

SEPARATION TECHNOLOGIES

&

DEVICES For

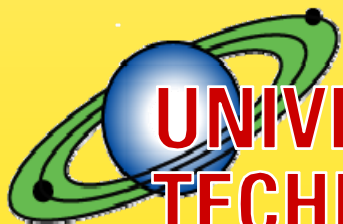
Global Industries

Spiral Speed Separators

IMAGINATION IS THE LIMIT

Patent Pending

Only Offered by UTC



**UNIVERSAL
TECHNOLOGIES**

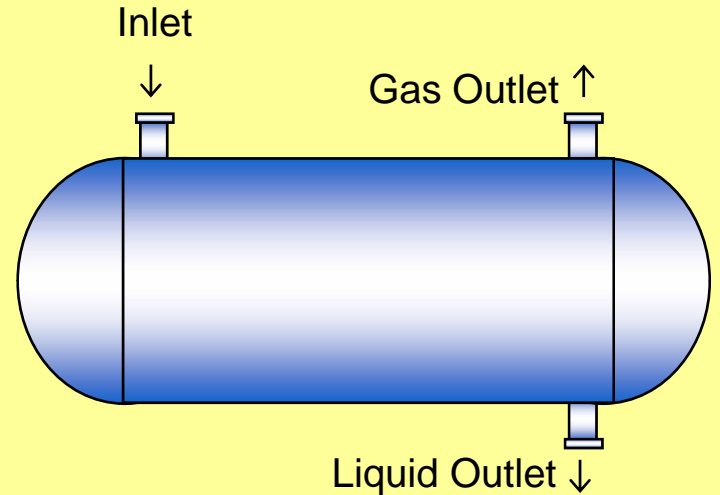
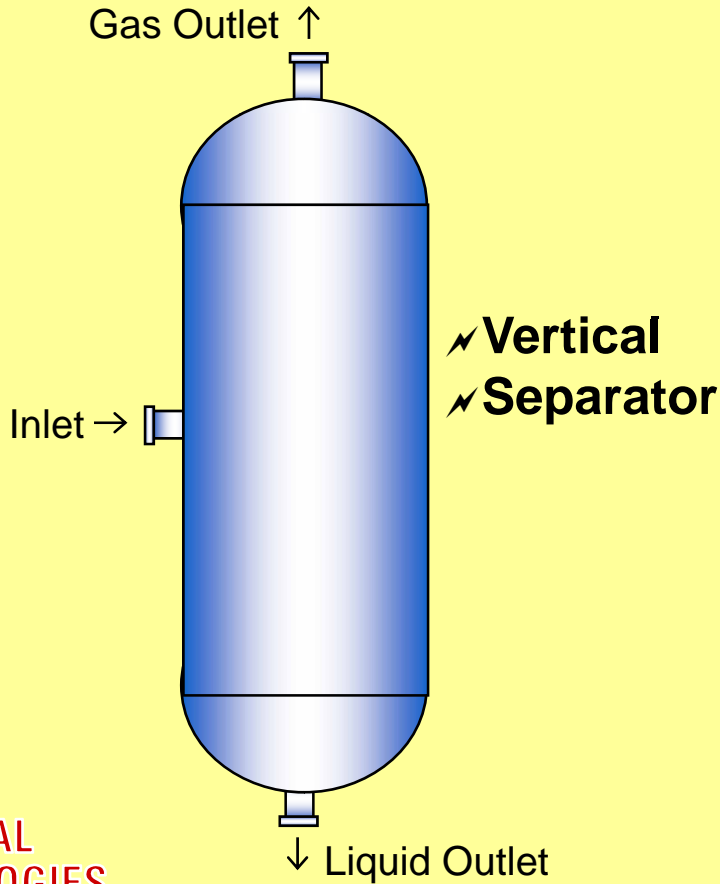


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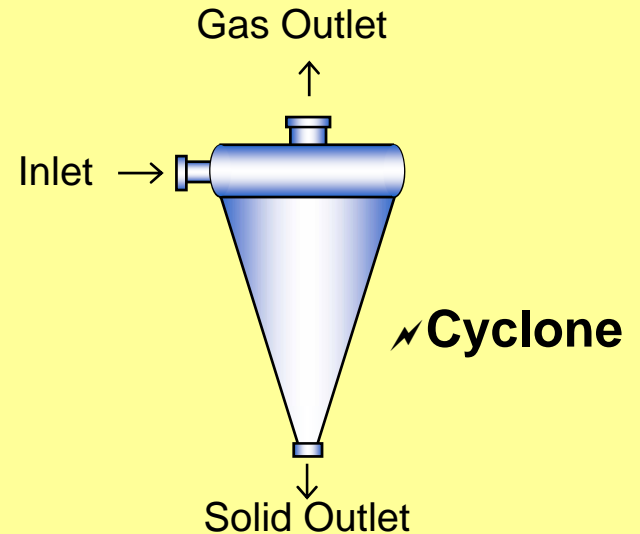
SSS

Universal Technologies Corporation Spiral Speed Separator

✓ Conventional Separation
Equipment



✓ Horizontal Separator

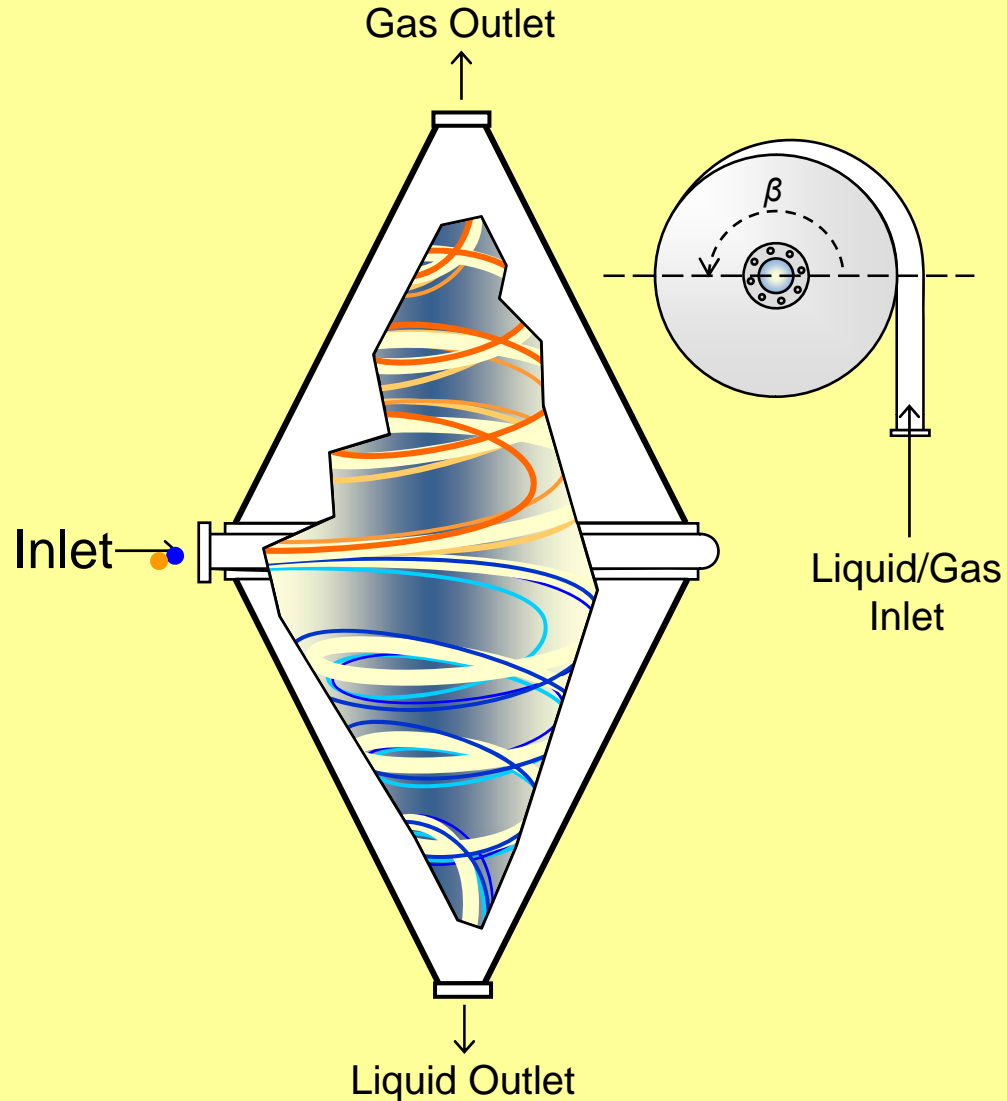


Spiral Speed Separator

THE SUPERIOR CHOICE

Principle:

Combination of tangential, centrifugal and gravitational forces resulting in far more effective and superior separation.

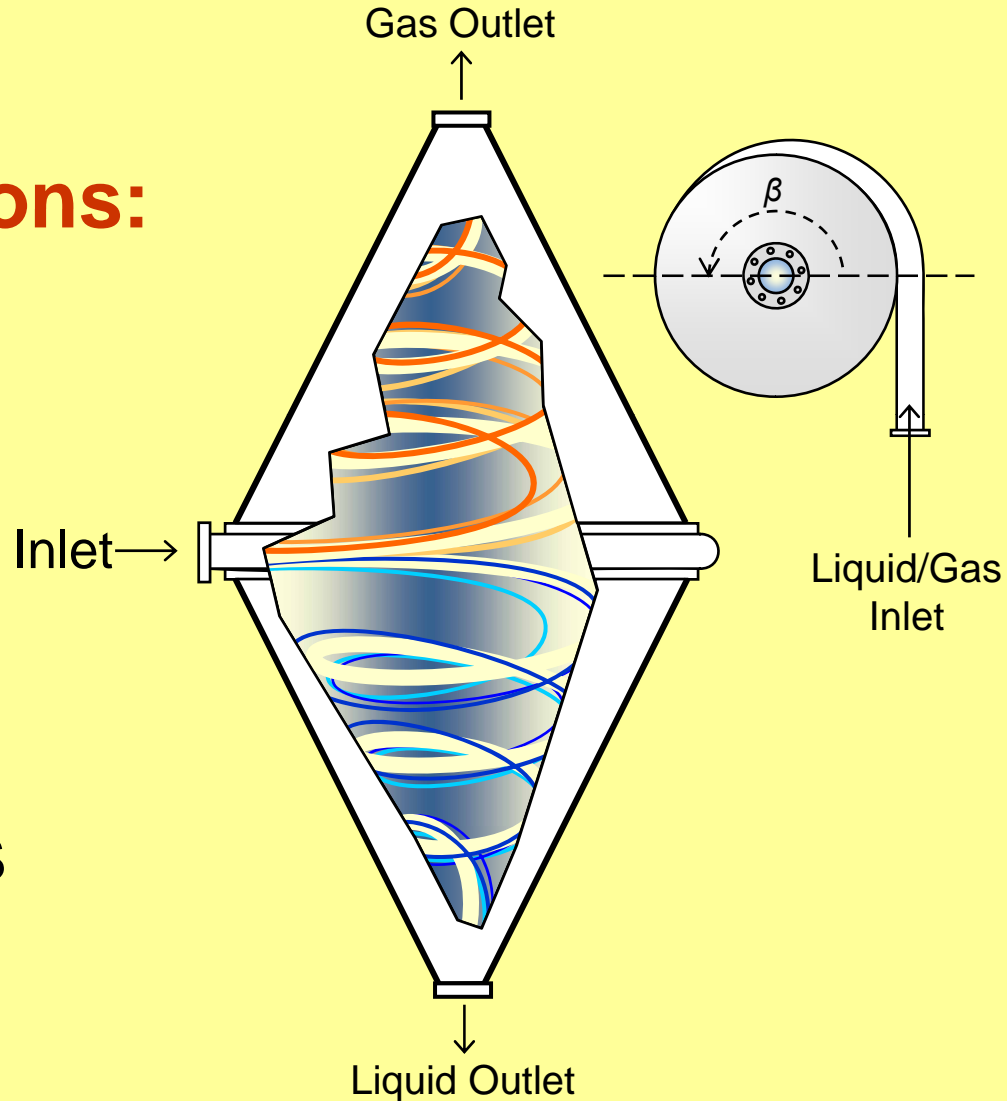


Spiral Speed Separator

THE SUPERIOR CHOICE

Typical Applications:

