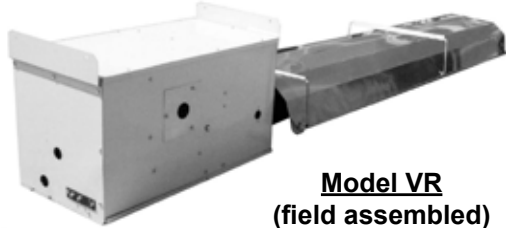


Replacement Parts

Applies to: **Infrared Heater**
Model VR and Models RIH/RIHV

Low-Intensity, Tubular, Infrared Heater



High-Intensity, Infrared Heater



Models RIH/RIHV

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References

See your local Distributor for the following manuals:

Form I-VR, Model VR Installation, Operation, Maintenance, and Service

Form T-VR-CNFG, Model VR Configuration Manual

Form CP-VR-GC, Model VR Gas Conversion


Form I-RIH, Model RIH/RIHV Installation, Operation, Maintenance, and Service

Rating Plate and Serial No. (Model VR)

Rating Plate Key:

- A** = Model
- B** = ANSI Certification
- C** = CSA Certification
- D** = Mfg Date (month & year)
- E** = Supply Voltage
- F** = Type of Fuel (natural gas or propane)
- G** = Burner Orifice Drill Size
- H** = Input (BTUH)
- I** = Manifold Pressure (" w.c.)
- J** = Minimum Gas Supply (inches w.c.)
- K** = Clearances to Combustibles—Burner End
- L** = Clearance to Combustibles—Heat Exchanger Bend
- M** = Clearance to Combustibles—Below
- N** = Clearance to Combustibles—Front/Rear, 0–30° Reflector
- O** = Clearance to Combustibles—Front/Rear, 31–45° Reflector
- P** = Clearance to Combustibles—Front/Rear, 0–30° Reflector with Side Shield

MERCER, PA. USA 16137




MADE IN MEXICO
 INFRARED RADIANT TUBE HEATER
 FOR INDUSTRIAL/COMMERCIAL USE ONLY
 FOR INDOOR INSTALLATION ONLY. NOT FOR USE IN RESIDENTIAL DWELLINGS CERTIFIED UNDER ANSI Z83.20b - [B] CSA 2.34b - [C]
 LOW INTENSITY INFRARED HEATER
 MODEL [A]
 SERIAL # [C]
 [E] VOLTS [E] PH [E] HZ MAXIMUM TOTAL INPUT [E] AMPS
 TYPE OF GAS [F]
 FOR USE AT 0-2000 FEET, 0-610 METERS OF ALTITUDE
 ORIFICE SIZE [G] DRILL
 NORMAL INPUT [H] BTU/HR
 NORMAL MANIFOLD PRESSURE [I] IN. W.C.
 MIN PERMISSIBLE AS SUPPLY PRESSURE FOR PURPOSE OF INPUT ADJUSTMENT [J] IN. W.C.

CLEARANCE TO COMBUSTIBLE CONSTRUCTION: TOP - 12"; FLUE CONNECTION - 6"; BURNER END [K]; EXHAUST END - 24"; HEAT EXCHANGER BEND (U OR L) [L]
 *18" IF UNVENTED

REFLECTOR	MAX MOUNTING ANGLE	BELOW	(FRONT/ REAR)
STANDARD REFLECTOR	0 TO 30 DEG	[M]	[N]
STANDARD REFLECTOR	31 TO 45 DEG	[M]	[O]
STANDARD REFLECTOR W/SIDE SHIELDS (ONE SIDE ONLY)	0 TO 30 DEG	[M]	[P]

THIS UNIT CAN BE INSTALLED IN VARIABLE CONFIGURATIONS AS SPECIFIED IN THE MANUFACTURER'S FORM T-VR-CNFG.
 FOR STRUCTURES LISTED BELOW, USE APPLICABLE STANDARDS.
 INSTALLATION OF THIS UNIT IN AIRCRAFT HANGARS IN CANADA MUST BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE ENFORCING AUTHORITIES.
 IN PUBLIC GARAGES, IN ACCORDANCE WITH THE CAN/CGA-B149 (1 OR 2) CODES IN CANADA.
 AIRCRAFT HANGARS USE STANDARD ANSI/NFPA 409 IN THE USA
 PARKING STRUCTURES USE STANDARD ANSI/NFPA 88A IN THE USA
 REPAIR GARAGES USE STANDARD ANSI/NFPA 88B IN THE USA
 FOR USE WITH TYPE L VENT
 FOR INDOOR INSTALLATION ONLY
 THIS UNIT IS FOR USE WITH NATURAL GAS AND PROPANE
 A CONVERSION KIT AS SUPPLIED BY THE MANUFACTURER SHALL BE USED TO CONVERT THE HEATER TO THE ALTERNATE FUEL.

MERCER, PA. USA 16137



FABRIQUÉ AU MEXIQUE
 INFRARED RADIANT TUBE HEATER
 POUR USAGE INDUSTRIEL/COMMERCIAL SEUL
 INSTALLATION À L'INTÉRIEUR SEULEMENT. NE PAS INSTALLER DANS UN LOGEMENT. CERTIFIÉ UNDER ANSI Z83.20b - [B] CSA 2.34b - [C]
 LOW INTENSITY INFRARED HEATER
 MODELE [A]
 #DE SÉRIE [D]
 [E] VOLTS [E] PH [E] HZ CONSOMMATION TOTALE MAX. DE [E] AMPS
 TYPE DE GAZ [F]
 PRÉVU POUR 0-2000 PIEDS, 0-610 MÈTRES D'ALTITUDE
 DIMENSION DE L'ORIFICE [G] FORET
 ENTRÉE NORMALE [H] BTU/HEURE
 PRESSION NORMALE DE LA TUB [I] PO/COL D'EAU
 PRES. D'ALIM. MI. ACCEPTABLE DE GAZ POUR DES FIN DE RÉGLAGE DE L'ENTRÉE [J] PO/COL D'EAU
 DÉGAGEMENT ENTRÉE LES CONSTRUCTIONS COMBUSTIBLES: EN HAUT - *12 PO, RACCORD DE TUYAUX - 6 PO, CÔTÉ BRULEUR - [K]; CÔTÉ ÉVACUATION - 24 PO, COUDE D'ÉCHANGEUR (U OR L) [L]
 *18 PO SI NON VENTILÉ

