Using Table 13 on page 58 in the Guide & Workbook what is the preferred noise criterion for selecting diffusers in nonindustrial applications?

Using Table 13 on page 58 in the Guide & Workbook what is the NC value for a 27×27 diffuser providing 3,600 CFM of airflow

Using Figure 27 on page 60 in the Guide & Workbook, if a grill was going to be placed in a corner which of the 4 grille types below would you select?

Using Table 13 on page 58 in the Guide & Workbook what would the face velocity be for a 9×9 Corner diffuser at 0.050 IWC of pressure loss?

Using Table 13 on page 58 in the Guide & Workbook what would the throw be in the X & Y directions for a 9×9 corner diffuser at 0.050 IWC of pressure loss?

Using Table 13 on page 58 in the Guide & Workbook what would the Ak be for a 12×12 corner diffuser?

Using Table 13 on page 58 in the Guide & Workbook what would the CFM be for a 6×6 corner diffuser at 0.020 IWC of pressure loss?

Using Table 14 on page 59 in the Guide & Workbook what would the recommended cooling temperature differential for out selected two way diffuser in an 8 foot ceiling application?

Using Table 14 on page 59 in the Guide & Workbook what would the recommended CFM for out selected two way diffuser in an 11 foot ceiling application?

Field Notes:

Everything covered in this lesson for supply diffusers is also true for return grilles. They will have identical charts (except for the numbers). In the field it is very common for supply registers to be noisy because they are undersized it is even more common for return grilles to be undersized and noisy. Under sizing also often causes the entire system to have low airflow due to the added pressure drops. Custom or site built supply and return grilles should always be evaluated to see what the pressure drop is and if they are causing a major restriction on the HVAC system. As discussed earlier, a larger blower motor may be needed to generate the higher RPMs needed to overcome the pressure drops across undersized supply diffusers and return grilles. Warning: the resulting increase in noise level may not be welcomed by the customer! The best approach is always to try and increase the diffuser or grill size so it accommodates the design airflows at a reasonable noise level.