



Defining Quality. Building Comfort.

# Heating and Cooling Coils



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For over 20 years, AAON has supplied the coil needs of industrial and commercial HVAC customers. Today, AAON offers a wide selection of chilled water, hot water, steam, and refrigerant fin and tube coil configurations. AAON coils can be easily configured with the AAONECat selection software from an expansive list of features to meet your coil construction and performance specifications. All AAON coils follow a rigorous manufacturing process and testing routine to ensure they are free from leaks before shipment.

## Quick Ship Coils Available

The AAON design expertise and manufacturing processes allow for emergency quick shipments with lead times as short as one business day. Contact your local AAON representative for further details on available quick shipments.

## Booster Coils

Booster coil configurations are available that are sure to meet your exact needs for supplemental heating. The coil options include tube diameter, rows deep, finned height and length, fin thickness, fin material, fins per inch, tube wall, connection size and type, and casing configuration. Using the AAON ECat selection software, the critical criteria can be selected to ensure that the right AAON booster coil is selected to provide optimum performance in any application.

## Heating Coils

Whether a job calls for steam distributing heat or hot water heat, AAON heating coils are designed to fit any application. All AAON heating coils are available with multiple tubing diameter options, a variety of tube wall thicknesses, and multiple rows deep. Hot water heating coils can be circuited in a full, half, or quarter serpentine circuiting to optimize heating performance. Steam coils are configured as tube-in-tube distributing to maximize performance at low entering air temperature conditions. Since AAON hot water coils are rated for entering water temperatures as high as 200°F and steam distributing coils rated for entering superheated steam as high as 15 psig, AAON heating coils can satisfy the rigorous demands of the HVAC marketplace.



## Chilled Water Cooling Coils

AAON offers an array of options to satisfy hydronic cooling coil requirements whether the application calls for chilled water only or a glycol solution for freeze protection. With multiple tubing diameter options, coil circuitry options and fin densities, and up to 12 rows deep for additional latent capacity for dehumidification applications, AAON cooling coils can maximize performance regardless of the job specification. Designed to save installation and maintenance time and money, all hydronic coils include factory installed manifolds designed to handle a wide range of water flow rates. World class leak testing equipment and manufacturing processes, and AHRI 410 certification, ensure AAON hydronic coils are the best.

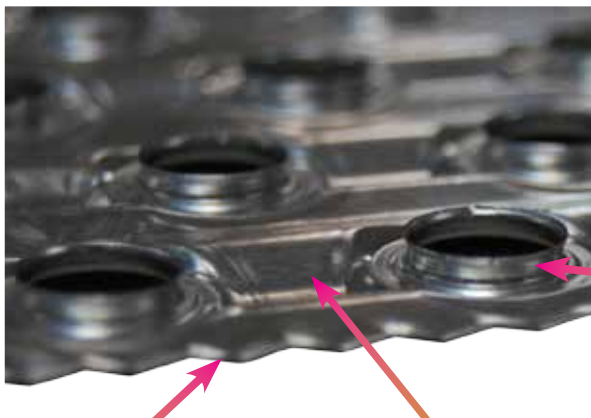


AAON chilled water and hot water coils are certified in accordance with AHRI Standard 410, Forced Circulation Air-Cooling and Air-Heating Coils. The AHRI Certification program is administered and governed by AHRI, which ensures that various types of heating, ventilation, air conditioning, refrigeration, and water heating products perform according to manufacturers' published claims. Products that are certified through the AHRI Certification Program are continuously tested by an independent third-party laboratory, contracted by AHRI, to determine the product's ability to conform to one or more product rating standards or specifications. Specifying AHRI Certified AAON Coils instills confidence in coil performance.

## DX Evaporator or Condenser Coils

For any system requiring direct expansion refrigerant coils, AAON can provide the evaporator or condenser coil to match the exact need. DX evaporator coils are available with multiple rows, multiple fins per inch options, and can be configured with interlaced or face split circuitry for capacity modulation and capitalize on valuable energy savings. DX condenser coils are available with multiple rows, up to 22 fins per inch, and can be configured with interlaced or face split circuitry. All DX evaporator coils and heat pump condenser coils include rifled tube enhancements and refrigerant distributors that ensure

proper refrigerant distribution into the coil. AAON DX coils are designed to maximize performance no matter the specific job requirements.



*All fins have sine wave enhancements for greater heat transfer efficiency*

*Fins available in either aluminum or copper with a number of different thicknesses to fit the specific application*

*Drawn fin collars increase heat transfer and offer precise fin densities*

## Coil Leak Testing

All AAON coils, whether they are for hydronic or DX systems, surpass all standard industry leak test specifications. Each coil has an individual barcode that is scanned as it follows a rigorous leak test routine including gross leak testing, vacuum decay testing, and final leak testing with trace gas where each outcome being stored electronically for data analysis. Every coil must pass each step of the leak test procedure before it receives final approval and ships to the customer or is installed in one of the world class AAON rooftop units, chillers, outdoor mechanical rooms, air handling units, self contained units, or condensing units. Using the test data, AAON is also able to continually improve the manufacturing processes to offer the best coils available.



