

ROOFTOP UNITS FROM 1.5 TO 50 TR

Trane is a worldwide leader in the manufacture of rooftop units (600 units per day)

Rooftop units are evidently the cheapest solution for large surface areas : above 300 m². For industrial premises, office blocks or sales units.

They can be installed on any type of flat rooftop.

The installation is simple and maintenance is made easy by direct access to the components and electronic microprocessor regulation.

The Varitrac system is one of the stars of this range.

This duct and volume management system allows variable thermal needs to be set.



Rooftops units



The wide range of Trane rooftop units satisfies the requirements of any installation. The units are simple to install and maintain, thanks to the direct access to internal components and a high level of reliability.

Compact, with low profile appearance, the IMPACK units are convertible for downflow and horizontal applications.

For larger applications, the VOYAGER units introduce a micro-processor control providing reliability, flexibility and high level performance. The Voyager units are available with dedicated airflow, in cooling only, heatpump and gas fired configurations with a wide range of accessories and factory-mounted options.

In addition to this range, Trane provides the VARITRAC® system, capable of responding to different thermal requirements in several zones providing superior comfort control.

For the ultimate system control, TRACKER allows supervision of installation and controls additional devices of the building, such as : lights, signs, fans etc..., from a single location

Range overview

IMPACK	WCC (50 Hz)	30	40	50	TCC (60 Hz)	18	24	30	36	42	48	60				
	Cooling capacity (MBH)	30	40	50	Cooling capacity (MBH)	18	23.4	29.8	35.2	40.5	48	60				
	Heat pump capacity (MBH)	29.4	38.6	48.1	WCC (60 Hz)	18	24	30	36	42	48	60				
	TCC (50 Hz)	30	40	50	Cooling capacity (MBH)	18	23.8	29.8	36	41.5	48	60				
	Cooling capacity (MBH)	30	40	50	Heating capacity (MBH)	18	23.8	29.0	35.4	42	48	60				
	YCC (60 Hz)	18	24	30	36	42	48	60								
	Cooling capacity (MBH)	18	23.4	29.8*	35.2	42	48*	60								
	Heating capacity (MBH)	38	40	60*	80*	80	100*	100								
	* High heating capacity															
	VOYAGER	WCD/H (50 Hz)	63	73	100	125	155	200	WCH/D (60 Hz)	150	180	240				
Cooling capacity (kW)		18.1	22.8	31	37.3	44.8	60.2	Cooling capacity (MBH)	152.5	183.5	237					
Heat pump capacity (kW)		15.1	20.5	27.9	29.4	38.7	54.9	Heat Pump cap. (MBH)	135	160	204					
TCD/H (50 Hz)		63	73	100	125	155	175	200	250	TCH/D (60 Hz)	150	180	210	240	300	
Cooling capacity (kW)		18.3	22.6	29.6	34.7	42.4	48.2	57.9	62	Cooling capacity (MBH)	151	183	208	246	290	
YCD/H (50 Hz)		63	73	89	100	125	155	175	200	250	YCH/D (60 Hz)	150	180	210	240	300
Cooling capacity (kW)		18.3	22.6	25.4	29.4	34.7	42.4	48.2	57.9	62	Cooling capacity (MBH)	151	183	208	246	290
Gas furnace capacity (kW)		41.4	41.4	41.4	49.1	49.1	70.6	70.6	77.4	77.4	Heating capacity (MBH)	203	284	284	324	324
TCD/H - TED/H (50 Hz)		275	305	350	400	500	TCH/D - TEH/D (60 Hz)	330	360	420	480	600				
Cooling capacity (MBH)		279	304	375	409	505	Cooling capacity (MBH)	330	360	420	480	587				
Electric heating capacity (kW)	27	40	54	67	81	Electric heating capacity (kW)	90	90	90	108	108					
YCD/H (50 Hz)	275	305	350	400	500	YCD*/H (60 Hz)	330	360	420	480	600					
Cooling capacity (MBH)	279	304	375	409	505	Cooling capacity (MBH)	330	360	429	480	600					
Gas furnace capacity (kW)*	119	119	119	159	159	Gas furnace capacity (MBH)	486	486	486	648	648					
* High heating capacity																



Rooftop Units



1.5 - 50 TR



The wide range of TRANE rooftop units satisfies the requirements of any installation.

The units are simple to install and maintain, thanks to the direct access to internal components and control by electronic microprocessor controls.



VOYAGER (TCD/H, WCD/H)

FOR WHOM? FOR WHAT?

Ideal for large and medium-sized commercial business locations, shopping arcades, industrial sites, restaurants, cinemas ...

Possibility to multiply the number of rooftop units in order to avoid more complex and costly configurations.



VOYAGER III

TRANE'S ADVICE

This type of product is particularly appreciated for its simplicity of installation, reliability and cost, also can be used on buildings of more than 2 floors.



VOYAGER GAS/ELECTRIC

LIGHT COMMERCIAL RANGE



 **Precedent™**

 **3 - 10 TR**

New 3 - 10 ton Packaged Roof Tops are here, with more to come in 2002!!!

Added Flexibility

- Electromechanical or microprocessor controls
- Standard or high efficiency cooling
- Low, medium or high heat, single or two stage
- Convertible airflow
- Fork lift openings on three sides of unit
- Direct or belt drive - standard or oversized motors (Direct for 3-5 ton only)
- We don't prepackage options
- Choose options tailored to suit each job —pay only for what is needed
- Units ship with options installed —and within our standard ship cycle time

Factory Installed Options

- Through-the-Base — Electrical, gas, condensate
- Convenience Outlet — Powered or unpowered
- Unit Disconnect Switch
- Smoke Detectors — Supply, return, or both
- Condenser Coil Coating
- Hinged Access Service Panels
- Discharge Air Sensor
- Fan Fail and Clogged Filter Switches
- Condenser Coil Guard — Hail Protection Quality

The same Trane Quality and Reliability ... with added Flexibility!

3-10 ton Packaged Rooftops



Featuring New Look for a New Century

- Beveled Top
- Smoother Design
- Small compact cabinet
- Recessed access handles

NEW!

Self-contained rooftop unit

Impack range



THERMOSTAT

Operating limits :

	Outdoor air temperature	
	Cooling mode	Heating mode
Standard	+ 13°C to + 46°C	- 14°C to + 18°C
With speed controller	- 18°C to + 46°C	

Available in cooling and electric heat, heat pump and gas heating. High efficiency models up to 16 SEER available in 60 Hz.

The standard unit is convertible : for horizontal or vertical discharge.

Main features :

- "CLIMATUFF" compressor,
- Internal protection of fan and compressor windings,
- Crankcase heater,
- Liquid line filter drier,
- Reversing valve,
- Pressure taps for pressure gauges,
- Outdoor and indoor coils with flat aluminium fins and copper tubes,
- R22 operating charge,
- Direct drive outdoor axial fan,
- 2-speed indoor centrifugal fan,
- Galvanised steel casing coated with enamel paint,

Accessories :

- Assembled adjustable roofcurb,
- 10.5 kW electric heater (1 stage),
- 25% fresh air inlet,
- Outdoor low ambient speed controller,
- Filter set.

Control :

- 24 V electro-mechanical control with : Digital display electronic wall thermostat :
- non programmable TAYSTAT 570 (LCD screen)
- programmable BAYSTAT 038 (LCD screen)



TCD-TCH

R22 5 - 20 TR 50 Hz, 12.5 - 25 TR 60 Hz

Main features :

- Single circuit unit : sizes 063 and 073,
- Dual circuit unit : sizes 100 to 200,
- "3 D-Scroll" compressor for sizes 125 to 250,
- Internal protection of winding for fans and compressor(s),
- Crankcase heater on size 063 to 100,
- Frost protection control system,
- Direct drive outdoor axial fan :
 - 1 fan : TCD/H 063 to 125,
 - 2 fans : TCD/H 150 to 250,
- Variable pulley-belt drive indoor centrifugal fan,
- Galvanised steel water-tight casing,
- Disposable filters supplied as standard.

