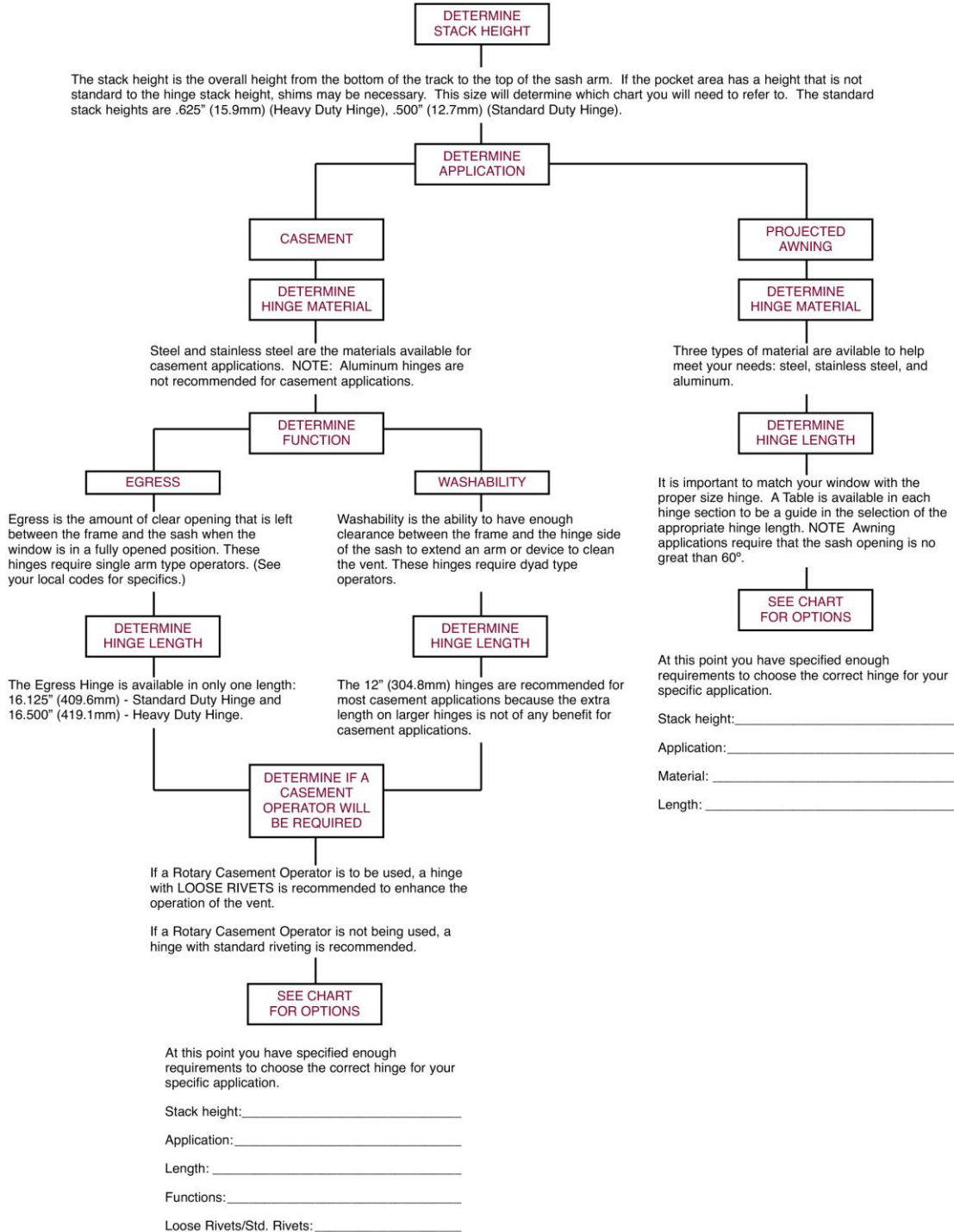


4-BAR HINGES

GUIDE TO 4-BAR HINGE SELECTION

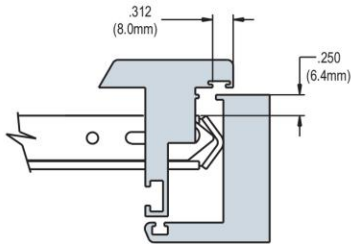


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4-BAR HINGES

TRUTH TIPS:

1. Placement of a 4-Bar Hinge relative to the outside edge of the frame depends on the amount of overlap of the sash on the frame. As a general rule the hinge should be mounted flush to .250" (6.3 mm) of the outside edge of the frame. This dimension depends on the amount of overlap. A .250" (6.3 mm) dimension will allow proper clearance for a window system having approximately .312" (7.9 mm) of sash overlap. If interference occurs between the sash and frame then the hinge must be moved further outboard on the frame or the overlap must be reduced.



2. Particular attention must be given to 4-Bar Hinge mounting. It is important that the ventilator bar be offset to a point where it is flush with the outside edge of the track. This results in an offset between the screw centerlines of the ventilator bar and hinge track. (See the application drawing of the particular hinge.)

3. Ultimate sash weight & width for hinges as shown in the charts of this document are based on AAMA 904.1 "Specification for Multi-Bar Hinges in window Applications". The load carrying capacity is based on the vent height being at least twice the vent width. These numbers do not apply to windows being tested to ANSI/AMMAD/WDMA 101/I.S. 2/NAFS-02 "Casement Hardware Load Test".

4. To increase the overall hinge height of 4-Bar Hinges, aluminum shims applicable to the ventilator bar are available in various thicknesses. Truth provides some popular sizes of shims, however, other sizes must be provided by the window manufacturer.

5. Sash sag is a problem which affects many casement windows. 4 bar hinges tend to be more susceptible to sash sag

than standard 2 bar hinges because they cantilever the sash outside of the frame, supporting the entire sash weight on the support arms. While 2 bar hinges are supported inside of the window frame so they transfer the sash weight back into the window. To minimize sash sag, Truth Hardware recommends utilizing the measures outlined in Truth Tech Note #3.

6. For casement applications, where a Rotary Casement Operator is used, Truth recommends a hinge with loose rivets.

7. Aluminum hinges are NOT recommended for casement applications.

8. For proper balancing, Truth recommends a hinge with no greater than 60° of opening in projected and awning applications.

9. Special considerations should be given when designing an awning window. Please consult Truth Tech Note #2 for further information.

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

11. Mounting screws must pass through two PVC walls or one PVC wall and one insert wall.

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

13. Hinge life can be prolonged by periodically adding a drop of lightweight oil at each riveted joint.

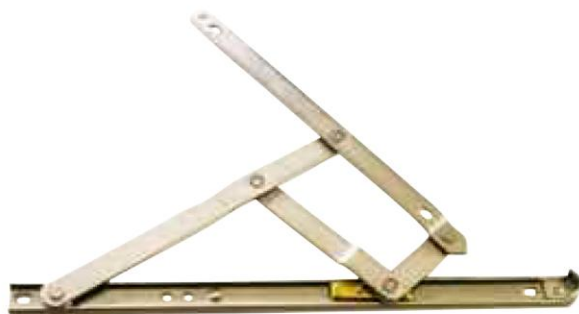
14. For easy correction of out of square, or racked window installations, the use of Truth Jamb Jack III frame adjusters is recommended. Frame adjustment can improve both weather seal tightness and sash operation over the life of the window.

For More Information, Call 1 (719) 531-0961, or e-mail Info@WeFixItUSA.com



CASEMENT
AWNING

STANDARD & HEAVY DUTY 4-BAR HINGES (201 - 301 Series)



These “non-handed” 4-Bar Hinges are specially designed for casement, awning, and projected vents with a lip on the outside edge. 4-Bar Hinges are designed to project the sash out as it pivots to avoid interference between a lipped vent and frame. In awning and projected window applications, friction adjustment is achieved by adjusting the screw which is located in the sliding shoe. Adjustments made to this screw affect shoe friction as it slides along the hinge track.

Standard Duty 4-Bar Hinges are generally used for residential projects requiring relatively light window sections (projected units up to 40 lbs.). These hinges are normally provided with a stop built into its track — and is generally used with awning and projected windows. Hinges designed without the stop feature will open to approximately 65° in casement applications.

Heavy Duty 4-Bar Hinges are generally used for commercial projects requiring relatively heavy window sections (projected units up to 200 lbs.).

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.

MATERIAL:

Standard & Heavy Duty Stainless Steel 4-Bar Hinges: Non-magnetic stainless steel. Manufactured with a brass shoe.

Standard & Heavy Duty Steel 4-Bar Hinges: Steel parts are zinc plated with yellow dichromate dip for added protection against corrosion. Manufactured with a brass shoe.

ORDERING INFORMATION:

1. Choose correct hinge size and style by part number. (Reference the 4-Bar Hinge Part Number Guide for the available options).
2. Order two hinges per window.

RECOMMENDED SCREWS:

Stainless Steel 4-Bar Hinges:

6 – #10 Phillips Pan head stainless steel screws. Length and thread type to be determined by profile design.

Steel 4-Bar Hinges: 6 – #10 Phillips Pan head screws. Length and thread type to be determined by profile design. See Truth Tips for additional screw selection information.

INCLUDE TRUTH SPECS ON YOUR NEXT WINDOW PROJECT

4-bar type window hinge for casement or awning windows, which projects the vent while opening to avoid interference between frame and sash.

Window hinges to be of 4-bar type design, utilizing a screw adjusted slide shoe to fine tune hinge to window application. Hinges shall be non-handed and constructed of high quality stamped and roll formed materials. Hinges used must be certified to AAMA 904.1 specifications.

Window hinges shall be 201/301 series 4-bar, as manufactured by Truth Hardware.-

For More Information, Call 1 (719) 531-0961, or e-mail Info@WeFixItUSA.com

**STANDARD DUTY
4-BAR HINGE**
(201SS - 201ST Series)

FIG. 1 TRUTH STANDARD DUTY 4-BAR HINGE
(ANDERBERG 201SS-201ST SERIES)

STANDARD DUTY 4-BAR HINGE PART NUMBER GUIDE

MAT'L	HINGE CALL OUT & (ACTUAL LENGTH)		PART NUMBER	STD. STOP	NO STOP
SST	8"	8.18" [207.8 mm]	34.10.00	.101	.104
STL			34.17.00	.102	
SST	10"	10.18" [258.6 mm]	34.11.00	.102	.101
STL			34.18.00	.100	
SST	12"	12.18" [309.4 mm]	34.12.00	.100	.101
STL			34.19.00	.104	
SST	14"	14.18" [360.2 mm]	34.13.00	.102	.101
STL			34.20.00	.100	
SST	16"	16.18" [410.9 mm]	34.14.00	.100	.101
STL			34.21.00	.102	
SST	18"	18.18" [461.8 mm]	34.15.00	.102	
STL					
SST	20"	20.18" [512.6 mm]	34.16.00	.100	.101
STL			34.23.00	.102	

PART NUMBERING SYSTEM

Product No.	Model	Finish	Assembly
34	10	00	101
4-Bar Hinge	Standard Duty 10" Length	No Decorative Finish	W/ Stop Std. Open (Hinge Feature)

Notes:

1. *SPECIAL NOTE* A properly counterbalanced sash is recommended in an awning operation. An unbalanced sash when used with an awning operator is likely to produce sash chatter and an uneven feel during operation.
2. For additional recommendations regarding 4-Bar Hinges, please refer to the Truth Tips section and the Tech Notes section at the end of the catalog.
3. Unless otherwise specified all 201 series hinges have a brass shoe.
4. The standard stack height of a Standard Duty Hinge is .500 (12.7mm). If a shim or washer is used the stack height will increase by the shim or washer thickness.
5. Ultimate sash weight & width for hinges as shown in charts are based on AAMA 904.1 "Specification for Multi-Bar Hinges in Window Applications". These numbers do not apply to windows being tested to ANSI/AMMA/WDMA 101/LS 2/NAFS-02 "Casement Hardware Load Test".

