Council of Chapter Representatives

Louisville, KY

Technical Resources Department Update

June 2, 2025

2025 New Releases

Standards, Manuals, & Guidelines:

Rectangular Industrial Duct Construction Standard 3rd

- 16’ wide panel widths (Carbon & Coated Steel, SS, Alum)
- 2.5’ stiffener spacing options
- Stainless Steel Tables for Class 2, 3 & 4 applications
- Added 500˚F Stainless Steel Operating Temperature
- Completed testing for Wall Shear Capacities for localized buckling

2025 New Releases

Standards, Manuals, & Guidelines:

Seismic Restraint Manual – Guidelines for Mechanical Systems 4th

- Revised to conform to the International Building Code (ICC)
- Updated Expansion Anchor Tables
- Added Appendix B, assist determining weight duct/piping
- New Axially Loaded Bracing Schedules
- Added 10ga Cold Formed Angle and Additional Cable Sizes
- Three concrete conditions:
    - Normal Weight - Underside/Topside
    - Light Weight - Underside
    - Light Weight - Topside

2025 Technical Projects

Standards, Manuals, & Guidelines:

Future Updates & New Releases -

- Phenolic Duct Construction Standards (2nd edition)
- Sound & Vibration Manual (2nd edition)

Task Force -

- Accepted Industry Practice For Industrial Duct Construction
- Kitchen Equipment Food Service & Kitchen Ventilation

2025 Technical Projects

Standards, Manuals, & Guidelines:

Task Force (Continued) -

- Laser Welding (New)
- Indoor Environmental Agricultural (New)
- Architectural Wall Panels/Rainscreen Systems (New)
- Clean Room Duct Fab/Install (New) - **Application Open!**

2025 Technical Projects

Standards, Manuals, & Guidelines:

- ASME AG-1 Ductwork Design

  - Requirements for performance, design, fab/install, inspection, acceptance testing, and quality assurance of equipment

  - Nuclear Reactors (Small Modular Reactors-SMR)

  - Round & Rectangular Industrial Duct Construction Standards

  - D/T ratio change to accommodate structural design

  - Compliance to AISC 360 & N690, ACI 318 & 349

  - ASME CONAGT Subcommittee (SMACNA)

2025 Technical Projects

Projects:

- HVAC Duct Construction Standards
  - 16ga TDC/TDF Calculated “EI” Reinforcement Rating
  - Calculated “I” Reinforcement Class (RC)
  - Perform Field Testing to Correlate Final Rating
  - Aluminum TDC/TDF Rating (Future)

2025 Technical Projects

Projects :

- Architectural Sheet Metal Manual

  - Coping/Fascia Re-Testing to ANSI SPRI ES-1 (IBC)

  - Gutter Pull-Out Testing to ANSI SPRI GT-1 (IBC)

  - Factory Mutual (FM) Submission Package

2025 Technical Projects

Projects:

- Spanish Language Conversion – Technical Standards (HVAC Systems Duct Design & HVAC-DCS)
- HVAC-DCS Education Videos (on website)
  - TDC/TDF, Slip & Drive, & Tie-Rods
- Future Education Videos
  - Industrial Round & Rectangular
  - Hangers
  - Large Duct

Technical Videos

HVAC Duct Construction Standards *TDC/TDF*

SMACNA HVAC Duct Construction Videos

SMACNA's Technical Department has developed on-demand videos that are explicitly catered to our contractors. These videos are designed to provide instruction on specific aspects of sheet metal fabrication and HVAC installation so that SMACNA contractors feel equipped to tackle the most complex components of the job accurately and safely. In addition to the video training, our technical team is available to support you with specific questions when you complete our inquiry form, **here**.

HVAC Duct Construction Standards *Slip and Drive Selection*

HVAC Duct Construction Standards *Tie Rods*

2025 Technical Resources

Industry Related:

ASHRAE -

- Standard 90.1 - Energy
- Standard 62.1 – IAQ/Ventilation
  - Technical Committees:
    - TC 2.6: Sound & Vibration
    - TC 2.7: Seismic Wind Flooding Resistant Design
    - TC 5.06: Control of Fire and Smoke
    - TC 5.10: Kitchen Ventilation

2025 Technical Resources

Industry Related:

ASHRAE -

- Technical Committees (Continued):
  - TC 7.02: HVAC&R Design Build
  - TC 7.09: Building Commissioning
  - TC 8.7: Variable Refrigerant Flow
  - SSPC 62.1: Ventilation & Acceptable Indoor Air Quality, Admin Committee

2025 Technical Resources

Industry Related:

NFPA -

- Technical Committees:
  - NFPA 90A/B – HVAC Systems
  - NFPA 92 – Smoke Control Systems
  - NFPA 96 – Kitchen Ventilation

AWS -

- Technical Committees:
  - D9.1 Sheet Metal Welding Code (D9 Voting Member)

2025 Technical Resources

Technical Training & Programs:

