

# TECHNICAL GUIDE

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### SPLIT-SYSTEM AIR CONDITIONERS

13 SEER – R-410A

**MODELS:**  
TCGD30 THRU 60  
(2.5 THRU 5 NOMINAL TONS - 3 PHASE)



Due to continuous product improvement, specifications are subject to change without notice.

Visit us on the web at [www.york.com](http://www.york.com)

Additional rating information can be found at [www.ahridirectory.org](http://www.ahridirectory.org)

## DESCRIPTION

The 13 SEER Series condensing unit is the outdoor part of a versatile system of air conditioning. It is designed to be custom-matched with one of UPG's complete line of evaporator sections, with each serving a specific function. Matching Air Handlers are available for upflow, downflow, or horizontal applications to provide a complete system. Electric Heaters are available, if required. Add-on coils are available for use with upflow, downflow, or horizontal furnaces and air handlers.

## WARRANTY

*1-year limited parts warranty.*

*5-year limited compressor warranty.*

## FEATURES

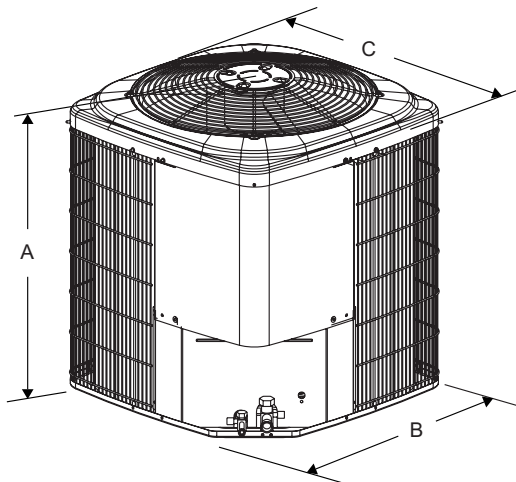
- **QUALITY CONDENSER COILS** - The coil is constructed of aluminum microchannel tubing and enhanced aluminum fins for increased efficiency and corrosion protection.
- **PROTECTED COMPRESSOR** - The compressor is internally protected against high pressure, temperature, and externally by a factory installed high pressure switch. This is accomplished by the simultaneous operation of high pressure relief valve and a temperature sensor which protects the compressor if undesirable operating conditions occur. A liquid line filter-drier further protects the compressor.
- **DURABLE FINISH** - The cabinet is made of pre-painted steel. The pre-treated galvanized steel provides a better paint to steel bond, which resists corrosion and rust creep. Special primer formulas and matted-textured finish insure less fading when exposed to sunlight.
- **LOWER INSTALLED COST** - Installation time and costs are reduced by easy power and control wiring connections. Available in sweat connect models only. The unit contains enough refrigerant for matching indoor coils and 15 feet of interconnecting piping. The small base dimension means less space is required on the ground or roof.
- **TOP DISCHARGE** - The warm air from the top mounted fan is blown up away from the structure and any landscaping. This allows compact location on multi-unit applications.
- **LOW OPERATING SOUND LEVEL** - The upward air flow carries the normal operating noise away from the living area. The rigid top panel effectively isolates any motor sound. Isolator mounted compressor and the rippled fins of the condenser coil muffle the normal fan motor and compressor operating sounds.
- **LOW MAINTENANCE** - Long life permanently lubricated motor-bearings need no annual servicing.
- **EASY SERVICE ACCESS** - Fully exposed refrigerant connections, and a single panel covering the electrical controls make for easy servicing of the unit.
- **SECURED SERVICE VALVES** - Secured re-usable service valves are provided on both the liquid and vapor sweat connections for ease of evacuating and charging.
- **U.L. and C.U.L. listed** - approved for outdoor application.

Certified in accordance with the Unitary Small Equipment certification program, which is based on ARI Standard 210/240.

## Physical and Electrical Data

MODEL	TCGD30 S43S1	TCGD36 S43S1	TCGD42 S43S1	TCGD48 S43S1	TCGD60 S43S1	TCGD30 S44S1	TCGD36 S44S1	TCGD42 S44S1	TCGD48 S44S1	TCGD60 S44S1	
Unit Supply Voltage	208-230V, 3 $\phi$ , 60Hz					460V, 3 $\phi$ , 60Hz					
Normal Voltage Range <sup>1</sup>	187 to 252					432 to 532					
Minimum Circuit Ampacity	11.4	12.3	16.3	15.5	23.9	9.4	7.1	8.0	7.9	13.5	
Max. Overcurrent Device Amps <sup>2</sup>	15	20	25	25	40	15	15	15	15	20	
Min. Overcurrent Device Amps <sup>3</sup>	15	15	20	20	25	15	15	15	15	15	
Compressor Type	Recip	Recip	Recip	Recip	Scroll	Recip	Recip	Recip	Recip	Scroll	
Compressor Amps	Rated Load	8.1	8.6	11.8	11.2	17.9	6.6	4.5	5.2	5.1	9.6
	Locked Rotor	63	68	88	88	120	30	34	44	44	70
Crankcase Heater	No	No	No	No	No	No	No	No	No	No	
Fan Motor Amps	Rated Load	1.2	1.5	1.5	1.5	1.5	1.2	1.5	1.5	1.5	
Fan Diameter Inches	17.5	22	22	22	22	17.5	22	22	22	22	
Fan Motor	Rated HP	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/4	
	Nominal RPM	1100	850	850	850	850	1100	850	850	850	
	Nominal CFM	2050	3200	2950	2950	3600	2050	3200	2950	2950	
Coil	Face Area Sq. Ft.	9.6	13.07	14.16	14.16	18.68	9.6	13.07	14.16	14.16	
	Rows Deep	1	1	1	1	1	1	1	1	1	
	Fin / Inches	23	23	23	23	23	23	23	23	23	
Liquid Line Set OD (Field Installed)	3/8	3/8	3/8	3/8	3/8	3/8	3/8	3/8	3/8	3/8	
Vapor Line Set OD (Field Installed)	3/4	3/4	7/8	7/8	7/8	3/4	3/4	7/8	7/8	7/8	
Unit Charge (Lbs. - Oz.) <sup>4</sup>	3 - 14	4 - 9	4 - 5	4 - 9	5 - 6	3 - 14	4 - 9	4 - 5	4 - 9	5 - 6	
Charge Per Foot, Oz.	0.62	0.62	0.67	0.67	0.67	0.62	0.62	0.67	0.67	0.67	
Operating Weight Lbs.	131	145	173	173	195	131	145	173	173	195	

1. Rated in accordance with ARI Standard 110, utilization range "A".
2. Dual element fuses or HACR circuit breaker. Maximum allowable overcurrent protection.
3. Dual element fuses or HACR circuit breaker. Minimum recommended overcurrent protection.
4. The Unit Charge is correct for the outdoor unit, matched indoor coil and 15 feet of refrigerant tubing. For tubing lengths other than 15 feet, add or subtract the amount of refrigerant, using the difference in length multiplied by the per foot value. If line exceeds 25 feet, you may refer to publications software 036-68001-001 for proper line sizing.



