



12a Replacement parts

Section assembly 61

Base 62

Jacket 63

Trim..... 64

Controls 65

⚠ 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**.

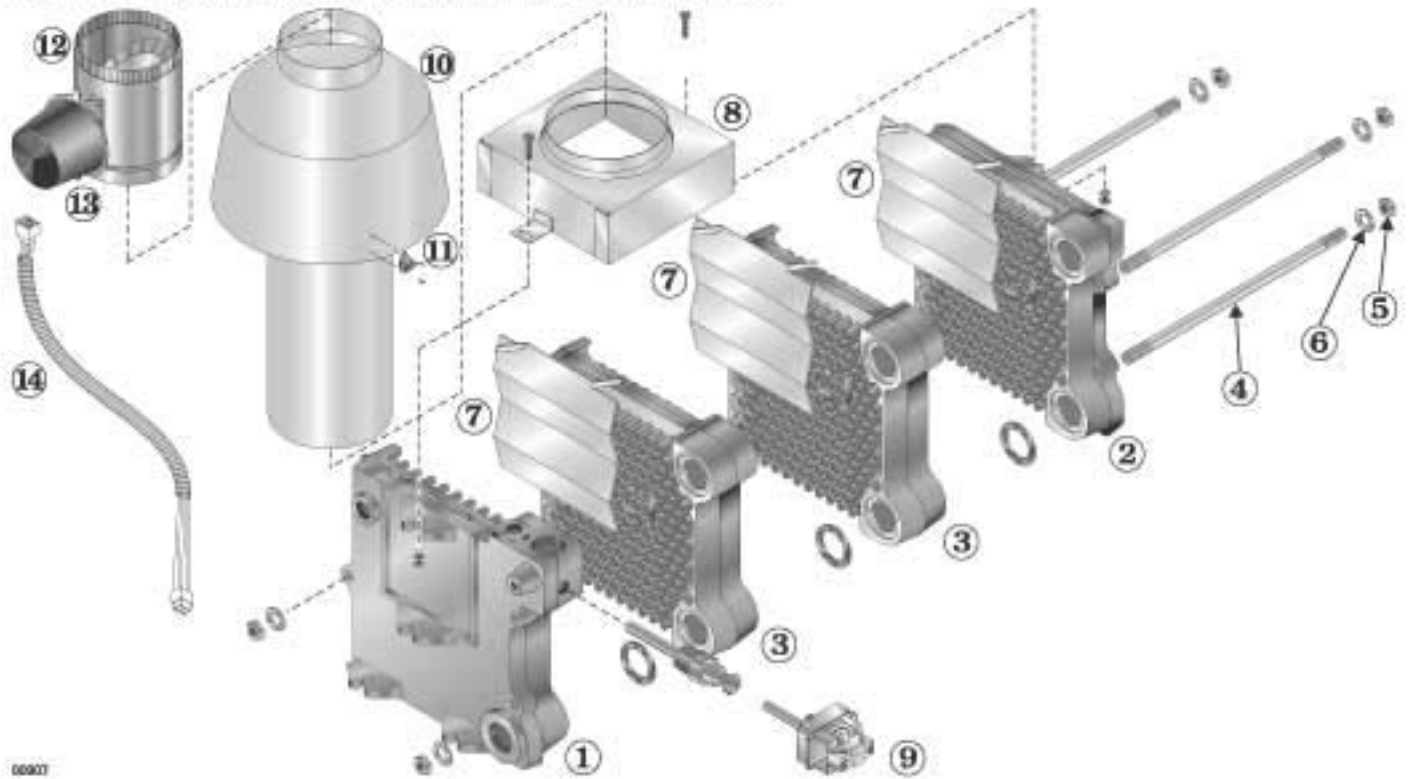
⚠ WARNING

The boiler contains ceramic fiber and fiberglass materials. Use care when handling these materials per instructions on **page 68** of this manual. Failure to comply could result in severe personal injury.



