

THERMAL-GRIP MASONRY VENEER ANCHOR



Designed & Manufactured in the USA with
Domestic & Globally Sourced Materials

The Thermal-Grip® Masonry Veneer Anchor from TRUFAST® Walls helps solve the challenge of thermal-bridging, air and water hold-outs, and labor costs. It is designed to anchor masonry veneer and continuous insulation to steel, concrete, CMU, wood stud and other masonry substrates while maintaining thermally efficient design and air barrier performance.



**STOPS AIR
INFILTRATION**



**MINIMIZES
THERMAL BRIDGING**



**STOPS WATER
INFILTRATION**



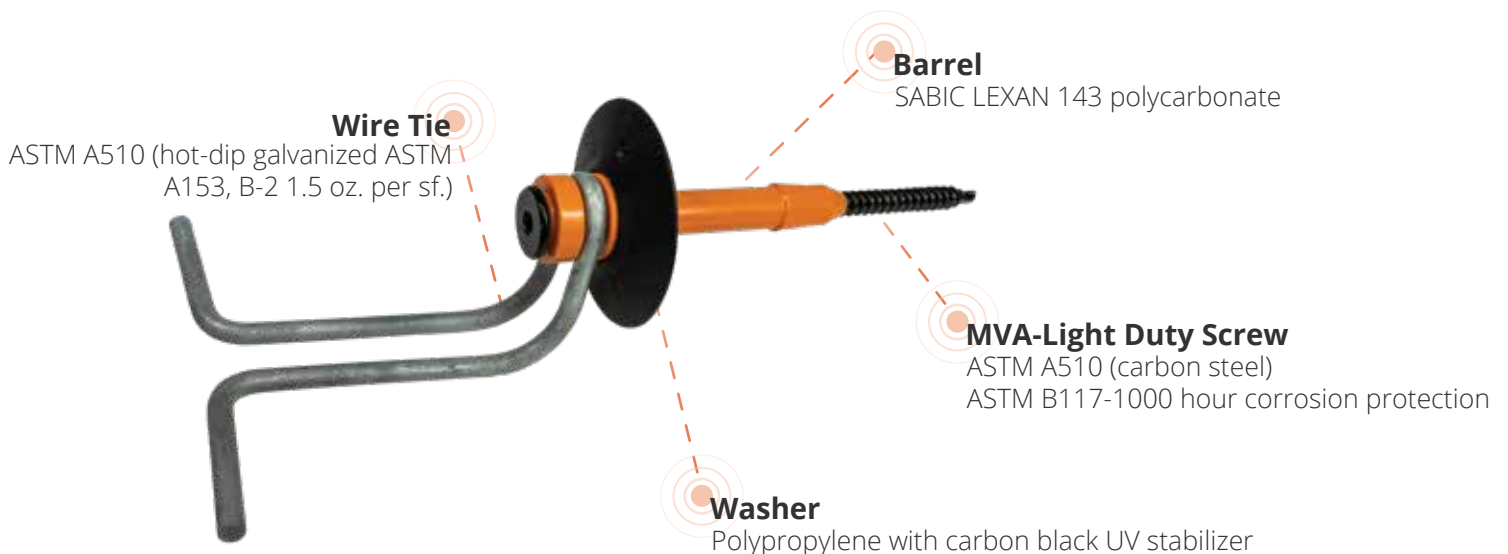
**INSTALLS
EASY & FAST**



**WORKS ON ALL
SUBSTRATES**



**PERFECT FOR PROSOCO
AIR BARRIER SYSTEMS**



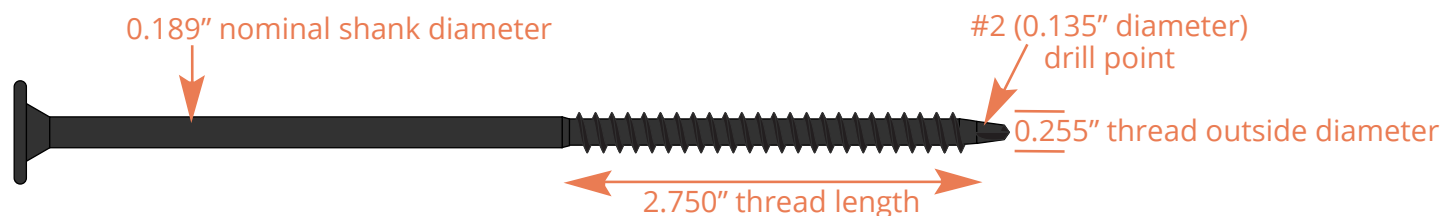
SUMMARY OF PARTS

