

Clarifiers for grape juice and the wine industry

Flexibility – quality – efficiency



Clarifier for grape juice and the wine industry

The right choice for excellent clarification

ANDRITZ SEPARATION offers modern winemakers the chance to satisfy more and more demanding and skilled consumers. Our clarifiers ensure excellent and reliable clarification of grape juice, must, and red, white and sparkling wines. We guarantee gentle processing, giving the wine a clean taste and full character. Exactly what your customers expect.

Must clarification

Must clarification is needed to remove the unwanted substances (lees, seeds, yeast, bacteria, molds, sand, dust, enzymes, etc.) remaining after pressing and which can lead to uncontrolled fermentation. Clarifiers from ANDRITZ SEPARATION ensure efficient pre-clarification and facilitate controlled fermentation, which is required to achieve the right aroma, color, brilliance, and alcohol content in your high-quality wine.

Your benefits

- Continuous processing
- Production of clear quality must
- Savings in floor space, time, labor, and cooling costs compared to traditional tank sedimentation
- Easy cleaning by using a CIP system
- Fast removal of undesired solids
- Controlled fermentation with high-quality, selected yeast to enhance wine development
- Removal of wild yeast deposits for healthier must

Wine clarification

After fermentation, centrifugal separation can be applied successfully to clarify young wine. Clarifiers from ANDRITZ SEPARATION make it possible to remove solids, lees, and spent yeasts, thus stopping further fermentation. They reduce the turbidity of the wine, the so-called NTU (nephelometric turbidity units), preparing the wine for aging, filtration or even for bottling.

Our clarifiers can process both young and mature wines successfully.

Your benefits

- Continuous processing
- Easy cleaning by using CIP system
- Versatility, both young and mature wines can be clarified
- Effective and economic wine production because less SO₂, fining agents or filter aids are needed in the downstream process
- Savings in floor space, time, labor and cooling costs compared to traditional tank sedimentation
- Long life guaranteed for all equipment by removing most of the solids

Sparkling wine clarification

Clarifiers from ANDRITZ SEPARATION are the ideal solution for processing of sparkling wines. They can be equipped with NO₂, a mechanical sealing system that protects the product against the atmosphere to ensure the constant high CO₂ pressure needed in sparkling drinks processing.

Post-stabilization clarification

After tartaric stabilization, tartrate crystals can be removed from the product with a clarifier. In order to avoid abrasion, ANDRITZ SEPARATION provides special wear protection on the sliding piston and clips on the bowl ejection ports, which extend the mechanical life of the clarifier.



▲ Wine clarifier skid

Fields of application

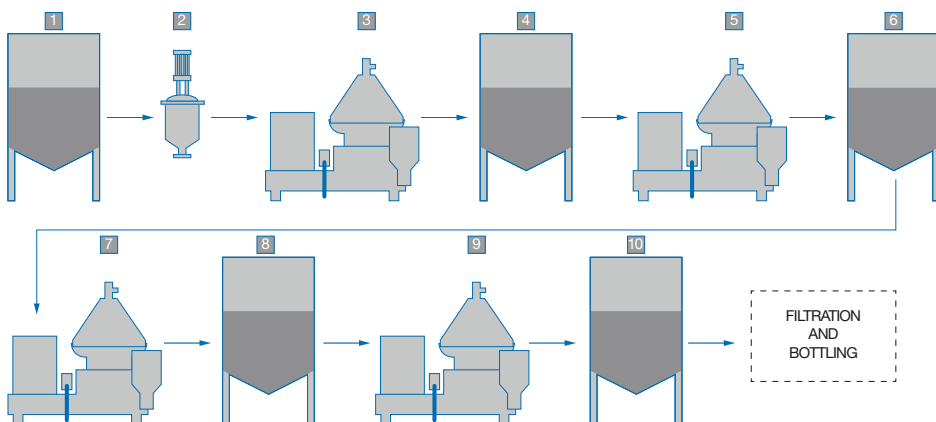
- Grape juice/must clarification
- Post-fermentation wine clarification
- Pre-filtered wine clarification
- Sparkling wine clarification
- Post-stabilization clarification

Scope of supply

- Complete, pre-mounted clarifier skid with all instruments, valves, and controls
- Variable frequency drive to allow optimum acceleration and deceleration of the centrifuge
- Automatic 3-way valves for product recirculation
- Integration into fully automatic CIP (cleaning-in-place) system
- Operating water system with bowl open and close solenoids
- Double inlet strainer with interception valves

