

## MONITORING AND MANAGEMENT SYSTEMS, CONTROLLERS, AND DOSING SYSTEMS FOR OPTIMIZED IRRIGATION

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### **ABOUT NETAFIM**

NETAFIM IS THE GLOBAL LEADER IN SMART IRRIGATION SOLUTIONS FOR A SUSTAINABLE FUTURE.



29 subsidiaries



17 manufacturing plants



4,300 employees



>110

Founded in 1965, Netafim pioneered the drip revolution, creating a paradigm shift toward low-flow agricultural irrigation.

Today, Netafim provides diverse smart irrigation solutions - from drippers and sprinklers to high-end digital farming solutions and automated systems - for a range of agriculture, landscaping and mining applications. Netafim also offers large-scale and turnkey open-field and greenhouse projects - from design to maintenance - featuring engineering, project management and financing services.

Since its establishment over 50 years ago, Netafim has been the global leader in agricultural irrigation solutions. With hundreds of leading agronomic and technical professionals, numerous state-of-the-art technologies, and decades of implementation experience, Netafim provides a comprehensive, innovative and field-proven offering for all crops, topographies, climates and conditions. Netafim closely accompanies customers from the get-go, offering end-to-end expert guidance and support to help meet their specific needs.

Serving growers of all sizes - from smallholders to large-scale farmers - Netafim is helping the world grow more with less.

1965

Established at Kibbutz Hatzerim

1966

Introduces world's first commercialized dripper

1981

Opens first subsidiary outside of Israel

1999

Merges into single corporation

2008

Becomes member of UN CEO Water Mandate

2011

Permira funds acquires controlling intrest

2013

Named 2013 Stockholm Industry Water Award Laureate

2015





## ABOUT NETAFIM'S DIGITAL FARMING

Leveraging over 15 years of technological experience, a growing installed base, and a world-class agronomy department that deeply understands growers' needs, Netafim is the leading global provider of digital farming solutions.

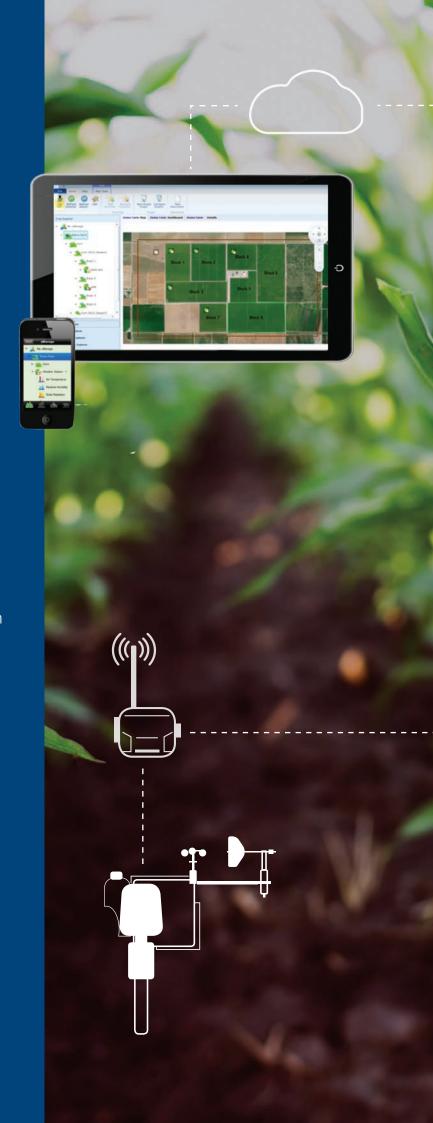
Comprised of three families of cutting-edge and reliable product types - monitoring and management systems, controllers and dosing systems - Netafim's digital farming offering enables smarter, faster and more accurate irrigation. Taking into account all soil, weather, crop, environmental and hydraulic conditions, our cloudbased solutions present a real-time, in-field situation picture and comprehensive data that can be accessed by a farmer's PC or mobile device anytime, anywhere. This enables farmers to manage, control and optimize irrigation and fertigation according to the crop's specific needs. With our digital farming offering, farmers enjoy steadier productivity, lower risk and higher efficiency, leading to greater profitability.

# MONITORING & MANAGEMENT SYSTEMS

#### **CUTTING-EDGE SOLUTIONS**

Netafim's monitoring and management systems include rSense - a cutting-edge solution comprised of diverse sensors and a wireless communications system based on advanced radio frequency technology - and uManage state-of-theart crop management software.

Monitoring all soil, weather, crop, environmental and hydraulic conditions, rSense sensors are connected to a base with an embedded cellular modem that connects to uManage. User-friendly with a simple and intuitive user interface (UI), uManage continuously collects data from the sensors to present a clear, real-time view of a farm's status. Offering a new user experience (UX), uManage features several easy-to-use tools, including a dynamic dashboard, decision support system (DSS) graphic tool, dynamic map, and navigation panel with online information and easy access to any farm device. Netafim's comprehensive monitoring and management systems improve growers' planning and decision making, leading to optimized farm resource utilization and higher yields.





#### HIGHLIGHTS

- Includes a broad array of sensors
- Offers real-time in-field monitoring
- Provides water and nutrient usage traceability
- Enables anytime, anywhere connectivity
- Features user-friendly web user interface

#### **PRODUCTS**

Netafim's monitoring and management systems include rSense sensors/wireless communications system and uManage crop management software.

- rSense's wide range of sensors include:
  - Soil moisture and temperature sensors -NetaSense (VWC of soil), Irrometer (water tension of soil), SM150T by DeltaT (soil moisture content), NetaCap by DFM (profile depth soil moisture and temperature)
  - Water meter, fertilizer meter and pressure sensors
  - Dendrometer sensors
  - Meteorological station meteoSense (air temperature, relative humidity, radiation, solar radiation summary, wind speed, wind direction, rain gauge, daily rain counter, ET calculation, dew point calculation, maximum wind speed)
- uManage advanced crop management software for sensor data collection and presentation of real-time, in-field situation picture

## VANTAGE PRO2 GROWEATHER

MODULAR, CLOUD-BASED WEATHER STATION BY DAVIS

#### **OVERVIEW**

The Vantage Pro2 GroWeather station provides real-time weather updates directly to a grower's mobile device or PC. Effective under the most demanding conditions, the cloud-based weather station is fully integrated with uManage crop management software, enabling viewing and storing of data on any device - anytime, anywhere.

#### **HIGHLIGHTS & BENEFITS**

- Rugged and flexible
- Dependable data transmission
- Simple installation
- High accuracy
- Plug-and-play connection to uManage
- Customized options

#### **DATA COVERAGE**

- Air temperature
- Relative humidity
- Radiation
- Wind speed
- Wind direction
- Rain gauge
- Daily rain counter
- ET calculation (evapotranspiration)
- Dew point calculation
- Maximum wind speed



#### **TYPICAL INSTALLATION**





For illustrative purposes

#### **ORDER DETAILS**

SAP#	DESCRIPTION
33010-012040	UMANAGE WEATHER STATION F/MOST COUNTRIES

#### **SPECIFICATIONS**

- Operating temperature: -40°F-150°F (-40°C-65°C)
- Non-operating temperature: -40°F-158°F (-40°C-70°C)
- Current draw (ISS SIM only): 5mA (average) at 4-6VDC
- Sensors connector: modular sensor RJ-11
- Cable type: 4-conductor, 26 AWG
- Cable length: anemometer 40 feet (12m) (included),

240 feet (73m) (maximum recommended)

For further information, please consult our pre-sales support via Cmt.Support@netafim.com
For assembly and installation information, please go to https://www.youtube.com/watch?v=GNA5SYImNAo
For maintenance information, please go to https://www.youtube.com/watch?v=8UjG9LNec-l

## IRROMETER RSU-V TENSIOMETER

SOIL MOISTURE MEASUREMENT TOOL

#### **OVERVIEW**

The Irrometer tensiometer is a proven and reliable tool that provides users with accurate information on soil moisture status, regardless of soil type, and is fully integrated with uManage software. Measuring soil water tension in centibars (cb) or kilopascals (kPa), the tool determines the amount of energy that a plant's root system uses to draw water from the soil. By understanding soil moisture activity, users make better informed irrigation scheduling decisions that lead to improved yields and quality, while reducing water, fertilizer, labor and energy costs.

