



WEAVER CONSTRUCTION MANAGEMENT COMPANY
 3679 S. Huron St., Suite 404
 Englewood, CO 80110
 Phone: (303) 789-4111 FAX: (303) 789-4310

SUBMITTAL TRANSMITTAL

March 19, 2012
Submittal No: 15400-005.A

PROJECT: **Harold Thompson Regional WRF**
 Birdsall Rd.
 Fountain, CO 80817
 Job No. 2908

ENGINEER: **GMS, Inc.**
 611 No. Weber St., #300
 Colorado Springs, CO 80903
 719-475-2935 Roger Sams

OWNER: **Lower Fountain Metropolitan
 Sewage Disposal District**
 901 S. Santa Fe Ave.
 Fountain, CO 80817
 719-382-5303 James Heckman

CONTRACTOR: **Contract Mechanical Services, Inc.**
 P.O.Box 63323
 Colorado Springs, CO 80962
 719-596-7717 Jeff Payne

SUBJECT: Resubmittal of Plumbing Fixtures and WCM Comments for the Equipment, Maintenance and Storage Bldg.

SPEC SECTION: 15400

PREVIOUS SUBMISSION DATES: 1/20/12

DEVIATIONS FROM SPEC: ___ YES X NO

CONTRACTOR'S STAMP: This submittal has been reviewed by Weaver Construction Management and, unless indicated otherwise, has been found to be in conformance with the intent of the contract documents.

Contractor's Stamp:

Engineer's Stamp:

Date: 3/19/12

Reviewed by: Chuck Berry

() Reviewed Without Comments

(x) Reviewed With Comments

**ENGINEER'S
 COMMENTS:** _____



Project: Harold D. Thompson WRF / Equip, Maint, and Sto Bldg

Location: Fountain, CO

Supplier/Contractor: Contract Mechanical Services

Date: 3/15/12

Submittal No/Spec. Section: 15400-005A

WCM Submittal Review Comments:

1. In response to review comments related to submittal 15400-005, comment 9.,a. The water heater called for on sheet MEM-1 of the contract drawings is a Rheem model PDV40. Model PDV40 is a power ventilated unit. The model PRO40E2 in the submittal is not power ventilated. Is this OK ?
2. In response to comment 9., b. Contract Mechanical has included a Rheem cut sheet that indicates that the tank lining is "Rheemglas Porcelain Enamel" which is what all Rheem water heaters have including the Model PVD40 called for on the contract drawings.

BRASS HOSE END VALVES

710 - 712 - 1032 - 1034

150 WWP



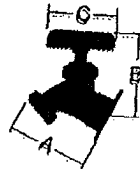
* 710*
BOILER DRAIN
(male IPS to hose)

DIMENSIONS (INCHES)				Approx. Weight
SIZE	A	B	C	
1/2	1.56	3.50	2.13	0.45
3/4	1.56	3.63	2.13	0.46



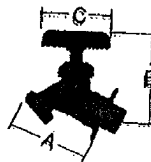
712*
BOILER DRAIN
(female IPS to hose)

DIMENSIONS (INCHES)				Approx. Weight
SIZE	A	B	C	
1/2	3.00	2.22	2.09	0.38
3/4	3.00	2.22	2.09	0.46



1032
SILL FAUCET
(female IPS to hose)

DIMENSIONS (INCHES)				Approx. Weight
SIZE	A	B	C	
1/2	2.44	2.75	2.00	0.42
3/4	2.44	2.75	2.00	0.43



1034
SILL FAUCET
(solder to hose)

DIMENSIONS (INCHES)				Approx. Weight
SIZE	A	B	C	
1/2	2.44	2.75	2.00	0.47
3/4	2.44	2.75	2.00	0.48

RATING

- 150 PSI WWP TO 200° F NON-SHOCK

FEATURES

- BRASS BODY
- HEAVY DUTY PATTERN
- LARGE WATER WAY
- ADJUSTABLE PACKING NUT & STUFFING BOX
- BUNA-N- SEATS
- IRON HANDWHEEL
- HAMMOND NAME ON BODY
- 100% FACTORY TESTED
- INTERNATIONAL

*User's are advised that some boiler applications require ASME code compliant and/or higher rated product, it is the user's responsibility to ensure all regulatory requirements are met for their installation.