REFLECTEUR	ANGLE DE MONTAGE MAX.	DESSOUS	(AVANT/ ARRIÈRE)
RÉFLECTEUR STANDARD	0 À 30 DEG	[M]	[N]
RÉFLECTEUR STANDARD	31 À 45 DEG	[M]	[O]
RÉFLECTEUR STANDARD AVEC CÔTÉ ÉCRANS (UN CÔTÉ SEULEMENT)	0 À 30 DEG	[M]	[P]

CET APPAREIL PEUT ÊTRE INSTALLÉ SELON DES CONFIGURATION VARIABLES COMME IL EST STIPULÉ DANS LE FORMULAIRE T-VR-CNFG DU FABRICANT
 L'INSTALLATION DE UNITÉ DANS CES GARAGES D'AVIONS DOIT SE CONFORMER AUX CONDITIONS DES AUTORITÉS CHARGÉES DE FAIRE.
 APPLIQUER LA LOI. L'INSTALLATION DANS DES GARAGES PUBLICS DOIT SE CONFORMER AU CODE CAN/CGA-B149 (.1 OU 2).
 S'UTILISE AVEC UN ÉVÉNEMENT DE TYPE L.
 FOR INDOOR INSTALLATION ONLY
 CET APPAREIL POUR UTILISATION AVEC LE GAZ NATURAL ET LE PROPANE.
 UNE TROUSSE DE CONVERSION FOURNIE PAR LE FABRICANT UNE TROUSSE DE CONVERSION FOURNIE PAR LE FABRICANT

Serial No. Decoding

Example:

B	J	K	8	0	6	A	N	1	2	3	4	5
1	2	3	4	5	6	7	8	9	0	1	2	3

- CODES:**
- 1 = Date of manufacture (see chart below)
 - 2 = Type of ignition
 - 3 = Type of valve
 - 4 = Type of gas (N= Natural; L= Propane)
 - 5 = Consecutive number (for identification purposes only)

First Element of the Serial Number—Date of Manufacture (Model VR)

Year	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
2002	BBA	BBB	BBC	BBD	BBE	BBF	BBG	BBH	BBI	BBJ	BBK	BBL
2003	BCA	BCB	BCC	BCD	BCE	BCF	BCG	BCH	BCI	BCJ	BCK	BCL
2004	BDA	BDB	BDC	BDD	BDE	BDF	BDG	BDH	BDI	BDJ	BDK	BDL
2005	BEA	BEB	BEC	BED	BEE	BEF	BEG	BEH	BEI	BEJ	BEK	BEL
2006	BFA	BFB	BFC	BFD	BFE	BFF	BFG	BFH	BFI	BFJ	BFK	BFL
2007	BGA	BGB	BGC	BGD	BGE	BGF	BGG	BGH	BGI	BGJ	BGK	BGL
2008	BHA	BHB	BHC	BHD	BHE	BHF	BHG	BHH	BHI	BHJ	BHK	BHL
2009	BIA	BIB	BIC	BID	BIE	BIF	BIG	BIH	BII	BIJ	BIK	BIL
2010	BJA	BJB	BJC	BJD	BJE	BJF	BJG	BJH	BJI	BJJ	BJK	BJL
2011	BKA	BKB	BKC	BKD	BKE	BKF	BKG	BKH	BKI	BKJ	BKK	BKL
2012	BLA	BLB	BLC	BLD	BLE	BLF	BLG	BLH	BLI	BLJ	BLK	BLL
2013	BMA	BMB	BMC	BMD	BME	BMF	BMG	BMH	BMI	BMJ	BMK	BML
2014	BNA	BNB	BNC	BND	BNE	BNF	BNG	BNH	BNI	BNJ	BNK	BNL
2015	BOA	BOB	BOC	BOD	BOE	BOF	BOG	BOH	BOI	BOJ	BOK	BOL

Size Conversion Label (Model VR)—When servicing a heater with a rating plate reading Model VR75, VR125, or VR175, always look for a Size Conversion label.

- Rating Plate reads Model VR75 AND Size Conversion Label reads VR100 - Service heater as a Model VR100.
- Rating Plate reads Model VR125 AND Size Conversion Label reads VR150 - Service heater as a Model VR150.
- Rating Plate reads Model VR175 AND Size Conversion Label reads VR200 - Service heater as a Model VR200.

Example of a Size Conversion Label

* Minimum supply pressure is 5" w.c. for natural gas for Sizes 50–150; 6" w.c. for natural gas for Sizes 175–200; or 10" w.c. for propane gas for all sizes.

IMPORTANT

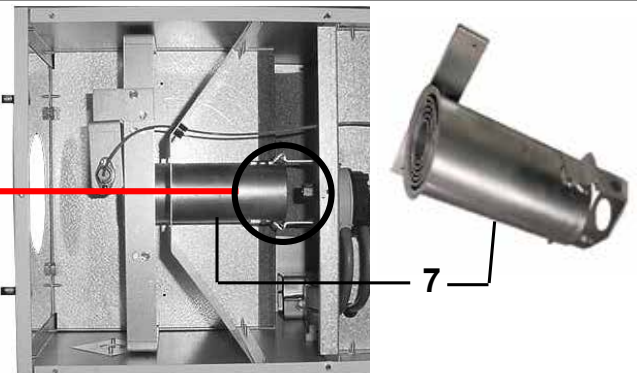
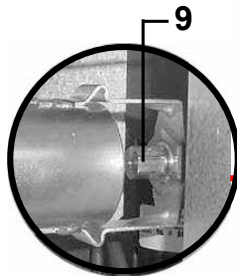
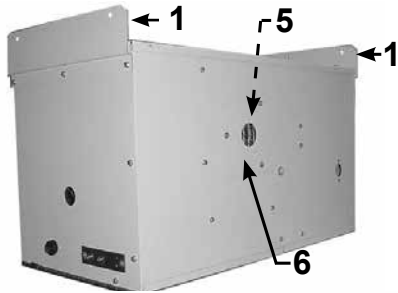
This appliance has been converted at the time of installation to a model
 Cet appareil a été converti au moment de l'installation en un modèle _____ (100, 150, or 200) _____
 by _____ with kit no. _____
 per _____ (name of service person or agency) _____ avec la kit n° _____ (Kit PN) _____
 which accepts the responsibility that this conversion has been properly made.
 ce qui accepte la responsabilité que cette conversion a été correctement faite.

