

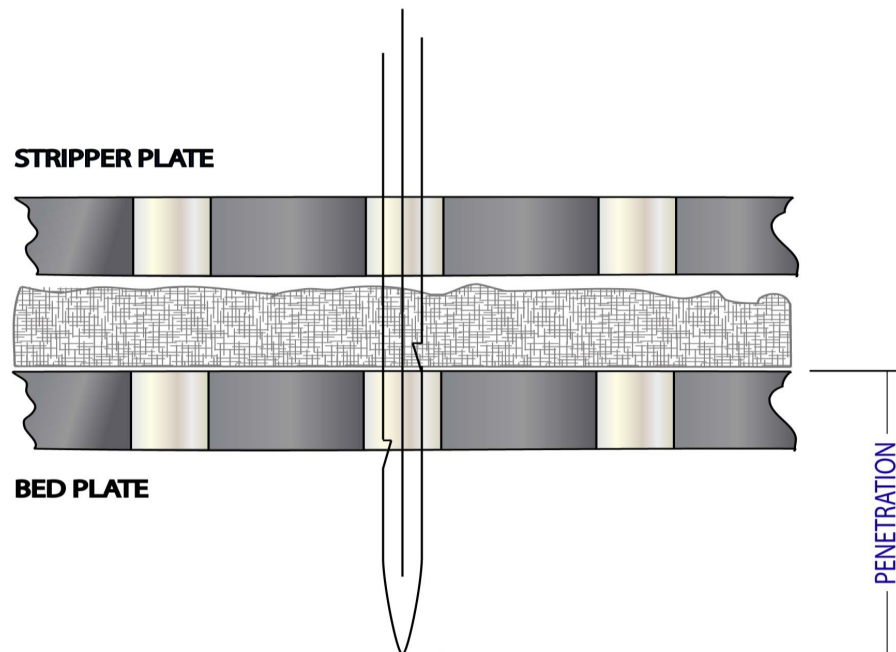


## NONWOVEN TERMS

For the informed employee

### Penetration

Needling occurs as the barb(s) of the needle grab fibers and drag them through the surface of the bed plate. A stationary surface (the bed plate) must hold the fabric while needles pierce through it. The distance between the surface of the bed plate which is against the fabric and the tip of the needle is called needle penetration. This distance is measured in millimeters. As a general rule the deeper the needle penetrates into the bed plate, the more needling. However, the needle can penetrate only so far or bad things can happen. The intermediate blade could get into the fabric and cause visible holes. The needle dwell time in the fabric could be too long and the needle could bend or break. It is useless to go into the bed plate beyond the top barb on the needle. Fortunately needles come in many different configurations with respect to distance from tip to first barb, numbers of barbs, and distance between barbs. This usually enables a combination to be found that will work well for the type of fabric being produced. In the picture below, the barb that has gone into the bed plate is effective in needling the fabric whereas the barb that is just above the bed plate accomplishes very little if any needling.



“Being busy does not always mean real work. The object of all work is production or accomplishment and to either of these ends there must be forethought, system, planning, intelligence, and honest purpose, as well as perspiration. Seeming to do is not doing. “

Thomas Edison

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