



COMMERCIAL REFRIGERATION

LIQUID RECEIVERS

DP-305-12 // ASME

BH / BV
Gen. 2



DP-305-12



BITZER US ASME Pressure Vessels

In addition to our wide variety of compressors and compressor packages, BITZER US delivers high quality pressure vessels dedicated to the refrigeration and air-conditioning industries.

These vessels are used in many applications ranging from condensing units, supermarkets, cold storage, ice makers, and other industrial processing systems.

BITZER US utilizes multiple robots and welding stations to provide fast, consistent, and reliable welds which results in high quality vessels with short lead times.

All vessels are manufactured in Georgia.

Design Capabilities

- Max Diameter: 96"
- Max Length: 290"
- Max Pressure: 3000 PSI
- Min Temperature: -55F

Manufacturing

- CNC Machine Shop
- Robotic Welding
- Water Jet
- Pipe Cutter
- Plasma Table

Design Safety

- BITZER ASME vessels are manufactured in accordance with the latest edition of ASME Section VIII, Division 1.
- CRN is available with majority of models.



2024 UPDATE: You Spoke – We Listened!

The BITZER US ASME Pressure Vessel Product Series has now been redesigned to meet our customer's demands. The industry is changing quickly to embrace natural refrigerants like ammonia and carbon dioxide in new applications. For this reason, we are dividing our vessels into two primary catalogs: Commercial Refrigeration and Industrial Refrigeration.

Vessels for Commercial Refrigeration

System designers of CO₂ know that there is a balancing act in choosing the right pressure rating. BITZER US has expanded the Commercial Receivers into 5 standard pressure ratings to choose from.

As our products grow, so will this catalog. Please check back for additions like CO₂ Open Flash Vessels, Suction Accumulators, and more!

Vessels for Industrial Refrigeration

Looking for larger vessels tailored for Ammonia or Industrial Refrigeration? We also offer High Pressure Receivers, Thermosyphon vessels, Recirculators, Surge Drums, Intercoolers, Open Flash Economizers, Controller Pressure Receivers and more!

See our catalog DP-261 for more Info!



Customer Designed Vessels Still Available

Do you need a custom pressure vessel not found in our catalogs? We love to work with our customers who have specialized requirements through our "Customer Designed Vessels." See Page 7 for more info.

Legacy Models

We realize you might not be able to make a change at the same time we are! You may continue to purchase your existing vessels with the same item/model number.

If a previously ordered vessel is discontinued, we will be sure to provide you an update with sufficient time to plan accordingly.

S



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INTRODUCING BH & BV Generation 2

All though value is important, not everything is just about the price. Quality and lead time is highly valued by our customers! We have shifted our item number to enable more flexibility into our standard offering. For a given diameter, multiple lengths are now available to select the right capacity, in the right footprint. In addition, to better streamline our manufacturing, there are now three modification levels: "Q", "Z", and "C".

NEW Pressure Ratings

We have restructured our supply chain and manufacturing processes to plan around the growth of CO₂ as a refrigerant. Please take advantage of our new pressure ratings up to 1451 psi (100 bar).

NEW Configurable Vessels: "Q"

You can now select a standard vessel and change the connection size, type, and location without requiring a custom vessel. Need a port for service or equalization? No problem! Add up to three additional connections.

Semi-Custom: "Z"

Sometimes, you just need that one (or five) extra modification(s) to make the vessel perfect. As you order new designs, we make them part of our standard offering.

See Page 7 for more info on "Q", "Z" and Customer Designed Pressure Vessels.

General Applications

- Suitable for use for nearly all A1/A2L refrigerants including but not limited to: R22, R134a, R404A, R448A, R407A/C/F, R410A, R507A, R513A, R744, R1234yf, R1234ze(E), R32, R452B, R454B/C, R455A
- For A3 refrigerants, please consult factory.
- Vessels are designed for target minimum operating temperature of -20°F (consult factory to verify, or request a dual stamp with additional temp/pressure on nameplate).

MADE IN THE USA!

Vessel Factory (Georgia)



Explanation of Item Number

B V 1 4 6 0 - 4 5 0

Model designation

B = BITZER Commercial Receiver

C = Customer Designed Vessel (Go to Page 7)

B V 1 4 6 0 - 4 5 0

Model orientation

V = Vertical, H = Horizontal

B V 1 4 6 0 - 4 5 0

Diameter

XX = Nominal Diameter (NPS)

(Max of 24")

B V 1 4 6 0 - 4 5 0

Vessel Length (w/o Conn & Legs)

XXX = Length in.

