



12a Replacement parts

Section assembly 59

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⚠ WARNING

Replacement parts must be purchased through a local Weil-McLain distributor. When ordering, specify boiler model and size and include description and part number of replacement part. Results from using modified or other manufactured parts will not be covered by warranty and may damage boiler or impair operation.

NOTICE

Weil-McLain part numbers are found in **Weil-McLain Boilers and Controls Repair Parts Lists**.

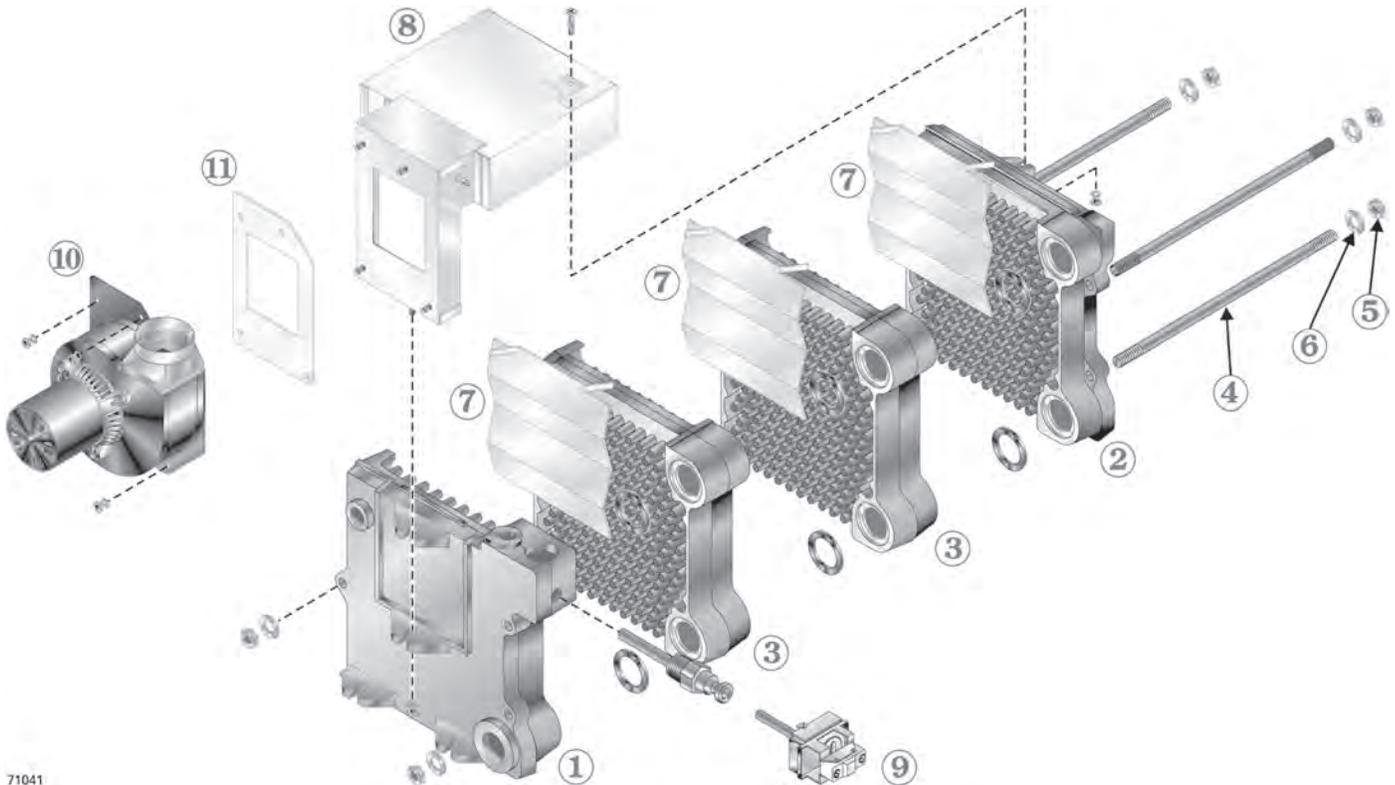
⚠ WARNING

The boiler contains ceramic fiber and fiberglass materials. Use care when handling these materials per instructions on **page 67** of this manual. Failure to comply could result in severe personal injury.



