

TECHNICAL REFERENCE · PRINT & KEEP

# Gate Caster Selection: V-Track & Spring-Loaded

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

**Quick answer.** Pick a spring-loaded gate wheel for swing gates over open ground: the spring keeps the tread planted through grade changes of about plus or minus 1 inch while relieving the hinges of roughly half the gate weight. Use V-groove steel wheels on embedded angle track for slide gates and any gate over about 16 ft or 600 lb. Size the wheel to half the gate weight times a 2x shock factor, and square the frame before mounting anything.

## How do you size a gate caster by weight and span?

Gate span	Gate weight	Recommended hardware	Wheel diameter
Up to 6 ft	Under 150 lb	Single spring-loaded dual-wheel bracket	4 in
6 to 10 ft	150 to 300 lb	Spring-loaded bracket, heavy spring	6 in
10 to 16 ft	300 to 600 lb	Two spring-loaded brackets or semi-pneumatic wheel kit	8 in
Over 16 ft	Over 600 lb	V-groove wheels on embedded angle track	6 to 8 in steel
Slide gate, any span	Any	V-groove on track, two wheel minimum	4 to 8 in steel

## Which wheel compound survives outdoor service?

Compound	Best surface	Typical 8 in capacity	Weak point outdoors
Solid rubber	Concrete, asphalt	400 to 500 lb	Hardens and cracks with UV over years; quiet and flat-proof meanwhile
Semi-pneumatic	Gravel, grass, dirt	250 to 350 lb	Lower capacity; foam core tolerates punctures a pneumatic cannot
Pneumatic	Loose gravel, turf, sand	250 to 300 lb	Goes flat; needs pressure checks every season
Polyurethane on iron	Smooth concrete track areas	900 lb and up	Standing water and constant wet soil attack the bond over time
Cast iron / forged steel V-groove	Steel track only	1,500 lb and up	Surface rust if unpainted; zero UV or creep concern



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