All dimensions are in inches. They are subject to change without notice. Certified dimensions will be provided upon request.

Unit Model	Dimensions (Inches)			Refrigerant Connection Service Valve Size	
	A <sup>1</sup>	B	C	Liquid	Vapor
30	28	23-1/2	23-1/2	3/8"	3/4"
36	28	29	29		
42	30	29	29		7/8"
48	30	29	29		
60	32	33-5/8	33-5/8		

1. Including Fan Guard.

Additional R-410A Charge / Orifice Size for Various Matched Systems					
Outdoor Unit	TCGD30S4(3,4)S1	TCGD36S4(3,4)S1	TCGD42S4(3,4)S1	TCGD48S4(3,4)S1	TCGD60S4(3,4)S1
Required Orifice or TXV <sup>1,2</sup>	0.061 / 907	0.065 / 903	0.075 / 903	0.073 / 904	0.087 / 905
Factory Charge, lbs-oz	3 - 14	4 - 9	4 - 5	4 - 9	5 - 6
Indoor Coil <sup>3,4</sup>	Additional Charge, Oz				
FC/MC/PC32A3X	61 + 0	-	-	-	-
	907 + 0	-	-	-	-
FC/MC/PC35B3X	61 + 0	-	-	-	-
	907 + 0	-	-	-	-
FC/MC/PC35C3X	61 + 0	-	-	-	-
	907 + 0	-	-	-	-
FC/MC/PC37A3X	61 + 2	65 + 0	-	-	-
	907 + 2	903 + 0	-	-	-
FC/MC/PC43B3X	61 + 2	65 + 0	75 + 0	-	-
	907 + 2	903 + 0	903 + 0	-	-
FC/MC/PC43C3X	61 + 2	65 + 0	75 + 0	-	-
	907 + 2	903 + 0	903 + 0	-	-
FC/MC/PC/UC48C3X	-	65 + 8	75 + 2	73 + 4	-
	-	903 + 8	903 + 2	904 + 4	-
FC/MC/PC/UC48D3X	-	65 + 8	75 + 2	73 + 4	-
	-	903 + 8	903 + 2	904 + 4	-
FC/MC/PC/UC60D3X	-	-	-	73 + 0	87 + 0
	-	-	-	904 + 0	905 + 0
FC/MC62D3X	-	-	-	-	87 + 4
	-	-	-	-	905 + 4
HC36B3X	61 + 0	-	-	-	-
	907 + 0	-	-	-	-
HC42C3X	61 + 2	65 + 0	75 + 0	-	-
	907 + 2	903 + 0	903 + 0	-	-
HC60D3X	-	-	-	-	87 + 0
	-	-	-	-	905 + 0
AHP30B3X	61 + 0	-	-	-	-
	907 + 0	-	-	-	-
AHP36C3X	61 + 2	65 + 0	-	-	-
	907 + 2	903 + 0	-	-	-
AHP42C3X	-	65 + 0	75 + 0	-	-
	-	903 + 0	903 + 0	-	-
AHP/SHP60D3X	-	-	-	73 + 0	87 + 0
	-	-	-	904 + 0	905 + 0
F4FP040 <span style="border: 1px solid black; padding: 2px;">See Caution below</span>	61 + 0	-	-	-	-
	907 + 0	-	-	-	-
F5FP048 <span style="border: 1px solid black; padding: 2px;">See Caution below</span>	-	65 + 8	75 + 2	73 + 4	-
	-	903 + 8	903 + 2	904 + 4	-
F5FP060 <span style="border: 1px solid black; padding: 2px;">See Caution below</span>	-	-	-	73 + 0	87 + 0
	-	-	-	904 + 0	905 + 0

**FOOTNOTES:**

1. For applications requiring a TXV use 1TVM series kit.
2. Approved orifice shipped with outdoor unit.
3. Systems matched with furnace or air handlers not equipped with blower-off delays may require blower Time Delay Kit 2FD06700224.
4. PC coils cannot be used in downflow or horizontal applications. FC coils cannot be used in horizontal applications.

**PROCEDURES:**

1. Unit factory charge listed on the unit nameplate includes refrigerant for the condenser, the smallest evaporator and 15 feet of interconnecting line tubing.
2. Verify the TXV or orifice and additional charge required for specific evaporator coil in the system using the above table.
3. Additional charge for the amount of interconnecting line tubing greater than 15 feet at the rate specified in Physical and Electrical Data Table.
4. For TXV match charge weight needs to be weighed in for specific coil match and lineset length.
5. Permanently mark the unit nameplate with the total system charge. Total System Charge = Base Charge (as shipped) + adder for evaporator + adder for line set.

