NEVER STOPPING. NEVER SETTLING.



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Trane Product Update Call



December 2018

It's Hard To Stop A Trane.

Product Updates and Managers:

- Air Conditioner Jim Lowell
- Heat Pump Tim Storm
- Furnace Mark Woodruff
- Coils –Patrick Van Deventer
- Geothermal and Indoor Air Quality Jay Ayers
- Controls Karl Mutchnik
- Residential Packaged Charles Trammell
- Light Commercial Packaged Matt Bynum
- Air Handlers Dave Garris
- Ductless Tai McKinney
- Ameristar Brian Steckroth
- Closing Comments



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Air Conditioner – Jim Lowell



It's Hard To Stop A Trane.

XL18i (4 ton) and XR17 (4 ton) Air Conditioner Improvements

- New, more efficient Climatuff[™] 2 stage compressor
- New ECM 2 speed fan motor
- Elimination of the Desuperheater coil:
 Lighter weight easier to install
 Fewer brazed joints improved reliability
- (96) existing system matches have improved ratings (sample ratings shown below)
- Over 200 new system ratings added finding the exact match you need is easier

Energy Star certified

Sample Ratings				OLD				NEW			
	Coil	Furnace	SEER	EER	Capacity	SEER	EER	Capacity			
2 Stage AC, 4t	4TXCC007DS3	N/A	15	12	46000	15	12.5	47000			
	4TXCB006DS3	S9X2B080U4PSA	16	12.5	48000	17	12.5	47000			
	4PX*BU48BS3	S9V2B060U4PSB	16	13	47500	17	13	45000			
	4PX*CU48BS3	*UD2C080A9V4	16.5	12.75	48000	17	13	47000			
	TEM8A0D48V41+TDR	N/A	16	13	48500	17	13	47000			





Trane **WeatherGuard**Top Kit

Available Q2 2019

- Easy to install
- Retrofittable to all split AC's and HP's with plastic base pan (since approx. 2001)
- Protects unit from debris, snow, ice
- Looks great!
- Newly designed top will be phased into production for current XLi and XVi products during Q1



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Heat Pump — Tim Storm



It's Hard To Stop A Trane.

AHRI Failure on Simulated Dual Fuel System (4TWX824A/4TWR7024A/4PXCBU36BS3/TUHMB080

- We will be introducing new XR17 and XL18i 2 ton heat pump models as a result of an AHRI failure on an dual fuel simulation.
 - The HSPF was less than 95% of the published efficiency
 - The SEER and EER met the published AHRI rating
- The HSVTC tested combinations with the TAM7-30 air handlers passed with flying colors
- To minimize risk of failing additional testing in 2019, we will be introducing a new 4TWR7024**B**1000A and 4TWX8024**B**1000A model the first week of January and phasing out the current "A" models. A bulletin on the new model with AHRI ratings will be issued the week of December 10th.

NEVER STOPPING, NEVER SETTLING.

Furnace – Mark Woodruff



It's Hard To Stop A Trane®

S8X1 & S8X2 Are Here!

- Short 34" Height
- 80% AFUE, 4-way multi-poise
- Dealer Guide & Introduction Document is Available!
 - Samples are coming in the mail!
 - PUB. No. 62-7233-01 ← *Order This!*





Important Dates:

• 1st Prod: Nov 30th

1st Ship: Dec 17th

Legacy Last Order: Nov 19th

Legacy Last Prod: Dec. 3rd









ADDITIONAL FEATURES

- High efficiency Constant Torque ECM blower motor
- Less than 1% air leakage
- 4-Way Poise
- Multiple venting options every model offers at least two venting options in every poise with no kits required
- Menu driven IFC with electronically selectable motor taps
- Rates with single and two-stage outdoor cooling systems
- 34" cabinet height
- Aluminized steel tubular heat exchanger comes with 20 year registered limited warranty
- Self-diagnostics that report error codes at the IFC

TRANE'S FIRST 4-WAY POISE FURNACE

CALIFORNIA ONLY:

For the areas of California that require a maximum NOx emission limit of 40 ng/J, we have models just for you.

12th digit will indicate NOx compliant models. When 40ng/J NOx models are needed, the order will need to include the model number with a 'T' in the 12th digit. These models include a unique NOx screen that reduces the NOx emission below the 40ng/J requirement.



NEW DOOR DESIGNS

One-Stage & Two-Stage furnaces each have their own sleek, new door design.

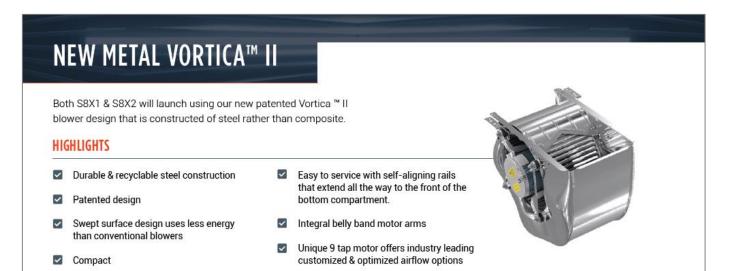
The S8X1 new door design is attractively styled and is engineered for maximum airflow efficiency. It attaches to the cabinet via 1/4" head screws.

The S8X2 furnace comes with a new variation of the two stage door design that dealers are familiar with. The new design features a sight glass that doubles as a honeycomb louver for combustion air.

TRANE.COM/RESIDENTIAL \$8X1 | \$8X2







SMALL SIZE, BIG IMPACT

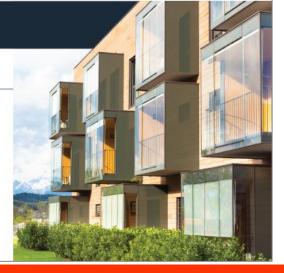
LOW-CAPACITY FURNACES ARE THE NEXT BIG THING

As housing becomes smaller and more energy efficient, Trane is introducing new and lower capacity furnaces to market. At just 14.5 inches wide and 34 inches tall, these furnaces are the perfect size for small multi-family homes and condos where space is a premium. The S8X1 offers 26,000 BTU/h options and the S8X2 offers a 40,000 BTU/h option which fires at 26,000 BTU/h on low stage.



S8X2

TRANE.COM/RESIDENTIAL





The new S8X1 & S8X2 furnaces come equipped with 9-tap constant torque ECM blower motors. These blowers offer a greater range of operation, making it possible in some cases to cover multiple cooling tonnages with a single model. This reduces the number of models that dealers and distributors manage and inventory in their warehouse.



Each of our 9 taps is electronically selectable via our menu driven IFC and LED display. With legacy furnaces, the system must be shut down, and motor taps must be physically moved and rewired on the control board before the system can be restarted. Our new design allows both heating and cooling airflows to be adjusted on the fly, which makes checking temperature rise or cooling airflow easier than ever before.