- I Gases or vapors from liquid
- II Gases or vapors from solids
- III Liquids from solids



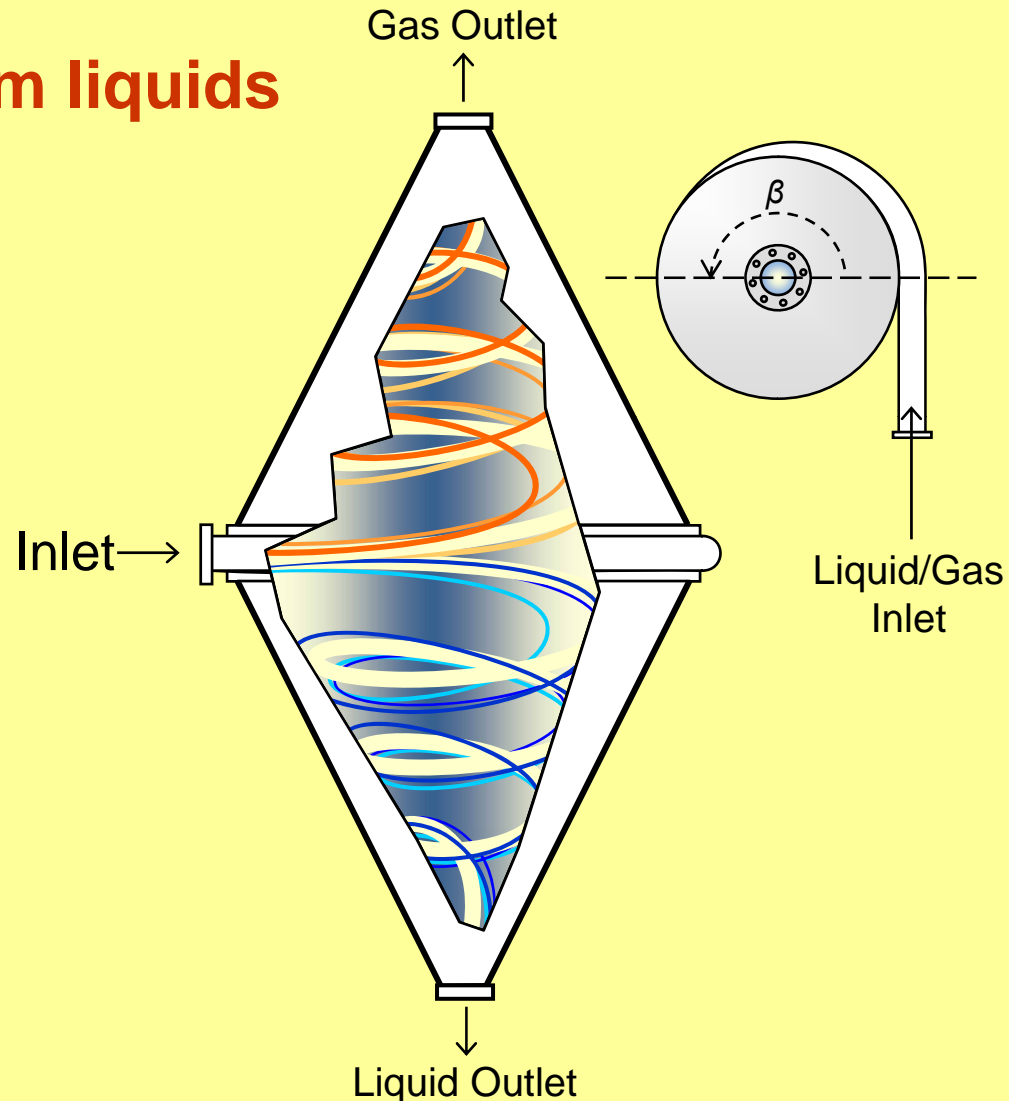
Spiral Speed Separator

THE SUPERIOR CHOICE

I – Gases or vapors from liquids

Far more efficient separation than the conventional design (horizontal or vertical) configuration such as reflux drum, vapor – liquid separators, cyclones, knock out drum, etc.

Light weight and less space than the conventional separator (horizontal or vertical configuration) – Cheaper Installation



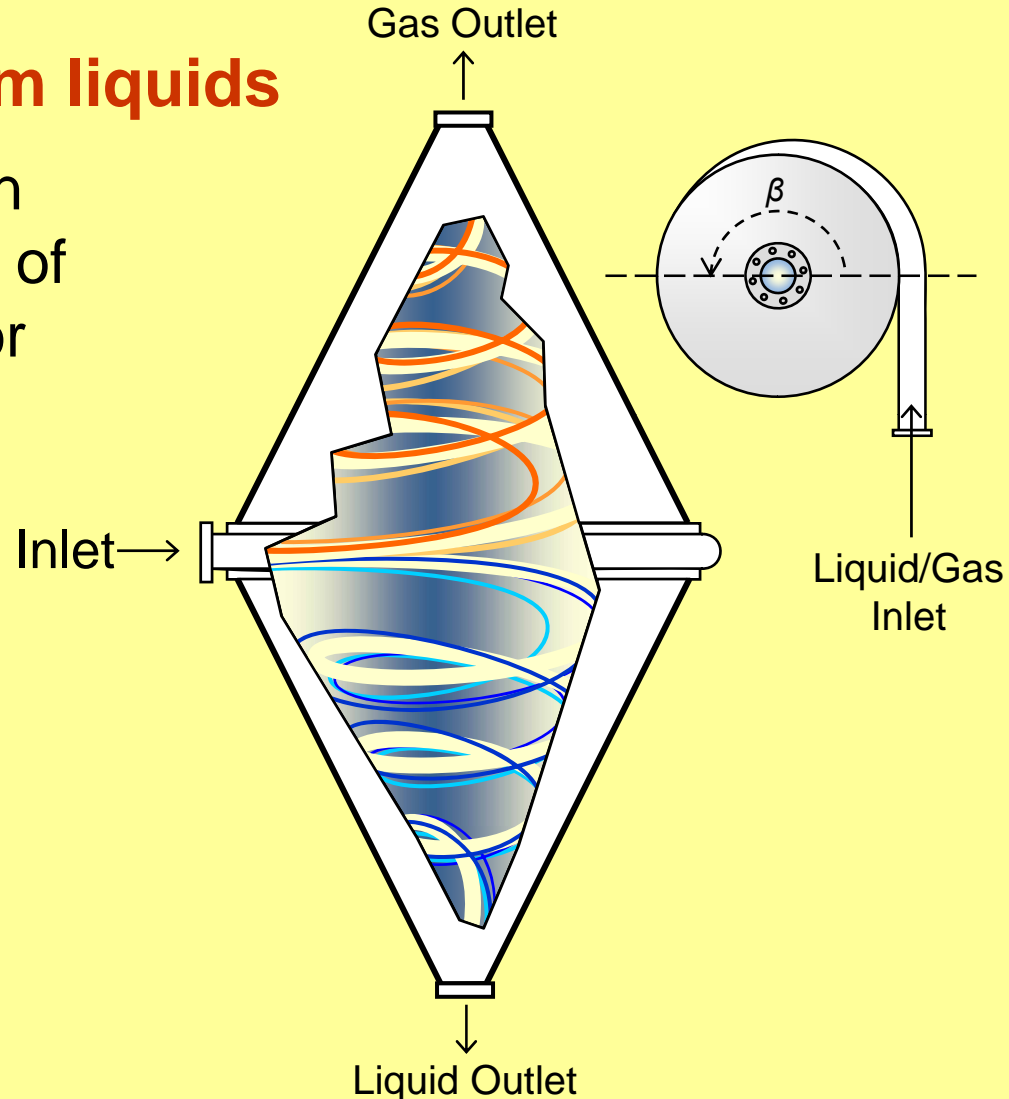
Less Welding Seams – Only One or Two

Spiral Speed Separator

THE SUPERIOR CHOICE

I – Gases or vapors from liquids

- ✦ New separator can even be mounted on the side of other large equipment or existing structure
- ✦ Compact size
- ✦ Over all cheaper installation



