

**CATALOG A**

Terms & Conditions	A-2
Warranty Terms	A-3 to A-6
Fenestration Terminology	A-7 to A-10

**CATALOG B**

**Lift Slide Systems**

System Components	B-2 to B-5
Door Carriages & Gears	B-6 to B-8
Half Gears & Extensions	B-9 to B-10
Window Carriages & Gears	B-11 to B-15
Link Rods, Ventilation Keep	B-16
Lock Bolts, Gear Jig	B-17
Edge Pulls	B-18
PVC, Metal Panels Guides	B-19

**CATALOG C**

**Lift Slide Track, Thresholds, Gaskets, Interlocks**

Configurations, Sizes, Specs	C-2
Bottom Tracks & Guides	C-3 to C-4
FASTrack Systems	C-5 to C-7
Thresholds	C-8 to C-10
Top Tracks & Guides	C-11 to C-12
Gaskets and Weatherseals	C-13 to C-14
Interlocks	C-15 to C-16

**CATALOG D**

**Sliding Door Hardware & Tracks**

ALU Top-Hung Sliding Systems	D-3 to D-10
SST Top-Hung Sliding Systems	D-11 to D-16
Flush Pulls	D-17 to D-19
Pocket Door Pulls	D-20
Slider Door Locks	D-21 to D-25
Truth Flush Handles	D-26 to D-27
Patio Door Hardware	D-28 to D-29
Patio Door Track	D-30

**CATALOG E**

**Swing Door Hardware**

Multipoint Door Lock Overview	E-2
Unitop Multipoint Systems	E-3 to E-7
Poseidon Unitop Systems	E-8 to E-9
Sicurtop Multipoint Systems	E-10 to E-13
Poseidon Sicurtop Systems	E-14 to E-15
Latch and Deadbolt Strikes	E-16
Flush Bolts	E-17
Screw Hinges	E-18

**CATALOG F**

**Framing, Spacers & Gasketing**

Rapid Spacers	F-2 to F-3
Drip Rail	F-4
Gasketing	F-5 to F-7
Cladding Systems	F-8 to F-11
Cladding Gasketing	F-12

**CATALOG G**

**Window Locking Systems**

Tilt Turn Comparison & Components	G-2 to G-3
Tilt Turn Terminology	G-4 to G-5
AGB Tilt Turn Window Systems	G-6 to G-11
Winkhaus Tilt Turn Window Systems	G-12 to G-18
Multipoint Window Systems	G-19 to G-20
Winkhaus Casement Window Systems	G-21 to G-22
AGB Casement Window Systems	G-23 to G-24
AGB Pivot Window Systems	G-25 to G-30

**CATALOG H**

**Actuator & Control Systems**

EM, LM2 & FM Chain Actuators	H-4 to H-9
Vega & Quasar Chain Actuators	H-10 to H-16
Linear Actuators	H-17
CoreControl Series Control Panels	H-18
RQ Series Control Panels	H-19
Control Accessories	H-20 to H-21
PSP Power Supply Panels	H-22
Truth Sentry II WLS Motor	H-23
Truth Sentry II HS Motor	H-24
Truth Marvel Motor	H-25
Automation Terminology	H-26

**CATALOG I**

**Truth Hardware**

Casement & Awning Window Operators	I-2 to I-9
Casement Hinges, Track & Accessories	I-10 to I-13
Hinge Limit Devices & Friction Adjusters	I-14
Window Sash Locks and Cam Locks	I-15, I-16
Truth Window/Skylight Motors & Operators	I-17 to I-20

**CATALOG J**

**Decorative Handles & Trim**

Lift Slide Door Handles & Pulls	J-2 to J-10
Profile Cylinders	J-11 to J-15
Swing Door Handles	J-16 to J-23
Window Handles	J-24 to J-34
Window Fasteners & Stays	J-35 to J-43



### WARRANTY TERMS FOR FFI PRODUCTS

Warranty is available for most FFI products: FFI Decorative (p. A-4), FFI Stainless Steel Lift Slide (A-5), FFI tracks (A-5), AGB (A-6), Tiger (A-7), Truth (A-8), Winkhaus (A-9), FFI Controls, STG (A-10), and UCS (A-11).

