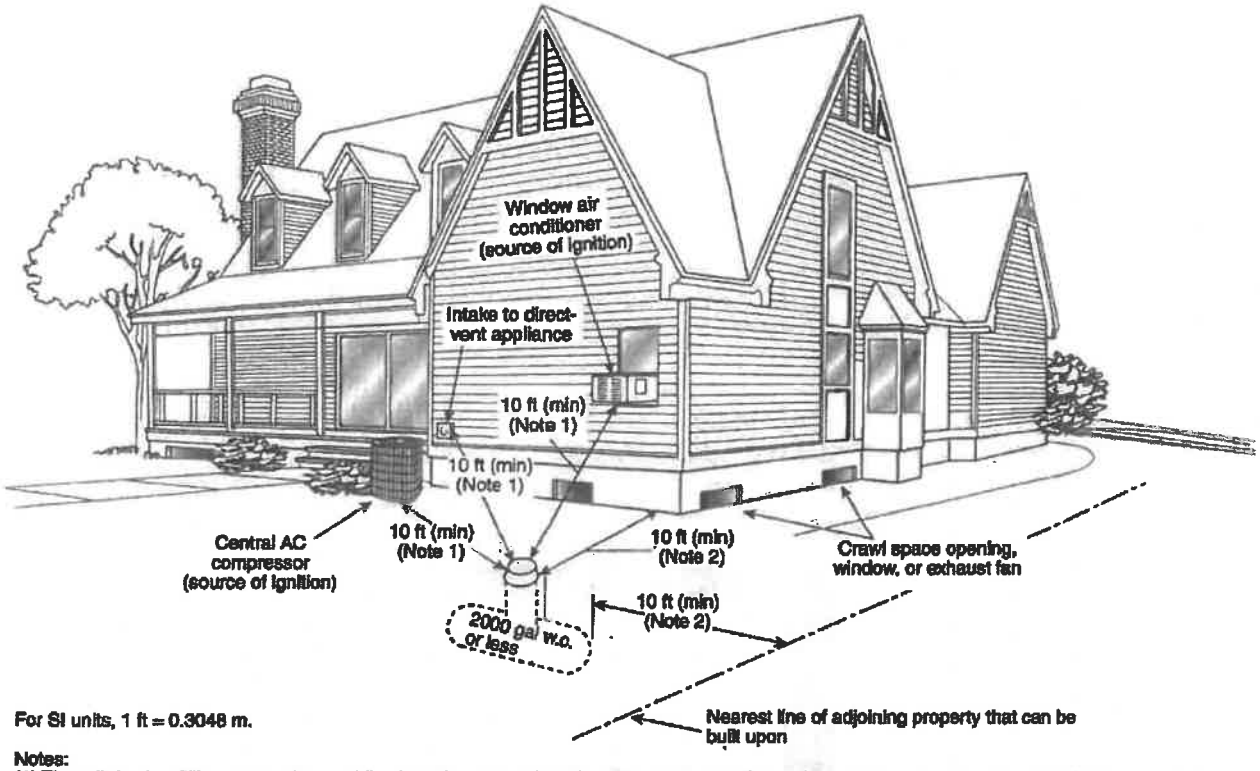


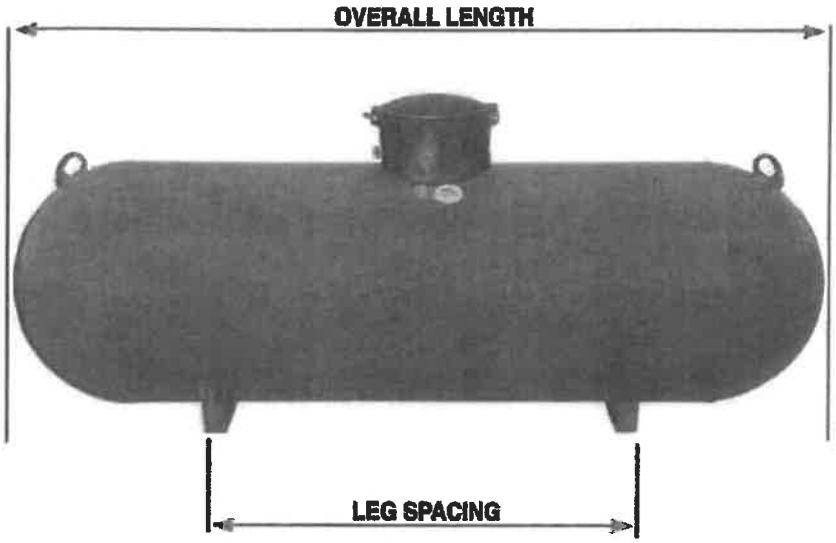
For SI units, 1 ft = 0.3048 m.

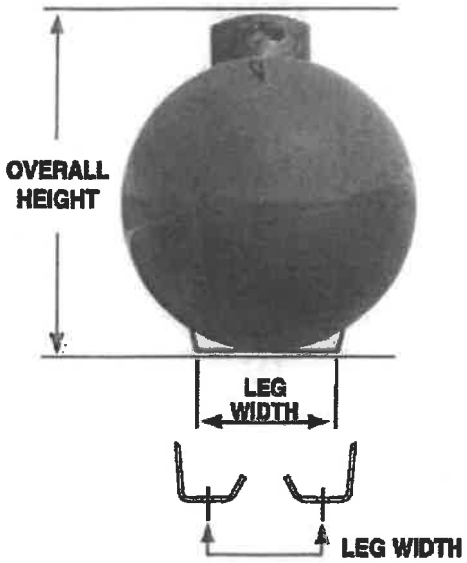
Notes:
(1) The relief valve, filling connection, and fixed maximum liquid level gauge vent connection at the container must be at least 10 ft from any exterior source of ignition, openings into direct-vent appliances, or mechanical ventilation air intakes. Refer to 6.4.4.4.
(2) No part of an underground container can be less than 10 ft from an important building or line of adjoining property that can be built upon. Refer to Table 6.4.1.1.

Δ **FIGURE I.1(c) Underground ASME Containers.** ***(Figure for illustrative purposes only; code compliance required.)***

UNDERGROUND/ABOVEGROUND TANKS (AG/UG)

Consult our dimension and specification chart below to find the tank that best fits your needs.
Visit our website at www.propanetank.com for more information.





APPROXIMATE ABOVEGROUND/UNDEGROUND (AG/UG) VESSEL DIMENSIONS AND SPECIFICATIONS

