

Range Demand Calculator

Estimate connected range load, demand load, diversity allowance, and effective demand factor from entered range loads.

Generated October 10, 2026

<https://www.elecatrix.com/residential-load-service/range-demand-calculator/>

Inputs

Input	Value	Unit
Largest range load	12000	VA
Additional range load	18000	VA
Entered demand factor	40	%

Results

Result	Value	Unit
Connected range load	30000	VA
Range demand	19200	VA
Diversity allowance	10800	VA
Effective demand factor	64	%

Calculation details

Detail	Value	Unit
Calculation basis	The mode keeps the largest entered range load at full value and applies the entered factor to the additional entered range load.	
Boundary	Entered-demand arithmetic only; no adopted demand table, dwelling service result, feeder result, or final load decision is made.	

Formulas

$$S_{\text{connected}} = S_{\text{largest}} + S_{\text{additional}}$$

$$S_{\text{demand}} = S_{\text{largest}} + S_{\text{additional}} \times (\text{demand factor} / 100)$$

$$\text{Diversity allowance} = S_{\text{connected}} - S_{\text{demand}}$$

$$\text{Effective demand factor \%} = \frac{S_{\text{demand}}}{S_{\text{connected}}} \times 100$$

Warnings and limitations

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Mode arithmetic only; verify the adopted dwelling method, load classification, source factor, AHJ direction, and complete service calculation separately.