(Max of 120")

B V 1 4 6 0 - 4 5 0

Pressure Ratings (psi)

- 450 (31 bar)
- 675 (46 bar)
- 871 (60 bar)
- 1161 (80 bar)
- 1451 (100 bar)

B V 1 4 6 0 - 4 5 0 - R S

Options (BH and BV Only)¹

R = Rotalock Stub and Cap for Inlet and Outlet

Valves must be ordered separately! See Page 8

S = Standard sightglass(es)

Vertical vessels Only

F = Welded feet instead of a skirt

Horizontal Only

L = Liquid Level Indicator Flange (see Page 9)

H = Top brackets (see page 10)

G = No Feet

B V 1 4 6 0 - 4 5 0 - R S 2 Q 1

Optional Modification Level¹ - See Page 7

Blank, 1..3 = Number of additional connections

Q = Configured (either of below)

- Non-default connection size
- Change connection/feet location
- 1 to 3 Additional connections

Z = Semi-Custom (either of below)

- 4 to 9 Additional connections
- Other modifications

B V 1 4 6 0 - 4 5 0 - R S 5 Z 1

Design Version

Blank, 1,2,3... = Design version (if needed)

¹Not Applicable to Custom Models "C"



SELECT DIAMETER, LENGTH AND PRESSURE

To provide our customers with more flexibility, BITZER US has created tables of *Internal Vessel Volume* for each Pressure Rating. Vessel Length is measured from the end each head (no feet or connections). For lengths and pressures not shown, please see the different modification available on page 7.

Available Vessels by Dimension and Orientation

Nom Dia	18	24	30	36	42	48	60	72	84	96	120
6	V	H/V	H/V	H/V	H/V	H/V	H/V				
8	V	H/V	H/V	H/V	H/V	H/V	H/V				
10		V	H/V	H/V	H/V	H/V	H/V	H	H	H	H
12		V	H/V	H/V	H/V	H/V	H/V	H/V	H	H	H
14			V	V	H/V	H/V	H/V	H/V	H	H	H
16			V	V	H/V	H/V	H/V	H/V	H/V	H	H
18				V	H/V	H/V	H/V	H/V	H/V	H	H
20				V	V	V	H/V	H/V	H/V	H/V	H
24				V	V	V	H/V	H/V	H/V	H/V	H

Table 1

H – Horizontal
V – Vertical

Available Vessels by Diameter and Pressures

Nom Dia	450 psi	675 psi	871 psi	1161 psi	1451 psi
NPS	31 bar	46 bar	60 bar	80 bar	100 bar
06	H/V	H/V	H/V	H/V	
08	H/V	H/V	H/V	H/V	H/V
10	H/V	H/V	H/V	H/V	
12	H/V	H/V	H/V	H/V	H/V
14	H/V	H/V	H/V	H/V	H/V
16	H/V	H/V	H/V		
18	H/V	H/V	H/V	H/V	H/V
20	H/V	H/V	H/V	H/V	H/V
24	H/V	H/V	H/V	H/V	H/V

Table 2

Internal Vessel Volume (ft³) - Rated at 450¹ and 675 psi

Nominal Diameter	18	24	30	36	42	48	60	72	84	96	120
6	0.3	0.4	0.5	0.6	0.7	0.8	1.0				
8	0.5	0.7	0.8	1.0	1.2	1.4	1.7				
10		1.0	1.3	1.5	1.8	2.1	2.6	3.2	3.7	4.3	5.4
12		1.4	1.8	2.2	2.6	3.0	3.8	4.5	5.3	6.1	7.7
14			2.2	2.6	3.1	3.6	4.6	5.5	6.5	7.4	9.3
16			2.7	3.3	4.0	4.6	5.8	7.0	8.3	9.5	11.9
18				4.2	5.0	5.8	7.4	9.0	10.5	12.1	15.3
20				5.2	6.2	7.2	9.2	11.2	13.1	15.1	19.0
24				7.4	8.8	10.2	13.1	15.9	18.8	21.6	27.3

Table 1

¹ Table based on 675 psi. (450 psi rated vessels may have slight increase in volume due to thinner wall).

Internal Vessel Volume (ft³) - Rated at 871 psi (60 bar)¹

Nominal Diameter	18	24	30	36	42	48	60	72	84	96	120
6	0.3	0.4	0.5	0.6	0.7	0.8	1.0				
8	0.5	0.7	0.8	1.0	1.2	1.4	1.7				
10		1.0	1.3	1.5	1.8	2.1	2.6	3.2	3.7	4.3	5.4
12		1.4	1.8	2.2	2.6	3.0	3.8	4.5	5.3	6.1	7.7
14			2.1	2.6	3.0	3.5	4.5	5.4	6.3	7.3	9.2
16			2.7	3.3	4.0	4.6	5.8	7.0	8.3	9.5	11.9
18				4.2	5.0	5.8	7.3	8.9	10.4	12.0	15.1
20				5.1	6.1	7.0	9.0	10.9	12.8	14.8	18.6
24				7.3	8.7	10.1	12.8	15.6	18.4	21.2	26.8

Table 2

¹ The 24" diameter vessels are rated at 870 psi.

