



Black, Sivalls & Bryson  
(Canada) Limited

# Separators



Horizontal and Vertical  
Oil & Gas Separators

**BS&B standard and custom-engineered separators have exclusive design and operational features which provide maximum efficiency throughout a long service life.**

### **Horizontal Separators**

BS&B designs horizontal separators to maximize the separation of the fluids and gases in the well stream. By engineering the internals to match the give ratio's of oil, gas, water and condensate, BS&B can customize each system to the client's anticipated production. Many of the internals used by BS&B are based on decades of experience.

Some of these design features are:

- Dish deflector inlets.
- Cyclone inlets for initial separation.
- Anti-turbulence gas straightening vanes.
- Baffles to prevent gas from re-entering the liquid stream.
- Mist extractors.
- Liquid level controls that allow time for natural separation.
- Anti-vortex liquid draw-off, to prevent remixing of oil and gas.

BS&B horizontal separators are available in high and low pressure designs and for two and three phase separation. Test separators can also be designed to client specifications.

### **Vertical Separators**

BS&B vertical separators achieve separation through the use of gravitational and centrifugal force. Using the following features assures high quality separation:

- A baffle above liquid section calms the liquid surface allowing for proper operation of the dump valve float and removal of liquids.
- A large liquid section assures proper retention time.
- Wire mesh mist extractors give maximum separation performance.

BS&B separators are available in several models with design pressures to 10,000 psig.

### **Additional Separator Designs**

Spherical separators are available upon request where space is at a premium.

Foamy oil separators are also offered with five design features for production of clean gas and gas free liquid from frothy oil.



**Table - 1 BS&B Standard Vertical Separators**

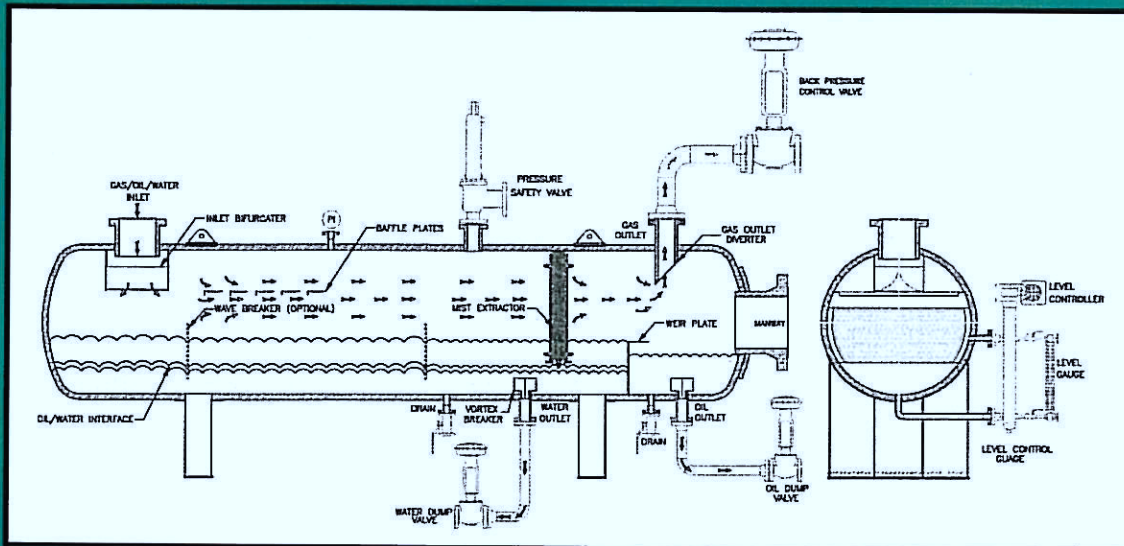
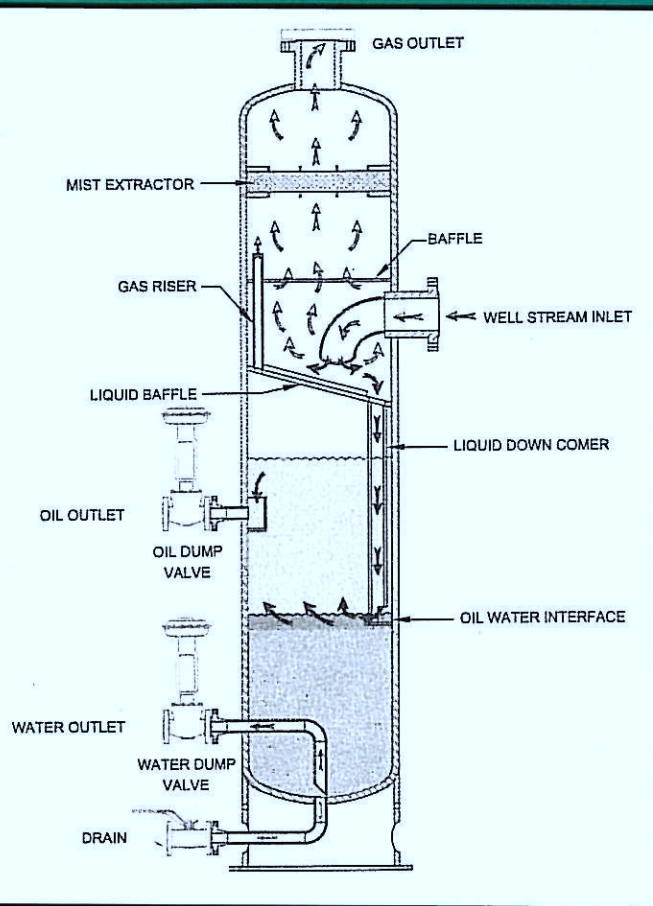
Separator Model	Nominal Capacity*			MAWP**
	Gas, MMSCFD	Oil, bbl/d	Water, bb/d	psig
VSS-16-150	2.5	55	45	270
VSS-16-300	4.0	55	45	735
VSS-16-600	5.0	55	45	1440
VSS-20-150	3.8	100	75	270
VSS-20-300	6.0	100	75	735
VSS-20-600	8.0	100	75	1440
VSS-24-150	5.5	150	100	270
VSS-24-300	8.5	150	100	735
VSS-24-600	12.0	150	100	1440
VSS-30-150	9.0	250	200	270
VSS-30-300	13.0	250	200	735
VSS-30-600	18.0	250	200	1440

