” or greater door thickness required.
Flush Pulls
for Passage Doors

42 4251

Flush Pulls

42 4251 00000 (open)
42 4251 00001 (spring loaded cover)
42 4251 00002 (half open)

Recess 150 × R.20 × 17.5 mm
1 ¾” or greater door thickness required.
Flush Pulls
for Passage Doors

42 4252

Flush Pulls
42 4252 00000 (open)
42 4252 00001 (spring loaded cover)
42 4252 00002 (half open)

Recess 70 × 17.5 mm
1 ¾” or greater door thickness required.

42 4254

Flush Pulls
42 4254 00000 (open)
42 4254 00001 (spring loaded cover)

Recess 45 × 17.5 mm
1 ¾” or greater door thickness required.
Flush Pulls
for Passage Doors

42 4253

Flush Pulls
42 4253 00000 (open)
42 4253 00001 (spring loaded cover)
42 4253 00002 (half open)

Recess 65 × 65 × 17.5 mm
Corner radius R 15
1 ¾" or greater door thickness required.
Flush Pull Sets for Passage Doors

42 4210
7” (177.5 mm)

Flush Pulls
42 4210 09000

42 4255
8 3/8” (210 mm)
9 1/8” (230 mm)

Flush Pulls
42 4255 09006 Set for EPL, ESL (210 mm)
42 4255 09016 Set for SDL, SPL (230 mm) (spring loaded cover)

1 3/4” or greater door thickness required.
Flush Pulls
for Glass Doors

13 4256

Items number | B   | A   |
-------------|-----|-----|
13 4256 00100| 8 mm| 16 mm|
13 4256 00200| 10 mm| 18 mm|
13 4256 00300| 12 mm| 20 mm|

Glass thickness = B, total thickness = A

Open version

Pair, for inner and outer side
glass cut-out Ø 70 mm

Mounted without adhesive, screwed in pair
with through fixing using 3.9 mm countersunk screws, included in delivery

13 4256

Items number | B   | A   |
-------------|-----|-----|
13 4256 00101| 8 mm| 20 mm|
13 4256 00201| 10 mm| 22 mm|
13 4256 00301| 12 mm| 24 mm|

Glass thickness = B, total thickness = A

Closed version

Pair, for inner and outer side
glass cut-out Ø 70 mm

Mounted without adhesive, screwed congruently in pairs using 3.9 mm countersunk screws, included in delivery
Flush Pulls
for Passage Doors

42 4211
Flush Pull
Recess 3\(\frac{3}{8}\) x 1\(\frac{1}{2}\) x 1\(\frac{1}{8}\)" (87 x 28 x 10 mm)
Boreholes for 3.0 mm countersunk screws

42 4212
Flush Pull
Recess 3\(\frac{3}{8}\) x 1\(\frac{1}{2}\) x 1\(\frac{1}{8}\)" (87 x 28 x 10 mm)
Boreholes for 3.0 mm countersunk screws
Flush Ring Handles

42 4203 | 42 4204
Flush Ring for Passage Doors

- **Flush Ring with 8 mm Square**
  - 3 1/2" x 3 1/2" (90 x 90 mm)
  - 42 4203 00010 female
  - 42 4203 00014 spindle
  - 2 3/4" x 2 3/4" (70 x 70 mm)
  - 42 4204 00010 female
  - 42 4204 00014 spindle

  Minimum 1 3/4" door thickness required.

- **Flush Ring with 5 mm Diamond**
  - 2 3/4" x 2 3/4" (70 x 70 mm)
  - 42 4204 09003 female
  - 42 4204 09002 spindle

  Minimum 2" door thickness required.

42 4204
Flush Ring Set for Privacy Doors

- **Flush Ring with 5 mm Diamond Spindle**
  - 42 4204 09001

- **Flush Ring Set with 8 mm Square Spindle**
  - 42 4204 09000
Edge/Flush Pulls for Wood Doors

42 4299

42 4299 00025
1 ¼" (45 mm) Door Thickness

Square Corners
Edge Pull
for Pocket Doors

SPP 7000
Spring Loaded Edge Pull

Finger pull remains flush with the edge of the door until the button is pressed. Pushing button projects finger pull.

As standard, the finger pull and button is always supplied in satin brass or satin chrome. Custom finishes are available on request.

Steel Case
3.343" × 3.031" × 0.688"
(84.9 × 77 × 17.5 mm)
Heavy gauge 0.093" (2.36 mm) thick, corrosion resistant zinc dichromate finish.

Armor Front and Scalp
0.188" × 0.875" × 5.50"
(4.8 × 22.3 × 140 mm).

Faceplate (Scalp only)
0.062" × 1" × 5.50"
(1.57 × 25.4 × 140 mm).
Wrought stainless steel.

Pull
0.50" × 2" (12.7 × 50.8 mm)
× 1.25" (32 mm) throw.
Machined solid brass.
Edge Pull
for Pocket Doors

EPP 7000
Spring Loaded Edge Pull

Finger pull remains flush with the edge of the door until the button is pressed. Pushing button projects finger pull.

As standard, the finger pull and button is always supplied in nickel-plated steel and the faceplate in stainless steel.

Steel Case
4.13” × 2.95” × 0.55”
(105 × 75 × 14 mm)
Case not enclosed.
0.057” (1.45 mm) thick, steel.

Faceplate (Forend)
0.157” × 0.79” × 8.66”
(3 × 20 × 220 mm)
Stainless steel, non-corroding, precision ground. Satin stainless finish only. Flat forend plate with rounded ends.

Pull
0.394” × 1.95” (10 × 49.5 mm)
x 1” (25.5 mm) throw.
Nickel-plated steel.
Multi-Point Trim
NMP and EMP Series

Quality
FSB offers a full range of multi-point trim to fit both North American and European multi-point locksets. For your convenience, we offer trim sets which include the escutcheon, spindle, and screws for 1 3/4" thick doors and your choice of lever. FSB also offers multi-point escutcheons separately to meet your custom needs.

Design Advantage
FSB has a wide selection of designer lever options for our multi-point trim kits. We also offer an even greater selection of individual lever and multi-point escutcheons to meet your customer design requirements.
### Specifying Multi-Point Trim

**North American (NMP) European (EMP) Multi-Point**

<table>
<thead>
<tr>
<th>Lock Type</th>
<th>Trim Function</th>
<th>Lever Design</th>
<th>Trim Set</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>NMP</strong></td>
<td><strong>C</strong></td>
<td><strong>1003</strong></td>
<td><strong>ED</strong></td>
</tr>
<tr>
<td></td>
<td>Insert your choice of function using one of the letter codes below</td>
<td>Insert your choice of lever design using one of the four digit codes.</td>
<td>Insert your choice of escutcheon using one of the two letter codes.</td>
</tr>
<tr>
<td></td>
<td><strong>C</strong></td>
<td>Passage</td>
<td><strong>ED</strong></td>
</tr>
<tr>
<td></td>
<td><strong>H</strong></td>
<td>Entrance</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>T</strong></td>
<td>Patio</td>
<td></td>
</tr>
<tr>
<td><strong>EMP</strong></td>
<td><strong>C</strong></td>
<td></td>
<td><strong>ED</strong></td>
</tr>
<tr>
<td></td>
<td>Insert your choice of function using one of the letter codes below</td>
<td></td>
<td>Insert your choice of escutcheon using one of the two letter codes.</td>
</tr>
<tr>
<td></td>
<td><strong>C</strong></td>
<td>Passage</td>
<td><strong>ED</strong></td>
</tr>
<tr>
<td></td>
<td><strong>H</strong></td>
<td>Entrance</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>T</strong></td>
<td>Patio</td>
<td></td>
</tr>
</tbody>
</table>

**Premium/Elements**

- 1001*
- 1002*
- 1003
- 1004
- 1005
- 1015
- 1016
- 1017
- 1020*
- 1021
- 1022
- 1023
- 1025
- 1027
- 1028
- 1031
- 1034*
- 1035
- 1045
- 1051*
- 1053
- 1057
- 1058
- 1070
- 1074
- 1075
- 1076
- 1077*
- 1078
- 1080
- 1088
- 1093
- 1102
- 1106
- 1107
- 1108
- 1119
- 1134
- 1144
- 1146
- 1147
- 1160
- 1163
- 1164
- 1176
- 1177
- 1178
- 1183
- 1185*
- 1241*
- 1251^*^ Stainless Steel Only
- 1257^*^ Stainless Steel Only
- 1257*
- 1241*
- 1241*

* Elements Only

---

All details subject to modification.
**Example for Specifying (Specification is for trim only)**

```
NMP - C - 1003 - ED - 6204 - 134
```

<table>
<thead>
<tr>
<th>Material and Finish</th>
<th>Door Thickness</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>6204</strong></td>
<td><strong>134</strong></td>
</tr>
</tbody>
</table>

Insert your choice of material and finish using one of the codes below.

**Premium**
- Stainless Steel
  - **6204** Satin (630)
  - **6205** Polished (629)

**Bronze**
- **7305** Polished, Waxed (611)
- **7615** Aged, Waxed (615)
- **7625** Dark Oxidized, Waxed (613)

**Standard**
- **134** 1 1⁄4”
- **214** 2 1⁄4”

**Special Order**
All sizes over 2 1⁄4” thick please consult FSB.

**Elements**
- **0105** Natural Color (628)
- **0205** Champagne Silver Color
- **0410** Bronze Color
- **0510** Medium Bronze Color
- **0710** Dark Bronze Color (710)
- **0810** Black Color (711)

**Aluminum Powder Coated**
- **8120** Black (671)
- **8220** White (714)
North American Multi-Point Sets

Lever on Top

**Function C**
Passage

Set Includes:
- 2 Escutcheons
- 2 Levers
- 1 Spindle
- 2 Screws
- 2 Nuts

Lever on Top

Straight Spindle

**Function H**
Entrance

Set Includes:
- 2 Escutcheons
- 2 Levers
- 1 Cylinder / Thumbturn
- 1 Spindle
- 2 Screws
- 2 Nuts

Lever on Top

Straight Spindle

**Function T**
Patio

Set Includes:
- 2 Escutcheons
- 2 Levers
- 1 Thumbturn
- 1 Spindle
- 2 Screws
- 2 Nuts

Lever on Top

Straight Spindle

All details subject to modification.
Europe Multi-Point Sets
Lever on Top

Function C
Passage

Straight Spindle

Set Includes:
2 Escutcheons
2 Levers
1 Spindle
3 Screws
3 Nuts

Lever on Top

Set Includes:
2 Escutcheons
2 Levers
1 Spindle
3 Screws
3 Nuts

Function H
Entrance

Straight Spindle

Set Includes:
2 Escutcheons
2 Levers
1 Cylinder / Thumbturn
1 Spindle
3 Screws
3 Nuts

Lever on Top

Function T
Patio

Straight Spindle

Set Includes:
2 Escutcheons
2 Levers
1 Thumbturn
1 Spindle
3 Screws
3 Nuts

Lever on Top

All details subject to modification

Multi-Point Trim
fsbna.com
North American Multi-Point Escutcheon Plates for Swinging Doors 1410 Series

**ED**
14 1410 09023
Cylinder | $9\frac{3}{8}$" (245 mm)

**Cylinder**
14 1410 09023

**Lever only**
14 1410 09021

**Thumbturn**
14 1410 09022

All details subject to modification
European Rectangular Multi-Point Escutcheon Plates for Swinging Doors

**ED**
12 1410 19112
9\(\frac{3}{8}\)" (245 mm)

**Cylinder**
12 1410 19112

**Lever only**
14 1410 09021

**Thumbturn**
12 1410 19112 and 88 8812 00230
(2\(\frac{1}{4}\)" door use 88 8812 00245)
Multi-Point Custom Ordering Information

When ordering 1550 (page 266) or 1458 custom laser cut escutcheon (page 267) please refer to the illustration and the lock function guide below to insure you have ordered everything you will need to operate your lock.

When ordering the 1458 customer laser cut escutcheon please complete the form on page 267 and submit with your order.

1 ¾” Door Thickness

Passage Trim Set
2 - Levers - See lever overview on page 21
2 - Escutcheons - 14 1550 01001 x Desired Finish
1 - Spindle and fastener pack - 05 0553 1000 000

Entrance Trim Set
2 - Levers - See lever overview on page 21
2 - Escutcheons - 14 1550 010102 x Desired Finish
1 - Cylinder - 88 8812 00164
1 - Spindle and fastener pack - 05 0553 1000 000

Patio Trim Set
2 - Levers - See lever overview on page 21
1 - Escutcheon - 14 1550 01001
1 - Escutcheon - 14 1550 01012
1 - Thumbturn - 88 8812 00230
1 - Spindle and fastener pack - 05 0553 1000 000

2” to 2 ¼” Door Thickness

Passage Trim Set
2 - Levers - See lever overview on page 21
2 - Escutcheons - 14 1550 01001 x Desired Finish
1 - Spindle and fastener pack - 05 0553 1002 000

Entrance Trim Set
2 - Levers - See lever overview on page 21
2 - Escutcheons - 14 1550 01012 x Desired Finish
1 - Cylinder - 88 8812 00170
1 - Spindle and fastener pack - 05 0553 1002 000

Patio Trim Set
2 - Levers - See lever overview on page 21
1 - Escutcheon - 14 1550 01001
1 - Escutcheon - 14 1550 01012
1 - Thumbturn - 88 8812 00235
1 - Spindle and fastener pack - 05 0553 1002 000
European Narrow Multi-Point Escutcheon with Visible Fasteners

14 1550 01012 PZ 92 mm

Can not be ordered in sets, must be ordered separately. See Multi-Point sets beginning on page 261.

Lever Only
14 1550 01001
### Laser Cut Escutcheon and Multi-Point Dimension Chart

#### Special Length Laser Cut Escutcheon

14 1458 00299

Please complete form and send to FSB for pricing

<table>
<thead>
<tr>
<th>Escutcheon Thickness</th>
<th>PZ Cylinder</th>
<th>Mortise Cylinder</th>
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<tbody>
<tr>
<td>3 mm</td>
<td>3 mm</td>
<td>3 mm</td>
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<tr>
<td>5 mm</td>
<td>5 mm</td>
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<table>
<thead>
<tr>
<th>Door Thickness</th>
<th>PZ Cylinder</th>
<th>Mortise Cylinder</th>
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<tr>
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<tr>
<td>Width Y</td>
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<td>Dimension B</td>
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<tr>
<td>Dimension C</td>
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<th>Mortise Cylinder</th>
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<table>
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<th>PZ Cylinder</th>
<th>Mortise Cylinder</th>
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<tbody>
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</tr>
<tr>
<td>one side</td>
<td></td>
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</tr>
<tr>
<td>both sides</td>
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<table>
<thead>
<tr>
<th>Handle Bearing</th>
<th>PZ Cylinder</th>
<th>Mortise Cylinder</th>
</tr>
</thead>
<tbody>
<tr>
<td>loose</td>
<td></td>
<td></td>
</tr>
<tr>
<td>turnably fixed*</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* only for screws visible one side

Please specify 6204 or 6205 finish.
Multi-Point Lock Dimension Chart

Multi-Point Measurements

<table>
<thead>
<tr>
<th>Lock Manufacturer</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Dimension A
Dimension B
Dimension C
Dimension D
Dimension E
Dimension F
Dimension G
Dimension H
Dimension I

Key:
A = Center of Lever Hub to Top of Lock Case
B = Top of Lock Case to Bottom of Lock Case
C = Center of Cylinder to Center of Lever Hub
D = Center of Cylinder to Bottom of Lock Case
E = Lever Hub Size
F = Backset
G = Width of Door
H = Center of Lock to Exterior Face of Door
I = Center of Lock to Interior Face of Door
Specifying Lift and Slide Trim
Lift and Slide (LNS)

<table>
<thead>
<tr>
<th>Lock Type</th>
<th>Trim Function</th>
<th>Lever Design</th>
<th>Trim Set</th>
</tr>
</thead>
<tbody>
<tr>
<td>LNS</td>
<td>C</td>
<td>1004</td>
<td>MTR</td>
</tr>
<tr>
<td></td>
<td>Insert your choice of function using one of the letter codes below</td>
<td>Insert your choice of lever design using one of the four digit codes.</td>
<td>Insert your choice of trim using one of the letter codes.</td>
</tr>
<tr>
<td>C</td>
<td>Passage</td>
<td></td>
<td>SH</td>
</tr>
<tr>
<td>H</td>
<td>Entrance</td>
<td></td>
<td>LH</td>
</tr>
<tr>
<td>T</td>
<td>Patio</td>
<td></td>
<td>MTR</td>
</tr>
</tbody>
</table>

Levers:
- 1004
- 1016
- 1076
- 1102
- 1146
- 1242

Trim Sets are supplied less cylinder.

- SH: Short Flush Pull
- LH: Long Flush Pull
- MTR: MTR
Example for Specifying (Specification is for trim only)

LNS - C - 1004 - LH - 6204 - 134

<table>
<thead>
<tr>
<th>Material and Finish</th>
<th>Door Thickness</th>
</tr>
</thead>
<tbody>
<tr>
<td>6204</td>
<td>134</td>
</tr>
</tbody>
</table>

Insert your choice of material and finish using one of the codes below.

**Premium**
Stainless Steel
- 6204 Satin (630)
- 6205 Polished (629)

Bronze
- 7305 Polished, Waxed (611)
- 7615 Aged, Waxed (615)
- 7625 Dark Oxidized, Waxed (613)

**Elements**
Aluminum Anodized
- 0105 Natural Color (628)
- 0205 Champagne Silver Color
- 0410 Bronze Color
- 0510 Medium Bronze Color
- 0710 Dark Bronze Color (710)
- 0810 Black Color (711)

Aluminum Powder Coated
- 8120 Black (671)
- 8220 White (714)

Lift and Slide trim sets are supplied standard for 2 ¼" door thickness.

