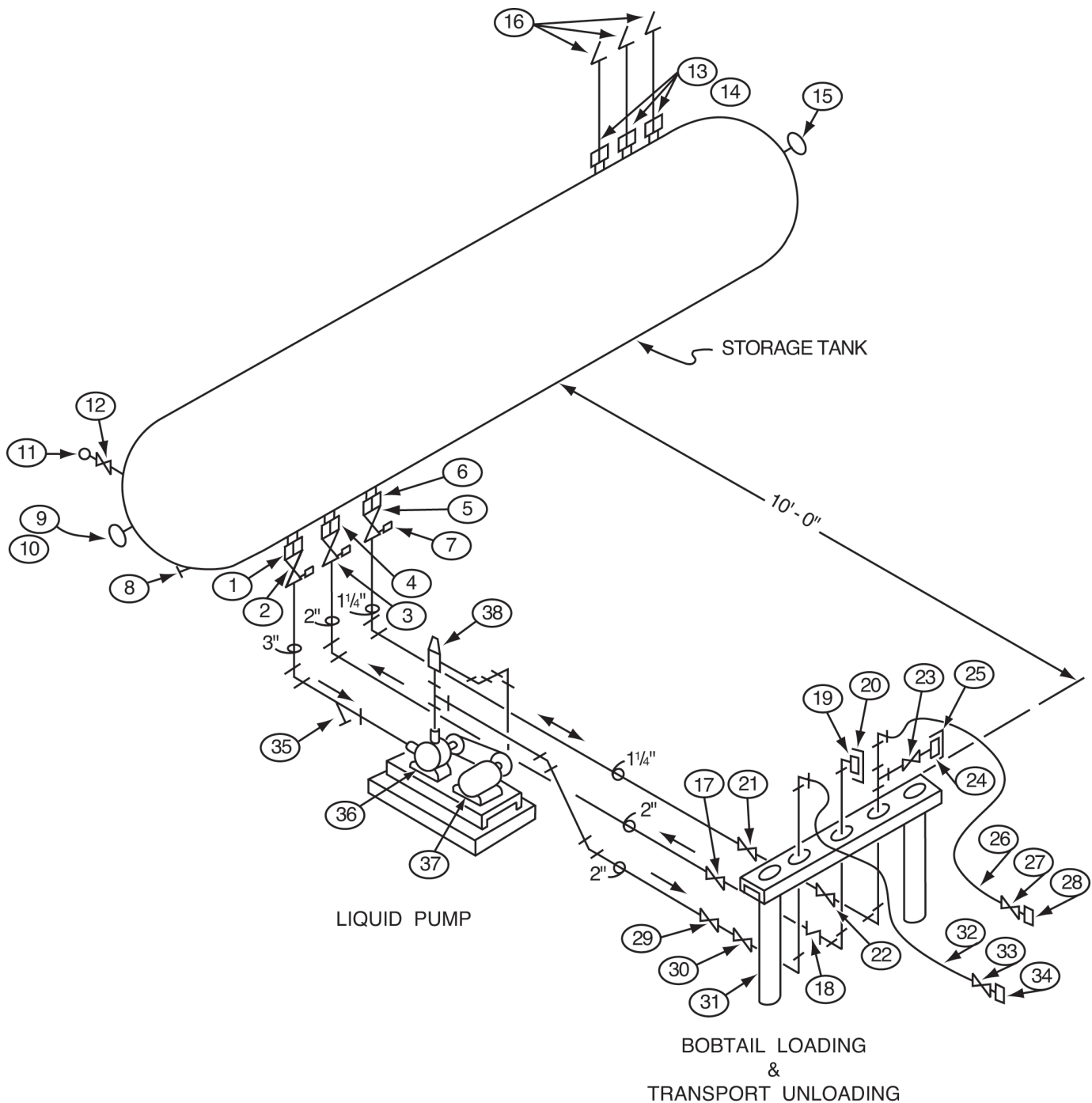


Single Bulkhead



NOTE:

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Bulk Plant Layout - Bill of Materials