- SMACNA Chapters
- ASHRAE Meetings
- Trade Shows and Conventions
- Code Officials
- Architects
- Engineers

2025 Technical Resources

Technical Training & Programs:

SMACNA Technical University's -

- **1 Day Program** – HVAC Duct Construction, Fire Dampers, Duct/System Leakage, Large Duct Applications
- **2 Day Program** – Rectangular/Round Industrial Duct Construction Steel Stacks

ICC Preferred Provider – Continuing Education Units (CEU's)

AIA Provider – Learning Units (LU's)

Various State License Approved Staff (State Educational Credits)

2025 Technical Resources

Technical Training & Programs:

Past Programs:

- AHR Expo (Orlando, FL) – FEB 2025
- MEP Industry Show (St. Louis, MO) – APR 2025
- Technical University/Programs –
  - ❑ SMCA Hawaii – APR 2025
  - ❑ Bay Area SMACNA – MAY 2025
  - ❑ SMACNA San Diego – MAY 2025

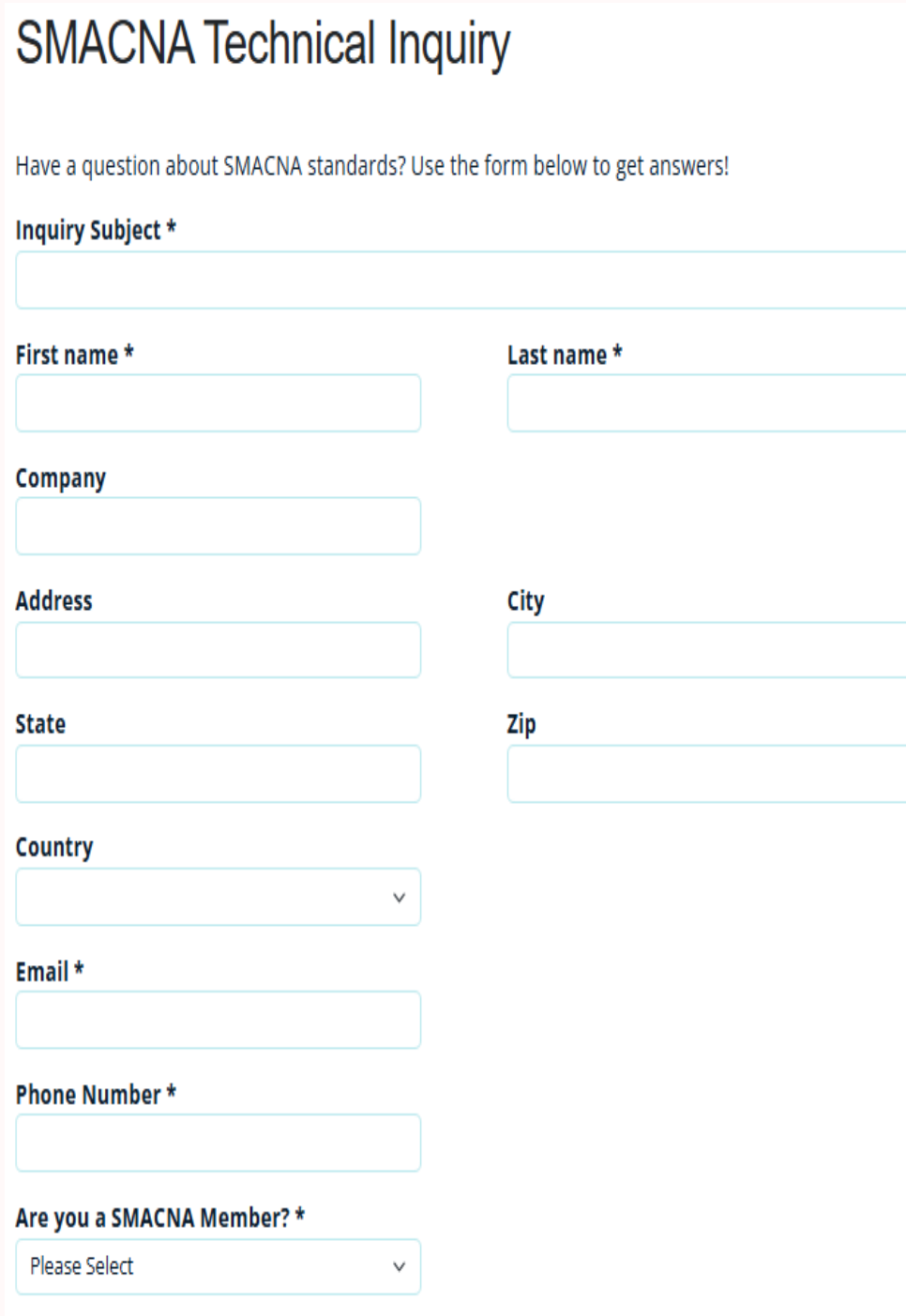
Upcoming (Tech U's):

- SMACNA Utah, SMACCA Milwaukee, SMACNA Georgia, & SMACNA Southern California & more!

