

# Proper Temperature Split On Furnaces (DeltaT)

The temperature rise is the temperature difference between the supply temperature and the return temperature. Take temperatures at the supply plenum and the return plenum. We do not want the temperature rise on our furnaces to be above 60 degrees.

## Airflow Calculations:

The airflow of a gas furnace can be calculated using the following formula:

$$\text{CFM} = (\text{Input} \times \text{Efficiency}) / (1.08 \times \text{Temperature Rise})$$

The following tables are the product of this formula for an 80% and 90% efficient appliance:

Temp Rise (F)	80% Efficient Furnace Input				
	50,000	75,000	100,000	125,000	150,000
20	1,852	2,778	3,704	4,630	5,556
25	1,481	2,222	2,963	3,704	4,444
30	1,235	1,852	2,469	3,086	3,704
35	1,058	1,587	2,116	2,646	3,175
40	926	1,389	1,852	2,315	2,778
45	823	1,235	1,646	2,058	2,469
50	741	1,111	1,481	1,852	2,222
55	673	1,010	1,347	1,684	2,020
60	617	926	1,235	1,543	1,852
65	570	855	1,140	1,425	1,709
70	529	794	1,058	1,323	1,587

Temp Rise (F)	90% Efficient Furnace Input			
	60,000	80,000	100,000	120,000
20	2,500	3,333	4,167	5,000
25	2,000	2,667	3,333	4,000
30	1,667	2,222	2,778	3,333
35	1,429	1,905	2,381	2,857
40	1,250	1,667	2,083	2,500
45	1,111	1,481	1,852	2,222
50	1,000	1,333	1,667	2,000
55	909	1,212	1,515	1,818
60	833	1,111	1,389	1,667
65	769	1,026	1,282	1,538
70	714	952	1,190	1,429