Quality, Speed, and Trust

DÜNDER MAKINE

CATALOG



DISTILLATION - EXTRACTION

2026

www.dundermakine.com



CONTENTS



EXTRACTION	04-09
ABSOLUTE	10-11
ADSORPTION	12-13
STANDARDIZATION	14
EVAPORATOR	15
PRESSURE TANK	16
DISTILLATION	17-22
KOHOBATION	23
STORAGE TANK	24
REFERENCES	25

EXTRACTION

The Solvent Meets the Plant

What is Extraction?

Concretes obtained through solvent extraction preserve the natural scent, color, and characteristics of aromatic plants, offering unique and high-quality products to the perfume, cosmetic, [illegible] industries. This method is carried out by processing medicinal and



EKS-S SERİSİ



EKS-R SERİSİ



EKS-T SERİSİ

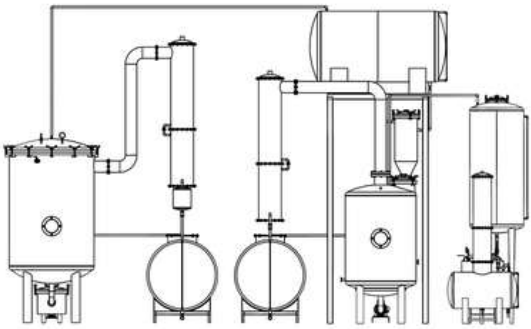
Features	Static Extraction	Rotary Extraction	Turbo Extraction
Working Principle	Constant and prolonged solvent contact	Solvent-raw material interaction using a rotating drum	High-speed mixing and mechanical force
Extraction Time	Long	Medium	Short
Efficiency	Medium	High	Highest
Solvent Usage	High	Medium	Low
Energy Consumption	Low	Medium	High
Production Capacity	Small and medium-scale	Medium and large-scale	Small and medium-scale
Cost	Low investment cost	High investment cost	Medium investment cost
Ease of Maintenance	Easy	Difficult	Medium
Automation Suitability	Suitable for full automation systems		
Water Consumption	Low	High	Medium
Solvent Consumption	High	High	Medium
Evoparatör Takımı	Available		

All three extraction methods enable the separation of target components from raw materials with the help of a solvent, thereby fulfilling essential functions such as process optimization, increased efficiency, and control of energy consumption.

Static Extraction

Static extraction is a method used to obtain herbal extracts and essential oils. Aromatic plants are placed on sieves and allowed to stand in a solvent, enabling the components to dissolve. With its low energy consumption and controlled process, it is a reliable option in the essential oil, cosmetics, and pharmaceutical industries.

EKS-S SERİES



Features	EKS-S 100	EKS-S 250	EKS-S 500
Capacity (L)	1500	3500	5000
Material	AISI 304/316		
Heating System	Direct/Indirect Steam		
Cooling System	Tubular/Serpentine		
Operating Pressure	0.5-1 Bar		
Evaporator Unit	100 liters	300 liters	600 liters

THE MACHINES ARE STANDARD DESIGNS AND CAN BE MODIFIED ACCORDING TO CUSTOMER NEEDS.



EKS-S 250



EKS-S 500

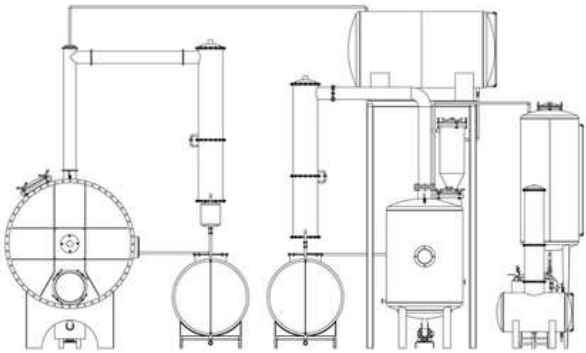


EKS-S 100

Rotary Extraction

Rotary extraction is a process of obtaining valuable components such as herbal extracts and essential oils by enhancing the interaction between the material and the solvent through rotational movement. This method offers high yield, moderate processing, and effective extraction, making it an ideal solution in the essential oil, cosmetics, and pharmaceutical industries.

