NEXIA
LAUNDRY SMART EVOLUTION

MAIN CATALOGUE

MADE IN ITALY

All our technology at the service of sustainable denim production

Nexia & De Franceschi (1871) is an Italian group leader in the production of innovative machineries which developed a deep experience and know-how in the finishing process within the textile sector, with particular focus on the denim industry. **Technologically advanced products and systems aligned to the industry 4.0 standards**, CLIMA CERTIFIED, have been conceived and manufactured to drastically reduce the consumption of water, chemicals and energy. Nexia & De Franceschi's line includes **stone-wash, dyeing, drying and laser machines**, available in different sizes, suitable for both sampling and production, with high performance results. Sustainability is a constantly evolving journey for N&DF as it is actively engaged in researching and developing less environmentally impactful cutting-edge technologies, such as the ALLTOGETHER SYSTEM, a combination of options applicable to all Nexia's Washing/Dyeing machines the NEXSTONE, a washing system without pumice stone; the NDROP single or double nebulizer, to reduce water consumption; Nexia's predisposition for the OZONE SYSTEM installation; jet system for high-spin dyeing treatment and WAVE SYSTEM for water recovery.

This reaffirms N&DF's dedication to responsible production through high performing machines and applications from a target zero perspective.

Alltogether® the certified real green wash

All treatments in all Nexia's Washing/Dyeing machine

WAVE
Water
Recirculation

N DROP
Double
Nebulizer

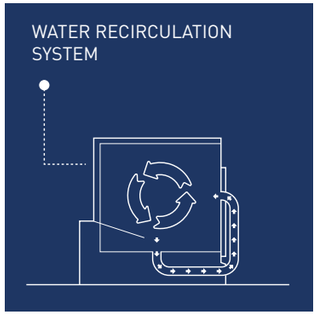
NEXSTONE
Stone free
Abrasion

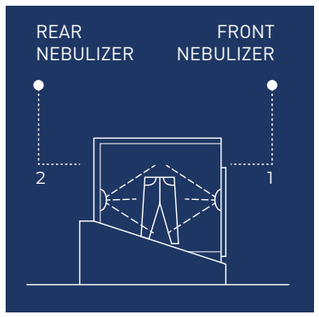
OZONE
Dry, Wet and
in bath processes

Nexia Engineering is proud to introduce this innovative and exclusive system, an absolute "state of the art" technology, with 4 treatment options available in an all-inclusive "start" button: just one cycle which **significantly reduces the environmental impact** by shortening the processing time and cutting the energy consumption. Thanks to Nexia AllTogether, ambitious objectives are made possible: water consumption **reduced by up to 85%,** the use of chemical products lowered by as much as 87% and energy consumption lessened by up to 40%.

All treatments in a single Nexia Washing/Dyeing machine.

The ALLTOGETHER System, which can be installed in all Nexia's Washing/Dyeing Machines, performs a complete treatment and the rinsing of garments between one procedure and the other in just one loading/unloading operation: an uninterrupted cycle which brings to a more dynamic process with outstanding results.





WAVE SYSTEM

WATER RECIRCULATION SYSTEM

Nexia Wave is a water recovery and recirculation system, used in both washing and dyeing processes, which drastically reduces the liquor ratio, for a full sustainable cycle.

N DROP

DOUBLE NEBULIZER

The Ndrop double nebulizer increases load capacity and simultaneously reduces water consumption per garment by at least 85% (compared to the latest market technology). The NDrop system can be connected up to 2 Nexia's washing machines.

NEXSTONE

STONE FREE ABRASION

An exclusive and unique patented system whereby textiles are washed without the use of pumice stone. Nexstone reduces waste emissions and water consumption.

OZONE

IN DRY, WET OR IN BATH PROCESSES

The Ozone, in combination with water, is a strong bleacher and a powerful sanitizer.

Wave® System

Water recirculation system

Nexia Wave is a water recovery and recirculation system, used in both washing and dyeing processes, which drastically reduces the liquor ratio, for a full sustainable cycle.
Combined with Ozone, it forms an excellent and uniform mix introduced through a forced flow directly over the garments during the treatment.
Applied to any Nexia's Washing/dyeing Machine:
- it optimizes the washing cycle, reducing the bath ratio to 1:2;
- it recirculates the water
- it gives regular and constant treatments to the garments.

