



# OUTDOOR CONDENSING UNITS



## HTST-Series Outdoor Units

Technical Bulletin: HTST\_001\_071015

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# Outdoor Condensing Units

## HTST-Series Outdoor Units

HTST-Series Outdoor condensing units are designed specifically for refrigeration applications where reliable cooling is required under varying loads and operating conditions. At the heart of every HTST-Series Unit is a performance-proven Tecumseh compressor, built with exacting standards to handle the rigors of commercial refrigeration. A premium galvanized steel enclosure is used to protect mechanical and electrical components from the environment, adding to the unit's overall reliability.

HTST-Series Outdoor units are equipped with an easy-to-remove access panel for electrical component wiring and serviceability. Standard features include filter driers, suction-line accumulator, oversized receiver tank, pressure controls, service valves, defrost timer, a crank-case heater, fixed fan motor, and a defrost heater.

Heated receivers are available on all units.

Single and dual fan units are available.

R404A. All fan motors are 1/2 HP.



Single Fan Unit

# FEATURES AND BENEFITS

**EASY ACCESS**  
Electrical panel is detachable for easy service.

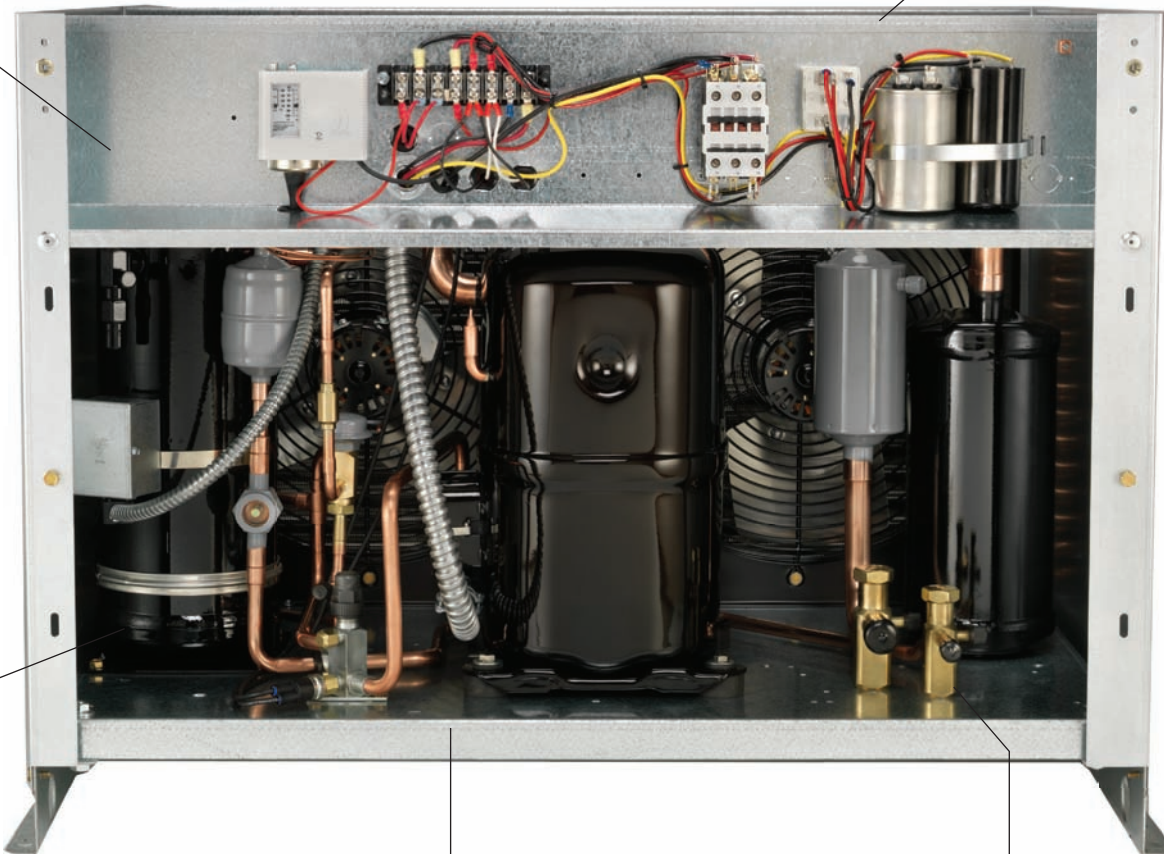
**SMALLER FOOTPRINT**  
Reduced size envelope covers capacities normally served by larger compressors. Three footprint layouts available.