EKS-R SERİES



Features	EKS-R 250	EKS-R 500
Capacity (L)	2500	4000
Material	AISI 304/316	
Heating System	Direct/Indirect Steam	
Cooling System	Tubular/Serpentine	
Motor Power (kW)	2.2	4
Operating Pressure	0.5-1 Bar	
Evaporator Unit	250 liters	300 liters

THE MACHINES ARE STANDARD DESIGNS AND CAN BE MODIFIED ACCORDING TO CUSTOMER NEEDS.



EKS-R 250



EKS-R 500

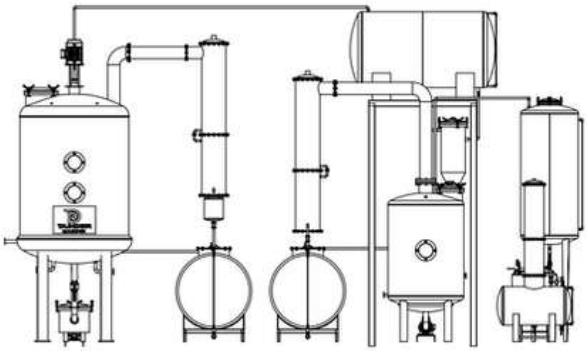


EKS-R 250

Turbo Extraction

Turbo extraction is a method for obtaining valuable components such as herbal extracts and essential oils through an accelerated process with high-speed mixing. This technique offers short extraction times, maximum efficiency, and low solvent consumption, making it an ideal solution for the essential oil, cosmetics, and pharmaceutical industries.

EKS-T SERİES



Features	EKS-T 1000	EKS-T 3500	EKS-T 5000
Capacity (L)	2500	3500	5000
Material	AISI 304/316		
Heating System	Indirect		
Cooling System	Tubular/Serpentine		
Motor Power (kW)	2.2	4	7.5
Operating Pressure	0.5-1 Bar		
Evaporator Unit	250 Liters	300 Liters	600 Liters

THE MACHINES ARE STANDARD DESIGNS AND CAN BE MODIFIED ACCORDING TO CUSTOMER NEEDS.



EKS-T 1000



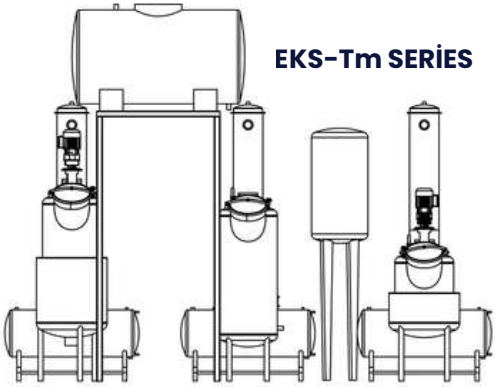
EKS-T 2000



EKS-T 500

Mini Turbo Extraction

Mini Turbo Extraction, with its compact design, enables the rapid and efficient extraction of herbal extracts and essential oils. High-speed mixing shortens the extraction time while ensuring a sustainable process with low solvent consumption. It is an ideal solution for the cosmetics, essential oil, and pharmaceutical industries.



EKS-Tm SERİES

Features	EKS-Tm 100	EKS-Tm 250	EKS-Tm 500
Capacity (L)	100	250	500
Material	AISI 304/316		
Heating System	Indirect		
Cooling System	Tubular/Serpentine		
Motor Power (kW)	0.37	1.1	1.1
Operating Pressure	0.5-1 Bar		
Evaporator Unit	50 Liters	50 Liters	100 Liters

THE MACHINES ARE STANDARD DESIGNS AND CAN BE MODIFIED ACCORDING TO CUSTOMER NEEDS.



