

TECHNICAL REFERENCE · PRINT & KEEP

Casters for Cracked Floors, Joints and Thresholds

One-page quick reference · Full engineering guide + live tools at the QR codes below

Quick answer. Uneven floors call for three spec tools: large-diameter wheels of 8 inches or more to span cracks and expansion joints, pneumatic or foam-filled wheels to absorb shock, and spring-loaded rigs to keep all four wheels in contact. Expansion joints run 3/8 to 1 inch wide, and wheel diameter should be at least double the defect width.

Pneumatic and Foam-Filled Wheels

Wheel Type	Shock Absorption	Max Load per Caster	Maintenance	Cost Multiplier
Pneumatic (air-filled)	Excellent	600 lb	Pressure checks, patch kits	1x baseline
Foam-filled (closed-cell)	Very good	800 lb	None	2.5 to 3x
Semi-pneumatic (hollow)	Good	500 lb	None	1.5x
Solid rubber	Fair	1,000 lb	None	1.2x
Solid 95A PU on iron	Poor (transmits shock)	2,500 lb	None	2x
Solid 85A PU on iron	Fair	1,500 lb	None	2.2x

Defect-to-Spec Decision Matrix

Floor Defect	Defect Size	Wheel Diameter	Compound	Rig Type
Expansion joints, indoor	3/8 to 1/2 in	8 in	95A polyurethane	Standard plate
Expansion joints, heavy cart	1/2 to 3/4 in	10 in	95A PU or phenolic	Kingpinless plate
Dock transitions	1/4 to 3/4 in step	10 in	85A PU or solid rubber	Spring-loaded
Broken concrete (indoor)	1/2 to 2 in chip	8 to 10 in	85A PU or solid rubber	Standard or spring-loaded
Outdoor gravel yards	1 to 3 in loose rock	10 to 16 in	Pneumatic or foam-filled	Standard plate
Outdoor broken asphalt	1/2 to 2 in	10 in	Pneumatic or 85A PU	Spring-loaded
Mixed indoor-outdoor	varies	10 in	Foam-filled	Spring-loaded



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