Single Bulkhead

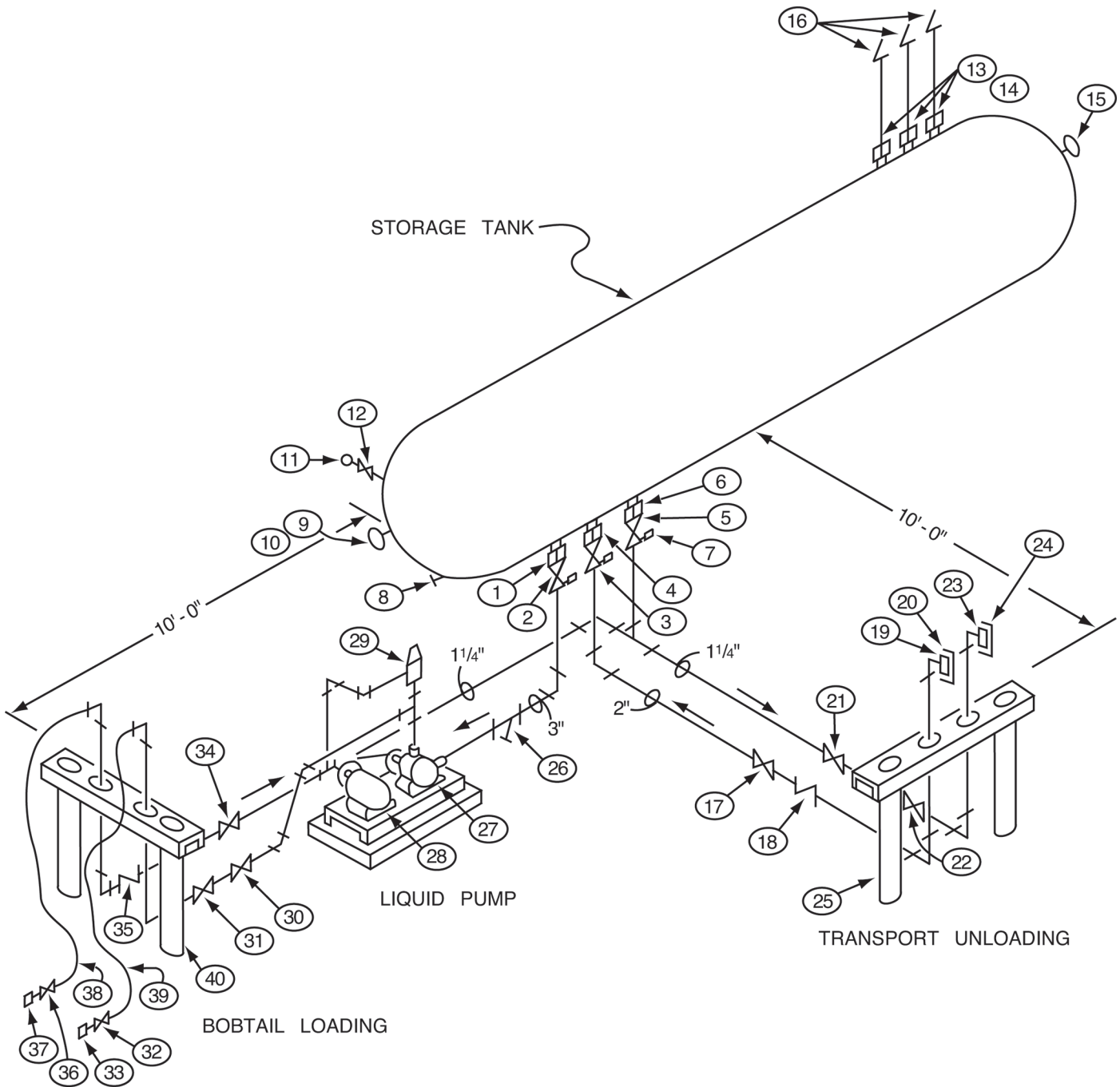
Part #	Ref. No.	Description	Quantity
TANK TRIM			
A3213	1	Rego 3" Internal Valve	1
A3213RA	1	Rego Pneumatic Actuator	1
A7517AP	2	Rego 3" Globe Valve	1
A7513AP	3	Rego 2" Globe Valve	1
A3212	4	Rego 2" Internal Valve	1
A3212RA	4	Rego Pneumatic Actuator	1
A7509BP	5	Rego 1-1/4" Globe Valve	1
A3209	6	Rego 1-1/4" Internal Valve	1
A3209 PA	5	Rego Pneumatic Actuator	1
3127U	7	Rego Hyd. Relief Valve	3
1750-00115	8	Thermometer	1
C6342-11-108	9	Magnetel Gauge	1
22-29	10	Flange Mounting Adapter	1
J5563	11	0-300 Pressure Gauge	1
A2805C	12	Rego Combo Valve	1
7534G	13	Rego Relief Valves	3
7534-20	14	Rego Adapter Pipeaway	3
A9095RS, A9091-18LX, A9091M	15	Rotogage	1
RVS-3	16	Relief Vent Stacks w/Weather Caps	3
BOBTAIL LOADING & TRANSPORT UPLOADING			
A7513AP	17	Rego 2" Globe Valve	1
A7616	18	Rego 2" Swing Check with Flow Indicator	1
