

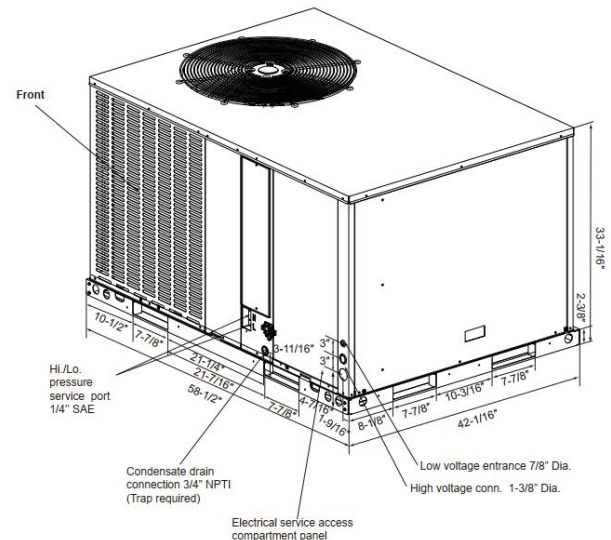
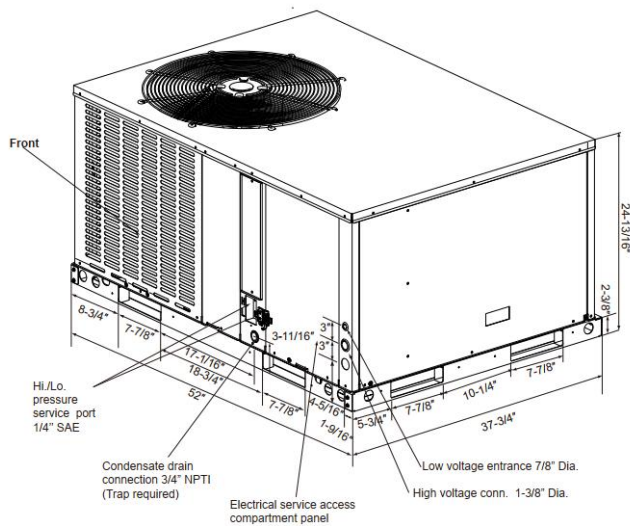
Submittal

TAG:

R454B TPH Series Packaged Rooftop

TPH Series

Cooling capacity: 24-60 kBTU/h



Model	Unit Width "W" in. [mm]	Unit Height "H" in. [mm]	Unit Length "D" in. [mm]	Net Weight kg [lb]	Gross Weight kg [lb]
24	37.75 [958]	24.81 [630]	52 [1321]	148 [326]	154 [340]
30	37.75 [958]	24.81 [630]	52 [1321]	148 [326]	154 [340]
36	37.75 [958]	24.81 [630]	52 [1321]	153 [337]	159 [351]
42	42.06 [1068]	33.06 [840]	58.5 [1485.9]	206 [454]	214 [472]
48	42.06 [1068]	33.06 [840]	58.5 [1485.9]	206 [454]	214 [472]
60	42.06 [1068]	33.06 [840]	58.5 [1485.9]	204 [450]	212 [467]

