PRMH20241150

HVAC Submittals

Absher Construction

1001 Shaw Rd East

Puyallup, WA 98372

ASEI Job No. S13165

July 19, 2024

Prepared by:

Air Systems Engineering Inc.

COMFORT SYSTEMS USA

3602 S. Pine St.
Tacoma, WA 98409
Phone (253) 572-9484

Certificate of Product Ratings

AHRI Certified Reference Number : 209469118 Date : 07-15-2024 Model Status : Active

AHRI Type : HRCU-A-CB (Split System: Heat Pump with Remote Outdoor Unit-Air-Source)

Outdoor Unit Brand Name : TRANE

Outdoor Unit Model Number (Condenser or Single Package) : 4TWR4036N1

Indoor Unit Model Number (Evaporator and/or Air Handler) : TEM6A0C42H41+TDR

The manufacturer of this TRANE product is responsible for the rating of this system combination.

Rated as follows in accordance with the latest edition of AHRI 210/240 – 2023, Performance Rating of Unitary Air-Conditioning & Air-Source Heat Pump Equipment and subject to rating accuracy by AHRI-sponsored, independent, third party testing:

Cooling Capacity (A_{Full}) – Single or High Stage (95F), btuh : 34800

SEER2 : 14.60

EER2 (A_{Full}) – Single or High Stage (95F) : 12.00

Heating Capacity ($H1_{Full}$) – Single or High Stage (47F), btuh : 32000

HSPF2 (Region IV) : 7.80

?"Active" Model Status are those that an AHRI Certification Program Participant is currently producing AND selling or offering for sale; OR new models that are being marketed but are not yet being produced.?Production Stopped? Model Status are those that an AHRI Certification Program Participant is no longer producing BUT is still selling or offering for sale.

Ratings that are accompanied by WAS indicate an involuntary re-rate. The new published rating is shown along with the previous (i.e. WAS) rating.

The Department of Energy has published updated energy efficiency metrics for central air conditioners and heat pumps. This publication reflects both the 1987 metric (SEER) and the 2023 metric (SEER2). Efficiency requirements are published at 10 C.F.R. 430.32(c). Please refer to www.AHRInet.org for more information about updated energy efficiency metrics.

AIR-CONDITIONING, HEATING, & REFRIGERATION INSTITUTE

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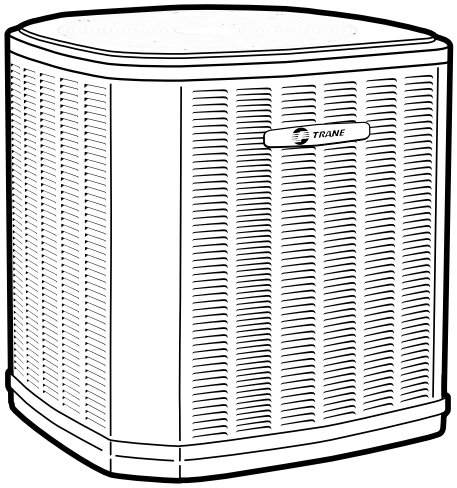
CERTIFICATE NO.: 133655573164758579