12b Replacement parts — section assembly

Figure 39 Section assembly



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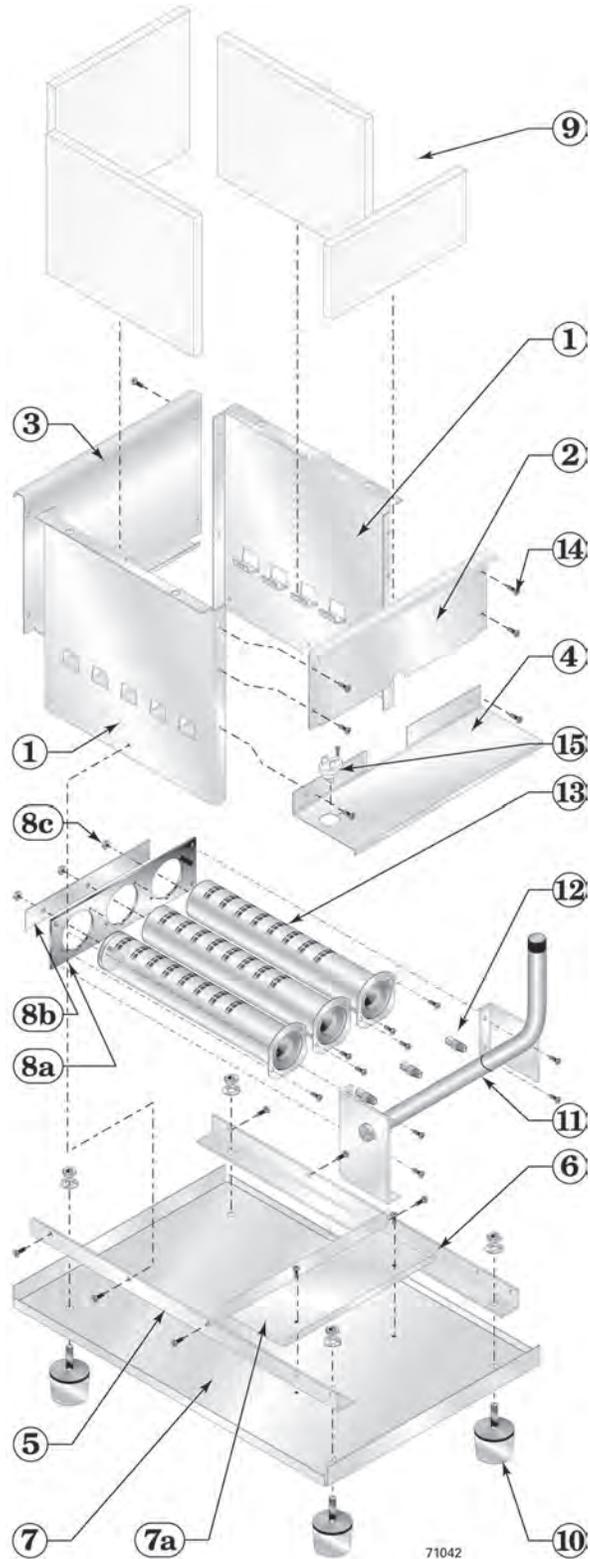
Item number	Description	Weil-McLain part number
1	End section, left hand, 51124	311-103-850
2	End section, right hand 51128	311-103-821
3	Intermediate section, 51125	311-103-818
not shown	Replacement section assembly	CGi-25 and CGi-3 321-114-330 CGi-4 321-114-331 CGi-5 321-114-332 CGi-6 321-114-333 CGi-7 321-114-334 CGi-8 321-114-335
not shown	Section replacement kit, includes seals and sealant for 1 joint	381-354-527
4	Tie rod, 7/16" without nut (3 per boiler):	CGi-25 and CGi-3 560-234-500 CGi-4 560-234-501 CGi-5 560-234-502 CGi-6 560-234-503 CGi-7 560-234-504 CGi-8 560-234-505
5	Nut, 7/16" (2 per tie rod)	561-928-235