**STANDARDIZATION**  
One platform, one brand.

Width  
Sm 27"  
Med 35"  
Lg 46"

Height  
Sm 26"  
Med 26"  
Lg 32"

Length  
Sm 26"  
Med 26"  
Lg 30"



**SERVICE AND SUPPORT**  
Backed by Krack's network of knowledgeable application engineers, test labs & support personnel.

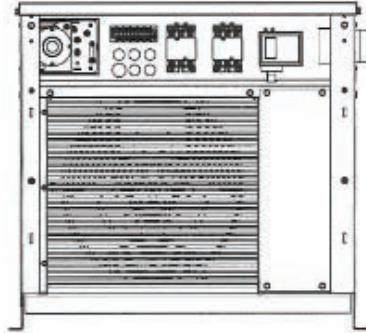
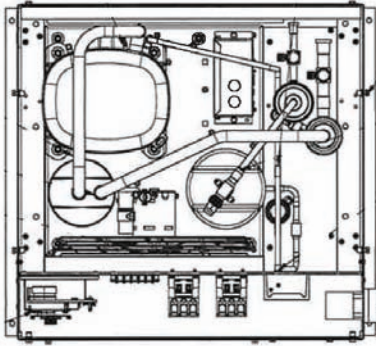
**PRODUCT OFFERING**  
Available in U.S. and Canada with flexibility to meet regional needs and agency approvals.

**SERVICEABILITY**  
Top mounted components and easy access to service valves provides hassle free maintenance.

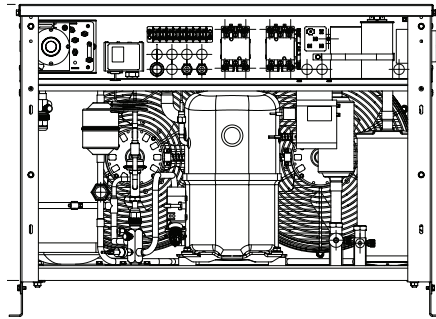
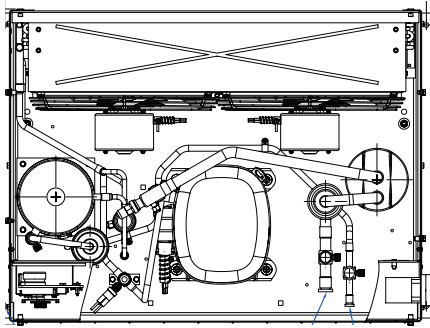


# LINE DRAWINGS

## SINGLE FAN UNIT



## DUAL FAN UNIT



See pages 6-15 for dimensions.

# STANDARD FEATURES

## APPLICATIONS

- R404A: 1/2 to 4 HP
- AK, AJ, AW, AV, AG Compressors

### Standard Features

• Accumulator	• Liquid Receiver Tank
• Suction Filter	• Liquid Filter and Sight Glass
• Suction Service Valve	• Liquid Service Valve
• Crankcase Heater	• Check Valve
• Adjustable Low Pressure Control	• High Pressure Control
• Defrost Timer	• Head Pressure Control

