

# **ICC-ES Evaluation Report**

### ESR-3434

Reissued October 2024

This report also contains:

- CA Supplement

Subject to renewal October 2026

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| DIVISION: 06 00 00—<br>WOOD, PLASTICS AND<br>COMPOSITES<br>Section: 06 05 23.13—<br>Nails | REPORT HOLDER:<br>OMAN FASTENERS LLC<br>ADDITIONAL LISTEES:<br>KOKI HOLDINGS<br>AMERICA LTD.<br>"METABO HPT"-BRAND<br>NAME<br>PRIMESOURCE<br>BUILDING PRODUCTS,<br>INC.<br>"GRIP-RITE"-BRAND<br>NAME | EVALUATION SUBJECT:<br>PNEUMATICALLY AND<br>MECHANICALLY<br>DRIVEN ROUND HEAD<br>OR MODIFIED ROUND<br>HEAD NAILS |  |
|---|--|--|--|
|---|--|--|--|

## **1.0 EVALUATION SCOPE**

Compliance with the following codes:

- 2018, 2015, 2012, 2009 and 2006 International Building Code® (IBC)
- 2018, 2015, 2012, 2009 and 2006 *International Residential Code*® (IRC)

#### **Properties evaluated:**

- Bending yield strength
- Compliance with material requirements and tolerances of ASTM F1667
- Compliance with prescriptive requirements of the IBC and IRC
- Use in diaphragms, shear walls and braced walls

### **2.0 USES**

The nails are used for engineered and non-engineered (prescriptive) structural connections.

## **3.0 DESCRIPTION**

The nails are formed from carbon steel wire, and have full round heads, D heads, or offset heads (see <u>Figure 1</u>). The nail point types are diamond, blunt diamond, chisel/blunt chisel or blunt/no point. Nails with coating designated as EG are electro-galvanized and comply with ASTM A641, Class 1. Nails with coating designated as HD are hot-dip galvanized and comply with ASTM A153, Class D. Both EG and HD nails comply with the requirements of Section 10.1 of ASTM F1667. See <u>Table 1</u> for dimensions and additional descriptive information, including bending yield strength, and <u>Table 2</u> for head markings on metal connector nails. Dimensional tolerances conform to ASTM F1667.



## **4.0 DESIGN AND INSTALLATION**

### 4.1 Design:

**4.1.1 Engineered Structural Connections:** The Oman Fasteners nails comply with the requirements of IBC Section 2303.6 and may be used in connections designed in accordance with the ANSI/AWC National Design Specification for Wood Construction (NDS), using the design bending yield strengths and the nail diameters shown in <u>Table 1</u>. For nails with round heads, the reference head pull-through design values must be determined in accordance with Section 12.2.5 of the 2018 NDS. Reference head pull-through design values for other nails are outside the scope of this report.

**4.1.2 Engineered Diaphragms and Shear Walls:** The Oman Fasteners nails listed in <u>Table 3</u> comply with the requirements of IBC Section 2303.6 and head area requirements defined in the ICC-ES Acceptance Criteria for Nails (AC116), and are equivalent to the code-prescribed nails listed in <u>Table 3</u> for use in engineered diaphragms and shear walls in accordance with the AWC Special Design Provisions for Wind and Seismic (SDPWS), which is referenced in the IBC.

**4.1.3 Prescriptive Framing Connections:** The Oman Fasteners nails comply with the requirements of IBC Section 2303.6 and may be used in framing connections where the nail type and size is prescribed in IBC Table 2304.10.1 (2012, 2009 and 2006 IBC Table 2304.9.1) or IRC Table R602.3(1), as applicable.

**4.1.4 Prescriptive Sheathing Attachment:** The nails listed in <u>Table 3</u> comply with the requirements of IBC Section 2303.6 and head area requirements of AC116, and are equivalent to the code-prescribed nails listed in <u>Table 3</u> for attachment of sheathing to wood framing in accordance with IBC Table 2304.10.1 (2012, 2009 and 2006 IBC Table 2304.9.1) or Table R602.3(1), as applicable.

**4.1.5 Prescriptive Use with Metal Connectors:** The Oman Fasteners nails may be used where nails of the same dimension and the same or lesser bending yield strength are prescribed in an ICC-ES evaluation report on the metal connector.

### 4.2 Installation:

The nails must be installed in accordance with this report, the report holder's published installation instructions, the approved plans, if applicable, and the applicable prescriptions in the code.

The nails described in this report are packaged for use in power tools recommended by the report holder. Individual nails may be manually driven.

Edge distances, end distances, and spacing must be sufficient to prevent splitting of the wood. Installation must comply with the applicable requirements of NDS Section 12.1.6 (Section 11.1.6 of the NDS-12 for the 2012 IBC; Section 11.1.5 of the NDS-05 for the 2009 and 2006 IBC).

