

**STRENGTH & PERFORMANCE:**

Designed for narrow awning windows, Truth's 15 Series Ellipse Single Arm Awning Operator brings with it all of the style and performance characteristics of the Ellipse family of operators.

To help make the transition to this new system easier, the Ellipse Single Arm Awning Operator works with all of Truth's current Awning Hinges.

MANUFACTURING BENEFITS:

Manufacturers will appreciate the similarities in design of this new operator, in that the Ellipse Single Arm Awning Operator conforms to the same frame preparation, and screw hole pattern that the other Ellipse Operators use. The operator will be shipped with the arm in an "open" position, so it can be inserted through the cut-out for easy mounting.

STYLE: Incorporating the same cover as other Ellipse Operators, allows the homeowner to have a similar "family" appearance throughout the home. The cover, along with the new Contour™ Handle, has been streamlined to minimize interference with window treatments, such as mini-blinds and drapery.

SEALABLE CASE: A special "lip" around the operators' case will accept a gasket, which will help the window achieve a higher air and water performance rating, while at the same time eliminate the need for slow, messy and often expensive caulking during the installation process.

PRODUCT APPLICATION

ASSISTANCE: If you are designing a new window profile, or are having difficulty selecting hardware for your window, please contact Truth. Our highly trained Technical Service Staff can assist you with the selection of the appropriate hardware to meet your performance requirements, as well as providing personalized application drawings.

LOGO OPTIONS: Have you considered *personalizing* your window with your company name or logo? All of Truth's operator handles are capable of accepting your own "signature". Contact Truth for further details.

WARRANTY: Protected under the terms of the "Truth Warranty for Window & Door Manufacturers & Authorized Distributors". Refer to Truth's Terms



& Conditions for further details.

MATERIAL: High-pressure die-cast zinc cover, crank handle and knob. Hardened steel drive worm and gear. Stainless steel track and plastic pivot slides.

CORROSION RESISTANCE:

Truth's E-Gard® Hardware has a multi-stage coating process that produces a superior physical and aesthetic finish. Plus, it is resistant to a wider range of corrosive materials, including industrial cleaning materials and environmental pollutants. This proprietary process has been tested to be approximately three times better than common zinc plated finishes.

DECORATIVE FINISH:

Electrostatically applied, durable coatings that provide excellent resistance to chipping, scratching and corrosion while maintaining color stability for years in direct sunlight. Please refer to Truth's Color Chart for examples of Truth's most popular finish options. Truth also offers a wide range of decorative "plated" finishes - contact Truth for additional information on availability of these finishes on specific product lines.

ORDERING INFORMATION:

1. Specify operator model number (see table in Fig. 3 for options)
2. Specify Ellipse style housing
3. Specify finish number.
4. Select mounting hardware (sold separately):
#11454.XX - Contour™ Handle - shown above (painted) or
#11329.XX - Folding Handle

- #30169 - Stainless Steel Track
- #21504 - Ellipse Gasket (optional)
- #21494 - Gasket Applicator (optional)
- #21306 - Protective red plastic spline cap.

RECOMMENDED SCREWS:

Types of screws required determined by material of profile used. Refer to drawings for complete information on screw type and quantity needed (sold separately). For additional information regarding screw selection - see Truth Tips and Tech Note #11.

TRUTH TIPS:

1. The Ellipse Single Arm Awning Operator can be used with all Truth 13 & 34 Series Awning Hinges. To insure maximum operator efficiency and avoid sash chatter, it is important that the hinge and sash height be properly matched. For more complete information on proper hinge sizing and how to overcome corner pull-in problems, see Truth Tech Note #2.
2. Due to the larger opening provided by this awning operator, binding can be experienced on narrower sash heights. Windows with sash heights less than 16 inches may need to use a Limit Stop. Please contact Truth for availability of this stop device.

3. Operator position becomes more important as window size increases. With operator in closed position, center the end of the arm on the sash for optimum pull-in performance.
4. When selecting mounting screws for Truth hardware, coating compatibility is one of the most important criteria. For best corrosion resistance the coating on the screws should be the same as the coating on the hardware. For more information see Tech Note #11.
5. For accurate hardware placement, pre-drilling of the screw holes in the window profile is recommended.
6. For vinyl window applications, mounting screws should pass through two PVC walls, or one PVC wall and one insert wall. For this reason, it may be necessary to use a longer screw than is recommended.
7. For metal window profiles Truth recommends machine screws. However, in most applications, sheet metal screws will provide adequate holding power.
8. Truth recommends that Sash Locks be used on all awning windows. Sash Locks will provide security and a tighter weatherseal to the window.
9. A Truth Spline Cap (#21306) is available to protect the operator spline from dirt and damage during shipping, window installation, and final building construction.
10. Adding Truth Snubbers to the top rail on an awning window may increase the negative air pressure rating of the window.