Factory mounted options :

- Economizer for fresh air intake and free-cooling (comparative enthalpy control),
- Motorized hood 0-50% for fresh air intake,
- NEW : CO2 sensor (operates with the economizer),
- Smoke detector,
- Electric heater,
- Disconnect switch (Pre-wired),
- Clogged filter sensor,
- Oversized drive kit (ton increase available static pressure),

Field installed accessories :

- 0-25% manual hood for fresh air intake,
- NEW : Remote potentiometer (for remote control of the motorized hood 0-50%),
- Fire thermostat,
- Roofcurbs (TCD only),

Control :

- Control of the unit by microprocessor,
- Non-programmable electronic thermostat BAYSENS 010,
- Programmable electronic thermostat BAYSENS 019 (accessory).
- Interface for communication with Tracer-Tracker and supervisor Varitrac®,
- CTI board to adapt to thermostats other than zone sensors.

Self-contained rooftop unit

VOYAGER I and II range

TCD: Downflow discharge and intake

TCH: Horizontal discharge and intake



BAYSENS 010



BAYSENS 019

Operating limits :

		Cooling mode
Outdoor air temperature		- 18°C to + 46°C
Min. intake temperature on the indoor coil		+ 18°C

Model TC*	063	073	89	100	125	155	175	200	250	150	180	210	240	300
ARI Gross Cooling Capacity (MBH) ¹	65.2	80.8	91	106.7	124.9	152.5	176.3	208.2	225.3	150	182	210	242	290
System Power (kW)	6.4	8.2	9.7	10.4	12.2	14.7	18	20	21.3	14.49	17.57	20.0	23.91	28.05
Optional Electric Heater (kW)	26.9	26.9	26.9	26.9	26.9	40.3	53.8	53.8	53.8	54	54	72	72	72
Compressor No./Type	1/Recip.	1/Recip.	1/Recip.	2/Recip.	2/Scroll									
Sound Rating (BELS) ²	8.6	8.6	8.8	8.8	9.0	9.0	9.2	9.2	9.2	9.2	9.2	9.4	9.4	9.4
Drain Connection Number.	1	1	1	1	1	1	1	2	2	1	1	1	1	1
Drain Connection Size in.	3/4 PVC	3/4 PVC	3/4 PVC	1 NPT	21 NPT	1 NPT	1 NPT	1 NPT	1 NPT	1 NPT				
Outdoor Fan No. Motors/HP	1/0.5	1/0.5	1/0.5	1/0.75	1/0.75	2/0.33	2/0.75	2/0.75	2/0.75	2/0.5	2/0.5	2/1.0	2/1.0	2/1.0
Indoor Fan HP	1.0	1.0	2.0	1.5	2.0	2.0	3.0	3.0	5.0	3.0	3.0	5.0	5.0	7.5
Refrigerant Charge (lbs of R22) per circuit ³	8.5	10	5.7	8.0	8.4	10.8	13.1	12.9	15.9	9.3	17.5	21	18.9	17

(1) Cooling mode with inlet air temperature of 27°C DB/19°C WB and outdoor temperature of 35°C. (2) Sound Ratings shown are tested in accordance with ARI standard 270 or 370. (3) Refrigerant charge is an approximate value. For a more precise value, see unit nameplate and service instructions.

Dimensions : see page 56

Gas-fired self-contained rooftop unit

VOYAGER I and II range

YCD: downflow discharge and intake

YCH : horizontal discharge and intake



YCD



BAYSENS 010



BAYSENS 019

Operating limits :

		Cooling mode	Heating mode
Outside air temperature		- 18°C to + 46°C	-
Min. inlet temperature	on indoor coil	+ 18°C	-
	on the burner	-	+ 5°C

Model YC*	063	073	89	100	125	155	175	200	250	150	180	210	240	300
ARI Gross Cooling Capacity (MBH) ¹	65.2	80.8	91	104.3	124.9	152.5	176.3	208.2	225.3	150	182	210	242	290
System Power (kW)	6.4	8.2	9.7	10.9	12.2	14.7	18	20	21.3	14.8	17.94	20.41	24.42	28.05
Heating Output (MBH) ²	137.9	137.9	137.9	118.1	118.1	233.1	233.1	268.9	268.9	203	203	284	324	324
First Stage (MBH)	100	100	100	118.1	118.1	166.9	166.9	202	202	142	142	203	243	243
Steady State Efficiency (%)	81	81	81	81	81	81	81	81	81	81	81	81	81	81
Gas Connection Pipe (in.)	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	3/4	3/4	3/4	3/4
Compressor No./Type	1/Recip.	1/Recip.	1/Recip.	2/Recip.	2/Scroll									
Sound Rating (BELS) ³	8.6	8.6	8.8	8.8	9.0	9.0	9.2	9.2	9.4	9.2	9.2	9.4	9.4	9.4
Drain Connection Number.	1	1	1	1	1	1	1	2	2	1	1	1	1	1
Drain Connection Size in.	3/4 PVC	3/4 PVC	3/4 PVC	1 NPT										
Outdoor Fan No. Motors/HP	1/0.5	1/0.5	1/0.5	1/0.75	1/0.75	2/0.33	2/0.75	2/0.75	2/0.75	2/0.5	2/0.5	2/1.0	2/1.0	2/1.0
Indoor Fan HP	1.0	1.0	2.0	1.5	2.0	2.0	3.0	3.0	5.0	3.0	3.0	5.0	5.0	7.5
Refrigerant Charge (lbs of R22) per circuit ⁴	8.5	10	5.7	8.0	8.4	10.8	13.1	12.9	15.9	9.3	17.5	21	18.9	17

(1) Cooling mode with inlet air temperature of 27°C DB/19°C WB and outdoor temperature of 35°C. (2) High output capacity. (3) Sound Ratings shown are tested in accordance with ARI standard 270 or 370. (4) Refrigerant charge is an approximate value. For a more precise value, see unit nameplate and service instructions.

Dimensions : see page 58

Main features :

- Single circuit unit : sizes 063 to 089,
- Dual circuit unit : sizes 100 to 200,
- "3 D-Scroll" compressor for sizes 125 to 250,
- Internal protection of windings for fans and compressor(s),
- Crankcase heater on size 063 to 100,
- Frost protection control system,
- Direct drive axial outdoor fan :
- 1 fan for sizes 063 to 125.
- 2 fans for sizes 150 to 250.
- Variable pulley-belt drive centrifugal indoor fan,
- Galvanised steel water-tight casing,
- Disposable filters supplied as standard.

Characteristics of the GAS heating module :

- Burner with forced combustion blower,
- High efficiency (> 86%),
- Gases used : natural gas. Option L.P. gas.