**Standard**
- 214 2 ¼"

**Special Order**
All sizes other than 2 ¼" thick please consult FSB.
Lift and Slide Sets

Function C

Passage Lever by Lever

**Set Includes:**
- 2 Escutcheons
- 2 Handles
- 1 Spindle
- 2 Screws
- 2 Nuts

Function C

Passage Lever by Flush Pull

**Set Includes:**
- 1 Escutcheons
- 1 Handle
- 1 Long or Short Flush Pull
- 1 Spindle
- 2 Screws

Function H

Entrance Lever by Lever

**Set Includes:**
- 2 Escutcheons
- 2 Handles
- 1 Spindle
- 2 Screws
- 2 Nuts
**Lift and Slide Sets**

### Function T

#### Patio

<table>
<thead>
<tr>
<th><strong>Set Includes:</strong></th>
<th><strong>Trim Options</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>2 Escutcheons</td>
<td></td>
</tr>
<tr>
<td>2 Handle</td>
<td></td>
</tr>
<tr>
<td>1 Spindle</td>
<td></td>
</tr>
<tr>
<td>2 Screws</td>
<td></td>
</tr>
<tr>
<td>2 Nuts</td>
<td></td>
</tr>
</tbody>
</table>

#### Straight Spindle

### Function T

#### Patio

<table>
<thead>
<tr>
<th><strong>Set Includes:</strong></th>
<th><strong>Trim Options</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Escutcheon</td>
<td></td>
</tr>
<tr>
<td>1 Handle</td>
<td></td>
</tr>
<tr>
<td>1 Long or Short Flush Pull</td>
<td></td>
</tr>
<tr>
<td>1 Spindle</td>
<td></td>
</tr>
<tr>
<td>2 Screws</td>
<td></td>
</tr>
</tbody>
</table>

#### Straight Spindle

---

**Patio Lever by Lever**

**Set Includes:**

- 2 Escutcheons
- 2 Handle
- 1 Spindle
- 2 Screws
- 2 Nuts

**Patio Lever by Flush Pull**

**Set Includes:**

- 1 Escutcheon
- 1 Handle
- 1 Long or Short Flush Pull
- 1 Spindle
- 2 Screws

---

**Trim Options:**

- Lever
- Flush Pull
Lift and Slide Handles

**34 1004**

without keyhole, with M6 threaded lugs, for through bolting combined with design 002

**34 1016**

Lift and Slide handles with 180° click-stop, swivel-mounted, invisible screws, 10 mm □ spindle

Matching flush pulls FSB 42 4215 see page 294

... 01100
without keyhole, with M6 threaded lugs, for through bolting combined with design 002

... 01101
with profile cylinder keyhole, with M6 threaded lugs, for through bolting combined with design 003
Lift and Slide Handles

34 1076

Lift and Slide handles with 180° click-stop, swivel-mounted, invisible screws, 10 mm □ spindle

Matching flush pulls FSB 42 4215
see page 294

34 1102

.... 01100
without keyhole, with M6 threaded lugs, for through bolting combined with design 002

.... 01101
with profile cylinder keyhole, with M6 threaded lugs, for through bolting combined with design 003
Lift and Slide handles with 180° click-stop, swivel-mounted, invisible screws, 10 mm □ spindle

Matching flush pulls FSB 42 4215 see page 294

... 01100
without keyhole, with M6 threaded lugs, for through bolting combined with design 002

... 01101
with profile cylinder keyhole, with M6 threaded lugs, for through bolting combined with design 003
Flush Pulls for Lift and Slide Handles

42 4215

42 4215 00000 (without keyhole)
42 4215 00002 (with profile cylinder keyhole)

Must be used with 34 1004, 34 1016, 34 1076, 34 1102 or 34 1146 found on page 291, 292 and 293.

M6 threaded screws

Flush Pull

Must be used with 34 1004, 34 1016, 34 1076, 34 1102 or 34 1146 found on page 291, 292 and 293.

M6 threaded screws
## Glass Locks Overview

<table>
<thead>
<tr>
<th>Model</th>
<th>Code</th>
<th>Page</th>
<th>Image 1</th>
<th>Image 2</th>
<th>Image 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>EGS</td>
<td>13 4220</td>
<td>283, 284</td>
<td><img src="image1" alt="Image" /></td>
<td><img src="image2" alt="Image" /></td>
<td><img src="image3" alt="Image" /></td>
</tr>
<tr>
<td>EGR</td>
<td>13 4223</td>
<td>285, 286</td>
<td><img src="image1" alt="Image" /></td>
<td><img src="image2" alt="Image" /></td>
<td><img src="image3" alt="Image" /></td>
</tr>
<tr>
<td>EGC</td>
<td>13 4224</td>
<td>287, 288</td>
<td><img src="image1" alt="Image" /></td>
<td><img src="image2" alt="Image" /></td>
<td><img src="image3" alt="Image" /></td>
</tr>
<tr>
<td></td>
<td>13 4230</td>
<td>289</td>
<td><img src="image1" alt="Image" /></td>
<td><img src="image2" alt="Image" /></td>
<td><img src="image3" alt="Image" /></td>
</tr>
</tbody>
</table>

### Materials and Finishes

**Premium**
- Stainless Steel
  - 6204 (630)
  - 6205 (629)

**Elements**
- Aluminum
  - 0105 (628)
  - 0205
  - 0410
  - 0510
  - 0710 (710)
  - 0810 (711)
- Powder Coated
## Specifying Glass Locksets

### European Swinging Glass Door Locks (EGS, EGR and EGC)

<table>
<thead>
<tr>
<th>Glass Lock Type</th>
<th>Lock Functions</th>
<th>Lever Design</th>
<th>Trim Set</th>
<th>Thumbturn and Indicator</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>EGS</strong></td>
<td></td>
<td><strong>1147</strong></td>
<td><strong>RA</strong></td>
<td><strong>S</strong></td>
</tr>
<tr>
<td></td>
<td>Insert your choice of function using one of the letter codes below.</td>
<td></td>
<td>Insert your choice of lever or knob design using one of the four digit codes.</td>
<td>Insert your choice of indicator if necessary.</td>
</tr>
<tr>
<td><strong>EGS</strong></td>
<td><strong>C</strong></td>
<td></td>
<td><strong>FL</strong></td>
<td></td>
</tr>
<tr>
<td>European Glass Door Lock, Square Edge</td>
<td>Insert your choice of glass door lock</td>
<td></td>
<td>Patch fitting only</td>
<td></td>
</tr>
<tr>
<td><strong>EGR</strong></td>
<td></td>
<td></td>
<td><strong>RA</strong></td>
<td></td>
</tr>
<tr>
<td>European Glass Door Lock, Round Edge</td>
<td></td>
<td></td>
<td>Rose 2 3/4&quot; (55 mm) (EGS + EGR only)</td>
<td></td>
</tr>
<tr>
<td><strong>EGC</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>European Glass Door Lock, Compact</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**European Glass Door Locks do not have Emergency Egress Function.**

<table>
<thead>
<tr>
<th>Premium/Elements</th>
<th>1001*</th>
<th>1078</th>
</tr>
</thead>
<tbody>
<tr>
<td>1002*</td>
<td>1080</td>
<td></td>
</tr>
<tr>
<td>1003</td>
<td>1088</td>
<td></td>
</tr>
<tr>
<td>1004</td>
<td>1093</td>
<td></td>
</tr>
<tr>
<td>1005</td>
<td>1102</td>
<td></td>
</tr>
<tr>
<td>1015</td>
<td>1106</td>
<td></td>
</tr>
<tr>
<td>1016</td>
<td>1107</td>
<td></td>
</tr>
<tr>
<td>1020*</td>
<td>1108</td>
<td></td>
</tr>
<tr>
<td>1021</td>
<td>1119</td>
<td></td>
</tr>
<tr>
<td>1023</td>
<td>1134</td>
<td></td>
</tr>
<tr>
<td>1025</td>
<td>1144</td>
<td></td>
</tr>
<tr>
<td>1027</td>
<td>1146</td>
<td></td>
</tr>
<tr>
<td>1028</td>
<td>1147</td>
<td></td>
</tr>
<tr>
<td>1031</td>
<td>1160</td>
<td></td>
</tr>
<tr>
<td>1034*</td>
<td>1163</td>
<td></td>
</tr>
<tr>
<td>1035</td>
<td>1164</td>
<td></td>
</tr>
<tr>
<td>1045</td>
<td>1176</td>
<td></td>
</tr>
<tr>
<td>1051*</td>
<td>1177</td>
<td></td>
</tr>
<tr>
<td>1053</td>
<td>1178</td>
<td></td>
</tr>
<tr>
<td>1057</td>
<td>1183</td>
<td></td>
</tr>
<tr>
<td>1058</td>
<td>1185*</td>
<td></td>
</tr>
<tr>
<td>1070</td>
<td>1241*</td>
<td></td>
</tr>
<tr>
<td>1074</td>
<td>1251*</td>
<td></td>
</tr>
<tr>
<td>1075</td>
<td>1257*</td>
<td></td>
</tr>
<tr>
<td>1076</td>
<td>1259*</td>
<td></td>
</tr>
<tr>
<td>1077*</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

^ Stainless Only
* Elements Only

**Optional Trim Set**

**Thumblturns**

**Emergency Releases**

All details subject to modification.
Example for Specifying

EGS - H - 1147 - RA - S - 6204 - 231 - E1 - RH - 010

<table>
<thead>
<tr>
<th>Material and Finish</th>
<th>Backset</th>
<th>Strike</th>
<th>Handing</th>
<th>Door Thickness</th>
</tr>
</thead>
<tbody>
<tr>
<td>6204</td>
<td>231</td>
<td>E1</td>
<td>RH</td>
<td>010</td>
</tr>
</tbody>
</table>

Insert your choice of material and finish using one of the codes below.

**Premium Stainless Steel**
- 6204 Satin (630)
- 6205 Polished (629)

**Elements Aluminum Anodized**
- 0105 Natural Color (628)
- 0205 Champagne Silver Color
- 0410 Bronze Color
- 0510 Medium Bronze Color
- 0710 Dark Bronze Color (710)
- 0810 Black Color (711)

**Aluminum Powder Coated**
- 8120 Black (671)
- 8220 White (714)

Insert your choice of backset using one of the three digit codes.

231 2 3⁄16" Backset (55 mm)

Insert your choice of strike using one of the two letter codes below.

Standard
- E1 Standard
- E2 Full Patch Strike

Insert your choice of hand using one of the two letter codes below.

- RH Right Hand
- LH Left Hand
- RR Right Hand Reverse
- LR Left Hand Reverse

Insert your choice of door thickness using one of the three digit codes.

- 008 8 mm
- 010 10 mm
- 012 12 mm

All details subject to modification.
European Glass Door Lock for Swinging Doors

Functions

Function A

**Store Door**

**Description**
Latch bolt by handle either side.
Deadbolt by key either side.
European profile cylinder.

Lever to cylinder center-to-center: 
2\(1\frac{3}{8}\)" (72 mm).

**Trim Sets**

<table>
<thead>
<tr>
<th>RA</th>
<th>FL</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1" alt="RA Trim Set" /></td>
<td><img src="image2" alt="FL Trim Set" /></td>
</tr>
</tbody>
</table>

Function C

**Passage**

**Description**
Latch bolt by handle either side.
## European Glass Door Lock for Swinging Doors

### Functions

#### Function E  
**Privacy**

**Description**  
Latch bolt by handle either side.  
Deadbolt by emergency release outside and thumbturn inside connected by 8 mm spindle on the square.

Lever to thumbturn center-to-center:  
$3\frac{3}{4}$" (78 mm).

<table>
<thead>
<tr>
<th>Trim Sets</th>
</tr>
</thead>
<tbody>
<tr>
<td>RA-SN</td>
</tr>
<tr>
<td>FL-SN</td>
</tr>
</tbody>
</table>

#### Function H  
**Entrance**

**Description**  
Latch bolt by handle either side.  
Deadbolt by key outside and thumbturn inside.  
European profile cylinder.

Lever to thumbturn center-to-center:  
$2\frac{3}{4}$" (72 mm).

<table>
<thead>
<tr>
<th>Trim Sets</th>
</tr>
</thead>
<tbody>
<tr>
<td>RA-S</td>
</tr>
</tbody>
</table>

---

All details subject to modification.
## European Glass Door Lock for Swinging Doors

### Series EGS

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>13 4220 041 (LH)</td>
<td>Rectangular lockset plate with cover plates with heavy-duty glass door lock (DIN 18251, analogous to Class 4)</td>
</tr>
<tr>
<td>13 4220 051 (RH)</td>
<td>PZ cylinder CTC 72 mm</td>
</tr>
</tbody>
</table>

The handle shown is illustrative. Virtually any other FSB handle could be used instead.

**European Glass Door Locks do not have Emergency Egress Function.**

### Technical Notes:

- Dimensions given assume glass 8 mm thick. Lockset plates for glass doors are prepared at the factory for glass 8 mm, 10 mm or 12 mm thick. Please specify.

- Lock Functions are listed beginning on page 281.
Strike Box for Glass Walls or Pairs

13 4220

13 4220 045 (LH)
13 4220 055 (RH)

Rectangular strike box to suit lockset plates for glass doors 4220 041/051 and 4220 042/052.

The strike box must be ordered in the hand opposite of the lock.

Technical notes:
Dimensions given assume glass 8 mm thick.
Strike boxes are prepared at the factory for glass 8 mm, 10 mm or 12 mm thick. Please specify.
European Glass Door Lock for Swinging Doors

Series EGR

13 4223 041 (LH)  13 4223 051 (RH)

Rectangular lockset plate rounded corners with cover plates with heavy-duty glass door lock (DIN 18251, analogous to Class 4)

PZ cylinder CTC 72 mm

The handle shown is illustrative. Virtually any other FSB handle could be used instead.

European Glass Door Locks do not have Emergency Egress Function.

13 4223 042 (LH)  13 4223 052 (RH)

Technical notes:
Dimensions given assume glass 8 mm thick. Lockset plates for glass doors are prepared at the factory for glass 8 mm, 10 mm or 12 mm thick. Please specify.

Lock Functions are listed beginning on page 281.
Strike for Glass Walls or Pairs

13 4223

13 4223 045 □ (LH)
13 4223 055 □ (RH)

Rectangular strike box rounded corners to suit lockset plates for glass doors 4223 041/051 and 4223 042/052.

The strike must be ordered in the hand opposite of the lock.

Technical notes:
Dimensions given assume glass 8 mm thick. Strike boxes are prepared at the factory for glass 8 mm, 10 mm or 12 mm thick.
European Glass Door Lock
for Swinging Doors

Series EGC

13 4224 042 □ (LH)
13 4224 052 □ (RH)

Heavy-duty bearing
Rectangular lockset plate compact with
cover plates with heavy-duty glass door
lock (DIN 18251, Class 4)

PZ cylinder CTC 72 mm

8 mm split follower
cast-steel latch

The handle shown is illustrative.
Virtually any other FSB handle could be
used instead.

European Glass Door Locks do not have
Emergency Egress Function.

Technical notes:
Dimensions given assume glass 8 mm thick. Lockset
plates for glass doors are prepared at the factory for glass
8 mm, 10 mm or 12 mm thick. Please specify.

Lock Functions are listed beginning on page 281.
Strike for Glass Walls or Pairs

13 4224

13 4224 045 (LH)
13 4224 055 (RH)

Rectangular strike box compact to suit lockset plate for glass doors 4224 042/052.

The strike must be ordered in the hand opposite of the lock.

Technical notes:
Strike boxes are prepared at the factory for 8 mm, 10 mm or 12 mm glass. Please specify.
### Door Holder

**Glass Door Locks**

<table>
<thead>
<tr>
<th>Item number</th>
<th>A</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td>13 4230 000</td>
<td>27 mm</td>
<td>8 mm</td>
</tr>
<tr>
<td>13 4230 010</td>
<td>29 mm</td>
<td>10 mm</td>
</tr>
<tr>
<td>13 4230 012</td>
<td>31 mm</td>
<td>12 mm</td>
</tr>
</tbody>
</table>

A = width overall, B = thickness of glass

---

**Diagram:**

[Image of a glass door holder with dimensions indicated]
European Glass Door Lock
Installation

shown here: 4220/4223

shown here: 4220/4223
FSB North America
Door Pulls
## Door Pulls and Fixed Knobs

<table>
<thead>
<tr>
<th>Page</th>
<th>Section</th>
</tr>
</thead>
<tbody>
<tr>
<td>293</td>
<td>Overview</td>
</tr>
<tr>
<td>297</td>
<td>Pull Handles</td>
</tr>
<tr>
<td>345</td>
<td>Fastening</td>
</tr>
<tr>
<td>355</td>
<td>Fixed Door Knobs</td>
</tr>
</tbody>
</table>
Pulls and Fixed Knobs Overview

All details subject to modification
Door Pulls

Materials and Finishes

- Stainless Steel: 6204 (630), 6205 (629)
- Bronze: 7305 (611), 7615 (615), 7625 (613)
- Aluminum: 0105 (628), 0205, 0410, 0510, 0710 (710), 0810 (711)
- Brass: 4205 (605), 4305 (606), 4404 (607)
- Powder Coated

Fixed Knobs

- Aluminum: 0105 (628), 0205, 0410, 0510, 0710 (710), 0810 (711)
- Powder Coated
Door Pulls – Features
Materials, Fastening Methods, Safety Clearance

FSB has added to its traditional tubular pull handle range with a comprehensive collection of oval and flat designs. All pull handles adapt to a wide variety of fastening methods. The traditional range of push/pull pad handles and profiles with brackets has also been further developed.

Materials

In principle, FSB supplies its entire pull handle range in either aluminum, stainless steel, brass and bronze, with stainless steel being particularly recommended for heavy-duty applications. Aluminum pulls are available in a variety of anodized finishes. The durable stainless steel pulls are supplied in a satin or polished finish. Brass and bronze pulls are offered in a selection of styles when these base materials and finish options are desired.

Fastening Methods

Pulls can be mounted using various methods on a variety of door types and materials.

FSB offers the four fastening options below:
- back-to-back fastening (A),
- through-bolted fastening (B),
- concealed fastening with threaded insert (for solid doors) (C),
- concealed fastening with drop clamp (for hollow doors) (D).

This section has the identifying letters that can be found on all relevant product pages. (Examples show fixing for tubular pulls).

Regarding the issue of concealed versus through-bolted fixing, FSB wishes to point out that, based on the compression ring technique deployed by FSB, concealed fixing is both aesthetically pleasing and sufficiently durable as a rule. This needs to be qualified, however, in the case of heavy-duty applications, through-bolt fastening is recommended.

Safety Clearance (S)

When fitting a handle to the closing face of a door, a safety clearance needs to be allowed for between the handle and the edge of the door and the jamb. The assembly scenario is made more readily comprehensible by the following sketch.

Ideally, safety clearances as recommended by FSB should be adhered to. Nevertheless, conditions at the point of assembly are crucial. It is particularly advisable to make use of offset pulls purpose-designed by FSB for especially narrow stiles, which sets the handle sufficiently far away from the edge.

Fastening Methods

A Back-to-Back Fastening
B Through-Bolted Fastening
C Concealed Fastening with Threaded Insert (for Solid Doors)
D Concealed Fastening with Drop Clamp (for Hollow Doors)
Door Pulls
Oval Series, Round Series, S-Flat Series, Rectangular Series

Oval Series
FSB has developed an alternative to traditional pulls of circular cross-section. Adopting the formula “diagonal + oval = ideal gripping” identified by FSB reduces the amount of effort required to take hold of and operate the handles on entrance doors.

The oval styling offers the market a new gripping quality for eye and hand which FSB has had copyright protected. The experience FSB has amassed now allows it to supply almost all its traditional styles both as circular pulls and as optimized-grip oval variants. A new flattened oval pull series airily and elegantly underpins architectural solutions.