Rev. 2

The information presented on this sheet is correct at the time of publication. Hammond Valve reserves the right to change design, and/or material specifications without notice. For the most current information access www.hammondvalve.com



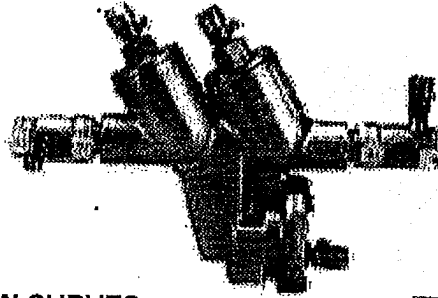
RPZ

Model RP40/ RP40N/ RP40Z REDUCED PRESSURE PRINCIPLE BACKFLOW PREVENTER

Job Name:	Contractor:
Job Location:	P.O. Number:
Engineer:	Representative:
Tag:	Wholesale Distributor:

SPECIFICATIONS

The Apollo® Model RP40, RP40N and RP40Z Reduced Pressure Principle Backflow Preventers shall prevent contamination of the potable water supply due to back-siphonage or backpressure from substances that are health or non-health hazards. The assembly shall be manufactured in America. The bronze body shall be configured with individually-accessible top-access check valves including top-mounted test cocks. The relief valve shall be bottom-centered with a separate access cover. The replaceable seat rings shall be glass-filled Noryl® and the reversible seat discs shall be silicone rubber. The Apollo® domestic shut-off ball valves shall have stainless steel handles. The pressure drop across the assembly shall be documented by USC's FCCC&HR approval curves.



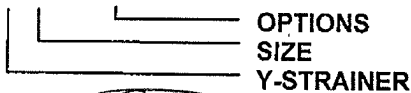
FEATURES

- Replaceable seats & reversible silicone seat discs
- Top-mounted test cocks for easy testing
- Corrosion resistant
- MADE IN THE USA



ORDERING INFORMATION

4 0 - 2 X X - X X



Y-STRAINER

- 0 - None (Standard) 1 - With Y-Strainer

SIZE

- | | | |
|-----------------------------------|--|-------------------------------------|
| <input type="checkbox"/> 1 - 1/4" | <input type="checkbox"/> 4 - 3/4" | <input type="checkbox"/> 7 - 1 1/2" |
| <input type="checkbox"/> 2 - 3/8" | <input checked="" type="checkbox"/> 5 - 1" | <input type="checkbox"/> 8 - 2" |
| <input type="checkbox"/> 3 - 1/2" | <input type="checkbox"/> 6 - 1 1/4" | |

OPTIONS DESCRIPTION

SUFFIX	DESCRIPTION
T1	Less ball valves (UL Listed)
T2	With ball valves (standard)
T2F	With SAE flare test cock fittings (3/4" & 1" only)
T2N	With ball valves; "N" flow - Model RP40N
T2Z	With ball valves; "Z" flow - Model RP40Z
T2LL	With ball valves; locking lever handles
T4	With union-end ball valves
T4LL	With union-end ball valves; locking lever handles
T4N	With union-end ball valves; "N" flow

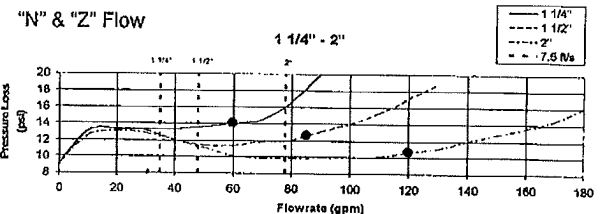
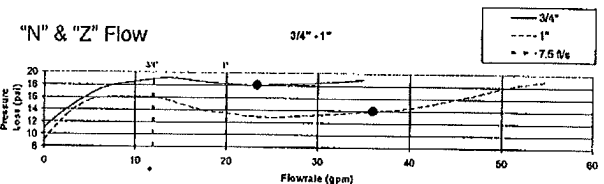
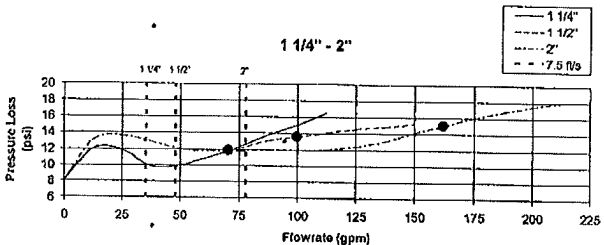
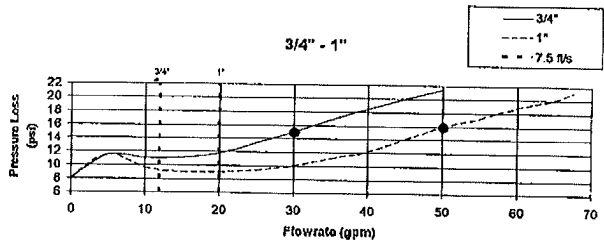
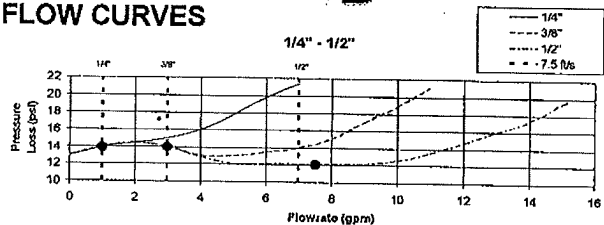
APPROVALS

