New to Truth's family of EntryGard® Operators is our Single Arm Model. This product combines all the functional advantages of Truth's Standard Single Arm Operator with the aesthetic features of our popular EntryGard model. Recommended for use on narrow windows, or for round-top and trapezoid windows that use a Butt Hinge.

VERSATILE: The roto gear casement operator arm can be easily disconnected from the sash to aid in cleaning and installation. When properly mounted, this operator will provide a full 90° of window opening. For smooth operation, a nylon roller located on the end of the arm, glides easily along the track.

STYLISH & ECONOMIC:
To tie this product in with the EntryGard family, Truth has designed this Single Arm Operator to accept the standard operator cover. The cover, available in a variety of colors, has a flange which acts as an escutcheon. This will result in lower costs in the making of the sill covers since the cut around the operator can be less exacting.

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 Product Specialists 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? The EntryGard Single Arm Operator provides a unique area in which to feature your company's name and/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 and Door Manufacturers and Authorized Distributors. Refer to Truth's Terms and Conditions for further details.

(Inset photo) ***EntryGard with new 11454 Contour Handle & 11553 Contour Cover***

MATERIAL: High-pressure die-cast zinc base, crank handle, and knob. Hardened steel worm and gear. High-strength plastic cover.

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.

CORROSION PROTECTION:
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.

For the severe conditions associated with coastal areas, Truth has developed certain product lines utilizing either **CoastGard® Hardware**, or stainless steel hardware. See Tech Note #7 for further information about corrosion protection and these special hardware options

ORDERING INFORMATION:
1. Choose operator style desired:
#15.94 - Single Arm Operator.

2. Specify right- or left-hand (determined by the side the hinge is on when viewed from the outside).

3. Specify operator track number.
#30706.XX Track - 3-hole.

4. Order mounting hardware (sold separately).
#11454 - Contour Handle (painted) or
#10579 - Roto Gear Operator Handle - shown above (painted). **Optional handle and cover style**, such as Truth's *Folding Handle*, are also available.
#10341 - Operator cover (specify finish number).
#21306 - Protective red plastic spline cap (optional).

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. Operator handing is determined by the hinge side when viewed from the outside.

2. When used in high rise applications of over two stories, Truth recommends using a Truth Limit Device.

3. A Spline Cap (#21306) is available to protect the operator splines from dirt and other windows from damage during shipping, installation, and final building construction.

4. Truth recommends that a Truth Snubber be used at the center of the hinge side on any casement window which has a tendency to bow outward at the center in the closed position. Adding a Snubber may increase the negative air pressure rating of a casement window.

5. Sash weight should be limited to 40 lbs. to insure ease of operation for the lifetime of the window. When used on a sash weighing over 40 lbs., operating torque will noticeably increase and operator life will be reduced.

6. For accurate hardware placement in vinyl or metal applications, pre-drilling of the window profile is recommended.

7. 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.

8. For metal window profiles, Truth recommends machine screws. However, in most applications, sheet metal screws will provide adequate holding power.

9. 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.

10. This operator may be mounted closer to the lock side of the window to effectively limit opening and improve corner pull-in performance.

