

## General Safety

### Water Coil Installation

- Hot Water Booster Coils

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*Booster coils are designed for air heating applications using hot water and are ideal for both replacement and new construction applications. Coils can be mounted in air-handling units or inside ductwork and feature 5/8 inch copper tubing. They utilize an aluminum, sine-wave fin design are available in one or two row configurations. All coils are leak tested under 450 PSIG of dry nitrogen to guarantee quality.*

*Flanged Casing Features a fully flanged casing which allows for mounting inside an air-handling unit or ductwork.*

*Slip & Drive Casing Allows coil to be directly connected to the ductwork.*

*This manual covers the basic installation, operation and maintenance recommendations for coils manufactured by Precision Coils.*

## General Safety

Always follow local codes and standards for the installation of equipment and coils for the area in which the coils are to be operated. Following are recommendations for the installation of products manufactured by Precision Coils. Please read this manual completely before installing and operating coils manufactured by Precision Coils including the suggested maintenance. Care should be taken when handling Precision Coils to avoid damage or personal injury.

Failure to observe these recommendations could result in premature failure of the product and / or loss of the warranty provided. Precision Coils will repair or replace any product determined to have failed due to a manufacturing defect after proper evaluation of the product and installation methods have been completed. Please see complete Warranty Statement. Precision Coils reserves the right to request information concerning the installation of products it manufactures and / or the return of failed products to our facility for evaluation of the failure before any warranty will be considered.

1. Support all piping independently of the coil.
2. All coil connections extend through the unit side panel.
3. All connections adjacent to heating coils should have swing joints or flexible fittings to absorb expansion and contraction strains.
4. Install all piping in accordance with local codes and accepted industry standards.

## Water Coil Installation Recommendations

1. Piping should be in accordance with accepted industry standards. Always use a back up wrench on the coil connections when attaching the piping to the coil if pipe thread connections are utilized.
2. Connect the water supply to the bottom connection on the air leaving side and the water return to the top connection on the air entering side.
3. Water coils are not normally recommended for use with entering air temperatures below 40°F. Glycol solutions or brines are the only freeze-safe media for operation of water coils for low entering air conditions.
4. When fresh and return air are to be heated by a water coil, care should be used in the design of the ductwork to insure thorough mixing before the air enters the coil. The return air should always enter the bottom of the duct. Fresh air should enter the top of the duct. The greater the distance between the points of mixing and entrance to the coil, the better the application.
5. Two position control valves, modulating valves, three way valves or a combination of these controls can accomplish control of water coils. Follow the recommendations of the control manufacturer regarding types, sizing and locations. Face and bypass dampers may also be used, but do not close off tightly. In heating applications the air temperature may rise several degrees and should be considered in system design. Low leakage dampers may be required.
6. Pipe sizes for the system must be selected on the basis of the head [pressure] available from the circulating pump. It is recommended that the velocity should not generally exceed 8 feet per second and that the friction loss should be approximately 3 feet per 100 feet of pipe.

Note: Vent and Drain connections are provided on Precision Coils water coils. This allows the coils to be drained. Keep in mind when draining coils, all water may not drain from the coil. In order to completely drain the coil to prevent the possibility of freezing during cold ambient temperatures, air or nitrogen pressure must be utilized to blow any remaining water from the coil.

## Maintenance

### Coil Cleaning

Coils should be kept clean to maintain maximum performance. For operation at it's highest efficiency, the coil should be cleaned often when dirty conditions prevail. Power should be disconnected and locked out and motors should be covered to insure that no moisture penetrates into the windings causing motor failure if applicable.

Remove large debris from the coils and straighten fins before cleaning. Clean coils with cold water and detergent or with one of the commercially available chemical coil cleaners. Rinse coils thoroughly after cleaning.

**CAUTION:** Do not use acidic chemical coil cleaners. Do not use alkaline chemical coil cleaners that, after mixing, have a pH value greater than 8.5 without also using an aluminum corrosion inhibitor in the cleaning solution. Failure to follow these guidelines or the manufacturer's instructions for use of cleaning chemicals could result in damage to the unit.

