SIERRA PACIFIC
ENGINEERING AND PRODUCTS

2026 BUYER'S GUIDE

The 2026 buyer's guide to access hardware: Hinges, handles and latches

It's the little things that matter. Industrial access hardware (hinges, latches, handles and complementary components that allow manufactured goods to open, close and stay secure) might seem simple and undeserving of further thought.

But too many OEMs building vehicles and enclosures have seen consequences ignoring what could go wrong.

Without the right access hardware, you risk reliability: Think leaks, corrosion and warranty issues. And in the worst cases, you risk safety. Cargo flying off the back of a truck. Doors opening when they shouldn't or getting jammed and not opening at all.

Not to mention the pain of mapping out the middle course between over- and under-engineering. Invest too little in your hardware and you see risks in the field; invest too much, and you're bleeding cash.

We've pulled together a practical guide for thinking about access hardware. Take a look.

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Getting started with hardware product design

Like any engineering problem, access hardware opportunities and problems can nearly always be traced back to the classic trio of form, fit and function. To put them into context:

FORM

How your access hardware looks and is shaped. Think overall size, outline, visual style and finish. At Sierra Pacific, we're often talking to customers about factors like colors and branding. These can be crucial for product managers tasked with preserving a visual identity for your company.

FIT

How the hardware installs and interfaces. Here, we're thinking about mounting patterns and hole locations, as well as tolerances and assembly considerations for your overall product. Getting access hardware to fit properly requires a genuine exploration of its application.

FUNCTION

How it operates and what it actually does. Generally the focus for engineers, function entails ensuring that access hardware can meet performance requirements like load ratings. Without an adequate grasp of function, access hardware can wear out after far fewer cycles than should be expected or worse; miss the mark entirely on its intended purpose.

Having a strong sense of what your product needs to accomplish in the above categories keeps frustrating issues at bay. But it's common for that not to be the case: We frequently see OEMs who know, for example, that they need a hinge, but are unsure of any additional specifications.

In those cases, it's best to work with a supplier who is willing to have conversations with you to meet you where you're at and walk through potential options.

BUT INDUSTRY CONTEXT MATTERS, TOO

Requirements for access hardware differ by industry. The two major markets that we work most closely with — enclosures (like industrial cabinets, electrical boxes, HVAC and data center gear) and vehicular (trailers, work trucks, RVs) — each follow distinct guidelines and standards.

In the enclosure market, UL and NEMA standards inform much of our work. Chief concerns in this market typically surround questions of sealing, corrosion, reliability and the safety of electrical contents.

For vehicular OEMs, standards can often be traced to DOT and FMVSS. Safety is paramount.

So while the basic types of parts here are sometimes similar, the questions, stakes and conversations about them often look very different.

Performance considerations

A part's performance is a testable and quantifiable measure of operational efficacy within its intended application. In other words: How well does a part do what it's supposed to do?

For purchasers of access hardware, you should feel comfortable asking about the following:

LOAD RATING

How much force or weight can a part stand? With suppliers like Sierra Pacific, load testing services are available in-house for physical parts, and FEA simulations allow us to prove out new design concepts before tooling.

CORROSIVE RESISTANCE

This determines a material's ability to withstand damage and residue from chemical reactions with the environment (like road salt for vehicles). With salt spray testing, parts are placed in a closed chamber filled with saltwater fog to estimate corrosion resistance under an accelerated timeframe.

CHEMICAL COMPOSITION

What alloys are being used? Are material certs available upon request? Industry standards are dictated by ASTM, ANSI, AISI and other organizations.

CYCLE TESTING

How well does a part hold up over repeated use? Typically, a robot should do the testing here (it's not a particularly fun job for humans).

SEALING

Does the hardware prevent the entry of dust and moisture? Especially important for many enclosures, sealing is generally determined by type rating standards from IP, NEMA, UL or CSA.

HARDNESS

Ultraviolet (UV) light can degrade certain materials after prolonged exposure. If hardware is not intended for outdoor use, this can cause noticeable damage quicker than you might think.

While this isn't an exhaustive spec sheet, it provides a starting point for asking about any access hardware serving critical functions.

Breaking down common access hardware types

LATCHES

WHAT THEY ARE:

Any mechanism whose core job is to keep something closed or held together

MAJOR TYPES:

Latch handles, cam latches, jaw latches, bolt latches, magnet catches, lever latches, draw latches, bar locks

KEY ADVICE:

Many buyers know they need a latch, but haven't thought through how they want that latch to work. The motion of the latch is the starting point: Does it pull parts together? Rotate? Slide? A specialist can help if articulating this functionality is difficult.

HINGES

WHAT THEY ARE:

Components that allow doors, panels or lids to pivot or fold

MAJOR TYPES:

Continuous hinges, butt hinges, positioning hinges, take apart hinges, strap hinges

KEY ADVICE:

Hinges are often more straightforward than latches, but the door size, shape and weight can make or break a design. There's creative flexibility in how hinges can work: The same hinge can sometimes be mounted in multiple ways to solve different problems. Start by thinking through your application and requirements, rather than specifying a certain kind of hinge.

