



COMMERCIAL POOL & SPA PRODUCT CATALOG



TABLE OF CONTENTS

SECTION 1	COMMERCIAL POOL HEATERS	4
SECTION 2	APPENDIX	39

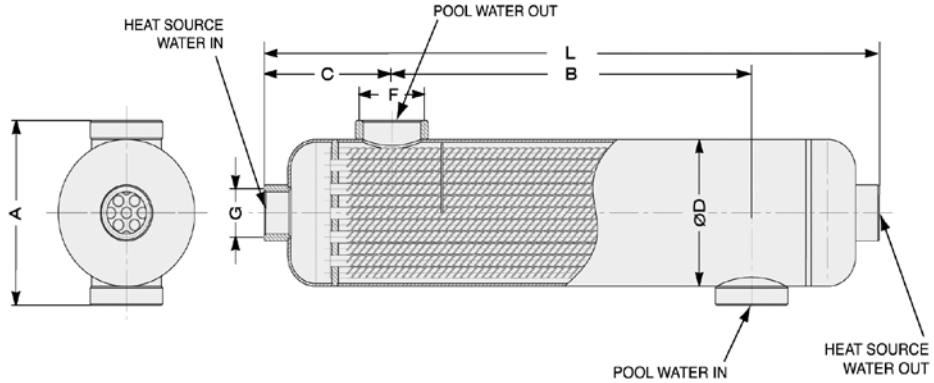
SECTION 1

COMMERCIAL POOL HEATERS

INDIRECT HEAT EXCHANGERS.....	5
DIGITAL BRONZE ASME	6
DIGITAL BRONZE ASME CUPRO-NICKEL	7
DIGITAL BRONZE LOW NO _x ASME	8
DIGITAL BRONZE LOW NO _x ASME CUPRO-NICKEL.....	9
MILLIVOLT BRONZE ASME	10
PROFESSIONAL SERIES ASME BRONZE DIGITAL	11
ASME OPTIONS AND KITS	12
X94 PROFESSIONAL SERIES.....	13
X94 PROFESSIONAL SERIES OPTIONS	13
PROFESSIONAL HEAT PUMP 9350ti, 9353ti, 10353ti, 10354ti.....	14
E3T 3-PHASE	15
HI DELTA 502C-902C	16
HI DELTA 992C-1532C	17
HI DELTA 1802C-2342C	18
HI DELTA 502C-902C COLD RUN	19
HI DELTA 992C-1532C COLD RUN	20
HI DELTA 1802C-2342C COLD RUN	21
HI DELTA SURE RACK KIT	22
HI DELTA OPTIONS	23
MVB 504A-2004A	27
MVB 504A-2004A COLD RUN	28
MVB OPTIONS	29
PROFESSIONAL INDIRECT 1005A-2005A.....	31
PROFESSIONAL INDIRECT OPTIONS	32
XTHERM 1005A-2005A.....	34
XTHERM 3005-4005	35
XTHERM OPTIONS	36

INDIRECT HEAT EXCHANGERS

- Choice of SS316L or B Ti Super Alloy
- SS316L-Tube side 235psi/Shell side 190psi 406°F
- B Ti-Tube side 150psi/Shell side 150psi 406°F
- ASME B31.3 Process Piping Code
- Compact Dimensions



Dimensions are in inches.

Models		Nominal capacity* BTU/hour	Dimensions (inches)							
SS316L	B Ti** Super Alloy		A	B	C	Pool Conn NPT F	Boiler Conn NPT G	Length L	Diameter Ø D	Heat Transfer Area (sq. ft.)
RP-045		45,000	4-3/16	4-3/8	3-1/16	1	3/4	10-7/16	3-1/8	1.62
RP-075		75,000	4-3/16	6-7/8	3-5/16	1-1/2	3/4	13-9/16	3-1/8	2.64
RP-125		125,000	4-3/16	8-7/8	3-5/16	1-1/2	3/4	15-1/2	3-1/8	3.64
RP-185		185,000	5	7-5/8	3-3/8	1-1/2	1	14-3/8	4	4.70
RP-245		245,000	5	12-11/16	3-3/8	1-1/2	1	19-1/2	4	6.80
RP-305		305,000	5	17-3/8	3-3/8	1-1/2	1	24-3/16	4	9.00
RP-495		495,000	5-1/16	34-13/16	3-5/8	2	1	42-1/16	4	16.80
RP-995		995,000	6-9/16	26-5/8	4-5/16	2	2	35-3/16	5-1/2	21.50
	B Ti-180	185,000	5-5/8	7-11/16	4-1/4	1-1/2	1-1/4	16-1/8	4-1/16	4.70
	B Ti-300	305,000	5-5/8	17-1/2	4-1/4	1-1/2	1-1/4	25-15/16	4-1/16	9.00
	B Ti-500	495,000	5-5/8	35-5/16	4-1/4	1-1/2	1-1/4	43-3/4	4-1/16	16.80

*Nominal values are based on 140 °F temperature differential between incoming heating and heated water.

**B Ti Titanium - widely used in industrial salt water environments. Due to its unsurpassed corrosion resistance, this unique super alloy option is a 'true' salt water product, now available from Raypak for the most demanding of applications, from high chlorination to high salt content.

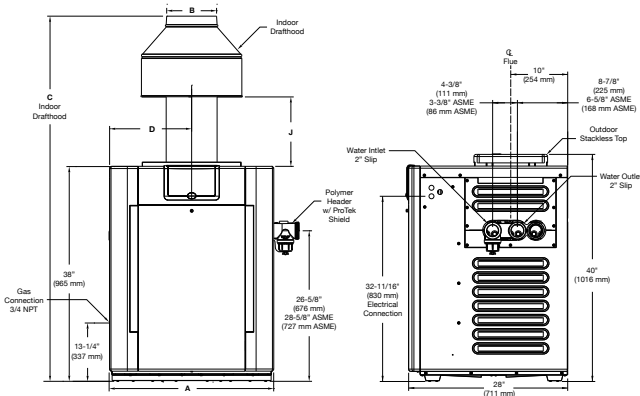
MODEL	BTU	PART NUMBER
RP-045	45,000	013476
RP-075	75,000	013477
RP-125	125,000	013478
RP-185	185,000	013479
RP-245	245,000	013480
RP-305	305,000	013481
RP-495	495,000	013482
RP-995	995,000	013483

Units with B Ti Super Alloy

B Ti-180	185,000	018306
B Ti-300	305,000	018307
B Ti-500	495,000	018308

DIGITAL BRONZE ASME

- ProTek Shield™ module
- 2" bronze headers
- Unitherm governor eliminates condensation
- Small footprint
- 125# pressure relief valve included
- ANSI Z21.56 design certified
- Digital LCD for temperature control and heater settings
- Microprocessor controls diagnostic readout and continuously monitors operational status



Heater Model	BTUH Input (000)	(A) Cabinet Width	(B) Flue Diameter	(C) Indoor Drafthood	(D)	(J) Minimum	Shipping Weights (lbs)	
							w/ Bronze Headers and Stackless Top	Indoor Drafthood
R206A	199.5	20"	6"	61-5/8"	10	11-3/4"	206	14
R266A	266.0	23"	7"	62"	11-1/2	11"	229	16
R336A	332.5	26"	8"	63"	13	10-5/8"	249	19
R406A	399.0	29"	9"	64-9/16"	14-1/2	12-1/8"	268	21

Dimensions are in inches.

MODEL	GAS	ELEVATION (feet)	PART NUMBER	SHIPPING WT (LBS)
B-R206A-EN-C #50	Natural	0-1999	017371	206
B-R206A-EN-C #51	Natural	2000-5999	017375	206
B-R206A-EN-C #52	Natural	6000-8999	017379	206
B-R266A-EN-C #50	Natural	0-1999	017372	229
B-R266A-EN-C #51	Natural	2000-5999	017376	229
B-R266A-EN-C #52	Natural	6000-8999	017380	229
B-R336A-EN-C #50	Natural	0-1999	017373	249
B-R336A-EN-C #51	Natural	2000-5999	017377	249
B-R336A-EN-C #52	Natural	6000-8999	017381	249
B-R406A-EN-C #50	Natural	0-1999	017374	268
B-R406A-EN-C #51	Natural	2000-5999	017378	268
B-R406A-EN-C #52	Natural	6000-8999	017382	268
B-R206A-EP-C #57	Propane	0-1999	017383	206
B-R206A-EP-C #58	Propane	2000-2999	017387	206
B-R206A-EP-C #59	Propane	3000-4999	017391	206
B-R206A-EP-C #60	Propane	5000-6999	017395	206
B-R266A-EP-C #57	Propane	0-1999	017384	229
B-R266A-EP-C #58	Propane	2000-2999	017388	229
B-R266A-EP-C #59	Propane	3000-4999	017392	229
B-R266A-EP-C #60	Propane	5000-6999	017396	229
B-R336A-EP-C #57	Propane	0-1999	017385	249
B-R336A-EP-C #58	Propane	2000-2999	017389	249
B-R336A-EP-C #59	Propane	3000-4999	017393	249
B-R336A-EP-C #60	Propane	5000-6999	017397	249
B-R406A-EP-C #57	Propane	0-1999	017386	268
B-R406A-EP-C #58	Propane	2000-2999	017390	268
B-R406A-EP-C #59	Propane	3000-4999	017394	268
B-R406A-EP-C #60	Propane	5000-6999	017398	268

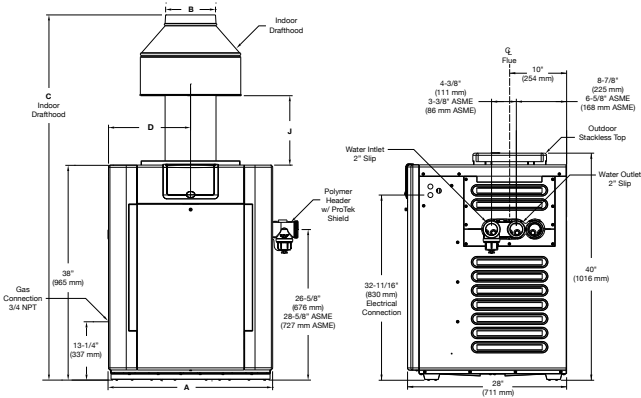
Outdoor top is standard.
For indoor top and other options, see page 12.



For Parts reference the Illustrated Parts List at the back of this products I&O Manual, or Scan Code

DIGITAL BRONZE ASME CUPRO-NICKEL

- ProTek Shield™ module
- 2" bronze headers/Cupro-Nickel finned tubes
- Unitherm governor prevents condensation
- PVC plumbing directly to the heater
- 125# pressure relief valve included
- Can be installed on combustible surface
- Digital LCD for temperature control and heater settings
- Microprocessor controls diagnostic readout and continuously monitors operational status



Heater Model	BTUH Input (000)	(A) Cabinet Width	(B) Flue Diameter	(C) Indoor Drafthood	(D)	(J) Minimum	Shipping Weights (lbs)	
							w/ Bronze Headers and Stackless Top	Indoor Drafthood
R206A	199.5	20"	6"	61-5/8"	10	11-3/4"	206	14
R266A	266.0	23"	7"	62"	11-1/2	11"	229	16
R336A	332.5	26"	8"	63"	13	10-5/8"	249	19
R406A	399.0	29"	9"	64-9/16"	14-1/2	12-1/8"	268	21

MODEL	GAS	ELEVATION (feet)	PART NUMBER	SHIPPING WEIGHT (LBS)
B-R206A-EN-X #50	Natural	0-1999	017399	206
B-R206A-EN-X #51	Natural	2000-5999	017403	206
B-R206A-EN-X #52	Natural	6000-8999	017407	206
B-R266A-EN-X #50	Natural	0-1999	017400	229
B-R266A-EN-X #51	Natural	2000-5999	017404	229
B-R266A-EN-X #52	Natural	6000-8999	017408	229
B-R336A-EN-X #50	Natural	0-1999	017401	249
B-R336A-EN-X #51	Natural	2000-5999	017405	249
B-R336A-EN-X #52	Natural	6000-8999	017409	249
B-R406A-EN-X #50	Natural	0-1999	017402	268
B-R406A-EN-X #51	Natural	2000-5999	017406	268
B-R406A-EN-X #52	Natural	6000-8999	017410	268
B-R206A-EP-X #57	Propane	0-1999	017411	206
B-R206A-EP-X #58	Propane	2000-2999	017415	206
B-R206A-EP-X #59	Propane	3000-4999	017419	206
B-R206A-EP-X #60	Propane	5000-6999	017423	206
B-R266A-EP-X #57	Propane	0-1999	017412	229
B-R266A-EP-X #58	Propane	2000-2999	017416	229
B-R266A-EP-X #59	Propane	3000-4999	017420	229
B-R266A-EP-X #60	Propane	5000-6999	017424	229
B-R336A-EP-X #57	Propane	0-1999	017413	249
B-R336A-EP-X #58	Propane	2000-2999	017417	249
B-R336A-EP-X #59	Propane	3000-4999	017421	249
B-R336A-EP-X #60	Propane	5000-6999	017425	249
B-R406A-EP-X #57	Propane	0-1999	017414	268
B-R406A-EP-X #58	Propane	2000-2999	017418	268
B-R406A-EP-X #59	Propane	3000-4999	017422	268
B-R406A-EP-X #60	Propane	5000-6999	017426	268

Outdoor top is standard.

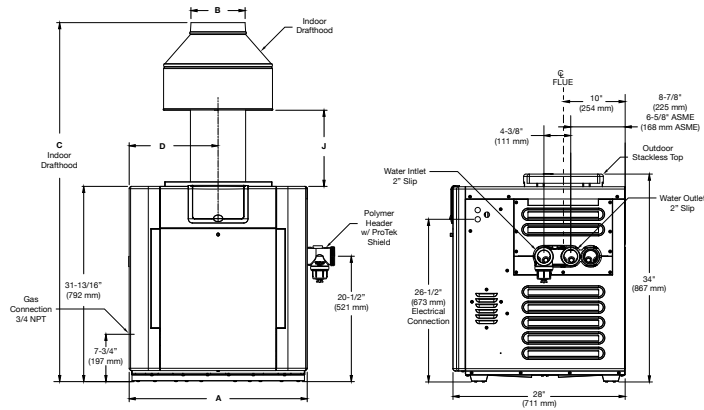
For indoor top and other options, see page 12.



For Parts reference the Illustrated Parts List at the back of this products I&O Manual, or Scan Code

DIGITAL BRONZE LOW NO_x ASME

- ProTek Shield™ module
- 2" bronze headers
- High-wind reliability
- 125# pressure relief valve included
- Unitherm governor eliminates condensation
- ANSI Z21.56 design certified
- Digital LCD for temperature control and heater settings
- Microprocessor controls diagnostic readout and continuously monitors operational status



Heater Model	BTUH Input (000)	(A) Cabinet Width	(B) Flue Diameter	(C) Indoor Draft Hood	(D)	(J) Minimum	Shipping Weights (lbs)	
							w/ Bronze Headers and Stackless Top	Indoor Draft Hood
R207A	199.5	20"	6"	55-5/8"	10	11-3/4"	193	14
R267A	266.0	23"	7"	56"	11-1/2"	11"	216	16
R337A	332.5	26"	8"	57"	13	10-5/8"	238	19
R407A	399.0	29"	9"	58-1/2"	14-1/2"	12-1/2"	256	21

Dimensions are in inches.

