

**Ask Jon Eakes**

# **Small ducting air conditioning systems.**

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Air conditioning is often difficult to install into an existing house that uses radiant heating simply because it requires a lot of large air ducting. Space Pak from Mestek Canada in Toronto is a system that uses ducts small enough to slide into existing 2x4 hollow walls. There is a basic air conditioning compressor outdoors. Then there is a heat exchanger and fan system someplace inside the house, often in the attic. From this is a large round plenum, into which are attached the small insulated delivery ducts. As you can see these small ducts can easily be snaked through just about any passageway. There are some important differences between this system and regular air conditioning. Here the air moves much faster, in order to deliver the necessary cooling through the smaller ducts. This actually allows them to cool the air more, which removes more humidity than with most systems. With this faster moving air, it is important to have quality output grills to avoid whistling. In addition, the last three feet of ducting before a ceiling grill is a special sound muffler. Careful installation is a must and everything is both insulated and sealed air tight. Just look at them pulling that duct through the ceiling hole. Several feet away they are working from the back of a closet, totally avoiding any wall repairs although snaking ducting all over this house.

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