



Friction Rate Worksheet

Step 1) Manufacturer's Blower Data

External static pressure (ESP) = _____ IWC CFM = _____

Step 2) Device Pressure Losses

Direct expansion refrigerant coil	_____
Electric resistance heating coil	_____
Hot water coil	_____
Heat exchanger	_____
Low efficiency filter	_____
High or mid-efficiency filter	_____
Electronic filter	_____
Humidifier	_____
Supply outlet	_____
Return grille	_____
Balancing damper	_____
Other device	_____
Total device losses (DPL)	_____

Step 3) Available Static Pressure

ASP = ESP - DPL = (_____ - _____) = _____ IWC

Step 4) Total Effective Length (TEL)

Supply-side TEL + Return-side TEL = (_____ + _____) = _____ FEET

Step 5) Friction Rate Design Value (FR) $\frac{ASP \times 100}{TEL}$

FR value from friction rate chart = _____

