

# COORDINATION WITH ELECTRICAL

SPRINKLER COORDINATION WITH MEP SERIES BY MEYERFIRE UNIVERSITY | FEBRUARY 2023

## SUMMARY

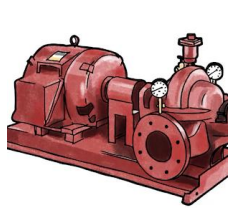
Generally, electrical engineers/designers are most concerned about power. The earlier we can coordinate power needs, the better. What needs power?

- **Fire Pumps:** This effort usually involves (1) horsepower, (2) coordinating phase, (3) coordinating voltage, (4) the starter type, and (5) the location of the fire pump controller(s). Electrical fire pumps can command a lot of power, can have secondary backup power needs, and can have a major impact on electrical design. Check the video segment for more detail about strategies for estimating fire pump size.
- **Jockey Pumps:** These are much less-demanding than a fire pump, but they still need power. Phase & voltage here need to match the supply.
- **Air Compressors:** Air compressors for dry-pipe and pre-action systems can range in size, and electrical design will typically want to know the size of compressors. Again, check the video for detail on estimating air-compressor sizes early in a project.
- **Nitrogen Generators:** Like air compressors, nitrogen generators have power needs. These are usually simplified and shown on panel cutsheets, but working with a nitrogen generator provider can make estimating the size and power needs easy.
- **Pre-Action/Deluge Releasing Panels, Sprinkler Monitoring Panel:** These generally need dedicated circuits (so they can be locked out) on 120V.
- **Any 120V monitoring devices:** If there are any non-low-voltage devices or appliances, like a standalone waterflow switch, horn/strobe, or electric bell, then these can be directly powered as a 120V single-phase device. This would only occur when there's not a panel serving the device.

What do sprinkler designers need to know from electrical?

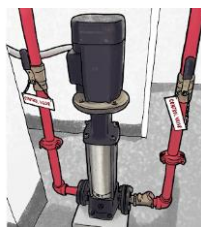
- **Voltage:** We generally need to know the available phase and voltage to the building in order to properly specify a fire pump and jockey pump.
- **Reflected Ceiling Plan:** We need to know what's on the ceiling, and where it is, in order to coordinate sprinkler locations and avoid conflicts.
- **Electrical Panel Locations:** We need to know where electrical panels will be, so that we can do a better job of avoiding routing pipe above them.

## What Electrical Engineers & Designers Need from Fire:



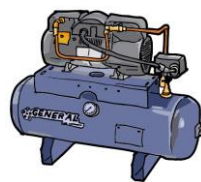
**Fire Pumps**

(Often the largest power need from fire protection)



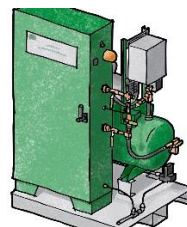
**Jockey Pump**

(Smaller, but still needs power to be coordinated)



**Air Compressors**

(Range in size, from 1/6 HP to roughly 5 HP)



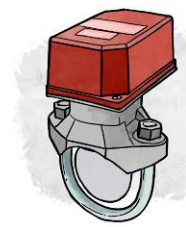
**Nitrogen Generators**

(Like compressors, these range in size)



**Releasing Panel**

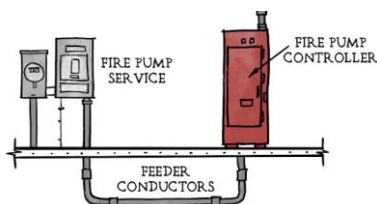
(For Pre-Action or Deluge Systems)



**Any 120V Devices**

(Typically low-voltage, but can be standalone)

## What Fire Protection Designers & Engineers Need from Electrical:



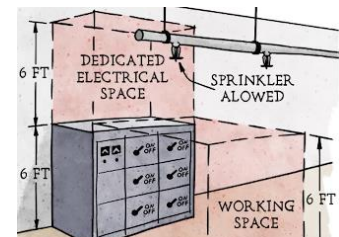
**Electrical Service Available Phase & Voltage**

(This affects specifying fire pumps & other equipment)



**Reflected Ceiling Plan for Electrical Fixtures**

(Lights, Fire Alarm Appliances, Speakers, etc)



**Electrical Panel & Equipment Locations**

(To Avoid Routing Above)

## VIDEO LINK

[www.meyerfire.com/university/what-needs-to-be-coordinated-with-electrical](http://www.meyerfire.com/university/what-needs-to-be-coordinated-with-electrical)

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