OMNIS IC M COND/MSM/MCS/PP/DEG/DD/ROLC

2.1051.0020

The OMNIS IC M COND/MSM/MCS/PP/DEG/ DD/ROLC is the high-class single channel instrument in the OMNIS IC world. 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, an OMNIS MCS Unit, an OMNIS Degasser Unit, an OMNIS Peristaltic Pump Unit with one channel, and OMNIS Dosing Drive Unit. It features a transparent door for easy access and a Reagent Organizer Liquid Control.

The integrated OMNIS Column Thermostat Unit 1 features a removable column tray with intelligent column chip technology and regulates the column temperature (5–80 °C, depending on ambient temperature). The column thermostat is intended for single-column use, but can be upgraded to support two columns at any time. For sample transport and injection, a peristaltic pump and a 7/3-port valve are integrated.

For high-throughput applications, the OMNIS IC M COND/MSM/MCS/PP/DEG/DD/ROLC comes with an OMNIS MISP Unit for integrated sample preparation. The OMNIS MISP Unit provides complete flexibility to add Metrohm Inline Sample Preparation (MISP) options, perfectly tailored to the application needs, such as Ultrafiltration, Metrohm intelligent Partial Loop Injection Technique (MiPT), or can be used as a holder for a trap column. These MISP techniques enhance efficiency and accuracy while reducing the manual steps usually involved in sample preparation.

The built-in Multi Flow Monitor Unit enables smart flow monitoring for up to four channels. It detects flow trend variations, for example, induced by worn tubing or fouled filtration membranes, and can trigger software actions to minimize disturbances.

The included Reagent Organizer Liquid Control functions not only as a holder for liquids and eluent bottles but also has an integrated light that illuminates the instrument's interior when at least one door is open. The integrated leak and level sensors are monitored by the OMNIS software and support automatic eluent production and liquid level control.

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 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 M COND/MSM/MCS/PP/DEG/DD/ROLC serves as a flexible, high-throughput single-channel device. Additional upgradeability with OMNIS Extension Modules broadens its capabilities to meet future demands, such as dual-channel ion chromatography or extended liquid handling functions.

The high-class OMNIS IC M instrument is the ideal choice for qualified or sophisticated applications requiring sequential suppression and temperature-controlled column conditions, such as oxyhalide analyses or suppressed cations analyses in various matrices. Due to integrated sample preparation, even complex matrices can be handled, while manual workload is minimized and accuracy is increased.

Phạm vi giao hàng 2.1051.0020

Order Number	Description	Quantity
1.1051.0020	**OMNIS IC M COND/MSM/MCS/PP/DEG/DD/ROLC**	1 PCS
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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.

6.02050.200

Bottle retainer, ROLC 3 PCS

Bottle retainer for Eluent bottle PP 2 L on OMNIS IC Reagent Organizer Liquid Control.

6.02837.110

CO2 Absorber (Cartridge) 1 PCS

Absorber cartridge for removing CO_2 from the air drawn in by the OMNIS MCS unit ensures that the baseline remains stable and consistent.

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.

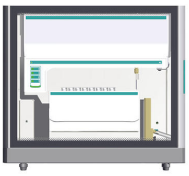
6.05000.010

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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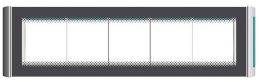
2.1055.0020
OMNIS Extension Module

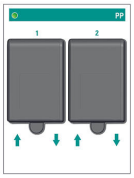


The OMNIS Extension Module serves as an extension module for an OMNIS IC and is always operated together with a main module. An OMNIS IC can thus be expanded to a maximum of 5 levels. An OMNIS Extension Module can accommodate up to 5 functional units, such as the OMNIS Degasser Unit, OMNIS High-Pressure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

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

2.1056.1020

OMNIS Peristaltic Pump Unit 2-Channel



The OMNIS Peristaltic Pump Unit is used as the peristaltic pump in the OMNIS IC System to convey the samples and auxiliary solutions.

It works according to the displacement principle, i.e., liquids are forced through the pump tubing by external mechanical deformation of the pump tubing. The pump tubing is deformed by pressing it against a rotating roller head.

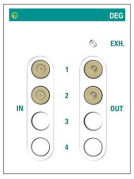
The two channels can be operated independently of each other at different speeds, increasing flexibility for a wide range of applications.

Specifications:

– Number of channels: 2
– Rotational speed increment: 2.5 rpm
– Minimum rotational speed: 2.5 rpm
– Maximum rotational speed: 250 rpm
– Rotation direction: Clockwise

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

2.945.0020
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.

