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On complete constant mean curvature vertical multigraphs in $E(\kappa, \tau)$

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We prove that any complete surface with constant mean curvature in a homogeneous space $E(\kappa, \tau)$ which is transversal to the vertical Killing vector field is, in fact, a vertical graph. As a consequence we get that any orientable, parabolic, complete, immersed surface with constant mean curvature H in $E(\kappa, \tau)$ (different from a horizontal slice in $S^2 \times \mathbb{R}$) is either a vertical cylinder or a vertical graph (in both cases, it must be $4H^2 + \kappa \leq 0$).

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