12b Replacement parts – section assembly

Figure 31 Section assembly, flue collector, draft hood and vent damper



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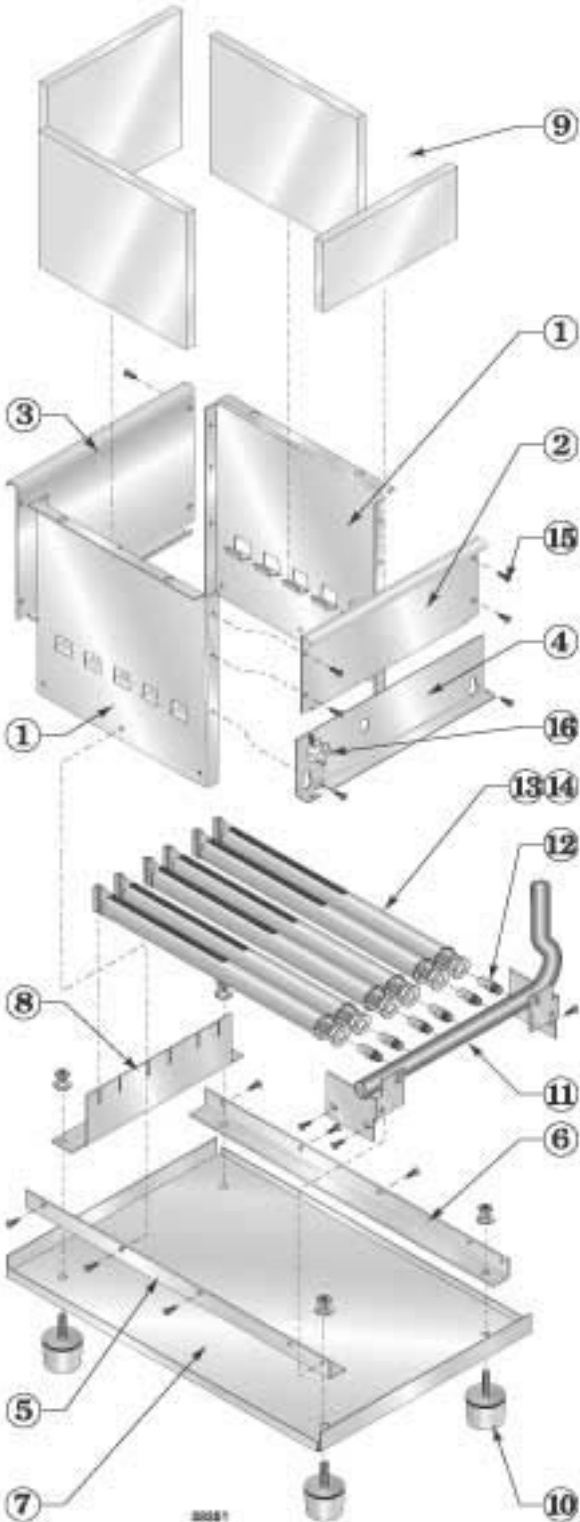
Item number	Description	Weil-McLain part number
1	End section, left hand, 51124	311-103-830
2	End section, right hand, 51128	311-103-821
3	Intermediate section, 51125	311-103-818
not shown	Replacement section assembly	CGa-25 & CGa-3 321-114-345 CGa-4 321-114-346 CGa-5 321-114-347 CGa-6 321-114-348 CGa-7 321-114-349 CGa-8 321-114-350
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):	CGa-25 & CGa-3 560-234-500 CGa-4 560-234-501 CGa-5 560-234-502 CGa-6 560-234-503 CGa-7 & CGa-8 560-234-504
5	Nut, 7/16" (2 per tie rod)	561-928-235
6	Washer, 7/16" (1 per tie rod)	562-248-684
7	Radiation plate (1 per joint)	460-003-700
8	Collector hood	CGa-25 381-354-625 CGa-3 381-354-626 CGa-4 381-354-627 CGa-5 381-354-628 CGa-6 381-354-629 CGa-7 381-354-630 CGa-8 381-354-631

