



PRODUCTS PORTFOLIO

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ANALYTICAL INSTRUMENTS

LABORATORY EQUIPMENT

# VELP SCIENTIFICA

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Established in 1983, VELP Scientifica is today one of the world's leading manufacturers of analytical instruments and laboratory equipment that has made an impact on the world-wide market with Italian products renowned for innovation, design and premium connectivity.

We owe our success to a rich patrimony of ideas, significant investments in R&D and technological development aiming at maximizing productivity as well as reducing time-to-market.

VELP is a pioneer of smart lab technology. Our analytical instruments and laboratory equipment are accelerating scientific work every day giving scientists the possibility to monitor and control VELP technology from a virtual dashboard accessible from any device, everywhere and anytime!

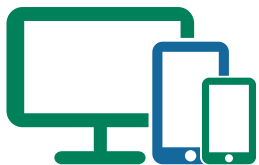
VELP is today a global company with an expanding local focus. Our internationalization process has led us to open local subsidiaries that provide service to our customers in different parts of the world:

- VELP Scientific, Inc. in Long Island (USA) offering sales and technical support for the United States, Canada, and Mexico.
- VELP China Co. LTD in Shanghai guarantees a local presence in China through commercial and technical support.

VELP has always generated value for its customers through close cooperation with its qualified distribution network which today counts more than 300 distributors in 130 countries.

# ERMES | SMART LAB CLOUD PLATFORM

VELP Ermes creates a connected ecosystem of devices, people and data that transmit information between each other cutting down distances and expanding your scientific potential.



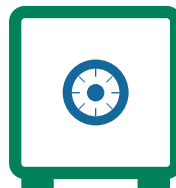
## Monitor and Control your instruments

Monitor and manage multiple instruments 24/7 from your internet devices. Real-time visualization of your analysis and of the instrument working conditions. Immediate notifications and alerts.



## Remote Service Support

Faster and smarter Service Support thanks to the direct contact with VELP specialists and official partners. With VELP Ermes we can guide you to get the maximum from your instrument.



## Safely Manage your Data

Collect and store your data with the maximum level of encryption and cyber-security standards. Generate and share reports of your analysis in multiple formats.



## Your Instrument Always Updated

Effortlessly connect your instrument via secure Wi-Fi or cable and update the software immediately and free of charge.

TO DISCOVER MORE VISIT [WWW.VELP.COM](http://WWW.VELP.COM)



# Analytical Instruments

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- ELEMENTAL ANALYZERS
- DIGESTION UNITS
- DISTILLATION UNITS
- SOLVENT EXTRACTORS
- FIBER ANALYZERS
- DIETARY FIBER ANALYZERS
- OXIDATION STABILITY REACTOR
- CONSUMABLES



# N/PROTEIN Elemental Analyzer

The Dumas technique is used for the quantitative determination of Nitrogen in chemical substances based on the combustion method first described by the French chemist Jean-Baptiste Dumas.

NDA 702 provides results in 3-4 minutes with a low detection limit (0.001 mgN, with Helium) and an excellent RSD% (<0.5% with EDTA standard), keeping low cost per analysis.



NDA 702



- Helium and Argon as carrier gas



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# CARBON / NITROGEN Elemental Analyzer

The determination of Carbon, Nitrogen and Carbon/Nitrogen ratio is a fundamental analysis in the agricultural and environmental industries. The VELP CN 802 is a versatile solution ideal for applications including soils, plants, fertilizers, food, feed, starches, wastewater, wastes, sediments and sludges.

The instrument assures low cost per analysis, rapid process results (from 3 to 5 min), high productivity and a low LOD both for Carbon (0.01 mg C) and Nitrogen (0.001 mg N with Helium).



CN 802



■ Helium and Argon as carrier gas



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# CHNS-O Elemental Analyzers

CHNS-O analysis with EMA 502 Elemental Analyzer helps determine the structure of an unknown compound, as well as evaluate the structure and purity of a synthesized compound.

Easily set and perform your CHNS analysis and then switch to O mode thanks to the exclusive connection panel.

EMA 502



- Helium and Argon as carrier gas




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# DISTILLATION Units

The UDK Series Distillation Units are designed to meet the most challenging demands and requirements for diverse applications, according to international standards: Kjeldahl nitrogen TKN, proteins, ammoniacal nitrogen, nitric nitrogen (Devarda), phenols, TVBN and volatile acids, cyanides, and alcohol content.

Five different UDK models are available with different automation levels and the exclusive cloud connectivity to match any laboratory requirement of automation and throughput.



