Алматы (7273)495-231
Ангарск (3955)60-70-56
Архангельск (8182)63-90-72
Астрахань (8512)99-46-04
Барнаул (3852)73-04-60
Белгород (4722)40-23-64
Благовещенск (4162)22-76-07
Брянск (4832)59-03-52
Владивосток (423)249-28-31
Владикавказ (8672)28-90-48
Владимир (4922)49-43-18
Волгоград (844)278-03-48
Вологда (8172)26-41-59
Воронеж (473)204-51-73
Екатеринбург (343)384-55-89
Иваново (4932)77-34-06
Ижевск (3412)26-03-58
Иркутск (395)279-98-46
Казань (843)206-01-48
Калининград (4012)72-03-81
Калуга (4842)92-23-67
Кемерово (3842)65-04-62
Киров (8332)68-02-04
Коломна (4966)23-41-49
Кострома (4942)77-07-48
Краснодар (861)203-40-90
Красноярск (391)204-63-61
Курск (4712)77-13-04
Курган (3522)50-90-47
Липецк (4742)52-20-81
Магнитогорск (3519)55-03-13
Москва (495)268-04-70
Мурманск (8152)59-64-93
Набережные Челны (8552)20-53-41
Нижний Новгород (831)429-08-12
Новокузнецк (3843)20-46-81
Ноябрьск (3496)41-32-12
Новосибирск (383)227-86-73
Омск (3812)21-46-40
Орел (4862)44-53-42
Оренбург (3532)37-68-04
Пенза (8412)22-31-16
Петрозаводск (8142)55-98-37
Псков (8112)59-10-37
Пермь (342)205-81-47
Ростов-на-Дону (863)308-18-15
Рязань (4912)46-61-64
Самара (846)206-03-16
Санкт-Петербург (812)309-46-40
Саратов (845)249-38-78
Севастополь (8692)22-31-93
Саранск (8342)22-96-24
Симферополь (3652)67-13-56
Смоленск (4812)29-41-54
Сочи (862)225-72-31
Ставрополь (8652)20-65-13
Сургут (3462)77-98-35
Сыктывкар (8212)25-95-17
Тамбов (4752)50-40-97
Тверь (4822)63-31-35
Тольятти (8482)63-91-07
Томск (3822)98-41-53
Тула (4872)33-79-87
Тюмень (3452)66-21-18
Ульяновск (8422)24-23-59
Улан-Удэ (3012)59-97-51
Уфа (347)229-48-12
Хабаровск (4212)92-98-04
Чебоксары (8352)28-53-07
Челябинск (351)202-03-61
Череповец (8202)49-02-64
Чита (3022)38-34-83
Якутск (4112)23-90-97
Ярославль (4852)69-52-93

Россия +7(495)268-04-70 Казахстан +7(7172)727-132 Киргизия +996(312)96-26-47

https://velp.nt-rt.ru/ || vpe@nt-rt.ru

CN 802

Carbon / Nitrogen Analyzer

Elemental Analyzer for a Wide Range of Applications

CN 802 Carbon / Nitrogen Analyzer

The CN 802 combustion elemental analyzer is a versatile, cloud-enabled and fully automatic solution for carbon and nitrogen determination in a wide range of applications. The CN 802 offers high performance on both solid and liquid samples, working in accordance to international standards such as AOAC, AACC, ASBC, ISO, DIN, IFFO, OIV, ASTM, EPA.

RAPID C/N DETERMINATION

The CN 802 performs analysis of both carbon and nitrogen in just 3-5 minutes. The quick start and sleeping mode ensures fast operation set up with possibility of leak test per zone.

FLEXIBLE

Fully automatic determination of TC, TN and Carbon/Nitrogen Ratio on solid and liquid samples. Determination of TOC and TIC after external acidification

PRECISE

The NDIR (Non Dispersive Infrared) detector and LoGas™ TCD (Thermal Conductivity Detector) designed by VELP guarantee unmatched precision and unrivaled LOD.

EFFICIENT

The fully automatic and reliable combustion method of CN 802 together with DriStep™ water trap guarantees moderate cost. The 30-positions disc autosampler expandable with extra 3 discs ensures maximum productivity and uptime.

VERSATILE

The CN 802 works with solid, liquid and doughy samples of up to 1 gram. Seamless carrier gas selection between Helium and Argon without hardware changes and with no memory effect.