Factory mounted options :

- Economizer for fresh air intake and free-cooling (comparative enthalpy control),
- Motorized hood 0-50% for fresh air intake,
- **NEW** : CO2 sensor (operates with the economizer),
- Smoke detector,
- Propane gas conversion,
- Disconnect switch (Pre-wired),
- Clogged filter sensor,
- Oversized drive kit (ton increase available static pressure),

Field installed accessories :

- 0-25% manual hood for fresh air intake,
- **NEW** : Remote potentiometer (for remote control of the motorized hood 0-50%),
- Fire thermostat,
- Roofcurbs (YCD only),

Controls :

- Control of unit by 24 V microprocessor,
- Non-programmable electronic thermostat BAYSENS 010,
- Programmable electronic thermostat BAYSENS 019.
- TC3 interface for communication with Tracer-Tracker and supervisor Varitrac®
- CTI board to adapt to thermostats other than BAYSENS 010 or BAYSENS 019



WCD-WCH

R22 5 - 20 TR

Main features :

- Single circuit unit : sizes 063 and 073,
- Dual circuit unit : sizes 100 to 200,
- Internal protection of winding for fans and compressor(s),
- Crankcase heater on size 063 to 100,
- 4-way reversing valve,
- Frost protection control system,
- Direct drive outdoor axial fan :
- 1 fan : WCD-WCH 063 to 125
- 2 fans : WCD-WCH 150 to 250,
- Variable pulley-belt drive indoor centrifugal fan,
- Galvanised steel water-tight casing,
- Disposable filters supplied as standard.

Factory mounted options :

- Economizer for fresh air intake and free-cooling (comparative enthalpy control),
- Motorized hood 0-50% for fresh air intake,
- **NEW** : CO2 sensor (operates with the economizer),
- Smoke detector,
- Electric heater,
- Disconnect switch (Pre-wired),
- Washable filters,
- Clogged filter sensor,
- Oversized drive kit (ton increase available static pressure),

Field installed accessories :

- 0-25% manual hood for fresh air intake,
- **NEW** : Remote potentiometer (for remote control of the motorized hood 0-50%),
- Fire thermostat,
- Roofcurbs (WCD only),
- Duct mounting CO2 sensor kit.

Control :

- Control of the unit by microprocessor (24 V),
- Non-programmable electronic thermostat BAYSENS 019,
- Programmable electronic thermostat,
- Interface for communication with Tracer-Tracker and supervisor Varitrac®,
- CTI board to adapt to thermostats other than BAYSENS 011 or BAYSENS 019.

Self-contained rooftop unit

VOYAGER I and II range

WCD: Downflow discharge and intake

WCH: Horizontal discharge and intake



BAYSENS 011



BAYSENS 019

Operating limits :

	Cooling mode	Heating mode
Outdoor air temperature	- 18°C to + 46°C	- 14°C to + 18°C
Min. intake temperature on the indoor coil	+ 18°C	+ 10°C

Model WC*	063	073	100	125	155	200	150	180	240
ARI Gross Cooling Capacity (MBH) ¹	65.2	80.8	104.3	124.9	152.5	208.2	152	183.5	233
System Power kW	6.5	8.4	10.5	12.9	15.6	22.3	15.16	18.31	22.2
Heating Output (MBH) ²	60.2	73.3	100.2	120.2	130.7	203.3	135	160	208
System Power Heating (kW)	5.4	6.6	9.0	10.5	12.1	18	10.8	15.12	22.2
Compressor No./Type	1/Recip.	1/Recip.	2/Recip.	2/Scroll	2/Scroll	2/Scroll	2/Scroll	2/Scroll	2/Scroll
Sound Rating (BELS) ³	8.6	8.6	8.8	9.0	9.0	9.2	9.2	9.2	9.4
Drain Connection No./Size in.	1 ³ / ₄ PVC	1 ³ / ₄ PVC	1/1 NPT	1/1 NPT	1/1 NPT	2/1 NPT	1/1 NPT	1/1 NPT	1/1 NPT
Outdoor fan No. Motors/HP	1/0.5	1/0.5	1/0.75	2/0.33	2/0.33	2/0.75	2/0.5	2/0.5	2/1.0
Indoor Fan HP	1.0	1.0	1.5	2.0	2.0	3.0	3.0	3.0	5.0
Refrigerant Charge (lbs of R22) per circuit ⁴	12.5	14.3	11	12	12.3	18	11.1	13.2	22
			11.3	11.8			11.4	12.8	21

(1) Cooling mode with inlet air temperature of 27°C DB/19°C WB and outdoor temperature of 35°C. (2) High output capacity. (3) Sound Ratings shown are tested in accordance with ARI standard 270 or 370. (4) Refrigerant charge is an approximate value. For a more precise value, see unit nameplate and service instructions.

Dimensions : see page 57



TCD-TCH



TED-TEH, YCD-YCH



R22 27.5 - 50 TR



Voyager III



TCD/TED : downflow discharge and intake
TCH/TEH : horizontal discharge and intake
TED/TEH : cooling only + electric heater
YCD/YCH : Gas fired

BAYSENS 010

BAYSENS 019

Operating limits :

		Cooling mode	Heating mode
Outdoor air temperature		- 18°C to + 46°C	-
Min. inlet temperature	on indoor coil	+ 18°C	-
	on burner	-	+ 5°C

Main features :

- “3 D-Scroll” compressor,
- Internal protection of windings for fans and compressor(s),
- Frost protection control system,
- Direct drive axial outdoor fan :
- 3 fans for sizes 275-300-350 and 330-360-420,
- 4 fans for sizes 400-500 and 480-600.
- Variable pulley-belt drive centrifugal indoor fan (drive type selected with order).

Factory mounted options :

- Economizer for fresh air intake and free-cooling (comparative enthalpy control),
- Barometric relief or exhaust fan,
- 0-25% manual hood for fresh air intake,
- **NEW** : CO2 sensor (operates with the economizer),
- Smoke detector,
- Propane gas conversion (YCD/YCH),
- Disconnect switch (Pre-wired),
- Washable filters,
- Clogged filter sensor,
- Oversized drive kit (ton increase available static pressure),
- Hinged access doors,
- Coil guard for condenser,

Field installed accessories (NEW) :

- Remote potentiometer (for remote control of the motorized hood 0-50%)
- Fire thermostat
- Roofcurbs (TCD, TED, YCD only)

Control :

- Control of unit by 24 V microprocessor,
- Non-programmable electronic thermostat BAYSENS 010,
- Programmable electronic thermostat BAYSENS 019 (accessory),
- Interface for communication with Tracer-Tracker and supervisor Varitrac®,
- CTI board to adapt to thermostats other than BAYSENS 010 or BAYSENS 019.

