OMNIS IC S COND/MSM/PP/CH

2.1050.0020

The OMNIS IC S COND/MSM/PP/CH is the start instrument in the OMNIS IC world with basic sample introduction and chemical suppression. It is provided as a pre-installed, ready-to-use sales version with an OMNIS High-Pressure Pump Unit, an OMNIS Actuator Unit, an OMNIS Conductivity Detector Unit, an OMNIS MSM Unit, and an OMNIS Peristaltic Pump Unit with two channels. It features a transparent door for easy access and a Reagent Organizer.

It is equipped with an OMNIS Column Holder Unit with intelligent column chip technology. For sample transport and injection, a peristaltic pump and a 6/2-port valve are integrated. The 3 empty unit spaces give flexibility to upgrade the system, for example, with an OMNIS Dosing Drive Unit, an OMNIS MISP Unit, an OMNIS Degasser Unit, or an OMNIS MCS Unit for sequential suppression.

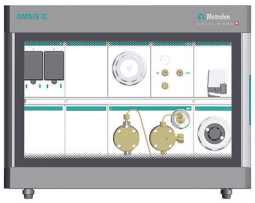
The OMNIS IC instrument is foreseen to be placed on an autosampler. There is the free choice to add an integrated OMNIS IC Autosampler or an OMNIS IC Autosampler COOL for full automation; alternatively, it can be placed on a baseplate, for example, in case of a double tower solution.

The OMNIS IC S COND/MSM/PP/CH can be used for applications with chemical suppression. At any time, OMNIS Extension Modules can be added to upgrade the OMNIS IC S system, for example, to improve performance with sequential suppression or Metrohm Inline Sample Preparation options.

The OMNIS IC instrument is compatible with the 947 Professional UV/VIS Detector Vario, and the 945 Professional Detector Vario – Amperometry, expanding the options for detection.

The OMNIS IC S COND/MSM/PP/CH is an ideal choice for applications like standard anions in simple matrices such as surface or drinking water.

Phạm vi giao hàng 2.1050.0020

Order Number	Description	Quantity
1.1050.0020	**OMNIS IC S COND/MSM/PP/CH**	1 PCS
	The OMNIS IC S COND/MSM/PP/CH is the start instrument in the OMNIS IC world with basic sample introduction and chemical suppression. It is provided as a pre-installed, ready-to-use sales version with an OMNIS High-Pressure Pump Unit, an OMNIS Actuator Unit, an OMNIS Conductivity Detector Unit, an OMNIS MSM Unit, and an OMNIS Peristaltic Pump Unit with two channels. It features a transparent door for easy access and a Reagent Organizer. It is equipped with an OMNIS Column Holder Unit with intelligent column chip technology. For sample transport and injection, a peristaltic pump and a 6/2-port valve are integrated. The 3 empty unit spaces give flexibility to upgrade the system, for example, with an OMNIS Dosing Drive Unit, an OMNIS MISP Unit, an OMNIS Degasser Unit, or an OMNIS MCS Unit for sequential suppression. The OMNIS IC instrument is foreseen to be placed on an autosampler. There is the free choice to add an integrated OMNIS IC Autosampler or an OMNIS IC Autosampler COOL for full automation; alternatively, it can be placed on a baseplate, for example, in case of a double tower solution. The OMNIS IC S COND/MSM/PP/CH can be used for applications with chemical suppression. At any time, OMNIS Extension Modules can be added to upgrade the OMNIS IC S system, for example, to improve performance with sequential suppression or Metrohm Inline Sample Preparation options. The OMNIS IC instrument is compatible with the 947 Professional UV/VIS Detector Vario, and the 945 Professional Detector Vario – Amperometry, expanding the options for detection. The OMNIS IC S COND/MSM/PP/CH is an ideal choice for applications like standard anions in simple matrices such as surface or drinking water.	

6.02744.010

Flangeless fitting M6, 1/8", 2 pcs 1 PCS

Flangeless fitting for 1/8'' tubing.
Quantity: 2 pcs

6.02837.030

CO2 Absorber (Tube) 1 PCS

CO2 Absorber (Tube) with a Luer adapter; protects reagents and eluents from particles and ensures consistent retention times for CO2-sensitive eluents.

6.02837.040

Filter tube 1 PCS

Filter tube with Luer adapter, protects eluents and reagents from particles.

6.05000.000

Accessory kit: OMNIS IC 1 PCS

OMNIS IC accessory set required for installation, daily work, and maintenance.
The set contains the most necessary tools and accessories for simple tasks related to the OMNIS IC device.