MODEL	GAS	ELEVATION (feet)	PART NUMBER	SHIPPING WEIGHT (LBS)
B-R207A-EN-C #26	Natural	0-5000	017705	193
B-R267A-EN-C #26	Natural	0-5000	017706	216
B-R337A-EN-C #26	Natural	0-5000	017707	238
B-R407A-EN-C #26	Natural	0-5000	017708	256

Not available for propane gas.

Outdoor top is standard.

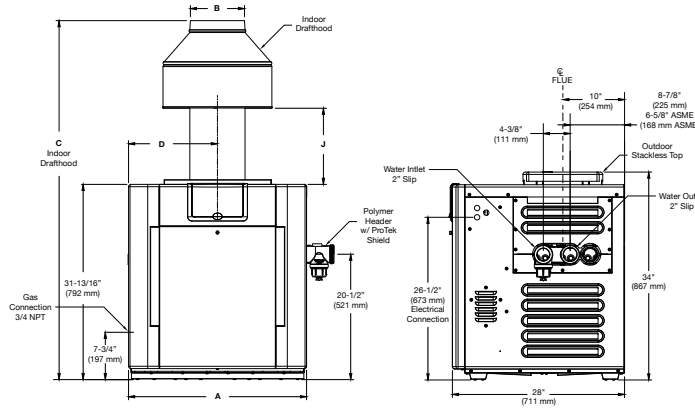
For indoor top and other options, see page 12.



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DIGITAL BRONZE LOW NO_x ASME CUPRO-NICKEL

- ProTek Shield™ module
- 2" bronze headers/Cupro-Nickel finned tubes
- High-wind reliability
- 125# pressure relief valve
- ANSI Z21.56 design certified
- Unitherm governor eliminates condensation
- Digital LCD for temperature control and heater settings
- Microprocessor controls diagnostic readout and continuously monitors operational status



Heater Model	BTUH Input (000)	(A) Cabinet Width	(B) Flue Diameter	(C) Indoor Draft Hood	(D)	(J) Minimum	Shipping Weights (lbs)	
							w/ Bronze Headers and Stackless Top	Indoor Draft Hood
R207A	199.5	20"	6"	55-5/8"	10	11-3/4"	193	14
R267A	266.0	23"	7"	56"	11-1/2	11"	216	16
R337A	332.5	26"	8"	57"	13	10-5/8"	238	19
R407A	399.0	29"	9"	58-1/2"	14-1/2	12-1/2"	256	21

MODEL	GAS	ELEVATION (feet)	PART NUMBER	SHIPPING WEIGHT (LBS)
B-R207A-EN-X #26	Natural	0-5000	017709	193
B-R267A-EN-X #26	Natural	0-5000	017710	216
B-R337A-EN-X #26	Natural	0-5000	017711	238
B-R407A-EN-X #26	Natural	0-5000	017712	256

Not available for propane gas.

Outdoor top is standard.

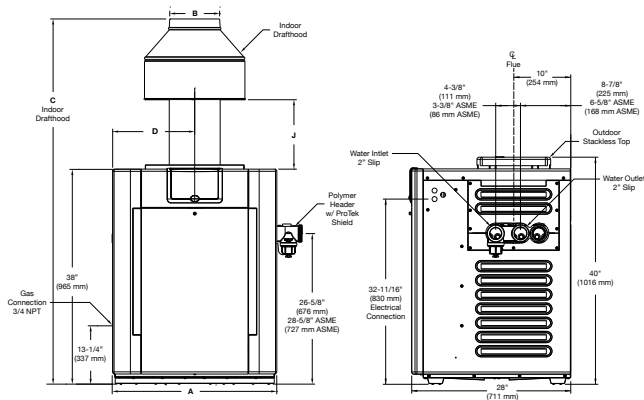
For indoor top and other options, see page 12.



For Parts reference the Illustrated Parts List at the back of this products I&O Manual, or Scan Code

MILLIVOLT BRONZE ASME

- ProTek Shield™ module
- 2" bronze headers
- Unitherm Plus eliminates condensation
- Small footprint
- High-wind reliability
- 125# pressure relief valve
- ANSI Z21.56 design certified



Heater Model	BTUH Input (000)	(A) Cabinet Width	(B) Flue Diameter	(C) Indoor Drafthood	(D)	(J) Minimum	Shipping Weights (lbs)	
							w/ Bronze Headers and Stackless Top	Indoor Drafthood
R206A	199.5	20"	6"	61-5/8"	10	11-3/4"	206	14
R266A	266.0	23"	7"	62"	11-1/2"	11"	229	16
R336A	332.5	26"	8"	63"	13	10-5/8"	249	19
R406A	399.0	29"	9"	64-9/16"	14-1/2"	12-1/8"	268	21

MODEL	GAS	ELEVATION (feet)	PART NUMBER	SHIPPING WEIGHT (LBS)
B-R206A-MN-C #50	Natural	0-1999	017343	206
B-R206A-MN-C #51	Natural	2000-5999	017347	206
B-R206A-MN-C #52	Natural	6000-8999	017351	206
B-R266A-MN-C #50	Natural	0-1999	017344	229
B-R266A-MN-C #51	Natural	2000-5999	017348	229
B-R266A-MN-C #52	Natural	6000-8999	017352	229
B-R336A-MN-C #50	Natural	0-1999	017345	249
B-R336A-MN-C #51	Natural	2000-5999	017349	249
B-R336A-MN-C #52	Natural	6000-8999	017353	249
B-R406A-MN-C #50	Natural	0-1999	017346	268
B-R406A-MN-C #51	Natural	2000-5999	017350	268
B-R406A-MN-C #52	Natural	6000-8999	017354	268
B-R206A-MP-C #57	Propane	0-1999	017355	206
B-R206A-MP-C #58	Propane	2000-2999	017359	206
B-R206A-MP-C #59	Propane	3000-4999	017363	206
B-R206A-MP-C #60	Propane	5000-6999	017367	206
B-R266A-MP-C #57	Propane	0-1999	017356	229
B-R266A-MP-C #58	Propane	2000-2999	017360	229
B-R266A-MP-C #59	Propane	3000-4999	017364	229
B-R266A-MP-C #60	Propane	5000-6999	017368	229
B-R336A-MP-C #57	Propane	0-1999	017357	249
B-R336A-MP-C #58	Propane	2000-2999	017361	249
B-R336A-MP-C #59	Propane	3000-4999	017365	249
B-R336A-MP-C #60	Propane	5000-6999	017369	249
B-R406A-MP-C #57	Propane	0-1999	017358	268
B-R406A-MP-C #58	Propane	2000-2999	017362	268
B-R406A-MP-C #59	Propane	3000-4999	017366	268
B-R406A-MP-C #60	Propane	5000-6999	017370	268

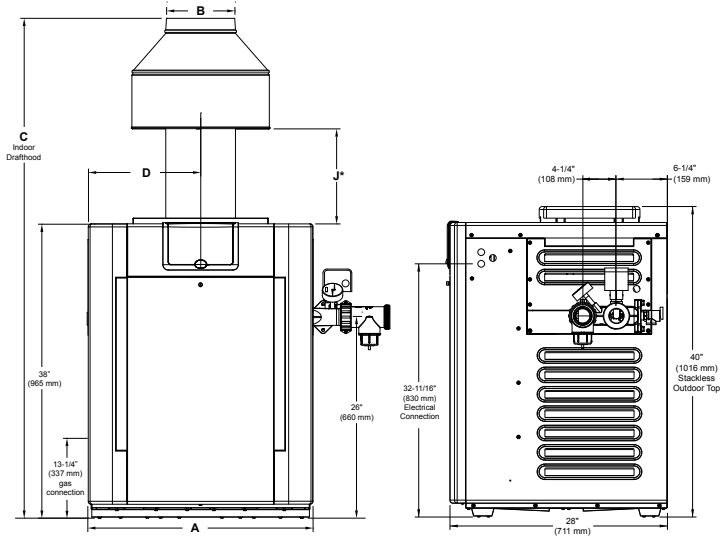
Outdoor top is standard.
For indoor top and other options, see page 12.



For Parts reference the Illustrated Parts List at the back of this products I&O Manual, or Scan Code

PROFESSIONAL SERIES ASME BRONZE DIGITAL

- ProTek Shield™ module
- Flow switch and T&P gauge-standard
- 125# pressure relief valve
- 3 year warranty
- 2" bronze headers/Cupro-Nickel finned tubes
- Digital LCD for temperature control and heater settings
- Stainless steel burner tray, base, flue collector
- Microprocessor controls diagnostic readout and continuously monitors operational status



Heater Model	BTUH Input (000)	(A) Cabinet Width	(B) Flue Diameter	(C) Indoor Drafthood	(D) Minimum	(J) Minimum	Gas Conn.	Water Conn.	Shipping Weights (lbs)	
									w/ Bronze Headers and Stackless Top	Indoor Drafthood
R268A	266.0	23"	7"	62"	11-1/2"	11"	3/4"	2"	229	16
R408A	399.0	29"	9"	64-9/16"	14-1/2"	12-1/8"	3/4"	2"	268	21

MODEL	GAS	ELEVATION (feet)	PART NUMBER	SHIPPING WEIGHT (LBS)
B-R268-EN-X #50	Natural	0-1999	013729	255
B-R268-EN-X #51	Natural	2000-5999	013739	255
B-R268-EN-X #52	Natural	6000-8999	013740	255
B-R408-EN-X #50	Natural	0-1999	013731	274
B-R408-EN-X #51	Natural	2000-5999	013744	274
B-R408-EN-X #52	Natural	6000-8999	013745	274
B-R268-EP-X #57	Propane	0-1999	013730	255
B-R268-EP-X #58	Propane	2000-2999	013741	255
B-R268-EP-X #59	Propane	3000-4999	013742	255
B-R268-EP-X #60	Propane	5000-6999	013743	255
B-R408-EP-X #57	Propane	0-1999	013732	274
B-R408-EP-X #58	Propane	2000-2999	013746	274
B-R408-EP-X #59	Propane	3000-4999	013747	274
B-R408-EP-X #60	Propane	5000-6999	013748	274

Outdoor top is standard.

For indoor top and other options, see page 12.



For Parts reference the Illustrated Parts List at the back of this products I&O Manual, or Scan Code

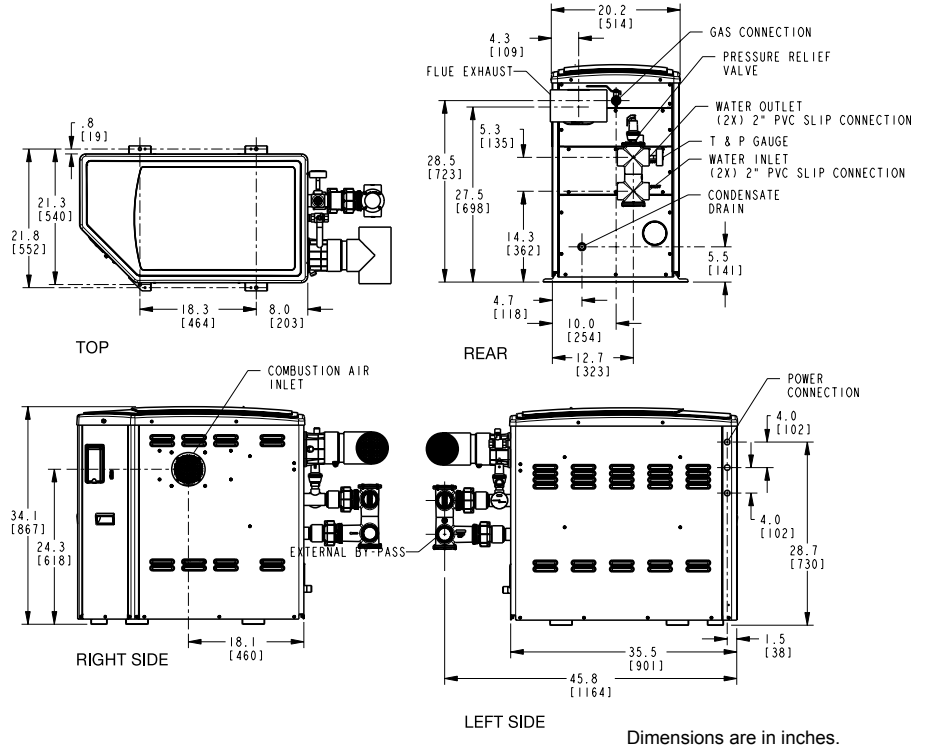
ASME OPTIONS AND KITS

PART SHIPPING LIST

MODEL	DESCRIPTION	PART NUMBER	SHIPPING WEIGHT (lbs)
HOSE ADAPTORS			
206A-207A	2" MPT TO 1 1/2" HOSE	006490	SET OF 2
POOLSTAT COVER/LOCK KIT			
206A-267A		009505	2
Note: Use on heaters with Electronic Ignition only.			
D-2: POWER VENT - INDOOR			
206A/267A	240V IID ONLY	009832	36
R268	240V IID ONLY	009832	36
206A/267A	120V IID ONLY	010744	36
R268	120V IID ONLY	010744	36
336A/407A	240V IID ONLY	009833	39
R408	240V IID ONLY	009833	39
336A/407A	120V IID ONLY	010745	39
R408	120V IID ONLY	010745	39
Note: Power vents are shipped loose for field installation and wiring.			
D-10: RESIDENTIAL POOL HEATER INDOOR DRAFTHOODS			
206A/207A	INDR STACK TOP 6"	009838	14
266A/267A	INDR STACK TOP 7"	009839	16
R268	INDR STACK TOP 7"	009839	16
336A/337A	INDR STACK TOP 8"	009840	19
406A/407A	INDR STACK TOP 9"	009841	21
R408	INDR STACK TOP 9"	009841	21
406A/407A	ADAPTOR 9"X 10"	010781	5
R408	ADAPTOR 9"X 10"	010781	5
Note: Adaptor 9" x 10" used to connect to standard 10" flue.			
D-11: RESIDENTIAL POOL HEATER STACKLESS TOPS - SHIPPED WITH HEATER			
D-13: RESIDENTIAL POOL HEATER HIGH WIND TOPS			
206A/207A	INDR STACK TOP 6"	009834	20
266A/267A	INDR STACK TOP 7"	009835	20
R268	INDR STACK TOP 7"	009835	20
336A/337A	INDR STACK TOP 8"	009836	25
406A/407A	INDR STACK TOP 9"	009837	25
R408	INDR STACK TOP 9"	009837	25
F-2: FLOW SWITCH/T&P GAUGE KIT			
206A-407A	IID ONLY	013969	4
X-10: RESTRAINT BRACKET			
206A-406A, 207A-407A		011636	
R268 & R408			
PROTEK SHIELD REPLACEMENT KIT			
206A-406A, 207A-407A, 264 & 404		017960F	2
PROTEK SHIELD BULK (25PK) REPLACEMENT KIT			
206A-406A, 207A-407A, 264 & 404		018847F	67
PROTEK SHIELD ASME ADAPTER KIT			
206A-406A, 207A-407A		018006F	3

X94 PROFESSIONAL SERIES

- 94% thermal efficiency
- ASME stainless steel heat exchanger
- Small footprint
- External bypass
- Cat IV vent - PVC, CPVC, Polypropylene, Stainless
- T&P and flow switch standard
- All connections on rear
- Easily nest units together
- 3 year warranty commercial installations
- Low NOx



