

Proposed Change 2242

Code Reference(s):	NPC25 Div.B 2.2.7. (first printing)
Subject:	Plumbing
Title:	Adds Requirements for Press-Connect Water Fittings
Description:	This proposed change introduces references to IAPMO/ANSI/CAN Z1117-2022, "Standard for Press Connections," ASME B16.51-2021, "Copper and Copper Alloy Press-Connect Pressure Fittings," and ASTM F3226/F3226M-19, "Standard Specification for Metallic Press-Connect Fittings for Pipe and Tubing Systems," in the NPC.
Related Code Change Request(s):	CCR 1273, CCR 1274, CCR 1275, CCR 1276, CCR 1796

This change could potentially affect the following topic areas:

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|--|---|
| ☐ Division A | ☒ Division B |
| ☐ Division C | ☒ Design and Construction |
| ☐ Building operations | ☒ Housing |
| ☒ Small Buildings | ☒ Large Buildings |
| ☐ Fire Protection | ☐ Occupant safety in use |
| ☐ Accessibility | ☐ Structural Requirements |
| ☐ Building Envelope | ☐ Energy Efficiency |
| ☐ Heating, Ventilating and Air Conditioning | ☒ Plumbing |
| | ☐ Construction and Demolition Sites |

Problem

Press-connect water fitting systems are widely used in plumbing and mechanical installations due to their demonstrated performance and installation efficiency. However, the current edition of the National Plumbing Code of Canada (NPC) does not explicitly allow press-connect fittings to be used as a joining method, nor does it directly reference nationally recognized product standards for press-connect technology.

In the absence of explicit references to standards for press-connect water fittings in the NPC, Code users must depend on indirect references, product listings, or alternative solutions to use this technology. This situation results in inconsistent interpretation and enforcement of the requirements for press-connect water fittings across jurisdictions and creates uncertainty for designers, installers and building officials.

The lack of a clear compliance path for the use of press-connect water fittings limits the uniform application of the Code and complicates plan review and inspection, despite the availability of established consensus standards that evaluate press-connect water fittings for their performance, durability and suitability for use in potable water systems.

Justification

Press-connect water fittings have been successfully used in potable water systems in Canada and internationally for more than two decades.

Press-connect water fittings are manufactured by multiple suppliers and are subject to rigorous third-party testing and certification to national and international consensus standards. These standards specifically establish requirements for the pressure resistance, joint integrity, mechanical strength, and long-term performance of press-connect water fittings. These standards also provide a level of assurance that is equivalent to that required for other joining methods that the NPC currently allows.

Press-connect technology is already referenced or accepted in other Canadian plumbing codes and provincial regulatory frameworks, which sets a regulatory precedent and demonstrates familiarity with press-connect water fittings in the industry. This proposed change would align the NPC with current industry practice while continuing to meet the NPC's public health and safety objectives.

PROPOSED CHANGE

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[2.2.7.] 2.2.7. Non-Ferrous Pipe and Fittings

(For a summary of pipe applications, see Note A-2.2.5. to 2.2.8.)

[2.2.7.1.] 2.2.7.1. Copper and Brass Pipe**[2.2.7.2.] 2.2.7.2. Brass or Bronze Pipe Flanges and Flanged Fittings****[2.2.7.3.] 2.2.7.3. Brass or Bronze Threaded Water Fittings****[2.2.7.4.] 2.2.7.4. Copper Tube****[2.2.7.5.] 2.2.7.5. Solder-Joint Drainage Fittings****[2.2.7.6.] 2.2.7.6. Solder-Joint Water Fittings****[2.2.7.7.] 2.2.7.7. Flared-Joint Fittings used in a Copper Water System****[2.2.7.8.] 2.2.7.8. Lead Waste Pipe and Fittings****[2.2.7.9.] --- Press-Connect Water Fittings**

[1] --) Press-connect water fittings made from an acceptable material for a plumbing system shall conform to

[a] --) ASME B16.51-2021, "Copper and Copper Alloy Press-Connect Pressure Fittings,"

[b] --) ASTM F3226/F3226M-19, "Standard Specification for Metallic Press-Connect Fittings for Pipe and Tubing Systems," or

[c] --) IAPMO/ANSI/CAN Z1117-2022, "Standard for Press Connections."

Impact analysis

This proposed change is not expected to result in additional costs for contractors or building owners, and may reduce costs. One benefit of using press-connect water fittings is flameless installation, meaning that the installation does not require a hot work permit or a fire watch. Although press-connect water fittings cost slightly more than traditional solder fittings, the labour costs for installation are lower because the installation is faster and does not use consumables such as flux and torch fuel.

Enforcement implications

This proposed change could facilitate Code enforcement by providing inspectors and plan reviewers with explicit, nationally recognized performance standards against which press-connect water fittings can be assessed.

Clearly referencing standards in the NPC reduces the need for discretionary approvals and reviews of alternative solutions, and improves consistency in enforcement across jurisdictions. This proposed change would not require new inspection procedures or specialized enforcement training, thus the proposed change could be seamlessly enforced using existing plumbing inspection practices.