WATER CAPACITY	DIAMETER (OD)	HEAD TYPE	OVERALL LENGTH	OVERALL HEIGHT	LEG* WIDTH	LEG** SPACING	WEIGHT (lbs.)	**QUANTITY	
								FULL LOAD	PER STACK
*120 wg.	24"	Ellip.	5'-8"	3'	1'-1 1/2"	2'-10 1/2" or 3'-11"	260	108 | 96	16 | 12
*250 wg.	30"	Hemi.	7'-10"	3'-8"	1'-5"	4'-11"	480	54	9
*320 wg.	30"	Hemi.	9'-7"	3'-8"	1'-5"	5'	620	45	9
500 wg.	37 1/2"	Hemi.	10'	4'-2"	1'-8"	5'	950	37 | 30	8 | 6
1000 wg.	41"	Hemi.	16'	4'-5"	1'-8"	10'-1"	1,800	17 | 15	6 | 5
1450 wg.	46 1/2"	Ellip.	17'-4"	4'-11"	1'-9"	11'-7"	2,650	12	4
1990 wg.	46 1/2"	Ellip.	23'-11"	4'-11"	1'-9"	16'	3,520	8	4

Dimensions and specifications shown are approximate. Individual vessels may vary

* Leg spacing +/- 2". Leg widths and spacing may vary based on mfg. location. Check with your salesperson for details. 120, 250, 320 wg. standard tanks - no holes in legs (one center hole on request). 500 and 1000 wg. standard tanks - 2 holes 16" on center. 1450 wg. and up as shown above.