For More Information, Call 1 (719) 531-0961, or e-mail Info@WeFixItUSA.com

**STANDARD DUTY
4-BAR HINGE
(201SS - 201ST Series)**

**FIG. 2 TRUTH STANDARD DUTY 4-BAR HINGE
(ANDERBERG 201SS-201ST SERIES)**

4-BAR HINGE APPLICATION TABLE FOR PROJECTED & AWNING HINGES (As certified to AAMA 904.1)							
Hinge Call Out & (Actual Length)		*Counterbalanced		**Ultimate (see note #2)		Degrees of opening	
		Sash/Vent Height Range	Max Sash Vent Weight	Sash/Vent Height Range	Max Sash Vent Weight	Std. Stop	No Stop
8"	(8.18") [207.8 mm]	9"-16" [229-406 mm]	19 lbs [8.6 kg]	9"-16" [229-406 mm]	19 lbs [8.6 kg]	55°	65°
10"	(10.18") [258.6 mm]	16"-20" [406-508 mm]	23 lbs [10.4 kg]	16"-20" [406-508 mm]	23 lbs [10.4 kg]	55°	65°
12"	(12.18") [309.4 mm]	20"-24" [508-610 mm]	28 lbs [12.7 kg]	20"-24" [508-610 mm]	28 lbs [12.7 kg]	55°	65°
14"	(14.18") [360.2 mm]	23"-28" [584-711 mm]	33 lbs [15.0 kg]	23"-28" [584-711 mm]	33 lbs [15.0 kg]	55°	65°
16"	(16.18") [410.9 mm]	28"-34" [711-864 mm]	40 lbs [18.1 kg]	28"-34" [711-864 mm]	40 lbs [18.1 kg]	55°	65°
18"	(18.18") [461.8 mm]	28"-34" [711-864 mm]	40 lbs [18.1 kg]	28"-34" [711-864 mm]	40 lbs [18.1 kg]	55°	65°
20"	(20.18") [512.6 mm]	32"-34" [813-864 mm]	40 lbs [18.1 kg]	32" Wide *** [813 mm]	47 lbs *** [213.2 kg]	55°	65°

Definitions:

*Counterbalanced: A pair of hinges will balance or hold open the vent/sash with no added friction at the heights and weights listed in the chart.

**Ultimate: A pair of hinges will not balance or hold open the vent/sash without added friction at the heights and weights listed in the chart.

***Not AAMA certified.

Notes:

1. A properly counterbalanced sash is recommended in an awning operation. An unbalanced sash when used with an awning operator is likely to produce sash chatter and an uneven feel during operation.

2. Ultimate sash weight & width for hinges as shown in chart are based on AAMA 904.1 "Specification for Multi-Bar Hinges in Window Applications". These numbers do not apply to windows being tested to ANSI/AMMA/WDMA 101/LS 2/NAFS-02 "Casement Hardware Load Test".

For More Information, Call 1 (719) 531-0961, or e-mail Info@WeFixItUSA.com

**STANDARD DUTY
4-BAR HINGE
(201SS - 201ST Series)**

**FIG. 2 TRUTH STANDARD DUTY 4-BAR HINGE
(ANDERBERG 201SS-201ST SERIES)**

4-BAR HINGE APPLICATION TABLE FOR PROJECTED & AWNING HINGES (As certified to AAMA 904.1)							
Hinge Call Out & (Actual Length)		*Counterbalanced		**Ultimate (see note #2)		Degrees of opening	
		Sash/Vent Height Range	Max Sash Vent Weight	Sash/Vent Height Range	Max Sash Vent Weight	Std. Stop	No Stop
8"	(8.18") [207.8 mm]	9"-16" [229-406 mm]	19 lbs [8.6 kg]	9"-16" [229-406 mm]	19 lbs [8.6 kg]	55°	65°
10"	(10.18") [258.6 mm]	16"-20" [406-508 mm]	23 lbs [10.4 kg]	16"-20" [406-508 mm]	23 lbs [10.4 kg]	55°	65°
12"	(12.18") [309.4 mm]	20"-24" [508-610 mm]	28 lbs [12.7 kg]	20"-24" [508-610 mm]	28 lbs [12.7 kg]	55°	65°
14"	(14.18") [360.2 mm]	23"-28" [584-711 mm]	33 lbs [15.0 kg]	23"-28" [584-711 mm]	33 lbs [15.0 kg]	55°	65°
16"	(16.18") [410.9 mm]	28"-34" [711-864 mm]	40 lbs [18.1 kg]	28"-34" [711-864 mm]	40 lbs [18.1 kg]	55°	65°
18"	(18.18") [461.8 mm]	28"-34" [711-864 mm]	40 lbs [18.1 kg]	28"-34" [711-864 mm]	40 lbs [18.1 kg]	55°	65°
20"	(20.18") [512.6 mm]	32"-34" [813-864 mm]	40 lbs [18.1 kg]	32" Wide *** [813 mm]	47 lbs *** [213.2 kg]	55°	65°

Definitions:

*Counterbalanced: A pair of hinges will balance or hold open the vent/sash with no added friction at the heights and weights listed in the chart.

**Ultimate: A pair of hinges will not balance or hold open the vent/sash without added friction at the heights and weights listed in the chart.

***Not AAMA certified.

Notes:

1. A properly counterbalanced sash is recommended in an awning operation. An unbalanced sash when used with an awning operator is likely to produce sash chatter and an uneven feel during operation.

2. Ultimate sash weight & width for hinges as shown in chart are based on AAMA 904.1 "Specification for Multi-Bar Hinges in Window Applications". These numbers do not apply to windows being tested to ANSI/AMMA/WDMA 101/LS 2/NAFS-02 "Casement Hardware Load Test".

For More Information, Call 1 (719) 531-0961, or e-mail Info@WeFixItUSA.com

**STANDARD DUTY
4-BAR HINGE**
(201SS - 201ST Series)

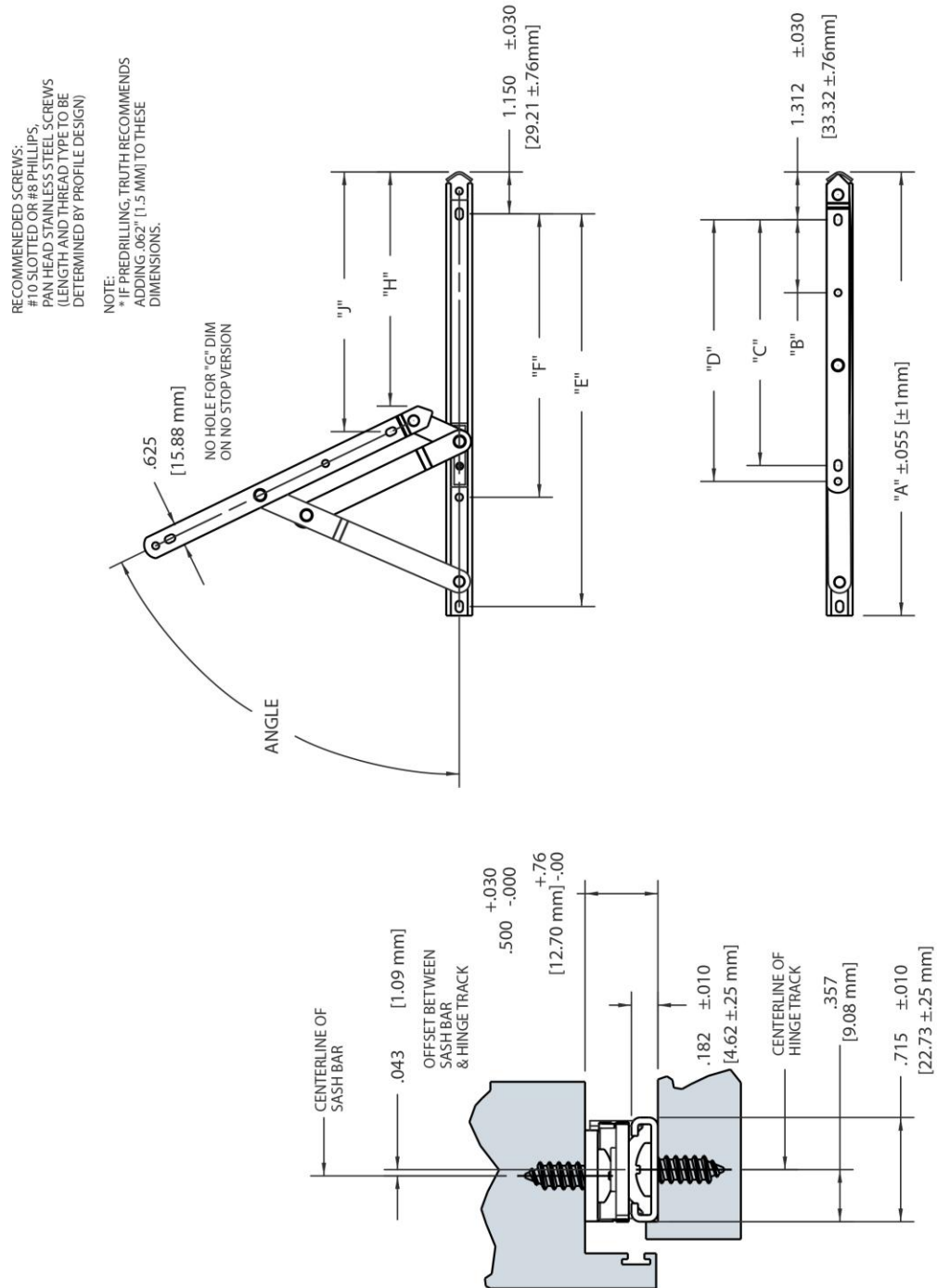
FIG. 4 TRUTH STANDARD DUTY 4-BAR HINGE W/STOP
(ANDERBERG 201SS-201ST SERIES)

HINGE CALL OUT	HINGE PART NUMBER	"A" DIM HINGE LENGTH	"B" DIM	"C" DIM	"D" DIM	"E" DIM	"F" DIM	"G" DIM	"H" DIM	"J" DIM	APPROX. ANGLE OF OPENING	NUMBER OF SCREWS
8"	34.10.00.XXX 34.17.00.XXX	8.18" [207.8 mm]	NA	4.75" [120.7 mm]	5.19" [131.8 mm]	6.78" [172.2 mm]	5.59" [142.0 mm]	5.16" [131.1 mm]	3.19" [81.0 mm]	4.000" [101.6 mm]	55°	7
10"	34.11.00.XXX 34.18.00.XXX	10.18" [258.6 mm]	2.00" [50.8 mm]	5.75" [146.1 mm]	6.19" [157.3 mm]	8.78" [223.0 mm]	6.47" [164.3 mm]	6.03" [153.2 mm]	4.06" [103.1 mm]	4.87" [123.7 mm]	55°	8
12"	34.12.00.XXX 34.19.00.XXX	12.18" [309.4 mm]	2.00" [50.8 mm]	6.75" [171.5 mm]	7.19" [182.6 mm]	10.78" [273.8 mm]	7.34" [186.4 mm]	6.91" [175.5 mm]	4.94" [125.5 mm]	5.74" [145.8 mm]	55°	8
14"	34.13.00.XXX 34.20.00.XXX	14.18" [360.2 mm]	2.00" [50.8 mm]	7.75" [196.9 mm]	8.19" [208.0 mm]	12.78" [324.6 mm]	8.20" [208.3 mm]	7.76" [197.1 mm]	5.73" [146.8 mm]	6.59" [167.4 mm]	55°	8
16"	34.14.00.XXX 34.21.00.XXX	16.18" [410.9 mm]	2.00" [50.8 mm]	8.75" [222.3 mm]	9.19" [233.4 mm]	14.78" [375.4 mm]	9.09" [230.9 mm]	8.66" [219.9 mm]	6.67" [169.4 mm]	7.08" [179.8 mm]	55°	8
18"	34.15.00.XXX	18.18" [461.8 mm]	2.00" [50.8 mm]	9.75" [247.7 mm]	10.19" [258.8 mm]	16.78" [426.2 mm]	9.97" [253.2 mm]	9.53" [242.1 mm]	7.55" [191.8 mm]	8.35" [212.1 mm]	55°	8
20"	34.16.00.XXX 34.23.00.XXX	20.18" [512.6 mm]	2.00" [50.8 mm]	10.75" [273.1 mm]	11.19" [284.2 mm]	18.78" [477.0 mm]	10.844" [275.3 mm]	10.41" [264.4 mm]	8.43" [214.1 mm]	9.24" [234.7 mm]	55°	8

