The Comprehensive Guide to ADA Accessible Door Handles
What you will learn:

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ADA compliance has been a requirement for architects since the federal ADA laws came into being in 1990. Confusion in the marketplace about the law, compliance variations from state to state and individual interpretation of the compliance guidelines have made adherence a challenge.

Comprehensive door handle requirements have been hard to find and even harder to interpret. Until now.

T-Concepts Solutions is a manufacturer of a full-range of architectural hardware for glass sliding and swing doors. But it’s our customers that actually pushed us to become as knowledgeable as possible on ADA compliance and awareness.

They taught us that there are many “gray areas” when it comes to interpreting compliance guidelines state by state, inspector by inspector. From our experience, often times door handle selections seemingly adhere to code and regulations, yet an inspector could report that a selection is not ADA compliant. And if you are in California, you could have a modified set of compliance standards.

We also know that many of you have overbought what you needed by following the advice of companies that purposely created confusion as a means of selling products.

Since confusion is not uncommon, we’ve made this guideline available to help architects, designers and their staffs with their design decisions and staying current on the changing regulations. Your investment in understanding ADA compliance will benefit your design work in the following ways:

• **Less confusion** – variations in compliance from state to state and the interpretation of requirements will no longer be a source of frustration.

• **Better understanding** - we’ll share our expertise in a way that takes the guesswork out of designing for compliance.

• **Specification data at your fingertips** – with the information you need, you can eliminate time-consuming research for specs.

• **Saving money** - by designing in compliance the first time, you won’t overspend on handles or have to rework projects when handles don’t meet code.

• **Faster turnaround** – having the specifications up front allows the design phase of your project to go from start to finish quickly.
What are the basic ADA compliance requirements?

As one of the few industry suppliers who specifically focus on architectural hardware for glass doors, we carefully monitor ADA code variations and help clients meet codes to ensure their door handles are ADA compliant.

T-Concepts Solutions has researched and compiled the requirements for door handle ADA compliance. We’ll remain diligent in keeping you informed as code changes occur.

- The selected door handle pull, if locking, can lock into header (ceiling) or floor with a “staggered” design. Staggered design means the handle is longer on one side (interior) while shorter on the other side (corridor.) A minimum of 10 inches is required from the bottom of pull handle to the finished floor on the corridor side.

- Sliding or swing door hardware must not require more than 5 pounds of force to operate.

- The pull handle must be operable with one hand/limb without tight grasping, pinching or twisting of the wrist.

- Locking ladder pulls must have a “lever” actuator, not a typical thumb-turn requiring a “push” as well as “turn” rotation. This is referred to as 2-point actuation, where there are two action points. The lever allows for a single point of action, meeting compliance requirements in that it rotates 180 degrees without the need for a “press” action.
What are the basic ADA compliance requirements, cont’d.

- The lever actuator must be designed and applied in such a way to keep its location no more than 48 inches AFF (from the finished floor). Note: the margin of height is 38 inches minimum to a maximum of 48 inchesAFF. In California, the minimum to maximum is 36-46 inches.

- When sliding doors are fully open, the operating pull handle must still be exposed and usable from both sides.

- The allowable gripping space of the pull must allow sufficient space for movement. Thus, when the handle (ladder pull) is installed, there must be a 2 ½ to 3-inch minimum projection spacing between face of the glass to the inside of the pull itself to allow for a hand or limb to operate.

- ADA codes do not apply to spaces smaller than 300 square feet.
What is the most common error of omission?

With so many compliance requirements, architects and designers without experience in designing for ADA code often make mistakes. One of the most common errors of omission or code details that is forgotten? The shape of the door hardware.

The ADA compliance guidelines state that if the shape of the door hardware inhibits the user from operating the door handle, it will not pass inspection. Specifically, door handles, pulls, latches, locks and other operating devices on accessible doors must be easy to access and function appropriately without requiring tight grasping, pinching or twisting of the wrist to operate.

This is one of the reasons that appropriate non-locking ladder pulls, locking lever-operated, push-type, ladder pulls and U-shaped handles are acceptable designs. They don’t require a level of dexterity or coordination that may be a challenge for users.

Why do compliance errors occur?

Compliance interpretation by region causes errors. In different regions of the country, inspectors will interpret the codes with varying degrees of strictness. As an example, in DC, Philadelphia, New York and Chicago the “staggered floor locking pull design” meets with compliance, allowing a certificate of occupancy to be granted. While in San Francisco top locking ladder pull handles are needed, not only to comply to national codes, but to meet California Building Code (CBC) as well.

Also, the architect of record can impact compliance interpretation. Some architectural firms have a wealth of experience with ADA guidelines and understand how to interpret and design for ADA accessibility. At the drawing table, they ask the right questions and have the right details. If the architecture and design community members don’t have ADA experience, they may inadvertently take risks in their designs or incorrectly assume their door handle selection is in compliance with ADA code.

Did you know?

Traditional round doorknobs are NOT ADA accessible, under any circumstances, as they require tight grasping and twisting to turn.
What should you know about staggered pulls, levers and pull spacing?

Now that you’ve got a checklist and know the most common pitfall in designing door handles for ADA compliance, here are examples of three approved designs that have been installed and passed ADA inspection. Specific sizes and specs can be modified per your project.

Staggered Pull

The staggered pull is designed to have full height inside the office while offering shortened height outside the office door (corridor). This provides a clearance of 10 inches or more from the finished floor required by code.