UDK 129



- Automatic Addition of NaOH

UDK 139



- Automatic Addition NaOH - H<sub>2</sub>O

UDK 149



- Automatic Addition NaOH - H<sub>2</sub>O - H<sub>3</sub>BO<sub>3</sub>
- Potentiometric titration

UDK 159



- Automatic Addition NaOH - H<sub>2</sub>O - H<sub>3</sub>BO<sub>3</sub>
- Colorimetric titration

UDK 169  
& AutoKjel

- Automatic Addition NaOH - H<sub>2</sub>O - H<sub>3</sub>BO<sub>3</sub>
- Colorimetric titration
- Autosampler



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## AUTOMATIC DIGESTION Units

Sample preparation is a crucial part of the Kjeldahl analysis in order to obtain accurate and precise results. The DKL Series digesters are fully automatic units where manual operations have been drastically reduced: lowering and lifting of the samples takes place automatically.



DKL 8



DKL 12



DKL 20



DKL 42/26



## SEMI-AUTOMATIC DIGESTION Units

DK Series semi-automatic digesters combine excellent accuracy and repeatability with maximum versatility. The DK digesters are traditional digesters, consisting of an aluminum heating block to offer high thermal homogeneity, heating up to 450 °C. The temperature of the block is constantly controlled by a microprocessor.

DK 6 - 6/48



DK 8



DK 18/26



DK 20



DK 42/26



## OXIDATION Stability Reactor

VELP OXITEST is the innovative solution for the study of lipid oxidation stability. With the OXITEST it is possible to analyze the whole sample without extensive sample preparation.

### AOCS Standard procedure Cd 12c-16

Accelerated Oxidation Test for the Determination of the Oxidation Stability of Foods, Oils and Fats using the OXITEST Oxidation Test Reactor

OXITEST



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## SOLVENT Extractors

The SER 148 and SER 158 solvent extractors perform fast solid-liquid extractions on a variety of sample types. The SER 148 Series is a semi-automatic solution with no compromises on operator safety (IP55) and solvent consumption also guaranteeing a limited cost per analysis. The SER 158 is a fully automated solvent extractor offering state-of-the-art technology, full safety, precision and smart data management. The HU 6 is the ideal solution for the acid and basic hydrolysis of food and feed samples prior to solvent extraction.



SER 158 Series only

SER 158



- 3 or 6 positions
- Fully automatic solution

SER 148



- 3 or 6 positions
- Semi-automatic solution

HU 6



- 6 positions
- Acid and Basic Hydrolysis



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# FIBER Analyzers

The FIWE Series is used to determine the quantity of raw fiber according to Wendee, Van Soest and other Official Methods. FIWE is the semi-automatic solution. FIWE Advance is the fully automatic analyzer providing automatic reagent addition, Load&Go operation, an intuitive user interface and cloud connectivity.



FIWE Advance only

### FIWE Advance



- 6 positions
- Fully automatic solution

### FIWE



- 3 or 6 positions
- Semi-automatic solution

### COEX



- 6 positions
- Cold extractor for fat separation



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# DIETARY FIBER Analyzers

Dietary Fiber determination according to AOAC 985.29 enzymatic method, by digesting the sample with enzymes and final filtration. Dietary fiber extraction is carried out on foods intended for human nourishment.

GDE



- 6 positions
- Enzymatic digestion system

CSF 6



- 6 positions
- Filtration Unit



# CONSUMABLES

VELP provides a wide range of genuine consumables designed to ensure optimum performance for Elemental Analyzers, Kjeldahl Analyzers and Solvent Extractors.

## ELEMENTAL ANALYZERS



High-quality quartz tubes, crucibles, tin foils; long-life and premium reagents and catalysts; calibration standards (EDTA, 9.57% N), o-rings, seals and fittings.

## KJELDAHL ANALYZERS



Genuine Catalyst tablets KJTabs™, Vreceiver™ Boric Acid powder formula with indicators and Nitrogen-free Weighing Boats for reliable Kjeldahl analysis.

## SOLVENT EXTRACTORS



Three different glass cup sizes, aluminum cup, cellulose thimbles and glass fiber thimbles; butyl, viton and vaflon seals; boiling stones.

# Laboratory Equipment

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- MAGNETIC STIRRERS
- HEATING MAGNETIC STIRRERS
- HEATING PLATES
- OVERHEAD STIRRERS
- VORTEX MIXERS
- DISPERSERS
- COD THERMOREACTORS
- BOD AND RESPIROMETERS
- COOLED INCUBATORS
- FLOCCULATORS
- OVERHEAD SHAKERS
- TURBIDIMETER
- OPEN CIRCULATING BATHS



## MAGNETIC Stirrers

Specially designed for chemical, biotechnological, pharmaceutical, microbiological and medical applications such as growing microorganisms, dissolving nutrients and solids and preventing suspended matter from setting during titration. VELP Scientifica's magnetic stirrers offer solutions for diversified laboratory applications and the highest safety standards available on the market, with sample volumes ranging from 250 ml to 50 L.