SMART & SAFE

The CN 802 is easy to use thanks to the user-friendly CNSoft™ software which is equipped with maximum safety control of the instrument. VELP Ermes connection will deliver a new user experience and smart workflows.

TEMS™ SAVING

TEMS™ Technology
Save Time, Energy, Money and Space.

CARBON AND NITROGEN DETECTORS

CARBON DETECTOR

NDIR - NON DISPERSIVE INFRARED DETECTOR

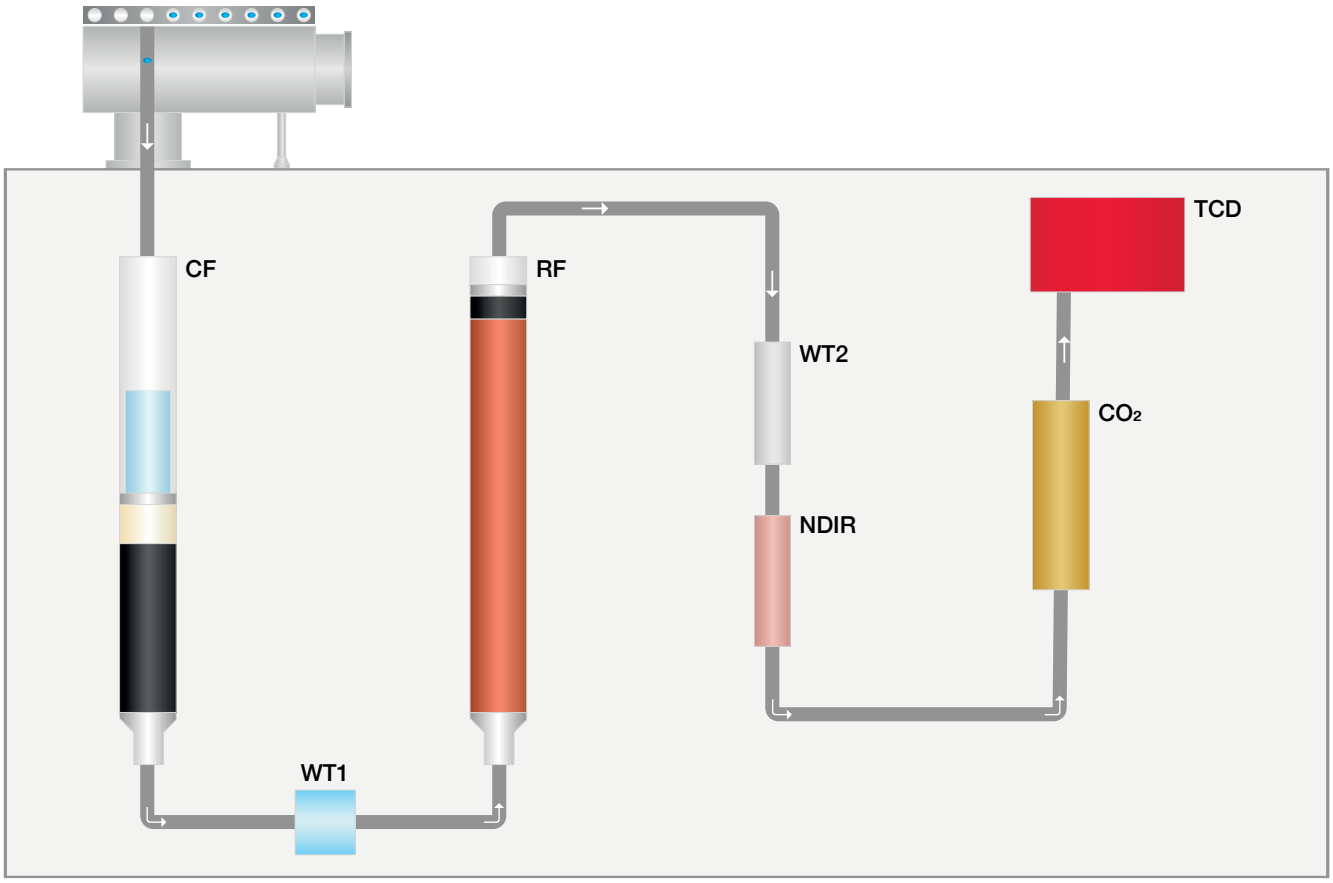
- Selective detector reading only Carbon content
- Maintenance free
- High Accuracy and Precision
- LOD: 0,01 mgC