Internal Vessel Volume (ft³) - Rated at 1161 psi (80 bar)

Nominal Diameter	18	24	30	36	42	48	60	72	84	96	120
6	0.3	0.4	0.5	0.6	0.7	0.8	1.0				
8	0.5	0.6	0.8	1.0	1.2	1.3	1.7				
10		1.0	1.3	1.5	1.8	2.1	2.6	3.2	3.7	4.3	5.4
12		1.3	1.7	2.1	2.4	2.8	3.5	4.3	5.0	5.7	7.2
14			2.1	2.5	3.0	3.5	4.4	5.3	6.2	7.1	9.0
16											
18				4.0	4.7	5.4	6.9	8.4	9.9	11.4	14.3
20				4.9	5.8	6.7	8.6	10.4	12.2	14.1	17.8
24				6.8	8.1	9.4	12.1	14.7	17.4	20.0	25.3

Table 3

SELECT DIAMETER, LENGTH AND PRESSURE (Cont.)

Internal Vessel Volume (ft³) - Rated at 1451 psi (100 bar)

Nominal Diameter	Vessel Length (Inches)										
	18	24	30	36	42	48	60	72	84	96	120
6											
8	0.4	0.6	0.7	0.9	1.1	1.2	1.5				
10											
12		1.3	1.7	2.1	2.4	2.8	3.5	4.3	5.0	5.7	7.2
14			2.0	2.5	2.9	3.3	4.2	5.1	6.0	6.9	8.7
16											
18				4.0	4.7	5.4	6.9	8.4	9.9	11.4	14.3
20				4.9	5.8	6.7	8.6	10.4	12.2	14.1	17.8
24				6.8	8.1	9.4	12.1	14.7	17.4	20.0	25.3

Table 4

Density of Common Refrigerants in Liquid State

Refrigerant	Density of Liquid Refrigerant by Saturated Temp (lbs / ft³)						
	Liquid Temp (°F)						
	110	100	90	80	70	60	50
R22	69.5	71.1	72.5	73.9	75.3	76.6	77.8
R404A	58.9	61.0	62.9	64.7	66.3	67.9	69.3
R507A	59.0	61.1	63.1	64.9	66.6	68.2	69.7
R134a	70.7	72.2	73.6	74.9	76.2	77.5	78.7
R448A	62.6	64.4	66.1	67.7	69.2	70.7	72.1
R410A	59.6	61.7	63.7	65.6	67.3	68.9	70.4
R744				42.6	47.5	51.0	53.8

Table 5

Formula for Mass of Refrigerant

- Liquid Mass (lbs) = Liquid Density (lbs / ft³) x Vessel Volume (ft³) x % Full
 - % Full is typically 80% based on code requirements.
 - BITZER US assumes no responsibility in code or sizing recommendations.
- Contact BITZER US for Pressure Vessel Configurator to create more volume, density, and mass tables for a wide variety of refrigerants in SI & IP Units.

Canadian Registration Numbers

We work hard to register these vessels as quickly as possible but also “as needed.” Please contact BITZER US for latest status.

Table 8 shows the latest status by province for CRN by diameter and pressure.



CRN Status of BITZER US Vessels¹

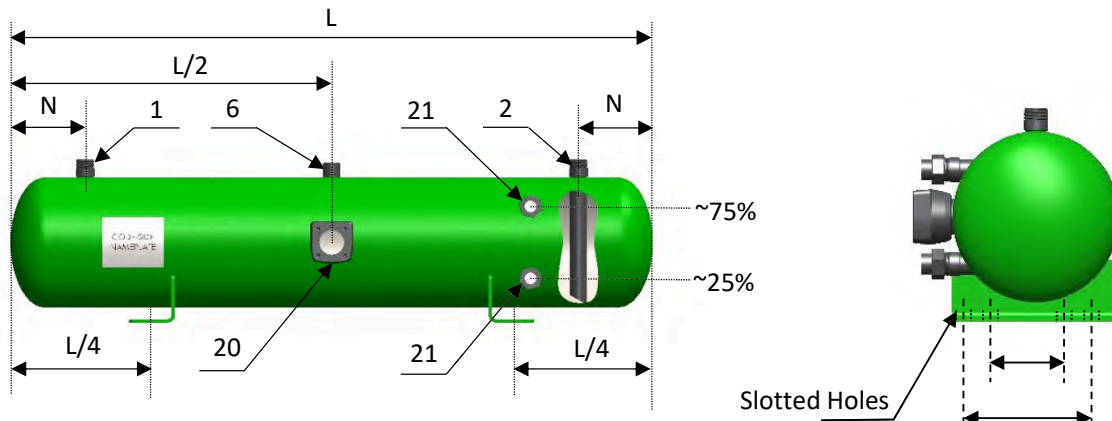
Nom Dia	450 psi	675 psi	871 psi	1161 psi	1451 psi
NPS	31 bar	46 bar	60 bar	80 bar	100 bar
06	All	Partial			
08	All	All			
10	All	All	Quebec	Ontario	
12	All	All	Ontario	Ontario	
14	All	All	All		
16	All	B.C.	Alberta		
18	All	All	All	Ontario	
20	All		All	Quebec	
24	All	All		Quebec	