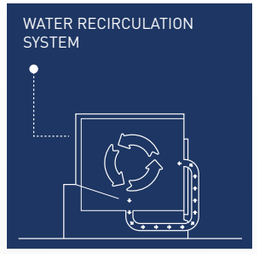
The synergy between the Wave System, Nexstone, NDrop and Ozone technologies brings to:
- Stone wash Effect
- Perfect cleaning of the garments
- Eco bleaching

Furthermore, Wave System saves water and chemicals, limiting the process to a sustainable flow. The water is collected and recirculated through injectors with a pressure set for a perfect treatment of the denim.

Steam consumption **-50%**

Energy consumption **-25%**

Water consumption **-55%**

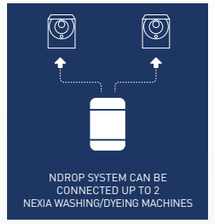


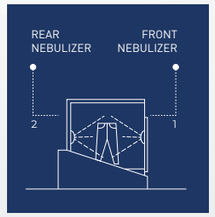
Ndrop®

Single or Double Nebulization System

NDrop is an exclusive, unique and patented system, with single front or double (front & rear) nebulizers, which increases the load capacity and simultaneously reduces the water consumption per garment by at least 85% **(1:0,5 - 1:1 liquor ratio)** with a better uniformity of the required treatment.
It can also create cloudy effects on both knitwear and trousers, thanks to specific adjustments managed by the microprocessor that controls the machine.
The nebulizers are made of stainless steel and are set to host up to 4 nozzles (normally supplied 2 per side) that can be easily removed for cleaning or replaced.
In the sampling machines, the Ndrop Nebulization System is integrated and features a front nebulizer installed on the door, improving the machine's functionality and efficiency.
The Double Nebulization System, applicable to all Nexia's production machines, features an external AISI 316 stainless-steel load-bearing structure, with a scotch brite finishing, which is equipped with 2 x 100 liters tanks, an inbuilt mixer and stainless-steel lids. A double mixer is available on request.

ADDITIONAL FEATURES:
- 100% stainless steel high-pressure pump equipped with special filters to prevent dirt from entering the nozzles inside the machines.
- Suction system that eliminates any suspended dye residuals inside the drum.
- Machine's microprocessor that controls all the system's functions.
- Reduction of the consumption of chemicals and energy.





Steam consumption **-65%**

Energy consumption **-50%**

Water consumption **-80%**

TECHNICAL DATA	NS 5	NS 17	NS 40
Drum Thickness	3 mm	4 mm	4 mm
Drum Diametre	700 mm	950 mm	1300 mm
Drum Depth	390 mm	700 mm	900 mm
Drum Volume	150 lt	500 lt	1200 lt
Door Diametre	490 mm	655 mm	655 mm
Spin Speed	0-480 rpm	0-450 rpm	0-350 rpm
High Spin Speed (optional)			600 rpm
Power installed	3 Kw	5,5 Kw	11 Kw
Voltage	3HP 400V 50/60 Hz	3HP 400V 50/60 Hz	3HP 400V 50/60 Hz
No 2 Tanks	8 lt + 8 lt	12 lt + 12 lt	30 lt + 30 lt
Tank rinsing valve Ø	1/2"	1/2"	1/2"
MACHINES' OVERALL DIMENSIONS			
Height	1330 mm	1700 mm	2060 mm
Width	900 mm	1180 mm	1560 mm
Depth	1015 mm	1465 mm	1775 mm

TECHNICAL DATA	NS 260	NS 420	NS 520
Drum Thickness	5 mm	5 mm	5 mm
Drum Diametre	1650 mm	1865 mm	1865 mm
Drum Depth	1200 mm	1545 mm	1890 mm
Drum Volume	2560 lt	4218 lt	5160 lt
Door Diametre	1010 mm	1010 mm	1010 mm
Spin Speed	0-140 rpm	0-140 rpm	0-140 rpm
High Spin Speed (optional)	550 rpm	550 rpm	550 rpm
Power installed	22 Kw	27 Kw	35 Kw
Voltage	400V 50/60 Hz	400V 50/60 Hz	400V 50/60 Hz
No 1 Tanks	90 lt	90 lt	90 lt
Tank rinsing valve Ø	3/4"	3/4"	3/4"
MACHINES' OVERALL DIMENSIONS			
Height	2550 mm	2900 mm	3100 mm
Width	1650 mm	2250 mm	2250 mm
Depth	2500 mm	3050 mm	3400 mm
Width with electrical panel	2150 mm	2750 mm	2750 mm