Round Series
The proven FSB range of tubular pulls has profited from the burst of innovation in the sphere of oval designs. New shapes and brackets have been added.

This is particularly true of the lightweight pull series in 20 mm tubular material, for which a new design-conscious bracket fixture has been developed that FSB has likewise had utility and design patented.

Custom lengths can be provided for several of our round and oval pulls. Where it is possible we provide a sheet to be populated with the desired dimensions.

S-Flat Series
The new “S-Flat” push/pull pad handle series designed by the established designer Hartmut Weise. In the best Bauhaus tradition, he opted for a geometrical approach in his concept that sees every angular handle matched by a rounded counterpart. The S-Flat handles are available in various dimensions and open or closed forms.
S-Flat Push and Pull Pad Handles

Rectangular

61 6187

Rectangular open
Bracket powder-coated in silver grey
Safety clearance 45 mm
Fastening M8

Design: Hartmut Weise

61 6188

Rectangular open
Bracket powder-coated in silver grey
Safety clearance 45 mm
Fastening M8

Fastening Methods (Details on page 353)
A Back-to-Back
B Through-Bolted
C Concealed - Threaded Insert
D Concealed - Drop Clamp
S-Flat Push and Pull Pad Handles
Rectangular

61 6190

- Rectangular closed
- Bracket powder-coated in silver grey
- Safety clearance 45 mm
- Fastening M8

Design: Hartmut Weise

Fastening Methods (Details on page 353)
A Back-to-Back
B Through-Bolted
C Concealed - Threaded Insert
D Concealed - Drop Clamp
S-Flat Push and Pull Pad Handles
Round

61 6192
- Round open
- Bracket powder-coated in silver grey
- Safety clearance 45 mm
- Fastening M8

61 6193
- Round open
- Bracket powder-coated in silver grey
- Safety clearance 45 mm
- Fastening M8

Design: Hartmut Weise

Fastening Methods (Details on page 353)
- A Back-to-Back
- B Through-Bolted
- C Concealed - Threaded Insert
- D Concealed - Drop Clamp

All details subject to modification
**Pull Handles**

Round Series

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**66 6514**

<table>
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<td>30</td>
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<tr>
<td>66 6514 045</td>
<td>450</td>
<td>30</td>
</tr>
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</table>

Safety clearance $S = 55$ mm

Fastening M8

---

**Fastening Methods** (Details on page 349 and 350)

A Back-to-Back
B Through-Bolted
C Concealed - Threaded Insert
D Concealed - Drop Clamp
**Pull Handles**
Round Series

66 6506

66 6506 065 (RH)
66 6506 075 (LH)

Handle cross-section Ø 35 mm
Safety clearance S = 47 mm
Fastening M8

Illustration: right hand, outside view

**Fastening Methods** (Details on page 349 and 350)

A Back-to-Back
B Through-Bolted
C Concealed - Threaded Insert
D Concealed - Drop Clamp
Pull Handles
Round Series

66 6507

66 6507 065 (RH)
66 6507 075 (LH)

Handle cross-section Ø 35 mm
Safety clearance S = 47 mm
Fastening M8

Illustration: right hand, outside view

Fastening Methods (Details on page 349 and 350)
A Back-to-Back
B Through-Bolted
C Concealed - Threaded Insert
D Concealed - Drop Clamp
<table>
<thead>
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<th>Fastening Method</th>
<th>Details</th>
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<td>B Through-Bolted</td>
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<td>C Concealed - Threaded Insert</td>
<td></td>
</tr>
<tr>
<td>D Concealed - Drop Clamp</td>
<td></td>
</tr>
</tbody>
</table>

**66 6519**

Handle cross-section □ 25 × 25 mm  
Safety clearance S = 53 mm  
Fastening M8  
Standard length 500 mm  
(also available in special lengths, please see order form page 17)
Pull Handles
Square Series

66 6520

Handle cross-section □ 25 × 25 mm
Safety clearance S = 46 mm
Fastening M8

Standard length 500 mm
(also available in special lengths, please see order form page 17)

Fastening Methods (Details on page 353)
A Back-to-Back
B Through-Bolted
C Concealed - Threaded Insert
D Concealed - Drop Clamp
Pull Handles
Straight Series

66 6548

Matches FSB lever handle model 1003.
Handle cross-section 40 × 10 mm
Safety clearance S = 55 mm
Fastening M8

Fastening Methods (Details on page 349 and 350)
A Back-to-Back
B Through-Bolted
C Concealed - Threaded Insert
D Concealed - Drop Clamp
Order Form
Pull Handles 6519, 6520 and 6548

Please use a copy of this page to order the door handle series 6519, 6520 and 6548 in variable lengths.

Start by using the product numbers to define the desired version.

In the table below, please enter the quantity and overall length. Then add the distance(s) (A) between the support(s) and the end support distance (R).

66 6519 99 (□ 25 × 25 mm)

66 6520 99 (□ 25 × 25 mm)

To ensure stability, the support distance (A) should not exceed 1200 mm.

66 6548 99 (40 × 10 mm)

To ensure stability, the support distance (A) should not exceed 600 mm.

Send custom lengths to FSB for pricing

<table>
<thead>
<tr>
<th>Quantity</th>
<th>Overall length L</th>
<th>Support distance A₁</th>
<th>A₂</th>
<th>A₃</th>
<th>End support distance* R₁</th>
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<th>Fastening type</th>
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<td></td>
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</tbody>
</table>

* min. 30 mm, max. 350 mm for 6519, 6520
* min. 30 mm, max. 250 mm for 6548
FSB has supplemented its proven and long-successful in-line pull series in aluminum and stainless steel with a particularly safe-to-grip design featuring heavily offset fastening points on which the ends of brackets are incorporated into the pull section. The in-line pull sections are supplied with a diameter of 35 mm in either aluminum or stainless steel. The brackets are made of aluminum and anodized in the metal’s natural color.

The standard version has an A dimension of 350 mm and a length of 570 mm. Other center-to-center dimensions and lengths are available.

Maximum length for dark anodized aluminum finishes is 1000 mm.

Fastening M8

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<td>35</td>
</tr>
<tr>
<td>66 6526 4594</td>
<td>450</td>
<td>670</td>
<td>35</td>
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</tbody>
</table>

Fastening Methods (Details on page 353)
A Back-to-Back
B Through-Bolted
C Concealed - Threaded Insert
D Concealed - Drop Clamp
Please use a copy of this page to order the door handle series 6526 in variable lengths.

In the table below, please enter the quantity and overall length. Then add the distance(s) (A) between the support(s) and the end support distance (R).

☐ 66 6526 99 (Ø 35 mm)

To ensure stability, the support distance (A) should not exceed 1200 mm.

Send custom lengths to FSB for pricing

<table>
<thead>
<tr>
<th>Quantity</th>
<th>Overall length</th>
<th>Support distance</th>
<th>End support distance*</th>
<th>Fastening type</th>
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</tbody>
</table>

* min. 40 mm, max. 350 mm
The flattened oval pull handle series 6533, 6534, 6535 and 6536 see FSB’s philosophy of the ovaly gripping hand and the diagonal moving arm put to effect in telling manner. The circular fastening section has been shortened and the grip tilted towards the user by dint of a flattened oval cross-section. The hand therefore enjoys optimum clearance while, stylistically, these airy, elegant handles display a decidedly architectural dimension.

Guaranteeing FSB’s usual production excellence is an innovative internal high-pressure metal forming process for the stainless steel variant.

66 6533

Handle cross-section Ø 35 x 17.5 mm
Fastening M8

66 6534

Handle cross-section Ø 35 x 17.5 mm
Fastening M8
Pull Handles
Oval Series

66 6535

Handle cross-section Ø 35 x 17.5 mm
Fastening M8

66 6536

Handle cross-section Ø 35 x 17.5 mm
Fastening M8

Design: Hartmut Weise

Fastening Methods (Details on page 349 and 350)
A Back-to-Back
B Through-Bolted
C Concealed - Threaded Insert
D Concealed - Drop Clamp
Pull Handles
Oval Series

66 6537

Handle cross-section $\varnothing$ 39 x 20 mm
Fastening M8

Design: Hartmut Weise

Fastening Methods (Details on page 349 and 350)
A Back-to-Back
B Through-Bolted
C Concealed - Threaded Insert
D Concealed - Drop Clamp
Pull Handles
Oval Series

66 6538

Handle cross-section Ø 39 x 20 mm
Fastening M8

Special lengths up to 1200 mm are available in stainless steel.
Order 6638 099 and the length (L) in parenthesis.

Design: Hartmut Weise

Fastening Methods (Details on page 349 and 350)
A Back-to-Back
B Through-Bolted
C Concealed - Threaded Insert
D Concealed - Drop Clamp
Pull Handles
Round Series

66 6540

Matches FSB lever handle model 1035.
Safety clearance S = 45 mm

Fastening Methods (Details on page 349 and 350)
A Back-to-Back
B Through-Bolted
C Concealed - Threaded Insert
D Concealed - Drop Clamp
Pull Handles
Round Series

66 6541

Matches FSB lever handle model 1077.
Grip Stainless Steel, Corners Aluminum

Safety clearance $S = 51$ mm

Fastening Methods (Details on page 349 and 350)
A Back-to-Back
B Through-Bolted
C Concealed - Threaded Insert
D Concealed - Drop Clamp
Pull Handles
Round Series

66 6542

<table>
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<tr>
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<td>66 6542 060</td>
<td>600</td>
<td>40 × 28</td>
<td>75</td>
<td>45</td>
<td>55</td>
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Matches FSB lever handle models 1107/1108.

Safety clearance S = 51 mm

Fastening Methods (Details on page 349 and 350)
A Back-to-Back
B Through-Bolted
C Concealed - Threaded Insert
D Concealed - Drop Clamp
Pull Handles
Round Series

66 6546

Matches FSB lever handle model 1102. Available length up to 1200 mm.

Safety clearance $S = 51$ mm
Fastening M8

Fastening Methods (Details on page 349 and 350)

- A Back-to-Back
- B Through-Bolted
- C Concealed - Threaded Insert
- D Concealed - Drop Clamp
Pull Handles
Oval Series

66 6610

- Matches FSB lever handle model 1025.
- Safety clearance $S = 45$ mm
- Fastening M6

66 6611

- Matches FSB lever handle model 1028.
- Safety clearance $S = 60$ mm
- Fastening M6

Illustration: right hand, outside view

Design: Hartmut Weise

Fastening Methods (Details on page 351)
- A Back-to-Back
- B Through-Bolted
- C Concealed - Threaded Insert

All details subject to modification
### Pull Handles
**Oval Series**

<table>
<thead>
<tr>
<th>Model</th>
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<tbody>
<tr>
<td>66 6613</td>
<td>Safety clearance $S = 48$ mm. Fastening M6.</td>
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Design: Hartmut Weise

Fastening Methods (Details on page 351):
- **A** Back-to-Back
- **B** Through-Bolted
- **C** Concealed - Threaded Insert
Pull Handles
Round Series

66 6602

<table>
<thead>
<tr>
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<td>66 6670 037</td>
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<td>40</td>
<td>80</td>
<td>35</td>
<td>48</td>
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<td>80</td>
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<td>66 6602 038</td>
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<td>66 6603 038</td>
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<td>66 6604 038</td>
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<td>45</td>
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<td>66 6670 099</td>
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<tr>
<td>66 6602 099</td>
<td>300–1200</td>
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<td>35</td>
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<tr>
<td>66 6603 099</td>
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<tr>
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<td>350–1200</td>
<td>40</td>
<td>60</td>
<td>105</td>
<td>45</td>
<td>65</td>
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</table>

Matches FSB lever handle model 1075.

Bronze available only in Ø 30 mm (66 6602 038)

Maximum length for dark anodized aluminum finishes is 1000 mm.

Fastening: Ø = 20 mm M6
Ø ≥ 25 mm M8

Fastening Methods (Details on page 349 and 350)
A Back-to-Back
B Through-Bolted
C Concealed - Threaded Insert
D Concealed - Drop Clamp
**Pull Handles**

**Round Series**

<table>
<thead>
<tr>
<th>Item number</th>
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<td>66 6607 038</td>
<td>350</td>
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<td>66 6609 038</td>
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<td>90</td>
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<td>66 6669 099</td>
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<tr>
<td>66 6609 099</td>
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</table>

Matches FSB lever handle model 1076.

Bronze available only in Ø 30 mm (66 6669 038)

Special lengths with dimension A to 1200 mm in Ø 30, 35 and 40 mm

Fastening M8

**Fastening Methods** (Details on page 349 and 350)

A Back-to-Back
B Through-Bolted
C Concealed - Threaded Insert
D Concealed - Drop Clamp
In door pull series FSB 6615 (Ø 30 mm), fixing is by means of laterally offset strap-type brackets. The fastening and gripping sides are separated from one another and hence protect hands. The innovative combination of fastening strap and pull lends the design an airy, vivacious appearance.

Special lengths are available per the chart above. Order 6615 099 and add distance (A) in parenthesis. FSB recommends a support distance (A) of max. 1200 mm.

<table>
<thead>
<tr>
<th>Item number</th>
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<tbody>
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<tr>
<td>66 6615 099</td>
<td>451–2100</td>
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<td>650</td>
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</tbody>
</table>

**Fastening Methods** (Details on page 352)
- **A** Back-to-Back
- **B** Through-Bolted
- **C** Concealed - Threaded Insert
In door pull series FSB 6616 (Ø 40 × 28 mm), fastening is by means of laterally offset strap-type brackets. The fastening and gripping sides are separated from one another and hence protect hands. The innovative combination of fastening strap and pull lends the design an airy, vivacious appearance.

Special lengths are available per the chart above. Order 6616 099 and add distance (A) in parenthesis. FSB recommends a support distance (A) of max. 1200 mm.

Fastening Methods (Details on page 352)
A Back-to-Back
B Through-Bolted
C Concealed - Threaded Insert
Pull Handles
Round Series

66 6630

Handle cross-section Ø 30 mm
Fastening M8

Standard length 400 mm

66 6681

Handle cross-section Ø 30 mm
Safety clearance S = 38 mm
Fastening M8

Standard length 400 mm

Bronze available only in Ø 30 mm

Fastening Methods (Details on page 349 and 350)
A Back-to-Back
B Through-Bolted
C Concealed - Threaded Insert
D Concealed - Drop Clamp
Order Form
Pull Handles 6630 and 6681

To order custom designs in the pull handle series 6630 or 6681, please use a copy of this page:

First specify the model desired citing the applicable order code above. Then enter the quantity required and overall length in the table below.

Then enter details of the distances between supports and, where applicable, their distance from the end of the handle in mm. To ensure stability, the distance between supports should not exceed 1200 mm.

Send custom lengths to FSB for pricing

<table>
<thead>
<tr>
<th>Quantity</th>
<th>Overall length</th>
<th>Support distance</th>
<th>End support distance*</th>
<th>Fastening type</th>
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<tr>
<td></td>
<td></td>
<td>A₃</td>
<td></td>
<td>R₂</td>
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</table>

* min. 30 mm, max. 350 mm
66 6642

Handle cross-section Ø 30 mm
Safety clearance S = 38 mm
Fastening M6

Standard length 400 mm.
Maximum length for dark anodized aluminum finishes is 1000 mm.

66 6643

Handle cross-section Ø 30 mm
Fastening M6

Standard length 400 mm.
Maximum length for dark anodized aluminum finishes is 1000 mm.

Brackets: Aluminum Natural Color Anodized
Grip: Aluminum or Stainless Steel

Fastening Methods (Details on page 354)
A Back-to-Back
B Through-Bolted
C Concealed - Threaded Insert
D Concealed - Drop Clamp
To order custom designs in the pull handle series 6642 or 6643, please use a copy of this page:

First specify the model desired citing the applicable order code above. Then enter the quantity required and overall length in the table below.

Then enter details of the distances between supports and, where applicable, their distance from the end of the handle in mm. To ensure stability, the distance between supports should not exceed 1200 mm.

- 66 6642 99 (Ø 30 mm)
- 66 6643 99 (Ø 30 mm)

Send custom lengths to FSB for pricing

<table>
<thead>
<tr>
<th>Quantity</th>
<th>Overall length</th>
<th>Support distance</th>
<th>End support distance*</th>
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<tr>
<td></td>
<td>L</td>
<td>A₁</td>
<td>A₂</td>
<td>A₃</td>
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</tbody>
</table>

* min. 40 mm, max. 350 mm
The door handle design FSB 66 6635 was the first product in FSB's oval series. A comfortable oval tube (Ø 40 × 28 mm) is to be aligned ergonomically so that the hand can grip safely and efficiently. This aim was achieved by mitre welding the handle and support at a 90° angle. This provided a counterpoint to the soft bends of the handle design in round tubes.

Special lengths are available per the chart above. Order 6635 099 and add distance (A) in parenthesis.

Fastening M8

<table>
<thead>
<tr>
<th>Item number</th>
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<tbody>
<tr>
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</tr>
<tr>
<td>66 6635 045</td>
<td>450</td>
<td>40 × 28</td>
</tr>
<tr>
<td>66 6635 099</td>
<td>451–2100</td>
<td>40 × 28</td>
</tr>
</tbody>
</table>

**Fastening Methods** (Details on page 348)
A Back-to-Back
B Through-Bolted
C Concealed - Threaded Insert
FSB could not resist squeezing all the experience gained in fashioning the 40 x 28 mm oval tube into a smaller diameter. And thus it was that the standard in-line pull FSB 6650 came into being. It features a skewed oval grip 36 by 22 mm in diameter affixed to circular supports.

Special lengths are available per the chart above. Order 6650 099 and add distance (A) in parenthesis.

Safety clearance S = 49 mm

Fastening M8

**Fastening Methods** (Details on page 349 and 350)

A Back-to-Back
B Through-Bolted
C Concealed - Threaded Insert
D Concealed - Drop Clamp
Pull Handles
Oval Series

66 6652

Handle models FSB 6650 (inline), FSB 6682 (U-shape), FSB 6652 (semicircular) and FSB 6685 (triangular) are living proof that tested designs featuring new oval cross-sections have the edge over their round counterparts both optically and in terms of gripping ergonomics. The hand glides effortlessly around them.