**SINGLE POSITION**

**ANALOG**



MST  
Up to 1100 rpm - 5 L



MICROSTIRRER  
Up to 1100 rpm - 5 L



MSL 8  
Up to 1500 rpm - 8 L



ESP  
Up to 1100 rpm - 5 L

**ILLUMINATED**



AMI  
Up to 1100 rpm - 5 L

**MULTIPOSITION**



MULTISTIRRER 6  
Stainless Steel Top - 0.4 L (x6)



MULTISTIRRER 15  
Stainless Steel Top - 0.25 L (x15)



AMI 4  
Up to 1100 rpm - 5 L (x4)

**DIGITAL**



MST Digital  
Up to 1500 rpm - 5 L



MSL 8 Digital  
Up to 1500 rpm - 8 L



MSL 25 Digital  
Up to 1500 rpm - 25 L



MSL 50 Digital  
Up to 1000 rpm - 50 L



MULTISTIRRER 6 Digital  
Stainless Steel Top - 0.4 L (x6)



MULTISTIRRER 15 Digital  
Stainless Steel Top - 0.25 L (x15)

## HEATING MAGNETIC Stirrers

Hot plate stirrers are suitable for a great variety of applications when mixing and heating is required. VELP always provides the best instrument to fulfill any lab requirement, from basic applications to cloud controlled thermoregulation.



ROUND TOP



ARE 6  
Aluminum Alloy plate - 370 °C - 20 L



AREX 6  
CerAlTop™ plate - 370 °C - 20 L



AREX 6 Digital PRO  
CerAlTop™ plate - 370 °C - 20 L



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AREX 6 Connect PRO  
CerAlTop™ plate - 370 °C - 20 L



ARE 5  
Aluminum Alloy plate - 310 °C - 15 L



AREX 5  
CerAlTop™ plate - 310 °C - 20 L



AREX 5 Digital  
CerAlTop™ plate - 310 °C - 20 L

SQUARE TOP



HSC 7  
Ceramic plate - 400 °C - 15 L



AREC 7  
Ceramic plate - 550 °C - 15 L



AREC.X 7  
Ceramic plate - 550 °C - 15 L



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AREC 7 Connect  
Ceramic plate - 550 °C - 20 L

MULTIPOSITION



AM4  
Aluminum Alloy plate - 370 °C - 15 L (x4)



AM4 Digital PRO  
CerAlTop™ plate - 370 °C - 20 L (x4)



MULTI-HS 6 Digital  
CerAlTop™ plate - 120 °C - 0.4 L (x6)



MULTI-HS 15 Digital  
CerAlTop™ plate - 120 °C - 0.25 L (x15)

## OVERHEAD Stirrers

VELP Scientifica offers a complete range of overhead stirrers with state-of-the-art stirring power and smart features for a wide range of applications. VELP overhead stirrers can work continuously, even in challenging environments.

Many reliable solutions are available for different requirements in terms of viscosity and volume. OHS Advance models offer unique features and cloud connectivity.

### CONTROLLER Advance & Digital

The VELP CONTROLLER Advance and Digital are the innovative solutions to control brushless motors of process reactors. Digital interface, maximum precision, timer and torque monitoring make VELP CONTROLLER the state-of-the-art solution for reactors of up to 100 L volume.



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CONTROLLER Advance



CONTROLLER Digital



TORQUE (Ncm)

15/20

40

60

80

100

120

200

ANALOG



ES  
Up to 15 L



LS  
Up to 25 L



LH  
Up to 40 L



PW  
Up to 70 L

DIGITAL



OHS 20 Digital  
Up to 25 L



DLS  
Up to 25 L



OHS 60 Digital  
Up to 40 L



DLH  
Up to 40 L



OHS 100 Digital  
Up to 100 L



OHS 200 Digital  
Up to 100 L



OHS 40 Digital  
Up to 25 L



ermes enabled  
OHS 60 Advance  
Up to 40 L



ermes enabled  
OHS 100 Advance  
Up to 100 L



ermes enabled  
OHS 200 Advance  
Up to 100 L

## VORTEX Mixers

Vortex mixers are suitable for mixing substances in any shape or size of test tube thanks to the orbital movement of the rubber cup. Manual, continuous and IR sensor operating modes meet the multiple needs of every laboratory with high safety standards.

VELP's unique IR sensor system activates vibration without the need to apply pressure. The ergonomic and highly innovative design along with the zinc base ensures excellent stability on the bench, usable on many surfaces.