 **CAUTION**

*If the F\*FP Air Handler used has a with a factory installed R-22 TXV it **MUST BE CHANGED OUT** to a R-410A TXV or a orifice for proper operation. If the TXV is not changed out system damage will occur.*

**COOLING CAPACITY - With Air Handler Coils**

UNIT MODEL	AIR HANDLER		COIL MODEL <sup>1</sup>	COOLING				
	MODEL	W		RATED CFM	NET MBH		SEER	EER
					TOTAL	SENS.		
<b>13 SEER AC WITH MA</b>								
TCGD30S4(3,4)S1	MA12B	17	FC/MC35B	1000	29.0	21.0	13.00	11.00
	MA12B	17	FC/MC43B	1000	29.0	21.0	13.00	11.00
TCGD36S4(3,4)S1	MA12B	17	FC/MC43B	1200	35.0	24.8	13.00	11.00
	MA14D	24	FC/MC48D	1200	35.0	24.8	13.00	11.00
TCGD42S4(3,4)S1	MA16C	21	FC/MC43C	1400	42.0	29.2	13.00	11.00
	MA14D	24	FC/MC48D	1400	42.0	29.2	13.00	11.00
	MA16C	21	FC/MC48C	1400	42.0	29.2	13.00	11.00
TCGD48S4(3,4)S1	MA16C	21	FC/MC48C	1600	48.0	34.4	13.00	11.00
	MA20D	24	FC/MC48D	1600	48.0	34.4	13.00	11.00
	MA16C	21	FC60C	1600	48.0	34.4	13.00	11.00
	MA20D	24	FC/MC60D	1600	48.0	34.4	13.00	11.00
TCGD60S4(3,4)S1	MA20D	24	FC/MC60D	1800	57.0	38.5	13.00	11.00
	MA20D	24	FC/MC62D	1800	57.0	38.5	13.00	11.00
<b>13 SEER AC WITH AHP / SHP / F*FP</b>								
TCGD30S4(3,4)S1	AHP30	17	—	1015	29.0	21.0	13.00	11.00
	AHP36	21	—	1040	29.0	21.0	13.00	11.00
	F4FP040	18	—	1050	29.0	21.0	13.00	11.00
TCGD36S4(3,4)S1	AHP36	21	—	1235	35.0	24.8	13.00	11.00
	AHP42	21	—	1255	35.0	24.8	13.00	11.00
	F5FP048	24	—	1235	35.0	24.8	13.00	11.00
TCGD42S4(3,4)S1	AHP42	21	—	1485	41.0	29.2	13.00	11.00
	F5FP048	24	—	1455	41.0	29.2	13.00	11.00
TCGD48S4(3,4)S1	AHP/SHP48	24	—	1675	48.0	34.4	13.00	11.00
	AHP/SHP60	24	—	1600	48.0	35.0	13.50	11.00
	F5FP048	24	—	1600	48.0	34.4	13.00	11.00
	F5FP060	24	—	1600	48.0	34.4	13.00	11.00
TCGD60S4(3,4)S1	AHP/SHP60	24	—	1850	57.0	38.5	13.00	11.00
	F5FP060	24	—	1900	57.0	38.5	13.00	11.00

Rated in accordance with DOE test procedures (Federal Register 12-27-79 and 3-18-88) and ARI Standards 210.  
Cooling MBH based on 80°F entering air temperature, 50% RH, and rated air flow.  
EER (Energy Efficiency Ratio) is the total cooling output in BTU's at 95°F outdoor ambient divided by the total electric power in watt-hours at those conditions.  
SEER (Seasonal Energy Efficiency Ratio) is the total cooling output in BTU's during a normal annual usage period for cooling divided by the total electric power input in watt-hours during the same period.

1. MC coils available with a factory installed horizontal drain pan. See price pages for specific model number.

— = Not applicable.

**COOLING CAPACITY - Upflow, Downflow & Horizontal Furnaces and Coils**

UNIT MODEL	FURNACE**		COIL MODEL	COOLING				
	CFM RANGE (Min.-max.)	W		RATED CFM	NET MBH		SEER <sup>1</sup>	EER
					TOTAL	SENS.		
TCGD30S4(3,4)S1	800 - 1200	14	FC/MC/PC32	1000	29.0	21.0	13.00	11.00
	800 - 1200	17,21	FC/MC/PC35	1000	29.0	21.0	13.00	11.00
	800 - 1200	14	FC/MC/PC37	1000	29.0	21.0	13.00	11.00
	800 - 1200	17,21	FC/MC/PC43	1000	29.0	21.0	13.00	11.00
	800 - 1200	17	HC36	1000	29.0	21.0	13.00	11.00
	800 - 1200	21	HC42	1000	29.0	21.0	13.00	11.00
TCGD36S4(3,4)S1	1000 - 1400	14	FC/MC/PC37	1200	35.0	24.8	13.00	11.00
	1000 - 1400	17,21	FC/MC/PC43	1200	35.0	24.8	13.00	11.00
	1000 - 1400	21,24	FC/MC/PC48	1200	35.0	24.8	13.00	11.00
	1000 - 1400	21	HC42	1200	35.0	24.8	13.00	11.00
	1000 - 1400	21,24	UC48	1200	35.0	24.8	13.00	11.00
TCGD42S4(3,4)S1	1200 - 1600	17,21	FC/MC/PC43	1400	42.0	29.2	13.00	11.00
	1200 - 1600	21,24	FC/MC/PC48	1400	42.0	29.2	13.00	11.00
	1200 - 1600	21	HC42	1400	42.0	29.2	13.00	11.00
	1200 - 1600	21,24	UC48	1400	42.0	29.2	13.00	11.00
TCGD48S4(3,4)S1	1400 - 1800	21,24	FC/MC/PC48	1600	48.0	34.4	13.00	11.00
	1400 - 1800	21,24	FC/MC/PC60	1600	48.0	34.4	13.00	11.00
	1400 - 1800	24	HC60	1600	48.0	34.4	13.00	11.00
	1400 - 1800	21,24	UC48	1600	48.0	34.4	13.00	11.00
	1400 - 1800	21,24	UC60	1600	48.0	34.4	13.00	11.00
TCGD60S4(3,4)S1	1600 - 2000	21,24	FC/MC/PC60	1800	57.0	38.5	13.00	11.00
	1600 - 2000	24	FC/MC62	1800	57.0	38.5	13.00	11.00
	1600 - 2000	24	HC60	1800	57.0	38.5	13.00	11.00
	1600 - 2000	21,24	UC60	1800	57.0	38.5	13.00	11.00

1. Requires a 2FD06700224 Blower Time Delay unless a standard furnace is equipped with one.

\*\* Refer to Quick Selection Chart for specific furnace match-up.

**ACCESSORIES**

Refer to Price Manual for specific model numbers.