Item number	Description	Weil-McLain part number
6	Washer, 7/16" (1 per tie rod)	562-248-684
7	Radiation plate (1 per joint)	460-003-700
8	Collector hood and transition assembly	CGi-25 381-354-594 CGi-3 381-354-595 CGi-4 381-354-596 CGi-5 381-354-597 CGi-6 381-354-598 CGi-7 381-354-599 CGi-8 381-354-600
9	High limit, 30° differential, with well	Honeywell L4080D1036 White-Rodgers 11B81-3 510-312-250
10	Inducer fan assembly kit, includes inducer fan assembly, gasket and nuts	381-356-499
11	Gasket, inducer	590-317-627



12c Replacement parts — base

Figure 40 Base assembly





12c Replacement parts – base (continued)

Item	Description	Weil-McLain part number
	Base assembly kit (includes base panels items 1, 2, 3, 4, 5, 6 and 7)	CGi-25 & CGi-3 CGi-4 CGi-5 CGi-6 CGi-7 CGi-8 381-354-337 381-354-338 381-354-339 381-354-340 381-354-341 381-354-342
1	Base side panel (in Base assembly)	
2	Base front cross-tie assembly (in Base assembly)	
3	Base back cross-tie assembly (in Base assembly)	
4	Burner shield (in Base assembly)	
5	Base pan angle, left side (in Base assembly)	
6	Base pan angle, right side (in Base assembly)	
7	Base pan (in Base assembly)	
7a	Base pan air baffle (in Base assembly)	
8a	Burner mounting plate	CGi-25 & CGi-3 CGi-4 CGi-5 CGi-6 CGi-7 CGi-8 450-003-690 450-003-691 450-003-692 450-003-693 450-003-795 450-003-796
8b	Rear spacing strip	CGi-25 & CGi-3 CGi-4 CGi-5 CGi-6 CGi-7 CGi-8 550-320-160 550-320-161 550-320-162 550-320-163 550-320-164 550-320-165
8c	Nut, hex 5mm Zp	550-320-170
9	Base insulation kit	CGi-25 & CGi-3 CGi-4 CGi-5 CGi-6 CGi-7 CGi-8 381-354-330 381-354-331 381-354-332 381-354-333 381-354-334 381-354-335
10	Boiler leg kit	550-320-219
11	Manifold	CGi-25 & CGi-3 CGi-4 CGi-5 CGi-6 CGi-7 CGi-8 591-126-735 591-126-736 591-126-737 591-126-738 591-126-739 591-126-740
12	Main burner orifice — Natural gas, sea level (see Table 2, page 12 for orifice size) CGi-25 CGi-3 and CGi-5 CGi-4 and CGi-6 - CGi-8 Main burner orifice — Liquefied Petroleum (Propane) gas, sea level (see Table 2, page 12 for orifice size) CGi-25 CGi-3 and CGi-5 CGi-4 and CGi-6 - CGi-8	560-529-090 560-529-126 560-529-077 560-529-084 560-529-111 560-529-078
13	Burner	512-200-076
14	Screw, 10-32 x 0.38 STP type 23 hex, washer head slot	562-135-710
15	Rollout thermal fuse element	512-050-230



12d Replacement parts — jacket

Figure 41 Jacket assembly



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Boiler Model	1	2		3	4	5	Boiler Model
	Junction box, 2 x 4	Panel, left side, with insulation		Panel, right side, with insulation	Panel, top front, with insulation	Panel, top rear, with insulation	
		Natural Gas	Propane Gas				
	Weil-McLain part number						
CGi-25	(Available at local supply house)	381-355-534	381-355-581	381-355-699	381-355-403	381-355-539	CGi-25
CGi-3		381-355-541	381-355-584	381-355-699	381-355-403	381-355-539	CGi-3
CGi-4		381-355-546	381-355-587	381-355-699	381-355-413	381-355-551	CGi-4
CGi-5		381-355-553	381-355-590	431-223-311	381-355-420	381-355-558	CGi-5
CGi-6		381-355-560	381-355-601	431-223-311	381-355-427	381-355-565	CGi-6
CGi-7		381-355-567	381-355-604	431-223-311	381-355-434	381-355-572	CGi-7
CGi-8		381-355-574	381-355-607	431-223-311	381-355-441	381-355-579	CGi-8
Boiler Model		6	7	8	9	10	Boiler Model
	Panel, door	Cross tie, bottom front	Panel, interior, with insulation	Panel, rear, with insulation	Not shown — gold touch-up paint		
CGi-25/3	381-355-540	431-223-325	381-355-405	431-223-300	592-000-000	CGi-25/3	
CGi-4	381-355-552	431-223-326	381-355-415	431-223-301		CGi-4	
CGi-5	381-355-559	431-223-327	381-355-422	431-223-302		CGi-5	
CGi-6	381-355-566	431-223-328	381-355-429	431-223-303		CGi-6	
CGi-7	381-355-573	431-223-329	381-355-436	431-223-304		CGi-7	
CGi-8	381-355-580	431-223-330	381-355-443	431-223-305		CGi-8	