Orifice Size Dimension de l'orifice _____ (New Orifice Size) Drill Foret _____
 Normal input Entrée Normale _____ (100,000; 150,000; or 200,000) BTU/HR _____
 Minimum permissible gas supply pressure for purpose of input adjustment _____ (*) in. w.c. _____
 Pres. D'alim. Min. acceptable de gaz pour des fin de réglage de l'entrée _____ (*) PO/COL D'eau _____

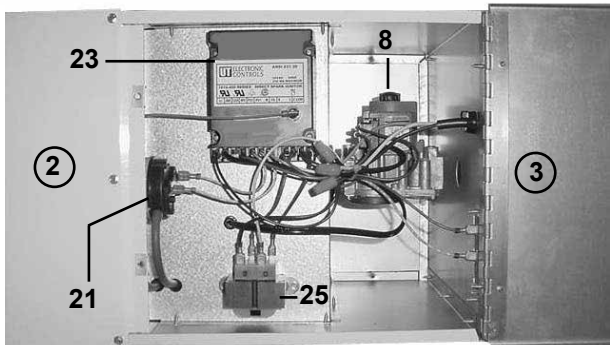
Replacement Parts—Model VR

Code	Description	Qty	50	75	100	125	150	175	200		
				75/100		125/150		175/200			
1	Burner/Control Box Hanger	2	203954								
2	Burner Box Access Panel with Gaskets	1	205415								
3	Control Compartment Door w/Hinge and Latch	1	205414								
4	Receptacle Portion of the Door Latch (on box)	1	196336								
5	Combustion Air Inlet Screen	1	203974								
6	Combustion Air Restrictor Plate	115/1/60	1	203967	203968	203969	203970	203971	203972	203973	
		208-230/1/60or50	1	203967	203968	203969	203970	203971	205539	—	
7	Main Burner Assembly	1	204120					204121			
8	Combination Gas Valve (for PN and Serial No. Code, see page 2)	Natural Gas	1	260604 (7E) (replaces 147830(U2))				204301 (6A)			
		Propane Gas	1	260606 (8E) (replaces 147560(U3))							
9	Burner Orifice	Natural Gas	1	120147	131579	205430	205431	120165	205432		
		Marking		#29	4.25 mm	#11	#2	D		J	
		Propane Gas	1	124966	196852	196854	196838	120149	205433	205434	
		Marking		#45	#39	3 mm	#30	#27	5/32"	4.3 mm	
10A	Orifice Adapter	1	165701								
10B	Brass Pipe Nut	1	165702								
11	Input Conversion Bag (in 75/100, 125/150, 175/200 Boxes ONLY—converts 75 to 100, 125 to 150, and 175 to 200)	Natural Gas	1	—	205504	—	205506	—	205508	—	
		Propane	1	—	205505	—	205507	—	205509	—	
12	Gas Conversion Kit	Nat to Pro	1	269842		269843		269844			
		Pro to Nat	1	269856		269857		269858			
13	Venter Housing	1	204116								
14	Sensing Tube Bracket and Tube Assembly	1	203938								
15	Venter Wheel	115/1/60	1	195036			120545		132007		
		208-230/1/60or50	1	195036			120545		135980	—	
16	Venter Motor	115/1/60	1	148055		214067 w/capacitor		214066 w/capacitor			
		208-230/1/60or50	1	148054				161416 w/capacitor		—	
17	Venter Motor Capacitor	115/1/60	1	—							
		208-230/1/60or50	1	—							
18	Venter Motor Plate	1	204119	120997		132019					
19	Spirol Spacer	115/1/60	4	97721		97722		—			
		208-230/1/60or50	4	97722							
20	Venter Motor Clip	115/1/60	2	262441		262442		194805			
		208-230/1/60or50	2	262441		262442		—			
21	Pressure Switch	0-6000 ft	1	205442 (white label)		205443 (yellow label)		205444 (green)			
		Above 6000 ft	1	205445 (grey label)		205446 (pink label)		205444 (green)			
22	High Altitude Kit (Option DJ20)	Above 6000 ft	1	205524		205525		—			
23	DSI Ignition Control, UTC #1016-426	1	204955								
24	DSI Electrode Assembly	1	204611								
25	Transformer	115/1/60	1	175265, 30 VA							
		208-230/1/60or50	1	194536, 40 VA							
26	Relay (optional; required with outside air)	1	18549 (for units mfgd before AUG 2011, order Relay Replacement Kit, PN 263527)								
27	Terminal Strip, 2-pole, 24V	1	96041								
28	Vinyl Grommet for Gas Pipe	1	102607								

Burner/Control Box



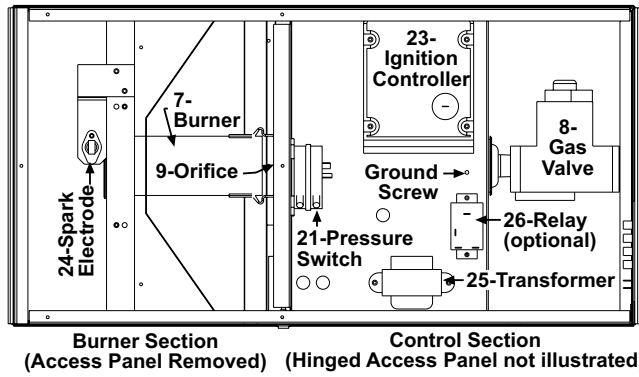
Burner Section—Bottom View with Access Panel Removed



Control Compartment—Bottom View with Door Open and Burner Section Access Panel Closed