FINISHES: Limits of Warranties, Recommended Maintenance

Most FFI finishes have no warranty, per industry norms. Scratches and other effects of daily use are not warranted. Proper maintenance will protect finish durability; avoid abrasive cleaners, brushes, steel wool, & chemicals to prevent surface corrosion. Clean hardware & tracks regularly with water, mild soap, & wipe dry with a soft cloth. Oil-Rubbed Bronze (ORB, BHMA code 613) is a patina of dark oxidation and oil-coating on bronze or brass. It's a variable ('living') patina that changes over time and rubs off from touching. An artificially aged patina is accelerated with oxidation chemicals such as potash sulfured. ORB is categorized by the BHMA as 'unstable', and as a finish that cannot and does not color match. FFI cannot guarantee color consistency of ORB items. FFI ORB alternatives: Painted Dark Bronze (code 690) for a dark brown, consistent color that won't rub off and change. Unfinished Brass (code 721) for natural patina over time, or for custom patina that you arrange. Stainless steel may develop minor surface rust over time, especially in coastal applications. Stainless steel is corrosion-resistant, not corrosion-proof. Recommended preventive maintenance: rub annually with coating of Boeshield T-9 or lemon oil. Use non-abrasive stainless steel cleaner to remove minor surface rust. FFI Warranty Limitations FFI will replace or repair defective products under warranty guidelines covering defects in materials and manufacturing. Not covered by warranties: damage from improper storage or installation, use outside of recommendations, unauthorized modification, normal environmental corrosion not affecting product function; nor normal wear, minor surface rust, discoloration or defects having negligible effect on product operation. FFI will not assume liability for any labor charges regarding the removal or reinstallation of products. Warranty is void if repairs are undertaken by unauthorized persons and/or without following available instructions and recommendations. Liability of Functional Fenestration Inc (FFI), Hawthorne, CA, as the seller for any defective product is limited to the replacement or credit of FFI product at original cost, and shall not include damages of any kind, whether incidental, consequential or otherwise. Any return and/or warranty claim must be made in accordance with FFI Terms and Conditions; see pages A-3. Special Order Deposit: FFI requires a 50% non-refundable deposit on Special Order items. Because most special order items can't be returned to the manufacturer, the deposit protects FFI and our clients from loss, for example if the end-user changes their mind after placing a non-returnable order. It is recommended, as a standard industry practice, that you in turn ask a 50% non-refundable deposit from your customer.

### WARRANTIES FOR FFI DESIGNED DECORATIVE HARDWARE

Manufacturing Warranty: FFI-Design handles and pulls series LS100, LS300 and LS400. FFI-Design decorative handles and pulls, series LS100, LS300 & LS400, are warranted for five (5) years from invoice date against defects in materials and manufacturing (not including finishes), under normal installation and use.

Limited PVD Finish Warranty: FFI warrants trimset handles with PVD (Physical Vapor Deposition) finish are warranted against tarnish for the life of the Product as long as the Product is owned by the original purchaser and used in the residence in which it was originally installed (proof of original purchase required)

Manufacturing Warranty: FFI cylinders series LS100. FFI cylinders are warranted for one (1) year from invoice date against defects in materials and manufacturing, under normal installation and use. Finish Warranties: FFI brass handles series LS100 and LS300, only Painted Dark Bronze (code PDB/690) and Satin Nickel (code SN/619) finishes are warranted for one (1) year from date of purchase against defects in materials or manufacturing (such as flaking or peeling) under normal installation and use. Oil-rubbed bronze and other special order, non-stock finishes are not warranted. These warranty terms are guaranteed by Functional Fenestration Inc., Hawthorne, CA.

### WARRANTY FOR FFI STAINLESS STEEL LIFT SLIDE

Products including:

FFI 304 and 430 grade stainless steel lift slide hardware, developed with and contracted-manufactured for FFI by 3G Technologies. FFI 304 and 430 grade stainless steel lift slide products are warranted for fifteen (15) years against defects in material and manufacturing from the invoice date, under normal installation and use. FFI SST system (carriages, link rods, gears and lock bolts) is designed for use together for lift slide panels; if connected to other brands of lift slide hardware warranty may be void. FFI 304 grade stainless steel products are warranted against corrosion-related product failure in all areas for fifteen (15) years. FFI 430 grade stainless steel products are warranted against corrosion-related product failure for two (2) years within 5 miles of seacoast, and for fifteen (15) years in all other areas. These warranty terms are guaranteed by 3G Technologies Co. Ltd., Seoul, Korea, specifically for 304 and 430 grade stainless steel products developed with and contract-manufactured exclusively for Functional Fenestration Inc (FFI). Liability of Functional Fenestration Inc (FFI), Hawthorne, CA, as the seller for any defective product is limited to the replacement or credit of FFI product at original cost, and shall not include damages of any kind, whether incidental, consequential or otherwise. Any claim and return must be made in accordance with FFI Terms and Conditions.