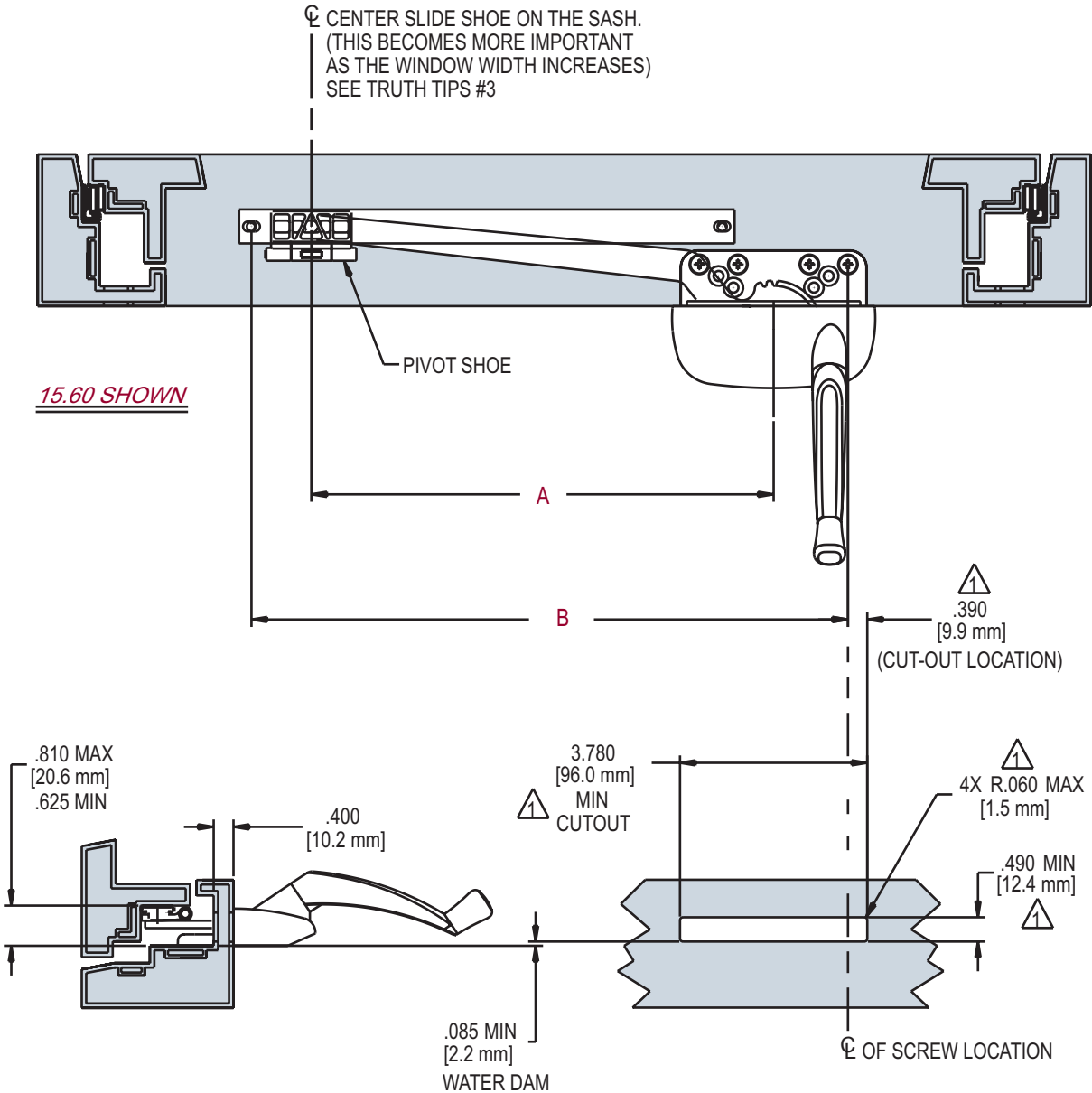
**INCLUDE TRUTH SPECS ON
YOUR NEXT WINDOW PROJECT**

Window operators shall be provided which allow easy adjustment of the window's open position. The mechanism should be crank operated and provide a continuous range of open positions.

Window operators will be of single arm and track/pivot slide design driven by hand crank. The operator must be constructed of E-Gard® coated components. High-pressure die-cast zinc cover, crank handle and knob. Hardened steel drive worm and gear. Stainless steel track and plastic pivot slides.