ASSE® 1013, CSA® B64.4, IAPMO, USC's FCCC&HR, AWWA C-511, and UL (less ball valves only).

PERFORMANCE RATING

Maximum Working Pressure 175 psi
Hydrostatic Test Pressure 350 psi
Temperature Range 33 °F - 180 °F

FLOW CURVES



Conbraco Industries, Inc. 701 Matthews Mint Hill Rd. Matthews NC 28105 USA; www.apollovalves.com; 704-841-6000

This specification is provided for reference only. Conbraco reserves the right to change any portion of this specification without notice and without incurring obligation to make such changes to Conbraco products previously or subsequently sold.

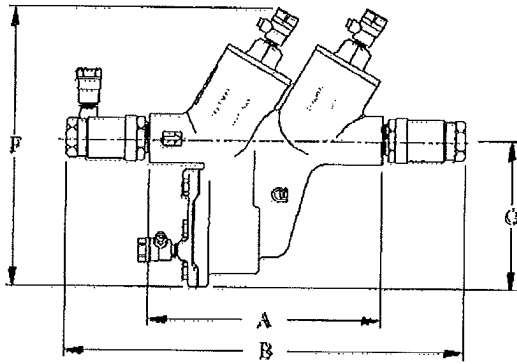
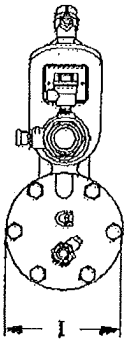
Model RP40/ RP40N/ RP40Z

REDUCED PRESSURE PRINCIPLE BACKFLOW PREVENTER

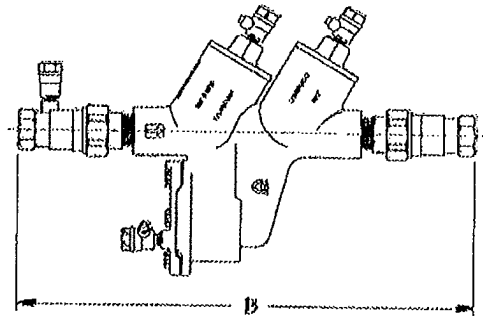
DIMENSIONS (in.) – WEIGHTS (lbs.)

Size	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
A	5 3/4	5 3/4	5 3/4	8	8	11	11	11
B*	10 1/4	10 1/4	10 1/4	13 3/4	15 3/8	17 1/2	19 1/2	21 1/2
B* (w/ union end bv's)	11 3/4	11 3/4	11 3/4	15 7/8	17 3/8	21 1/2	23	25 3/8
C*	13	13 13/16	13 13/16	18 1/2	21	23 9/16	26 3/8	29 9/16
C* (w/ union end bv's)	14 1/2	15 1/4	15 1/4	20 5/8	23	27 5/8	30	33 3/8
D*	n/a	n/a	n/a	10 1/2	10 11/16	14 3/16	15 1/8	15 3/4
E*	n/a	n/a	n/a	13 7/8	15 1/8	19	20 3/4	22 1/8
F*	6 7/8	6 7/8	6 7/8	9 3/4	9 3/4	12 5/8	12 5/8	12 5/8
G	3 3/4	3 3/4	3 3/4	5 1/8	5 1/8	7 1/8	7 1/8	7 1/8
H*	n/a	n/a	n/a	4 1/8	5 3/16	6	6 5/8	7 5/8
I	2 5/8	2 5/8	2 5/8	4 1/16	4 1/16	5 3/8	5 3/8	5 3/8

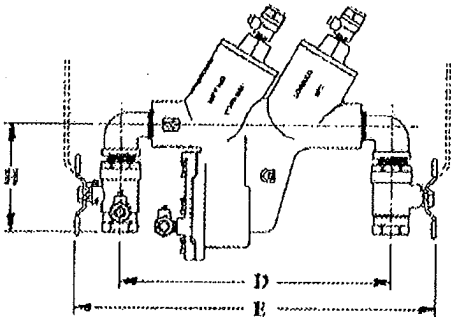
*Dimensions shown are for reference only.