EKS-T 250



EKS-T 100



EKS-T 500

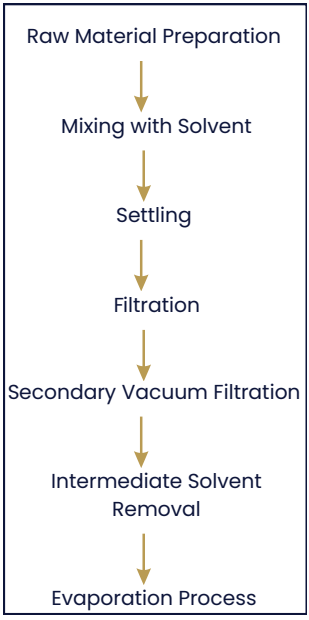
EXTRACTION UNIT EQUIPMENT AND FLOW DIAGRAM

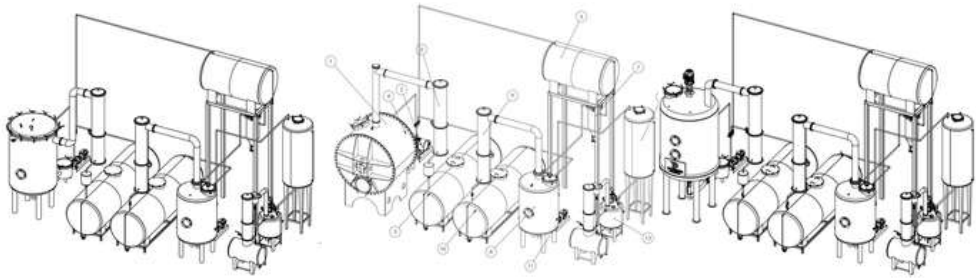
Extraction is a fundamental process that enables the pure isolation of botanical and chemical components. Our company manufactures stainless steel extraction equipment designed for high efficiency and compliance with hygiene standards.

Equipment List	No
Rotary / Static / Turbo Extractor	1
Extractor Cooling Exchanger	2
Solvent Collection Tank (Horizontal)	3
Stainless Steel Filter	4
Pump	5
Settling Tank (Horizontal)	6
Decanter	7
Distiller	8
Distiller Cooler	9
Solvent Collection Tank (Horizontal)	10
Pump	11
Settling Tank (Vertical)	12
Evaporator Unit	13

This table can be redesigned for greater variety.

Flow Diagram





YOU CAN OPTIMIZE YOUR PRODUCTION PROCESSES BY SELECTING THE MOST SUITABLE EQUIPMENT.

ABSOLUTE

Concrete is dissolved in alcohol.

WHAT IS ABSOLUTE?

Absolute is a valuable compound obtained from plant parts such as flowers and leaves. In the initial stage, concretes are extracted using solvent extraction and then purified with alcohol to create a pure and rich fragrance profile. This method is an ideal choice for the perfumery, cosmetics, and aromatherapy industries, as it offers a deep and authentic scent character.



Özellikler	ABS 250	ABS 500
Capacity (L)	10 kg/day	20 kg/day
Material	AISI 304/316	
Solvent Used	Alcohol	
Evaporator Unit	100 liters	300 liters



ABS 250

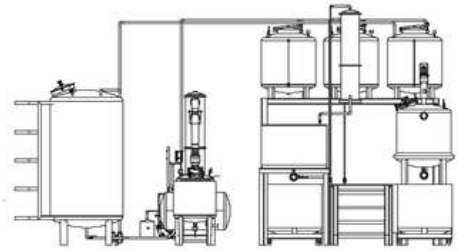


ABS 500

ABSOLUTE

Concrete is dissolved in alcohol.

ABSOLUTE FLOW DIAGRAM



Absolute is obtained by dissolving the waxy structures in concrete with alcohol and purifying them through filtration and evaporation processes. High-quality products are derived from flowers such as rose (Rosa damascena), jasmine, tuberose, violet, lily, and orchid.