#### **HIGHLIGHTS & BENEFITS**

- High accuracy
- Cost-efficient and reliable irrigation scheduling
- Unaffected by salinity with no need for site calibration,
   thereby offering true soil water potential measurement
- Available in several models for sandy and other soil types, with standard lengths of 30cm, 60cm, 90cm (12", 24", 36") based on crop's rooting depth

#### **FEATURES & FUNCTIONALITY**

- Low-cost voltage output/input transducer
- RoHS-compliant
- Voltage output signal read by rSense unit, enabling real-time data transmission to the grower
- Temperature compensated



#### **TYPICAL INSTALLATION**

#### UPPER TENSIOMETER

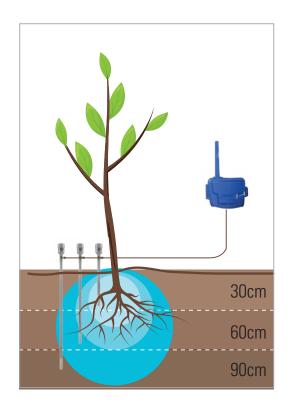
- Placed at the top of the root zone
- Provides data of the wetted bulb's development in the soil, and indicates the appropriate time to irrigate

#### MIDDLE TENSIOMETER

- Placed at the midpoint of the main fibrous root system
- Provides data regarding the soil's wetness in the root zone

#### LOWER TENSIOMETER

- Placed at the bottom of the root zone
- Used to determine if too much or too little water is being applied in each irrigation and the proper time intervals between irrigation to provide data regarding runoff or deep percolation



#### **ORDER DETAILS**

SAP#	DESCRIPTION	REMARKS
74390-007910	RSENSE IRROMETER RSU - V-MOST SOILS-30/12	30cm / 12" length
74390-007920	RSENSE IRROMETER RSU - V-MOST SOILS-60/24	60cm / 24" length
74390-007930	RSENSE IRROMETER RSU - V-MOST SOILS-90/36	90cm / 36" length
74390-007940	RSENSE IRROMETER RSU - V-SANDY SOILS-30/12	30cm / 12" length
74390-007950	RSENSE IRROMETER RSU - V-SANDY SOILS-60/24	60cm / 24" length
74390-007960	RSENSE IRROMETER RSU - V-SANDY SOILS-90/36	90cm / 36" length

#### **SPECIFICATIONS**

Output voltage: 0.5-4.5V, 2.5mA

Accuracy: +/- 2% of full scale

Weight: 2.16oz (61.22gm)

Dimensions: 25mm (w) x 30cm (d) x 25cm (h)

(1" x 1.88" x 1")

Operating temperature: 32°-150°F (0°-66°C)

Connection: 1/4" NPT brass

Supply voltage: 5VDC (+/- 0.5 VDC)

Supply current: 10mA

Range: 0-94 cb (kPa)

For filling and service information, please go to https://www.youtube.com/watch?v=FDKqEYoG\_XQ

## **NETASENSE V2**

SOIL MOISTURE SENSOR FOR ALL SOIL TYPES

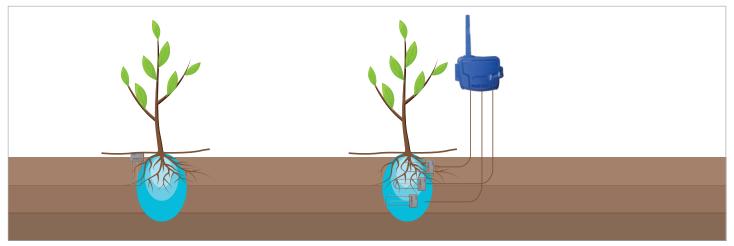
#### **OVERVIEW**

NetaSense is a soil moisture sensor that works with all soil types. Fully integrated with uManage software, the sensor monitors the volumetric water content (VWC) of the soil based on time domain transmissometry (TDT) technology, which works according to the same operating principle as time domain reflectometry (TDR) technology. Measuring the speed of an electromagnetic wave - the most accurate method of measuring water content in soil - NetaSense enables an immediate and accurate response to changes in soil and moisture levels.

#### **FEATURES & BENEFITS**

- Stainless steel, robust all-soil sensor
- Sealed electronics via waterproof epoxy
- High accuracy
- Easy to install
- Integrated with uManage





Installation at depth

Alternative installation at depth

#### **ORDER DETAILS**

CAT#	DESCRIPTION
74390-003800	RSEN-NETASENSE SENSOR

#### **SPECIFICATIONS**

Temperature range

Operating: 0°C-50°C

Storage: -20°C-60°C

Output format: 0.5-5.0mA

Power requirements: 5.5-18VDC, 10-20mA (max)

Accuracy: 1% volumetric soil moisture (can be less accurate)

Cable length: 2.5m

Connection: 4 pin Switchcraft connector EN3C3M

Dimension: 9.5cm (w) x 3.2cm (d) x 27.0cm (h)

Weight: 0.5kg

Typical measurement field: 4cm in all directions from the most external element

## **DELTA T - SM 150T**

MULTIFUNCTIONAL, HIGHLY ACCURATE SOIL MOISTURE SENSOR

#### **OVERVIEW**

The Delta T sensor measures soil moisture content. The soil moisture output signal is a differential analog DC voltage that is converted to soil moisture by a data logger or meter using the supplied general soil calibration. The soil moisture content can also be calibrated for specific soils. Fully integrated with uManage crop management software, the sealed plastic body is attached to two sensing rods directly inserted in the soil to enable highly accurate readings.

#### **HIGHLIGHTS & BENEFITS**

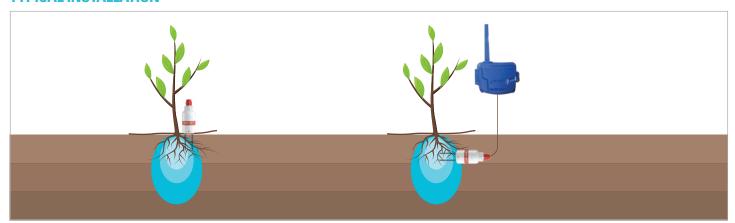
- Cost-efficient, research-grade sensor
- Dependable
- Accurate to ± 3%
- Rugged, weatherproof and can be buried
- Easy installation at depth in augured holes, and easy removal for servicing
- Low salinity sensitivity
- Excellent stability
- Minimal soil disturbance
- Adaptable to all soil and soilless media types

#### **FEATURES & FUNCTIONALITY**

- Waterproof connector to IP68
- Good electrical immunity
- Choice of cabling system options
- Cable connector, cylindrical profile and extension tube design.
- Optional temperature-sensor capabilities



#### **TYPICAL INSTALLATION**



Surface installation and spot measurements

Alternative installation at depth

#### **ORDER DETAILS**

CAT #	DESCRIPTION
74390-008200	SOIL MOISTURE SENSOR M12 IP68 DELTA-T
74390-008500	DELTAT CABLE15FT W/PLUG, LONG BARE WIRE
77100-004448	PG-9 CABLE GLAND

## NETACAP PROFILE PROBE

MULTILEVEL SOIL MOISTURE AND TEMPERATURE SENSOR BY DFM

#### **OVERVIEW**

The NetaCap profile probe is a multilevel soil moisture and temperature sensor that is fully integrated with uManage crop management software. The easy-to-install probe delivers a complete data package to the grower to improve irrigation planning and strategic decision-making.

#### **HIGHLIGHTS & BENEFITS**

- High accuracy and reliability
- Cost-efficient, high-level instrument
- State-of-the-art, proven technology
- Easy-to-use tool
- Ideal for all root zones with any soil type

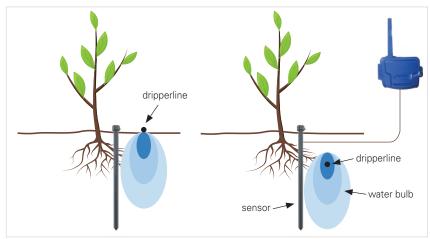
#### **FEATURES & FUNCTIONALITY**

- Temperature compensation
- Soil moisture and temperature data measurement from 6 depths
- Ambient condition measurement via additional temperature sensor at top of probe
- Continuous data collection via uManage



#### **TYPICAL INSTALLATION**





NetaCap probe depths

On-surface drip irrigation installation (left) and subsurface drip irrigation installation

#### **ORDER DETAILS**

SAP#	DESCRIPTION
74390-002680	RSENSE MD PROBE - MULTI-DEPTH - 80CM

NetaCap probe must be connected to a dedicated rMSense DFM unit. Please consult with CMT pre-sales support on this matter at Cmt.Support@netafim.com

#### **SPECIFICATIONS**

Equipment type: Electronic capacitance continuous logging probe

Length: 80cm

Body material: Polyvinyl chloride (PVC plastic)

Communication: TTL/RS232

Power source: 3.6V, 500mA regulated supply

Active state in transit: Not active, not energized

Packaging for transit: Custom designed box with bubble wrap

## uManage

REAL-TIME CROP MANAGEMENT SOFTWARE

#### **OVERVIEW**

uManage is advanced real-time crop management software providing growers with their farms' status at a glance. Integrated with rSense, a cutting-edge solution comprised of diverse sensors and RF-based wireless communications, uManage continuously collects data from the field. Anchoring Netafim's leading monitoring and management systems, uManage enables end users to optimize their farm resources and increase yield.