HP-6A

Submittal

Split System Heat Pump

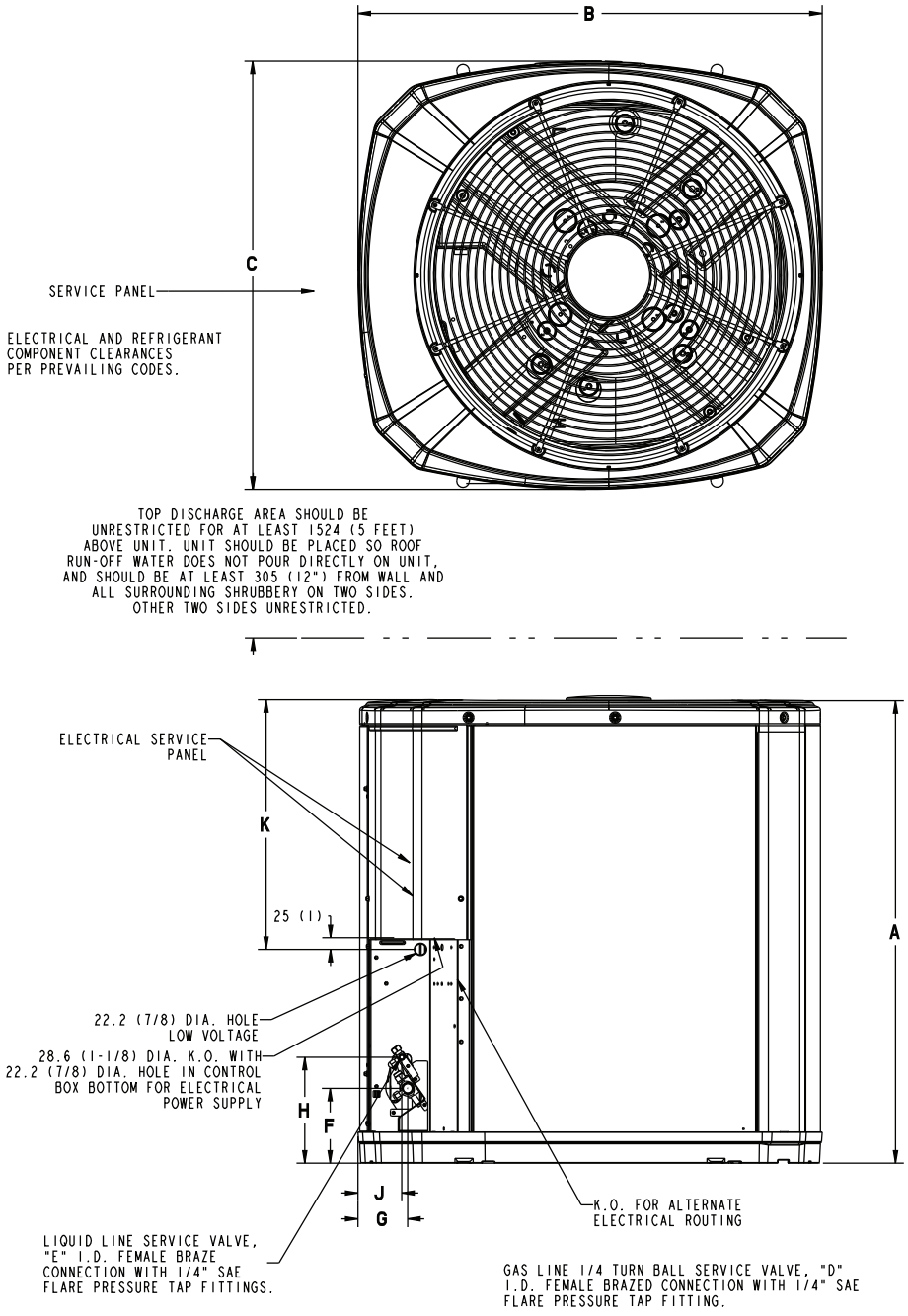
4TWR4036N1000A



Note: *"Graphics in this document are for representation only. Actual model may differ in appearance."*

August 2022

4TWR4036N-SUB-1A-EN



Model	Base	A	B	C	D	E	F	G	H	J	K
4TWR4036N	4	943 (37–1/8)	946 (37–1/4)	870 (34–1/4)	7/8	3/8	143 (5–5/8)	98 (3–7/8)	219 (8–5/8)	86 (3–3/8)	508 (20)

Sound Power Level									
MODEL	A-Weighted Sound Power Level [dB(A)]	Full Octave Sound Power(dB)							
		63 Hz*	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz
4TWR4036N	70	75	69	68	68	66	62	57	51
Note: Rated in accordance with AHRI Standard 270–2008 *For Reference Only									

