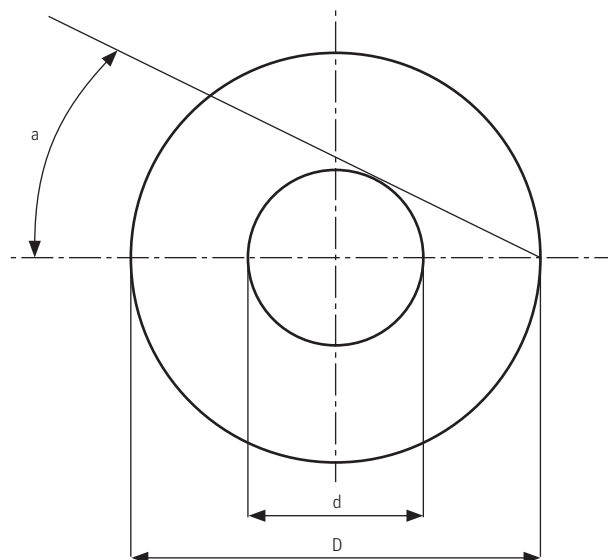


Choice of the Tube

Guidelines for selecting the optimal tube dimensions for spinning and twisting applications

The selection of the correct tube geometry is essential for stable package formation, efficient yarn unwinding, and optimum processing performance. The table below provides recommended ratios between tube dimensions and cone angle for spinning and twisting applications.



	Spinning				Twisting		
	$\frac{D}{d}$	$\frac{d}{D}$	α		$\frac{D}{d}$	$\frac{d}{D}$	α
Very good	1.9	0.52	31°		2.3	0.43	25°
Good	2	0.5	30°		2.45	0.41	24°
Normal	2.1	0.47	28°	max	2.5	0.4	23°
Acceptable	2.3	0.43	25°		2.6	0.38	22°
Bad	2.4	0.41	24°	min	2.9	0.34	20°
Impossible	2.5	0.4	23°		3.2	0.31	18°

D = tube top diameter

d = tube base diameter

α = cone angle

$(D - d) / d$ = taper ratio