### WARRANTIES FOR FFI TRACKS AND EXTRUSIONS

All FFI tracks and extrusions--including FFI FASTrack, FFI Panel Interlock, FFI lift slide tracks, FDP patio door tracks, and ALU and SST tracks for top-hung hardware are warranted for one (1) year from invoice date against defects in materials and manufacturing, under normal installation and use. FFI stainless steel tracks--including FFI SST FASTrack and SST top-hung tracks are warranted for fifteen (15) years against corrosion-related product failure.

FFI Class I anodized aluminum and brass tracks are warranted for one (1) year against corrosion-related product failure. Surface discoloration, minor scratches or surface rust is normal and doesn't affect product function. Corrosion from direct exposure to harsh chemicals such as chlorine or chlorides (ingredients in some types of concrete) is not covered by warranty. Maintain sliding doors and tracks monthly; clean away debris and surface residue with water and mild soap; clean surface discoloration with a non-metallic pad such as Scotch-Brite.

These warranty terms are guaranteed by Functional Fenestration Inc, Hawthorne, CA.

Liability of Functional Fenestration Inc (FFI), Hawthorne, CA, as the seller for any defective product is limited to the replacement or credit of FFI product at original cost, and shall not include damages of any kind, whether incidental, consequential or otherwise. Any return and claim must be made in accordance with FFI Terms and Conditions.

### WARRANTY FOR AGB PRODUCTS

Products including: lift slide, multipoint locks, tilt turn hardware, and other AGB hardware.

Each Alban Giacomo spa (AGB) product is warranted for a period of one (1) year from invoice date against defects in materials and manufacturing, under normal installation and use. Not covered by the warranty: damage arising from improper (non-recommended) use, modification, installation or storage; nor normal wear or defects which have negligible effect on the value or operation of the product. The warranty becomes void if repairs are undertaken by unauthorized persons. Normal environmental corrosion is not covered by warranty. AGB's liability for any defective product is limited to the repair or replacement of said product at their option, and shall not include damages of any kind, whether incidental, consequential or otherwise. These warranty terms are guaranteed by Alban Giacomo spa, Vicenza, Italy.

Liability of Functional Fenestration Inc (FFI), Hawthorne, CA, as the seller for any defective product is limited to the replacement or credit of FFI product at original cost, and shall not include damages of any kind, whether incidental, consequential or otherwise. Any claim and return must be made in accordance with FFI Terms and Conditions.

### WARRANTY FOR TIGER PRODUCTS

Products including: top-hung sliding and folding door hardware, in stainless steel, steel, and aluminum.

Each Tiger product is warranted for a period of one (1) year from invoice date under normal installation and use, against defects in material and manufacturing. These Material Defect Terms are by Tiger (Hermann Francksen Nachf. GmbH & Co. KG, Bremen, Germany): The terms of the goods is determined exclusively by the technical specifications supplied. In the event of Tiger having to supply in accordance with drawings, specifications, or samples provided by a customer, the customer will assume the risk of fitness for the intended use. The condition of the goods in accordance with the contract is determined as at the time of transfer of risk in accordance with dispatch and transfer terms.

Any material defects in respect of any defect deriving from unsuitable or improper use, defective assembly or operation by the customer or third parties, normal wear and tear, defective or negligent handling, will be excluded as the consequences of unsuitable modifications or repairs undertaken by the customer or third parties without approval from Tiger. The same shall apply to defects which only reduce the value of the goods or their fitness for their intended use to an insignificant extent. Claims for material defects shall become statute-barred after 12 months. Where it is agreed that the goods are to be accepted after completion or that the initial samples are to be tested, notification of defects which could have been discovered by the customer under careful acceptance or testing of initial samples is excluded. Tiger must be given the opportunity of assessing the notified defect. The goods complained of must be returned immediately; Tiger will take over the transport costs where the notice of defect is justified. In the event of the customer failing to observe these obligations, or carrying out

modifications of the goods which are complained of without our consent, customer will lose any claims for material defects. In the event of notice of defect which is justified and made at the due and proper time, Tiger will, at their discretion, make improvements to the goods complained of or supply a replacement free of defect.