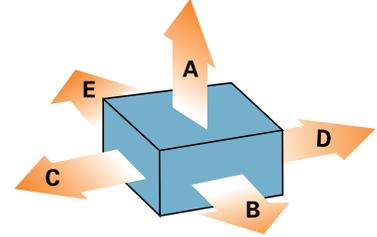
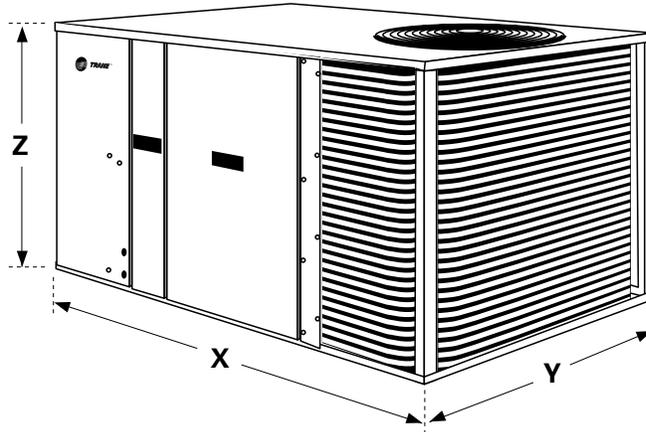
General Date – Model TC*	60 Hz					50 Hz				
	330	360	48	450	600	275	305	350	400	500
ARI Gross Cooling Cap. (MBH) ¹	329	363	417	513	616	279	304	375	409	505
Heating Output (MBH) ²	486	486	486	648	648	405	405	405	542.7	542.7
First Stage (MBH) ²	344.5	344.5	344.5	486	486	344.3	344.3	344.3	486	486
Steady State Efficiency (%) ³	81	81	81	81	81	81	81	81	81	81
No. Burners/No. Stages ²	2/2	2/2	2/2	2/2	2/2					
Gas Connection Pipe Size (in.) ²	1	1	1	1	1	3/4	3/4	3/4	3/4	3/4
Electric Heat Range (kW)	27-90	27-90	27-90	41-108	41-108					
Compressor No./Type	2/Scroll	2/Scroll	2/Scroll	3/Scroll	3/Scroll	2/Scroll	2/Scroll	2/Scroll	3/Scroll	3/Scroll
Comp. Size (Nominal Tons)	10/15	15	15	15/15/10	14	10/15	15/15	15/15	15/15/10	15/15/15
Comp. Unit Cap. Steps (%)	100/40	100/50	100/50	100/60/40	100/67/33	100/40	100/50	100/50	100/60/40	100/67/33
Outdoor Fan No Motors/HP	3/1.10	3/1.10	3/1.10	4/1.10	4/1.10	3/0.75	3/0.75	3/0.75	4/0.75	4/0.75
Indoor Fan Type/No. Used	FC/1	FC/1	FC/1	FC/1	FC/1	FC/1	FC/1	FC/1	FC/1	FC/1
Indoor Fan Diameter (in)	22.4	22.4	22.4	25.0	25.0	22.4	22.4	22.4	25.0	25.0
Indoor Fan Width (in)	22.0	22.0	22.0	25.0	25.0	22.0	22.0	22.0	25.0	25.0
Indoor Fan Motor HP	7.5/10	7.5/10	7.5/10/15	10/15	10/15/20	7.5	7.5	7.5	10.0	10.0
Filters Type	Throwaway					Throwaway				
Filters No.	Yes/16	Yes/16	Yes/16	Yes/17	Yes/17	Yes/16	Yes/16	Yes/16	Yes/17	Yes/17
Filters Recommended Size (in)	16x20x2	16x20x2	16x20x2	16x20x2	16x20x2	16x20x2	16x20x2	16x20x2	16x20x2	16x20x2
Refrigerant Charge (lbs of R22) per circuit ⁴	46	46.6	51.5	26.0	25.7	46	46	52	24.5	23.9
			47.1	54.3					42.5	49.4

(1) Minimum Outside Air Temp.
 For Mechanical Cooling (F) (2) Cooling mode with inlet air temperature of 27°C DB/19°C WB and outdoor temperature of 35°C. (3) High output capacity. (4) Steady state efficiency is rated in accordance with DOE test procedures. (5) Refrigerant charge is an approximate value. For a more precise value, see unit nameplate and service instructions.

Dimensions : see page 58

LIGHT COMMERCIAL RANGE

Impact (1.5 - 5 TR)



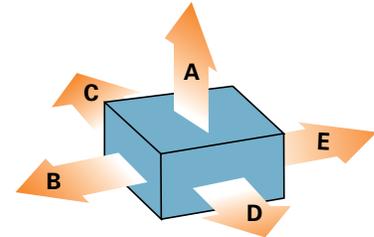
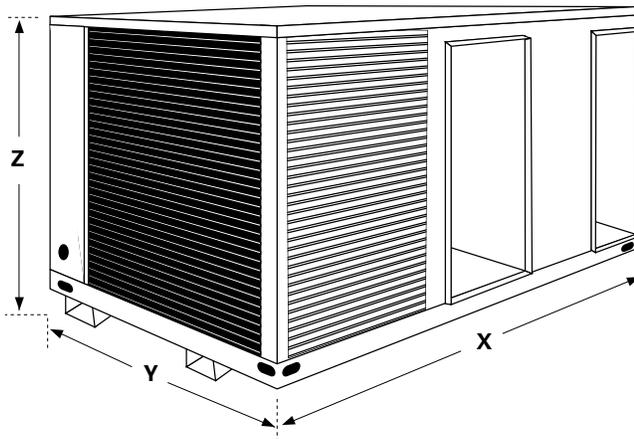
Model and size			TCC/YCC/WCC 018 - 042		TCC/YCC/WCC 048 - 060	
Dimensions (1)	Length (X)	(mm)	1401		1633	
	Width (Y)	(mm)	966		1195	
	Height (Z)	(mm)	741		848	
	Clearance (A)	(mm)			1900	
	Clearance (B)	(mm)			1300	
	Clearance (C)	(mm)			920	
	Clearance (D)	(mm)			920	
Clearance (E) (mm)		1300				

(1) A : condenser air outlet - B : condenser air inlet - C : maintenance (elec. pannel, gaz module...) - D : condenser air inlet - E : maintenance (economizer ...)

Shipping Weights

Size	018	024	030	036	042	048	060
Model TCC	319	327	354	369	389	513	547
Model WCC	337	337	359	383	400	552	547
Model YCC	341	350	398	454	454	576	604

TCD-TCH (17-60 kW 50 Hz, 12.5 - 25 TR 60 Hz)

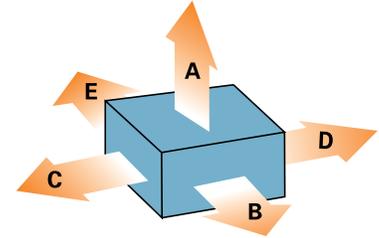
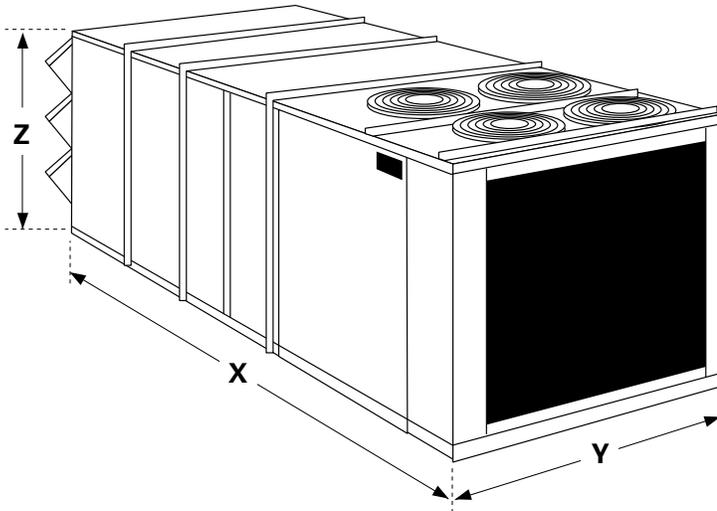


Model and size			TC*063	TC*073	TC*100	TC*180 TC*125	TC*180 TC*155	TC*210 TC*175	TC*240 TC*200	TC*300 TC*250
Dimensions (1)	Length (X)	(mm)	2215		2232	2395	2726		3107	
	Width (Y)	(mm)		1260		1608	1811		2154	
	Height (Z)	(mm)	889		1156	1245	1273		1372	
	Clearance (A)	(mm)					1900			
	Clearance (B)	(mm)	1300				1800			
	Clearance (C)	(mm)	920				1220			
	Clearance (D)	(mm)	920				1000			
Clearance (E) (mm)							1300			
Weight (2)	(kg)	286	313	403	517	622	640	827	876	

(1) A : condenser air outlet - B : condenser air inlet - C : maintenance (elec. pannel, gaz module...) - D : condenser air inlet - E : maintenance (economizer ...)