The software provides user-friendly tools for field monitoring and status:

- Dynamic dashboard
- Graphic tool with real-time crop management and decision support system (DSS)
- Dynamic map to get field status at a glance
- Navigation panel with online information, and simple access to any farm device

#### **HIGHLIGHTS & BENEFITS**

- Cloud-based software with high availability
- Remote access and support to/from any unit
- Multiple communications interfaces (RF, cellular)
- Low power, long-lasting battery
- Broad array of sensors soil, hydraulic, weather, plant
- Real-time in-field monitoring
- Water and nutrient usage traceability
- Anywhere, anytime connectivity
- Web and mobile access
- Graph and status updates
- Photography, note-taking, manual data input



#### **RADIO FREQUENCIES**

TYPE F		REGION	RADIO FREQUENCY
	Α	Europe	865 MHz
B Asia Pacific, South America & Australia			915 MHz
	C Middle East		315 MHz
D USA		USA	450 MHZ
	Е	China	433 MHZ

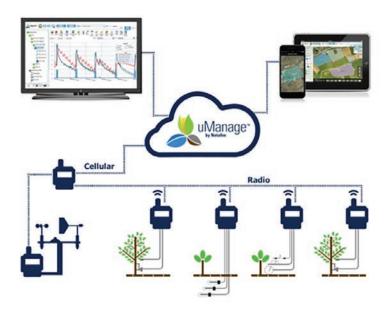


#### **SYSTEM ARCHITECTURE**

The remote rSense site is connected to the rLink base via an embedded cellular modem that connects to the uManage server.

If radio reception is low or there are great distances between sites, the remote rSense site is connected to the rLink router, which connects to the rLink base.

 Note: The customer is responsible for cellular network set-up and operational costs (e.g. SIM card, data package)



#### **ORDER DETAILS**

The following commercial kits are available for rSense, rLink and uManage.

PACKAGE NAME: BASIC			
rSense	1		
rLink Cellular	1		
uManage Users (Single License)	1		
Remarks	Basic monitoring 3 analog inputs	Basic monitoring package, 1 digital input, 3 analog inputs	
SKU	74395-001561	UMANAGE-BASIC-KIT-AUS-915-MODEM	
	74395-001564	UMANAGE-BASIC-KIT-CN-433-MODEM	
	74395-001566	UMANAGE-BASIC-KIT-EU-865-MODEM	
	74395-001565	UMANAGE-BASIC-KIT-IL-315-MODEM	
	74395-001560	UMANAGE-BASIC-KIT-US-450-W/O MODEM	

PACKAGE NAME: BASIC



PACKAGE NAME: SMALL-MEDIUM			
rSense	3		
rLink Cellular	1	1	
uManage Users (Single License)	3		
Remarks		For small-to-medium farms, up to 3 rSense & 3 uManage licenses	
SKU	74395-001571	UMANAGE-SMB-KIT-AUS-915-MODEM	
	74395-001572	UMANAGE-SMB-KIT-CN-433-MODEM	
	74395-001573	UMANAGE-SMB-KIT-EU-865-MODEM	
	74395-001574	UMANAGE-SMB-KIT-IL-315-MODEM	
	74395-001575	UMANAGE-SMB-KIT-US-450-W/O MODEM	

PACKAGE NAME: SMALL- MEDIUM



PACKAGE NAME: PRO/LARGE			
rSense	5		
rLink Cellular	1		
uManage Users (Single License)	3		
Remarks	Professional moup to 5 rSense	Professional monitoring package, for large farms, up to 5 rSense & 3 uManage licenses	
SKU	74395-001562	UMANAGE-PRO-KIT-AUS-915-MODEM	
	74395-001567	UMANAGE-PRO-KIT-CN-433-MODEM	
	74395-001568	UMANAGE-SMB-KIT-EU-865-MODEM	
	74395-001569	UMANAGE-SMB-KIT-IL-315-MODEM	
	74395-001570	UMANAGE-SMB-KIT-US-450-W/O MODEM	

PACKAGE NAME: PRO/LARGE



UMANAGE SINGLE LICENSE ONLY	SKU	DESCRIPTION
Single uManage User	74395-001576	UMANAGE-LICENSE-PROMOTION-1 USER

#### **PLEASE NOTE**

To allow maximum flexibility, all rNet products (rSense, rLink, sensors, solar panels, meteoSense) can still be purchased as stand-alone items with existing SKUs.



#### **USER & INSTALLATION GUIDE**

Scan for installation guides & movies

### **CONTROLLERS**

### ADVANCED, RELIABLE AND FLEXIBLE CONTROL SYSTEMS

Netafim's controllers cover a wide range of open-field and greenhouse irrigation applications regardless of climate or plot condition. Available in AC and DC versions, the advanced, reliable and flexible controllers manage up to 250 irrigation valves in the field, and up to 50 controllers in the same network.

Our robust controllers connect with Netafim's NMC Air cloud-based software to a gateway that creates a network of between one to five controllers.





#### **HIGHLIGHTS**

- Manages up to 250 irrigation valves
- Displays user-friendly programming interface
- Integrates with cellular or Ethernet communications software
- Increases fertigation accuracy

#### **PRODUCTS**

Netafim offers a wide range of controllers for openfield and greenhouse applications.

- NMC-PRO advanced modular, multifunctional system for large plots
- NMC-Junior PRO cost-effective multifunctional system for small and medium plots
- NMC DC battery-powered system for large and small plots
- MiniAg cost-effective system for small-scale open-field applications
- NMC-PRO Climate cost-effective system for a wide range of greenhouses located in cold or warm environments

## NMC-PRO Controller

ADVANCED, MULTIFUNCTIONAL, MODULAR AND ROBUST IRRIGATION CONTROLLER

#### **OVERVIEW**

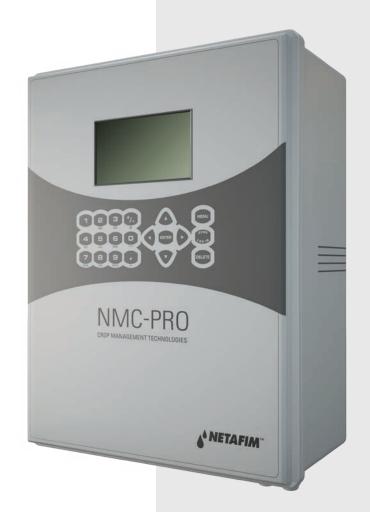
The NMC-PRO is a state-of-the-art irrigation controller for mid-to-large-scale applications. A robust and user-friendly stand-alone controller that operates under all weather conditions, NMC-PRO is suitable for open field and greenhouse solutions.

#### **HIGHLIGHTS & BENEFITS**

- Cost-effective, high-level controller
- Mobile and web remote control via NMC Air.
- User-friendly, multilingual interface
- High resistance under all weather conditions
- Modular design

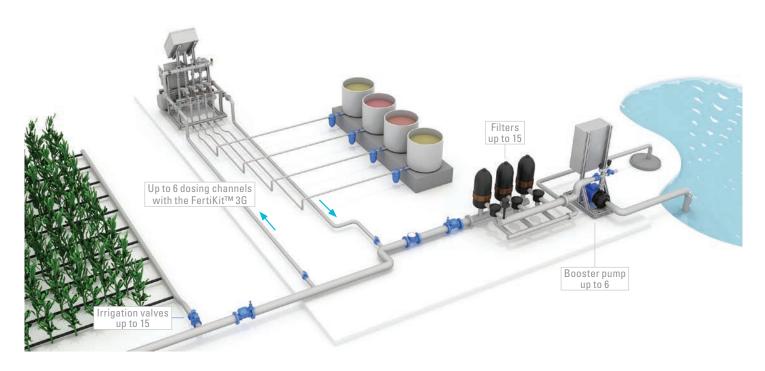
#### **FEATURES & FUNCTIONALITY**

- Up to 256 outputs for configuring valve irrigation/ cooling/misting
- Up to 8 fertilizer dosing channels
- Up to 6 booster pumps
- Valve control via RF with RadioNet, or via 2-wire cable with SingleNet
- Irrigation strategy based on dosing program, water run time and irrigation program
- Irrigation start based on time, condition, VPD sum, or radiation sum
- Filter flush program start based on either time or delta pressure
- Cooling strategy based on time and actual temperature, as well as on relative humidity sensors
- Misting strategy start based on scheduled time; can also be used as a simple timer program



#### **TYPICAL INSTALLATION**

NMC-PRO controller with FertiKit 3G dosing system



#### **ORDER DETAILS**

SAP # DESCRIPTION		REMARKS
74340-xxxxx	NMC PRO - small	NMC PRO -11 analog inputs, 8 digital inputs, 24 outputs, RadioNet and SingleNet (optional)
74340-xxxxx	NMC PRO - medium	NMC PRO -11 analog inputs, 8 digital inputs, 40 outputs, RadioNet and SingleNet (optional)
74340-xxxxxx NMC PRO - large		NMC PRO - 11 analog inputs, 8 digital inputs, 64 outputs, RadioNet and SingleNet (optional)
74340-xxxxx	NMC PRO - giant	NMC PRO -11 analog inputs, 8 digital inputs, up to 256 outputs, RadioNet and SingleNet (optional)

For specific SAP number please contact our pre-sales support via Cmt.Support@netafim.com

## NMC-Junior PRO Controller

COST-EFFECTIVE, MULTIFUNCTIONAL CONTROLLER FOR SMALL-TO-MEDIUM-SCALE APPLICATIONS

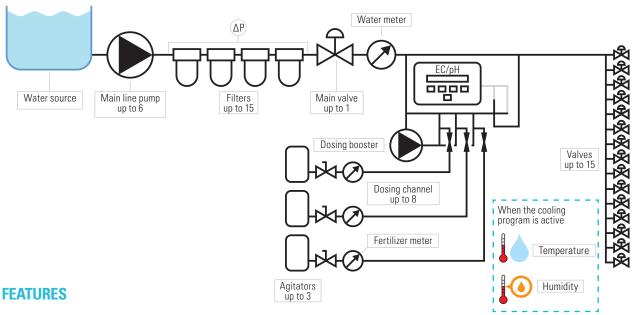
#### **OVERVIEW**

The NMC-Junior PRO is a cost-effective, multifunctional irrigation controller for small-to-medium-scale applications. Designed for open field and greenhouse applications, NMC-Junior PRO has 15 outputs for flexible configuration.