HP-6A

TRANE

Product Specifications

OUTDOOR UNIT (a) (b)	4TWR4036N1000A
POWER CONNS. – V/PH/HZ (c)	208/230/1/60
MIN. BRCH. CIR. AMPACITY	18
BR. CIR. PROT. RTG. – MAX. (AMPS)	30
COMPRESSOR	CLIMATAUFF® - SCROLL
NO. USED – NO. STAGES	1 – 1
VOLTS/PH/HZ	208/230/1/60
R.L. AMPS (d) — L.R. AMPS	14.1 – 72.2
FACTORY INSTALLED	
START COMPONENTS (e)	NO (Uses BAYKSKT263)
INSULATION/SOUND BLANKET	NO
COMPRESSOR HEAT	NO
OUTDOOR FAN	PROPELLER
DIA. (IN.) – NO. USED	27.5 – 1
TYPE DRIVE – NO. SPEEDS	DIRECT – 1
CFM @ 0.0 IN. W.G. (f)	4275
NO. MOTORS – HP	1 – 1/8
MOTOR SPEED R.P.M.	825
VOLTS/PH/HZ	200/230/1/60
F.L. AMPS	0.64
OUTDOOR COIL – TYPE	SPINE FIN™
ROWS – F.P.I.	1 – 24
FACE AREA (SQ. FT.)	24
TUBE SIZE (IN.)	3/8
REFRIGERANT CONTROL	EXPANSION VALVE
REFRIGERANT	
LBS. – R-410A (O.D. UNIT) (g)	8 LBS., 5 OZ
FACTORY SUPPLIED	YES
LINE SIZE – IN. O.D. GAS (h) (i)	7/8
LINE SIZE – IN. O.D. LIQ.	3/8
CHARGING SPECIFICATIONS	
SUBCOOLING	10°F
DIMENSIONS	H X W X D
CRATED (IN.)	42 x 35.1 x 38.7
WEIGHT	
SHIPPING (LBS.)	246
NET (LBS.)	199

(a) Certified in accordance with the Air-Source Unitary Air-conditioner Equipment certification program, which is based on AHRI standard 210/240.
(b) Rated in accordance with AHRI standard 270.
(c) Calculated in accordance with Natl. Elec. Codes. Use only HACR circuit breakers or fuses.
(d) This value shown for compressor RLA on the unit nameplate and on this specification sheet is used to compute minimum branch circuit ampacity and max. fuse size. The value shown is the branch circuit selection current.
(e) No means no start components. Yes means quick start kit components. PTC means positive temperature coefficient starter. Optional kit shown.
(f) Standard Air – Dry Coil – Outdoor
(g) This value approximate. For more precise value see unit nameplate.
(h) Reference the outdoor unit ship-with literature for refrigerant piping length and lift guidelines. Reference the refrigerant piping software pub # 32-3312-xx or refrigerant piping application guide SS-APG006-xx for long line sets or specialty applications (xx denotes latest revision).
(i) The outdoor condensing units are factory charged with the system charge required for the outdoor condensing unit, ten (10) feet of tested connecting line, and the smallest rated indoor evaporative coil match. Always verify proper system charge via subcooling (TXV/EEV) or superheat (fixed orifice) per the unit nameplate.

Mechanical Specification Options

General

The outdoor condensing units are factory charged with the system charge required for the outdoor condensing unit, ten (10) feet of tested connecting line, and the smallest rated indoor evaporative coil match. This unit is designed to operate at outdoor ambient temperatures as high as 115°F. Cooling capacities are matched with a wide selection of air handlers and furnace coils that are AHRI certified. The unit is certified to UL 1995. Exterior is designed for outdoor application.

Casing

Unit casing is constructed of heavy gauge, galvanized steel and painted with a weather-resistant powder paint finish. The corner panels are prepainted. All panels are subjected to our 1,000 hour salt spray test.

