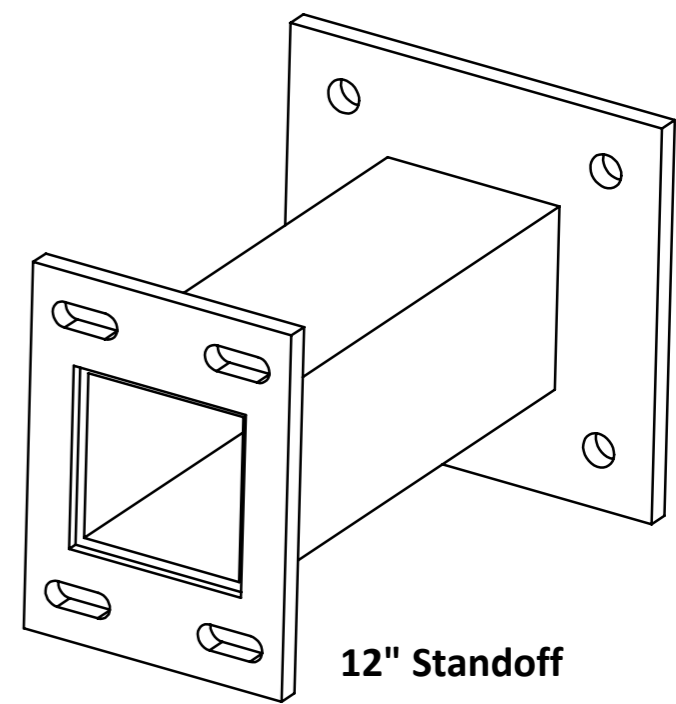


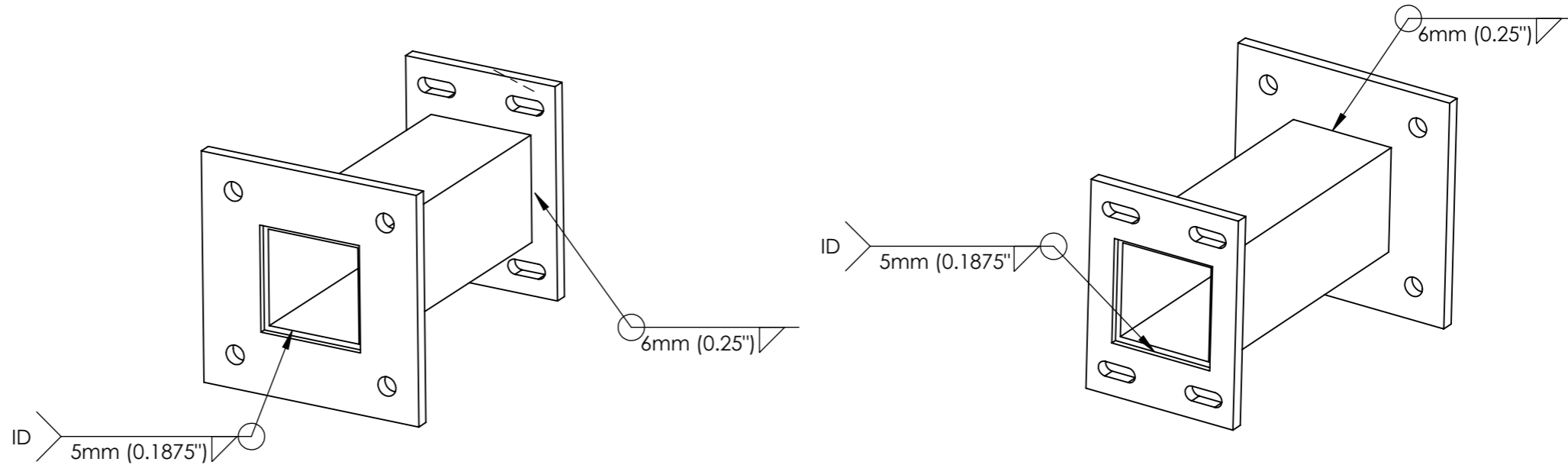
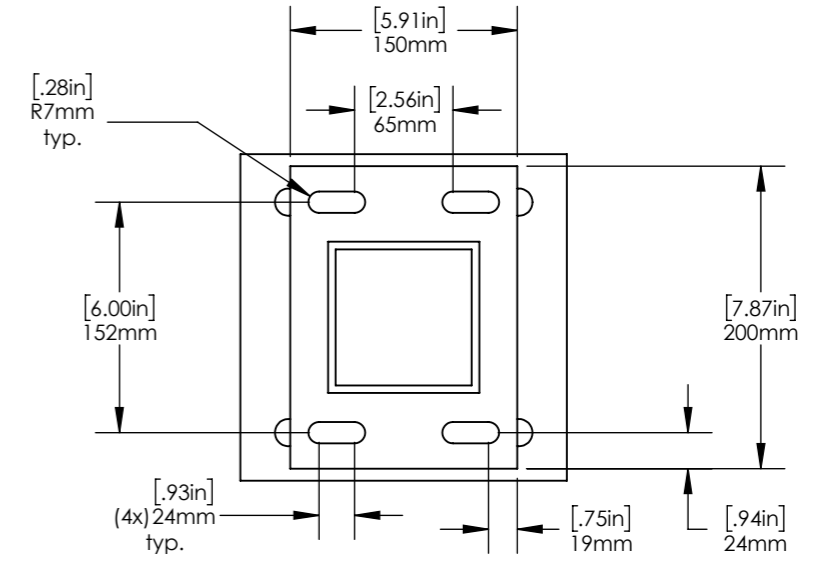
