



ODYSSEY

Light Commercial Split Systems

75-250 MBH / 20-75 kW
Cooling Only
50Hz



Features

The Odyssey air cooled Split System from Trane offers the latest technology available for today's flexible and demanding market needs. It offers the optimum answer from standard everyday applications to customized installations.

Its design follows the "Plug and Play" concept to offer easy installation, maintenance, and project management.

Far beyond effective cooling, the Odyssey Splits provided unparalleled benefits in terms of:

- Versatility
- Reliability
- Simplicity

Everything is in the box

Only a main power supply, low voltage control interfacing, refrigerant piping and charge are necessary, as the rest are in the "box".

This includes unit mounted starters, PCB board and wall thermostat.

Low installation costs cuts time and saves space

The Odyssey's fully packaged concept centers on the philosophy to reduce installation time and costs as well as reduce overall system defects from product to installation in order to deliver a defect free product to the customer. From the smaller 1 phase indoor units to the modular condensing units, designs are tuned to current market needs where space is a premium.

Flexibility

Flexible standard systems do not stop here. Outdoor condensing units can be matched with virtually an unlimited combination of Trane AHUs; from 100% fresh air units, to outdoor AHUs, standby systems and even high ambient installations.

Scroll Compressors Reliability

Scroll compressors have simple mechanical design with only three major moving parts.

Scroll type compression provides inherently low vibration. Scroll compliance provides a completely enclosed compression chamber which leads to increased efficiency.

Compressor FEATURES

Compliant Scroll

- High Efficiency
- Better Liquid Handling
- Better Debris Handling
- Self-compensating for wear ("Wears-in" vs. "Wears-out")
- 70% fewer moving parts
- Low sound level

internal Line Break Motor Protection

Suction Gas Motor Cooling

Suction Screen

Disc Type Check Valve

Centrifugal Oil Pump with Filter and Magnet

DU (PTFE) Journal Bearings

Low Shutdown Noise



General Data

Odyssey Condensing Units General Data

		TTA 075	TTA 100	TTA 125	2xTTA 075	TTA075+100	2xTTA 100	TTA100+125	2xTTA125	
Performances (1)										
Gross Cooling Capacity (1)	(kW)(MBH)	25 84	31.0 106	37 127	49 168	56 190	62 212	68 233	74 254	
Unit Capacity Steps (%)		0-100	0-100	0-100	0-50-100	0-50-100	0-50-100	0-50-100	0-50-100	
Total Compressor Power Input (1)	(kW)	6.9	9.1	10.2	13.8	16.0	19.3	19.3	20.4	
Main Power Supply		400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	
Utilization Range		400V+, -10%								
Compressor										
Number		1	1	1	2	2	2	2	2	
Type		Hermetic Scroll								
Unit MCA Amps (4)	(A)	21.7	21	24						
RLA / LRA (2)	(A)	12.4/95	15.9/125	17.9/125						
Motor RPM	(rpm)	2900								
Sump Heater (Optional) per compressor	(W)	90								
Liquid and Suction connection										
Suction Connection	brazed	1 1/8"	1 1/8"	1 1/8"	1 1/8"	1 1/8"	1 1/8"	1 1/8"	1 1/8"	
Liquid Connection	brazed	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	
Coil										
Type		Plate Fin								
Tube Size	(mm)	9.52								
Tube Type		Smooth								
Height	(mm)	914								
Length	(mm)	965								
Quantity [per TTA]		2	2	2	2	2	2	2	2	
Face Area [per TTA]	(m2)	1.77	1.77	1.77	1.77	1.77	1.77	1.77	1.77	
Rows [std. Ambient]		1	2	2	1	1 & 2	2	2	2	
Fins Per Foot (fpf)		168	144	168	168	168 & 144	144	144 & 168	168	
Fan										
Type		Propeller								
Number		1	1	1	2	2	2	2	2	
Diameter	(mm)/(in)	650 26	650 26	650 26	650 26	650 26	650 26	650 26	650 26	
Drive Type		Direct Drive, 3 Phase								
Speeds Number		1	1	1	1	1	1	1	1	
Air Flow	(m3/h)/(cfm)	15200/9535	15700/9240	15400 9064	32400 19070	31899 18775	31899 18480	31099 18304	30800 18128	
Motors Quantity		1	1	1	2	2	2	2	2	
Motors kW (2)	kW/hp	0.55/0.75								
FLA / LRA (2)	(A)	1.8/5.66								
Motor RPM	(rpm)	910								
Dimensions										
Height	(mm)	945								
Width	(mm)	1115								
Length	(mm)	935								
Weight Crated	(kg)	165	197	230	330	352	394	427	460	
System Data										
Refrigerant Circuit [per TTA]		1	1	1	1	1	1	1	1	
Refrigerant Charge (3)										
Approximate per circuit	(kg)	7.8	8.8	9.5						
TTA Only										

Notes

- [1] at 7deg C SSt and 35 deg C Ambient, 420V, [4] Minimum Circuit Ampacity (MCA) is 125% of the largest compressor RLA plus 100% of the other compressor RLA plus the sum of the condenser fan FLA.
- [2] Per Motor @ 400V [5] Standard Ambient range of up to 45 C, with high ambient range of up to 50deg C with the HA Option.
- [3] Per Circuit

