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**Building Materials Evaluation
Commission**

**Commission d'évaluation des
matériaux de construction**

January 31, 2022

Abraham I. Murra, P. Eng
Abraham Murra Consulting
Santa Margarita, CA
92688 United States

Garth Anderson
Director of Sales North America
BMI Canada Inc.
3437 Grande Allee Boulevard
Boisbriand, Quebec J7H 1H5

Sent by way of email
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BMEC 2021-02: BMI Canada's Press-Fit Wrought Copper Fittings

Dear Mr. Murra and Mr. Anderson,

I am pleased to advise you that on January 26, 2022, the Building Materials Evaluation Commission (the "BMEC") granted the attached Authorization 22-01-397. The Authorization is subject to the terms and conditions contained therein.

Please note that this Authorization expires on January 26, 2027. Authorizations are not automatically renewed.

Prior to your authorization's expiry, if you still require an authorization, a complete, new application must be submitted to the BMEC. The new application should be made six or more months prior to the expiration (depending on the complexity of the application) to allow time for review.

Please note that the BMEC will not be providing you with any further notice of the expiration of this Authorization.

Thank you for applying to the BMEC. We wish you success with your product.

Best regards,

A handwritten signature in black ink, appearing to be "Nadine", written in a cursive style.

Nadine
BMEC Secretary

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BMEC AUTHORIZATION: 22-01-397

BMI Canada's Press-Fit Wrought Copper Fittings

Date of Authorization: January 26, 2022
Date of Expiry¹: January 26, 2027

1. Applicant

BMI Canada Inc.
3437 Boulevard de la Grande-Allée
Boisbriand
Quebec, Canada
J7H 1H5

Tel: +1 (403) 370-5623
Web: www.bmicanada.com

2. Manufacturing Facility

Zhuji City Howhi Air Conditioners
Made Co., Ltd
Jinling Industrial Area, Ruanshi
Town,
Zhuji City, Zhejiang Province,
China, 311802

3. Authorization

The BMI Canada's Press-Fit Wrought Copper Fittings are copper fittings that incorporate an elastomeric seal with a leak detection design that may be used as an alternative to traditional copper soldering systems.

The BMI Canada's Press-Fit Wrought Copper Fittings may be used with copper tube sizes ½ in to 4 in and are intended to be used with Types K, L, and M copper tube for potable water.

The BMI Canada's Press-Fit Wrought Copper Fittings are designed to be pressed with the use of a power tool.

¹ This Authorization expires on the date shown. It is the responsibility of Authorization holders to make a complete application considering the time for review and complexity of the new application.

Additional descriptive information is provided in documents supplied by the Applicant listed in Appendix A.

Reports and assessments provided by the Applicant demonstrate that if the BMI Canada's Press-Fit Wrought Copper Fittings are manufactured, designed, constructed, tested, and installed in accordance with the manufacturer's instructions and limitations, and the specific terms and conditions stated in this authorization, the use of BMI Canada's Press-Fit Wrought Copper Fittings shall be deemed to not be a contravention of Article 7.2.7.6. "Solder-Joint Water Fittings", Article 7.2.7.7. "Flared-Joint Fittings for Copper Tube Water Systems" and Article 7.3.2.6. "Mechanical Joints" of Division B of the Building Code.

All other requirements pertaining to the manufacture, design, construction, testing, and installation are subject to the requirements of the Building Code, and subject to the following terms and conditions contained below.

4. Specific Terms and Conditions

4.1. This Authorization is valid only for BMI Canada Inc.'s BMI Canada's Press-Fit Wrought Copper Fittings with sizes from ½ in to 4 in as per table 4.1 below;

TABLE 4.1			
Model	Description	Connections	Size
100ANV-AB	Couplings with Stop	Press x Press	1/2 to 4
101ANV-AB	Coupling Reducers	Press x Press	3/4x1/2 - 4x3
102ANV-AB	Bushing Reducers	FTG x Press	3/4x1/2 - 4x3
103ANV-AB	90° Short Elbows	Press x Press	3/4 to 1-1/2
104ANV-AL	90° Extended Street Elbows	Press x FTG	1/2 to 3/4
104ANV-AB	90° Street Short Elbows	Press x FTG	3/4 to 1-1/2
105ANV-AB	90° Elbow	Press x Press	1/2 to 4
106ANV-AB	90° Street Elbow	Press x FTG	1/2 to 4
107ANV-AB	45° Elbows	Press x Press	1/2 to 4
108ANV-AB	45° Street Elbows	Press x FTG	3/4 to 1-1/2
111ANV-AB	Couplings No Stop	Press x Press	1/2 to 4
111ANV-AL	Extended Couplings No Stop	Press x Press	1/2 to 2
112ANV-AB	Tees	Press x Press	1/2 to 4
113ANV-AB	Tees	Press x Press	3/4x3/4x1/2 to 4x4x3
114ANV-AB	Tees	Press x Press	3/4x1/2x1/2 to 4x3x3
115ANV-AB	Tees	Press x Press	1/2x1/2x1/2 to 1x1x1-1/4
121ANV-AB	90° Elbow	Press x Press	3/4 x 1/2, 1 x 3/4
137ANV-AB	Caps	Press	1/2 to 4
138ANV-AB	Cross Overs	Press x Press	3/4, 1/2
148ANV-AB	Street Cross Overs	FTG x Press	3/4, 1/2
301ANV-AB	Male Adapters	Press x NPT	1/2 x 3/8 to 4x4
302ANV-AB	Female Adapters	Press x NPT	1/2 x 3/8 to 4x4
303ANV-AB	Male Street Adapters	Press x NPT	1/2 x 3/8 to 2x2
304ANV-AB	Female Street Adapters	Press x NPT	1/2 x 3/8 to 2x2
305ANV-AB	Unions	Press x Press	1/2 to 2