Handle cross-section Ø 36 × 22 mm
Safety clearance S = 53 mm
Fastening M8

Fastening Methods (Details on page 349 and 350)
A Back-to-Back
B Through-Bolted
C Concealed - Threaded Insert
D Concealed - Drop Clamp
Pull Handles
Round Series

66 6653

Handle cross-section Ø 30 mm
Safety clearance S = 55 mm
Fastening M8

Fastening Methods (Details on page 349 and 350)
A Back-to-Back
B Through-Bolted
C Concealed - Threaded Insert
D Concealed - Drop Clamp
Pull Handles
Round Series

66 6655

Handle cross-section Ø 35 mm
Safety clearance S = 55 mm
Fastening M8

Fastening Methods (Details on page 349 and 350)
A Back-to-Back
B Through-Bolted
C Concealed - Threaded Insert
D Concealed - Drop Clamp
Pull Handles
Round Series

<table>
<thead>
<tr>
<th>Item number</th>
<th>Ø</th>
<th>R</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>S</th>
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<tbody>
<tr>
<td>66 6661 034</td>
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<tr>
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<tr>
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<td>66 6663 099</td>
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<td>60</td>
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<td>40</td>
<td>60</td>
<td>150</td>
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<td>45</td>
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</table>

Bronze available only in Ø 30 mm (66 6662 038)

Fastening: Ø = 20 mm M6
Ø ≥ 25 mm M8

Special lengths are available per the chart above. Order 6661, 6662, 6663, 6664 099 and add length (A) in parenthesis.

Maximum length for dark anodized aluminum finishes is 1000 mm.

Fastening Methods (Details on page 349 and 350)
A Back-to-Back
B Through-Bolted
C Concealed - Threaded Insert
D Concealed - Drop Clamp
Door pull FSB 6674 takes the offset strap-type brackets from the FSB 6615 series and fuses these with the sweep of the crescent-shaped round pull (Ø 30 mm).

This pull series is only supplied with A dimensions of 210 mm and 350 mm.
Door pull FSB 6675 takes the offset strap-type brackets from the FSB 6616 series and fuses these with the sweep of the crescent-shaped oval pull (Ø 40 × 28 mm).

This pull series is only supplied with A Dimensions of 210 mm and 350 mm.
## Pull Handles
### Round Series

### Fastening Methods
- **A** Back-to-Back
- **B** Through-Bolted
- **C** Concealed - Threaded Insert
- **D** Concealed - Drop Clamp

### Fastening:
- Ø = 20 mm M6
- Ø ≥ 25 mm M8

<table>
<thead>
<tr>
<th>Item number</th>
<th>Ø</th>
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<td>66 6679 038</td>
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Pull Handles
Round Series

66 6683

<table>
<thead>
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<th>A</th>
<th>Ø</th>
<th>R1</th>
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<tr>
<td>66 6673 036</td>
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<tr>
<td>66 6683 038</td>
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<tr>
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<td>175</td>
<td>60</td>
<td>235</td>
<td>120</td>
<td>45</td>
<td>52</td>
</tr>
</tbody>
</table>

Bronze only in Ø 30 mm (66 6683 038)

Fastening: Ø = 20 mm M6
Ø ≥ 25 mm M8

Fastening Methods (Details on page 349 and 350)
A Back-to-Back
B Through-Bolted
C Concealed - Threaded Insert
D Concealed - Drop Clamp
Design Suggestions
Pull Handles Round Series

The sketched handle constructions in the material stainless steel are intended as an inspiration to planners, designers, retailers and builders.

When sending an inquiry, please state the door type, material and weight. Accurate drawings are essential for FSB to prepare quotations.
Push and Pull
Pad Handles

61 6108

Available in:
Bracket: Aluminum | Pad: Aluminum
Bracket: Aluminum | Pad: Stainless Steel

Safety clearance 45 mm
Fastening M8

61 6112

Fastening M6

For detailed information on fastening, please turn to page 353 and 354.
Push and Pull
Pad Handles

61 6184

Plastic-pad, black
Safety clearance 45 mm

Screw hole Ø 8.5 mm
Fastening M8

All details subject to modification
**Push and Pull**

**Pad Handles**

<table>
<thead>
<tr>
<th>Model</th>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>61 6254</td>
<td>61 6254 00062</td>
<td>Safety clearance 45 mm</td>
</tr>
<tr>
<td>61 6268</td>
<td>61 6268 00000</td>
<td>Safety clearance 40 mm</td>
</tr>
</tbody>
</table>

**61 6254**

![Image of square pad handle]

**61 6268**

![Image of round pad handle]

- Screw hole Ø 8.5 mm
- Fastening M8

*All details subject to modification*
S-Flat Push and Pull Pad Handles
Square + Circle

61 6186
Bracket powder-coated in silver grey
Safety clearance 45 mm
Fastening M8

61 6191
Bracket powder-coated in silver grey
Safety clearance 45 mm
Fastening M8

Design: Hartmut Weise

For detailed information on fastening, please turn to page 353.
Pull Handles

66 6628

Fittings feature two fixing points concealed by a clip-on cover

Double-action swing doors in restaurants, canteens, hospitals and so forth are generally fitted with both push and pull plates for added protection. An alternative arrangement is conceivable in the gripping area, however. Furnishing the two faces of the door with the combination shown above allows the desired direction of swing to be implied.
Double-action swing doors in restaurants, canteens, hospitals and so forth are generally fitted with both push and pull plates for added protection. An alternative arrangement is conceivable in the gripping area, however. Furnishing the two faces of the door with the combination shown above allows the desired direction of swing to be implied.

Boreholes for 4.0 mm countersunk screws
FSB’s threaded insert method is a practically-minded and, at the same time, enhanced means of fixing concealed pulls to solid doors, and in the process allowing distension forces to be absorbed far more effectively by the door stile.

A single type of threaded insert, 34 mm (1⅞") long is used which requires a minimum door thickness of 40 mm (1⅜").

The self-tapping thread creates an excellent bond with comparatively little play between door stile and threaded insert, thus ensuring an even and effective frictional connection – assuming the accurate drilling of 12.5 mm (½") diameter borehole has been made.

**Step One**
Whether a manual or a power drill is used, threaded inserts require holes 12.5 mm in diameter to be drilled.

**Step Two**
Then the threaded insert is screwed in using a size 8 Allen key until the washer at the end of the threaded insert lies flush against the stile. FSB recommends an Allen key with handle, as this is the best way of guaranteeing the requisite force is exerted.

**Step Three**
The “mounting post” is screwed into the threaded insert. The handle is then placed on the projecting “mounting post”.

All details subject to modification.
The FSB clamping rose fastening is a method of assembling door-pulls whereby the pull is tightened fast against the surface of the door. Visible fastening screws are done away with.

All door pulls with round necks are supplied as female parts with an internal left-handed thread 18 × 1.5 mm (\(\frac{3}{8} \times \frac{1}{16}\)) (M8 fastening) or 14 × 1.5 mm (\(\frac{1}{8} \times \frac{1}{16}\)) (M6 fastening).

A clamping rose fastening comprises a plastic washer, a steel washer, a clamping element (with “lock-tight”), a rotating rose and a spacer sleeve that are securely held in place by a plastic clip and pre-attached to the end of the handle.

The FSB clamping rose fastening allows all FSB door pulls with round necks to be screwed tight against the surface of the door by means of an easy-to-operate clamping rose. Radial play allowed for by FSB ensures the necessary tolerances during fitting. Assembly is as follows:

**Step One**

First install the “mounting post”. How this is done depends on which fastening method you are using (back-to-back fastening, through-bolted fastening or concealed fastening).

**Step Two**

Then detach the clamping elements from the end of the pull by turning them counterclockwise. Remove the plastic clip and slip the plastic washer, the steel washer, the clamping rose and the clamping element over the mounting post in that order. Using the spacer sleeve, screw the elements together, ensuring that the clamping rose and clamping element remain free to rotate.

**Step Three**

Place the handle on the fastening points and tighten against the door by alternately turning the clamping roses in a clockwise direction.

A turning device for the FSB clamping rose is supplied with the product.
Borehole Dimensions
Door Pulls

The illustrations below provide the bore hole dimensions for all FSB door pulls based on type of door and fastening method.

<table>
<thead>
<tr>
<th>Fastening Method</th>
<th>Glass Door</th>
<th>Wood Door</th>
<th>Metal Door</th>
</tr>
</thead>
<tbody>
<tr>
<td>A Back-to-Back Fastening</td>
<td><img src="image1" alt="Diagram" /></td>
<td><img src="image2" alt="Diagram" /></td>
<td><img src="image3" alt="Diagram" /></td>
</tr>
<tr>
<td>B Through-Bolted Fastening</td>
<td><img src="image4" alt="Diagram" /></td>
<td><img src="image5" alt="Diagram" /></td>
<td><img src="image6" alt="Diagram" /></td>
</tr>
<tr>
<td>C Concealed Fastening with Threaded Insert</td>
<td><img src="image7" alt="Diagram" /></td>
<td><img src="image8" alt="Diagram" /></td>
<td><img src="image9" alt="Diagram" /></td>
</tr>
<tr>
<td>D Concealed Fastening with Drop Clamp</td>
<td><img src="image10" alt="Diagram" /></td>
<td><img src="image11" alt="Diagram" /></td>
<td><img src="image12" alt="Diagram" /></td>
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</tbody>
</table>
### Fastening Methods

#### Door Pulls

<table>
<thead>
<tr>
<th>Door Pull Series</th>
<th>66 6635</th>
</tr>
</thead>
</table>

When selecting and ordering pull handles, please note that the pulls in this series are produced as threaded-part and through-bolted fastening sections.

### Fastening Methods

<table>
<thead>
<tr>
<th>Fastening Method</th>
<th>Fastening Accessories</th>
<th>Item Number</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>A Back-to-Back Fastening</strong></td>
<td>2 each socket head cup screws M8</td>
<td>05 0582 01008 glass door 8 – 19 mm</td>
</tr>
<tr>
<td></td>
<td>4 each plastic washers</td>
<td>05 0582 03038 38 – 44 mm</td>
</tr>
<tr>
<td></td>
<td>2 each lids stainless steel</td>
<td>05 0582 03045 45 – 49 mm</td>
</tr>
<tr>
<td></td>
<td></td>
<td>05 0582 03050 50 – 54 mm</td>
</tr>
<tr>
<td></td>
<td></td>
<td>05 0582 03055 55 – 59 mm</td>
</tr>
<tr>
<td></td>
<td></td>
<td>05 0582 03060 60 – 64 mm</td>
</tr>
<tr>
<td></td>
<td></td>
<td>05 0582 03065 65 – 69 mm</td>
</tr>
<tr>
<td></td>
<td></td>
<td>05 0582 03070 70 – 74 mm</td>
</tr>
<tr>
<td></td>
<td></td>
<td>05 0582 03075 75 – 79 mm</td>
</tr>
<tr>
<td></td>
<td></td>
<td>05 0582 03080 80 – 84 mm</td>
</tr>
<tr>
<td></td>
<td>Borehole Ø 13 mm</td>
<td></td>
</tr>
</tbody>
</table>

| **B Through-Bolted Fastening** | 2 each countersunk screw M8 | 05 0582 02008 glass door 8 – 19 mm |
|                               | 4 each plastic washers     | 05 0582 04038 38 – 44 mm |
|                               | 2 each fastening washers with caps stainless steel | 05 0582 04045 45 – 49 mm |
|                               |                       | 05 0582 04050 50 – 54 mm |
|                               |                       | 05 0582 04055 55 – 59 mm |
|                               |                       | 05 0582 04060 60 – 64 mm |
|                               |                       | 05 0582 04065 65 – 69 mm |
|                               |                       | 05 0582 04070 70 – 74 mm |
|                               |                       | 05 0582 04075 75 – 79 mm |
|                               |                       | 05 0582 04080 80 – 84 mm |
|                               | Borehole Ø 13 mm         |             |

| **C Concealed Fastening with Threaded Insert** | 2 each socket head cup screws M8 | 05 0582 00335 length of dowel 34 mm |
|                                               | 2 each plastic washers       |                                     |
|                                               | 2 each expansion plugs        |                                     |
|                                               | brass dull nickel finish      |                                     |
|                                               | 2 each lids stainless steel   |                                     |
|                                               | Borehole Ø 12.5 mm (wood doors) |                                   |

All details subject to modification.

fsbna.com
## Fastening Methods

### Door Pulls

<table>
<thead>
<tr>
<th>Fastening Method</th>
<th>Fastening Accessories</th>
<th>Item Number</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>A Back-to-Back Fastening</strong></td>
<td>2 each set screws M8</td>
<td>05 0580 01008 Glass door</td>
</tr>
<tr>
<td></td>
<td></td>
<td>05 0580 03035 35 – 54 mm</td>
</tr>
<tr>
<td></td>
<td></td>
<td>05 0580 03055 55 – 74 mm</td>
</tr>
<tr>
<td></td>
<td></td>
<td>05 0580 03075 75 – 94 mm</td>
</tr>
<tr>
<td><strong>B Through-Bolted Fastening</strong></td>
<td>2 each set screws M8</td>
<td>05 0580 02308 Glass door</td>
</tr>
<tr>
<td></td>
<td>2 each fastening nuts with caps</td>
<td>05 0580 04335 35 – 44 mm</td>
</tr>
<tr>
<td></td>
<td></td>
<td>05 0580 04345 45 – 54 mm</td>
</tr>
<tr>
<td></td>
<td></td>
<td>05 0580 04355 55 – 64 mm</td>
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<td></td>
<td></td>
<td>05 0580 04365 65 – 74 mm</td>
</tr>
<tr>
<td></td>
<td></td>
<td>05 0580 04375 75 – 84 mm</td>
</tr>
</tbody>
</table>

Grip diameter 25/30 mm

Grip diameter 35/40 mm

Borehole Ø 13 mm

Please turn to page 347.
Fastening Methods
Door Pulls

Pull Handle Series Round M8

<table>
<thead>
<tr>
<th>Fastening Method</th>
<th>Fastening Accessories</th>
<th>Item Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>C Concealed Fastening with Threaded Insert</td>
<td>2 each set screws M8, 2 each expansion plugs brass dull nickel finish</td>
<td>05 0580 00335 Length of dowel 34 mm</td>
</tr>
<tr>
<td>D Concealed Fastening with Drop Clamp</td>
<td>1 plastic washer, 1 clamp</td>
<td>05 0580 09002 2 – 15 mm, 05 0580 09016 16 – 30 mm</td>
</tr>
</tbody>
</table>

Borehole
Ø 12.5 mm (wood doors)
Ø 13 mm (metal doors)

All details subject to modification
## Fastening Methods

### Door Pulls

#### Pull Handle Series Round M6

66 6610, 66 6611, 66 6612, 66 6613

<table>
<thead>
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<th>Fastening Accessories</th>
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<tbody>
<tr>
<td><strong>A</strong> Back-to-Back Fastening</td>
<td>2 each set screws M6</td>
<td>05 0580 01208</td>
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<tr>
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<td></td>
<td>Glass door</td>
</tr>
<tr>
<td></td>
<td></td>
<td>8 – 19 mm</td>
</tr>
<tr>
<td></td>
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<td>05 0580 03235</td>
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<td></td>
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<td>35 – 54 mm</td>
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<td>05 0580 03255</td>
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<td>55 – 74 mm</td>
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<td>05 0580 03275</td>
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<td></td>
<td></td>
<td>75 – 94 mm</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Borehole Ø 13 mm</td>
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</table>

#### B Through-Bolted Fastening

2 each set screws M6
2 each fastening nuts with caps

<table>
<thead>
<tr>
<th>Fastening Accessories</th>
<th>Item Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Handle diameter</td>
<td>20/25 mm</td>
</tr>
<tr>
<td>05 0580 02208</td>
<td>Glass door</td>
</tr>
<tr>
<td>8 – 19 mm</td>
<td></td>
</tr>
<tr>
<td>05 0580 04235</td>
<td>35 – 44 mm</td>
</tr>
<tr>
<td>05 0580 04245</td>
<td>45 – 54 mm</td>
</tr>
<tr>
<td>05 0580 04255</td>
<td>55 – 64 mm</td>
</tr>
<tr>
<td>05 0580 04265</td>
<td>65 – 74 mm</td>
</tr>
<tr>
<td>05 0580 04275</td>
<td>75 – 84 mm</td>
</tr>
<tr>
<td>Borehole Ø 13/18 mm</td>
<td>please turn to page 66</td>
</tr>
</tbody>
</table>

#### C Concealed Fastening with Threaded Insert

2 each set screws M6
2 each expansion plugs brass dull nickel finish

<table>
<thead>
<tr>
<th>Fastening Accessories</th>
<th>Item Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Length of dowel</td>
<td>34 mm</td>
</tr>
<tr>
<td>05 0580 00435</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Fastening Accessories</th>
<th>Item Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Borehole Ø 12.5 mm (wood doors)</td>
<td></td>
</tr>
</tbody>
</table>

#### D Concealed Fastening with Drop Clamp

1 plastic washer
1 clamp

<table>
<thead>
<tr>
<th>Fastening Accessories</th>
<th>Item Number</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2 – 15 mm</td>
</tr>
<tr>
<td>05 0580 09202</td>
<td></td>
</tr>
<tr>
<td>16 – 30 mm</td>
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<tr>
<td>05 0580 09216</td>
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<table>
<thead>
<tr>
<th>Fastening Accessories</th>
<th>Item Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Borehole Ø 13 mm (metal doors)</td>
<td></td>
</tr>
</tbody>
</table>
# Fastening Methods

## Door Pulls

### Pull Handle Series

66 6615, 66 6616, 66 6674, 66 6675

<table>
<thead>
<tr>
<th>Fastening Method</th>
<th>Fastening Accessories</th>
<th>Item Number</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>A</strong>  Back-to-Back Fastening</td>
<td>2 each countersunk screws M8 with sleeve nuts M8</td>
<td>05 0583 01008</td>
</tr>
<tr>
<td></td>
<td>stainless steel</td>
<td>Glass door</td>
</tr>
<tr>
<td></td>
<td>4 each plastic washers</td>
<td>8 – 19 mm</td>
</tr>
<tr>
<td></td>
<td></td>
<td>05 0583 03034</td>
</tr>
<tr>
<td></td>
<td></td>
<td>34 – 43 mm</td>
</tr>
<tr>
<td></td>
<td></td>
<td>05 0583 03044</td>
</tr>
<tr>
<td></td>
<td></td>
<td>44 – 53 mm</td>
</tr>
<tr>
<td></td>
<td></td>
<td>05 0583 03054</td>
</tr>
<tr>
<td></td>
<td></td>
<td>54 – 63 mm</td>
</tr>
<tr>
<td></td>
<td></td>
<td>05 0583 03064</td>
</tr>
<tr>
<td></td>
<td></td>
<td>64 – 73 mm</td>
</tr>
<tr>
<td></td>
<td></td>
<td>05 0583 03074</td>
</tr>
<tr>
<td></td>
<td></td>
<td>74 – 83 mm</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Borehole Ø 13 mm</td>
</tr>
<tr>
<td><strong>B</strong>  Through-Bolted Fastening</td>
<td>2 each countersunk screws M8 with sleeve nuts M8</td>
<td>05 0583 02008</td>
</tr>
<tr>
<td></td>
<td>stainless steel</td>
<td>Glass door</td>
</tr>
<tr>
<td></td>
<td>2 each washers stainless steel</td>
<td>8 – 19 mm</td>
</tr>
<tr>
<td></td>
<td>4 each plastic washers</td>
<td>05 0583 04036</td>
</tr>
<tr>
<td></td>
<td></td>
<td>36 – 45 mm</td>
</tr>
<tr>
<td></td>
<td></td>
<td>05 0583 04046</td>
</tr>
<tr>
<td></td>
<td></td>
<td>46 – 55 mm</td>
</tr>
<tr>
<td></td>
<td></td>
<td>05 0583 04056</td>
</tr>
<tr>
<td></td>
<td></td>
<td>56 – 65 mm</td>
</tr>
<tr>
<td></td>
<td></td>
<td>05 0583 04066</td>
</tr>
<tr>
<td></td>
<td></td>
<td>66 – 75 mm</td>
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<tr>
<td></td>
<td></td>
<td>05 0583 04076</td>
</tr>
<tr>
<td></td>
<td></td>
<td>76 – 85 mm</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Borehole Ø 13 mm</td>
</tr>
<tr>
<td><strong>C</strong>  Concealed Fastening with</td>
<td>2 each countersunk screws M8 with sleeve nuts M8</td>
<td>05 0583 00335</td>
</tr>
<tr>
<td>Threaded Insert</td>
<td>stainless steel</td>
<td>Length of dowel</td>
</tr>
<tr>
<td></td>
<td>2 each expansion plugs brass</td>
<td>34 mm</td>
</tr>
<tr>
<td></td>
<td>dull nickel finish</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2 each plastic washers</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Borehole Ø 12.5 mm</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(wood doors)</td>
</tr>
</tbody>
</table>
### Fastening Methods

