



ARC ARMOR™ ENCLOSURE

PATENT PENDING





The innovative, multiple compartment design of the **ARC ARMOR™ Enclosure** reduces the risk of injury resulting from arc flash and electric shock. The control and power circuitry are isolated in separate compartments, thus preventing unnecessary exposure of arc flash to operators.



WHAT IS ARC FLASH?

With 5-10 arc flash incidents occurring per day, arc flash is a leading cause of death and burn accidents for maintenance staff when servicing electrical control panels in North America today. Onsite damages caused by an arc flash incident include: OSHA citations or fines, down time, loss of revenue and equipment damage. In worst case scenarios, arc flash may result in long term disability or even death thereby having a significant impact on the liability of the municipality.

All of these arc flash events usually occur in less than 0.2 seconds, and can create:

- Intense heat
- Thermo-acoustic shock wave
- Molten metal
- Shrapnel
- Blinding light
- Toxic smoke
- Contact with energized components

The multiple compartment design of the **ARC ARMOR™ Enclosure** will limit access to electrical equipment capable of producing arc flash incidents. Electrical control equipment is segregated within an enclosure where only control voltage is present (120VAC max).

High energy circuits, such as Motor Controls are located in the MCC compartment, while low energy circuits, such as controllers and low voltage controls, are located in the Control Compartment. This allows the maintenance staff to safely work on control circuits with minimum Personal Protective Equipment (PPE).

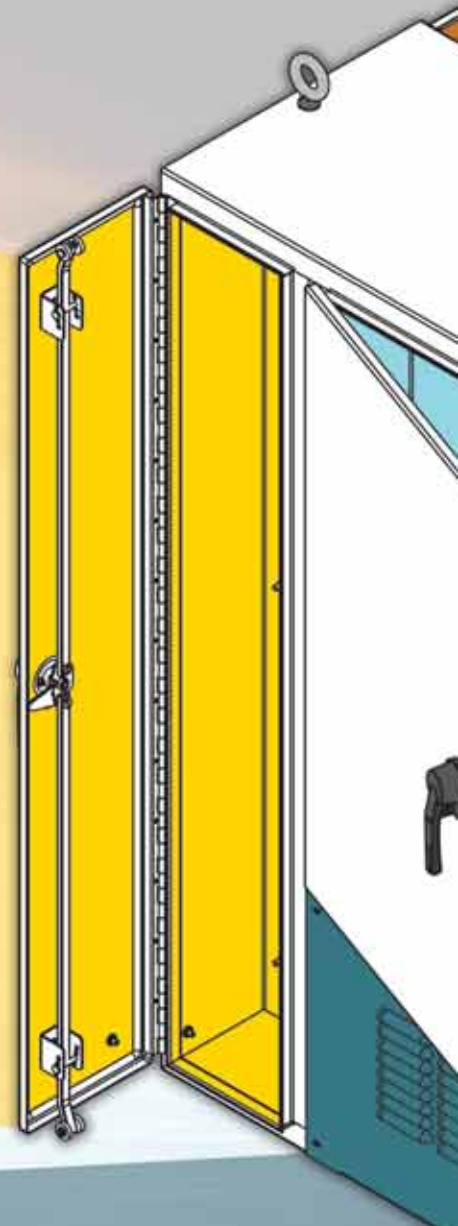
UNIQUE MULTIPLE COMPARTMENT ENCLOSURE DESIGN

>>>>> ZONE 1 - Service Compartment

- **Danger Zone:** Contains the most dangerous arc flash potential and risk of electrical shock
- Entry is limited to authorized personnel only and proper personal protection equipment (PPE) must be used
- All service entrance devices and conductors are confined to this compartment to avoid accidental contact or faults
- Isolated from potential corrosive gases
- Locker-style service entrance
- Can be service entrance rated
- NEMA 3R enclosure rating

>>>>> ZONE 4 - Skirt Compartment

- **Gas Isolation Zone:** Provides gas isolation from wet well in wastewater lift station applications
- Can be used to house the control transformer
- Vented space for sealing cable penetrations





»»»» ZONE 2 - MCC Compartment

- **Danger Zone:** Entry is limited when energized to service personnel with proper NFPA 70 safety gear or may be "Lockout/Tagout" protected for unrestricted access.
- Can be completely de-energized from line voltage
- Contains motor control devices that are full voltage rated
- Isolated from potential corrosive gases
- Thermal Management: Environmentally-conditioned independent from other zones (i.e. VFD cooling)
- NEMA 3R enclosure rating

»»»» ZONE 3 - Control Compartment

- **Operator Safety Zone** (120VAC or lower only)
- Minimum PPE required
- Houses all sensitive control devices and maintains complete isolation from high energy power components
- System operation and low voltage troubleshooting can be accomplished while being isolated from potential arc flash risks
- Isolated from corrosive gases
- NEMA 4X enclosure rating

APPLICATIONS

The **ARC ARMOR™ Enclosure** is suitable for a wide range of pump control applications.