Specifications

	TPH4024E100A	TPH4030E100A	TPH4036E100A
NOMINAL CAPACITY			
Cooling (BTU/h)	22,800	28,200	34,200
Heating (BTU/h)	22,400	27,600	34,200
ELECTRICAL DATA			
Voltage / Phase (60 Hz)	208/230V-1Ph	208/230V-1Ph	208/230V-1Ph
Min. / Max. Voltage (V)	187/253	187/253	187/253
Min. Circuit Amps (MCA) (A)	17.9	24.4	27.1
Max. Overcurrent Protection (MOP) (A)	25	30	35
COMPRESSOR			
Type	Rotary	Rotary	Scroll
Stage	Single	Single	Single
Rated Load Amps (RLA) (A)	11.9	15.5	17.6
Locked Rotor Amps (LRA) (A)	55	55	86
OUTDOOR COIL			
Type	Tube & Fin	Tube & Fin	Tube & Fin
Tube outside dia. (mm)	5	5	5
OUTDOOR FAN MOTOR			
Motor Type	ECM	ECM	ECM
Capacitor (uF)	/	/	/
Horsepower (HP)	1/4	1/3	1/3
Full Load Amps (FLA) (A)	1.4	2.1	2.1
Rated Airflow (CFM)	2,250	2,550	2,550
INDOOR COIL			
Type	Tube & Fin	Tube & Fin	Tube & Fin
Tube outside dia. (mm)	7	7	7
INDOOR BLOWER MOTOR			
Motor Type	PSC	ECM	ECM
Capacitor (uF)	/	/	/
Horsepower (HP)	1/4	1/2	1/4
Full Load Amps (FLA) (A)	1.6	2.9	3.0
Rated Airflow (CFM at 0.5 8 in H ₂ O)	840	1050	1200
REFRIGERATION SYSTEM			
Refrigerant Control	Piston	Piston	Piston
Refrigerant Charge (lbs. - oz.)	3 lbs. 14 oz.	3 lbs. 10 oz.	3 lbs. 12 oz.
SOUND POWER (dB(A))	80	81	81
OPERATION RANGE			
Cooling (°C)	0~46.1	0~46.1	0~46.1
Cooling (°F)	32~114.9	32~114.9	32~114.9
Heating (°C)	-18~30	-18~30	-18~30
Heating (°F)	-0.4~86	-0.4~86	-0.4~86
Dimension & Weight			
Unpacking (W*H*D) mm	958 x 630 x 1321	958 x 630 x 1321	958 x 630x 1321
inch	37.75 x 24.81 x 52	37.75 x 24.81 x 52	37.75 x 24.81 x 52
Packing (W*H*D) mm	965 x 655 x 1340	965 x 655 x 1340	965 x 655 x 1340
inch	38 x 25.81 x 52.76	38 x 25.81 x 52.76	38 x 25.81 x 52.76
Net/Gross weight kg	148/154	148/154	153/159
lb	326/340	326/340	337/351
Shipping per STD 40HQ	84	84	84

	TPH4042E100A	TPH4048E100A	TPH4060E100A
NOMINAL CAPACITY			
Cooling (BTU/h)	40,500	46,500	56,500
Heating (BTU/h)	40,500	46,000	56,000
ELECTRICAL DATA			
Voltage / Phase (60 Hz)	208/230V-1Ph	208/230V-1Ph	208/230V-1Ph
Min. / Max. Voltage (V)	187/253	187/253	187/253
Min. Circuit Amps (MCA) (A)	29.9	36.0	48.6
Max. Overcurrent Protection (MOP) (A)	40	45	60
COMPRESSOR			
Type	Scroll	Scroll	Scroll
Stage	Single	Single	Single
Rated Load Amps (RLA) (A)	19.9	23.8	32.0
Locked Rotor Amps (LRA) (A)	96	95	125
OUTDOOR COIL			
Type	Tube & Fin	Tube & Fin	Tube & Fin
Tube outside dia. (mm)	5	5	5
OUTDOOR FAN MOTOR			
Motor Type	ECM	ECM	ECM
Capacitor (uF)	/	/	/
Horsepower (HP)	1/3	1/4	1/4
Full Load Amps (FLA) (A)	2.3	2.3	2.8
Rated Airflow (CFM)	3,600	3,600	3,600
INDOOR COIL			
Type	Tube & Fin	Tube & Fin	Tube & Fin
Tube outside dia. (mm)	7	7	7
INDOOR BLOWER MOTOR			
Motor Type	PSC	PSC	ECM
Capacitor (uF)	/	/	/
Horsepower (HP)	1/4	1/2	3/4
Full Load Amps (FLA) (A)	2.7	2.9	5.8
Rated Airflow (CFM at 0.58 in H ₂ O)	1430	1620	1750
REFRIGERATION SYSTEM			
Refrigerant Control	Piston	Piston	Piston
Refrigerant Charge (lbs. - oz.)	5 lbs. 15 oz.	6 lbs. 1 oz.	5 lbs. 15 oz.
SOUND	POWER		
(dB(A))	80	80	81
OPERATION RANGE			
Cooling (°C)	0~46.1	0~46.1	0~46.1
Cooling (°F)	32~114.9	32~114.9	32~114.9
Heating (°C)	-18~30	-18~30	-18~30
Heating (°F)	-0.4~86	-0.4~86	-0.4~86
Dimension & Weight			
Unpacking (W*H*D) mm	1068 x 840 x 1485.9	1068 x 840 x 1485.9	1068 x 840 x 1485.9
inch	42.06 x 33.06 x 58.5	42.06 x 33.06 x 58.5	42.06 x 33.06 x 58.5
Packing (W*H*D) mm	1073 x 865 x 1505	1073 x 865 x 1505	1073 x 865 x 1505
inch	42.24 x 34.07 x 59.25	42.24 x 34.07 x 59.25	42.24 x 34.07 x 59.25
Net/Gross weight kg	206/214	206/214	204/212
lb	454/472	454/472	450/467
Shipping per STD 40HQ	45	45	45