Mixing & Heating

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First Vacuum Filtration

↓

Dinlendirme

↓

Cooling

↓

Second Vacuum Filtration

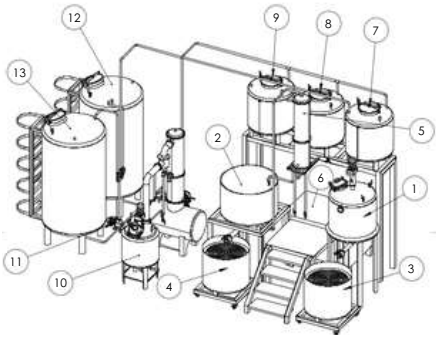
↓

Alcohol-Based Product Settling

↓

Evaporation Process

ABSOLUTE UNIT EQUIPMENT



Equipment List	No
Mixing Tank	1
Cooling Unit	2
Filter Tank	3
Filter Tank	4
Cooling Exchanger	5
Alcohol Cooling Unit	6
Alcohol Preparation Tank	7
Settling Tank	8
Settling Tank	9
Evaporator Unit	10
Pump	11
Main Alcohol Tank	12-13

This table can be redesigned for greater variety.

ADSORPTION

Phenethyl alcohol is produced.

WHAT IS ADSORPTION? (PEA)

It is a process in which molecules adhere to a surface (solid or liquid) to achieve separation. In industrial applications, it is particularly used for the recovery of turpentine present in aromatic waters. In this process, oil molecules accumulate on a suitable adsorbent material, then are separated and recovered.



Features	ADS 200	ADS 400
Column Volume	200 Litre	400
Material	AISI 304/316	AISI 304/316
Adsorbent Material	Carbon/Zeolite	Carbon/Zeolite
Application Area	Small and medium-scale facilities	Industrial production facilities
Evaporator Unit	100 Liters	250 Liters

THE MACHINES HAVE STANDARD DESIGNS AND CAN BE MODIFIED ACCORDING TO CUSTOMER REQUIREMENTS.



ADS 200 Rose PEA

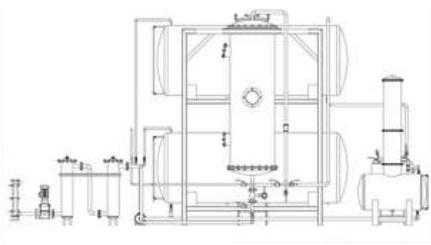


ADS 400 Rose PEA

ADSORPTION

Phenethyl alcohol is produced.

ADSORPTION FLOW DIAGRAM



Cooling & Filtration

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Transfer to Resin Column

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Alcohol Addition

↓

Settling

↓

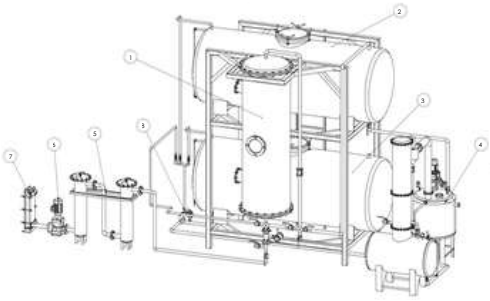
Evaporation Process

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Product Collection



ADSORPTION UNIT EQUIPMENT



Equipment List	No
Resin Column	1
Alcohol Tank	2
Storage Tank for Solvent	3
Evaporator Unit	4
Stainless Steel Mesh Filter	5
Stainless Steel Water Pump	6
Brazed Plate Heat Exchanger	7
Alcohol-Water Pump	8
Distiller Cooler	9

This table can be redesigned for greater variety.

STANDARDIZATION

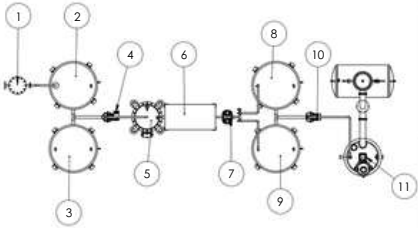
Achieves homogeneous quality.

What is Standardization?

Standardization is a process applied to ensure that the product obtained from the extraction process meets a specific standard. In this process, unwanted components are retained while the targeted active substances are purified and transferred to the next tank. This ensures homogeneous quality in every production, resulting in reliable and consistent products for the food, cosmetics, essential oil, and pharmaceutical industries.



