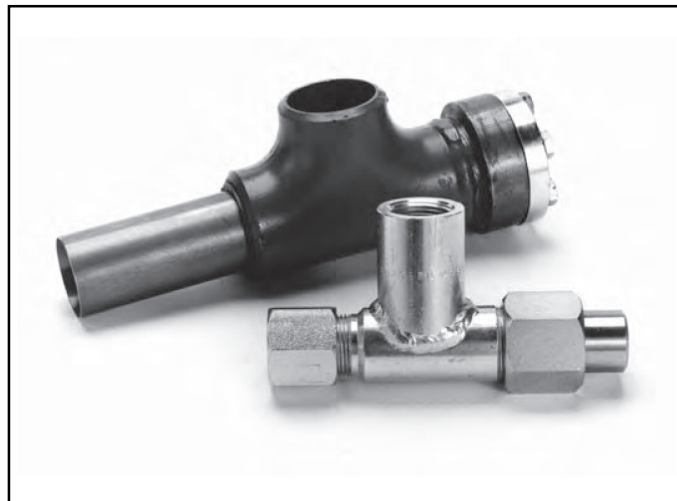


## For Ammonia, R22, 134A, and Halocarbon Refrigerants

### Features

- No moving parts
- All steel construction
- Brass construction available for halocarbons
- Aids high efficiency heat transfer
- Reduces refrigerant charge
- Minimum maintenance
- Interchangeable nozzles
- 5TR to 300TR (Ammonia)
- 1TR to 100TR (Halocarbons)
- DWP—400 PSI



### Description

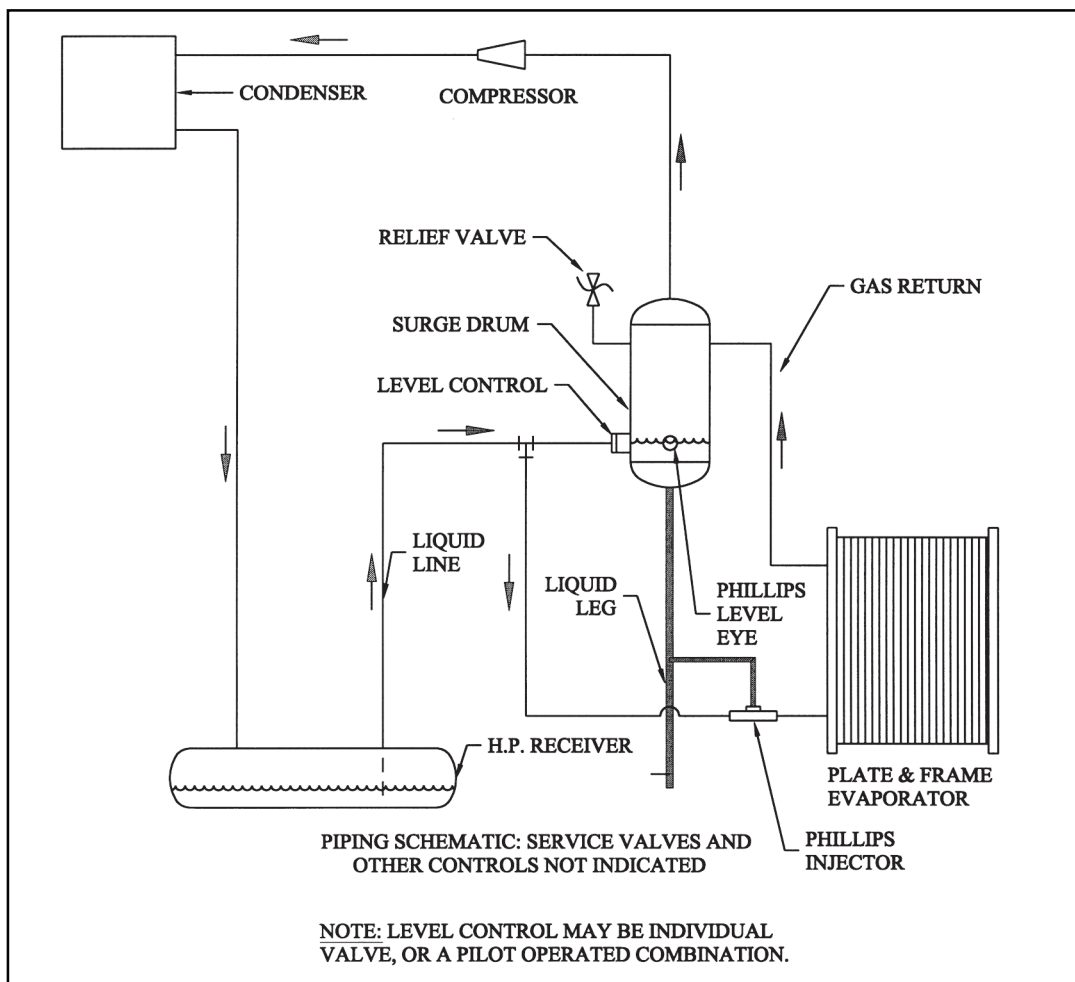
The Phillips® liquid refrigerant injector is an uniquely efficient metering device with no moving parts. It complements the high efficiency heat transfer of plate and frame applications by ensuring a thoroughly wetted heat transfer surface.