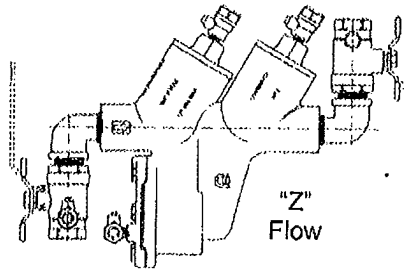
Standard



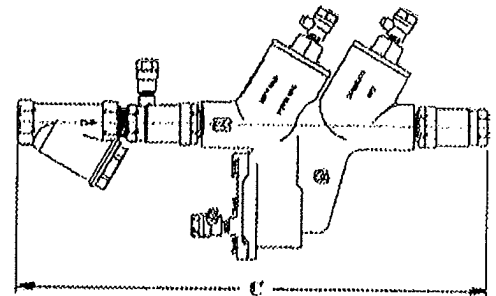
Standard
(with union-end ball valves)



"N"
Flow



"Z"
Flow



Standard
(with strainer)

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AGD AND AGD4A SERIES AIR GAP DRAINS

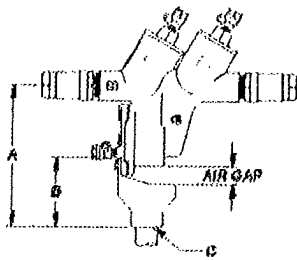
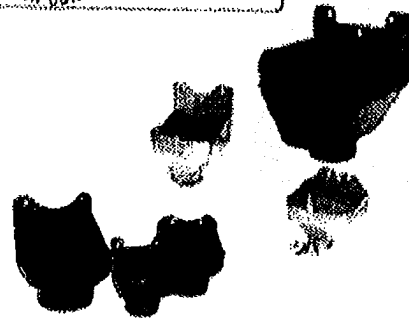
Job Name:	Contractor:
Job Location:	P.O. Number:
Engineer:	Representative:
Tag:	Wholesale Distributor:

DESCRIPTION

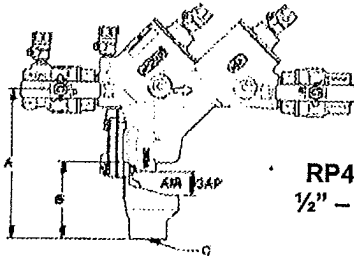
The Apollo Air Gap Drain (AGD) is designed to funnel minor discharges from a Reduced Pressure Backflow Preventer's relief valve due to line pressure fluctuations and/or minor check valve fouling, into the drainage system. Drain piping is easily attached to the AGD's threaded bottom outlet. The AGD4A series ABS plastic AGDs have the additional option of using the outlet OD to glue on a coupling using the appropriate cement or the use of a flexible pipe coupling.

Note: The AGD is **NOT** designed to collect the full discharge capacity of the relief valve. Please refer to Apollo literature for RP Relief Valve full discharge rates

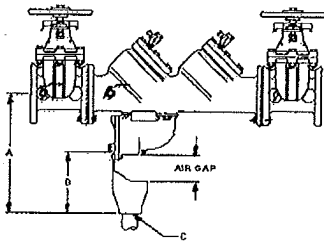
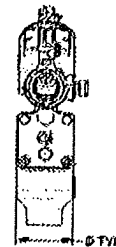
The appropriate AGD should be selected for Apollo's Reduced Pressure RP4A, RP40 and RP4D Series backflow preventers from the table below.



RP40
1/4" - 2"



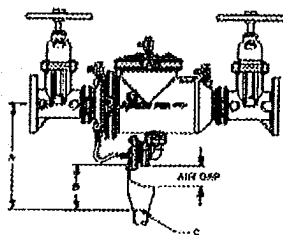
RP4A
1/2" - 2"



RP40
2 1/2" - 10"

RP4A Series	AGD Model No.	Order Code	A	B	C	OD of C	D	Wt. Each
1/2"	AGD4A1	AGD4A1	6 1/2	3 3/8	1" FNPT	1 1/4" Pipe	2 5/8	0.1
3/4"	AGD4A1	AGD4A1	6 1/2	3 3/8	1" FNPT	1 1/4" Pipe	2 5/8	0.1
1"	AGD4A1	AGD4A1	6 5/8	3 3/8	1" FNPT	1 1/4" Pipe	2 5/8	0.1
1 1/4" & 1 1/2"	AGD4A112	AGD4A112	8 1/2	4 1/8	1 1/2" FNPT	2" Pipe	3 1/2	0.2
2"	AGD4A2	AGD4A2	10	5 3/8	2" FNPT	2 1/2" Pipe	4 1/4	0.35