You should always check with your particular designer or inspector before making your door handle selection, as some interpret that the 32-inch clear walk-way through the desired opening needs to include the protrusion on this style pull as well. Also, it’s worth noting that the staggered pull will not work in all regions, with California being one such location. On the next page is an example of a T-Concepts Solutions staggered pull that was designed, installed and approved by inspectors.
(*) The above is a drawing of ADA style pull handle that has been designed, installed and approved in certain cities of the US.
What should you know about staggered pulls, levers and pull spacing, cont’d.

Lever Pull

Another ADA code-compliant option is a ladder pull which incorporates the use of a “lever” in place of the standard “thumb-turn” for actuation (as mentioned under the ADA requirement checklist). Some inspectors and designers view this actuator as a must when designing an “accessible” entry pull system. Check with your particular design team and inspector on their expectation for code compliance. On the next page is an example of a T-Concepts Solutions’ design which shows the “staggered” pull design but now includes a “lever”.
The above is a drawing of ADA style pull handle that has been designed, installed and approved in certain cities of the US.

**T-Concepts Identifying Pull Code:**

**LLNSP**
LOCKING LEVER NO SPRING PULL

**49.375/60**
STAGGERED LENGTH DESIGN, 49.375” ON THE OUTSIDE AND 60” ON THE INSIDE

**BSS**
BRUSHED STAINLESS STEEL (304) FINISH (US32)

**SFIC**
SMALL FORMAT INTERCHANGEABLE CORE RIM DESIGN (LFIC AN OPTION AS WELL)

**ADA**
INDICATES A DESIRED SPACING OF 64.5MM BETWEEN SUBSTRATE SURFACE AND INSIDE OF PULL VERTICAL TUBE.

**SP**
ANY OTHER SPECIAL FEATURES SUCH AS GLASS CUT-OUT HOLE SIZE(S)

(*) The above is a drawing of ADA style pull handle that has been designed, installed and approved in certain cities of the US.
What should you know about staggered pulls, levers and pull spacing, cont’d.

Top Locking Design

Similar in design to a standard offering of bottom locking ladder pulls, this special configuration has an inverted standard bottom locking design, allowing the locking bolt to be positioned into ceiling or supported header.

California and the California Building Code (CBC) have the most conservative approach when it comes to “accessibility” codes. CBC uses not only the US “accessible” codes, but have also added their own requirements, such as the location of the desired pull actuator to be placed between 36 and 46 inches off the finished floor, compared to the US code requirement of 38 to 48 inches. California strictly interprets and enforces the following design details as well:

A) Top locking only
B) Lever actuation only
C) Pull handle spacing from the face of glass to inside of pull handle at a minimum of 64.5 millimeter for pull movement

On the next page is an example of a T-Concepts Solutions pull handle design which incorporates all three design criteria.
The above is a drawing of ADA style pull handle that has been designed, installed and approved in certain cities of the US.

**T-Concepts Identifying Pull code:**
- **LLNSP**: LOCKING LEVER NO SPRING PULL
- **72**: OVERALL LENGTH OF 72"
- **BSS**: BRUSHED STAINLESS STEEL (304), FINISH (US32D)
- **SFIC**: SMALL FORMATE INTERCHANGEABLE CORE RIM DESIGN (LFIC AN OPTION AS WELL)
- **ADA**: INDICATES A DESIRED SPACING OF 64.5MM BETWEEN SUBSTRATE SURFACE AND INSIDE OF PULL VERTICAL TUBE.
- **TOP**: TOP LOCKING

(*) The above is a drawing of ADA style pull handle that has been designed, installed and approved in certain cities of the US.
Conclusion

In today’s complex design environment, the expectation of fast design turnaround times and the desire to avoid rework due to a wrong design choice, means that understanding the requirements for ADA compliant door handles is imperative. At T-Concepts Solutions, we understand the frustration you and our A&D community as a whole have experienced.

We know you are looking for more awareness of the regional differences in code requirements and desire to avoid the costly mistakes that happen because of misinterpretation. We recognize the importance of understanding ADA accessible compliance code to insure that everyone feels comfortable within their environment. Sensitivity for your needs is what propelled us into preparing a guide that can be your go-to resource to bring peace of mind, cost-saving solutions and applicable results.

With this guide in hand, we hope that you will now:

- Know and accurately interpret the detailed compliance guidelines
- Avoid the most common compliance error
- Be able to take advantage of the pull examples shared here that have already passed inspection
- And most of all, experience the benefits of time and cost-saving in your design work

For more information on ADA compliant door handles, please contact the T-Concepts Solutions team directly so we can assist you with your specific project.

Did you know? You can be compliant and not be limited in aesthetics. Finish is not impacted at all by ADA – and T-Concepts Solutions offers a variety of finishes and styles that will make your project unique.

Disclaimer: TCS manufacturers to specific regulations regarding ADA accessible door handles. However, due to specific project guidelines outside of our scope, regulation amendments and interpretations of ADA requirements per state, adherence to all ADA compliant designs of any handle is inevitably the responsibility of the specific project’s design team. Ultimately TCS accepts no liability for project or product approval and acceptance based on these stated here or any particular ADA pull design.
T-Concepts Solutions (TCS) is a Miami-based custom manufacturer of architectural door glass hardware. The firm specializes in locking ladder pulls, non-locking ladder pulls, custom pull handles, ADA compliant hardware, glass hinges, to hydraulic patch fittings and sliding door solutions. TCS services clients throughout North America.

T-Concepts has taken a long look at the glass hardware industry…and decided it’s time for a transparent evolution.

For more information, visit us online or contact us directly.

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