Alltogether®

Nexstone®

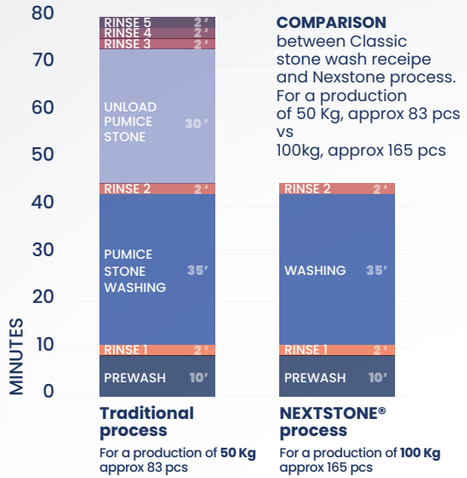
Stone free abrasion system

The first stone wash effect without pumice stone.
Nexstone is an exclusive and unique patented system which replaces the use of pumice stone in the washing process with even better results. With a significant reduction in energy consumption, particularly in water, Nexstone is ecologically advanced and improves mechanical action on garments through its unique beaters: these eliminate the traditional stone loading and/or unloading and consequently the extra rinsing to remove residuals of the pumice from the garments or from the machine.

Steam consumption **-50%**

Energy consumption **-25%**

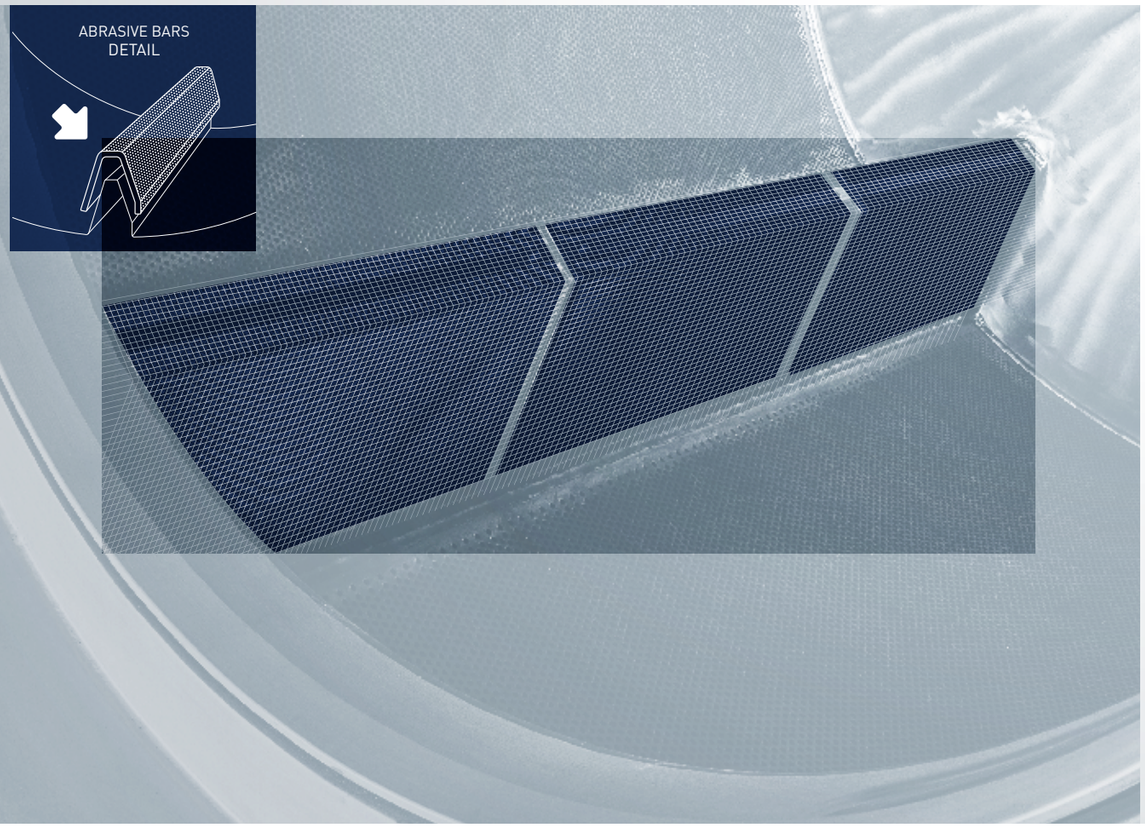
Water consumption **-55%**



Traditional process
For a production of **50 Kg** approx 83 pcs

NEXTSTONE® process
For a production of **100 Kg** approx 165 pcs

COMPARISON
between Classic stone wash receipe and Nexstone process.
For a production of 50 Kg, approx 83 pcs
vs
100kg, approx 165 pcs