Item number	Description	Weil-McLain part number
9	High limit, 30° differential, with well	Honeywell L4080D1036 White-Rodgers 11B81-3 510-312-250
10	Draft hood	CGa-25 450-021-240 CGa-3 450-021-241 CGa-4 450-021-242 CGa-5 450-021-243 CGa-6 450-021-244 CGa-7 450-021-245 CGa-8 450-021-246
11	Spill switch (210°F) Spill switch (240°F)	CGa-25 510-300-013 CGa-3 through -8 510-300-014
12	Vent damper	4" 381-800-474 5" 381-800-475 6" 381-800-476 7" 381-800-477
13	Vent damper actuator	Effikal RVGP Johnson M35BE-1C 510-512-337 510-312-255
14	Vent damper harness	591-391-795



12c Replacement parts — base

ers

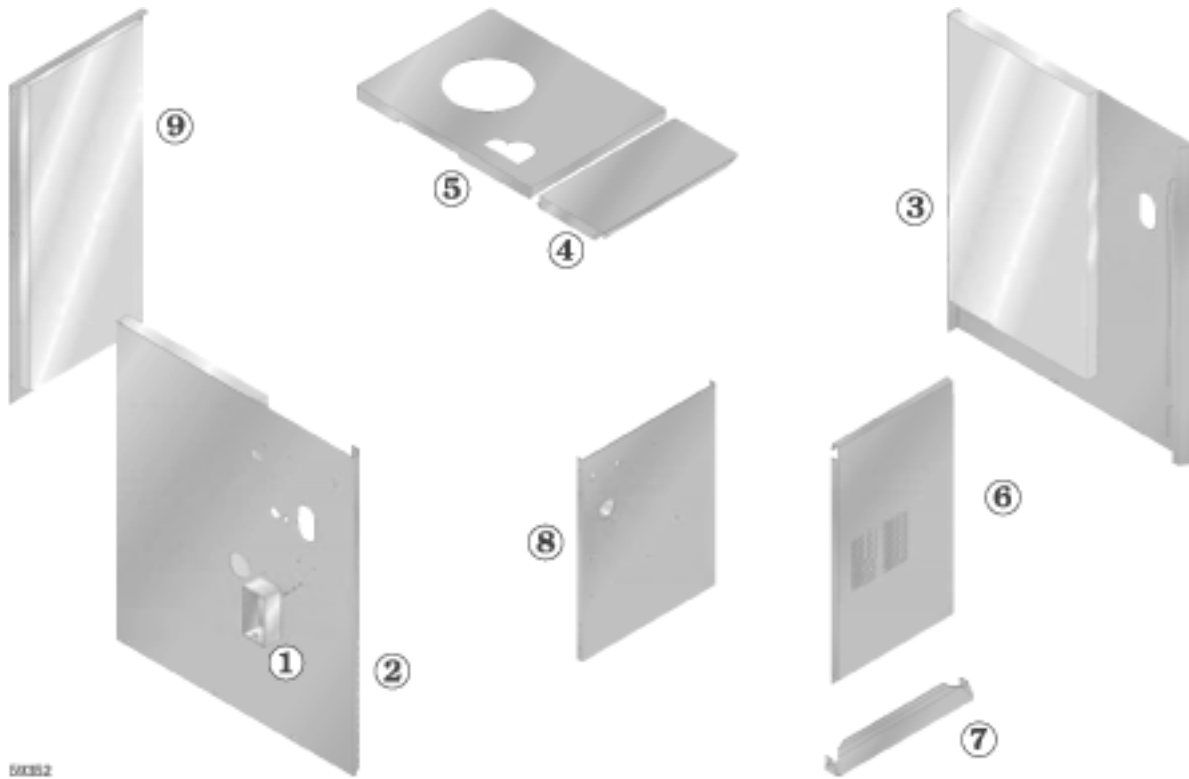


Item number	Description	Weil-McLain part number	
	Base assembly kit (includes base panels items 1, 2, 3, 4, 5, 6, and 7, plus insulation, air box gaskets, and hardware)	CGa-25 CGa-3 CGa-4 CGa-5 CGa-6 CGa-7 CGa-8	381-354-355 381-354-356 381-354-357 381-354-358 381-354-359 381-354-360 381-354-361
1	Base side panel (in Base assembly)		
2	Base front cross-tie assembly (in Base assembly)		
3	Base back cross-tie assembly (in Base assembly)		
4	Access panel (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)		
8	Burner rest	CGa-25 CGa-3 CGa-4 CGa-5 CGa-6 CGa-7 CGa-8	450-003-742 450-003-736 450-003-737 450-003-738 450-003-739 450-003-740 450-003-741