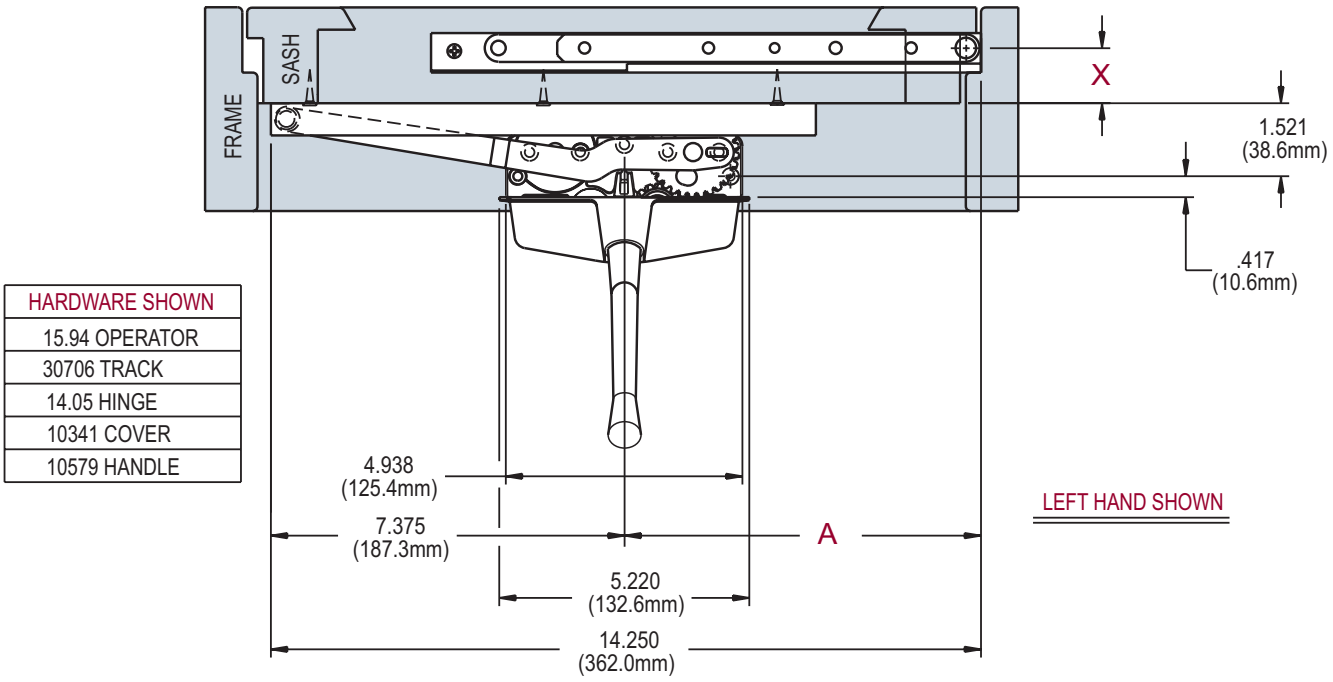
INCLUDE TRUTH SPECS ON YOUR NEXT WINDOW PROJECT

Window operators shall be provided which allow easy adjustment of window position. The mechanism should be crank operated and provide smooth operation of egress or butt hinges. Connection to the movable sash must be easily detachable for window cleaning and maintenance. Removable EntryGard® interior cover will allow matching hardware styling as well as easier finishing of frame and sill.

Window operators will be of single push arm design driven by a hand crank. The operator must be constructed of E-Gard® components, hardened steel worm and gearing and high pressure zinc alloy die castings. High-strength plastic trim cover.

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

FIG. 1 APPLICATION OF TRUTH ENTRYGARD SINGLE ARM OPERATOR



HARDWARE SHOWN
15.94 OPERATOR
30706 TRACK
14.05 HINGE
10341 COVER
10579 HANDLE

APPROXIMATE MINIMUM SASH WIDTH WITH 14.05 HINGE

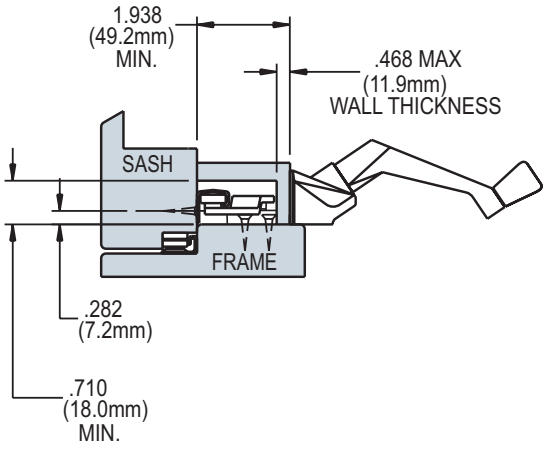


TABLE OF APPLICATION
FOR 90° SASH OPENING

AVAILABLE HINGES	Y HINGE CONSTANT
*14.02	7.997 (203.1mm)
14.05	7.008 (178.0mm)
14.06	7.655 (194.4mm)
14.75	6.947 (176.5mm)
14.76	7.575 (192.4mm)
14.77	4.318 (109.7mm)
*14.80	6.947 (176.5mm)
*14.91	7.575 (192.4mm)
*14.93	4.068 (103.3mm)
14.96	6.986 (177.4mm)