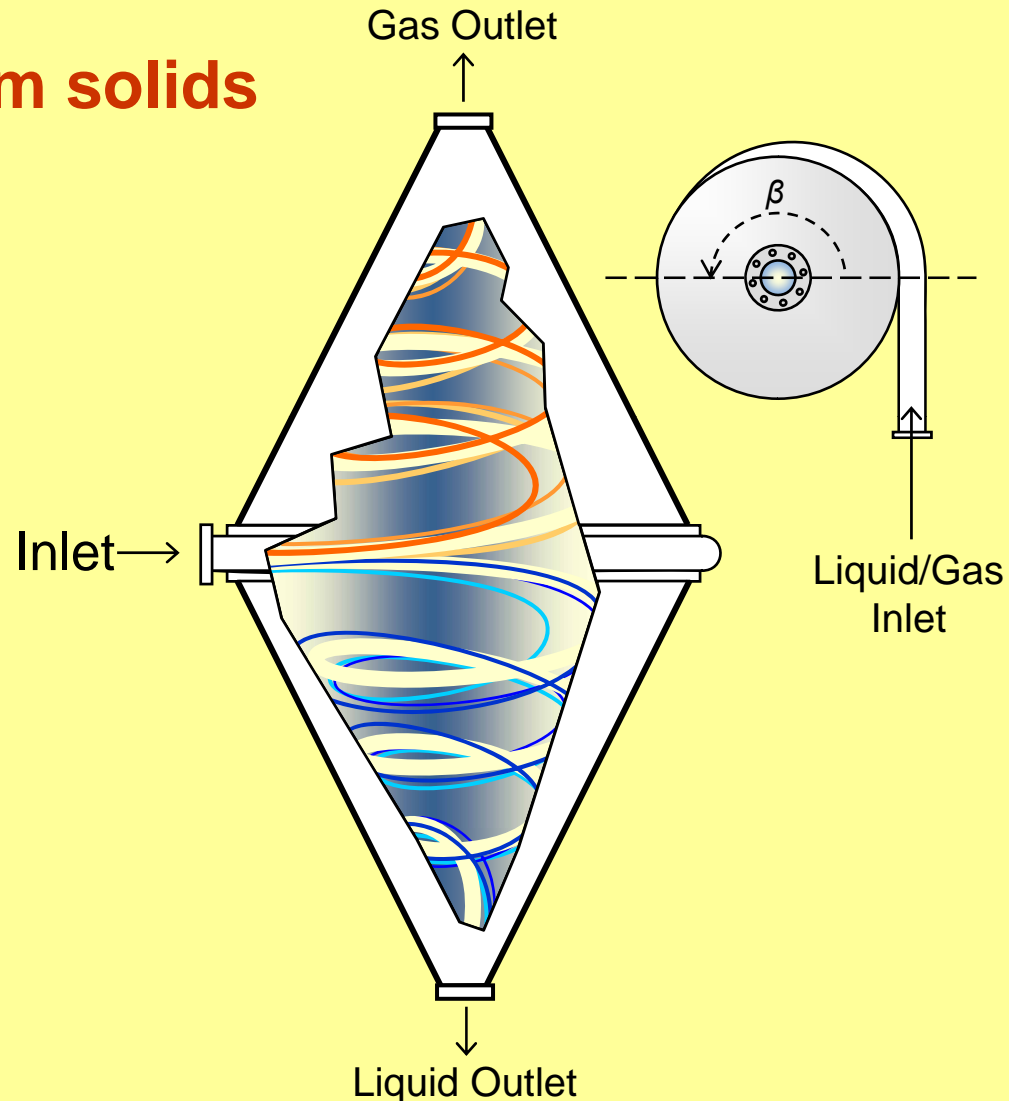
✦ **Less Welding Seams – Only One or Two**

Spiral Speed Separator

THE SUPERIOR CHOICE

II – Gases or vapors from solids

- Far more efficient separation of catalysts, polymers, specialty and fine chemicals, other difficult solids, etc.
- Compact size
- Over all cheaper installation



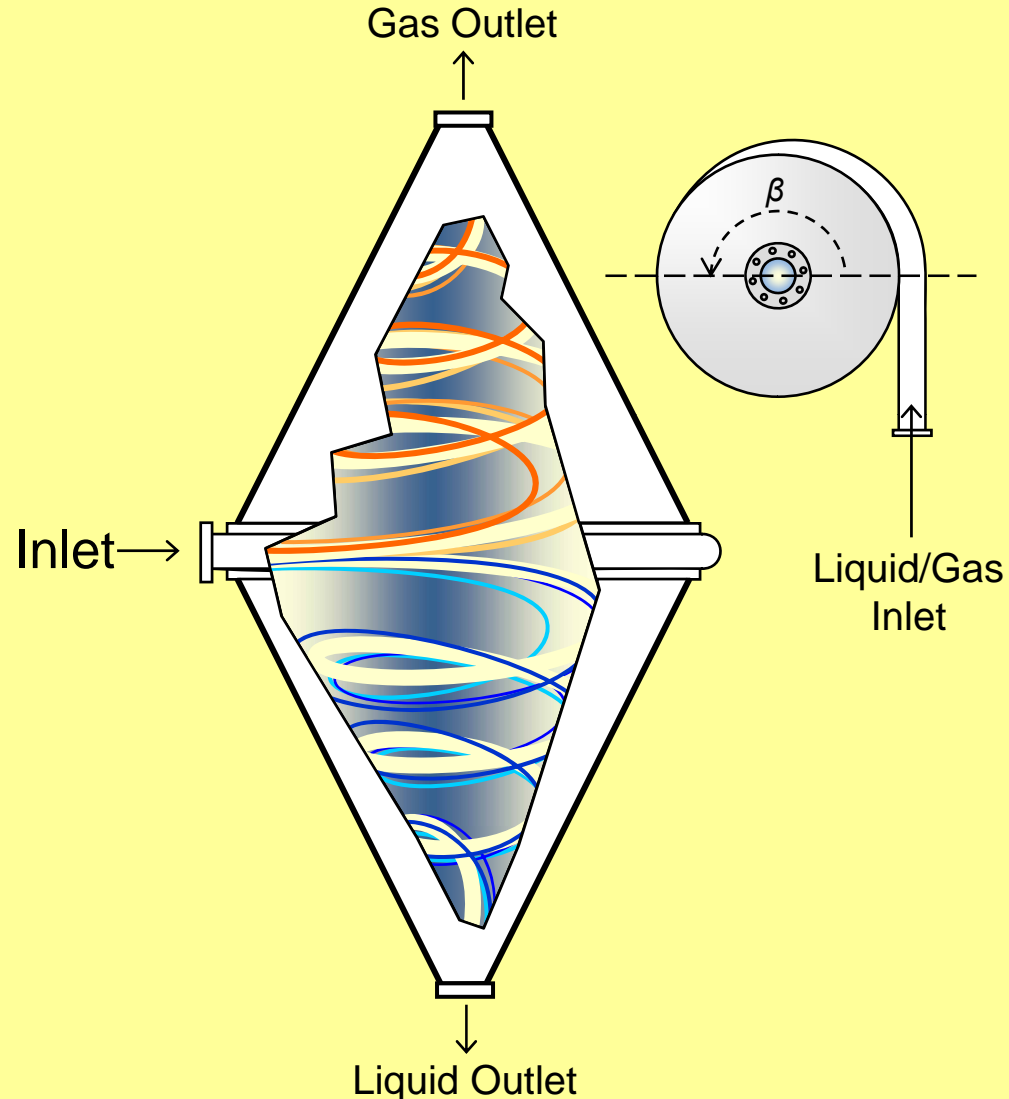
Less Welding Seams – Only One or Two

Spiral Speed Separator

THE SUPERIOR CHOICE

III – Liquids from solids

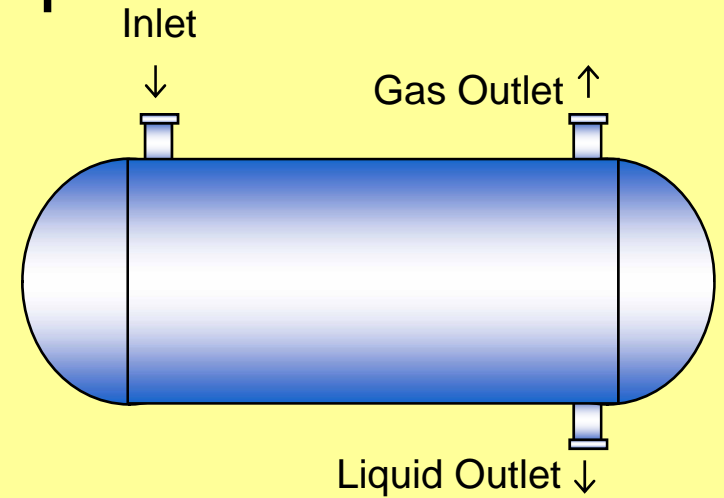
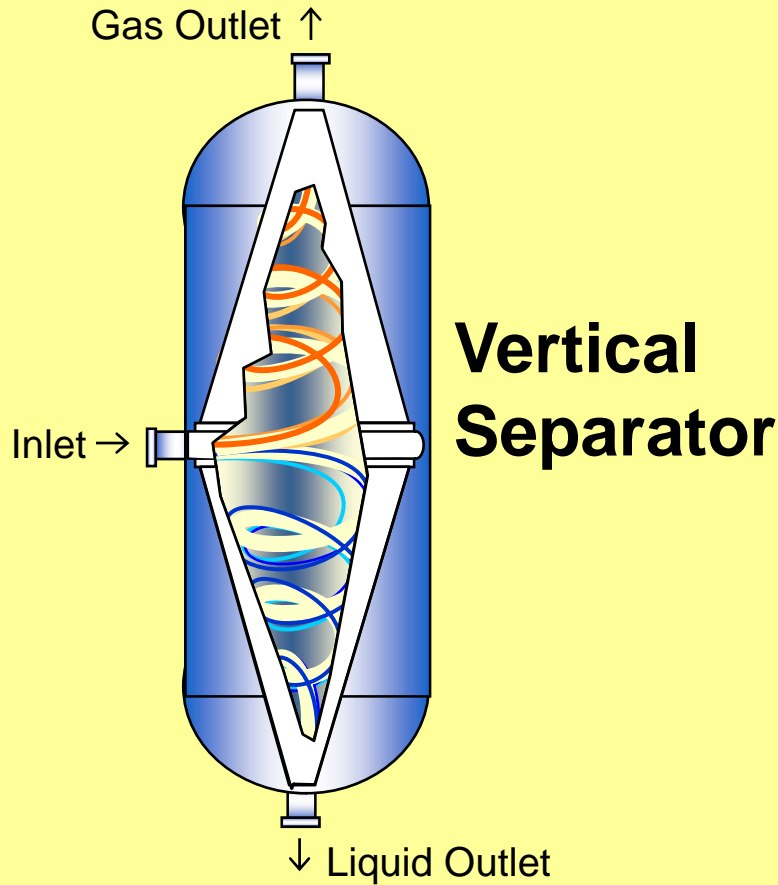
- ✦ Far more efficient separation operation than the Hydroclone
- ✦ Compact size
- ✦ Over all cheaper installation



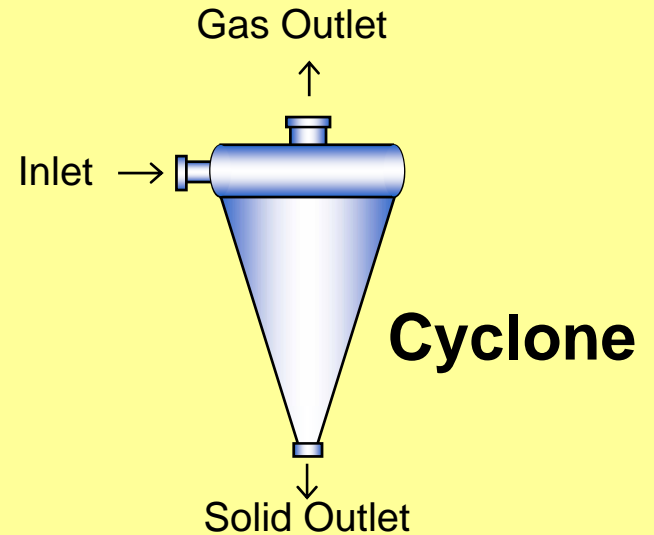
✦ **Less Welding Seams – Only One or Two**