#### **HIGHLIGHTS & BENEFITS**

- Cost-effective
- Mobile and web remote control via NMC Air
- Precise EC and pH monitoring and control
- User-friendly and multilingual interface with large graphical display
- Integrated with FertiKit Nutrigation<sup>™</sup> system, or as a stand-alone product

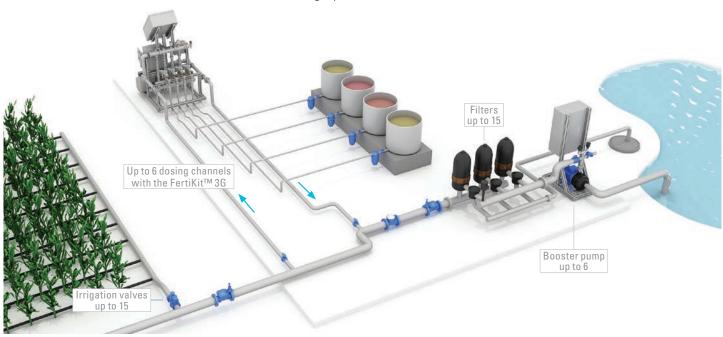




- 15 flexible outputs
  - Up to 15 valves irrigation/cooling/misting
  - Up to 6 booster pumps
  - Up to 1 main valve
  - Up to 8 fertilizer dosing channels
  - Up to 3 agitators
  - Up to 15 backflush filter valves
- Inputs
  - 6 digital inputs for water meter, fertilizer meter and delta pressure switch
  - 5 analog inputs for EC, pH, 2 x temperature and relative humidity
- Irrigation strategy is based on a dosing program, water run time program and irrigation program
- Irrigation starts by either time, conditions, VPD sum, or radiation sum
- Filter flush program starts by either time and/or delta pressure ( $\Delta P$ )
- Cooling strategy is based on time, actual temperature and relative humidity sensors
- Misting strategy starts by scheduled time; this program can also be used as a simple timer program

#### **TYPICAL INSTALLATION**

NMC-Junior PRO controller with FertiKit 3G dosing system



#### **ORDER DETAILS**

#### **NMC-JUNIOR PRO BASIC CONFIGURATIONS**

Stand-alone

CAT. No.         DESCRIPTION           74340-005145         NMC-JUN-PRO-IR-SB-115 CONTROLLER           74340-005135         NMC-JUN-PRO-IR-SB-230 CONTROLLER           74340-023950         NMC-JUN-PRO-IR-SB-115-485-PL-G CONTROLLER           74340-023940         NMC-JUN-PRO-IR-SB-230-485-PL CONTROLLER           74340-005140         NMC-JUN-PRO-IR-SB-KC-230 CONTROLLER           74340-023960         NMC-JUN-PRO-IR-DD-115V-PL-G CONTROLLER           74340-023930         NMC-JNKRCN-PRO-IR-SB-230-485-PL CONTROLLER           74340-089100         NMC-JUN-PRO-IR-SB-115-PL-G CONTROLLER           74340-089120         NMC-JUN-PRO-IR-SB-230 CONTROLLER           74340-089130         NMC-JUN-PRO-IR-DD-230-PL CONTROLLER           74340-089140         NMC-JUN-PRO-IR-SB-230-PL CONTROLLER	Stariu-alone	
74340-005135         NMC-JUN-PRO-IR-SB-230 CONTROLLER           74340-023950         NMC-JUN-PRO-IR-SB-115-485-PL-G CONTROLLER           74340-023940         NMC-JUN-PRO-IR-SB-230-485-PL CONTROLLER           74340-005140         NMC-JUN-PRO-IR-SB-KC-230 CONTROLLER           74340-023960         NMC-JUN-PRO-IR-DD-115V-PL-G CONTROLLER           74340-023930         NMC-JNKRCN-PRO-IR-SB-230-485-PL CONTROLLER           74340-089100         NMC-JUN-PRO-IR-SB-115-PL-G CONTROLLER           74340-089120         NMC-JUN-PRO-IR-SB-230 CONTROLLER           74340-089130         NMC-JUN-PRO-IR-DD-230-PL CONTROLLER           74340-089140         NMC-JUN-PRO-IR-SB-230-PL CONTROLLER	CAT. No.	DESCRIPTION
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74340-089150 NMC-JUN-PRO-IR-SB-12V CONTROLLER	74340-089150	NMC-JUN-PRO-IR-SB-12V CONTROLLER
74340-089160 NMC-JUN-PRO-IR-DD-12V CONTROLLER	74340-089160	NMC-JUN-PRO-IR-DD-12V CONTROLLER
74340-089170 NMC-JUN-PRO-IR-SB-230-485 CONTROLLER	74340-089170	NMC-JUN-PRO-IR-SB-230-485 CONTROLLER
74340-089180 NMC-JUN-PRO-IR-DD-230-485-PL CONTROLLER	74340-089180	NMC-JUN-PRO-IR-DD-230-485-PL CONTROLLER



#### For FertiKit 3G

CAT. No.	DESCRIPTION
74340-010120	NMC-JUNIOR-PRO-FOR-FERTIKIT 80W-230V
74340-010110	NMC-JUNIOR-PRO-FOR-FERTIKIT 80W-115V
74340-010130	NMC-JUNIOR-PRO-FERTIKIT 80W-115V D.DOOR
74340-010135	NMC-JUNIOR-PRO-FERTIKIT 80W-230V D.DOOR
74340-010160	NMC-JNKRCN-PRO-SB-CN-230-80W F/FERTIKIT

#### **UPGRADE FROM NMC-JUNIOR TO NMC-JUNIOR PRO**

CAT. NO.	DESCRIPTION	COMMENTS
74340-009980	NMC-JUNIOR PRO CPU CARD FOR LED	For NMC Junior with LED display
74340-009990	NMC-JUNIOR PRO CPU CARD FOR FLUR	For NMC Junior with fluorescent display

#### **POWER SPECIFICATIONS**

15 outputs: 24 VAC

Internal surge protector: 115/230 VAC

Surge protection on inputs and outputs

Power supply: 115/230 VAC, 35W

#### **AVAILABILITY**

Lead time: 4 weeks from receipt of customer's order.

#### **USER & INSTALLATION GUIDE**

An installation guide with comprehensive explanations is provided with the NMC-Junior PRO and can be downloaded from the Netafim Media Center at http://www.netafim.com/media-center

## NMC-PRO Climate Controller

ADVANCED MODULAR, MULTIFUCTIONAL GREENHOUSE CONTROLLER

#### **OVERVIEW**

The NMC-PRO Climate is a multifunctional greenhouse controller covering diverse climatic conditions. The cost-effective controller is suitable for small-to-mid-range greenhouses.

#### **HIGHLIGHTS & BENEFITS**

- Advanced climate control management
- Real-time climate control
- Control of up to 4 climate zones in a single controller
- Installation of up to 50 zones in a single network
- Easy integration with NMCnet software for carrying out climate control, operations and management, and with a graphic module for monitoring and analyzing controller performance
- Weather station data sharing with all controllers in the same network
- New temperature and humidity measuring box design, enabling longer durability



#### **FEATURES & FUNCTIONALITY**

The NMC-PRO Climate can control diverse modules and components in a greenhouse, including:

- Vents top and side
- Screens shading and energy
- Heating ON/OFF heating and up to 5 water heating networks per zone; upgraded heating network algorithm enables high calculation accuracy, performance and energy efficiency
- Misting up to 8 misting valves per zone with PID control by temperature, RH and VPD triggers
- Fan and pad up to 8 fan stages per zone controlled by temperature, RH and/or time (integrated air inlet control)
- Air circulation controlled by time and/or trigger, temperature and RH