Odyssey Air Handling Units General Date

		MCDP075	MCDP100	MCDP125	TTH-V 150	TTH-V 175	TTH-V 200	TTH-V 240
Evaporator Coil								
Evaporator Rated Air Flow [MCDs at Med. Speed]	Cfm	2400	3225	3237	4750	5300	650	8000
	Cmh	4078	5479	5500	8070	9005	11044	13592
@ Available ESP at normal Airlow	Pg	163	111	111	125	125	188	188
	Hign Pa [3]	263	248	248				
	Med. Pa [3]	182	238	238				
	Low. Pa [3]	51	158	158				
Configuration (1)		H	H	H	H and V	H & V	H & V	H & V
Face Area	Sq. ft/m2	5/0.46	6.7/0.62	6.7/0.62	10.22/0.95	10.22/0.95	15/1.39	15/1.39
Tube Material		COPPER						
Tube Type		SMOOTH BORE						
Tube Size (OD)	in/mm	3/8in-9.52mm						
Rows/FPF		3/144	3/144	4/144	3/144	3/144	3/144	3/144
No. Of Circuits		1	1	1	2	2	2	2
Refrigerant Flow Control		FLOW CONTROL			THERMAL EXPANSION VALVE			
Drain Connection Size	in	3/4	3/4	3/4	1.0	1.0	1.0	1.0
Evaporator Fan/Motor								
Motor	Drive Type	DIRECT-DRIVE, 3 Speed,			BEL-DRIVEN, TEFC			
Utilization Range		240V, 50 Hz, 1 Phase			400V+, -10%, 50Hz, 3 Phase			
FLA (each) (2)	(Hi/Med/Low) (3)	5.8/5.5/4.4	9/8,5/7,5	9/8,5/7,5	4.70	4.70	6.20	8
LRA		12.1/8.9/7	23.8/16.9/13	23.8/16.9/13	29.40	29.40	40.20	38.20
	Std. kW	0.75	1.1	1.1	2.2	2.2	3	4.0
Diameter of Fan	in/mm	9/229	9/229	9/229	15/361	15/381	16/457	18/457
Width of Fan	in/mm	7/176	9/229	9/229	15/361	15/381	18/457	18/457
No of Fans		1	2	2	1	1	1	1
Indoor Fan Type								
Nominal Fan Speed	RPM	1250/1300/1350	1235/1345/1410	1235/1345/1410	836	843	823	833
Liquid/Suction Line OD								
	in	1/2/1 1/8	1/2/1 1/8	1/2/1 1/8	1/2/1 1/8	1/2/1 1/8	1/2/1 1/8	1/2/1 1/8
Approx. Operating Weight	kg	82	114	120	190	190	315	315
Unit Dimensions [uncrated]	HxWxD mm	398x1217x996	398x1593x995	396x1593x995	1423x1436x702	1423x1436x702	1673x1628x772	1673x1628x772

Notes

1 H= Horizontal Only. V=Verticle Only.

2 Per Motor @ 400V [std kW]

3 For direct drives only.

Performance Data (R22)

System Performance Matrix

MODEL		Evaporator Airflow		Total Capacity/Airflow		Condenser Fan Motor	Total Compressor Motor
Outdoor	Indoor	CFM	CMH	MBH	kW	kW x Qty	kW
TTA 075	MCDP 075	2400	4078	84	25	0.55	6.9
TTA 100	MCDP 100	3235	5496	106	31	0.55	9.1
TTA 125	MCDP 125	3235	5496	127	37	0.55	10.2
2xTTA 075	TTH/V 150	4750	8070	168	49	0.55 x 2	13.8
TTA 075+100	TTH/V 175	5300	9005	190	56	0.55 x 2	16.0
2xTTA 100	TTH/V 200	6500	11044	212	62	0.55 x 2	18.3
2xTTA 125	TTH/V 240	8150	13847	254	74	0.55 x 2	20.4

Capacities based on ambient temperature of 95 F [35 C]. Coil on coil temperature of 80 / 67 F [26 / 19] EDB/EWB.

Rated at 400V / 3P / 50 Hz

Capacities are gross and do not include the evaporator fan motor heat deduction.

Custom Matches & configuration are available with the Trane Quantum Climate Changer air handler.

