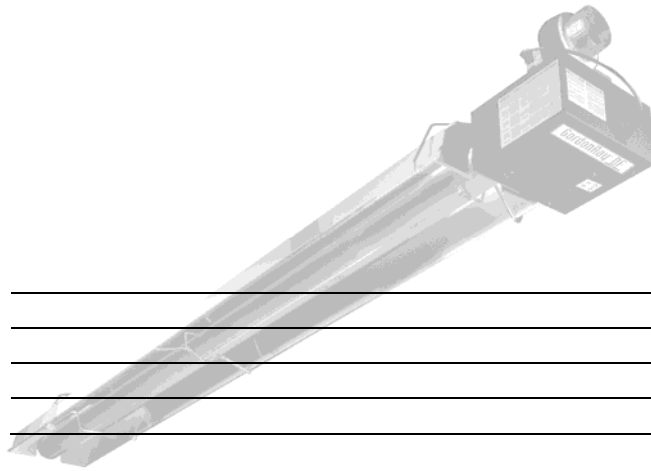


GordonRay® DF

Two-Stage, Unitary Infrared Heater Submittal: DF Series



Job: _____
Location: _____
Engineer: _____
Gas Specs: _____
Date: _____

QTY.	_____	MODEL NO. DF	_____	UNIT INPUT	_____	BTU/HR
QTY.	_____	MODEL NO. DF	_____	UNIT INPUT	_____	BTU/HR
QTY.	_____	MODEL NO. DF	_____	UNIT INPUT	_____	BTU/HR
QTY.	_____	MODEL NO. DF	_____	UNIT INPUT	_____	BTU/HR
		TOTAL INPUT	_____	BTU/HR	_____	

Important

Before installation and operation of heating equipment, read and understand the Installation, Operation and Service Manual.

Applications, engineering and detailed guidance on systems design, installation and equipment performance are available upon request. ROBERTS GORDON® equipment is to be installed only in accordance with local laws, codes and regulations, and only by a contractor qualified in the installation and service of gas-fired heating equipment.



Roberts-Gordon LLC

1250 William Street
P.O. Box 44
Buffalo, New York 14240-0044
Telephone: +1.716.852.4400
Fax: +1.716.852.0854
Toll Free: 800.828.7450
www.robertsgordon.com

STANDARD PARTS LIST**Contents of DF-Series Burner Carton**

Part No.	Description	DF-80	DF-100	DF-125	DF-150	DF-175	DF-200
073XXXX	Burner (Rate and Fuel Varies)	1	1	1	1	1	1
90709700	Blower Assembly with Cord	1	1	1	1	1	1
02568200	Gasket (Burner to Burner Tube)	1	1	1	1	1	1
90709801	Gasket (Blower to Burner)	1	1	1	1	1	1
173101NA	Installation, Operation and Service Manual	1	1	1	1	1	1
91201708	Pipe Nipple (Black) 1/2" NPT x 4"	1	1	1	1	1	1
94273914	Hex Head Bolts 5/16" - 18 Rolok	4	4	4	4	4	4
96411600	Split Lock Washer	4	4	4	4	4	4
*91412200	Flexible Stainless Steel Gas Hose, 1/2" NPT (US Models Only)	1	1	1	-	-	-
*91412204	Flexible Stainless Steel Gas Hose, 3/4" NPT (US Models Only)	-	-	-	1	1	1
91907302	S-Hooks	2	2	2	2	2	2
91911700	Outside Air Collar	1	1	1	1	1	1
94118106	#8 x 3/8 Hex Washer Head (for Outside Air Collar)	3	3	3	3	3	3
92311800	Keps Nut	4	4	4	4	4	4
03051503	Turbulator Adapter	1	1	1	1	-	-
03051504	Turbulator 2.5' (76 cm), Aluminized Steel	4	2	3	2	-	-

*Canadian models: Rubber (Type 1) Gas Hoses available as an accessory. See Page 43.

Contents of Core and Extension Packages

Part No.	Description	Core Packages				Extension Packages			
		Aluminized				Aluminized			
		10' (3m)	20' (6m)	30' (9m)	40' (12m)	10' (3m)	20' (6m)	30' (9m)	40' (12m)
91409408	Tube, HT Aluminized, 10' (3 m)	-	1	2	3	1	2	3	4
03051101	Burner Tube, ALUMI-THERM® Steel, 10' (3 m)	-	-	1	1	-	-	-	-
03051601	Burner Tube, HT ALUMI-THERM® Steel, 10' (3 m)	1	1	-	-	-	-	-	-
01312700	Coupling Assembly	-	1	2	3	1	2	3	4
02750303	Standard Reflector, 8' (3.5 m)	2	3	4	6	2	3	4	6
02750800	End Cap	2	2	2	2	-	-	-	-
03090100	Tube and Reflector Hanger	2	3	4	5	1	2	3	4
91907302	S-Hook	2	3	4	5	1	2	3	4
03050010	Reflector Support Package (Strap, Wire Form, Screws)	1	2	3	5	2	3	4	6
91107720	U-Clip Package	1	1	1	1	1	1	1	1
90502700	Vent Adapter	1	1	1	1	-	-	-	-
01318901	Tube Clamp Package	1	1	1	1	-	-	-	-
Part Number		CP10ALUM	CP20ALUM	CP30ALUM	CP40ALUM	EXP10ALUM	EXP20ALUM	EXP30ALUM	EXP40ALUM

GENERAL SPECIFICATIONS

Material Specifications

Reflectors

.024 Aluminum

(Optional .024 Stainless Steel Type 304)

Heater Specifications

Ignition

Fully automatic, three-try, direct spark, electronic ignition control, 100% safety shut-off.

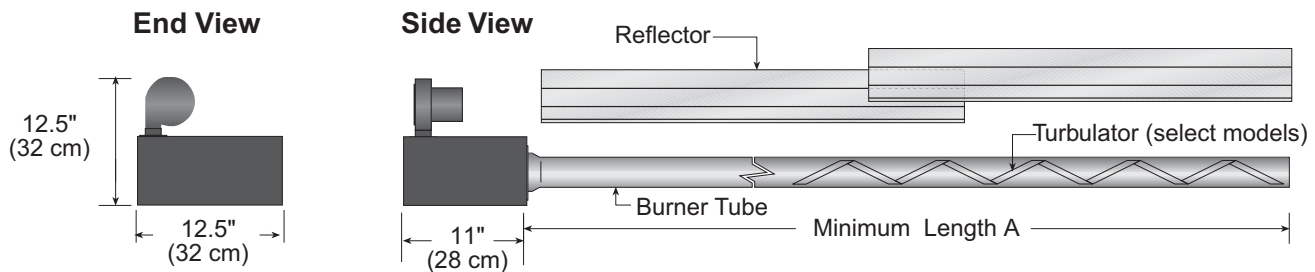
General Specifications for DF-Series heaters are as follows:

Suspension Specifications

Hang heater with materials with a minimum working load of 75 lbs (33 kg). See Page 15, Figure 14.

Controls Specifications

Time switches, thermostats, etc. can be wired into the electrical supply. External controls supplied as an optional extra.



Model	Heat Input Rate		Length "A" Minimum	Recommended Minimum Mounting Height*	
	High Fire	Low Fire		Space	Spot
DF-80	80	55	20' (6 m)	12-15' (3.6 - 4.5 m)	11' (3.3 m)
DF-100	100	70	30' (9 m)	12-15' (3.6 - 4.5 m)	12' (3.7 m)
DF-125	125	85	30' (9 m)	15-20' (4.5 - 6 m)	15' (4.6 m)
DF-150	150	105	40' (12 m)	20-25' (6 - 7.6 m)	20' (6.1 m)
DF-175	175	120	50' (15 m)	25' (7.6 m)	23' (7 m)
DF-200	200	130	60' (18 m)	25' (7.6 m)	25' (7.6 m)

Gas Pressure at Manifold Per Rate (NG Only)

	DF-80	DF-100	DF-125	DF-150	DF-175	DF-200
Burner Pressure High Fire (in wc)	3.3	3.3	3.4	3.5	3.7	3.9
Burner Pressure Low Fire (in wc)	1.7	1.6	1.7	1.8	1.8	1.8

*See Page 5, Section 3 for clearances to combustibles.

PIPE CONNECTION:

1/2" NPT (for DF-80, 100, 1125)

3/4" NPT (for DF- 150,175 & 200)

DIMENSIONS:

Vent Connection Size: 4" (10 cm)

Outside Air Connection Size: 4" (10 cm)

Refer to figure above for dimensional information.

GAS INLET PRESSURE:

Natural Gas:

for DF-80, 100,

125, 150

for DF-175, 200

4.6" wc Minimum

5.0" wc Minimum

14.0" wc Maximum

Electrical Rating (all models):

120 V - 60 Hz, 1 A (run)

CLEARANCES TO COMBUSTIBLES

- NOTE:** 1. All dimensions are from the surfaces of all tubes, couplings and elbows.
 2. Clearances B, C and D can be reduced by 50% after 25' (7.5 m) of tubing downstream from where the burner and burner tube connect.

FIGURE 1: Standard Reflector

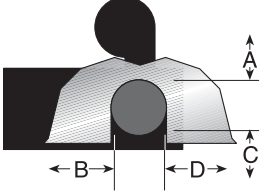
	Model	(inches)				(centimeters)			
		A	B	C	D	A	B	C	D
	DF-80	6	38	65	38	16	97	166	97
	DF-100	6	40	70	40	16	102	178	102
	DF-125	6	46	76	46	16	117	194	117
	DF-150	6	50	79	50	16	127	201	127
	DF-175/200	8	52	82	52	21	133	209	133

FIGURE 2: One Side Reflector

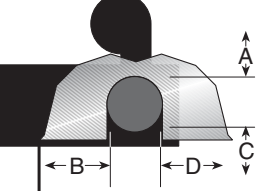
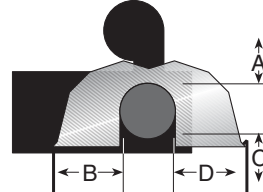
	Model	(inches)				(centimeters)			
		A	B	C	D	A	B	C	D
	DF-80	6	9	69	54	16	23	176	138
	DF-100	6	9	76	59	16	23	194	150
	DF-125	6	9	82	65	16	23	209	166
	DF-150	6	9	85	69	16	23	216	176
	DF-175/200	8	9	88	73	21	23	224	186

FIGURE 3: Two Side Reflectors

	Model	(inches)				(centimeters)			
		A	B	C	D	A	B	C	D
	DF-80	6	25	71	25	16	64	181	64
	DF-100	6	27	77	27	16	69	196	69
	DF-125	6	32	83	32	16	82	211	82
	DF-150	6	35	87	35	16	89	221	89
	DF-175/200	8	40	91	40	21	102	232	102

- NOTE:** 1. All dimensions are from the surfaces of all tubes, couplings and elbows.
 2. Clearances B, C and D can be reduced by 50% after 25' (7.5 m) of tubing downstream from where the burner and burner tube connect.

FIGURE 4: 45° Tilt Reflector

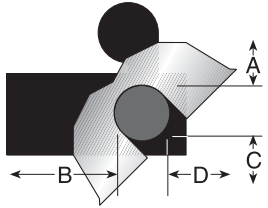
	Model	(inches)				(centimeters)			
		A	B	C	D	A	B	C	D
	DF-80	8	8	65	60	21	21	166	153
	DF-100	10	8	73	64	26	21	186	163
	DF-125	10	8	77	69	26	21	196	176
	DF-150	12	8	83	74	31	21	211	188
	DF-175/200	12	8	85	79	31	21	216	201

FIGURE 5: U-Tube, Standard Reflector

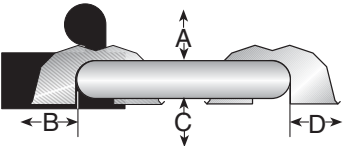
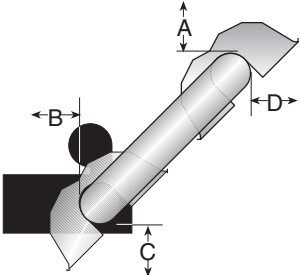
	Model	(inches)				(centimeters)			
		A	B	C	D	A	B	C	D
	DF-80	6	38	68	37	16	97	173	94
	DF-100	6	40	75	39	16	102	191	100
	DF-125	6	46	78	43	16	117	199	110
	DF-150	6	50	83	47	16	127	211	120
	DF-175/200	8	54	87	51	21	138	221	130

FIGURE 6: U-Tube, 45°

	Model	(inches)				(centimeters)			
		A	B	C	D	A	B	C	D
	DF-80	8	8	65	46	21	21	166	117
	DF-100	8	8	73	52	21	21	186	133
	DF-125	8	8	77	61	21	21	196	155
	DF-150	8	8	83	66	21	21	211	168
	DF-175/200	8	8	85	70	21	21	216	178

- NOTE:** 1. All dimensions are from the surfaces of all tubes, couplings and elbows.
 2. Clearances B, C and D can be reduced by 50% after 25' (7.5 m) of tubing downstream from where the burner and burner tube connect.

FIGURE 7: U-Tube, Opposite 45° Reflector

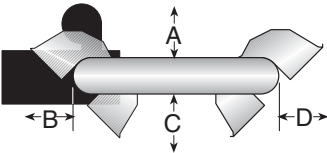
	Model	(inches)				(centimeters)			
		A	B	C	D	A	B	C	D
	DF-80	8	60	65	22	21	153	166	56
	DF-100	10	64	73	22	26	163	186	56
	DF-115/125	10	70	77	22	26	178	196	56
	DF-140/150	12	74	83	22	31	188	211	56
	DF-175/200	12	76	85	22	31	194	216	56

FIGURE 8: 2-Foot Deco Grille and Protective Grille

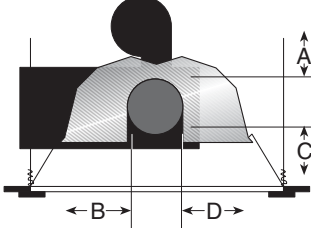
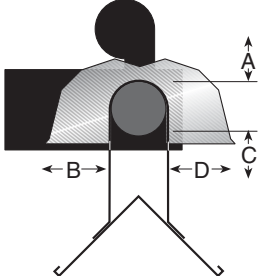
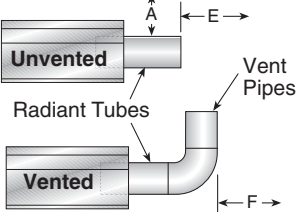
	Model	(inches)				(centimeters)			
		A	B	C	D	A	B	C	D
	DF-80	6	38	65	38	16	97	166	97
	DF-100	6	40	70	40	16	102	178	102
	DF-125	6	46	76	46	16	117	194	117
	DF-150	6	50	79	50	16	127	201	127
	DF-175/200	8	52	82	52	21	133	209	133

FIGURE 9: Lower Clearance Shield*

	Model	(inches)				(centimeters)			
		A	B	C	D	A	B	C	D
	DF-80	6	40	38	40	16	102	97	102
	DF-100	6	50	44	50	16	127	112	127
	DF-125	6	54	48	54	16	138	122	138
	DF-150	6	55	50	55	16	140	127	140
	DF-175/200	- UNAPPROVED -				- UNAPPROVED -			

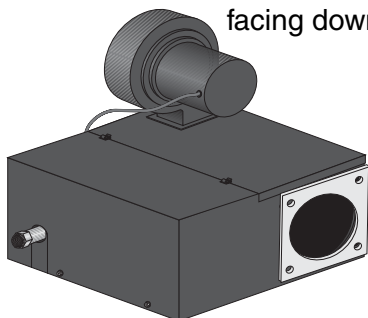
*When installed in the first 10' (3 m).

NOTE: 1. All dimensions are from the surfaces of all tubes, couplings and elbows.
2. Clearances B, C and D can be reduced by 50% after 25' (7.5 m) of tubing downstream from where the burner and burner tube connect.