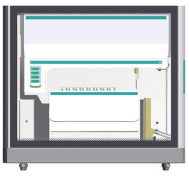
6.05000.010

Accessory kit: Bottle OMNIS IC, PP, 2 L 2 PCS

OMNIS IC accessory set to install the reagent bottle onto the Reagent Organizer / Reagent Organizer Liquid Control.

Phụ kiện tùy chọn

2.1054.0010
OMNIS IC Autosampler Module



The OMNIS IC Autosampler automates the sample change in the OMNIS IC System and enables efficient processing of up to 160 vials of 5 mL each, depending on the selected rack. As the first fully integrated autosampler of the new OMNIS IC generation, it is installed directly below the OMNIS IC as standard. It is not a stand-alone device, but an integral part of the OMNIS IC System, which is conveniently controlled via the OMNIS Software.

Key features:

– Compact footprint: Can be placed directly under the OMNIS IC
– High sample throughput: 96 x 10 mL vials, 160 x 5 mL vials, 192 x (1500, 700, 300) µL HPLC vials, 384 x 2 mL well format (deep well plate)
– High speed (30 s/injection of 5 µL)
– Removable autosampler tray for easy loading and unloading
– Interior lighting for easy loading and unloading
– Fast and precise xyz needle drive with automatic vial detection
– Follow-up light and status display for visual traceability of needle movement and autosampler status
– High flexibility for different sample vessels and rack types (including customer-specific racks)
– Six integrated positions for 50 mL bottles, e.g., for standards or rinsing solutions
– Integrated rinsing station and leak detection as standard for maximum safety
– Fully integrated into the OMNIS Software
– Optional upgrades: 3/2-way valves, dilution station, barcode reader

2.1054.0020
OMNIS IC Autosampler Module COOL

The OMNIS IC Autosampler COOL automates the sample change in the OMNIS IC System and enables efficient processing of up to 160 vials of 5 mL each, depending on the selected rack. In addition, the OMNIS IC Autosampler COOL offers the option of precisely controlling the temperature in the range from 4 °C to 22 °C, enabling a large number of samples to be cooled. The cooling function is ideal for thermally unstable and biochemically relevant samples, for example in the analysis of organic acids, halogenated acetic acids, amino acids, and carbohydrates.

Key features:

– Compact footprint: Can be placed directly under the OMNIS IC
– Temperature control from 4 °C to 22 °C
– High sample throughput, large quantity of coolable samples: (96 x 10 mL vials, 160 x 5 mL vials, 192 x (1500, 700, 300) µL HPLC vials, 384 x 2 mL well format (deep well plate)
– High speed (30 s/injection of 5 µL)
– Removable autosampler tray for easy loading and unloading
– Interior lighting for easy loading and unloading
– Fast and precise xyz needle drive with automatic vial detection
– Follow-up light and status display for visual traceability of needle movement and autosampler status
– High flexibility for different sample vessels and rack types (including customer-specific racks)
– Six integrated positions for 50 mL bottles, e.g., for standards or rinsing solutions
– Integrated rinsing station and leak detection as standard for maximum safety
– Fully integrated into the OMNIS Software
– Optional upgrades: 3/2-way valves, dilution station, barcode reader

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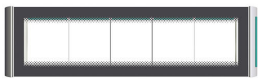
2.1055.0020
OMNIS Extension Module

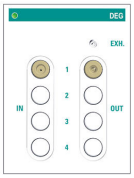


The OMNIS Extension Module serves as an extension module for an OMNIS IC and is always operated together with a main module. An OMNIS IC can thus be expanded to a maximum of 5 levels. An OMNIS Extension Module can accommodate up to 5 functional units, such as the OMNIS Degasser Unit, OMNIS High-Pressure Pump Unit or OMNIS Conductivity Detector Unit.

Blind Cover Units are standard not provided with the extension module and need to be added additionally.

2.1056.0110

OMNIS Degasser Unit 1-Channel



The OMNIS Degasser Unit 1-Channel is used for the automated removal of dissolved gases and air bubbles from eluents and samples in the OMNIS IC System. The degassing of the eluent ensures a stable baseline and thus enhances the precision of the chromatographic measurement. For samples with a high gas content, the integrated sample degasser ensures that a constant sample volume enters the sample loop with each injection. This improves the reproducibility of the analysis significantly, and manual degassing is omitted in its entirety. Thanks to the new technical Film Degassing Chamber concept, thee OMNIS Degasser Unit is considerably more efficient.