The MVA-Light Duty fasteners are engineered to mechanically attach to a wide variety of substrates such as concrete, CMU, wood stud, plywood, OSB, and metal studs ranging from 16-gauge to 24-gauge. Pre-drilling is not required for wood or metal stud applications, but a 3/16-inch pilot hole is recommended for concrete or CMU applications. Install using a maximum 2,500-rpm screw gun or impact driver.

The fasteners are case-hardened and tempered for easy installation and long-term durability. The included T-30, 6-lobe internal drive offers excellent bit engagement during installation, especially in high-torque applications.

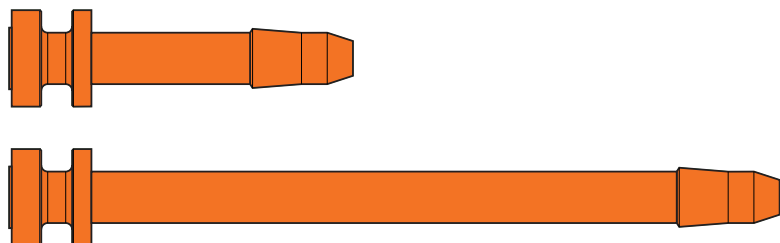
MVA-LIGHT DUTY SCREW

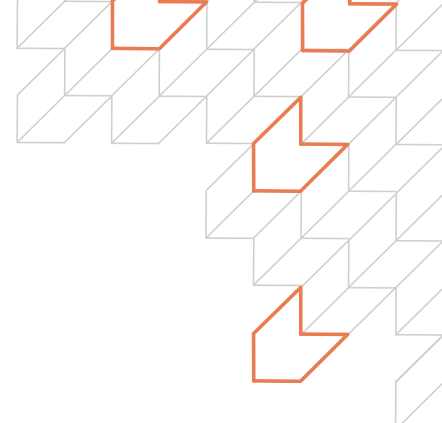
Light-duty drill point for metal stud (16ga-24ga), wood, concrete, and CMU applications



BARREL

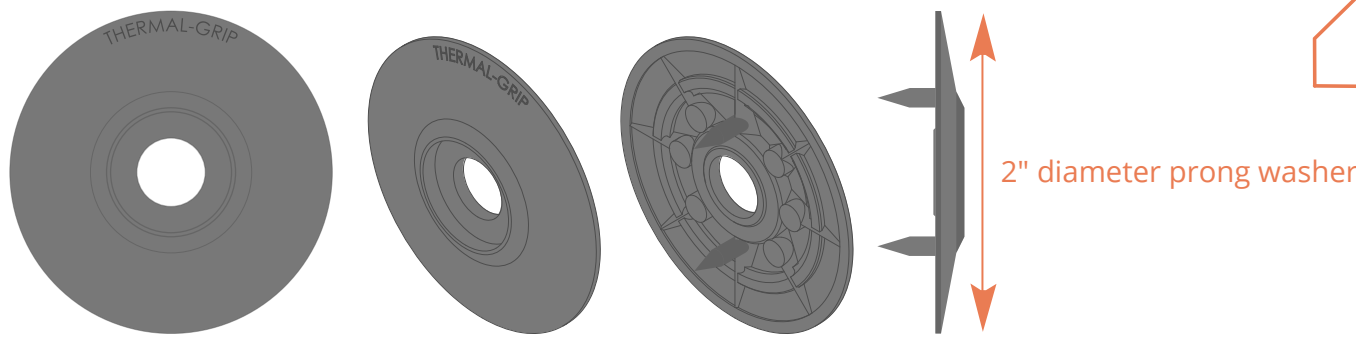
SABIC LEXAN 143 polycarbonate barrel lengths available for 1", 1.5", 2", 2.5", 3", 3.5", or 4" insulation thickness