(2) without options

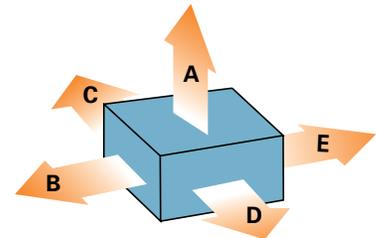
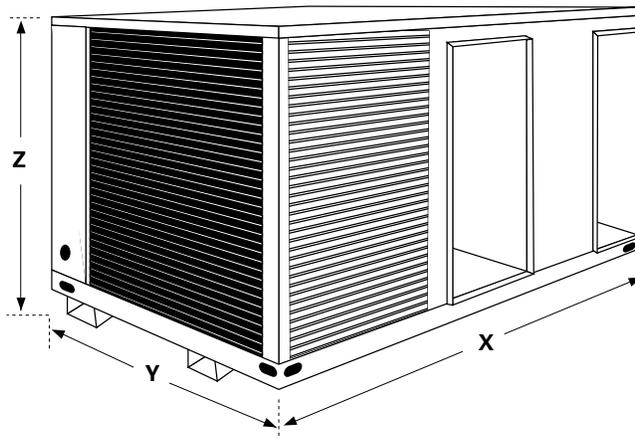
TCD/TCH - TED/TEH (25 - 50 TR)



Model and size			TC 275/330	TC 300/360	TC 350/420	TC 400/480	TC 500/600	
Model and size			TE 275/330	TE 300/360	TE 350/420	TE 400/480	TE 500/600	
Dimensions (1)	Length (X)	(mm)	4580				5917	
	Width (Y)	(mm)	2368				2638	
	Height (Z)	(mm)	1821				1988	
	Clearance (A)	(mm)					1900	
	Clearance (B)	(mm)					2440	
	Clearance (C)	(mm)					1220	
	Clearance (D)	(mm)					1220	
Weight (2)	TCD/TCH	(kg)	1584/1604	1620	1658	1998	2075	
	TED/TEH	(kg)	1599/1619	1635	1673	2014	2090	

(1) A : condenser air outlet - B : condenser air inlet - C : maintenance (elec. pannel, gaz module...) - D : condenser air inlet - E : maintenance (economizer ...). (2) without options

WCD-WCH (17 - 60 kW 50 Hz, 12.5 - 20 TR 60 Hz)

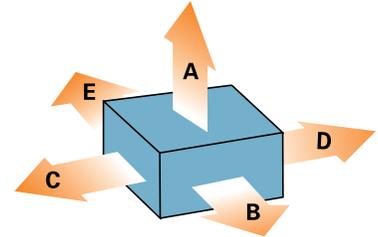
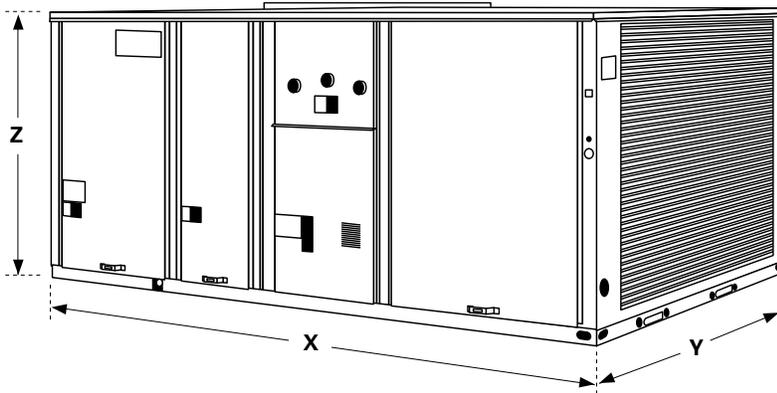


Model and size			WC 063	WC 073	WC 100	WC 125/150	WC 155/180	WC 200/240	
Dimensions (1)	Length (X)	(mm)	2215		2395		2726	3107	
	Width (Y)	(mm)	1260		1608		1811	2154	
	Height (Z)	(mm)	889		1245		1273	1372	
	Clearance (A)	(mm)					1900		
	Clearance (B)	(mm)	1300				1800		
	Clearance (C)	(mm)	920				1220		
	Clearance (D)	(mm)	920				1000		
Weight (2)		(kg)	313	327	520	618	640	877	

(1) A : condenser air outlet - B : condenser air inlet -
 C : maintenance (elec. pannel, gas module...) -
 D : condenser air inlet - E : maintenance (economizer ...).
 (2) without options

LIGHT COMMERCIAL RANGE

YCD-YCH (17-62 kW 50 Hz and 12.5 - 25 TR 60 Hz)

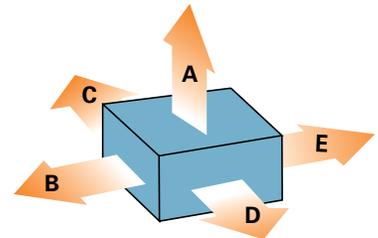
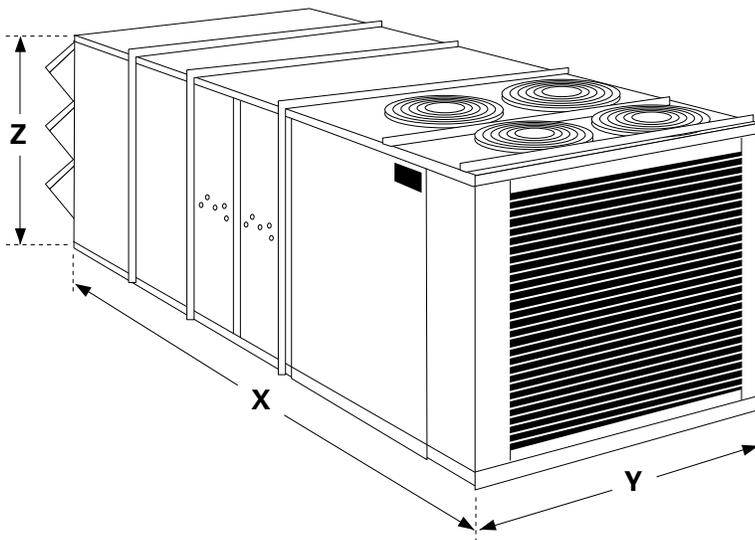


Model and size		063	073	089	100	150	180	210	240	300
Dimensions (1)	Length (X) (mm)		2215		2395		2726		3107	
	Width (Y) (mm)		1260		1608		1811		2167	
	Height (Z) (mm)		890		1245		1274		1372	
	Clearance (A) (mm)					1900				
	Clearance (B) (mm)		1300						1800	
	Clearance (C) (mm)		920						1220	
	Clearance (D) (mm)		920						1000	
	Clearance (E) (mm)					1300				
Weight (2)	(kg)	340	360	435	540	562	645	700	910	960

(1) A : condenser air outlet - B : condenser air inlet - C : maintenance (elec. pannel, gaz module...) - D : condenser air inlet - E : maintenance (economizer ...)

(2) without options

YCD-YCH (27 - 50 TR)



Model and size		275/330 L	—	300/360 L	—	350/420 L	—	400 L	—	500 L	—
Model and size		—	275/330 H	—	300/360 H	—	350/420 H	—	400/480 H	—	500/600 H
Dimensions (1)	Length (X) (mm)	4580	5285	4580	5285	4580	5285		5917		
	Width (Y) (mm)		2368								
	Height	1821		1988							
	Clearance (A) (mm)		1900								
	Clearance (B) (mm)		2440								
	Clearance (C) (mm)		1220								
	Clearance (D) (mm)		1220								
	Clearance (E) (mm)		1830								
Weight (2)	YCD (kg)	1643	1805	1679	1841	1717	1880	2099	2153	2178	2230
	YCH (kg)	1643	1835	1679	1869	1717	1902	2111	2167	2187	2243

(1) A : condenser air outlet - B : condenser air inlet - C : maintenance (elec. pannel, gaz module...) - D : condenser air inlet - E : maintenance (economizer ...)