Equipment List	No
Filter	1
Incoming Product Storage Tank	2
Alcohol Storage Tank	3
Pump	4
Standardization Column	5
Alcohol Pump	6
Alcohol-Based Product Storage Tank	7
Product Storage Tank	8
Alcohol-Based Product Storage Tank	9
Pump	10
Evaporator Unit	11



Filtration & Settling

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Transfer to Resin Column

↓

Alcohol Addition

↓

Settling

↓

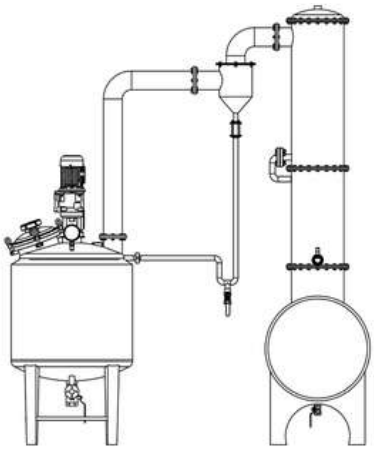
Evaporation Process

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Product Collection

EVAPORATOR

The liquid evaporates under vacuum.



Evaporator Unit

An evaporator is a system that increases the concentration of a liquid or removes unwanted liquid from the system by evaporating it under controlled temperature and vacuum conditions. When the heated liquid reaches its designated boiling point, it evaporates and separates. This method is widely used for concentration enhancement, solvent recovery, and various industrial cooling systems.

Features/Model	EVP-250	EVP-300	EVP-600
Capacity (L)	250	300	600
Material	AISI 304/316		
Heating System	Indirect		
Cooling System	Tubular/Serpentine		
Motor Power (kW)	0.37	0.37	0.37
Vacuum System	Avaible		



EVP-600



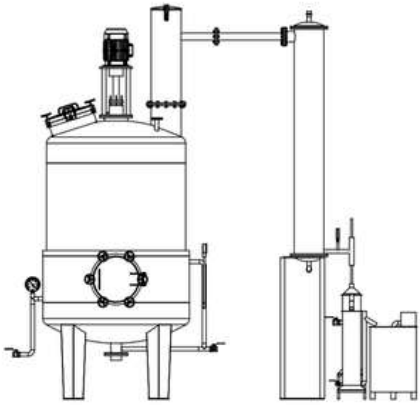
EVP-300



EVP-250

PRESSURE BOILER

The liquid evaporates under pressure.



Pressure Boiler

A Pressure Boiler is a system that operates under specific pressure conditions to extract essential oils from certain aromatic plants. The primary purpose of applying pressure in this process is to increase the water temperature, allowing for more efficient processing of plant material. This method is widely used to enhance essential oil yield and facilitate the effective release of desired compounds.

Features/Model	EKP-500	EKP-1000	EKP-2000
Capacity (L)	2500	3500	5000
Material	AISI 304/316		
Heating System	Direct/Indirect Steam		
Cooling System	Tubular/Serpentine		
Motor Power (kW)	2.2	4	7.5
Operating Pressure	0.5-8 Bar		



EKP-2000



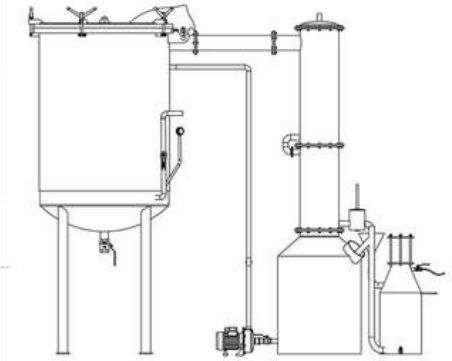
EKP-1000



EKP-500

DISTILLATION

Hydrosol and essential oil are produced.