WASHER

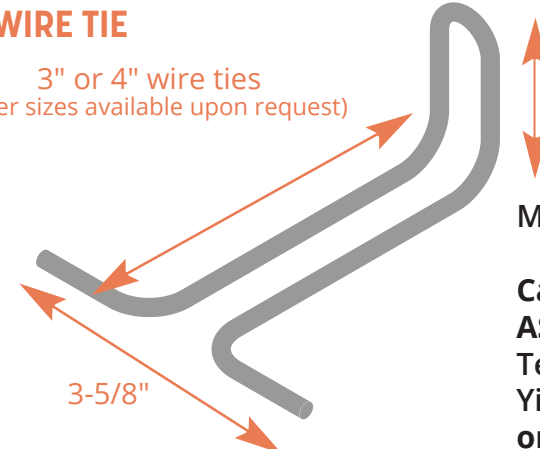
Polypropylene with carbon black UV stabilizer



62180-0200	Thermal-Grip MVA	2"	Washer
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WIRE TIE

3" or 4" wire ties
(other sizes available upon request)



1-1/4" offset per TMS 402 building code requirements

Material: 3/16"- (4.76 mm-) diameter wire

Carbon steel per ASTM A1064, hot-dip galvanized to ASTM A153, B-2; 1.5 oz. per sq ft

Tensile strength: 85-110 ksi

Yield strength: 70 ksi

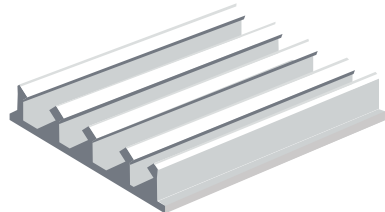
or

Type 304 stainless steel per ASTM A580

Tensile strength: 102.5-150 ksi

Yield strength: 70 ksi

SEISMIC CLIP



For seismic applications, the MVA Seismic Attachment is available to connect the 3/16"-diameter wire tie to 9-gauge horizontal reinforcing wire. The MVA Seismic Attachment allows for a uniform distribution of lateral forces to occur and conforms to the requirements of the UBC for seismic zones.

62175-0100	Thermal-Grip MVA	Seismic Clip
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CODE APPROVALS & LISTINGS