# CONDENSING UNIT MODEL NUMBER

## HTST xxx3ABCD yy

### HTST

**Type**

T = Outdoor

**Base**

S = Standard

**Compressor Vendor**

T = Tecumseh Hermetic

### xxx3ABCD yy

**Compressor HP**

005 = 1/2 HP

006 = 5/8 HP

007 = 3/4 HP

010 = 1 HP

**GEN III****Application**

L = Low Back Pressure

M = Medium Back Pressure

**Refrigerant**

S = R404A

**Voltage**

D = 208-230/1/60

K = 200-230/3/60

**Receiver Size**

Q = 15.70 lbs

R = 19.80 lbs

T = 20.09 lbs

U = 32.84 lbs

W = 37.02 lbs

**Option Code (yy)**

01 Timer + (Fan Control)

02 Timer + Contactor + (Fan Control)

04 Timer + Contactor + (Fan Control)

+ Receiver Heater

06 Timer + (Fan Control)

+ Receiver Heater

**Agency Approval:** Outdoor Condensing units are in compliance with both U.S. and Canadian safety agency requirements. The UL file is SA2372.

## Commercial Temperature

Model Number	HP	Ambient	Capacity (Btu/h) at 95°F Ambient/ Evaporator Temperature (°F)									
			-5°F	0°F	5°F	10°F	15°F	20°F	25°F	30°F	35°F	40°F
			-20.6°C	-17.8°C	-15°C	-12.2°C	-9.4°C	-6.7°C	-3.9°C	-1.1°C	1.7°C	4.4°C
<b>R404A CBP Application Range -5°F to 40°F (-20.6°C to 4.4°C)</b>												
HTST-0053MSDQ-XX	1/2	95°F	2,200	2,600	3,000	3,600	4,200	4,800	<b>5,500</b>	6,300	7,000	7,800
		100°F	1,800	2,200	2,700	3,200	3,900	4,500	<b>5,200</b>	5,900	6,600	7,300
		110°F	1,100	1,500	2,100	2,600	3,200	3,900	<b>4,500</b>	5,100	5,700	6,300
HTST-0073MSDQ-XX	3/4	95°F	3,300	3,800	4,400	5,000	5,700	6,400	<b>7,200</b>	8,000	8,900	9,800
		100°F	3,000	3,500	4,100	4,700	5,300	6,000	<b>6,800</b>	7,500	8,400	9,200
		110°F	2,400	2,900	3,400	3,900	4,500	5,100	<b>5,700</b>	6,400	7,100	7,900
HTST-0103MSDR-XX HTST-0103MSKR-XX	1	95°F	5,300	6,100	7,100	8,200	9,400	10,700	<b>12,100</b>	13,700	15,300	17,100
		100°F	4,800	5,600	6,500	7,600	8,700	9,900	<b>11,300</b>	12,800	14,300	16,000
		110°F	3,700	4,400	5,200	6,100	7,200	8,300	<b>9,500</b>	10,800	12,200	13,700
HTST-0113MSDT-XX HTST-0113MSKT-XX	1	95°F	5,200	6,400	7,600	8,900	10,300	11,600	<b>13,100</b>	14,600	16,100	17,700
		100°F	4,800	4,700	7,000	8,200	9,500	10,800	<b>12,200</b>	13,600	15,100	16,600
		110°F	3,800	4,700	5,800	6,900	8,000	9,200	<b>10,400</b>	11,600	12,900	14,300
HTST-0163MSDR-XX HTST-0163MSKR-XX	1 3/4	95°F	6,800	7,800	9,000	10,300	11,700	13,100	<b>14,700</b>	16,400	18,200	20,100
		100°F	6,200	7,200	8,300	9,500	10,800	12,200	<b>13,800</b>	15,300	17,000	18,900
		110°F	5,400	6,200	7,200	8,200	9,300	10,500	<b>11,900</b>	13,300	14,800	16,400
HTST-0203MSDT-XX HTST-0203MSKT-XX	2	95°F	9,200	10,600	12,100	13,700	15,500	17,300	<b>19,300</b>	21,400	23,600	25,900
		100°F	8,500	9,800	11,300	12,800	14,500	16,200	<b>18,100</b>	20,100	22,200	24,440
		110°F	7,000	8,200	9,500	11,000	12,500	14,100	<b>15,800</b>	17,600	19,500	21,500
HTST-0243MSDT-XX HTST-0243MSKT-XX	2 1/2	95°F	12,800	14,600	16,600	18,700	20,800	23,100	<b>25,600</b>	28,100	30,800	33,500
		100°F	11,800	13,600	15,400	17,400	19,500	21,700	<b>24,000</b>	26,400	28,900	31,600
		110°F	9,700	11,300	13,000	14,800	16,700	18,700	<b>20,700</b>	22,800	25,000	27,300
HTST-0303MSDT-XX HTST-0303MSKT-XX	3	95°F	16,100	18,100	20,200	22,400	24,800	27,200	<b>29,800</b>	32,600	35,400	38,400
		100°F	15,000	17,000	19,000	23,200	23,200	25,400	<b>27,900</b>	30,400	33,000	35,700
		110°F	13,100	14,700	16,400	18,100	19,900	21,600	<b>23,400</b>	25,300	27,300	-
HTST-0353MSDU-XX HTST-0353MSKU-XX	3 1/2	95°F	17,500	20,000	22,600	25,500	28,700	32,100	<b>35,800</b>	39,700	43,800	48,200
		100°F	16,400	18,700	21,200	24,000	27,000	30,300	<b>33,800</b>	37,500	41,500	45,700
		110°F	14,100	16,200	18,400	20,900	23,700	26,600	<b>29,700</b>	33,100	36,700	40,500
HTST-0413MSDW-XX HTST-0413MSKW-XX	4	95°F	20,600	23,700	27,100	30,800	34,900	39,100	<b>43,700</b>	48,500	53,500	58,800
		100°F	18,500	21,400	24,700	28,200	32,100	36,100	<b>40,500</b>	45,000	49,800	54,900
		110°F	15,800	18,500	21,400	24,700	28,100	31,800	<b>35,800</b>	40,000	44,300	48,900