Window Operators shall be 15 series Ellipse Single Arm Awning Operator as manufactured by Truth Hardware, Owatonna, MN.

FIG. 1 ELLIPSE SINGLE ARM AWNING OPERATOR APPLICATION

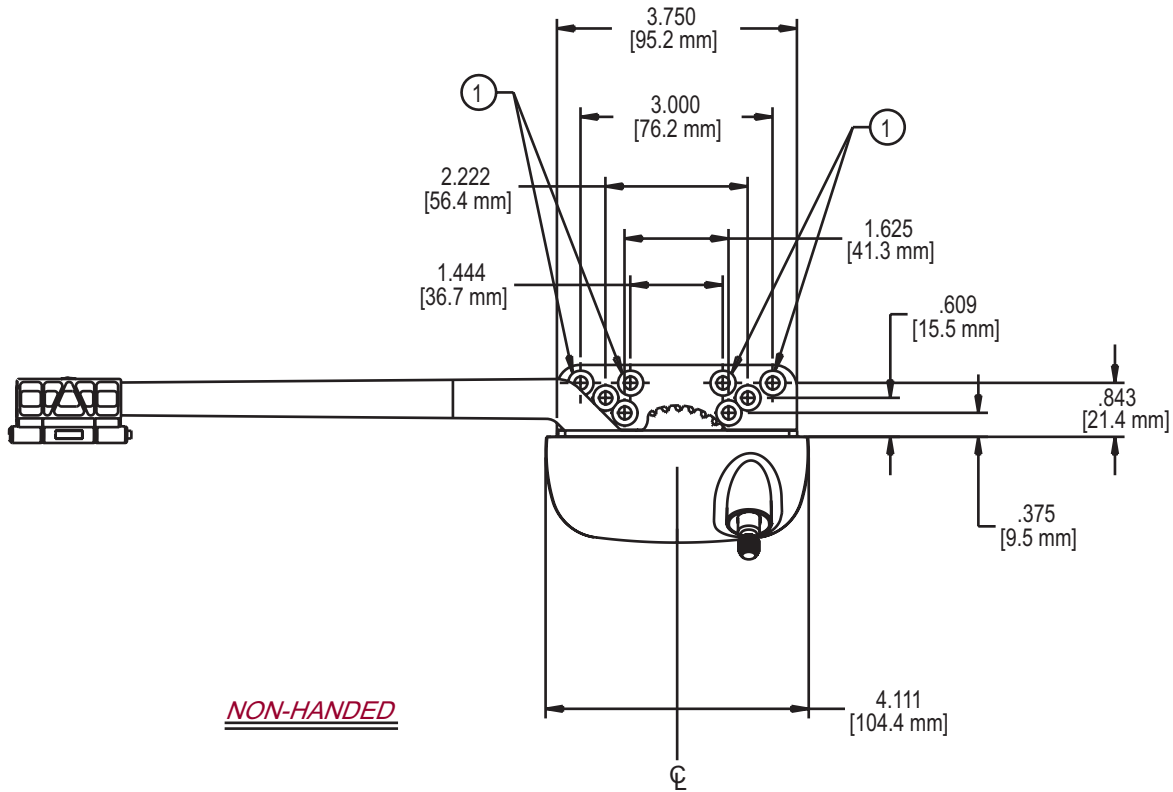


AVAILABLE OPERATOR	AVAILABLE TRACK	A	B
15.71	30169	13.50 (342.9mm)	16.039 (407.4mm)
15.60	30169	9.500 (241.3mm)	12.039 (305.8mm)

NOTE:
 ⚠ HOLD THESE DIMENSIONS AS CLOSE TO MINIMUM AS POSSIBLE FOR PROPER GASKET FIT

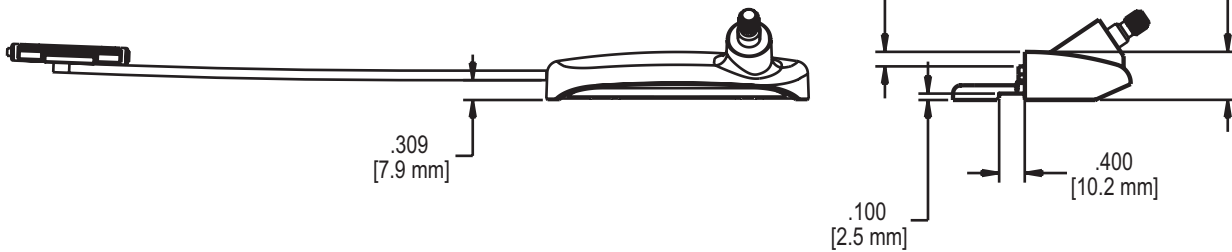
15 ELLIPSE SINGLE ARM AWNING OPERATOR

FIG. 2 ELLIPSE SINGLE ARM AWNING OPERATOR



NON-HANDED

① PREFERRED MOUNTING HOLES
(PVC/ALUMINUM)