** Full load and stack quantities vary by shipping location. Check with your salesperson for details.

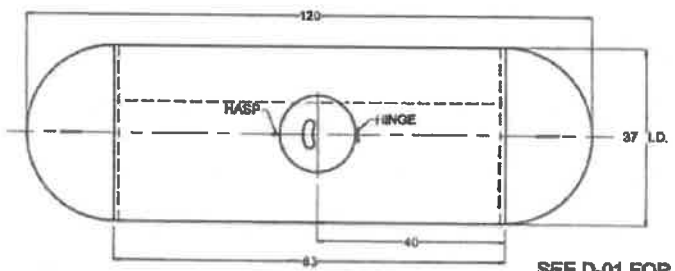
QUALITY STEEL
Because Quality Steel Means Quality Tanks

HOME OFFICE
2914 U.S.61
Cleveland, MS 38732
800-345-2495

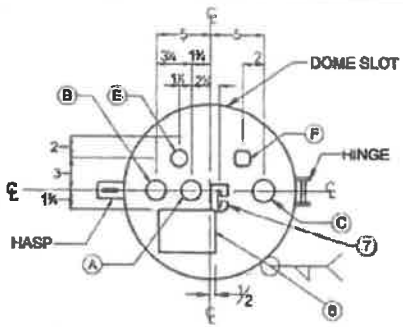
OHIO LOCATION
721 Graham Drive
Fremont, OH 43420
419-334-2664

UTAH LOCATION
5601 Axel Park Rd.
West Jordan, UT 84081
801-280-1133

THIS VESSEL IS DESIGNED FOR THE STORAGE OF LIQUEFIED PETROLEUM GAS ONLY

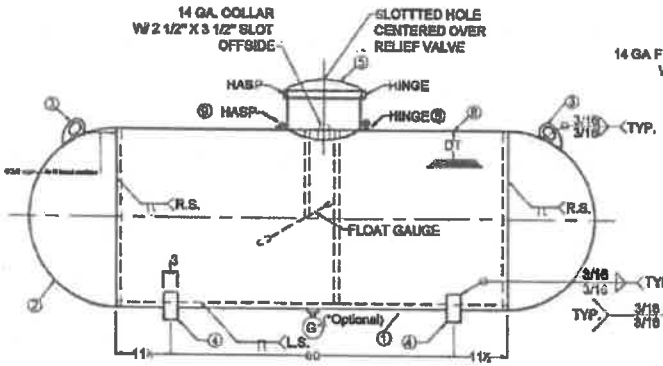


TOP VIEW

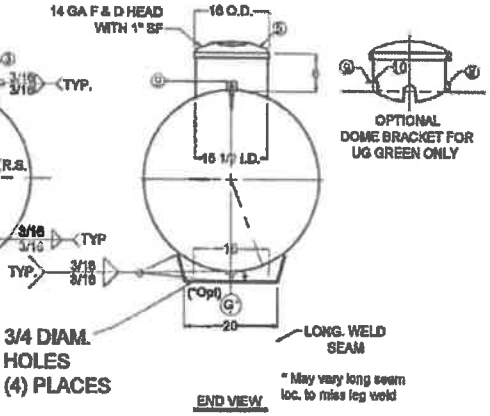


FITTING LAYOUT

SEE D-01 FOR ANY UNSPECIFIED WELD DETAILS



SIDE ELEVATION



END VIEW

OPTIONAL DOME BRACKET FOR UG GREEN ONLY

* May vary long seam loc. to miss leg weld

NOTE: TANK MUST BE INSTALLED LEVEL, WITH ALL LEGS IN SAME PLANE TO ASSURE EVEN DISTRIBUTION OF LOAD AND OPTIMIZE ACCURACY OF GAUGE DEVICE.