Conventional Separation Equipment

Typical Installation



Horizontal Separator



Universal Technologies Corporation

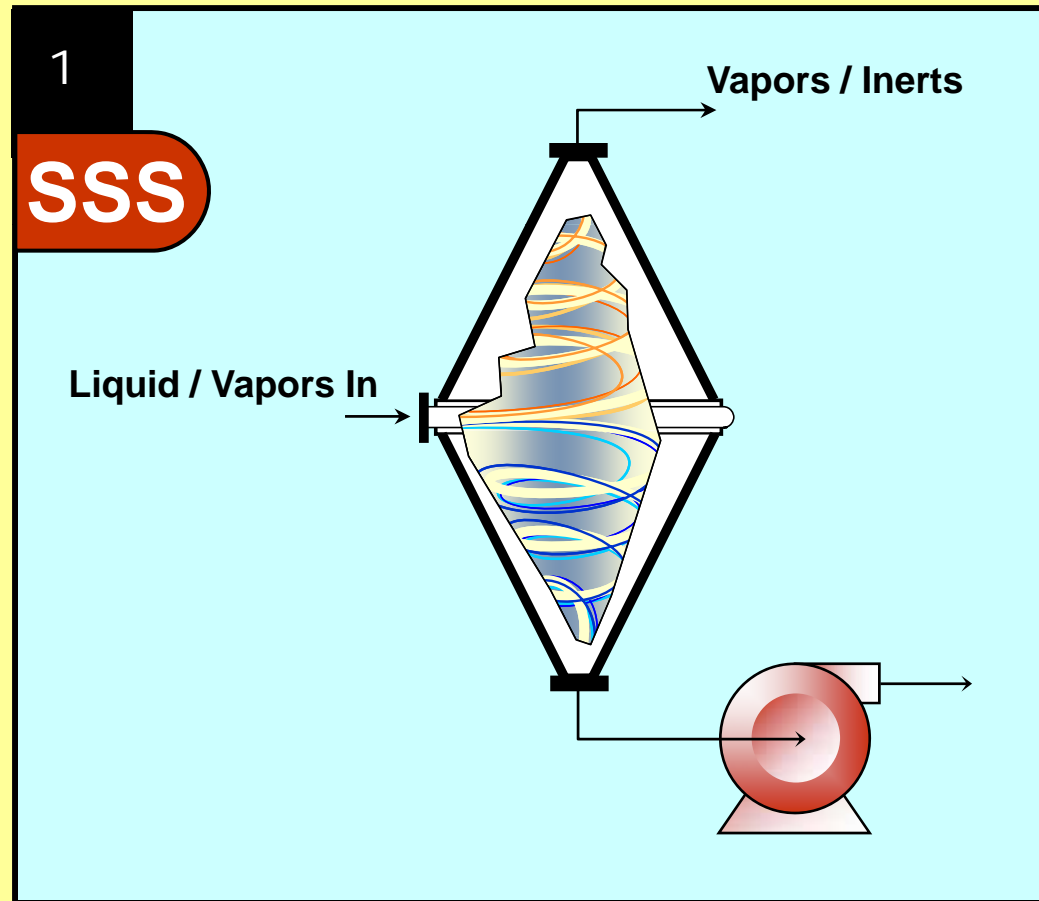
SSS

Spiral Speed Separator

THE SUPERIOR CHOICE

Various Design Configurations

UNIT OPERATIONS



Universal Technologies Corporation

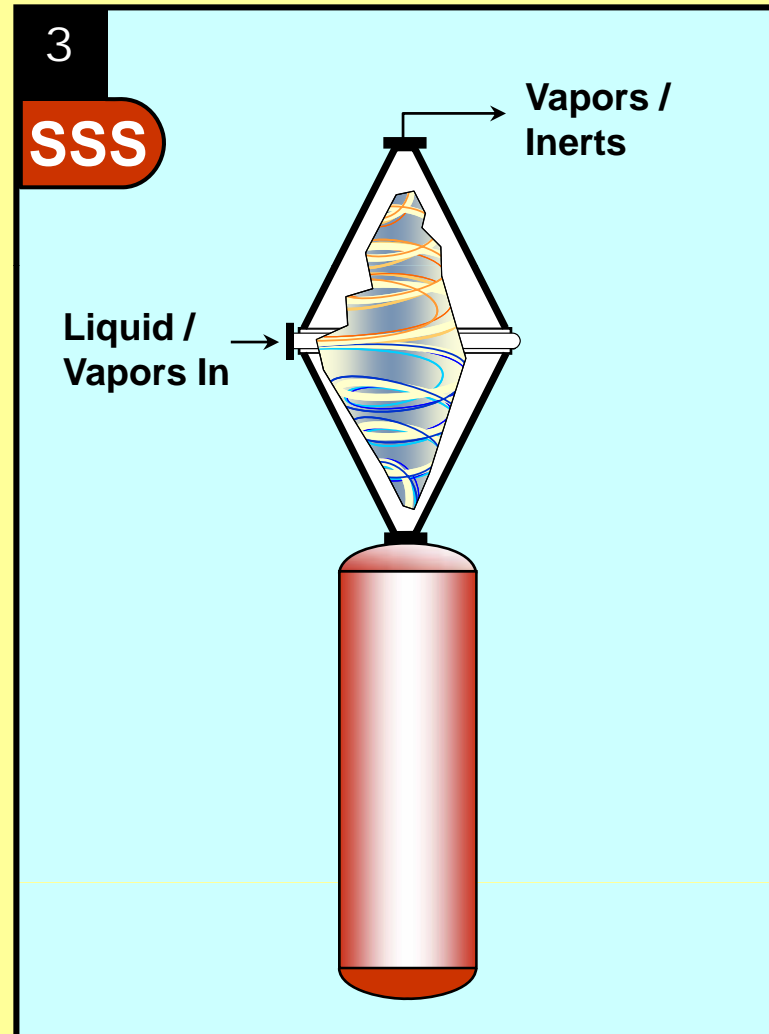
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Spiral Speed Separator

THE SUPERIOR CHOICE

Various Design Configurations

UNIT OPERATIONS



Universal Technologies Corporation

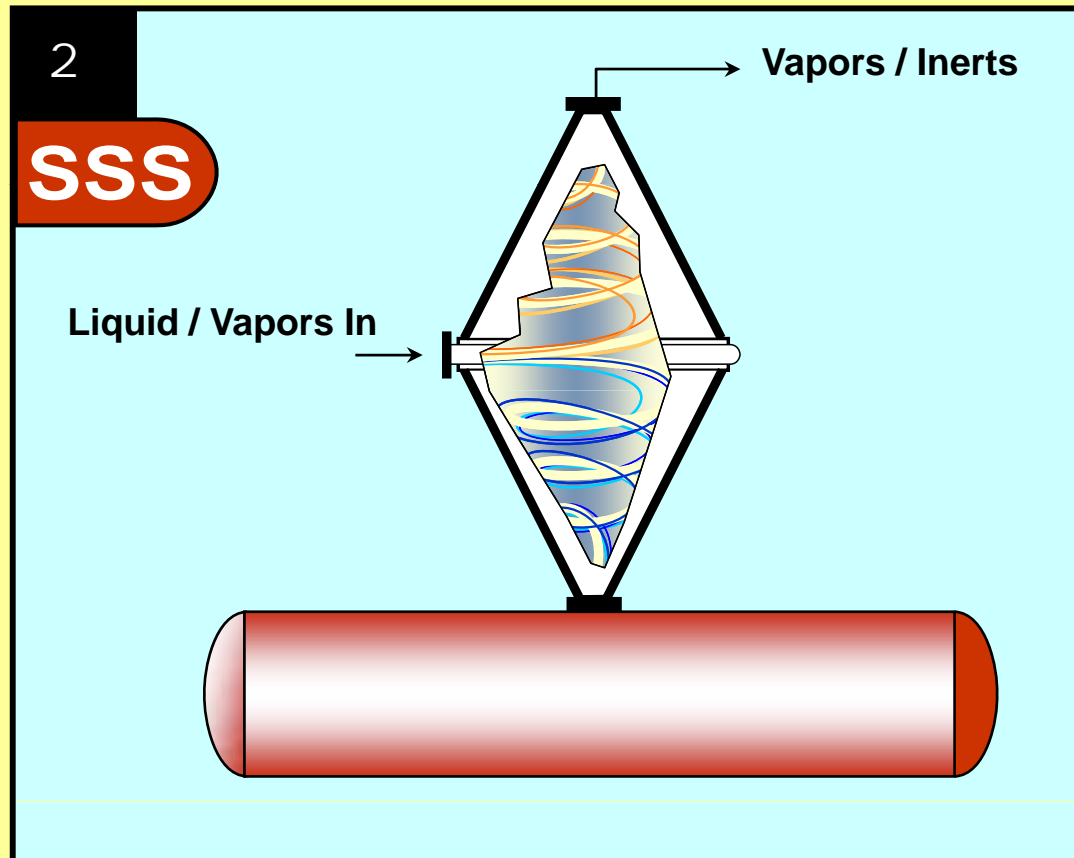
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THE SUPERIOR CHOICE

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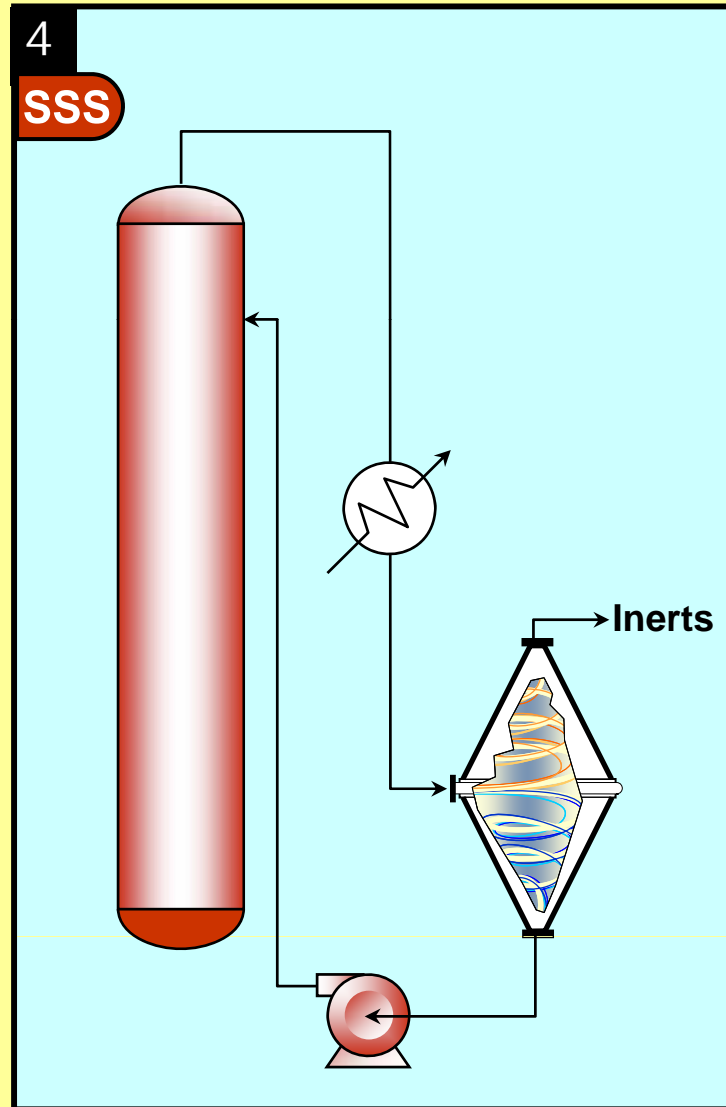