**OFF CYCLE TIMER DELAY** - Provides a 5-minute off cycle to prevent rapid recycling of the compressor.

**ROOM THERMOSTATS** - A wide selection of compatible thermostats are available to provide optimum performance and features for any installation.

1H/1C, manual changeover electronic non-programmable thermostat.

1H/1C, auto/manual changeover, electronic programmable, deluxe 7-day, thermostat.

1H/1C, auto/manual changeover, electronic programmable.

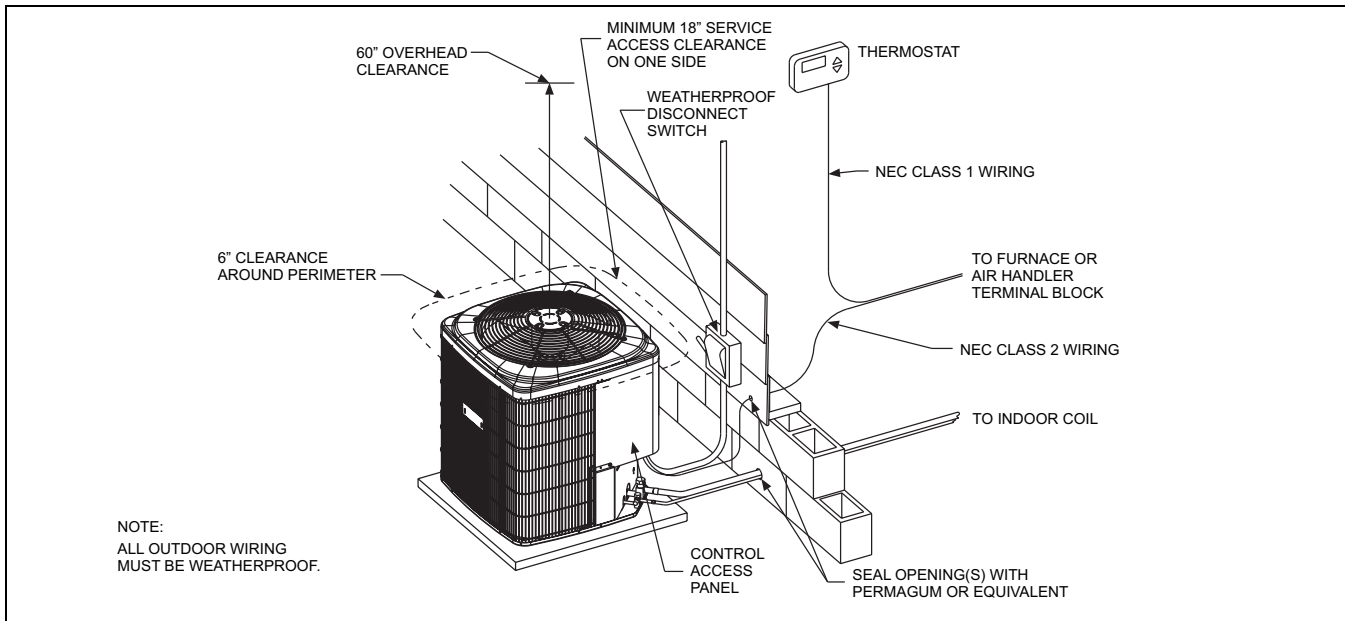
\* For the most current accessory information, refer to the price book or consult factory.

**SOUND POWER RATINGS\***

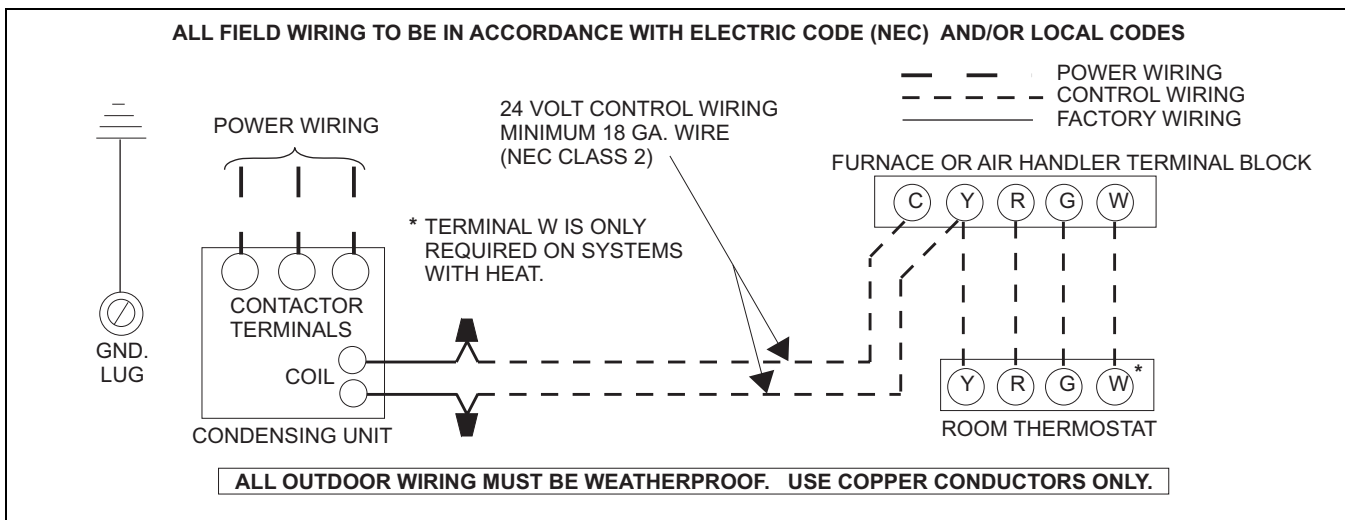
UNIT MODEL	(dBA)
30	76
36	76
42	76
48	77
60	78

\* Rated in accordance with ARI 270-95 Standards.