Optional features

- Turbidity monitoring and control of TSS level in skid outlet, fully automatic
- Solids discharge pump
- VolCon, the universal volume control discharging device
- KO² hydro-hermetic device to minimize oxygen pick-up
- NO² mechanical sealing system for sparkling wines
- Turbidity monitoring on feed
- Special wear protection on sliding piston and clips on the bowl ejection ports
- Double strainers with automatic switch
- Hydrocyclone or rotary brush strainer



▲ 1. Must tank, 2. Hydrocyclone and/or rotary brush strainer, 3. Clarifier, 4. Fermentation tank, 5. Clarifier, 6. Buffer tank, 7. Clarifier, 8. Stabilizing tank, 9. Clarifier, 10. Buffer tank.

KO² – knock out oxygen

KO² is the hydro-hermetic device designed to minimize the oxygen pick-up in the product processed by the clarifier

- Oxygen pick-up <35 ppb
- No risk of increasing the oxygen content during discharge
- No risk of contaminating product with deaerated water
- Low operating costs for CO₂ or N₂
- No deaerated water needed

NO² – no oxygen pick-up

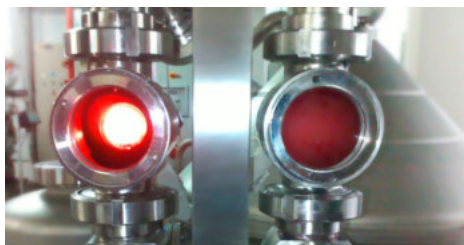
NO² is based on a mechanical sealing system that creates a barrier between the product and the external environment

- Higher clarification efficiency because the product can be clarified with higher natural gas and back pressures
- Sparkling wines can be clarified at a constant high pressure
- Low maintenance costs because only the seal tracks have to be replaced in the event of a fracture
- Higher quality of product as there is no risk of contaminating the product with the cooling water
- Higher feed flow rate

VolCon – universal volume control discharging device

VolCon is based on a volumetric piston that ensures perfect control of the discharging volume

- Minimized product losses as a result of shorter and more precise discharging time
- Higher yield, no in-out deviation is needed during processing due to short discharge time and intervals (as low as every 35 seconds)
- Higher clarification efficiency because the high hydraulic water pressure and the high bowl speed maintained during the discharging phase avoid turbulence
- Not affected by fluctuations in plant water pressure



▲ Wine clarifier sight glasses

The strength to support your needs

We call it 360 degrees of separation

Technical data ⁽¹⁾	Unit	CA 31 V	CA 41 V	CA 71 V	CA 131 V	CA 201 V	CA 301 V	CA 401 V
Hydraulic capacity ⁽²⁾	hl/h	75	100	200	350	500	700	900
Effective capacity for must ⁽²⁾	hl/h	10-15	20-40	60-90	90-130	160-220	230-300	320-380
Effective capacity for pre-decanted wine ⁽²⁾	hl/h	30-40	50-80	130-160	160-200	250-300	320-400	420-500
Effective capacity for young wine ⁽²⁾	hl/h	20-35	40-60	120-150	150-170	220-260	280-380	400-480
Effective capacity for sparkling wine ⁽²⁾	hl/h	20-30	40-50	90-120	120-140	200-250	250-300	350-400
Weight of clarifier	kg	380	1,100	1,300	2,000	2,100	3,800	4,300
Footprint	m x m	2.5 x 1.4	3.2 x 1.5	3.5 x 1.5	3.6 x 1.6	3.6 x 1.6	2.2 x 1.9	2.3 x 2.1
Height	m	1.7	1.8	2.0	2.2	2.2	1.8	2.0
Total installed power of clarifier	KW(HP)	5.5(7.5)	7.5/11(15)	15(20)	22(30)	37(50)	45(60)	55(75)

(1) Skid-mounted sizes, except for CA 301 V and CA 401 V.

(2) Hydraulic capacity is the maximum throughput capacity of the bowl. Effective capacity is usually lower and depends on the character of the product and required degree of clarity at the clarified product discharge.

With more than 100 years' experience in the food and beverage industry, ANDRITZ SEPARATION is one of the world's largest suppliers of solid/liquid separation and automation equipment. Whether you're an international group or a family company, our

mission is the same: to provide reliable, efficient solutions that improve the quality of your wines. We have both the technology and the process knowledge to help you create the product your customers demand. It's a 360-degree approach that

gives you all the right ingredients for your success in the food and beverage industry.

Let's sit down and see how we could take your operations to the next level.

Contact us today.

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