5769H	19	Rego 3-1/4" ACME x 2" Adapter	1
A3194-90	20	Rego Cap & Chain	1
A7509BP	21	Rego 1-1/4" Globe Valve	1
A6010	22	Rego 1-1/4" ESV	1
6016RA	22	Rego Rotary Actuator	1
A7509BP	23	Rego 1-1/4" Globe Valve	1
5765F	24	Rego 1-3/4" x 1-1/4" Adapter	1
3175P	25	Rego Cap & Chain	1
E20LP2x15FT	26	1-1/4" Hose w/Couplings	15 ft.
A7509BP	27	Rego 1-1/4" Globe Valve	1
A7575L5	28	Rego Extended Type Hose Coupling	1
A7513AP	29	Rego 2" Globe Valve	1
A6016	30	Rego 2" ESV	1
6016RA	30	Rego Rotary Actuator	1
BH-10CV3-2CPLG	31	3 Port Bulkhead	1
BH-SCH80V3-2CPLG-12IN		3 Port Bulkhead (Texas Approved)	1
L3-32LP3x15FT-F	32	Smarthose 2" Hose w/Coupling	15 ft.
A7513AP	33	Rego 2" Globe Valve	1
A3195S	34	Rego Steel Hose Coupling with Screen	1
LIQUID PUMP			
STYLEC-DI-300	35	3" Strainer	1
	36	3" Pump Unit	1
	37	10 HP Motor	1
BV-200	38	Pump Bypass Valve	1