**WARNING:** Some chemical coil-cleaning compounds are caustic, as well as toxic. Use these substances only in accordance with the manufacturer's instructions. Failure to do so could result in serious injury, death or equipment damage.

### Fin Straightening

Coil fins may have been bent during shipping or servicing, and should be straightened to maintain maximum heat transfer. Reduction of the effective coil surface will correspondingly reduce coil capacity. Always check fin appearance after any handling of the coil and after any servicing is done near the coils. Fin combs are sized according to number of fins per inch of the coil. For relatively small bends that require only minor repair, other tools may be used to evenly space the fins. Be careful not to damage the coils.

## Specifications

Flanged Casing Model No.	Casing Height x Length (in.)	Slip & Drive Casing Model No.	Casing Height x Length (in.)	Fin Height x Length (in.)	Casing Depth (in.)	Face Area (ft <sup>2</sup> )	No. of Rows	Flow Capacity (GPM)	Total Capacity (MBH)	Air Flow Rate (FPM)	Air Pressure Drop
W101612N-WWG	8 x 14	SP101612N-WWG	6½ x 12½	6 x 12	4	0.50	1	0.9	8.6	375	0.1
W101912N-WWG	11 x 14	SP101912N-WWG	9½ x 12½	9 x 12	4	0.75	1	1.3	12.7	450	0.1
W1011212N-WWG	14 x 14	SP1011212N-WWG	12½ x 12½	12 x 12	4	1.00	1	1.8	17.7	600	0.1
W1011224N-WWG	14 x 26	SP1011224N-WWG	12½ x 24½	12 x 24	4	2.00	1	3.9	38.3	1200	0.1
W1011524N-WWG	17 x 26	SP1011524N-WWG	15½ x 24½	15 x 24	4	2.50	1	5.0	48.7	1500	0.1
W1011824N-WWG	20 x 26	SP1011824N-WWG	18½ x 24½	18 x 24	4	3.00	1	5.7	56.0	1800	0.1
W102612N-WWG	8 x 14	SP102612N-WWG	6½ x 12½	6 x 12	4	0.50	2	2.0	19.8	375	0.3
W102912N-WWG	11 x 14	SP102912N-WWG	9½ x 12½	9 x 12	4	0.75	2	2.8	27.2	450	0.2
W1021212N-WWG	14 x 14	SP1021212N-WWG	12½ x 12½	12 x 12	4	1.00	2	3.8	37.1	600	0.2
W1021224N-WWG	14 x 26	SP1021224N-WWG	12½ x 24½	12 x 24	4	2.00	2	7.6	74.3	1200	0.2
W1021524N-WWG	17 x 26	SP1021524N-WWG	15½ x 24½	15 x 24	4	2.50	2	9.7	94.1	1500	0.2
W1021824H-WWG	20 x 26	SP1021824N-WWG	18½ x 24½	18 x 24	4	3.00	2	11.7	114.1	1800	0.2

AHRI Certified™ is the trusted mark of performance assurance for heating, ventilation, air conditioning and commercial refrigeration equipment. Products earning the mark undergo rigorous, independent annual evaluation to ensure that they perform according to the manufacturers' published claims. Certifying HVACR equipment and component performance allows consumers to compare products based on independently verified performance ratings. To find AHRI Certified™ products, go to [www.ahridirectory.org](http://www.ahridirectory.org). Precision Coils product is certified by AHRI to AHRI Standard 410.

## Warranty

The Seller warrants to the original user of its manufactured product against defects in material and workmanship for a period of one year from the date of shipment provided the equipment has been correctly installed, applied, and operated under intended design conditions. The Seller's obligation under this warranty is limited to repair or replacement, at Seller's option, of any product, that upon Seller's examination at its factory shall appear to have become defective. Correction of such defects by repair or replacement, plus return freight via lowest common carrier, shall constitute fulfillment of obligations to the buyer. The Seller will accept no expense, liability, or responsibility for repairs made outside the factory by others without prior written approval. In any event and at no time shall the expenses or liabilities arising from the sale of the equipment by the Seller exceed the original net cost of the material sold. Warranty covers material only and not labor required to replace or install.

Contact your local Precision Coils distributor for more information.



Right Fit. Right Now.

