



NATIONAL FIRE PROTECTION ASSOCIATION

The Leading Information and Knowledge Resource on Fire,
Electrical, and Related Hazards

National Electrical Code® Handbook (2026)

Replacement Page due to Errata

Note that this page incorporates the Errata listed below.

Errata

Page 103, Table 120.54 correct table as follows:

Table 120.54 Demand Factors for Household Electric Clothes Dryers

Number of Dryers	Demand Factor (%)
1–2	100
3–5	85 80
6	75
7	65
8	60
9	55
10	50
11	47
12–23	47% minus 1% for each dryer exceeding 11
24–42	35% minus 0.5% for each dryer exceeding 23
43 and over	25%

load current rating be less than the rating of the largest branch circuit supplied.

Exception: If reduced loading of the conductors results from units operating on duty-cycle or intermittently, or from all units not operating at the same time, the authority having jurisdiction shall be permitted to grant permission for feeder and service conductors to have an ampacity less than 100 percent if the conductors have an ampacity for the load so determined.

N 120.52 Small-Appliance and Laundry Loads — Dwelling Unit.

(A) Small-Appliance Circuit Load. In each dwelling unit, the load shall be calculated at 1500 volt-amperes for each 2-wire small-appliance branch circuit as covered by 210.11(C)(1). Where the load is subdivided through two or more feeders, the calculated load for each shall include not less than 1500 volt-amperes for each 2-wire small-appliance branch circuit. These loads shall be permitted to be included with the general lighting load and subjected to the demand factors provided in Table 120.45.

Exception: The individual branch circuit permitted by 210.52(B) (1) Exception No. 2 shall be permitted to be excluded from the calculation required by 120.52.

(B) Laundry Circuit Load. A load of not less than 1500 volt-amperes shall be included for each 2-wire laundry branch circuit installed as covered by 210.11(C)(2). This load shall be permitted to be included with the general lighting load and shall be subjected to the demand factors provided in Table 120.45.

N 120.53 Appliance Load — Dwelling Unit(s). Applying a demand factor of 75 percent to the nameplate rating load of four or more appliances rated ¼ hp or greater, or 500 watts or greater, that are fastened in place, and that are served by the same feeder or service in a one-family, two-family, or multifamily dwelling shall be permitted. This demand factor shall not apply to the following:

- (1) Household electric cooking equipment that is fastened in place
- (2) Clothes dryers
- (3) Space heating equipment
- (4) Air-conditioning equipment
- (5) Electric vehicle supply equipment (EVSE)

For appliances fastened in place (other than ranges and other cooking appliances, clothes dryers, space-heating, air-conditioning equipment, and electric vehicle supply equipment), feeder capacity must be provided for the sum of these loads. If the total load includes four or more such appliances, a demand factor of 75 percent is permitted. To reduce the number of small motor-operated appliance loads (e.g., bathroom ventilating fans)

that are typically supplied by general-purpose branch circuits from having two demand factors applied (120.53 plus Table 120.45), the minimum appliance rating that can be considered in applying the 75 percent demand of 120.53 is either 500 watts or greater or ¼ horsepower (hp).

See also

Table 430.248 for the full-load current, in amperes, for single-phase ac motors in accordance with 120.50

N 120.54 Electric Clothes Dryers — Dwelling Unit(s). The load for household electric clothes dryers in a dwelling unit(s) shall be the nameplate rating if available or 5000 watts (volt-amperes), whichever is larger, for each dryer served. The use of the demand factors in Table 120.54 shall be permitted. Where two or more single-phase dryers are supplied by a 3-phase, 4-wire feeder or service, the total load shall be calculated on the basis of twice the maximum number connected between any two phases. Kilovolt-amperes (kVA) shall be considered equivalent to kilowatts (kW) for loads calculated in this section.

N TABLE 120.54 Demand Factors for Household Electric Clothes Dryers

Number of Dryers	Demand Factor (%)
1–2	100
3–5	80
6	75
7	65
8	60
9	55
10	50
11	47
12–23	47% minus 1% for each dryer exceeding 11
24–42	35% minus 0.5% for each dryer exceeding 23
43 and over	25%

The use of demand factors is permitted but not required. This is because the NEC does not prohibit applying the full load of all dryers to a service and/or feeder calculation. However, this method is not necessary or practical, and experience has demonstrated that the use of Table 120.54 demand factors provides sufficient capacity in the service for dryer loads. It is unlikely that all dryers will be in operation simultaneously, and Table 120.54 was developed based on utility demand that proves this point.

The minimum load to be used is the larger of 5000 volt-amperes or the nameplate rating of the dryer. In the following calculation example, the nameplate rating of 5500 watts (VA) is used. In addition, because of the supply system characteristics, calculation is a little different from simply adding the total rating of all dryers and applying the appropriate demand factor. The load of 10 single-phase dryers will be distributed across a 3-phase supply system.