MORE OPTIONS, FEWER SKU'S

	SKU	NOMINAL AIRFLOW (TONS)
	S8X1A026M2PSAA	2
	S8X1A040M3PSAA	2-3
	S8X1B040M2PSAA	2
	S8X1B060M3PSAA	3
S8X1	S8X1B060M4PSAA	4
	S8X1B080M4PSAA	3-4
	S8X1C080M5PSAA	4-5
	S8X1C100M5PSAA	4-5
	S8X1D120M5PSAA	5
	S8X2A040M3PSAA	2-3
	S8X2B060M3PSAA	3
	S8X2B060M4PSAA	4
S8X2	S8X2B080M4PSAA	3-4
	S8X2C080M5PSAA	4-5
	S8X2C100M5PSAA	4-5
	S8X2D120M5PSAA	5

TRANE.COM/RESIDENTIAL \$8X1 | \$8X2





ATURES	S8X1	S8X2
Gas Stages	Single Stage Heat	Two Stage Heat
Heating Input	26K - 120K BTU/h	40K - 120K BTU/h
High Efficiency constant torque ECM blower motor	~	~
Certified to <1% air leakage	~	~
4-Way Poise Convertibility	~	~
Multiple venting option - every model offers at least two venting options in every poise	~	~
Menu driven IFC with electronically selectable motor taps	~	~
Self-diagnostics that report error codes at the IFC	~	~
No Dip Switches	~	~
Rates with single and two-stage outdoor cooling systems	~	~
34" cabinet height	~	~
IFC digital display characters can be rotated, making the display easier to read in down-flow applications where the display would normally be upside down.	~	~
Aluminized steel tubular heat exchanger comes with 20 year registered limited warranty.	~	~
Menu Driven Seven Segment IFC Display	~	~
Easy System Setup	~	~
Blower compartment insulation (Excluding "A" cabinet widths)	~	~
Appliance-like Door		~
Metal Vortica™ II	~	~
Forward Facing Screws for Component Servicing	✓	~







FREQUENTLY ASKED QUESTIONS

1. Are these furnaces compatible with LP (Propane)?

Yes, and propane kits are available. When converted to propane, S8 furnaces will have similar sound characteristics as S9 furnaces, which can be a consideration for noise sensitive applications.

2. Are they rated with 1-stage and 2-stage outdoor systems?

Yes - both S8X1 & S8X2 are rated with both 1-stage and 2-stage outdoor systems. This is the first time we have ever had single stage furnaces matched with 2-stage outdoor systems, which offers new opportunities for our customers.

3. What is the firing rate for each furnace?

The low-stage firing rate is 65%, and the high-stage firing rate is 100% (Max), except for the 120 BTU models which have a firing rate of Low 70% - High 100% (max).

4. Does the S8X1A026 only have one burner tube?

No. it has two tubes and fires at 13 BTU/h per tube.

5. Can the unit be set up for left or right side gas entry?

Yes, every furnace is shipped ready for default left side gas entry (in up-flow), and default right side gas entry for downflow. Gas entry through the alternate side is possible via optional accessory part PIP02095.

6. Do they meet air leakage requirements?

Yes, these furnaces are AirTite™, meaning they are rated to <1% air leakage.

S8X1 | S8X2 TRANE.COM/RESIDENTIAL

Two Pages of FAQ's!!

7. What is the clearance to combustibles?

* FOR HORIZONTAL APPLICATIONS

14.5" Cabinets, 1" Sides & 2" Top

17.5" Cabinets, 1" Sides & 2" Top

21.0" Cabinets. 1" Sides & 3" Top

24.5" Cabinets, 1" Sides & 5" Top

Line contact only permissible between line

and two sides of the furnace lacket, and bu

do not change with furnace orientation.

Clearance arrows

Does the control have to be rotated when used in downflow?

No, the control does not have to be removed or reoriented for different orientations. For down-flow, the LED 7-segment display text can be rotated by selecting 'UP' or 'DN' in the "ORN" menu.

9. Do these furnaces use the Vortica blower?

Yes, these furnaces use the first steel Vortica blowers, produced at our factory in Trenton, NJ. The new steel Vortica design has patented technology, and has the same industry leading efficiency as the composite design.

10. Do the new blower motors really have 9 speed taps?

Yes, as airflow efficiency becomes more and more important, our new ECM motors have 9 speed taps, electronically selectable through the IFC. These new motors have many benefits, one of them is that they can cover a wider range of airflows, and in some cases have allowed us to reduce the number of unique SKU's that are required.

11. Are there California compliant 40 ng/J low-NOx SKU's available? Yes, a 'T' in digit 12 indicates that model is a 40 ng/J low-NOx model,

and complies with California NOx manufacturer requirements.

12. Can these furnaces be twinned?

Yes, all models can be twinned. Instructions and wiring diagrams are located in the Installers Guide.

13. What size circuit breaker is required on these models?

All models require only 15 Amp breakers! This helps save time and money on many retrofit/replacement applications

14. Are these furnaces 4-way convertible (multi-poise)?

Yes! Every model can be converted or installed in all 4 positions, and no kits are needed for any of the positions. Venting through the cabinet in downflow orientation requires BAYVENT600A. See graphic below.



DOWNFLOW ADAPTER IN PLACE

Accessory kit BAYVENT600A required for internal cabinet venting in downflow.

TRANE.COM/RESIDENTIAL S8X1 | S8X2



	Outdoor Model #	Coil Model #	Furnace Model	Capac
	4TT(R,X)6018J1000AA	4PXCAU24BS3 / 4TXCA002DS3	S8X(1,2)A040M3PSAA	18
	4TT(R,X)6018J1000AA	4PXCAU24BS3 / 4TXCA002DS3	S8X1A026M2PSAA	18
	4TT(R,X)6018J1000AA	4PXCBU30BS3 / 4TXCB003DS3	S8X(1,2)B040M2PSAA	19
	4TT(R,X)6024J1000AA	4PXCBU30BS3 / 4TXCB003DS3	S8X(1,2)B040M2PSAA	2
	4TT(R,X)6030J1000AA	4PXCBU30BS3 / 4TXCB003DS3	S8X(1,2)B060M3PSAA	2
	4TT(R,X)6030J1000AA	4PXCCU30BS3	S8X(1,2)C080M5PSAA	2
	4TT(R,X)6036J1000AA	4PXCBU36BS3 / 4TXCB004DS3	S8X(1,2)B060M3PSAA	3
	4TT(R,X)6036J1000AA	4PXCCU36BS3 / 4TXCC005DS3	S8X(1,2)C080M5PSAA	;
	4TT(R,X)6036J1000AA	4PXCBU36BS3 / 4TXCB004DS3	S8X(1,2)B080M4PSAA	:
XR16/XL16	4TTX6042J1000AA	4PXCBU42BS3	S8X(1,2)B060M4PSAA	,
(Single-Stage)	4TTX6042J1000AA	4PXCBU48BS3 / 4TXCB006DS3	S8X(1,2)B060M4PSAA	
	4TTX6042J1000AA	4PXCBU42BS3	S8X(1,2)B080M4PSAA	
	4TTX6042J1000AA	4PXCBU48BS3 / 4TXCB006DS3	S8X(1,2)B080M4PSAA	
	4TTX6042J1000AA	4PXCCU36BS3 / 4TXCC005DS3	S8X(1,2)C080M5PSAA	
	4TTX6042J1000AA	4PXCCU36BS3 / 4TXCC005DS3	S8X(1,2)C100M5PSAA	
	4TTX6042J1000AA	4PXCDU48BS3 / 4TXCD008DS3	S8X(1,2)D120M5PSAA	,
	4TTX6048J1000AA	4PXCCU48BS3 / 4TXCC007DS3	S8X(1,2)C100M5PSAA	
	4TTX6049J1000AA	4PXCBU48BS3 / 4TXCB006DS3	S8X(1,2)B080M4PSAA	
	4TTX6049J1000AA	4PXCCU48BS3 / 4TXCC007DS3	S8X(1,2)C100M5PSAA	
	4TTX6049J1000AA	4PXCDU48BS3 / 4TXCD008DS3	S8X(1,2)D120M5PSAA	
	4TTX6061J1000AA	4PXCDU60BS3 / 4TXCD010DS3	S8X(1,2)C100M5PSAA	