Refrigerant Controls

Refrigeration system controls include condenser fan, compressor contactor and low and high pressure switches. A factory supplied, field installed liquid line drier is standard.

Compressor

The compressor features internal over temperature and pressure protection. Other features include: Centrifugal oil pump and low vibration and noise.

Condenser Coil

The outdoor coil provides low airflow resistance and efficient heat transfer. The coil is protected on all four sides by louvered panels.

Low Ambient Cooling

As manufactured, this system has a cooling capacity to 55°F. The addition of an evaporator defrost control permits operation to 40°F. The addition of an evaporator defrost control with TXV permits low ambient cooling to 30°F.

The addition of the BAYLOAM107A low ambient kit permits ambient cooling to 20°F.

Thermostats – Cooling only and heat/cooling (manual and automatic change over). Sub-base to match thermostat and locking thermostat cover.

Trane - by Trane Technologies (NYSE: TT), a global innovator - creates comfortable, energy efficient indoor environments for commercial and residential applications. For more information, please visit trane. com or tranetechnologies.com.

The AHRI Certified mark indicates Trane U.S. Inc. participation in the AHRI Certification program. For verification of individual certified products, go to ahridirectory. org.

Trane has a policy of continuous data improvement and it reserves the right to change design and specifications without notice. We are committed to using environmentally conscious print practices.

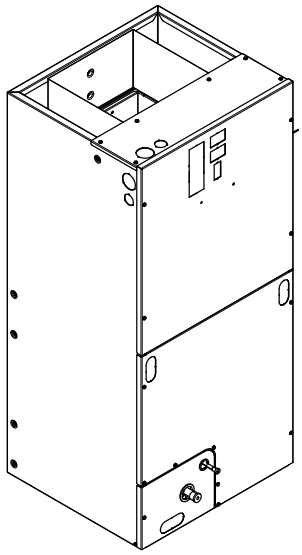
4TWR4036N-SUB-1A-EN 12 Aug 2022
Supersedes (New)