RP40 Series	AGD Model No.	Order Code	A	B	C	OD of C	D	Wt. Each
1/4", 3/8", 1/2"	AGD4012	AGD4012	6 1/2	3 3/8	1" FNPT	1 1/4" Pipe	2 5/8	0.1
3/4" & 1"	AGD401	AGD401	8 1/4	4 1/8	1 1/2" FNPT	2" Pipe	3 1/2	0.2
1 1/4", 1 1/2", & 2"	AGD2	40-200-X1	11 1/4	5 1/8	1" FNPT	N/A	5 1/4	3.4
2 1/2" & 3"	AGD3	40-200-X2	19	9 7/8	2" FNPT	N/A	7	11.0
4"	AGD3	40-200-X2	20	9 7/8	2" FNPT	N/A	7	11.0
6"	AGD3	40-200-X2	21	9 7/8	2" FNPT	N/A	7	11.0
8"	AGD4	40-200-X3	22 11/16	12 11/16	3" FNPT	N/A	10	12.45
10"	AGD4	40-200-X3	25 11/16	12 11/16	3" FNPT	N/A	10	12.45



RP4D
2 1/2" - 10"

RP4D Series	AGD Model No.	Order Code	A	B	C	N/A	D	Wt. Each
2 1/2" - 4"	AGD2	40-200-X1	14 3/8	5 1/8	1" FNPT	N/A	5 1/4	3.4
6"	AGD2	40-200-X1	15 7/8	5 1/8	1" FNPT	N/A	5 1/4	3.4
8" & 10"	AGD3	40-200-X2	23 3/4	9 4/5	2" FNPT	N/A	7	11.0

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WH-1



Available in 38 and 50 Gallon Tall – 40 and 50 Gallon Short Gas Models

- ▶ 8-Year Limited Tank and Parts Warranty with a Professional Installation.*
- ▶ With ProtectionPlus™ the 8-Year Limited Tank Warranty Becomes 12 Years!

Energy Efficient Damper Design

- 24 VAC Powered flue damper
- Higher energy factors
- Lower stand-by losses
- More hot water at a lower operating cost



Self-Diagnostic System

- Integrated self-diagnostic system control takes away the guesswork

Guardian System™

- One-of-a-kind air/fuel shut-off device offers double protection
- Maintenance free – no filter to clean
- Standard replacement parts

Flammable Vapor Detection Sensor

- Protective control system that disables the heater in the presence of flammable vapor accumulation



Longer Life

- Patented magnesium anode rod design incorporates a special resistor which protects the tank from rust.

High Altitude Compliant

- 50 gallon 50k BTU product certified for applications up to 6,000 feet above sea level
- All other models certified for applications up to 10,200 feet above sea level

Plus...

- Environmentally friendly burner – Low NOx design for low nitrous oxide emissions
- Brass drain valve & temperature and pressure relief valve are included
- Standard 110 volt electrical outlet required for installation. Includes 19 ft. (3-prong grounded) power cord
- Meets or exceeds National Appliance Energy Conservation Act (NAECA) requirements

*See Residential Warranty Certificate for complete warranty information. Energy Factor and Average Annual Operating Costs based on D.O.E. (Department of Energy) test procedures. D.O.E. national average fuel rate natural gas \$1.218/therm; LP \$4.87/gallon.



Products meet or exceed the requirements of ENERGY STAR® Phase II effective September 1, 2010.

TYPE	DESCRIPTION		FEATURES					ROUGHING IN DIMENSIONS (SHOWN IN INCHES)								ENERGY INFO.		
	GAL. CAP.	MODEL NUMBER	GAS INPUT IN THOUS. BTU/HR. NAT.	LP	RECOVERY IN G.P.H. 30" RISE NAT.	LP	FIRST HOUR DEL. G.P.H. NAT.	HT. TO VENT A	TANK HT. B	DIAM. C	HT. TO GAS COH. D	VERT. SIZE E	WATER CORR. CNTR. F	HT. TO SIDE T&P G	WATER CORR. H	SHIP. WT. (LBS)	ENERGY FACTOR NAT.	AVG. ANNUAL OPER. COST NAT.
TALL	38	PRO40E2	40	36	40.4	36.4	68	82-3/4	57-3/4	19-3/4	14	3 or 4	8	52-1/4	3/4	140	0.69	\$264
	50	PRO50E2	40	36	40.4	36.4	84	63	58	21-3/4	14	3 or 4	8	52-1/2	3/4	160	0.67	\$272
	50	PRO50-50E2	50	-	50.5	-	87	63-1/2	58	21-3/4	14	4	8	52-1/2	3/4	160	0.67	\$272
SHORT	40	PRO40SE2	40	36	40.4	36.4	72	55-1/2	50-1/2	21-3/4	14	3 or 4	8	44	3/4	140	0.67	\$272
	50	PRO50SE2	40	36	40.4	36.4	89	55-1/2	50-1/2	23-3/4	14	3 or 4	8	44	3/4	160	0.67	\$272