(2) without options

Vertical Self-Contained



SAVE, SRVE, SIVE Vertical Self-Contained 60 - 180 MBH (60 Hz)

Features and Benefits:

- Available as water cooled self-contained (SAVE) or as air cooled (SRVE)
- Available with remote air cooled condenser (SIVE)
- Free discharge plenum or ducted discharge
- Attractively designed to be openly displayed
- Top vertical, rear horizontal or free air discharge
- Microprocessor control reliability, ICS compatibility

Model No.*	Gross Cooling Capacity ¹ MBH	Power Supply Volts/Phase/Hz		Uncrated Dimensions (in.)			Shipping Weight ² (Lbs)
		60 Hz	50 Hz	H	W	D	
SAVE 050	60	220,380,440/3/60	380/3/50	78.74	37.80	23.62	556
SAVE 075	90	220,380,440/3/60	380/3/50	78.74	46.85	23.62	668
SAVE 100	120	220,380,440/3/60	380/3/50	78.74	59.06	23.62	851
SAVE 125	150	220,380,440/3/60	380/3/50	78.74	66.93	23.62	1014
SAVE 150	180	220,380,440/3/60	380/3/50	78.74	66.93	23.62	1083

*Water-cooled model numbers and dimension shown.

Self-contained (SIVE) with remote air cooled condenser requires the condenser unit CRCB.

¹Capacity based on 60 Hz operation.

²Shipping weight shown for water cooled condenser models.



SAVE, SIVE Vertical Self-Contained — Water and Air-Cooled 20 - 40 Tons (60 Hz)

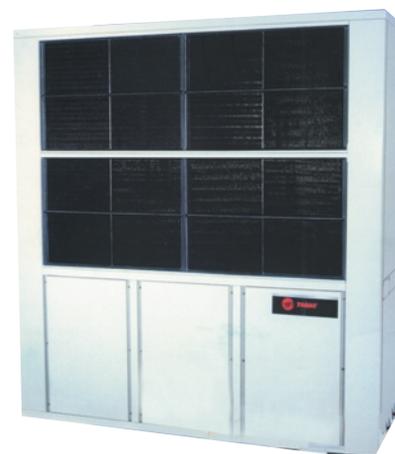
Features and Benefits:

- Available as water-cooled self-contained (SAVE) or as air-cooled self-contained (SIVE)
- SIVE Model also available with the remote air-cooled condenser (CRCB)
- Scroll compressors
- Microprocessor control reliability, ICS compatibility

Model No. ¹	Gross Cooling Capacity ¹ MBH*	Power Supply Volts/Phase/Hz		Uncrated Dimensions (in.)			Shipping Weight** (Lbs)
		60 Hz	50 Hz	H	W	D	
SAVC 200	240	220,380,440/3/60	380/3/50	78.74	74.02	33.46	1609
SAVC 250	300	220,380,440/3/60	380/3/50	78.74	74.02	33.46	1642
SAVC 300	360	220,380,440/3/60	380/3/50	78.74	97.24	38.58	2138
SAVC 350	420	220,380,440/3/60	380/3/50	78.74	97.24	38.58	2270
SAVC 400	480	220,380,440/3/60	380/3/50	78.74	97.24	38.58	2336

¹Water-cooled model numbers and shipping weight shown.

*Capacities based on 60 Hz



LIGHT COMMERCIAL RANGE



Wall Mounted

R22 2 - 5 TR

Features and Benefits

Flexibility in features and options allows customization to fit any customer requirement.

Emergency ventilation

The fan will operate on the shelter's battery backup in the event of a power failure, bringing in 100% outside air.

Free cooling

The optional economizer (dry bulb or enthalpy control) will provide energy savings by using the outside air.

Automation controls

Aside from a conventional or programmable thermostat, we can offer a lead lag controller or a PLC to best fit each project specification.

Quiet

The optional sound attenuation package is used in locations close to residential areas.

Efficient

Power factor capacitor helps to improve the electrical input, resulting in a more stable power supply.

Heating

Optional electrical heaters are available with one or two stages, depending upon capacity.

Easy to install

Plug-in capability allows for installation at the integrator's shop or at the job site.

Service panels

Provides easy access to the components from the outside of the shelter.

Filters

Washable or throwaway filters are furnished with the unit.

Balance

Our optional left or right scroll compressor assembly location will facilitate service.

Options

Trane Wall mounted has some options to better meet specific needs.

High Efficiency Economizer Cycle can supply 100% of outside air, in case of power failure.

Electric heat by using tubular resistances.

Throwaway and permanent filters.

Sight Glass to allow identification of problems in the refrigeration system, like lack of refrigerant, moisture, etc.

Sound attenuator to allow lower sound levels.

Specially designed for telecommunications.

Base Radio Stations have a high factor of sensible heat, which requires more capacity and flow in order to avoid malfunction of the telecommunications system.

The Trane Wall Mounted units were designed to supply the proper cooling to these applications.

The Trane tradition in air conditioning systems and controls, provide the development of an integrated system, designed especially for telecommunications.



Capacity Tables	SWMC 02		SWMB 02		SWMB 03		SWMB 04		SWMB 05	
60 Hz	MBh	Kcal	MBh	Kcal	MBh	Kcal	MBh	Kcal	MBh	Kcal
Total Capacity ¹	23.0	5796	27.5	6930	36.7	9248	47.9	12071	56.6	14314
Sensible Capacity ¹	16.4	4133	23.5	5922	27.1	6829	38.4	9677	41.9	10559
Total Capacity ²	22.1	5569	26.5	6678	35.2	8870	46	11592	55.2	13910
Sensible Capacity ²	16.1	4057	23.1	5821	26.5	6678	37.6	9475	41.2	10382
Performance at High Ambient Temperature										
Total Capacity ³	21.0	5292	25.2	6350	33.4	8417	43.7	11012	53.1	13381
Sensible Capacity ³	15.6	3931	22.5	5670	25.8	6502	36.7	9246	40.4	10181
Nominal Air Flow	Cfm	Cmh	Cfm	Cmh	Cfm	Cmh	Cfm	Cmh	Cfm	Cmh
	800	1360	1332	2265	1332	2265	2054	3492	2054	3492

Capacity Tables	SWMC 02		SWMB 02		SWMB 03		SWMB 04		SWMB 05	
50 Hz	MBh	Kcal	MBh	Kcal	MBh	Kcal	MBh	Kcal	MBh	Kcal
Total Capacity ¹	20.8	5242	24.5	6174	33.2	8366	42.8	10786	51	12852
Sensible Capacity ¹	15.5	3906	22.2	5594	25.7	6476	36.3	9148	39.6	9979
Total Capacity ²	20.0	5040	23.5	5922	31.9	8039	41.1	10357	49.6	12499
Sensible Capacity ²	15.2	3830	21.8	5494	25.2	6350	35.7	8996	39.0	9828
Performance at High Ambient Temperature										
Total Capacity ³	19.0	4788	22.4	5645	30.2	7610	39.1	9853	47.7	12020
Sensible Capacity ³	14.8	3730	21.2	5342	24.5	6174	34.8	8770	38.3	9652
Nominal Air Flow	Cfm	Cmh	Cfm	Cmh	Cfm	Cmh	Cfm	Cmh	Cfm	Cmh
	800	1360	1332	2265	1332	2265	2054	3492	2054	3492

(1) Cooling capacities for air-cooled units rated at 95°F (35°C) and 80°F (26.7°C) DB / 67°F (19.5°C) WB indoor air temperature.
 (2) Cooling capacities for air-cooled units rated at 95°F (35°C) and 80°F (26.7°C) DB / 67°F (19.5°C) WB indoor air temperature.
 (3) Cooling capacities for air-cooled units rated at 115°F (46.1°C) and 80°F (26.7°C) DB / 67°F (19.5°C) WB indoor air temperature.