Spiral Speed Separator

THE SUPERIOR CHOICE

Various Design Configurations

UNIT OPERATIONS

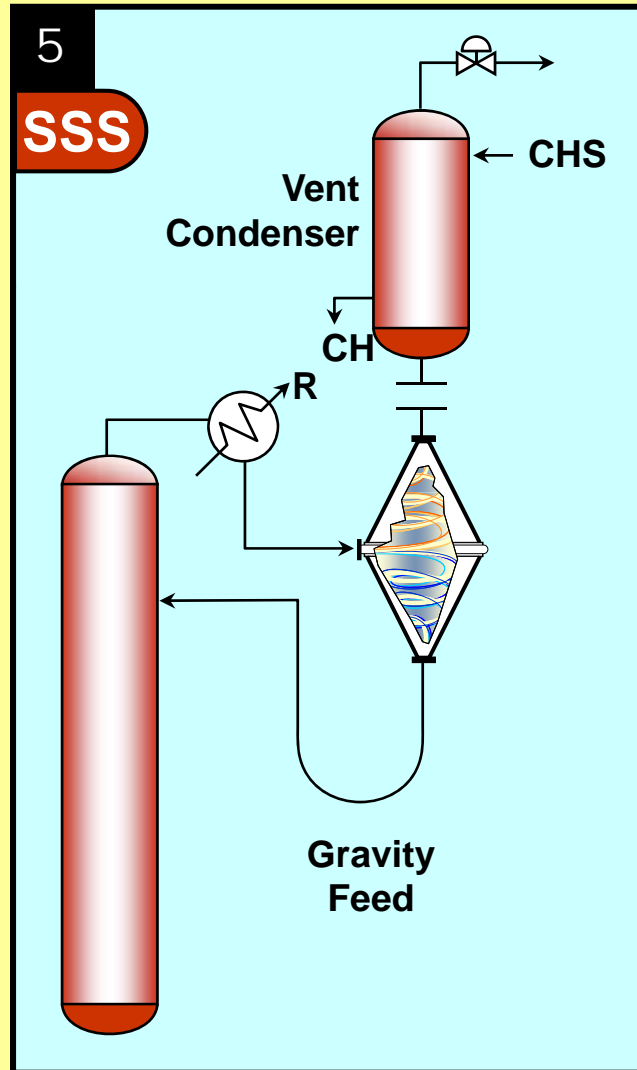


Spiral Speed Separator

THE SUPERIOR CHOICE

Various Design Configurations

UNIT OPERATIONS

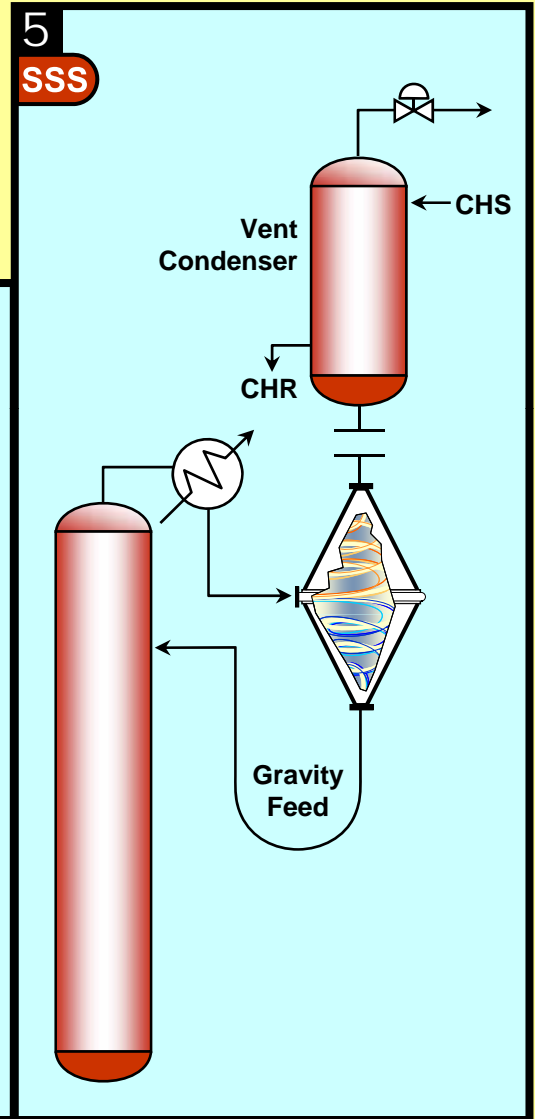
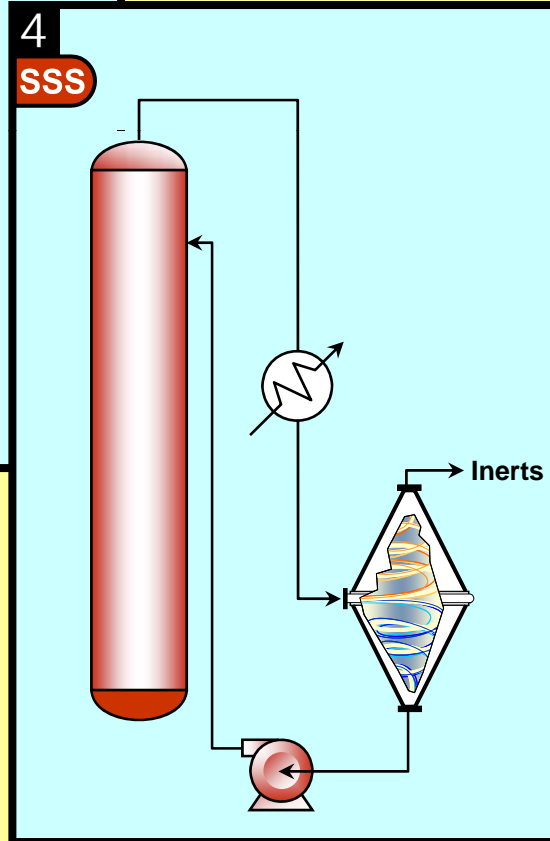
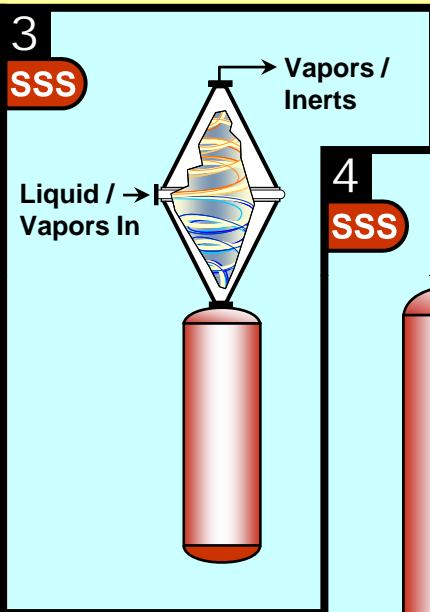
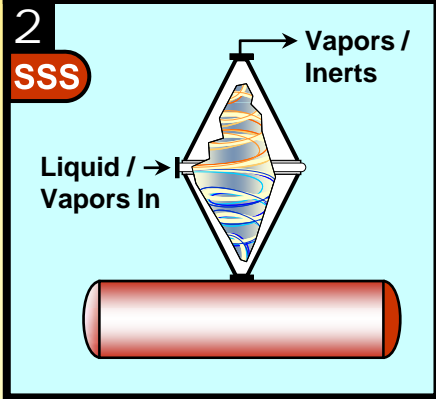
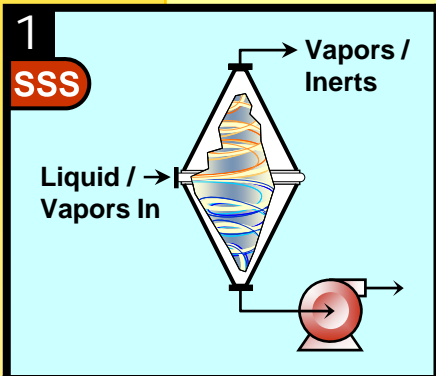