9	Base insulation kit (includes insulation for all base parts above plus gasket material needed between block assembly and base)	CGa-25 CGa-3 CGa-4 CGa-5 CGa-6 CGa-7 CGa-8	381-354-518 381-354-518 381-354-518 381-354-518 381-354-519 381-354-519 381-354-519
10	Boiler leg kit		590-424-253
11	Manifold	CGa-25 CGa-3 CGa-4 CGa-5 CGa-6 CGa-7 CGa-8	591-126-615 591-126-616 591-126-617 591-126-618 591-126-619 591-126-556 591-126-557
12	Main burner orifice — Natural gas, sea level Main burner orifice — Propane gas, sea level		560-528-997 560-528-998
13	Burner, stainless steel		512-200-077
14	Burner with pilot bracket (not shown)	Standing pilot	512-200-079
		Spark-ignited pilot	512-200-078
15	Screw, 10-32 x 1/8 STP type D hx, washer head slot ZP		available at local supply house
16	Rollout thermal fuse element		512-050-230



12d Replacement parts – jacket

Figure 33 Jacket assembly



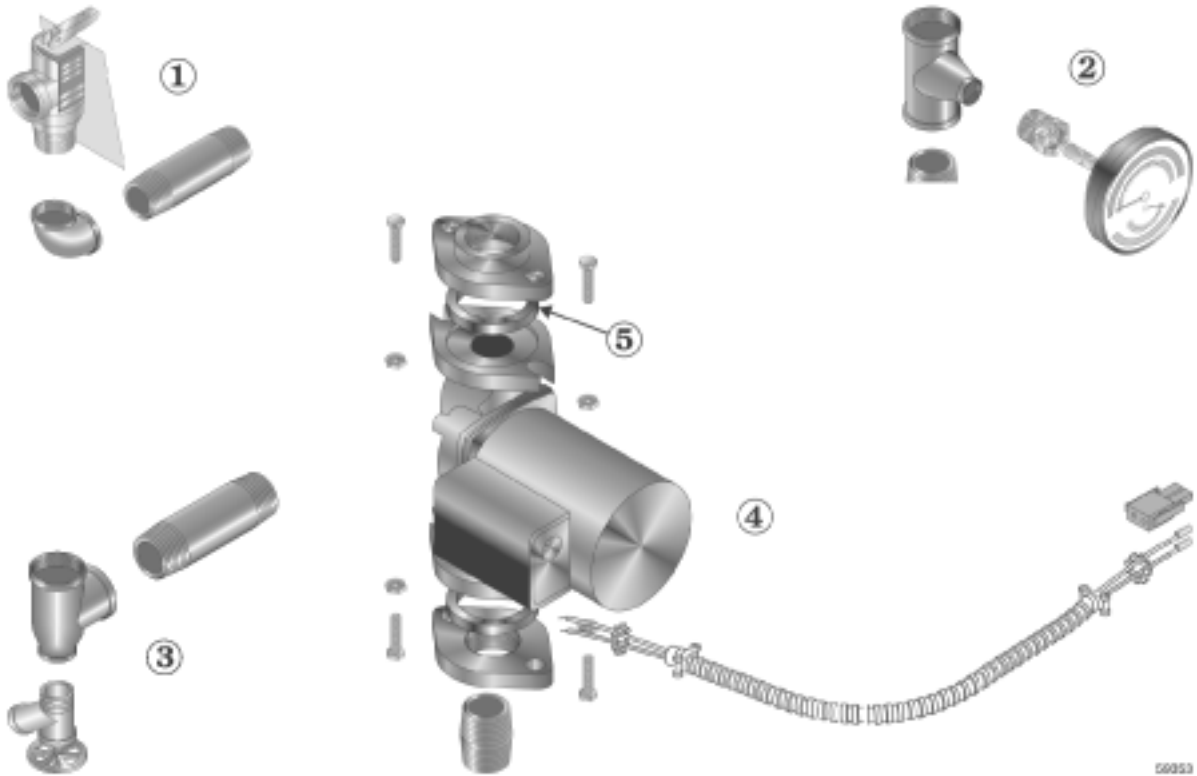
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Boiler Model	1	2			3	4	Boiler Model
	Junction box, 2 x 4	Jacket panel, left side, with insulation			Jacket panel, right side, with insulation	Jacket panel, top front	
		Natural Gas Standing Pilot	Propane Gas Standing Pilot	Natural Gas Spark Pilot			