Relief Valve Stack



Part #	Description
RVS-3	3" Relief Valve Stack w/Weather Cap
RVS-4	4" Relief Valve Stack w/Weather Cap

Double Bulkhead



NOTE:

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Bulk Plant Layout - Bill of Materials

Double

Part #	Ref. No.	Description	Quantity
TANK TRIM			
A3213	1	Rego 3" Internal Valve	1
A3213RA	1	Rego Pneumatic Actuator	1
A7517AP	2	Rego 3" Globe Valve	1
A7513AP	3	Rego 2" Globe Valve	1
A3212	4	Rego 2" Internal Valve	1
A3212RA	4	Rego Pneumatic Actuator	1
A7509BP	5	Rego 1-1/4" Globe Valve	1
A3209	6	Rego 1-1/4" Internal Valve	1
A3209 PA	6	Rego Pneumatic Actuator	1
3127U	7	Rego Hyd. Relief Valve	3
1750-00115	8	Thermometer	1
C6342-11-108	9	Magnetel Gauge	1
22-29	10	Flange Mounting Adapter	1
J5563	11	0-300 Pressure Gauge	1
A2805C	12	Rego Combo Valve	1
7534G	13	Rego Relief Valves	3
7534-20	14	Rego Adapter Pipeaway	3
A9095RS, A9091-18LX, A9091M	15	Rotogage	1
11011	16	3" Weather Caps	3
BOBTAIL LOADING & TRANSPORT UPLOADING			
A7513AP	17	Rego 2" Globe Valve	1
A3186	18	Rego 2" Back Check Valve	1
5769H	19	Rego 3-1/4" ACME x 2" Adapter	1
3194-90	20	Rego Brass Cap	1
A7509BP	21	Rego 1-1/4" Globe Valve	1
A6010	22	Rego 1-1/4" ESV	1
6016RA	22	Rego Rotary Actuator	1
5765F	23	Rego 1-3/4" x 1 1/4" Adapter	1
3174-93	24	Rego Cap & Chain	1
BH-10CV2-2CPLG	25	2 Port Vertical Bulk Head w/ 2" 3M Full Couplings	1
BH-SCH80V2-2CPLG-12IN		2 Port Bulkhead (Texas Approved)	1
LIQUID PUMP			
STYLEC-DI-300	26	3" Strainer	1
	27	3" Pump Unit	1
	28	10 HP Motor	1
BV-200	29	Pump Bypass Valve	1
BOBTAIL LOADING			
A7513AP	30	Rego 2" Globe Valve	1
A6016	31	Rego 2" ESV	1
6016RA	31	Rego Rotary Actuator	1
A7513AP	32	Rego 2" Globe Valve	1
A3195S	33	Rego Steel Hose Coupling with Screen	1
A7509BP	34	Rego 1 1/4" Globe Valve	1
A6010	35	Rego 1 1/4" ESV	1
6016RA	35	Rego Rotary Actuator	1
A7509BP	36	Rego 1 1/4" Globe Valve	1
A7575L5	37	Rego Extended Type Hose Coupling	1
E20LP2x15FT	38	1 1/4" Hose w/Couplings	15 ft.
L3-32LP3x15FT-F	39	Smarthose 2" Hose w/Coupling	15 ft.
BH-10CV2-2CPLG	40	2 Port Vertical Bulk Head w/2" 3M Full Couplings	1
BH-SCH80V2-2CPLG-12IN		2 Port Bulkhead (Texas Approved)	1

Bulkhead

Standard Construction

Safety Bulkheads are designed to allow the safe transfer of propane at the bobtail loading and transport unloading points in a bulk plant. The bulkhead is Rigid All-Steel construction. It is designed to protect the piping systems against truck pull-away with hose still connected.



Standard Construction

These bulkheads are made of 10" channel iron legs and top rail. When anchored in a concrete block (approximately 4 ft. x 4 ft.), the bulkhead becomes a sound wall of protection against most pull-aways.

Part #	Description
BH-10CV2-2CPLG	2-Port Vertical Bulk Head w/2" 3M Full Couplings
BH-10CV2-3CPLG	2-Port Vertical Bulk Head w/3" 3M Full Couplings
BH-10CV3-2CPLG	3-Port Vertical Bulk Head w/2" 3M Full Couplings
BH-10CV3-3CPLG	3-Port Vertical Bulk Head w/3" 3M Full Couplings

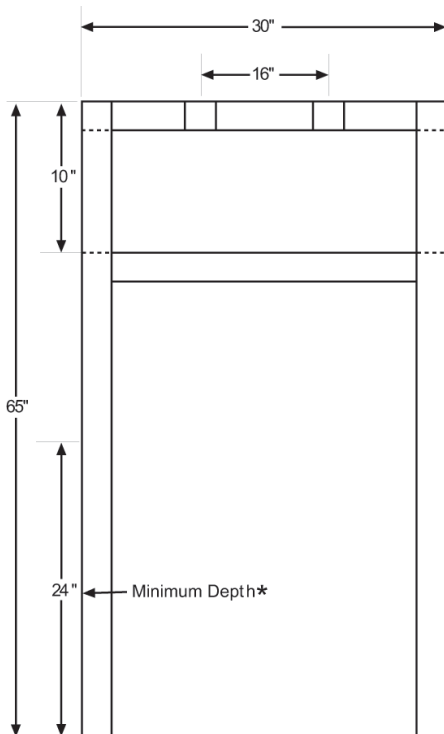
Bulkhead Piping Kit

BH-10CV2-PKG



Kit Includes	Description	Qty
EL90-200-2M	FS ELBOW 90 DEGREE 2 INCH AT 2000#	2
REL90-200X114	2" M.NPT X 12" EXTRA HEAVY SCH 80 BLACK PIPE NIPPLE	2
N-200X12	2" M.NPT X 12" EXTRA HEAVY SCH 80 BLACK PIPE NIPPLE	4