12e Replacement parts – trim

Figure 42 Trim assembly



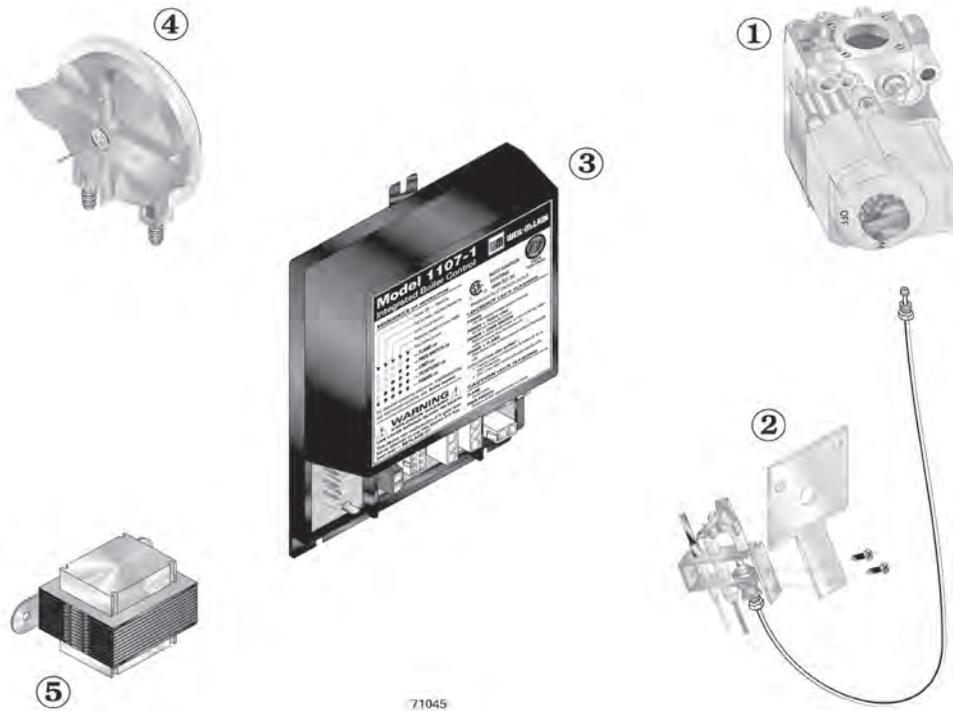
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Item number	Description	Manufacturer	Manufacturer's part number	Weil-McLain part number
1	Pressure relief valve, ASME, 30 PSIG, ¼" male inlet Pressure relief valve, ASME, 30 PSIG, ¼" female inlet <i>(Fittings shown are factory-installed on boiler.)</i>	Conbraco Watts Conbraco Watts	10-407-05 M330 10-408-05 335	511-546-920 511-546-924
2	Combination pressure-temperature gauge, 3 1/8" diameter, short shank <i>(Fittings shown are shipped loose with boiler.)</i>	Weil-McLain		380-000-000
3	Drain valve, ¾" <i>(Fittings shown are included with boiler.)</i>	Conbraco Hammond Valve Matco-Norca Watts	31-606-01 710 205F04 BD-2C	511-210-423 511-246-392 511-246-392 511-246-392
4	Circulator <i>(Fittings shown are shipped loose with boiler.)</i>	Taco	007	511-405-113
5	Circulator gasket, universal (2 per boiler)	Weil-McLain		590-317-535
not shown	Circulator hardware kit, includes: 1 flange, 2 nuts, 2 screws, 1 gasket — ¼" NPT — CGI-25 ----- 1" NPT — CGI-3 through CGI-5 ----- 1 ¼" NPT — CGI-6 and CGI-7 ----- 1 ½" NPT — CGI-8 -----	Weil-McLain		----- 381-354-530 ----- 381-354-525 ----- 381-354-526 ----- 381-354-531
6	Circulator wiring harness kit, with Molex <i>(loose)</i>			381-354-528