Weil-McLain part number							
CGa-25	(Available at local supply house)	381-355-400	381-355-445	381-355-466	381-355-699	381-355-403	CGa-25
CGa-3		381-355-407	381-355-448	381-355-470	381-355-699	381-355-403	CGa-3
CGa-4		381-355-410	381-355-451	381-355-473	381-355-699	381-355-413	CGa-4
CGa-5		381-355-417	381-355-454	381-355-477	431-223-311	381-355-420	CGa-5
CGa-6		381-355-424	381-355-457	381-355-481	431-223-311	381-355-427	CGa-6
CGa-7		381-355-431	381-355-460	381-355-485	431-223-311	381-355-434	CGa-7
CGa-8		381-355-438	381-355-463	381-355-489	431-223-311	381-355-441	CGa-8
Boiler Model	5	6	7	8	9	10	Boiler Model
	Jacket panel, top rear	Jacket panel, door	Jacket cross tie, bottom front	Jacket panel, interior	Jacket panel, rear	Not shown — gold touch-up paint	
	Weil-McLain part number						
CGa-25/3	381-355-404	381-355-406	431-223-325	381-355-405	431-223-300	592-000-000	CGa-25/3
CGa-4	381-355-414	381-355-416	431-223-326	381-355-415	431-223-301		CGa-4
CGa-5	381-355-421	381-355-423	431-223-327	381-355-422	431-223-302		CGa-5
CGa-6	381-355-428	381-355-430	431-223-328	381-355-429	431-223-303		CGa-6
CGa-7	381-355-435	381-355-437	431-223-329	381-355-436	431-223-304		CGa-7
CGa-8	381-355-442	381-355-444	431-223-330	381-355-443	431-223-305		CGa-8