306ANV-AB	MPT Press Unions	Press x NPT	1/2 to 2
307ANV-AB	FPT Press Unions	Press x NPT	1/2 to 2
308ANV-AB	Press Unions, Female BSP	Press x BSP	1/2 to 2
313ANV-AB	Female Tees	Press x NPT	1/2x1/2x1/2 to 2x3/4x2
314ANV-AB	Male 90° Elbows	Press x NPT	1/2x3/8 to 2x2
315ANV-AB	Female 90° Elbows	Press x NPT	1/2x3/8 to 2x2
316ANV-AB	PEX Adapter	Press x PEX	1/2 x 1/2 to 1 x 1
325ANV-AB	90° Hi Ear Elbow	Press x FPT	1/2 x 1/2
326ANV-AB	90° Drop Ear Elbows	Press x FPT	1/2x3/8 to 3/4x3/4
400ANV-AB	Flanges	Press	1 to 4
Column 1	2	3	4

- 4.2. BMI Canada's Press-Fit Wrought Copper Fittings shall only be used in a hot and cold water distribution system;
- 4.3. BMI Canada's Press-Fit Wrought Copper Fittings shall not be used underground under a building as set out in Sentence 7.3.3.12.(2) of Division B of the Building Code;
- 4.4. BMI Canada's Press-Fit Wrought Copper Fittings shall only be used with Type K, L or M copper tube;
- 4.5. BMI Canada's Press-Fit Wrought Copper Fittings shall keep current certifications to:
 - a. NSF 61: "Drinking Water System Components - Health Effects"; and
 - b. NSF 372: "Drinking Water System Components – Lead content";
- 4.6. BMI Canada's Press-Fit Wrought Copper Fittings shall comply with the requirements of IAPMO PS-117, Press Connections;
- 4.7. BMI Canada's Press-Fit Wrought Copper Fittings shall comply with the material requirements of ASME B16.22, Wrought Copper and Copper Alloy Solder-Joint Pressure Fittings;
- 4.8. BMI Canada's Press-Fit Wrought Copper Fittings shall comply with the chemical composition requirements of ASTM B88, Standard Specification for Seamless Copper Water Tube;
- 4.9. BMI Canada's Press-Fit Wrought Copper Fittings shall not be used in a plumbing system where the maximum pressure exceeds 1380 kPa (200 PSI);
- 4.10. BMI Canada's Press-Fit Wrought Copper Fittings shall not be installed where the working and operation temperature of the plumbing system is below -18°C (0°F);
- 4.11. BMI Canada's Press-Fit Wrought Copper Fittings shall not be used in a fire protection system such as sprinkler and standpipe systems;
- 4.12. BMI Canada's Press-Fit Wrought Copper Fittings shall be installed in accordance with "BMI: INSTALLATION INSTRUCTIONS" version BMI202108;

- 4.13. The elastomeric seal (EPDM O-ring) used with the BMI Canada's Press-Fit Wrought Copper Fittings shall be as part trade name 70EP111P as per NSF 61 listing certification;
- 4.14. Each BMI Canada's Press-Fit Wrought Copper Fittings shall be permanently marked with the manufacturer's name and the nominal size;
- 4.15. BMI Canada's Press-Fit Wrought Copper Fittings shall be installed by a licenced plumber or contractor; and
- 4.16. BMI Canada's Press-Fit Wrought Copper Fittings shall be pressed by the proper use of an approved pressing tool and jaws as set out below:
 - a. ® Milwaukee ½" to 4"
 - b. ® Nibco ½" to 2"
 - c. ® REMS ½" to 4"
 - d. ® Ridgid ½" to 4"
 - e. ® Rothenberger ½" to 2"
 - f. ® Stanley Virax ½" to 2"
- 4.17. All certifications noted in this authorization shall be kept up to date.

