

# FFI TILT TURN SYSTEMS

## with concealed hinges



Functional Fenestration Inc (FFI) is the new exclusive North American source for select Winkhaus products. Winkhaus is based in Germany and has more than 150 years experience in producing locking hardware.

### Winkhaus activPilot Elegance Tilt Turn concealed hinge system

#### Applications ■

- Rectangular, in-swing Tilt Turn windows.
- Single or double French pair.
- Sash types: wood/fiberglass system is in stock; vinyl/pvc system coming soon.
- Sash rebate sizes: width 14-1/2 to 55 inches (370 to 1400 mm), height 18 to 90-1/2 inches (460 to 2300 mm).
- Maximum sash size: 2 square meters (21.5 square feet).
- Maximum sash weight: up to 220 lbs (100 kg).
- Can be used with roll-down screens.
- Concealed-hinge windows are suitable for historic building renovations.



Tilt

#### Benefits ■

- Tilt Turn fulfills green building goals for natural ventilation, energy savings, and daylight.
- One handle operation: tilts in as a hopper window; turns in as a casement window.
- 'Tilt' hopper window function provides highly efficient air flow for natural ventilation.
- 'Turn' casement window function allows easy cleaning and emergency egress.
- High strength, security and warp-prevention from multipoint locking on all 4 sides.
- Airtight and weather-sealed with continuous gasketing on all 4 sides.
- R-5 window requirements are fulfilled for thicker sashes and heavier grade hardware.
- Fully-hidden hinges give a clean appearance.
- Easy, manual adjustment of locking cams due to octagonal shape (unique to Winkhaus).



Turn

#### Features ■

- Backset is 15.5 mm.
- Lock spindle hub: for 7 mm square spindle.
- Strikes: 12 mm air gap, surface-mounted strikes.
- Tested for corrosion-resistance to Grade 4 (of 5) EN 1670 standard.
- Anti-mishandling device included.
- Casement function opens to 90 degrees.
- Compatible with Alpine PROSET tooling from Rangate.
- 10-Year Winkhaus Warranty against manufacturing defects.



Contact FFI Customer Service for product details and ordering info: **800-677-0228** or [service@fenestration.net](mailto:service@fenestration.net)

## Options for activPilot Elegance Tilt Turn systems

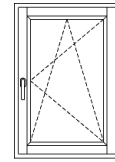
Before ordering, see FFI Elegance Tilt Turn Calculator and FFI Elegance Tilt Turn Product Catalog for details:

**Window units**

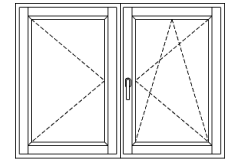
**Quantity** of windows for order

**Window type**

**Single Sash, or Double (French) Sash**  
(for double sashes, one sash will tilt, and both will turn in as casements)



Single Sash



Double (French) Sash

**Tilt function**

**Turn before Tilt** (tilts when handle is turned up), or  
**Tilt before Turn** (tilts when handle is turned sideways)



**Keep/Strike type**

**Standard** (SBA, non-handed, for 1 screw), or  
**Security** (SBS, handed, for 2 screws)



Standard Keep



Security Keep

**Sash handing**

Hinges on **Left side**, or  
Hinges on **Right side**  
(from interior view)

Hinges  
Left side



Hinges  
Right side

**Jig for hinges**

(optional)



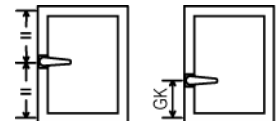
**Jig for strikes**

(optional)



**Handle position**

**Central** (centered in sash), or **Fixed/Constant**  
(variable handle height by special request, please inquire)  
window handle heights are usually 550 mm or less