Neo® (Nexia ozone engineering)

Ozone Generator

It can be used as a bleach and a powerful sanitizer in Wet, Dry or In Bath garments.
The use of Ozone in the washing treatment process is becoming increasingly important in the textile process, as its unique features enable companies to respond effectively to the market's varying production demands. The use of Ozone is generally known, particularly in the textile sector, for its strong oxidizing action which makes it the most powerful and "ecological" sanitizer in the industry. All operations are managed by a control system integrated in an electrical panel, which allows to program all equipment and accessories installed in the machine in one single operation system. All system parameters are displayed and monitored on an info-read and monitored to ensure maximum reliability and safety for the operators. Nexia Ozone system can be connected up to 3 machines working either in dry, wet or in bath mode. The Ozone generator comes with a catalyst which eliminates ozone emissions into the atmosphere.

- Whitening of the garment at the required range
- Improvement of the fabric finish
- Water saving (low liquor ratio)
- Energy savings (use of cold or warm water)
- Reduction of chemical products use
- Fabric sanitation
- Improvement of the quality of wastewater with reduction of current surfactants
- Safe work environment
- Low environmental impact

Steam consumption **-50%**

Energy consumption **-25%**

Water consumption **-80%**

Nd 420 C

Front load high spin washing machine for dyeing treatments.

Nexia ND 420C high spin dyeing machine reduces the liquor ratio and prevents any possible abrasion or knotting during the operation.
With an open pocket drum, Nexia ND 420C is designed especially for washing and dyeing treatments for ready-made garments. The customized color kitchen guarantees an excellent repeatability of the dyeing recipes.

eco process · less energy · less water

Jet System

Nexia JET System

It is a high-speed dyeing system specifically studied to reduce the liquor ratio traditionally used in the industry to avoid abrasions and knots on the garment. This new technology offers an excellent penetration of the dye bath even on very closed fibers, considerably reducing the cycle time, saving water and chemicals and making the dyeing process more sustainable.

multiple processes in one machine · eco process · less chemical · less energy · less water

Nd/Ns 2

Sampling front-loading washing and dyeing machine

Nexia ND2 ensures the same results of an industrial washing machines. The space between the drum and the containment tank is reduced to the minimum, ensuring a very low liquor ratio. The loading capacity is highly flexible, ranging from 50 grams with a liter of water to a maximum of 1 kg. Indirect heating by electric resistance located inside the bath containment tank. Water inlet valve equipped with digital flow meter and AISI 316 stainless steel solenoid valve.
The machine is equipped with 1 product vessel with a 1-liter capacity for manual introduction (automatic option available on request), positioned on the upper side of the machine.
100% stainless steel. Manual door with operator's safety lock.
Main functions managed by a microprocessor.

Nd/Ns 5

Front loading high spin washing machine.
Max. load: 5 Kg

Nd/Ns 17

Front loading high spin washing machine
Max. load: 17 Kg

Nd/Ns 40

Front loading high spin washing machine.
Max. load: 40 Kg

NEXIA'S 100% STAILNESS STEEL ND/NS SAMPLING MACHINES for washing and dyeing, guarantee the same effect of bulk production in any kind of treatment.
They features a new captivating design and a high-speed dyeing system which prevents any possible abrasion or knotting during the operation, reduces the liquor ratio, ensures an excellent penetration of the dye bath even on garments with tightly woven fibers, significantly reducing the dyeing cycle time.
The space between the drum and the containment tank is reduced to the minimum: this allows you to work with a low liquor ratio (1:2), reducing the environmental impact and energy consumption. Manual inspection porthole and external door with operator safety device.
Indirect heating and cooling system through a coil placed in the dyeing bath containment tank. Water and steam inlets/outlets are fitted with stainless steel AISI 316 pneumatic valves.
2 product tanks with automatic gravity introduction placed on the left side of the machine. The introduction can be programmed either continuously or step by step by setting the recipe on the microprocessor. An innovative touch screen to control all the machine functions, simple to use, can memorize a large number of automated programs.
NEXIA ND/NS sampling machines can be connected to Nexia's Ozone generator, suitable for Wet, Dry and in Bath processes; they can also be connected to SUPERVISION, Nexia's software to monitor and manage all process operations.