12f Replacement parts — controls

Figure 43 Gas control assembly



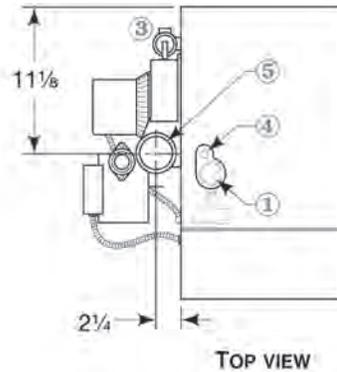
Item number	Description	Boiler model	Manufacturer	Manufacturer's part number	Weil-McLain part number
Natural gas components					
1	Gas valve, 1/2" x 1/2"	CGi-25 -- CGi-6	Honeywell	VR8204A2001	511-044-381
	Gas valve, 3/4" x 3/4"	CGi-7 & CGi-8	White-Rodgers	36E36-266	511-044-381
			Honeywell	VR8304M4002	511-044-353
			White-Rodgers	36C68-478	511-044-353
2	Pilot kit w/orifice & aluminum pilot gas tubing		Weil-McLain		511-330-080
Propane gas components					
1	Gas valve, 1/2" x 1/2"	CGi-25 -- CGi-6	Honeywell	VR8204M2701	511-044-354
	Gas valve, 3/4" x 3/4"	CGi-7 & CGi-8	White-Rodgers	36E36-291	511-044-354
			Honeywell	VR8304M4010	511-044-355
			White-Rodgers	36C68-479	511-044-355
2	Pilot kit w/orifice & aluminum pilot gas tubing		Weil-McLain		511-330-081
Natural gas and propane gas components					
3	Control module		United Technologies	1107-1	511-330-090
not shown	Wiring harness		Weil-McLain		591-391-894
4	Air pressure switch	CGi-25 & CGi-3	Tri-Delta	PPS10171-3013	511-624-401
	1.79" w.c.	CGi-4		PPS10171-3094	511-624-302
	1.40" w.c.	CGi-5		PPS10171-3095	511-624-303
	1.12" w.c.	CGi-6 & CGi-8		PPS10171-3096	511-624-304
	0.80" w.c.	CGi-7		PPS10171-3031	511-624-405
	0.75" w.c.				
5	Control transformer				511-842-370
not shown	Tubing, air pressure switch, 0.12 I.D. silicone red, to collector hood white, to transition		Lydall		590-317-650 590-317-651



13a Dimensions

Figure 44 Dimensional drawing

- ① Supply piping (note 1)
- ② Return piping (note 1)
- ③ Relief valve, 3/4" NPT
- ④ 1/2" NPT to expansion tank/air vent
- ⑤ 3" Diameter vent

