SVE Zone Header Sizing and Friction Loss Calculation

Parameters:		
Vacuum at pipe inlet	1.00	"HG
Temperature	60	Deg F
Flow Rate	300	SCFM
Pipe ID	4.03	Inches
Length of Pipe	360	FT
Calculated Paramters:		
P actual =	14.21	PSIA
Kd =	1.01	
Flow Rate	304.5	ACFM
Actual Velocity	3,437.2	FPM

Comments:	**Calc. by**	**Check by**
Design VER Casing Vacuum	TCK	BOD
Worst Case Zone TF-7: 6 wells operating at 50 SCFM EA or 300 SCFM		

Results:			
Friction Loss	0.046	"H2O/Foot Pipe	
Friction Loss	4.60	"H2O/100 FT Pipe	
Friction Loss	0.0034	"HG/Foot Pipe	
Friction Loss	0.34	"HG/100 FT Pipe	
Total Friction Loss	16.55	"H2O	
Total Friction Loss	1.220	"HG	
Manifold Est. Head Loss	0.500		
KO Tank Est. Head Loss	0.500		
Vacuum at Blower Inlet	3.22	"HG	O.K. < 5"HG
	43.67	"H2O	OK - blower Capable of 750 SCFM at 5"HG Vac

Based on Moody Equation - uses ACFM in formula and Kd Adjusment Factor
Mechanical Engineering Reference Manual

Nominal D	Actual ID
2	2.07
3	3.07
4	4.03
6	6.07
8	7.98
10	10.02
12	12.00