MARK	QTY.	SIZE	TYPE	FITTINGS REGO		SERVICE
A	1	1	XH FLG.	008884GT		RELIEF VALVE
B	1	1	XH FLG.	[illegible]		LOAT GAUGE
C	1	1-1/4	XH FLG.	L007979T		FILL VALVE
E	1	3/4	XH FLG.	PT007888RS10.5		MULTI VALVE
F	1	3/4	[illegible]	007980LT		CHEK-LOK
G(OPT)	1	1 1/4	XH FLG.			PLUGGED OPENING

MARK	QTY.	DESCRIPTION	DWG. NO.
1	1	SHELL - 0.218" X 83" X 115 11/16" - SA414G	
2	2	HEADS - 37" I.D. X 0.189" - HEMI SA414G	
3	2	LIFTING LUGS	D - 03
4	2	TANK LEGS	D - 3
5	1	DOME	D - 6
6	1	DATA PLATE	D - 09
7	1	REGULATOR BRACKET	D - 10
8	1	DIP TUBE LENGTH = 10.5" FOR 80 % @ 40° F	
9	2	HINGE AND HASP OR DOME BRACKETS	D-10, D-19, D-47
10	1	ANODE ATTACHMENT	D - 17

REV.	BY:	DESCRIPTION	DATE
14	CDH	ADDED HINGE & HASP AT SHELL	12/13/01
15	CDH	ADDED NOTE AT LEG DESCRIPTION	5/8/02
16	CDH	REVISED MDMT PRESSURE TO 250 PSI	8/23/02
17	CDH	CORRECTED RELIEF VLV. MODEL NOS.	11/5/03
18	CDH	CORRECTED SHELL LENGTH	11/12/03
19	wlo	REVISED COMPANY NAME	12/06/07
20	wlo	NEW NAME PLATE AND MOVED RELIEF VALVE	01/23/13
21	bls	REVISED SHELL LENGTH	03/18/14
22	bls	CHANGE FITTING LOCATION	04/10/14
23	TWW	NEW NAME PLATE AND STD. LEGS, LUGS, BRACKETS	01/04/16

PART NO: 0105002x

CERTIFIED BY: QUALITY STEEL CORPORATION
CLEVELAND, MS - FREMONT, OH - WEST JORDAN, UT

MAX. ALLOW. WORK. PRESS.	250 PSI	AT	400 °F.
M.D.M.T.	-20 °F. AT	250 PSI	
YEAR BUILT			
U W. STAMP	201	SER. NO.	*
LENGTH	120 IN.	OUTSIDE DIA.	37.5 IN.
HEAD THK.	.185 IN.	SHELL THK.	.218 IN.
ABOVE/UNDER GROUND TYPE	IQ5	SURFACE AREA	100 SQ. FT.
CONTAINER ASSEMBLY FOR LP GAS		HEAD D.R.	HEMI.
		WATER CAPACITY	500 GALLONS

THIS CONTAINER SHALL NOT CONTAIN A PRODUCT HAVING A VAPOR PRESSURE IN EXCESS OF 215 PSI AT 100°F.
DIP TUBE LENGTH - 80% FULL AT 40°F, D.T.= 10.5 IN.

DATA PLATE DETAIL

GENERAL NOTES:

1. LIFTING LUGS DESINGED FOR TOTAL LIFTING WEIGHT OF 150#s.
2. TOTAL EMPTY WEIGHT IS 952#.
3. ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE SPECIFIED
4. COMPLETE TANK DRIED TO REMOVE ALL MOISTURE
5. ALL WEIGHTS AND CAPACITIES ARE APPROXIMATE
6. EXTERIOR OF TANK TO BE GRIT BLASTED
7. PAINT PER SHOP ORDER
8. VACUUM PURGE TANK
9. DIMENSION ARE SUBJECT TO CHANGE WITHOUT NOTICE. (NON-PRESSURE RETAINING COMPONENTS ONLY)
10. THREADS OF ALL FITTINGS TO BE COATED WITH COMPOUND SUITABLE FOR USE WITH LP GAS
11. FLOAT GAUGE TO BE INSTALLED WITH FLOAT ARM 45° OFF LONGITUDINAL CENTERLINE OF TANK.