**TYPICAL INSTALLATION**



**TYPICAL FIELD WIRING**



<b>COOLING PERFORMANCE DATA</b>																
<b>AIR CONDITIONER MODEL NO.</b>		<b>TCGD30S4(3,4)S1</b>														
<b>INDOOR COIL MODEL NO.</b>		<b>FC/MC/PC35</b>														
<b>CONDENSING ENTERING AIR TEMPERATURE</b>	IDCFM	800					1000					1200				
	ID DB (°F)	80	80	75	80	80	80	80	75	80	80	80	80	75	80	80
	ID WB (°F)	57	62	62	67	72	57	62	62	67	72	57	62	62	67	72
65	T.C.	28.4	31.4	30.8	33.1	34.4	29.8	31.8	31.4	33.4	34.5	31.2	32.3	32.1	33.7	34.7
	S.C.	28.8	25.8	21.7	21.2	16.0	30.4	28.2	23.6	22.6	17.1	31.9	30.7	25.4	24.0	18.1
	KW	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
75	T.C.	26.4	28.8	28.2	30.9	32.6	27.9	29.7	28.9	31.4	32.8	29.5	30.5	29.6	31.8	32.9
	S.C.	26.9	24.7	20.5	20.3	15.4	28.5	27.1	22.6	22.0	16.4	30.2	29.5	24.6	23.7	17.5
	KW	1.8	1.8	1.8	1.9	1.9	1.8	1.8	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.9
85	T.C.	24.4	26.3	25.6	28.8	30.9	26.0	27.5	26.4	29.3	31.0	27.7	28.7	27.1	29.8	31.2
	S.C.	24.9	23.6	19.4	19.4	14.7	26.6	26.0	21.6	21.4	15.8	28.4	28.4	23.9	23.4	16.8
	KW	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.1	2.1
95	T.C.	22.4	23.8	23.0	26.7	29.1	24.2	25.3	23.8	29.0	29.3	26.0	26.9	24.7	27.9	29.4
	S.C.	22.9	22.5	18.2	18.5	14.1	24.8	24.9	20.7	21.2	15.1	26.7	27.3	23.1	23.1	16.2
	KW	2.1	2.1	2.1	2.2	2.3	2.2	2.2	2.2	2.2	2.3	2.2	2.2	2.2	2.2	2.3
105	T.C.	20.5	21.8	20.4	23.7	26.3	22.0	23.1	21.3	24.3	26.4	23.6	24.5	22.1	24.8	26.4
	S.C.	21.0	20.7	17.1	17.4	13.2	22.6	22.7	19.1	19.7	14.3	24.3	24.7	21.0	22.0	15.4
	KW	2.3	2.3	2.3	2.4	2.4	2.4	2.4	2.3	2.4	2.5	2.4	2.4	2.3	2.4	2.5
115	T.C.	18.6	19.8	17.9	20.9	23.5	19.9	21.0	18.8	21.4	23.5	21.2	22.2	19.6	21.8	23.6
	S.C.	19.1	18.9	15.9	16.4	12.3	20.5	20.5	17.5	18.6	13.5	22.0	22.2	19.1	20.9	14.7
	KW	2.5	2.5	2.4	2.5	2.6	2.5	2.5	2.5	2.5	2.6	2.6	2.6	2.5	2.6	2.6
125	T.C.	16.8	17.9	15.4	18.1	20.7	17.8	18.9	16.2	18.5	20.7	18.9	19.9	17.1	18.8	20.7
	S.C.	17.3	17.2	14.8	15.3	11.4	18.4	18.4	16.0	17.6	12.6	19.6	19.6	17.1	19.8	13.9
	KW	2.7	2.7	2.6	2.7	2.8	2.7	2.7	2.6	2.7	2.8	2.7	2.7	2.7	2.7	2.8

**NOTE:** ALL CAPACITIES INCLUDE INDOOR FAN HEAT AT 1250 BTUH/1000 CFM.

#### Multipliers for determining the performance with other indoor sections.

**NOTE:** For dry bulb temperatures different than those listed (between 73-87 F), sensible capacity increases by 1060 BTUH per 1000 CFM per degree above the listed temperature and decreases by 1060 BTUH per 1000 CFM per degree below the listed temperature.

<b>Air Handler</b>	<b>Coil</b>	<b>T.C.</b>	<b>S.C.</b>	<b>KW</b>
-	FC/MC/PC35	1.00	1.00	1.00
-	FC/MC/PC37	1.00	1.00	1.00
-	FC/MC/PC43	1.00	1.00	1.00
-	HC36	1.00	1.00	1.00
-	HC42	1.00	1.00	1.00
AHP30	-	1.00	1.00	1.00
AHP36	-	1.00	1.00	1.00
MA12B	FC/MC35B	1.00	1.00	1.00
MA12B	FC/MC43B	1.00	1.00	1.00
F4FP040	-	1.00	1.00	1.00