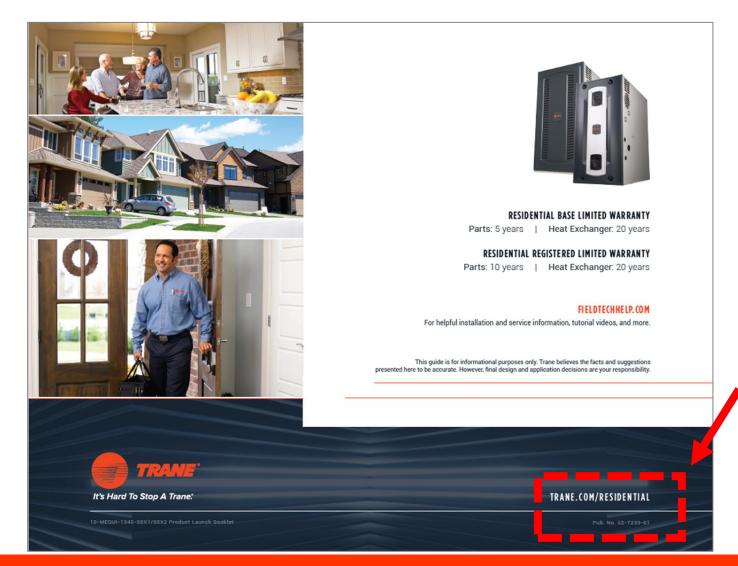
Two Pages of Ratings!!

Outdoor Family	Outdoor Model #	Coil Model #	Furnace Model	Capacity (95F)	SEER	EER	HSPF
	4TTR6042J1000AA	4PXCCU48BS3 / 4TXCC007DS3	S8X(1,2)C080M5PSAA	41000	16	13.5	
	4TTR6042J1000AA	4PXCDU48BS3 / 4TXCD008DS3	S8X(1,2)D120M5PSAA	41500	16	14	
XR16 (Single-Stage)	4TTR6048J1000AA	4PXCCU60BS3 / 4TXCC009DS3	S8X(1,2)C100M5PSAA	47000	16	13.5	N/
(onigie ouige)	4TTR6048J1000AA	4PXCDU60BS3 / 4TXCD010DS3	S8X(1,2)D120M5PSAA	48000	16	13.5	
	4TTR6061C1000AA	4PXCCU60BS3 / 4TXCC009DS3	S8X(1,2)C100M5PSAA	57000	16	13	
	4TTR4018L1000AA	4PXCBU30BS3 / 4TXCB003DS3	S8X(1,2)B040M2PSAA	19000	16	13.6	
XR14	4TTR4025L1000AA	4PXCBU30BS3 / 4TXCB003DS3	S8X(1,2)B060M3PSAA	24000	16	13	
(Single-Stage)	4TTR4031L1000AA	4PXCBU36BS3 / 4TXCB004DS3	S8X(1,2)B060M3PSAA	29000	16	13	N/
	4TTR4037L1000AA	4PXCBU48BS3 / 4TXCB006DS3	S8X(1,2)B060M3PSAA	35000	16	13	
	4TTR4037L1000AA	4PXCCU48BS3 / 4TXCC007DS3	S8X(1,2)C080M5PSAA	35800	16	13	
	4TTX8024A1000AA	4PXCBU30BS3 / 4TXCB003DS3	S8X(1,2)B040M2PSAA	25800	17	13.5	
	4TTX803GA1000AA	4PXCBU48BS3 / 4TXCB006DS3	S8X(1,2)B060M3PSAA	37200	17	13	
	4TTX803GA1000AA	4PXCBU48BS3 / 4TXCB006DS3	S8X(1,2)B080M4PSAA	37200	17	13	N/
	4TTX8048B1000AA	4PXCCU60BS3 / 4TXCC009DS3	S8X(1,2)C100M5PSAA	48000	17	13	14/
	4TTX8048B1000AA	4PXCDU60BS3 / 4TXCD010DS3	S8X(1,2)D120M5PSAA	49500	18	13	
XL18 AC & HP	4TTX8060A1000AA	4PXCDU60BS3 / 4TXCD010DS3	S8X(1,2)D120M5PSAA	57500	16	13	
(Two-Stage)	4TWX8024A1000AA	4PXCBU30BS3 / 4TXCB003DS3	S8X(1,2)B060M3PSAA	25600	17	13	9.
	4TWX8036C1000AA	4PXCBU36BS3 / 4TXCB004DS3	S8X(1,2)B080M4PSAA	36000	17	13	9
	4TWX8036C1000AA	4PXCBU48BS3 / 4TXCB006DS3	S8X(1,2)B060M4PSAA	37000	18	13	9
	4TWX8048A1000AA	4PXCCU60BS3 / 4TXCC009DS3	S8X(1,2)C100M5PSAA	48500	17	13	9
	4TWX8060A1000AA	4PXCCU60BS3 / 4TXCC009DS3	S8X(1,2)C100M5PSAA	56000	16	11.5	9
	4TWX8060A1000AA	4PXCDU60BS3 / 4TXCD010DS3	S8X(1,2)D120M5PSAA	57000	16	11.5	9

Ratings above are preliminary. Visit AHRIDirectory.org for final published ratings.

