Vertical Separator

Two & Three Phase / Low Pressure

APPLICATION - Two phase separators are utilized to separate the gas from the liquid in a wellstream. This allows liquid free gas to be diverted to gas sales and/or to be utilized as fuel. Relatively gas free oil is then dumped to storage or to a treating system for removal of water.

TWO PHASE - The wellstream enters the separator and immediately strikes the inlet deflector. This diverts the liquid and gas around in a circular pattern which tends to "throw" the heavier liquids to the shell of the separator where it travels downward to the liquid section.

The gas expands and starts to travel upward at a low velocity which allows heavier liquids to fall out. After adequate retention time, the gas goes through the wire mesh mist extractor for final scrubbing of the gas.

The liquid section is sized to hold the liquid long enough for a maximum portion of the gas in solution to break out and travel up through the gas section.

As liquid builds up in the bottom sections of the separator it lifts a float which, through linkage, dumps the fluid by means of a mechanical dump valve. A baffle protects the float and reduces liquid turbulence.

THREE PHASE - LOW PRESSURE APPLICATION - Operation is essentially the same as the two phase except that the separator has an internal inlet flume which carries the liquid down into the setting section. The three phase also has a larger liquid section allowing more retention time for the oil and water to separate.

At the oil/water interface there is a pneumatic displacement type level control which actuates the water dump valve. The oil which rises is then dumped by a mechanical float operated oil dump valve.

The capacity is a function of the gravity difference in the oil and water, and retention time. Oil and water must be present as free liquids. The three phase separator will not "break" an emulsified liquid stream.