<b>COOLING PERFORMANCE DATA</b>																
<b>AIR CONDITIONER MODEL NO.</b>		<b>TCGD36S4(3,4)S1</b>														
<b>INDOOR COIL MODEL NO.</b>		<b>FC/MC/PC43</b>														
<b>CONDENSING ENTERING AIR TEMPERATURE</b>	<b>IDCFM</b>	<b>1000</b>					<b>1200</b>					<b>1400</b>				
	<b>ID DB (°F)</b>	80	80	75	80	80	80	80	75	80	80	80	80	75	80	80
	<b>ID WB (°F)</b>	57	62	62	67	72	57	62	62	67	72	57	62	62	67	72
65	T.C.	34.7	36.1	35.2	37.4	37.3	33.8	35.5	34.8	37.0	37.5	32.9	34.9	34.4	36.6	37.6
	S.C.	34.3	33.0	27.6	25.5	18.4	33.3	31.0	26.2	24.6	18.0	32.3	29.1	24.7	23.6	17.7
	KW	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	2.0	1.9	2.0	2.0
75	T.C.	33.6	34.7	33.6	35.9	36.6	32.6	33.9	33.2	35.5	36.6	31.5	33.2	32.7	35.1	36.6
	S.C.	33.3	32.5	27.5	25.6	18.6	32.1	30.6	25.8	24.5	18.0	31.0	28.7	24.2	23.3	17.5
	KW	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.1	2.2	2.2	2.2	2.2
85	T.C.	32.4	33.2	32.0	34.4	35.8	31.3	32.3	31.5	34.1	35.7	30.2	31.5	31.0	33.7	35.5
	S.C.	32.2	32.0	27.3	25.8	18.8	30.9	30.2	25.5	24.3	18.0	29.6	28.3	23.7	22.9	17.3
	KW	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.3	2.4	2.4	2.4	2.4
95	T.C.	31.3	31.7	30.4	33.0	35.0	30.1	30.7	29.9	35.0	34.8	28.9	29.8	29.4	32.2	34.5
	S.C.	31.1	31.5	27.2	26.0	19.0	29.7	29.7	25.2	24.9	18.0	28.3	27.9	23.2	22.5	17.1
	KW	2.6	2.6	2.6	2.6	2.7	2.6	2.6	2.6	2.6	2.7	2.5	2.6	2.6	2.6	2.6
105	T.C.	27.9	28.8	27.2	29.8	32.5	27.0	27.8	26.6	29.4	32.2	26.0	26.9	25.9	29.0	31.9
	S.C.	28.7	28.9	25.0	25.0	18.4	27.3	27.2	23.2	23.2	17.3	25.8	25.6	21.5	21.4	16.2
	KW	2.8	2.8	2.8	2.8	2.9	2.8	2.8	2.8	2.8	2.9	2.7	2.8	2.7	2.8	2.9
115	T.C.	24.6	26.0	24.2	26.8	30.1	23.9	25.1	23.4	26.3	29.8	23.3	24.1	22.6	25.9	29.5
	S.C.	26.3	26.3	22.8	24.1	17.8	24.9	24.8	21.3	22.2	16.6	23.5	23.3	19.8	20.3	15.4
	KW	3.0	3.0	3.0	3.0	3.1	3.0	3.0	2.9	3.0	3.1	2.9	2.9	2.9	3.0	3.1
125	T.C.	21.3	23.2	21.1	23.7	27.6	20.9	22.3	20.2	23.2	27.3	20.5	21.3	19.3	22.7	27.0
	S.C.	23.9	23.8	20.6	23.2	17.2	22.5	22.4	19.4	21.2	15.9	21.1	21.0	18.2	19.2	14.6
	KW	3.2	3.2	3.2	3.2	3.4	3.2	3.2	3.1	3.2	3.3	3.1	3.1	3.1	3.2	3.3

**NOTE:** ALL CAPACITIES INCLUDE INDOOR FAN HEAT AT 1250 BTUH/1000 CFM.

#### Multipliers for determining the performance with other indoor sections.

**NOTE:** For dry bulb temperatures different than those listed (between 73-87 F), sensible capacity increases by 1060 BTUH per 1000 CFM per degree above the listed temperature and decreases by 1060 BTUH per 1000 CFM per degree below the listed temperature.

<b>Air Handler</b>	<b>Coil</b>	<b>T.C.</b>	<b>S.C.</b>	<b>KW</b>
–	FC/MC/PC43	1.00	1.00	1.00
–	FC/MC/PC48	1.00	1.00	1.00
–	HC42	1.00	1.00	1.00
–	UC48	1.00	1.00	1.00
AHP36	–	1.00	1.00	1.00
AHP42	–	1.00	1.00	1.00
MA12B	FC/MC43B	1.00	1.00	1.00
MA14D	FC/MC48D	1.00	1.00	1.00
F5FP048	–	1.00	1.00	1.00

<b>COOLING PERFORMANCE DATA</b>																
<b>AIR CONDITIONER MODEL NO.</b>		<b>TCGD42S4(3,4)S1</b>														
<b>INDOOR COIL MODEL NO.</b>		<b>FC/MC/PC43</b>														
<b>CONDENSING ENTERING AIR TEMPERATURE</b>	IDCFM	1200					1400					1600				
	ID DB (°F)	80	80	75	80	80	80	80	75	80	80	80	80	75	80	80
	ID WB (°F)	57	62	62	67	72	57	62	62	67	72	57	62	62	67	72
65	T.C.	44.4	45.5	43.6	47.0	48.5	45.9	46.5	45.0	48.5	49.8	47.5	47.5	46.5	50.1	51.1
	S.C.	41.5	35.6	29.7	28.7	21.5	42.9	37.5	31.4	30.2	22.9	44.4	39.4	33.2	31.7	24.3
	KW	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.6	2.5	2.5	2.5	2.5	2.6
75	T.C.	42.3	42.9	41.2	45.1	46.6	44.2	44.3	42.7	46.6	47.9	46.0	45.7	44.2	48.1	49.1
	S.C.	39.4	35.2	29.2	28.5	21.3	41.1	37.4	31.1	30.1	22.4	42.9	39.7	33.0	31.8	23.6
	KW	2.7	2.7	2.7	2.8	2.8	2.7	2.7	2.7	2.8	2.8	2.8	2.8	2.8	2.8	2.9
85	T.C.	40.2	40.3	38.9	43.3	44.6	42.4	42.1	40.4	44.7	45.9	44.6	43.9	41.9	46.0	47.2
	S.C.	37.2	34.7	28.7	28.2	21.2	39.3	37.3	30.8	30.0	22.0	41.5	40.0	32.9	31.8	22.9
	KW	3.0	3.0	3.0	3.0	3.1	3.0	3.0	3.0	3.1	3.1	3.0	3.0	3.0	3.1	3.1
95	T.C.	38.2	37.7	36.5	41.5	42.7	40.7	39.9	38.0	42.0	44.0	43.2	42.1	39.6	43.9	45.3
	S.C.	35.0	34.3	28.1	28.0	21.0	37.5	37.3	30.5	29.4	21.6	40.0	40.3	32.8	31.9	22.2
	KW	3.2	3.2	3.2	3.3	3.4	3.3	3.3	3.3	3.3	3.4	3.3	3.3	3.3	3.4	3.4
105	T.C.	35.3	34.7	32.8	37.4	38.7	37.5	36.7	34.2	38.6	39.8	39.8	38.8	35.6	39.8	40.9
	S.C.	32.3	32.1	26.5	26.4	19.6	34.5	34.5	28.8	28.4	20.4	36.7	37.0	31.1	30.5	21.2
	KW	3.5	3.5	3.5	3.6	3.7	3.5	3.5	3.5	3.6	3.7	3.6	3.6	3.5	3.6	3.7
115	T.C.	32.4	31.7	29.2	33.4	34.8	34.5	33.6	30.5	34.6	35.7	36.5	35.5	31.8	35.7	36.7
	S.C.	29.7	30.0	25.0	24.9	18.2	31.6	31.9	27.2	27.0	19.3	33.5	33.8	29.4	29.1	20.3
	KW	3.7	3.7	3.7	3.8	4.0	3.8	3.8	3.7	3.8	4.0	3.8	3.8	3.7	3.9	4.0
125	T.C.	29.6	28.8	25.6	29.4	30.9	31.4	30.5	26.8	30.5	31.7	33.2	32.2	28.0	31.7	32.5
	S.C.	27.1	27.9	23.5	23.4	16.8	28.7	29.3	25.6	25.6	18.1	30.2	30.6	27.6	27.8	19.4
	KW	4.0	4.0	3.9	4.0	4.2	4.0	4.0	4.0	4.1	4.3	4.1	4.1	4.0	4.1	4.3