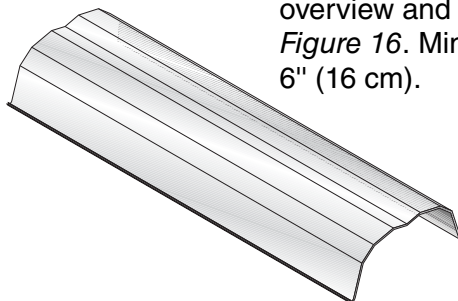
FIGURE 10: Venting							
	Model	(inches)			(centimeters)		
		A	E	F	A	E	F
	DF-80	20	24	18	51	61	46
	DF-100	20	24	18	51	61	46
	DF-125	20	24	18	51	61	46
	DF-150	20	30	18	51	77	46
	DF-175/200	20	30	18	51	77	46

MAJOR COMPONENTS

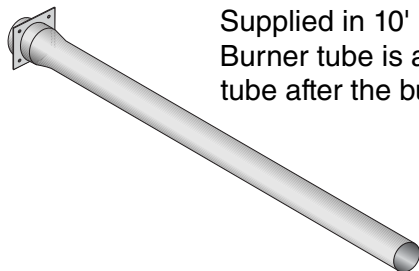
Major Component Descriptions



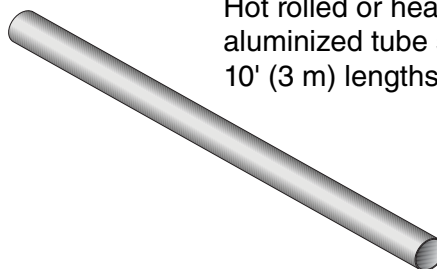
Burner with Tube Gasket
Must be installed with the flame observation window facing down.



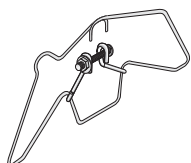
Reflector (Aluminum or Stainless Steel)
Alternate overlap as shown on overview and on Page 17, Figure 16. Minimum overlap is 6" (16 cm).



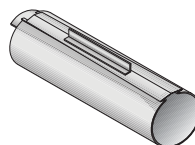
Burner Tube
Supplied in 10' (3 m) lengths. Burner tube is always the first tube after the burner.



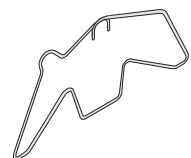
Tube
Hot rolled or heat treated aluminized tube supplied in 10' (3 m) lengths.



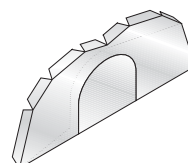
Tube and Reflector Hanger with Clamp Package
Position this hanger no more than 4" (10 cm) away from the burner.



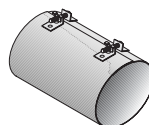
Coupling Assembly with Lock



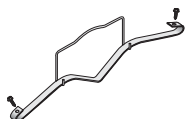
Tube and Reflector Hanger
Suspend system from these hangers.



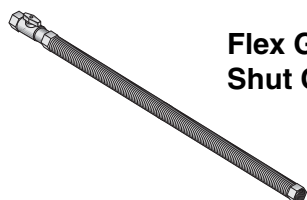
Reflector End Cap
Punch out center section to accommodate tube.



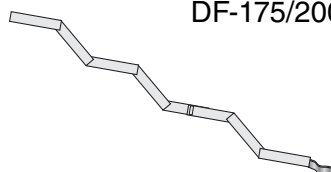
Vent Adapter



Reflector Support Strap & Wire Form



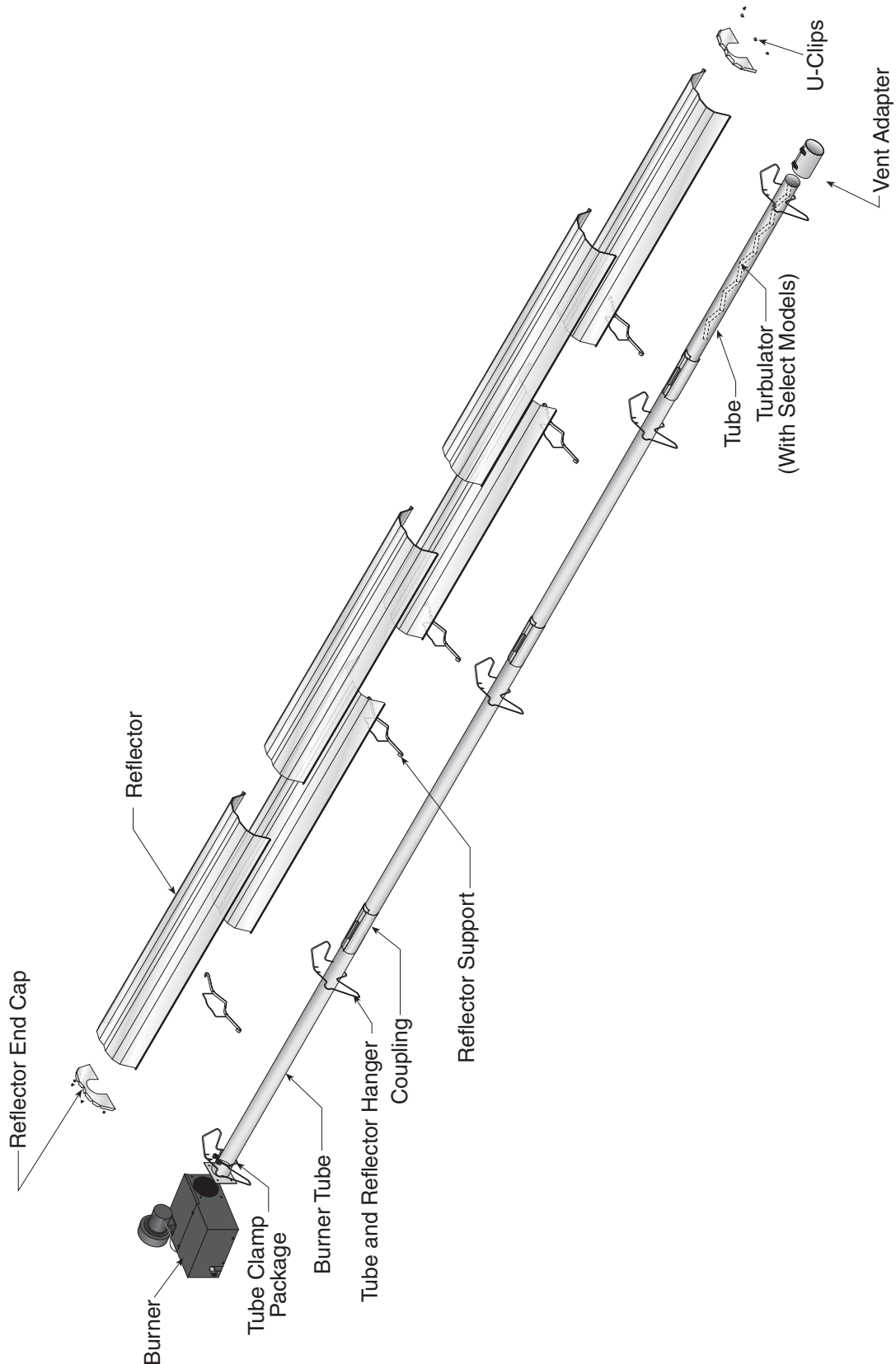
Flex Gas Line with Shut Off Cock



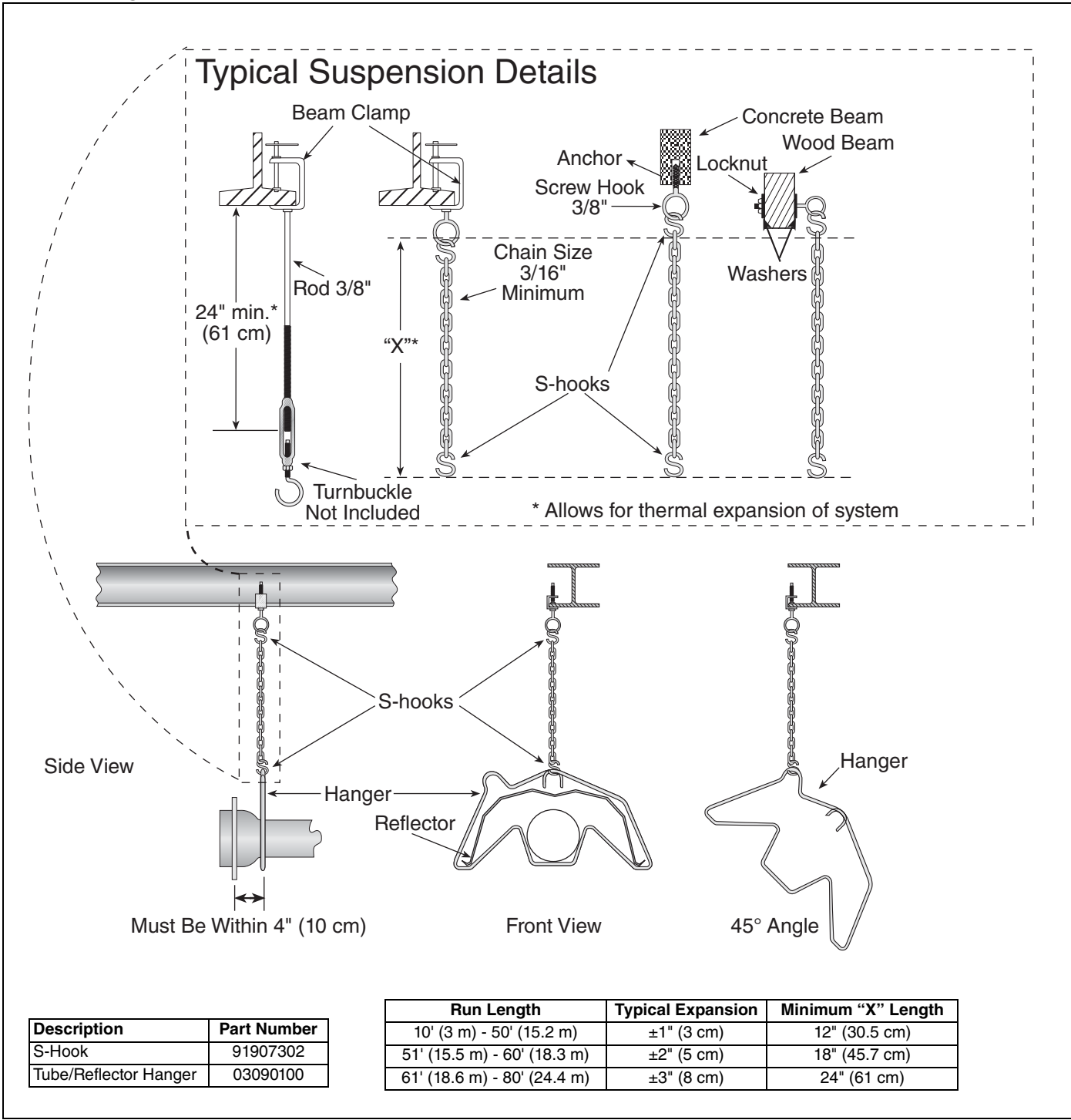
Turbulator
Install turbulator as specified in the "Turbulator Installation" chart. Turbulator is not required on the DF-175/200.