MODEL	GAS	ELEVATION (feet)	PART NUMBER	SHIPPING WEIGHT (LBS)
S-R410-EN ASME	Natural	0-4500	014280	300
S-R410-EP ASME	Propane	0-4500	014281	300

X94 PROFESSIONAL SERIES OPTIONS

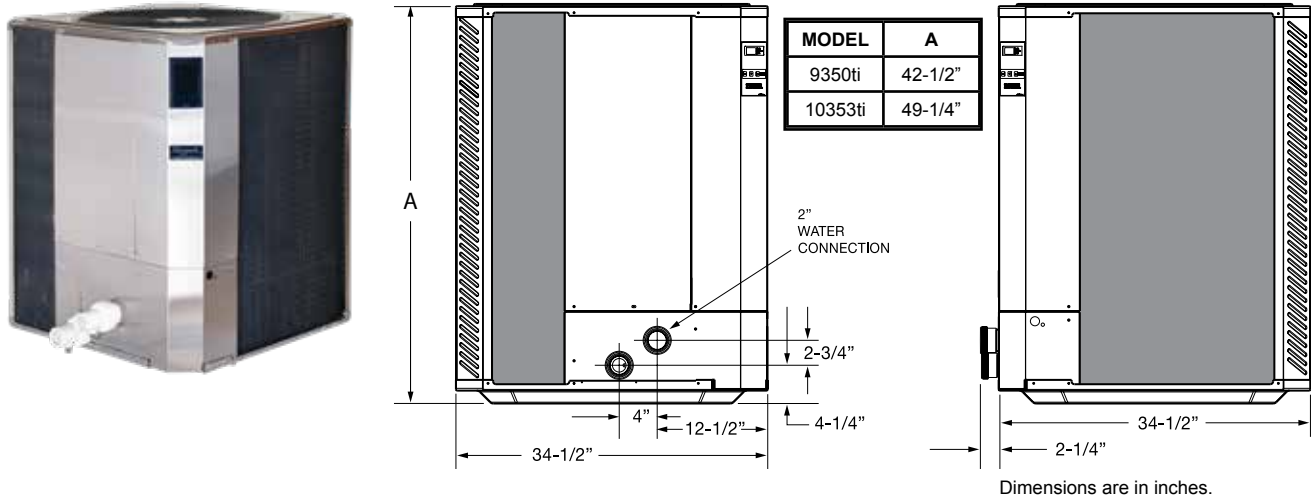
MODEL	DESCRIPTION	PART NUMBER	SHIPPING WEIGHT (LBS)
D-11: VENT TERMINATION TEE			
410	STAINLESS STEEL TEE 4"	015361	5
410	PVC TEE 4"	015451	5
Z-12: CONDENSATE TREATMENT KIT			
410	600 (MBH)	015199	5



For Parts reference the Illustrated Parts List at the back of this products I&O Manual, or Scan Code

PROFESSIONAL HEAT PUMP 9350ti, 9353ti, 10353ti, 10354ti

- Stainless steel cabinet
- Titanium Heat Exchanger
- Scroll Compressor
- 2" PVC connection unions supplied
- 2 year labor, 7 year parts - commercial warranty
- Digital control with micro processor



Model	BTUH / C.O.P. (80,80,80*)	BTUH / C.O.P. (80,63,80*)	C.O.P. (50,63,80*)	Electrical Input (kW)	Water Flow gpm (LPM)	Minimum Circuit Size (Amps)	Maximum Breaker Size (Amps)	Ship Weight lbs. (kgs)
PS9350ti-E-HC	140,000 / 6.1	133,000 / 5.8	4.0	6.7	30-60 (113.6-227)	42	60	363 (165)
PS9353ti-E-HC	140,000 / 6.1	133,000 / 5.8	4.0	6.7	30-60 (113.6-227)	34	50	363 (165)
PS10353ti-E-HC	170,000 / 5.8	155,000 / 5.3	4.0	8.6	30-60 (113.6-227)	42	70	445 (202)
PS10354ti-E-HC	170,000 / 5.8	155,000 / 5.3	4.0	8.6	30-60 (113.6-227)	26	40	450 (204)
PS10355ti-E-HC	170,000 / 5.8	155,000 / 5.3	4.0	8.6	30-60 (113.6-227)	29	45	450 (204)

*Tested to AHRI 1160

**All models comply with Florida 4.0 minimum C.O.P. requirement.



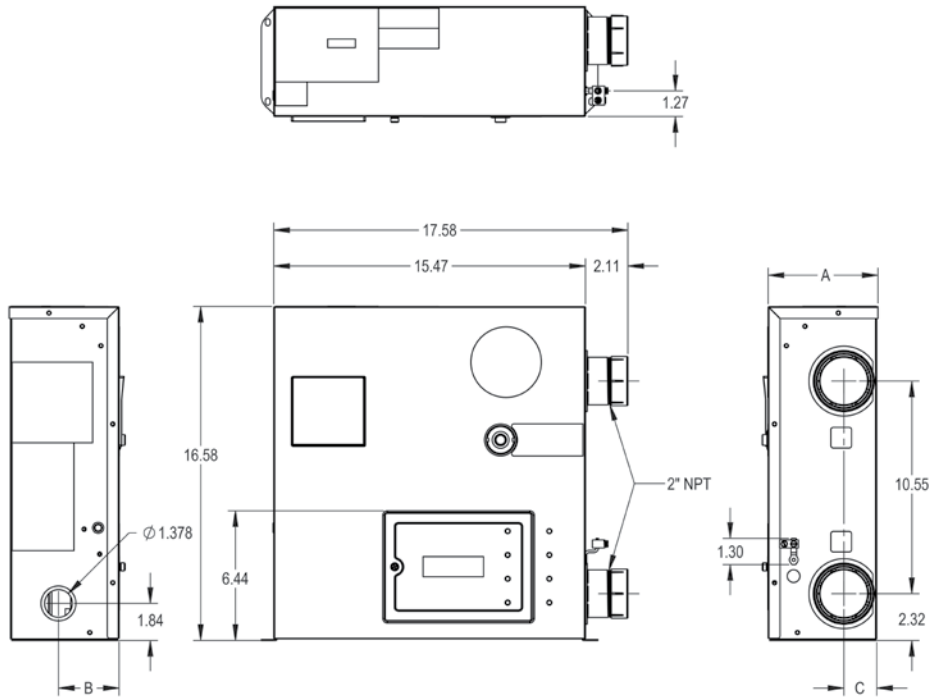
MODEL	BTU	PART NUMBER	SHIPPING WEIGHT (LBS)
PS9350ti-E-HC 208V, Scroll compressor, digital thermostat, Ti heat exchanger, classic cabinet, 1 PH, heat cool.	140,000	TWPH-9350EHC17	363
PS9353ti-E-HC 208V, Scroll compressor, digital thermostat, Ti heat exchanger, classic cabinet, 3 PH, heat cool.	140,000	TWPH-9353EHC17	363
PS10353ti-E-HC 208V, Scroll compressor, digital thermostat, Ti heat exchanger, classic cabinet, 3 PH, heat cool.	170,000	TWPH-10353EHC17	445
PS10354ti-E-HC 460V, Scroll compressor, digital thermostat, Ti heat exchanger, classic cabinet, 3 PH heat cool.	170,000	TWPH-10354EHC17	450
PS10355ti-E-HC 380V, Scroll compressor, digital thermostat, Ti heat exchanger, classic cabinet, 3 PH heat cool.	170,000	TWPH-10355EHC17	450



For Parts reference the Illustrated Parts List at the back of this products I&O Manual, or Scan Code

E3T 3-PHASE – TYPE P

- Quiet Operation
- Solid State Relays
- Inlet/Outlet Sensors
- Fuse Access Door
- 2" NPT Unions Included
- Certified to CEC Title 20



Dimensions are in inches.

TABULATION TABLE			
MODEL	A	B	C
3 ELEMENT	5.45 IN	3.01 IN	1.63 IN
6 ELEMENT	7.74 IN	4.00 IN	2.78 IN

MODEL	BTUH	VOLTAGE	PART NUMBER	SHIPPING WEIGHT (LBS)
ELS-R-0018-3-TI	61,419	208V	019141	41.9
ELS-R-0018-4-TI	61,419	480V	019142	41.4
ELS-R-0024-3-TI	81,891	208V	019143	41.9
ELS-R-0024-4-TI	81,891	480V	019144	41.4
ELS-R-0030-3-TI	102,364	208V	019145	59.5
ELS-R-0030-4-TI	102,364	480V	019146	57.2
ELS-R-0045-4-TI	153,546	480V	019147	58.7
ELS-R-0054-4-TI	184,255	480V	019148	58.7

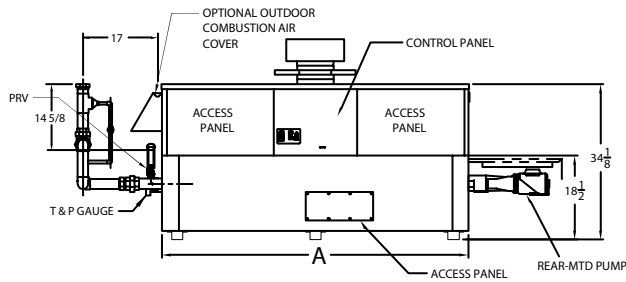


For Parts reference the Illustrated Parts List at the back of this products I&O Manual, or Scan Code

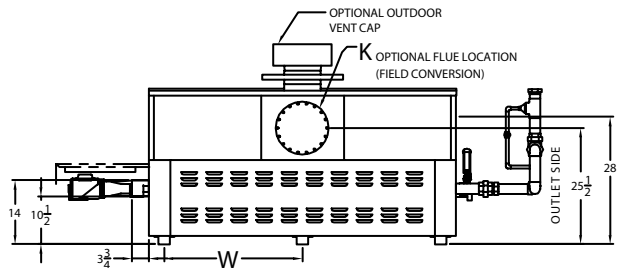
HI DELTA 502C-902C



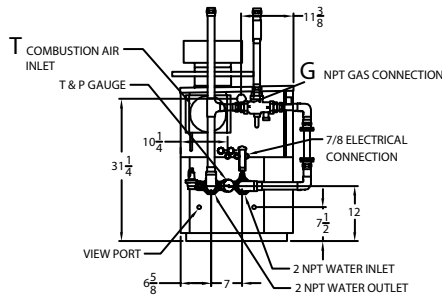
- Indoor/outdoor installation
- Ultra-low NOx
- 85% thermal efficiency
- Cupro-nickel tubes
- Bronze headers
- Top or back venting
- Sealed combustion chamber
- Only one inch installation clearance needed
- Stackable without increased footprint
- VERSA IC Controller
- Rear-mounted bronze pump



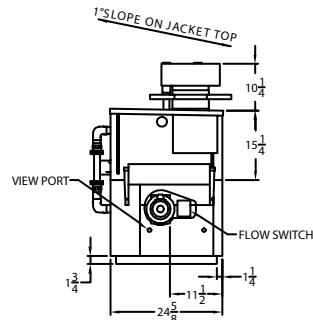
FRONT VIEW



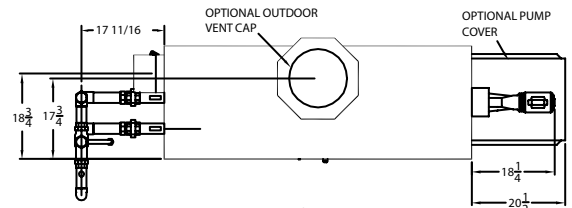
BACK VIEW



LEFT SIDE



RIGHT SIDE



TOP VIEW

Model	Input MBTUH	Output MBTUH	A Width	G NPT	H NPT	K	T	W	Amp. Draw	Shipping Wt. (Lbs.)
502C	500	425	50"	1-1/4"	2"	6"	6"	22"	6	584
652C	650	553	60-1/2"	1-1/4"	2"	8"	6"	27-1/4"	6	754
752C	750	638	67-1/2"	1-1/4"	2"	8"	6"	30-3/4"	6	812
902C	900	765	78"	1-1/4"	2"	8"	6"	36"	7	898

MODEL	GAS	ELEVATION (feet)	PART NUMBER	SHIPPING WEIGHT (LBS)
P 502C	Natural	0-5000	016061	584
P 652C	Natural	0-5000	016062	754
P 752C	Natural	0-5000	016063	812
P 902C	Natural	0-5000	016064	898
P 502C	Propane	0-5000	016074	584
P 652C	Propane	0-5000	016075	754
P 752C	Propane	0-5000	016076	812
P 902C	Propane	0-5000	016077	898

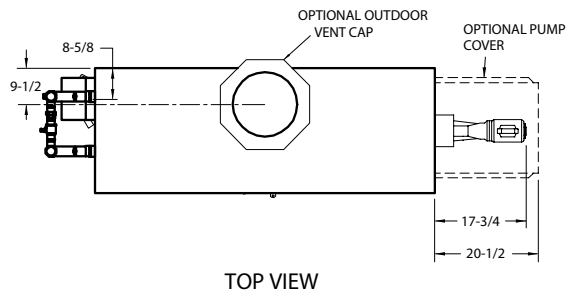
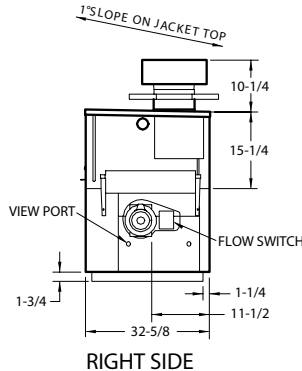
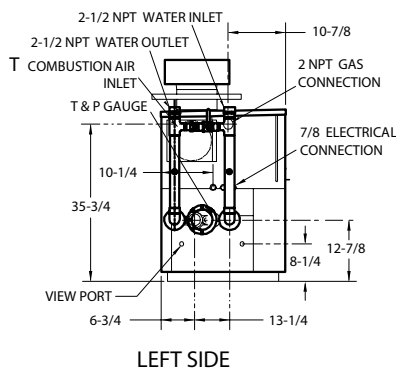
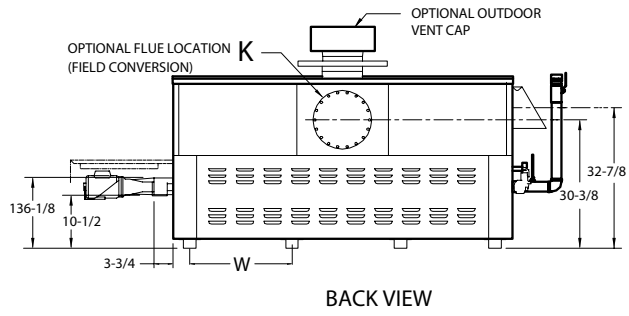
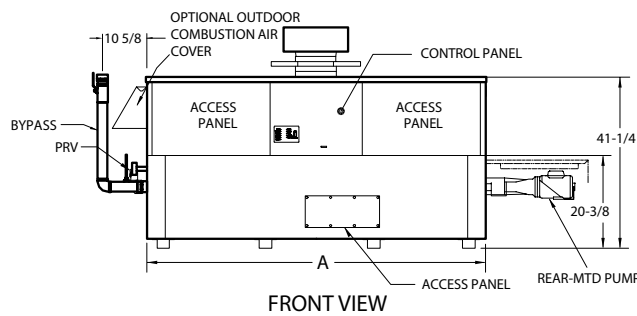