VARITRAC® AND TRACKER



As a complement to the Rooftop range, TRANE also offers two accessories that quickly prove to be indispensable :

the VARITRAC® system which allows variable thermal needs to be regulated within several zones requiring air-conditioning

TRACKER, a system of microelectronic control and monitoring of the air conditioning system.

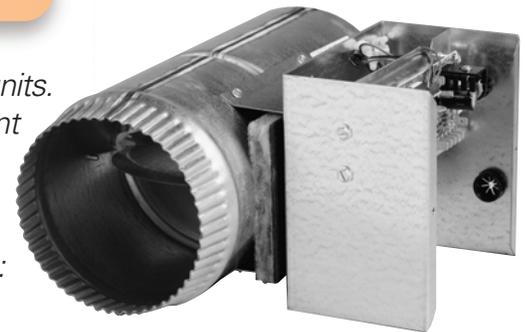


CCP2

FOR WHOM? FOR WHAT?

The VARITRAC® system is compatible with all types of Rooftop units. It allows individual comfort to be offered within zones with different thermal needs using one centralised Rooftop unit.

For the ultimate system control, TRACKER allows supervision of installation and controls additional devices of the building, such as : lights, signs, fans etc. . . , from a single location.



VADA ROUND
VARITRAC® DAMPER

TRANE'S ADVICE

The combination of a rooftop unit + Varitrac® + Tracker offers a complete solution, a true system offer for the overall management of a building.

This system can be used on new buildings or can be retrofitted on existing structures.



TRACKER

LIGHT COMMERCIAL RANGE

Each zone is equipped with a “VariTrac®” damper that modulates air supply according to the room temperature and the set points.

The CCP is the system’s nerve centre, continuously communicating with each damper to determine its requirements and inform it of the current state of the system.

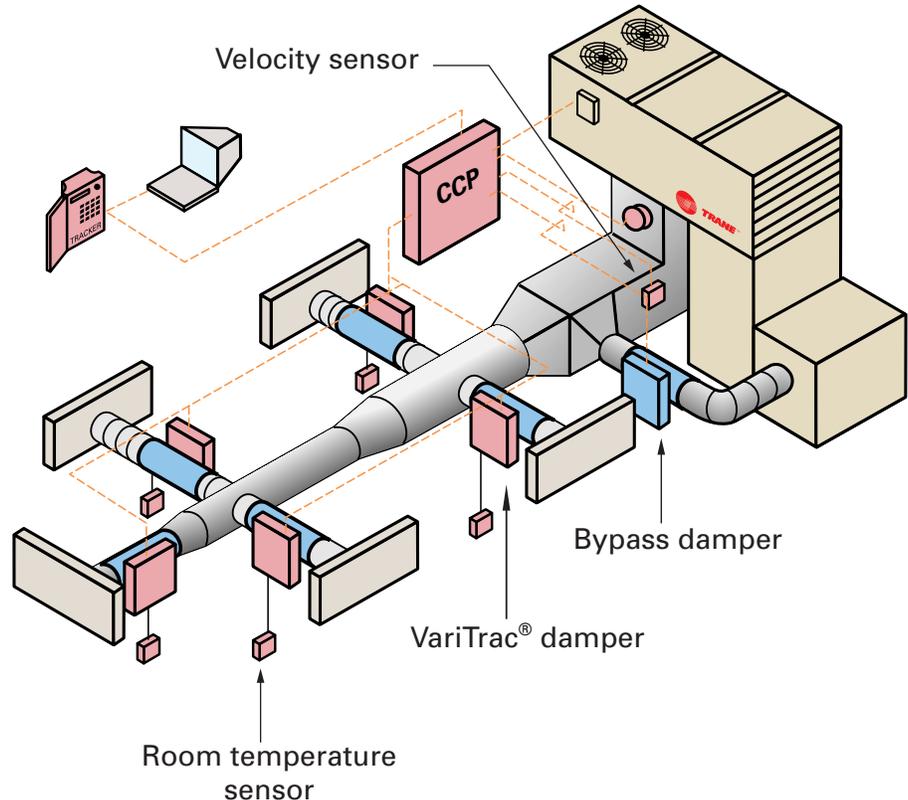
Increased zone count. The new VariTrac system now supports 24 zones instead of 16. The zones may be VariTrac dampers, or any type of VariTrane VAV box including fan-powered boxes or boxes with factory-installed local heat.

The CCP chooses the operating mode depending on the different demands, and controls the unit as well as the production of cold and hot air.

The installation is simple, quiet and unobtrusive, providing users with maximum comfort and enabling each person to choose their own room temperature.

Variable air volume system

The “VariTrac®” system is compatible with all the blower units, and provides individualised comfort in each zone by means of a central unit.



Hardware Overview

Central Control Panel Enclosure

The new VariTrac Central Control Panel (CCP) has a three-piece enclosure for simplified installation. All wiring is done on large, easily accessible terminal strips located in the wall mount base plate. The electronics are located in the middle section, which is snapped onto the base plate after mounting. The top section is either a blank face plate, or the optional operator display.

Central Control Panel Operator Display

The optional operator display (OD) is a back-lit liquid crystal display with touch-screen programming capability. Through the display you can access system status and zone status, and do basic set-up of the zone UCMs and the CCP system operating parameters. It is designed to give an installer the ability to commission a VariTrac system without requiring a PC. Additionally, the OD has a seven-day time clock built in to provide stand alone scheduling capability of the VariTrac system. Zones may be divided into four groups, each with its own schedule if desired. If there is no Tracker system on the job, the CCP must be ordered with a display. If Tracker is available, the CCP may have a blank cover plate installed instead of an OD.

Communicating Sensor/Bypass Control Assembly

The VariTrac duct sensors have been combined with a UCM into one factory-wired assembly, so it now resides on the Comm 4 link along with the zone dampers and Voyager/Precedent™ rooftop unit. The bypass damper is also wired to this assembly. This eliminates the multiple conductors and terminations between the CCP, the duct sensors and the bypass damper, where most installation errors occurred.

Bypass Damper Installation Harness

All bypass dampers will now be shipped with a 12-foot plenum-rated wiring harness attached to the damper at the factory. The harness has a polarized plug on the end which is plugged into the communicating sensor assembly control board. This eliminates bypass damper wiring errors during installation.

Digital Display Zone Sensor

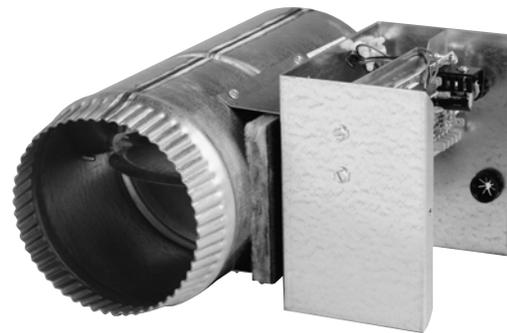
The new digital display zone sensor has the look and functionality of the standard Trane zone sensor, but includes an LCD digital display of the space temperature and setpoint adjustment in degrees F or C. The sensor has ON and CANCEL buttons, and a communications jack which can be accessed without removing the cover. The sensor requires 24 volts, and may share a power supply with UCM.



CCP2



TZS 004
DIGITAL DISPLAY
ZONE SENSOR



VADA
ROUND
VARITRAC®
DAMPER

CCP type damper	HVAC unit (rooftop or split system)	VariTrac zone damper or VariTrane VAV box	Bypass
New VariTrac	1 constant-volume Voyager, Precedent, or other RTU	24	1
	1 Voyager III VAV RTU	32	0

Note: The Voyager RTU, Precedent RTU, or other RTU must have either a communication interface card (TCI) or low-voltage relay interface. If a low-voltage relay is used, the CCP must be ordered with the optional relay board.