Liability of Functional Fenestration Inc (FFI), Hawthorne, CA, as the seller for any defective product is limited to the replacement or credit of FFI product at original cost, and shall not include damages of any kind, whether incidental, consequential or otherwise. Any claim and return must be made in accordance with FFI Terms and Conditions.

### WARRANTY FOR TRUTH HARDWARE

Products including: casement and awning window hardware, skylight operators, motors for windows and skylights, and patio door hardware Warranty for Window & Door Manufacturers & Authorized Distributors Truth Hardware products are warranted against defects in materials and workmanship for the life of the product\*\*, with the exception of electrical products\* which are warranted for 1 (one) year. These warranty terms are guaranteed by Truth Hardware, Owatonna, MN. Truth Hardware's warranty is expressly limited to window & door manufacturers and Truth Hardware Authorized Distributors, who purchase Truth Hardware products for the purpose of resale, or use in the ordinary course of the buyers business, and may not be assigned or transferred. This warranty does not cover normal wear or discoloration on finishes or any product which has been improperly installed, abused, misused, worn out, altered, used for a purpose other than that for which it was intended, or in a manner inconsistent with any instructions regarding its use, nor does it cover corrosion related damage.

This warranty is exclusive. Truth Hardware makes no other warranty of any kind whatsoever, expressed or implied, with respect to the products manufactured and sold by it, whether as to merchantability, fitness for a particular purpose, or any other matter. No agent, employee or representative of Truth Hardware has any authority to bind Truth Hardware to any affirmation, representation, or warranty concerning Truth Hardware products or parts, except stated herein. If any product manufactured by Truth Hardware is found to be defective by Truth Hardware, in its sole judgment, Truth Hardware will, at its option, either repair or replace such defective product. Truth's liability is limited only to the replacement value of the hardware. This remedy shall be the exclusive remedy available for any defects in the products manufactured and sold by truth Hardware or for damages resulting from any other cause whatsoever, including without limitation, Truth Hardware's negligence. Truth Hardware shall not in any event be liable to any buyer for consequential, or incidental, or punitive damages of any kind, or for the labor which may be required for the replacement of said product, whether for breach of warranty, negligence, on the basis of strict liability, or for any other reason. The purpose of this exclusive remedy shall be to provide the window/door manufacturer, or Truth Hardware Authorized Distributor, with replacement of products, or parts, manufactured by Truth Hardware found to be defective in materials or workmanship, or negligently manufactured. This exclusive remedy shall not be deemed to have failed its essential purpose so long as Truth Hardware is willing and able to repair or replace said defective products or parts in the prescribed manner.

\* Truth Hardware electrical products are warranted for one (1) year against defects in materials and workmanship.

\*\*Industry related testing has defined the typical lifetime of fenestration hardware to be 10 years.

Liability of Functional Fenestration Inc (FFI), Hawthorne, CA, as the seller for any defective product is limited to the replacement or credit of FFI product at original cost, and shall not include damages of any kind, whether incidental, consequential or otherwise. Any claim and return must be made in accordance with FFI Terms and Conditions.

### WARRANTY FOR WINKHAUS TILT TURN SYSTEMS

10 Year Warranty for Winkhaus autoPilot/activPilot fitting systems. Aug. Winkhaus GmbH & Co. KG, August-Winkhaus-Straße 31, 48291 Telgte gives a warranty of 10 years for the Winkhaus autoPilot/activPilot fitting range. Aug. Winkhaus GmbH & Co. KG guarantees no safety-relevant parts or interlinked components of the above-mentioned fitting systems will break. In case of a warranty claim, Winkhaus will replace the defective parts free of charge. No further reimbursements will be made.