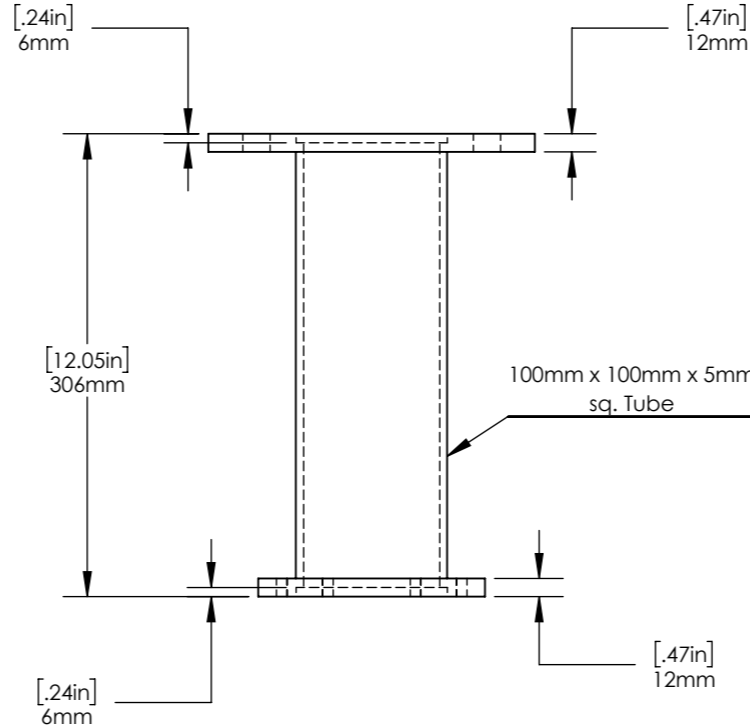
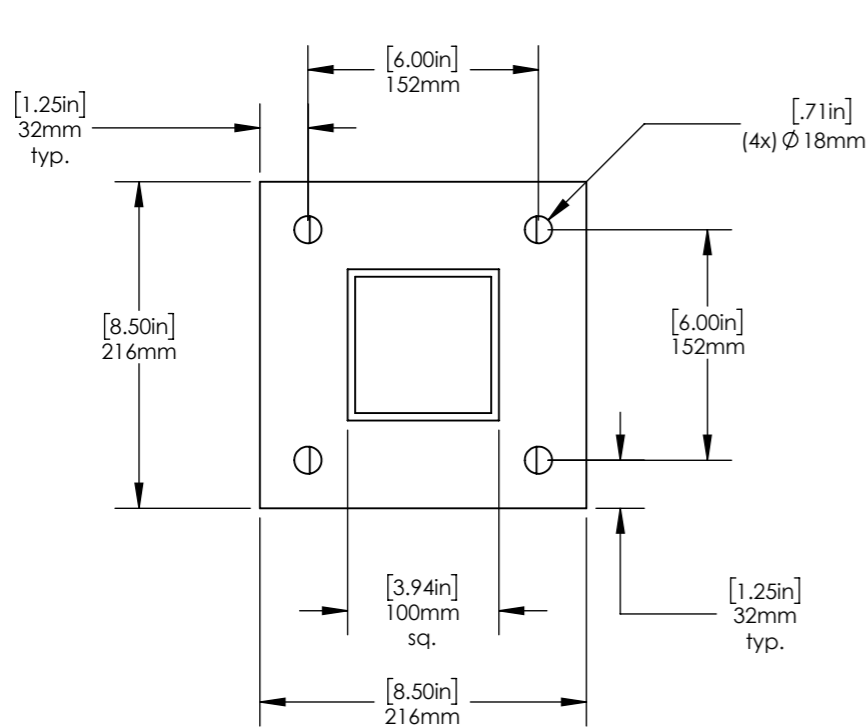
12" Standoff Product Manual