NITROGEN DETECTOR

TCD – THERMAL CONDUCTIVITY DETECTOR

- Low gas consumption
- No reference gas required
- Long life span
- LOD: 0.001 mgN (He) – 0.01 mgN (Ar)

CN 802 Analysis Process



- **CF** (Combustion Reactor) Allows complete combustion at 1030 °C in order to convert all of the sample into its elemental substances.
- **WT1** (Physical Water Trap) The maintenance-free DriStep™ cooler permits 99% of water to be removed.
- **RF** (Reduction Reactor) Enables the elimination of unwanted compounds and oxygen, transforming NOx into N_2.
- **WT2** (Chemical Water Trap) Eliminates the residual water.
- **NDIR** (Non Dispersive Infrared Detector) Accurately measures the CO_2 concentration that the instrument is able to convert in carbon quantity.
- **CO_2** (CO_2 Regenerating Adsorbers) Used to get rid of all the CO_2. Auto-regenerating, maintenance-free system.
- **TCD** (Innovative TCD) LoGas™ determines nitrogen content without the need for a reference gas. Maintenance-free.

VELP ERMES CONNECTION

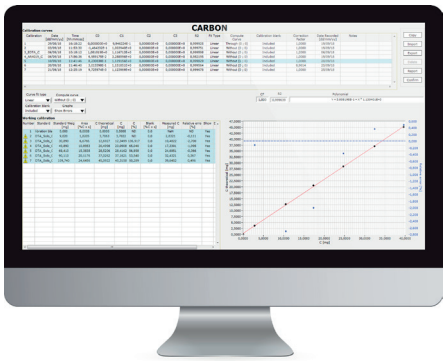
Connect the CN 802 to the exclusive VELP Ermes Cloud Platform to improve your laboratory experience. The VELP Ermes Cloud platform connection will unburden you from tedious tasks, improving your lab productivity.

- Real time monitor and control of the instrument from PC, smartphone and tablet whenever you want, wherever you are
- Immediate alert and notification with the possibility to stop the instrument for maximum safety
- Enhanced service and application support.
- Regular software updates will guarantee the best performance and new features with just one-click

ermes enabled

CNSoft™ Software

The CNSoft™ software is the powerful VELP solution that controls and operates the CN 802 analyzer. The CNSoft™ comes with a user-friendly interface that displays all relevant information at a glance: results, database and instrument conditions. It is possible to choose from a rich library of pre-installed methods and create customized ones.

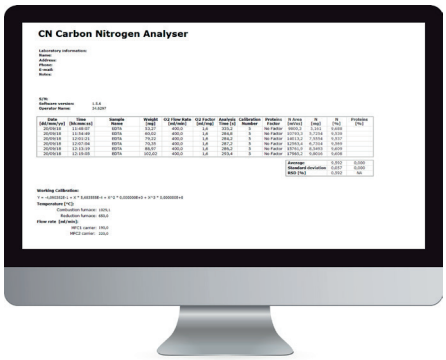


1 BEFORE THE ANALYSIS

- Create or choose a calibration curve for C and N
- Fill in the required data (sample name, analysis type, weight…)
- Select a method and calibration curve

2 DURING THE ANALYSIS

- Monitor of the working parameters
- Realtime graph of C and N peaks
- Immediate readout of the results in mg and % of C and N, % protein



3 AFTER THE ANALYSIS

- Multiple data comparison in graph
- Data export in .xls, .txt and .csv to PC or LIMS
- Crate, print and download reports of single or multiple analysis
- If necessary set the instrument in Stand-by mode or Sleeping mode
- Short statistical analysis in one click