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STANDARD DUTY 4-BAR HINGE (201SS - 201ST Series)

FIG. 5 TRUTH STANDARD DUTY 4-BAR HINGE W/O STOP
(ANDERBERG 201SS-201ST SERIES)



For More Information, Call 1 (719) 531-0961, or e-mail Info@WeFixItUSA.com

**STANDARD DUTY
4-BAR HINGE**
(201SS - 201ST Series)

FIG. 6 TRUTH STANDARD DUTY 4-BAR HINGE W/O STOP
(ANDERBERG 201SS-201ST SERIES)

HINGE CALL OUT	HINGE PART NUMBER	"A" DIM HINGE LENGTH	"B" DIM	"C" DIM	"D" DIM	"E" DIM	"F" DIM	"G" DIM	"H" DIM	"J" DIM	APPROX. ANGLE OF OPENING	NUMBER OF SCREWS
8"	34.10.00.XXX 34.17.00.XXX	8.18" [207.8 mm]	NA	4.75" [120.7 mm]	5.19" [131.8 mm]	6.78" [172.2 mm]	5.53" [140.5 mm]	NA	4.35" [110.5 mm]	5.05" [128.3 mm]	65°	6
10"	34.11.00.XXX 34.18.00.XXX	10.18" [258.6 mm]	2.00" [50.8 mm]	5.75" [146.1 mm]	6.19" [157.3 mm]	8.78" [223.0 mm]	6.78" [172.2 mm]	NA	5.46" [138.7 mm]	6.15" [156.2 mm]	65°	7
12"	34.12.00.XXX 34.19.00.XXX	12.18" [309.4 mm]	2.00" [50.8 mm]	6.75" [171.5 mm]	7.19" [182.6 mm]	10.78" [273.8 mm]	7.78" [197.6 mm]	NA	6.43" [163.3 mm]	7.13" [181.1 mm]	65°	7
14"	34.13.00.XXX 34.20.00.XXX	14.18" [360.2 mm]	2.00" [50.8 mm]	7.75" [196.9 mm]	8.19" [208.0 mm]	12.78" [324.6 mm]	9.03" [229.4 mm]	NA	7.74" [196.6 mm]	8.43" [214.1 mm]	65°	7
16"	34.14.00.XXX 34.21.00.XXX	16.18" [410.9 mm]	2.00" [50.8 mm]	8.75" [222.4 mm]	9.19" [233.4 mm]	14.78" [375.4 mm]	10.28" [261.1 mm]	NA	8.93" [226.8 mm]	9.62" [244.4 mm]	65°	7
20"	34.16.00.XXX 34.23.00.XXX	20.18" [512.6 mm]	2.00" [50.8 mm]	10.75" [273.1 mm]	11.19" [284.2 mm]	18.78" [477.0 mm]	12.53" [318.3 mm]	NA	11.20" [284.5 mm]	11.89" [302.0 mm]	65°	7

For More Information, Call 1 (719) 531-0961, or e-mail Info@WeFixItUSA.com

HEAVY DUTY 4-BAR HINGE (301SS - 301ST Series)

FIG. 7 TRUTH HEAVY DUTY 4-BAR HINGE
(ANDERBERG 301SS-301ST SERIES)

HEAVY DUTY 4-BAR HINGE PART NUMBER GUIDE

MAT'L	HINGE CALLOUT & (ACTUAL LENGTH)		PART NUMBER	STD. STOP	NO STOP	STD. STOP LOOSE RIVETS	NO STOP LOOSE RIVETS
SST	10"	(10.50") [266.7mm]	34.24.00	.208	.210		.211
STL			34.33.00	.208			
SST	12"	(12.50") [317.5mm]	34.25.00	.208	.210	.201	.211
STL			34.34.00	.208			
SST	14"	(14.50") [368.3mm]	34.26.00	.208	.210		
STL			34.35.00	.208			
SST	16"	(16.50") [419.1mm]	34.27.00	.208	.210	.201	.211
STL			34.36.00	.208			
SST	18"	(18.50") [469.9mm]	34.28.00	.208	.210		
STL			34.37.00	.208			
SST	20"	(20.50") [520.7mm]	34.29.00	.208	.210		
STL			34.38.00	.208			
SST	24"	(24.50") [622.3mm]	34.31.00	.208	.210		
STL			34.39.00	.208			
SST	28"	(28.50") [723.9mm]	34.86.00	.208			
STL							

PART NUMBERING SYSTEM

Product No.	Model	Finish	Assembly
34	24	00	208
4-Bar Hinge	Heavy Duty 10" Length	No Decorative Finish	W/ Stop Std. Open (Hinge Feature)

Notes:

1. *SPECIAL NOTE* A properly counterbalanced sash is recommended in an awning operation. An unbalanced sash when used with an awning operator is likely to produce sash chatter and an uneven feel during operation.
2. For additional recommendations regarding 4-Bar Hinges, please refer to the Truth Tips section and the Tech Notes section at the end of the catalog.
3. Unless otherwise specified all 301 series hinges have a brass shoe.
4. The standard stack height of a Heavy Duty Hinge is .625 (15.9mm). If a shim or washer is used the stack height will increase by the shim or washer thickness.
5. For a casement (side hung) application where operators are used, loose rivets are recommended to reduce friction. The 301 hinges are designed to work with dyad style operators only.
6. Ultimate sash weight & width for hinges as shown in charts are based on AAMA 904.1 "Specification for Multi-Bar Hinges in Window Applications". These numbers do not apply to windows being tested to ANSI/AMMA/WDMA 101/LS 2/NAFS-02 "Casement Hardware Load Test".

For More Information, Call 1 (719) 531-0961, or e-mail Info@WeFixItUSA.com

**HEAVY DUTY
4-BAR HINGE
(301SS - 301ST Series)**

**FIG. 8 TRUTH HEAVY DUTY 4-BAR HINGE
(ANDERBERG 301SS-301ST SERIES)**

4-BAR HINGE APPLICATION TABLE FOR PROJECTED & AWNING HINGES (As certified to AAMA 904.1)							
Hinge Call Out & (Actual Length)		*Counterbalanced		**Ultimate (see note #2)		Degrees of opening	
		Sash/Vent Height Range	Max Sash Vent Weight	Sash/Vent Height Range	Max Sash Vent Weight	Std. Stop	No Stop
10"	(10.50") [266.7mm]	12"-20" [305-508 mm]	58 lbs [26.3 kg]	12"-20" [305-508 mm]	58 lbs [26.3 kg]	58°	65°
12"	(12.50") [317.5mm]	20"-25" [508-635 mm]	73 lbs [33.1 kg]	20"-25" [508-635 mm]	73 lbs [33.1 kg]	52°	65°
14"	(14.50") [368.3mm]	23"-30" [584-762 mm]	86 lbs [39.0 kg]	23"-30" [584-762 mm]	86 lbs [39.0 kg]	49°	65°
16"	(16.50") [419.1mm]	25"-34" [635-864 mm]	99 lbs [44.9 kg]	25"-40" [635-1016 mm]	99 lbs [44.9 kg]	49°	65°
18"	(18.50") [469.9mm]	32"-37" [813-940 mm]	108 lbs [49.0 kg]	32"-40" [813-1143 mm]	108 lbs [49.0 kg]	49°	65°
20"	(20.50") [520.7mm]	34"-40" [864-1016 mm]	117 lbs [53.1 kg]	34"-50" [864-1270 mm]	117 lbs [53.1 kg]	49°	65°
24"	(24.50") [622.3mm]	40"-44" [1016-1118 mm]	129 lbs [58.5 kg]	40"-60" [1016-1524 mm]	129 lbs [58.5 kg]	45°	77°
28"	(28.50") [723.9mm]	50"-64" [1270-1626 mm]	175 lbs [79.4 kg]	50"-80" [1270-2032 mm]	234 lbs [106.1 kg]	40°	NA

4-BAR HINGE APPLICATION TABLE FOR CASEMENT (SIDE HUNG) HINGES (As certified to AAMA 904.1)					
Hinge Call Out & (Actual Length)		Ultimate (see note #2)		Degrees of opening	
		Sash/Vent Height Range	Max Sash Vent Weight	Std. Stop	No Stop
10"	(10.50") [266.7mm]	12"-34" [305-864 mm]	100 lbs at 34" [45.36 kg at 864 mm]	59°	77°
12"	(12.50") [317.5mm]	12"-34" [305-864 mm]	100 lbs at 34" [45.36 kg at 864 mm]	53°	78°
14"	(14.50") [368.3mm]	12"-34" [305-864 mm]	100 lbs at 34" [45.36 kg at 864 mm]	50°	79°
16"	(16.50") [419.1mm]	12"-34" [305-864 mm]	100 lbs at 34" [45.36 kg at 864 mm]	50°	78°

Definitions:

*Counterbalanced: A pair of hinges will balance or hold open the vent/sash with no added friction at the heights and weights listed in the chart.

**Ultimate: A pair of hinges will not balance or hold open the vent/sash without added friction at the heights and weights listed in the chart.

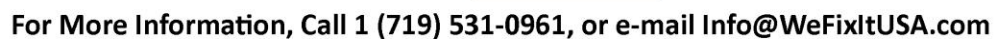
Notes:

1. A properly counterbalanced sash is recommended in an awning operation. An unbalanced sash when used with an awning operator is likely to produce sash chatter and an uneven feel during operation.

2. Ultimate sash weight & width for hinges as shown in charts are based on AAMA 904.1 "Specification for Multi-Bar Hinges in Window Applications". These numbers do not apply to windows being tested to ANSI/AMMA/WDMA 101/LS 2/NAFS-02 "Casement Hardware Load Test".