**Door Pulls**

**Pull Handle and Push and Pull Pad Handle Series**

61 6108, 61 6186, 61 6187, 61 6188, 61 6190, 61 6191, 61 6192, 61 6193, 66 6519, 66 6520, 66 6526

<table>
<thead>
<tr>
<th>Fastening Method</th>
<th>Fastening Accessories</th>
<th>Item Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>A Back-to-Back Fastening</td>
<td>2 each set screws M8</td>
<td>05 0587 01008</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Glass door</td>
</tr>
<tr>
<td></td>
<td></td>
<td>8 – 19 mm</td>
</tr>
<tr>
<td></td>
<td></td>
<td>05 0587 03035</td>
</tr>
<tr>
<td></td>
<td></td>
<td>35 – 54 mm</td>
</tr>
<tr>
<td></td>
<td></td>
<td>05 0587 03055</td>
</tr>
<tr>
<td></td>
<td></td>
<td>55 – 74 mm</td>
</tr>
<tr>
<td></td>
<td></td>
<td>05 0587 03075</td>
</tr>
<tr>
<td></td>
<td></td>
<td>75 – 94 mm</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Borehole Ø 13 mm</td>
</tr>
</tbody>
</table>

| B Through-Bolted Fastening | 2 each set screws M8 | 05 0587 02008 |
| | 2 each fastening nuts with caps | Glass door |
| | | 8 – 19 mm |
| | | 05 0587 04335 |
| | | 35 – 44 mm |
| | | 05 0587 04345 |
| | | 45 – 54 mm |
| | | 05 0587 04355 |
| | | 55 – 64 mm |
| | | 05 0587 04365 |
| | | 65 – 74 mm |
| | | 05 0587 04375 |
| | | 75 – 84 mm |
| | | Borehole Ø 13/18 mm, please turn to page 347. |

| C Concealed Fastening with Threaded Insert | 2 each set screws M8 | 05 0587 00335 |
| | 2 each expansion plugs brass dull nickel finish | Length of dowel |
| | | 34 mm |
| | | Borehole |
| | | Ø 12.5 mm (wood doors) |
| | | Ø 13 mm (metal/plastic doors) |

| D Concealed Fastening with Drop Clamp | 1 plastic washer | 05 0587 09202 |
| | 1 clamp | 2 – 15 mm |
| | | 05 0587 09216 | 16 – 30 mm |
| | | Borehole |
| | | Ø 13 mm (metal doors) |
## Fastening Methods

### Door Pulls

**Pull Handle and Push and Pull Pad Handle Series**

61 6112, 66 6642, 66 6643

<table>
<thead>
<tr>
<th>Fastening Method</th>
<th>Fastening Accessories</th>
<th>Item Number</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>A</strong> Back-to-Back Fastening</td>
<td>2 each set screws M6</td>
<td>05 0580 01208</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Glass door 8 – 19 mm</td>
</tr>
<tr>
<td></td>
<td></td>
<td>05 0580 03235 35 – 54 mm</td>
</tr>
<tr>
<td></td>
<td></td>
<td>05 0580 03255 55 – 74 mm</td>
</tr>
<tr>
<td></td>
<td></td>
<td>05 0580 03275 75 – 94 mm</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Borehole Ø 13 mm</strong></td>
</tr>
<tr>
<td><strong>B</strong> Through-Bolted Fastening</td>
<td>2 each set screws M6</td>
<td>05 0580 02208</td>
</tr>
<tr>
<td></td>
<td>2 each fastening nuts with caps</td>
<td>Glass door 8 – 19 mm</td>
</tr>
<tr>
<td></td>
<td></td>
<td>05 0580 04235 35 – 44 mm</td>
</tr>
<tr>
<td></td>
<td></td>
<td>05 0580 04245 45 – 54 mm</td>
</tr>
<tr>
<td></td>
<td></td>
<td>05 0580 04255 55 – 64 mm</td>
</tr>
<tr>
<td></td>
<td></td>
<td>05 0580 04265 65 – 74 mm</td>
</tr>
<tr>
<td></td>
<td></td>
<td>05 0580 04275 75 – 84 mm</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Borehole Ø 13/18 mm, please turn to page 347.</strong></td>
</tr>
<tr>
<td><strong>C</strong> Concealed Fastening with Threaded Insert</td>
<td>2 each set screws M6</td>
<td>05 0580 00435</td>
</tr>
<tr>
<td></td>
<td>2 each expansion plugs brass dull nickel finish</td>
<td>Length of dowel 34 mm</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Borehole Ø 12.5 mm (wood doors)</strong></td>
</tr>
<tr>
<td><strong>D</strong> Concealed Fastening with Drop Clamp</td>
<td>1 plastic washer</td>
<td>05 0580 09202</td>
</tr>
<tr>
<td></td>
<td>1 clamp</td>
<td>2 – 15 mm</td>
</tr>
<tr>
<td></td>
<td></td>
<td>05 0580 09216 16 – 30 mm</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Borehole Ø 13 mm (metal doors)</strong></td>
</tr>
</tbody>
</table>
Fixed Doorknobs

23 0802

23 0802 00005
Concealed surface mounting

23 0802 00006
Concealed through bolting

Stainless Steel  \( X = 73 \text{ mm} \)
Bronze  \( X = 72 \text{ mm} \)
Aluminium  \( X = 77 \text{ mm} \)

c:c screw holes 1\(\frac{1}{2}\)" (38 mm)

For technical information see page 360.

23 0803

23 0803 00005
(concealed surface mounting)

23 0803 00006
(concealed through bolting)

For technical information see page 360.
Fixed Doorknobs

23 0804 00005
(concealed surface mounting)

23 0804 00006
(concealed through bolting)

For technical information see page 360.
## Fixed Doorknobs

### 23 0828

<table>
<thead>
<tr>
<th>23 0828 00005</th>
<th>(concealed surface mounting)</th>
</tr>
</thead>
<tbody>
<tr>
<td>23 0828 00006</td>
<td>(concealed through bolting)</td>
</tr>
</tbody>
</table>

![Fixed Doorknob Image](image1.png)

Stainless Steel \( \varnothing = 55 \text{ mm} \)
Bronze \( \varnothing = 50 \text{ mm} \)
Aluminium \( \varnothing = 50 \text{ mm} \)

**c:c screw holes** 1\(\frac{1}{4}\)" (38 mm)

For technical information see page 360.

### 23 0829

<table>
<thead>
<tr>
<th>23 0829 00005</th>
<th>(concealed surface mounting)</th>
</tr>
</thead>
<tbody>
<tr>
<td>23 0829 00006</td>
<td>(concealed through bolting)</td>
</tr>
</tbody>
</table>

![Fixed Doorknob Image](image2.png)

Stainless Steel \( \varnothing = 55 \text{ mm} \)
Bronze \( \varnothing = 50 \text{ mm} \)
Aluminium \( \varnothing = 50 \text{ mm} \)

**c:c screw holes** 1\(\frac{1}{4}\)" (38 mm)

For technical information see page 360.
Fixed Doorknobs

23 0844  
Design: Jasper Morrison

23 0844 00005  
(concealed surface mounting)

23 0844 00006  
(concealed through bolting)

23 0873  
Design: Hadi Teherani

23 0873 00026  
(concealed through bolting)

Aluminum only available in natural anodized finish (FSB 0105)

Owing to the large knob size, can also be used offset.

C-c screw holes 1½" (38 mm)

For technical information see page 360.
23 0880 00035
(concealed surface mounting)

23 0880 00036
(concealed through bolting)

Design: Christoph Mäckler

For technical information see page 360.

c:c screw holes 1⅛" (38 mm)
Technical Information

Fixed Doorknobs

Where concealed through bolting is required, we supply doorknobs prepared for \( \frac{3}{16} \) (5 mm) screws and reinforced with two lugs with standard \( 1 \frac{1}{8}'' \) (38 mm) center to center. The M5 screws are \( 1 \frac{3}{4}'' \) (45 mm) in length, making them suitable for doors \( 1 \frac{3}{8}'' - 1 \frac{3}{4}'' \) (35 – 45 mm) thick. For other door thicknesses, screws of the appropriate size should be used. In this configuration, the doorknob can be fastened to an FSB lever handle on the reverse by means of an FSB half-spindle (No. 0177) screwed into the \( \frac{1}{2}'' \) (12 mm) threaded neck of the knob.

Fixing method # 06, 26 or 36

Concealed surface mounting first involves screwing a steel base rose to the door. The dead knob is then positioned so as to precisely cover this and is secured with a punch-type screw.

Fixing method # 05 or 35
FSB Butt Hinges

FSB offers a line of hinges unique in their construction, finish, and performance.

FSB hinges are stainless steel, available in two-knuckle and three-knuckle versions that utilize carbon steel and oil-impregnated sintered bronze bearings to minimize wear. FSB stainless steel hinges can be supplied to simulate many of our popular finishes.

All hinges are UL & cUL listed up to 3 hours.

FSB hinges are ANSI A156.1-2006 grade 1.
## Specifying Hinges
### 9101 Series

**Example for Specifying**

9101 - 0001 - 6204

<table>
<thead>
<tr>
<th>Butt Hinge Series</th>
<th>Hinge Type</th>
<th>Material and Finish</th>
</tr>
</thead>
<tbody>
<tr>
<td>9101</td>
<td>0001</td>
<td>6204</td>
</tr>
</tbody>
</table>

**Hinge Type**

- **0001**
  - Insert your choice of the Two- or Three-Knuckle Hinge type.

**Two-Knuckle**

- **0000** (3 \( \frac{1}{2} \) x 3 \( \frac{1}{2} \)” RH)
- **0001** (3 \( \frac{1}{2} \) x 3 \( \frac{1}{2} \)” LH)
- **0002** (4 x 4” RH)
- **0003** (4 x 4” LH)
- **0004** (4 \( \frac{1}{2} \) x 4 \( \frac{1}{2} \)” RH)
- **0005** (4 \( \frac{1}{2} \) x 4 \( \frac{1}{2} \)” LH)
- **0006** (4 \( \frac{1}{2} \) x 4” RH)
- **0007** (4 \( \frac{1}{2} \) x 4” LH)

**Three-Knuckle**

- **0050** (3 \( \frac{1}{2} \) x 3 \( \frac{1}{2} \)”)
- **0051** (4 x 4”)
- **0052** (4 \( \frac{1}{2} \) x 4 \( \frac{1}{2} \)”)
- **0053** (4 \( \frac{1}{2} \) x 4”)

**Handing for Hinges**

- **RH** – Right Hand Hinge
- **LH** – Left Hand Hinge

**Finishes are approximate and finish codes are nearest equivalent.**

- **0105** Aluminum Natural Color (689)
- **0710** Dark Bronze Color (710)
- **8120** Black (671)
- **8220** White (714)
- **6204** Satin (630)
- **6205** Polished (629)
- **4205** Polished Brass (606)
- **7615** Aged Bronze (703)
Two-Knuckle Hinges
Series 9101

9101 0000 (RH)  
9101 0001 (LH)

Two-Knuckle Hinge
3 1/2" × 3 1/2" (88.9 × 88.9 mm)
Minimum door thickness 1 3/8" (35 mm)

9101 0001 pictured below

9101 0002 (RH)  
9101 0003 (LH)

Two-Knuckle Hinge
4 × 4" (101.6 × 101.6 mm)
Minimum door thickness 1 3/4" (44 mm)

9101 0003 pictured below

RH – Right Hand Hinge  
LH – Left Hand Hinge

Base material of all hinges is stainless steel. For all available finishes please refer to page 364.
Two-Knuckle Hinges
Series 9101

9101 0004 (RH)
9101 0005 (LH)

Two-Knuckle Hinge
4 1/2 x 4 1/2" (114.3 x 114.3 mm)
Minimum door thickness 1 3/4" (44 mm)

9101 0005 pictured below

9101 0006 (RH)
9101 0007 (LH)

Two-Knuckle Hinge
4 1/2 x 4" (114.3 x 101.6 mm)
Minimum door thickness 1 3/4" (44 mm)

9101 0007 pictured below

RH – Right Hand Hinge    LH – Left Hand Hinge

Base material of all hinges is stainless steel. For all available finishes please refer to page 364.
### Three-Knuckle Hinges

#### Series 9101

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
<th>Minimal Dimensions</th>
<th>Minimum Door Thickness</th>
</tr>
</thead>
<tbody>
<tr>
<td>9101 0050</td>
<td>Three-Knuckle Hinge</td>
<td>3⅛ × 3⅛&quot; (88.9 × 88.9 mm)</td>
<td>1 ⅜&quot; (35 mm)</td>
</tr>
<tr>
<td>9101 0051</td>
<td>Three-Knuckle Hinge</td>
<td>4 × 4&quot; (101.6 × 101.6 mm)</td>
<td>1 ⅝&quot; (44 mm)</td>
</tr>
</tbody>
</table>

Base material of all hinges is stainless steel. For all available finishes please refer to page 364.
Three-Knuckle Hinges
Series 9101

9101 0052

Three-Knuckle Hinge

4 1/2 x 4 1/2" (114.3 x 114.3 mm)
Minimum door thickness 1 3/4" (44 mm)

9101 0053

Three-Knuckle Hinge

4 1/2 x 4" (114.3 x 101.6 mm)
Minimum door thickness 1 3/4" (44 mm)

Base material of all hinges is stainless steel. For all available finishes please refer to page 364.
Site/Situation

Serious consideration should be given to the type of door and frame being installed as well as the nature of the building and the door’s specific location. For example, very frequently used doors, in a hospital or school, tend to be put under more arduous stresses than in residential applications. The table to the right shows some estimates of traffic in certain building/locations.

All FSB two- and three-knuckle hinges are swaged and full mortise, for use with all door and frame materials. They are designed for use in high frequency situations, with other specific requirements guiding the appropriate hinge choice.

Frequency of Door Operation

<table>
<thead>
<tr>
<th>Type of Building and Door</th>
<th>Annual Cycles</th>
<th>FSB Hinges to Use</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>High frequency</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Large dept. store entrance</td>
<td>1,500,000</td>
<td>Special Order</td>
</tr>
<tr>
<td>Large office bldg. entrance</td>
<td>1,200,000</td>
<td></td>
</tr>
<tr>
<td><strong>High frequency</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>School entrance</td>
<td>400,000</td>
<td>FSB Standard</td>
</tr>
<tr>
<td>School toilet door</td>
<td>225,000</td>
<td>Two- and Three-Knuckle Hinges</td>
</tr>
<tr>
<td>Store or bank entrance</td>
<td>150,000</td>
<td></td>
</tr>
<tr>
<td>Office building toilet door</td>
<td>118,000</td>
<td></td>
</tr>
<tr>
<td><strong>Average frequency</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>School corridor door</td>
<td>30,000</td>
<td></td>
</tr>
<tr>
<td>Office building corridor door</td>
<td>22,000</td>
<td></td>
</tr>
<tr>
<td>Store toilet door</td>
<td>18,000</td>
<td></td>
</tr>
<tr>
<td>Dwelling entrance</td>
<td>15,000</td>
<td></td>
</tr>
<tr>
<td><strong>Low frequency</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dwelling toilet door</td>
<td>9,000</td>
<td></td>
</tr>
<tr>
<td>Dwelling corridor door</td>
<td>3,600</td>
<td></td>
</tr>
<tr>
<td>Dwelling closet door</td>
<td>2,200</td>
<td></td>
</tr>
</tbody>
</table>

Hinge Size

The size of hinge to be used is determined not only by the weight but also the door size, thickness and any clearances required.

It should be noted that if extra “clearance” is required to allow the door to, for example, swing out and lay flat around any decorative casing then this should be considered in guiding hinge choice.

Guidance on the suitability of individual hinges can be found on the following and product specific pages.

The drawing to the right shows the plan detail of a standard hinge installation.

UL/cUL up to 3 hours
UL File - R27193

ANSI A156.1-2006 Grade 1
Number of Hinges

Typically, three hinges are fitted to each door. Hinge positions are determined by the weight of door, its situation and its construction/resistance to warping. The usual positioning is symmetrical, see examples.

Number of Hinges to be used on Standard Doors

<table>
<thead>
<tr>
<th>Door height</th>
<th>No. hinges</th>
</tr>
</thead>
<tbody>
<tr>
<td>Up to 7'</td>
<td>3 hinges</td>
</tr>
<tr>
<td>7' to 10'</td>
<td>4 hinges</td>
</tr>
</tbody>
</table>

Doors over 10' please contact FSB.

For extra heavy doors or doors with a low height to width ratio (see below) the positions should be modified to help account for the increased side loading* placed on the hinges.

*As the door has an eccentric centre of gravity a side loading force is placed on the hinges. This is the force trying to pull the hinges off the door frame.

Note: Two knuckle hinge separates at the midline using a non-removable 1 ¼" pin.

FSB three knuckle hinge does not separate and the pin is fixed.

Hinges for use with Doors of excess width

Wider doors increase the pressure and bending stresses exerted on the hinge. This must be allowed for by reduction in the mass of the door leaf supported by the hinges. The factors by which the door mass has to be adjusted for excessive widths of door are calculated by dividing the door height by its width.

For a factor of two or greater, no allowance has to be made. When the factor is less than two, the door mass has to be increased by the value required to bring the factor to two expressed as a percentage. These percentages are shown in the Side Loading Calculations to the right.

Approximate door construction average weights

The table to the right shows the approximate door weights per area when using various materials.

