apply
$$(\langle \mathbf{R}_x \mathbf{R}_y, \mathbf{R}_x \mathbf{t}_y + \mathbf{t}_x \rangle, \mathbf{p}) = \mathbf{R}_x \mathbf{R}_y \mathbf{p} + \mathbf{R}_x \mathbf{t}_y + \mathbf{t}_x$$