## Commercial Temperature

Model Number	Line Connections (in)		Pump Down Cap (lb) @ 90°F Ambient	Oil Type	Min Circuit Ampacity	Max Fuse Size (Amps)	Gross Weight lb (kg)	Dimensions (in)		
	Suction	Liquid						L	W	H
<b>R404A CBP Application Range -5°F to 40°F (-20.6°C to 4.4°C)</b>										
HTST-0053MSDQ-XX	1/2 ODF	3/8 ODF	15.70	POE	6.25	15	190 (86.2)	26	27	26
HTST-0073MSDQ-XX	1/2 ODF	3/8 ODF	15.70	POE	8.16	15	190 (86.2)	26	27	26
HTST-0103MSDR-XX	5/8 ODF	3/8 ODF	19.80	POE	14.91	15	320 (145.1)	26	35	26
HTST-0103MSKR-XX	5/8 ODF	3/8 ODF	19.80	POE	9.91	15	320 (145.1)	26	35	26
HTST-0113MSDT-XX	5/8 ODF	3/8 ODF	20.09	POE	14.91	15	320 (145.1)	26	35	26
HTST-0113MSKT-XX	5/8 ODF	3/8 ODF	20.09	POE	7.30	15	320 (145.1)	26	35	26
HTST-0163MSDR-XX	5/8 ODF	3/8 ODF	19.08	POE	17.15	30	300 (136.1)	26	35	26
HTST-0163MSKR-XX	5/8 ODF	3/8 ODF	19.08	POE	11.31	20	320 (145.1)	26	35	26
HTST-0203MSDT-XX	5/8 ODF	3/8 ODF	20.09	POE	20.04	35	320 (145.1)	26	35	26
HTST-0203MSKT-XX	5/8 ODF	3/8 ODF	20.09	POE	14.03	25	320 (145.1)	26	35	26
HTST-0243MSDT-XX	7/8 ODF	1/2 ODF	20.09	POE	29.90	50	280 (240.1)	26	35	26
HTST-0243MSKT-XX	7/8 ODF	1/2 ODF	20.09	POE	21.24	35	280 (240.1)	26	35	26
HTST-0303MSDT-XX	7/8 ODF	1/2 ODF	20.09	POE	39.51	70	280 (240.1)	30	46	32
HTST-0303MSKT-XX	7/8 ODF	1/2 ODF	20.09	POE	25.33	45	280 (240.1)	30	46	32
HTST-0353MSDU-XX	7/8 ODF	1/2 ODF	32.84	POE	40.81	70	480 (217.7)	30	46	32
HTST-0353MSKU-XX	7/8 ODF	1/2 ODF	32.84	POE	27.03	45	480 (217.7)	30	46	32
HTST-0413MSDW-XX	7/8 ODF	1/2 ODF	37.02	POE	53.77	100	500 (226.8)	30	46	32
HTST-0413MSKW-XX	7/8 ODF	1/2 ODF	37.02	POE	32.62	50	500 (226.8)	30	46	32