Spiral Speed Separator

THE SUPERIOR CHOICE

Various Design Configurations

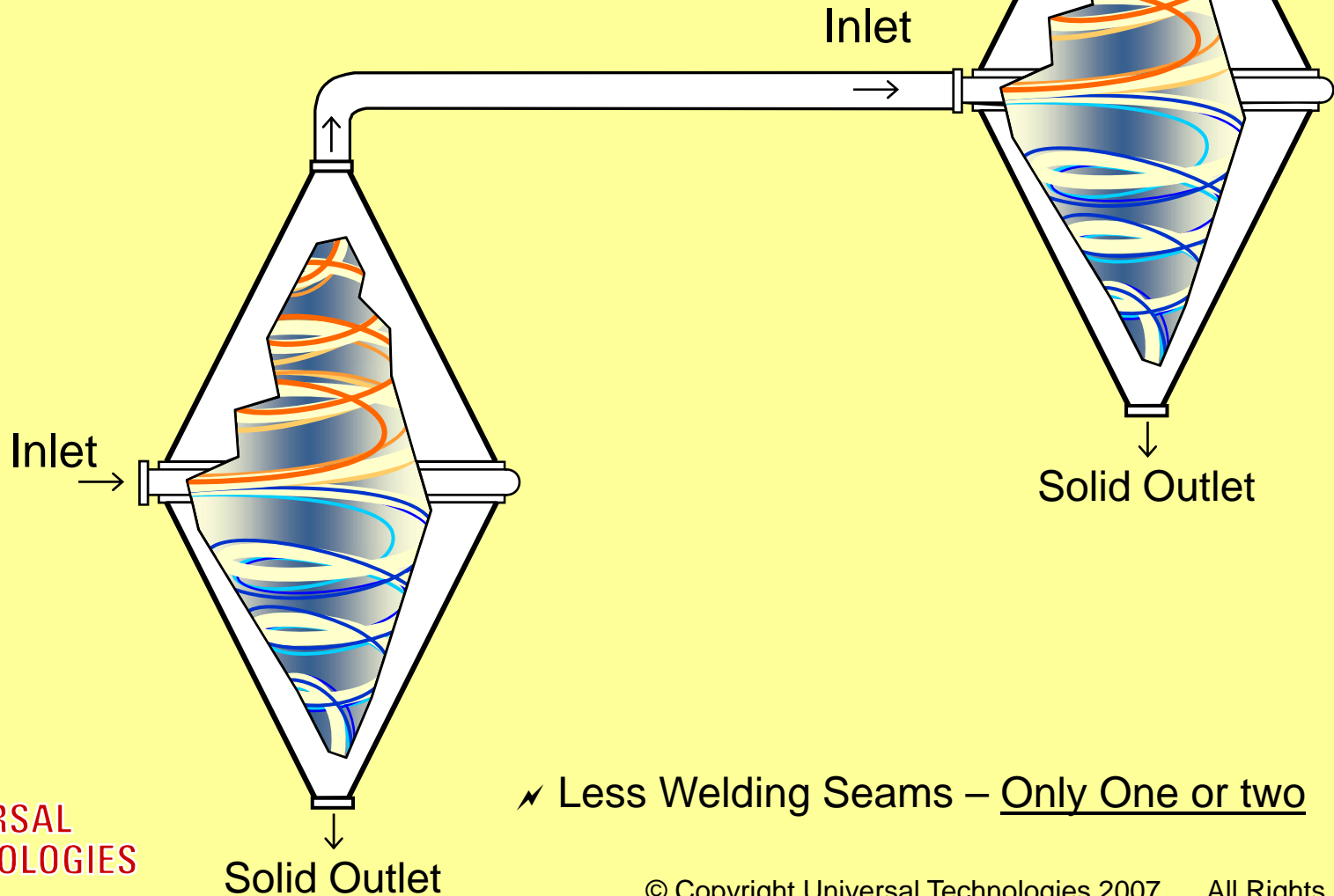
UNIT OPERATIONS



SSS

Universal Technologies Corporation Spiral Speed Separator

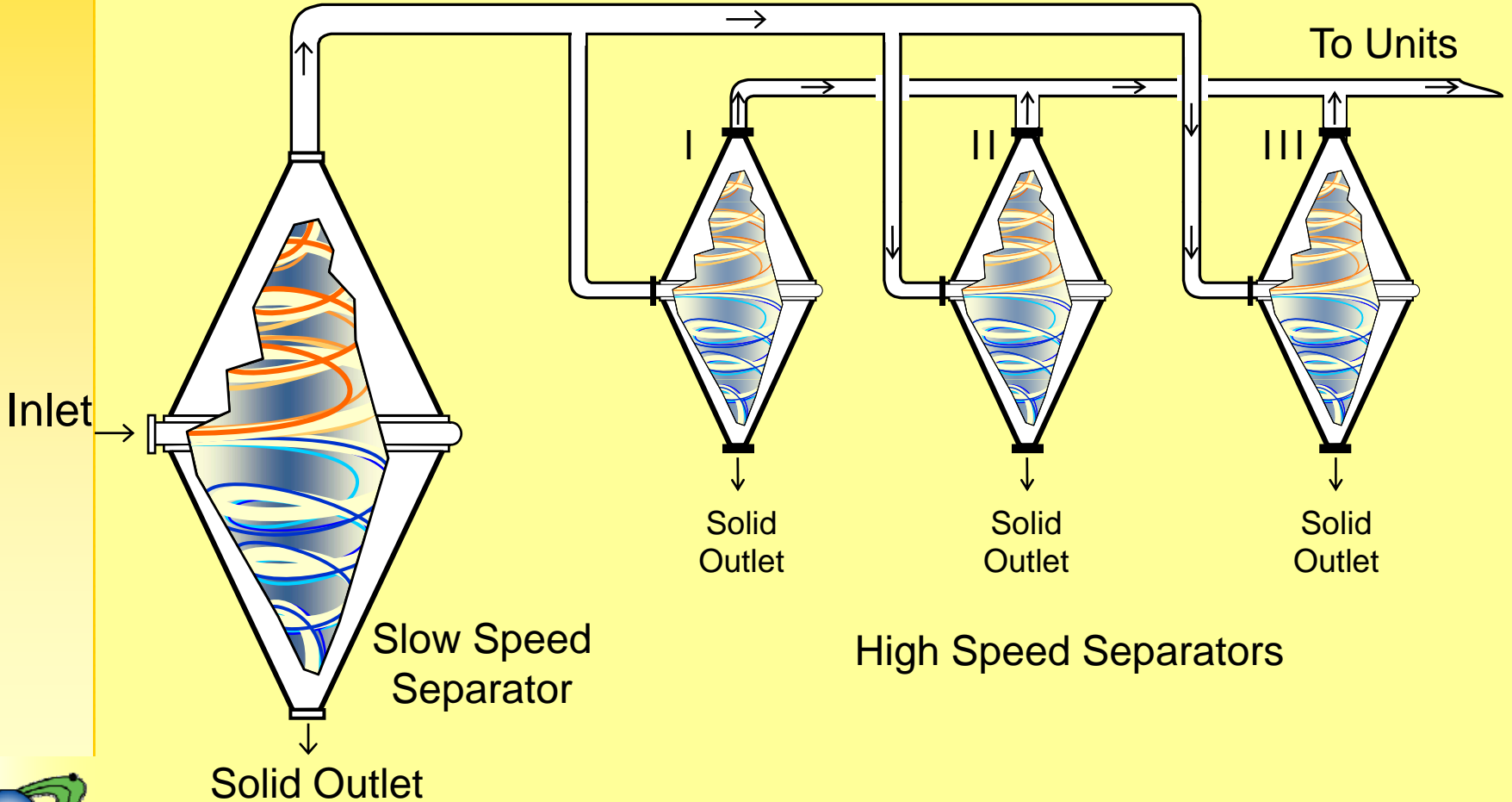
✓ SSS in Series for Enhanced Separation



✓ Less Welding Seams – Only One or two

SSS THE SUPERIOR CHOICE

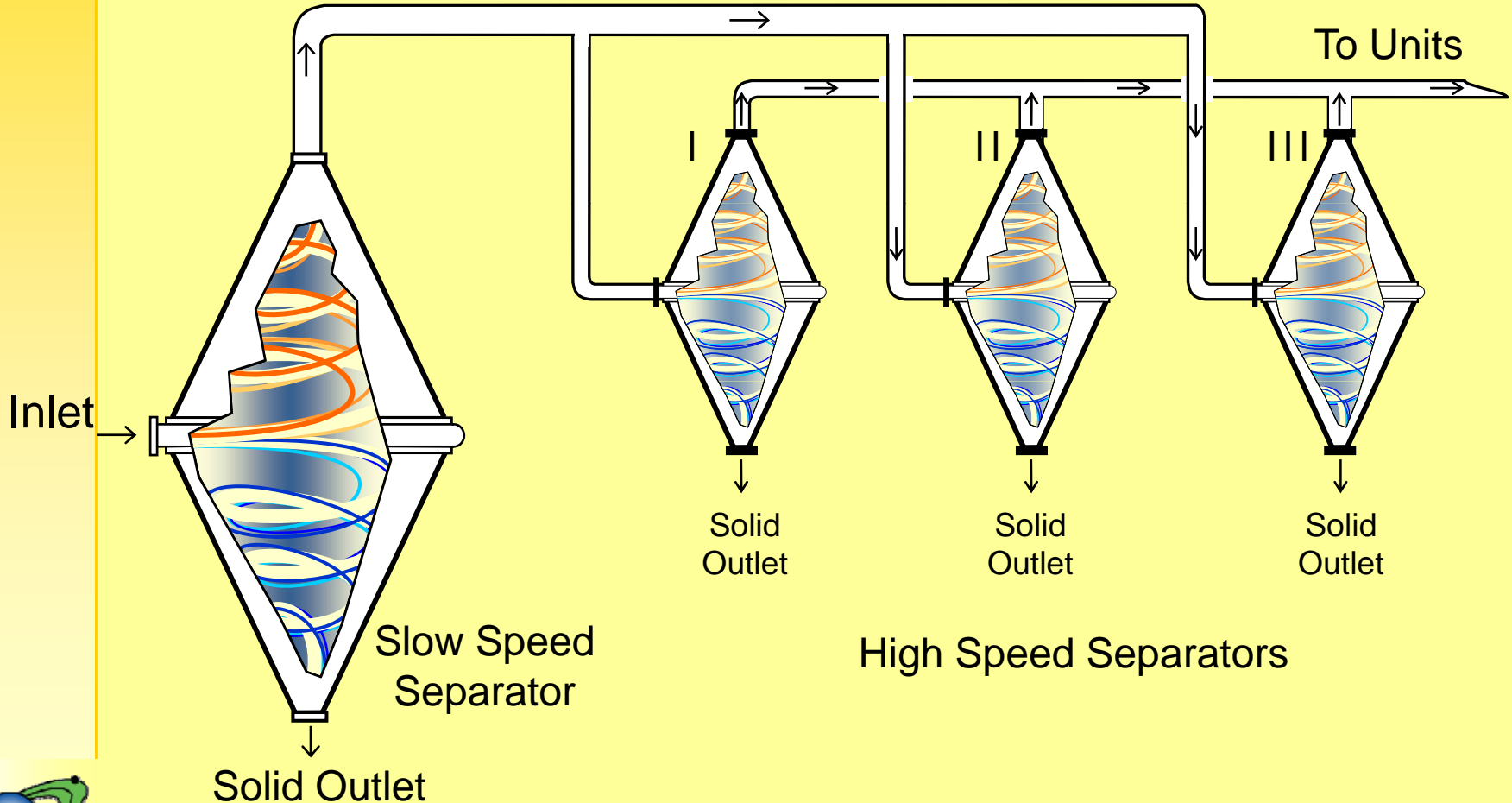
SSS in Series for Enhanced Gas - Solid Separation