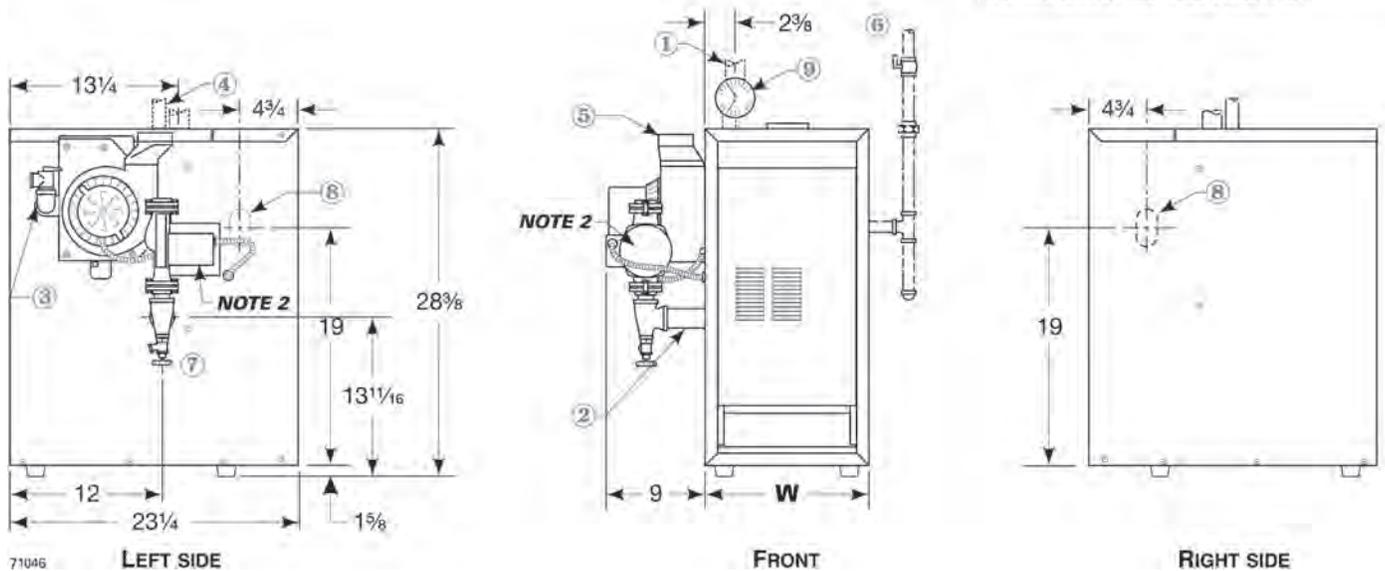


- ⑥ Gas supply piping
- ⑦ Drain valve
- ⑧ Gas supply entrance (right or left side)
- ⑨ Pressure/temperature gauge

Note 1: Boiler supply and return tapings are both 1 1/4" NPT. See **Table 6**, page 20 for recommended system supply and return piping sizes.

Note 2: Boiler circulator is shipped loose. Circulator may be mounted on either boiler supply or return piping. Circulator flange provided with boiler is same size as recommended pipe size in **Table 6**, page 20.

ALL DIMENSIONS IN INCHES



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Boiler model number	Supply tapping (inches NPT)	Return tapping (inches NPT)	Gas connection size Note 3 (inches NPT)	Gas manifold size Note 3 (inches NPT)	"W" Jacket width (inches)
CGi-25	1 1/4	1 1/4	1/2	1/2	10
CGi-3	1 1/4	1 1/4	1/2	1/2	10
CGi-4	1 1/4	1 1/4	1/2	1/2	13
CGi-5	1 1/4	1 1/4	1/2	1/2	16
CGi-6	1 1/4	1 1/4	1/2	1/2	19
CGi-7	1 1/4	1 1/4	3/4	3/4	22
CGi-8	1 1/4	1 1/4	3/4	3/4	25

Note 3: Gas piping from meter to boiler to be sized per local utility requirements.



13b Ratings



(Note 5)