For More Information, Call 1 (719) 531-0961, or e-mail Info@WeFixItUSA.com

**FIG. 9 TRUTH HEAVY DUTY 4-BAR HINGE W/STOP
(ANDERBERG 301SS-301ST SERIES)**



**HEAVY DUTY
4-BAR HINGE**
(301SS - 301ST Series)

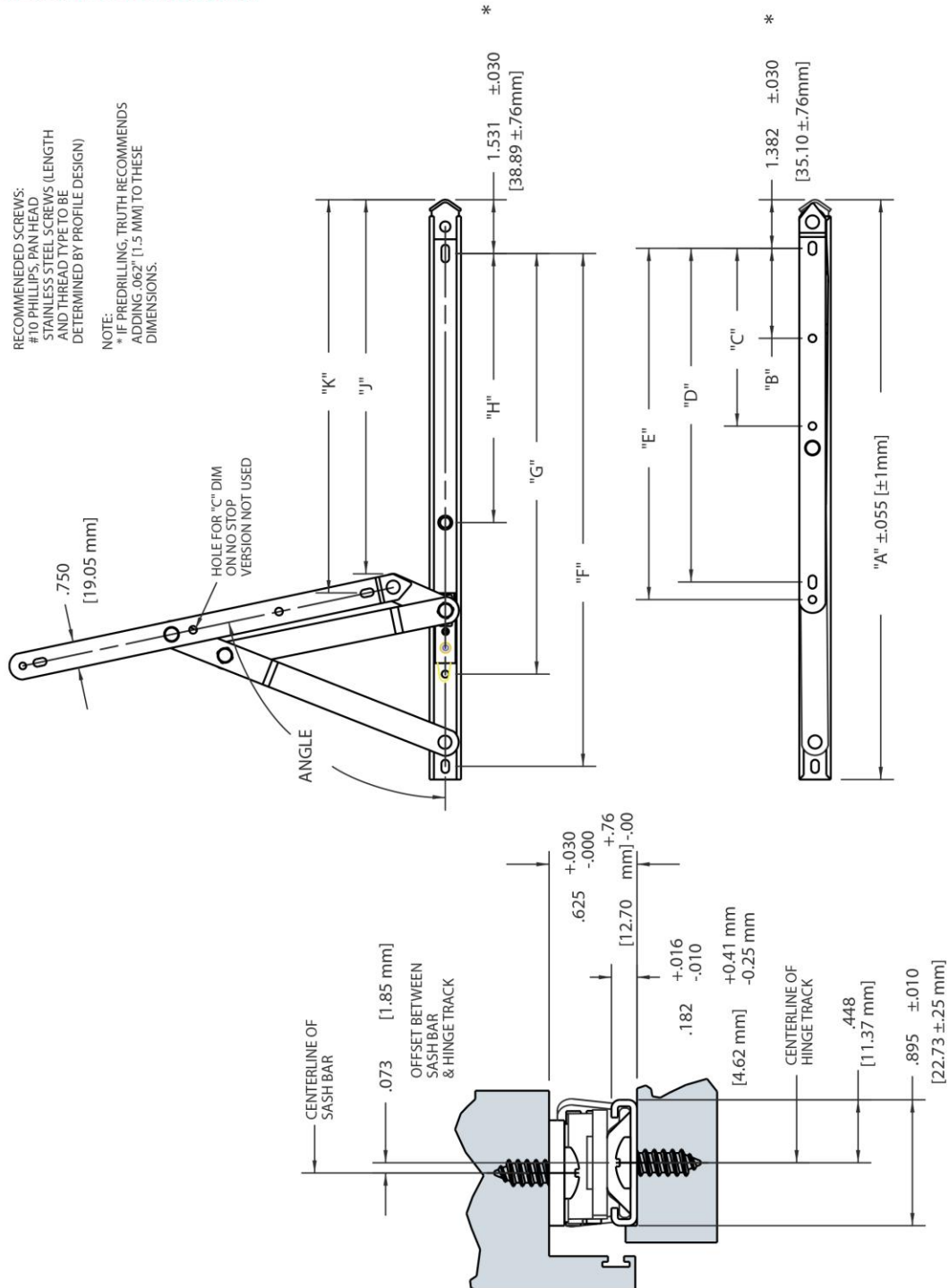
FIG. 10 TRUTH HEAVY DUTY 4-BAR HINGE W/STOP
(ANDERBERG 301SS-301ST SERIES)

TRUTH HEAVY DUTY 4-BAR HINGE W/STOP												
HINGE CALL OUT	HINGE PART #	"A" HINGE LG	"B"	"C"	"D"	"E"	"F"	"G"	"H"	"J"	"K"	ANGLE # OF SCREWS
10"	34.24.00.XXX 34.33.00.XXX	10.50" [266.7 mm]	5.98" [151.9 mm]	NA	6.50" [165.1 mm]	7.00" [177.8 mm]	8.59" [218.2 mm]	6.34" [161.0 mm]	NA	3.94" [100.1 mm]	4.71" [119.6 mm]	59° 7
12"	34.25.00.XXX 34.34.00.XXX	12.50" [317.5 mm]	2.56" [65.0 mm]	NA	7.50" [190.5 mm]	8.00" [203.2 mm]	10.59" [269.0 mm]	6.59" [167.4 mm]	NA	4.12" [104.7 mm]	4.952" [125.7 mm]	53° 7
14"	34.26.00.XXX 34.35.00.XXX	14.50" [368.3 mm]	2.56" [65.0 mm]	NA	8.50" [215.9 mm]	9.00" [228.6 mm]	12.59" [319.8 mm]	6.94" [176.3 mm]	NA	4.43" [112.5 mm]	5.30" [134.6 mm]	50° 7
16"	34.27.00.XXX 34.36.00.XXX	16.50" [419.1 mm]	2.56" [65.0 mm]	5.06" [128.5 mm]	9.50" [241.3 mm]	10.00" [254.0 mm]	14.59" [370.6 mm]	7.66" [194.6 mm]	NA	5.16" [131.1 mm]	6.03" [153.2 mm]	50° 8
18"	34.28.00.XXX 34.37.00.XXX	18.50" [469.9 mm]	2.56" [65.0 mm]	6.06" [153.9 mm]	10.50" [266.7 mm]	11.00" [279.4 mm]	16.59" [421.4 mm]	8.28" [210.3 mm]	NA	5.78" [146.8 mm]	6.65" [168.9 mm]	50° 8
20"	34.29.00.XXX 34.38.00.XXX	20.50" [520.7 mm]	2.56" [65.0 mm]	7.06" [179.3 mm]	11.50" [292.1 mm]	12.00" [304.8 mm]	18.59" [472.2 mm]	8.97" [227.8 mm]	NA	6.48" [164.6 mm]	7.35" [186.7 mm]	49° 8
24"	34.31.00.XXX 34.39.00.XXX	24.50" [622.3 mm]	2.56" [65.0 mm]	9.06" [230.1 mm]	13.50" [342.9 mm]	14.00" [355.6 mm]	22.594" [573.8 mm]	9.094" [230.1 mm]	NA	6.52" [163.6 mm]	7.44" [189.0 mm]	44° 8
28"	34.86.00.XXX	28.50" [723.9 mm]	2.56" [65.0 mm]	11.06" [280.9 mm]	15.50" [393.7 mm]	16.00" [406.4 mm]	26.59" [675.4 mm]	9.59" [243.6 mm]	NA	6.99" [177.6 mm]	7.92" [201.2 mm]	42° 8

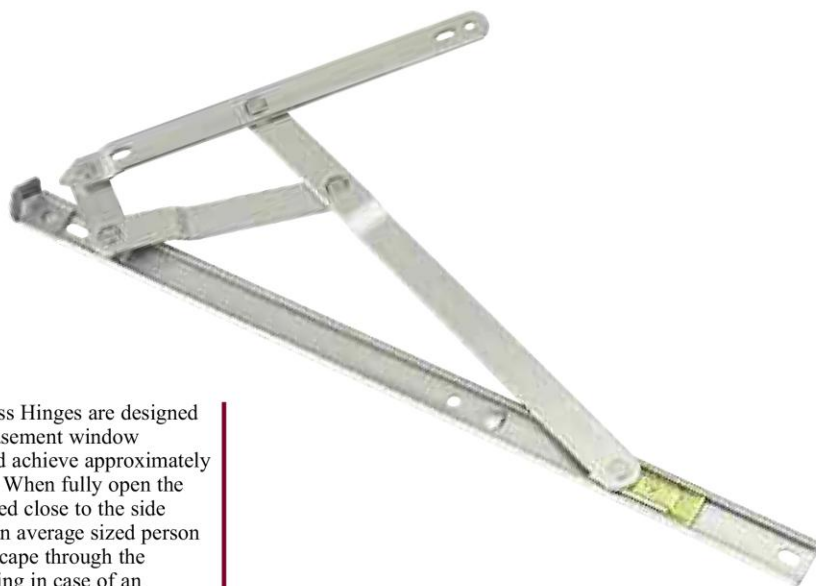
For More Information, Call 1 (719) 531-0961, or e-mail Info@WeFixItUSA.com

HEAVY DUTY 4-BAR HINGE (301SS - 301ST Series)

FIG. 11 TRUTH HEAVY DUTY 4-BAR HINGE W/O STOP
(ANDERBERG 301SS-301ST SERIES)



For More Information, Call 1 (719) 531-0961, or e-mail Info@WeFixItUSA.com



All of our Egress Hinges are designed to be used in casement window applications and achieve approximately 90° of opening. When fully open the sash is positioned close to the side jamb to allow an average sized person the ability to escape through the window's opening in case of an emergency as required by Egress codes. Egress Hinges are non-handed and made of durable stainless steel. These Egress Hinges are designed to project the sash out as it pivots to avoid interference between a lipped vent and frame. There is a wide variety of Egress Hinges available, - each of which has its own unique set of features and benefits. For example:

Standard Duty & Heavy Duty Egress Hinges – will allow 90° of opening with the maximum amount of Egress opening (clear opening) depending upon application. Standard Duty recommended for a maximum vent weight of 82 lbs. Heavy Duty - recommended for maximum vent weight of 158 lbs.

Standard Duty & Heavy Duty Egress Hinge (with washability) – Similar to the Standard Duty & Heavy Duty Egress Hinges in that they allow 90° of opening, however these hinges have the added advantage of allowing the outside vent to be washed from the inside. This is accomplished by inserting a key and sliding the vent towards the center of the frame opening for a washing space of approximately 4.500" (11.43cm) depending upon application.

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.

MATERIAL: Non-magnetic Stainless steel. Each hinge is manufactured with a sliding brass shoe which contains a nylon block for screw adjustment of friction.

ORDERING INFORMATION & OPTIONS

1. Choose correct hinge style by part number. Reference the 4-Bar Hinge Part Number Guide for the available options.
2. Order two hinges per window.
3. Washability Key #16000 ordered separately (2 required per window)

RECOMMENDED SCREWS:

Standard Duty 4-Bar Hinge 6 – #10 Slotted or #8 Phillips pan head stainless steel screws. Length and thread type to be determined by profile design.

Heavy Duty 4-Bar Hinge 6 – #10 Phillips pan head stainless steel screws. Length and thread type determined by profile design.

INCLUDE TRUTH SPECS ON YOUR NEXT WINDOW PROJECT

4-Bar type casement hinge for meeting residential and commercial egress code requirements. Utilizing a 4-bar action to project the vent while opening to avoid interference between frame and sash.

Window hinges to be of 4-bar design, which opens the sash to 90° position close to hinge side of jamb for widest possible egress opening. Hinges shall be non-handed and constructed of high quality stamped and roll formed materials. Hinges used must be certified to AAMA 904.1 specifications.

Only On Washability Equipped Models:

Window hinges will have the ability to be unlocked and moved to a position which allows easy cleaning of the window from the inside.

Window hinges shall be 222/224 or 333/334 series 4-Bar, as manufactured by Truth Hardware.