Universal Technologies Corporation

SSS THE SUPERIOR CHOICE

SSS in Series for Enhanced
Liquid - Solid Separation

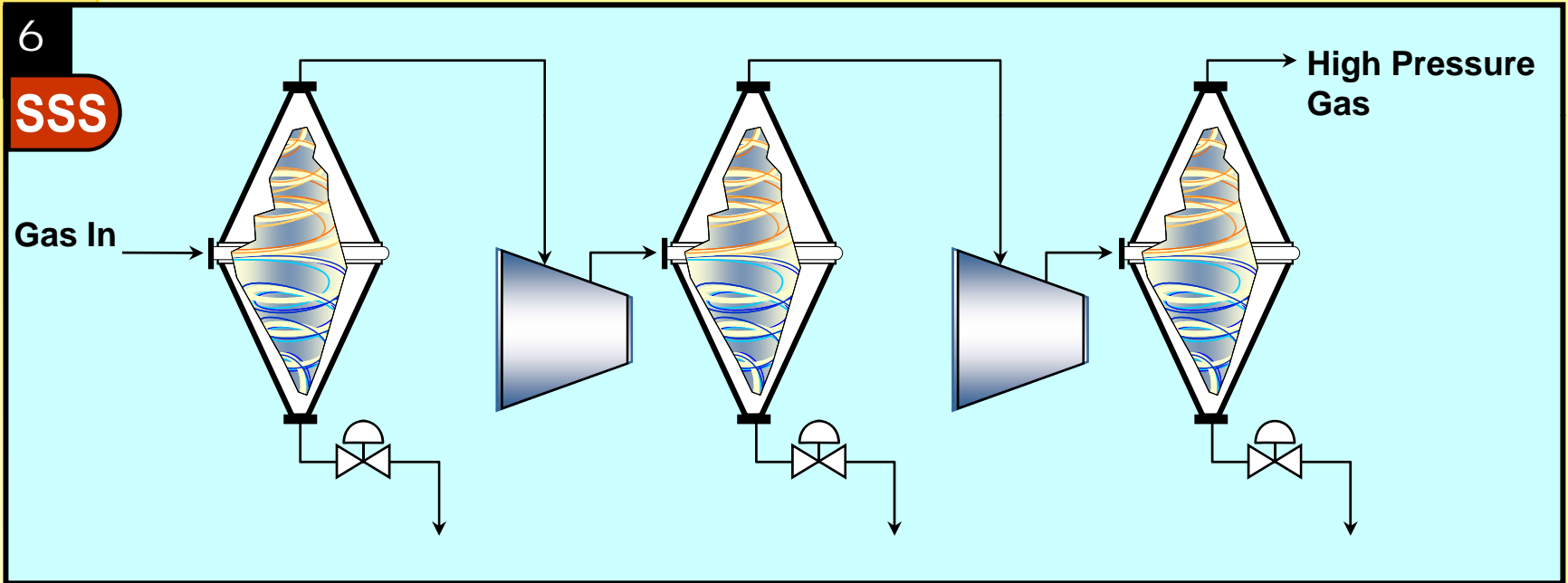


Spiral Speed Separator

THE SUPERIOR CHOICE

Various Design Configurations

UNIT OPERATIONS

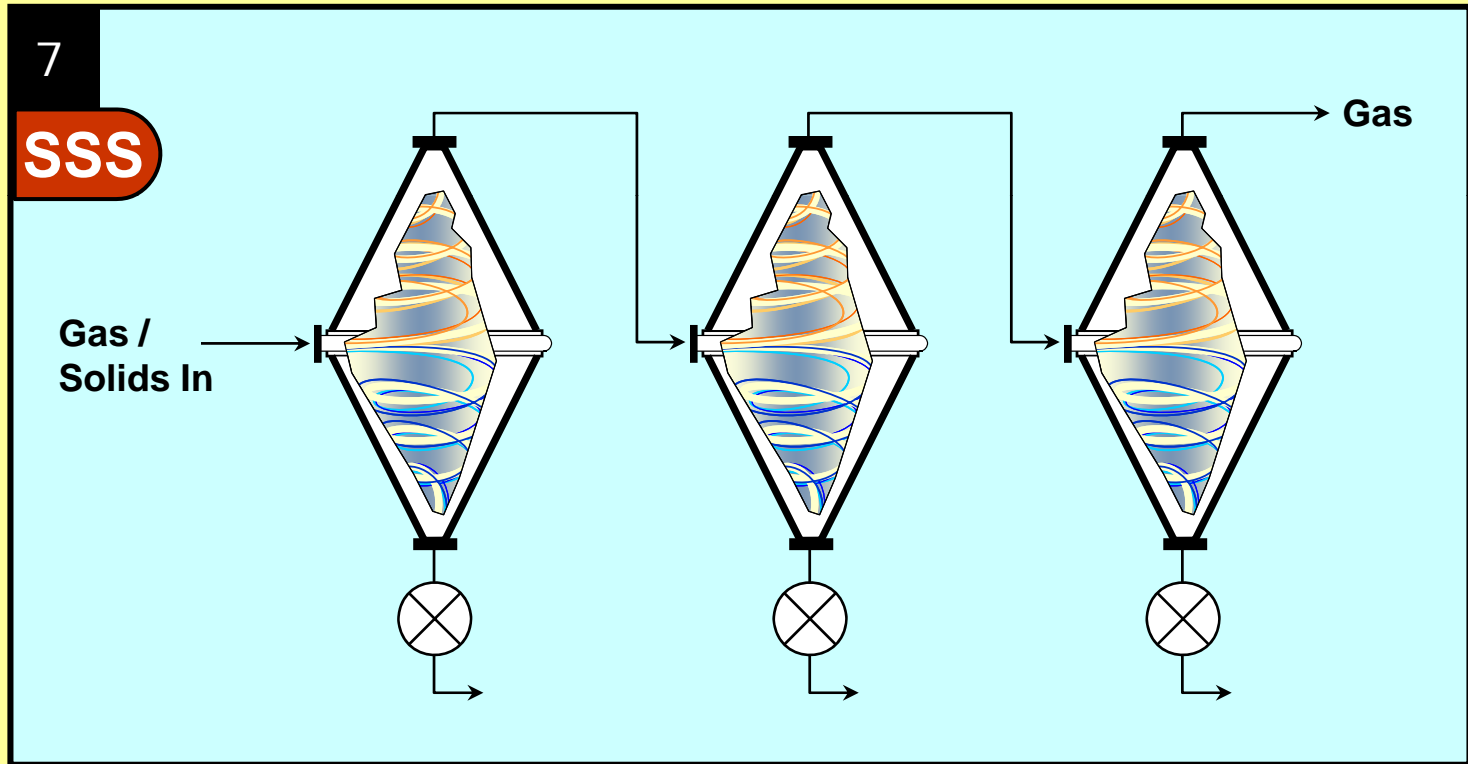


Spiral Speed Separator

THE SUPERIOR CHOICE

Various Design Configurations

UNIT OPERATIONS

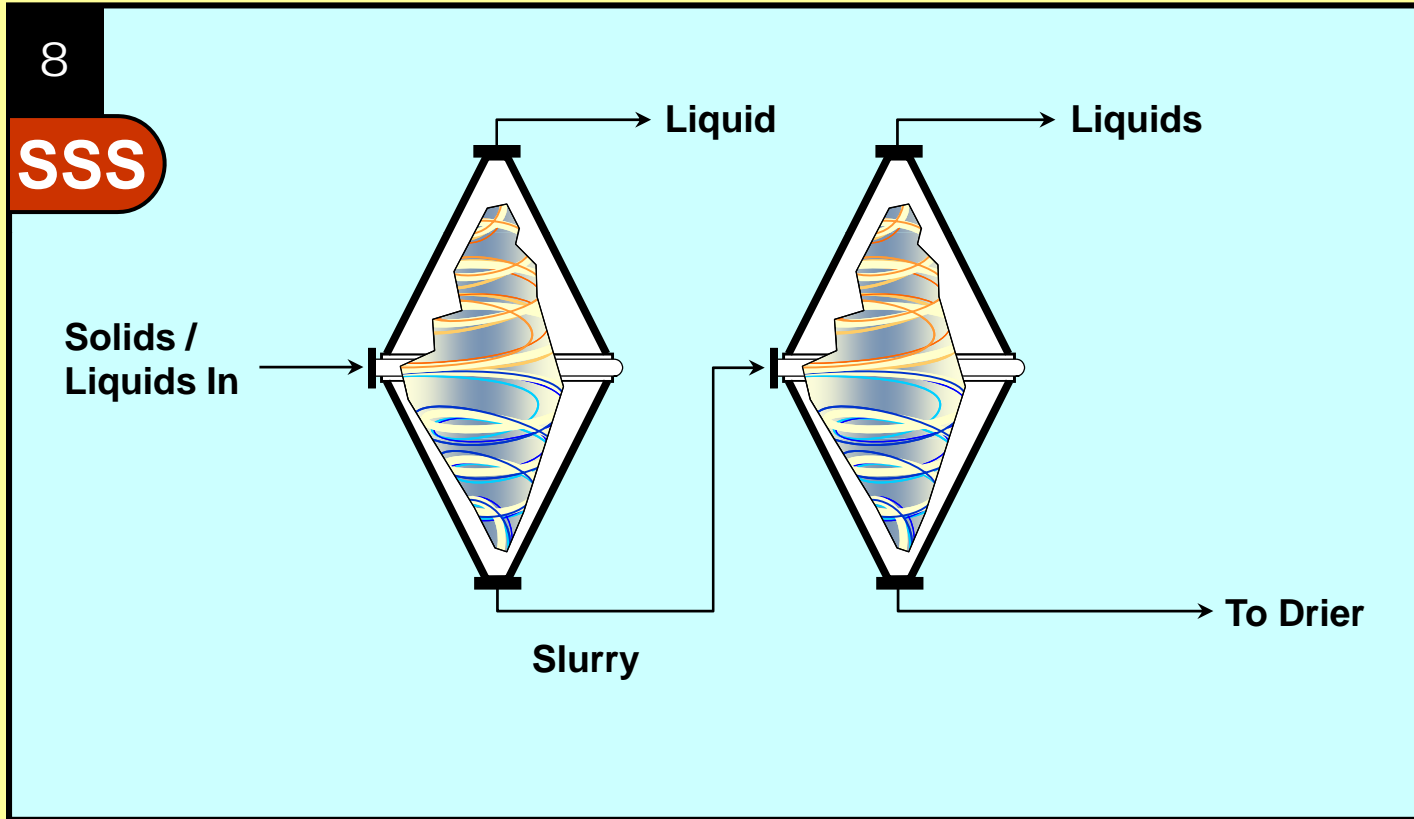


Spiral Speed Separator

THE SUPERIOR CHOICE

Various Design Configurations

UNIT OPERATIONS

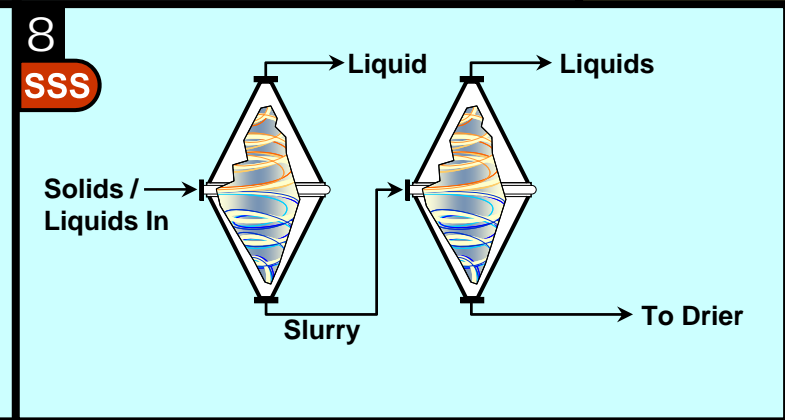
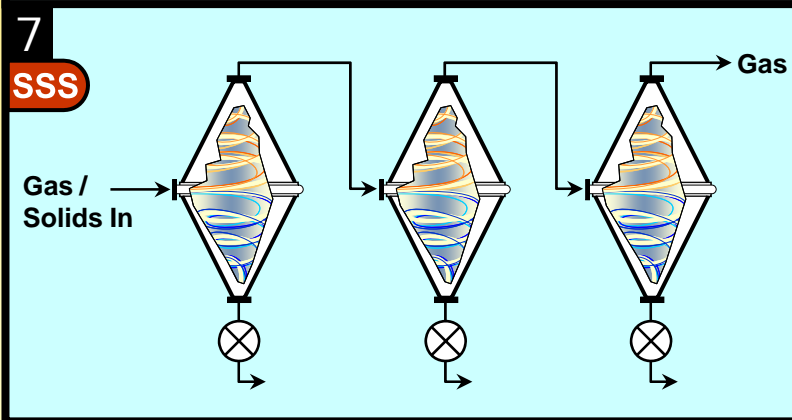
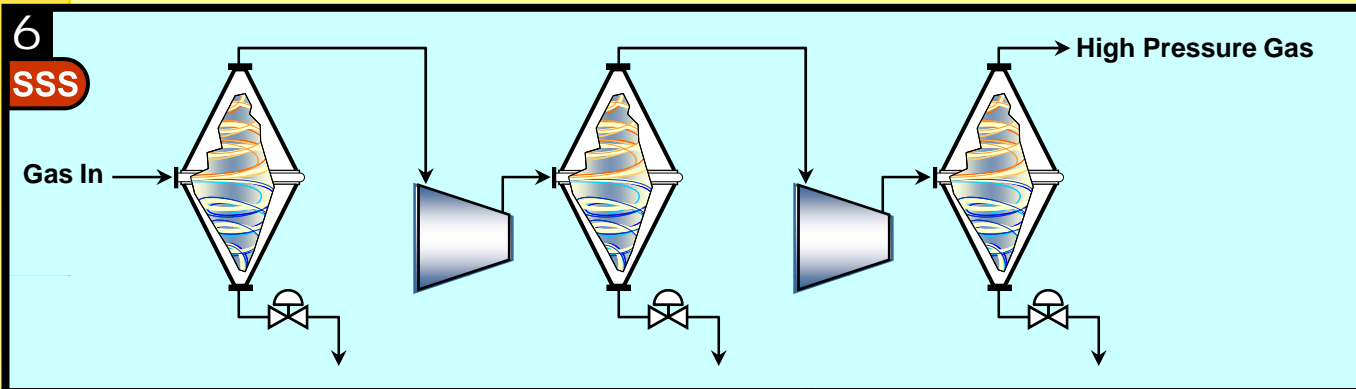


Spiral Speed Separator

THE SUPERIOR CHOICE

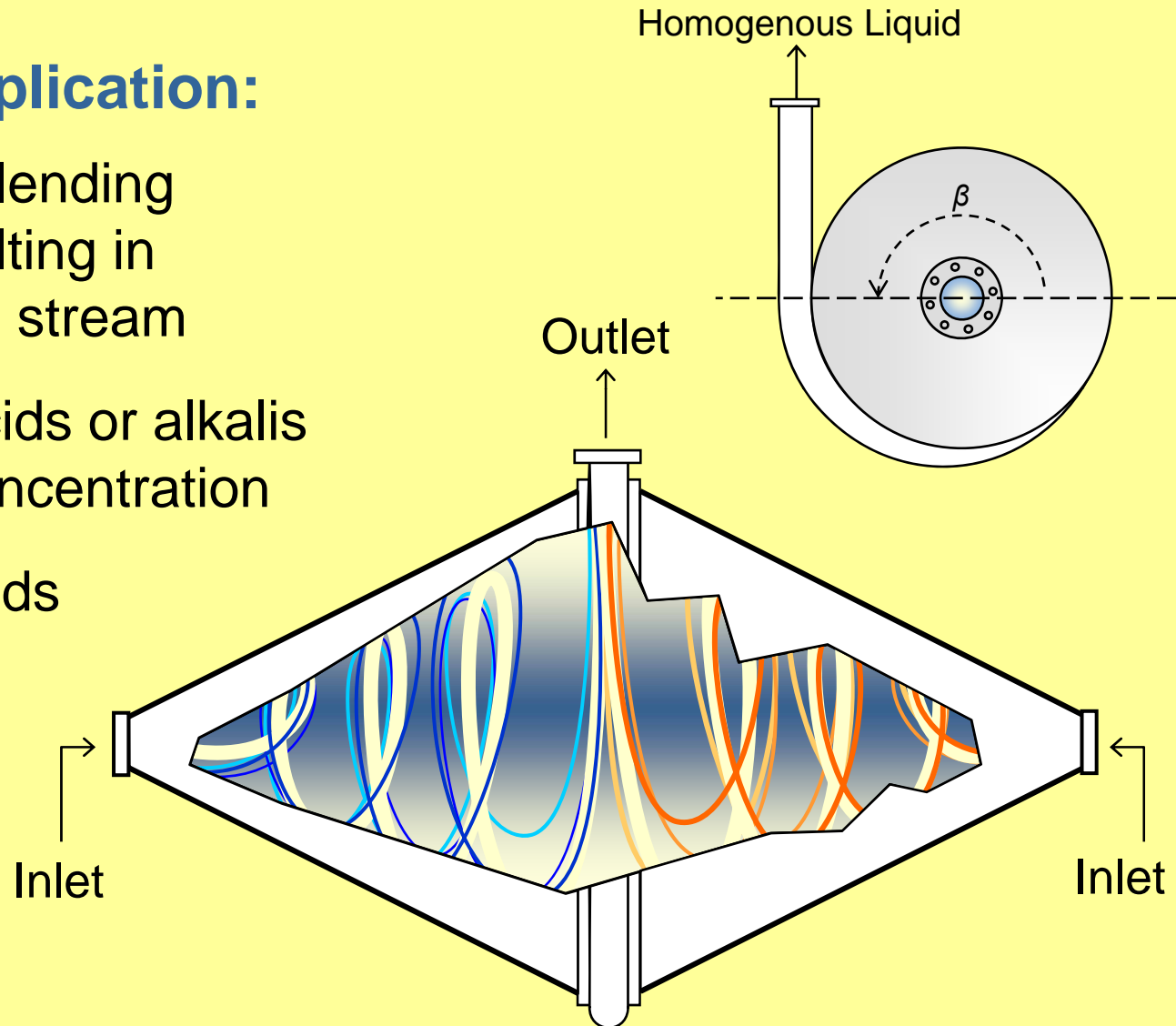
Various Design Configurations

UNIT OPERATIONS



