

**PRINCIPLES OF MODULAR DUCT CONSTRUCTION**

In designing, fabricating and installing fibrous glass duct systems, the principle of Modular Duct Construction (MDC) is used. This is based on use of the 48" (1220mm) (nominal)\* duct module for both straight duct runs and fittings of most types.

The remaining pages of this section show how these objectives are met using the MDC principle.

Use of the MDC principle enhances productivity, minimizes the number of circumferential joints, simplifies fabrication of fittings both in the shop and on the job, and improves the quality of workmanship.

\*For actual installed length, subtract shiplap length from nominal:

DUCT BOARD THICKNESS	SHIPLAP LENGTH	INSTALLED DUCT LENGTH
1" (25mm)	7/8" (22mm)	47 1/8" (1200mm)
1 1/2" (38mm)	1 3/8" (35mm)	46 5/8" (1185mm)
2" (51mm)	1 7/8" (48mm)	46 1/8" (1170mm)

Application of the MDC principle involves the following design considerations:

- The modified shiplap groove is used in preference to the V-groove method (see page 2-4).
- Elbows and tees are designed to be throatless.
- Transitions are extended to maintain the module dimension.
- Sweep and radius fittings are not used.
- The male shiplap end of the duct section is always installed facing the fan or equipment.
- Branch taps should be made from shiplap panels wherever possible.
- The integrity of the module should be maintained as consistently as possible throughout the system during design, fabrication and installation. Shop drawings and blueprints should reflect this.

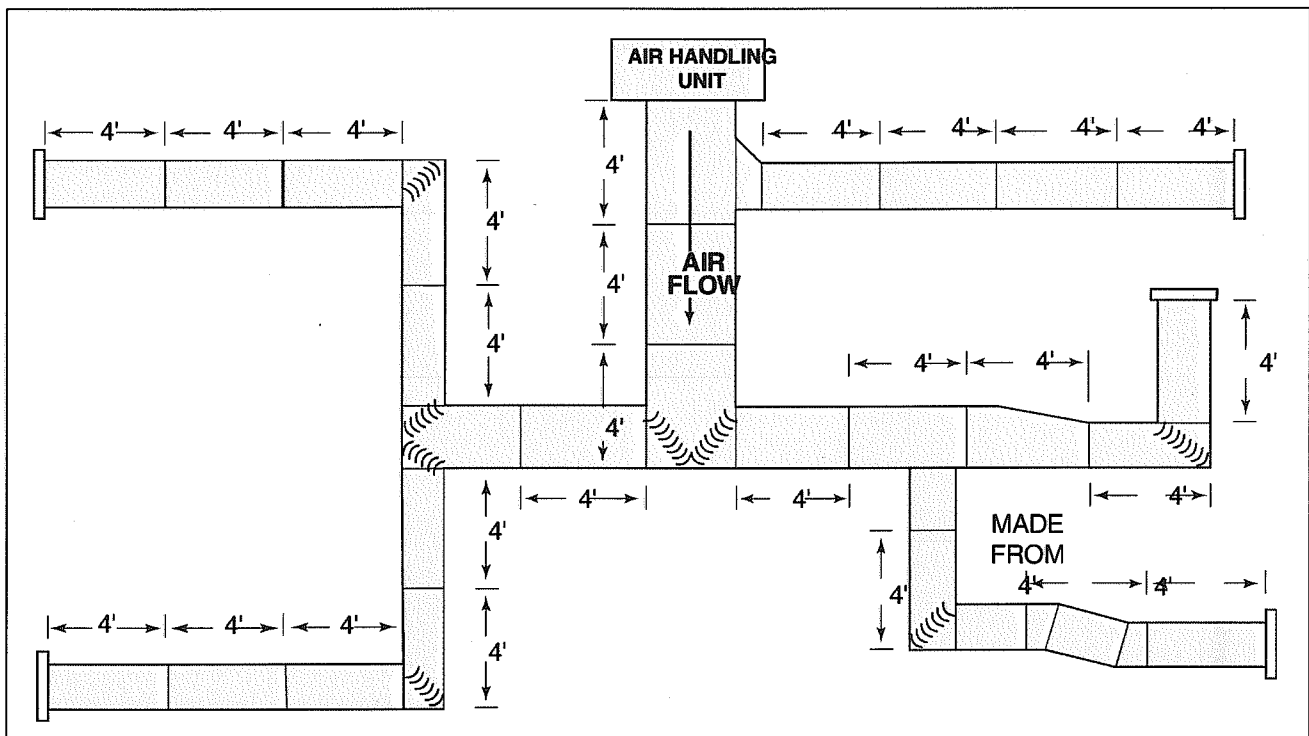


Fig. 2-1. Modular Duct Construction (MDC) Layout.