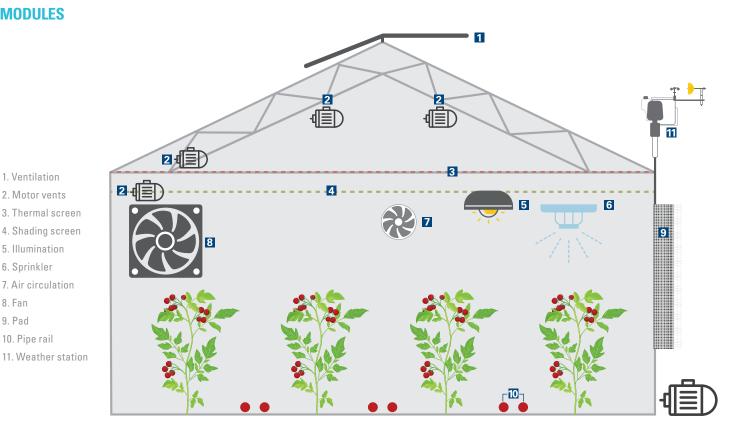
#### **MODULES**

1. Ventilation

2. Motor vents

5. Illumination 6. Sprinkler

8. Fan 9. Pad 10. Pipe rail



#### **ORDER DETAILS**

#	SAP#	DESCRIPTION	REMARKS
1	74340-xxxxx	NMC PRO Climate - 1 zone	NMC PRO Climate - 11 analog inputs, 8 digital inputs, 24 outputs
2	74340-xxxxx	NMC PRO Climate - 2 zones	NMC PRO Climate - 11 analog inputs, 8 digital inputs, 40 outputs
3	74340-xxxxx	NMC PRO Climate - 3-4 zones	NMC PRO Climate - 22 analog inputs, 8 digital inputs, 64 outputs
4	74340-xxxxx	NMC PRO Climate - up to 4 zones	NMC PRO Climate - 44 analog inputs, 8 digital inputs, up to 256 outputs

For specific SAP number please contact our pre-sales support via Cmt.Support@netafim.com

## NMC-PRO DC Controller

ADVANCED, ROBUST CONTROLLER FOR FARMING AREAS WITHOUT ELECTRICAL POWER

#### **OVERVIEW**

The NMC-PRO DC is an ideal solution for remote farms that have no electricity source. An advanced and robust stand-alone controller, the NMC-PRO DC is suitable for small-to-medium open-field applications.

#### **HIGHLIGHTS & BENEFITS**

- Cost-effective, advanced controller
- Mobile and web remote control via NMC Air
- Robust, stand-alone system
- User-friendly and multilingual interface
- Precise EC and pH monitoring and control



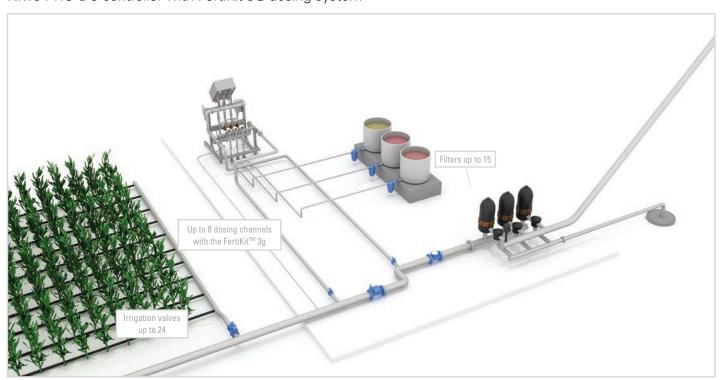
#### **FEATURES & FUNCTIONALITY**

- Up to 24 outputs for configuring valve irrigation
- Up to 6 booster pumps
- Up to 8 fertilizer dosing channels
- Valve control via RF with RadioNet, or via mono cable with SingleNet
- Irrigation strategy based on dosing program,
   water run time, and irrigation program
- Irrigation start based on time, condition, VPD sum, or radiation sum

- Filter flush program start based on either time or delta pressure
- Cooling strategy based on time and actual temperature, as well as on relative humidity sensors
- Misting strategy start based on scheduled time;
   can also be used as a simple timer program

#### **TYPICAL INSTALLATION**

NMC-PRO DC controller with FertiKit 3G dosing system



Installation when there is no electricity on site

#### **ORDER DETAILS**

SAP#	DESCRIPTION	REMARKS
74340-xxxxx	NMC PRO DC	NMC PRO DC - 4 analog inputs, 4 digital inputs, 24 outputs, RadioNet and SingleNet (optional)

## **NMC AIR**

ADVANCED CLOUD-BASED SOFTWARE ENABLING REMOTE CONTROL

#### **OVERVIEW**

NMC Air is advanced cloud-based software that links to Netafim's NMC controllers to enable remote monitoring and control of farms anytime, anywhere.

#### **HIGHLIGHTS & BENEFITS**

- Cloud-based software
- Real-time in-field situation picture
- Water and nutrient usage traceability
- Remote farm operations
- Easy and enjoyable user experience
- Works with NMC-PRO, NMC-Junior PRO and NMC-PRO DC

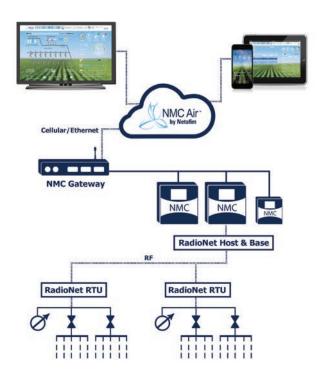
#### **FEATURES**

- Farm status and active irrigation and dosing performance in a single view
- Alarms and notifications to PC and mobile devices
- Manual NMC irrigation controller operations pause/resume irrigation, start/stop irrigation program, start/stop irrigation valve, start/stop filter flushing
- Irrigation, dosing and water run time filter, flushing/misting, and cooling program editing and creation
- Graph viewing and creation for continuous farm monitoring
- NMC history for farm data analysis, including sensor log, irrigation log, and incomplete irrigation programs

#### **SYSTEM ARCHITECTURE**

- NMC Air connects up to 5 NMC irrigation controllers in a network via an NMC gateway by means of cellular or Ethernet communications
- Controllers working with NMC Air:
  - NMC-PRO
  - NMC-Junior PRO
  - NMC-PRO DC





#### **ORDER DETAILS**

#### 1. NMC AIR KIT FOR SINGLE NMC-PRO IRRIGATION

SAP#	DESCRIPTION	PACKAGE INCLUDES
33900-003000	NMC-AIR-KIT-FOR-NMC-PRO-SINGLE-GW-US-PS	1 Gateway for single NMC PRO with power supply
33900-003010	NMC-AIR-KIT-FOR-NMC PRO-SINGLE-GW-UK-PS	for USA / UK / EU / AU.
33900-003020	NMC-AIR-KIT-FOR-NMC PRO-SINGLE-GW-EU-PS	1 NMC PRO Communication card
33900-003030	NMC-AIR-KIT-FOR-NMC PRO-SINGLE-GW-AU-PS	2 years NMC Air cloud license

#### 2. NMC AIR KIT FOR MULTI NMC-PRO 2-5 CONTROLLERS

SAP#	DESCRIPTION	PACKAGE INCLUDES
33900-003040	NMC-AIR-KIT F/2-5-NMC PRO-MULT-GW-US-PS	1 Gateway for single NMC PRO with power supply
33900-003050	NMC-AIR-KIT F/2-5-NMC PRO-MULT-GW-UK-PS	for USA / UK / EU / AU.
33900-003060	NMC-AIR-KIT F/2-5-NMC PRO-MULT-GW-EU-PS	1 NMC PRO Communication card
33900-003070	NMC-AIR-KIT F/2-5-NMC PRO-MULT-GW-AU-PS	2 years NMC Air cloud license

#### 3. NMC AIR KIT FOR SINGLE NMC-JUNIOR PRO IRRIGATION

SAP#	DESCRIPTION	PACKAGE INCLUDES
33900-003080	NMC-AIR-KIT-FOR-JUN-PRO-SINGLE-GW-US-PS	1 Gateway for single NMC PRO with power supply
33900-003090	NMC-AIR-KIT-FOR-JUN-PRO-SINGLE-GW-UK-PS	for USA / UK / EU / AU.
33900-003100	NMC-AIR-KIT-FOR-JUN-PRO-SINGLE-GW-EU-PS	1 NMC Junior Pro Communication card
33900-003110	NMC-AIR-KIT-FOR-JUN-PRO-SINGLE-GW-AU-PS	2 years NMC Air cloud license

#### **UPGRADE FROM NMC-JUNIOR TO NMC-JUNIOR PRO**

SAP#	DESCRIPTION	PACKAGE INCLUDES
74340-009980	NMC-JUNIOR PRO CPU CARD FOR LED	Relevant for Junior with LED display
74340-009990	NMC-JUNIOR PRO CPU CARD FOR FLUR	Relevant for Junior with fluorescent display