This consent only applies if the fitting parts have been professionally mounted in accordance with valid mounting instructions, correctly operated according to installation instructions, and maintenance has verifiably been carried out as per maintenance instructions. Winkhaus is in a position to assume a warranty for the surface quality only if no aggressive environmental strains or cleaners work on the fittings from the outside or aggressive substances from the window material corrode the components (e. g. timber with aggressive chemical components).

Furthermore, Winkhaus General Product Information as well as the Guidelines on Product Liability must be observed. The 10 year warranty exceeding the legal warranty period is valid from the day the goods are delivered. Liability of Functional Fenestration Inc (FFI), Hawthorne, CA, as the seller for any defective product is limited to the replacement or credit of FFI product at original cost, and shall not include damages of any kind, whether incidental, consequential or otherwise. Any claim and return must be made in accordance with FFI Terms and Conditions.

### WARRANTIES FOR FFI UL CONTROL PANELS

Manufacturing Warranty: FFI UL Control Panels for use with FFI Actuator systems are warranted for three (3) years from invoice date against defects in materials and manufacturing under normal installation and use, and following all recommendations given. Recommendations for FFI Actuators & Controls: FFI only recommends UL compliant systems. FFI is a UL registered firm. Read FFI data sheets & installation guides before specifying project details. Project specifications must comply with electric & building codes—for wire gauge, wire connections and run distance, conduits, junction boxes—and must be arranged by the project electrical contractors. Do not add non-essential components or disconnect internal wires or components. Do not tamper with FFI UL Control Panels. If parts are modified, altered or added the warranty is void. These warranty terms are guaranteed by Functional Fenestration Inc., Hawthorne, CA.

### WARRANTY FOR STG ACTUATORS

Products include: motorized actuators including EM, LM and FM product families. EM Actuators are guaranteed for a period of 2 (two) years from the invoice date against defects in materials and manufacturing. EM Actuators are guaranteed for a period of 2 (two) years from the invoice date against defects in materials and manufacturing. FM Actuators are guaranteed for a period of 3 (three) years from the invoice date against defects in materials and manufacturing. Other STG products available from FFI are guaranteed for a period of 2 (two) years from the invoice date against defects in materials and manufacturing. Products must be installed and maintained according to seller recommendations, or the warranty is void. These warranty terms are guaranteed by STG Beikirch GmbH & Co. KG, Germany. If returned products are deemed defective, items will be repaired or replaced free of charge, at manufacturer's option, if found to be below STG quality standards. Liability of Functional Fenestration Inc (FFI), Hawthorne, CA, as the seller for any defective product is limited to the replacement or credit of FFI product at original cost, and shall not include damages of any kind, whether incidental, consequential or otherwise. Any claim and return must be made in accord with FFI Terms & Conditions.

### WARRANTIES FOR FFI UL CONTROL PANELS

Manufacturing Warranty: FFI UL Control Panels for use with FFI Actuator systems are warranted for three (3) years from invoice date against defects in materials and manufacturing under normal installation and use, and following all recommendations given. Recommendations for FFI Actuators & Controls: FFI only recommends UL compliant systems. FFI is a UL registered firm. Read FFI data sheets & installation guides before specifying project details. Project specifications must comply with electric & building codes—for wire gauge, wire connections and run distance, conduits, junction boxes—and must be arranged by the project electrical contractors. Do not add non-essential components or disconnect internal wires or components. Do not tamper with FFI UL Control Panels. If parts are modified, altered or added the warranty is void. These warranty terms are guaranteed by Functional Fenestration Inc., Hawthorne, CA

### WARRANTY FOR UCS (Ultraflex Control Systems)

Products include: motorized actuators & accessories including vega and Quasar product families. UCS Products are guaranteed for a period of 2 (two) years from the manufacture date, against defects in materials and manufacturing. These warranty terms are guaranteed by Ultraflex Control Systems, Italy. Alleged defective products returned, freight prepaid, within the above said term, will be repaired or replaced free of charge, at manufacturer's option, if found effectively below UCS quality standards. This guarantee does not cover other claims for direct or indirect damages. In particular, UCS declines liability and excludes guarantee (except as stated above) if improper installation or misuse results in UCS product failure. Also, the guarantee is void if UCS products are not used according to the following recommendations:

UCS Products are manufactured to the highest standards and are free from workmanship and material defects; their use assures top-level performance of the installations in which they are made operational. On the other hand, UCS cannot guarantee the function of complete installations we do not entirely manufacture; but we can give recommendations, which in some countries may already have been passed into law. a) The installation and/or equipment, and in particular the products sold by UCS, should be accessible to qualified people only, preventing unwilling or willful manipulation and tampering by third parties. b) Installations and/or equipment using UCS products must be carried out by qualified companies, i.e. licensed electricians, following provided installation and maintenance instructions. c) Installation and/or equipment must be carefully tested after installation and checked every twelve months or according to existing local laws. Testing and maintenance must be done by qualified persons.