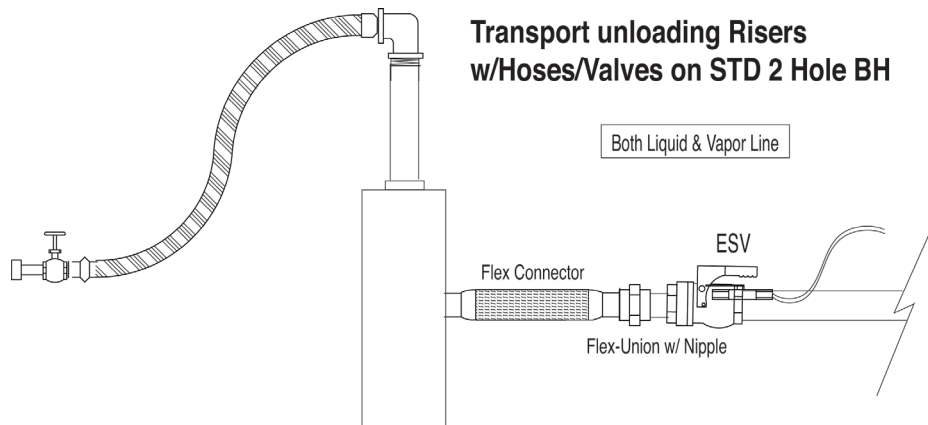
Note: Piping kit for HBH-10CV2-2CPLG bulkhead only



Check with local codes for proper above grade height.

Bulkheads shall be anchored in reinforced concrete to prevent displacement of the bulkhead.

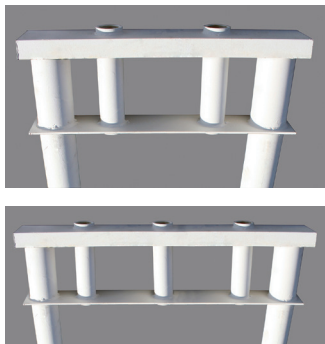
Reinforcement rod not supplied.



Bulkhead

12" Coupling Construction - Texas Approved

Safety Bulkheads are designed to allow the safe transfer of propane at the bobtail loading and transport unloading points in a bulk plant. The bulkhead is Rigid All-Steel construction. It is designed to protect the piping systems against truck pull-away with hose still connected.



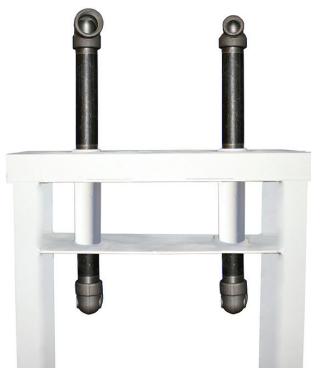
12" Coupling

These bulkheads are built to comply with the Railroad Commission of Texas regulations for bulkhead design; they incorporate 4" schedule 80 pipe legs with a channel iron top rail and 12" long full couplings welded between the top rail and kick plate.

Part #	Description
BH-SCH80V2-2CPLG-12IN	2-Port Vertical Bulk Head w/2" 3M Full Couplings
BH-SCH80V2-3CPLG-12IN	2-Port Vertical Bulk Head w/3" 3M Full Couplings
BH-SCH80V3-2CPLG-12IN	3-Port Vertical Bulk Head w/2" 3M Full Couplings
BH-SCH80V3-3CPLG-12IN	3-Port Vertical Bulk Head w/3" 3M Full Couplings