Airflow Data

Duct Application(208V)

Model Number	Motor Speed		SCFM								
			External Static Pressure in H ₂ O[kPa]								
			0[0]	0.1[.02]	0.2[.05]	0.3[.07]	0.4[.10]	0.5[.12]	0.6[.15]	0.7[.17]	0.8[.20]
24	Low-Tap(1)	SCFM	787	744	691	643	/	/	/	/	/
		Watts	187	185	182	152	/	/	/	/	/
		Amps	0.98	0.77	0.75	0.73	/	/	/	/	/
	Mid-Tap(2) (Factory)	SCFM	/	/	/	882	828	751	698	/	/
		Watts	/	/	/	269	262	253	246	/	/
		Amps	/	/	/	1.37	1.34	1.31	1.27	/	/
	High-Tap(3)	SCFM	/	/	/	/	/	964	896	759	621
		Watts	/	/	/	/	/	360	330	307	276
		Amps	/	/	/	/	/	1.78	1.71	1.64	1.57
30	Low-Tap(1)	SCFM	911	869	828	782	723	/	/	/	/
		Amps	0.9	1.0	1.0	1.1	1.2	/	/	/	/
		Watts	103	113	122	131	141	/	/	/	/
	Mid-Tap(2)	SCFM	/	1031	995	961	927	876	829	782	740
		Amps	/	1.3	1.4	1.5	1.6	1.7	1.7	1.8	1.9
		Watts	/	159	170	180	190	203	213	222	230
	High-Tap(3) (Factory)	SCFM	/	/	/	1110	1079	1050	1015	967	926
		Amps	/	/	/	1.9	2.0	2.1	2.2	2.3	2.4
		Watts	/	/	/	233	246	257	270	286	297
36	Low-Tap(2)	SCFM	1073	1031	995	961	927	876	/	/	/
		Amps	1.2	1.3	1.4	1.5	1.6	1.7	/	/	/
		Watts	148	159	170	180	190	203	/	/	/
	Mid-Tap(3)	SCFM	/	1177	1142	1110	1079	1050	1015	967	926
		Amps	/	1.7	1.8	1.9	2.0	2.1	2.2	2.3	2.4
		Watts	/	209	221	233	246	257	270	286	297
	High-Tap(4) (Factory)	SCFM	/	/	/	/	/	1232	1205	1178	1152
		Amps	/	/	/	/	/	2.8	2.9	3.0	3.1
		Watts	/	/	/	/	/	347	361	374	386
42	Low-Tap(1) (Factory)	SCFM	1545	1507	1463	1418	1366	1307	1239	1144	/
		Watts	487	479	469	458	447	433	418	400	/
		Amps	2.58	2.55	2.52	2.49	2.46	2.42	2.38	2.33	/
	Mid-Tap(2)	SCFM	/	/	/	/	1551	1488	1414	1318	1200
		Watts	/	/	/	/	728	712	693	672	644
		Amps	/	/	/	/	4.1	4.05	3.99	3.92	3.84
	High-Tap(3)	SCFM	/	/	/	/	/	/	1570	1499	1380
		Watts	/	/	/	/	/	/	812	787	759
		Amps	/	/	/	/	/	/	4.57	4.49	4.4
48	Low-Tap(1)	SCFM	1545	1507	1463	1418	1366	1307	1239	/	/
		Watts	487	479	469	458	447	433	418	/	/
		Amps	2.58	2.55	2.52	2.49	2.46	2.42	2.38	/	/
	Mid-Tap(2) (Factory)	SCFM	1740	1699	1654	1606	1551	1488	1414	1318	1200
		Watts	783	768	756	742	728	712	693	672	644
		Amps	4.27	4.22	4.18	4.14	4.1	4.05	3.99	3.92	3.84
	High-Tap(3)	SCFM	/	/	/	1800	1740	1671	1595	1499	1380
		Watts	/	/	/	874	854	833	812	787	759
		Amps	/	/	/	4.76	4.7	4.63	4.57	4.49	4.4
60	Low-Tap(3) (Factory)	SCFM	1830	1784	1742	1700	1658	1618	1579	1542	1503
		Amps	2.4	2.5	2.7	2.8	2.9	3.0	3.1	3.2	3.3
		Watts	306	320	336	350	365	380	392	407	420
	Mid-Tap(4) (Factory)	SCFM	1983	1943	1906	1862	1824	1784	1745	1709	1674
		Amps	3.1	3.2	3.3	3.4	3.5	3.6	3.7	3.9	4.0
		Watts	391	406	421	438	453	469	486	501	515
	High-Tap(5)	SCFM	2250	2201	2159	2120	2083	2047	2023	1978	1946
		Amps	4.3	4.4	4.5	4.6	4.7	4.9	5.0	5.1	5.2
		Watts	562	575	593	609	627	645	666	682	700