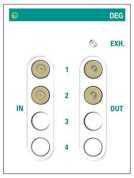
The OMNIS Degasser Unit is integrated in space-saving fashion in the OMNIS Extension Module. The OMNIS Degasser Unit 1-Channel can be expanded to comprise 2, 3 or 4 chambers. The Degasser Unit can at this time be equipped with either up to 4 eluent degassers (4 chambers) or with 1 sample degasser and up to 3 eluent degassers.

Specifications:

– Time to establish vacuum: 10 s
– Degassing efficiency: > 150 µL air / min at 1 mL/min
– Resistance against solvents: No restrictions (except PFC)
– Expandable: Yes, up to 4 channels
– Flow path: Free of metal

2.1056.0120

OMNIS Degasser Unit 2-Channel



The OMNIS Degasser Unit 2-Channel is used for the automated removal of dissolved gases and air bubbles from eluents and samples in the OMNIS IC System. The degassing of the eluent ensures a stable baseline and thus enhances the precision of the chromatographic measurement. For samples with a high gas content, the integrated sample degasser ensures that a constant sample volume enters the sample loop with each injection. This improves the reproducibility of the analysis significantly, and manual degassing is omitted in its entirety.

The OMNIS Degasser Unit is integrated in space-saving fashion in the OMNIS Extension Module. The OMNIS Degasser Unit 2-Channel can be expanded to comprise 3 or 4 chambers. The Degasser Unit can at this time be equipped with either up to 4 eluent degassers (4 chambers) or with 1 sample degasser and up to 3 eluent degassers.

Specifications:

– Time to establish vacuum: 10 s
– Degassing efficiency: > 150 µL air / min at 1 mL/min
– Resistance against solvents: No restrictions (except PFC)
– Expandable: Yes, up to 4 channels
– Flow path: Free of metal

2.1056.0310

OMNIS Dosing Drive Unit

The OMNIS Dosing Drive Unit functions as a dosing drive for attachable cylinder units used for the precise aspiration and dosing of liquid volumes.

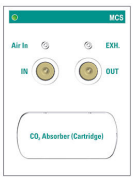
The OMNIS Dosing Drive Unit is compatible with various cylinder units (2 to 50 mL). Thanks to the new design, a higher resolution and accuracy can be achieved during dosing.

Specifications:

– Resolution: 250,000 steps per cylinder volume
– Dosing times/filling times: 10 seconds

2.1056.0710

OMNIS MCS Unit



The OMNIS MCS Unit serves as a CO_2 suppressor in the OMNIS IC System. The Metrohm CO_2 Suppressor (MCS) removes CO_2 from the eluent flow. Together with the MSM, the MCS acts as a sequential suppressor. This lowers the background conductivity and reduces the baseline noise, which improves detection sensitivity. The system peak is minimized.

In the MCS, the eluent flows through a capillary that is permeable for gases. A vacuum pump is used to create a difference in pressure and concentration and the CO_2 is diffused out of the capillary in the eluent flow. To remove the CO_2 from the MCS, a constant CO_2-free air flow is drawn through the air inlet.

Learn more about sequential suppression: Monograph Ion Chromatography.

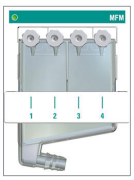
Specifications:

– Time to establish vacuum: 10 s

– Flow path: Free of metal

2.1056.0910

OMNIS Multi Flow Monitor Unit



The OMNIS Multi Flow Monitor Unit is used for flow monitoring in the OMNIS IC System. It can detect trend changes in the behavior of the flow. If corresponding measures have been defined in the OMNIS Software, then the OMNIS IC System will execute them.

Constant monitoring of the flow rate helps to ensure the smooth operation of the entire OMNIS IC System. Changes in the flow rate indicate a functional disruption, caused for example by worn pump tubings or a dirty filtration membrane.

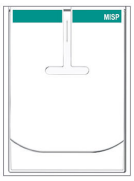
The liquids drained by the OMNIS IC System flow through up to 4 channels into the waste collector of the OMNIS Multi Flow Monitor Unit. The flow rate of each channel can be monitored individually and independently of the other channels. If more than 4 channels are fed into the drainage system, then an additional waste collector can be installed on the reagent organizer (without flow monitoring).