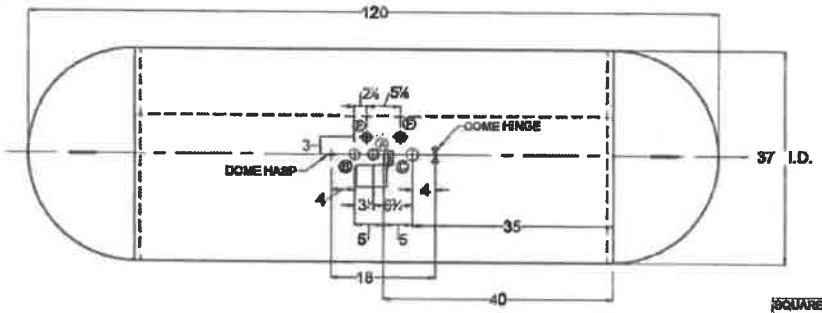
GENERAL SPECIFICATIONS	
WATER CAPACITY (GALLONS)	500
ALLOWABLE WORKING PRESSURE (PSIG)	250
JOINT EFFICIENCY: ASME UW-51 LONG SEAM	100 %
ASME UW-52 HEAD TO SHELL	80 %
HYDROSTATIC TEST PRESSURE (PSIG)	325
SURFACE AREA (SQ. FT.)	100
RELIEF VALVE SETTING (PSIG)	250
RELIEF DISCHARGE RATE - (CFM REQ'D.)	2360
HEAT TREATMENT NOT REQUIRED	
CODE: ASME SECTION VIII DIV. I	
STANDARDS: UNDERWRITERS LABORATORIES INC.	MH-7203
MATERIAL SPECIFIED P.A. 58 LP GAS CODE	
COUPLINGS SA-105	
TANK FLANGES SA-105 or SA-181-70	
ADAPTOR SA-105	

500 W.G. ABOVE/UNDERGROUND
PROPANE TANK-TYPE IQS (FORMERLY AWT-9A)

QUALITY STEEL CORPORATION

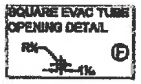
DATE	DRAWN BY:	APPROVED BY:	REVISION	DRAWING NO.:
01 / 03 / 00	RAC	TWW	23	X - 500

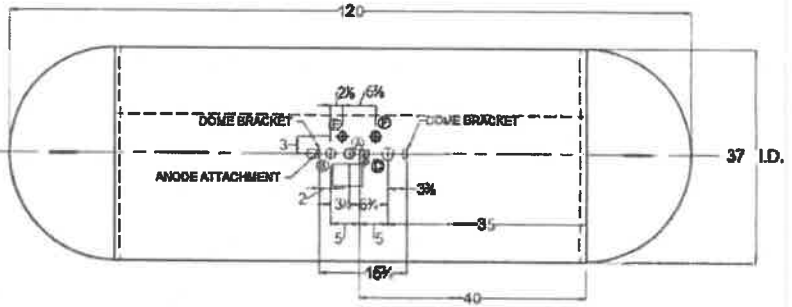
AGUG STANDARD



TOP VIEW

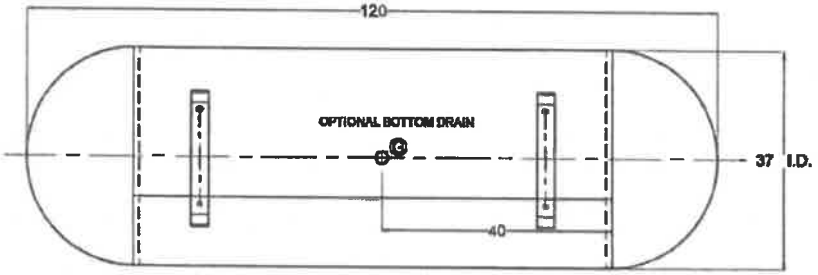
WITH HINGE AND HASP FOR NON-UG GREEN TANKS





