

THREE PHASE SEPARATOR

RELIABLE SEPARATION. MAXIMUM PERFORMANCE.

Efficiently separates gas, oil and water
in one compact vessel for stable operation
and higher process efficiency.



EFFICIENT SEPARATION

Effective three phase
separation (Gas, Oil, Water)



COMPACT & RELIABLE

Low carryover with internal
separation devices



BUILT TO LAST

Robust design for high reliability
and long service life



EASY MAINTENANCE

User friendly design for
inspection and upkeep



CUSTOM SOLUTION

Flexible design to meet
various process conditions



DESIGNED FOR WIDE RANGE OF APPLICATIONS



OFFSHORE & ONSHORE
PRODUCTION FACILITIES



OIL & GAS PROCESSING
PLANTS



PETROCHEMICAL
INDUSTRY



GAS CONDITIONING
SYSTEMS



ENGINEERED
FOR RELIABILITY



COMPLIANT WITH
ASME SECTION VIII DIV. 1



QUALITY ASSURANCE
& TESTED PERFORMANCE



GLOBAL STANDARD
LOCAL SUPPORT

THREE-PHASE SEPARATOR

SEPARATE - CONTROL - PROCESS.



HORIZONTAL THREE PHASE SEPARATOR

A **Three-phase Separator** is a pressure vessel designed to separate a mixed process stream into three phase - Gas, Oil and Water - using controlled flow, gravity separation, and dedicated internal component,

HOW DOES IT WORK?

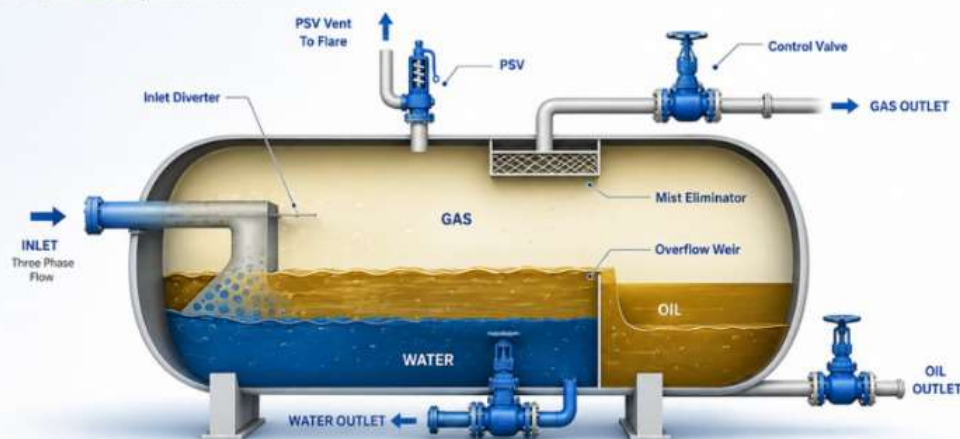
The mixed stream enters the separator and flows through internal components that reduce velocity and allow the phase to separate.

Gas rises to the top, oil forms in the middle layer, and water settles at the bottom.

Each phase is discharged through its respective outlet.

THREE-PHASE SEPARATOR

One Vessel. Three Separated Phases.



THE SOLUTION FOR YOUR PROCESS CONFIGURED FOR YOUR PROCESS



ORIENTATION

- Horizontal
- Vertical



SEPARATION

- 2-Phase
- 3-Phase



INTERNAL ARRANGEMENT

- Inlet device
- Weir
- Mist eliminator / Demister
- Vortex breaker
- Oil-water interface agreement



DESIGN CONDITION

- Design pressure
- Design temperature
- Flow capacity
- Liquid retention time



MATERIAL

- Carbon steel
- Stainless steel
- Special material upon request



DESIGN STANDARD

- ASME Section VIII
- Project-specific standard and requirement

TYPICAL APPLICATION



OIL & GAS PRODUCTION



ONSHORE FACILITY



OFFSHORE FACILITY



GAS PROCESSING



EARLY PRODUCTION FACILITY

SOLVE A CRITICAL PROCESS NEED



KEY FEATURES

- ✓ Engineered separation internals
- ✓ Optimized residence time
- ✓ Efficient gas-liquid separation
- ✓ Controlled oil-water interface
- ✓ Robust pressure vessel construction
- ✓ Project-specific customization

WHY DO YOU NEED IT?

Separating oil, gas and water before processing :

- ✓ Stable downstream processing
- ✓ Improve product quality
- ✓ Reliable flow measurement
- ✓ Reduce liquid carryover into gas system
- ✓ Controlled oil and water separation
- ✓ Safer and more efficient operation

THREE-PHASE SEPARATOR

INFORMATION AND DATA TABLE



APPLICATION

Efficient separation of primary liquid / liquid dispersions and removal of liquids from gases



INDUSTRY

Crude oil production plant

PRESSURE VESSEL INFORMATION TABLE	
Design Code	ASME Section VIII Div. 1, Codes available on request
Materials of Construction	Stainless steel, Special alloys, Carbon steel etc.
Shells	Cylindrical with construction
Heads	Flat, ellipsoidal or hemispherical
Nozzles	Straight or conical, main inlet and outlet, drain, vent and instrumentation
Connections	ANSI standards B16.47, B16.5 or other standards
Fixation	Saddles
Access to internals	Manhole to access all Internals
SEPARATOR INTERNALS DATA TABLE	
Inlet devices	Facilitate better distribution of feed into the inlet compartment
Distribution baffles	Even distribution of liquid in the separation zone
Coalescing Internals	Agglomerates the dispersed phase to a required droplet spectrum downstream of the coalescer
Foam breakers	Installed upstream of liquid gas separator to prevent foam formation
Mist eliminators	Removal of liquid entrainment from gas stream
Specialised Internals	Internals performing specific functions to further enhance separator performance.
PERFORMANCE DATA TABLE	
	Over liquid carryover will not exceed 0.1 USG/MMSCF
	The water content of hydrocarbon outlet stream 0.2% v/v
	The hydrocarbon liquid content 2000 mg/L