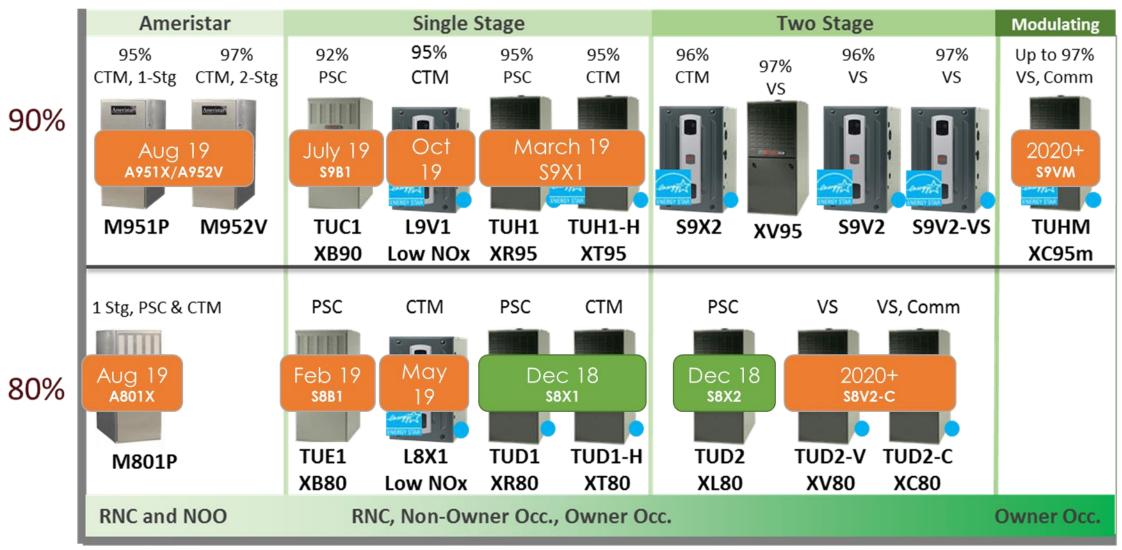
TRANE.COM/RESIDENTIAL AHRI RATINGS | XR16/XR14 (SINGLE-STAGE) | XL18 AC & HP (TWO-STAGE)

11



PUB. No. 62-7233-01

Furnace Product Launches 2019



Certified <2% air leakage</p>



FER Update

- July 3, 2019 is fast approaching!
- Trane FER compliant furnaces are rolling out!
 - CTM Motors
 - CTM capable controls (IFC)
 - CTM wiring harnesses
 - Vortica II[™] blowers
 - Higher horsepower motors
 - Wider & larger diameter blower housings and blower wheels
- Must prepare customers!



A very important ruling from the Department of Energy:

FER (Fan Efficiency Rating)



Dr. Ernst J. Moniz

Former US Secretary of Energy (Department of Energy/DOE)



2

What Does It Do?

- FER (Fan Energy Rating)
 - Sets limits for airflow efficiency in Residential Furnaces (& Pkg units)
 - Designed to eliminate PSC blower motors
 - Designed to eliminate single stage heat
 - Effective July 3, 2019
 - This is law (not a proposal)





FER Rumor VS Fact

Rumor:

"FER is delayed/cancelled"

Fact:

- FER is a <u>law</u> in both the US and Canada, going into effect July 3, 2019.
- Confusion due to two activities:
 - 1. A new metric "AFUE2" is being discussed
 - 2. DOE issued an FER enforcement policy statement that confused a lot of people
- There is some possibility that FER might get delayed; but that has not happened yet.

We are moving forward will all launch plans.



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Coils — Patrick Van Deventer



It's Hard To Stop A Trane®

4TXC and 4PXC model addition

- Adding a new A-width coil option for increased capacities of 2.5 and 3 ton AC/HP systems
 - 13-14 SEER up to 3 ton
 - 16/13 up to 2.5 ton
- Factory-installed TXV
- 14.5" wide, 22.5" tall Narrow installations
- Multi-position 4TXC and upflow/downflow 4PXC-U

Ratings / Bulletin: January 2019

Production Launch: March 2019



4TXC Comfort™ Coil

Table COIL-1-A — Aluminum High Efficiency Staged System Cased Convertible Coils (Upflow/ Downflow/ Horizontal Left or Right) R-410A Refrigerant

	Cooling Capacity			Outlet	Overall	Shipping	Line	Size
Model Number	Range (Tons)	Coil Type	Refrigerant Control	Dim. (in.) W/H x D	Dim. (in.) H x W x D	Weight (lbs.)	OD Gas	OD Liq.
4TXCA002DS3HCA	1.5 - 2.0	Α	TXVNB ^①	123/4 x 193/8	17.5 x 14.5 x 21.5	42	3/4	3/8
4TXCA032DS3HCA	1.5 - 3.0	A	TXVNB ^①	$12^{3}/_{4} \times 19^{3}/_{8}$	22.5 x 14.5 x 21.5	46	3/4	3/8
4TXCB003DS3HCA	1.5 - 3.0	Α	TXVNB _①	153/4 x 193/8	17.5 x 17.5 x 21.5	50	3/4	3/8
4TXCB004DS3HCA	2.0 - 3.5	Α	TXVNB _①	153/4 x 193/8	22.5 x 17.5 x 21.5	58	7/8	3/8
4TXCC005DS3HCA	2.0 - 4.0	Α	TXVNB _①	19 ¹ / ₄ x 19 ³ / ₈	22.5 x 21 x 21.5	60	⁷ / ₈	3/8
4TXCB006DS3HCA	2.0 - 4.0	Α	TXVNB1	15 ³ / ₄ x 19 ³ / ₈	26.9 x 17.5 x 21.5	65	7/8	3/8
4TXCC007DS3HCA	3.0 - 5.0	Α	TXVNB _①	19 ¹ / ₄ x 19 ³ / ₈	26.9 x 21 x 21.5	69	7/8	3/8
4TXCD008DS3HCA	3.0 - 5.0	Α	TXVNB _①	223/4 x 193/8	26.9 x 24.5 x 21.5	72	⁷ / ₈	3/8
4TXCC009DS3HCA	3.5 - 5.0	Α	TXVNB ^①	19 ¹ / ₄ x 19 ³ / ₈	30.7 x 21 x 21.5	78	7/8	3/8
4TXCD010DS3HCA	3.5 - 5.0	Α	TXVNB1	223/4 x 193/8	30.7 x 24.5 x 21.5	81	⁷ / ₈	3/8



4PXC-U Comfort™ Coil

Table COIL-1-B — Aluminum High Efficiency Staged System Cased Upflow/Downflow Coils R-410A Refrigerant, Convertible to Horizontal Left or Horizontal Right with kit