Example:
A 7'6" × 3'3" “Solid Core” door leaf at 1 ¾" thick will have an approximate weight of 110 lb

Side Loading Calculation

<table>
<thead>
<tr>
<th>Door Size</th>
<th>Factor</th>
<th>Normal Increase of Mass of Door Leaf</th>
</tr>
</thead>
<tbody>
<tr>
<td>Door Height</td>
<td>Door Width</td>
<td></td>
</tr>
<tr>
<td>6' 8&quot;</td>
<td>3' 6&quot;</td>
<td>1.90</td>
</tr>
<tr>
<td>6' 8&quot;</td>
<td>4' 0&quot;</td>
<td>1.67</td>
</tr>
<tr>
<td>7' 0&quot;</td>
<td>3' 6&quot;</td>
<td>2.00</td>
</tr>
<tr>
<td>7' 0&quot;</td>
<td>4' 0&quot;</td>
<td>1.75</td>
</tr>
<tr>
<td>7' 6&quot;</td>
<td>4' 0&quot;</td>
<td>1.88</td>
</tr>
<tr>
<td>8' 0&quot;</td>
<td>4' 0&quot;</td>
<td>2.00</td>
</tr>
</tbody>
</table>

Door Thickness

<table>
<thead>
<tr>
<th>Door Thickness</th>
<th>1 ¾&quot; (35 mm)</th>
<th>1 3/8&quot; (44 mm)</th>
<th>2&quot; (51 mm)</th>
<th>2 3/8&quot; (54 mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>lbs/ft² kg/m²</td>
<td>lbs/ft² kg/m²</td>
<td>lbs/ft² kg/m²</td>
<td>lbs/ft² kg/m²</td>
</tr>
<tr>
<td>Hollow Metal</td>
<td>4 19.5</td>
<td>5 24.4</td>
<td>6 1/2 31.7</td>
<td>7 33.6</td>
</tr>
<tr>
<td>Kalamein</td>
<td>—</td>
<td>5 24.4</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Hollow Core</td>
<td>2 9.8</td>
<td>2 1/2 12.2</td>
<td>—</td>
<td>—</td>
</tr>
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<td>8 39.0</td>
<td>8 1/2 41.3</td>
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<td>Ash</td>
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<td>Birch</td>
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<td>5 1/2 26.9</td>
<td>6 1/4 30.5</td>
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<td>Mahagony</td>
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<td>4 1/2 22.0</td>
<td>5 1/4 25.6</td>
<td>5 1/2 27.1</td>
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## Accessories

<table>
<thead>
<tr>
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<th>Description</th>
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<td>Letter Plates &amp; Intercom</td>
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Door Stops and Coat Hooks Overview

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Drawer Pulls, Cabinet Knobs and Furniture Accessories Overview

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36 9865
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All details subject to modification.
Mail Slots, Intercom Covers, Bell Push, and House Letter Overview

Materials and Finishes
- Stainless Steel: 6204 (630), 6205 (629)
- Bronze: 7305 (611), 7615 (615), 7625 (613)
- Aluminum: 0105 (628), 0205, 0710 (710), 0810 (711)
- Powder Coated
- Brass: 4205 (605), 4305 (606), 4404 (607)
- Black Rubber

Accessories

Accessories
All details subject to modification

Accessories

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Before placing an order or carrying out any installation, please check the weight of the door leaf, the angle of impact, the height of the bottom edge of the door above the floor and the strength of the floor. Depending on requirements, it is possible to choose between simple stops, stops with anti-twist capability, stops with baseplates, directional and non-directional stops and stops fitted straight into the floor or those where rawlplugs are used.
Door Stops

38 3878
Design: Christoph Ingenhoven

38 3880 00001 (Black rubber)

Before placing an order or carrying out any installation, please check the weight of the door leaf, the angle of impact, the height of the bottom edge of the door above the floor and the strength of the floor. Depending on requirements, it is possible to choose between simple stops, stops with anti-twist capability, stops with baseplates, directional and non-directional stops and stops fitted straight into the floor or those where rawlplugs are used.
Door Stops

38 3880

38 3880 00002 (120 mm)
38 3880 00003 (90 mm)
38 3880 00004 (60 mm)

Before placing an order or carrying out any installation, please check the weight of the door leaf, the angle of impact, the height of the bottom edge of the door above the floor and the strength of the floor. Depending on requirements, it is possible to choose between simple stops, stops with anti-twist capability, stops with baseplates, directional and non-directional stops and stops fitted straight into the floor or those where rawlplugs are used.
Door Stops

Before placing an order or carrying out any installation, please check the weight of the door leaf, the angle of impact, the height of the bottom edge of the door above the floor and the strength of the floor. Depending on requirements, it is possible to choose between simple stops, stops with anti-twist capability, stops with baseplates, directional and non-directional stops and stops fitted straight into the floor or those where rawlplugs are used.
Coat Hooks / Wall-mounted Door Stops

36 3646

36 3646 00000 (Coat hook without buffer)
36 3646 00001 (Coat hook and doorstop with buffer)

38 3895
Cabinet Knobs

36 3632  ■■■  *
Design: Philippe Starck
36 3632 004 (RH)
36 3632 005 (LH)

Supplied with M4 × 30 mm screw
* Aluminum available in natural color only

36 3654  ■■■
Design: Jasper Morrison
Supplied with M4 × 30 mm screw

36 3689  ■■■
Supplied with M4 × 30 mm screw

36 3691  ■■■
Design: Franco Clivio
Supplied with M4 × 30 mm screw
### Cabinet Pulls

**36 3656 | 36 3657**

<table>
<thead>
<tr>
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<th>Dimension</th>
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<tr>
<td>36 3656 (70 mm)</td>
<td>70</td>
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<tr>
<td>36 3657 (90 mm)</td>
<td>90</td>
</tr>
</tbody>
</table>

Supplied with M4 x 26 mm screws.

**36 3679**

- 96 mm length
- Ø10 mm
- 28 mm projection

Annex subject to modification.
Cable Box and Card Frame

36 9865

The FSB cable box ensures tidy cable management at work desks. Connections for telephones and fax machines, task lights, desktop computers and all that goes with them are ideally accommodated in this elegant cable box. Its heavy-duty design is such that the cap remains firmly clipped in place no matter how inflexible the cabling beneath. The slit is sealed by a brush gasket that adapts itself to the cables inserted.

Card Frame

36 4001

36 4001 (paper dimension 74 × 105 mm)  
36 4002 (paper dimension 37 × 105 mm)  
36 4003 (paper dimension 52 × 74 mm)  
36 4004 (paper dimension 26 × 74 mm)
Letter Plates

38 3801 | 38 3804

38 3801 02001 (without nameplate)
38 3801 02002 (with nameplate)
Opening size 325 × 32 mm
Door cutout 350 × 48 mm

38 3804 02001 (without nameplate)
38 3804 02002 (with nameplate)
Opening size 230 × 32 mm
Door cutout 255 × 48 mm

Fixation drill holes:
Ø 10 mm, 8 mm deep
Ø 5.5 mm through fixing
To be fixed using M5 screws (included)
Letter Plates

38 3808

38 3808 00061 (40 – 70 mm)
38 3808 00071 (71 – 100 mm)
Letter plate set without nameplate, with spacer and inner flap

38 3808 00001
38 3808 00101 for wall mounting
Letter plate without nameplate, without spacer and inner flap

38 3808 00062 (40 – 70 mm)
38 3808 00072 (71 – 100 mm)
Letter plate set with nameplate, spacer and inner flap

38 3808 00002
38 3808 00102 for wall mounting
Letter plate with nameplate, without spacer and inner flap

Opening dimensions 230 × 35 mm
Door cutout 246 × 60 mm

Fixed invisibly from the inside or through the inner flap

Fixation drill holes:
Ø 9 mm, 36 mm deep
Ø 4.5 mm through fixing
To be fixed using M4 screws (included)
Letter Plates

38 3826

38 3826 02061 (40 – 70 mm)
Letter plate set without nameplate,
with spacer and inner flap

38 3826 02071 (71 – 100 mm)
Letter plate set without nameplate,
without spacer and inner flap

38 3826 02002
Letter plate with nameplate,
without spacer and inner flap

Opening dimensions 230 × 40 mm
Door cutout 240 × 50 mm

Separate fixation of letter plate
and inner flap

All details subject to modification
Letter Plates

38 3826 | 38 3829

<table>
<thead>
<tr>
<th>38 3826 02001 without nameplate</th>
<th>38 3829 02001 without nameplate</th>
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</thead>
<tbody>
<tr>
<td>38 3826 02002 with nameplate</td>
<td>38 3829 02002 with nameplate</td>
</tr>
</tbody>
</table>

Opening dimension or door cutout

230 × 40 mm

Opening dimension or door cutout

325 × 40 mm

All details subject to modification
Mail Flap, Door Bell and Intercom

**Accessories**

38 3845

Suitable for door cutout 255 x 40 mm

---

38 3863

38 3810

38 3810 00011 (single)
38 3810 00012 (double)

**Mill out size**
W 110 × H 70 × D 30 mm

Instruction:
Bell pushes may only be connected to a protective low voltage (max 42 V). Given the high no-load voltage involved, we recommend connecting the light socket (lamp operation max. 24 V/40 mA) to the safety transformer (8 V).
Door Numbers and Letters

FSB’s programme of numerals and letters draws on designs that Otl Aicher recommended to our company as a headline typeface. For Otl Aicher, clear legibility from a great distance was of the utmost importance.

Our numerals and letters are made of 4 mm-thick stainless steel or bronze sheet. Numerals and letters have the identical fixation points with threaded sockets (M4). These are fitted with bolts, which in turn are secured in rawplugs (8 mm). Every numeral or letter comes with a fixing template that also determines the distance between the characters. Custom spacing is easy to achieve.

Item number:
38 4005 00... = available numbers or letters (shown above)
Example: 38 4005 00002 = Number 2

Only lower case letters “a” to “e” are available.
**METRIC® + ErgoSystem® Bathroom Accessories**

**Bathroom Accessories**

The bathroom is increasingly becoming a place for tranquility and relaxation. As a result, notions of how such spaces are designed are having to be reconsidered too. The atmosphere of a space plays an increasingly important part alongside purely functional requirements.

**METRIC®**

Factors such as “natural quality”, “simplicity” and “well-being” are setting new standards both in the domestic sphere as well as in hotels and public areas. Growing significance is attached to the process of selecting and combining natural materials, finishes and colors. FSB is addressing this trend in the design of its METRIC® range of bathroom accessories.

The METRIC® design is deliberately understated, being defined by geometric shapes and high quality materials. The contrast between round roses and rectangular support profiles is a striking design feature that runs through the entire range. The combination of round functional parts and the supports made of rectangular profiles underscores the clear division of the system's constituent parts.

Its astutely balanced proportions have a soothing effect and blend harmoniously with a variety of design concepts. Ergonomic criteria have been taken into account wherever they are an aid to fluent sequences of movements. The holder for the toothbrush mug, for instance, tilts towards the user, thus making it easier to remove the mug.

METRIC® is supplied in stainless steel satin finish or polished. Besides looking good, stainless steel boasts an authenticity that harmonizes particularly well with natural materials such as wood or granite and is excellently suited to well-appointed bathroom schemes. Stainless steel rightly lays claim to being exceedingly hard wearing, corrosion resistant, easy to look after and durable.

The base rose features two parallel longitudinal slots for optimum dimensional coordination and is screwed to the wall with the fastenings supplied. The cover rose is then placed on top and aligned with the patterning as required. The final optical adjustment of the working parts is performed by firmly tightening the socket screw against the tensioning bolt.

**Fastening by screws or adhesive**

As an alternative to conventional screw fastening, FSB also offers attachment by means of a bonding technique that uses an adhesive and facilitates residue-free removal.

The quality with which FSB works stainless steel draws on decades of experience gained as a manufacturer of well-designed, finely machined hardware for doors and windows. This expertise has found its way into the design and production of the METRIC® range of bathroom accessories.

**ErgoSystem®**

The standard color combination FSB 8811 combines light grey and dark grey aluminum as shown to the left.

Hand-holds, handrails and the surfaces of utensils trays that are subject to constant loading either by being gripped or having utensils placed on them are coated in Anthracite Dark Grey Metallic (FSB 8809). Brackets, assembly devices, and working parts that are infrequently handled may additionally be refined with the accent color Aluminium Grey Metallic (FSB 8829, Satin Matt).

Surface quality In particular, finishes on hand-holds, handrails and shelves and trays brought about by electrostatic powder coating (EPC) are far more resilient to cleansers, scratching or wear than conventional powders and procedures of a purely decorative persuasion. The powders used at FSB have their origins in facade construction – an area, after all, in which the most exacting demands are traditionally made of surfaces in the erection of facades or to account for climatic impacts.

The matt color shade Anthracite Grey Metallic (FSB 8809) boasts above-average surface hardness and outstanding mechanical properties and can hence be recommended for areas in which particularly high loads are to be expected.

As an alternative to conventional screw fastening, FSB also offers attachment by means of a bonding technique that uses an adhesive and facilitates residue-free removal.
METRIC® + ErgoSystem® Bathroom Accessories
Material & Finishes and Overview

■ FSB 6204
  Stainless steel, satin (630)

■ FSB 6205
  Stainless steel, polished (629)

■ FSB 8811
  Brackets: FSB 8829
  Aluminium Grey
  Handrail/rail: FSB 8809
  Anthracite Dark Grey

Materials and Finishes
  ■ Stainless Steel
  ■ 6204 (630)
  ■ 6205 (629)
  ■ Aluminum
  ■ 8811

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All details subject to modification
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82 8270 01013  ■  Page 401

82 8270 00017  ■  Page 401

82 8270 0001/02  ■  Page 401

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All details subject to modification

Bathroom Accessories
**METRIC® + ErgoSystem®**

**Bathroom Accessories**

---

### Single towel bar

82 8270 04511 (450 mm)
82 8270 00011 (600 mm)
82 8270 07511 (750 mm)
82 8270 09011 (900 mm)

---

### Single fixed bath towel rail

Custom lengths of up to 1,050 mm can be supplied to order
METRIC® + ErgoSystem®
Bathroom Accessories

82 8270 00014  
Combination towel rack and towel bar

82 8270 00021  
Double towel bar

All details subject to modification
82 8270 00015  ■  Frosted glass shelf

82 8270 00016  ■  Clear glass shelf
METRIC® + ErgoSystem®
Bathroom Accessories

82 8460 00011
Utensils tray with grab/towel bar
Max grab rail loading 100 kg

82 8270 00010
Swivel action double towel bar

82 8460 00002
Double swivel-action hand towel bar

All details subject to modification
METRIC® + ErgoSystem®
Bathroom Accessories

82 8201 xxx00

Grab bar

- 82 8201 03000 (L = 300 mm)
- 82 8201 04500 (L = 450 mm)
- 82 8201 06000 (L = 600 mm)
- 82 8201 09000 (L = 900 mm)
METRIC® + ErgoSystem®
Bathroom Accessories

82 8420 000xx

- 82 8420 00060 (L = 600 mm)
- 82 8420 00070 (L = 700 mm)
- 82 8420 00085 (L = 850 mm)
- 82 8420 00090 (L = 900 mm)

Drop-down support rail
with non-directional grip cross-section

Spring-loaded, ease of action adjustable

Max. loading 100 kg on the front edge

All details subject to modification

Bathroom Accessories

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METRIC® + ErgoSystem®
Bathroom Accessories

82 8270 01030  ■  Toilet roll holder

82 8270 01031  ■  Spare toilet roll holder for one roll
METRIC® + ErgoSystem®
Bathroom Accessories

82 8460 000xx

82 8460 00007 (for two toilet-rolls)
82 8460 00017 (for one toilet-roll)

Spare toilet-roll holder

82 8270 00003

Door Stop

Custom length available

All details subject to modification
METRIC® + ErgoSystem®
Bathroom Accessories

82 8270 01013

Towel ring

82 8270 00017

Toothbrush holder

82 8270 00001

Robe or towel hooks

82 8270 00002

82 8270 00017

82 8270 00001

82 8270 00002
### METRIC® + ErgoSystem®
#### Bathroom Accessories

<table>
<thead>
<tr>
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<td>82 8460 00004</td>
<td>Coat hook</td>
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<td></td>
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<td>82 8460 00018</td>
<td>Double wall hook</td>
<td>Width: 80</td>
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<td></td>
<td></td>
<td>Height: 48</td>
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</tbody>
</table>

*All details subject to modification.*
82 8270 00040

Soap holder with plastic soap dish

82 8270 00041

Mug holder with plastic mug
METRIC® + ErgoSystem®
Bathroom Accessories

82 8460 00012

Soap holder with plastic soap dish

82 8460 00014

Mug holder with plastic mug

All details subject to modification
METRIC® + ErgoSystem®
Bathroom Accessories

82 8270 00042
Toilet brush set oval, with removable plastic insert*

82 8270 00043
Toilet brush set round, with removable plastic insert*

* The removable plastic insert for the toilet brush sets is washable up to 266 °F. The brush heads can be replaced and ordered separately.
METRIC® + ErgoSystem®
Bathroom Accessories

82 8460 00008

Toilet brush set oval, with removable plastic insert*

* The removable plastic insert for the toilet brush sets is washable up to 266 °F. The brush heads can be replaced and ordered separately.
**METRIC® + ErgoSystem®
Bathroom Accessories**

### 82 8243  ![Seat PUR](image)

**Free-standing bath stool with rotating seat**

The free-standing stool has a rotating seat and is very convenient in the bathroom and for getting dressed/undressed.

![Stool Diagram](image)

### 82 8241  ![Seat PUR](image)

**Bath stool with rotating seat**

The height-adjustable bath stool with rotating seat is designed with comfort in mind. Propped up against the edge of the bath, it makes getting into the bath easier. Further bathroom functions such as body care or getting dressed/undressed are likewise facilitated.