Who is affected

Designers would benefit from using a clearly defined joining method that is permitted by the NPC and can be specified without needing project-specific approvals. This proposed change would improve design clarity, reduce ambiguity related to permits and align Code requirements with current installation practices while maintaining Code objectives.

Contractors would gain certainty that press-connect water fittings are acceptable for use without requiring additional approvals. This proposed change would reduce administrative burden, shorten installation timelines, and support safer practices on the jobsite by minimizing the use of open-flame joining methods.

Manufacturers and suppliers would benefit from a level, transparent regulatory framework that establishes clear performance and compliance requirements for press-connect water fittings. Including these fittings in the NPC would encourage innovation while ensuring that products are evaluated against recognized standards. This proposed change would also improve supply chain planning and market access by reducing inconsistencies across jurisdictions, which would allow manufacturers to support designers and contractors by offering compliant, readily accepted solutions nationwide.

For building officials and regulators, including press-connect water fittings in the NPC would provide clarity and consistency in enforcement. Including references to established standards for these products in the NPC would make building officials and regulators less reliant on discretionary approvals and reviews of alternative solutions. This proposed change would support more efficient plan review and inspections while ensuring that public safety objectives are met through standardized, performance-based criteria that are uniformly applied across jurisdictions.

Building owners and facility operators could be affected by improving the reliability of the plumbing system and reducing the risk of leaks associated with improperly installed joints. This proposed change would support consistent quality of installation, which could reduce maintenance issues and lifecycle costs over the service life of the plumbing system.

Maintenance personnel would benefit from using press-connect water fittings that are familiar, documented, recognized by the NPC and compliant with nationally recognized standards. This proposed change would reduce uncertainty when repairing or modifying existing plumbing systems and supports safer maintenance practices by reducing the need for hot work in occupied buildings.

OBJECTIVE-BASED ANALYSIS OF NEW OR CHANGED PROVISIONS

NPC25 Div.B 2.2.7. (first printing)

[2.2.7.1.] 2.2.7.1. (**[1]** 1) [F80-OH2.1,OH2.3] Applies to *drainage systems* and *venting systems*. [F46-OH2.2] Applies to *water systems*.

[2.2.7.1.] 2.2.7.1. (**[1]** 1) [F80-OP5]

[2.2.7.1.] 2.2.7.1. (**[2]** 2) [F80-OH2.1,OH2.3] Applies to *drainage systems* and *venting systems*. [F46-OH2.2] Applies to *water systems*.

[2.2.7.1.] 2.2.7.1. (**[2]** 2) [F80-OP5]

[2.2.7.1.] 2.2.7.1. (**[3]** 3) [F46-OH2.2]

[2.2.7.2.] 2.2.7.2. (**[1]** 1) [F80-OH2.1,OH2.3] Applies to *drainage systems* and *venting systems*. [F46-OH2.2] Applies to *water systems*.

[2.2.7.2.] 2.2.7.2. (**[1]** 1) [F80-OP5]

[2.2.7.2.] 2.2.7.2. (**[2]** 2) [F46-OH2.2]

[2.2.7.3.] 2.2.7.3. (**[1]** 1) [F80-OP5]

[2.2.7.3.] 2.2.7.3. (**[2]** 2) [F46-OH2.2]

[2.2.7.3.] 2.2.7.3. (**[3]** 3) [F80-OH2.1,OH2.3]

[2.2.7.4.] 2.2.7.4. (**[1]** 1) [F80-OH2.1,OH2.3] Applies to *drainage systems* and *venting systems*. [F46-OH2.2] Applies to *water systems*.

[2.2.7.4.] 2.2.7.4. (**[1]** 1) [F80-OP5]

[2.2.7.4.] 2.2.7.4. (**[2]** 2) [F80-OH2.1,OH2.2,OH2.3]

[2.2.7.4.] 2.2.7.4. (**[3]** 3) [F46-OH2.2]

[2.2.7.4.] 2.2.7.4. (**[4]** 4) [F80-OH2.1,OH2.3,OH2.4]

[2.2.7.5.] 2.2.7.5. (**[1]** 1) [F80-OH2.1,OH2.4]

[2.2.7.5.] 2.2.7.5. (**[2]** 2) [F20-OP5]

[2.2.7.6.] 2.2.7.6. (**[1]** 1) [F20-OP5]

[2.2.7.6.] 2.2.7.6. (**[2]** 2) [F20-OP5]

[2.2.7.6.] 2.2.7.6. (**[3]** 3) [F46-OH2.2]

[2.2.7.7.] 2.2.7.7. (**[1]** 1) [F20-OP5]

[2.2.7.7.] 2.2.7.7. (**[2]** 2) [F20-OP5]

[2.2.7.7.] 2.2.7.7. (**[3]** 3) [F46-OH2.2]

[2.2.7.8.] 2.2.7.8. (**[1]** 1) [F46,F20-OH2.2,OH2.3]

[2.2.7.8.] 2.2.7.8. ([2] 2) [F81-OH2.1,OH2.3,OH2.4]

[2.2.7.9.] -- ([1] --) [F80,F46,F20-OH2.2,OH2.4]

[2.2.7.9.] -- ([1] --) [F80,F46,F20-OP5]