

ICC-ES Report

PMG-1383

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Reissued 08/2018
This report is subject to renewal 08/2019

EVALUATION SUBJECT:

PERT-AL-PERT PIPE AND FITTINGS FOR REFRIGERATION

DIVISION:

23 00 00—HEATING, VENTILATING AND AIR CONDITIONING (HVAC)

SECTION:

23 20 00—HVAC PIPING

Report Holder:

WRW WESTFÄLISCHE ROHRWERKE GMBH

KRUPPSTRASSE 29
59227 AHLEN, GERMANY

Look for the ICC-ES marks of Conformity!



ICC-ES PMG Product Certificate

PMG-1383



Effective Date: August 2018

This listing is subject to re-examination in one year.

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CSI: DIVISION: 23 00 00—HEATING, VENTILATING AND AIR CONDITIONING (HVAC)
Section: 23 20 00—HVAC Piping

Product certification system:

The ICC-ES product certification system includes testing samples taken from the market or supplier's stock, or a combination of both, to verify compliance with applicable codes and standards. The system also involves factory inspections, and assessment and surveillance of the supplier's quality system.

Products: PERT-AL-PERT Pipe and Fittings for Refrigeration

Listee: WRW Westfälische Rohrwerke GmbH
Kruppstrasse 29
59227 Ahlen, Germany
www.wrw-ahlen.com

Compliance with the following codes:

2018, 2015, 2012, 2009 and 2006 *International Mechanical Code*® (IMC)
2018, 2015, 2012, 2009 and 2006 *International Residential Code*® (IRC)
2018, 2015, 2012, 2009 and 2006 *Uniform Mechanical Code*® (UMC)*
2016 *California Mechanical Code*® (CMC)*
2014 *Florida Mechanical Code*®

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Compliance with the following standards:

ICC-ES LC 1039-2015, PMG Listing Criteria for PERT-AL-PERT Pipe and Fittings for Refrigeration Applications.

Identification:

The WRW Smartpipe PERT-Type II-AL-PERT-Type II pipe is marked every 5 feet (1.5 m) with the following: manufacturer's name, nominal pipe size, material designation (PERT-AL-PERT), temperature and pressure ratings, production code, and the ICC-ES PMG listing mark.

Installation:

The WRW Smartpipe pipe and fittings must be installed in accordance with the manufacturer's published installation instructions, the applicable codes and this listing.

Mechanical joints shall not be used on annealed temper copper tube in sizes larger than $\frac{7}{8}$ -inch (22.2 mm) OD size per IMC and $\frac{3}{4}$ " of an inch nominal size per UMC.

Installation of refrigerant piping is limited to line-set applications and for single DX Evaporator and Air Handler of 5 Tons or less, residential and light commercial use for direct expansion split systems and shall not be used inside factory built equipment.

Models:

WRW Smartpipe PERT-Type II-AL-PERT-Type II pipe is manufactured from polyethylene and aluminum materials satisfying ASTM F1282 and LC1039.

The pipe is available in a nominally, $\frac{1}{4}$, $\frac{3}{8}$, $\frac{1}{2}$, $\frac{5}{8}$, $\frac{3}{4}$, $\frac{7}{8}$, 1, and $1\frac{1}{8}$ inch outside diameter (8, 10, 15, 16, 20, 22, 25 and 28 mm) and in coils or in straight lengths 20 feet (6.2 m) long.

WRW Smartpipe PERT-Type II-AL-PERT-Type II pipe and fittings used in used in refrigeration applications shall be have a temperature range of -40 to 203°F (-40 to 95°C), and a working pressure of 580 psi (40 bar). Maximum pressure is 650 (45 bar).

Conditions of Listing:

1. The pipe must be used with only the following refrigerants: R410A.
2. Installation of refrigerant piping is limited to line-set applications and for single DX Evaporator and Air Handler of 5 Tons or less, residential and light commercial use for direct expansion split systems and shall not be used inside factory built equipment.
3. Mechanical joints shall not be used on annealed temper copper tube in sizes larger than $\frac{7}{8}$ -inch (22.2 mm) OD size per IMC and $\frac{3}{4}$ " of an inch nominal size per UMC.
4. The pipe installation must be pressure-tested for leaks in the presence of the code official or the code official's designated representative. Refrigeration system shall include safety device to limit pressure to 650 psi.
5. When installation is in fire-resistance-rated assemblies, evidence must be provided to the code official of compliance with *International Building Code*[®] (IBC) Section 713 (penetrations), *Uniform Building Code* (UBC) Section 709 (walls and partitions) or UBC Section 710 (floor/ceiling or roof/ceiling), as applicable.
6. The pipe must not be used as a source of electrical ground.
7. Pipe bends must be installed in accordance with the manufacturer's published installation instructions.
8. When the system is embedded in concrete, pipe must be covered with a minimum of $\frac{3}{4}$ inches (19.1 mm) of concrete and installation must comply with IBC Section 1906.3 or UBC Section 1906.3, as applicable.
9. The pipe is manufactured in Ahlen Germany, under a quality control program with surveillance inspections by ICC-ES.