This guarantee does not cover UCS products if installed with non-original UCS components or used with accessories such as control panels, power supplies, switches or brackets not recommended by UCS. Liability of Functional Fenestration Inc (FFI), Hawthorne, CA, as the seller for any defective product is limited to the replacement or credit of FFI product at original cost, and shall not include damages of any kind, whether incidental, consequential or otherwise. Any claim and return must be made in accord with FFI Terms & Conditions.

## FENESTRATION TERMINOLOGY

**ASTRAGAL** - A strip of wood attached to an inactive door, sealing the gap between a French door pair.

**AWNING WINDOW** - Window sash hinged at the top that swings out from the bottom.

**BACKSET** - Distance from the centerline of a knob or lever hub, keyhole or cylinder to the lock face on a door's edge.

**BARN DOORS** - Doorsthat slide on top-hung track (with a bottom guide)

**BAY WINDOW** - A set of windows that project outward; with a large center unit and two side units usually at 30 or 45 degree angles.

**BI-FOLD DOORS** - see folding doors

**BI-PARTING DOORS** - Two doors that slide apart and meet together in the middle, sliding on one track

**BI-PASSING DOORS** - Two doors that slide past each other on 2 parallel tracks

**BOTTOM RAIL** - Bottom horizontal member of a window sash or door.

**BUTT HINGE** - Hinge that is mortised into a door's edge and door frame.

**CASEMENT WINDOW** - Window hinged on the side that swings in or out like a door.

**CHECK RAILS** - Meeting rails where lock is mounted a double-hung window (bottom rail on top sash and top rail on low sash).

**CLADDING** - Metal (often brass or aluminum) attached to the exterior of a wood sash, to provide ease of maintenance.

**CLERESTORY WINDOWS** - Windows placed up high, along the top of a wall

**CREMONE** - A bolt lock, surface-mounted on a door face (instead of on the door edge as with other locks).

**CUT SHEET** - A manufacturer's complete list of specifications (parts, components, sizes, etc) used as a manufacturing guide to make a specified product. Because FFI is not a door, window or skylight manufacturer, we cannot provide complete cut sheets; FFI can provide detailed hardware lists for manufacturers to use to complete their cutsheets. Clients are responsible for verifying FFI hardware will meet their size, weight and other specifications.

**DEADBOLT** - A throwbolt that adds extra security to exterior doors; usually specified for 1 inch in United States.

**DK HANDLE** - European-style window handle with 3-way movement to operate a tilt-and-turn or window multipoint window lock. DK is short for the German "Dreh-Kipp" (turn-tilt).

**DORMER** - A window projecting out perpendicular to a sloping roof.

**DOUBLE-HUNG WINDOW** - Window with two operable sashes that move up and down in the frame.

**DRAINAGE CHANNEL** - Extrusion for a window sill that allows water drainage.

**DRIP RAIL** - Extrusion that attaches to a window sill to keep water out.

**DUMMY** - An inactive knob or lever, that doesn't operate a latch or lock. Used as a pull, or just for aesthetic purposes.

**EDGE** - A The side of a door stile; a sliding door leads by its edge.

**EGRESS** - Exit; window or door that allows exit in an emergency.

**ESCUTCHEON** - A back-plate plate for a handle, lever, pull or knob; with function holes for spindles or key or thumbturn cylinders

**ESPAÑOLETTE** - A casement window lock with multiple locking points.

**EURO CYLINDER** - A locking mechanism activated by a key or thumbturn; a universal lock style in Europe.

**EUROGROOVE** - A 16mm groove cut in the edge of a door or window stile to accept a European style multipoint lock.

**EXTRUSION** - A material (brass, aluminum, plastic, etc.) that is heated and pushed through a die to produce a track, component or profile used to make doors or windows.