Condenser coil being scanned prior to leak testing. The results of this test, pass or fail, are stored electronically for further analysis to ensure quality control.



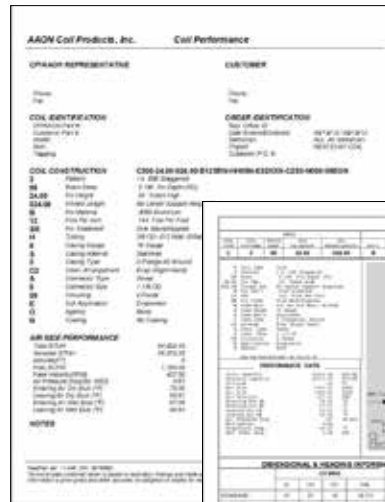
Test interface for the leak test chamber. Operators are able to see real time results.



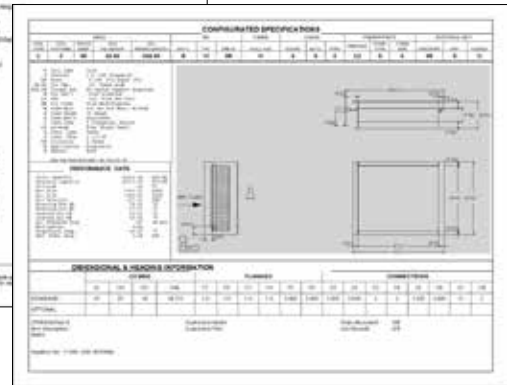
Leak test chamber where coils go through gross leak and trace gas leak testing.

## AAON Selection Software

The AAON ECat software allows each coil selection to precisely match your application requirements. The coil can be configured based on the desired MBH, with the ECat software varying the rows, fins per inch, and circuitry to find the closest match. The coil can also be configured based on specific coil characteristics input with the ECat software providing a performance rating. The software calculates coil performance including sensible and latent capacity, airside pressure drop, leaving air conditions, and even glycol solution ratings. Coil options in the ECat software are nearly limitless with the flexibility to select specific fin densities, specific tube diameters and circuitry to optimize pressure drop through the coil. The AAON ECat selection software gives you the assurance that the designed coil will meet the exact needs of your job specifications.



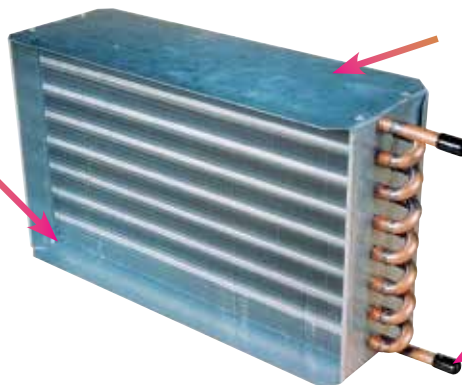
Coil Specific Performance Rating Sheet and Coil Specific Drawing



# Booster Coil Details

## Booster Coil Details

Fin densities from 8 to 16 fins per inch to optimize performance and air side pressure drop