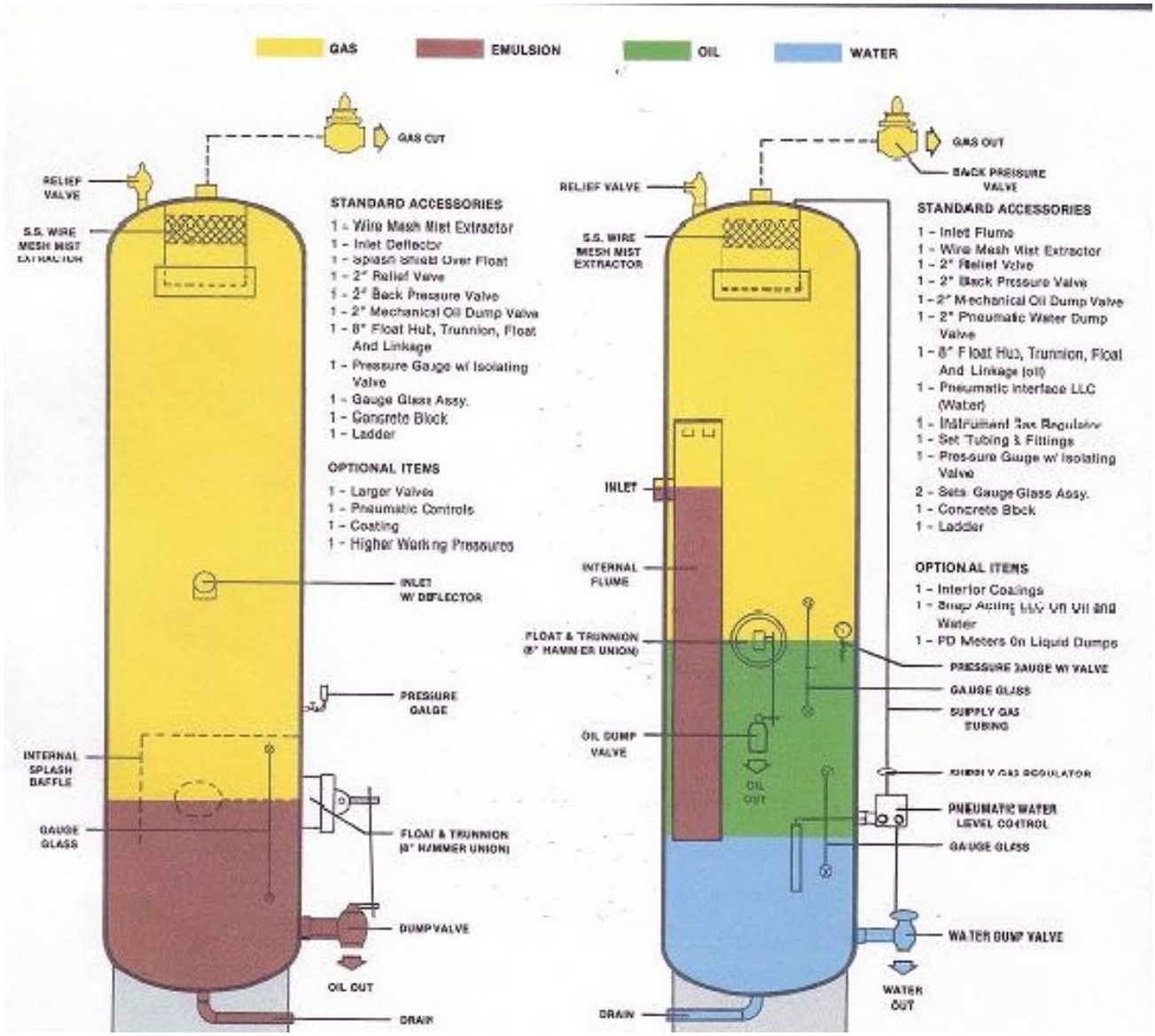
Two Phase

SIZE S-S	INLET & GAS OUT CONN.	LIQUID OUT CONN.	STD. LIQUID & GAS Valve Size	NOMINAL CAPACITIES FAS LIQUID B/D	MMSCF/D 50 PSIG	MMSCF/D 100 PSIG
24" x 10'	3"	3"	2"	600	2.3	3.1
30" x 10'	3"	3"	2"	1400	4.2	5.7
36" x 10'	3"	3"	2"	2700	6.1	8.2

Three Phase

SIZE	INLET & GAS OUT CONN.	LIQUID OUT CONN.	STD. VALVE SIZE	NOMINAL CAPACITIES GAS LIQUID B/D	MMSCF/D 50 PSIG	MMSCF/D 100 PSIG	APPX. WT. LB.
24" x 10'	3"	2"	2"	700	1.9	2.8	850
30" x 10'	3"	2"	2"	1100	3.8	5.3	1100
36" x 10'	3"	2"	2"	1800	5.0	7.1	1300

Liquid capacities are based on 45 API liquid at 1 minute retention time - 2-phase (3 minute retention - 3 phase) with an even 24 hour flow rate. Allowance must be made for slugging, gravity differences, and valves and lines sized for operating pressure differential.



2-PHASE STANDARD ACCESSORIES

3-PHASE STANDARD ACCESSORIES

1 - Wire Mesh Mist Extractor
1 - Inlet Deflector
1 - Splash Shield Over Float
1 - 2" Relief Valve
1 - 2" Back Pressure Valve
1 - 2" Mechanical Oil Dump Valve
1 - 8" Float Hub, Trunion, Float & Linkage
1 - Pressure Gauge w/Isolating Valve
1 - Gauge Glass Assembly
1 - Concrete Block
1 - Ladder

OPTIONAL ITEMS
1 - Larger Valves
1 - Pneumatic Controls
1 - Interior Coating
1 - Higher Working Pressure

1 - Inlet Flume
1 - Wire Mesh Mist Extractor
1 - 2" Relief Valve
1 - 2" Back Pressure Valve
1 - 2" Mechanical Oil Dump Valve
1 - 2" Pneumatic Water Dump Valve
1 - 8" Float Hub, Trunion, Float & Linkage (oil)
1 - Pneumatic Interface LLC (Water)
1 - Pressure Gauge w/Isolating Valve
1 - Instrument Gas Regulator
1 - Set Tubing & Fittings
1 - Pressure Gauge w/Isolating Valve
1 - Sets Gauge Glass Assembly
1 - Concrete Block
1 - Ladder

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1 - Interior Coating
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