

Download Smacna Duct Design Manual

The SMACNA HVAC Systems Duct Design manual is intended to be used in conjunction with the American Society of Heating, Refrigerating and Air Conditioning Engineers, Inc. (ASHRAE) Fundamentals Handbook. The basic fluid flow equations are not included here, but may be found in the ASHRAE handbook. Information Required for Duct Construction

1. A comprehensive duct layout indicating sizes, design airflows, pressure class, and routing of the duct system.
2. The types of fittings to be used based on the designer's calculations of fitting losses (i.e., square versus 45 ° entry taps, conical versus straight taps, etc.).

SMACNA standards and manuals address all facets of the sheet metal and HVAC industry — including duct construction and installation, indoor air quality, energy recovery, roofing and smacma sheet metal, welding, and commissioning. It reviews materials and reinforcement of duct systems, as well as assembly and supports of ducts.

SMACNA HVAC SYSTEMS DUCT DESIGN MANUAL, FOURTH EDITION –DECEMBER 2006, Table A-1, pg A.4. A common value to remember is 0.0003 ft for standard galvanized material which is what the friction chart is based on. The Colebrook equation value of f must be solved for iteratively