SPECIFY LP GAS WHEN ORDERING. Add "P" suffix to the model number. Example: PRO40PE2.
• 40 ng/J NOx Compliant

Rheem Guardian System Features...



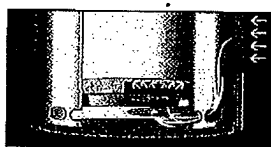
Exclusive Combustion Shut-off System

Should a spill incident occur, the Guardian System shuts off the gas supply and the air supply preventing a sustained vapor burn in the combustion chamber.



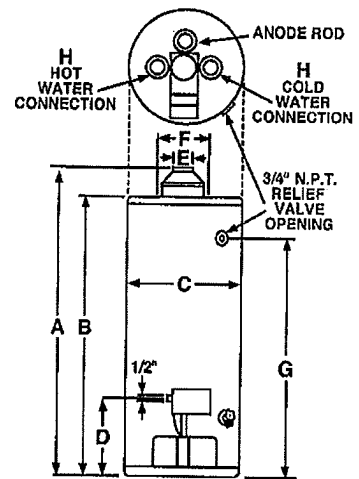
Flame Arrestor Plate

A specially-designed flame arrestor prevents ignition of vapors outside the combustion chamber.



Maintenance Free

Superior air filtration prevents the flame arrestor from becoming clogged by lint, dust and oil.



These units are designed to meet or exceed ANSI (American National Standards Institute) requirements and have been tested according to D.O.E. test procedures and meet or exceed the energy efficiency requirements of NAECA, ASHRAE standard 90, ICC Code and all state energy efficiency performance criteria for energy consuming appliances.

Before purchasing this appliance, read important energy cost and efficiency information available from your supplier.

PROTECTIONPLUS™

8 YEAR LIMITED TANK WARRANTY BECOMES 12

For more details, see form 101-7.

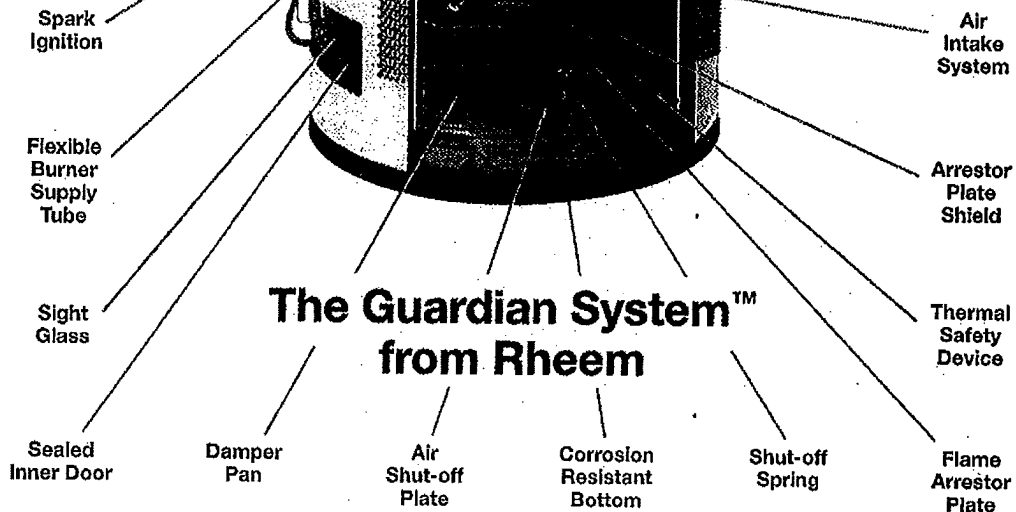
In keeping with its policy of continuous progress and product improvement, Rheem reserves the right to make changes without notice.