Table 6

¹ Status as of Jan 2024



HORIZONTAL LIQUID RECEIVERS – “BH” Generation 2



Model Prefix	Dimensions				Default Size		Options					
	Vessel OD	Min (L)	Max (L)	N	Liquid Inlet / Outlet (1) (2)	Relief (6)	Rotalock Stubs "R" (1) (2)	Sightglass "S" (21)		Liquid Level Flange "L" (20)	Top Bracket "H"	No Feet "G"
	in	in	in	in	ID (in)	FPT	UNF	#	%	#		
BH06	6 5/8	24	60	4.5	5/8	1/2	1 - 14	1	50	1	Option	Option
BH08	8 5/8	24	60	6.3	7/8	1/2	1 1/4 - 12	1	50	1	Option	Option
BH10	10 3/4	30	120	7.8	1 1/8	1/2	1 1/4 - 12	1	50	1	Option	Option
BH12	12 3/4	30	120	8.3	1 3/8	1/2	1 3/4 - 12	2	25, 75	1	Option	Option
BH14	14	42	120	9.0	1 3/8	1/2	1 3/4 - 12	2	25, 75	1	N/A	Option
BH16	16	42	120	9.3	1 5/8	3/4	2 1/4 - 12	2	25, 75	1	N/A	Option
BH18	18	42	120	10.3	1 5/8	3/4	2 1/4 - 12	2	25, 75	1	N/A	Option
BH20	20	60	120	11.5	2 1/8	3/4	2 1/4 - 12	2	25, 75	1	N/A	Option
BH24	24	60	120	13.0	2 1/8	3/4	2 1/4 - 12	2	25, 75	1	N/A	Option

Table 7

BH and BV Notes

- Inlet and Outlet Connections
 - Default size is a stub for Copper ODS.
 - For available sizes or types, see Table 11.
- "R" - Rotalock Stub
 - Replaces default inlet and outlet with Rotalock Stub and cap.
 - Max Pressure of stub and cap is 871 psi.
 - For Rotalock Valves (sold as accessories), see Table 13.
- "S" – Sightglass
 - 450 psi: Rotalock style.
 - 675 psi and up: NPT Coupling Style.
- For Level monitoring: See Page 8.

Connection Positions

- 1 Liquid Inlet
- 2 Liquid Outlet
- 6 Pressure Relief
- 20 Liquid Level Flange (For Float Level Gage)
- 21 Sight glass

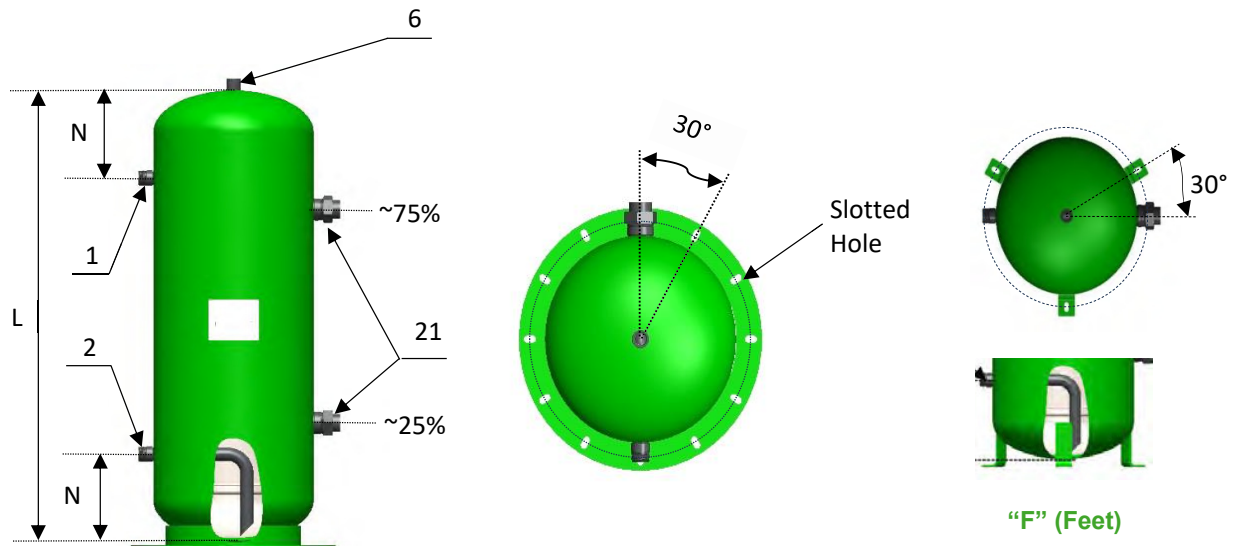
BH (Horizontal) Notes

- "L" – Liquid Level Flange: See page 9 for AWA Float Gauge and blank off plate.
- "H" - Top Bracket: See Page 10 for compressor mounting kits and available vessel sizes.
- "G" - No feet: See Page 10 for U-bolt mounting kits.