Ndry Circular Energy

Rotary Dryer – Frontal Type

Nexia's team works every day to develop high-quality, ethically sustainable, and responsibly manufactured products, offering customers environmentally friendly innovations that reflect Nexia's dedication to protecting the planet for future generations.
The NDRY Circular Energy model is a key solution in Nexia's commitment to sustainability and innovation. It is designed to recover exhaust air heat to preheat incoming air, minimizing energy waste and significantly reducing the energy required by the heat exchanger. This technology can also be retrofitted to existing dryers, including both CNG/GPL and steam models.
The loading and unloading of garments are facilitated by a large, stainless-steel front door with pneumatic operation. A thick tempered glass window provides a wide view of the garments during the drying cycle. The structure, made of properly coated carbon steel, consists of a fixed and a movable section powered by a pneumatic cylinder located at the rear bottom of the machine.

TECHNICAL FEATURES:
- Microprocessor control for manual and automatic process
- Inverter adjustable speed
- Stainless steel exchanger, aluminum flaps (steam)
- CNG/GPL burner
- Forward tilting
- Pneumatic opening/closing system

OPTIONAL FEATURES:
- Central Data Processing – supervision system unit for the machine
- Additional loading and unloading door
- Perforated polished drum suitable for microfibre garments
- Steam system controlled by microprocessor
- One or more products spray system
- Humidity probe
- Automatic garments loading/unloading system

AIR RECOVERING SYSTEM

Ndry

Rotary Dryer – Frontal Type

Nexia NDRY Rotary Dryer, designed for industrial production, is a robust and high-performance machine. The construction of its components is carefully engineered to achieve a balance between technological and production requirements.
The operating principle of the rotary dryer relies on an air circulation system. The heated air is generated by proper flap exchangers when powered by steam, or by a dedicated burner when powered by CNG or LPG.
The airflow is directed through the garments, keeping them in constant motion inside the fully perforated circular drum. The humid air is carried through a radiator to heat the incoming fresh air, which is then recirculated and finally expelled as dry air.
The loading and unloading of the garments take place through a large stainless steel front door. The door is equipped with a pneumatic movement system and features thick tempered glass, allowing full visibility of the garments during the drying cycle.
The structure is made of varnished carbon steel and consists of two parts:
- A fixed section
- A movable section, which is operated by a pneumatic cylinder located at the bottom rear of the machine.

TECHNICAL FEATURES:
- A microprocessor for the control of automatic and manual cycles
- Variable speed control via an inverter
- Stainless aluminum flap exchangers (steam version)
- A CNG/LPG burner option
- Forward tilting for easier access
- A pneumatic system for opening and closing

OPTIONAL FEATURES:
- A central data processing and supervision system
- An additional loading and unloading door
- A polished perforated drum suitable for microfiber garments
- A steam system controlled by a microprocessor
- A spray system for one or more products
- A humidity probe
- An automatic system for loading and unloading garments

Nray^4

Dual Laser-Double Area Marking System with Mannequins

NRay4 is a new high-performance last generation laser machine equipped with a new digital scanning head. Special effects such as customized designs, images, brands, whiskers and sandblasting can be reproduced on finished garments, both in denim and fabric.
Nray4 is a high speed working machine with outstanding performances.

eco process · vertical laser source · horizontal laser source · double conveyor belt · double mannequin

Nray^3

Version with mannequins (double source on demand).

NRay3 is a new double high-speed laser head professional system with two vertical mannequins. The two laser sources are installed on a special structure. The 2 mannequins units are installed on a rotating base, with special transparent protections and safety devices in compliance with current European regulations. This machine is designed for high productivity.