TOP VIEW

WITH DOME BRACKETS FOR UG GREEN TANKS



BOTTOM VIEW

MARK	QTY.	SIZE	HOLE DIA
A	1	1	1 13/16
B	1	1	1 13/16
C	1	1-1/4	2 1/16
E	1	3/4	1 9/16
F	1	3/4	SEE DETAIL
G (OPT)	1	1 1/4	2 1/16

NOTE: SEE TANK DRAWING FOR REVISION BLOCK

500 W.G. ABOVE/UNDERGROUND
PROPANE TANK-TYPE IQ5 (FORMERLY AWT-8A)

QUALITY STEEL CORPORATION
FITTING LAYOUT

DATE	DRAWN BY	APPROVED BY	REVISION	DRAWING NO.
01 / 03 / 00	RAC	TWV	23	X - 500

Δ Table 17.1(l) Polyethylene Plastic Pipe — IPS

					Gas:	Undiluted Propane
					Inlet Pressure:	10.0 psig
					Pressure Drop:	1.0 psig
					Specific Gravity:	1.52
Plastic Pipe Length (ft)	½ in. SDR 9.33 (0.660)	¾ in. SDR 11 (0.860)	1 in. SDR 11 (1.007)	1¼ in. SDR 11 (1.328)	1½ in. SDR 11 (1.554)	2 in. SDR 11 (1.943)
INTENDED USE: Sizing Between First-Stage Pressure Regulator and Second-Stage (Low-Pressure) Regulator						
30	2,140	4,290	7,740	13,420	20,300	36,400
40	1,840	3,670	6,630	11,480	17,300	31,200
50	1,630	3,260	5,870	10,180	15,400	27,600
60	1,470	2,950	5,320	9,220	13,900	25,000
70	1,360	2,710	4,900	8,480	12,800	23,000
80	1,260	2,530	4,560	7,890	11,900	21,400
90	1,180	2,370	4,270	7,400	11,200	20,100
100	1,120	2,240	4,040	6,990	10,600	19,000
125	990	1,980	3,580	6,200	9,360	16,800
150	897	1,800	3,240	5,620	8,480	15,200
175	826	1,650	2,980	5,170	7,800	14,000
200	778	1,540	2,780	4,810	7,260	13,000
225	721	1,440	2,600	4,510	6,810	12,200
250	681	1,360	2,460	4,260	6,430	11,600
275	646	1,290	2,340	4,050	6,110	11,000
300	617	1,240	2,230	3,860	5,830	10,470
350	567	1,140	2,050	3,550	5,360	9,640
400	528	1,060	1,910	3,300	4,990	8,970
450	495	992	1,790	3,100	4,680	8,410
500	468	937	1,690	2,930	4,420	7,950
600	424	849	1,530	2,650	4,010	7,200
700	390	781	1,410	2,440	3,690	6,620
800	363	726	1,310	2,270	3,430	6,160
900	340	682	1,230	2,130	3,220	5,780
1000	322	644	1,160	2,010	3,040	5,460
1500	258	517	933	1,620	2,440	4,390
2000	221	443	798	1,380	2,090	3,750

IPS: Iron pipe size. SDR: Standard dimension ratio.

Notes:

(1) Capacities are in 1000 Btu/hr.

(2) Dimensions in parentheses are inside diameter.