6.05000.100
Installation kit: OMNIS IC M/L

6.05000.120
Installation kit: OMNIS IC M, cable

6.05331.010
OMNIS IC equip.: D-INJ, DD

Accessory set for Full Loop Injection in OMNIS IC: With this technique, the sample loop can be filled with an OMNIS Dosing Drive Unit in combination with the OMNIS cylinder unit.
Prerequisites:
OMNIS IC S/M/L with OMNIS IC AS/ASCOOL, including:
– available OMNIS Dosing Drive Unit
– available OMNIS MISP 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

6.05332.000
OMNIS IC equip.: Container 10 L, LC

Accessory set for automatic monitoring of 10 L container.
Prerequisites:
OMNIS IC with ROLC

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

6.05332.050
OMNIS IC equip.: DD Reg.

Accessory set for MSM regeneration with Dosing Drive Unit with STREAM setup.
Prerequisites:
OMNIS IC S/M/L, including:
– available OMNIS Dosing Drive Unit

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

6.05332.070
OMNIS IC equip.: PCR, DD

Accessory set for PCR in OMNIS IC: PCR-UV/VIS detection is used to photometrically detect analytes through a chemical reaction following chromatographic separation. In the PCR cartridge, the eluent is mixed with a reagent behind the separation column, thereby enabling a specific reaction with the analyte. The eluent-reagent mixture, along with the reacted analytes, is then transported to the UV detector. This set is specific for the PCR application in combination with the dosing drive unit, including an additional bottle for rinsing purposes.

Prerequisites:
OMNIS IC S/M/L, including:
– available OMNIS Dosing Drive Unit
– available OMNIS Column Thermostat Unit

6.05332.080
OMNIS IC equip.: EPOD

Accessory set for automatic eluent production in OMNIS IC.

Prerequisites:
OMNIS IC S/M/L including:
– available OMNIS Dosing Drive Unit
– OMNIS Reagent Organizer Liquid Control with 2 volume sensors (1 for eluent bottle, 1 for concentrate bottle)

6.05332.090
OMNIS IC equip.: Dose-in Gradient

Accessory set for Dose-in Gradient in OMNIS IC: A gradient is created by mixing different eluents in a mixing ratio that varies over the analysis duration.
An OMNIS Cylinder Unit doses a concentrated or diluted eluent into the main eluent stream in a defined ratio. This changes the overall concentration of the mobile phase. The result is optimal separation of all ions within an acceptable analysis time.

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

6.05332.100
OMNIS IC equip.: DD Reg., Rinse

Accessory set for MSM regeneration with Dosing Drive Unit without STREAM setup.
Prerequisites:
OMNIS IC S/M/L, including:
– available OMNIS Dosing Drive Unit

6.05332.110
OMNIS IC equip.: PCR, PP

Accessory set for PCR in OMNIS IC: PCR-UV/VIS detection is used to photometrically detect analytes through a chemical reaction following chromatographic separation. In the PCR cartridge, the eluent is mixed with a reagent behind the separation column, thereby specifically reacting with the analyte. The eluent-reagent mixture, along with the reacted analytes, is then transported to the UV detector. This set is specific for the PCR application in combination with the peristaltic pump unit.
Prerequisites:
OMNIS IC S/M/L, including:
– available OMNIS Peristaltic Pump Unit channel
– available OMNIS Column Thermostat Unit

6.05332.120
OMNIS IC equip.: Two tower setup

Accessory set for an OMNIS IC without OMNIS IC AS or ASCOOL: If the OMNIS IC system is to be set up in 2 stacks (two-tower setup), the OMNIS IC must be equipped with a base plate, and the AS/ASCOOL with a reagent organizer.
Prerequisites:
OMNIS IC S/M/L

6.05332.130
OMNIS IC equip.: AutoSwitch

Accessory set for AutoSwitch in OMNIS IC: Many samples require analysis of multiple analytes, such as anions and cations. The OMNIS IC M can be easily upgraded to perform AutoSwitch analysis. This enables automated serial execution, for example, of anion and cation analyses. Automatic switching between different analyses is possible with an additional injector and two 3 /2-way valves.

Prerequisites:

OMNIS IC M, including:

– available OMNIS Actuator Unit equipped with 6/2 or 7/3 injector (minimum 1 x 7/3 injector is required)
– available position on the OMNIS Column Thermostat Unit
– AS/ASCOOL equipped with 1x switching valve 3/2, M6 and 1x switching valve 3/2, UNF

6.05801.290
Drain kit, M

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

Prerequisites:

2105100x0 OMNIS IC M