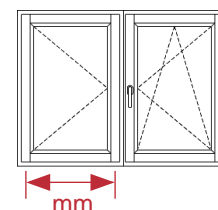
**Sash Rebate Width (SRW)**

Choose within 481 – 1400 mm range



**Turn sash rebate width**

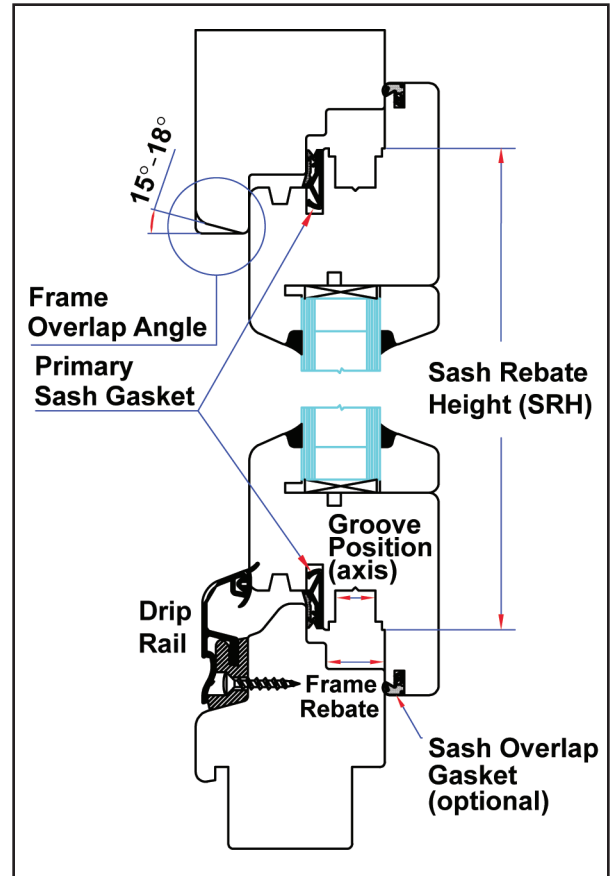
For Double (French) Sashes, specify width of the 'turn-only' sash in 420 –1400 mm range (if different from the 'tilt turn' sash)



## Options continued...

See Diagram (to the right)  
for the below terms

- Frame overlap angle** Flat (no angle), or 15 degree to 18 degree **angled** (to choose flat or angled drip rail end caps)
- Sash Weatherseal** Gasketing in brown, black or white – **Primary sash gasket** in 5mm standard (4mm by request) and **Sash overlap gasket** (optional)
- Sash Rebate Height (SRH)** Choose within 460 – 2300 mm range (with HH = Constant/fixed handle height)
- Groove position/ Frame rebate** **9 mm groove/18 mm rebate** (for sash thickness 54 – 68mm), or **13 mm groove/24 mm rebate** (for sash thickness 68 – 92mm)
- Drip rail** Aluminum, in dark brown, silver or white (with compatible gasket and clips)



- DK handle options** FFI has a choice of styles and finishes (see page 4)



• Ask for the **FFI Elegance Tilt Turn calculator** to create parts lists and quotes •

FFI's Winkhaus Tilt Turn systems are compatible with Alpine PROSET tooling from Rangate ([www.rangate.com](http://www.rangate.com))

For clean cutting of multipoint hardware, FFI has machines available:

- Multi Max Power Cutting Machine** - punch press (#BSD.WSH.GL2), Foot Control (BSD.WSH.FC), Scale Slider (BSD.WSH.S+S).
- Manual Punch Cutting Machine** (# 4908).











**Learning how to make tilt turn windows** - **Alpine Technical Workshops** are multi-day classes in the production of European solid-wood windows & doors, especially tilt turn windows and lift slide doors. Organized through a partnership between Cascade Woodwork, Rangate Tooling, Martin Woodworking Machinery, and Functional Fenestration Inc, classes are held in Colorado and offer a wealth of product information, guidance with tooling, and access to a unique woodworking community. Visit [www.alpineworkshops.com](http://www.alpineworkshops.com) or call 888.810.2522 for information.

## Compatible DK Window Handles

- Tilt turn requires handles with DK 3-click movement and 7 mm square spindles •

**FFI stock DK handles** – see catalog for more by special order:

	<b>DK handles</b>	<b>material</b>	<b>stock finishes</b>
	<b>Alba</b>	brass	satin chrome only
	<b>Basic</b>	nylon	white
	<b>Botticelli</b>	brass	PVD dark bronze, satin chrome, bright brass
	<b>Ellisse</b>	brass	oil-rubbed bronze, satin nickel
	<b>Mercury</b>	brass	double chrome only (right-hand version shown, for windows with hinges on right side)
	<b>Ottawa</b>	stainless steel	satin
	<b>Sirius</b>	brass	PVD dark bronze only
	<b>Volo</b>	brass	PVD dark bronze, satin steel (right-hand version shown, for windows with hinges on right side)

Quality Architectural Hardware for Doors, Windows & Skylights  
Excellent Service...Every Time



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