FM Global
CE European Technical
Approval ETA 19/0616



MIAMI-Dade County
State of Florida
FL# 4500-R4

DrJ Certification
Technical Evaluation Report
TR 1909-04



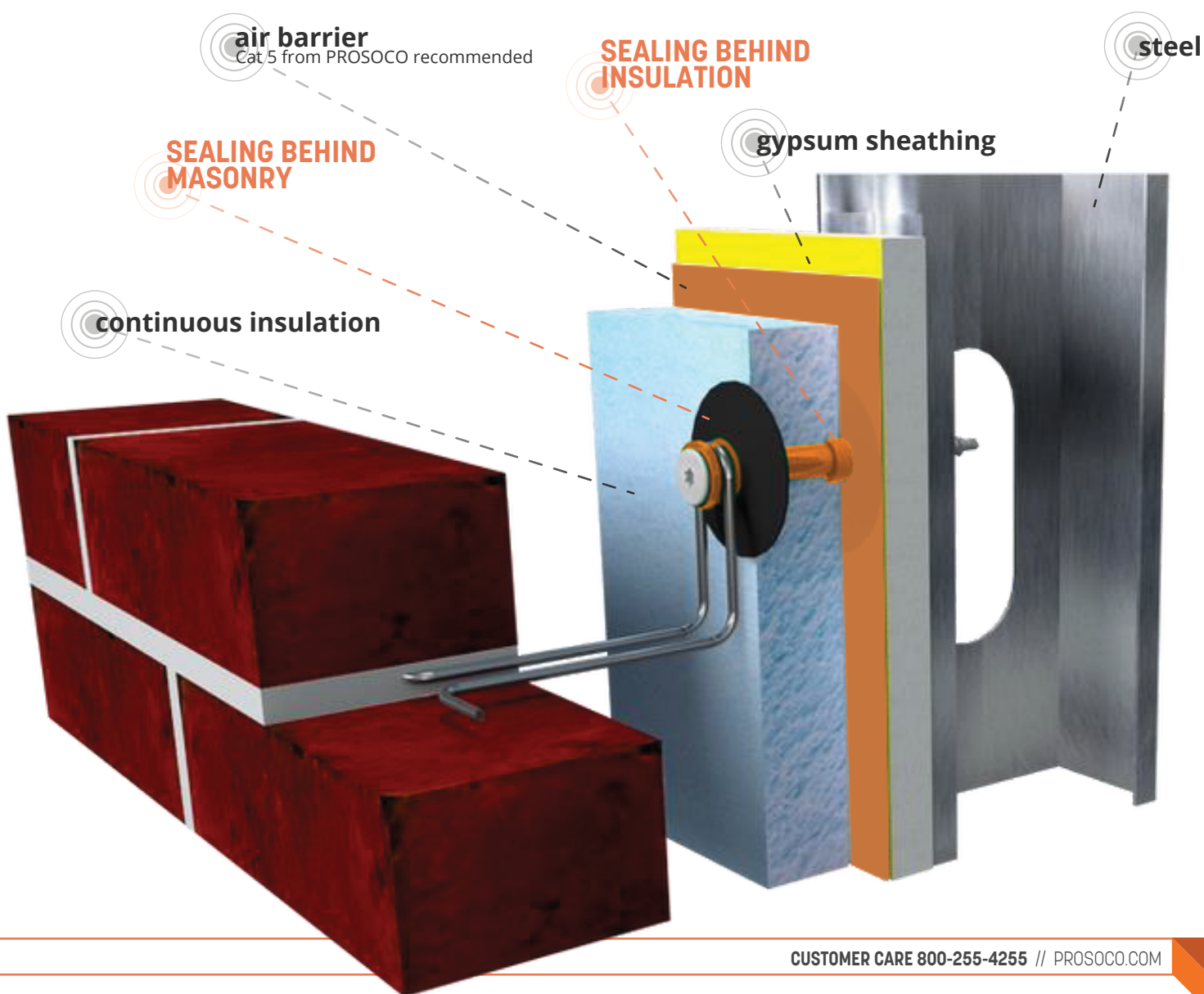
THERMAL-GRIP MVA

THERMAL ANALYSIS

Evaluated Scenarios: A third-party thermal evaluation was performed on the MVA system to determine the effective U-value and R-values within various wall assemblies. The parameters and variations of these wall assemblies are shown in Table 1.1 below. A summary of results, comparing the thermally broken MVA to a non-thermally broken veneer tie can be seen in table 1.2. To review the full report, please contact your local PROSOCO representative for a copy.

Table 1.1 THERMAL ANALYSIS EVALUATED SCENARIOS	
Parameters	Variations
Backup Wall Assembly	3-5/8" & 6" steel stud wall
Cavity Insulation	None, R-12 (for 3-5/8" cavity) and R-20 (for 6" cavity)
MVA spacing	16" x 16"
Exterior Insulation	Mineral Wool (R-4.2/in), XPS (R-5/0/in) and Polyiso (.6/in)
Insulation Depth	2", 3", 4"
Wire Tie Material	Galvanized Steel

Evaluation Assumptions: The Thermal-Grip MVA system assemblies for this report were evaluated using three-dimensional thermal modeling, which allows for the analysis of the entire wall system to provide a more comprehensive assessment of the impact of thermal bridging for the assembly that accounts for lateral heat flow. Thermal modeling was performed in general conformance with ASHRAE 1365-RP, CSA Z5010: *Calculation of Thermal Bridges in Building Enclosure Assemblies* and the ASHRAE Handbook Fundamentals. Per industry standard modeling practices, the analysis was conducted under steady-state heat flow using published material properties assuming isotropic and temperature independent thermal conductivities, and assembly information provided.