Options Include:

- Single or multiple pump control (PLCs)
- Variable Frequency Drives (VFDs)
- Across the line starters (NEMA, IEC, manual)
- Solid state/electro-mechanical reduced voltage starters
- Service or automatic entrance ratings
- Manual transfer switch gear
- Generator receptacle
- Voltage/current meters
- Voltage fault monitoring
- Transient suppression/filtering
- Line reactors to reduce harmonics
- Lightning arrestors
- Surge capacitors
- Digital level controllers
- Telemetry/SCADA
- Independent back up controls

Optional Conduit Template:

- Alignment of underground conduits

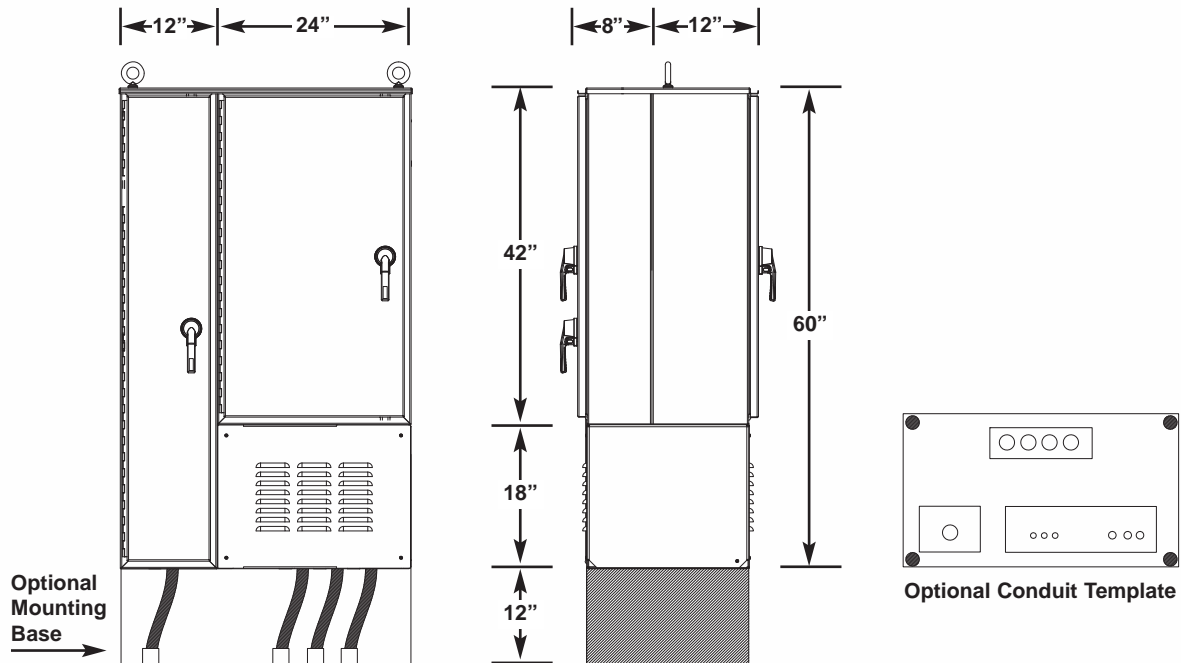
Optional Base:

- Designed for new and retrofit construction
- 304L stainless steel
- Integrated leveling system

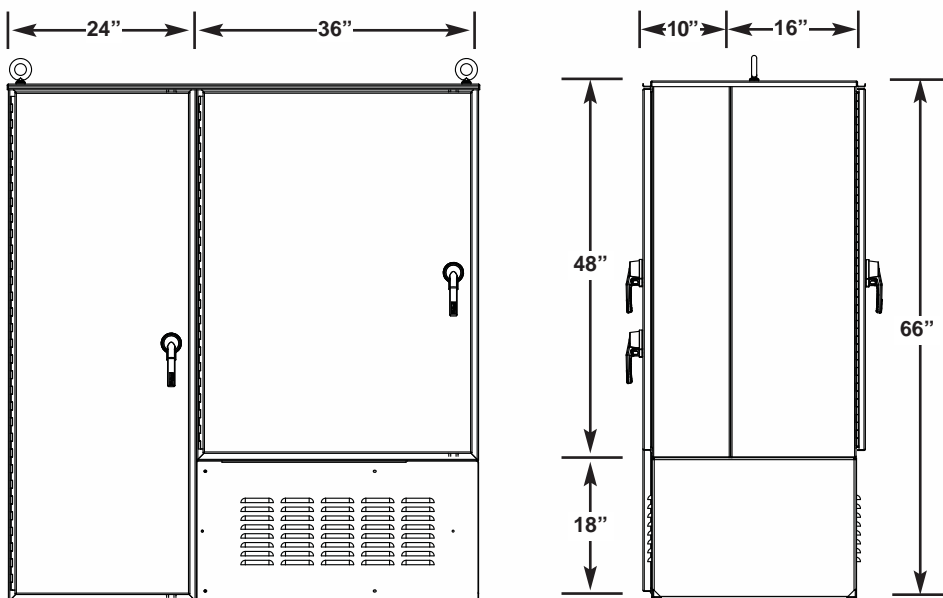


ENCLOSURE DIMENSIONS

SIZE 1 OVERALL DIMENSIONS 60"H x 36"W x 20"D



SIZE 2 OVERALL DIMENSIONS 66"H x 60"W x 26"D





LET US DESIGN A CONTROL SOLUTION USING AN ARC ARMOR™ ENCLOSURE FOR YOUR APPLICATION.

ARC ARMOR 12/10



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