

LOAD CALCULATION of a SMALL COMMERCIAL BUILDING

Calculate the load for the service for a 8500 sq. ft church building using the following loads. Use all applicable demand factors to result in the smallest service, service conductors and raceway or cable. The service is 120/240-Volts, 1-Phase, 3-Wire.

FACTORS:

- 95 General Purpose Receptacles
- 2, HVAC Outdoor Units 8600 VA each (this is minimum circuit ampacity)
- 2, HVAC Indoor Units 11,424 VA each (operates concurrently with outdoor units)
- 2, HVAC Outdoor Units 6960 VA each (this is minimum circuit ampacity)
- 2, HVAC2 Indoor Units 11, 11,424 each (operates concurrently with outdoor units)
- 3, 500 W Attic Heaters
- 1, 4.5 kW Water Heater
- 1, 10 kW Baptistery Heater
- 1, 10.7 kW Kitchen Range
- 1, 1.5 kW Dishwasher
- 3, 500 W Serving Trays
- 1, 1500 W Refrigerator
- 5, Exhaust Fans 240 W each
- 1, 7200 W Coffee Cart
- 2, Drinking Fountains, 600 W each
- 1, Office Copier 1400 W

Amperes _____

LOAD CALCULATION of a 4-PLEX MULTIFAMILY DWELLING

Calculate the load for the service for a 4-plex multifamily building using the following loads. Use 220.84 and all applicable demand factors to result in the smallest service, service conductors and raceway or cable. Assume there are no common or house loads. The service is supplied at 120/240-Volts, 1-Phase, 3-Wire. Each unit includes laundry equipment.

Each unit has (include all additional NEC mandated branch circuit or feeder loads):

1200 square ft

10.7 kW electric range

1.2 kW dishwasher

1, 160 W kitchen hood fan

1, 120 W bathroom exhaust fan

8.6 kW electric heat

1, 4.5 kW water heater

1, 6.2 kW electric clothes dryer

Amperes _____