THERMAL-GRIP MVA

THERMAL ANALYSIS

Table 1.2: Masonry Tie System Thermal Performance Comparison (16" On-Center Spacing)

Anchor	Exterior Insulation Depth (Mineral Wool)	Nominal Exterior Insulation R-Value (ft ² ·hr·°F/Btu)	Whole System Theoretical R-Value (ft ² ·hr·°F/Btu)	Simulated Effective R-Value with Fasteners (ft ² ·hr·°F/Btu)	Thermal Efficiency
PROSOCO Thermal Grip MVA (Stainless Steel Tie Wire)	2"	8.4	12.2	11.1	91.0%
	3"	12.6	16.4	14.6	89.0%
	4"	16.8	20.6	17.8	86.4%
PROSOCO Thermal Grip MVA (Galvanized Steel Tie Wire) ¹	2"	8.4	12.2	11.0	90.2%
	3"	12.6	16.4	14.5	88.4%
	4"	16.8	20.6	17.7	85.9%
Zinc Alloy Barrel Anchor (Galvanized Steel Tie Wire) ²	2"	8.4	12.7	11.1	87.4%
	3"	12.6	16.9	14.2	84.0%
	4"	16.8	21.1	17.1	81.0%
Carbon Steel Adjustable Veneer Tie (Galvanized Steel Tie Wire) ³	2"	8.4	12.7	10.1	79.5%
	3"	12.6	16.9	12.5	74.0%
	4"	16.8	21.1	14.6	69.2%

Notes:

1. For the full thermal simulation report with U-value and Chi-value data in addition to wall compositions including R-12 & R-20 cavity wall insulation as well as Mineral Wool, XPS, and Polyiso exterior insulation simulations, please contact PROSOCO technical support.
2. Performance obtained from the Thermal Envelope Thermal Bridging Guide (thermalenvelope.ca) detail 5.1.67
3. Performance obtained from the Thermal Envelope Thermal Bridging Guide (thermalenvelope.ca) detail 5.1.70



Fastener Properties

Ultimate Tension AISI S904	Ultimate Shear AISI S904	Bending Yield Strength -Fyb ASTM F1575	Corrosion Resistance ASTM D6294, ETAG 006
3,390 lb	2,490 lb	185 ksi	<15% Red Rust after 30 cycles

Fastener Pull Out Values In Metal Stud¹

METAL STUD THICKNESS	24-gauge	22-gauge		20-gauge	18-gauge	16-gauge	
Yield Strength	36 ksi	36 ksi	85 ksi	36 ksi	36 ksi	36 ksi	100 ksi
MVA-Light Duty Screw	250 lbs	381 lbs	435 lbs	449 lbs	694 lbs	896 lbs	1185 lbs

¹Minimum 3/4" penetration of fastener through metal stud

Fastener Withdrawal Values in Lumber & Engineered Wood, Edge Grain²

Wood Type (Specific Gravity)		
SPF/HF (0.42)	DF/SP (0.50)	LVL (0.50)
497 lb/in	720 lb/in	381 lb/in

²Load values listed in lbs per inch of embedment (including the fastener tip). Typical installation into wood studs provides a minimum of 1-1/4" embedment, depending on sheathing type and thickness

Fastener Withdrawal Values in Engineered Wood Substrates (lbs)³

	OSB				Plywood		
Thickness	7/16"	1/2"	19/32"	23/32"	15/32"	19/32"	23/32"
MVA-Light Duty Screw	284 lb	261 lb	334 lb	693 lb	344 lb	519 lb	720 lb