4-BAR EGRESS HINGES (222SS - 224SS Series)

FIG. 1 TRUTH STANDARD DUTY EGRESS (90°) 4-BAR HINGE
(Truth 222SS and 224SS Series)

TRUTH STD DUTY 4-BAR CASEMENT HINGE W/ STOP

MAT'L	HINGE CALLOUT & (ACTUAL LENGTH)		PART NUMBER	STD STOP	STD STOP LOOSE RIVETS	EGRESS TO WASHABILITY
SST	12"	12.61" [320.3 mm]	35.09.00	.100	.101	N/A
SST	16"	16.41" [416.7 mm]	35.10.00	.100	.101	N/A
SST	16"	16.41" [416.7 mm]	35.11.00	.100	.101	YES

PART NUMBERING SYSTEM

Product No.	Model	Finish	Assembly
35	09	00	100
4-Bar Hinge	Standard Duty Egress 12" Length	No Decorative Finish	W/ Stop Std. Open (Hinge Feature)

4-BAR HINGE APPLICATION TABLE FOR CASEMENT HINGES
(SIDE HUNG) (As certified to AAMA 904.1)

HINGE CALLOUT & (ACTUAL LENGTH)		Ultimate (see note #6)	
		Sash/Vent Width Range	Max Sash Vent Weight
12"	12.61" [320.3 mm]	14"-32" [356 mm-813 mm]	82 lbs at 32" [37.2 kg at 813 mm]
16"	16.41" [416.7 mm]	18"-32" [457 mm-813 mm]	82 lbs at 32" [37.2 kg at 813 mm]
16"	16.41" [416.7 mm]	18"-32" [457 mm-813 mm]	82 lbs at 32" [37.2 kg at 813 mm]

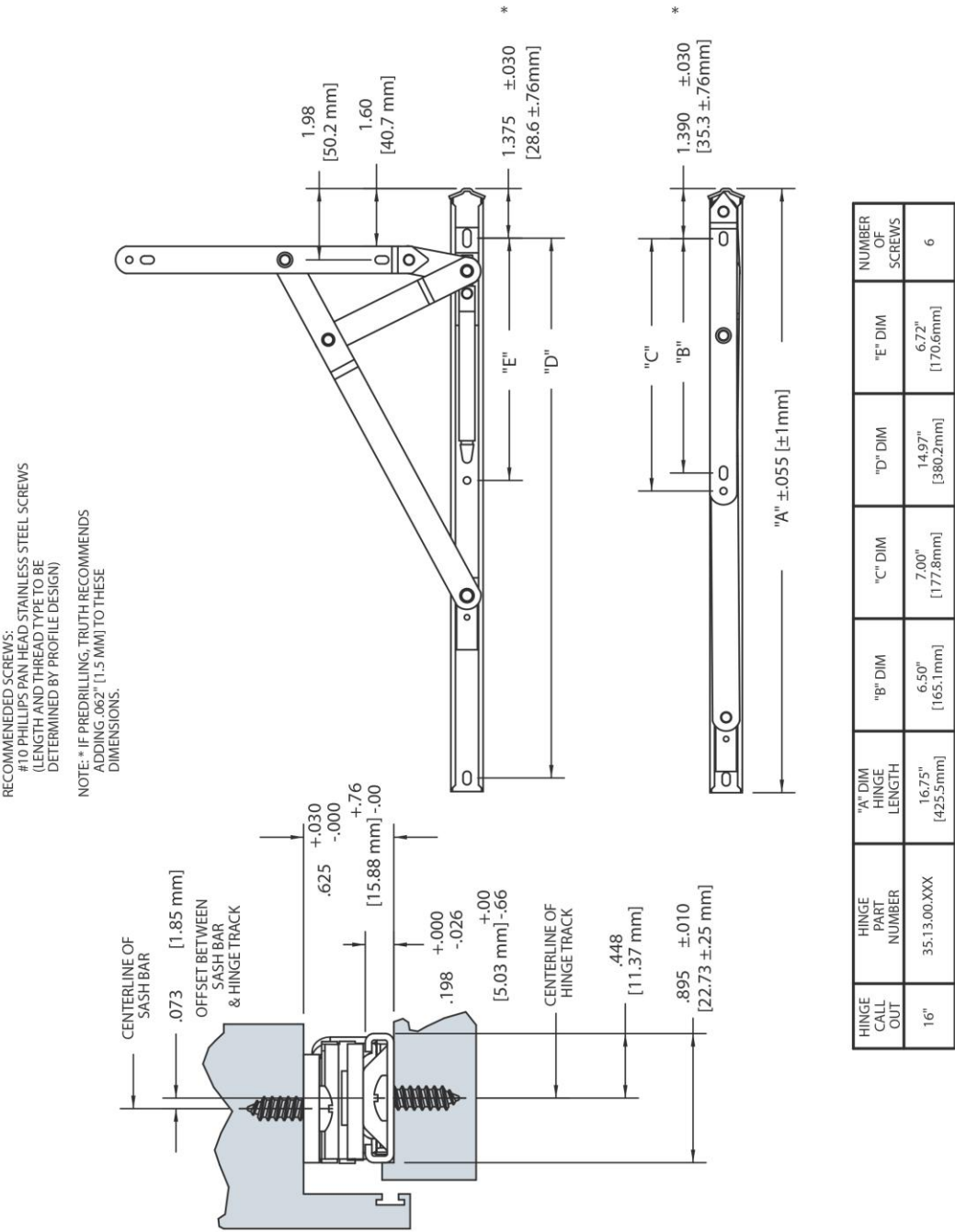
Notes:

1. These Standard Duty Egress 4-Bar Hinges are recommended for casement applications only.
2. For additional recommendations regarding 4-Bar Hinges, please refer to the Truth Tips section and the Tech Notes section at the end of the catalog.
3. Unless otherwise specified all 222-224 series hinges have a brass shoe.
4. The standard stack height of a Standard Duty Hinge is .500 (12.7mm). If a shim or washer is used the stack height will increase by the shim or washer thickness.
5. For a casement (side hung) application where operators are used, loose rivets are recommended to reduce friction. The 222-224 hinges are designed to work with single arm style operators only.
6. Ultimate sash weight & width for hinges as shown in charts are based on AAMA 904.1 "Specification for Multi-Bar Hinges in Window Applications". These numbers do not apply to windows being tested to ANSI/AMMA/WDMA 101/LS 2/NAFS-02 "Casement Hardware Load Test".

For More Information, Call 1 (719) 531-0961, or e-mail Info@WeFixItUSA.com

4-BAR EGRESS HINGES (334SS Series)

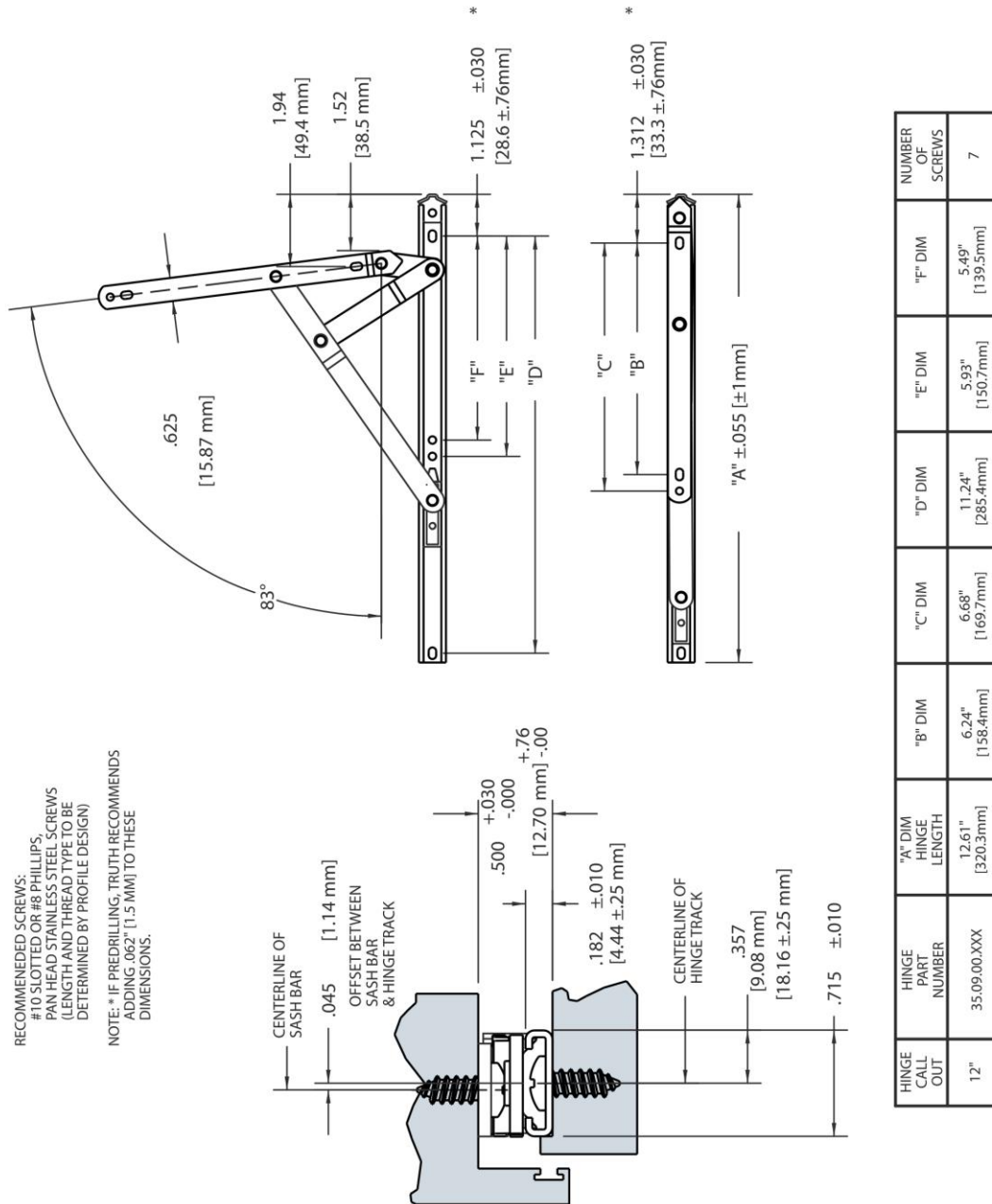
FIG. 7 TRUTH HEAVY DUTY EGRESS (90°) 4-BAR HINGE
(Truth 334SS Series)



For More Information, Call 1 (719) 531-0961, or e-mail Info@WeFixItUSA.com

4-BAR EGRESS HINGES (222SS Series)