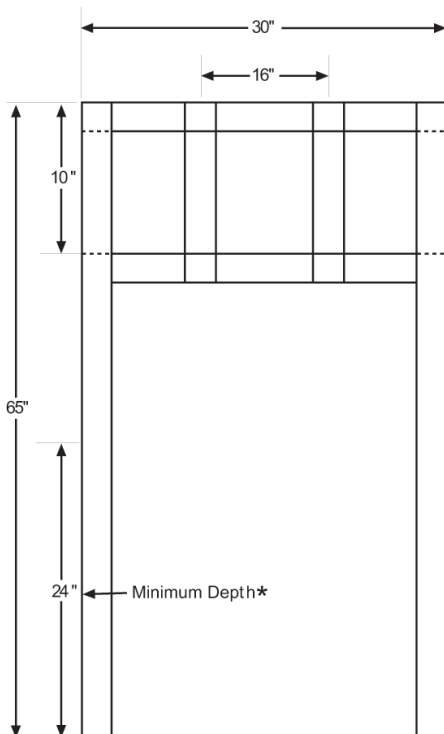
Bulkhead Piping Kit - Texas Approved

BH-SCH80V2-FTG-PKG



Kit Includes	Description	Qty
EL90-200-2M	FS ELBOW 90 DEGREE 2 INCH AT 2000#	2
REL90-200X114	2" X 1-1/4" REDUCING 90 DEGREE ELBOW 3000#	2
N-200X12	2" M.NPT X 12" EXTRA HEAVY SCH 80 BLACK PIPE NIPPLE	2
N-200X4	EXTRA HEAVY WELDED BLACK PIPE NIPPLE 2 X 4	2

Note: Piping kit for BH-SCH80V2-2CPLG-12IN bulkhead only

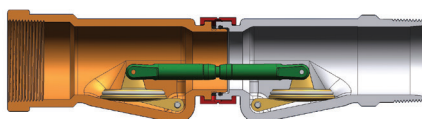


Check with local codes for proper above grade height.

Bulkheads shall be anchored in reinforced concrete to prevent displacement of the bulkhead.

Reinforcement rod not supplied.