#### **TUTORIAL VIDEO**

Scan for a tutorial video at Netafim's YouTube channel

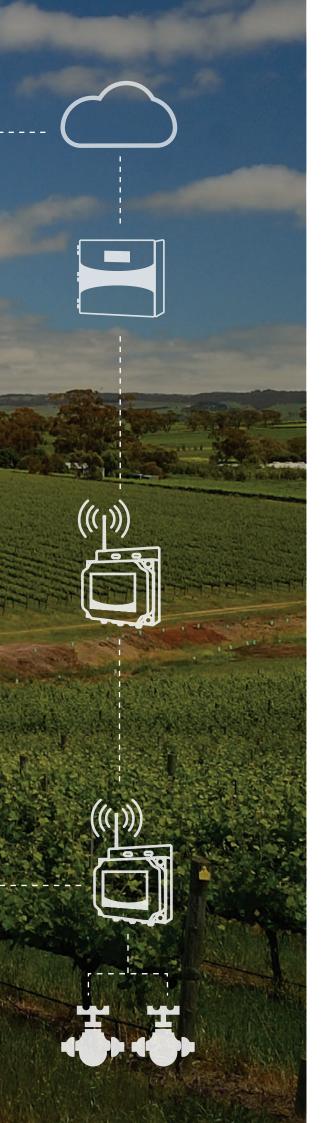
### VALVE CONTROL SYSTEMS

### WIRELESS AND WIRED SOLUTIONS

Netafim offers both wireless and wired valve control systems for remote irrigation monitoring and control. Easy to set up and operate, the systems are comprised of remote terminal units (RTUs), communications and software. Designed to interface with Netafim and third-party controllers, these systems offer the highest level of control and reliability for projects of all sizes, while ensuring grower peace of mind. RadioNet is a unified wireless monitoring and control system. Built with an advanced design that includes four modular expansion slots, RadioNet enables virtually unlimited monitoring and control configurations and scalability to strengthen performance. Controlling up to 2,000 valves and 2,000 sensors at one time, RadioNet is a secure, energy efficient system that extends geographical coverage between RTUs, while operating effectively in the most extreme climatic conditions. SingleNet is a 2-wire cable power and communications system. Fast and easy to install, SingleNet is highly reliable, and requires minimum maintenance to ensure effective long-term usage.







#### **HIGHLIGHTS**

- Controls all valve operations
- Easily integrates with existing systems
- Lowers hardware and installation costs
- Requires minimal maintenance
- Ensures reliability and peace of mind

#### **PRODUCTS**

Netafim offers two valve control systems enabling long-distance irrigation monitoring and control.

- RadioNet advanced unified wireless monitoring and control system
- SingleNet 2-wire cable power and communications system

## **RadioNet**

ADVANCED RF VALVE CONTROL

#### **OVERVIEW**

RadioNet is a unified wireless monitoring and control system. Featuring an advanced and modular design, RadioNet is comprised of remote terminal units (RTUs), radio frequency (RF) communications, and software to enable long-distance wireless monitoring and control. The user-friendly system ensures reliable and flexible control over RTUs to increase productivity with minimal interruptions at the highest level of scalability.

#### **HIGHLIGHTS & BENEFITS**

- Advanced and modular design that easily integrates into existing systems and ensures network stability
- Flexible and versatile to enable system expansion as the enterprise expands
- Repeater technology to avoid infringing objects while covering great distances
- Long-distance signal capabilities
- Control of up to 2,000 valves and 2,000 sensors at one time to provide maximum control and reliability for large-scale projects

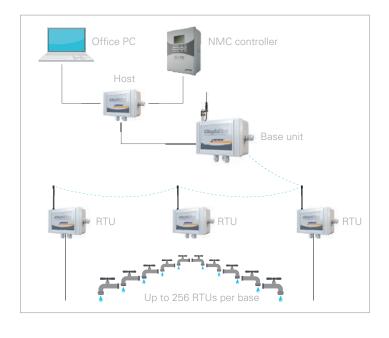


#### **FEATURES & FUNCTIONALITY**

- Wireless network optimized seamless wireless network enabling exceptional system architecture with enhanced throughput in virtually any environment
- Modular and scalable four modular expansion slots enabling virtually unlimited monitoring and control configuration to strengthen performance
- Built-in survey mode optimal long-term operation with instant spectrum analysis by recording charting frequency interruptions across the entire network from the initial unit installation
- Extended coverage remote unit operability as a store & forward (S&F) data repeater to increase geographical coverage by up to 3 miles (5km) between every two units, and by a total of 43 miles (70km) with all repeaters
- Easy integration versatility and easy connectivity
   (using Modbus protocol) to a wide range of

- controllers making it a cost-efficient tool for future growth
- Energy efficient low-power consumption design that typically is in sleep mode (reporting and controlling only when needed) to ensure extended battery life; units can be powered by rechargeable batteries and a solar cell
- Diagnostic reliability embedded advanced features such as immediate assessment of a frequency failure and remote alerts and diagnostics in the event of service failure
- Secure communications protocol increased data security operation with multiple layers of encryption and time-based data authentication
- Reliability in extreme conditions remote unit temperature range of -13°F-185°F (-25°C-85°C)

#### TYPICAL INSTALLATION



#### **ORDER DETAILS**

SAP#	DESCRIPTION
74330-012000	R-NET HOST COMPLETE UNIT RS485/232
74330-012100	R-NET BASE STATION
74360-007600	R-NET CENTER UNIT (HOST+BASE+BATT+PS)
74330-012200	R-NET REMOTE UNIT RTU (1DO, 2DI)
74330-012195	R-NET RTU 2XDO 2XDI
74330-013140	R-NET EXPANSION CARD 2 X DO/2 X DI
74330-005120	R-NET MONOPOL.ANT.430-470 10M GROUND.486
74330-005020	R-NET MONOPOL.ANT.430-470 3M GROUNDED484
74330-005060	R-NET MONOPOL.ANT.430-470 6M GROUNDED485

## **SingleNet**

2-WIRE CABLE VALVE COMMUNICATIONS CONTROL SYSTEM

#### **OVERVIEW**

SingleNet is a 2-wire cable power and communications system. Easily operated and monitored over an RTU network, the SingleNet interface communicates with all controllers. Fast and simple to install, SingleNet is a reliable system that requires minimum maintenance ensuring long-term usage.

#### **HIGHLIGHTS & BENEFITS**

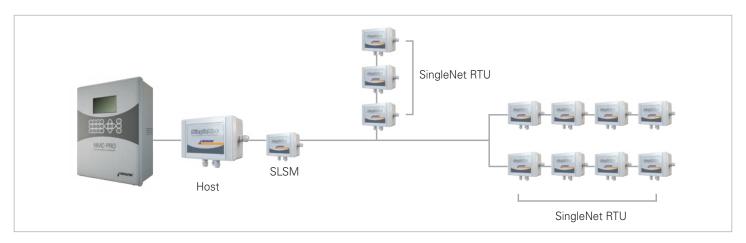
- Advanced control over valve operations
- Lower cable and installation costs
- Greater reliability and peace of mind

#### **FEATURES & FUNCTIONALITY**

- Powered by 12VDC
- Total cable length of up to 10km
- Control of up to 128 remote terminal units (RTUs)
- 2 digital outputs and inputs per RTU
- 2 digital water meter inputs per RTU
- Auto valve shutdown upon communication or power failure
- PC connection for easy setup and monitoring
- Optional plug-in lighting suppression module



#### **TYPICAL INSTALLATION**



#### **ORDER DETAILS**

SAP#	DESCRIPTION
00035-001750	SINGLENET SERIAL INTERFACE UN.RS485/232
74340-001960	SINGLENET HOST IN BRACKET FOR NMC PRO
74340-014900	SINGLENET RTU 2 LATCH OUT & 2D.IN
74340-015000	SINGLENET RTU 4 LATCH OUT & 4D.IN
74340-015100	SINGLENET RTU 6 LATCH OUT & 6D. IN
74340-015400	SINGLENET RTU 2 LATCH OUT & 2D. IN+PLSM
74340-015500	SINGLENET RTU 4 LATCH OUT & 4D. IN+PLSM
74340-015600	SINGLENET RTU 6 LATCH OUT & 6D. IN+PLSM
77100-005870	SINGLENET CABLE 1X3X16 GAUGE PE ISOLATION
00035-008200	SINGLENET PLSM LINE SUPPRESSION FOR RTU
00035-008300	SINGLENET SLSM LINE SUPPRESSION MODULE
77100-005880	GROUND KIT FOR SINGLENET PLSM

### DOSING SYSTEMS

### FOR MULTI-SIZED GREENHOUSE & OPEN-FIELD APPLICATIONS

Suitable for greenhouse and open-field applications, our advanced dosing systems integrate with Netafim's world-leading smart irrigation solutions to ensure the highest level of Nutrigation accuracy, while optimizing water, fertilizer and energy usage. Available in manual or automated versions, our systems are based on the Venturi principle and operate across a wide range of pressures. Robust and reliable, the systems address the specific needs of each plot and crop to create the best conditions for maximized and timely yields.

All of our dosing systems integrate with Netafim or third-party controllers. When linked to NMC Air, Netafim's advanced cloud-based software, the systems can be remotely accessed via the web or a mobile device, enabling farmers to operate and monitor their growing areas anytime, anywhere.







#### **HIGHLIGHTS**

- Covers greenhouse and open-field applications of all sizes
- Works with a wide range of pressures
- Offers perfect EC and pH control
- Integrates with Netafim or third-party controllers
- Operates in manual or automated fashion
- Lowers water, fertilizer and energy usage

#### **PRODUCTS**

Netafim offers two groups of dosing systems broken down by three applications.