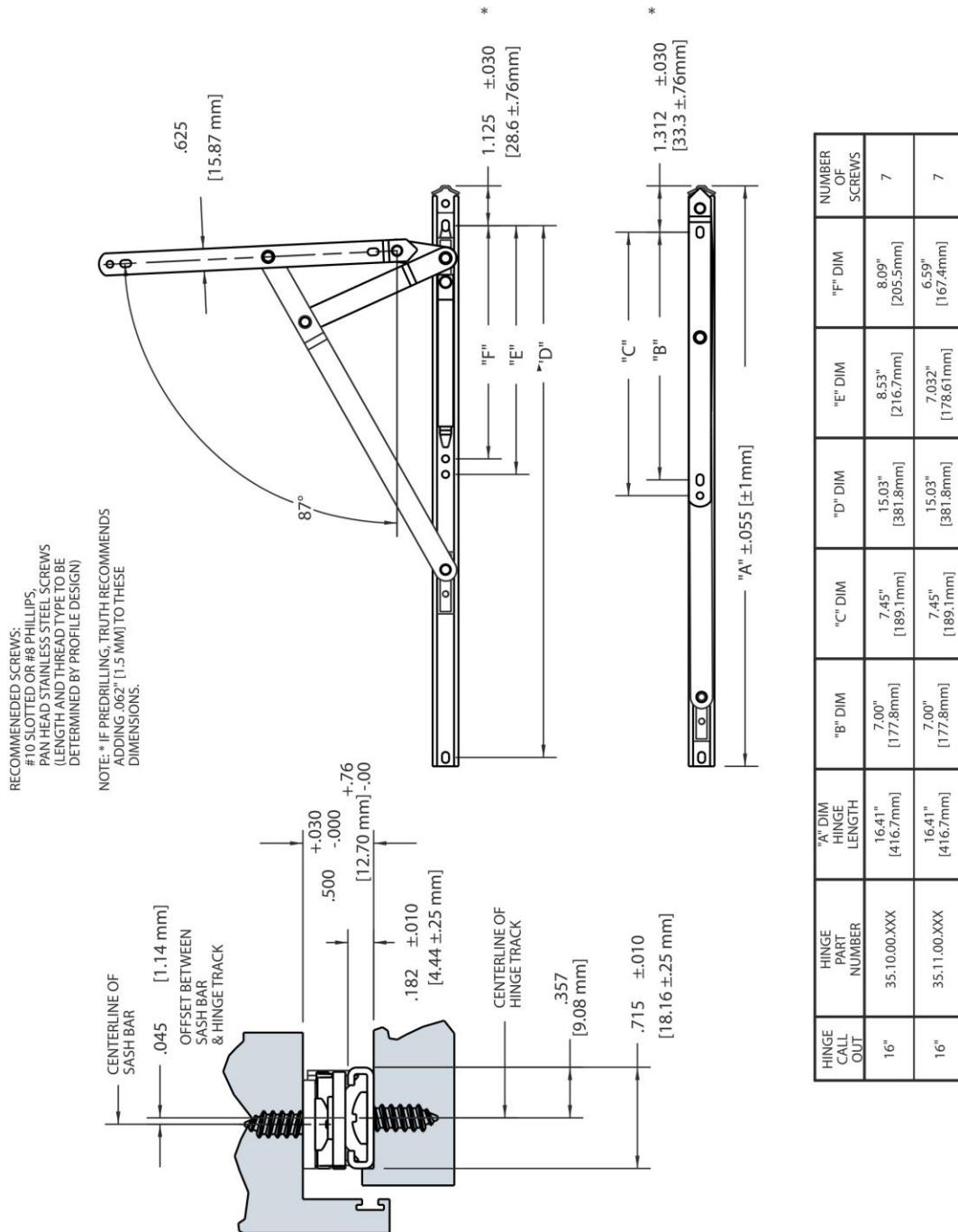
FIG. 2 TRUTH STANDARD DUTY EGRESS (90°) 4-BAR HINGE
(Truth 222SS Series)



For More Information, Call 1 (719) 531-0961, or e-mail Info@WeFixItUSA.com

4-BAR EGRESS HINGES (224SS Series)

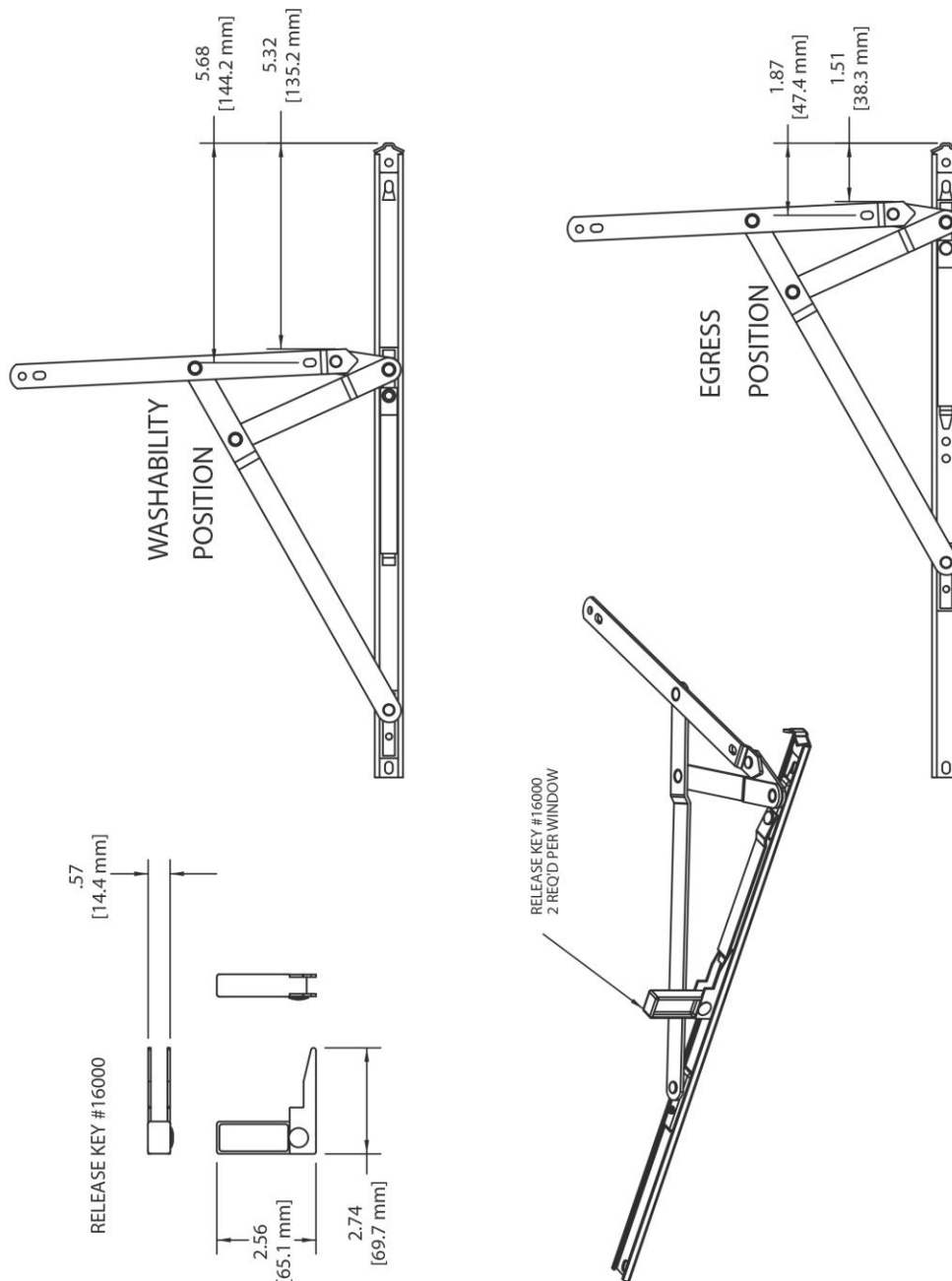
FIG. 3 TRUTH STANDARD DUTY EGRESS (90°) 4-BAR HINGE
(Truth 224SS Series)



For More Information, Call 1 (719) 531-0961, or e-mail Info@WeFixItUSA.com

4-BAR EGRESS HINGES (224SS Series)

FIG. 4 TRUTH STANDARD DUTY EGRESS (90°) 4-BAR HINGE
(Truth 224SS Series)



For More Information, Call 1 (719) 531-0961, or e-mail Info@WeFixItUSA.com

4-BAR EGRESS HINGES (333SS - 334SS Series)

FIG. 5 TRUTH HEAVY DUTY EGRESS (90°) 4-BAR HINGE
(Truth 333SS - 334SS Series)

TRUTH HEAVY DUTY 4-BAR CASEMENT HINGE W/ STOP

MAT'L	HINGE CALLOUT & (ACTUAL LENGTH)		PART NUMBER	STD STOP	STD STOP LOOSE RIVETS	EGRESS TO WASHABILITY
SST	16"	16.75" [425.5mm]	35.12.00	.208	.201	N/A
SST	16"	16.75" [425.5mm]	35.13.00	.208	.201	YES

PART NUMBERING SYSTEM

Product No.	Model	Finish	Assembly
35	12	00	208
4-Bar Hinge	Heavy Duty Egress 16" Length	No Decorative Finish	W/ Stop Std. Open (Hinge Feature)

4-BAR HINGE APPLICATION TABLE FOR CASEMENT HINGES
(SIDE HUNG) (As certified to AAMA 904.1)

HINGE CALLOUT & (ACTUAL LENGTH)		Ultimate (see note #6)	
		Sash/Vent Width Range	Max Sash Vent Weight
16"	16.75" [425.5mm]	18"-36" [457.2 mm-914.4 mm]	158 lbs at 36" [71.7 kg at 914.4 mm]
16"	16.75" [425.5mm]	18"-36" [457.2 mm-914.4 mm]	158 lbs at 36" [71.7 kg at 914.4 mm]

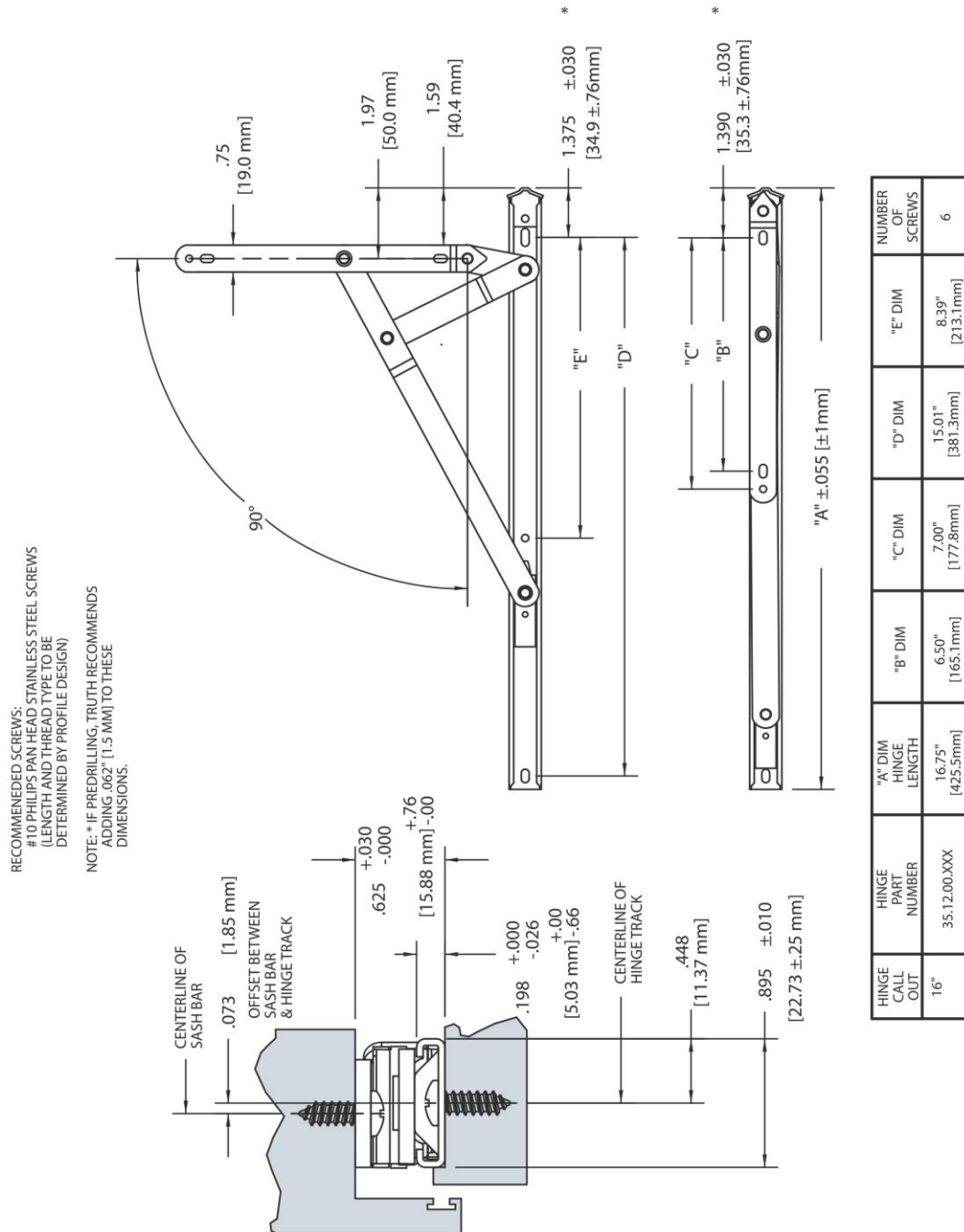
Notes:

- These Heavy Duty Egress 4-Bar Hinges are recommended for casement applications only.
- For additional recommendations regarding 4-Bar Hinges, please refer to the Truth Tips section and the Tech Notes section at the end of the catalog.
- Unless otherwise specified all 333-334 series hinges have a brass shoe.
- The standard stack height of a Heavy Duty Hinge is .625 (15.9 mm). If a shim or washer is used the stack height will increase by the shim or washer thickness.
- For a casement (side hung) application where operators are used, loose rivets are recommended to reduce friction. The 333-334 hinges are designed to work with single arm style operators only.
- Ultimate sash weight & width for hinges as shown in charts are based on AAMA 904.1 "Specification for Multi-Bar Hinges in Window Applications". These numbers do not apply to windows being tested to ANSI/AMMA/WDMA 101/I.S 2/NAFS-02 "Casement Hardware Load Test".