Specifications:

– Flow range: 0.1 ml/min to 8 ml/min for water

– Number of measuring channels: 4

2.1056.1110
OMNIS MISP Unit



The OMNIS MISP Unit acts as a holder and pullout for the accessories of the various Metrohm inline sample preparation techniques (Metrohm Inline Sample Preparation "MISP") and liquid handling processes. The innovative pull-out design makes it easy to insert or change accessories. As a result, they are stored in an orderly and space-saving way and integrated in the flow path.
With the corresponding accessories, the following Metrohm inline sample preparation techniques can be carried out with the OMNIS MISP Unit:

– Metrohm Inline Ultrafiltration (UF)
– Metrohm Inline Dilution (MIDT)
– Metrohm inline dilution in combination with Metrohm inline ultrafiltration (MIDT-UF)
– Metrohm Inline Dialysis
– Metrohm intelligent Partial Loop injection Technique (MiPT)
– Metrohm inline ultrafiltration and Metrohm intelligent Partial Loop injection Technique in combination (UF-MiPT)
– Metrohm intelligent Preconcentration Technique (MiPCT)
– Metrohm intelligent Preconcentration Technique with matrix elimination (MiPCT-ME)
– Metrohm intelligent Pick-up injection Technique (MiPuT)
– Metrohm Inline Neutralization and Metrohm Inline Cation Removal
– Metrohm intelligent Preconcentration Technique with inline neutralization (MiPCT-NE)

Ultrafiltration or dialysis cell, transfer tubings or transfer capillaries can be used in the OMNIS MISP Unit. All trap columns available from Metrohm can be mounted with the optional MISP holder. Various connectors can be fastened to the optional MISP base plate and integrated into the flow path.

2.945.0020
945 Professional Detector Vario – Amperometry

Intelligent stand-alone detector equipped with the IC Amperometric Detector. Outstanding selectivity due to the four measuring modes: DC, PAD, flexIPAD, CV. The excellent signal /noise ratio and the very fast start-up guarantee the highest in measurement precision. For use with intelligent IC instruments or as independent detector.

2.947.0020
947 Professional UV/VIS Detector Vario MW

As an intelligent. multi-wavelength detector, the 947 Professional UV/VIS Detector Vario MW permits a secure and reliable quantification of substances active in the ultraviolet or visible range. Up to eight wavelengths can be freely selected. A diode array is used for detection.

6.05000.000
Accessory kit: OMNIS IC

OMNIS IC accessory set required for installation, daily work, and maintenance.
The set contains the most necessary tools and accessories for simple tasks related to the OMNIS IC device.

6.05000.110
Installation kit: OMNIS IC S

6.05331.020
OMNIS IC equip.: D-INJ, PP

Accessory set for Full Loop Injection in OMNIS IC: With this technique, the sample loop can be filled using an OMNIS Peristaltic Pump Unit.
Prerequisites:
OMNIS IC S/M/L with OMNIS IC AS/ASCOOL, including:
– available OMNIS Peristaltic Pump Unit

6.05331.030
OMNIS IC equip.: UF, PP/DD

Accessory set for Ultrafiltration in OMNIS IC: Inline ultrafiltration allows the sample to be separated from contained particles. The main component of the Metrohm Inline Ultrafiltration system is the ultrafiltration cell. The ultrafiltration cell is suitable for sample filtration with high demands on filtration efficiency and sample throughput. This equipment is for the setup with a combination of the Peristaltic Pump Unit and the Dosing Drive Unit.

Prerequisites:

OMNIS IC S/M/L with OMNIS IC AS/ASCOOL, including:
– available OMNIS Dosing Drive Unit
– available OMNIS Peristaltic Pump Unit channel
– available OMNIS MISP Unit
– AS/ASCOOL equipped with a switching valve 3/2, UNF

6.05331.040
OMNIS IC equip.: MIDT

Accessory set for dilution in OMNIS IC: This technique allows samples with excessively high ion concentrations or highly concentrated sample matrices to be diluted. The required sample volume is precisely aspirated by the OMNIS Dosing Drive Unit.
The sample and the dilution solution are mixed in the dilution station, ensuring the sample is diluted and completely homogenized. Additionally, with the Inline Dilution technique, calibration using a single standard solution is possible.

Specifications:

– Maximum dilution factor: 2000
– Accuracy: <1.5% up to DF 100, <2.5% up to DF 1000
– Reproducibility (n=9): <1% up to DF 1000
– Carry over: < 0.003%

Prerequisites:

OMNIS IC S/M/L, including:
– available OMNIS Dosing Drive Unit
– available OMNIS MISP Unit

AS/ASCOOL equipped with:
– dilution station and
– switching valve 3/2, M6

6.05331.050
OMNIS IC equip.: UF, PP/PP

Accessory set for Ultrafiltration in OMNIS IC: Inline ultrafiltration allows the sample to be separated from contained particles. The main component of the Metrohm inline ultrafiltration system is the ultrafiltration cell. The ultrafiltration cell is suitable for sample filtration with high demands on filtration efficiency and sample throughput. This equipment is for the setup with a Peristaltic Pump Unit only.