For Parts reference the Illustrated Parts List at the back of this products I&O Manual, or Scan Code



HI DELTA 992C-1532C

- Indoor/outdoor installation
- Ultra-low NOx
- 85% thermal efficiency
- Cupro-nickel tubes
- Bronze headers/CPVC Plumbing
- Vent top or back
- Sealed combustion chamber
- Only one inch installation clearance needed
- Stackable without increased footprint
- VERSA IC Controller
- Non-ferrous bypass and pump assembly



Model	Input MBTUH	Output MBTUH	Firing Stages	A Width	H NPT	K	T	W	Amp. Draw*	Shipping Wt. (Lbs.)
992C	990	842	3	57-1/8"	2-1/2"	10"	10"	16-13/16"	<12	964
1262C	1260	1071	4	68-1/2"	2-1/2"	12"	10"	20-9/16"	<12	1055
1532C	1530	1301	4	79-7/8"	2-1/2"	12"	10"	24-3/8"	<12	1188

* Without pump

MODEL	GAS	ELEVATION (feet)	PART NUMBER	SHIPPING WEIGHT (LBS)
P 992C	Natural	0-5000	016065	964
P 1262C	Natural	0-5000	016066	1055
P 1532C	Natural	0-5000	016067	1188
P 992C	Propane	0-5000	016078	964
P 1262C	Propane	0-5000	016079	1055
P 1532C	Propane	0-5000	016080	1188

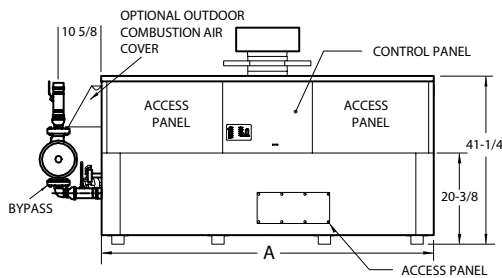


For Parts reference the Illustrated Parts List at the back of this products I&O Manual, or Scan Code

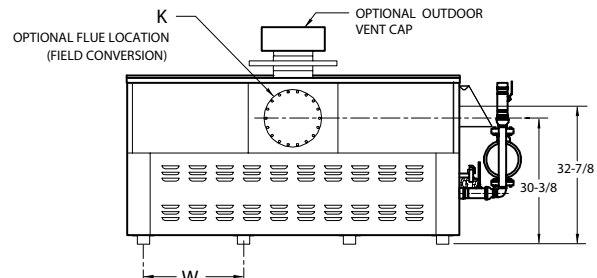
HI DELTA 1802C-2342C



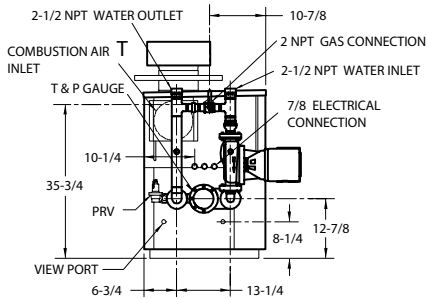
- Indoor/outdoor installation
- Ultra-low NOx
- 85% thermal efficiency
- Cupro-nickel tubes
- Bronze headers/CPVC Plumbing
- Top or back venting
- Sealed combustion chamber
- Only one inch installation clearance needed
- Stackable without increased footprint
- VERSA IC Controller
- Non-ferrous bypass and pump assembly



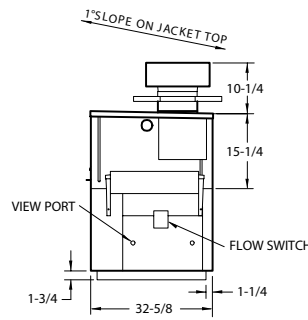
FRONT VIEW



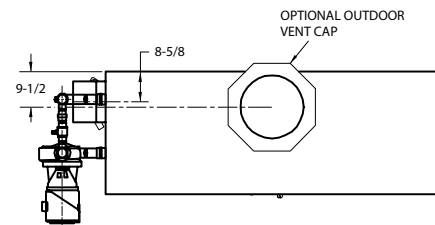
BACK VIEW



LEFT SIDE



RIGHT SIDE



TOP VIEW

Model	Input MBTUH	Output MBTUH	Firing Stages	A Width	H NPT	K	T	W	Amp. Draw*	Shipping Wt. (Lbs.)
1802C	1800	1530	4	91-1/8"	2-1/2"	14"	10"	28-1/8"	<12	1331
2002C	1999	1699	4	102-1/2"	2-1/2"	14"	10"	31-15/16"	<12	1471
2072C	2070	1760	4	102-1/2"	2-1/2"	14"	10"	31-15/16"	<12	1470
2342C	2340	1989	4	113-7/8"	2-1/2"	16"	10"	35-11/16"	<12	1615

* Without pump

MODEL	GAS	ELEVATION (feet)	PART NUMBER	SHIPPING WEIGHT (LBS)
P 1802C	Natural	0-5000	016068	1331
P 2002C	Natural	0-5000	016069	1470
P 2072C	Natural	0-5000	016070	1470
P 2342C	Natural	0-5000	016071	1615
P 1802C	Propane	0-5000	016081	1331
P 2072C	Propane	0-5000	016082	1470
P 2342C	Propane	0-5000	016083	1615

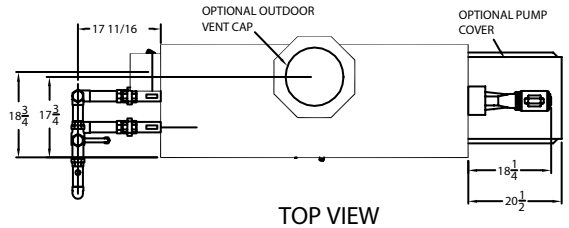
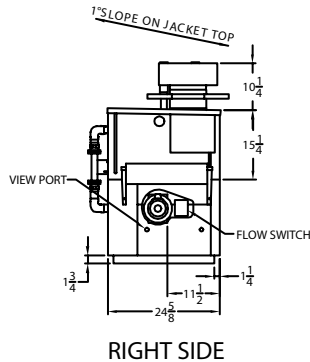
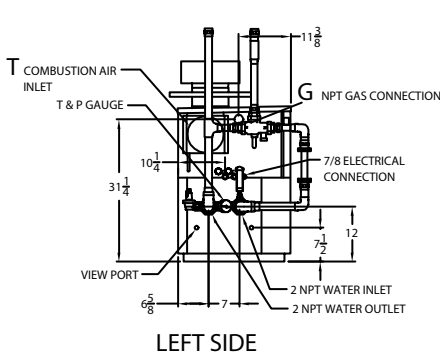
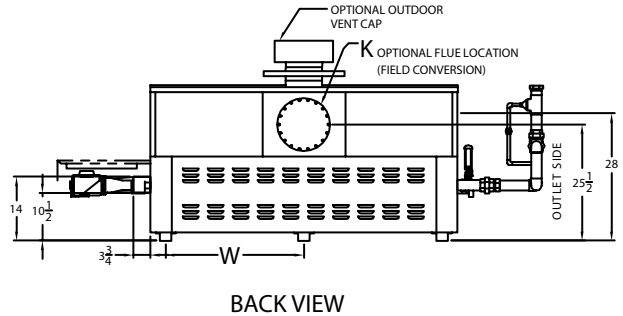
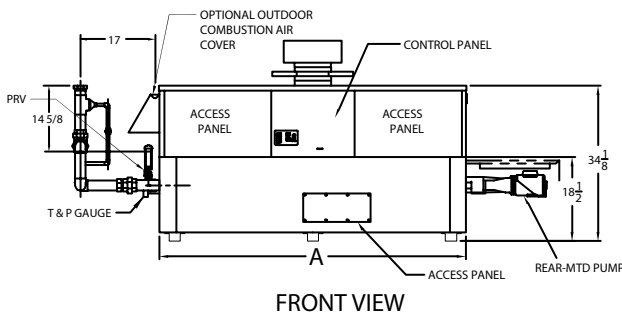


For Parts reference the Illustrated Parts List at the back of this products I&O Manual, or Scan Code



HI DELTA 502C-902C COLD RUN

- Indoor/outdoor installation
- Ultra-low NOx
- 85% thermal efficiency
- Cupro-nickel tubes
- Bronze headers/CPVC Plumbing
- Top or back venting
- Sealed combustion chamber
- Only one inch installation clearance needed
- Stackable without increased footprint
- VERSA IC Controller
- Rear-mounted bronze pump



Model	Input MBTUH	Output MBTUH	A Width	G NPT	H NPT	K	T	W	Amp. Draw	Shipping Wt. (Lbs.)
502C	500	425	50"	1-1/4"	2"	6"	6"	22"	6	730
652C	650	553	60-1/2"	1-1/4"	2"	8"	6"	27-1/4"	6	830
752C	750	638	67-1/2"	1-1/4"	2"	8"	6"	30-3/4"	6	890
902C	900	765	78"	1-1/4"	2"	8"	6"	36"	7	980

MODEL	GAS	ELEVATION (feet)	PART NUMBER	SHIPPING WEIGHT (LBS)
P 502C	Natural	0-5000	016084	730
P 652C	Natural	0-5000	016085	830
P 752C	Natural	0-5000	016086	890
P 902C	Natural	0-5000	016087	980
P 502C	Propane	0-5000	016095	730
P 652C	Propane	0-5000	016096	830
P 752C	Propane	0-5000	016097	890
P 902C	Propane	0-5000	016098	980

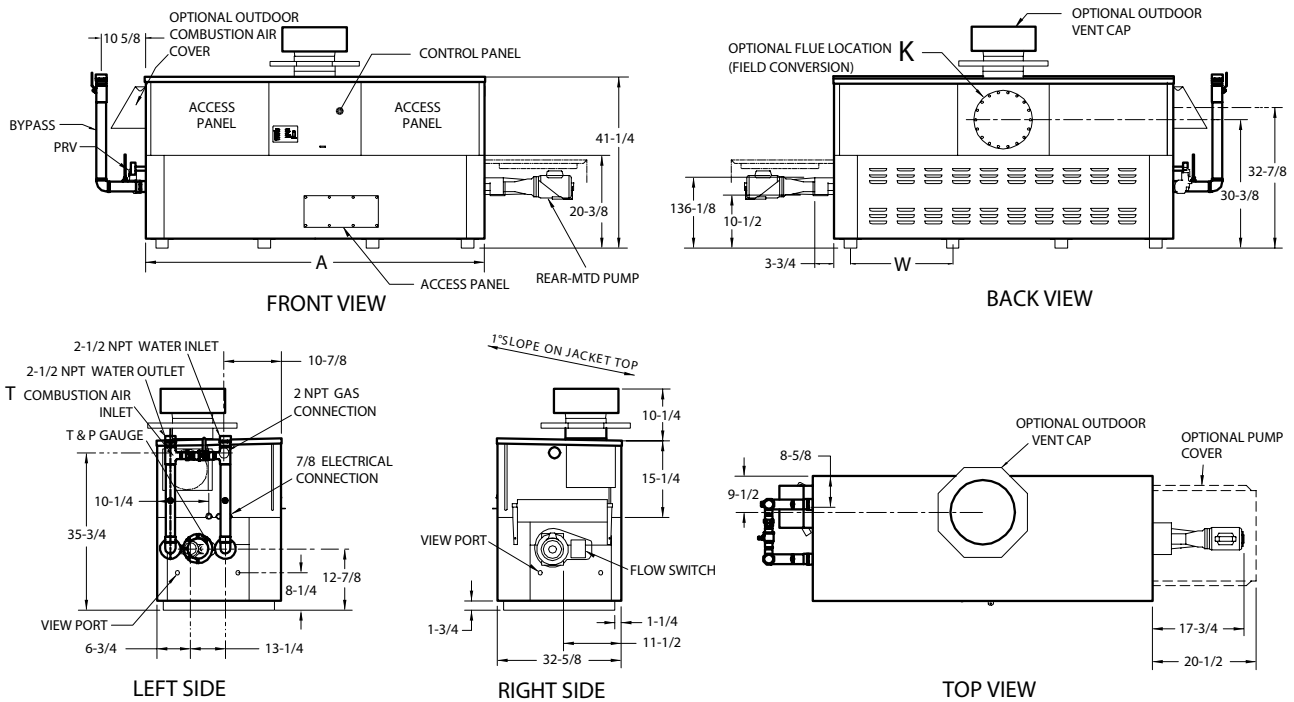


For Parts reference the Illustrated Parts List for this product, or Scan Code



HI DELTA 992C-1532C COLD RUN

- Indoor/outdoor installation
- Ultra-low NOx
- 85% thermal efficiency
- Cupro-nickel tubes
- Bronze headers/CPVC Plumbing
- Top or back venting
- Sealed combustion chamber
- Only one inch installation clearance needed
- Stackable without increased footprint
- VERSA IC Controller
- Rear-mounted bronze pump



Model	Input MBTUH	Output MBTUH	Firing Stages	A Width	H NPT	K	T	W	Amp. Draw*	Shipping Wt. (Lbs.)
992C	990	842	3	57-1/8"	2-1/2"	10"	10"	16-13/16"	<12	1075
1262C	1260	1071	4	68-1/2"	2-1/2"	12"	10"	20-9/16"	<12	1130
1532C	1530	1301	4	79-7/8"	2-1/2"	12"	10"	24-3/8"	<12	1330

* Without pump

MODEL	GAS	ELEVATION (feet)	PART NUMBER	SHIPPING WEIGHT (LBS)
P 992C	Natural	0-5000	016088	1075
P 1262C	Natural	0-5000	016089	1130
P 1532C	Natural	0-5000	016090	1330
P 992C	Propane	0-5000	016099	1075
P 1262C	Propane	0-5000	016100	1130
P 1532C	Propane	0-5000	016101	1330

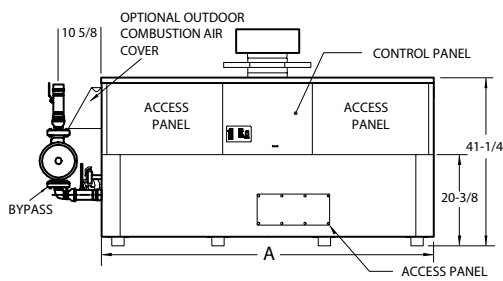


For Parts reference the Illustrated Parts List for this product, or Scan Code

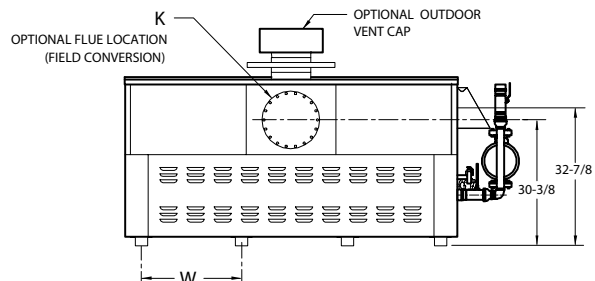


HI DELTA 1802C-2342C COLD RUN

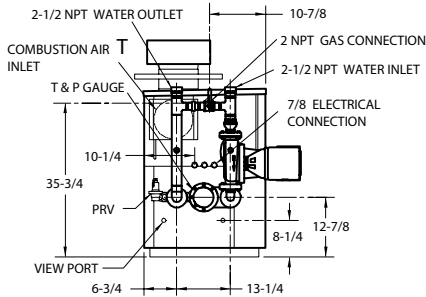
- Indoor/outdoor installation
- Ultra-low NOx
- 85% thermal efficiency
- Cupro-nickel tubes
- Bronze headers/CPVC Plumbing
- Top or back venting
- Sealed combustion chamber
- Only one inch installation clearance needed
- Stackable without increased footprint
- VERSA IC Controller
- Front-mounted bronze pump