## Low Temperature

Model Number	HP	Ambient	Capacity (Btu/h) at 95°F Ambient/ Evaporator Temperature (°F)									
			-40°F	-35°F	-30°F	-25°F	-20°F	-15°F	-10°F	-5°F	0°F	5°F
			-40°C	37.2°C	-34.4°C	-31.7°C	-28.9°C	-26.1°C	-23.3°C	-20.6°C	-17.7°C	-15.0°C
<b>R404A LBP Application Range -40°F to 5°F (-40°C to -15.0°C)</b>												
HTST-0053LSDQ-XX	1/2	95°F	-	900	1,200	1,500	1,800	2,100	<b>2,500</b>	2,900	3,300	3,700
		100°F	-	800	1,100	1,300	1,600	2,000	<b>2,300</b>	2,700	3,100	3,500
		110°F	-	700	900	1,100	1,400	1,700	<b>2,000</b>	2,300	2,700	3,100
HTST-0063LSDQ-XX	3/4	95°F	-	1,100	1,400	1,800	2,300	2,800	<b>3,400</b>	4,000	4,600	5,300
		100°F	-	800	1,200	1,600	2,100	2,600	<b>3,100</b>	3,700	4,300	4,900
		110°F	-	500	900	1,300	1,700	2,100	<b>2,600</b>	3,100	3,600	4,200
HTST-0073LSDQ-XX HTST-0073LSKQ-XX	3/4	95°F	1,300	1,700	2,300	2,900	3,600	4,300	<b>5,000</b>	5,800	6,600	7,400
		100°F	1,200	1,600	2,000	2,600	3,200	3,900	<b>4,600</b>	5,400	6,100	6,900
		110°F	900	1,200	1,500	2,000	2,500	3,100	<b>3,800</b>	4,400	5,100	5,800
HTST-0103LSDQ-XX HTST-0103LSKQ-XX	1 1/2	95°F	1,500	2,000	2,600	3,300	4,100	4,900	<b>5,800</b>	6,700	7,600	8,500
		100°F	-	1,700	2,300	3,000	3,700	4,500	<b>5,300</b>	6,200	7,000	7,900
		110°F	-	1,200	1,700	2,300	2,900	3,600	<b>4,400</b>	5,100	5,900	6,700
HTST-0153LSDR-XX HTST-0153LSKR-XX	1 1/2	95°F	-	-	3,900	4,800	5,900	7,000	<b>8,100</b>	9,300	10,600	11,800
		100°F	-	-	3,500	4,300	5,300	6,300	<b>7,400</b>	8,600	9,800	11,100
		110°F	-	-	-	3,600	4,300	5,200	<b>6,100</b>	7,100	8,200	9,300
HTST-0173LSDQ-XX HTST-0173LSKQ-XX	1 3/4	95°F	3,300	4,300	5,300	6,200	7,200	8,200	<b>9,200</b>	10,200	11,100	12,100
		100°F	3,000	3,900	4,800	5,700	6,600	7,500	<b>8,400</b>	9,300	10,300	11,200
		110°F	2,200	3,000	3,900	4,700	5,500	6,300	<b>7,100</b>	7,900	8,600	-
HTST-0203LSDR-XX HTST-0203LSKR-XX	2	95°F	3,600	4,700	5,900	7,100	8,400	9,700	<b>11,100</b>	12,300	13,700	15,100
		100°F	3,200	4,300	5,400	6,500	7,700	8,900	<b>10,200</b>	11,500	12,800	14,100
		110°F	2,500	3,500	4,600	5,700	6,800	7,900	<b>9,000</b>	10,200	11,300	12,500
HTST-0303LSDT-XX HTST-0303LSKT-XX	3	95°F	4,500	5,800	7,100	8,600	10,100	11,800	<b>13,500</b>	15,300	17,200	19,200
		100°F	-	4,800	6,200	7,700	9,200	10,800	<b>12,400</b>	14,100	15,900	17,700
		110°F	-	-	3,600	5,200	6,800	8,300	<b>9,900</b>	11,500	13,100	14,700