HP-6B

Submittal

Variable Speed Convertible Air Handler
3–1/2 Ton

TEM6A0C42H41SC

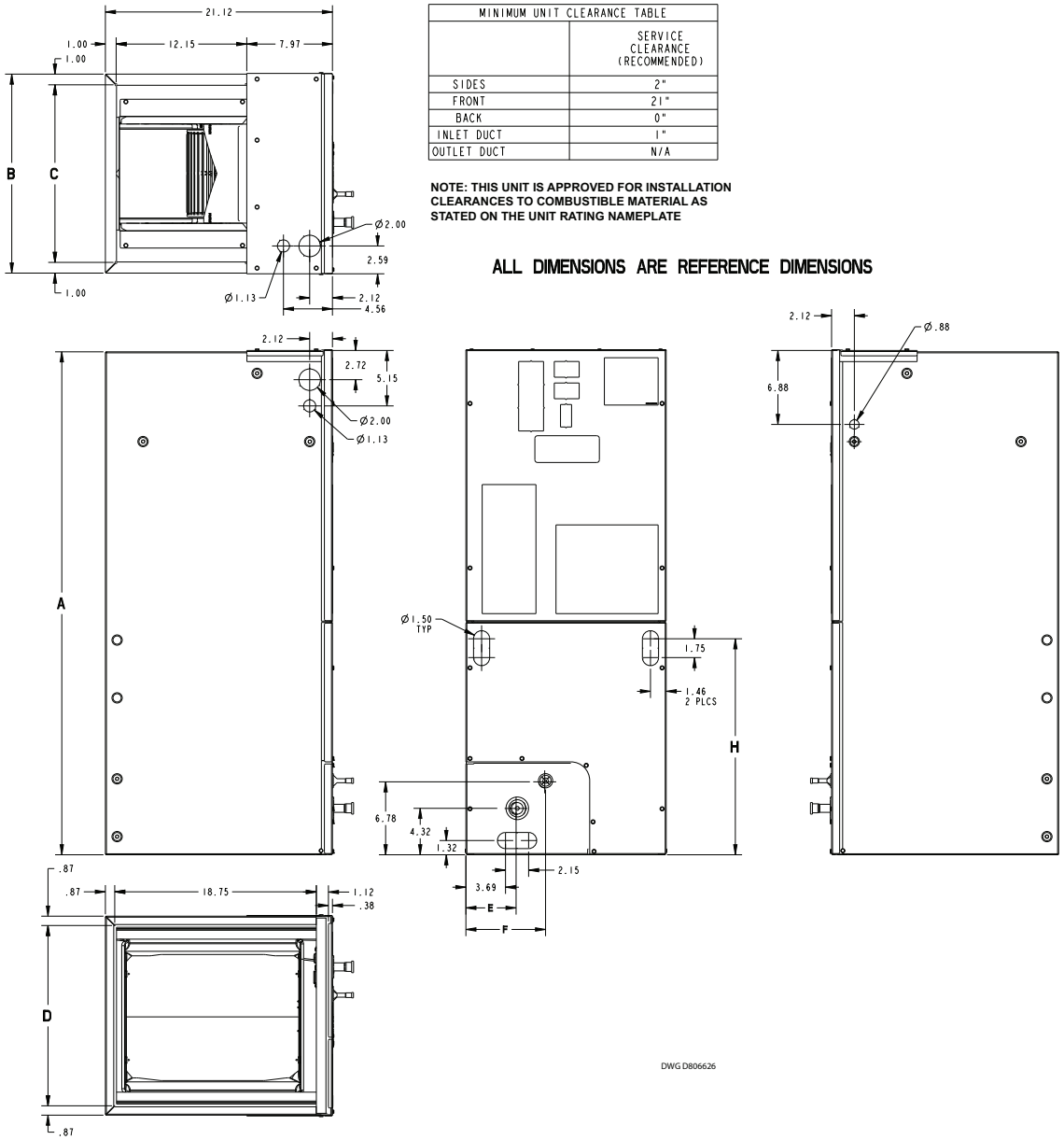


Note: *The TEM6 series air handler is designed for installation in a closet, utility room, alcove, basement, crawlspace or attic. These versatile units are applicable to air conditioning and heat pump applications. Several models are available to meet the specific requirements of the outdoor equipment. Field installed electric resistance heaters are available.*

March 2022

TEM6A0C42-SUB-1E-EN

Outline Drawing



MINIMUM UNIT CLEARANCE TABLE	
	SERVICE CLEARANCE (RECOMMENDED)
SIDES	2"
FRONT	21"
BACK	0"
INLET DUCT	1"
OUTLET DUCT	N/A

NOTE: THIS UNIT IS APPROVED FOR INSTALLATION CLEARANCES TO COMBUSTIBLE MATERIAL AS STATED ON THE UNIT RATING NAMEPLATE

ALL DIMENSIONS ARE REFERENCE DIMENSIONS

PRODUCT DIMENSIONS									
Air Handler Model	A	B	C	D	E	F	H	Flow Control	Gas Line Braze
TEM6A0C42H41SC	51.27	23.50	21.50	21.75	7.01	9.66	24.59	TXV	7/8
All dimensions are in inches									

Product Specifications

MODEL	TEM6A0C42H41SC
RATED VOLTS/PH/HZ	208-230/1/60
RATINGS[a]	See O.D. Specifications
INDOOR COIL — Type	Plate Fin
Rows — F.P.I.	4 - 14
Face Area (sq. ft.)	4.59
Tube Size (in.)	3/8
Refrigerant Control	TXV
Drain Conn. Size (in.)[b]	3/4 NPT
DUCT CONNECTIONS	**See Outline Drawing**
INDOOR FAN — Type	Centrifugal
Diameter-Width (In.)	11 X 8
No. Used	1
Drive - No. Speeds	Direct - 16
CFM vs. in. w.g.	See Fan Performance Table
No. Motors — H.P.	1 - 1/2
Motor Speed R.P.M.	Variable
Volts/Ph/Hz	208-230/1/60