**NOTE:** ALL CAPACITIES INCLUDE INDOOR FAN HEAT AT 1250 BTUH/1000 CFM.

#### Multipliers for determining the performance with other indoor sections.

**NOTE:** For dry bulb temperatures different than those listed (between 73-87 F), sensible capacity increases by 1060 BTUH per 1000 CFM per degree above the listed temperature and decreases by 1060 BTUH per 1000 CFM per degree below the listed temperature.

<b>Air Handler</b>	<b>Coil</b>	<b>T.C.</b>	<b>S.C.</b>	<b>KW</b>
–	FC/MC/PC48	1.00	1.00	1.00
–	HC42	1.00	1.00	1.00
–	UC48	1.00	1.00	1.00
AHP42	–	0.97	1.00	0.97
MA16C	FC/MC43C	1.00	1.00	1.00
MA14D	FC/MC48D	1.00	1.00	1.00
MA16C	FC/MC48C	1.00	1.00	1.00
F5FP048	–	1.00	1.00	1.00

<b>COOLING PERFORMANCE DATA</b>																
<b>AIR CONDITIONER MODEL NO.</b>		<b>TCGD48S4(3,4)S1</b>														
<b>INDOOR COIL MODEL NO.</b>		<b>FC/MC/PC48</b>														
<b>CONDENSING ENTERING AIR TEMPERATURE</b>	<b>IDCFM</b>	<b>1400</b>					<b>1600</b>					<b>1800</b>				
	<b>ID DB (°F)</b>	80	80	75	80	80	80	80	75	80	80	80	80	75	80	80
	<b>ID WB (°F)</b>	57	62	62	67	72	57	62	62	67	72	57	62	62	67	72
		T.C.	S.C.	KW	T.C.	S.C.	KW	T.C.	S.C.	KW	T.C.	S.C.	KW	T.C.	S.C.	KW
65	T.C.	49.7	51.4	50.6	55.8	54.6	52.0	53.1	51.9	56.4	55.4	54.4	54.7	53.2	56.9	56.3
	S.C.	47.2	43.1	35.9	36.0	26.1	49.2	45.9	38.2	37.4	27.6	51.2	48.7	40.4	38.8	29.0
	KW	2.7	2.8	2.8	2.8	2.8	2.7	2.8	2.8	2.8	2.8	2.7	2.8	2.8	2.8	2.9
75	T.C.	47.5	48.6	47.7	52.9	52.4	49.8	50.3	48.9	53.6	53.1	52.0	52.1	50.2	54.3	53.8
	S.C.	44.9	42.0	35.0	34.9	25.4	47.0	44.8	37.1	36.5	26.8	49.0	47.6	39.3	38.2	28.1
	KW	3.0	3.0	3.0	3.1	3.1	3.0	3.0	3.0	3.1	3.2	3.0	3.0	3.0	3.1	3.2
85	T.C.	45.4	45.8	44.8	49.9	50.2	47.5	47.6	46.0	50.8	50.8	49.7	49.4	47.1	51.7	51.4
	S.C.	42.7	41.0	34.0	33.8	24.8	44.7	43.7	36.1	35.7	26.0	46.8	46.5	38.2	37.6	27.2
	KW	3.2	3.3	3.3	3.4	3.4	3.3	3.3	3.3	3.4	3.5	3.3	3.3	3.3	3.4	3.5
95	T.C.	43.2	42.9	42.0	47.0	47.9	45.3	44.9	43.1	48.0	48.4	47.4	46.8	44.1	49.1	48.9
	S.C.	40.4	39.9	33.0	32.7	24.1	42.4	42.6	35.1	34.6	25.2	44.5	45.4	37.1	37.0	26.3
	KW	3.5	3.5	3.5	3.6	3.7	3.6	3.6	3.5	3.7	3.8	3.6	3.6	3.6	3.7	3.8
105	T.C.	39.8	39.4	37.3	42.4	43.6	41.6	41.1	38.4	43.4	44.0	43.5	42.9	39.5	44.4	44.5
	S.C.	37.1	37.0	30.9	30.9	22.9	38.9	39.3	32.9	33.0	23.9	40.8	41.5	34.9	35.1	25.0
	KW	3.8	3.8	3.8	3.9	4.0	3.9	3.9	3.8	3.9	4.1	3.9	3.9	3.8	4.0	4.1
115	T.C.	36.5	35.9	32.7	38.0	39.3	38.1	37.5	33.9	38.9	39.8	39.7	39.1	35.1	39.8	40.2
	S.C.	33.9	34.2	28.9	29.2	21.6	35.5	36.0	30.9	31.3	22.7	37.2	37.7	32.8	33.3	23.8
	KW	4.1	4.1	4.0	4.2	4.3	4.1	4.1	4.1	4.2	4.4	4.2	4.2	4.1	4.2	4.4
125	T.C.	33.1	32.4	28.1	33.5	35.1	34.5	33.8	29.4	34.4	35.5	35.9	35.3	30.6	35.2	36.0
	S.C.	30.7	31.4	26.9	27.5	20.4	32.1	32.7	28.8	29.6	21.5	33.5	34.0	30.7	31.6	22.5
	KW	4.4	4.4	4.3	4.4	4.6	4.4	4.4	4.3	4.5	4.7	4.5	4.5	4.4	4.5	4.7

**NOTE:** ALL CAPACITIES INCLUDE INDOOR FAN HEAT AT 1250 BTUH/1000 CFM.

#### Multipliers for determining the performance with other indoor sections.

**NOTE:** For dry bulb temperatures different than those listed (between 73-87 F), sensible capacity increases by 1060 BTUH per 1000 CFM per degree above the listed temperature and decreases by 1060 BTUH per 1000 CFM per degree below the listed temperature.