BV (Vertical) Notes

- "F" – Welded feet instead of a skirt (See Image on page 6).

VERTICAL LIQUID RECEIVERS – “BV” Generation 2



Model Prefix	Dimensions				Default Size		Options			
	Vessel OD	Min (L)	Max (L)	N	Liquid Inlet / Outlet (1) (2)	Relief (6)	Rotalock Stubs "R" (1) (2)	Sightglass "S" (21)		Feet "F"
	in	in	in	in	ID (in)	FPT	UNF	#	%	
BV06	6 5/8	18	60	4.5	5/8	1/2	1 - 14	2	25, 75	Option
BV08	8 5/8	18	60	6.3	7/8	1/2	1 1/4 - 12	2	25, 75	Option
BV10	10 3/4	24	60	7.8	1 1/8	1/2	1 1/4 - 12	2	25, 75	Option
BV12	12 3/4	24	72	8.3	1 3/8	1/2	1 3/4 - 12	2	25, 75	Option
BV14	14	30	72	9.0	1 3/8	1/2	1 3/4 - 12	2	25, 75	Option
BV16	16	30	84	9.3	1 5/8	3/4	2 1/4 - 12	2	25, 75	Option
BV18	18	36	84	10.3	1 5/8	3/4	2 1/4 - 12	2	25, 75	Option
BV20	20	36	96	11.5	2 1/8	3/4	2 1/4 - 12	2	25, 75	Option
BV24	24	36	96	13.0	2 1/8	3/4	2 1/4 - 12	2	25, 75	Option

Table 8

AVAILABLE CONNECTION SIZES AND ADDITIONAL CONNECTONS (BH & BV)

Nom Dia	Stubs for Copper ODS			Rotalock Stub Max Pressure 871 PSI			Butt Weld		Coupling	
	Default (1) (2)	Min	Max	"R" Default (1) (2)	Min	Max	Min	Max	Min	Max
NPS	ID (in)	ID (in)	ID (in)	UNF	UNF	UNF	NPS	NPS	NPT	NPT
06	5/8	1/2	1 1/8	1 - 14	3/4 - 16	1 3/4 - 12	1/2	1 1/4	1/8	1
08	7/8	1/2	1 3/8	1 1/4 - 12	3/4 - 16	1 3/4 - 12	1/2	1 1/2	1/8	1 1/4
10	1 1/8	1/2	1 5/8	1 1/4 - 12	3/4 - 16	1 3/4 - 12	1/2	2	1/8	1 1/4
12	1 3/8	1/2	2 1/8	1 3/4 - 12	3/4 - 16	2 1/4 - 12	1/2	2 1/2	1/8	1 1/4
14	1 3/8	1/2	2 5/8	1 3/4 - 12	3/4 - 16	2 1/4 - 12	1/2	3	1/8	1 1/4
16	1 5/8	1/2	2 5/8	2 1/4 - 12	3/4 - 16	2 1/4 - 12	1/2	3	1/8	1 1/4
18	1 5/8	1/2	3 1/8	2 1/4 - 12	3/4 - 16	2 1/4 - 12	1/2	3	1/8	1 1/4
20	2 1/8	1/2	3 1/8	2 1/4 - 12	3/4 - 16	2 1/4 - 12	1/2	3	1/8	1 1/4
24	2 1/8	1/2	4 1/8	2 1/4 - 12	3/4 - 16	2 1/4 - 12	1/2	4	1/8	1 1/4

Table 9

Connection Notes

- Connections available for all pressure ratings with except of Rotalock Stubs (871 psi max).



MODIFICATION LEVELS “Q”, “Z”, and “C”

Modification	Standard	"Q" - Configured	"Z" - Semi-Custom	"C" - Customer Designed
Diameter	See Table 1 - 6	See Table 1 - 6	See Table 1 - 6	See Table 1 - 6
Length	See Table 1 - 6	See Table 1 - 6	Customizable	Customizable
Pressure Rating	See Table 2	See Table 2	Limited	Customizable
Inlet / Outlet Size - Stub for ODS	Default Size	See Table 11	See Table 11	Customizable
Inlet / Outlet Size - Rota	Default Size	See Table 11	See Table 11	Customizable
Change Conn To Butt Weld / Coupling	No	See Table 11	See Table 11	Customizable
Change Conn or Feet Location	No	Yes - Limited	Yes	Customizable
Sightglasses	"S" - 1 or 2	Up to 3	Up to 9	Customizable
Standard Options	F,L,H,G	F,L,H,G	F,L,H,G	(Not applicable)
Additional Conn - Horizontal	No	Up to 3 (Shell Only)	Up to 9	Unlimited
Additional Conn - Vertical	No	Up to 3	Up to 9	Unlimited
Dual Stamp (Lower Temp Rating)	No	Yes	Yes	Yes
Additional Lugs, Weld Pads, Brackets	No	No	Yes	Yes
Additional Internal Components	No	No	Some	Customizable
Proprietary Level	BITZER US	BITZER US	BITZER US	CUSTOMER