**Replacement Parts—
Model VR (cont'd)**

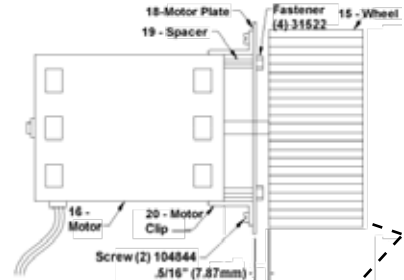
**Model VR
Burner/Control Box
(cont'd)—see PN
on page 3**



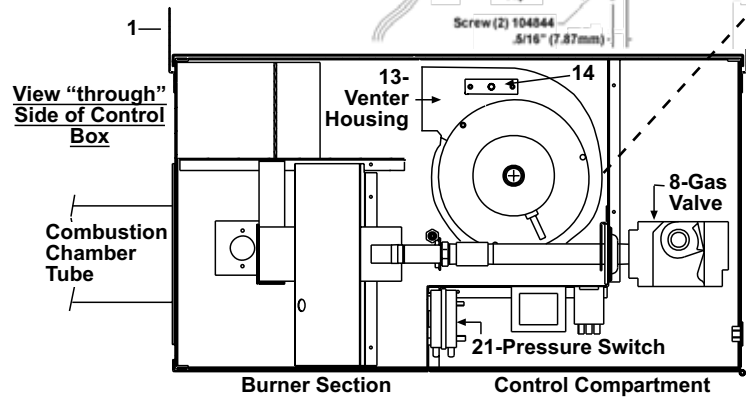
**Bottom View
with Access
Panels
Removed**

27-Terminal
Board, 24V

**Venter Motor and
Wheel Components**



<p>CODE 17 - Venter Motor Capacitor</p>	<p>CODE 24 - DSI Ignition Electrode</p>
<p>CODE 21 - Pressure Switch</p>	
<p>CODE 25 - Transformer</p>	<p>CODE 26 - Relay</p>
	<p>CODE 27 - 24V Terminal Strip</p>

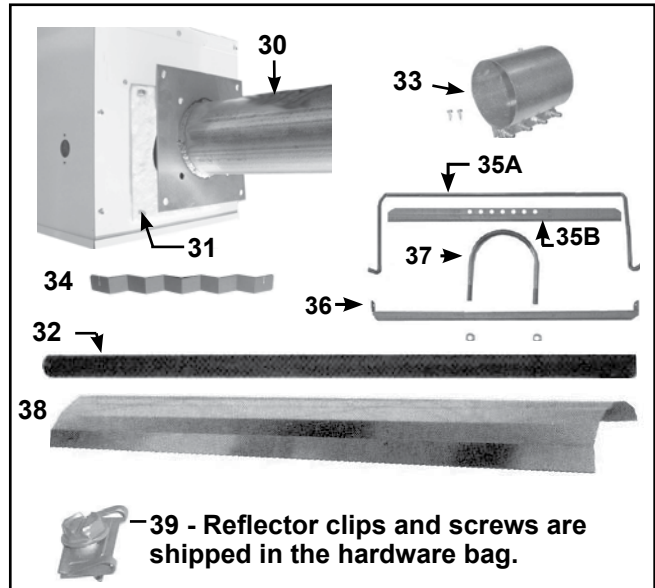


Model VR Tubes, Reflectors, and Options

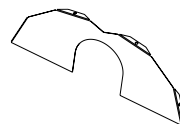
Code	Description	All Sizes
30	Combustion Chamber Tube	205545
31	Combustion Chamber Tube Gasket	116029
32	10-ft Heat Exchanger Tube	205541
33	Compression Coupling w/all Hardware (coupling is used for all tube to tube connections & tube to vent pipe)	205546
34	Turbulator Section	116019
35A	Wire Reflector Retainer	Replaces PN 205543
35B	Tube and Reflector Hanger Bar	209322
36	Reflector Bracket	205586
37	"U" Bolt with brass nuts	131785
38	10-ft Reflector (NOTE: As of JUN 2012, Model VR reflectors are made of aluminized steel and may be used to replace aluminum reflectors.)	268220
39	Clip-on, spring steel receptacle nut	196336

Tube Packages include tubes, reflectors, and hardware				
Package ID	VRE	VRF	VRG	VRH
Package PN	205204	205205	205206	205151
Required for 20-foot length	1	—	—	—
Required for 30-foot length	—	1	—	—
Required for 40-foot length	1	—	1	—
Required for 50-foot length	1	—	—	1
Required for 60-foot length	—	1	—	1
Required for 70-foot length	—	1	2	—

PNs and Components of the Hardware Packages included in Tube Packages VRE, VRF, VRG, & VRH listed above								
Tube Pkg	Replacement Hardware Pkg	Qty of Components by Code						Plus each hardware package includes (6) #10 × 1/2" sheetmetal screws, PN 11813, and (4) #10 × 1/2" long Teks, PN 37661
		33	34	35A&B	36	37	39	
VRE	PN 209401	2	4	3	3	3	2	
VRF	PN 209402	3	3	4	4	4	2	
VRG	PN 209403	2	1	2	2	2	2	
VRH	PN 209404	3	2	3	3	3	2	

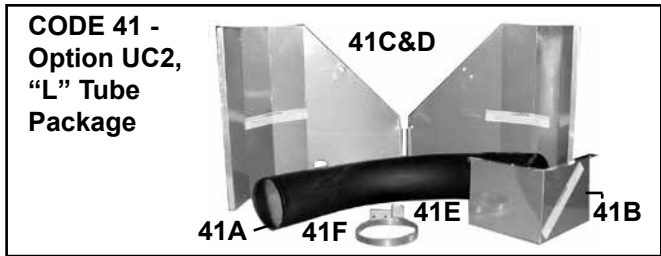


**CODE 40 -
Reflector End
Cover**

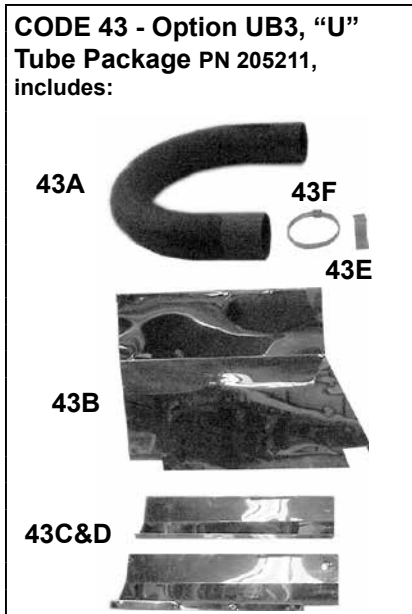


Option Designation	CD27	
Option Package PN	205762	
Description	Qty	PN
Reflector End Cover	2	268218
Screw, #10-32 × 1/2" long	8	113275
Nut, #10-32 (Keps)	8	26490