Cooling Capacity				Outlet	Overall	Shipping	Line Size	
Model Number	Range (Tons)	Coil Type	Refrigerant Control	Dim. (in.) W/H x D	Dim. (in.) H x W x D	Weight (lbs.)	OD Gas	OD Liq.
4PXCAU24BS3HAA	1.5 - 2.0	Α	TXVNB _①	123/4 x 193/8	17.5 x 14.5 x 21.5	39	3/4	3/8
4PXCBU24BS3HAA	1.5 - 2.0	Α	TXVNB _①	153/4 x 193/8	17.5 x 17.5 x 21.5	42	3/4	3/8
4PXCBU30BS3HAA	1.5 - 3.0	Α	TXVNB _①	153/4 x 193/8	17.5 x 17.5 x 21.5	47	3/4	3/8
4PXCCU30BS3HAA	1.5 - 3.0	Α	TXVNB _①	19 ¹ / ₄ x 19 ³ / ₈	17.5 x 21 x 21.5	49	3/4	3/8
4PXCAU32BS3HAA	1.5 - 3.0	A	TXVNB ^①	123/4 x 193/8	22.5 x 14.5 x 21.5	43	3/4	3/8
4PXCBU36BS3HAA	2.0 - 3.5	Α	TXVNB1	153/4 x 193/8	22.5 x 17.5 x 21.5	54	7/8	3/8
4PXCCU36BS3HAA	2.0 - 4.0	Α	TXVNB _①	19 ¹ / ₄ x 19 ³ / ₈	22.5 x 21 x 21.5	56	7/8	3/8
4PXCBU42BS3HAA	2.0 - 3.5	Α	TXVNB _①	153/4 x 193/8	26.9 x 17.5 x 21.5	61	7/8	3/8
4PXCCU42BS3HAA	2.5 - 3.5	Α	TXVNB _①	191/4 x 193/8	26.9 x 21 x 21.5	64	7/8	3/8
4PXCBU48BS3HAA	2.0 - 4.0	Α	TXVNB _①	153/4 x 193/8	26.9 x 17.5 x 21.5	61	7/8	3/8
4PXCCU48BS3HAA	3.0 - 5.0	Α	TXVNB _①	19 ¹ / ₄ x 19 ³ / ₈	26.9 x 21 x 21.5	64	7/8	3/8
4PXCDU48BS3HAA	3.0 - 5.0	Α	TXVNB _①	223/4 x 193/8	26.9 x 24.5 x 21.5	68	7/8	3/8
4PXCCU60BS3HAA	3.5 - 5.0	Α	TXVNB①	19 ¹ / ₄ x 19 ³ / ₈	30.7 x 21 x 21.5	73	7/8	3/8
4PXCDU60BS3HAA	3.5 - 5.0	Α	TXVNB ^①	223/ ₄ x 193/ ₈	30.7 x 24.5 x 21.5	77	7/ _s	3/8

4PXC-D Model Consolidation

Slimming down the 4PXC-D Dedicated Downflow coil lineup to optimize coverage and minimize SKU's

- Keeping 6 models, phasing out 7
- Coil design optimized for downflow performance
 - 16+ SEER with Downflow furnaces
 - Higher HSPF, SEER, EER, Capacity
- Added over 1200 Ratings with remaining 4PXC-D models and 4PXC-U models in downflow to maintain ratings
- Bulletin forthcoming

Model	Status	Capacity	Width	Height
4PXCAD24BS3HDA	Phase out	1.5-2.0	А	17.5"
4PXCBD24BS3HDA	Phase out	1.5-2.0	В	17.5"
4PXCBD30BS3HDA	KEEP	1.5-2.5	В	17.5"
4PXCBD36BS3HDA	KEEP	2.0-3.0	В	22.5"
4PXCBD42BS3HDA	KEEP	2.5-4.0	В	26.9"
4PXCBD48BS3HDA	Phase out	2.5-4.0	В	22.5"
4PXCCD30BS3HDA	Phase out	2.0-2.5	С	17.5"
4PXCCD36BS3HDA	Phase out	2.0-3.0	С	22.5"
4PXCCD42BS3HDA	KEEP	2.5-4.0	С	26.9"
4PXCCD48BS3HDA	Phase out	3.0-4.0	С	26.9"
4PXCCD60BS3HDA	KEEP	3.5-5.0	С	30.7"
4PXCDD48BS3HDA	Phase out	3.0-4.0	D	26.9"
4PXCDD60BS3HDA	KEEP	3.5-5.0	D	30.7"

Coil Readiness Plan - Q1 2019

Our Coil business is growing!

- Planning for over 90,000 coils in stock for pre-season 2019
- We need our partners to stock up early to optimize coil availability next season
 - Quick response for pre-season replacement jobs
 - Shorten lead times during peak months

Sales plan details

- All coil families qualify
- +60 day terms for 5% YoY order increase in Q1
- Your Regional Manager will reach out to you soon





NEVER STOPPING. NEVER SETTLING.

Geothermal – Jay Ayers



It's Hard To Stop A Trane.



Geothermal Product Line Transitions to WaterFurnace

Starting in January 2019, Envirowise® Trane® and Envirowise American Standard® equipment will no longer be supplied by Ingersoll Rand. We will transfer full control of the product offering, materials, manufacturing, sales, and distribution to WaterFurnace, which has been our OEM supplier for these products since 2011. The equipment will no longer carry the Trane or American Standard brands, or the Envirowise label.

The last day for dealers and distributors to order Trane or American Standard geothermal equipment through the Ingersoll Rand Oracle system will be December 14, 2018. No orders will be accepted through our system after that date. WaterFurnace and Ingersoll Rand are working closely together to ensure a smooth transition over the next two months. You will be contacted by your account representative with information on the steps and process to transition your geothermal orders to WaterFurnace beginning January 2, 2019.

Ingersoll Rand and WaterFurnace leadership agreed that the transition is in the best interest of our geothermal equipment customers and businesses. The move aligns with the vision to Deliver the Best Experience to our customers, and will facilitate continuity of geothermal products for Trane and American Standard distributors and dealers by offering access to WaterFurnace-owned brands.

Jay Ayers, Ingersoll Rand Geothermal Product Manager, will lead the transition team through the end of February 2019, and will advocate for our channel. The offer for an alternate brand is voluntary, and has no requirement to accept, nor guarantee of availability.

Thank you for your understanding and acceptance of the decision to transition the ground source heat pump business, and thank you in particular for allowing us to earn your business over the past 7 years. We have an excellent OEM partner in WaterFurnace, which is prepared to service your geothermal business needs in 2019 and beyond.



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Indoor Air Quality — Jay Ayers



It's Hard To Stop A Trane®

Recap of 2018 Product Additions in IAQ

- QuikBox Cabinet and Media Filter
 - Launched April See eTPB1811 on DealerNet
 - Replaces TFM Perfect Fit Cabinet sizes with exception of 3 downflow furnace sizes and the 14.5" upflow size which are phased out
 - Two new sizes- 18.5" for TEM air handler and 16.5" for S Series furnace
- QF130V Inline Ventilator w/ Intelligent Logic
 - Launched April See Bulletin eTPB1813 on DealerNet
 - First Inline ventilator fan with *full ECM Motor* that is 62.2 Ventilation Compliant. No balancing dampers required
 - Intelligent "Q" Controller with adjustable lockouts for temperature and humidity with timed sampling, allowing intermittent ventilation for code compliancy
- 70V Dehumidifying Ventilator
 - Launched Nov. 2017 See eTPB1723 on DealerNet
 - Use for fresh air ventilation in humid climates or in high performance homes
 - Use as a stand alone or ducted 70 ppd dehumidifier for indoor humidity control













New Models added to Dehumidifier Line Up

Trane is pleased to announce the launch of 4 new models of horizontal dehumidifiers with capacities from 98 pints per day up to 205 pints per day.