Table 10

HOW TO ORDER MODIFICATIONS

“Q” Configuration

- Request a Quote:
 - Specify diameter, length, and pressure rating.
 - Specify available options (R,S,F,L,H,G)
 - Specify any configuration changes such as:
 - Connection size
 - Connection type (if not Stub for ODS)
 - Connection location (Must remain on shell for BH & Off-center connections are limited)
 - Additional connections (Up to 3)
- Feel free to provide an example drawing or sketch.
- A submittal drawing will be provided after order is placed.
- Vessel will be scheduled after submittal is signed.

Semi-Custom – “Z”

- Request a Quote:
 - Specify diameter, length, and pressure rating.
 - Special pressure ratings are allowed for CRN.
 - Specify available options (R,S,F,L,H,G) as needed.
- Provide drawing or sketch as needed.
- A submittal drawing will be provided after ordering.
- Vessel will be scheduled after submittal is signed.

Customer Designed Vessel – “CH / CV”

- Provide a fully detailed drawing or sketch.
- A submittal drawing will be provided after ordering.
- Vessel will be scheduled after submittal is signed.

Customer Designed Vessels – “CH / CV”

BITZER has a high appreciation for innovation, creativity, research, and development. If you have a fully designed vessel, we will be happy to manufacture it for you.

It will be your drawing, your vessel, and be considered proprietary to your company alone.



Customer Designed Vessel Nomenclature

C V 1 4 6 0 - 9 0 0 - 1 1 1 1

Model designation

“C” = Customer Designed Vessel

C V 1 4 6 0 - 9 0 0 - 1 1 1 1

Model orientation

V = Vertical, H = Horizontal

C V 1 4 6 0 - 9 0 0 - 1 1 1 1

Diameter (NPS)

C V 1 4 6 0 - 9 0 0 - 1 1 1 1

Vessel Length (w/o Conn & Legs)

C V 1 4 6 0 - 9 0 0 - 1 1 1 1

Pressure Rating (psi)

C V 1 4 6 0 - 9 0 0 - 1 1 1 1

Customer Specific Job Number

ROTALOCK VALVES



Valve Part Number	Rotalock Conn	Piping Connection		Gauge Port	Pressure Rating (14°F-284°F)
Item	UNF	Size [in]	Type	Location	psi
500113050	3/4 - 16	3/8	ODS (Brazed)	Top	653
500212050	3/4 - 16	3/8	SAE Male Flare	Top	
500016050	3/4 - 16	1/2	ODS (Brazed)	Top	
500213050	3/4 - 16	1/2	SAE Male Flare	Top	
500693050	1 - 14	3/8	SAE Male Flare	Top+Right	
500815050	1 - 14	1/2	ODS (Brazed)	Top	
500845050	1 - 14	1/2	SAE Male Flare	Left	
503011050	1 - 14	5/8	ODS (Brazed)	Top	
503140050	1 - 14	5/8	SAE Male Flare	Top	
506113050	1 1/4 - 12	1 1/8	ODS (Brazed)	Top	
509042750	1 1/4 - 12	1 3/8	ODS (Brazed)	Top	
506011050	1 1/4 - 12	3/4	ODS (Brazed)	Top	
506040050	1 1/4 - 12	7/8	ODS (Brazed)	Left	
508012050	1 3/4 - 12	1 1/8	ODS (Brazed)	Top	
508043050	1 3/4 - 12	1 3/8	ODS (Brazed)	Left	
506412050	1 3/4 - 12	7/8	ODS (Brazed)	Top	
509040750	2 1/4 - 12	1 3/8	ODS (Brazed)	Top	
509051050	2 1/4 - 12	1 5/8	ODS (Brazed)	Left	
509060050	2 1/4 - 12	2 1/8	ODS (Brazed)	Top	
470040050	3/4 - 16	1/2	ODS (Brazed)	(None)	914
470010050	3/4 - 16	3/8	ODS (Brazed)	(None)	
470110050	1 - 14	5/8	ODS (Brazed)	(None)	
470130050	1 1/4 - 12	3/4	ODS (Brazed)	(None)	
470150050	1 1/4 - 12	7/8	ODS (Brazed)	(None)	
470210050	1 3/4 - 12	1 1/8	ODS (Brazed)	(None)	
470230050	2 1/4 - 12	1 3/8	ODS (Brazed)	(None)	
470240050	2 1/4 - 12	1 5/8	ODS (Brazed)	(None)	
470260050	2 1/4 - 12	2 1/8	ODS (Brazed)	(None)	

Table 11

Rotalock Valves

Table 13 contains valves that mount to a Rotalock stub. Valves must be ordered separately. Please verify Rotalock connection matches the Rotalock stub size on your vessel. To change the stub size, see page 7.



