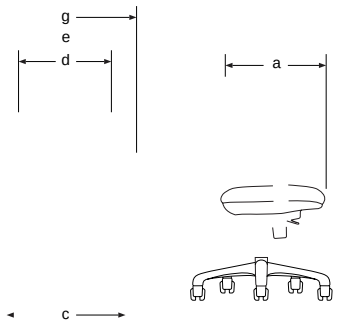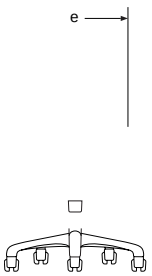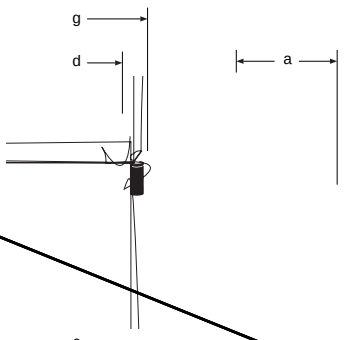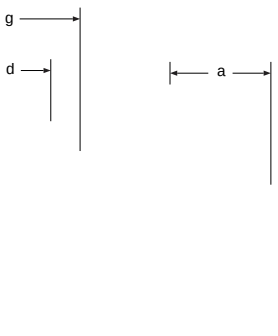Speci cations