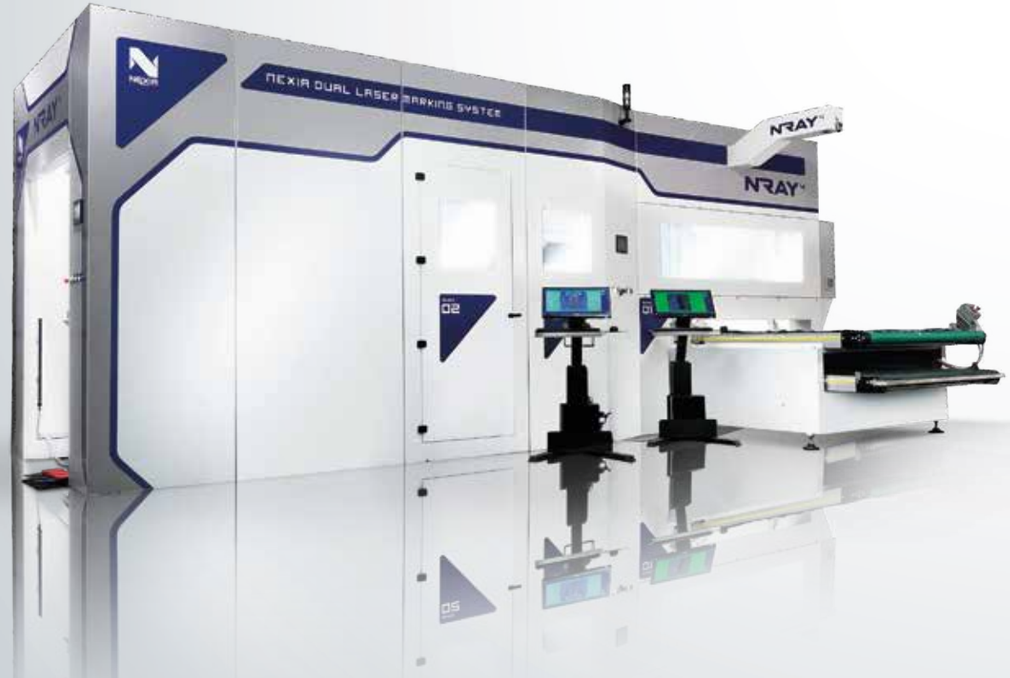
eco process · double laser source · double conveyor belt · double mannequin

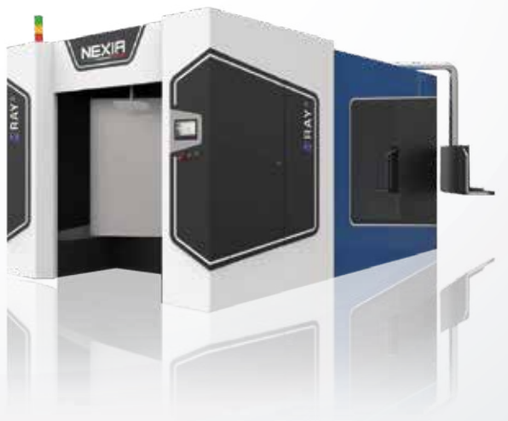
Nray^2

Double alternate conveyor belt system with single source.

Welcome to high productivity and reduced production times Era. Thanks to the new independent and simultaneous double conveyor belt, 4 garments can be loaded and laser treated at the same time. Once the process is completed, the autonomous lower conveyor belt returns the processed garments to the operator's position to be easily removed.

eco process · vertical laser source · independent and simultaneous double belt system





Nitrogen®

Dyeing system using nitrogen

The new Nitrogen System
is designed to carry out low-cost dyeing cycles with very short processing times, using sulfur and indanthrene dyes. (About 70 minutes at 60–65 degrees C.)
Thanks to the use of N2 in an airless environment, it enhances the application of all those dyes that, until now, needed oxygen instead as a form of reduction and fixation of the color on the fibre. The garments dyed with this innovative process result in a full, intense and long-lasting colors. In addition, it ensures the reproducibility of the colors between the lots.