Table 10 Boiler ratings

Boiler model number	DOE Heating capacity (Btuh)	0 - 2,000 feet altitude		2,000 - 4,500 feet altitude		Net I=B=R ratings (Btuh)	Boiler water content (gallons)	DOE Seasonal efficiency (% AFUE)	Vent size
		Input (Btuh)	Output (Btuh)	Input (Btuh)	Output (Btuh)				
(Note 1)	(Note 2)	Input (Btuh)	Output (Btuh)	Input (Btuh)	Output (Btuh)	(Note 3)		(Note 5)	(Note 4)
CGi-25	42,000	50,000	42,000	45,000	38,000	37,000	1.5	84.0	3"
CGi-3 (Note 5)	51,000	60,000	51,000	60,000	51,000	45,000	1.5	85.1	3"
CGi-4	85,000	100,000	85,000	90,000	76,000	74,000	2.1	84.0	3"
CGi-5	100,000	119,000	100,000	120,000	101,000	87,000	2.7	83.3	3"
CGi-6	140,000	167,000	140,000	150,000	126,000	122,000	3.3	83.3	3"
CGi-7	167,000	200,000	167,000	180,000	150,000	145,000	3.8	83.0	3"
CGi-8	194,000	233,000	194,000	210,000	175,000	169,000	4.4	82.7	3"
Notes	1. Add "PIN" for natural gas boiler - "PIL" for Liquefied Petroleum (propane) gas boiler.								
	2. Based on standard test procedures prescribed by the United States Department of Energy.								
	3. Net I=B=R ratings are based on net installed radiation of sufficient quantity for the requirements of the building and nothing need be added for normal piping and pickup. Ratings are based on a piping and pickup allowance of 1.15. An additional allowance should be made for unusual piping and pickup loads.								
	4. CGi boilers require special venting, consistent with Category I or III boiler. Use only the vent materials and methods specified in this manual. Vent diameter shown above is for direct exhaust venting. See Table 3, page 14, for vent diameter when chimney draft venting.								
	5. As an Energy Star Partner, Weil-McLain has determined that the CGi-3 meets the Energy Star guidelines for energy efficiency.								

NOTICE

CGi boilers for residential radiant panel systems, converted gravity heating systems or other low water temperature applications should be installed with balancing valves and bypass piping equal to the supply and return size to avoid excessive flue gas condensation due to lower operating water temperatures. For alternate piping, contact your Weil-McLain sales office. CSA design certified for installation on combustible flooring. Tested for 50 psi working pressure.



Handling ceramic fiber and fiberglass materials

REMOVAL OF COMBUSTION CHAMBER LINING OR BASE PANELS



The combustion chamber lining or base insulation panels in this product contain ceramic fiber materials. Ceramic fibers can be converted to cristobalite in very high temperature applications. The International Agency for Research on Cancer (IARC) has concluded, “Crystal-line silica inhaled in the form of quartz or cristobalite from occupational sources is carcinogenic to humans (Group 1).”:

Precautionary measures

- Avoid breathing fiberglass dust and contact with skin or eyes.
 - Use NIOSH certified dust respirator (N95). This type of respirator is based on the OSHA requirements for fiberglass wool at the time this document was written. Other types of respirators may be needed depending on the job site conditions. Current NIOSH recommendations can be found on the NIOSH web site at <http://www.cdc.gov/niosh/homepage.html>. NIOSH approved respirators, manufacturers, and phone numbers are also listed on this web site.
 - Wear long-sleeved, loose fitting clothing, gloves, and eye protection.
- Apply enough water to the combustion chamber lining or base insulation to prevent airborne dust.
- Remove combustion chamber lining or base insulation from the boiler and place it in a plastic bag for disposal.
- Wash potentially contaminated clothes separately from other clothing. Rinse clothes washer thoroughly.

NIOSH stated First Aid.

- Eye: Irrigate immediately.
- Breathing: Fresh air.

REMOVAL OF FIBERGLASS WOOL

or

INSTALLATION OF FIBERGLASS WOOL, COMBUSTION CHAMBER LINING OR BASE PANELS:



This product contains fiberglass jacket insulation and ceramic fiber materials in combustion chamber lining or base panels in gas fired products. Airborne fibers from these materials have been listed by the State of California as a possible cause of cancer through inhalation.

Precautionary measures

- Avoid breathing fiberglass dust and contact with skin or eyes.
 - Use NIOSH certified dust respirator (N95). This type of respirator is based on the OSHA requirements for fiberglass wool at the time this document was written. Other types of respirators may be needed depending on the job site conditions. Current NIOSH recommendations can be found on the NIOSH web site at <http://www.cdc.gov/niosh/homepage.html>. NIOSH approved respirators, manufacturers, and phone numbers are also listed on this web site.
 - Wear long-sleeved, loose fitting clothing, gloves, and eye protection.
- Operations such as sawing, blowing, tear out, and spraying may generate airborne fiber concentration requiring additional protection.
- Wash potentially contaminated clothes separately from other clothing. Rinse clothes washer thoroughly.

NIOSH stated First Aid.

- Eye: Irrigate immediately.
- Breathing: Fresh air.