General Application:

- ✦ Mixing and blending of fluids resulting in homogenous stream
- ✦ Dilution of acids or alkalis for proper concentration
- ✦ Mixing of solids with liquids



IMAGINATION IS THE LIMIT

TECHNOLOGIES & INNOVATIONS

IN

*ABSORPTION & DISTILLATION
SYSTEMS*

**Converging &
Diverging Towers**

IMAGINATION IS THE LIMIT



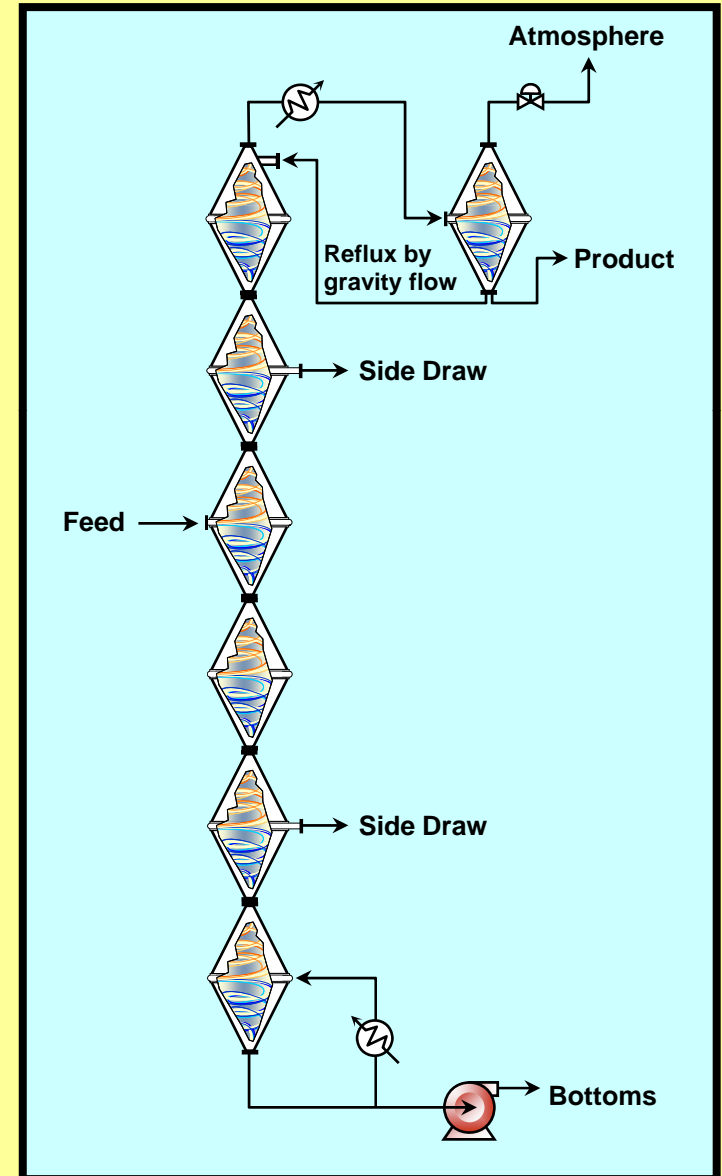
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Converging & Diverging Tower

THE BETTER CHOICE

Applications:

- Gas – Liquid Distillation & Absorption for New and Existing installations
- Adding packing height for capacity increase or product quality
- Structured or random packaging
- Simpler system
- Economic installation



IMAGINATION IS THE LIMIT



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