HANDLES

WHAT THEY ARE:

What people grab with their hand to hold, push or pull a part or product.

MAJOR TYPES:

Chest handles, carrying handles, recessed handles, pocket pulls, assist handles, cast pulls

KEY ADVICE:

In ordinary language, handles often get mixed up with latches that have handles attached. For example, a doorknob assembly is technically a latch, while a drawer handle is a handle. Keeping this distinction in mind will make searching for the right product a lot easier.

When to go custom

Standard products are, well, standard. Which means they're tried and true and will do the job in most cases. A good supplier, who has capabilities in both standard and custom products, can help you determine when going custom is necessary.

We see buyers place orders for custom products for a few key reasons.

THEY HAVE VERY SPECIFIC OR DETAILED REQUIREMENTS.

Think geometry, like hole locations, or performance. Sometimes a catalog part is almost perfect, but just needs to be customized to add a feature or change a dimension. We had a customer who manufactured walk-in bathtubs, and their existing submerged handles were corroding in the soapy water. Custom design with more suitable materials and finishes solved warranty issues.

THEY'RE LOOKING FOR BRANDING AND DIFFERENTIATION.

Some manufacturers want to ensure their products have a unique look or feel compared to run-of-the-mill commodity parts, by integrating their logos or colors into their hardware. A customer in the shed industry that sells a more premium product line compared to competitors wanted to ensure their access hardware stood out from the crowd. They accomplished this through a proprietary custom design.

THEY HAVE A UNIQUE OR UNORTHODOX APPLICATION.

For OEMs working in particularly niche applications, it's possible that there are no standard options for industrial access hardware that provide the required functionality. In those cases, custom is the only option.

Custom hardware might sound like it's more expensive, but the opposite is often true. With the right custom access hardware design, you optimize value by including the features you need and eliminating those you don't. But be aware that custom parts typically have high minimum order quantities and longer lead times due to development.

Custom access hardware might make sense for you. And if it does, you'll want to find a supplier that can lead you through the process with expertise and a track record.

Cost and the hardware supplier landscape

As much as we'd like to tell you otherwise, there's no single source of access hardware that is the best option for all businesses and buyers. But there are, broadly, four different kinds of suppliers working in the space, and each serves a different set of needs. We'll take you through each of them.

THE CATEGORY	PROS	CONS
Retail These are general online or in-person retailers, including large chains	Immediate availability, small quantities available and easy ordering	High unit costs, limited to no engineering support and no customization options
Distributors Distributors buy from manufacturers and resell their products, often including value-added services like vendor-managed inventories, restocking and consolidated billing and logistics	Less internal overhead and minimal responsibility for the customer	Sometimes steep markups on top of manufacturer pricing outweigh extra services
Specialized suppliers ★ This is where Sierra Pacific fits: Companies like ours own or control factories, but also import, stock and support product locally.	Often the best balance of cost, availability, technical/engineering support, and customer service for mid-sized to large OEMs and manufacturers	Not the right fit if you're looking for very small, inconsistent orders, or have capabilities to mass import hardware yourself from direct factory connections without the need for any value added services
Direct from factory Typically offshore or high-volume industrial producers	The lowest price per piece	Large minimum order quantities, little to no engineering support, more risk assumed by the buyer on quality issues, import logistics, inventory warehousing, language barriers

★ *This is where Sierra Pacific fits: Companies like ours own or control factories, but also import, stock and support product domestically.*

None of these tiers are "wrong." The right choice depends on volume, the resources you have in-house to handle engineering, supply chain and inventory management, as well as your tolerance for risk and complexity.

Where we're seeing the industry heading

When you're in the industrial hardware business, you have to keep your eyes open. Here's what we're seeing take place in the industry.

IN THE ENCLOSURE WORLD,

over the past year, we've seen a large portion of demand coming from **AI infrastructure and data centers.** This drives very high volumes of relatively standard parts and places a premium on reliability and lead time. While the market may eventually plateau or correct, and design priorities might shift, the implication here is that **access hardware suppliers capable of scaling with surges in demand are seeing a lot more success.** We've found a lot of that success in the market so far, and look forward to helping more customers with their projects in this space.

IN THE VEHICULAR SPHERE,

we're expecting to see a large shift from mechanical locks and latches to **keyless, electronic ones.** This will signal the vehicular market catching up to trends in the residential sphere, which has moved toward keyless systems much more quickly. We're expecting to see **the wider adoption of the technology in the next 2-5 years** as model year changes are implemented and fleet refresh cycles renew. For designers of vehicle-related hardware today, future-proofing for the option of electronic access is a smart plan.

A lot hinges on good access hardware

And we're here to help you make the best choices. Access hardware is more nuanced than a lot of buyers are prepared for, which makes having a supplier like Sierra Pacific — one that's willing to meet you wherever you are in the design or purchasing process — a strong asset for manufacturers.

Regardless of your choice of supplier, we hope this guide provides you with a stronger orientation toward the considerations at stake in the process.

If you have an enclosure, vehicle or other project where the hardware "just needs to work"

Send us your drawing, photo or CAD file. Our team can help you quickly narrow down the right latch, hinge or handle, and point you in the right direction whether custom or standard.

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