Technical Inquiries

SMACNA Website:

- Technical support service for members!
- Interpret SMACNA standards for:
  - ❑ Members
  - ❑ Code Officials
  - ❑ Designers (Architects/Engineers)
- Benefits of the service to SMACNA:
  - ❑ Source of feedback for manual updates
  - ❑ Early indication of construction trends



SMACNA Technical Inquiry

Have a question about SMACNA standards? Use the form below to get answers!

Inquiry Subject *

First name * **Last name ***

Company

Address **City**

State **Zip**

Country

Email *

Phone Number *

Are you a SMACNA Member? *

Please Select

Technical Apps

SMACNA Website:

Air Duct Leakage App

This app provides suggested leakage classes using the method outlined in SMACNA's HVAC Air Duct Leakage Manual. The method used is compliant with ASHRAE 90.1, IECC, IGCC Version 2, IMC and the UMC.

Users can combine multiple sections of ductwork that vary by size and shape to calculate a total allowable leakage. This app allows the user (engineers, architects, designers, and contractors) to easily estimate the air duct leakage and determine the pass/fail mark for properly specified Duct Air Leakage Tests (DALT).

Technical Apps

SMACNA Website:

Downspout & Gutter Sizing Calculator

This app allows you to easily and accurately size downspout and gutters using the methods and formulas covered in SMACNA's Architectural Sheet Metal Manual (ASMM).

- Rainfall Wizard – Rain Intensity per ASMM Table 1-2
- Manually enter Design Area or use Design Area Wizard

Technical Apps

SMACNA Website:

Duct-U-Lator

This app works as a Ductulator and Pressure Loss (friction) calculator.

- Converts Duct Shape or Size to Another
- Determines Sizes for a Given Friction Rate
- Determines Sizes for a Given Velocity
- Determines Sizes for a Given Velocity and a Friction Loss Rate (simultaneous output)
- Determines the Airflow Rate for a Given Size and Friction Loss Rate
- Calculates Friction Loss

Technical Apps

SMACNA Website:

Exhaust System Design

This app will help create Web-based Exhaust Designs using the Constant Velocity Design Method

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- Enter Air Properties, Select Standard or Non-standard Conditions
- Select I-P (English) or SI (Metric) Units
- Add New Projects or Edit Existing Ones
- Draw a Single-Line Exhaust System Schematic with Available Icons Within a Web Interface
- Allows for Fitting and Hood Inputs with Loss Coefficients
- Allows for Duct Lengths and Calculates Friction Losses
- Calculates Fittings and Duct Total Pressure Losses
- Output Includes by Numbered Section with Sized Ductwork and Fittings
- Output also Includes Section Pressure Losses, Path Pressure Losses and Total System Pressure Required

Technical Apps

SMACNA Website:

HVAC Duct Construction App

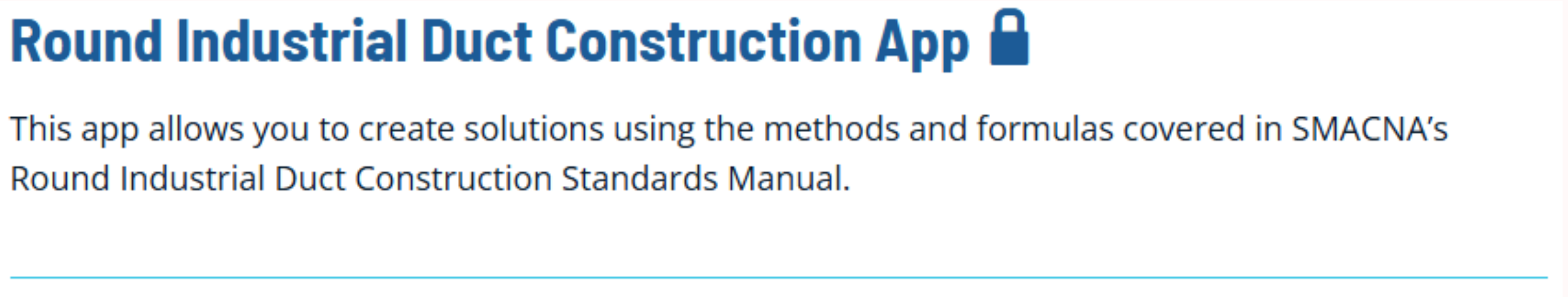
This app allows you to create table driven solutions using the methods and formulas covered in SMACNA's HVAC Duct Construction Standard (Metal and Flexible).

Rectangular Industrial Duct Construction App

This members-only app allows you to create table driven solutions using the methods and formulas covered in SMACNA's Rectangular Industrial Duct Construction Standards Manual.

Technical Apps

SMACNA Website:



- App Updates
- Future Apps?

THANK YOU!

SMACNA Resources available:

- Call SMACNA Technical Services
- Submit a Technical Inquiry
- Geoff Parks – Phone: (703) 803-2980, Email: gparks@smacna.org