APPLICATIONS AND METHODS

SOILS
TOTAL N: ISO 13878
TOTAL C - TOC: ISO 10694

SOILS IMPROVERS AND GROWING MEDIA
TOTAL N: EN 13654-2

SEDIMENTS
TOTAL N - TOTAL C: EPA Method 440.0

SLUDGE, TREATED BIOWASTE, SOIL AND WASTE
TOC: EN 15936

PETROLEUM PRODUCTS AND LUBRICANTS
TOTAL N - TOTAL C: ASTM Method D5291

SOLID MINERAL FUELS
TOTAL N - TOTAL C: ISO 29541

SOLID BIOFUELS
TOTAL N - TOTAL C: ISO16948

SLUDGE, TREATED BIOWASTE AND SOIL
TOTAL N: EN 16168

COAL AND COKE
TOTAL N - TOTAL C: ASTM Method D5373

FERTILIZERS
TOTAL N: AOAC 993.13

CARBON BLACK
TOTAL C: ASTM D 7633

OPTIONAL ACCESSORIES

1000 analyses kit	A00000194
2000 analyses kit	A00000270
4000 analyses kit	A00000271
Disc 2 for Autosampler	A00000199
Disc 3 for Autosampler	A00000200
Disc 4 for Autosampler	A00000201
Pre-packed combustion reactor	A00000158
Pre-packed reduction reactor	A00000226
Quartz reactor tube	A00000162
Metal reactor tube	A00000321
Cleaning kit for metallic ash collector	A00000353
Ceramic ash collector	A00000198
Metallic ash collector	A00000322
Quartz ash collector	A00000161
Anhydrone, 454g	A00000225
Super-Absorbent Powder, 10g	A00000317
Quartz wool, 50g	A00000154
Vcopper High Reduction Efficiency, 470g	A00000240
Copper oxide, 50g	A00000157
Velpcatalyst with inert layer, 36g	A00000320
EDTA Certified, 100 gr	A00000149
Rice Flour, 30g	A00000235
Tin Foil Cups, 150pcs	A00000153
Tin Foils 50x50mm, 450 pcs	A00000260
Mold for tin foils 50x50mm	A00000262
Tin foil cup closing device	A00000217
Kit for TOC/sample preparation	TA00000378
Silver Foil 35x35mm, 100 pcs	A00000371
High temperature sealing grease	A00000236
IQ/OQ/PQ CN Manual	A00000370
VELP Ermes 1 Year Connection	E00010012
VELP Ermes 3 Year Connection	E00010036

GLP Good Laboratory Practice

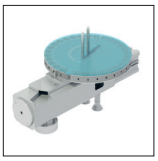
AOAC	AACC	ASBC
ISO	DIN	IFFO
OIV	ASTM	EPA

INSTRUMENT - CODE

CN 802	230 V / 50-60 Hz	F30800090

SUPPLIED WITH

A00000193
Start-up kit



40001065
Autosampler with disc 1

40002622
CNSoft™ Software

40001693
USB cable for PC, 5m

10003926
RS232 Cable for balance

E00010012
VELP Ermes 1 Year Connection

The CN 802 is supplied with all necessary parts to perform up to 1000* analyses (inclusive of catalysts, copper, quartz wool, reagents and seals). In addition it contains chemicals and small consumables spares for maintenance.

Use Genuine VELP consumables and accessories to get the best performance from your CN 802

FIELDS OF APPLICATION

The CN 802 is extremely versatile, being suitable for carbon and nitrogen determination in several kinds of sample, in accordance with official AOAC, AACC, ASBC, ISO, ASTM, EPA, DIN and OIV methods.

TECHNICAL DATA

	CN 802
METHOD OF ANALYSIS	Combustion method
DETECTOR	N = TCD (Thermal Conductivity Detector) C = NDIR (Non Dispersive Infrared Detector)
CARRIER GAS	Helium and Argon
SAMPLE WEIGHT	Up to 1 g
NITROGEN MEASURING RANGE	ppm - 200 mgN
CARBON MEASURING RANGE	ppm - 150 mgC
ANALISIS TIME	3-5 min
AUTOSAMPLER CAPACITY	Up to 4 discs, 30 positions each
AUTOSAMPLER TYPE	Pneumatic
REPRODUCIBILITY (RSD)	< 0.5% for EDTA standards approx. 100 mg
RECOVERY	> 99.5%
NITROGEN DETECTION LIMIT	0.001 mgN (He); 0.01 mgN (Ar);
CARBON DETECTION LIMIT	0.01 mgC
COMBUSTION TEMPERATURE	1030 °C / 1886 °F
HELIUM (He) / ARGON (Ar)	Purity 99.999% (grade 5.0)
OXYGEN (O_2)	Purity 99.999% (grade 5.0)
CARRIER GAS PRESSURE	2 bar
OXYGEN (O_2) PRESSURE	2 bar
CONNECTIVITY	Cloud via LAN or Wi-Fi
INTERFACES	USB, RS232, VELP Ermes Cloud Platform
POWER	1400 W
POWER SUPPLY	230 V / 50 - 60 Hz
WEIGHT	54 kg 119 lb
DIMENSIONS (WxHxD) (including autosampler)	655 x 690 x 410 mm 25.8 x 27.2 x 16.1 in