- EDHUM0981H1MDAA
- EDHUM1051H1MDAA
- EDHUM1551H1MDAA
- EDHUM2051H1MDAA



Product Features and Specifications Include:

- Exclusive XT coil technology means higher efficiency humidity removal rates than standard units
- All Units are Energy Star rated
- All units come with optional ventilation capability to meet ASHRAE 62.2 Ventilation requirements
- Units can be ducted to and wired to operate with HVAC system or can used independently of HVAC system with internal blower and wired control
- Units come standard with MERV 11 filter for improved indoor air quality

NOTE: These products will be launched under the Envirowise product label. This is a single sku product offering with no brand specific badging. This opens up new sales channels, reduces inventory requirements, and offers the same quality product and brand standards as all Trane products.

IMPORTANT DATES

First Order: Immediately First Ship: Immediately

Sales Literature: 72-1313-02

Technical Literature:

- 18-HE103D1-1-EN
- 18-HE105D1-1-EN
- 18-HE106D1-1-EN
- 18-HE107D1-1-EN

Pricing: Available on ComfortSite



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Controls — Karl Mutchnik



It's Hard To Stop A Trane.

Connected Controls

- XR724
 - target availability February 2019
- XL824, 850 and 1050 version 5.4 software upgrade
 - available on Comfortsite for download on or about 12-7-2018
 - 1050 and zoning features 4 sensors per zone

Non-Connected Thermostats – new models in 2019

- 803, 802, 800
 - replacement 303, 302 (800 to phase out)
 - programmable touchscreen control
 - common preferred, not required with batteries
 - target availability late December 2018/January 2019
- 602, 600
 - replacement 203, 202 programmable push button control
 - common preferred, not required with batteries
 - target availability January/February 2019
- 401, 200
 - replacement for 401, 200 will feature non-programmable push button control
 - common preferred, not required
 - target availability April/May 2019
- 402 no change, continue to offer in line up

Controls

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Residential Packaged-Charles Trammell



It's Hard To Stop A Trane®

Opportunity: Variable Speed







- Do not lose on price!
- Convertible GE
- Horizontal HP
- 3-5 Tons
- 14 SEER (R-410A)
- Engineered in the USA
- ARI Certified
- ETL Listed

• 5-Year Base Limited Parts Warranty

• 10-Year Registered Parts Warranty







New 2-Ton XL 16 Packaged Models (Heat Pump & Gas Electric only)

!! Available Now!!

Available Now

I I for XR and XL Impack

Package Families

CleanEffects™

AIR CLEANER

Trane has always been an industry leader in home comfort. Now, we're setting a new standard for clean indoor air with the revolutionary Trane CleanEffects™, the world's most effective whole-house air filtration system.

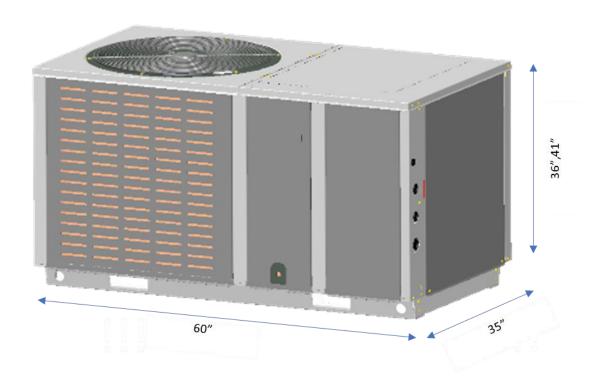
- · Removes up to 99.98% of allergens
- · Industry-leading clean air delivery rate
- . Low operating cost, no filters to buy







Available: April 2019!!!



Low Cost AC:

- Manufactured in Vidalia, GA
- 2-5 Ton, 14 SEER
- Convertible
- Supports Modular/ Mfg. Homes
 - Square to Round
 - High Static Blower System
 - Neighbor-Friendly Sound
- Fits Low Lot Lines



Matt Bynum, Res Channel LCU Product Manager

- 5 years with Ingersoll Rand
- Previously Project Pricing Manager
- Started role as Product Manager LCU Splits & Packages October 1st
- Really enjoys data and analytical problem solving
- Works best in team collaboration
- Education MBA Louisiana State University
- Married with 2 girls (3 years and 10 months)



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LCU Packaged — Matt Bynum



Hurricane Michael hit the Lynn Haven Plant on 10/10/18



Ingersoll Rand focused on its people first

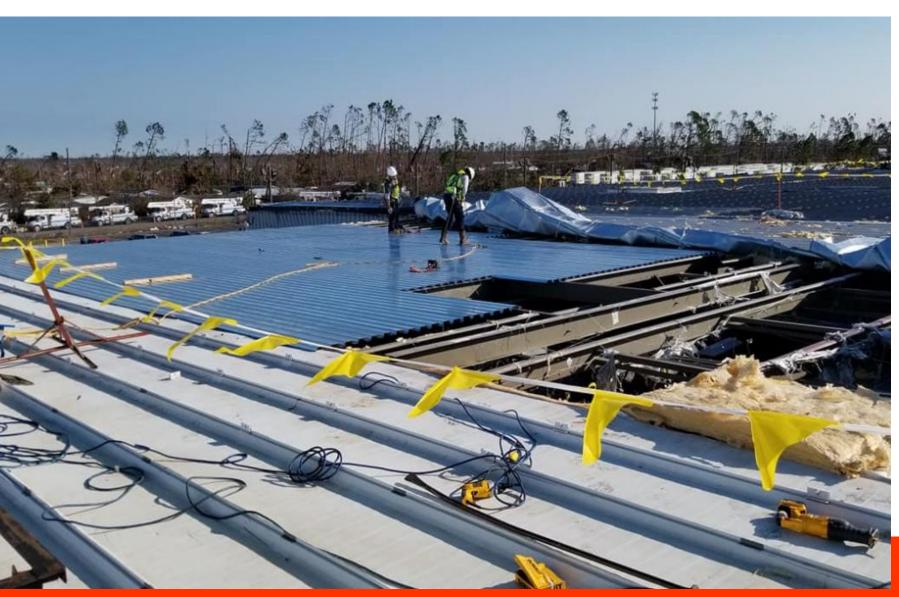




As we pulled away today, I started to cry just looking in the back seat at all the supplies, food, and necessities we was just given by Trane. We are forever grateful. I'm proud to work for a company that is so caring and supportive.



Lynn Haven Recovering from Hurricane Michael







Most Recent Lynn Haven Products Update

PRECEDENT UPDATES:

- As previously announced, lead times for Precedent are extending to 35 days (from 25 days).
 - Scheduled Ship Dates (SSDs) are in the process of being updated and most will be moved out by ~2 weeks. Please check Comfortsite / ASDealernet regularly for updates, as any blank SSDs are in the process of being fixed.
 - Specifically for **Precedent high efficiency units 7.5T and above**, that lead time is extending to 40 days, and the factory is unlikely to improve dates due to the significant open backlog. Please refrain from new orders that are contingent on the factory improving the published lead time.
- We expect the lead times to decrease over the upcoming weeks as our significant material constraints are alleviated; until then, our ability to commit to specific ship dates is limited.
- We expect to be back at normal stock unit levels by late Q1 2019 and are on track to operate at pre-storm levels prior to the busy season Q2 2019.

