

TECHNICAL REFERENCE · PRINT & KEEP

Pneumatic Caster Sizing: 8", 10", Tire Pressures

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Quick answer. Pneumatic casters standardize on 8, 10, 12, and 16 inch wheels built around hand-truck tire sizes. A 10 inch 4.10/3.50-4 tire carries roughly 300 to 350 lb per caster at its rated 30 psi, and capacity falls fast below that pressure. Size per-caster load as total weight divided by 3 on a 4-caster rig, spec air-filled for cushioning, foam-filled for flat-free uptime, and semi-pneumatic for light loads under about 200 lb per wheel.

Foam-Filled or Air-Filled: Which Should You Spec?

Attribute	Air-Filled	Foam-Filled (Flat-Free)
Cushioning	Best; tunable via pressure	Good; 10 to 15% firmer
Flats	Punctures and pinch flats	None
Pressure maintenance	Weekly to monthly checks	None
Capacity stability	Decays as pressure drops	Constant
Weight per 10 in wheel	Baseline	Approx. 2 to 4 lb heavier
Upfront cost	Baseline	+30 to 60%
Best for	Fragile cargo, rough washboard terrain	Fleets, rental, debris-strewn yards



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