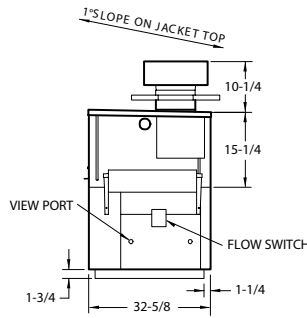
FRONT VIEW



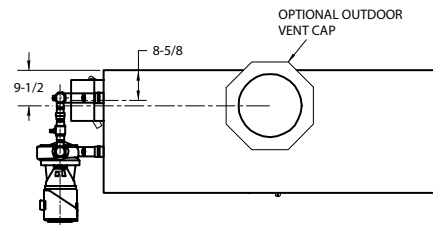
BACK VIEW



LEFT SIDE



RIGHT SIDE



TOP VIEW

Model	Input MBTUH	Output MBTUH	Firing Stages	A Width	H NPT	K	T	W	Amp. Draw*	Shipping Wt. (Lbs.)
1802C	1800	1530	4	91-1/8"	2-1/2"	14"	10"	28-1/8"	<12	1535
2002C	1999	1699	4	102-1/2"	2-1/2"	14"	10"	31-15/16"	<12	1670
2072C	2070	1760	4	102-1/2"	2-1/2"	14"	10"	31-15/16"	<12	1670
2342C	2340	1989	4	113-7/8"	2-1/2"	16"	10"	35-11/16"	<12	1730

* Without pump

MODEL	GAS	ELEVATION (feet)	PART NUMBER	SHIPPING WEIGHT (LBS)
P 1802C	Natural	0-5000	016091	1535
P 2002C	Natural	0-5000	016092	1670
P 2072C	Natural	0-5000	016093	1670
P 2342C	Natural	0-5000	016094	1730
P 1802C	Propane	0-5000	016102	1535
P 2072C	Propane	0-5000	016103	1670
P 2342C	Propane	0-5000	016104	1730

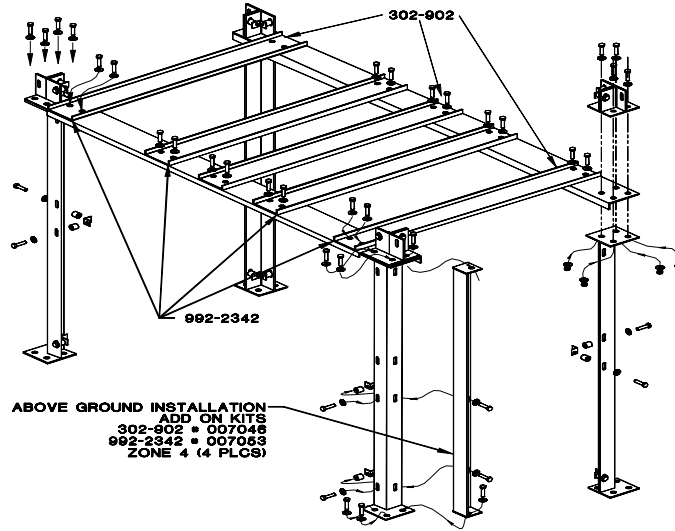


For Parts reference the Illustrated Parts List for this product, or Scan Code



HI DELTA SURE RACK KIT

- Two-boiler vertical stack
- No vent offset required
- Small footprint
- Low ceiling height
- Heavy-duty construction
- Easy assembly
- All hardware included
- Still allows for complete servicing



HI DELTA RACK KIT			
OPTION #	X-1	X-2	X-3
	KIT-SURE RACK (2 Boilers)	KIT-ADD ON Add to Stand Rack price	Bracket Restraint
MODEL	PART NUMBER	PART NUMBER	PART NUMBER
502C	006908	011919	008136
652C	006909		
752C	006910		
902C	006911		
992C	011563		
1262C	011564	011920	008147
1532C	011565		
1802C	011566		
2002C	011567		
2072C	011567		
2342C	011568		

X-4			INFORMATION	
MODEL	RACK/LEG EXTENSION	P/N	GROUND LEVEL	ABOVE GROUND
502C-902C	8"	011955	STANDARD X-1	ADD X-2 KIT
992C-2342C	8"	011954		
992C-2342C	18"	011953		

Note: X-1 Racks are for ground-level installations only. The X-2 add-on kit is required for above-ground installations.

HI DELTA OPTIONS

PART SHIPPING LIST

MODEL	DESCRIPTION	PART NUMBER	SHIPPING WEIGHT (LBS)
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A-6: RIGHT-HAND WATER

P 502C-2342C		069056	
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BAS/BMS Gateway Protocol Convertor (Only Works with VERSA IC)

B-85	BACnet MS/TP, BACnet IP, Metasys N2 or Modbus TCP (Loose)	014691	
B-86	LonWorks (Loose)	014692	

B-36 / 38: TEMP-TRACKER MOD+ CONTROLLERS

B-36 P 1005A-4005	Up to four units	011922	6
B-37 P 1005A-4005	Up to ten units	011923	16
B-38 P 1005A-4005	Up to 16 units	011924	21

Note:

1. B-36 is the basic unit. B-37 is the basic unit plus one expansion module. B-38 is the basic unit plus two expansion modules.

2. B-36, 37 and 38 include two sensors and include lead/lag.

C-6: LOCKOUT IGNITION MODULE - MANUAL RESET

P 502C-2342C	In Lieu of Standard	069305	
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D-11: OUTDOOR TOP

P 502C	6"	010794	15
P 652C/752C/902C	8"	010795	17
P 992C	10"	010796	20
P 1262C/1532C	12"	010797	20
P 1802C/2002C/2072C	14"	010798	25
P 2342C	16"	010799	25

NOTE: Includes an intake, vent hood and flow switch cover for outdoor units.

D-12: BAROMETRIC DAMPER W/O THERMAL SWITCH - Single Acting

P 502C	6"	009518	7
P 652C/752C/902C	8"	009519	4
P 992C	10"	009520	7
P 1262C/1532C	12"	009521	12
P 1802C/2002C/2072C	14"	009522	15
P 2342C	16"	015733	25

D-14: FLUE EXHAUST TEE BACK OUTLET - MOUNTED

P 502C	6"	073598	
P 652C/752C/902C	8"	073599	
P 992C	10"	073600	
P 1262C/1532C	12"	073601	
P 1802C/2002C/2072C	14"	073602	
P 2342C	16"	073603	

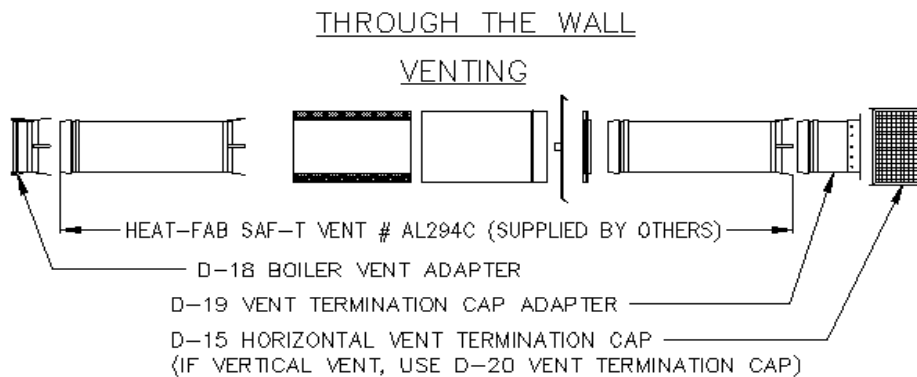
D-15: VENT TERMINATION CAP - Horizontal installation (CATEGORY III OR IV)

P 502C	6"	006644	6
P 652C/752C/902C	8"	006646	13
P 992C	10"	006650	10
P 1262C/1532C	12"	007989	15
P 1802C/2002C/2072C	14"	007002	36
P 2342C	16"	007003	33

HI DELTA OPTIONS

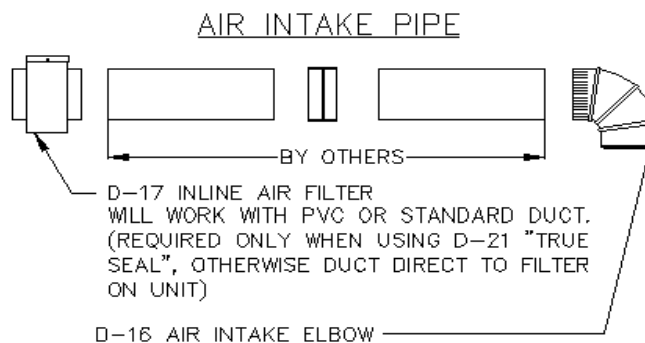
PART SHIPPING LIST

MODEL	DESCRIPTION	PART NUMBER	SHIPPING WEIGHT (LBS)
D-16: AIR INTAKE ELBOW - 90° with screen			
P 502C-902C	6"	006997	3
P 992C-2342C	10"	006999	5
D-17: INLINE AIR INTAKE FILTER - Required only when TruSeal is used			
P 502C/902C	6"	006926	10
P 992C-2342C	10"	006928	10
D-18: VENT ADAPTER (CATEGORY III & IV)			
FOR USE WITH HEAT-FAB SAF-T VENT #AL294C SINGLE & DOUBLE WALL VENT			
P 502C	6"	007005	6
P 652C/752C/902C	8"	007006	2
P 992C	10"	007007	3
P 1262C/1532C	12"	007008	3
P 1802C/2002C/2072C	14"	007009	2
P 2342C	16"	007010	2
D-19: VENT TERMINATION CAP ADAPTER (CATEGORY III & IV)			
FOR USE WITH HEAT-FAB SAF-T VENT #AL294C SINGLE & DOUBLE WALL VENT			
P 502C	6"	007015	2
P 652C/752C/902C	8"	007016	3
P 992C	10"	007017	2
P 1262C/1532C	12"	007018	6
P 1802C/2002C/2072C	14"	007019	3
P 2342C	16"	007020	2



NOTES:

1. ADAPTERS GOOD FOR SINGLE WALL OR DOUBLE WALL VENT.
2. CATEGORY III AND IV.



HI DELTA OPTIONS

PART SHIPPING LIST

MODEL	DESCRIPTION	PART NUMBER	SHIPPING WEIGHT (LBS)
D-20: VENT TERMINATION CAP - VERTICAL (CATEGORY I)			
P 502C	6"	010802	6
P 652C/752C/902C	8"	010803	7
P 992C	10"	010804	8
P 1262C/1532C	12"	010805	9
P 1802C/2002C/2072C	14"	010806	10
P 2342C	16"	010807	15

D-21: TruSeal™ AIR INTAKE SYSTEM - Must also use D-17, Inline Air Filter

P 502C	LEFT SIDE	073768
P 502C	RIGHT SIDE	073769
P 652C-902C	LEFT SIDE	072412
P 652C-902C	RIGHT SIDE	072413
P 992C	LEFT SIDE	073331
P 992C	RIGHT SIDE	073332
P 1262C	LEFT SIDE	072501
P 1262C	RIGHT SIDE	072535
P 1532C-1802C	LEFT SIDE	072502
P 1532C-1802C	RIGHT SIDE	072536
P 2002C-2342C	RIGHT SIDE ONLY	072503

Notes:

1. Required to meet ANSI direct vent verification.
2. Must utilize Inline Air Intake Filter (D-17) if indoor unit.
3. Air intake is standard on the left side. Raypak will switch sides if you order right hand TruSeal.

E-5: ALARM CENTER

P 502C-2342C	4" BELL	072372
--------------	---------	--------

F-10: LOW WATER CUTOFF - REMOTE TYPE

P 502C-2342C	MANUAL RESET
--------------	--------------

G: CODE CONTROLS

G-1: CSD-1 CODE CONTROLS

P 502C-902C
P 992C-1262C
P 1532C-2342C

G-4: ILLINOIS SCHOOL CODE (BOCA)

P 502C-2342C

G-7: NEW MEXICO CODE

P 502C-2342C	See G-1, CSD-1
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G-9: KENTUCKY CODE CONTROLS

P 502C-2342C	COMPLIES
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G-12: CALIFORNIA CODE CONTROLS

P 302C-2342C

Note: As of the 2004 Edition of CSD-1, ANSI Z21.56 pool heaters are specifically exempted from CSD-1. Not all states have adopted the 2004 revision.

HI DELTA OPTIONS

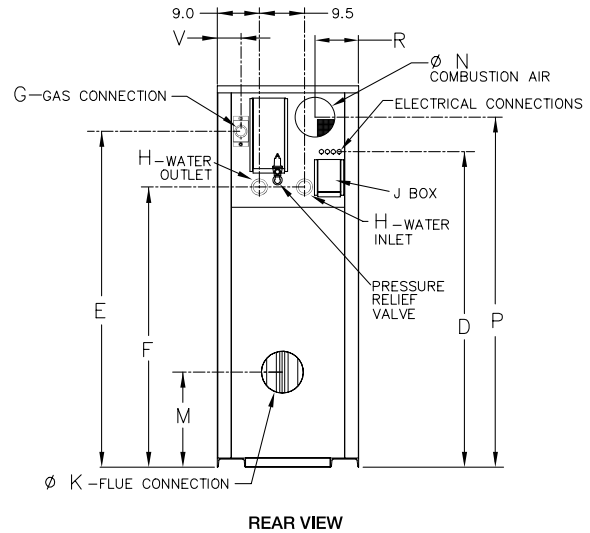
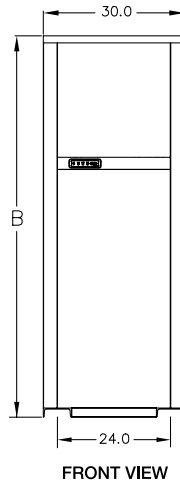
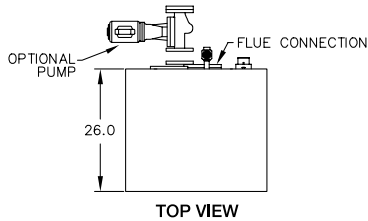
PART SHIPPING LIST

MODEL	DESCRIPTION	PART NUMBER	SHIPPING WEIGHT (LBS)
G-20: LOW GAS PRESSURE SUPPLY			
P 502C			
P 652C			
P 752C			
P 902C			
P 992C			
P 1262C			
P 1532C			
P 1802C			
P 2002/2072C			
P 2342C			
I-6: TEMPERATURE LIMITING CONTROL - MAX 100°F			
P 652C-2342C		006040	
M-1: SAFETY VALVES, MOTORIZED			
P 502C-992C			
P 1262C-2342C			
M-10: SAFETY VALVES, SOLENOID			
P 502C-992C			
P 1262C-2342C			
S-1: GAS PRESSURE SWITCH - LOW			
P 502C-902C			
P 992C-2342C	STANDARD		
S-2: GAS PRESSURE SWITCH - HIGH			
P 502C-1262C			
P 1532C-2342C	(Requires 2)		



MVB 504A-2004A

- Up to 85% efficiency
- Low NOx
- Compact footprint 5-1/2 FT2
- Fan-assisted combustion design
- Indoor/outdoor installation
- Touchscreen Display
- Cupro-nickel fin tubes
- Bronze headers
- Non-ferrous bypass assembly
- Bronze pump
- CAT I -if vented vertically



* Shown without H-bypass

DIMENSIONS ARE IN INCHES.