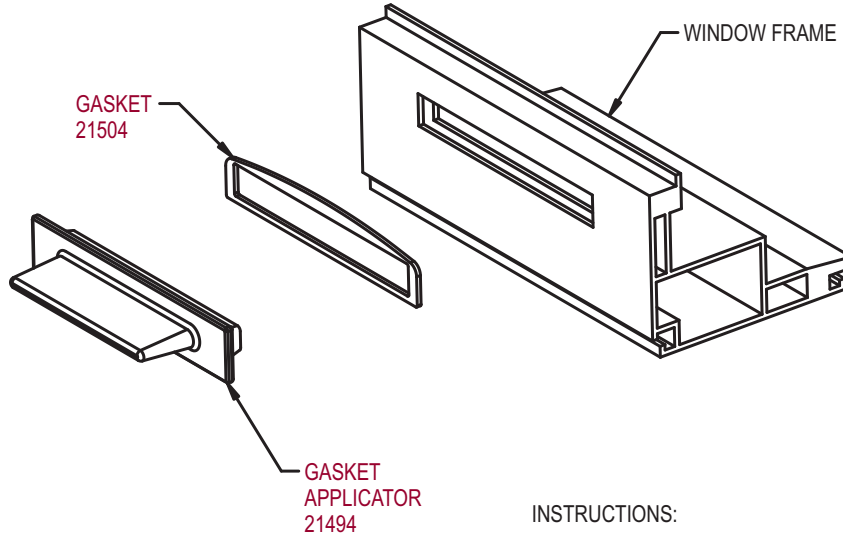


RECOMMENDED SCREWS:

WOOD: (QTY 4) (P/N 19380.92) #10 X 1.0 PHILLIPS
FLAT HEAD, SHEET METAL SCREWS

PVC & METAL: (QTY 4) - #10 PHILLIPS, FLAT HEAD
SCREWS (LENGTH AND THREAD TYPE
TO BE DETERMINED BY PROFILE)

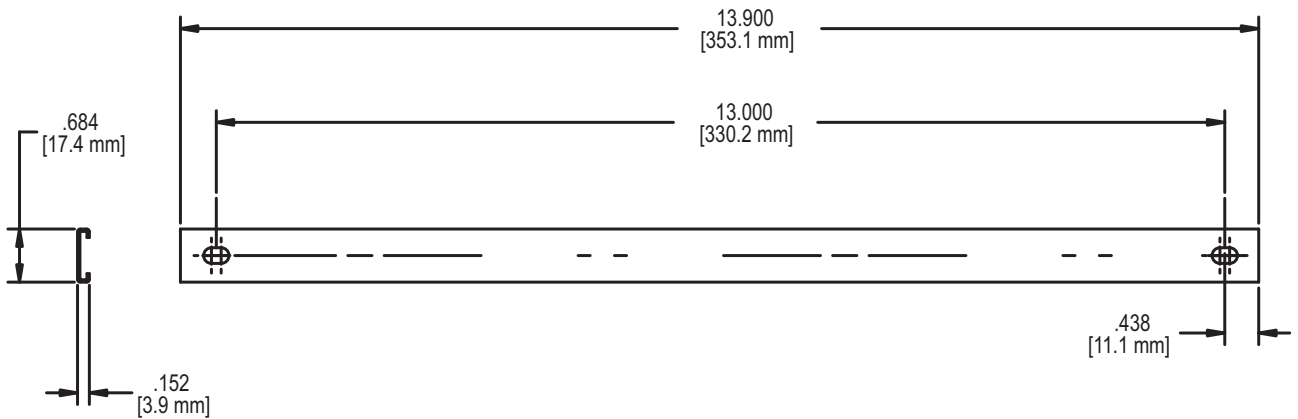
FIG. 3 GASKET APPLICATION FOR ELLIPSE SINGLE ARM OPERATOR



INSTRUCTIONS:

1. PLACE GASKET ONTO APPLICATOR WITH STICKY SIDE OUT
2. PRESS APPLICATOR INTO FRAME CUT-OUT TO SECURE GASKET

FIG. 4 SINGLE ARM AWNING OPERATOR TRACK 30169



RECOMMENDED SCREWS:

PVC & METAL: (QTY 2) #10 PHILLIPS, PAN HEAD SCREWS
(LENGTH AND THREAD TYPE DETERMINED BY PROFILE)



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