CODE 41 - Option UC2, Package PN 205217, includes:			
Code	Qty	PN	Description
"L" Tube and Reflector Parts			
41A	1	205218	"L" Heat Exchanger Tube
41B	1	268219	"L" Reflector Side
41C	1	268225	"L" Reflector Half Right
41D	1	268226	"L" Reflector Half Left
41E	1	120677	"L" Tube Reflector Bracket (in parts bag)
Coupling and Hardware for Tube Connection			
Same as CODE 33	1	205546	Compression Coupling
	2	37661	Self-Drilling Screw, #10 × 1/2" (shipped in parts bag below)
Wire Reflector Retainer, Hanger Bar, Tube Bracket, and U-Bolt			
Same as CODES 35A, 35B, 36, & 37	1	209321	Wire Reflector Retainer (Replaces 205543)
	1	209322	Hanger Bar
	1	205586	Reflector Bracket
	1	131785	U-Bolt, w/Brass Nuts (in parts bag below)
"L" Tube Kit Hardware Bag, PN 205723 (includes items below plus items above that indicate they are shipped in parts bag)			
—	15	113275	Screw, #10-32 × 1/2" long
	15	26490	Nut, #10-32 (Keps)
	2	113807	Washer
41F	1	120716	Stainless Worm-drive Clamp, 1/2"
Same as CODE 39	2	196336	Receptacle Nut, clip-on, spring steel
	2	11813	Sheetmetal Screw, #10 × 1/2"



CODE 42 - Option UA1, 5-ft Tube, Pkg PN 205207, includes:			
Code	Qty	PN	Description
5 ft Tube and Reflector			
5 ft Lengths of CODES 32 & 38	1	205208	5-ft Heat Exchanger Tube
	1	268221	5-ft Reflector
Coupling and Hardware for Tube Connection			
Same as CODE 33	1	205546	Compression Coupling
	2	37661	Self-Drilling Screw, #10 × 1/2" (parts bag below)
Wire Retainer, Hanger Bar, Tube Bracket, U-Bolt			
Same as CODES 35A, 35B, 36, & 37	1	209321	Reflector Retainer (replaces 205543)
	1	209322	Hanger Bar
	1	205586	Reflector Bracket
	1	131785	U-Bolt, w/brass nuts (in parts bag)
"5-ft" Tube Kit Hardware Bag, PN 205721 (includes items below plus items above that indicate they are shipped in parts bag)			
Same as CODE 39	2	196336	Receptacle Nut, Clip-On
	2	11813	Sheetmetal Screw, #10 × 1/2"



CODE 43 - Option UB3, "U" Tube Package PN 205211, includes:			
Code	Qty	PN	Description
"U" Tube and Reflector Parts (see NOTE on page 4 about replacement reflectors)			
43A	1	205212	"U" Heat Exchanger Tube
43B	1	268222	Reflector Top
43C	1	268223	Reflector Right Side
43D	1	268224	Reflector Left Side
43E	1	120677	"U" Tube Reflector Bracket (shipped in parts bag below)
Coupling and Hardware for Tube Connection			
Same as CODE 33	1	205546	Compression Coupling
	2	37661	Self-Drilling Screw, #10 × 1/2" (shipped in parts bag below)
Wire Reflector Retainer, Hanger Bar, Tube Bracket, and U-Bolt			
Same as CODES 35A, 35B, 36, & 37	1	209321	Wire Reflector Retainer (replaces PN 205543)
	1	209322	Hanger Bar
	1	205586	Reflector Bracket
	1	131785	U-Bolt, w/brass nuts (in parts bag below)
"U" Tube Kit Hardware Bag, PN 205722 (includes items below plus items above that indicate they are shipped in parts bag)			
—	14	113275	Screw, #10-32 × 1/2" long
	14	26490	Nut, #10-32 (Keps)
	2	113807	Washer
43F	1	120716	Stainless Worm-drive Clamp, 1/2"
Same as CODE 39	2	196336	Receptacle Nut, clip-on, spring steel
	2	11813	Sheetmetal Screw, #10 × 1/2"

CODE 44 - Optional Side Shield (option selection based on length & number of side shield sections)

Option	CD19	CD13	CD14	CD15	CD16	CD17	CD18	CD20									
Length	5 ft	10 ft	20 ft	30 ft	40 ft	50 ft	60 ft	70 ft									
Kit PN	205738	205732	205733	205734	205735	205736	205737	205739									
Code	Component	Qty	PN	Qty	PN	Qty	PN	Qty	PN	Qty	PN	Qty	PN	Qty	PN		
—	Side Shield	1	268227	2	268227	4	268227	6	268227	8	268227	10	268227	12	268227	14	268227
Wire Reflector Retainer, Hanger Bar, Tube Bracket and U-Bolt																	
Same as CODES 35A, 36, & 37	Reflector Retainer	1	209321	2	209321	4	209321	6	209321	8	209321	10	209321	12	209321	14	209321
	Reflector Bracket	1	205586	2	205586	4	205586	6	205586	8	205586	10	205586	12	205586	14	205586
	U-Bolt, w/brass nuts (in parts bag below)	1	131785	2	131785	4	131785	6	131785	8	131785	10	131785	12	131785	14	131785
Side Shield Hardware Bag																	
CODE 44A	Pushnut, TRW #250015	4	125848	4	125848	8	125848	12	125848	16	125848	20	125848	24	125848	28	125848
Same as CODE 39	Receptacle Nut, clip-on spring steel	2	196336	2	196336	4	196336	6	196336	8	196336	10	196336	12	196336	14	196336
—	Sheetmetal Screw, #10 × 1/2" long	2	11813	2	11813	4	11813	6	11813	8	11813	10	11813	12	11813	14	11813