Slip and Drive Coil Casing Type

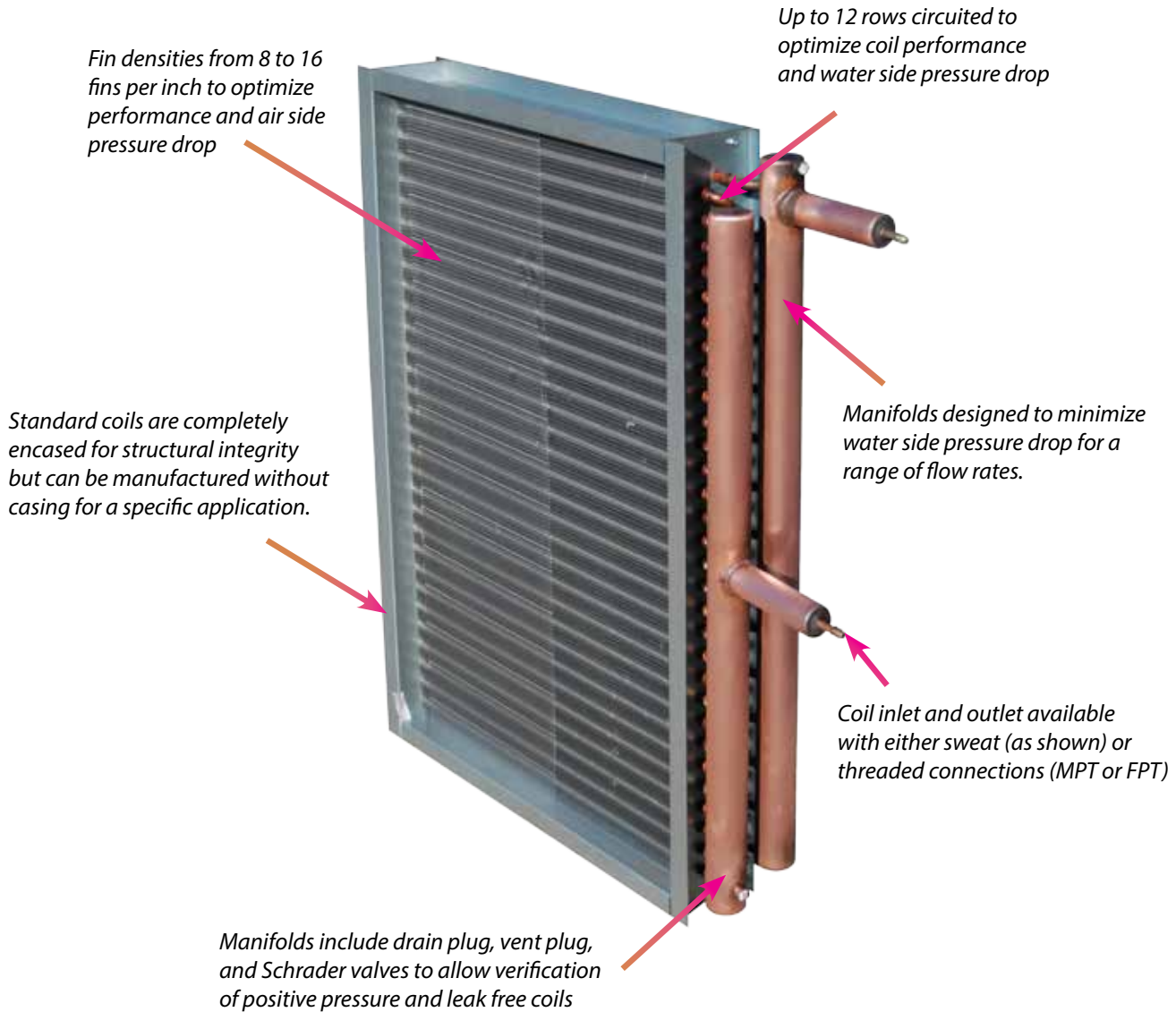
Coil inlet and outlet available with either sweat or threaded connections (MPT or FPT)

Booster Coils										
Type	Tube Material	Fin Material	Casing Material	Casing Type	Rows	FPI	Circuitry	Tube Diameter (OD)	Connection Type	Optional Corrosion Protection
Hot Water or Steam	Copper	Aluminum or Copper	G90 Galvanized, Aluminum, or 304 Stainless Steel	U-Flange, Slip and Drive or None	Up to 12	Up to 16	Quarter to Double Serpentine, or Steam Distributing	1/2" or 5/8"	Sweat, MPT, or FPT*	Polymer E-Coating

\* MPT (Male Pipe Thread) and FPT (Female Pipe Thread)

# Hydronic Coil Details

## Hydronic Coil Details



## Hydronic Coils

Type	Tube Material	Fin Material	Casing Material	Casing Type	Rows	FPI	Circuitry	Tube Diameter (OD)	Connection Type	Optional Corrosion Protection
Hot Water Coils	Copper	Aluminum or Copper	G90 Galvanized, Aluminum, or 304 Stainless Steel	U-Flange, Slip and Drive or None	Up to 12	Up to 16	Quarter to Double Serpentine	1/2" or 5/8"	Sweat, MPT, or FPT*	Polymer E-Coating
Steam Coils							Steam Distributing	5/8"		
Chilled Water Coils							Quarter to Double Serpentine	1/2" or 5/8"		

\* MPT (Male Pipe Thread) and FPT (Female Pipe Thread)

# DX Coil Details

## DX Coil Details

Fin densities from 8 to 20 fins per inch to optimize performance and air side pressure drop

6 row high capacity available for dehumidification applications and increased energy efficiency.