![Stool Diagram](image)
METRIC® + ErgoSystem®
Bathroom Accessories

82 8270 00050

Slide rail with shower head holder for wall mounting

The new shower head holder enables convenient showering: it combines an ergonomically shaped handle that is safe and easy to operate without any turning action involved and features a maintenance-free, continuously adjustable height and tilt mechanism. The shower head holder can be conveniently adjusted with one hand – leaving the other free at all times and giving the user the opportunity, for instance, to hold onto a grab handle.
METRIC®
Specification Details

82 8270 00001
FSB METRIC bathroom accessory, robe or towel hook in stainless steel, wall mounting with concealed fastening and cover rose in stainless steel, Ø 46 mm. Includes fasteners for solid masonry, wood or drywall. Wall construction must be provided with order. Length 51 mm

82 8270 00002
FSB METRIC bathroom accessory, robe or towel hook in stainless steel, wall mounting with concealed fastening and cover rose in stainless steel, Ø 46 mm. Includes fasteners for solid masonry, wood or drywall. Wall construction must be provided with order. Length 89 mm

82 8270 00003
FSB METRIC bathroom accessory, door stop in stainless steel, wall mounting with concealed fastening and cover rose in stainless steel, Ø 46 mm. Includes fasteners for solid masonry, wood or drywall. Wall construction must be provided with order. Length 132 mm

82 8270 00010
FSB METRIC bathroom accessory, swivel action double towel bar in stainless steel, Ø 12 mm, wall mounting with concealed fastening and cover rose in stainless steel, Ø 73 mm. Includes fasteners for solid masonry, wood or drywall. Wall construction must be provided with order. Length 419 mm

82 8270 xxx11
FSB METRIC bathroom accessory, towel bar in stainless steel, Ø 22 mm mounting brackets in stainless steel, wall mounting with concealed fastening and cover roses in stainless steel, Ø 46 mm. Includes fasteners for solid masonry, wood or drywall. Wall construction must be provided with order.
82 8270 04511 Length 450 mm
82 8270 00011 Length 600 mm
82 8270 07511 Length 750 mm
82 8270 09011 Length 900 mm

82 8270 00014
FSB METRIC bathroom accessory, combination towel rack and towel bar in stainless steel, wall mounting with concealed fastening and cover rose in stainless steel, Ø 73 mm, 230 mm deep rack with Ø 22 mm towel bar. Includes fasteners for solid masonry, wood or drywall. Wall construction must be provided with order.

82 8270 00015
FSB METRIC bathroom accessory, glass wall-mounted shelf, in unbreakable glass (toughened safety glass), mounting brackets in stainless steel, plastic wall mounting with concealed fastening and cover roses in stainless steel, Ø 46 mm. Includes fasteners for solid masonry, wood or drywall. Wall construction must be provided with order. Surface area of tray 600 × 135 mm. Frosted finish

82 8270 00016
FSB METRIC bathroom accessory, glass wall-mounted shelf, in unbreakable glass (toughened safety glass), mounting brackets in stainless steel, plastic wall mounting with concealed fastening and cover roses in stainless steel, Ø 46 mm. Includes fasteners for solid masonry, wood or drywall. Wall construction must be provided with order. Surface area of tray 600 × 135 mm. Plain glass finish

82 8270 00017
FSB METRIC bathroom accessory, toothbrush holder in stainless steel, wall mounting with concealed fastening and cover rose, Ø 46 mm, in stainless steel. Includes fasteners for solid masonry, wood or drywall. Wall construction must be provided with order.

82 8270 00021
FSB METRIC bathroom accessory, double towel bar in stainless steel, Ø 22 mm mounting brackets in stainless steel, wall mounting with concealed fastening and cover roses in stainless steel, Ø 46 mm. Includes fasteners for solid masonry, wood or drywall. Wall construction must be provided with order. Length 600 mm

82 8270 00040
FSB METRIC bathroom accessory, soap holder in stainless steel, for washstand, with removable plastic soap tray (polycarbonate), wall mounting with concealed fastening and cover rose in stainless steel, Ø 46 mm. Includes fasteners for solid masonry, wood or drywall. Wall construction must be provided with order.
82 8270 00041
FSB METRIC bathroom accessory, glass holder in stainless steel, for washstand, with removable glass beaker. Ergonomic styling, tilting of holder conducive to ease of removal, wall mounting with concealed fastening and cover rose in stainless steel, Ø 46 mm. Includes fasteners for solid masonry, wood or drywall. Wall construction must be provided with order.

82 8270 00042
FSB METRIC bathroom accessory, toilet brush set in stainless steel and plastic (polycarbonate), for wall fastening, nylon brush head. Replaceable brush is automatically centred and positioned, for removal in line with body movements, large insertion aperture, easy to clean due to removable brush receptacle, with inner reservoir for disinfectants, concealed fastening. Includes fasteners for solid masonry, wood or drywall. Wall construction must be provided with order.

82 8270 00043
FSB METRIC bathroom accessory, toilet brush set in stainless steel and plastic (polycarbonate), for wall fastening, nylon brush head. Replaceable brush is automatically centred and positioned, for removal in line with body movements, large insertion aperture, easy to clean due to removable brush receptacle, with inner reservoir for disinfectants, concealed fastening. Includes fasteners for solid masonry, wood or drywall. Wall construction must be provided with order.

82 8270 00050
FSB METRIC bathroom accessory, shower rail in stainless steel, Ø 22 mm, with continuously adjustable shower head holder, supports in stainless steel, wall mounting with concealed fastening and cover rose in stainless steel, Ø 46 mm. Includes fasteners for solid masonry, wood or drywall. Wall construction must be provided with order. Length 900 mm

82 8270 01013
FSB METRIC bathroom accessory, towel ring in stainless steel, wall mounting with concealed fastening and cover rose in stainless steel, Ø 73 mm. Includes fasteners for solid masonry, wood or drywall. Wall construction must be provided with order.

82 8270 01030
FSB METRIC bathroom accessory, toilet roll holder in stainless steel, Ø 22 mm, with roll retainer, wall mounting with concealed fastening and cover rose in stainless steel, Ø 73 mm. Includes fasteners for solid masonry, wood or drywall. Wall construction must be provided with order.

82 8270 01031
FSB METRIC bathroom accessory, reserve toilet roll holder in stainless steel, Ø 22 mm, for one roll, wall mounting with concealed fastening and cover rose in stainless steel, Ø 73 mm. Includes fasteners for solid masonry, wood or drywall. Wall construction must be provided with order. Length 125 mm

82 8201 xxx00
FSB diagonal-oval ErgoSystem, grab handle in stainless steel, ideal grab and support functions, elliptical gripping surface, oval tubing 36.5 x 22 mm, concealed fastening and stainless steel covering profiles, and roses in stainless steel, Ø 73 mm. Includes fasteners for solid masonry, wood or drywall. Wall construction must be provided with order. 82 8201 03000 Length 300 mm 82 8201 04500 Length 450 mm 82 8201 06000 Length 600 mm 82 8201 09000 Length 900 mm

82 8241
FSB convenience stool in pleasant-on-the-skin, hygienic PUR and stainless steel, with rotating seat in PUR, Ø 400 mm, seat height-adjustable from 420 mm to 520 mm, max. loading 150 kg, for propping against the edge of the bath and, in combination with FSB bath seat, can be used as an aid to moving and getting in the bath.

82 8243
FSB free-standing and convenience stool in pleasant-on-the-skin, hygienic PUR and stainless steel, with rotating seat in PUR, Ø 400 mm, seat height 480 mm, with four free-standing feet in stainless steel.
Window Handles

34 1001  Lever Design 1001
34 1003  Lever Design 1003
34 1004  Lever Design 1004
34 1005  Lever Design 1005
34 1015  Lever Design 1015

34 1023  Lever Design 1023
34 1025  Lever Design 1025
34 1035  Lever Design 1035
34 1070  Lever Design 1070
34 1075  Lever Design 1075
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<td>34 1102</td>
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<td>34 1106</td>
</tr>
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</table>

| 34 1107       | Lever Design 1107 |
| 34 1108       | Lever Design 1108 |
| 34 1144       | Lever Design 1144 |
| 34 1146       | Lever Design 1146 |
| 34 1147       | Lever Design 1147 |

* 34 1102 window handle finish restrictions: Aluminum only available in 0105, Bronze only available in 7615 & 7625
Window Handles

34 1160  Lever Design 1160

34 1163  Lever Design 1163

34 1176  Lever Design 1176

34 1183  Lever Design 1183

34 1241  Lever Design 1241
The following handles are available with rectangular roses: 1001, 1003, 1004, 1005, 1035, 1102, 1163, 1183

Note: Set screws are visible on the top side of window handle shank.
FSB Parts

421  Mortise Lock Bodies
431  Tubular Latches and Deadbolts
435  Spindles
438  Fasteners and Adaptors
European Mortise Lock Trim
EML Trim Sets

Dimensions and Details

14 1550 01010 PZ 72 mm
14 1550 01012 PZ 92 mm

Note: European Escutcheons cannot be used with ANSI mortise locks.

Special Length Laser Cut Escutcheon

14 1458 00299

<table>
<thead>
<tr>
<th>Escutcheon Thickness</th>
<th>PZ Cylinder</th>
<th>Mortise Cylinder</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 mm</td>
<td>3 mm</td>
<td></td>
</tr>
<tr>
<td>5 mm</td>
<td>5 mm</td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Door Thickness</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Length X</td>
<td></td>
</tr>
<tr>
<td>Width Y</td>
<td></td>
</tr>
<tr>
<td>Dimension A</td>
<td></td>
</tr>
<tr>
<td>Dimension B</td>
<td></td>
</tr>
<tr>
<td>Dimension C</td>
<td></td>
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<tr>
<td>Dimension D</td>
<td></td>
</tr>
<tr>
<td>Spacing Z</td>
<td></td>
</tr>
<tr>
<td>Holes</td>
<td></td>
</tr>
<tr>
<td>Screw Fasteners (visibility)</td>
<td>one side</td>
</tr>
<tr>
<td></td>
<td>both sides</td>
</tr>
<tr>
<td>Handle Bearing</td>
<td>loose</td>
</tr>
<tr>
<td></td>
<td>turnably fixed*</td>
</tr>
<tr>
<td></td>
<td>loose</td>
</tr>
<tr>
<td></td>
<td>turnably fixed*</td>
</tr>
</tbody>
</table>

* only for screws visible one side
Please specify 6204 or 6205 finish.
## Lock Correlation Table

<table>
<thead>
<tr>
<th>Lock Body Number</th>
<th>Lockset Function</th>
<th>Lock Code</th>
</tr>
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<tbody>
<tr>
<td>SML 7100</td>
<td>Active Dummy</td>
<td>SML/SMT Y/Z</td>
</tr>
<tr>
<td>SML 7122</td>
<td>Store Door</td>
<td>SML/SMT A</td>
</tr>
<tr>
<td>SML 7124</td>
<td>Dormitory</td>
<td>SML/SMT B</td>
</tr>
<tr>
<td></td>
<td>Privacy</td>
<td>SML/SMT E</td>
</tr>
<tr>
<td></td>
<td>Patio</td>
<td>SML/SMT T</td>
</tr>
<tr>
<td>SML 7125</td>
<td>Passage</td>
<td>SML/SMT C</td>
</tr>
<tr>
<td>SML 7134</td>
<td>Hotel</td>
<td>SML/SMT D</td>
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<td>SML 7142</td>
<td>Public Restroom</td>
<td>SML/SMT F</td>
</tr>
<tr>
<td>SML 7145</td>
<td>Classroom</td>
<td>SML/SMT G</td>
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<tr>
<td>SML 7148</td>
<td>Entrance</td>
<td>SML/SMT H</td>
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<tr>
<td>SML 7156</td>
<td>Office</td>
<td>SML/SMT I</td>
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<tr>
<td>SML 7158</td>
<td>Institutional</td>
<td>SML/SMT V</td>
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<td>Electrified Institutional</td>
<td>SML/SMT V (EU/EL)</td>
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<td>SML/SMT J</td>
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<td>Electrified Storeroom</td>
<td>SML/SMT J (EU/EL)</td>
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<tr>
<td>SML 7167</td>
<td>Apartment</td>
<td>SML/SMT K</td>
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<tr>
<td>SML 7181</td>
<td>Deadlock</td>
<td>SML/SMT M</td>
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<tr>
<td></td>
<td>Deadlock</td>
<td>SML/SMT N</td>
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<td>Deadlock</td>
<td>SML/SMT P</td>
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<td></td>
<td>Deadlock</td>
<td>SML/SMT R</td>
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<td>Deadlock</td>
<td>SML/SMT S</td>
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<td>NML 7100</td>
<td>Active Dummy</td>
<td>NML/NMT Y/Z</td>
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<tr>
<td>NML 7122</td>
<td>Store Door</td>
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<td>NML/NMT T</td>
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<td>NML 7125</td>
<td>Passage</td>
<td>NML/NMT C</td>
</tr>
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<td>NML 7142</td>
<td>Public Restroom</td>
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<td>Deadlock</td>
<td>NML/NMT S</td>
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<tr>
<td>EML 0001</td>
<td>Store Door</td>
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<td>Dormitory</td>
<td>EML B</td>
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<td>EML 0002</td>
<td>Privacy</td>
<td>EML E</td>
</tr>
<tr>
<td>EML 0003</td>
<td>Passage</td>
<td>EML C</td>
</tr>
</tbody>
</table>
Standard Mortise Lock Series SML and SMT
Lock Body and Functions

Series SML and SMT
Standard Mortise Lock Body

Recommended for minimum 1 3/4" (45 mm) door thickness with standard 1 3/4" (32 mm) armor front. 1" (25.4 mm) armor front available for doors with 1 1/8" (35 mm) door thickness.

Knob strength available.

C-UL-US Listing
File No: R16617

Backsets
2 1/4" (64 mm)
2 3/4" (70 mm)
3 3/4" (95 mm)
5" (127 mm)
6" (152 mm)

Lock Body
All SML and SMT use the same lock bodies.

SML 7100
Active Dummy Mortise Case
Function Y
Active dummy handle either side.

Function Z
Active dummy handle single side only with blind cover on opposing side.

SML 7122
Store Door, Function A – ANSI Code F14
Latch bolt by handle either side. Deadbolt by key either side.
Standard Mortise Lock Series SML and SMT
Lock Body and Functions

SML 7124

Dormitory, Function B – ANSI Code F13
Deadbolt by thumb turn inside and key or emergency release outside.

Privacy, Function E – ANSI Code F19
Latch bolt by handle either side. Deadbolt by thumbturn inside and emergency key outside. Use of inside handle retracts latch and deadbolt simultaneously, automatically unlocking outside handle. Outside handle is rigid when deadbolt is thrown by thumbturn.

Patio, Function T
Latch bolt by handle either side. Deadbolt by thumbturn inside. Outside handle is rigid when deadbolt is thrown by thumbturn. Use of inside handle retracts latch and deadbolt simultaneously.

SML 7125

Passage, Function C – ANSI Code F01
Latch bolt by handle either side.

SML 7134

Hotel, Function D – ANSI Code F15
Latch bolt by handle inside and guest or master key outside. Outside handle always rigid. Deadbolt by thumbturn inside and service key only outside. Use of inside handle retracts latch and deadbolt simultaneously. Auxiliary latch deadlocks latch bolt.

SML 7142

Public Restroom, Function F – ANSI Code F09
Latch bolt by handle either side unless outside handle is locked by master key from inside (cylinders are provided KD). When outside handle is locked, latch bolt by key outside and handle inside. Auxiliary latch deadlocks latch bolt.
Standard Mortise Lock Series SML and SMT
Lock Body and Functions

SML 7145

Classroom, Function G – ANSI Code F05
Latch bolt by key outside and handle either side unless outside handle is locked by key outside. Auxiliary latch deadlocks latch bolt.

SML 7148

Entrance, Function H – ANSI Code F12
Latch bolt by key outside and handle either side unless outside handle is locked by toggle. Deadbolt by key outside and thumbturn inside. Inside handle retracts latch and deadbolt. Outside handle is rigid when deadbolt is thrown by key or thumbturn.

SML 7156

Office, Function I – ANSI Code F04
Latch bolt by key outside and handle either side unless outside handle is locked by toggle. Auxiliary latch deadlocks latch bolt.

SML 7158

Institutional, Function V – ANSI Code F30
Latch bolt by key either side. Inside* and outside handle always rigid. Auxiliary latch deadlocks latch bolt.

*Verify code compliance before using this function.

SML 7159

Storeroom, Function J – ANSI Code F07
Latch bolt by handle inside and key outside. Outside handle always rigid. Auxiliary latch deadlocks latch bolt.
Standard Mortise Lock Series SML and SMT

Lock Body and Functions

SML 7167

Apartment, Function K – ANSI Code F20
Same as SML 7148 with the following addition: Auxiliary latch deadlocks latch bolt and prevents manipulation of locked toggle. Outside handle is rigid when deadbolt is thrown by key or thumbturn.

SML 7181

Deadlock
Function M – ANSI Code F18
Deadbolt by key outside. No operation inside.

Function N – ANSI Code F16
Deadbolt by key either side.

Function P – ANSI Code F17
Deadbolt by key outside and thumbturn inside.

Function R
Deadbolt by thumbturn inside. No operation outside.

Function S
Deadbolt by thumbturn inside and emergency release outside.

SML 7158 VEU/VEL

Electrified Institutional, Function VEU/VEL
Latchbolt retracted by key on either side. Switched power allows both levers to retract latchbolt. Auxiliary latch deadlocks latch bolt.
EU = Inside and outside lever simultaneously unlocked electronically.
EL = Inside and outside lever simultaneously locked electronically.

SML 7159 JEU/JEL

Electrified Storeroom, Function JEU/JEL
Key outside retracts latch bolt, when outside lever is locked. Outside lever retracts latch bolt except when locked. Outside lever can only be locked with the solenoid. Inside lever always retracts latch bolt. Auxiliary latch deadlocks latch bolt.
EU = Power off, Locks outside lever by solenoid.
EL = Power on, Locks outside lever by solenoid.

All details subject to modification.
Electrified Mortise Lock Series SML and SMT
Lock Body and Functions

Series SML/SMT EL or SML/SMT EU

Recommended for minimum 1 3/4" (45 mm) door thickness with standard 1 1/4" (32 mm) armor front.
1" (25.4 mm) armor front available for doors with 1 3/8" (35 mm) door thickness.

SML 7158 EU/EL
Electrified Institutional, JU/JL Function

Solenoid activated mortise lock.
EL function – Inside and outside handles simultaneously locked electronically.
EU function – Inside and outside handles simultaneously unlocked electronically.

Latchbolt retracted by key on either side. Switched power allows both levers to retract latchbolt. Auxiliary latch deadlocks latch bolt.

Monitoring Options
RX = Request to Exit Switch
LM = Latchbolt Monitor Switch
DP = Door Position Switch

SML 7159 EU/EL
Electrified Storeroom, JU/JL Function

Solenoid activated mortise lock.
EL function – Power ON, locks outside lever.
EU function – Power OFF, unlocks outside lever.

Key outside retracts latch bolt, when outside lever is locked. Outside lever retracts latch bolt except when locked.

Outside lever can only be locked with the solenoid. Inside lever always retracts latch bolt. Auxiliary latch deadlocks latch bolt.

Monitoring Options
RX = Request to Exit Switch
(monitors inside handle)
LM = Latchbolt Monitor Switch
(monitors position of latchbolt)
DS = Door Position Switch
(Monitors door via auxiliary latch)
Narrow Mortise Lock Series NML and NMT
Lock Body and Functions

Series NML
Narrow Mortise Lock

Recommended for minimum 1 3/4" (45 mm) door thickness with standard 1 1/4" (32 mm) armor front.
1" (25.4 mm) armor front available for doors with 1 1/8" (35 mm) door thickness.

