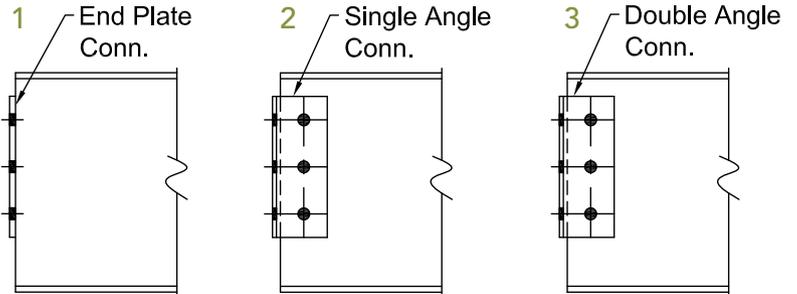


# steel quiz

This month's Steel Quiz takes a look at different types of shear connections and compares the advantages and disadvantages of each type. **Note: The lettered choices in the print version of the April issue were ordered incorrectly. They are in the correct order below.**

Detailed guidance is provided for all of these typical simple shear connections in Part 10 of the AISC *Steel Construction Manual*. Those discussions will help you maximize the usefulness of each connection, minimize the sensitivity of each to its disadvantages and make use of the details that best suit the needs for a given connection and given project. You also can help yourself quite a bit by talking to your fabricator, because they will all have their own list of advantages and disadvantages for each connection type. It will be worth the dime and your time!

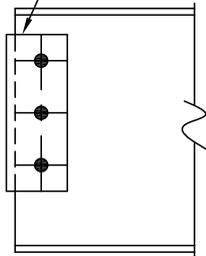
Match each connection with its corresponding advantages and disadvantages below. (The quiz continues on page 14 with another set of three connections and advantages/disadvantages.)



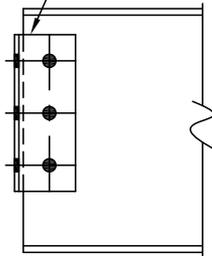
- A Advantages:** Can eliminate erection problems due to double-sided connection and fewer parts. The all-bolted configuration is often considered the most economical shear connection.  
**Disadvantages:** Limited strength, low strength relative to transferring axial loads.
- B Advantages:** Simple (few parts), no holes in beam.  
**Disadvantages:** Less tolerance on beam length may require the use of shims.
- C Advantages:** High-strength.  
**Disadvantages:** Double-sided connections into column webs can be an erection problem/safety issue.

# steel quiz

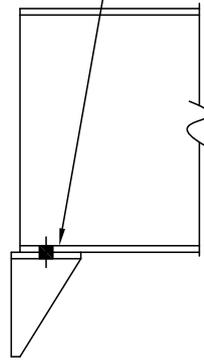
4 Single Plate Conn.



5 WT Conn.



6 Stiffened Seated Conn.



**D Advantages:** Few parts, few bolts.  
**Disadvantages:** Requires stability angle, weak-axis yielding of the column web may govern when connected to the column web.

**E Advantages:** One-sided.  
**Disadvantages:** Connection can be heavy, stiffer than other types except for single plate connections.

**F Advantages:** Simple (few parts), no welding on beam, efficient transferring axial forces.  
**Disadvantages:** Stiffer than other types of shear connections, requires explicit consideration of rotational ductility.

ANSWERS 1B 2A 3C 4F 5E 6D



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Everyone is welcome to submit questions and answers for Steel Quiz. If you are interested in submitting one question or an entire quiz, contact AISC's Steel Solutions Center at 866.ASK.AISC or at [solutions@aisc.org](mailto:solutions@aisc.org).