Prerequisites:

OMNIS IC S/M/L with OMNIS IC AS/ASCOOL, including:
– 2 available OMNIS Peristaltic Pump Unit channels
– available OMNIS MISP Unit

6.05331.060
OMNIS IC equip.: MIDT-UF, PP /DD

Accessory set for the combination of dilution with Ultrafiltration in OMNIS IC: This technique allows samples with excessively high ion concentrations or highly concentrated sample matrices to be diluted. The required sample volume is precisely aspirated by the OMNIS Dosing Drive Unit.

Additionally, inline ultrafiltration allows the sample to be separated from the particles it contains. This combined technique allows calibration with only one standard solution.

Prerequisites:

OMNIS IC S/M/L with OMNIS IC AS/ASCOOL, including:
– available OMNIS Dosing Drive Unit
– available OMNIS Peristaltic Pump Unit channel
– available OMNIS MISP Unit
– AS/ASCOOL equipped with dilution station and switching valve 3/2, M6

6.05331.070
OMNIS IC equip.: MiPT

Accessory set for Partial Loop Injection in OMNIS IC: With this technique, the 250 µL sample loop can be filled with a defined volume. The OMNIS Dosing Drive Unit, with the attached OMNIS cylinder unit, performs precise dosing steps. The intelligent partial-loop injection technique allows calibration using a single standard solution because the injection volume can be freely selected. The same applies to sample injection: a small injection volume can be chosen for a highly concentrated sample, or a larger one for low-concentration samples.

Prerequisites:
OMNIS IC S/M/L with OMNIS IC AS/ASCOOL, including:
– available OMNIS Dosing Drive Unit
– available OMNIS MISP Unit

6.05331.080
OMNIS IC equip.: UF-MiPT, PP /DD

Accessory set for the combination of Partial Loop Injection Technique with Ultrafiltration in OMNIS IC: The inline ultrafiltration allows the sample to be separated from contained particles. Additionally, with the partial loop injection, the 250 µL sample loop can be filled with a defined volume of the filtered sample. The OMNIS Dosing Drive Unit, with the attached OMNIS cylinder unit, performs precise dosing steps. This combined technique allows calibration using a single standard solution.

Prerequisites:
OMNIS IC S/M/L with OMNIS IC AS/ASCOOL, including:
– available OMNIS Dosing Drive Unit
– available OMNIS Peristaltic Pump Unit channel
– available OMNIS MISP Unit
– AS/ASCOOL equipped with a switching valve 3/2, UNF

6.05331.090
OMNIS IC equip.: D-INJ, manually

Accessory set for manual Full Loop Injection in OMNIS IC: With this technique, the sample loop can be filled manually.

Prerequisites:
OMNIS IC S/M/L

6.05332.010
OMNIS IC equip.: Container 10 L, drain

Accessory set for connecting drain to 10 L container.
Prerequisites:
OMNIS IC S/M/L

6.05332.020
OMNIS IC equip.: HPP piston seal wash, DD

Accessory set for HPP piston seal wash: The HPP piston seal wash for the OMNIS IC HPP is standard foreseen with a free port on a dosing system on the OMNIS Cylinder Unit. After each sample analysis, the piston is rinsed with a small portion of UPW.
When no free Cylinder Unit channel is available, the UPW can alternatively be transferred via a peristaltic pump channel equipped with 601826010 peristaltic pump tubing.
Prerequisites:
OMNIS IC S/M/L, including:
– available OMNIS Cylinder Unit port (with UPW as working medium) or
– available OMNIS Peristaltic Pump Unit channel

6.05332.060
OMNIS IC equip.: Base plate

Accessory set for an OMNIS IC without OMNIS IC AS or ASCOOL: With this equipment, the OMNIS IC (S/M/L) can be provided as a standalone solution without automation below the IC. This equipment is also required when the OMNIS IC is used in combination with an 858 Professional Sample Processor or a 919 IC Autosampler plus.
Prerequisites:
OMNIS IC S/M/L without AS/ASCOOL automation

6.05801.280
Drain kit, S

Drain kit to replace the drain tubing and connections in the OMNIS IC S.

Prerequisites:

2.1050.00x0 OMNIS IC S