For More Information, Call 1 (719) 531-0961, or e-mail Info@WeFixItUSA.com

4-BAR EGRESS HINGES (333SS Series)

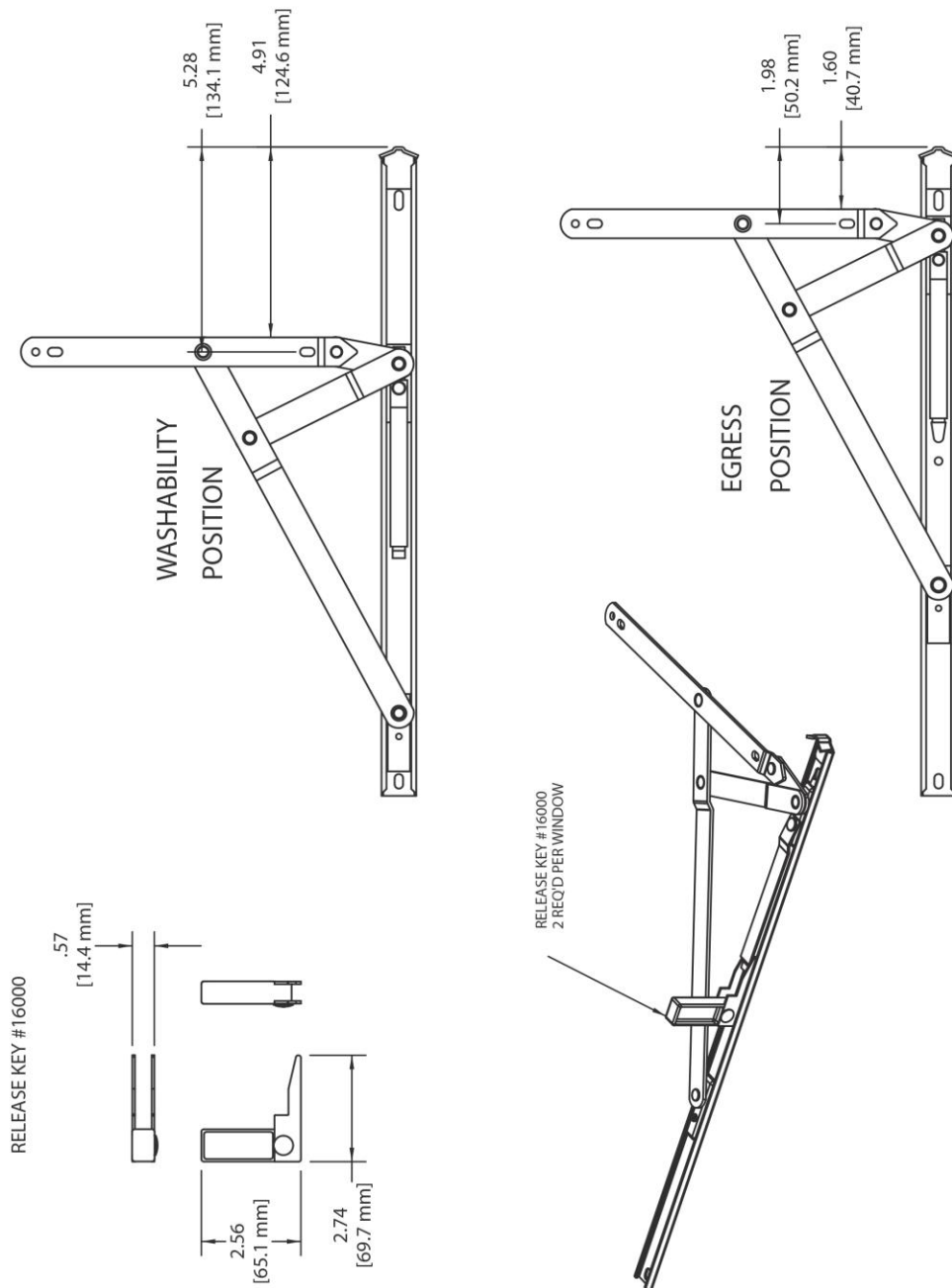
FIG. 6 TRUTH HEAVY DUTY EGRESS (90°) 4-BAR HINGE
(Truth 333SS Series)



For More Information, Call 1 (719) 531-0961, or e-mail Info@WeFixItUSA.com

4-BAR EGRESS HINGES (334SS Series)

FIG. 8 TRUTH HEAVY DUTY EGRESS (90°) 4-BAR HINGE
(Truth 334SS Series)



For More Information, Call 1 (719) 531-0961, or e-mail Info@WeFixItUSA.com



CASEMENT

**STANDARD DUTY
4-BAR HINGE**
(401SS Series)



These Truth 34 Series Standard Duty and Heavy Duty Stainless Steel 4-Bar Hinges are similar to the Anderberg 201SS & 301SS styles; however, these hinges also have the capability of producing 90° of window opening. Designed only for casement window applications, these non-handed, 4-Bar Hinges are designed to project the vent out as it pivots to avoid interference between a lipped vent and frame.

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.

MATERIAL: Non-magnetic stainless steel arms and track.

ORDERING INFORMATION & OPTIONS:

1. Choose correct hinge size and style by part number. (Reference 4-Bar Hinge Part Number Guide for the available options).
2. Order two hinges per window.

RECOMMENDED SCREWS:

Standard Duty (401 Series) 6 — #10 Slotted or #8 Phillips pan head stainless steel screws. Length and thread type to be determined by profile design.

Heavy Duty (601 Series) 6 — #10 Phillips pan head stainless steel screws. Length and thread type to be determined by profile design. See Truth Tip #11 for additional information on screw selection.

INCLUDE TRUTH SPECS ON YOUR NEXT WINDOW PROJECT

4-bar type window hinge for casement windows, which projects the vent while opening to avoid interference between frame and sash.

Window hinges to be of 4-bar type design, allowing 90° opening and washability access to outside of window glass. Hinges shall be non-handed and constructed of 300 series stainless steel. Hinges used must be certified to AAMA 904.1 specifications.

Window hinges shall be 401/601 series 4-bar, as manufactured by Truth Hardware.

For More Information, Call 1 (719) 531-0961, or e-mail Info@WeFixItUSA.com

STANDARD DUTY 4-BAR HINGE (401SS Series)

FIG. 1 TRUTH STANDARD DUTY 4-BAR CASEMENT HINGE
(Truth 401SS Series)

TRUTH STD DUTY 4-BAR CASEMENT HINGE W/ 90° STOP

MAT'L	HINGE CALLOUT & (ACTUAL LENGTH)		PART NUMBER	STD 90° STOP	STD 90° STOP LOOSE RIVETS
SST	12"	12.156" [308.7mm]	34.55.00	.300	.302
SST	14"	14.156" [359.5mm]	34.56.00	.300	
SST	16"	16.156" [410.4mm]	34.57.00	.300	
SST	18"	18.156" [461.2mm]	34.58.00	.300	

PART NUMBERING SYSTEM

Product No.	Model	Finish	Assembly
34	55	00	300
4-Bar Hinge	Standard Duty 12" Length	No Decorative Finish	W/ Stop Std. Open (Hinge Feature)

4-BAR HINGE APPLICATION TABLE FOR CASEMENT HINGES
(SIDE HUNG) (As certified to AAMA 904.1)

HINGE CALLOUT & (ACTUAL LENGTH)		Ultimate (see note #6)	
		Sash/Vent Width Range	Max Sash Vent Weight
12"	12.156" [308.7mm]	12"-36" [305mm-914mm]	65 lbs at 32" [29.5 kg at 813mm]
14"	14.156" [359.5mm]	14"-36" [356mm-914mm]	65 lbs at 32" [29.5 kg at 813mm]
16"	16.156" [410.4mm]	16"-36" [406mm-914mm]	65 lbs at 32" [29.5 kg at 813mm]
18"	18.156" [461.2mm]	18"-36" [457mm-914mm]	65 lbs at 32" [29.5 kg at 813mm]

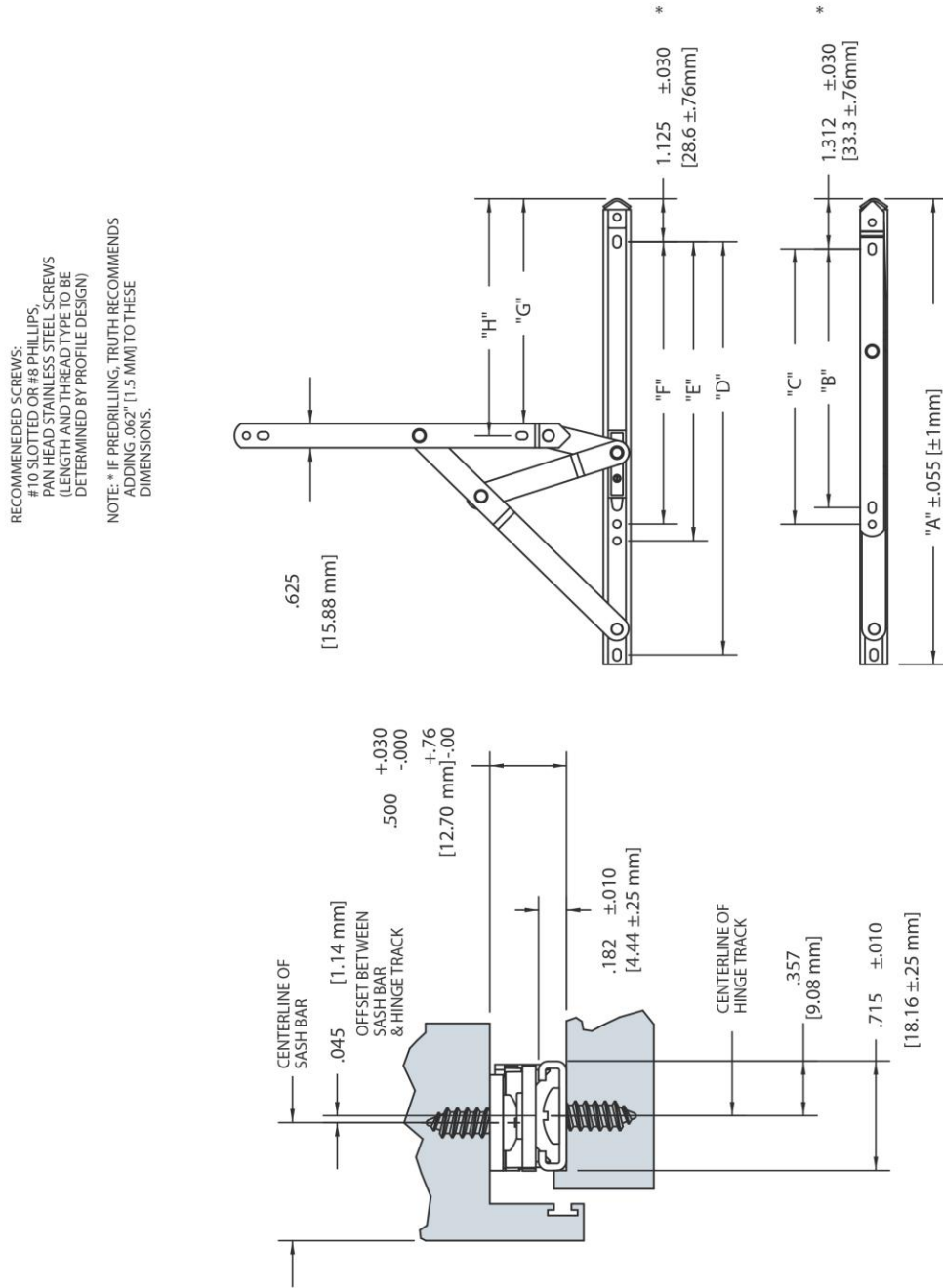
Notes:

1. These Standard Duty Hinges 90° 4-Bar Hinges are recommended for casement applications only.
2. For additional recommendations regarding 4-Bar Hinges, please refer to the Truth Tips section and the Tech Notes section at the end of the catalog.
3. Unless otherwise specified all 401 series hinges have a brass shoe.
4. The standard stack height of a Standard Duty Hinge is .500 (12.7mm). If a shim or washer is used the stack height will increase by the shim or washer thickness.
5. For a casement (side hung) application where operators are used, loose rivets are recommended to reduce friction. The 401 hinges are designed to work with dyad style operators only.
6. Ultimate sash weight & width for hinges as shown in charts are based on AAMA 904.1 "Specification for Multi-Bar Hinges in Window Applications". These numbers do not apply to windows being tested to ANSI/AMMA/WDMA 101/LS 2/NAFS-02 "Casement Hardware Load Test".

For More Information, Call 1 (719) 531-0961, or e-mail Info@WeFixItUSA.com

**STANDARD DUTY
4-BAR HINGE
(401SS Series)**

**FIG. 2 TRUTH STANDARD DUTY 4-BAR CASEMENT HINGE
(Truth 401SS Series)**



For More Information, Call 1 (719) 531-0961, or e-mail Info@WeFixItUSA.com

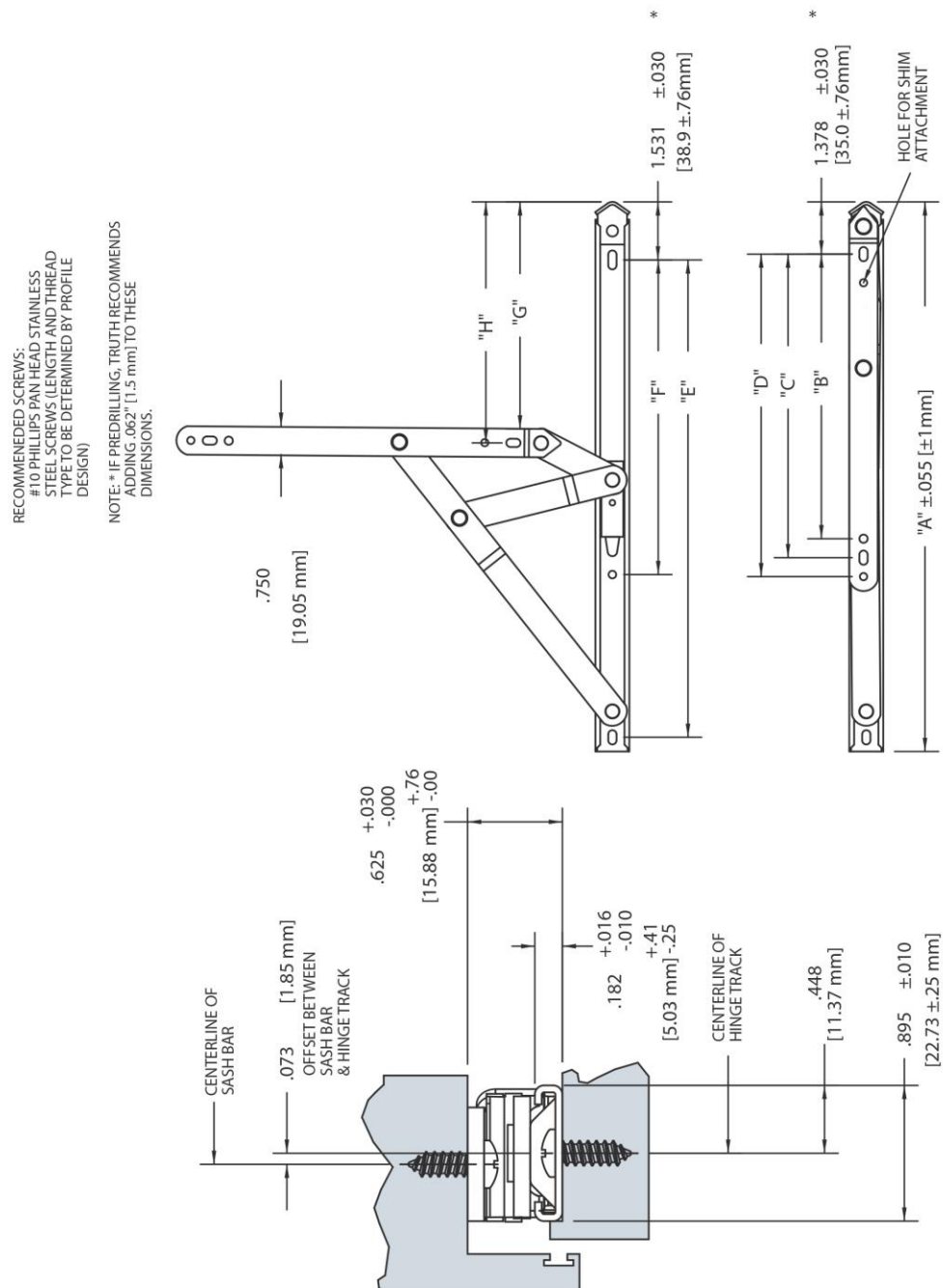
STANDARD DUTY 4-BAR HINGE (401SS Series)

FIG. 3 TRUTH STANDARD DUTY 4-BAR CASEMENT HINGE
(Truth 401SS Series)

HINGE CALL OUT	HINGE PART NUMBER	"A" DIM HINGE LENGTH	"B" DIM	"C" DIM	"D" DIM	"E" DIM	"F" DIM	"G" DIM	"H" DIM	# OF SCREWS
12"	34.55.00.XXX	12.16" [308.7 mm]	6.75" [171.4 mm]	7.19" [182.5 mm]	10.71" [273.8 mm]	7.81" [198.3 mm]	7.379" [187.2 mm]	5.88" [149.2 mm]	6.19" [157.2 mm]	6
14"	34.56.00.XXX	14.16" [359.5 mm]	7.28" [184.9 mm]	7.72" [194.9 mm]	12.78" [324.6 mm]	8.49" [215.7 mm]	8.05" [204.5 mm]	6.27" [159.3 mm]	6.58" [167.2 mm]	6
16"	34.57.00.XXX	16.16" [410.4 mm]	7.78" [197.6 mm]	8.22" [208.8 mm]	14.78" [375.4 mm]	9.08" [230.6 mm]	8.64" [219.5 mm]	6.70" [170.3 mm]	7.02" [178.2 mm]	6
18"	34.58.00.XXX	18.16" [461.2 mm]	8.31" [211.1 mm]	8.75" [222.3 mm]	16.78" [426.2 mm]	9.63" [246.0 mm]	9.25" [234.8 mm]	7.21" [183.1 mm]	7.52" [191.1 mm]	6

For More Information, Call 1 (719) 531-0961, or e-mail Info@WeFixItUSA.com

FIG. 5 TRUTH HEAVY DUTY 4-BAR CASEMENT HINGE (Truth 601SS Series)



For More Information, Call 1 (719) 531-0961, or e-mail Info@WeFixItUSA.com

**HEAVY DUTY
4-BAR HINGE
(601SS Series)**

**FIG. 6 TRUTH HEAVY DUTY 4-BAR CASEMENT HINGE
(Truth 601SS Series)**

HINGE CALL OUT	HINGE PART NUMBER	"A" DIM HINGE LENGTH	"B" DIM	"C" DIM	"D" DIM	"E" DIM	"F" DIM	"G" DIM	"H" DIM	# OF SCREWS
14"	34.59.00.XXX	14.50" [368.3 mm]	7.51" [190.7 mm]	8.01" [203.4 mm]	8.51" [216.1 mm]	12.59" [319.9 mm]	8.30" [210.9 mm]	5.99" [152.1 mm]	6.36" [161.5 mm]	7
16"	34.60.00.XXX	16.50" [419.1 mm]	7.51" [190.7 mm]	8.01" [203.4 mm]	8.51" [216.1 mm]	14.59" [370.7 mm]	7.75" [196.8 mm]	5.68" [144.4 mm]	6.04" [153.4 mm]	7
18"	34.61.00.XXX	18.50" [469.9 mm]	7.51" [190.7 mm]	8.01" [203.4 mm]	8.51" [216.1 mm]	16.59" [421.5 mm]	7.51" [190.7 mm]	5.38" [136.7 mm]	5.74" [145.7 mm]	7

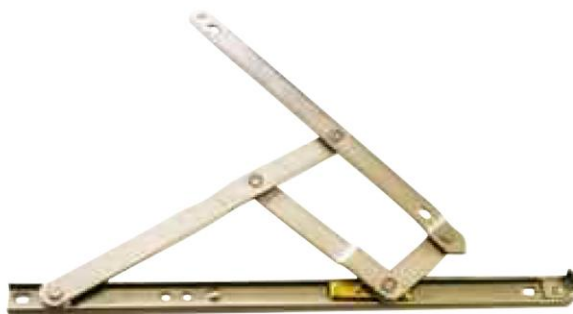
For More Information, Call 1 (719) 531-0961, or e-mail Info@WeFixItUSA.com



Throughout the industry the names Anderberg and Truth have stood for reliable engineering and production, as well as precision made products and excellent support services; but above all this, these names stand for quality. This is most evident in our expertly crafted 4-Bar Hinges.

Each style of hinge that you will find on the accompanying pages has a variety of sizes and options to choose from. Everything from hinges manufactured with or without stops to varying degrees of opening. A wide range of lengths and thicknesses are also available. Truth's 4-Bar Hinges are certified to AAMA 904.1.

4-Bar Hinges have been designed to be used primarily on vents with a lip on the outside edge. 4-Bar Hinges are designed to project the vent out as it pivots to avoid interference between a lipped vent and frame. 4-Bar Hinges are adaptable to both casement and projected window applications. To aid you in your selection of 4-Bar Hinges, Truth has developed a guide (flow-chart) that provides you with a step-by-step procedure for determining the appropriate hinge for your use.



To help reduce the inventory of "handed" products, each hinge is manufactured to be "non-handed", so that they can be used as either left-or right-handed hinges.

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.

NUMBERING SYSTEM:

The Truth product numbering system for hinges denotes the **product** with the first two numerals, **model** by the second two numerals, and the **finish** by the next two numerals (decorative finishes only – this does not apply to hinges). The last three numerals represent the various hinge features *with no commonality between product models intended*. The following chart illustrates this system using the #34.25.00.208 Heavy Duty 4-Bar Hinge as an example.

NUMBERING SYSTEM

Product No.	Model	Finish	Assembly
34	24	00	208
4-Bar Hinge	Heavy Duty 10 1/2" Length	No decorative finish	W/Stop Std. open (hinge feature)