Replacement Parts—Model VR (cont'd)

Optional Accessories for Model VR

CODE 46 - Option DE2, Outside Combustion Air Inlet, includes:

46D (PN 18549)



CODE 46 - Option DE2, Outside Combustion Air Inlet, includes:

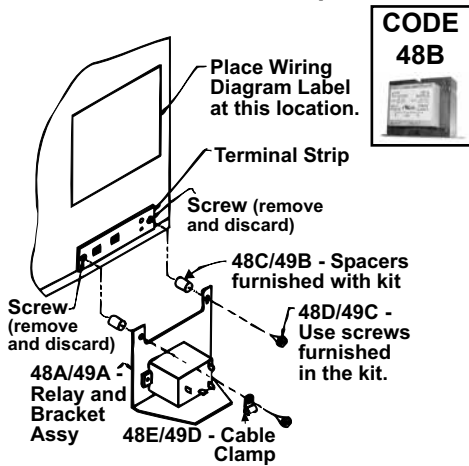
		Kit PN	204785	204786	
		For Model VR Sizes	50, 75, 100, 125, 150	175 and 200	
Code	Components	Qty	PN	PN	
46A	Combustion Air Inlet Cover	1	204783	204784	
46B	Inlet Air Cap	1	120726	204782	
46C	Flex Pipe, 40" (1016 mm) long	1	120729, 4" DIA	204956, 5" DIA	
46D	Relay Assembly	1	205540, Relay PN 18549 w/three 6" wires w/terminals (to replace relay only on unit mfgd before AUG 2011, order Relay Replacement Kit, PN 263527)		
Hardware Bag					
Not illustrated	46E	Worm Drive Clamp, 1/2" wide stainless	2	102716, 3-5/8" to 4-1/2" DIA range	155320, 4-5/8" to 5-1/2" DIA range
		Drill Fixture	1	204615	204617
		Screw, #8-32 x 1/2" long	2	195638 (to attach CODE 46A)	
		Rolox, #6 x 5/8" lg round head phillips	2	110076 (for attaching CODE 46D)	
		Connector, Orange Screw-on Wire	1	16354	
		Connector, Yellow Screw-on Wire	1	16355	
		Wiring Diagram Label	1	205526	

CODE 47 - Option CK11, Hanging Chain Kit, PN 205402, includes:

Qty	Description	PN
1	50' long chain (200-lb working load)	120703
22	S-Hook (for suspension points)*	116034

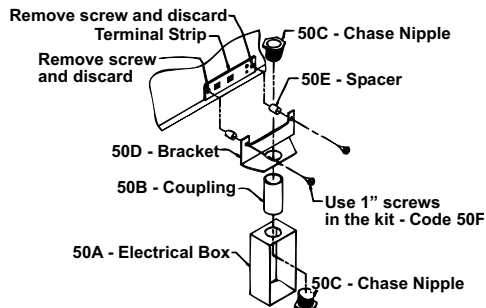
*The four S-hooks for the burner/control box are included in the burner/control box hardware package.

CODES 48 and 49 - Multiple Heater Control Packages (same as Options CL31 and CL32 for Model VR)



Option CL31 for Model VR—Package PN 205685						
Code	Qty	PN	Description			
48A	2	102243	Relay Assembly consisting of (1) PN 18549 Relay, wired and mounted on bracket (to replace relay only on unit mfgd before AUG 2011, order Relay Replacement Kit, PN 263527)			
Code	Qty	PN	Description	Code	Qty	Description
48B	1	194808	Transformer, 40VA	48D	4	121033 Screw, #8 x 1" long
—	1	16354	Orange Twist-On Wire Connector	48E	2	16228 Cable Clamp, 3/16"
48C	4	98872	Spacer	—	2	197164 Wiring Diagram Label
Option CL32 for Model VR—Package PN 205686						
Code	Qty	PN	Description			
49A	1	102243	Relay Assembly consisting of (1) PN 18549 Relay, wired and mounted on bracket (to replace relay only on unit mfgd before AUG 2011, order Relay Replacement Kit, PN 263527)			
Code	Qty	PN	Description	Code	Qty	Description
49B	2	98872	Spacer	49D	1	16228 Cable Clamp, 3/16"
49C	2	121033	Screw, #8 x 1" lg	—	1	197164 Wiring Diagram Label

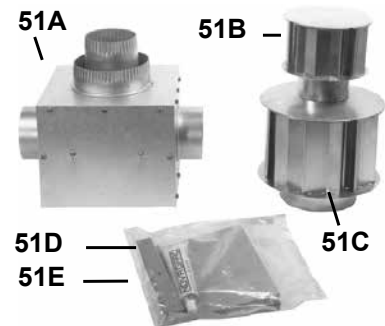
CODE 50 - Thermostat Bracket Package (same as Option CM3)



Thermostat Bracket Kit, PN 98524 includes:

Code	Qty	Description	PN
50A	1	Electrical Box, 2 x 4	17782
50B	1	Coupling conduit connector, 1/2"	7447
50C	2	Chase Nipple, 1/2"	3618
50D	1	Bracket	98353
50E	2	Spacer, 1/4" x 7/16" long	98872
50F	2	Screw, #8 x 1" long, type B	121033

CODE 51 - Dual Vent Kit (same as Option CC5)



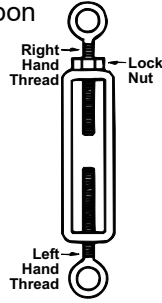
CODE 51 - Option CC5, Package PN 120736, includes:

Code	Qty	PN	Description
51A	1	120290	Dual Vent Adapter Box
51B	1	110051	4" Vent Cap
51C	1	120869	6" Vent Cap
51D	1	53335	High Temperature Silicone
51E	2	120108	Support Angle

CODE 52 - Turnbuckle and Turnbuckle Lock Nut

Each option package includes equal quantities of **PN 120704**, Eye-to-Eye Turnbuckle of forged carbon steel, and **PN 6554**, 5/16-18 Nut (Keps).