Model	MBTUH		B	D	E	F	G NPT	H NPT	K Flue ø	M	N C/A ø	P	R	V	Foot Print Ft²	MVB Amp Draw	System Pump (included)		
	Input	Output															Model	HP	Amps
504A	500	420	43	32	35	23-3/4	1	2	8	14-1/8	6	35	6	2	5.4	12	1611	1/4	6
754A	750	630	49	38	41	29-3/4	1	2	10	16	6	41	6	2	5.4	12	1630	1/2	7
1104A	1045	880	55	44	47	35-3/4	1-1/4	2-1/2	10	16	6	47	6	2	5.4	12	1630	1/2	7
1504A	1425	1211	61	50	53	41-3/4	1-1/4	2-1/2	12	18-1/8	8	53	6	2	5.4	12	1634	1	14
2004A	1900	1615	75	62	65	53-3/4	2	2-1/2	14	20-1/8	8	68	9	5	5.4	18	1636	1-1/2	15

MODEL	GAS	ELEVATION (feet)	PART NUMBER	SHIPPING WEIGHT (LBS)
P 504A	Natural	0-4500	014371	600
P 754A	Natural	0-4500	014372	660
P 1104A	Natural	0-4500	014373	720
P 1504A	Natural	0-4500	014374	780
P 2004A	Natural	0-4500	014375	940
P 504A	Propane	0-4500	014376	600
P 754A	Propane	0-4500	014377	660
P 1104A	Propane	0-4500	014378	720
P 1504A	Propane	0-4500	014379	780
P 2004A	Propane	0-4500	014380	940

Note: List price does not include Vent Termination Cap or Air Filter.



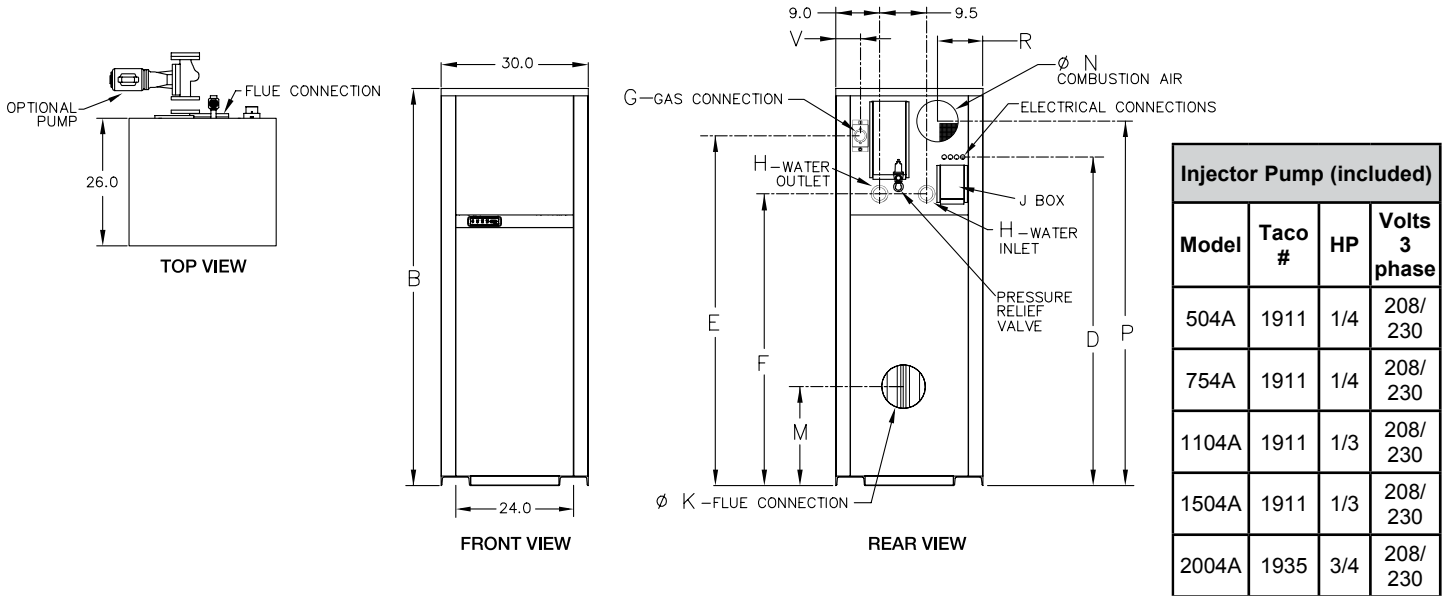
For Parts reference the Illustrated Parts List at the back of this products I&O Manual, or Scan Code



MVB 504A-2004A COLD RUN

- Up to 85% efficiency
- Low NOx
- Compact footprint 5-1/2 FT²
- Fan-assisted combustion design
- Indoor/outdoor installation
- Touchscreen Display
- Cupro-nickel fin tubes
- Bronze headers
- Non-ferrous bypass assembly
- Bronze pump
- CAT I -if vented vertically

Cold Run - Built in condensation protection. Variable speed pump automatically adjusts inlet water temp to prevent condensation.



* Shown without H-bypass
 DIMENSIONS ARE IN INCHES.
 Cold Run Controller requires two power inputs, 120VAC/1 Phase and 208/230 VAC 1 Phase.

Model	MBTUH		B	D	E	F	G NPT	H NPT	K Flue ø	M	N C/A ø	P	R	V	Foot Print Ft ²	MVB Amp Draw	System Pump (included)		
	Input	Output															Taco #	HP	Amps
504A	500	420	43	32	35	23-3/4	1	2	8	14-1/8	6	35	6	2	5.4	12	1611	1/4	6
754A	750	630	49	38	41	29-3/4	1	2	10	16	6	41	6	2	5.4	12	1611	1/4	7
1104A	1045	880	55	44	47	35-3/4	1-1/4	2-1/2	10	16	6	47	6	2	5.4	12	1630	1/2	7
1504A	1425	1211	61	50	53	41-3/4	1-1/4	2-1/2	12	18-1/8	8	53	6	2	5.4	12	1634	1	14
2004A	1900	1615	75	62	65	53-3/4	2	2-1/2	14	20-1/8	8	68	9	5	5.4	18	1636	1-1/2	15

MODEL	GAS	ELEVATION (feet)	PART NUMBER	SHIPPING WEIGHT (LBS)
P 504A	Natural	0-4500	014381	750
P 754A	Natural	0-4500	014382	800
P 1104A	Natural	0-4500	014383	850
P 1504A	Natural	0-4500	014384	950
P 2004A	Natural	0-4500	014385	1050
P 504A	Propane	0-4500	014386	750
P 754A	Propane	0-4500	014387	800
P 1104A	Propane	0-4500	014388	850
P 1504A	Propane	0-4500	014389	950
P 2004A	Propane	0-4500	014390	1050

Note: List price does not include Vent Termination Cap or Air Filter.



For Parts reference the Illustrated Parts List at the back of this products I&O Manual, or Scan Code

MVB OPTIONS

PART SHIPPING LIST

MODEL	DESCRIPTION	PART NUMBER	SHIPPING WEIGHT (LBS)
BAS/BMS Gateway Protocol Converter (Only Works with VERSA IC)			
B-85	BACnet MS/TP, BACnet IP, Metasys N2 or Modbus TCP (Loose)	014691	
B-86	LonWorks (Loose)	014692	
B-36 / 38: TEMP-TRACKER MOD+ CONTROLLERS			
B-36 P 1005A-4005	Up to four units	011922	6
B-37 P 1005A-4005	Up to ten units	011923	16
B-38 P 1005A-4005	Up to 16 units	011924	21
Note:			
1. B-36 is the basic unit. B-37 is the basic unit plus one expansion module. B-38 is the basic unit plus two expansion modules.			
2. B-36, 37 and 38 include two sensors and include lead/lag.			
C-6: LOCKOUT IGNITION MODULE - SINGLE TRY MANUAL RESET			
P 504A-2004A		076559	
D-11: OUTDOOR TOP			
P 504A		011895	30
P 754A-1104A		012285	35
P 1504A		012286	15
P 2004A		012287	37
D-15: VENT TERMINATION CAP			
P 504A	8"	006646	13
P 754A-1104A	10"	006650	10
P 1504A	12"	007989	15
P 2004A	14"	007002	36
D-17: AIR INTAKE FILTER-PREMIUM			
P 504A-1104A	6"	012460	10
P 1504A-2004A	8"	012461	11
D-18: VENT ADAPTER (CATEGORY III & IV)			
P 504A		007006	2
P 754A-1104A		007007	3
P 1504A		007008	3
P 2004A		007009	2
D-19: VENT TERMINATION CAP (CATEGORY III & IV)			
P 504A		007016	3
P 754A-1104A		007017	4
P 1504A		007018	6
P 2004A		007019	3
D-20: VENT TERMINATION CAP - VERTICAL (CATEGORY I)			
P 504A	8"	010803	7
P 754A-1104A	10"	010804	8
P 1504A	12"	010805	8
P 2004A	14"	010806	10
D-23: FLUE SUPPORT BRACKETS			
P 504A-1104A		012185	15
P 1504A-2004A		012186	15
D-37: MOTORIZED DAMPER			
P 504A-P1104A		016726	
P 1504A-P2004A		016727	

MVB OPTIONS

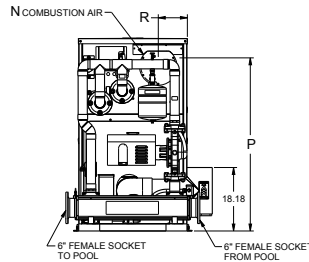
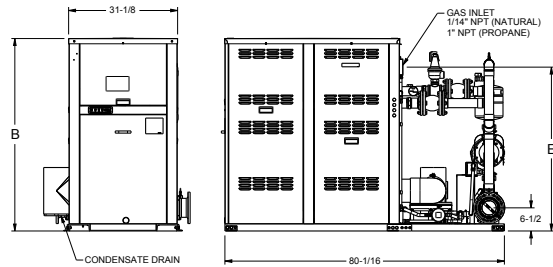
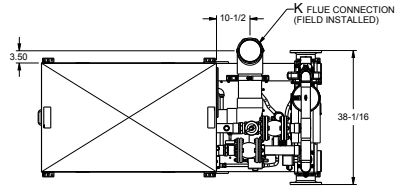
PART SHIPPING LIST

MODEL	DESCRIPTION	PART NUMBER	SHIPPING WEIGHT (LBS)
E-5: ALARM CENTER			
P 504A-2004A	4" BELL MOUNTED		
E-15: ALARM WITH BUZZER			
P 504A-2004A	MOUNTED	078767	
P 504A-2004A	LOOSE	016997	
F-10: LOW WATER CUTOFF - REMOTE TYPE			
P 504A-2004A	MANUAL RESET		
G: CODE CONTROLS -Consult local authorities for all code requirements			
G-1: CSD-1/GE GAP			
P 504A-2004A			
G-2: VENT VALVE COMBO			
P 754A			
G-2: VENT VALVE COMBO			
P 1104A-1504A			
G-2: VENT VALVE COMBO			
P 2004A			
G-4: ILLINOIS SCHOOL			
P 504A-2004A	USE F-10		
G-12: CALIFORNIA CODE CONTROLS			
P 504A-2004A			
G-15: CSD-1 - FOR FIELD UPGRADE			
P 504A-2004A			
I-6: TEMPERATURE LIMITING - Max 100°F			
P 504A-2004A	SHIPPED LOOSE	006040	
M-1: SAFETY VALVES, MOTORIZED			
P 504A-754A			
P 1104A-1504A			
P 2004A			
M-10: SAFETY VALVES, SOLENOID			
P 504A-754A			
P 1104A-1504A			
P 2004A			
M-15: VENT VALVE			
P 504A-2004A			
S-1: LOW GAS PRESSURE SWITCHES			
P 504A-2004A			
S-2: HIGH GAS PRESSURE SWITCHES - MANUAL RESET			
P 504A-2004A			
S-3: HIGH GAS PRESSURE SWITCHES - MANUAL RESET			
P 504A-2004A			



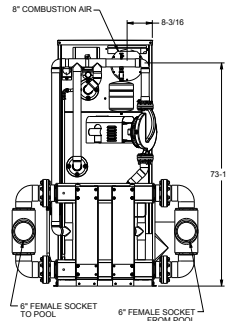
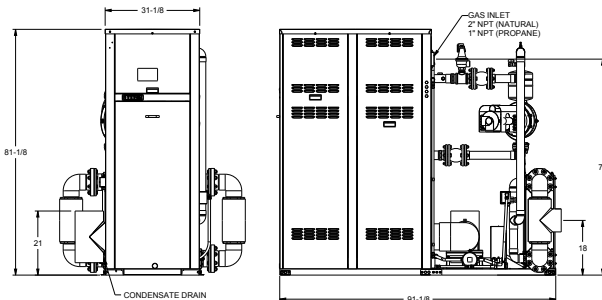
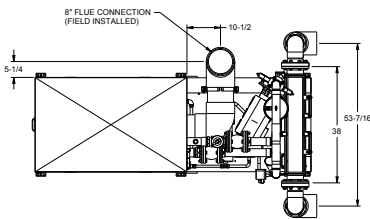
PROFESSIONAL INDIRECT 1005A-2005A

- Easy to commission and operate
- Corrosion resistant heat exchanger
- Time/labor savings
- Easy to move
- Condensate neutralizer
- PVC venting



Model (H7-)	MBTUH		Dimensions (in)						Ship Weight (Lbs.)	
	In	Out	B Height	E	G* NPT	K Flue ø	N C/A ø	P		R
1005A	999	969	55-1/4	47	1-1/4	6	6	47-1/8	8-5/16	1343
1505A	1500	1455	67-1/8	59	1-1/4	8	8	59-1/8	8-3/16	1448

*For Propane Gas, all models are 1" NPT.



Model (H7-)	MBTUH		Dimensions (in)						Ship Weight (Lbs.)	
	In	Out	B Height	E	G* NPT	K Flue ø	N C/A ø	P		R
2005A	1999	1939	81-1/8	72	2	8	8	73-1/8	8-3/16	1930

*For Propane Gas, all models are 1" NPT.

MODEL	GAS	INDIRECT HEAT EXCHANGER	ELEVATION (feet)	PART NUMBER	SHIPPING WEIGHT (LBS)
P 1005A	Natural	Cupronickel	0-4500	017001	1685
P 1005A	Natural	Titanium	0-4500	017004	1746
P 1505A	Natural	Cupronickel	0-4500	017002	1905
P 1505A	Natural	Titanium	0-4500	017005	1779
P 2005A	Natural	Cupronickel	0-4500	017003	2181*
P 2005A	Natural	Titanium	0-4500	017006	2181*
P 1005A	Propane	Cupronickel	0-4500	017007	1685*
P 1005A	Propane	Titanium	0-4500	017010	1685*
P 1505A	Propane	Cupronickel	0-4500	017008	1905*
P 1505A	Propane	Titanium	0-4500	017011	1905*
P 2005A	Propane	Cupronickel	0-4500	017009	2181*
P 2005A	Propane	Titanium	0-4500	017012	2181*

* Estimated shipping weights.