The Phillips injector may be applied to a “fixed” charge system or a “central” type system. Its application with a plate and frame unit allows for a smaller surge drum, thereby reducing operating cost, first cost, and maintenance cost. The cost savings in a “fixed” charge system are particularly advantageous because a liquid level control assembly is not required. The liquid level control assembly required for a “central system” installation may consist of either a Phillips float valve or a float switch with a solenoid valve. Multiple injectors may be employed to parallel plate and frame applications.

### Design Function

The Phillips injector meters the liquid refrigerant from the system through the nozzle and is mixed with liquid refrigerant from the surge drum. This mix is introduced through the throat at a recirculated rate into the plates for efficient operation.

## Injector, Level Control, and Surge Drum Sizing Central System R717 Plate & Frame Typical Application



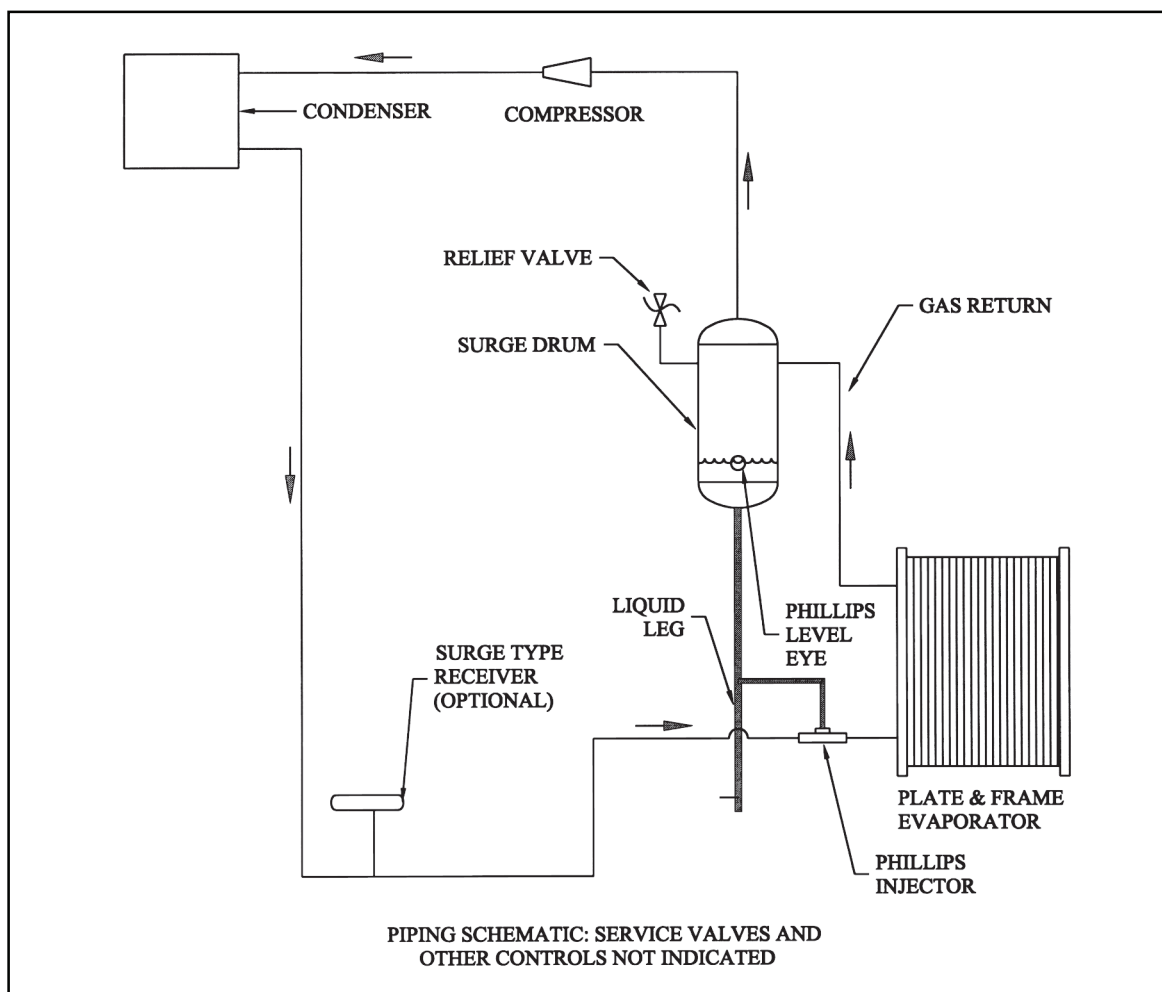