Duct Application(208V)

Model Number	Motor Speed		SCFM								
			External Static Pressure in H ₂ O[kPa]								
			0[0]	0.1[.02]	0.2[.05]	0.3[.07]	0.4[.10]	0.5[.12]	0.6[.15]	0.7[.17]	0.8[.20]
24	Low-Tap(1)	SCFM	885	841	795	743	/	/	/	/	/
		Watts	227	224	221	216	/	/	/	/	/
		Amps	2.07	2.07	2.06	2.05	/	/	/	/	/
	Mid-Tap(2) (Factory)	SCFM	/	/	/	988	957	882	767	/	/
		Watts	/	/	/	339	323	307	291	/	/
		Amps	/	/	/	2.31	2.28	2.26	2.24	/	/
	High-Tap(3)	SCFM	/	/	/	/	/	996	967	928	896
		Watts	/	/	/	/	/	412	392	379	361
		Amps	/	/	/	/	/	2.65	2.57	2.52	2.46
30	Low-Tap(1)	SCFM	911	869	828	782	723	/	/	/	/
		Amps	0.9	1.0	1.0	1.1	1.2	/	/	/	/
		Watts	103	113	122	131	141	/	/	/	/
	Mid-Tap(2)	SCFM	/	1031	995	961	927	876	829	782	740
		Amps	/	1.3	1.4	1.5	1.6	1.7	1.7	1.8	1.9
		Watts	/	159	170	180	190	203	213	222	230
	High-Tap(3) (Factory)	SCFM	/	/	/	/	1079	1050	1015	967	926
		Amps	/	/	/	/	2.0	2.1	2.2	2.3	2.4
		Watts	/	/	/	/	246	257	270	286	297
36	Low-Tap(2)	SCFM	1073	1031	995	961	927	876	/	/	/
		Amps	1.2	1.3	1.4	1.5	1.6	1.7	/	/	/
		Watts	148	159	170	180	190	203	/	/	/
	Mid-Tap(3)	SCFM	/	1177	1142	1110	1079	1050	1015	967	926
		Amps	/	1.7	1.8	1.9	2.0	2.1	2.2	2.3	2.4
		Watts	/	209	221	233	246	257	270	286	297
	High-Tap(4) (Factory)	SCFM	/	/	/	/	/	1232	1205	1178	1152
		Amps	/	/	/	/	/	2.8	2.9	3.0	3.1
		Watts	/	/	/	/	/	347	361	374	386
42	Low-Tap(1) (Factory)	SCFM	/	/	/	/	1554	1495	1429	1340	1230
		Watts	/	/	/	/	527	510	469	465	432
		Amps	/	/	/	/	2.29	2.22	2.15	2.02	1.88
	Mid-Tap(2)	SCFM	/	/	/	/	/	/	/	1503	1384
		Watts	/	/	/	/	/	/	/	566	533
		Amps	/	/	/	/	/	/	/	2.46	2.32
	High-Tap(3)	SCFM	/	/	/	/	/	/	/	/	1548
		Watts	/	/	/	/	/	/	/	/	662
		Amps	/	/	/	/	/	/	/	/	2.88
48	Low-Tap(1)	SCFM	1735	1701	1654	1608	1554	1495	1429	1340	/
		Watts	579	573	561	545	527	510	469	465	/
		Amps	2.52	2.49	2.44	2.37	2.29	2.22	2.15	2.02	/
	Mid-Tap(2) (Factory)	SCFM	/	/	/	1790	1730	1665	1591	1503	1384
		Watts	/	/	/	658	642	614	592	566	533
		Amps	/	/	/	2.86	2.79	2.67	2.57	2.46	2.32
	High-Tap(3)	SCFM	/	/	/	/	/	/	1761	1666	1548
		Watts	/	/	/	/	/	/	732	704	662
		Amps	/	/	/	/	/	/	3.18	3.06	2.88
60	Low-Tap(3) (Factory)	SCFM	1830	1784	1742	1700	1658	1618	1579	1542	1503
		Amps	2.4	2.5	2.7	2.8	2.9	3.0	3.1	3.2	3.3
		Watts	306	320	336	350	365	380	392	407	420
	Mid-Tap(4) (Factory)	SCFM	1983	1943	1906	1862	1824	1784	1745	1709	1674
		Amps	3.1	3.2	3.3	3.4	3.5	3.6	3.7	3.9	4.0
		Watts	391	406	421	438	453	469	486	501	515
	High-Tap(5)	SCFM	2250	2201	2159	2120	2083	2047	2023	1978	1946
		Amps	4.3	4.4	4.5	4.6	4.7	4.9	5.0	5.1	5.2
		Watts	562	575	593	609	627	645	666	682	700