Straight Length	Straight		With one "L" or "U"	
	Opt	PN	Opt	PN
20 ft	CK12	121046	CK13	120701
30 ft	CK13	120701	CK14	121047
40 ft	CK14	121047	CK15	132517
50 ft	CK15	132517	CK16	205583
60 ft	CK16	205583	CK17	205584
70 ft	CK17	205584	CK18	205585



CODE 53 - Flexible Gas Connector, Option CE3 & CE4



1/2", **PN 120715**
3/4", **PN 120874**

CODE 54 - 4" Vent Cap (same as Option CC1), PN 120738



CODE 55 - 1-Stage Thermostat, (same as Option CL1), PN 255350

24 Volt; 50-90°F Range



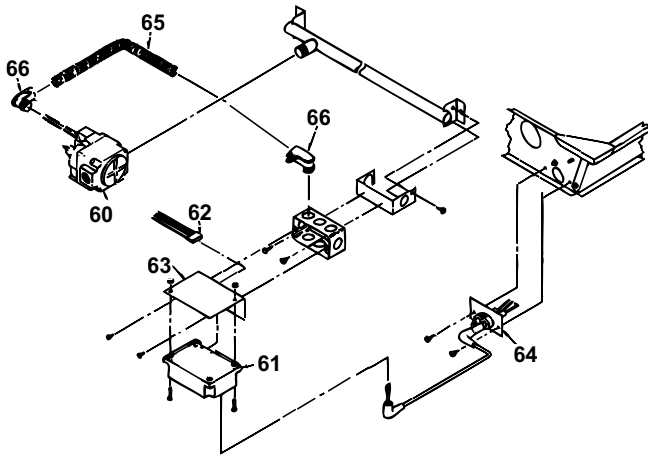
CODE 56 - Thermostat Cover, W/R 29-0143 (same as Option CM1), PN 91926

Clear Plastic Locking Cover



Replacement Parts—High-Intensity Infrared Models RIH/RIHV

Controls—All RIH/RIHV High-Intensity Infrared Models



Code	PN	Description
60	1012520	24v Two Stage Natural Gas Valve with LP conversion kit
	271823	120v Single Stage Natural Gas Valve with LP conversion kit
61	96010	Ignition Detection Control Replacement Kit, #0001-22-046
62	96011	Wire Harness, #132084, Package R10
63	112045	Ignition Detection Control Mounting Bracket, #000K-1-016
64	112046	Ignitor, #0002-42-110
65	Conduit, 3/8" Greenfield with Anti-Short Bushings	
	112047	for RIHN30, RIHN60, RIHL50, #3802-95-300-01
	112048	for RIHVN 100, RIHVL90, #3802-95-300-02
	112049	for RIHVN 150, RIHVL 120, #3802-95-300-03
	112050	for RIHVN 160, RIHVN 200, #3802-95-300-04
66	112051	Angle Connector for 3/8" Greenfield, #3802-95-302
67	96016	Air Flow Switch, #132081-2N, Pkg R15

Replacement Accessories

Description	Same as	PN
Chain, 50', 200 lb w/14 S-Hooks	Opt UE-1	95995
Chain Hanging Kit (see illustration)	Opt UE-2	110253
Stainless Flex Connector, 24", 7/8" OD w/1/2 gas cock w/pressure tap	Option UF-2	96000
Single-Stage Thermostat (below)	Opt CL34	110252

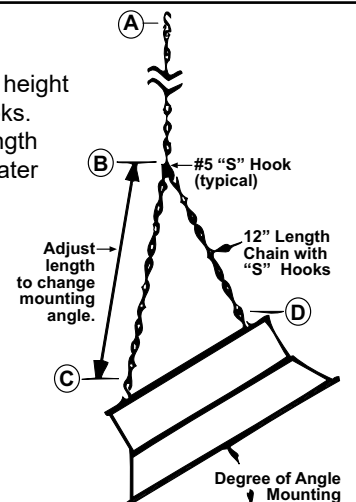


Thermostat (Option CL34), PN 110252
115/24 Volt; 50-90°F Range; nap Action Switch; Vertical Mounting; Mfr #132026-1

Chain Hanging Kit, PN 110253

Instructions:

- 1) Hang full length chain at desired height and attach heater (C) with S-hooks.
- 2) Attach one end of the 11-inch length chain with S-hooks to front of heater (D).
- 3) Place other end of chain with S-hook in hook (B) on the full length chain.
- 4) Change degree of angle by moving S-hook at point B.
- 5) Check to be sure unit is level. Crimp all S-hooks closed.



Replacement Parts—High-Intensity Infrared Models RIH/RIHV (cont'd)

Burner, Reflector, Screen, and Heat Shield—High-Intensity Infrared Models RIH/RIHV

Component Description	RIHN 30, RIHN 60, RIHL 50			RIHVN 100, RIHVL 90			RIHVN 150, RIHVL 120			RIHVN 160, RIHVN200		
	Code	PN	Qty	Code	PN	Qty	Code	PN	Qty	Code	PN	Qty
Burner Assembly (Combustion Chamber w/Tile)	69	112052	1	77	112052	2	85	112052	3	92	112052	4
Gas Manifold	70	112053	1	78	112054	1	86	112055	1	93	112056	1
Main Gas Orifice	71 (see table below)			79 (see table below)			87 (see table below)			94 (see table below)		
Standard Reflector Assembly	72	112057	1	80	112058	1	88	112059	1	95	112060	1
Wire Grid (same as Option DN2)	73	110246	1	81	110247	1	89	110248	1	96	110249	1
Protective Screen for unit w/Standard Reflector (same as Option DN3)	74	115381	1	82	115382	1	90	115383	1	97	115384	1
Parabolic Reflector (same as Option DM2)	75	110242	1	83	110243	1	91	110244	1	98	110245	1
Heat Shield (same as Option DO2)	76	110250	1	84	110251	1	—	—	—	—	—	—