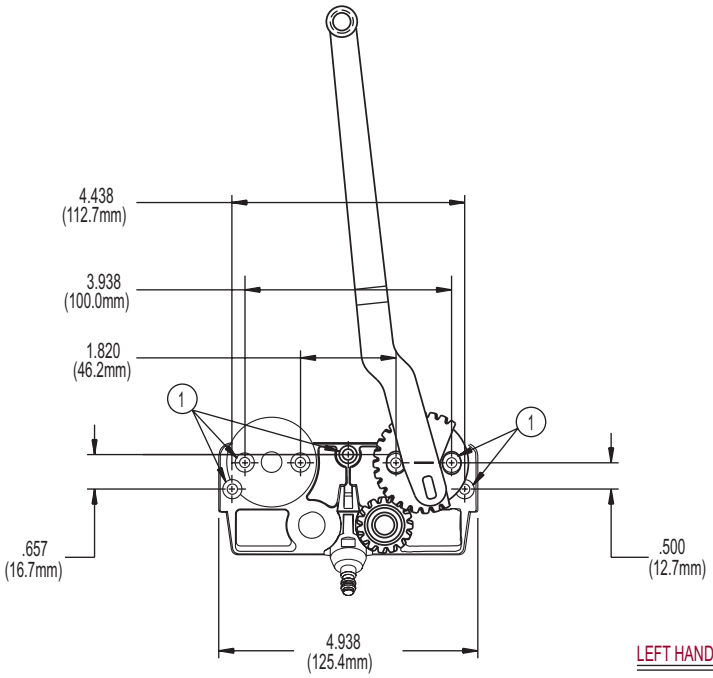
* STAINLESS STEEL HINGES

NOTE:
1. TO DETERMINE THE A DIMENSION FOR OPERATOR PLACEMENT ADD SASH DIMENSION X TO HINGE CONSTANT Y. (A=X+Y)

2. MINIMIZE THE X DIMENSION FOR BEST OPERATOR PERFORMANCE. THE RECOMMENDED RANGE FOR DIMENSION X IS .250 TO 1.00.

3. OPERATOR CUT OUT SIZE: 5.0 (127.0mm) X .750 (19.1mm)

FIG. 2 TRUTH ENTRYGARD SINGLE ARM OPERATOR



LEFT HAND SHOWN

RECOMMENDED SCREWS:

OPERATOR:

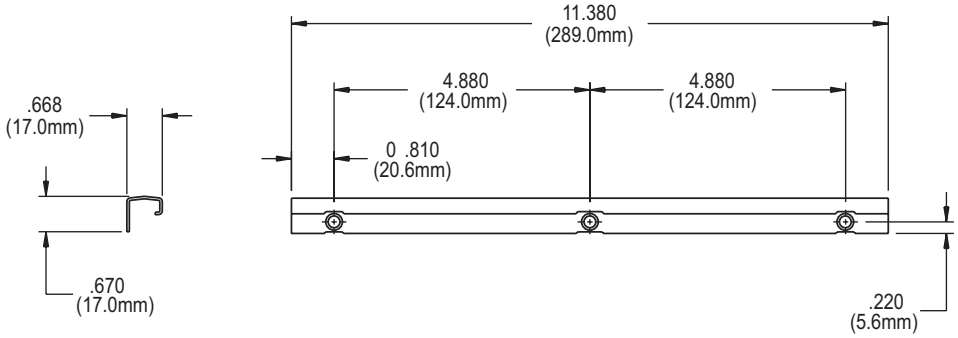
WOOD: 5 (P/N 19240.XX) #8 X 1.0 PHILLIPS,
FLAT HEAD, SHEET METAL SCREWS

PVC & METAL: 5 - #8 PHILLIPS, FLAT HEAD SCREWS
(LENGTH AND THREAD TYPE DETERMINED
BY PROFILE)

NOTE:
(1) PREFERRED MOUNTING HOLES

AVAILABLE OPERATORS
15.94

FIG. 3 SINGLE ARM OPERATOR TRACK 30706



RECOMMENDED SCREWS:

WOOD: 3 (P/N 19140.XX) #7 X .875 PHILLIPS,
FLAT HEAD, SHEET METAL SCREWS

PVC & METAL: 3 - #7 PHILLIPS, FLAT HEAD SCREWS
(LENGTH AND THREAD TYPE DETERMINED BY PROFILE)