BI SERİES

Steam System Steam Distillation is a method that operates with an external steam generator to extract essential oils and hydrosols from aromatic plant materials. In this system, the produced steam is directed straight into the chamber containing the plant material, initiating the distillation process. Controlled steam flow ensures the preservation of delicate components while helping to maintain the natural structure of the essential oils in the best possible way.

Features/Model	BI-50	BI-100	BI-200	BI-500	BI-1000
Capacity (L)	500	1000	2000	3500	5000
Material	AISI 304/316				
Fuel Type	Steam Generator / Boiler (Natural Gas, Fuel Oil, etc.)				
Cooling System	Tubular/Serpentine				
Oil Separation	Florentine Flask				

Our BI models are mounted on a suitable metal platform placed on a flat surface and are made operational by integrating a crane system. This structure ensures a safe and quick installation, providing practical usage.



BI-500



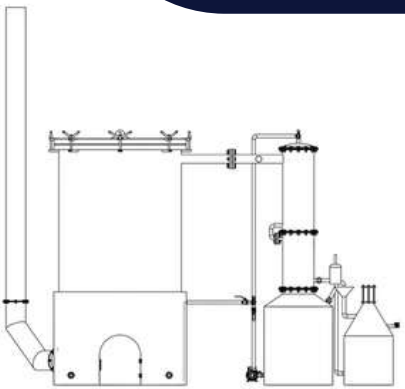
BI-1000



BI-100

DISTILLATION

Hydrosol and essential oil are produced.



KY SERİES

Solid Fuel Distillation is a method used to obtain essential oils and hydrosols from aromatic plant materials. By utilizing wood and similar natural fuels for heating, process efficiency is enhanced while reducing energy costs. Additionally, this method supports a sustainable production process by promoting the efficient use of natural resources.

Features/Model	KY-50	KY-100	KY-200
Capacity (L)	500	850	1800
Material	AISI 304/316		
Fuel Type	Solid Fuel / Electric		
Cooling System	Tubular/Serpentine		
Oil Separation	Florentine Flask		

NOTE: THE PROVIDED VALUES ARE FOR REFERENCE ONLY AND MAY VARY DEPENDING ON APPLICATION REQUIREMENTS AND DESIGN SPECIFICATIONS.



KY-50



KY-200



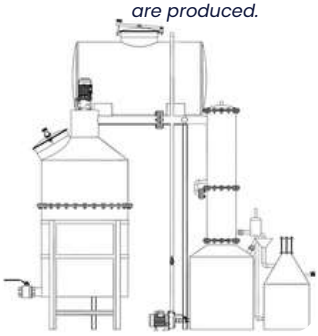
KY-100



The KY Series offers the possibility of distillation using both solid fuel (wood) and electricity with four 10 kW electric resistances. Its versatile design provides the freedom to choose between different energy sources.

DISTILLATION

Hydrosol and essential oil are produced.



BK SERİES

Solid Fuel Water Distillation is a method used to obtain essential oil and hydrosol from Rosa Damascena rose flowers. The heat generated by wood and similar natural fuels increases the water temperature, allowing the rose flowers to be processed through steam distillation. This method enables the extraction of rose oil and rose water in their purest form.

Features/Model	BK-80	BK-100	BK-150
Capacity (L)	80 Kg Rose	100 Kg Rose	150 Kg Rose
Material	AISI 304/316 & Bakır		
Fuel Type	Solid Fuel / Stoker		
Cooling System	Tubular/Serpentine		
Oil Separation	Florentine Flask		
Storage Tank	200 Liters	300 Liters	400 Liters

NOTE: THE PROVIDED VALUES ARE FOR REFERENCE ONLY AND MAY VARY DEPENDING ON APPLICATION REQUIREMENTS AND DESIGN SPECIFICATIONS.



BK-100 ROSA DAMASCENA



BK-150 ROSA DAMASCENA



BK-80 ROSA DAMASCENA

Copper is a material preferred in traditional methods, as it evenly distributes heat, enhancing distillation efficiency. Additionally, it helps preserve the purity of essential oils, contributing to the production of higher-quality products.