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REVISIONS

REV.	DESCRIPTION	DATE	APPROVED
A	initial release	11/23/21	MGC
B			
C			



Notes:

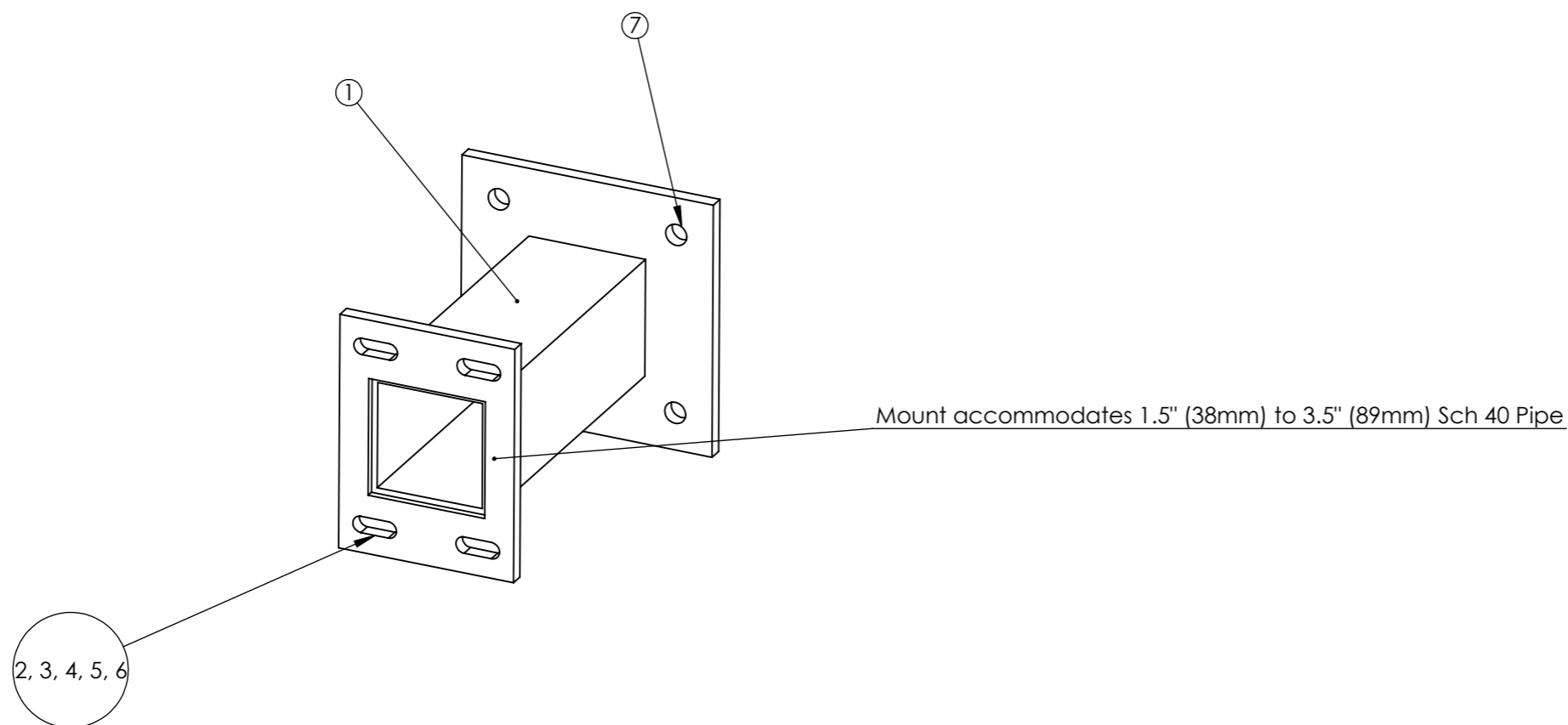
1. All plate material shall have a minimum yield strength of 355 MPa (50 ksi)
2. Tube shall be Q355 (ASTM A500 Gr B) or equivalent
3. All welding shall conform to the minimum requirements of AWS D1.1
4. All welding shall be done by welders qualified under AWS specifications, using E70XX, low hydrogen electrodes
5. All components shall Hot Dip Galvanized in accordance with ASTM A123
6. Deburr all sharp edges