HEATER INSTALLATION

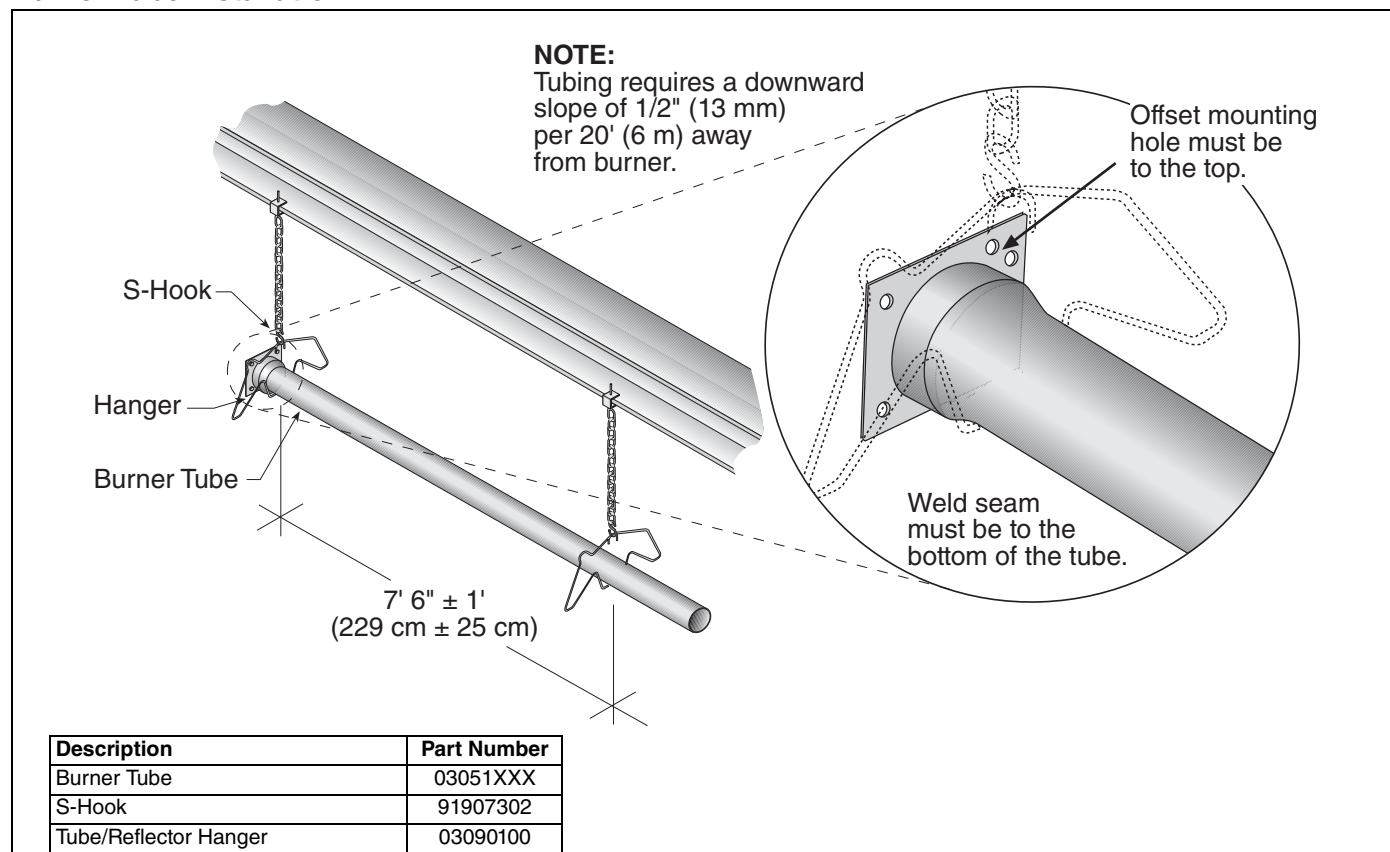
Heater Assembly Overview



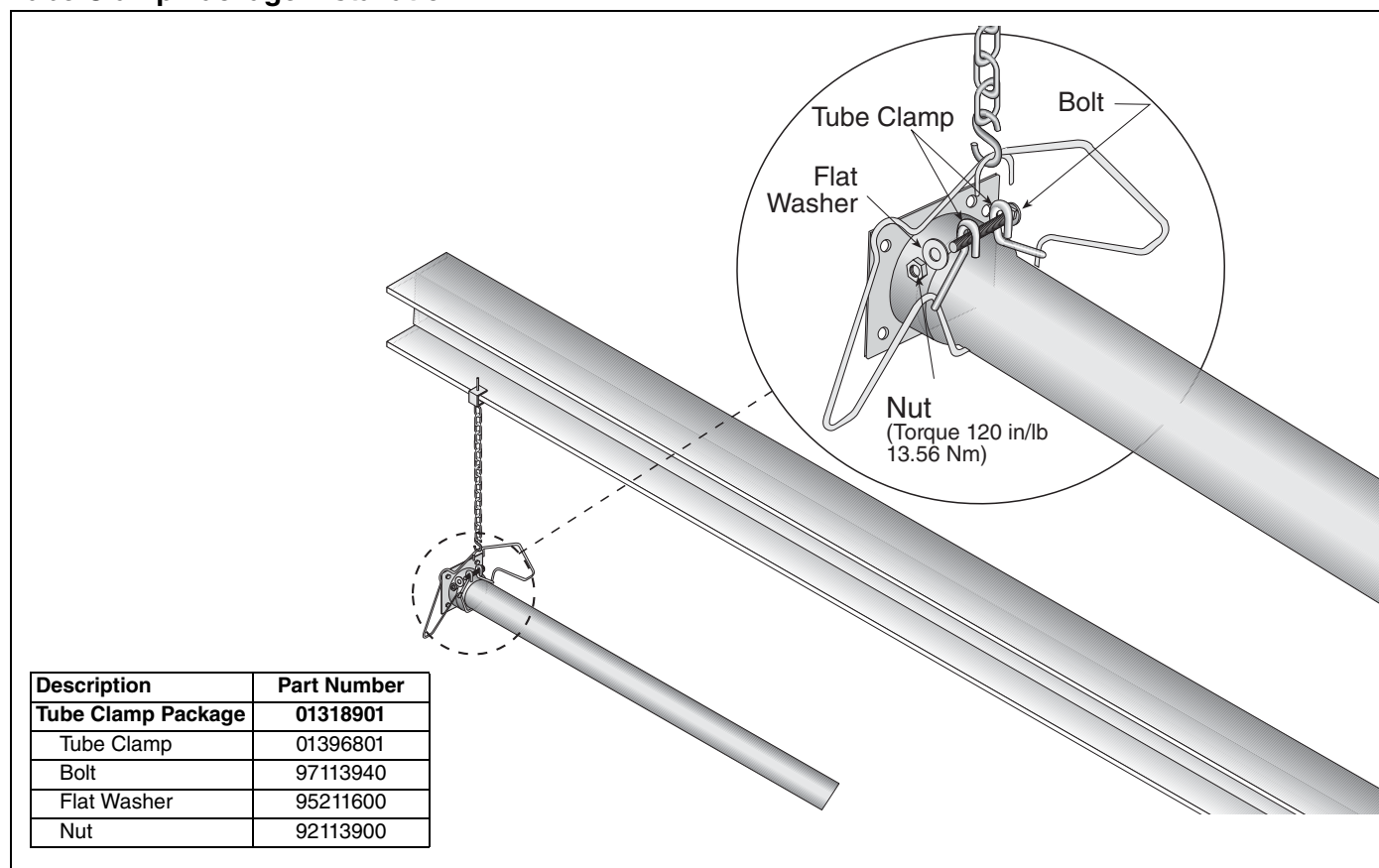
Critical Hanger Placement



Burner Tube Installation

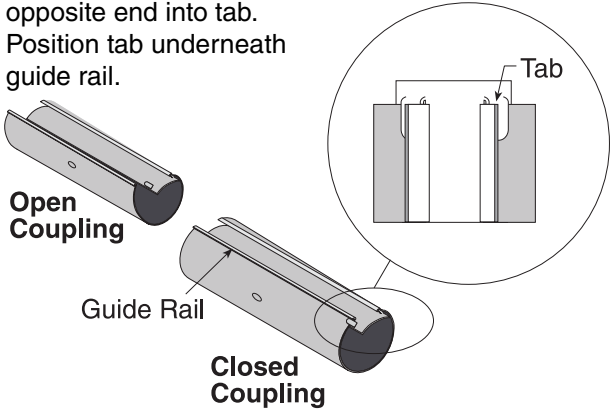


Tube Clamp Package Installation



Coupling and Tube Assembly

A Close coupling and slide opposite end into tab. Position tab underneath guide rail.



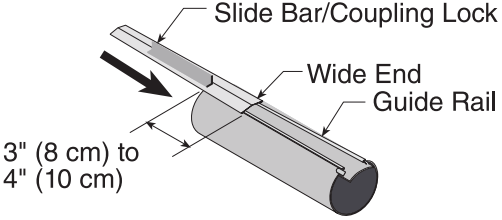
Open Coupling

Guide Rail

Closed Coupling

Tab

B Insert wide end of slide bar/coupling lock into guide rail on opposite end of tabs. Slide the slide bar/coupling lock up the guide rail until snug (approximately 3" (8 cm) to 4" (10 cm)).

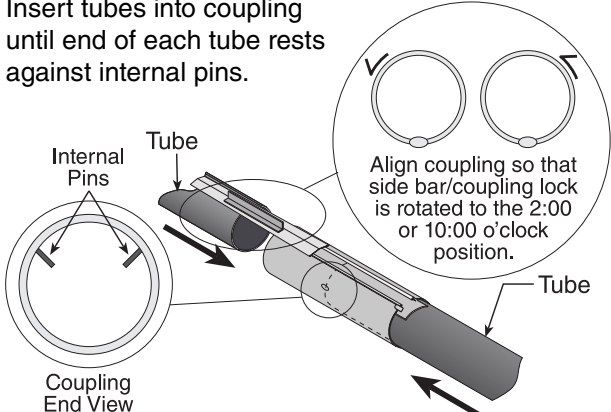


Slide Bar/Coupling Lock

Wide End Guide Rail

3" (8 cm) to 4" (10 cm)

C Insert tubes into coupling until end of each tube rests against internal pins.



Internal Pins

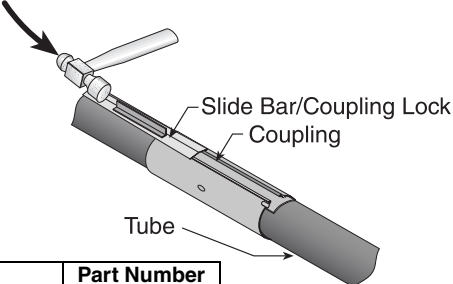
Tube

Coupling End View

Align coupling so that side bar/coupling lock is rotated to the 2:00 or 10:00 o'clock position.

Tube

D Strike slide bar/coupling lock with mallet or hammer until tight.



Slide Bar/Coupling Lock

Coupling

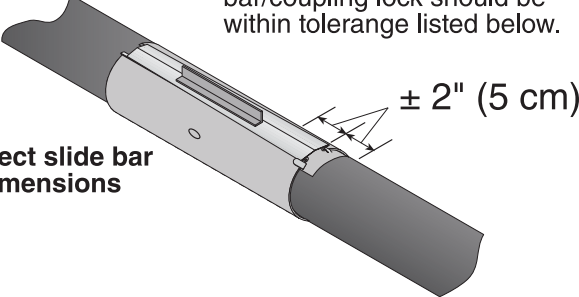
Tube

Description	Part Number
Coupling	01329600
Slide Bar/Coupling Lock	01329700
Tube	91409XXX

Coupling and Tube Assembly (Continued)

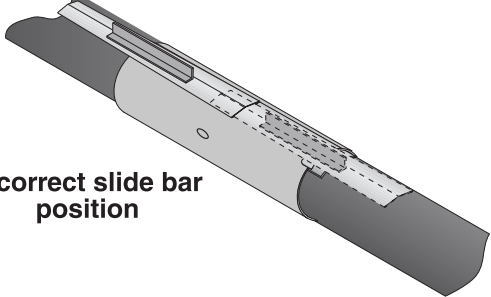
Tighten slide bar as shown below.

Be sure not to over tighten slide bar/coupling lock. Slide bar/coupling lock should be within tolerance listed below.



Correct slide bar dimensions

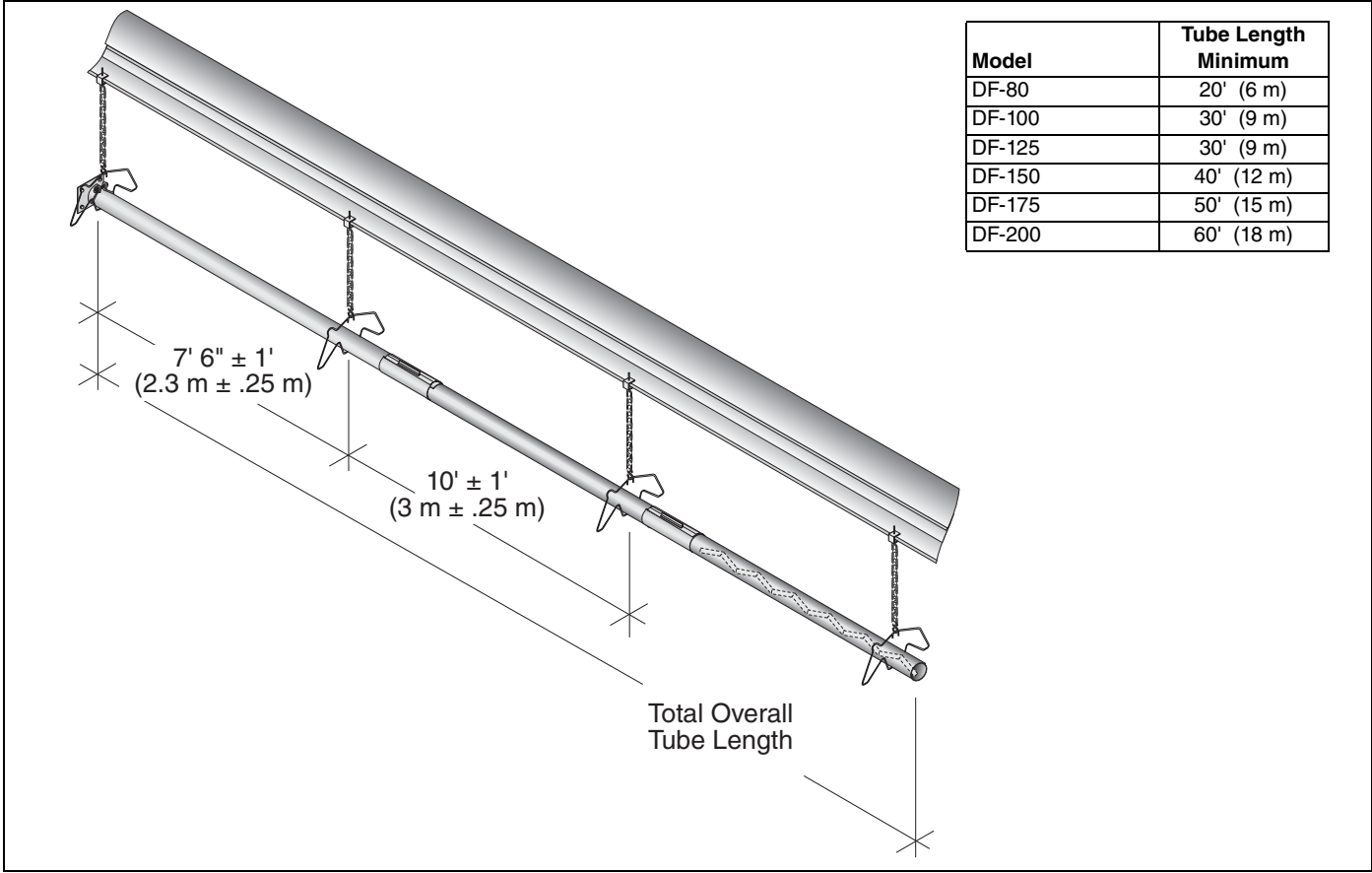
$\pm 2"$ (5 cm)



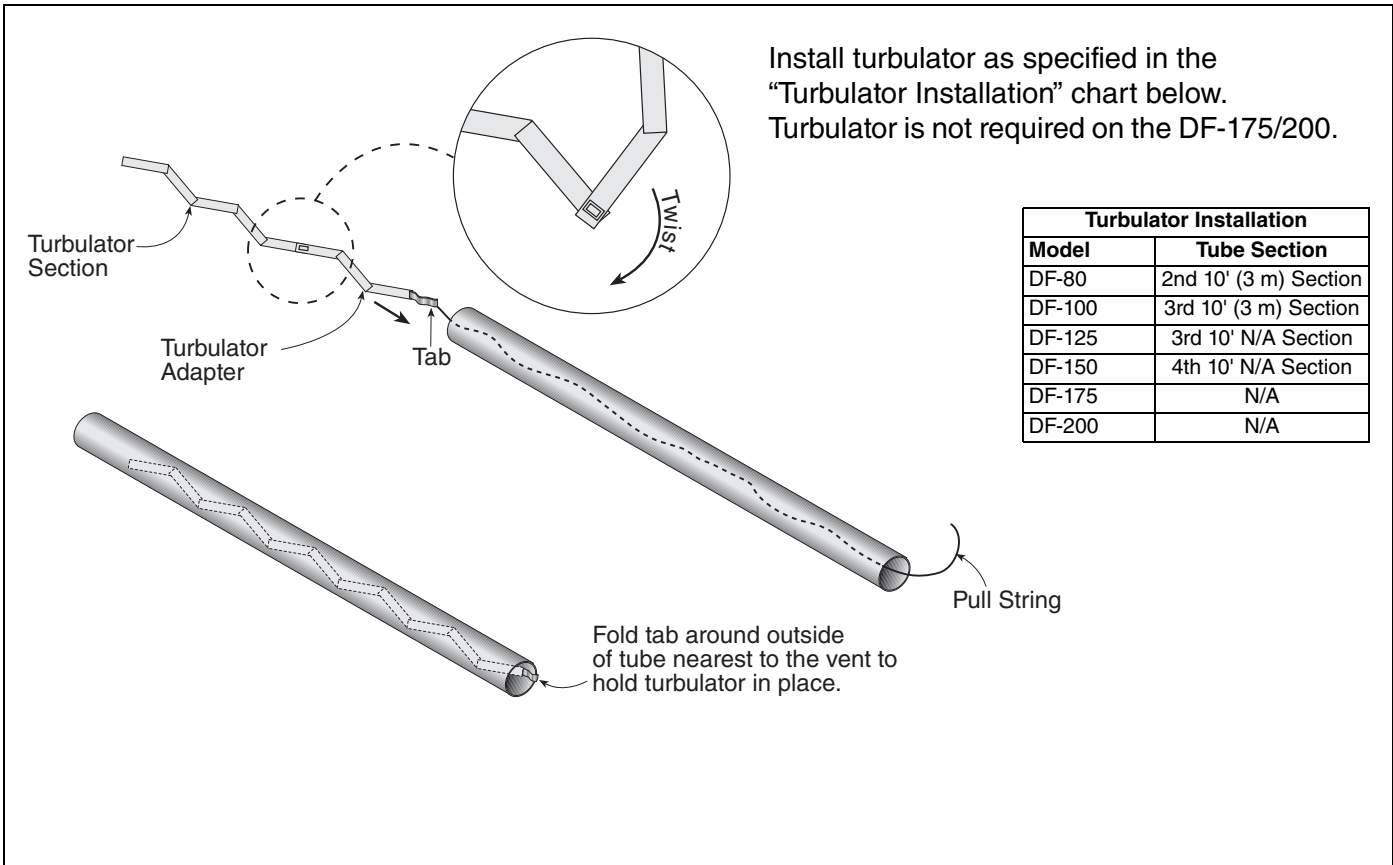
Incorrect slide bar position

- Repeat Steps until all tubes are assembled.