Table 2. Capacity, Connection Sizes, and Vent Orientation

REGULATOR APPLICATION	TYPE NUMBER	CAPACITY BTU/HR PROPANE[1]	INLET CONNECTION	OUTLET CONNECTION	OUTLET PRESSURE SETTING	3/4-INCH NPT SCREENED VENT STANDARD LOCATION
Second Stage	R622-BCF	875,000	1/2-inch FNPT	1/2-inch FNPT	11 inches w.c. / 27 mbar	Over Inlet
	R642-DFF	900,000	3/4-inch FNPT	3/4-inch FNPT		
	R652-DFF	1,000,000				
	R622-CFF	1,400,000	1/2-inch FNPT			
	R622-DFF		3/4-inch FNPT			
	R622-CFGXA	1,125,000	1/2-inch FNPT	3/4-inch FNPT	18 inches w.c. / 45 mbar	
	HSRL-BFC[2]	2,100,000	3/4-inch FNPT		11 inches w.c. / 27 mbar	
	HSRL-CFC[2]		1-inch FNPT	1-inch FNPT		
Integral Two-Stage	R632A-BCF	850,000	1/4-inch FNPT	1/2-inch FNPT	11 inches w.c. / 27 mbar	First Stage[3]: Down Second Stage: Over Outlet
	R632A-HCF		FPOL			
	R632A-CFF	950,000	1/4-inch FNPT	3/4-inch FNPT		
	R632A-JFF	850,000	FPOL			
	R632A-BCFXA	850,000	1/4-inch FNPT	1/2-inch FNPT	11 inches w.c / 27 mbar	First Stage[3]: Opposite gauge taps Second Stage: Opposite gauge taps
	R632A-HCFXA		FPOL			
	R632A-CFFXA	950,000	1/4-inch FNPT	3/4-inch FNPT		
	R632A-JFFXA	850,000	FPOL			
Integral 2 psig / 0.14 bar Service	R632E-BCH	850,000	1/4-inch FNPT	1/2-inch FNPT	2 psig / 0.14 bar	First Stage[3]: Down Second Stage: Over Outlet
	R632E-HCH	900,000	FPOL			
	R632E-CFH	850,000	1/4-inch FNPT	3/4-inch FNPT		
	R632E-JFH		FPOL			
2 psig / 0.14 bar Service	R622E-BCH	1,250,000	1/2-inch FNPT	1/2-inch FNPT	2 psig / 0.14 bar	Over Inlet
	R622E-DCH	1,500,000	3/4-inch FNPT	3/4-inch FNPT		
	R652E-DFH	1,400,000				
First Stage	R622H-BGK	2,000,000	1/2-inch FNPT	1/2-inch FNPT	5 psig / 0.35 bar	Over Outlet
	R622H-BGJ	2,100,000			10 psig / 0.69 bar	
	R622H-HGJ		FPOL			
	R622H-HGJKA					
	R622H-JGK	2,250,000		3/4-inch FNPT	5 psig / 0.35 bar	
	R622H-JGJ				10 psig / 0.69 bar	
	R622H-DGJ	2,400,000	3/4-inch FNPT			

1. Capacities Based on:
   Second Stage: 10 psig / 0.69 bar inlet pressure and 2 inches w.c. / 5 mbar droop.
   Integral Two-stage: 30 psig / 2.1 bar and 2 inches w.c. / 5 mbar droop.
   Integral Two psig Service: 30 psig / 2.07 bar and 20% droop.
   2 psig / 0.14 bar Service: 10 psig / 0.69 bar inlet pressure and 20% droop.
   First Stage: 30 psig / 2.1 bar inlet pressure and 20% droop.
2. Straight globe valve body configuration.
3. Integral First Stage Vent size: 7/16-24 UN thread for 1/4-inch OD copper tube inverted flare fitting.

- Replace old pigtails. Blow out any debris, dirt or copper sulfate in the copper tubing and the pipeline.
- Apply pipe compound to the male threads of the pipe before installing the regulator.
- Make sure gas flow through the regulator is in the same direction as the arrow on the body. "Inlet" and "Outlet" connections are clearly marked.

Installation Location

- The installed regulator should be adequately protected from vehicular traffic and damage from other external sources.
- Install the regulator with the vent pointed vertically down, see Figure 2. If the vent cannot be installed in a vertically down position, the regulator must be installed under a separate protective cover. Installing