## **5.0 CONDITIONS OF USE:**

The Oman Fasteners nails described in this report comply with, or are suitable alternatives to what is specified in, those codes listed in Section 1.0 of this report, subject to the following conditions:

- **5.1** Use of the nails must be in accordance with this report and the manufacturer's instructions. In the event of a conflict between the manufacturer's instructions and this report, this report governs.
- **5.2** Use of the nails with a bright finish in chemically treated wood, such as pressure-treated, preservative-treated, or fire-retardant-treated wood, or in exterior or exposed conditions, is not permitted. Use of the electro-galvanized nails in chemically treated wood or in exterior or exposed conditions is outside the scope of this report.
- **5.3** The nails are manufactured under a quality control program with inspections by ICC-ES.

## **6.0 EVIDENCE SUBMITTED**

Data in accordance with the ICC-ES Acceptance Criteria for Nails (AC116), dated March 2018.

## 7.0 IDENTIFICATION

7.1 Nails are packaged in containers or cartons bearing the company name (Metabo HPT or Grip-Rite), the evaluation report number (ESR-3434), an image of the collated nails, and the nail description (shank type, diameter, length, point type and finish/coating). Packages of hardened joist hanger nails are identified by "MC" on the packaging, and these nails are marked on the head in accordance with <u>Table 2</u>.

7.2 The report holder's contact information is the following:

**OMAN FASTENERS LLC PLOT NO. 5117 SOHAR PEIE INDUSTRIAL AREA – PHASE 5** POST OFFICE BOX 584, PC 322 **SOHAR - SULTANATE OF OMAN** +968-26701727 +968 26701726 (FAX) www.omanfasteners.com

7.3 The Additional Listees' contact information is the following:

KOKI HOLDINGS AMERICA LTD. **1111 BROADWAY AVENUE BRASELTON, GEORGIA 30517** PRIMESOURCE BUILDING PRODUCTS, INC. **1321 GREENWAY DRIVE IRVING, TEXAS 75038** 

| NOMINAL<br>DIAMETER<br>(inch) | RANGE OF<br>LENGTHS<br>(inches) | HEAD STYLE <sup>1</sup> | NOMINAL<br>HEAD<br>DIAMETER<br>(inch) | SHANK<br>TYPE | COATING   | SPECIFIED<br>BENDING YIELD<br>STRENGTH<br>F <sub>yb</sub> (psi) | PACKAGING                         |
|-------------------------------|---------------------------------|-------------------------|---------------------------------------|---------------|-----------|---|-----------------------------------|
| 0.092                         | $1^{1}/_{4} - 2^{1}/_{2}$       |                         | 0.216                                 | S, R, Sc      | X, HD, EG | 100,000   | Bully Mire Cail                   |
| 0.099                         | $1^{1}/_{8} - 2^{1}/_{2}$       |                         | 0.238                                 | S, R, Sc      | X, HD, EG | 100,000   | Buik, Wire Coll                   |
| 0.113                         | $1^{1}/_{4} - 2^{1}/_{2}$       |                         | 0.277                                 | S, R, Sc      | X, HD, EG | 100,000   |                                   |
| 0.120                         | $2^{1}/_{4} - 4$                | Full round              | 0.277                                 | S, R, Sc      | X, HD, EG | 100,000   | Bulk, Plastic Strip,<br>Wire Coil |
| 0.131                         | $2^{1}/_{4} - 4$                |                         | 0.277                                 | S, R, Sc      | X, HD, EG | 100,000   |                                   |
| 0.148                         | $2^{1}/_{4} - 4$                |                         | 0.287                                 | S, R, Sc      | X, HD, EG | 90,000  | Bulk Diastia Strip                |
| 0.162                         | $2^{1}/_{4} - 4$                |                         | 0.315                                 | S, R, Sc      | X, HD, EG | 90,000  | Duik, Plastic Strip               |
| 0.113                         | $2 - 2^{1}/_{2}$                |                         | 0.280                                 | S, R, Sc      | X, HD, EG | 100,000   |                                   |
| 0.120                         | $2^{3}/_{4} - 3^{1}/_{2}$       | D Head                  | 0.284                                 | S, R, Sc      | X, HD, EG | 100,000   | Paper Tape                        |
| 0.131                         | $3 - 3^{1}/_{2}$                |                         | 0.284                                 | S, R, Sc      | X, HD, EG | 100,000   |                                   |
| 0.113                         | $2 - 2^{1}/_{2}$                |                         | 0.258                                 | S, R, Sc      | X, HD, EG | 100,000   |                                   |
| 0.120                         | $2^{3}/_{4} - 3^{1}/_{2}$       | Offset Head             | 0.258                                 | S, R, Sc      | X, HD, EG | 100,000   | Paper Tape                        |
| 0.131                         | $3 - 3^{1}/_{2}$                |                         | 0.258                                 | S, R, Sc      | X, HD, EG | 100,000   |                                   |
| Hardened Joist Hanger Nails   |                                 |                         |                                       |               |           |   |                                   |
| 0.131                         | 1 ½ - 2 ½                       |                         | 0.283                                 | S             | X, HD, EG | 130,000   |                                   |
| 0.148                         | 1 ½ - 2 ½                       | Full round              | 0.283                                 | S             | X, HD, EG | 115,000   | Paper Tape                        |
| 0.162                         | 2 1/2                           |                         | 0.283                                 | S             | X, HD, EG | 115,000   |                                   |
|                               |                                 |                         |                                       |               |           |   |                                   |