Coupling and Tube Assembly (Continued)



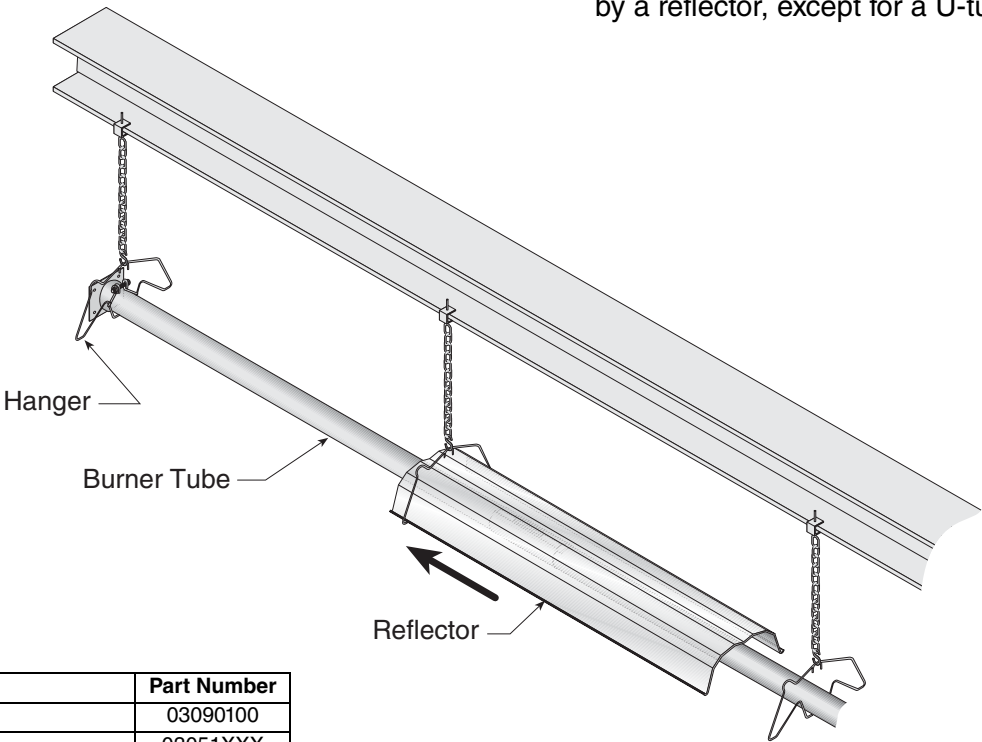
Turbulator Installation



BEFORE INSTALLATION AND OPERATION OF HEATING EQUIPMENT, READ AND UNDERSTAND THE CURRENT INSTALLATION, OPERATION AND SERVICE MANUAL. APPLICATIONS, ENGINEERING AND DETAILED GUIDANCE ON SYSTEMS DESIGN, INSTALLATION AND EQUIPMENT PERFORMANCE ARE AVAILABLE UPON REQUEST. ROBERTS GORDON® EQUIPMENT IS TO BE INSTALLED ONLY IN ACCORDANCE WITH LOCAL LAWS, CODES AND REGULATIONS, AND ONLY BY A CONTRACTOR QUALIFIED IN THE INSTALLATION AND SERVICE OF GAS-FIRED HEATING EQUIPMENT.

Reflector Installation

NOTE: All tube surfaces must be covered by a reflector, except for a U-tube.



Description	Part Number
Tube/Reflector Hanger	03090100
Burner Tube	03051XXX
Reflector 96" (244 cm)	02750303

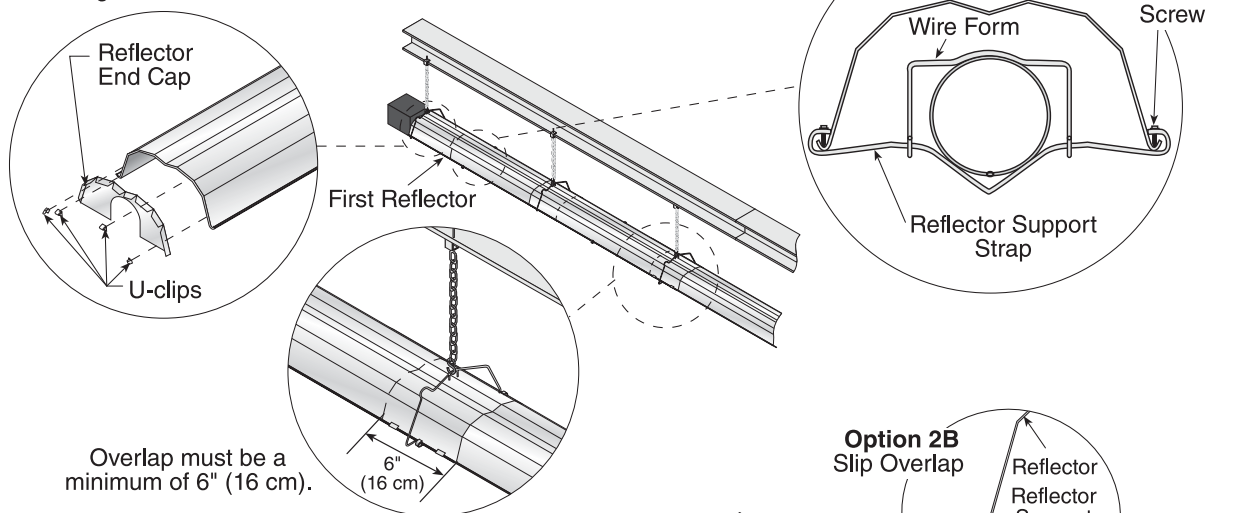
Reflector, U-Clip and Reflector Support Installation

The pictorial drawings of the heater construction in this section are schematic only and provide a general guideline of where hangers, reflector supports and U-clips are to be installed.

To ensure proper expansion and contraction movement of the reflectors, a combination of U-clips and reflector supports are used. The positioning of

reflector supports and U-clips depend on the individual installation. Use either pop rivets or sheet metal screws instead of u-clips when installing end caps and joint pieces in areas where impact and high wind may be a factor. The following rules must be observed.

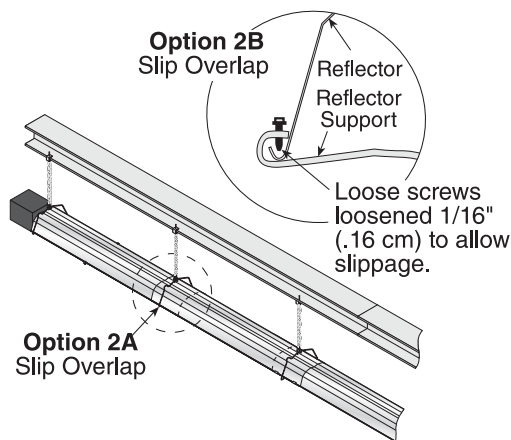
1. The first reflector after the burner must be affixed in the middle of the reflector with a reflector support and tight screws.



2. The overlap at the first and second reflector is a **slip overlap**. Thereafter, every third reflector joint is a slip overlap. A slip overlap is achieved by either:
 - a.) both reflectors lay inside a hanger.

(No reflector support needed.)

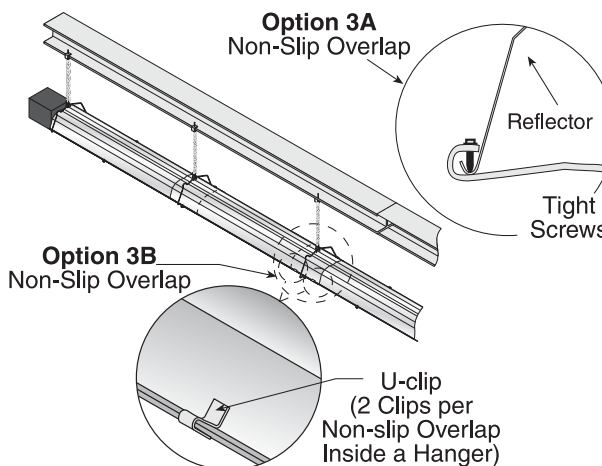
- b.) using a reflector support with loose screws at the reflector overlap.



3. The remaining reflector overlaps require a **non-slip overlap** connection. To affix the reflectors together in a non-slip overlap either:
 - a.) use reflector support and tight screws.

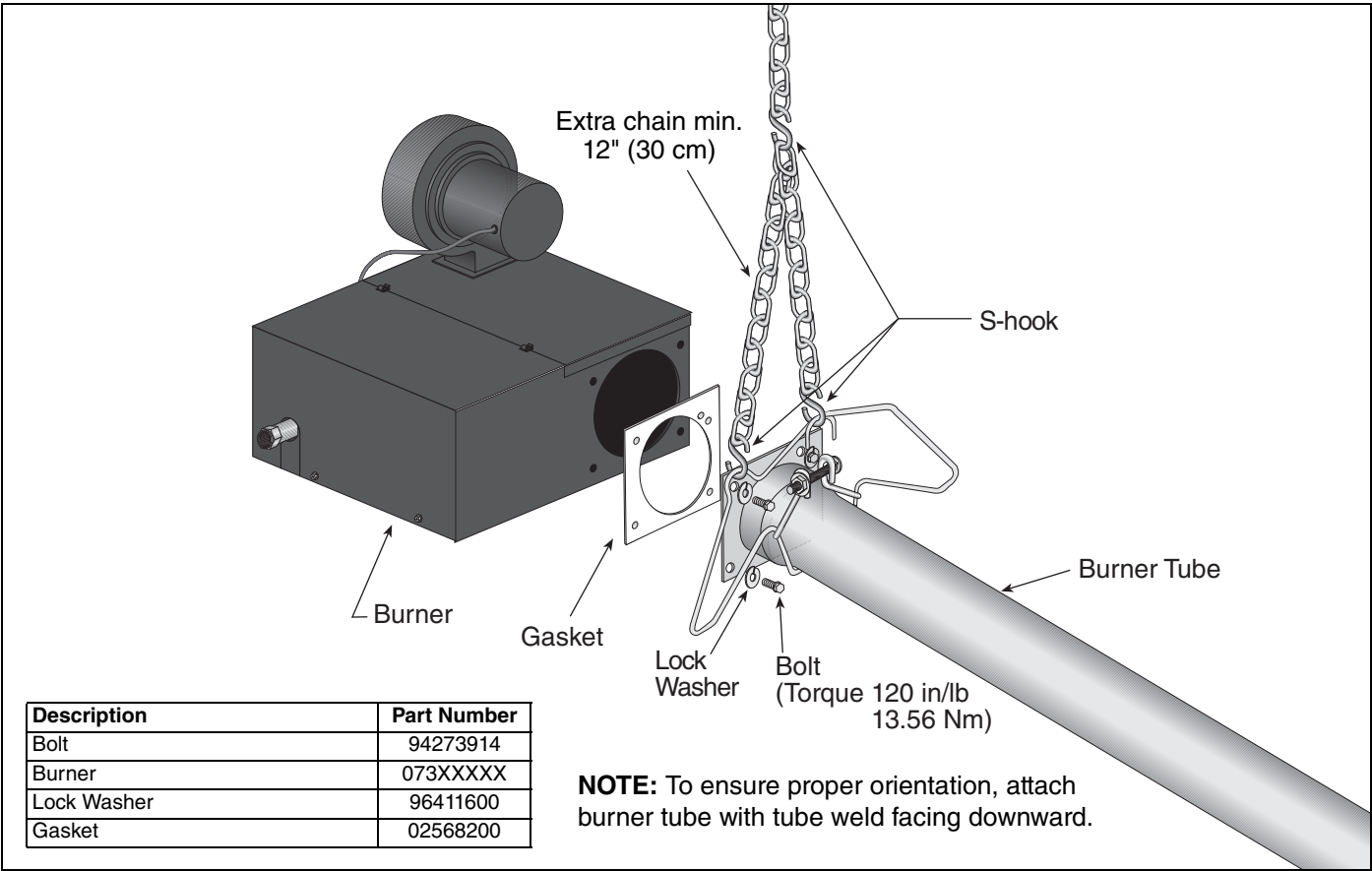
- b.) if both reflectors lay inside a hanger, u-clips or sheet metal screws may be used.

This section of three reflectors joined together must be affixed to the tube with at least one reflector support with tight screws.



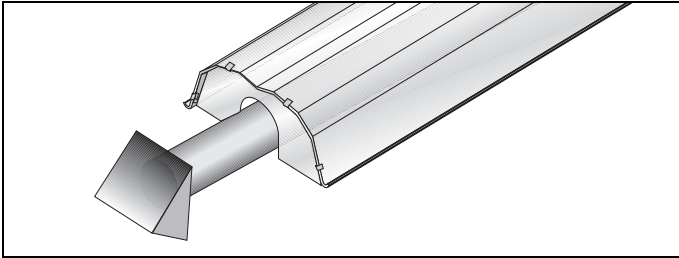
Description	Part Number
Reflector Support Package	03050010
Wire Form	91908004
Reflector Support Strap	03050000
Screw #8 x 3/4"	94320812
U-Clip Package	91107720
Reflector End Cap	027508XX

Burner Installation



VENTING

Tube Termination



Horizontal Ventilation 4" (10 cm) Pipe

SIDE VIEW

Combustible or Non-Combustible Wall

Vent Adapter

4" (10 cm) Single Wall Pipe

Vent Terminal

Non-Combustible Wall Only

Vent Adapter

4" (10 cm) Single Wall Pipe

Vent Terminal

18" (46 cm) Min.

Description	Part Number
Vent Terminal (Comb. Wall)	90502100
Vent Terminal	02537801-XX

Vertical Ventilation 4" (10 cm) Pipe

SIDE VIEW

4" (10 cm) Type "B" vent cap

4" (10 cm) Type "B" vent pipe

Roof Flashing

Roof

2' (0.61 m) Min.

Approved Thimble (If Applicable)

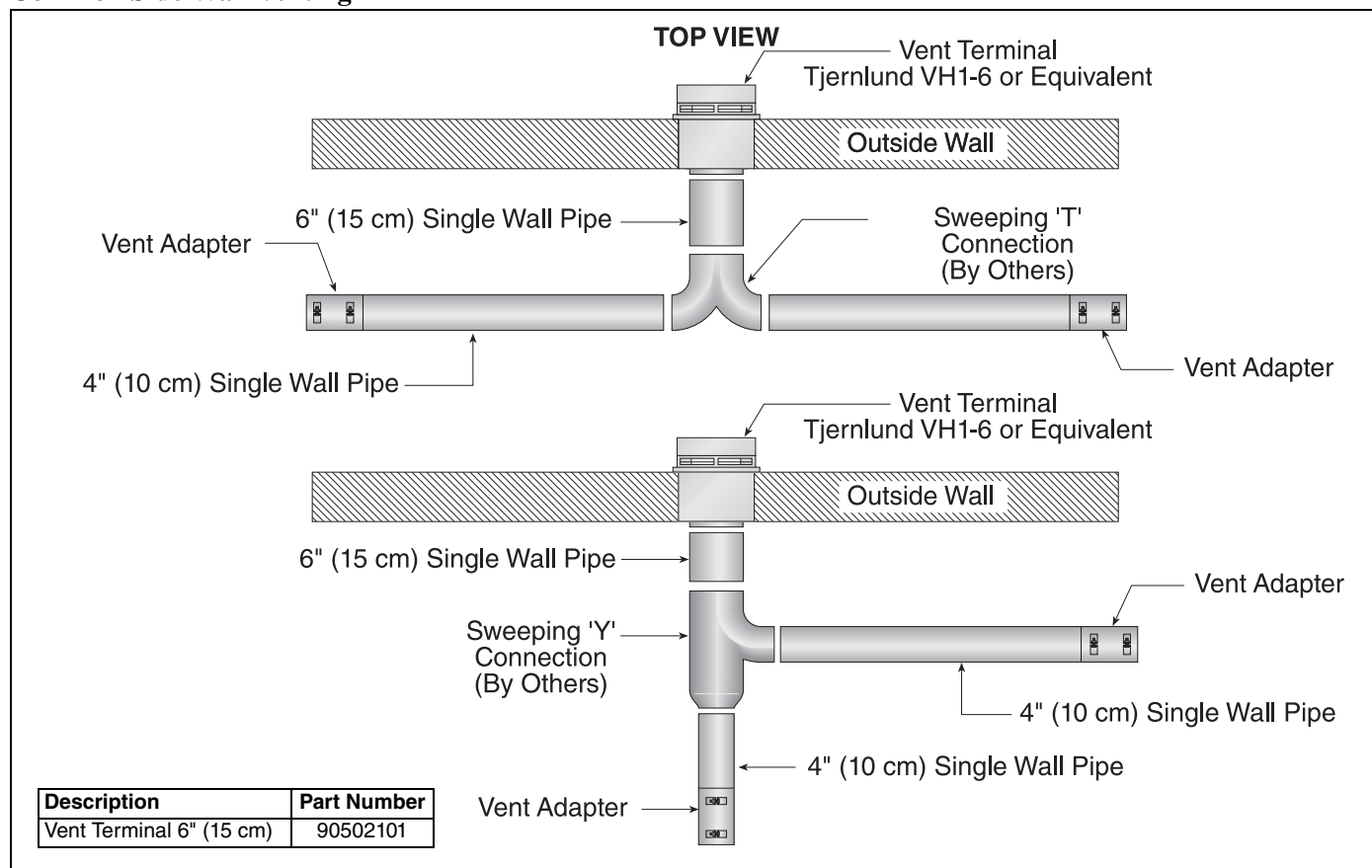
Vent Adapter

4" (10 cm) Single Wall Pipe

The last section of vent pipe passing through the roof or wall may be Type "B" vent pipe. All other vent materials in the building must be single wall vent pipe.