F.L. Amps	4.3
FILTER	
Filter Furnished? [c]	No
REFRIGERANT	**R-410A**
Ref. Line Connections	Brazed
Coupling or Conn. Size — in. Gas	7/8
Coupling or Conn. Size — in. Liq.	3/8
DIMENSIONS	H x W x D
Crated (In.)	52–3/4 x 27–1/2 x 25–1/2
Uncrated	51-3/8 x 23-1/2 x 21-1/8
WEIGHT	
Shipping (Lbs.) / Net (Lbs.)	155/144

(a) These Air Handlers are A.H.R.I certified with various Split System Air Conditioners and Heat Pumps (AHRI STANDARD 210/240). Refer to the Split System Outdoor Unit Product Data Guides for performance data.
(b) 3/4" Male Plastic Pipe (Ref: ASTM 1785–76)
(c) Remote filter required.

Minimum Airflow CFM

TEM6A0C42H41SC		
Heater	**Minimum Heater Airflow CFM**	
	With Heat Pump	Without Heat Pump
BAYHTR1504BRK, BAYHTR1504LUG BAYHTR1505BRK, BAYHTR1505LUG	875	675
BAYHTR1508BRK, BAYHTR1508LUG	950	820
BAYHTR1510BRK, BAYHTR1510LUG	1000	820
BAYHTR1517BRK	1000	820
BAYHTR3510LUG	875	820
BAYHTR3517LUG	1000	950
BAYHTR1523BRK	1300	1140

TEM6A0C42H41SC Airflow Performance with Auxiliary Heat				
Airflow Settings	Dip Switch Settings		Nominal Airflow	See following tables for heater application: - Pressure Drop for Electrical Heaters - Minimum Heating Airflow Matrix (on unit nameplates)
	Switch 7	Switch 8		
Low	ON	ON	696	
Med-Lo	OFF	ON	825	
Med-Hi	ON	OFF	1150	
High	OFF	OFF	1298	

Heater Pressure Drop Table

Airflow CFM	Number of Racks					Heater Racks	
	1	2	3	4		Heater Model	No. of Racks
	Air Pressure Drop — Inches W.G.					BAYHTR1504	1
1800	0.02	0.04	0.06	0.14		BAYHTR1505	1
1700	0.02	0.04	0.06	0.14		BAYHTR1508	2
1600	0.02	0.04	0.06	0.13		BAYHTR1510	2
1500	0.02	0.04	0.06	0.12		BAYHTR1517	3
1400	0.02	0.04	0.06	0.12		BAYHTR3510	3
1300	0.02	0.04	0.05	0.11		BAYHTR3517	3
1200	0.01	0.04	0.05	0.10		BAYHTR1523	4
1100	0.01	0.03	0.05	0.09		BAYHTR1525	4
1000	0.01	0.03	0.04	0.09			
900	0.01	0.03	0.04	0.08			
800	0.01	0.03					
700	0.01	0.02					
600	0.01	0.02					

Subcooling Adjustment

System Matched with:	Indoor Unit Model No.	Outdoor Model No.	Subcooling
16 SEER HP — 2 ton	TEM6A0C36H31	4TWR6024H1000A 4TWX6024H1000A 4A6H6024H1000A	13 Degrees
15 SEER HP — 2 ton	TEM6A0B24H21 TEM6A0B30H21	4TWR5024G1000A 4A6H5024G1000A	14 Degrees
15 SEER HP — 3 ton	TEM6A0B30H21 TEM6A0C36H31 TEM6A0C42H41	4TWR5036G1000A 4A6H5036G1000A	14 Degrees
All other matches must be charged per the nameplate charging instructions			