Low Temperature										
Model Number	Line Connections (in)		Pump Down Cap (lb) @ 90°F Ambient	Oil Type	Minimum Circuit Ampacity	Maximum Fuse Size (Amps)	Gross Weight lb (kg)	Dimensions (in)		
	Suction	Liquid						L	W	H
<b>R404A LBP Application Range -40°F to 5°F (-40°C to -15.0°C)</b>										
HTST-0053LSDQ-XX	1/2 ODF	3/8 ODF	15.70	POE	5.20	15	200 (90.7)	26	27	26
HTST-0063LSDQ-XX	1/2 ODF	3/8 ODF	15.70	POE	6.48	15	200 (90.7)	26	27	26
HTST-0073LSDQ-XX	5/8 ODF	3/8 ODF	15.70	POE	11.73	20	200 (90.7)	26	27	26
HTST-0073LSKQ-XX	5/8 ODF	3/8 ODF	15.70	POE	7.08	15	200 (90.7)	26	27	26
HTST-0103LSDQ-XX	5/8 ODF	3/8 ODF	15.70	POE	12.69	20	200 (90.7)	26	27	26
HTST-0103LSKQ-XX	5/8 ODF	3/8 ODF	15.70	POE	8.20	15	200 (90.7)	26	27	26
HTST-0153LSDR-XX	5/8 ODF	3/8 ODF	19.80	POE	17.32	30	320 (145.1)	26	35	26
HTST-0153LSKR-XX	5/8 ODF	3/8 ODF	19.80	POE	12.03	20	320 (145.1)	26	35	26
HTST-0173LSDQ-XX	7/8 ODF	3/8 ODF	15.70	POE	21.18	35	250 (145.1)	26	27	26
HTST-0173LSKQ-XX	7/8 ODF	3/8 ODF	15.70	POE	13.24	25	250 (145.1)	26	27	26
HTST-0203LSDR-XX	7/8 ODF	1/2 ODF	19.80	POE	21.18	40	280 (217.7)	26	35	26
HTST-0203LSKR-XX	7/8 ODF	1/2 ODF	19.80	POE	13.95	35	280 (217.7)	26	27	26
HTST-0303LSDT-XX	7/8 ODF	1/2 ODF	20.09	POE	27.65	50	280 (217.7)	26	35	26
HTST-0303LSKT-XX	7/8 ODF	1/2 ODF	20.09	POE	15.31	25	280 (217.7)	26	35	26



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For more information on products by Krack please visit our website at [www.krack.com](http://www.krack.com) or contact us at:

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