For Parts reference the Illustrated Parts List at the back of this products I&O Manual, or Scan Code

PROFESSIONAL INDIRECT OPTIONS

PART SHIPPING LIST

MODEL	DESCRIPTION	PART NUMBER	SHIPPING WEIGHT (LBS)
BAS/BMS Gateway Protocol Converter (Only Works with VERSA IC)			
B-85	BACnet MS/TP, BACnet IP, Metasys N2 or Modbus TCP (Loose)	014691	
B-86	LonWorks (Loose)	014692	

C-6: LOCKOUT IGNITION MODULE - SINGLE TRY MANUAL RESET

P 1005A-2005A	Mounted	076559	1
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Note: Three Try standard.

D-23: FLUE SUPPORT BRACKETS (Outdoor Only)

P 1005A-2005A

012185

D-37: MOTORIZED DAMPER

P 1005A	6"	016726	
P 1505A/2005A	8"	016727	

E-5: ALARM CENTER

P 1005A-2005A	4" BELL MOUNTED	076404	
P 1005A-2005A	4" BELL LOOSE	014683	

E-5: ALARM WITH BUZZER

P 1005A-2005A	MOUNTED	078767	
P 1005A-2005A	LOOSE	016997	

F-14: SYSTEM FLOW SWITCH

P 1005A-2005A	LOOSE	016929	
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G: CODE CONTROLS - Consult local authorities for all code requirements

G-1: CSD-1/GE GAP

P 1005A-2005A ADD C-6

G-2: VENT VALVE COMBO (Includes M-10)

P 1005A/1505A

G-2: VENT VALVE COMBO (Includes M-10)

P 2005A

G-4: ILLINOIS SCHOOL (LWCO only)

P 1005A-2005A COMPLIES

G-7: NEW MEXICO STATE CODE CONTROLS

P 1005A-2005A COMPLIES

G-8: WASHINGTON STATE CODE CONTROLS

P 1005A-2005A COMPLIES

G-9: KENTUCKY STATE CODE CONTROLS

P 1005A-2005A COMPLIES

G-10: POST OFFICE CODE CONTROLS

P 1005A-2005A USE C-6

G-11: FACTORY MUTUAL CODE CONTROLS

P 1005A-2005A COMPLIES

G-12: CALIFORNIA CODE CONTROLS

P 1005A-2005A COMPLIES

PROFESSIONAL INDIRECT OPTIONS

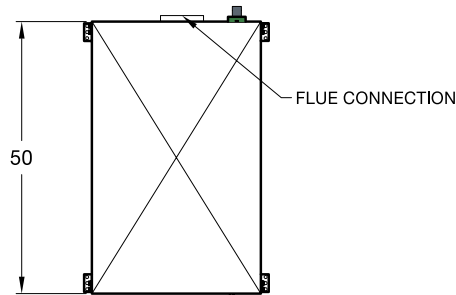
PART SHIPPING LIST

MODEL	DESCRIPTION	PART NUMBER	SHIPPING WEIGHT (LBS)
M-1: SAFETY VALVES, MOTORIZED MOUNTED			
P 1005A-1505A			
P 2005A			
M-10: SAFETY VALVES, SOLENOID MOUNTED			
P 1005A/1505A			
P 2005A			
M-15: VENT VALVE			
P 1005A-2005A			
P-172: FLANGE KIT CPVC			
P 1005A	4" PIPE SIZE	017025	
P 1505A	6" PIPE SIZE	017026	
Z-12: CONDENSATE NEUTRALIZER			
P 1005A		012050	
P 1505A/2005A		012051	

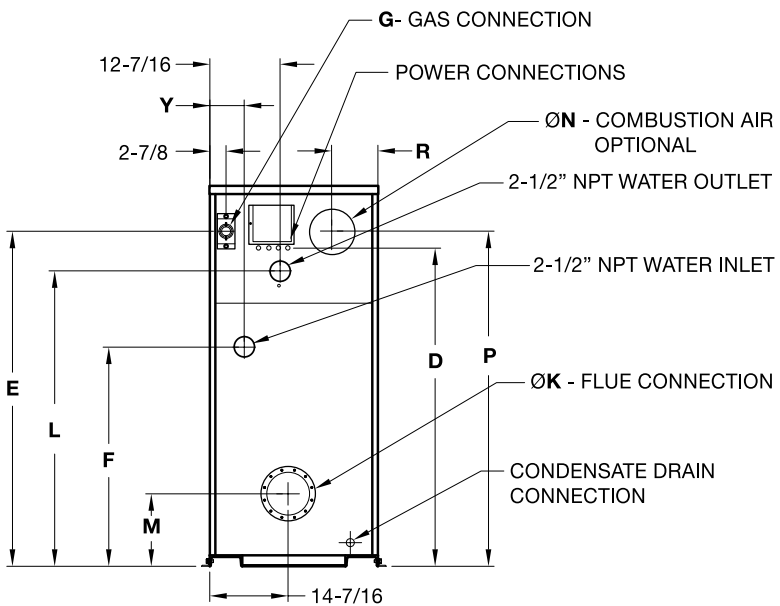
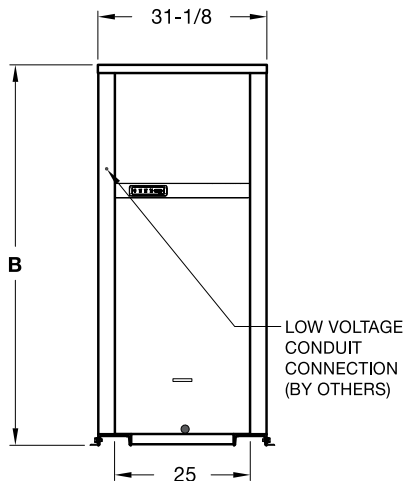


XTHERM 1005A-2005A

- 97% efficiency
- Low NOx
- Compact footprint >11 FT2
- Fan-assisted combustion design
- Indoor/outdoor installation
- Touchscreen Display
- Cupro-nickel fin tubes-primary
- Stainless Steel-secondary
- Bronze headers/CPVC Plumbing
- Built-in Cold Water Run
- Bronze pump
- CAT IV - venting



Model (WHP-)	RATES OF FLOW (GPM)			
	Maximum Flow		Minimum Flow	
	GPM	DT (°F)	GPM	DT (°F)
1005A	113	17	47	40
1505A	113	25	71	40
2005A	116	33	95	40



Model	MBTUH		Dimensions (in.)												Amp Draw		Ship Wt. (Lbs.)
	Input	Output	B Height	D	E	F	G* NPT	K Flue ø	L	M	N C/A ø	P	R	Y	Heater	Pump	
1005A	999	969	55-1/8	45	47-1/8	36-1/2	1-1/4	6	40-1/16	11-1/2	6	47-1/8	8-1/16	6-1/16	12	10	1065
1505A	1500	1455	67-1/8	57	59-1/16	38-1/2	1-1/4	8	52-1/16	12-5/8	8	59-1/8	8-3/16	6-1/16	12	14	1234
2005A	1999	1939	81-1/8	71	71-3/16	38-1/2	2	8	64-1/16	12-5/8	8	73-1/8	8-3/16	6-1/4	18	17	1461

MODEL	GAS	ELEVATION (feet)	PART NUMBER	SHIPPING WEIGHT (LBS)
P 1005A	Natural	0-4500	014391	1065
P 1505A	Natural	0-4500	014392	1234
P 2005A	Natural	0-4500	014393	1461
P 1005A	Propane	0-4500	014394	1065
P 1505A	Propane	0-4500	014395	1234
P 2005A	Propane	0-4500	014396	1461

Note: List price does not include Vent Termination Cap or Well Assy.



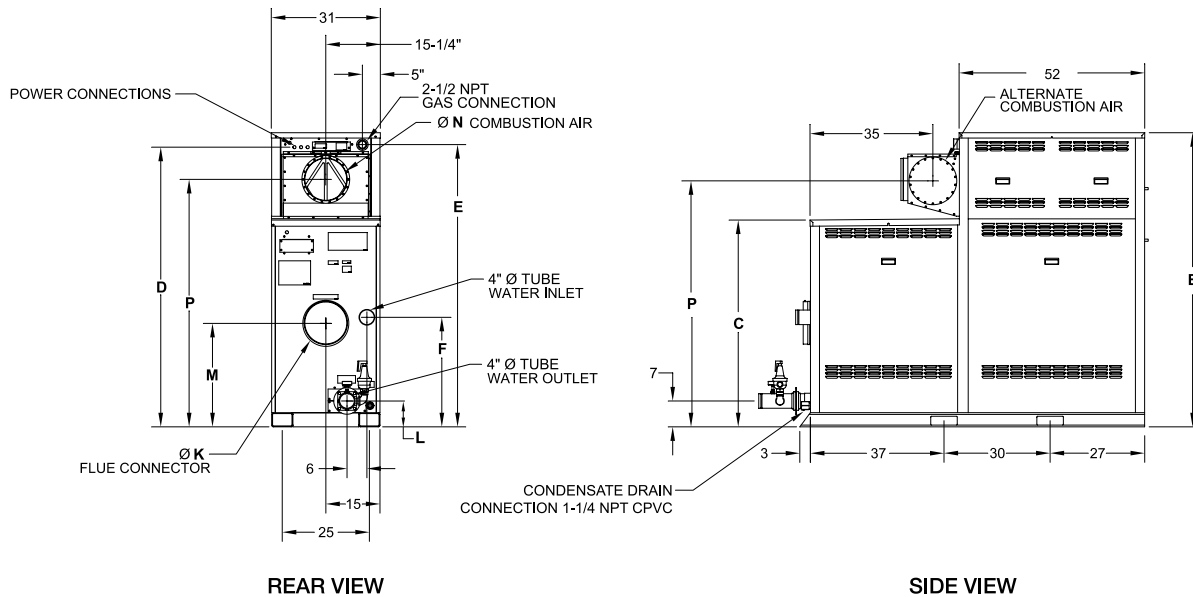
For Parts reference the Illustrated Parts List at the back of this products I&O Manual, or Scan Code



XTHERM 3005-4005

- 97% efficiency
- Low NOx
- Small footprint >21 FT2
- Fan-assisted combustion design
- Indoor/outdoor installation
- Touchscreen Display
- Cupro-nickel fin tubes-primary
- Stainless Steel-secondary
- Bronze headers
- Built-in Cold Water Run
- Bronze pump
- CAT IV - venting

Sys Ret Temp (#F)	Model 3005 (30°F Delta T)			Model 3505 (32°F Delta T)			Model 4005 (33°F Delta T)		
	Supply Temp (#F)	Flow GPM	Pipe Max Eq Ft	Supply Temp (#F)	Flow GPM	Pipe Max Eq Ft	Supply Temp (#F)	Flow GPM	Pipe Max Eq Ft
			4"			4"			4"
60	146	67	110	148	76	100	144	91	100
80	146	87	110	148	99	100	144	120	100
100	146	125	110	148	140	100	144	175	100



Model	MBTUH		Dimensions (in.)									Amp Draw		Ship Wt. (Lbs.)
	Input	Output	B Height	C	D	E	F	K Flue ø	M	N C/A ø	P	Heater	Pump	
3005	3000	2931	73-1/4	48-1/2	69-1/8	70	26-1/4	10	23-1/2	10	59-1/2	15	16	2775
3505	3500	3419	78-1/4	53-1/2	74	75	31-1/4	10	28-1/2	12	64-3/4	17	16	2925
4005	3999	3908	83-1/4	58-1/2	79	80	31	12	29-1/4	12	69-5/8	20	24	3058

MODEL	GAS	ELEVATION (feet)	PART NUMBER	SHIPPING WEIGHT (LBS)
P 3005	Natural	0-4500	015952	2775
P 3505	Natural	0-4500	015953	2925
P 4005	Natural	0-4500	015954	3058
P 3005	Propane	0-4500	015956	2775
P 3505	Propane	0-4500	015957	2925
P 4005	Propane	0-4500	015958	3058

Note: List price does not include Vent Termination Cap or Well Assy.



For Parts reference the Illustrated Parts List at the back of this products I&O Manual, or Scan Code

XTERM OPTIONS

PART SHIPPING LIST

MODEL	DESCRIPTION	PART NUMBER	SHIPPING WEIGHT (LBS)
B-31: WELL ASSEMBLY			
P 1005A-4005A	Loose and Separate	011932	1
Note: This well assembly can be used with the system sensor.			
BAS/BMS Gateway Protocol Converter (Only Works with VERSA IC)			
B-85	BACnet MS/TP, BACnet IP, Metasys N2 or Modbus TCP (Loose)	014691	
B-86	LonWorks (Loose)	014692	
B-36 / 38: TEMP-TRACKER MOD+ CONTROLLERS			
B-36 P 1005A-4005	Up to four units	011922	6
B-37 P 1005A-4005	Up to ten units	011923	16
B-38 P 1005A-4005	Up to 16 units	011924	21
Note:			
1. B-36 is the basic unit. B-37 is the basic unit plus one expansion module. B-38 is the basic unit plus two expansion modules.			
2. B-36, 37 and 38 include two sensors and include lead/lag.			
C-6: LOCKOUT IGNITION MODULE - SINGLE TRY MANUAL RESET			
P 1005A-4005	Mounted		1
Note: Three Try standard.			
D-11: OUTDOOR VENT CAP			
P 1005A		015785	22
P 1505A/2005A		015786	30
P 3005-3505		015278	
P 4005		015279	
D-15: SIDEWALL VENT TERMINATION CAP			
P 1005A	6"	006644	6
P 1505A/2005A	8"	006646	13
P 3005-3505		006650	
P 4005		007989	
Note: Use for horizontal venting only.			
D-18: BOILER FLUE ADAPTER, CAT III & IV			
P 1005A		007005	6
P 1505A/2005A		007006	8
P 3005-4005			
D-19: FLUE TERMINATION CAP ADAPTER			
P 1005A		007015	2
P 1505A/2005A		007016	2
P 3005-3505		007017	
P 4005		007018	
D-23: FLUE SUPPORT BRACKETS (Outdoor Only)			
P 1005A-3505		012185	
P 4005		012186	
D-32: PVC VENTING ADAPTOR (Factory Mounted Only)			
P 1005A		075321	
P 1505A/2005A		075322	
P 3005-4005		N/A	

XTHERM OPTIONS

PART SHIPPING LIST

MODEL	DESCRIPTION	PART NUMBER	SHIPPING WEIGHT (LBS)
D-33: POLYPROPYLENE VENTING ADAPTOR (Includes 2 plus Vent Limit)			
P 1005A	6"	013736	
P 1505A/2005A	8"	013737	
P 3005-3505		015762	
P 4005		015761	
D-37: MOTORIZED DAMPER			
P 1005A	6"	004711	
P 1505A/2005A	8"	004936	
P 3005-3505	10"	012687	
P 4005	10"	016660	
E-5: ALARM CENTER			
P 1005A-4005	4" BELL MOUNTED		
E-5: ALARM WITH BUZZER			
P 1005A-2005	MOUNTED	078767	
P 1005A-2005	LOOSE	016997	
F-10: LOW WATER CUTOFF - REMOTE TYPE			
P 1005A-2005A	MANUAL RESET	073547	
P 3005-4005	MANUAL RESET		

Note: Manual Reset, Test Button, Test Indicator Light on Circuit Board.