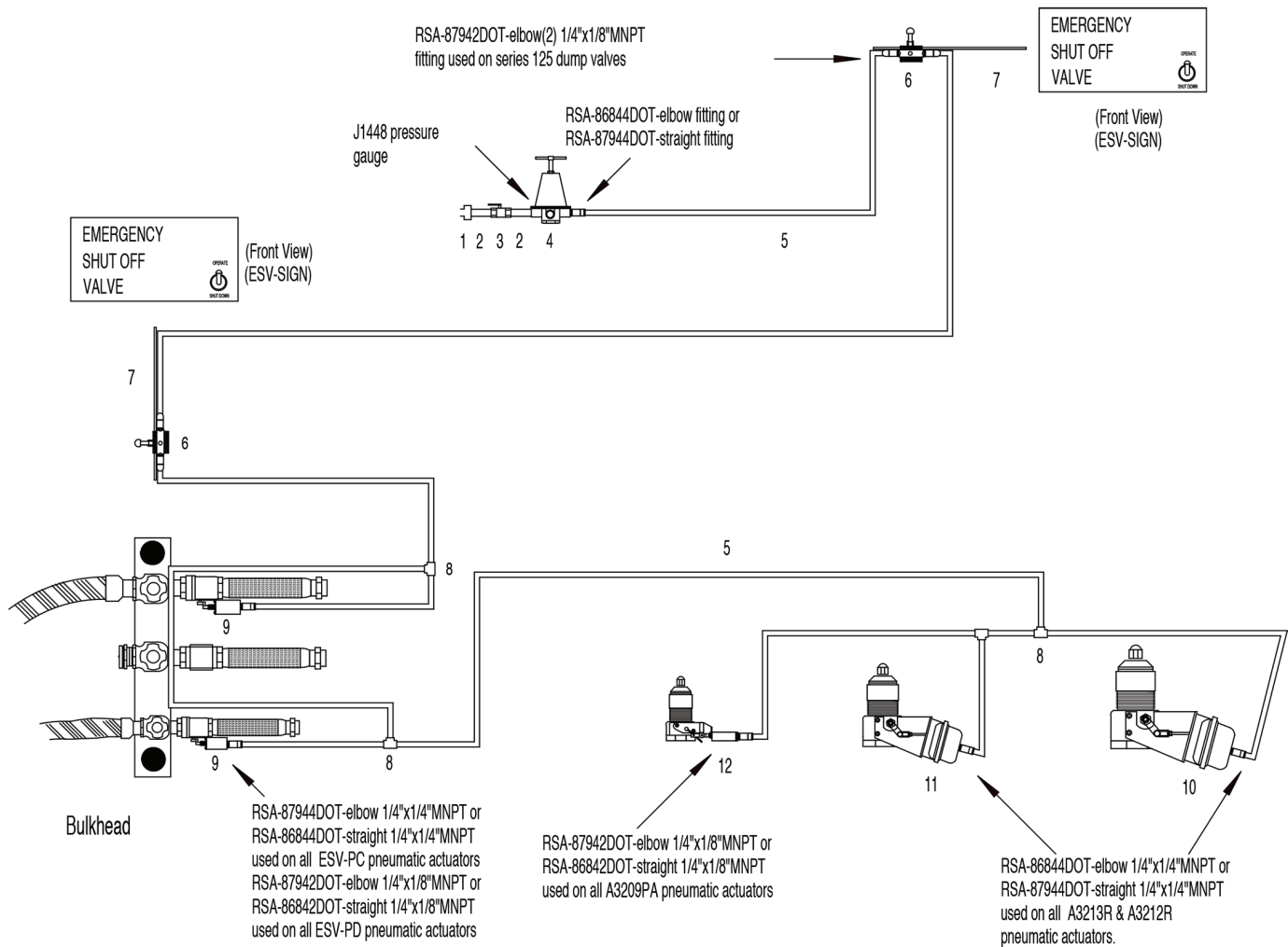
Smart-Hose Break-Away Coupler



For more information see Smart-Hose in the Hose Section

Part #	Size	Ends	Length	Application
L3-32LP3-FBA	2"	FNPT X FNPT	12"	LPG
L3-32LP3-MBA	2"	MNPT X MNPT	12"	LPG
A80-016-95-0012-0-00-00	2"	FNPT X MNPT	12"	
A80-024-97-0018-0-00-00	3"	MNPT X MNPT	18"	LPG/NH3
A80-024-97-0018-0-1121-1121	3"	FNPT X FNPT	18"	LPG/NH3
L3-32NH3-FBA	2"	FNPT X FNPT	12"	NH3
L3-32NH3-MBA	2"	MNPT X MNPT	12"	NH3

Bulk Plant Pneumatic Layout



Note:
Pneumatic tubing should be routed and affixed to risors to provide pull-away protection

Note:
If Nitrogen is used to power pneumatic actuators, replace 597FD (#4) with approved regulator.

Note:
Set Pressure at 25-30psi

Note:
Check Local Regulations Before Proceeding with Pneumatic Installation

Note:
Layout Not Drawn to Scale

Part #	Ref. No.	Description
PL-631-54	1	1/4" M x 1/4" F with 54 orifice
N014XC	2	1/4" x Close Nipple
T-100-014	3	1/4" Ball Valve
597FD	4*	Rego Adjustable Regulator
RSA-PTSAE	5	1/4" Pneumatic Tubing
125V-3-10-20	6	Dump Valve
ESV-SIGN	7	ESV Aluminum Sign with Hole for Toggle
RSA-86444DOT	8	1/4" Tubing Tee
ESV-PC	9**	Pneumatic Actuator Open/Close
ESV-PD	9**	Pneumatic Actuator Close
A3213R	10**	Rego Pneumatic Actuator
A3212R	11**	Rego Pneumatic Actuator
A3209PA	12**	Rego Pneumatic Actuator

*Can be substituted for air or inert gas regulator

**See drawing for information on Straight or Elbow fittings

Pneumatic Fittings



Part #	Description
125V-3-10-21	Discharge Valve with Base



Part #	Description
125V-3-10-20	Pneumatic Toggle Valve, 3-way, with Locknut



Part #	Description
RSA-M3820602	Lexair 3-way actuated valve



Part #	Description
RSA-57444DOT	1/4" Tube x 1/4" Tube x 1/4" Female NPT Tee



Part #	Description
ESV-SIGN	Aluminum "Emergency Shutoff Valve" Sign 5-1/2" x 9-1/2" Red on White (valve not included)



Part #	Description
ESV-SIGN-R	Metal "Emergency Shutoff Valve" Sign 29" x 15-1/2" Red on White (valve not included)