12e Replacement parts — trim

Figure 34 Trim assembly

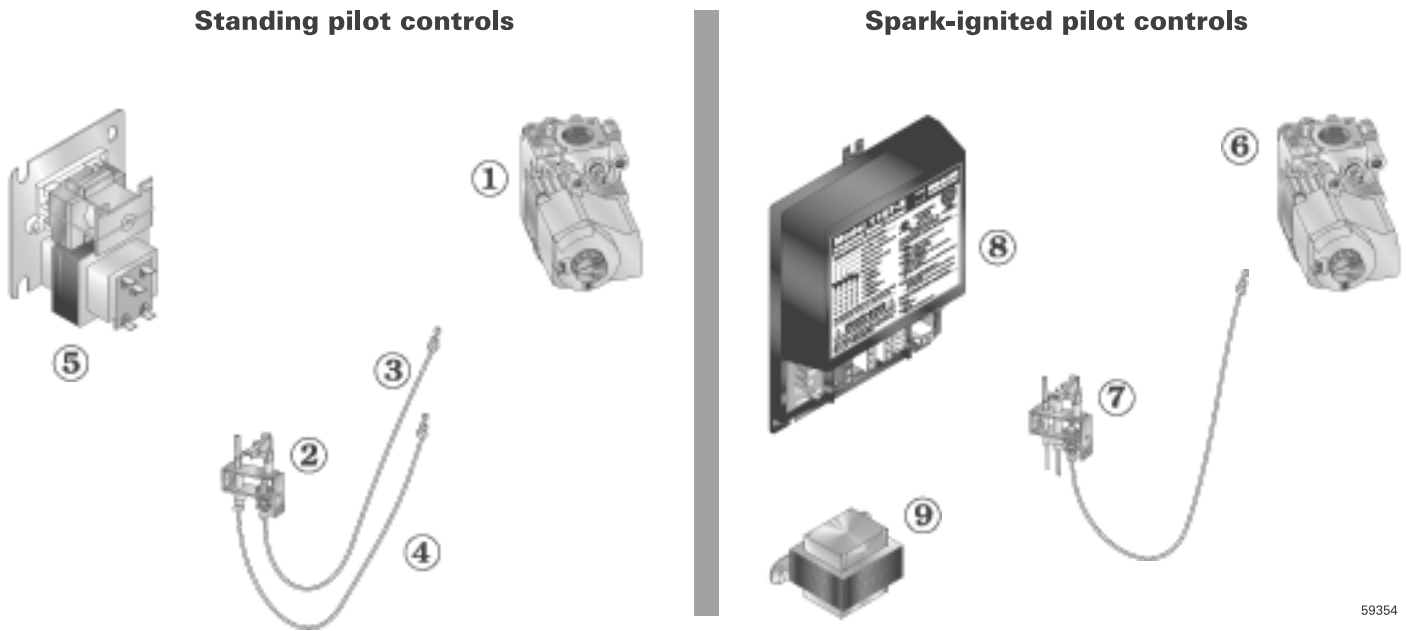


Item number	Description	Manufacturer	Manufacturer's part number	Weil-McLain part number
1	Pressure relief valve, ASME, 30 PSIG, 3/4" male inlet Pressure relief valve, ASME, 30 PSIG, 3/4" female inlet <i>(Fittings shown are factory-installed on boiler.)</i>	Conbraco Watts Conbraco Watts	10-407-10 M330 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, 3/4" <i>(Fittings shown are included with boiler.)</i>	Conbraco Hammond Valve Matco-Norca Watts	31-606-01 710 205F04 BD-2C	511-210-423
4	Circulator <i>(Fittings shown are shipped loose with boiler.)</i>	Bell & Gossett Taco	NRF-22-103253 007	511-405-118 511-405-113
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: 3/4" NPT — CGa-25- - - - - 1" NPT — CGa-3 through CGa-5 - - - - - 1 1/4" NPT — CGa-6 through CGa-7 - - - - - 1 1/2" NPT — CGa-8- - - - -	Weil-McLain		381-354-530 381-354-525 381-354-526 381-354-531
6	Circulator wiring harness, standing pilot ignition Circulator wiring harness, spark-ignited pilot (with Molex)	Weil-McLain		591-319-793 381-354-528
not shown	Mate-N-Lock connector (red), spark-ignited pilot only	Amp	1-480698-2	563-210-632