#### OPEN FIELDS AND ORCHARDS

 FertiOne - single-channel injection system for electricity-fitted sites

#### NET HOUSES, OPEN FIELDS AND ORCHARDS

 FertiKit 3G - field-proven, fully configurable dosing system

#### **GREENHOUSES**

- NetaJet 4G most advanced dosing system with the highest Nutrigation precision in minimum time
- NetaFlex 3G homogeneous dosing system for soilless media applications

## FertiOne

SINGLE-CHANNEL, COST-EFFECTIVE FERTILIZER INJECTION SOLUTION

#### **OVERVIEW**

FertiOne is a single-channel fertilizer injection solution for open-field sites fitted with electricity. The plug-and-play, fully configurable, and user-friendly FertiOne ensures high efficiency with minimal investment, making it an extremely cost-effective Nutrigation solution.

Built on a sturdy, corrosion-resistant aluminum frame, the system can accommodate different types of dosing channels and a range of single- or three-phase dosing boosters to suit the varied needs of sites. FertiOne is available as a basic manual system or equipped with several controller options, enabling either simple, straightforward operations or advanced quantitative or proportional control.

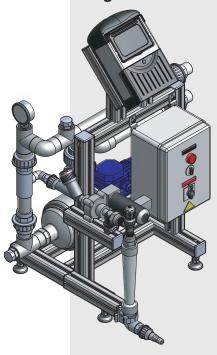
#### **HIGHLIGHTS**

- Modular Nutrigation system
- Standard platform
- Minimal required investment
- Efficient water, fertilizer and energy consumption
- Wide range of irrigated water capacities
- Quantitative or proportional Nutrigation capabilities
- Near maintenance-free Venturi operations no moving parts
- Highly accurate dosing channel
- Manual or fully automated operations
- Easy integration into existing irrigation systems
- High-quality components and PVC piping
- Aluminum, corrosion-resistant frame with adjustable legs

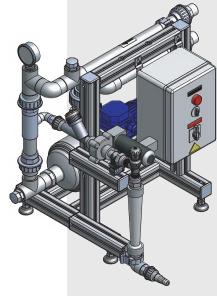
#### **BENEFITS**

- Easy installation and maintenance
- Broad application coverage, including open fields and orchards
- Highly profitable price/performance ratio
- Integrated with NMC and other controllers, as well as with a range of accessories and peripherals

#### With MiniAg controller



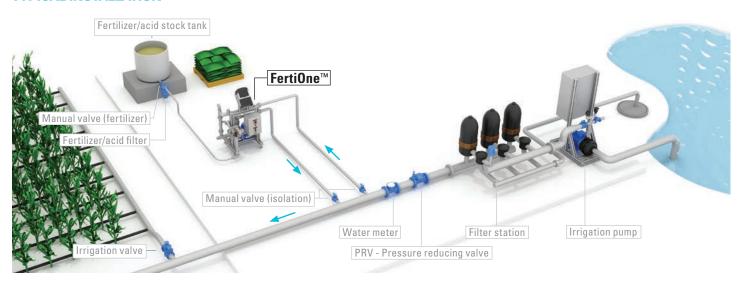
#### Without controller



#### **DOSING CHANNEL OPTIONS**

- Manual dosing channel
- Electric dosing channel
- Electric dosing channel with fertilizer meter

#### TYPICAL INSTALLATION



#### **COMPONENTS**

- Venturi-operated dosing channel
- Quick-action dosing valves
- Pressure gauge
- Controller (optional)

- Stainless steel dosing booster
- Dosing booster switchbox
- Check valve
- PVC piping
- Aluminum, corrosion-resistant frame with adjustable legs

#### **CAPABILITIES**

- Ensures an accurate mixture across a wide range of flow capacities
- Accommodates 0.1ha (nursery) to 400ha (plantation) plots

FEATURE	STANDARD	OPTIONAL
Controller	Manual (w/o controller)/NMC-Junior/MiniAg, according to customer need	Other controllers on the market
Suction Flow Rate	100 - 1,000 l/h (0.44 - 4.4 GPM)	
Dosing Channel	Manual/electric	Electric with fertilizer meter
System Pressure	2-7.5 bar (29-109 Psi), according to the selected dosing booster	

For more information, including user and installation manual, please login at: https://www.netafim.com/product-category/single---channel-injection--manual

## **NetaJet 4G**

INDUSTRY'S MOST ADVANCED AND ACCURATE DOSING SYSTEM

#### **OVERVIEW**

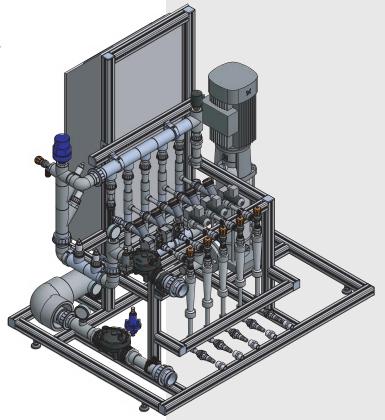
NetaJet 4G realizes Netafim's grow more with less concept. Based on Nutrigation technology, the dosing system controls the amount of water and fertilizer used, optimizing resource utilization for each specific land type and crop.

#### **HIGHLIGHTS**

- Extremely accurate and reliable, prevents water and fertilizer waste while reducing environmental pollution
- Ensures very precise and homogeneous nutrient dosing for greenhouse crops
- Modular CE-compliant dosing system that easily integrates with multiple Netafim and third-party monitoring and control systems
- Always injects a uniform quantity of nutrients while performing perfect EC and pH control
- Can accommodate a wide variety of dosing channels for fertilizer and concentrated/diluted acid
- Accommodates a variety of system pumps, peripherals and accessories to meet a vast range of applications and infrastructure constraints

#### **BENEFITS**

- Easy to install and maintain system
- In-house developed offering
- Versatile flow capacity
- Covers all applications from greenhouse in soil to very intensive soilless media
- Requires minimal investment with rapid ROI



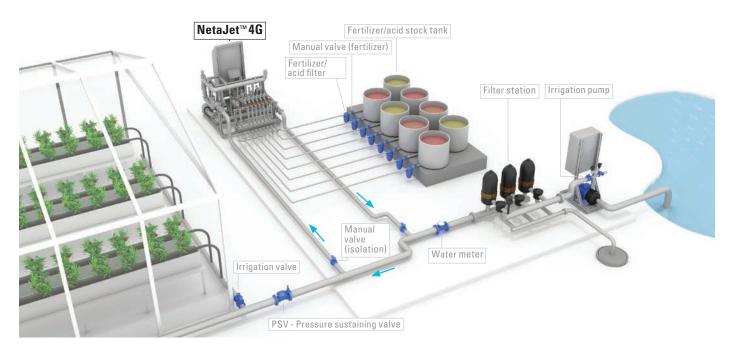
#### **ADVANTAGES**

- Equipped with unique innovative analog dosing channels for very accurate and reliable EC/pH control
- Provides fast and accurate fertilizer and acid control
- State-of-the-art technology with unique static mixing chamber
- Very short control cycle
- Efficient water, fertilizer and energy consumption
- Guaranteed EC and pH control
- Near maintenance-free Venturi operations no moving parts
- Highly accurate dosing channels
- Fast and efficient Nutrigation recipe adjustments
- Multi-lingual capabilities
- Extensive experience with more than 1000 units sold around the globe
- Made by Netafim

#### **FEATURES & FUNCTIONALITY**

- High precision
- Smooth and stable hydraulic operation
- No fluctuations
- Fast EC/pH set-point reaching
- Short stabilization time
- Enables short Nutrigation cycles
- No risk of cavitation damage to the booster

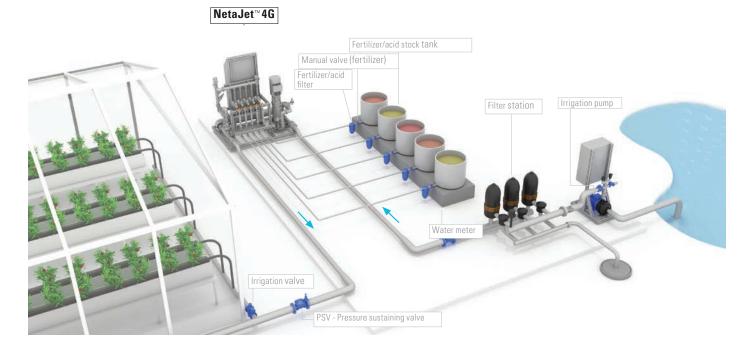
#### BP PL, OCTA, HIGH-FLOW MODES - BYPASS SYSTEMS FOR PRESSURIZED LINE WATER SOURCE



	SUITABLE FOR MAIN LINE		
MODE	FLOW RATE	PRESSURE RANGE	DOSING CHANNELS
BP PL	20 - 120 m³/h	Standard:	Up to 5 x 50 - 600 l/hr (13 - 158 GPH)
Octa	(90 - 500 GPM)	2.5 - 5.8 bar (36.5 - 84.0 PSI)	Up to 8 x 50 - 600 l/hr (13 - 158 GPH)
HF	80 - 400 m³/h (350 - 1760 GPM)	<b>High pressure:</b> 5.8 - 7.5 bar (84.0 - 108.5 PSI)	Up to 5 x 50 - 1000 l/hr (13 - 265 GPH)

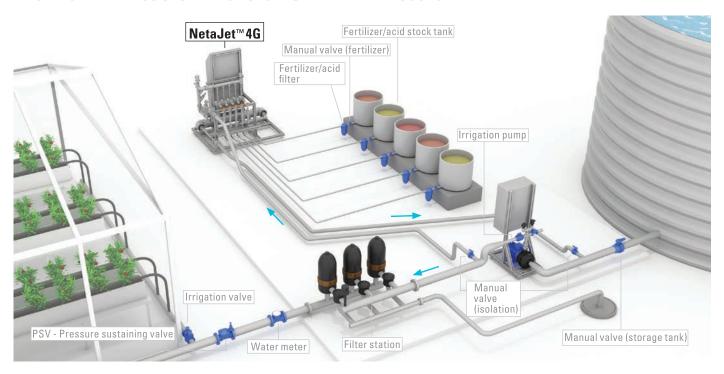
<sup>\*</sup>Flow limitation depends on the fertilizer injection rate and the size of the Venturis.