Part #	Description
RSA-PTSAE	1/4" Pneumatic Tube 100 ft Roll



Part #	Description
RSA-86244DOT	1/4" Tube Union



Part #	Description
RSA-87242DOT	1/4" Tube x 1/4" Tube x 1/8" NPT Tee



Part #	Description
RSA-86444DOT	1/4" Tubing Tee



Part #	Description
RSA-87244DOT	1/4" Tube x 1/4" Tube x 1/8" NPT Tee



Part #	Description
RSA-87942DOT	1/4" Tube x 1/8" NPT Swivel Elbow



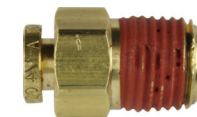
Part #	Description
RSA-86544DOT	1/4" x 1/4" Tube Elbow



Part #	Description
RSA-87944DOT	1/4" Tube x 1/4" NPT Swivel Elbow



Part #	Description
RSA-86842DOT	1/4" Tube x 1/8" NPT Straight



Part #	Description
RSA-86844DOT	1/4" Tube x 1/4" NPT Straight

SQE Super Quick Exhaust Valve



The universal design of this valve allows it to be used as a SUPER QUICK EXHAUST VALVE or a SHUTTLE VALVE. With the molded shuttle design, the Super Quick Exhaust valves have an operating range as low as 1 psi to 150 psi.

SQE: NFPA limits the pneumatic supply line size to a maximum of 3/8" OD. To reduce closing time of internal valves and ESV's, a SQE valve can be installed in lengthy tubing runs to reduce the closure times.

SHUTTLE VALVE: The shuttle valve can provide for control of internal valves with individual bulkhead ESV's control from multiple bulkhead control station locations without hindering other operators.

Specifications Required
Media: Compressed Air (Consult factory for others)
Operating Speeds: Up to 600 CPM
Materials: Zinc & Aluminum Die Cast, Zinc Plated Steel Fasteners, Buna N, Polyurethane
Temperature Range: -25°F to 180°F (-31.7°C to 82.2°C)

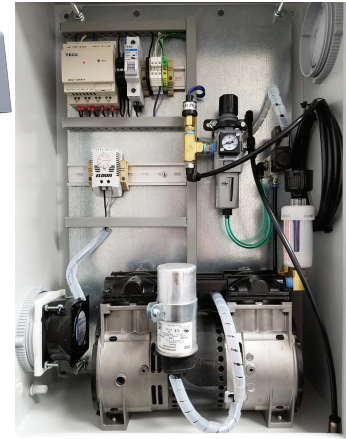
Part #	Port Size		
	In	Out	Exhaust
SQE1	1/8"	1/8"	1/4"
SQE2	1/4"	1/4"	1/4"

Self-Contained Compressor System

Parafour Eco-Air Series



P4-Eco-Air



P4-Eco-Air-Lite

The P4-ECO-Air Series, Self-Contained Compressor Systems, offer Autogas station operators, bulk plant and distribution systems a unique and reliable way to operate pneumatic controls, with little or no maintenance, and no ongoing cost of consumables (either compressed nitrogen, or tank pressure propane vapor).

- Operating Temperature Range = -45°C to 55°C
- Operating Voltage = 120v 60 Hz or 220v 50 Hz (Specify when ordering.)
- Circuit Protection = 10 amp supplemental breaker (requires minimum 10 amp primary service breaker)
- Enclosure = NEMA 4X / 12 / 13, Poly enclosure, metal enclosure is optional
- Output Pressure range = 30-60 psi (2-4.5 bar) field adjustable
- Reservoir Size = Eco-AIR unit is 1 US gallon (7.5 litres), ECO Air-Lite has no reservoir
- Reservoir storage pressure = 80-120 PSI (5.5 – 8.5 bar)
- Min pressure / recharge point = 40 psi
- Compressor Maintenance = NONE
- Regulated Outlet Pressure = 0-100 psi gauge

Part #	Actuators Controlled	Storage Reservoir	Water Drain	Indicator Lamps	External Alarm
P4-Eco-Air	21	Yes	Automatic	1-Power, 1-Fault	Yes - Visual and/or Audible
P4-Eco-Air-Lite	3	No	Manual	1-Power	No