



## Considerations When Specifying Enclosures

A number of factors should be considered when specifying the enclosure that will best perform in your application. The environment, application, thermal management requirements, enclosure performance standards, material and size all play a key role in the selection process.

On these pages, we highlight critical issues and questions that you should ask when selecting an enclosure.

## APPLICATION

When selecting an enclosure, application can be associated with market or product. For example, is your enclosure going to be used in a petrochemical refining plant, a food manufacturing system or a water treatment plant? Regarding product, does your application require a disconnect enclosure, pendant arm mounting, arc flash safety products or easy access? The requirements of your application must be taken into consideration.

**Refer to Technical Information, Chapter 15, pages 1346-1355, for information on Seismic, Hazardous Location, Arc Flash Protection and Sanitary Washdown applications and pages 1336-1338 for EMC applications.**

## ENVIRONMENT

Whatever your application—offshore, telecommunications, or dairy processing, environment is perhaps the most important factor to consider.

What is your primary environmental concern? Consider the most important potential threat in your environment. This will determine which enclosure offers the best protection.

What type of equipment are you protecting? Different types of equipment require different levels of protection.

## MATERIAL

Select the appropriate material for your enclosure based upon the potential environmental hazards and contaminants against which you need to defend.

- ▶ Steel
- ▶ Stainless Steel
- ▶ Aluminum
- ▶ Fiberglass
- ▶ ABS
- ▶ Polycarbonate
- ▶ Polyester

**Refer to Technical Information, Chapter 15, pages 1326-1335, for information on Materials and Paint Finishes.**





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## SIZE

You'll need to consider several factors when specifying enclosure size.

- What equipment will you enclose?
- Where on the enclosure will equipment be installed?
- Are you subpanel-mounting equipment?
- Are you door-mounting controls?
- Does your application have specific enclosure location requirements?

## STANDARDS

Select an enclosure that has a rating appropriate for your environment and application. Rating systems from NEMA, UL, CSA, IEC and VDE determine an enclosure's ability to withstand environmental conditions. However, these ratings differ in important ways.

**Refer to Technical Information, Chapter 15, pages 1318-1325, for information on Standards and Ratings.**

## THERMAL

Effective thermal management maximizes the efficiency and lifecycle of electrical components. While it is critical to dissipate and manage heat build-up, it can also be necessary to add heat.

Some key questions for determining the appropriate cooling unit for your application:

- What size is my enclosure?
- Which enclosure surfaces allow heat transfer?
- What type of system do I need? Such as open loop or closed loop.
- What is my enclosure's insulation R value?
- Is my application indoors or outdoors?
- Will the cooling unit be mounted on the top, side or inside the enclosure?

**Refer to Thermal Management, Chapter 12, and Technical Information, Chapter 15, pages 1339-1345, for information on Specifying Thermal Management Products.**

For additional assistance specifying enclosures, see the Search and White Papers on [hoffmanonline.com](http://hoffmanonline.com), contact your local Hoffman sales representative or contact Hoffman Customer Service, 763-422-2211.