Resin Distillation

Resin Distillation is a method used to separate and purify volatile components from plant resins. In this process, a mixture of resin and water is heated indirectly through wall heating, causing the volatile compounds to evaporate. These components are then released under controlled temperature conditions, condensed, and collected in liquid form. This technique is particularly used to obtain essential oils and valuable compounds from resins such as myrrh, frankincense, elemi, and gum olibanum. Wall heating ensures uniform heat distribution, allowing the components to be extracted in their purest form.

Features/Model	CI-50	CI-100	CI-200	CI-500	CI-1000
Capacity (L)	500 L	850 L	2000 L	3500 L	5000 L
Material	AISI 304/316				
Fuel Type	Steam Generator / Boiler (Natural Gas, Fuel Oil, etc.)				
Cooling System	Tubular/Serpentine				
Heating System	Jacket, Direct/Indirect				

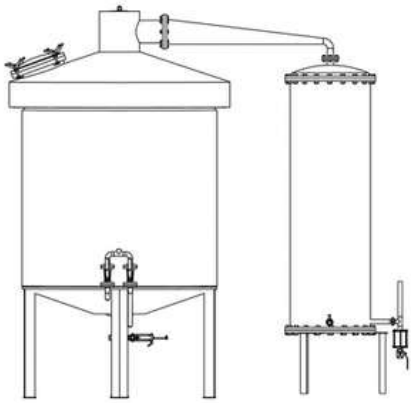


DISTILLATION

Hydrosol and essential oil are produced.

Steam and Hydro Distillation

Water and Steam Distillation is a system that combines both water distillation and steam distillation to obtain essential oils and hydrosols. Steam from an external steam generator directly interacts with the plant material while also increasing the water temperature through coils to support the distillation process. This method ensures balanced heating, allowing the extraction of essential oils and hydrosols in their purest form



Features/Model	HBI-50	HBI-100	HBI-200	HBI-500	HBI-1000
Capacity (L)	500 L	850 L	2000 L	3500 L	5000 L
Material	AISI 304/316				
Fuel Type	Steam Generator / Boiler (Natural Gas, Fuel Oil, etc.)				
Cooling System	Tubular				

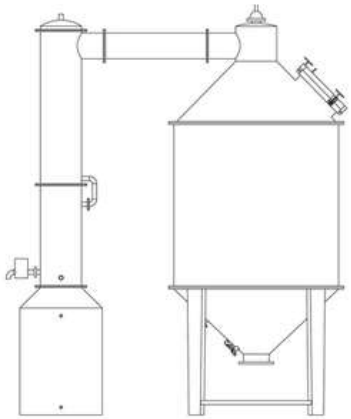


DISTILLATION

Hydrosol and essential oil are produced.

Hydro Distillation

Steam-Based Water Distillation is a method that operates with an external steam generator to obtain essential oil and hydrosol from Rosa Damascena rose flowers. The produced steam increases the water temperature, facilitating the processing of rose flowers. With controlled steam flow, rose oil and rose water are extracted in their purest form, making the distillation process more efficient.



Features/Model	HI-200	HI-500	HI-1000
Capacity (L)	2000 L	3500 L	5000 L
Material	AISI 304/316 & Bakır		
Fuel Type	Steam Generator / Boiler (Natural Gas, Fuel Oil, etc.)		
Cooling System	Tubular/Serpentine		
Oil Separation	Florentine Flask		



HI-500 ROSA DAMESCANE

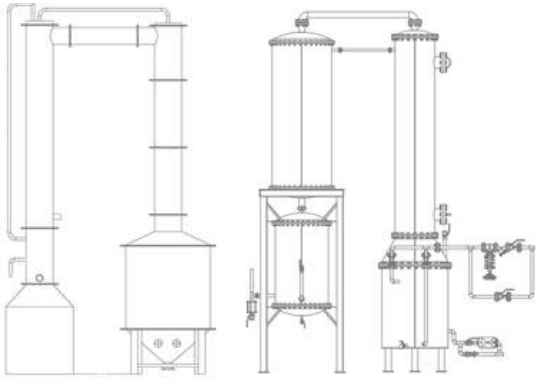


HI-1000 ROSA DAMESCANE



HI-500 ROSA DAMESCANE

Copper is a material preferred in traditional methods, as it evenly distributes heat, enhancing distillation efficiency. Additionally, it helps preserve the purity of essential oils, contributing to the production of higher-quality products.



