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High Temp & Freezer Casters: -40F to 600F Spec Guide

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Quick answer. Extreme-temperature casters span -40F blast freezers to 475F bakery ovens. Standard urethane degrades below 0F and above 180F, and standard bearing grease fails past 300F. Spec by temperature band: low-temp compounds for freezer service, standard wheels from 32F to 180F, and phenolic or high-temp nylon with high-temperature grease for oven service above 325F.

Temperature-to-Wheel-Material Matrix

Temperature Band	Primary Wheel	Secondary Option	Avoid	Typical Application
-65°F to -20°F	Glass-filled nylon	Cast iron	Urethane, rubber, phenolic	Cryogenic/pharma freezers
-20°F to 32°F	Glass-filled nylon	High-cold-spec urethane	Standard urethane, rubber	Blast freezer racks
32°F to 180°F	Urethane 85A-95A	Phenolic, cast iron	None for general duty	Ambient production
180°F to 325°F	Phenolic	High-temp urethane	Standard urethane, rubber	Proofing, washdown steam
325°F to 475°F	Forged steel	Cast iron w/ high-temp grease	Any polymer	Bakery oven racks
475°F to 600°F	Forged steel, air-cooled	Ductile iron	All polymer + standard cast iron	Curing and heat-treat ovens

Rig, Grease, and Fastener Strategy

Component	Freezer Spec	Ambient Spec	Oven Spec
Grease	Synthetic low-temp (-65°F)	NLGI 2 lithium	Kluber Barrierta 475°F
Rig plate	Zinc or stainless	Painted steel	304 stainless
Kingpin	Kingpinless preferred	Kingpin or kingpinless	Kingpinless mandatory
Fastener	Grade 8 zinc	Grade 5 or 8	Grade 8 stainless A4-80
Raceway seal	Silicone	Nitrile	Viton or dry bronze
Re-torque interval	30d + quarterly	Annual	30d + monthly



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