5. General Conditions

- 5.1. The use of the BMI Canada's Press-Fit Wrought Copper Fittings as described in Section 3. and the Specific Terms and Conditions set out in Section 4. must comply with:
 - (a) the *Building Code Act, 1992*, (the "Act") as amended or re-enacted,
 - (b) except as specifically authorized herein, the Building Code as amended or remade, and
 - (c) all other applicable legislation.
- 5.2. A copy of this Authorization shall accompany each application for a building permit and shall be maintained on the site of the construction with the building permit.
- 5.3. The Applicant specified in Section 1. shall promptly notify the BMEC of:
 - (a) the failure of the Applicant to comply with any of the Specific Terms and Conditions set out in Section 4.,
 - (b) the failure of the material, system or building design that is the subject matter of this Authorization to comply with any of the Specific Terms and Conditions set out in Section 4., or
 - (c) provide a satisfactory level of performance in situ, or the occurrence of any of the events described in General Conditions 5.4.(a), (b), or (e).
- 5.4. The BMEC may amend or revoke this Authorization at any time on its own initiative, or at the request of the Applicant specified in Section 1. Without restricting the foregoing, the BMEC may amend or revoke this Authorization where it determines that:

- (a) the failure of any change has been made to:
 - (i) the name of the Applicant specified in Section 1.,
 - (ii) the address or other contact name information of the Applicant specified in Section 1.,
 - (iii) the ownership of the Applicant specified in Section 2.,
 - (iv) the manufacturing facilities specified in Section 2,
 - (v) the material, system, or building design that is the subject matter of this Authorization, or
 - (vi) a test method relevant to this Authorization,
- (b) the Applicant has failed to comply with any of the terms and conditions set out in this Authorization,
- (c) in the opinion of the BMEC, the use of the material, system or building design authorized herein provides an unsatisfactory level of performance in situ,
- (d) in the opinion of the BMEC, amendment or revocation of the Authorization is appropriate on the basis of potential danger to public health and safety,
- (e) the *Act* or Building Code has been amended, re-enacted or remade in a manner relevant to this Authorization,
- (f) this Authorization was issued on mistaken, false or incorrect information, or
- (g) a revision of an editorial nature is appropriate.

Dated at Toronto this 31st day of January 2022

BUILDING MATERIALS EVALUATION COMMISSION



CHAIR, BUILDING MATERIALS EVALUATION COMMISSION

attached – “Appendix A – Supporting Information”

Appendix A – Supporting Information

The following is a list of the documents that were submitted and reviewed, but were not limited to:

1. Application, BMI Canada Inc., “Evaluation of BMI Canada Inc. Press-Fit Wrought Copper Fittings” as amended;
2. PowerPoint presentation, BMI Canada Inc., “BMI Canada Inc. Press-Fit Wrought Copper Fittings” dated July 28, 2021, 17 slides;
3. Certification, Abraham Murra Consulting, “Certification and Analysis Report”, dated June 7, 2021;
4. Letter, BMI Canada Inc., ‘Canadian Construction Materials Centre (Item 6, BMEC Application)’, dated June 7, 2021;
5. Certification, IAPMO Research and Testing Inc, “Certificate of Listing to IAPMO PS 117, the UPC, and the NPC (File # 10152)”, 70 pages, dated July 2019, revised March 17, 2021 and void after July 2024;
6. Listing, NSF International, “NSF/ANSI/CAN 61 Drinking Water System Components - Health Effects”, dated March 24, 2021;
7. Listing, NSF International, “NSF/ANSI 372 Drinking Water System Components - Lead Content”, dated March 25, 2021;
8. Report, Intertek, “Test Report”, dated June 20, 2017;
9. Certification, CQC, “Quality Management System Certificate”, valid until January 15, 2024;
10. Certification, CQC, “Environmental Management System Certificate”, valid until January 14 2024
11. Technical Information Manual, BMI Press, “Press-fit Wrot Copper Fittings”, 15 pages;
12. Instructions, BMI Press, “Installation Instructions”, 4 pages, BMI201909;
13. Sales brochure, BMI Press, “Wrot Copper Press-Fit Fittings”;
14. Handbook, Copper Development Association, “Copper Tube Handbook”, CDA Publication A4015-14/20, pages 50-78;
15. Table, BMI Canada Inc, “Model Equivalency – Sorted by BMI Part Number”, 8 pages;
16. Table, BMI Canada Inc, “Model Equivalency – Sorted by Howhi Part Number”, 9 pages;
17. Letter, Abraham Murra Consulting, “Response to letter dated July 29, 2021 — BMEC Application # 2021-02”, dated August 12, 2021;
18. Letter, Abraham Murra Consulting, “Technical Drawings”, dated August 12, 2021;
19. Letter, Abraham Murra Consulting, “Comprehensive List of Manufacturer Model Numbers and Corresponding BMI Canada Part Numbers”, dated August 12, 2021;
20. Letter, Abraham Murra Consulting, “Response to letter dated September 2, 2021 — BMEC Application # 2021-02”, dated September 8, 2021;
21. Letter, Abraham Murra Consulting, “Response to letter dated September 20, 2021 — BMEC Application # 2021-02”, dated September 29, 2021;
22. Letter, Abraham Murra Consulting, “Comment of draft authorization — BMEC Application # 2021-02”, dated October 21, 2021;
23. Letter, Abraham Murra Consulting, “Comment of draft authorization — BMEC Application # 2021-02”, dated November 5, 2021;
24. Instructions, BMI Press, “Installation Instructions”, 4 pages, BMI202108;
25. Listing, NSF International, “NSF/ANSI/CAN 61 Drinking Water System Components - Health Effects”, dated November 3, 2021;
26. Listing, NSF International, “Lead Content Certification Program 0PB-ADPL”, dated November 3, 2021.