

Tech Tip External Static Pressure



CFM is critical to achieve prior to ever checking refrigerant pressures!!!!

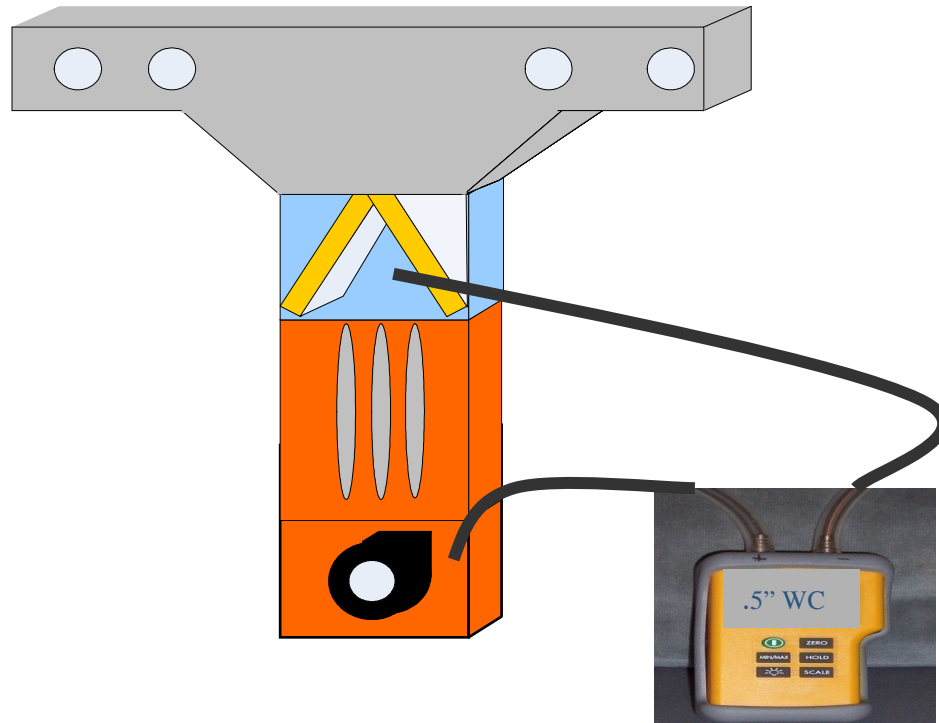
A manometer can be used to identify the airflow of an air conditioning system.

Using the manometer, insert a hose into the return air after the filter. With the blower running on cooling speed the reading will be a negative number like $-.2''$ Water Column.

Next, insert a lead between the outlet of the furnace and the evaporator coil. This reading may be something like $.3''$ Water Column.

Add the 2 whole numbers together to get an External static pressure of $.5''$ WC.

Some manometers have 2 ports which when both are installed as described, will do the math for you as seen in the illustration below.



You can use this information and the blower Data chart in the Install instructions to see what CFM is being delivered.

In this example Med-high speed is being used. With the $.5''$ measured you have established the system is moving 1215 CFM.

With a typical 400 CFM per ton, this system is moving approximately 3 tons of air.

Model Number	Heating Input (Btuh)	Motor Speed	External Static Pressure (Inches Water Column)															
			0.1		0.2		0.3		0.4		0.5		0.6		0.7		0.8	
			CFM	Rise	CFM	Rise	CFM	Rise	CFM	Rise	CFM	Rise	CFM	Rise	CFM	Rise	CFM	Rise
SA072()-24B Bottom Return	72,000	High*	1685	32	1640	33	1605	33	1565	34	1515	35	1475	36	1415	38	1345	40
		Med-High	1330	40	1295	41	1275	42	1245	43	1215	44	1185	45	1135	47	1070	50
		Med-Low**	1175	45	1155	46	1125	47	1100	48	1075	50	1045	51	1010	53	955	56
		Low	930	57	895	60	885	60	850	63	825	65	800	67	770	69	740	72