- The above airflow data for reference only.
- The air distribution system has the greatest effect on airflow. The duct system is totally controlled by the contractor. For this reason, the contractor should use only industry-recognized procedures.
- The installers should balance the air distribution system to ensure proper quiet airflow to all rooms in the home. This ensures a comfortable living space.
- Heat pump systems require a specified airflow. Each ton of cooling requires between 300 and 450 cubic feet of air per minute (CFM), or 400 CFM nominally.
- Duct design and construction should be carefully done. System performance can be lowered dramatically due to poor duct design.
- Air supply diffusers must be selected and located carefully. They must be sized and positioned to deliver treated air along the perimeter of the space. If they are too small for their intended airflow, they become noisy. If they are not located properly, they cause drafts. Return air grilles must be properly sized to carry air back to the blower. If they are too small, they also cause noise.
- The installers should balance the air distribution system to ensure proper quiet airflow to all rooms in the home. This ensures a comfortable living space.
- An air velocity meter or airflow hood can give a reading of system CFM.
- During installation, installer should select the air speed according to the actual setting static pressure. Please refer to the Air Flow Data

Features

- Quiet horizontal discharge.
- Power-painted galvanized steel cabinet.
- Electric heat kit available as a field-installed option: 5/8/10/15/20kW.
- High-efficiency compressors operate smoothly, quietly, and consistently.
- Internal safeguards protect the compressor against high and low pressure, and coil temperature.
- Aluminum tube/aluminum fin coil.
- High-efficiency ECM blower motor.
- AHRI Certified and ETL listed.
- Compliant with UL-60335 certification.
- Uses more environmentally friendly R454B refrigerant.
- Full series 5mm condenser, higher heat exchange efficiency with less flammable refrigerant charge, safer.
- Full DC variable speed external motor, more efficient, smarter, and quieter.