Description	Part Number
Vent Cap 4" (10 cm)	90502300

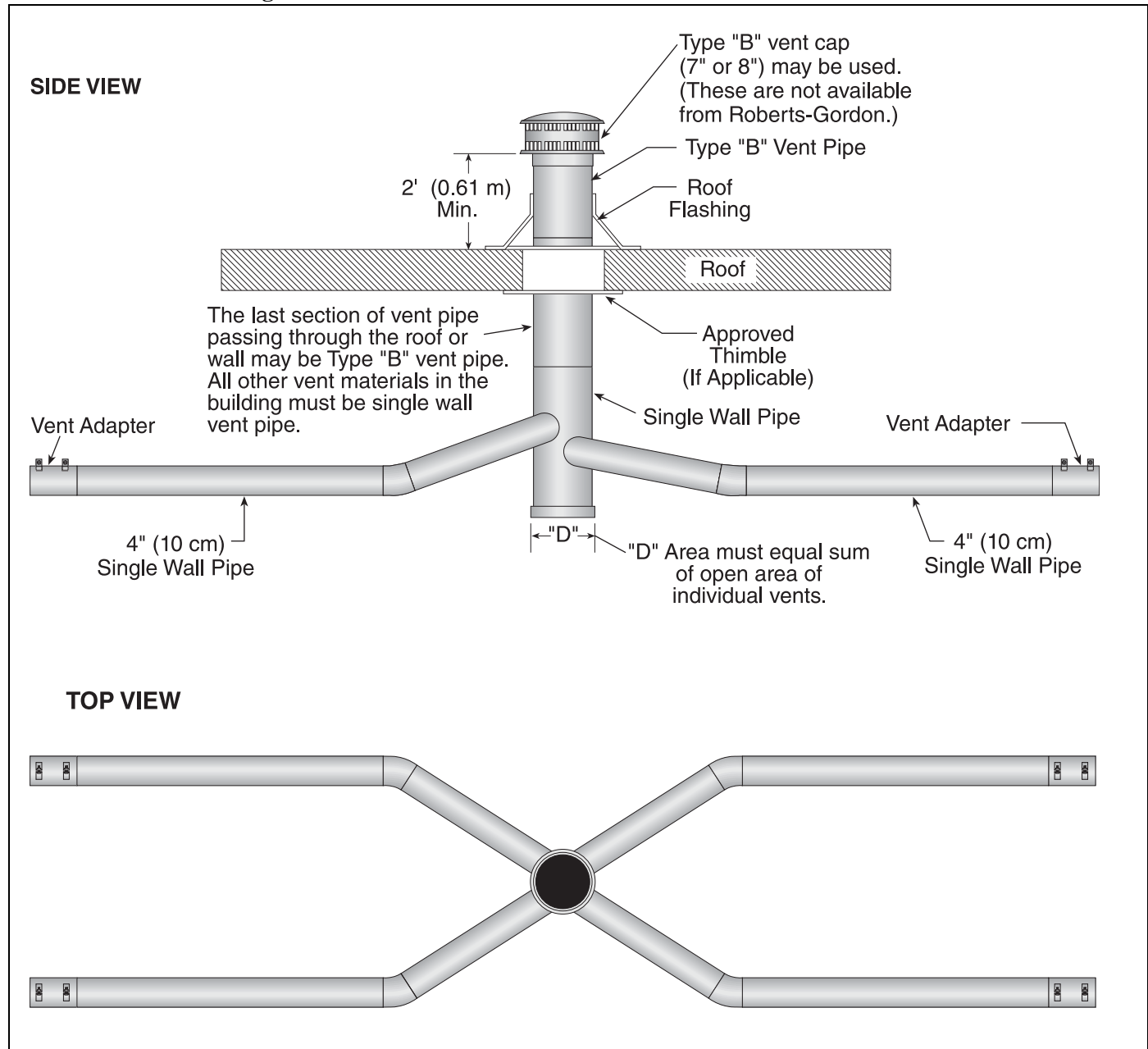
Common Side Wall Venting



Requirements:

- Maximum of two heaters can be commonly vented through a side wall.
- Heaters must be of the same BTU output.
- Heaters must be controlled by a common thermostat.

Common Vertical Venting

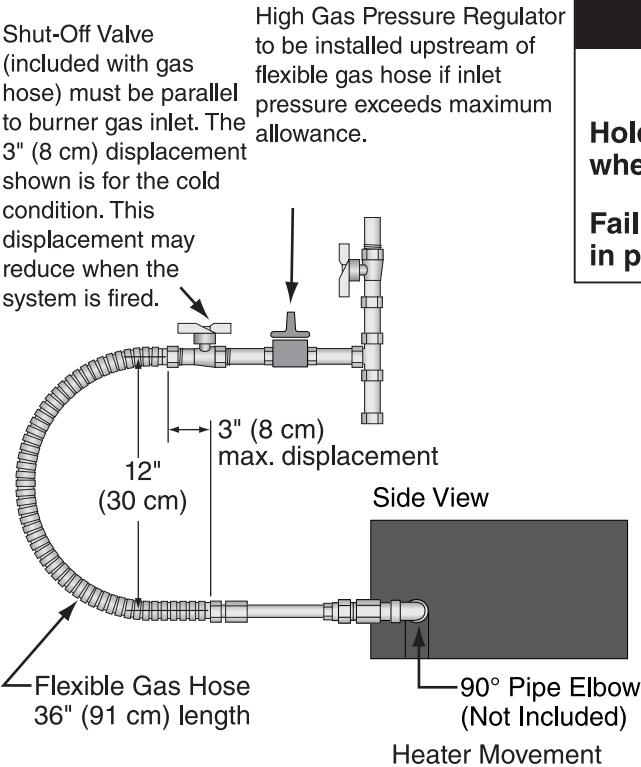



Requirements:

- Maximum of four heaters can be commonly vented through the roof.
- Heaters must be of the same BTU output.
- Heaters must be controlled by a common thermostat.
- Connections to a common stack must be positioned to avoid direct opposition between streams of combustion gases.

GAS CONNECTION

CORRECT POSITIONS

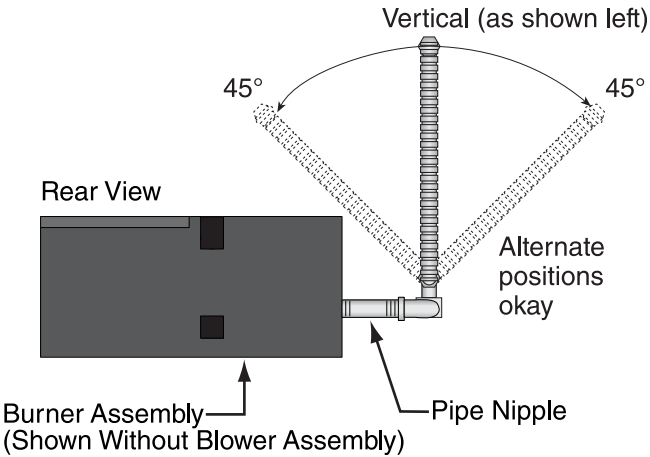


**CAUTION**

Product Damage Hazard

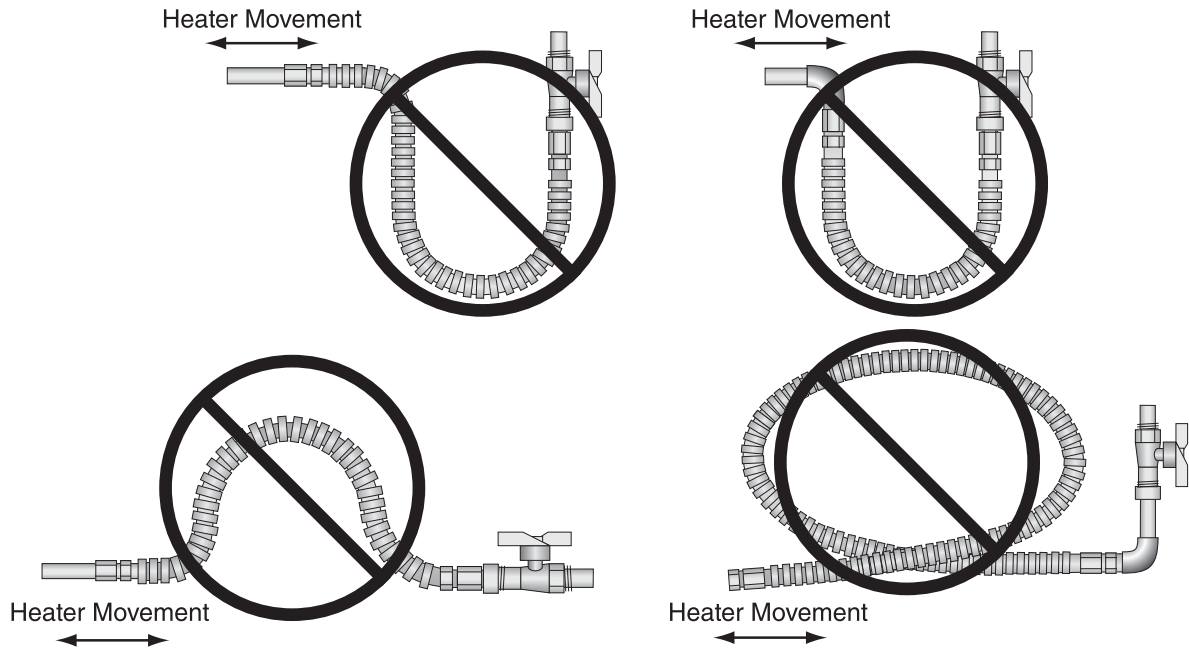
Hold gas nipple securely with pipe wrench when attaching gas hose.

Failure to follow these instructions can result in product damage.



Description	Part Number
High gas pressure regulator 1/2" – 2 PSI	90207600
High gas pressure regulator 3/4" – 5 PSI	90207602

INCORRECT POSITIONS (WRONG INSTALLATION)

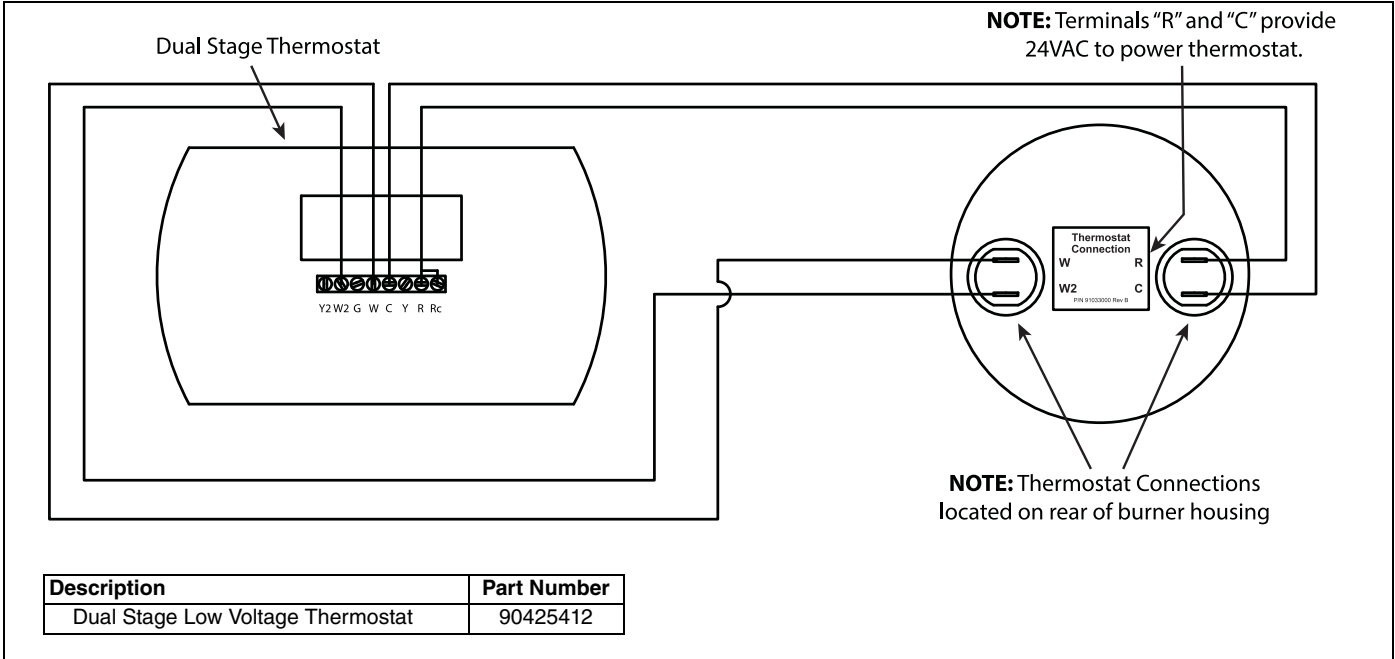


Description	Part Number
1/2" Flexible Stainless Steel Gas Hose (US Models)	91412200
3/4" Flexible Stainless Steel Gas Hose (US Models)	91412204
1/2" Rubber Type 1 Gas Hose (Canadian Models)	91412206
3/4" Rubber Type 1 Gas Hose (Canadian Models)	91412207

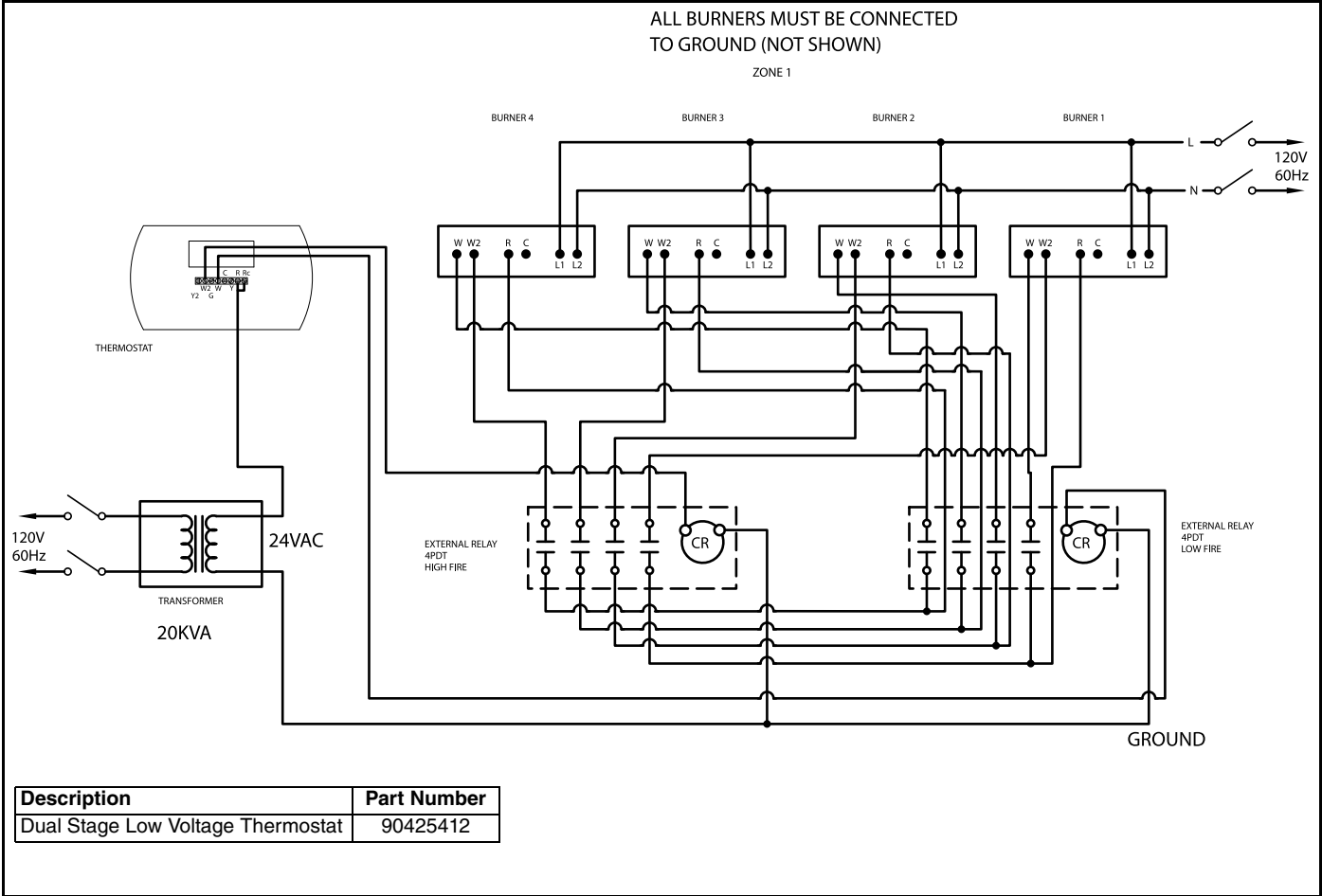
BEFORE INSTALLATION AND OPERATION OF HEATING EQUIPMENT, READ AND UNDERSTAND THE CURRENT INSTALLATION, OPERATION AND SERVICE MANUAL. APPLICATIONS, ENGINEERING AND DETAILED GUIDANCE ON SYSTEMS DESIGN, INSTALLATION AND EQUIPMENT PERFORMANCE ARE AVAILABLE UPON REQUEST. ROBERTS GORDON® EQUIPMENT IS TO BE INSTALLED ONLY IN ACCORDANCE WITH LOCAL LAWS, CODES AND REGULATIONS, AND ONLY BY A CONTRACTOR QUALIFIED IN THE INSTALLATION AND SERVICE OF GAS-FIRED HEATING EQUIPMENT.