Rheem Water Heating • 101 Bell Road, Montgomery, Alabama 36117-4305 • www.rheem.com

Superior Construction and Reliability

- **Hot Water Outlet:** The connection point for the hot water service piping, which carries the hot water to faucets and other hot water fixtures or appliances.
- **Temperature and Pressure Relief Valve (T&P valve):** this safety device opens to allow water to escape from the water heater in the unlikely event that either the tank pressure or temperature become excessive.
- **Rigid Foam Insulation:** A thick layer of rigid polyurethane foam insulation helps minimize heat loss.
- **Anode Rod:** The patented R-Tech anode rod, a replaceable component made of magnesium, protects tank against premature corrosion.
- **Flue:** The flue is a steel tube passing through the center of the water heater tank which carries combustion gasses to the water heater venting system.
- **EverKleen™ Self Cleaning System:** The patented EverKleen System creates a turbulent swirling action as water enters the tank. It fights sediment build-up and helps improve operating efficiency.
- **Brass Drain Valve:** Allows tank to be emptied should service be required.
- **Gas Control Valve:** Also referred to as the thermostat, this device takes the unregulated main supply gas and regulates the gas for use by the water heater.

- **Draft Hood:** This capping device, which connects to the venting system, assists in the upward movement of combustion gases.
- **Heat Trap Nipples:** They create a gap preventing conductive heat loss to the hot and cold service pipes.
- **Cold Water Inlet and Dip Tube:** The connection point for incoming cold water. The inlet connects directly to a dip tube which directs the water to the bottom of the tank.
- **Exclusive Rheemglas® Porcelain Enamel Tank Lining:** Engineered for durability and long tank life.
- **Flue Baffle:** The flue baffle slows the upward motion of combustion gases to maximize dispersion of heat into the tank.
- **Thermocouple:** Detects pilot operation. Shuts down burner valve should pilot light go out, thus preventing gas emissions when there is no source of ignition.
- **Burner Pilot:** Operates continuously to ignite main burner when the thermostat calls for heat.
- **Gas Burner:** Heats water from below the storage tank.
- **Guardian System™:** Automatically shuts down the water heater if flammable vapors are detected. Maintenance-free protection. No filters to clean. Standard replacement parts. Available on most models.



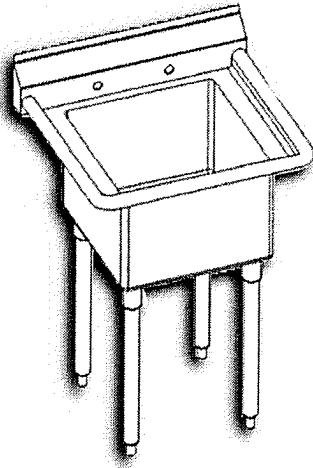
The Guardian System™ from Rheem



LAMBERTSON INDUSTRIES

HIGH-QUALITY STAINLESS STEEL

QUALITY-LINE SINKS ONE TUB



SPECIFICATIONS:

TOPS— 16-gauge, type 304 stainless steel, with integrally formed backsplash and sanitary roll on three sides. Backsplashes are pre-punched for required faucet holes. Drainboards are corrugated die-stamped (CDZ™ Corrugated Dry Zone) and pitched toward the sink. All joints are seam welded and all visible welds are ground smoothed and polished.

TUBS— 16-gauge, type 304 stainless steel with 3-1/2" die-stamped center drain openings. All vertical and horizontal corners minimal 5/8" radius cove. Tubs are integrally welded on tops.

LEGS— Removable 1-5/8" O.D. galvanized iron tubing legs with welded gussets and adjustable sanitary bullet-type feet. Stainless steel legs and adjustable sanitary bullet-type feet available upon request.

MECHANICAL:

- Water supply is 1/2" IPS Hot and Cold.
- Faucet holes are on standard 8" centers.
- Faucet height is 36-1/2" from floor.
- Waste drains are 1-1/2" IPS. Stainless Steel. 3-1/2" Basket drains are included.
- All dimensions are typical TOL ± .500

Faucets are not included

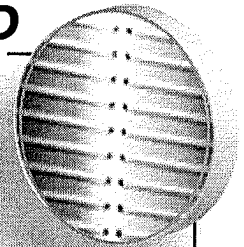
FEATURES:

- New **CDZ™ Corrugated Dry Zone**
- All one-piece welded construction
- Radius die-stamped tub bottom for better drainage
- All drainboards have integral backsplashes
- Gussets located on sink and tubs for greater support
- Turned up backsplash
- Tubs with a depth of 14", 16" and 18" are available upon request

CUSTOM SINKS

AVAILABLE UPON REQUEST!