PIPING SCHEMATIC: SERVICE VALVES AND OTHER CONTROLS NOT INDICATED  
NOTE: LEVEL CONTROL MAY BE AN INDIVIDUAL VALVE OR A PILOT OPERATED VALVE COMBINATION.

## CENTRAL PLANT APPLICATION

R717 (TONS)	PHILLIPS INJECTOR	NOM INJ. SIZE	PHILLIPS LEVEL CONTROL	VERTICAL SURGE DRUM SUCTION TEMP. (°F)			LIQ. LEG (IN.)	GAS RETURN °F SUCTION (IN.)		
				+32	+10	-10		+32	+10	-10
25	2075WCB	3/4"	300H	10" X 42"	12" X 42"	12" X 42"	2-1/2	3	3	3-1/2
50	2100WCB	1"	301J	14" X 42"	16" X 42"	18" X 42"	3	4	4	5
75	2125WA	1-1/4"	301K	18" X 36"	20" X 40"	20" X 40"	3-1/2	5	5	6
125	2150WA	1-1/2"	300H & 701JRS	24" X 48"	24" X 48"	30" X 42"	4	5	6	6
200	2200WA	2"	300H & 701S	30" X 54"	30" X 54"	36" X 54"	5	6	8	8
300	2250WA	2-1/2"	300H & 701S	36" X 60"	36" X 60"	42" X 54"	6	8	8	10

Note: This data represents typical application with warm, high pressure liquid. Consult factory for specific application and halocarbon applications. Multiple injectors can be used for larger capacities.