WIRING

Line Voltage Thermostat Wiring

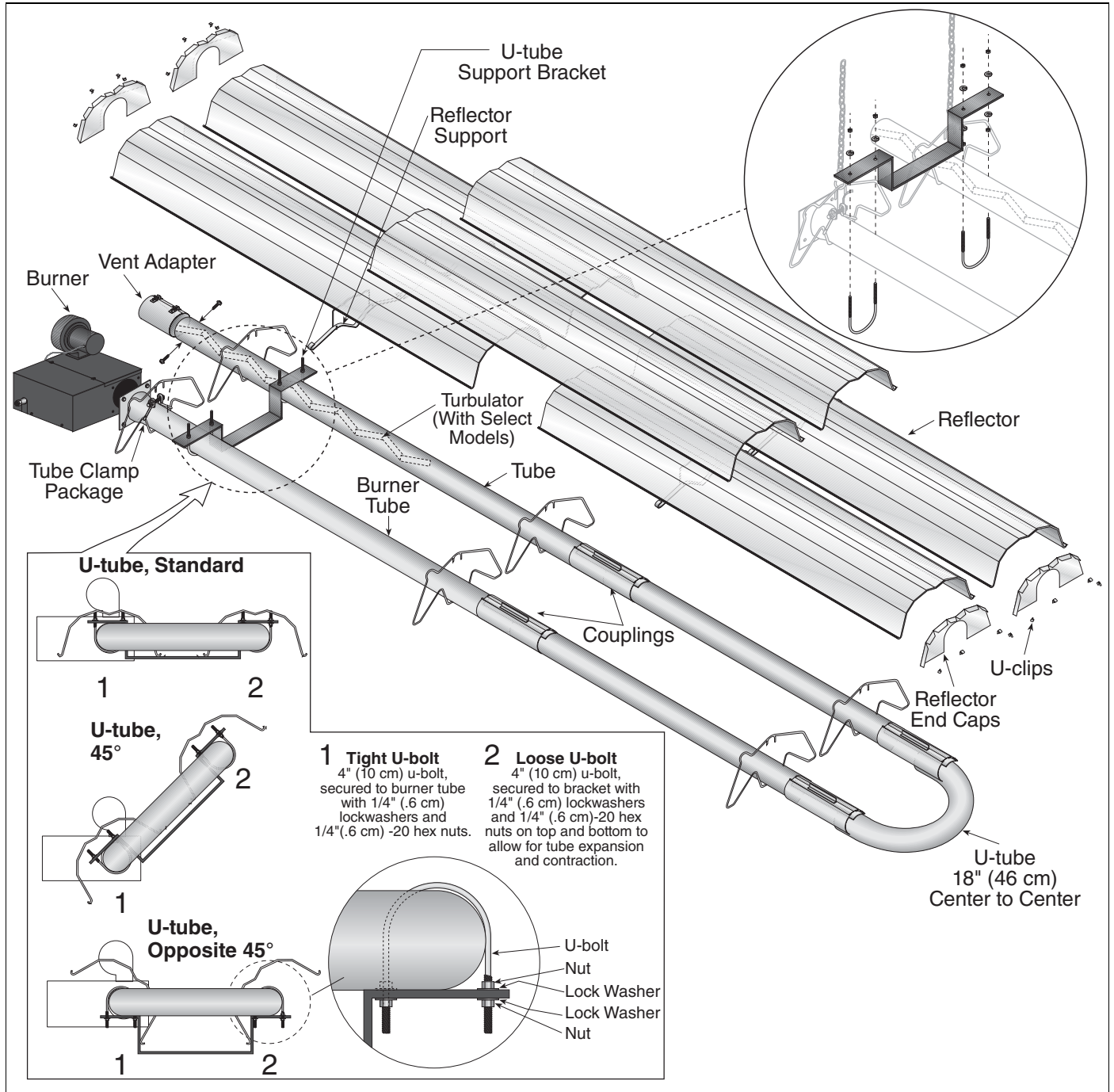


Low Voltage Thermostat Wiring

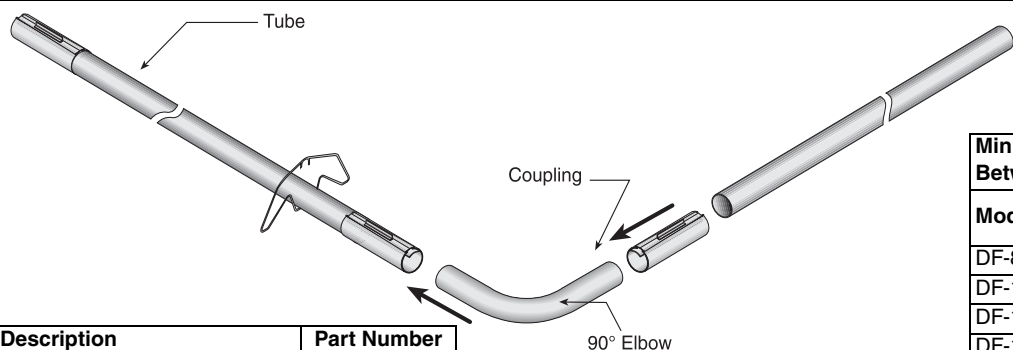


OPTIONAL HEATER ACCESSORIES

U-Tube Heater Assembly Overview



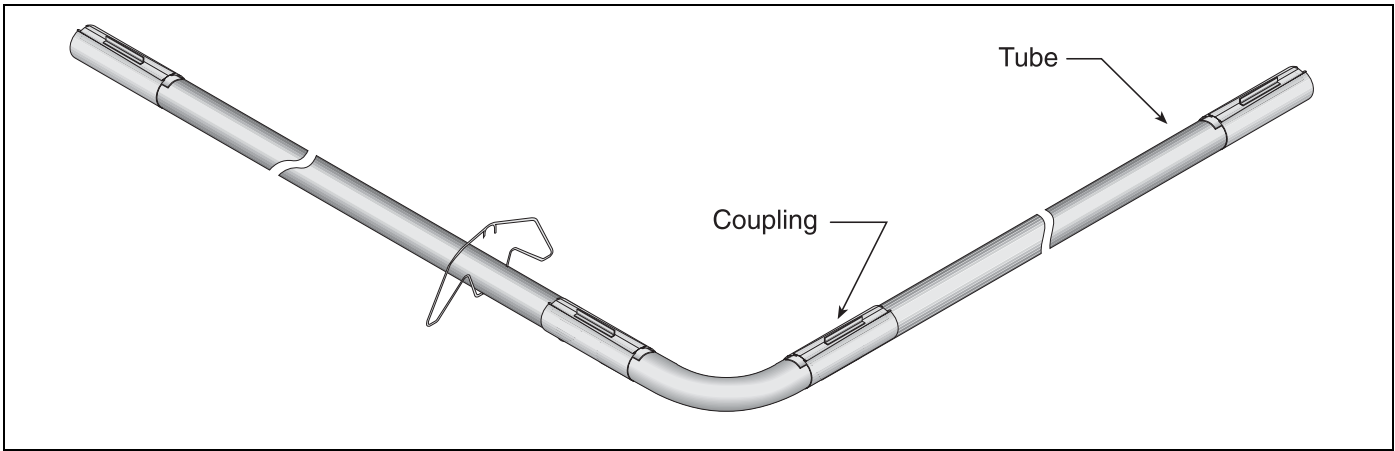
Elbow Installation



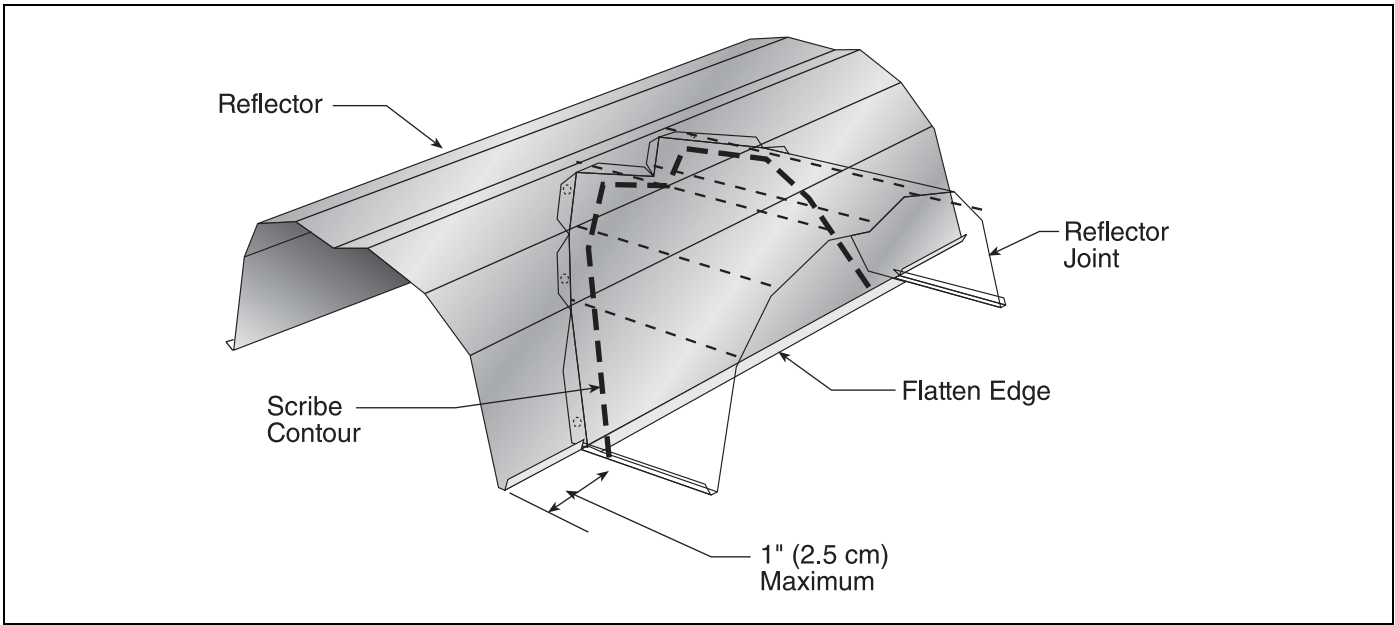
Description	Part Number
Elbow Package	02718702
90° Elbow	01335801
Coupling	01312700
Reflector End Cap	02750800
Reflector Joint Piece	02750900
U-Clip Package	91107720

Minimum Distance Required Between Burner and Elbow	
Model	Minimum Distance
DF-80	10' (3 m)
DF-100	15' (4.5 m)
DF-125	15' (4.5 m)
DF-150	15' (4.5 m)
DF-175	15' (4.5 m)
DF-200	15' (4.5 m)

Elbow Installation (continued)