<b>Air Handler</b>	<b>Coil</b>	<b>T.C.</b>	<b>S.C.</b>	<b>KW</b>
-	FC/MC/PC60	1.00	1.00	1.00
-	HC60	1.00	1.00	1.00
-	UC48	1.00	1.00	1.00
-	UC60	1.00	1.00	1.00
AHP/SHP48	-	1.00	1.00	1.00
AHP/SHP60	-	1.00	1.01	1.00
MA16C	FC/MC48C	1.00	1.00	1.00
MA20D	FC/MC48D	1.00	1.00	1.00
MA16C	FC60C	1.00	1.00	1.00
MA20D	FC/MC60D	1.00	1.00	1.00
F5FP048	-	1.00	1.00	1.00
F5FP060	-	1.00	1.00	1.00

<b>COOLING PERFORMANCE DATA</b>																
<b>AIR CONDITIONER MODEL NO.</b>		<b>TCGD60S4(3,4)S1</b>														
<b>INDOOR COIL MODEL NO.</b>		<b>FC/MC/PC60</b>														
<b>CONDENSING ENTERING AIR TEMPERATURE</b>	<b>IDCFM</b>	<b>1400</b>					<b>1600</b>					<b>1800</b>				
	<b>ID DB (°F)</b>	80	80	75	80	80	80	80	75	80	80	80	80	75	80	80
	<b>ID WB (°F)</b>	57	62	62	67	72	57	62	62	67	72	57	62	62	67	72
65	T.C.	55.8	63.8	62.1	65.2	71.9	60.3	65.7	62.8	66.7	69.8	64.8	67.5	63.5	68.2	67.8
	S.C.	54.7	51.6	41.4	41.1	34.1	58.4	54.2	43.9	42.6	31.9	62.1	56.8	46.5	44.2	29.6
	KW	3.0	3.0	3.0	3.1	3.1	3.0	3.0	3.0	3.1	3.1	3.0	3.1	3.0	3.1	3.1
75	T.C.	56.9	61.1	58.9	62.7	69.7	59.2	63.0	59.9	64.3	67.9	61.4	64.9	61.0	65.9	66.0
	S.C.	53.9	50.4	40.5	40.0	33.5	55.8	53.1	43.1	41.8	31.5	57.7	55.7	45.6	43.6	29.5
	KW	3.4	3.5	3.5	3.5	3.6	3.4	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
85	T.C.	58.0	58.4	55.7	60.3	67.6	58.0	60.4	57.1	61.9	65.9	58.1	62.4	58.5	63.6	64.1
	S.C.	53.2	49.3	39.7	39.0	32.9	53.3	52.0	42.2	41.0	31.2	53.4	54.7	44.8	42.9	29.4
	KW	3.9	3.9	3.9	3.9	4.0	3.9	3.9	3.9	3.9	4.0	3.9	3.9	3.9	3.9	4.0
95	T.C.	59.1	55.7	52.5	56.9	65.5	56.9	57.8	54.3	57.0	63.9	54.7	59.8	56.0	61.2	62.2
	S.C.	52.4	48.1	38.8	37.9	32.3	50.7	50.9	41.4	38.8	30.8	49.0	53.6	43.9	42.3	29.4
	KW	4.3	4.3	4.3	4.4	4.5	4.3	4.3	4.3	4.4	4.4	4.3	4.3	4.3	4.4	4.4
105	T.C.	56.4	52.2	48.8	54.0	60.1	54.0	54.3	50.5	55.7	59.7	51.6	56.3	52.2	57.4	59.4
	S.C.	49.7	45.9	37.5	36.5	29.7	47.9	48.3	40.0	38.7	29.4	46.2	50.6	42.5	40.9	29.0
	KW	4.9	4.9	4.9	4.9	5.0	4.9	4.9	4.9	5.0	5.0	4.9	4.9	4.9	5.0	5.0
115	T.C.	53.8	48.8	45.2	50.2	54.8	51.2	50.9	46.8	51.9	55.7	48.7	53.0	48.5	53.6	56.6
	S.C.	47.1	43.8	36.2	35.0	27.3	45.3	45.7	38.6	37.3	27.9	43.5	47.7	41.1	39.6	28.6
	KW	5.5	5.4	5.4	5.5	5.6	5.5	5.5	5.4	5.5	5.6	5.4	5.5	5.4	5.5	5.6
125	T.C.	51.2	45.4	41.6	46.5	49.4	48.5	47.5	43.2	48.2	51.6	45.7	49.7	44.8	49.8	53.8
	S.C.	44.5	41.7	34.9	33.6	24.9	42.6	43.2	37.3	35.9	26.5	40.7	44.7	39.7	38.3	28.2
	KW	6.1	6.0	5.9	6.1	6.2	6.0	6.0	6.0	6.1	6.2	6.0	6.0	6.0	6.1	6.2

**NOTE:** ALL CAPACITIES INCLUDE INDOOR FAN HEAT AT 1250 BTUH/1000 CFM.

#### Multipliers for determining the performance with other indoor sections.

**NOTE:** For dry bulb temperatures different than those listed (between 73-87 F), sensible capacity increases by 1060 BTUH per 1000 CFM per degree above the listed temperature and decreases by 1060 BTUH per 1000 CFM per degree below the listed temperature.

<b>Air Handler</b>	<b>Coil</b>	<b>T.C.</b>	<b>S.C.</b>	<b>KW</b>
–	FC/MC62	1.00	1.00	1.00
–	HC60	1.00	1.00	1.00
–	UC60	1.00	1.00	1.00
AHP/SHP60	–	1.00	1.00	1.00
MA20D	FC/MC60D	1.00	1.00	1.00
MA20D	FC/MC62D	1.00	1.00	1.00
F5FP060	–	1.00	1.00	1.00

# NOTES