#### **TABLE 1—NAIL DESCRIPTIONS**

For SI: 1 inch = 25.4 mm, 1 psi = 6.89 kPa.

s Smooth shank nail =

Ring shank nail R =

= Screw shank nail Sc

 X
 =
 Bright finish (no zinc)

 EG
 =
 Electrogalvanized, complying with ASTM A641 Class 1

 HD
 =
 Hot-dipped galvanized, complying with ASTM A153 Class D

 1See
 Figure 1 for a description of the head styles.

#### TABLE 2—HARDENED NAIL HEAD MARKING

| NAIL SIZE (inch) | NAIL HEAD MARKING |
|------------------|-------------------|
| 1½ x 0.131       | 1                 |
| 2½ x 0.131       | 2                 |
| 1½ x 0.148       | 3                 |
| 2½ x 0.148       | 4                 |
| 2½ x 0.162       | 5                 |

#### TABLE 3—OMAN FASTENERS NAILS FOR USE IN ENGINEERED DIAPHRAGMS AND SHEAR WALLS AND PRESCRIPTIVE SHEATHING ATTACHMENT UNDER THE IBC AND IRC

| NAIL TYPE AND SIZE PRESCRIBED IN THE CODE            | OMAN NAIL DESCRIPTION   |
|--|---|
| 6d common (2" x 0.113")                              | 2 to 2 <sup>3</sup> / <sub>8</sub> " x 0.113"; full round, D-head or offset head; smooth; X, HD or EG |
| 8d common (2 <sup>1</sup> / <sub>2</sub> " x 0.131") | $2^{1}/_{2}$ " to 3" x 0.131"; full round, D-head or offset head; smooth; X, HD or EG                 |

For **SI:** 1 inch = 25.4 mm.

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Full Round

D-Head (Clipped)

Offset

FIGURE 1-NAIL HEAD STYLES



## **ICC-ES Evaluation Report**

## **ESR-3434 CA Supplement**

Reissued October 2024 This report is subject to renewal October 2026

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DIVISION: 06 00 00—WOOD, PLASTICS AND COMPOSITES Section: 06 05 23.13—Nails

**REPORT HOLDER:** 

OMAN FASTENERS LLC

**EVALUATION SUBJECT:** 

#### PNEUMATICALLY AND MECHANICALLY DRIVEN ROUND HEAD OR MODIFIED ROUND HEAD NAILS

#### 1.0 REPORT PURPOSE AND SCOPE

#### Purpose:

The purpose of this evaluation report supplement is to indicate that Pneumatically and Mechanically Driven Round Head or Modified Round Head Nails, described in ICC-ES evaluation report <u>ESR-3434</u>, has also been evaluated for compliance with the code(s) noted below.

#### Applicable code edition(s):

#### ■ 2019 California Building Code<sup>®</sup> (CBC)

For evaluation of applicable chapters adopted by the California Office of Statewide Health Planning and Development (OSHPD) AKA: California Department of Health Care Access and Information (HCAI) and the Division of State Architect (DSA), see Sections 2.1.1 and 2.1.2 below.

■ 2019 California Residential Code<sup>®</sup> (CRC)

#### 2.0 CONCLUSIONS

#### 2.1 CBC:

The Pneumatically and Mechanically Driven Round Head or Modified Round Head Nails, described in Sections 2.0 through 7.0 of the evaluation report <u>ESR-3434</u>, comply with CBC Chapter 23, provided the design and installation are in accordance with the 2018 *International Building Code*® (IBC) provisions noted in the evaluation report and the additional requirements of CBC Chapters 16 and 23, as applicable.

2.1.1 **OSHPD:** The applicable OSHPD Sections of the CBC are beyond the scope of this supplement.

2.1.2 DSA: The applicable DSA Sections of the CBC are beyond the scope of this supplement.

#### 2.2 CRC:

The Pneumatically and Mechanically Driven Round Head or Modified Round Head Nails, described in Sections 2.0 through 7.0 of the evaluation report ESR-3434, comply with CRC Chapter 6, provided the design and installation are in accordance with the 2018 *International Residential Code*<sup>®</sup> (IRC) provisions noted in the evaluation report.

This supplement expires concurrently with the evaluation report, reissued October 2024.