CORRUGATED DRY ZONE™



MEETS OR EXCEEDS ALL HEALTH STANDARDS

REDUCES BACTERIA AND ODOR

ALLOWS AIR AND WATER TO FLOW UNDER ALL WASHABLE ITEMS ELIMINATING SUCTION AND CROSS-CONTAMINATION.

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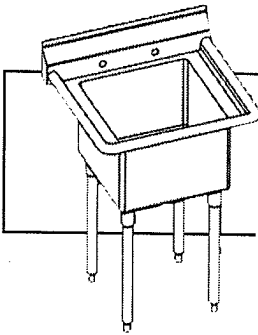
PHONE: 775-857-1100 • FAX: 775-857-3289 • TOLL-FREE: 800-548-3324



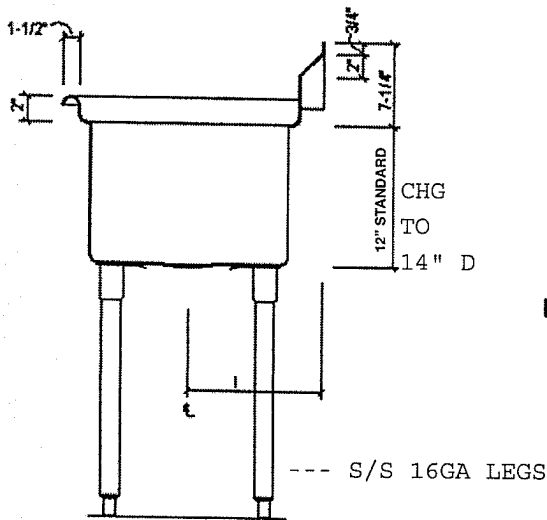


LAMBERTSON INDUSTRIES

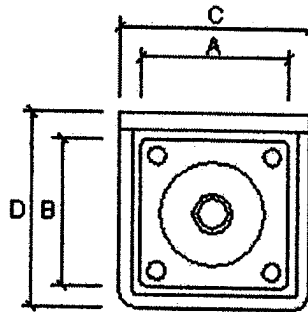
HIGH-QUALITY STAINLESS STEEL



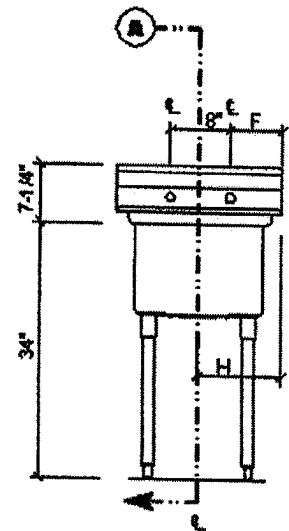
QUALITY-LINE SCHEMATICS ONE TUB / WITHOUT DRAINBOARD



SECTION VIEW



PLAN VIEW



ELEVATION VIEW

1-TUB WITHOUT DRAINBOARD

MODEL	WEIGHT	A	B	C	D	E	F	G	H	I	J
QL-1-LIN-17	55 LBS.	17"	17"	22"	22½"	N/A	7"	N/A	11"	11½"	N/A
QL-1-LIN-1723	55 LBS.	17"	23"	22"	28½"	N/A	7"	N/A	11"	14½"	N/A
QL-1-LIN-18	60 LBS.	18"	18"	23"	23½"	N/A	7½"	N/A	11½"	12"	N/A
QL-1-LIN-1824	65 LBS.	18"	24"	23"	29½"	N/A	7½"	N/A	11 ½"	15"	N/A
QL-1-LIN-23	65 LBS.	23"	23"	28"	28½"	N/A	10"	N/A	14"	14½"	N/A
QL-1-LIN-24	65 LBS.	24"	24"	29"	29½"	N/A	10½"	N/A	14½"	15"	N/A
QL-1-LIN-29	75 LBS.	29"	29"	34"	34½"	N/A	13"	N/A	17"	17½"	N/A
QL-1-LIN-2923	70 LBS.	29"	23"	34"	28½"	N/A	13"	N/A	17"	14½"	N/A
QL-1-LIN-1620	60 LBS.	16"	20"	21"	25½"	N/A	6½"	N/A	10½"	11"	N/A
QL-1-LIN-2020	65 LBS.	20"	20"	25"	25½"	N/A	8½"	N/A	12½"	13"	N/A
QL-1-LIN-2028	65 LBS.	20"	28"	25"	33½"	N/A	8½"	N/A	12½"	17"	N/A

MADE IN USA

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