³Fastener penetrates through the full thickness of board

Fastener Tension Values in Normal Weight Concrete & CMU⁴

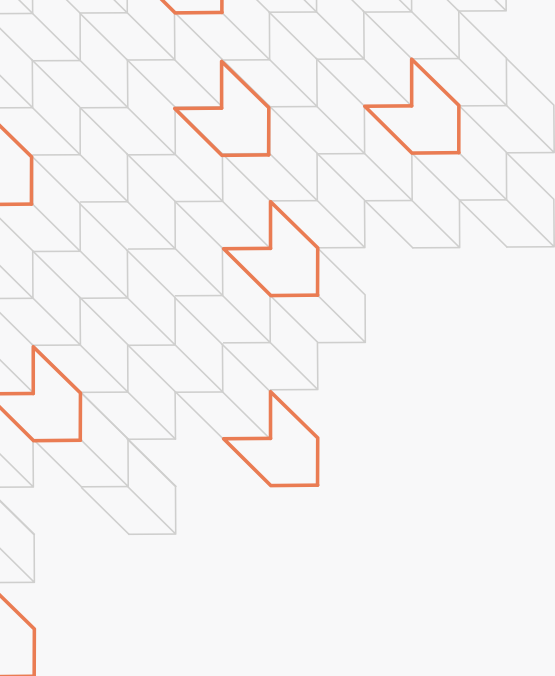
2500-psi Concrete	5000-psi Concrete	CMU ⁵
476 lb	648 lb	553 lb

⁴Fastener penetrates 1" into the concrete or CMU block, including the tip

⁵Concrete masonry unit (CMU) conforming to ASTM C90

DISCLAIMER

The performance specifications published in this PROSOCO product literature are based on controlled laboratory tests and are intended as a guideline only. They are not guaranteed in any way since building design, engineering, and construction, including workmanship and materials, are beyond the control of the manufacturer. The manufacturer recommends that pull-out tests be conducted to verify the substrate provides adequate pull-out values.



JOHN

Field Support

Our on-site service includes troubleshooting, training and installation support.



JEFF

Engineering Support

Engineering details and personalized solutions for your specific needs.



You. Us. The project.

We strive to provide the best construction products on the market, but we also know this business is about people. That's why we dedicate our human resources and services to make your job easier. Our nationwide network of sales representatives is here to do whatever we can to help solve your job-site problems.

COLLEEN

Customer Care

We're real live people who answer the phones!
Really. We're here M-F, 8a-5p, CST.

BRIAN

Field Support

We come to you to support your projects
when and where you need us.



HOW TO ORDER

Insulation Thickness

+

Backing Material Modifier

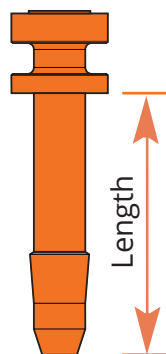
Gypsum sheathing = 1/2"
Wood sheathing = 0"
CMU/Concrete = 0"

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1. Choose your Barrel Anchor

62160-0100	1" Barrel Length
62160-0150	1.5" Barrel Length
62160-0200	2" Barrel Length
62160-0250	2.5" Barrel Length
62160-0300	3" Barrel Length
62160-0350	3.5" Barrel Length
62160-0400	4" Barrel Length