ODS (Brazed / Solder) [653 psi]



SAE Male Flare [653 psi]



ODS (Brazed/Solder) [914 psi]



OLC - OPTOELECTRONIC LIQUID LEVEL MONITORING

OLC-D1-D is a UL Listed opto-electronic oil for liquid level monitoring using infrared light.

- See BITZER Literature AT-170 and DT-300 for more information.
- Please specify 1-3/4-12 UNF Stub (652 psi) or 3/4" NPT (up to 1451 psi).
- Must be ordered separately (see Table 14).

OLC-D1-D			Kit Spare Parts		Other Parts / Accessories		
Voltage	Kit Part No. ¹	Max Switch Voltage / Current	Opto-Electronic Unit	Standard Prism ¹ 1-3/4-12 UNF	Rotalock "T" ¹ (1-3/4-12 UNF)	Sightglass ¹ (1-3/4-12 UNF)	High Pressure Prism 3/4" NPT (1450 psi)
115V	347950-02	250V / 4A	347949-02	361828-01	365433-56	182102060	930-0006-03
230V	347950-01		347949-01				
24 V (AC/DC)	347950-04		347949-04				

Table 12

¹ Maximum allowable pressure of 652 psi (down to 15°F)

ACCESSORIES FOR LIQUID LEVEL FLANGE - AWA Float Gauge

Vessel Nom. Diameter	Mechanical Float & Gauge	"Hall Sensor" Gauge Output: 0.5-4.5 VDC		"Hall Sensor" Gauge Output: 1-2 VDC		Supply Voltage
NPS	w/o Electrical Outlet Signal	Electrical (w/ Lead Wire)	Electrical w/ Junction Box	Electrical (w/ Lead Wire)	Electrical w/ Junction Box	DC
8	FG08	FG08-1	FG08-1J	FG08-2	FG08-2J	6-30
10	FG10	FG10-1	FG10-1J	FG10-2	FG10-2J	6-30
12	FG12	FG12-1	FG12-1J	FG12-2	FG12-2J	6-30
14	FG14	FG14-1	FG14-1J	FG14-2	FG14-2J	6-30
16	FG16	FG16-1	FG16-1J	FG16-2	FG16-2J	6-30
18	FG18	FG18-1	FG18-1J	FG18-2	FG18-2J	6-30
20	FG20	FG20-1	FG20-1J	FG20-2	FG20-2J	6-30
24	FG24	FG24-1	FG24-1J	FG24-2	FG24-2J	6-30
30	FG30	FG30-1	FG30-1J	FG30-2	FG30-2J	6-30

Table 13



**Mechanical Float & Gauge Only
(Without Outlet Signal)**



**Float Gauge Electrical:
"Hall sensor" with
Detachable Lead Wire**



**Float Gauge Electrical
with Junction Box,
"Hall sensor" & Lead Wire**

AWA – REFRIGERANT FLOAT GAUGES

- See Brochures: AP-0001

Design Features

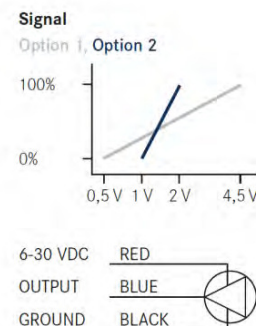
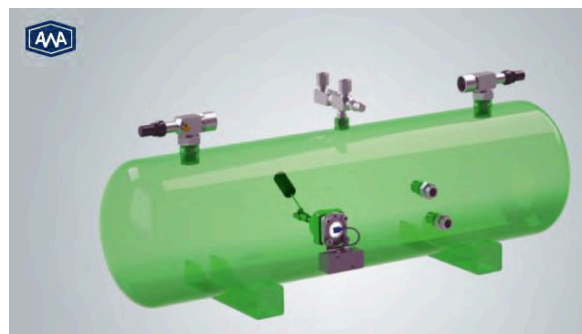
- ETL Listed in accordance with ETL testing. (Conforms to UL 207 Ed:8)
- Certified to CSA C22.2#140.3:2015 Ed.3.
- Fits all ASME certified horizontal refrigerant receivers.
- Durable and waterproof connection by encapsulation.
- Improved strength and durability of gear mechanism by use of diecast zinc.
- Precise measurement by use of Neodym Magnet.
- Gauges are made of polycarbonate.
- Gauges are ultrasonically welded and hermetically sealed.
- Leak-free service of dial & junction box.