12f Replacement parts – controls

Figure 35 Gas control assembly



59354

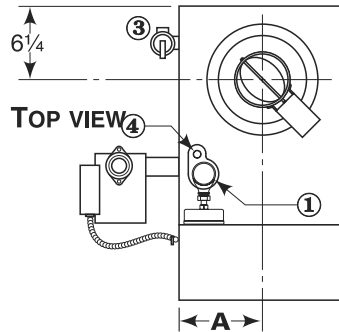
Item number	Description	Manufacturer	Manufacturer's part number	Weil-McLain part number
Standing pilot – Natural gas components				
1	Gas valve, 1/2" x 1/2", CGa-25 through CGa-6	Honeywell	VR8200A2116	511-044-360
	Gas valve, 3/4" x 3/4", CGa-7 and CGa-8	Robertshaw Honeywell	7200ER VR8300C4050	511-044-256
2	Pilot assembly kit with orifice	Weil-McLain		510-811-644
3	Tubing, pilot, aluminum			560-742-860
4	Tubing, thermocouple			511-724-254
Propane gas components				
1	Gas valve, 1/2" x 1/2", CGa-25 through CGa-6	Honeywell	VR8200C1074	511-044-258
	Gas valve, 3/4" x 3/4", CGa-7 and CGa-8	Honeywell	VR83004068	511-044-257
2	Pilot assembly kit with orifice	Weil-McLain		510-811-646
3	Tubing, pilot, aluminum			550-742-860
4	Tubing, thermocouple			511-724-253
Natural gas and propane gas components				
5	Transformer relay			510-312-167
not shown	Wiring harness			591-391-862
Spark ignition				
6	Gas valve, 1/2" x 1/2", CGa-25 through CGa-6	Honeywell	VR8204A2001	511-044-381
	Gas valve, 3/4" x 3/4", CGa-7 and CGa-8	White-Rodgers Robertshaw Honeywell White-Rodgers	36E36-266 7200 IPER VR8304P4348 36C74-474	511-044-382
7	Pilot assembly kit with orifice and aluminum pilot gas tubing	Weil-McLain		511-330-218
8	Control module	United Technologies	1107-2	511-330-079
9	Control transformer			511-842-370
not shown	Wiring harness, controls to control module			591-391-905
Pilot gas pressure regulator – Natural gas and propane gas, CGa-25 and CGa-3				
not shown	Pilot gas pressure regulator 4.0" w.c. outlet	Maxitrol SLP	RV-12 SL-50N	510-933-126
not shown	Tubing, from gas valve to regulator	Weil-McLain		560-742-859
not shown	Adapter, male 1/8" x 7/16" – 24, from regulator to pilot gas line	Weil-McLain		562-302-017



13a Dimensions

Figure 36 Dimensional drawing – ALL DIMENSIONS IN INCHES

- 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 Vent connection to vent damper
- ⑥ Draft hood
- ⑦ Gas supply piping
- ⑧ Drain valve
- ⑨ Gas supply entrance (right or left side)
- ⑩ Pressure/temperature gauge