## Injector and Surge Drum Sizing Fixed Charge System R717 Plate & Frame Typical Application



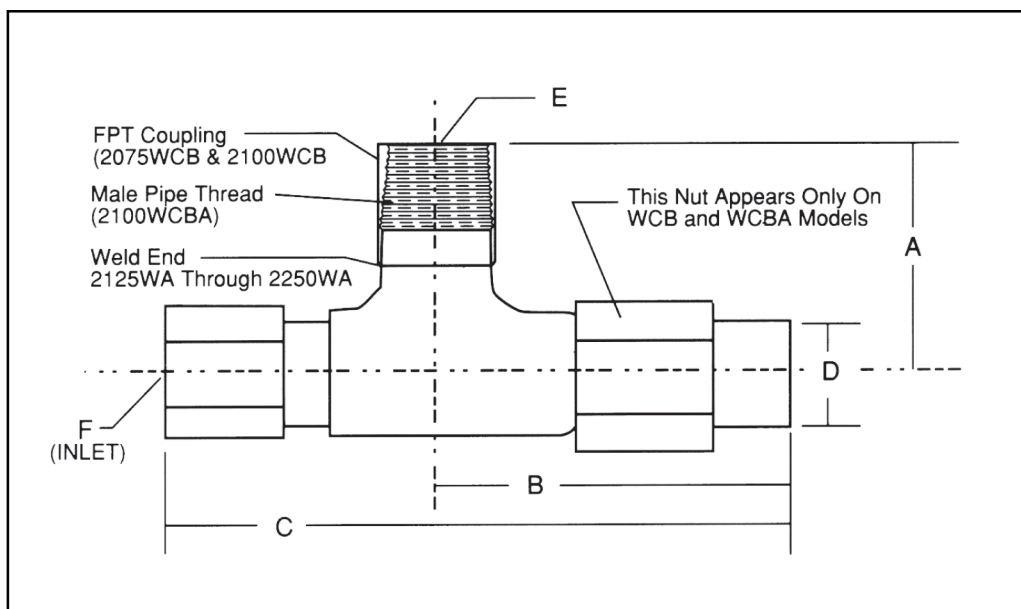
PIPING SCHEMATIC: SERVICE VALVES AND OTHER CONTROLS NOT INDICATED  
NOTE: LEVEL CONTROL MAY BE AN INDIVIDUAL VALVE OR A PILOT OPERATED VALVE COMBINATION.

### FIXED CHARGE APPLICATION

R717 (TONS)	PHILLIPS INJECTOR	NOM INJECT. SIZE	VERTICAL SURGE DRUM SUCTION TEMP. (°F)			LIQ. LEG (IN.)	GAS RETURN °F SUCTION (IN.)		
			+32	+10	-10		+32	+10	-10
25	2075WCB	3/4"	10" X 42"	12" X 42"	12" X 42"	2-1/2	3	3	3-1/2
50	2100WCB	1"	14" X 42"	16" X 42"	18" X 42"	3	4	4	5
75	2125WA	1-1/4"	18" X 36"	20" X 40"	20" X 40"	3-1/2	5	5	6
125	2150WA	1-1/2"	24" X 48"	24" X 48"	30" X 42"	4	5	6	6
200	2200WA	2"	30" X 54"	30" X 54"	36" X 54"	5	6	8	8
300	2250WA	2-1/2"	36" X 60"	36" X 60"	42" X 54"	6	8	8	10

Note: This data represents typical application with warm, high pressure liquid. Consult factory for specific application and halocarbon applications. Multiple injectors can be used for larger capacities.

## INJECTOR SIZES & DIMENSIONS



INJECTOR MODEL	A	B	C	D	E	F		SHIPPING WT. (LBS.)
	(IN.)	(IN.)	(IN.)	(IN.)	(IN.)	(IN.)	ODC (IN.)	
2075WCB	2.13	3.63	6.38	0.99	3/4 (FPT)	3/8, 1/2	5/8	2.15
2100WCB	2.69	4.00	7.25	1.25	1 (FPT)	3/8, 1/2	5/8	3.25
2100WCBA	2.69	4.00	7.25	1.25	1 (MPT)	3/8, 1/2	5/8	3.00
2125WA	1.88	3.25	5.87	1.25	1-1/4	1/2	5/8	4.15
2150WA	2.25	3.94	7.38	1.44	1-1/2	3/4	7/8	8.20
2200WA	2.50	6.37	11.75	1.88	2	3/4	1-1/8	11.38
2250WA	3.00	6.31	12.50	2.31	2-1/2	1	1-3/8	13.20

### H. A. Phillips & Co.

770 Enterprise Avenue  
DeKalb, IL 60115 U.S.A.  
Phone: (630) 377-0050  
Fax: (630) 377-2706