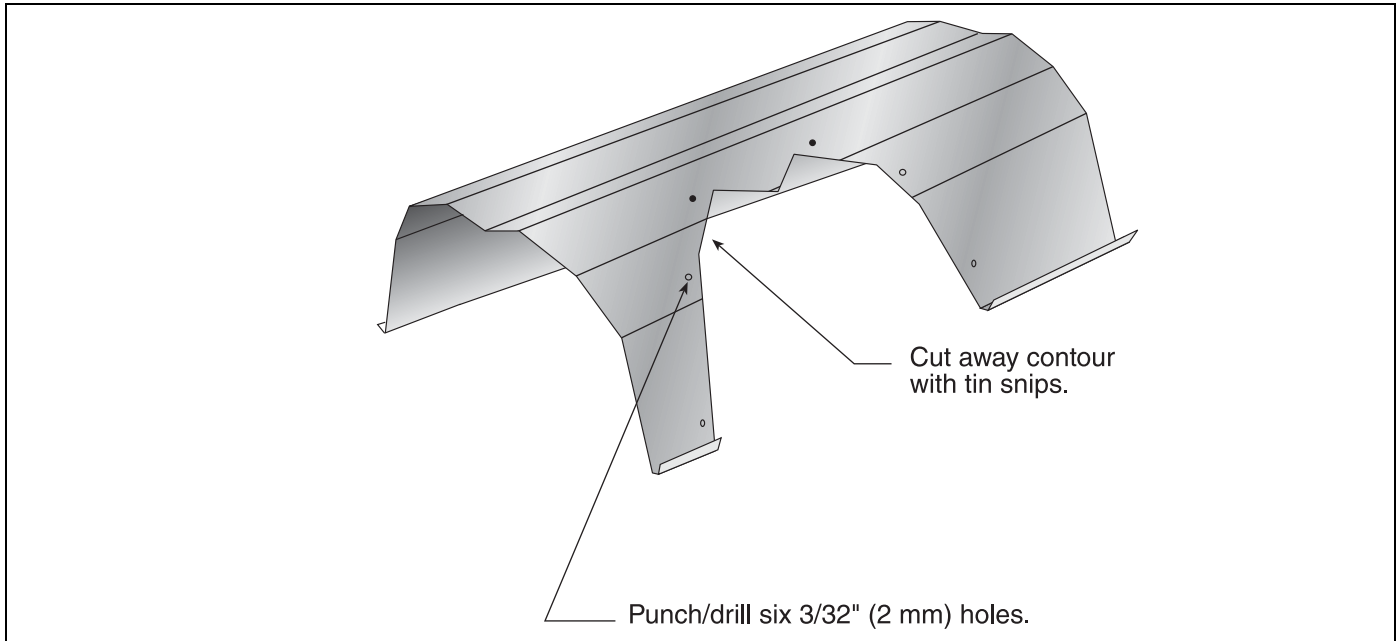


Reflector Joint Installation

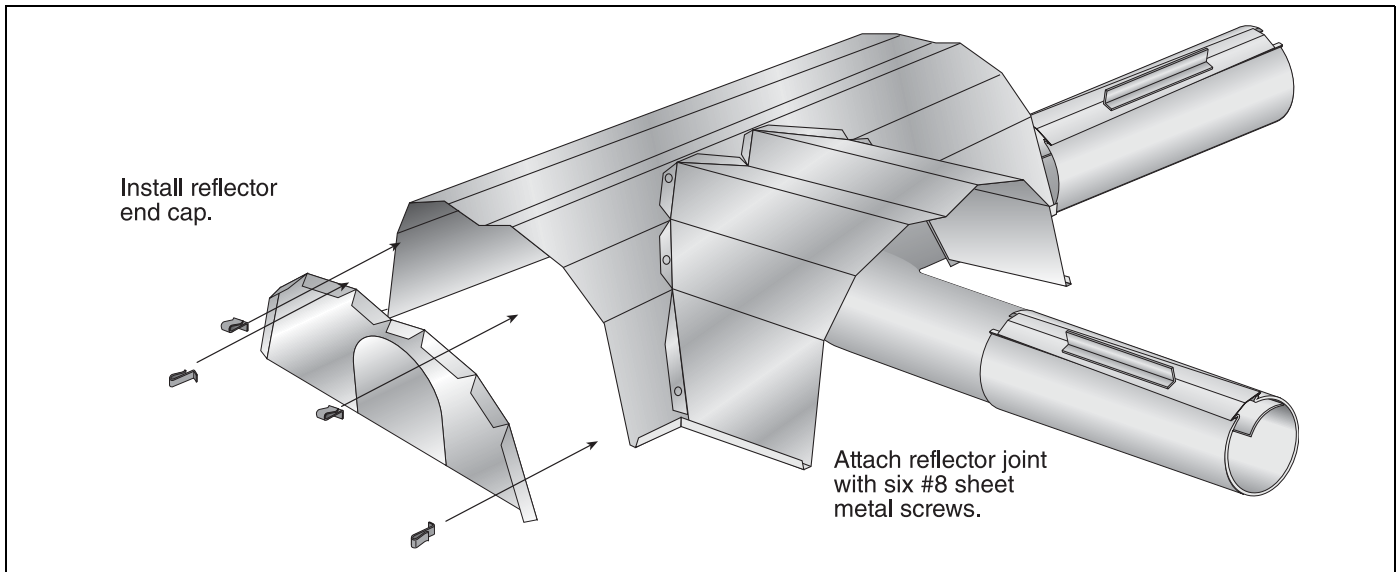


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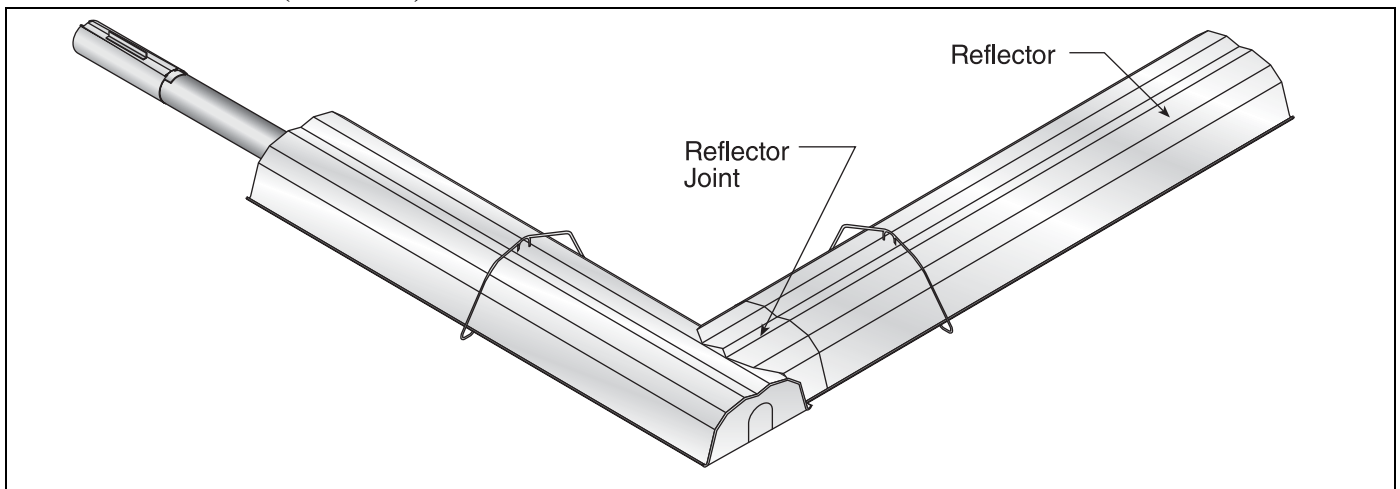
Reflector Joint Installation (continued)



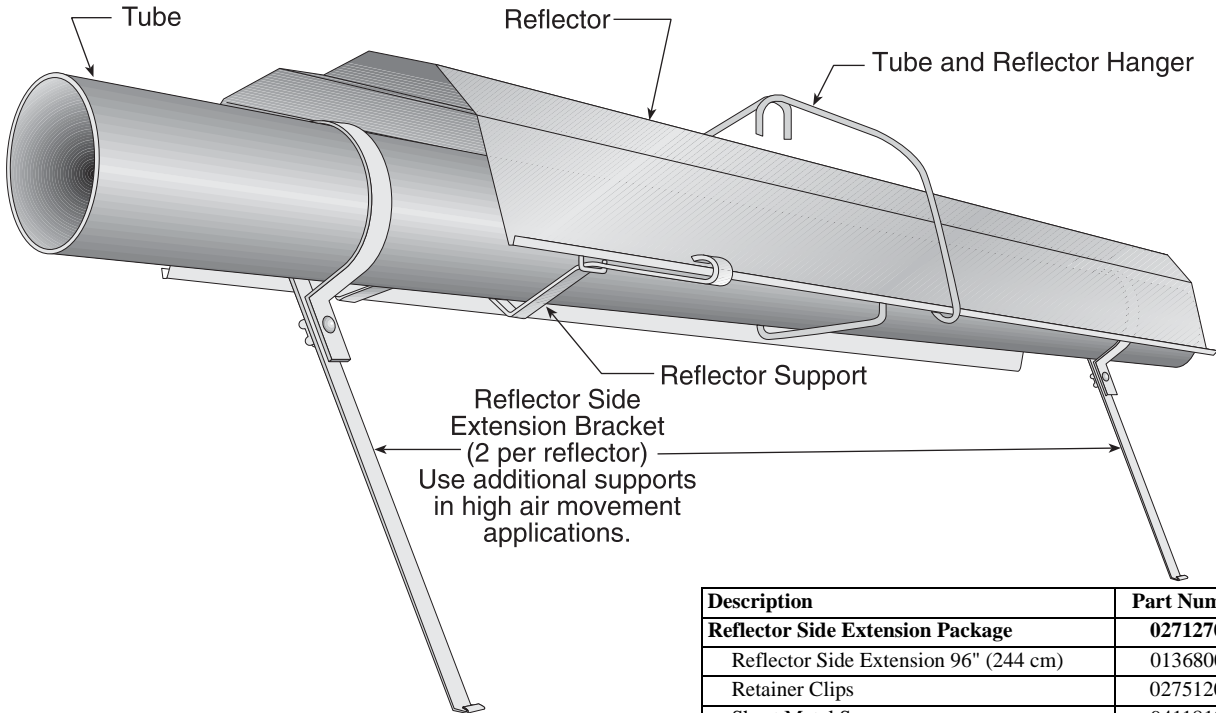
Reflector Joint Detail



Reflector Joint Detail (continued)



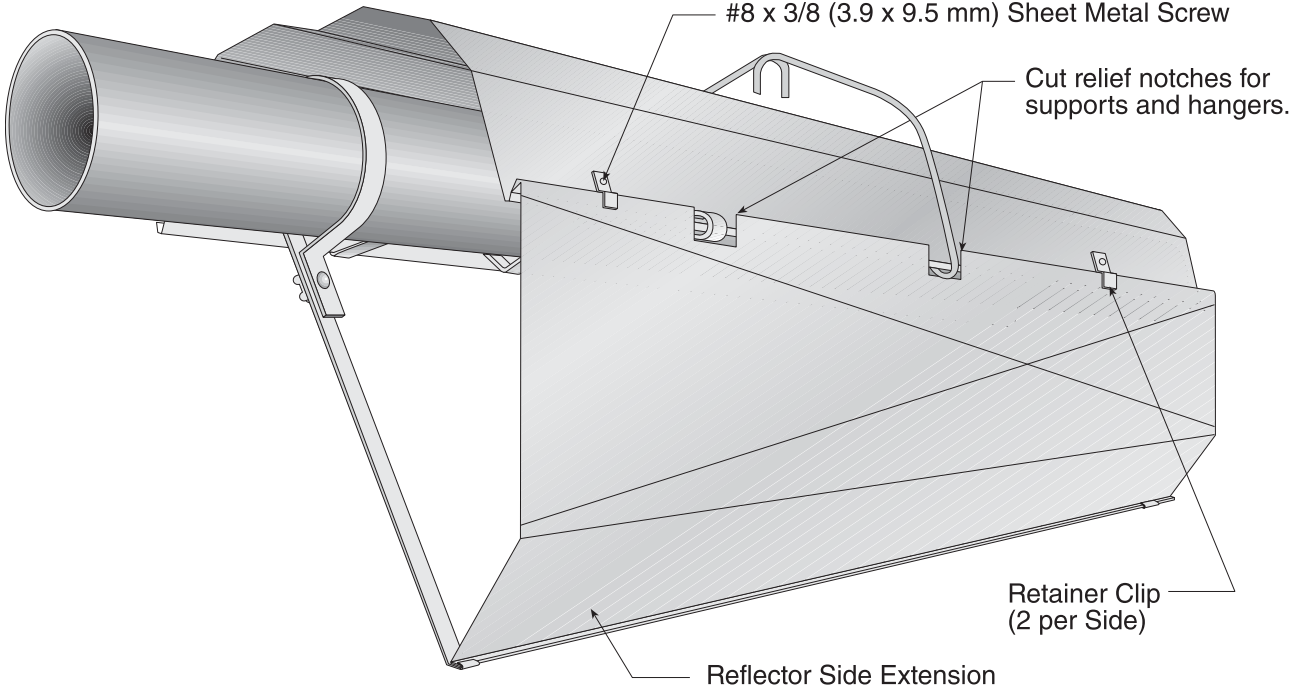
Reflector Side Extension Bracket Installation



The diagram illustrates the installation of a reflector side extension bracket. A horizontal tube is shown with a reflector attached to its side. A bracket, labeled 'Reflector Side Extension Bracket (2 per reflector)', is shown extending from the bottom of the reflector. A 'Reflector Support' is shown as a vertical rod attached to the bracket. A 'Tube and Reflector Hanger' is shown as a U-shaped bracket attached to the top of the tube. A note states: 'Use additional supports in high air movement applications.'

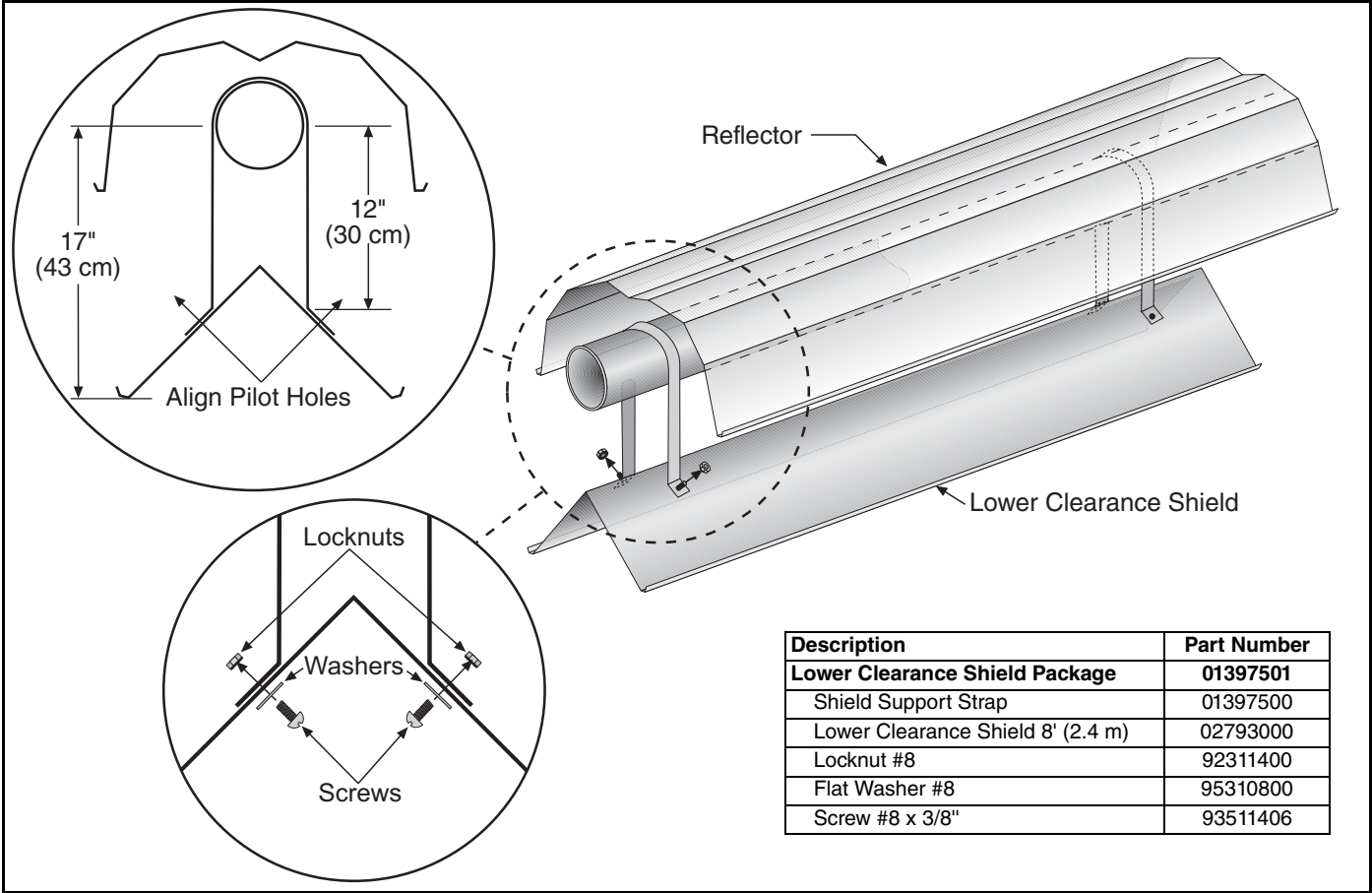
Description	Part Number
Reflector Side Extension Package	02712700
Reflector Side Extension 96" (244 cm)	01368000
Retainer Clips	02751200
Sheet Metal Screws	94118106
Order Separately	
Reflector Side Extension Bracket	01329910

Side Reflector Installation

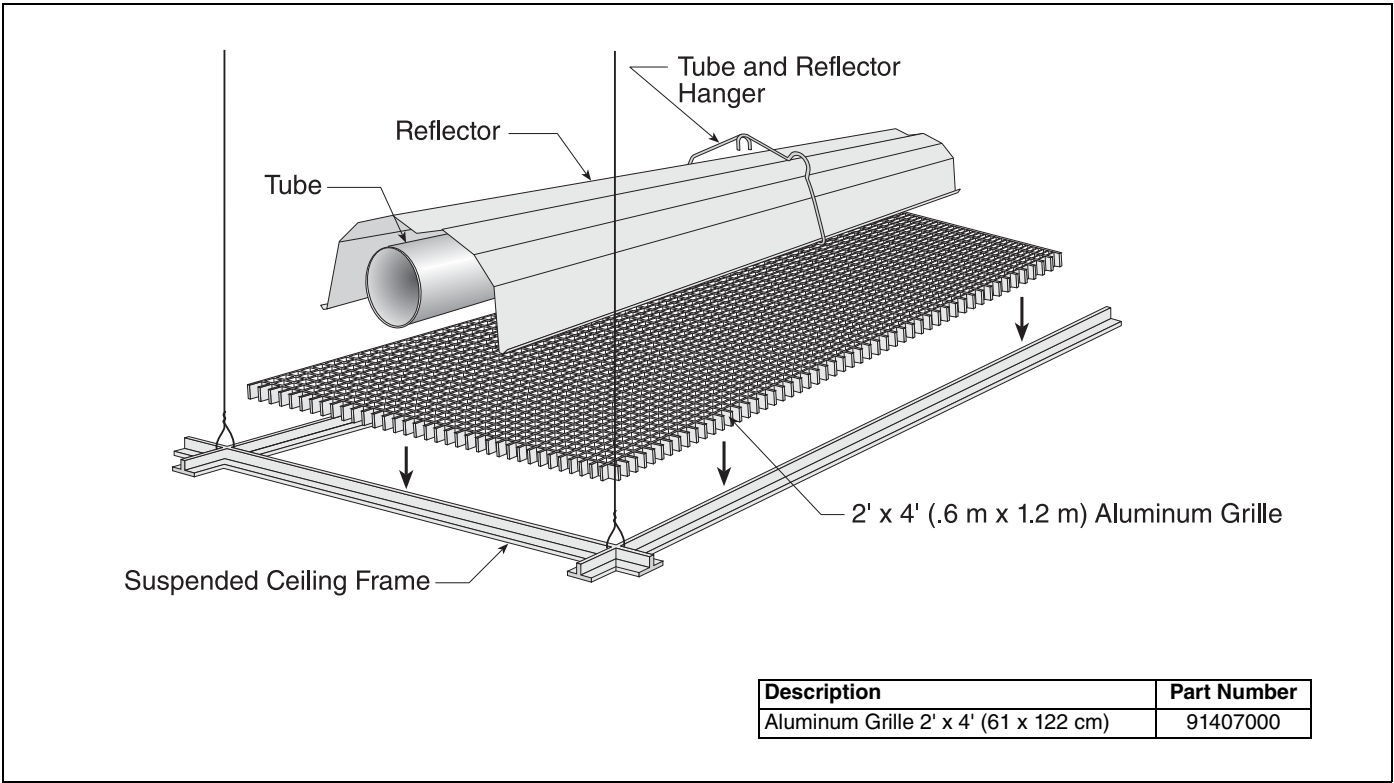


The diagram illustrates the installation of a side reflector. A horizontal tube is shown with a reflector attached to its side. A 'Reflector Side Extension' is shown as a large, angled plate attached to the bottom of the reflector. A '#8 x 3/8 (3.9 x 9.5 mm) Sheet Metal Screw' is shown securing the extension to the reflector. A 'Retainer Clip (2 per Side)' is shown securing the extension to the tube. A note states: 'Cut relief notches for supports and hangers.'