Lock Body
All NML and NMT use the same lock bodies.

Backsets
1 1/2" (38 mm)
1 3/4" (45 mm)
2" (51 mm)
2 1/4" (57 mm)

NML 7100
Active Dummy, Y, Z Functions

Active Dummy Mortise Case
Function Y
Active dummy handle either side.

Function Z
Active dummy handle single side only with blind cover on opposing side.

NML 7122

Active Dummy Mortise Case
Function Y
Active dummy handle either side.

Function Z
Active dummy handle single side only with blind cover on opposing side.

Store Door, Function A – ANSI Code F14
Latch bolt by handle either side. Deadbolt by key either side.
### Narrow Mortise Lock Series NML and NMT

#### Lock Body and Functions

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
<th>Function</th>
<th>ANSI Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>NML 7124</td>
<td>Dormitory, Function B – ANSI Code F13&lt;br&gt;Deadbolt by thumb turn inside and key or emergency release outside.</td>
<td>Privacy, Function E – ANSI Code F19&lt;br&gt;Latch bolt by handle either side. Deadbolt by thumbturn inside and emergency key outside. Use of inside handle retracts latch and deadbolt simultaneously, automatically unlocking outside handle. Outside handle is rigid when deadbolt is thrown by thumbturn.</td>
<td>F13, F19</td>
</tr>
<tr>
<td>NML 7125</td>
<td>Passage, Function C – ANSI Code F01&lt;br&gt;Latch bolt by handle either side.</td>
<td></td>
<td>F01</td>
</tr>
<tr>
<td>NML 7142</td>
<td>Public Restroom, Function F – ANSI Code F09&lt;br&gt;Latch bolt by handle either side unless outside handle is locked by master key from inside (cylinders are provided KD). When outside handle is locked, latch bolt by key outside and handle inside. Auxiliary latch deadlocks latch bolt.</td>
<td></td>
<td>F09</td>
</tr>
<tr>
<td>NML 7145</td>
<td>Classroom, Function G – ANSI Code F05&lt;br&gt;Latch bolt by key outside and handle either side unless outside handle is locked by key outside. Auxiliary latch deadlocks latch bolt.</td>
<td></td>
<td>F05</td>
</tr>
</tbody>
</table>

All details subject to modification.
Narrow Mortise Lock Series NML and NMT
Lock Body and Functions

NML 7148

Entrance, Function H – ANSI Code F12
Latch bolt by key outside and handle either side unless outside handle is locked by toggle. Deadbolt by key outside and thumbturn inside. Inside handle retracts latch and deadbolt. Outside handle is rigid when deadbolt is thrown by key or thumbturn.

NML 7156

Office, Function I – ANSI Code F04
Latch bolt by key outside and handle either side unless outside handle is locked by toggle. Auxiliary latch deadlocks latch bolt.

NML 7159

Storeroom, Function J – ANSI Code F07
Latch bolt by handle inside and key outside. Outside handle always rigid. Auxiliary latch deadlocks latch bolt.

NML 7181

Deadlock
Function M – ANSI Code F18
Deadbolt by key outside. No operation inside.

Function N – ANSI Code F16
Deadbolt by key either side.

Function P – ANSI Code F17
Deadbolt by key outside and thumbturn inside.

Function R
Deadbolt by thumbturn inside. No operation outside.

Function S
Deadbolt by thumbturn inside and emergency release outside.
**European Mortise Lock Series EML**

**Lock Body and Functions, Strikes**

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**Series EML**

European Mortise Lock

Recommended for minimum 1 3/8" (35 mm) door thickness.

EML Mortise lock scalp is only available in Stainless Finish.

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**EML 0001**

**Store Door, Function A**

Latch bolt by cylinder and handle either side unless deadbolt is in locked position. Deadbolt by key either side. Activated with key × key European profile cylinder.

Lever to thumbturn center-to-center: 2 1/16" (72 mm).

**Dormitory, Function B**

Latch bolt by cylinder, turnpiece or handle either side unless deadbolt is in locked position. Deadbolt by key outside and turnpiece inside. Activated with key × turnpiece European profile cylinder.

Lever to thumbturn center-to-center: 2 1/16" (72 mm).

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**EML 0002**

**Privacy, Function E**

Latch bolt by handle either side unless deadbolt is in locked position. Deadbolt by emergency release outside and thumbturn inside connected by 8 mm spindle on the square.

Lever to thumbturn center-to-center: 3 1/8" (78 mm).
European Mortise Lock Series EML
Lock Body and Functions, Strikes

**EML 0003**

Passage, Function C
Latch bolt by handle either side.

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**EML 1001**
EML Series Mortise Strike without dustbox

Entry/Privacy Functions
Standard = 1 3/16" (33 mm)

**EML 1001 99**
EML Series Extended Lip*
Mortise Strike without dustbox

* Identify lip to center (x dimension)
specify mortise strike number

**EML 1002**
EML Series Mortise Strike without dustbox
Passage Function

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All details subject to modification
Heavy Duty Lever Latch Series HLL and HLT

Latch Body and Function

Series HLL and HLT
Heavy Duty Lever Latch
Passage only

Latch
All HLL and HLT use the same Latch.

Specifications
Field reversible with adjustable bevel
(¼" over 2")

UL and C-UL Listing
File No. R 16617

Backsets
2 ⅜" (60 mm)
2 ¾" (70 mm)

Strike
Universal curved lip T-Strike with dustbox.

Faceplate width 1 ⅝" (25.4 mm) for minimum 1¾" (44.5 mm) door thickness.

HLL 7010
Passage Latch

Latch bolt by handle either side.

All details subject to modification
Heavy Duty Lever Latch Series HLL and HLT
Latch Body and Functions

Series HLL and HLT
Heavy Duty Lever Latch
Passage and Privacy

Latch
All HLL and HLT use the same Latch.

Recommended for minimum 1 ⅜" (35 mm) door thickness and maximum 2 ¼" (57 mm) door thickness.

1 ⅛" (28.5 mm) Faceplate optional.

HLL 7230
Passage Latch
Latch bolt by handle either side.

HLL 7240
Privacy Latch
Latch bolt by handle either side.
Outside handle locked by pushbutton inside. Outside handle unlocked by retracting inside handle, emergency release tool or closing the door.
Supplied with 8 mm hub as shown.
Deadbolt Series HDD/HDT
Deadbolt Body and Function

HDD/HDT 7220
Heavy Duty Privacy Deadbolt

Specifications
Full bolt extension achieved with 135° thumbturn rotation

Deadbolt
All HDD and HDT use the same deadbolt.

Backsets
2 3/4" (60 mm)
2 1/4" (70 mm)

Strike
Universal deadbolt strike with dustbox.

Faceplates
Faceplate width 1" (25.4 mm) standard
Faceplate width 1 1/8" (28.5 mm) optional

HDD/HDT 7220
Privacy Deadbolt

Deadbolt by thumbturn one side, or deadbolt by thumbturn one side and emergency release the other.

HDD 1001
Strike with dustbox for HDD 7120 (Heavy Duty Privacy Deadbolt)

All details subject to modification
Deadbolt Series KDD/KDT
Keyed Deadbolt Body and Function

KDD/KDT 7070
Keyed Deadbolt

Deadbolt
All KDD and KDT use the same deadbolt.

Backsets
2 3/8" (60 mm)
2 3/4" (70 mm)

Strike
Universal deadbolt strike with dustbox.

Faceplate width 1" (25.4 mm).

Recommended for minimum
1 1/8" (35 mm) door thickness.

KDD/KDT 7070
Keyed Deadbolt

Deadbolt by key or thumbturn either side.

Deadbolt Series KDD/KDT
Strikes

KDD 1001
Strike with dustbox for KDD 7070 (Keyed Deadbolt)
Spindles

05 0115  
FSB one sided spindle for doors drilled on one side

In choosing the correct FSB stabil-half-spindle, use the measurement of X as an aid. The measurement of X is the distance between the outer rim of the bushing of the backplates or roses and the lock follower.

<table>
<thead>
<tr>
<th>Dimension X</th>
</tr>
</thead>
<tbody>
<tr>
<td>05 0115 00810 ¾&quot; × 2½&quot; (8 × 60 mm), ¾½&quot; – 1¼&quot; (20 – 24 mm)</td>
</tr>
<tr>
<td>05 0115 00812 ¾&quot; × 2¾&quot; (8 × 65 mm), ¾½&quot; – 1¼&quot; (25 – 29 mm)</td>
</tr>
<tr>
<td>05 0115 00814 ¾&quot; × 2¾&quot; (8 × 70 mm), 1¾&quot; – 1¼½&quot; (30 – 34 mm)</td>
</tr>
<tr>
<td>05 0115 00816 ¾&quot; × 2½½&quot; (8 × 75 mm), 1¾&quot; – 1¼½&quot; (35 – 39 mm)</td>
</tr>
<tr>
<td>05 0115 00818 ¾&quot; × 3½&quot; (8 × 80 mm), 1¾½&quot; – 1¾&quot; (40 – 44 mm)</td>
</tr>
</tbody>
</table>

05 0199  
FSB ASL® half spindle

05 0199 00005 5700 ¾" × 2¾" (8 × 60 mm)

05 0599  
FSB ASL® set screw

05 0599 00073
Spindles

**05 0553 - Kit**

**FSB ASL® straight spindle**

Straight spindles available for DT (Door Thickness) up to 3¼" (95 mm) on request.

- **05 0553 10001**  9/16" × 4 1/2" (8 × 110 mm) 1 ¾"-2" DT
- **05 0553 10002**  9/16" × 5 1/2" (8 × 130 mm) 2 ¼"-2 ¾" DT
- **05 0553 10003**  9/16" × 5 5/8" (8 × 150 mm) 3"-3 ¾" DT

Kits include set screws, through bolts, through bolt caps and spindle.

**0553 10001**

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**05 0553 - Kit**

**FSB ASL® swivel spindle**

Swivel spindles available for DT (Door Thickness) up to 3¼" (95 mm) on request.

- **05 0553 20001**  9/16" × 4 1/2" (8 × 110 mm) 1 ¾"-2" DT
- **05 0553 20002**  9/16" × 5 1/2" (8 × 130 mm) 2 ¼"-2 ¾" DT
- **05 0553 20003**  9/16" × 5 5/8" (8 × 150 mm) 3"-3 ¾" DT

Kits include set screws, through bolts, through bolt caps and spindle.

**05 0553 20001**
**Spindles**

**05 0156**

FSB original straight spindle

Straight spindles available for DT (Door Thickness) up to 3 3⁄4" (95 mm) on request.

- 05 0156 00822  5⁄16" x 3 17⁄32" (8 x 90 mm)
- 05 0156 00827  5⁄16" x 4 15⁄32" (8 x 103 mm)
- 05 0156 00830  5⁄16" x 4 ½" (8 x 110 mm)
- 05 0156 00833  5⁄16" x 4 9⁄16" (8 x 117 mm)

When ordering a standard FSB lockset or latchset, provide the appropriate door thickness to get the correct spindle length. To select the appropriate spindle separately please consult the spindle charts on the next page.

**05 0157**

FSB original swivel spindle

Swivel spindles available for DT (Door Thickness) up to 3 ¼" (82 mm) on request.

- 05 0157 02824  (8 x 96 mm)  1⅞"–1 ¾" DT
- 05 0157 02830  (8 x 110 mm)  2"–2 ½" DT
- 05 0157 02838  (8 x 130 mm)  2 ¾"–3 ¼" DT

**05 0103**

FSB original half spindle

- 05 0103 00808  5⁄16" x 2 ⅞" (8 x 55 mm)
- 05 0103 00812  5⁄16" x 2 ½" (8 x 65 mm)
- 05 0103 00816  5⁄16" x 2 ⅝" (8 x 75 mm)

**05 0402**

Set screw with piercing punch

- 05 0402 00601  M6  ¼" x  5⁄8" (8.0 mm)
- 05 0402 00602  M6  ¼" x  11⁄32" (9.0 mm)
- 05 0402 00603  M6  ¼" x  13⁄32" (10.5 mm)
- 05 0402 00604  M6  ¼" x  7⁄32" (11.5 mm)

All details subject to modification.
### Fasteners

#### 05 0302

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<th>Part Number</th>
<th>Description</th>
<th>Dimensions</th>
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<tbody>
<tr>
<td>05 0302 04240</td>
<td><strong>Galvanized Steel Lens Head Tapping Screw</strong></td>
<td>$\frac{5}{16}'' \times 1\frac{1}{32}''$ (4.2 × 40 mm)</td>
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<tr>
<td>05 0302 04245</td>
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<td>$\frac{5}{16}'' \times 1\frac{3}{32}''$ (4.2 × 45 mm)</td>
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<tr>
<td>05 0302 04250</td>
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<td>$\frac{5}{16}'' \times 1\frac{1}{16}''$ (4.2 × 50 mm)</td>
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<td>05 0302 04255</td>
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<td>$\frac{5}{16}'' \times 2\frac{1}{4}''$ (4.2 × 55 mm)</td>
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<tr>
<td>05 0302 04260</td>
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<td>$\frac{5}{16}'' \times 2\frac{1}{8}''$ (4.2 × 60 mm)</td>
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<td>05 0302 04265</td>
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<td>$\frac{5}{16}'' \times 2\frac{1}{4}''$ (4.2 × 65 mm)</td>
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<td>05 0302 04270</td>
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<td>$\frac{5}{16}'' \times 2\frac{3}{4}''$ (4.2 × 70 mm)</td>
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<td>05 0302 04280</td>
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<td>$\frac{5}{16}'' \times 3\frac{1}{2}''$ (4.2 × 80 mm)</td>
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#### 05 0303

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<tbody>
<tr>
<td>05 0303 00515</td>
<td><strong>Cross recessed raised countersunk oval head bolt</strong></td>
<td>M5 $\frac{3}{16}'' \times \frac{3}{16}''$ (15 mm)</td>
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<tr>
<td>05 0303 00535</td>
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<td>M5 $\frac{3}{16}'' \times 1\frac{1}{8}''$ (35 mm)</td>
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#### 05 0308

**Cross countersunk head screws**

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<th>Description</th>
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<tbody>
<tr>
<td>05 0308 00540</td>
<td></td>
<td>M5 $\frac{3}{16}'' \times 1\frac{1}{32}''$ – $2''$</td>
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<tr>
<td>05 0308 00555</td>
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<td>M5 $\frac{3}{16}'' \times 2\frac{1}{16}''$ – $2\frac{1}{2}''$</td>
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<tr>
<td>05 0308 00560</td>
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<td>M5 $\frac{3}{16}'' \times 2\frac{3}{8}''$ – $2\frac{1}{4}''$</td>
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<tr>
<td>05 0308 00565</td>
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<td>M5 $\frac{3}{16}'' \times 2\frac{7}{16}''$ – $2\frac{1}{4}''$</td>
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<td>M5 $\frac{3}{16}'' \times 4\frac{1}{16}''$ – $4\frac{1}{2}''$</td>
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#### 05 0309

**Sex bolts with M4 $\frac{5}{16}''$ threaded sleeve nut 0309**

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<tbody>
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<td>05 0309 00435</td>
<td></td>
<td>1\frac{1}{8}'' (35 mm)</td>
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<tr>
<td>05 0309 00440</td>
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<td>1\frac{1}{4}'' (40 mm)</td>
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<tr>
<td>05 0309 00445</td>
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<td>1\frac{3}{8}'' (45 mm)</td>
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<tr>
<td>05 0309 00450</td>
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<td>1\frac{3}{16}'' (50 mm)</td>
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<tr>
<td>05 0309 00455</td>
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<td>2\frac{1}{16}'' (55 mm)</td>
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<tr>
<td>05 0309 00460</td>
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<td>2\frac{1}{2}'' (60 mm)</td>
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#### 05 0315

**Cross recessed metal screw**

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<tr>
<td>03 0315 02916</td>
<td></td>
<td>$\frac{3}{8}'' \times \frac{5}{8}''$ (2.9 × 16 mm)</td>
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<td>03 0315 03916</td>
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<td>$\frac{5}{8}'' \times \frac{5}{8}''$ (3.9 × 16 mm)</td>
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<tr>
<td>03 0315 04219</td>
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<td>$\frac{5}{8}'' \times \frac{3}{8}''$ (4.2 × 19 mm)</td>
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# Fasteners

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<tr>
<td>05 0316</td>
<td>Threaded Screw for Wood - for 61 6254, 61 6268 Pulls</td>
<td>Aluminum, Stainless Steel</td>
<td>M8 Version: 05 0316 00400, Total Length 40 mm, Length of M8 thread 15 mm</td>
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<td>05 0319</td>
<td>Dome Nut - for 61 6254, 61 6268 Pulls</td>
<td>Aluminum, Stainless Steel</td>
<td>05 0319 00800 M8, 05 0319 00800 M8</td>
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All details subject to modification.
### 03 0441

Blind rose

to blank out the lever handle hole on escutcheon plates

### 03 0450

Threaded Inserts

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<tbody>
<tr>
<td>05 0450 09147 5700</td>
<td>05 0450 09167 5700</td>
<td>2 3/4&quot; (18 mm)</td>
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<tr>
<td>05 0450 09147 5700</td>
<td>05 0450 09167 5700</td>
<td>1 1/2&quot; (26 mm)</td>
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### 03 0440

Lever handle distance rose to increase the distance between door and lever handle

#### Aluminum

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<td>03 0440 00020</td>
<td>03 0440 00025</td>
<td>2 5/8&quot; (20 mm)</td>
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<td>03 0440 00030</td>
<td>03 0440 00035</td>
<td>3 1/8&quot; (25 mm)</td>
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#### Stainless Steel

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<td>03 0440 00020</td>
<td>03 0440 00030</td>
<td>2 5/8&quot; (20 mm)</td>
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All details subject to modification
Adaptors

05 0425
Adaptor sleeve
for lever handles spindles/lock follower

05 0425 00809  5/16" on 1/2"  (8 on 9.0 mm)
05 0425 00810  3/8" on 1/2"  (8 on 10.0 mm)
05 0425 00885  5/16" on 1/4"  (8 on 8.5 mm)
05 0425 00910  1/2" on 1/2"  (9 on 10.0 mm)

05 0526
Threaded rivets for metal doors
M5 3/8" x 3/4"  (25 mm)
To be used with narrow style rose 1758.

0423 9000
Alignment tool
For proper installation of FSB roses.

0423 9001
Alignment tool
To be used with all FSB Thumbturns and Turn and Release Sets which have a 3/8" (5 mm) diamond spindle.

Proper alignment of the FSB thumbturn subrose over the hub of the mortise lock or tubular latch is critical. Misalignment of the subrose can result in deadbolt malfunction once the thumbturn is snapped in place. To avoid this issue from occurring, please use the thumbturn alignment tool for the appropriate FSB lockset or deadbolt set to mark the locations of the screws before fastening.

All details subject to modification
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