IMPACK UPDATES:

- There are fewer material outages on Impack and production rates are gradually increasing, which means that Scheduled Ship Dates (SSDs) are more likely to stay the same or improve. Items with the longest lead times continue to be the gas-electric and duel-fuels.
- We expect to be back at normal stocking levels by late Q1 2019



Lynn Haven Order FAQs

- If a customer placed an order and wants to cancel because it's taking too long, how are we handling that?
- Please be in constant communication with Customer Support if you are going to cancel an order. They can
 talk to you about the status of your order and will handle waiving of cancellation fee where applicable. We
 want to especially avoid cancellations for units that have already been built or in the process of being built
 given the tight supply.
- My ship date seems to be moving around. How can I feel confident this is accurate?
- Our production situation remains "fluid." Scheduled production currently does not have a 100% chance of actually being produced that day due to material outages and manpower availability. Our production schedule is being updated frequently to adjust for this variance, resulting in "moving" ship dates. When a line is "reserved" in the system, you can feel most confident in the date.



Lynn Haven Order FAQs

- If I see a ship date moving out to a later date, what does that mean?
- If you see your ship date move <u>out a week</u> or more, it likely means that a material component isn't available and the factory is waiting on it. Please contact your Customer Service Representative to confirm.
- If the ship date moves just a few days, it likely means the unit didn't get produced that day and production will get pushed to the next 1-3 days. Please contact your Customer Service Representative to confirm.



3-5T Foundation - Available as a Substitute for 3-5T Precedent

https://traneconnection.com/news-articles/3-5-ton-foundation-are-you-losing-money/

Connection



Are You Losing Money? Advantages of the 3-5 Ton Foundation

Did you know that you are losing money anytime one of your dealers replaces a mid-'80s Carrier packaged unit with anything other than a Trane 3-5 Ton Foundation Packaged Unit? We are committed to helping you inform your dealers about the advantages of these units, and have put together a **Digital Sales Kit** full of resources that will inform, educate, and inspire. Check them out now by clicking on the links.

Why Trane 3-5 Ton Is the Ideal Replacement for Common Mid-'80s Carrier Units

- · Easy, hassle-free installation-matches "through-the-base" utilities with optional kit
- · Weighs less than Carrier units
- · No structural analysis required
- · Long-life compressors
- Tubular heat exchanger
- · Microchannel condenser coil comes standard
- Reliable gas ignition system

Audio Podcast (listen)

One-Page Flyer (download)

Live Webinar (listen)

Small Foundation Training Slides (download)

eLearning Course

(IWD and Dealer view)

(DSO and IR view)

Dealer Testimonies (watch)



Dealer Buying Behavior Summary: Insights & Conclusions



Most Dealers like it when they try it....

"It's straightforward, quick install, fits perfect."

→ Product is working well



.....But it's not always easy to get them to try it. Trial requires:

- Active focus on pushing the product (ISS & TMs). Many don't know about it!
- ISS quoting as default, and knowing when it can be quoted (what curbs it replaces)
- Relevant price and availability



Dealer Penetration is still low, even among distributors who are selling a lot

→ Large opportunity to continue to drive awareness & adoption among existing dealer base



Dealers embracing the Foundation are the Price Seekers

- May or may not be in loyalty programs;
- Their other "go-to" brand varies
- → Implies: Opportunity exists across the dealer base



Multi-unit jobs are harder to win without 7.5 & 10T

- Most Jobs are "onesie-twosie" replacement for offices & retail.
- Will sell more 3-5T when we have Medium Sizes



3-5T Foundation: Marketing Materials

Examples of What's Working



- ✓ Encourage dealers to try despite initial resistance.
- ✓ Emphasize no curb adaptor needed & low price
- ✓ Familiar with what it replaces (have Carrier Replacement Matrix handy)
- ✓ Price gap big enough (>12%) between Foundation and Precedent
- ✓ Other features they like:
 - Same price for 460 Volt as 208/230 Volt
 - For those with 2015 IECC code (low-leak economizer with FDD): Ability to stock both standard and low-leak economizers from IR, giving you options for field accessories
- Note: While there are only 2 heat sizes (low & med), the medium capacity offering is standard with 2 stages and input/output goes up to 115,000 / 92,000.

Where we are Winning with Small Foundation:

- ➤ We are growing share
- We are <u>not</u> cannibalizing Precedent sales

NEVER STOPPING. NEVER SETTLING.

Air Handler – Dave Garris



New OTWH/Stud/Wall Mount Air Handler GMUV Model Family

Provides the shortest cabinet heights in the industry

- Goodman AWUF market leader, 36 inch cabinet heights
- Current TMM: 36.5 39.5 heights, challenging for replacements
- Lowest cost options based on performance and installation requirements
 - Orifice/TXV, as well as PSC and CTM motor options
 - Cooling only vs. Cooling and Heating performance

Targeted primarily at these market segments:

- Non-Owner Occupied and RNC multi-family
- New construction and replacement opportunities

Delivers on IR quality & reliability with an all aluminum coil

Launch timing:

- 4 models in production, all 8 by January 2019
- Ameristar will remain with TMM for 2019 season
 - All aluminum version from Midea will launch Q2 2019







GMUV Product Bulletin

- ■Product bulletin ETPB1835 released 11/2/18
- Ratings available via download
- Pricing available
 - •All 8 models, even if not in production
- ■GMUV has been added to existing TMM4 & TMM5 quotes
- ■TMM4 & TMM5 Sales Promotion
 - •Reference sales promotion:

Trane IWD: RS-SP818T

Trane DSO: RS-SP842D

•Runs from 10/29/18 thru 12/31/18



eTPB1835

November 2, 2018

IMPORTANT DATES First Production

10/15/18 (select models)

First Ship 11/15/18 (select models)

First Order Select models are available for order now

Sales Literature Available Now

Technical Literature Available Now

Pricing Info

Available Now

WARRANTY INFO

Registered Limited Warranty 10 years

Non-Registered Limited Warranty

5 Years

Ratings Info

AHRI ratings available at www.ahridirectorv.org

New GMU/V Model Family OTWH/Stud **Mount/Wall Mount Air Handler**



Trane is pleased to announce the launch of our new all aluminum GMU/V Air Handl series. This new offering has some of the shortest cabinet heights (26-30 inches) in the industry which provides a very competitive offering for both new construction and retail replacement. These models are primarily targeted at both Residential New Construction (RNC) and Non-Owner Occupied (NOO) Multi-Family opportunities. However, the units are also approved for mobile/manufactured housing (reference unit name plate for details)

This GMU/V model family is designed for over the water heater (OTWH), stud and wal mount applications and consists of 8 SKU's. They are front return only and offer both factory installed orifice (Cooling Only ratings) and TXV (Cooling & Heating ratings) options. Also, these units feature factory installed electric heat in 5, 8 and 10 kW options. Plus, a mixture of PSC and ECM motors to deliver the required performance at the lowest total system cost

All of these new models have been internally tested and meet our rigorous Trane performance testing requirements. Plus, they were designed without sacrificing serviceability or reliability. These air handlers will be produced in our Vidalia. GA manufacturing facility and carry a:

5 Year Non-Registered /10 Year Registered Warranty

As a result of this forthcoming launch, we will begin the phase out of the current TMM4 and TMM5 Air Handlers. Plus, we have implemented a TMM sales promotion (ref sales promo #RS-SP842D (DSO) and RS-SP818T (IWD)) to help deplete inventories during this transition. However, we are maintaining the TMM offering for Ameristar only and a new all aluminum series is planned to launch in Q2 2019

Production on only these GMU/V models began on 10/15/18:

- GMU2APB24051SA GMU2APB24081SA
- GMV2APB32081SA

Additional new GMU/V models will be made available once inventory of TMN models are depleted. Goal is to have all the new models in production by 1/1/19

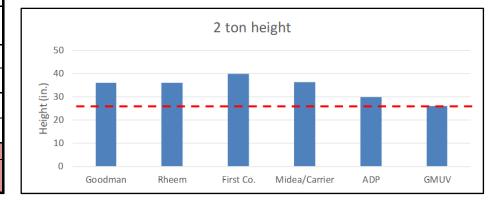
Dave Garris— Product Manager—david.garris@irco.com—(903) 730-4504

GMUV Air Handler SeriesCompetitive Overview

■Best in class size and performance:

		Configuration		Rat	Dimensions			
Manufacturer		Motor Type	Flow control	SEER Ratings - AC	Ratings - HP	H (in.)	W (in.)	D (in.)
Goodman		PSC	Orifice	13 SEER	-	36	20.2 - 24	16 - 21
AWUF/AWUT		СТМ	TXV/Orifice	14 SEER	14 SEER / 8.2 HSPF	36	20.2 - 24	16 - 21
Rheem		PSC	TXV/orifice	14 SEER	-	36	21.5 - 24	17 - 21
RHAL/RHLB		СТМ	TXV	14 - 16 SEER	15 SEER / 8.5 HSPF	36	21.5 - 24	17 - 21
ADP S Series	241	PSC	TXV	14 SEER	14 SEER / 8.5 HSPF	30	22	19
Carrier FFMA	-	PSC	Orifice	14 SEER	14 SEER / 8.2 HSPF	36.5-39.5	20.5 - 22	15 - 19
Trane TMM4/TMM5		СТМ	TXV	14 - 16 SEER	15 SEER / 8.5 HSPF	36.5-39.5	20.5 - 22	15 - 19
First Co		PSC	Orifice	14.5 SEER	-	40-46	22.1 - 28.1	15.1 - 21
uc/ucx		СТМ	TXV	16 SEER	16 SEER / 8.5 HSPF	40-46	22.1 - 28.1	15.1 - 21
Trane GMU/GMV		PSC/CTM	Orifice	13 - 16 SEER	-	26 - 30	22	19
		PSC/CTM	TXV	13 - 17 SEER	14 - 17 SEER Up to 9.5 HSPF	26 - 30	22	19





GMUV Summary:

Feature:	Description:					
Brand:	Non-Branded Rated with Trane for 2019 season TMM will stay with Ameristar for 2019 season					
Target Market Segments:	Multi-Family NOO and RNC					
Coil:	All Aluminum					
Cabinet Configuration:	Upflow, Front Return Only					
Cabinet Material:	Non-Painted Galvanized					
Cabinet Dimensions:	26.0-30.0" H x 22.0" W x 19.0" D					
Tonnage Range:	1.5 – 3.0 Ton Model Offering, 8 SKU's Total					
Cooling & Heating:	Supports Both Cooling Only & Cooling / Heating Applications					
Lowest Cost Application Options:	Mix of: Factory Installed Orifice & TXV / PSC & CTM motor options					
Factory Installed Filter Rack & Filter:	Yes					
Ratings:	Achieves 13-17 SEER Ratings					
Factory Installed Electric Heat:	5,8 & 10 kW options					
Warranty:	5 Year Non-Registered / 10 Year Registered					



GMUV OTWH / Stud Mount Air Handler

Service Friendly

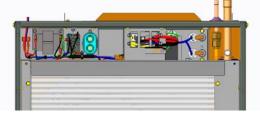
- All electrical components easily accessible
 - Remove the front control panel with 2 screws



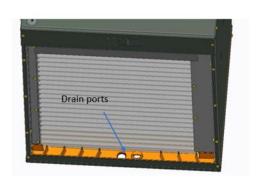
Orifice and TXV options

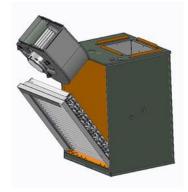


- Non-tooled filter replacement, easy coil cleaning
- Drain ports visible
 - Easily accessible for clean-out











GMUV SKU Offering:

Performance	SKU Count	New GMUV	Tonnage	Estimated Production Start Date	Potential TMM Model	Product Dimensions		ons	Factory Installed Refrigerant	Motor	Factory Installed Electric Heat
		Model Number			Cross Reference* * reference actual ratings	Н	inches W	D	Control Device	Туре	(kW) Sizes
GMU Upflow Only Front Return Only Cooling Only with Orifice	1	GMU2APB24051SA	1.5 – 2.0	10/15/18	TMM4A0A18 TMM4A0A24	25.40	22.10	19.30	Orifice	PSC 3 Taps	5 kW
	2	GMU2APB24081SA	1.5 – 2.0	10/15/18	TMM4A0A18 TMM4A0A24	25.40	22.10	19.30	Orifice	PSC 3 Taps	7.5 kW
	3	GMU2APB30081SA	2.5	11/15/18	TMM4A0B30	29.40	22.10	19.30	Orifice	PSC 3 Taps	7.5 kW
	4	GMU2AEB37101SA	2.5 – 3.0	1/1/19	TMM4A0B36	29.40	22.10	19.30	Orifice	CTM 5 Taps	10 kW
GMV Upflow Only Front Return Only Cooling & Heating With TXV	5	GMV2APB26051SA	1.5 – 2.0	1/1/19	TMM5A0B24	25.40	22.10	19.30	TXV	PSC 3 Taps	5 kW
	6	GMV2APB26081SA	1.5 – 2.0	1/1/19	TMM5A0B24	25.40	22.10	19.30	TXV	PSC 3 Taps	7.5 kW
		GMV2APB32081SA	2.5	10/15/18	TMM4A0B30 TMM5A0B30	29.40	22.10	19.30	TXV	PSC 3 Taps	7.5 kW
	8	GMV2AEB39101SA	2.5 – 3.0	1/1/19	TMM5A0B30 TMM5A0B36	29.40	22.10	19.30	TXV	CTM 5 Taps	10 kW



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Ductless - Tai McKinney



NEVER STOPPING, NEVER SETTLING.

Ameristar – Brian Steckroth



NEVER STOPPING, NEVER SETTLING.

Closing Comments – Charles Trammell



- Please Delete/Remove from your calendars:
 - Product Update Call occurring on 1st Friday of every month
 - From Trane Channel Communications

Tell us what you think about the Product Update Call:

- Is it effective? Why or why not?
- What cadence? Monthly? Every other month?
- All feedback to <u>charles.trammell@irco.com</u>



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