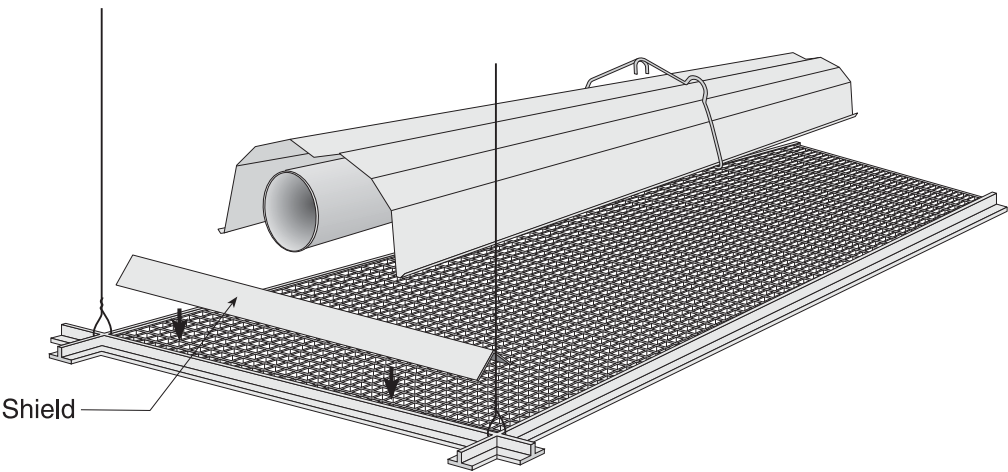
Lower Clearance Shield Support Strap Assembly



Two-Foot Decorative Grille Installation



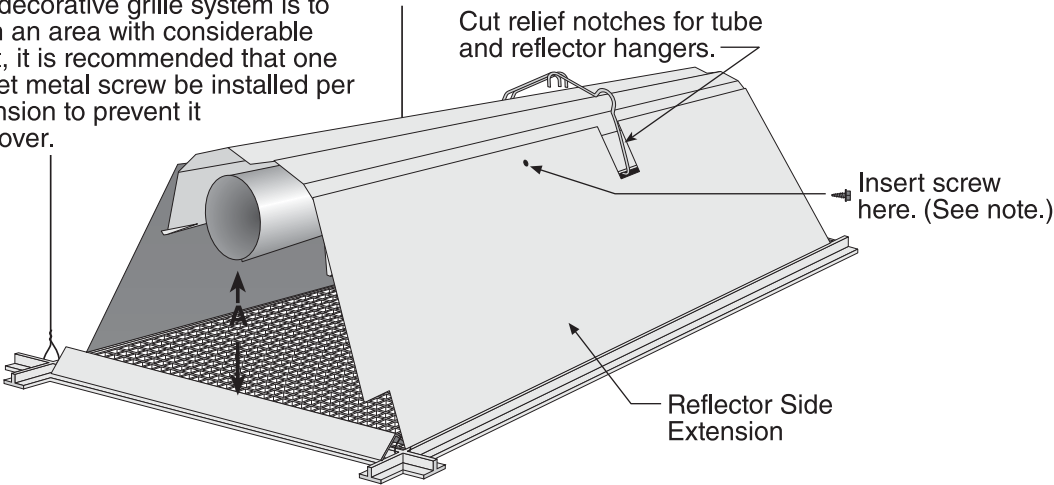
Frame Shield Installation



Description	Part Number
Deco Grille Shield 24" (61 cm)	01365900

Reflector Side Extension Installation for Decorative Grilles

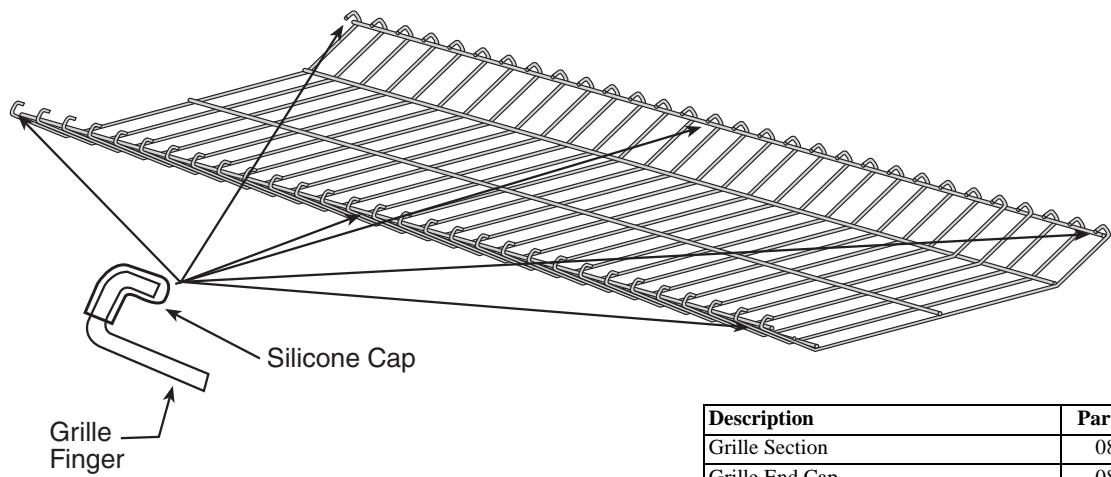
NOTE: If the decorative grille system is to be installed in an area with considerable air movement, it is recommended that one #8 x 3/8" sheet metal screw be installed per reflector extension to prevent it from blowing over.



Distance "A"		Extension	
Minimum	Maximum	Part No.	Width
2" (4 cm)	6" (15 cm)	01370408	8" (20 cm)
6" (15 cm)	10" (26 cm)	01370412	12" (30 cm)
10" (26 cm)	14" (37 cm)	01370416	16" (40 cm)

Description	Part Number
Reflector Side Extension	01370412

Protective Grille Silicone Cap Installation



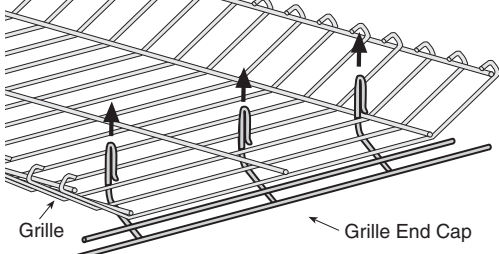
Grille Finger

Silicone Cap

Description	Part Number
Grille Section	08050001
Grille End Cap	08050002
Silicone Cap	91915951-6P

Protective Grille End Cap Installation

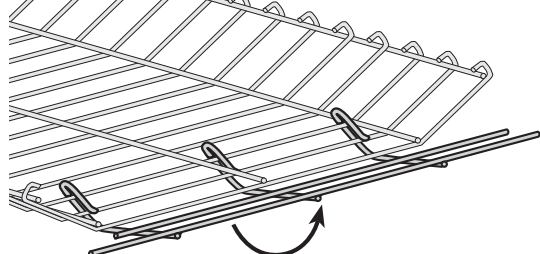
A



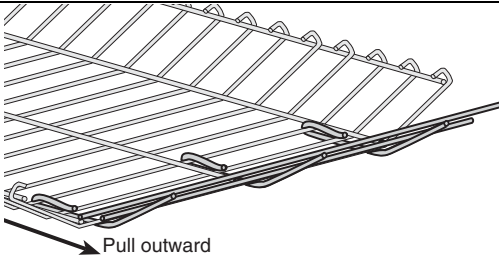
Grille

Grille End Cap

B

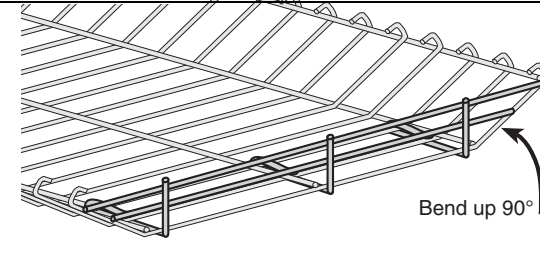


C



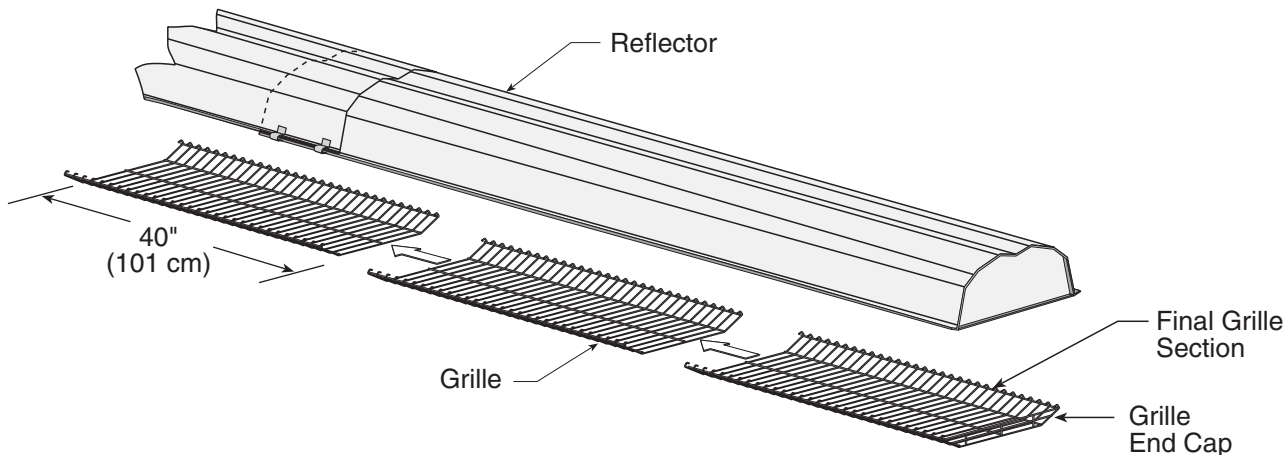
Pull outward

D



Bend up 90°

Protective Grille Installation



Reflector

40"
(101 cm)

Grille

Final Grille Section

Grille End Cap

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THE ROBERTS GORDON® GORDONRAY® DF LIMITED WARRANTY

ROBERTS-GORDON LLC WILL PAY FOR:

Within 36 months from date of purchase by buyer or 42 months from date of shipment by Roberts-Gordon LLC (whichever occurs first), replacement parts will be provided free of charge for any part of the product which fails due to a manufacturing or material defect.

Roberts-Gordon LLC will require the part in question to be returned to the factory. Roberts-Gordon LLC will, at its sole discretion, repair or replace after determining the nature of the defect and disposition of part in question.

ROBERTS GORDON® Replacement Parts are warranted for a period of 12 months from date of shipment from Roberts-Gordon LLC or the remaining ROBERTS GORDON® GORDONRAY® DF warranty.

ROBERTS-GORDON LLC WILL NOT PAY FOR:

Service trips, service calls and labor charges.

Shipment of replacement parts.

Claims where the total price of the goods have not been paid.

Damage due to:

- Improper installation, operation or maintenance.
- Misuse, abuse, neglect, or modification of the ROBERTS GORDON® GORDONRAY® DF in any way.
- Use of the ROBERTS GORDON® GORDONRAY® DF for other than its intended purpose.
- Incorrect gas or electrical supply, accident, fire, floods, acts of God, war, terrorism, or other casualty.
- Improper service, use of replacement parts or accessories not specified by Roberts-Gordon.
- Failure to install or maintain the ROBERTS GORDON® GORDONRAY® DF as directed in the Installation, Operation and Service Manual.
- Relocation of the ROBERTS GORDON® GORDONRAY® DF after initial installation
- Use of the ROBERTS GORDON® GORDONRAY® DF in a corrosive atmosphere containing contaminants.
- Use of the ROBERTS GORDON® GORDONRAY® DF in the vicinity of a combustible or explosive material.
- Any defect in the ROBERTS GORDON® GORDONRAY® DF arising from a drawing, design, or specification supplied by or on behalf of the consumer.
- Damage incurred during shipment. Claim must be filed with carrier.

WARRANTY IS VOID IF:

The ROBERTS GORDON® GORDONRAY® DF is not installed by a contractor qualified in the installation and service of gas fired heating equipment.

You cannot prove original purchase date and required annual maintenance history.

The data plate and/or serial number are removed, defaced, modified or altered in any way.

The ownership of the ROBERTS GORDON® GORDONRAY® DF is moved or transferred. This warranty is non-transferable.

Roberts-Gordon LLC is not permitted to inspect the damaged equipment and/or component parts.

READ YOUR INSTALLATION, OPERATION AND SERVICE MANUAL.

If you have questions about your equipment, contact your installing professional. Should you need Replacement Parts or have additional questions, call or write:

Roberts-Gordon LLC

1250 William Street

P.O. Box 44

Buffalo, New York 14240-0044

Telephone: +1.716.852.4400

Fax: +1.716.852.0854

Toll Free: 800.828.7450

www.robertsgordon.com

Roberts-Gordon LLC's liability, and your exclusive remedy, under this warranty or any implied warranty (including the implied warranties of merchantability and fitness for a particular purpose) is limited to providing replacement parts during the term of this warranty. Some jurisdictions do not allow limitations on how long an implied warranty lasts, so this limitation may not apply to you. There are no rights, warranties or conditions, expressed or implied, statutory or otherwise, other than those contained in this warranty.

Roberts-Gordon LLC shall in no event be responsible for incidental or consequential damages or incur liability for damages in excess of the amount paid by you for the ROBERTS GORDON® GORDONRAY® DF.

Some jurisdictions do not allow the exclusion or limitation of incidental or consequential damages, so this limitation or exclusion may not apply to you. This warranty gives you specific legal rights, and you may also have other rights which vary from jurisdiction to jurisdiction.

Roberts-Gordon LLC shall not be responsible for failure to perform under the terms of this warranty if caused by circumstances out of its control, including but not limited to war, fire, flood, strike, government or court orders, acts of God, terrorism, unavailability of supplies, parts or power. No person is authorized to assume for Roberts-Gordon LLC any other warranty, obligation or liability.

LIMITATIONS ON AUTHORITY OF REPRESENTATIVES:

No representative of Roberts-Gordon LLC, other than an Executive Officer, has authority to change or extend these provisions. Changes or extensions shall be binding only if confirmed in writing by Roberts-Gordon LLC's duly authorized Executive Officer.