Odyssey System Performance Data

Entering Wet Bulb Model Combinations	CFM Airflow	Ambient Temperature, deg F																		
		75						95						105						
		Entering Wet Bulb						Entering Wet Bulb						Entering Wet Bulb						
		61		67		73		61		67		73		61		67		73		
(F)	MBH	SHC	MBH	SHC	MBH	SHC	MBH	SHC	MBH	SHC	MBH	SHC	MBH	SHC	MBH	SHC	MBH	SHC		
TTA075-MCDP075	2400	75	82.9	61.8	92.3	50.3	102.5	38.0	75	56	84	46	93	35	69.4	51.7	77.2	42.1	85.7	31.8
		80	83.1	71.1	92.4	69.3	102.6	48.0	76	65	84	63	93	44	69.5	59.5	77.3	58.0	85.8	40.1
		85	83.3	80.4	92.6	59.8	102.8	57.2	76	73	84	54	93	52	69.7	67.3	77.5	50.0	85.9	47.8
		90	86.8	86.8	92.8	78.1	103.0	66.4	79	79	84	71	94	60	72.6	72.6	77.6	65.4	86.1	55.5
TTA100-MCDP100	3235	75	105.6	83.0	116.4	65.5	127.8	47.6	96	75	106	60	116	43	88.3	69.4	97.3	54.8	106.9	39.8
		80	105.9	96.6	116.6	88.0	128.0	61.6	96	88	106	80	116	56	88.6	80.8	97.5	73.6	107.1	51.5
		85	108.1	108.1	116.8	92.8	128.4	75.4	98	98	106	84	117	69	90.4	90.4	97.7	77.6	107.4	63.1
		90	113.7	113.7	117.3	106.5	128.7	89.4	103	103	107	97	117	81	95.1	95.1	98.1	89.1	107.7	74.8
TTA125-MCDP125	3235	75	129.6	118.6	139.2	78.6	153.4	57.0	118	108	127	71	139	52	108.4	99.2	116.5	65.8	128.3	47.7
		80	129.6	118.6	139.7	97.9	153.7	74.0	118	108	127	89	140	67	108.4	99.2	116.8	81.9	128.5	61.9
		85	132.6	132.6	139.9	111.7	154.3	90.9	121	121	127	102	140	83	110.9	110.9	117.0	93.4	129.1	76.0
		90	139.7	139.7	140.6	128.0	154.8	107.6	127	127	128	116	141	98	116.8	116.8	117.6	107.1	129.5	90.0
2xTTA075-TTH/V150	4750	75	165.9	123.6	184.7	100.7	204.9	76.1	151	112	168	92	186	69	138.7	103.4	154.5	84.2	171.4	63.6
		80	166.1	142.3	184.8	138.6	205.3	96.0	151	129	168	126	187	87	138.9	119.0	154.6	115.9	171.7	80.3
		85	166.6	160.9	185.3	119.7	205.5	114.4	151	146	168	109	187	104	139.3	134.6	155.0	100.1	171.9	95.7
		90	173.5	173.5	185.5	156.3	206.0	132.8	158	158	169	142	187	121	145.1	145.1	155.2	130.7	172.3	111.1
TTA075+100-TTH/V175	5300	75	188.5	144.8	208.7	115.8	230.3	85.7	171	132	190	105	209	78	157.7	121.1	174.6	96.9	192.6	71.6
		80	189.0	167.7	209.0	157.3	230.7	109.6	172	152	190	143	210	100	158.1	140.3	174.8	131.6	192.9	91.6
		85	191.4	188.6	209.5	152.7	231.1	132.6	174	171	190	139	210	121	160.1	157.7	175.2	127.7	193.9	110.9
		90	200.5	200.5	210.1	184.7	231.7	155.8	182	182	191	168	211	142	167.7	167.7	175.7	154.4	193.8	130.3
2xTTA100-TTH/V200	6500	75	211.2	165.9	232.7	131.0	255.6	95.3	192	151	212	119	232	87	176.6	138.8	194.7	109.5	213.8	79.7
		80	211.9	193.2	233.2	176.0	256.1	123.2	193	176	212	160	233	112	177.2	161.6	195.0	147.2	214.2	103.0
		85	216.3	216.3	233.7	185.7	256.8	150.9	197	197	212	169	233	137	180.9	180.9	195.4	155.3	214.7	126.2
		90	227.5	227.5	234.6	213.0	257.5	178.8	207	207	213	194	234	163	190.3	190.3	196.2	178.2	215.3	149.5
2xTTA125-TTH/V240	8150	75	259.2	237.2	278.5	157.3	306.9	113.9	236	216	253	143	279	104	216.8	198.4	232.9	131.5	256.6	95.3
		80	259.2	237.2	279.4	195.8	307.3	148.0	236	216	254	178	279	135	216.8	198.4	233.7	163.8	257.0	123.8
		85	265.1	265.1	279.9	223.4	308.7	181.8	241	241	254	203	281	165	221.7	221.7	234.1	186.9	258.2	152.1
		90	279.4	279.4	281.3	256.0	309.6	215.2	254	254	256	233	281	196	233.7	233.7	235.2	214.1	259.0	180.0

1 Dry coil condition. Total Gross Cooling Capacity (MBH) show to the left is not applicable.

In this case the Sensible Heat Capacity (SHC) is the total capacity

All capacities shown are gross and have not considered indoor fan heat.

To obtain net cooling capacities subtract indoor fan heat.

MBH = Total Gross Cooling Capacity

SHC = Sensible Heat Capacity



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Stocking Location Malaysia

Trane

www.trane.com

For more information, contact your local district office

Trane has a policy of continuous product and product data improvement and reserves the right to charge design and specifications without notice. Only qualified technicians should perform the installation and servicing of equipment referred to in this publication.