

Commercial Kitchen Load Calculator

Estimates commercial kitchen demand from connected equipment load, an entered demand factor, and the two-largest-equipment floor while keeping code factor selection separate.

Generated October 10, 2026

<https://www.elecatrix.com/commercial-industrial-loads/commercial-kitchen-load-calculator/>

Inputs

Input	Value	Unit
Kitchen equipment count	8	items
Connected kitchen load	80	kVA
Largest equipment load	20	kVA
Second-largest equipment load	15	kVA
Entered demand factor	0.65	x
Separate HVAC/ventilation/space-heat load	N/A	kVA

Results

Result	Value	Unit
Factor-based demand load	52	kVA
Two-largest floor	35	kVA
Selected preliminary demand	52	kVA

Status

Status	Value	Unit
Floor comparison	Factor demand is above two-largest floor	
Excluded-load comparison	No separate excluded load entered	

Calculation details

Detail	Value	Unit
Calculation basis	The preliminary kitchen demand estimate applies the entered factor to connected kitchen equipment and compares that result with the entered two-largest-equipment floor.	

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Planning boundary

No NEC Table 220.56 factor,
equipment classification, feeder,
OCPD, or code-compliance conclusion
is selected by this calculator.

Formulas

$$S_{\text{factor}} = S_{\text{connected}} \times f_{\text{demand}}$$

$$S_{\text{floor}} = S_{\text{largest},1} + S_{\text{largest},2}$$

$$S_{\text{selected}} = \max(S_{\text{factor}}, S_{\text{floor}})$$

No universal Table 220.56 factor or code-compliance result is selected.

Warnings and limitations

Commercial kitchen demand factors, equipment classification, exceptions, and the two-largest-equipment floor depend on the adopted NEC edition and AHJ method. Keep HVAC, ventilation, and space-heating loads out unless the governing method explicitly includes them.