Main Gas Orifice Chart (CODES 71, 79, 87, and 94)

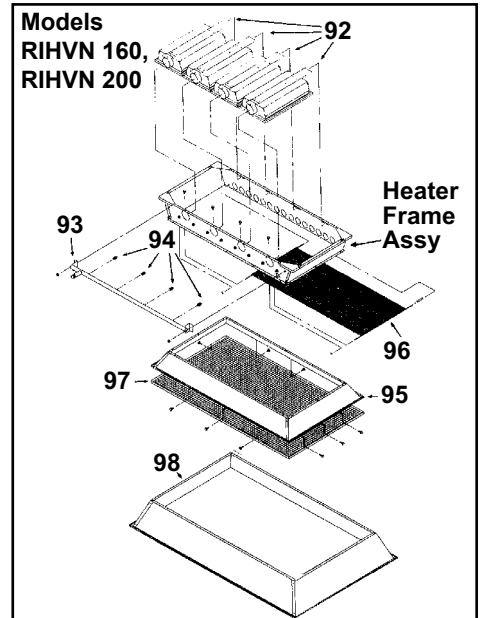
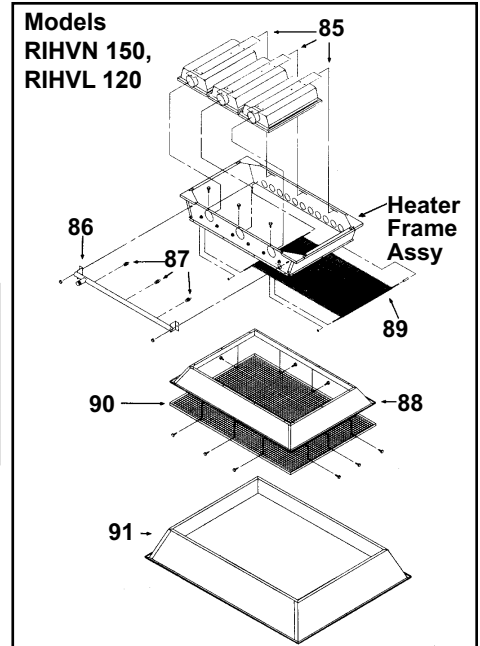
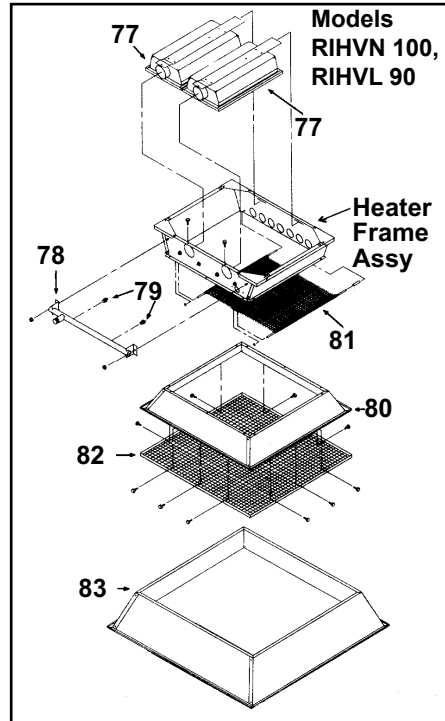
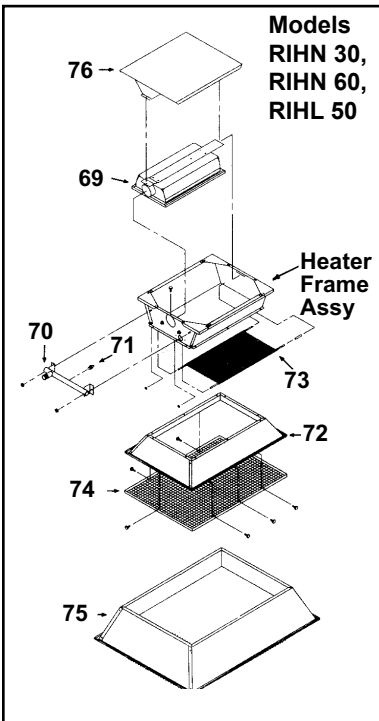
Model	RIHN 30	RIHN 60	RIHL 50	RIHVN 100	RIHVL 90	RIHVN 150	RIHVL 120	RIHVN 160	RIHVN 200
PN (Qty)	113191 (1)	143574 (1)	112103 (1)	112102 (2)	112104 (2)	112102 (3)	112105 (3)	112709 (4)	112102 (4)
Size	#43	#30	#46	#32	5/64"	#32	#49	#36	#32

Propane (LP) to Natural Gas (NG) Conversion Kits

Model	RIHL 30, RIHVL 30	RIHL 50, RIHVL 50		RIHL 90, RIHVL 90	RIHL 100, RIHVL 100
Type	LP to NG 30	LP to NG 50	LP to NG 60	LP to NG 90	LP to NG 100
Kit	30N	50N	60N	90N	100N
PN	1013663	1013664	1013665	1013666	1013667
Model	RIHL 120 RIHVL 120		RIHL 160, RIHVL 160		
Type	LP to NG 120	LP to NG 150	LP to NG 160		LP to NG 200
Kit	120N	150N	160N	160NQ	200N
PN	1013668	1013669	1013670	1013671	1013672

Natural Gas (NS) to Propane (LP) Conversion Kits

Model	RIHN 30, RIHVN 30, RIHN 50, RIHVN 50, RIHN 60, RIHVN 60	RIHN 90, RIHVN 90, RIHN 100, RIHVN 100	RIHN 120, RIHVN 120, RIHN 150, RIHVN 150, RIHN 160, RIHVN 160	RIHN 160, RIHVN 160, RIHN 200, RIHVN 200
Type	NG to LP 50	NG to LP 90	NG to LP 120	NG to LP 160
Kit	50L	90L	120L	160L
PN	1013673	1013674	1013675	1013676



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