Gas flux brazing on all distributors for a cleaner joint with less refrigerant leaks

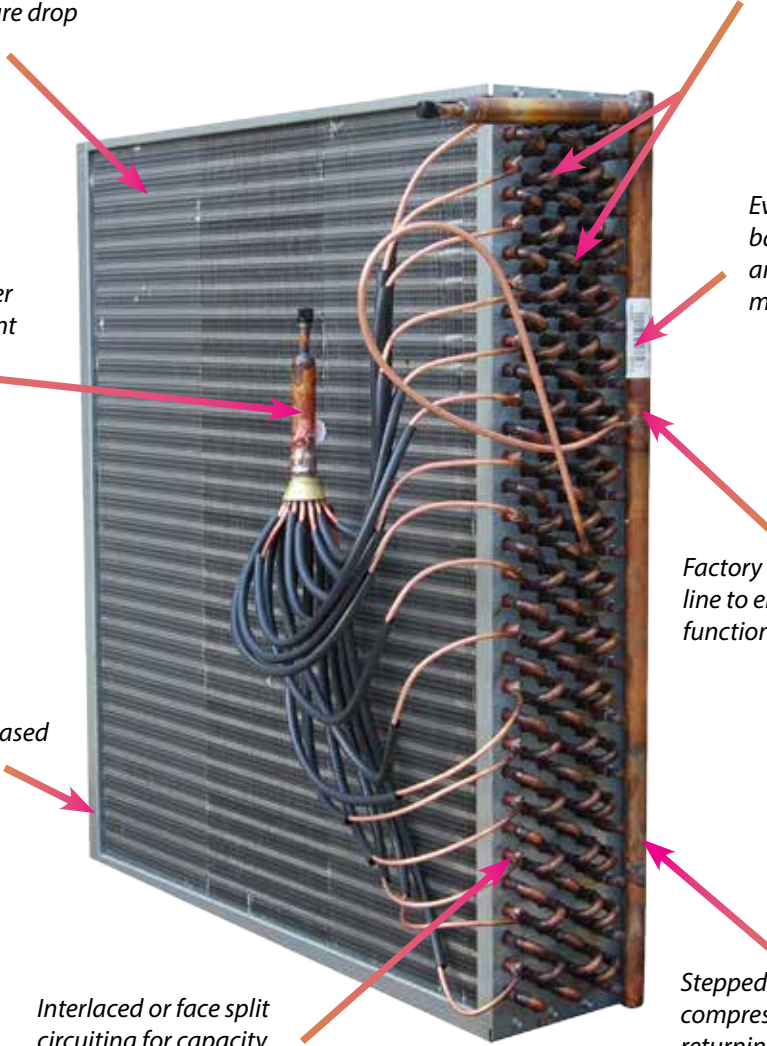
Every coil has a unique barcode that allows thorough analysis of every step of the manufacturing process

Coils are completely encased for structural integrity

Factory installed TXV equalizer line to ensure expansion valve functionality

Interlaced or face split circuiting for capacity modulation

Stepped suction manifold to prevent compressor liquid refrigerant returning to the compressor and therefore extend compressor life



## DX Coils

Type	Tube Material	Fin Material	Casing Material	Casing Type	Rows	FPI	Circuitry	Tube Diameter (OD)	Connection Type	Optional Corrosion Protection
Evaporator Coils	Copper	Aluminum or Copper	G90 Galvanized, Aluminum, or 304 Stainless Steel	U-Flange, Slip and Drive or None	Up to 12	Up to 20	Face Split or Interlaced	3/8" or 1/2"	Sweat, MPT, or FPT*	Polymer E-Coating
Condenser Coils						Up to 24		3/8" or 7mm		

\* MPT (Male Pipe Thread) and FPT (Female Pipe Thread)

## Corrosion Protection

All AAON coils can be selected in ECat with the industry leading corrosion protection of a 6,000-hour salt spray tested polymer e-coating of the entire coil, not just the fin pack. With less than a 1% reduction in heat transfer, the polymer e-coating allows coated coils to perform as designed. After two continuous years of simulated harsh coastal service, polymer e-coated coils saw no degradation in performance as compared to nearly a 60% reduction coil performance of a non-coated coil. Also available are AAON coils with copper tubes, copper fins and aluminum or 304 stainless steel coil casing. Copper fin and tube construction helps to avoid galvanic corrosion in the fin pack, and aluminum or stainless steel casing helps to prevent corrosion of coil casing.

### Polymer E-coated Coils

Coating Quality	Test Procedure	Coating Performance
Dry Film Thickness	ASTM D7091-05	0.8-1.2 mils
Water Immersion	ASTM D870-02	1,000+ hours
Salt Spray	ASTM B117-97	6,048+ hours
Heat Transfer Reduction	AHRI 410	<1%
Operating pH Range	n/a	3 - 12



Copper Tube and Fin Coil



Polymer E-Coated Coils



**Don't see the specific coil you need?** AAON can meet your requirements with custom coils designed specifically for your exact application.

For more information about AAON coils, contact your local AAON sales representative.



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