Performance and Electrical Data

Table 1. Air Flow Performance

TEM6A0C36H31SC, TEM6A0C42H41SC COOLING AIRFLOW PERFORMANCE, WET COIL, NO FILTER, NO HEATER												
OUTDOOR UNIT SIZE (TONS)	SPEED SETTING	AIRFLOW SETTING	DIP SWITCH SETTING				AIRFLOW POWER	EXTERNAL STATIC PRESSURE				
			SW1	SW2	SW3	SW4		0.1	0.3	0.5	0.7	0.9
2.5	LOW	300 CFM/ton	ON	ON	OFF	ON	CFM Watts	761 63	755 98	719 131	654 163	560 193
	NORMAL	341 CFM/ton	ON	ON	OFF	OFF	CFM Watts	862 82	861 120	834 158	781 196	700 235
	HIGH	384 CFM/ton	ON	ON	ON	OFF	CFM Watts	962 106	963 147	948 190	915 234	863 279
3	LOW	319 CFM/ton	OFF	ON	OFF	ON	CFM Watts	961 106	962 147	947 189	914 233	862 279
	NORMAL	363 CFM/ton	OFF	ON	OFF	OFF	CFM Watts	1092 146	1093 192	1082 240	1060 288	1026 337
	HIGH	408 CFM/ton	OFF	ON	ON	OFF	CFM Watts	1231 196	1231 249	1221 301	1203 353	1175 404
3.5	LOW	315 CFM/ton	ON	OFF	OFF	ON	CFM Watts	1104 150	1105 197	1094 245	1072 293	1039 343
	NORMAL	357 CFM/ton	ON	OFF	OFF	OFF	CFM Watts	1258 209	1258 263	1248 317	1229 369	1201 421
	HIGH	402 CFM/ton	ON	OFF	ON	OFF	CFM Watts	1418 286	1415 347	1401 406	1379 462	1348 516
4	LOW	308 CFM/ton	OFF	OFF	OFF	ON	CFM Watts	1238 199	1238 253	1229 306	1210 357	1182 408
	NORMAL [a]	350 CFM/ton	OFF	OFF	OFF	OFF	CFM Watts	1412 282	1410 344	1398 404	1378 462	1349 517
	HIGH	394 CFM/ton	OFF	OFF	ON	OFF	CFM Watts	1570 393	1528 436	1473 466	1406 483	1326 488

[a] Factory Default Setting

Table 2. Air Flow Performance

TEM6A0C36H31SC, TEM6A0C42H41SC HEATING AIRFLOW PERFORMANCE, NO FILTER, NO HEATER												
OUTDOOR UNIT SIZE (TONS)	SPEED SETTING	AIRFLOW SETTING	DIP SWITCH SETTING				AIRFLOW POWER	EXTERNAL STATIC PRESSURE				
			SW1	SW2	SW3	SW4		0.1	0.3	0.5	0.7	0.9
2.5	LOW	341 CFM/ton	ON	ON	OFF	ON	CFM Watts	860 77	863 115	838 154	788 193	707 232
	NORMAL	379 CFM/ton	ON	ON	OFF	OFF	CFM Watts	949 98	953 138	937 180	906 224	852 269
	HIGH	417 CFM/ton	ON	ON	ON	OFF	CFM Watts	1042 122	1046 166	1036 212	1015 259	980 308
3	LOW	381 CFM/ton	OFF	ON	OFF	ON	CFM Watts	1147 154	1149 203	1141 253	1123 303	1094 353
	NORMAL	424 CFM/ton	OFF	ON	OFF	OFF	CFM Watts	1277 204	1279 259	1272 314	1255 368	1228 421
	HIGH	466 CFM/ton	OFF	ON	ON	OFF	CFM Watts	1409 260	1409 323	1401 383	1384 442	1357 500
3.5	LOW	348 CFM/ton	ON	OFF	OFF	ON	CFM Watts	1222 180	1224 232	1216 285	1200 336	1174 388
	NORMAL	386 CFM/ton	ON	OFF	OFF	OFF	CFM Watts	1361 240	1362 300	1354 358	1337 415	1310 471
	HIGH	425 CFM/ton	ON	OFF	ON	OFF	CFM Watts	1497 316	1478 372	1449 420	1408 461	1356 494
4	LOW	338 CFM/ton	OFF	OFF	OFF	ON	CFM Watts	1360 239	1361 299	1353 358	1336 415	1309 470
	NORMAL [a]	375 CFM/ton	OFF	OFF	OFF	OFF	CFM Watts	1511 325	1489 380	1456 426	1412 464	1355 493
	HIGH	413 CFM/ton	OFF	OFF	ON	OFF	CFM Watts	1659 420	1605 463	1535 488	1450 494	1349 483