Optional Equipment

Zone Occupancy Sensor

The new zone occupancy sensor is a ceiling-mount infrared motion detector to be used with VariTrac zone damper UCM for controlling the occupied zone standby function. It can detect motion over a 360 degree range (adjustable) for up to a 1200 square foot area. It has SPDT isolated contacts for connection to the UCM occupancy input. The sensor requires 24 volts, and may share a power supply with UCM.

Zone CO2 Sensor

The zone CO2 sensor is a compact transmitter for use with the VariTrac UCM CO2 input for doing demand control ventilation. The sensor is available in either wall- or duct-mount enclosures. The sensor requires 24 volts, and may share a power supply with UCM.

VariTrac PC Software

Advanced set-up functions in VariTrac are now done with a new Windows®-based, graphical PC software program. Connection between the PC and the CCP is done with a standard serial port cable connection.



VariTrac™ Bypass and Zone Dampers Quick Select

Round Zone Damper

Capacity (cfm),Dimensions and Weights

Size (in)	6	8	10	12	14	16
600	120	210	330	470	640	840
800	160	280	435	630	855	1115
1000	200	350	545	785	1070	1395
1200	235	420	655	940	1280	1675
1400	275	490	765	1100	1500	1955
1600	315	560	875	1255	1710	2235
Length (in)	12	12	16	16	20	20
Ship Wt (lbs)	11	12	17	18	27	31

Round Bypass Damper

Capacity (cfm),Dimensions and Weights

Size (in)	6	8	10	12
600	120	210	330	470
800	160	280	435	630
1000	200	350	545	785
1200	235	420	655	940
1400	275	490	765	1100
1600	315	560	875	1255
1800	350	630	980	1415
2000	390	700	1090	1570
Length (in)	12	12	16	16
Ship Wt (lbs)	11	12	17	18

Rectangula Zone Damper

Capacity (cfm), Dimensions, Blades and Weight

Size (in)	8 x 12	8 x 14	8 x 16	10 x 16	10 x 20	14 x 18
600	398	464	531	663	829	1045
800	531	619	707	884	1105	1393
1000	663	774	884	1105	1382	1741
1200	796	928	1061	1326	1658	2089
1400	928	1083	1238	1547	1934	2437
1600	1061	1238	1415	1769	2211	2785
Blades		2	2	2	3	3
Ship Wt (ilbs)	8	10	12	14	16	18

Rectangula Bypass Damper

Capacity (cfm), Dimensions, Blades and Weight

Size (in)	14 x 12	16 x 16	20 x 20	0 x 20
600	696	1061	1658	2487
800	928	1415	2211	3316
1000	1161	1769	2763	4145
1200	1393	2122	3316	4974
1400	1625	2476	3869	5803
1600	1857	2830	4421	6632
1800	2089	3183	4974	7461
2000	2321	3537	5527	8290
Blades	2	3	3	3
Ship Wt (lbs)	16	21	29	40

Selection Procedures

Bypass Dampers

- 1 To determine the cfm capacity required for a bypass damper calculate 80 percent of the cfm capacity of the heating/cooling unit.
Example: If the rooftop capacity is 1200 cfm, 1200 x .8 =960 cfm.
- 2 To determine the size of the damper locate the recommended velocity and cfm for the bypass damper.

Zone Dampers

- 1 Refer to the sizing chart for zone dampers. Follow down the first column in the table for the desired velocity. Then follow across for the recommended cfm (air volume) to determine the correct VariTrac damper size.
- 2 If the cfm exceeds the damper range, increase the damper size.
- 3 Minimum airflow should be set at 10 percent in heating or cooling when a zone duct temperature sensor is used for stand-alone control. In addition, when controlling electric reheat coils, cooling minimum airflow should meet the heating unit manufacturer's guidelines.

Note: Damper casing lengths are 16 inches in both Rectangular Zone and Rectangular Bypass Dampers.

TRACKER



Simple but Sophisticated Control

Tracker provides scheduling, monitoring, and timed override capabilities, as well as local and unit auto dial-out indication of alarms. Operator interface is simple and user-friendly with icons on the touch-screen display or through a computer using Tracker PC software (ICS)

Trane Control Feature

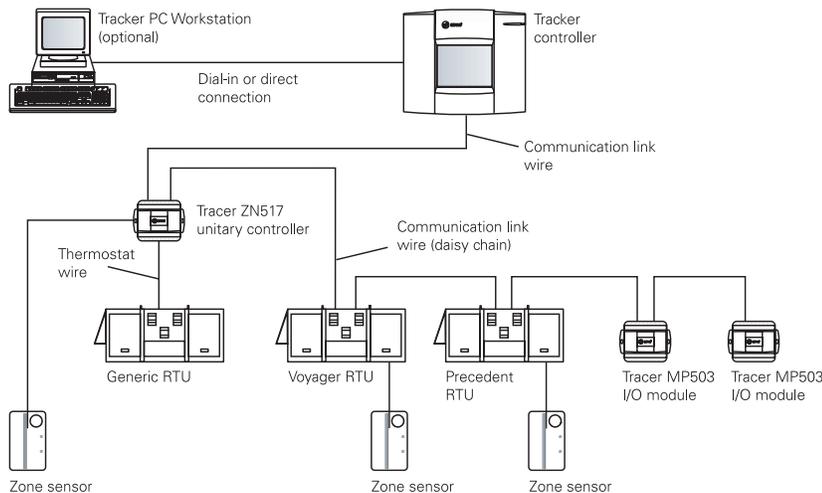
- **Simple** wiring and installation
- **Superior** automatic temperature control
- **Ventilation** control
- Inexpensive, easy-to-use sensors

The **touch screen display** provides all functionality and status of the building.

- **Reliable** electronics retain programming through power outages. . . no batteries to change.
- Optional **personal computer software** enables advanced features.



TRACKER



BAS	Model	Voyager rooftop and Precedent RTUs (SCC devices) with LonTalk communication interface (LCI) cards	Tracer ZN517 (SCC device) unitary controller	New VariTrac CCP	Tracer MP503 I/O controller		Voyager RTU with Trane Communication interface (TCI)	Thermosata Control Module (TCM)	VariTrac II CCP	Maximum Devices (See notes 1 and 2)
New Tracker (with touch screen)	12	12	12	5	4	0	0	0	0	21
	24	24	24	10	4	0	0	0	0	38
	24i (CE)	24	24	10	4	0	0	0	0	38

Features

The Tracker BAS offers the installer and operator features that ensure its ease of use.

Tracker BAS features

- Both the controller and the PC software of the Tracker BAS offer these features:
- Intuitive, menu-driven user interface
 - 365-day scheduling and 10 schedules
 - Capability of including all equipment and devices in one schedule
 - Temporary schedule override
 - Easy-to-administer security system with two levels of access
 - Automatic daylight savings time changeover
 - Error and alarm messaging
 - Setpoint viewing and editing

Features exclusive to the controller

- Several features of the Tracker BAS are exclusive to the controller:
- Auto-configuration
 - Pager notification for error and alarm messages
 - LCD touch screen

Features exclusive to the PC software

- The optional Tracker PC software offers all the features of the Tracker controller and the following features that are not available at the controller:
- Dial-in connection
 - Backup and restore capability
 - Standard graphics and HTML graphical interface
 - Binary output programming capability
 - Operator-defined custom alarms capability
 - Printer support

Note: The Tracker PC software is not needed to set up and operate a typical building.

LIGHT COMMERCIAL RANGE