CAD-generated drawing do not manually update			1041 Grand Ave., #213 St. Paul, MN 55105 (651) 330-1263 www.aretelcom.com
Total Weight 9.5kg (21lb) Does not include fasteners	APPROVALS	DATE	<p>12in Standoff</p> <p>CAD file : Details and dimensions not shown on this drawing can be found in CAD file.</p>
MATERIAL See Notes	DRAWN MGC	11/23/21	
FINISH See Notes	CHECKED		
DO NOT SCALE DRAWING	RESP ENG		
	MFG ENG		
	QUAL ENG		scale NA rev. A size NA sheet 1 of 2

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12" (306mm) T-Arm Standoff Bill of Materials

#	Description	Qty	Weight ea. kg/ (lb)
1	12" Standoff	1	9.5/ 21
Customer Must Specify U-Bolt (1.5" to 3.5" Schedule 40 Pipe)			
2	U-Bolt 3/8-16 w/ (2x) Washer, (4x) Nut - HDG (1.5" sch. 40 Pipe)	2	
3	U-Bolt 3/8-16 w/ (2x) Washer, (4x) Nut - HDG (2" sch. 40 Pipe)	2	
4	U-Bolt 1/2-13 w/ (2x) Washer, (4x) Nut - HDG (2.5" sch. 40 Pipe)	2	
5	U-Bolt 1/2-13 w/ (2x) Washer, (4x) Nut - HDG (3" sch. 40 Pipe)	2	
6	U-Bolt 1/2-13 w/ (2x) Washer, (4x) Nut - HDG (3.5" sch. 40 Pipe)	2	
	Pipe (Sch 40) supplied by customer		



Standoff Mounting Bolts, Nuts & Washers (other equivalent grades acceptable)

#	Unit	Bolt Size	Length	Width Across Flats	Thread Length	Grade	Coating	Nut Qty.	Washer Qty.	Bolt Qty.
7	Metric	M16x2	65mm	24mm	Full Thread	8.8	Hot Dip Galv.	8	8	4
7	Imperial	5/8-11	2-1/2"	15/16"	Full Thread	A325	Hot Dip Galv.	8	8	4


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 St. Paul, MN 55105
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12in Standoff BOM

Part # 

scale NA rev. A size NA sheet 2 of 2

4) ANALYSIS RESULTS

Table 2 – Mount Classifications - Max Appurtenance Load

Mount Model	Mount Classification	Max Normal Horizontal Load (lbs)	Max Transverse Horizontal Load (lbs)	Max Vertical Load w/ Ice (lbs)
Universal Tri and Quad Mount	M3050R(5000)-1[6]	3050	3050	5000

Note: The max normal and transverse loads are representative of an extreme wind condition. The max vertical load with ice is representative of an extreme ice condition. The maximum loads listed are factored loads applied at (1) mast pipe location per sector in accordance with TIA-5053

Table 3 – Mount Classifications – Max Appurtenance EPA

Mount Model	Max EPA (sqft)				
	180 mph Ult Wind Speed	150 mph Ult Wind Speed	130 mph Ult Wind Speed	110 mph Ult Wind Speed	90 mph Ult Wind Speed
Universal Tri and Quad Mount	11.3	16.4	21.8	30.5	44.9

Note: The max appurtenance EPA following analysis criteria in Section 2 of this report with varying ultimate wind speeds assuming a Force Coefficient (C_a) of 2.0.

Table 4 – Mount Effective Projected Areas and Weights

Mount Model	Mount EPA_N w/ No Ice (ft ²)	Mount EPA_T w/ No Ice (ft ²)	Mount EPA_N w/ 1/2" Ice (ft ²)	Mount EPA_T w/ 1/2" Ice (ft ²)	Weight (lbs)	Weight w/ 1/2" Ice (lbs)
Universal Tri Mount – 36" Standoff	13.81	14.32	17.41	17.91	989	1175
Universal Tri Mount – 24" Standoff	12.58	12.90	16.20	16.51	896	1064
Universal Tri Mount – 12" Standoff	11.36	11.48	14.99	15.11	795	854
Universal Quad Mount – 36" Standoff	18.16	18.16	22.93	22.93	1314	1561
Universal Quad Mount – 24" Standoff	16.58	16.58	21.37	21.37	1190	1414
Universal Quad Mount – 12" Standoff	14.99	14.99	19.81	19.81	1056	1266

* (1) 2.875" diameter x 168" long mount pipe per sector