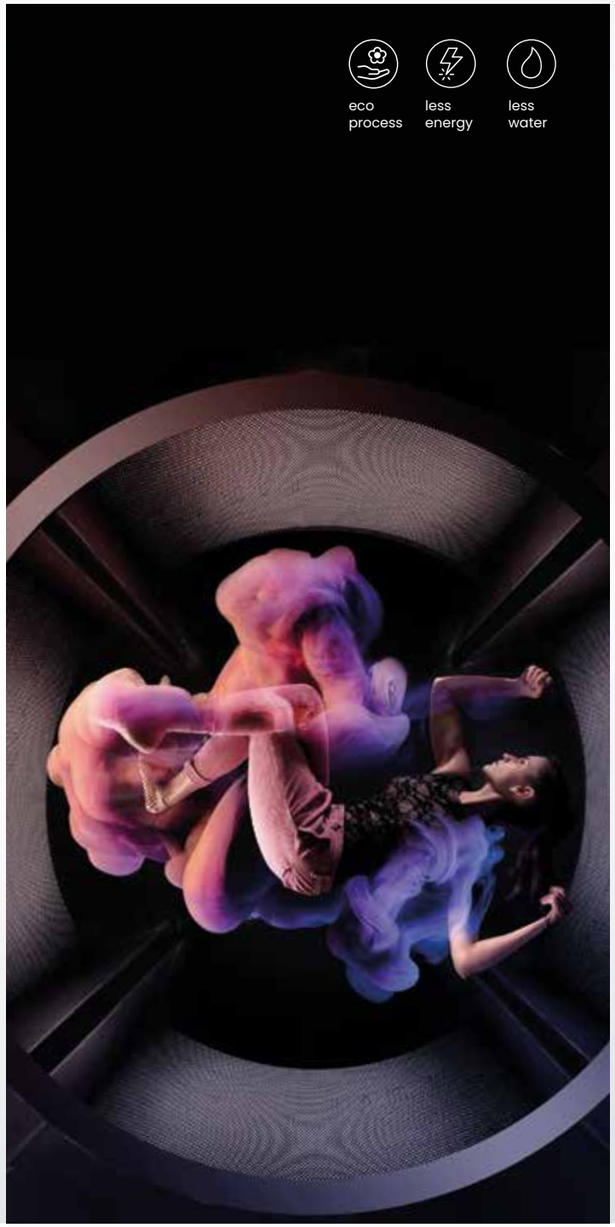
THE NITROGEN SYSTEM IS SET TO REVOLUTIONIZE THE WORLD OF DYEING.
LOW TEMPERATURES AND SHORT DYEING CYCLE GUARANTEE THE REPRODUCIBILITY OF THE COLOR BETWEEN THE LOTS, SAVING WATER, ENERGY AND USING ECO-FRIENDLY CHEMICALS.

Raw materials used in the Nexia Nitrogen system:
- Derived from agricultural crop waste
- No competition with land used for food crops
- Renewable every year
- Abundant and available all over the planet
- Traceability / Verifications
- Minimal risk of fraud
- Transparency of the supply chain/production chain
- Verified use of natural colors
- Unique encoded NFC

Less Time
High fastness values in the garment dyeing process. The redox system ensures high production reproducibility in very short times.

Less Chemicals
Lower water and chemical consumption, reducing environmental impact.

Less Energy
Low temperature treatments result in lower energy costs and excellent performance.



Lcf.T 220 / 330 / 520

Front loading washing machine for dyeing treatments.

High spin industrial washing machine designed for the dyeing of ready-made and delicate products. The drum can be divided into 3 or 4 compartments, depending on the customer's requirements. Available in 4 different load capacities.

TECHNICAL DATA	LCF.T 220	LCF.T 330	LCF.T 520
Drum Thickness	5 mm	5 mm	5 mm
Drum Diametre	1530 mm	1760 mm	1990 mm
Drum Depth	1250 mm	1310 mm	1680 mm
Drum Volume	2200 lt	3300 lt	5200 lt
Variable Washing Speed	5-45 rpm	5-45 rpm	5-45 rpm
High Spin Speed (optional)	650 rpm	600 rpm	550 rpm
Steam Connection Ø	1" 1/4	1" 1/2	2"
Water inlet connection Ø	2"*2"	2"*2"	2"*2"
Bath drain dimension	DN 125	DN 125	DN 125
Compartments (number)	3	4	4
Power installed	30 Kw	37 Kw	45 Kw
Voltage	3HP 400V 50 Hz	3HP 400V 50 Hz	3HP 400V 50 Hz
Tank for auxiliary products	1x150/200 lts	1x150/200 lts	1x150/200 lts
Tank for dyeing dissolution	1x150/200 lts	1x150/200 lts	1x150/200 lts
MACHINES' OVERALL DIMENSIONS			
Height	2300 mm	2600 mm	3000 mm
Width	2840 mm	3040 mm	3250 mm
Depth	2250 mm	2400 mm	2900 mm

NEXIA
LAUNDRY SMART EVOLUTION

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MADE IN ITALY

Innovative and Sustainable Laundry Solutions