2. Choose your Wire Tie

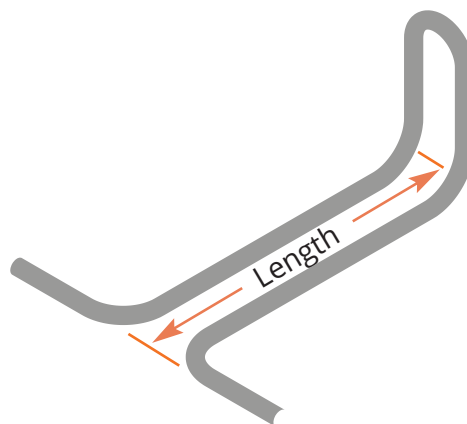
3" Tie Length = 1" to 2" Air space

4" Tie Length = 1-1/2" to 3" Air space

5" Tie Length = 2-1/2" to 4" Air space

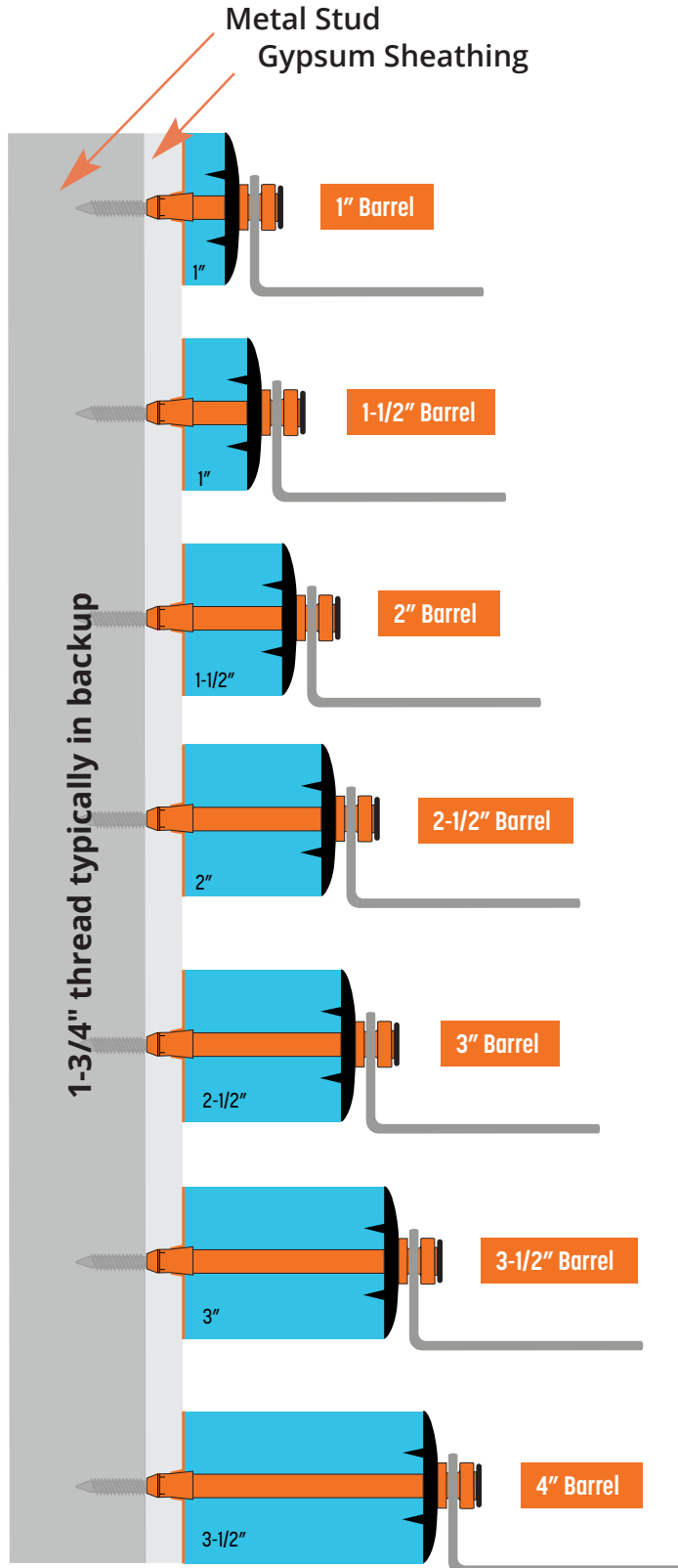
62165-0300	3" Hot-Dip Galvanized Wire Tie
62165-0400	4" Hot-Dip Galvanized Wire Tie
62170-0300	3" Stainless Steel Wire Tie*
62170-0400	4" Stainless Steel Wire Tie*
62170-0500	5" Stainless Steel Wire Tie*