## DIGITAL

## ANALOG

## MULTIPOSITION

## SINGLE POSITION



**MULTI-TX5 Digital**  
Electronic speed regulation:  
Up to 2500 rpm  
Integrated timer



**TX4**  
Electronic speed regulation:  
Up to 3000 rpm  
Integrated timer



**ZX4**  
Electronic speed regulation:  
Up to 3000 rpm



**WIZARD**  
Electronic speed regulation:  
Up to 3000 rpm



**RX3**  
Electronic speed regulation:  
Constant 3000 rpm



**ZX3**  
Electronic speed regulation:  
Up to 3000 rpm



**CLASSIC**  
Electronic speed regulation:  
Up to 3000 rpm

## DISPERSERS

The OV 625 Digital is the ideal solution for homogenizing, dispersing, mixing and grinding biological tissue samples (cells, animal and plant tissues), pharmaceutical products, cosmetics and food products.

Choose from a wide range of VELP dispersing tools, manufactured with high-quality stainless steel to ensure excellent mechanical properties and chemical resistance.

### OV 625 Digital



- Up to 25000 rpm



# COD Thermoreactors

Chemical Oxygen demand is an important parameter for water and wastewater characterization, to test pollution levels.

Thermoreactors for COD analysis and sample preparation to determine both metallic and non-metallic elements in organic and inorganic materials such as minerals, alloys, animal feeds, soils, sediments and organic tissues.

ECO 6



- 6 positions
- LED display

ECO 8



- 8 positions
- 4 analysis times

ECO 16



- 16 positions
- LED display

ECO 25



- 25 positions
- 4 analysis times



## BOD and RESPIROMETERS

VELP solutions for BOD and Respirometric analysis provide a precise, reliable and compact solution to laboratories of water and wastewater quality control, organic waste treatment plants, renewable energy production end environmental labs studying the effects of plastic and other pollutants in water and soils.

Together with wireless data transmission to the PC, the RESPIROMETRIC Sensor features exclusive connectivity to the VELP Ermes Cloud Platform and has a wide application range since it is suitable for aerobic and anaerobic degradation analysis.



## AEROBIC

## ANAEROBIC

STANDARD

### BOD



BOD Sensor System  
6 - 10 positions - Results on display

### PLASTIC ANALYSIS

### SOIL ANALYSIS

### BMP

CONNECTIVITY



RESPIROMETRIC Sensor System - BOD  
6 positions - Results on display and RESPIROSoft™



RESPIROMETRIC Sensor System for Plastic Analysis  
6 positions - Results on display and RESPIROSoft™



RESPIROMETRIC Sensor System for Soil Analysis  
Results on display and RESPIROSoft™



RESPIROMETRIC Sensor System MAXI - BMP  
6 positions - Results on display and RESPIROSoft™

## COOLED Incubators

For those applications where the monitoring of the sample is extremely important, VELP has developed a line of incubators that offer the possibility of visually examining the content without interfering with the thermal cycle in progress.

VELP refrigerated thermostats guarantee premium connectivity and high performance in temperature control with the Auto-Tuning System.

FOC Connect provide Data logging, insights, immediate notifications and alerts, remote control of the processes and enhanced service support with VELP Ermes.



COOLED INCUBATORS



109 L TOTAL VOLUME

169 L TOTAL VOLUME

STANDARD



FOC 120  
20°C constant



FOC 120 E Connect  
From 3 to 50 °C



FOC 200 E Connect  
From 3 to 50 °C

ILLUMINATED

INTERNAL TRANSPARENT DOOR



FOC 120 I Connect  
From 3 to 50 °C



FOC 200 I Connect  
From 3 to 50 °C



FOC 200 IL Connect  
From 3 to 50 °C

COOLED INCUBATORS

# FLOCCULATORS

VELP Scientifica has developed a complete line of instruments to support the lab technician working in the environmental sector and for the separation of pollutants in wastewater treatment plants in particular.

## FP4



- 4 positions
- Portable flocculator

## FC4S AND FC6S



- 4 or 6 positions
- Individual speed and time setting

## JLT 4 AND JLT 6



- 4 or 6 positions
- Programmable speed and time
- Digital



# OTHER LABORATORY EQUIPMENT Solutions



## OVERHEAD Shakers

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### ROTAX 6.8

- Digital display
- From 0 to 30 rpm

## OCB Open Circulating Baths

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### OCB

- Timer and digital display
- Excellent temperature homogeneity up to 105°C

## TURBIDIMETER

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### TBI

- Portable and impermeable
- Results in NTU (Nephelometric Turbidity Units)

# SERVICE & SUPPORT

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VELP designs and manufactures Analytical Instruments and Laboratory Equipment to resist years of laboratory use. Our instruments are produced with premium materials to guarantee the best performance with maximum safety. Proper and regular maintenance is necessary to ensure the highest performance of your analytical instrument. VELP Service Department and VELP Official Partners are always ready to offer you maintenance and service support tailored to your needs.



INSTALLATION



PREVENTIVE MAINTENANCE



HELP-DESK AND REMOTE SUPPORT



TECHNICAL ASSISTANCE



APPLICATION SUPPORT



CALIBRATION CERTIFICATION

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