**FENESTRATION** - An architectural term for the arrangement of openings in a building: windows, doors, skylights, and other operable or glazed openings. From the Latin word for window: "Fenestra".

**FIXED** - Non-operable (non-opening) door or window.

**FLUSH DOOR** - A door with a flat face that is aligned straight with the door jamb when it is closed.

**FOB** - Free On Board (FOB) is a standard shipping term for when the shipper (seller) takes responsibility for transport costs to get the shipment "on board" to a chosen freight carrier (ship, truck or plane). After it is "on board", the shippee (buyer) assumes responsibility for shipping costs from that point.

**FOLLOWER** - A lock follower is a lock spindle hub.

**FOLDING DOORS** - Doors with two or more hinged panels that fold away to the jamb; a.k.a. "bi-folding" or "multi-folding".

**FOREND** - Faceplate for a lock.

**FRAME** - A three- or four- sided structure around a door or window that consists of head, sill, jamb, and mullion.

**FRENCH DOORS** - A pair of hinged doors that meet and open at the middle.

**GEAR-DRIVEN LOCK** - A European multipoint door lock that's activated by turning a cylinder instead of by lifting a door lever.

**GASKETING** - Rubber or plastic material to seal a door or window.

**GLAZING** - noun: the glass in a window or door; verb: the process of installing glass in a sash.

**GLIDER** - A horizontal sliding window, or slider.

**HANDING** - Some handles/levers are left-handed or right-handed, when the design differs when facing each direction. To determine handing, look at the sash from the outside; if hinges are on the left, you need a left-handed version, if hinged on right, you need right-handed.

## FENESTRATION TERMINOLOGY

**HANDING** - Some handles/levers are left-handed or right-handed, when the design differs when facing each direction. To determine handing, look at the sash from the outside; if hinges are on the left, you need a left-handed version, if hinged on right, you need right-handed.

**HEAD/HEADER** - A beam or member installed horizontally across the top rough opening of a window or door. A.k.a. lintel.

**HOLLOW-CORE DOOR** - Flush door with two skins or door faces separated by stiles and rails on the perimeter and hollow on the interior.

**HOPPER** - A window sash hinged on the bottom, that swings in from the top to open.

**INACTIVE DOOR** - The less-used door in a French door pair, without a lock.

**JALOUSIE** - Window with horizontal louvers that tilt out to open.

**JAMB** - Main vertical frame pieces at the sides of a window or door.

**JAMB DEPTH** - Width of a window or door frame from interior to exterior.

**JIG** - A tool in woodworking or metalworking that helps control the location or motion of a tool, for installation of hardware. Some jigs are also called templates or guides.

**KD (KNOCKED-DOWN)** - Doors and/or hardware that are milled and prepped for assembly, and shipped unassembled to a jobsite or mill as a 'knocked-down' kit.

**LEVER-DRIVEN LOCK** - A multipoint door lock that is activated by lifting a lever.

**LIFT SLIDE (OR LIFT & SLIDE)** - Sliding door system designed for multiple large panels of up to 880 pounds and/or 10' by 10' each.

**LIGHT OR LIGHT** - A pane of glass in a window.

**LINTEL** - See head.

**LOCK FACE** - A lock faceplate or forend; visible after installation.

**LOW PROFILE** - A term describing a component that doesn't project very far out from the sash or frame; low profile sill track is desirable because people are less likely to trip over it; low profile handles and locks are more compatible with curtains.

**MORTISE (OR MORTICE) LOCK** - A quality door lock popular in older American homes and in Europe; has long, elegant face plate on the door's edge. Gaining new popularity in America due to improvements in installation technologies.

**MULLION** - A vertical framing member dividing two lights of glass.

**MULTIPOINT LOCK** - A locking system securing a window or door at two or more locking points.

**MUNTIN** - A strip (wood, metal, pvc) dividing panes of glass in a sash.

**OIL-RUBBED BRONZE (US 10-B)** - A patina on bronze or brass, of oxidation chemicals and oil, to add a dark brown color by artificial aging.

**OPERABLE** - Doors and windows that open for ventilation or egress.

**PANEL** - Door component mounted within the stile and rail frame.

**PASSAGE LATCH** - Passage hardware has a knob or lever with a latch and no lock; for interior use such as a hall, closet or kitchen door.