*Special Order



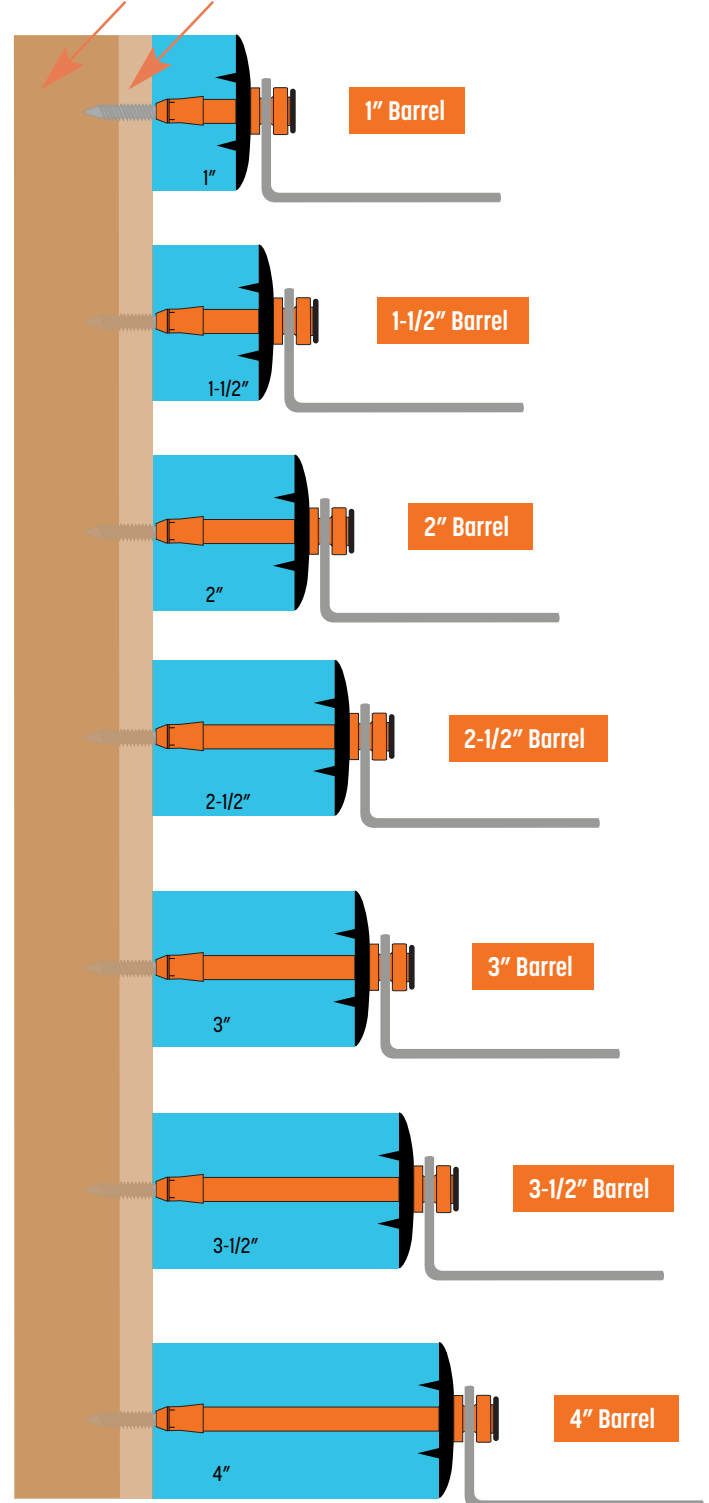
Note: Per BIA Tech Note 28D, 1" minimum air space is required dimensionally to account for construction tolerances, but an air space of 2" minimum is recommended too allow for drainage. Cavity measurements provide 5/8" minimum mortar coverage from the exterior and 1-1/2" minimum embedment into standard brick veneer .

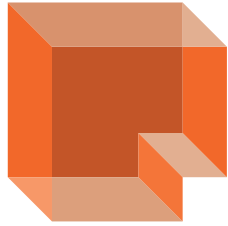
MVA barrel will recess 1/2" into the gypsum sheathing



CMU, Concrete, or Wood Stud Construction

(Wood stud + sheathing shown)





PROSOCO

You. Us. The project.