Cohobation

Cohobation is a technique used after the distillation process, especially preferred in essential oil production. In this method, the hydrosol obtained at the end of distillation is reprocessed to further separate the volatile compounds it contains, thereby enhancing product quality and efficiency.

Topic	Description
Process Step	Redistillation of hydrosol after distillation.
Equipment Used	Cohobation system, heating system, hydrosol return line.
Purpose	To increase essential oil yield and improve hydrosol quality.
Application Areas	Essential oil production.







REFERENCES

They Trusted Us.

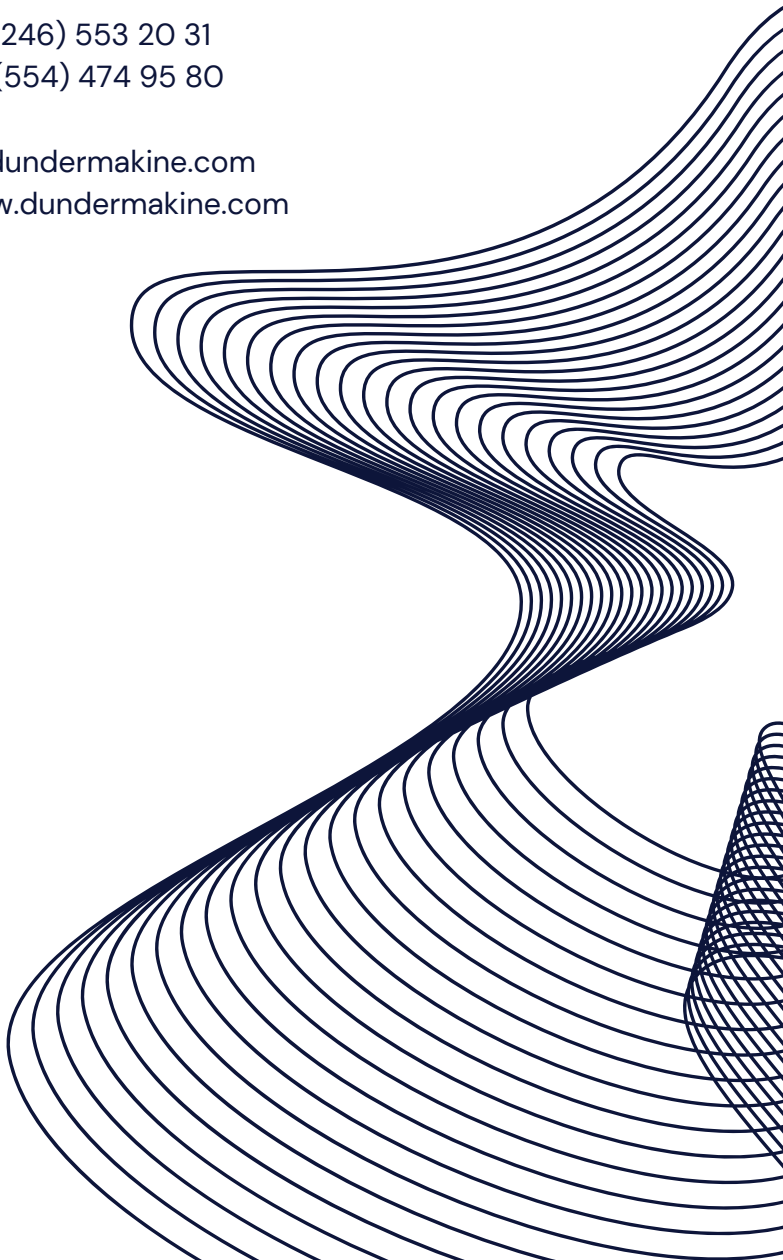


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