\* Nominal capacities for three phase separation based on continuous and uniform flow of inlet stream at a maximum operating temperature of 100°F. Capacities may vary for two phase separation and also based on the gas properties and oil characteristics.  
 \*\* Maximum Allowable Working Pressure.

**Table - 2 BS&B Standard Vertical Separators**

Size**	Skid Size**	End Connections**		
		Inlet	Gas Outlet	Liquid Outlet
16" OD x 10'-0" s/s	7' -6" x 11' -0" LG	4"	3"	2"
20" OD x 10'-0" s/s	7' -6" x 12' -0" LG	4"	4"	2"
24" OD x 10'-0" s/s	7' -6" x 12' -0" LG	6"	4"	2"
30" OD x 10'-0" s/s	7' -6" x 13' -0" LG	6"	6"	2"

\*\* Sizes may vary based on optional items such as meter run, controls at gas outlet, skid building etc. Vessel connections mentioned above may vary based on flow and nature of inlet stream, which are to be finalized during detailed engineering.



**Table - 1 BS&B STANDARD HORIZONTAL SEPARATORS**

Separator Model	Nominal Capacity*			MAWP**
	Gas, MMSCFD	Oil, bbl/d	Water, bb/d	psig
HSS-24-150	6.0	800	350	270
HSS-24-300	10.0	800	300	735
HSS-24-600	12.0	800	300	1440
HSS-24-150	12.0	1850	950	270
HSS-24-300	25.0	1600	800	735
HSS-24-600	30.0	1600	800	1440
HSS-24-150	25.0	4500	2250	270
HSS-24-300	52.0	4000	2000	735
HSS-24-600	64.0	4000	2000	1440
HSS-24-150	45.0	10000	5000	270
HSS-24-300	80.0	9500	4250	735
HSS-24-600	100.0	9500	4000	1440

\* Nominal capacities for three phase separation based on continuous and uniform flow of inlet stream at a maximum operating temperature of 100°F. Capacities may vary for two phase separation and also based on the gas properties and oil characteristics.  
 \*\* Maximum Allowable Working Pressure

**Table - 2 BS&B Standard Horizontal Separators**

Size**	Skid Size**	End Connections**		
		Inlet	Gas Outlet	Liquid Outlet
24" OD x 10' -0" s/s	8' - 6" x 18' - 6"	6"	4"	2"
36" OD x 10' -0" s/s	9' - 6" x 18' - 6"	8"	6"	2"
48" OD x 15' -0" s/s	10' - 6" x 23' - 6"	10"	8"	3"
60" OD x 20' -0" s/s	12' - 0" x 32' - 0"	12"	8"	4"

\*\* Sizes may vary based on optional items such as a meter run, controls at gas outlet, skid building. Vessel connections mentioned above may vary based on flow and nature of inlet stream, which are to be finalized during detailed engineering.



When asking for BS&B recommendations please provide the following information:

- Oil flow rate
- Gravity
- Gas flow rate
- Gravity
- Water flow rate
- Gravity
- Operating pressure
- 2 or 3 phase separation
- Corrosion allowance

## Contact:



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