NEC Article for Demand Factors: Cheat Sheet

Article 220 summary in our own words | azadtechhub.com

1. Where demand factors live

Article 220, Part III (standard method, 220.40 to 220.61) and Part IV (optional methods, 220.80 to 220.88). Factors apply to feeder and service loads, not individual branch circuits.

2. Main factors

Load	Factor	Where
Dwelling lighting	First 3,000 VA at 100%, 3,001 to 120,000 at 35%, over 120,000 at 25%	Table 220.42
Hotels and motels	First 20,000 at 50%, next 80,000 at 40%, rest 30%	Table 220.42
Hospitals	First 50,000 at 40%, rest 20%	Table 220.42
Warehouses	First 12,500 at 100%, rest 50%	Table 220.42
Non-dwelling receptacles	First 10 kVA at 100%, rest 50%	220.45 (220.44 before 2023)
4+ fastened appliances (dwelling)	75% (not ranges, dryers, heating or AC)	220.53
Electric dryers	5,000 W or nameplate; 100% for 1 to 4, then 85, 75, 65, 60, 55, 50, 47% for 5 to 11	220.54
Household range up to 12 kW	Counts as 8 kW	Table 220.55
Commercial kitchen	100% for 1 to 2, 90% for 3, 80% for 4, 70% for 5, 65% for 6+	Table 220.56
Noncoincident loads	Count only the larger (heating or cooling)	220.60
Optional dwelling method	First 10 kVA at 100%, remainder at 40%	220.82

3. Worked example: 2,000 sq ft all-electric home, 240 V

Load	After factor
Lighting 6,000 + small-appliance 3,000 + laundry 1,500 = 10,500 VA: 3,000 at 100% + 7,500 at 35%	5,625 VA
Range (Table 220.55)	8,000 VA
Dryer	5,000 VA
Four fastened appliances, 4,500 VA at 75%	3,375 VA
Larger of heat (10,000) or cooling (4,800)	10,000 VA
Total: 32,000 VA / 240 V = 133 A	Next standard service: 150 A

4. Quick answers

• Article 90: introduction (purpose, scope, enforcement). No demand factors.
• Article 200: use and identification of grounded conductors.
• Editions: section numbers move between editions (for example, non-dwelling receptacles 220.44 to 220.45 in 2023). Always check the adopted edition.

Educational summary, not the NEC text. Verify against the edition and local amendments your inspector enforces. Read the NEC free on NFPA's website. © Azad Circuit Hub.