[a] Factory Default Setting

1. *See Product Data or Air Handler nameplate for approved combinations of Air Handlers and Heaters.*
2. *Heater model numbers may have additional suffix digits.*

Table 3. Electrical Data

TEM6A0C36H31SC, TEM6A0C42H41SC HEATER DATA											
Heater Model No.	No. of Circuits/ Phases	240 Volt					208 Volt				
		Capacity		Heater Amps per Circuit	Minimum Circuit Ampacity	Maximum Overload Protection	Capacity		Heater Amps per Circuit	Minimum Circuit Ampacity	Maximum Overload Protection
		kW	BTUH				kW	BTUH			
No Heater				4.3 *	5	15			4.3 *	5	15
BAYHTR1504BRK BAYHTR1504LUG	1/1	3.84	13100	16.0	25	25	2.88	9800	13.8	23	25
BAYHTR1505BRK BAYHTR1505LUG	1/1	4.80	16400	20.0	30	30	3.60	12300	17.3	27	30
BAYHTR1508BRK BAYHTR1508LUG	1/1	7.68	26200	32.0	45	45	5.76	19700	27.7	40	40
BAYHTR1510BRK BAYHTR1510LUG	1/1	9.60	32800	40.0	55	60	7.20	24600	34.6	49	50
BAYHTR1517BRK Circuit 1 [a]	2/1	9.60	32800	40.0	55	60	7.20	24600	34.6	49	50
BAYHTR1517BRK Circuit 2		4.80	16400	20.0	25	25	3.60	12300	17.3	22	25
BAYHTR1523BRK Circuit 1	2/1	9.60	32800	40.0	55	60	7.20	24600	34.6	49	50
BAYHTR1523BRK Circuit 2		9.60	32800	40.0	50	50	7.20	24600	34.6	43	45
BAYHTR3510LUG	1/3	9.60	32800	23.1	34	35	7.20	24600	20.0	30	30
BAYHTR3517LUG	1/3	14.40	49100	34.6	48	50	10.80	36900	30.0	42	45
* = Motor Amps											

[a] MCA and MOP for circuit 1 contains the motor amps

Features and Benefits

- Painted metal cabinet with captured foil face insulation
- 2% or less air leakage
- R-4.2 Insulating Value
- Multi-Position UP/Down Flow, Horizontal Left /Right
- ALL Aluminum Coil
- Electric Heaters with polarized plug connections (sold as accessory)
- R-410A Thermal Expansion Valve
- Variable Speed ECM Motor
- Low Voltage Pigtail Connections
- Draw Through Design
- Horizontal Drain Pan
- Single Color
- Fused 24V Power
- **3 year warranty**
- **10-year warranty registered**
- **Optional extended warranty available**

About Trane and American Standard Heating and Air Conditioning

Trane and American Standard create comfortable, energy efficient indoor environments for residential applications. For more information, please visit www.trane.com or www.americanstandardair.com.

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TEM6A0C42-SUB-1E-EN 09 Mar 2022
Supersedes TEM6A0C42-SUB-1D-EN (April 2020)