**PATENT CYLINDER** - A locking mechanism activated by a key or thumbturn; a universal lock style in Europe.

**POCKET DOOR** - Door that slides away into a pocket in a wall.

**PRE-HUNG DOORS** - Doors hinged and installed in the jamb at a factory.

**PRIVACY LOCK** - Keyless lock operated by a thumb-turn knob; for interior use such as bath or bedrooms. Usually includes an emergency egress/exit function to unlock door from outside. Also called a WC lock.

**PROFILE CYLINDER** - Cylinder used to activate a mortise or multipoint lock with a key and/or thumbturn knob.

**PROJECTED WINDOW** - A casement, awning or hopper window, opening on hinges or pivots.

**PROUD** - Refers to the measurement of how far a window or door handle projects (sticks out) from the sash. A large handle is very proud; a low-profile handle is not very proud.

**PZ/PZW** - A lock function that uses European style profile cylinders.

**RAIL** - Horizontal frame pieces at the top and bottom of a door.

**ROOF WINDOW** - An operable unit similar to a skylight, placed in the surface of a sloping roof.

**ROTO OPERATOR** - A 'rotary'-type window operator has a handle that rotates to open or close a casement or awning window.

**SASH** - An operable window leaf or door panel, consisting of stiles and rails assembled into a frame to hold glass.

**SASH BALANCE** - A concealed iron weight used to counter-balance the sash of older double-hung windows.

**SASH LIFT** - A handle on the inside bottom rail of the lowersash of a single or double hung window.

**SCREW HINGE** - Hinge for doors or windows, used widely in Europe, which doesn't need mortising (unlike butt hinges).

**SIDELITES** - Tall, narrow glazed units adjacent to an entry door. Can be fixed or operable (for ventilation).

**SILL** - Main horizontal frame piece on the bottom of a window or door; also an accessory attached to deflect water.

**SINGLE-HUNG WINDOW** - Similar to a double-hung window, except that the bottom sash is operable and the top is fixed.

**SKIN** - A single piece of material used as the face of a door.

**SOLID CORE DOOR** - Flush door filled with solid material inside the door skins.

## FENESTRATION TERMINOLOGY

**SPECIFIED** - Listed in an architectural specification. Any types of doors, windows, hardware, wood, etc. directed to be used in an architectural project. FFI doesn't specify hardware; we do provide details and part numbers to help customers and architects specify as they choose.

**SPINDLE** - A spindle is the center post inserted through a lock.

**SPINDLE HUB** - Center opening in a lock that the spindle goes through.

**STILE** - Main vertical frame pieces at the sides of a sash or door.

**STILE AND RAIL DOOR** - Wood door made with vertical stiles and horizontal rails; openings are filled with wood panels or glass.

**STRIKE** - Component attached or recessed into a frame or inactive door, which catches a locking device such as a shootbolt, latch or deadbolt. Also called a keep.

**STRUCTURAL MEMBER** - A load-bearing framing piece, or header, usually of wood or steel.

**THERMAL BREAK** - A notch in a threshold that creates a temperature break between indoors and outdoors, to keep the cold out.

**THUMBTURN** - A turn knob or turn piece that activates a lock.

**TILT WINDOW** - Single or double hung window with a sash that tilts inward to allow easy cleaning.

**TBT (Tilt Before Turn) WINDOW** - European style tilt-and-turn windows have a 3-function handle: Turn the handle 90°, the sash tilts, turn the handle 180°, the sash turns. Sash opens like an inswing casement; turn the handle down to lock & seal the sash.

**TILT TURN WINDOW** - European style tilt-and-turn windows have a 3-function handle: Turn the handle 90°, the sash turns, turn the handle 180°, the sash tilts. Sash opens like an inswing casement; turn the handle down to lock & seal the sash.

**TRIM** - Decorative door or window hardware such as handles, escutcheons, roses or strikes.

**TRANSOM** - A small window above a door or above another window.

**US 10-B** - Code for a popular chemical finish; see Oil-rubbed bronze.

**WEATHERSTRIPPING** - Material used to seal the openings or gaps of operable windows and doors, preventing air & water infiltration.

**WATER CLOSET HARDWARE** - Privacy hardware with a built-in keylesslock operated by a thumb-turn knob; for interior use such as a bath or bedroom. Includes emergency egress function.