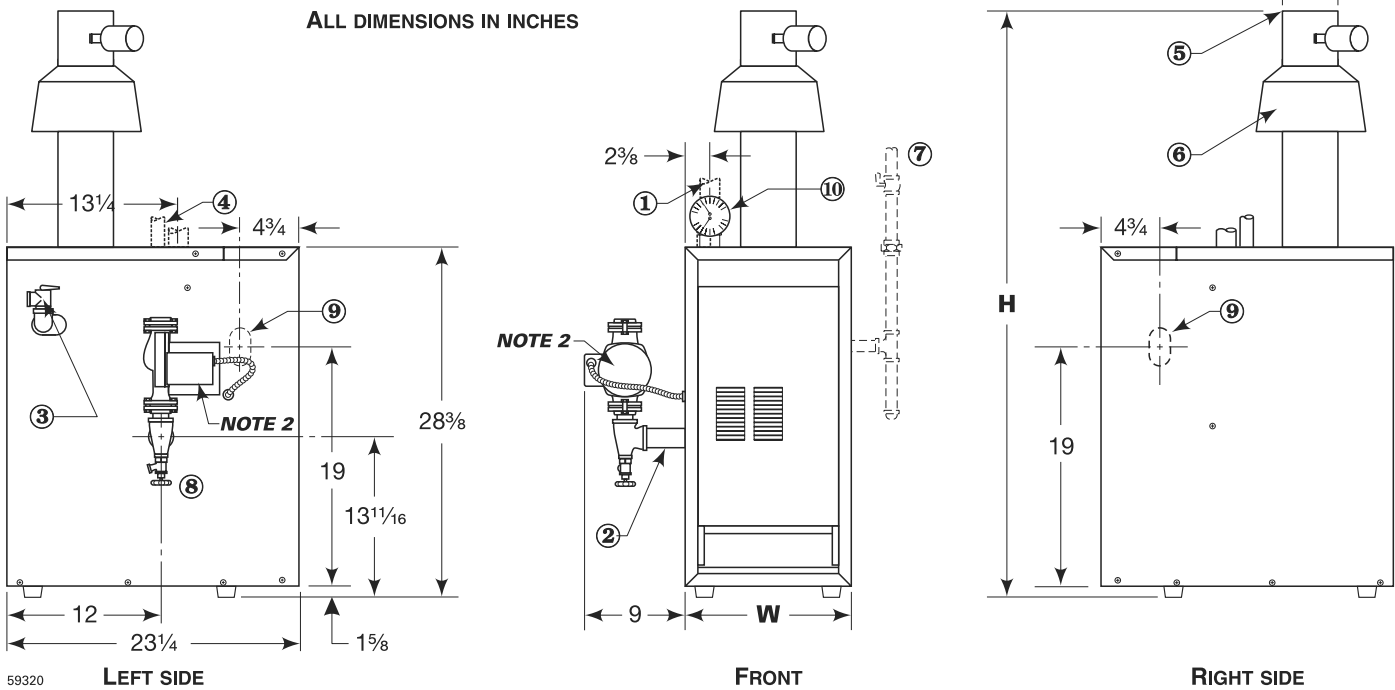


⚠ DANGER

Do not cut or alter draft hood in any way. Boiler combustion will be affected, causing severe personal injury, death or substantial property damage.

Note 1: Boiler supply and return tapings are both 1 1/4" NPT. See Table 3, page 16 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 3, page 16.



59320

Boiler model number	Supply tapping (inches NPT)	Return tapping (inches NPT)	Gas connection & manifold size (Note 3) (inches NPT)	"A" Vent location (inches)	"D" Vent diameter (inches)	"W" Jacket width (inches)	"H" Damper height (inches)
CGa-25	1 1/4	1 1/4	1/2	5	4	10	45 3/8
CGa-3	1 1/4	1 1/4	1/2	5	4	10	52 3/8
CGa-4	1 1/4	1 1/4	1/2	6 1/2	5	13	54 3/8
CGa-5	1 1/4	1 1/4	1/2	8	6	16	57 7/8
CGa-6	1 1/4	1 1/4	1/2	9 1/2	6	19	60 7/8
CGa-7	1 1/4	1 1/4	3/4	11	7	22	62 1/8
CGa-8	1 1/4	1 1/4	3/4	12 1/2	7	25	64 7/8

Note 3: Size gas piping from meter to boiler per local utility requirements.



13b Ratings



DOE

Boiler model number	Input (Btuh)	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 (% A.F.U.E)			Chimney and breeching size
			Input (Btuh)	Output (Btuh)	Input (Btuh)	Output (Btuh)			SPDN	SPDL	PIDN	
(Note 1)		(Note 2)					(Note 3)					
CGa-25	52,000	44,000	52,000	44,000	46,800	39,000	38,000	1.5	81.5	83.3	84.0	4" I.D. x 20'
CGa-3	70,000	59,000	70,000	59,000	63,000	53,000	51,000	1.5	81.6	83.7	84.0	4" I.D. x 20'
CGa-4	105,000	88,000	105,000	88,000	94,500	79,000	77,000	2.1	81.7	83.7	84.0	5" I.D. x 20'
CGa-5	140,000	117,000	140,000	117,000	126,000	105,000	102,000	2.7	81.8	83.7	83.5	6" I.D. x 20'
CGa-6	175,000	146,000	175,000	146,000	157,500	131,000	127,000	3.3	81.9	83.6	83.2	6" I.D. x 20'
CGa-7	210,000	175,000	210,000	175,000	189,000	157,000	152,000	3.8	82.0	83.6	83.0	7" I.D. x 20'
CGa-8	245,000	204,000	245,000	204,000	220,500	183,000	177,000	4.4	82.1	83.6	82.7	7" I.D. x 20'
Notes	1. See Table 7 for available pilot systems. The suffix shown in the table is added to the boiler model number. (Not available for millivolt systems.)											
	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.											

Table 7 Ignition system model suffixes

Pilot ignition system	Natural gas	Propane gas
Standing pilot	SPDN	SPDL
Spark-ignited pilot	PIDN	Not available

NOTICE

Install CGa boilers for residential radiant panel systems, converted gravity heating systems or other low water temperature applications per instructions in this manual to avoid damage due to condensation.

CGa boilers are CSA design certified for installation on combustible flooring.

CGa boilers are ASME rated for 50 psig 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, “Crystalline 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.



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