Specifications (See AB-1001)

- Operating Temperatures: -40° to 158° F, -40° to 70° C
- Max. Operating Pressure: 700 psi
- Input Voltage: 6 to 30 VDC
- Allowable Refrigerants: R22, R134a, R404A, R407A/C/F, R448A, R449A, R450A, R507, R513A
- Mounting Flange style: Senior Gauge
- Output Signal Options: 0.5 – 4.5 VDC or 1 – 2 VDC

Liquid Level Flange Blank Off Plate

- Kit Part Number: C1002976
 - Includes gasket P000007198 and hardware.



✓ Additional refrigerants upon request

COMPRESSOR MOUNTING KITS

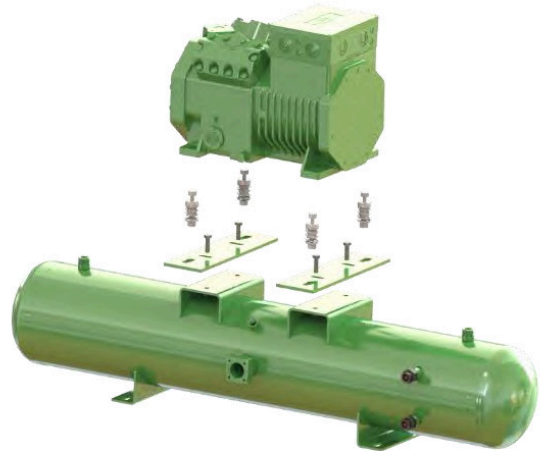
BITZER Horizontal Receivers ("BH") can be fitted with receiver mounting kits for use with our semi-hermetic reciprocating compressors. Please contact our application engineering department for assistance with sizing and selection.

The mounting kit includes mounting plate, front spring mounting kit, back spring mounting kit, and hardware. See Compressor operating manual KB-104 for more information on the spring mounting kits.

Compressor Series	Model Series	Kit Number	Fits Top Bracket "H" for			
			BH0636 ¹	BH0842 ¹	BH1048 ¹	BH1260 ¹
			6 NPS	8 NPS	10 NPS	12 NPS
CE1	2KES-05 .. 2FES-3	P000000599	✓			
CE2	2EES-2 .. 2CES-4	P000000600	✓			
CE3	4FES-3 .. 4CES-9	P000000605	✓	✓		
CE4	4VE(S)-6 .. 4NE(S)-20	P000000606		✓		
CE4	4VE(S)-6 .. 4NE(S)-20	P000000607			✓	✓
BE5	4JE .. 4GE23, 4FE25	P000000608			✓	✓
BE5	4GE30, 4FE28, 4FE35	P000000611			✓	✓
BE6	6JE-22 .. 6FE-50	P000000611				✓

Table 14

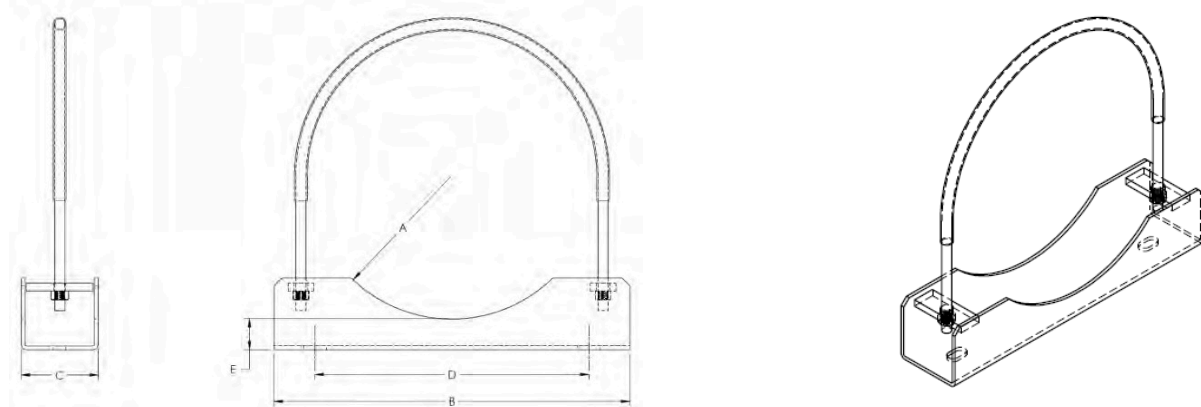
¹ Minimum lengths of 36", 42", 48" and 60" respectively



U-BOLT AND SADDLE MOUNTING KITS

Nom Dia	Kit Part Number	A in	B in	C in	D in	E in
6	405-0013-01	3.34	8.5	3.75	6	1.5
8	405-0014-01	4.34	10.5	3.75	8	1.5
10	405-0015-01	5.41	13.38	3.75	10.13	1.5
12	405-0012-01	6.41	15.38	3.75	12.13	1.5
14	405-0019-01	7.03	17.38	3.75	13.38	1.5
16	405-0020-01	8.03	19.38	3.75	15.38	1.5
18	405-0017-01	9.03	21.38	3.75	17.38	1.5
20	405-0018-01	10.03	24.13	3.75	19.38	1.5

Table 15



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