
A fan is rated at standard air (0.075 lb/ft^3). Find the corrected static pressure ($\text{SP} \times \text{density ratio}$).

Problem	Answer	Problem	Answer
1. Rated 1.0 in. w.c.; actual air 0.068 lb/ft ³		3. Rated 0.8 in. w.c.; actual air 0.080 lb/ft ³	
2. Rated 2.5 in. w.c.; actual air 0.060 lb/ft ³		4. Mass flow change at 0.064 vs 0.075 lb/ft ³ (same CFM)	

Answer key – Density corrections

#	Problem	Answer
1	Rated 1.0 in. w.c.; actual air 0.068 lb/ft ³	0.907 in. w.c.
2	Rated 2.5 in. w.c.; actual air 0.060 lb/ft ³	2.000 in. w.c.
3	Rated 0.8 in. w.c.; actual air 0.080 lb/ft ³	0.853 in. w.c.
4	Mass flow change at 0.064 vs 0.075 lb/ft ³ (same CFM)	-14.7%

Notes