G: CODE CONTROLS - Consult local authorities for all code requirements

G-1: CSD-1/GE GAP

P 1005A-2005A

G-1: CSD-1/GE GAP

P 3005-4005

G-2: VENT VALVE COMBO

P 1005A/1505A

G-2: VENT VALVE COMBO

P 2005A

G-2: VENT VALVE COMBO

P 3005-4005

G-4: ILLINOIS SCHOOL

P 1005A-4005

G-8: WASHINGTON STATE CODE CONTROLS

P 1005A-4005

G-12: CALIFORNIA CODE CONTROLS

P 1005A-4005

G-15: CSD-1 FIELD UPGRADE

P 1005A-4005

G-15: CSD-1 FIELD UPGRADE

P 3005-4005

X THERM OPTIONS

PART SHIPPING LIST

MODEL	DESCRIPTION	PART NUMBER	SHIPPING WEIGHT (LBS)
M-1: SAFETY VALVES, MOTORIZED MOUNTED			
P 1005A-1505A			
P 2005A			
P 3005-4005			
M-10: SAFETY VALVES, SOLENOID MOUNTED			
P 1005A/1505A			
P 2005A			
P 3005-4005			
M-15: VENT VALVE			
P 1005A-2005A			
P 3005-4005			
Note: Must use M1 or M10 with this option.			
S-1: LOW GAS PRESSURE SWITCHES			
S-2: HIGH GAS PRESSURE SWITCHES			
S-3: LOW WATER PRESSURE SWITCHES			
Z-9: THERMOMETER			
	BRASS 1/2" VERTICAL	067538	
Z-12: CONDENSATE NEUTRALIZER			
P 1005A		012050	
P 1505A/2005A		012051	
P 3005-4005		015206	

SECTION 3

APPENDIX

HEAT LOSS CALCULATION	40
RESIDENTIAL HEATER SIZING	41
COMMERCIAL HEATER SIZING	42
STANDARD EQUIPMENT SPECIFICATIONS	43

HEAT LOSS CALCULATION

HEAT LOSS FROM WATER SURFACE IN POOLS AND SPAS

		AIR VELOCITY (MILES PER HOUR)							
		0	0.35	0.68	1.6	3.4	6.81	13.63	34.09
AIR	WATER	HEAT LOSS, BTUH PER SQUARE FOOT							
80°F	80°F	17	34	40	49	66	106	185	330
	100°F	50	96	113	135	186	280	460	920
	110°F	210	265	320	380	540	780	1250	2550
70°F	80°F	47	72	82	99	138	210	347	690
	100°F	127	183	216	242	332	495	805	1610
	110°F	250	327	370	430	602	690	1425	2925
60°F	80°F	78	110	125	150	210	315	510	1050
	100°F	205	270	320	350	480	710	1150	2300
	110°F	290	370	420	480	670	1000	1600	3300
50°F	80°F	106	140	160	187	260	382	615	1255
	100°F	232	292	340	385	540	785	1275	2550
	110°F	320	395	445	515	670	1065	1740	3500

HEAT LOSS FROM WATER SURFACE AT VARIOUS AIR AND WATER TEMPERATURES AND AIR VELOCITIES AT 70% HUMIDITY.

RESIDENTIAL HEATER SIZING

How to Pick the Right Size Heater

Proper heater size is based on the time required to heat the pool or spa. If water is heated for each intended use, energy-saving rapid heating may be appropriate. If water is gradually heated to the desired temperature and then maintained at that temperature, a smaller heater may be acceptable. To determine proper heater size, use the following formula.

- A. Desired water temperature _____ °F
- B. (Minus) Average air temperature _____ °F
- C. (Equals) Total heat rise _____ °F
- D. Total heat rise/hours required to heat equals required heat rise per hour.

Use the charts below to find the appropriate heater for your pool or spa.

NUMBER IN THE TABLE IS REQUIRED HEAT RISE PER HOUR (°F).

					Pool Size - Surface Area in Square Feet							
					Degree Rise per Hour							
Product Name	Model Number/s	Input (BTU/HR)	Thermal Efficiency	Output	300	400	500	600	700	800	900	1000
Spa Gas Heater	106	105,000	82%	86100	0.9	0.7	0.6	0.5	0.4	0.3	0.3	0.3
Spa Gas Heater	156	150,000	82%	123000	1.3	1.0	0.8	0.7	0.6	0.5	0.4	0.4
Digital Gas Pool/Spa Heater	206/207	199,500	82%	163590	1.7	1.3	1.0	0.9	0.7	0.7	0.6	0.5
Digital Gas Pool/Spa Heater	266/267/268	266,000	82%	218120	2.3	1.7	1.4	1.2	1.0	0.9	0.8	0.7
Digital Gas Pool/Spa Heater	336/337	332,500	82%	272650	2.9	2.2	1.7	1.5	1.2	1.1	1.0	0.9
Digital Gas Pool/Spa Heater	406/407/408	399,000	82%	327180	3.5	2.6	2.1	1.7	1.5	1.3	1.2	1.0
X94 Gas Heater	410	399,000	94%	375060	4.0	3.0	2.4	2.0	1.7	1.5	1.3	1.2
AVIA Gas Heater	264	264,000	84%	221760	2.4	1.8	1.4	1.2	1.0	0.9	0.8	0.7
AVIA Gas Heater	404	399,000	84%	335160	3.6	2.7	2.1	1.8	1.5	1.3	1.2	1.1
E3T 1PH Electric	5.5	18,772	99%	18659	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1
E3T 1PH Electric	11	37,543	99%	37318	0.4	0.3	0.2	0.2	0.2	0.1	0.1	0.1
E3T 1PH Electric	18	61,434	99%	61065	0.7	0.5	0.4	0.3	0.3	0.2	0.2	0.2
E3T 1PH Electric	27	92,151	99%	91598	1.0	0.7	0.6	0.5	0.4	0.4	0.3	0.3
E3T 3PH Electric	18	61,434	99%	61065	0.7	0.5	0.4	0.3	0.3	0.2	0.2	0.2
E3T 3PH Electric	24	81,912	99%	81421	0.9	0.7	0.5	0.4	0.4	0.3	0.3	0.3
E3T 3PH Electric	30	102,390	99%	101776	1.1	0.8	0.7	0.5	0.5	0.4	0.4	0.3
E3T 3PH Electric	45	153,585	99%	152663	1.6	1.2	1.0	0.8	0.7	0.6	0.5	0.5
E3T 3PH Electric	54	184,302	99%	183196	2.0	1.5	1.2	1.0	0.8	0.7	0.7	0.6

					Spa Size In Gallons							
					Degree Rise per Hour							
Product Name	Model Number/s	Input (BTU/HR)	Thermal Efficiency	Output	300	400	500	600	700	800	900	1000
Spa Gas Heater	106	105,000	82%	86100	34.5	25.8	20.7	17.2	14.8	12.9	11.5	10.3
Spa Gas Heater	156	150,000	82%	123000	49.2	36.9	29.5	24.6	21.1	18.5	16.4	14.8
Digital Gas Pool/Spa Heater	206/207	199,500	82%	163590	65.5	49.1	39.3	32.7	28.1	24.5	21.8	19.6
Digital Gas Pool/Spa Heater	266/267/268	266,000	82%	218120	87.3	65.5	52.4	43.6	37.4	32.7	29.1	26.2
Digital Gas Pool/Spa Heater	336/337	332,500	82%	272650	109.1	81.8	65.5	54.6	46.8	40.9	36.4	32.7
Digital Gas Pool/Spa Heater	406/407/408	399,000	82%	327180	130.9	98.2	78.6	65.5	56.1	49.1	43.6	39.3
X94 Gas Heater	410	399,000	94%	375060	150.1	112.6	90.1	75.0	64.3	56.3	50.0	45.0
AVIA Gas Heater	264	264,000	84%	221760	88.7	66.6	53.2	44.4	38.0	33.3	29.6	26.6
AVIA Gas Heater	404	399,000	84%	335160	134.1	100.6	80.5	67.1	57.5	50.3	44.7	40.2
E3T 1PH Electric	5.5	18,772	99%	18659	7.5	5.6	4.5	3.7	3.2	2.8	2.5	2.2
E3T 1PH Electric	11	37,543	99%	37318	14.9	11.2	9.0	7.5	6.4	5.6	5.0	4.5
E3T 1PH Electric	18	61,434	99%	61065	24.4	18.3	14.7	12.2	10.5	9.2	8.1	7.3
E3T 1PH Electric	27	92,151	99%	91598	36.7	27.5	22.0	18.3	15.7	13.7	12.2	11.0
E3T 3PH Electric	18	61,434	99%	61065	24.4	18.3	14.7	12.2	10.5	9.2	8.1	7.3
E3T 3PH Electric	24	81,912	99%	81421	32.6	24.4	19.5	16.3	14.0	12.2	10.9	9.8
E3T 3PH Electric	30	102,390	99%	101776	40.7	30.5	24.4	20.4	17.5	15.3	13.6	12.2
E3T 3PH Electric	45	153,585	99%	152663	61.1	45.8	36.7	30.5	26.2	22.9	20.4	18.3
E3T 3PH Electric	54	184,302	99%	183196	73.3	55.0	44.0	36.7	31.4	27.5	24.4	22.0

Note: Values calculated with an average pool depth of 5 ft.

Spa sizing is based on an insulated and covered spa. Always cover your spa when not in use to minimize heat loss and evaporation, and to decrease the time needed to heat the water. Heat absorbed by the spa walls or lost by evaporation will add to the heat-up time.

For precise heater sizing go to www.raypak.com

COMMERCIAL HEATER SIZING

Product Name	Model Number	Input (BTU/HR)	Thermal Efficiency	Output	Desired Temperature Rise (Degrees F)				
					20	25	30	35	40
Hi Delta	302	300,000	85%	255000	613	490	409	350	306
Hi Delta	402	399,000	85%	339150	815	652	544	466	408
Hi Delta	502	500,000	85%	425000	1022	817	681	584	511
Hi Delta	652	650,000	85%	552500	1328	1063	885	759	664
Hi Delta	752	750,000	85%	637500	1532	1226	1022	876	766
Hi Delta	902	900,000	85%	765000	1839	1471	1226	1051	919
Hi Delta	992	990,000	85%	841500	2023	1618	1349	1156	1011
Hi Delta	1262	1,260,000	85%	1071000	2575	2060	1716	1471	1287
Hi Delta	1532	1,530,000	85%	1300500	3126	2501	2084	1786	1563
Hi Delta	1802	1,800,000	85%	1530000	3678	2942	2452	2102	1839
Hi Delta	2002	1,999,000	85%	1699150	4084	3268	2723	2334	2042
Hi Delta	2072	2,070,000	85%	1759500	4230	3384	2820	2417	2115
Hi Delta	2342	2,340,000	85%	1989000	4781	3825	3188	2732	2391
MVB	504	500,000	85%	425000	1022	817	681	584	511
MVB	754	750,000	85%	637500	1532	1226	1022	876	766
MVB	1104	1,100,000	85%	935000	2248	1798	1498	1284	1124
MVB	1504	1,500,000	85%	1275000	3065	2452	2043	1751	1532
MVB	2004	1,900,000	85%	1615000	3882	3106	2588	2218	1941
XTHERM	1005	999,000	97%	969030	2329	1864	1553	1331	1165
XTHERM	1505	1,500,000	97%	1455000	3498	2798	2332	1999	1749
XTHERM	2005	1,999,000	97%	1939030	4661	3729	3107	2664	2331
E3T 3PH Electric	18	61,434	99%	61065	147	117	98	84	73
E3T 3PH Electric	24	81,912	99%	81421	196	157	130	112	98
E3T 3PH Electric	30	102,390	99%	101776	245	196	163	140	122
E3T 3PH Electric	45	153,585	99%	152663	367	294	245	210	183
E3T 3PH Electric	54	184,302	99%	183196	440	352	294	252	220

Note: Values calculated at 15 hrs. with an average pool depth of 5 ft.

HOW TO USE THIS TABLE

1. Select the desired temperature of the pool water.
2. Determine the mean (average) temperature of the coldest month in which the pool will be used.
3. Subtract the mean temperature from the desired swimming temperature. The difference is the temperature rise.
4. Calculate the surface area of the pool in square feet.
5. Under the column headed by the temperature rise, determined in Step 3, find the number closest to, but not less than, the pool surface area from Step 4. The left-hand column will give you the correct model heater.

RAPID HEATING

For 1-1/2°F rise per hour: Increase BTUH input by 50%.

For 2°F rise per hour: Increase BTUH input by 100%.

Always select a heater equal to or larger than the requirement. Over-sizing generally reduces fuel costs.

SIZING FORMULA

BTUH INPUT REQUIRED = (POOL AREA (SQUARE FEET)) X (TEMPERATURE RISE) X (15)

Formula is based on 1° to 1-1/4°F temperature rise per hour and 3-1/2 MPH average wind velocity. Where high-wind conditions exist, select one size larger than determined by formula.

STANDARD EQUIPMENT SPECIFICATIONS

HI DELTA

- 160 PSIG bronze headers
- Cupro-nickel fin tubes
- 2-pass heat exchanger
- Natural gas or propane gas
- VERSA IC® controller with LCD display
- Low gas pressure switch (Models 992-2342)
- Manual “A” valve
- Left-hand water
- Left-hand gas
- 125# pressure relief valve
- Limit control - adjustable automatic 140°
- Hot surface ignition - 3 try
- On-off firing
- Flow switch
- Bronze pump, mounted
- Pump time delay relay
- Design certified to ANSI-Z21.56 (HLW)
- Non-ferrous bypass assembly

MVB

- 160 PSIG bronze headers
- Cupro-nickel fin tubes
- Non-ferrous waterway
- Non-ferrous bypass assembly
- 4-pass heat exchanger
- Natural gas or propane gas
- Manual “A” valve
- Rear connections-Water, Gas, Flue, Power
- Water Temperature Sensor (3) In/Out/Sys
- VERSA IC® controller with color touch screen display
- Full safety diagnostics with history
- Hot Surface Ignition
- Air Vent Mounted
- Immersion Well for system sensor
- Drain Valves (2)
- 125# pressure relief valve
- Limit control - automatic
- Limit control - manual
- Soft Start firing
- Flow switch
- Bronze pump mounted
- Footprint: Less than 4.5 square feet
- Design certified to ANSI-Z21.10.56 (504-1504)
- Design certified to ANSI-Z21.10.3 (2004)
- Flow switch-mounted
- Economaster II Pump Delay

XTHERM

- 160 PSIG bronze headers
- 97% Thermal efficiency at full rate
- Cupro-nickel finned tubing
- Brass headers
- Natural or propane gas
- 4-Pass heat exchanger
- VERSA IC® controller with color touch screen display
- 125# Pressure relief valve
- Adjustable auto limit
- Secondary stainless steel condensing heat exchanger
- Connections - rear water, gas flue and electrical, main power
- Water temperature sensor (3)
- Full safety diagnostics with history
- Pump-Off delay
- Hot surface ignition (HSI) three try
- Drain valves (2)
- T&P gauge - shipped loose
- ANSI Z21.10.3
- Flow switch
- Manual “A” valve
- Built-In cold water protection package



Learn more at raypak.com

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