#### IL PL MODE - INLINE SYSTEM FOR PRESSURIZED LINE WATER SOURCE



	SUITABLE FOR MAIN LINE		
MODE	FLOW RATE	PRESSURE RANGE	DOSING CHANNELS
IL PL	Up to 20 m <sup>3</sup> /h (90 GPM)	<b>Standard:</b> 2.5 - 5.8 bar (36.5 - 84.0 PSI) <b>High pressure:</b> 5.8 - 7.5 bar (84.0 - 108.5 PSI)	Up to 5 x 50 - 400 l/hr (13 - 105 GPH)

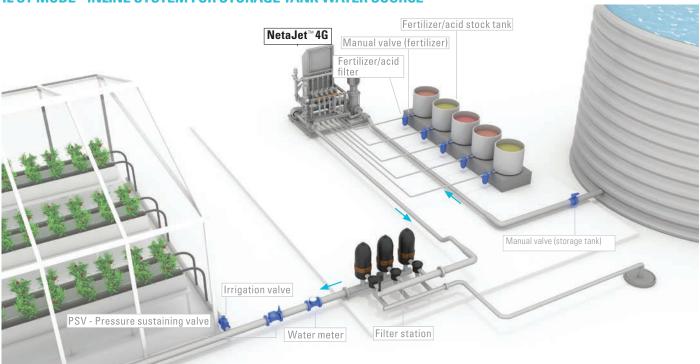
#### **BP ST MODE - BYPASS SYSTEM FOR STORAGE TANK WATER SOURCE**



	SUITABLE FOR MAIN LINE		
MODE	FLOW RATE	PRESSURE RANGE	DOSING CHANNELS
BP ST	15 - 100 m³/h (66 - 440 GPM)	<b>Upstream from the pump:</b> 0 – 0.5 bar (0 – 7.25 PSI)	Up to 5 x 50 - 600 l/hr (13 - 158 GPH)

<sup>\*</sup>Flow limitation depends on the fertilizer injection rate and the size of the Venturis.

#### IL ST MODE - INLINE SYSTEM FOR STORAGE TANK WATER SOURCE



	SUITABLE FOR MAIN LINE		
MODE	FLOW RATE	PRESSURE RANGE	DOSING CHANNELS
IL ST	Up to 20 m³/h (90 GPM)	<b>Upstream from the pump:</b> 0 – 0.5 bar (0 – 7.25 PSI)	Up to 5 x 50 - 400 l/hr (13 - 105 GPH)

#### **ANALOG DOSING CHANNEL**

NetaJet 4G is the first fertilizer dosing system equipped with Netafim's unique innovative analog dosing channel, the long-time awaited solution for very accurate and reliable EC/pH control for Nutrigation of high-value greenhouse crops.

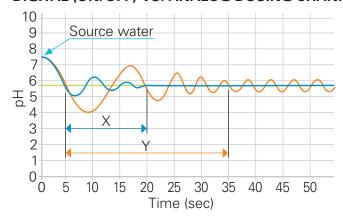
The analog dosing channel is equipped with a servo motor with a continuous variable opening from 0 to 100%. This unique feature allows unprecedented precise and seamless Nutrigation.

#### **COMPONENTS**

- HydroMix static mixing chamber
- Compensation channel with a pressure regulator
- Factory installed PRV at the inlet and a PSV at the outlet
- Selectable analog dosing channels
- Dual EC/pH monitoring and control
- Quick-action dosing valves
- Wide range of integrated accessories and peripherals
- High-quality components and PVC piping
- Aluminum, corrosion-resistant frame with adjustable legs

#### **PERFORMANCE**

#### **DIGITAL (ON/OFF) VS. ANALOG DOSING CHANNEL**



- Analog (continuous-variable) dosing channel
- Digital (pulsating) dosing channel
- pH set point

#### STABILIZATION TIME

X = Analog (continuous-variable) dosing channel

Y = Digital (pulsating) dosing channel

To select the suitable NetaJet for your project, see the online configurator at: https://cmtconfig.netafim.com.

For more information, including user and installation manual, please login at: https://www.netafim.com/product-category/multi---channel-injection-automated



## FertiKit 3G PL

COST-EFFECTIVE DOSING SYSTEM

#### **OVERVIEW**

FertiKit 3G is a fully-configurable, cost-effective fertilizer/acid dosing unit system that carries out precise Nutrigation.

Operating in four modes depending on site conditions, FertiKit 3G optimizes the available water flow rate and pressure usage of the main irrigation line to ensure high efficiency at a low investment. Bringing together over a decade of technological know-how and experience, FertiKit 3G maintains a proven track record under the most stringent environmental conditions.

#### **HIGHLIGHTS**

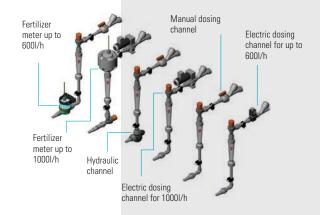
- Modular Nutrigation system
- Wide range of soil/substrate applications
- Built around a standard platform
- Minimal investment requirement
- Efficient water, fertilizer and energy consumption
- Unrivaled range of irrigation water capacities
- Quantitative or proportional Nutrigation capabilities
- Guaranteed EC and pH control
- Near maintenance-free Venturi operations no moving parts
- Highly accurate dosing channels
- Fast and efficient Nutrigation recipe adjustments
- Manual or fully automated operations
- Easy integration into existing irrigation systems, Netafim's NMC, and third-party controllers

#### **BENEFITS**

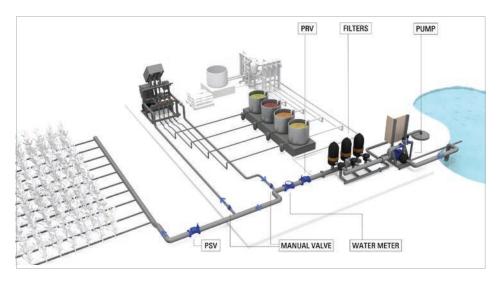
- Easy to install and maintain system
- In-house developed offering
- Broad application coverage, including open fields, orchards and others
- Highly profitable price/performance ratio



#### **DOSING CHANNEL OPTIONS**



#### **TYPICAL INSTALLATION**



#### **COMPONENTS**

- Quick-action dosing valves
- Wide range of integrated accessories and peripherals
- High-quality components and PVC piping
- Aluminum, corrosion-resistant frame with adjustable legs

#### **CAPABILITIES**

- Versatile flow capacity: from 0.1Ha (nursery) to 400Ha (suitable for sugarcane plantations, and all other field crops and orchards)
- Up to 6\* highly accurate 50-1,000 l/hour (13-265 GPH) fertilizer/acid dosing channels
- \* For applications requiring over 6 dosing channels, please contact Netafim

FEATURES	STANDARD	OPTIONAL
Controller	NMC - PRO, NMC-XL, NMC-JUNIOR According to customer need	Other controllers in the market or manual system without controller
EC/pH Control	Single measurement	None
Flow Rate	20 - 700 m³/hour (85 - 3000 GPM)	
Dosing Channel	Up to 6 x 50-1000 l/hour (13-250 GPH)	Concentrated Acid channel x 50 l/hour (13 GPH)
System Pressure	2.5- 6.5 Bar (36 - 94 PSI)	Up to 9 Bar (130 PSI)

For more information, including user and installation manual, please log in at: <a href="http://www.netafim.com/product/fertikit-3g">http://www.netafim.com/product/fertikit-3g</a>

## **NetaFlex 3G**

STATE-OF-THE-ART OPEN TANK MIXING SYSTEM

#### **OVERVIEW**

Featuring a state-of-the-art open tank mixing system, Netaflex 3G provides very high level of dosing precision and uniformity for greenhouses crops. A modular CE-compliant dosing system, NetaFlex 3G easily integrates with multiple Netafim and third-party controllers and monitoring systems. NetaFlex always injects a uniform quantity of nutrients and perfect EC and pH control.

#### **HIGHLIGHTS**

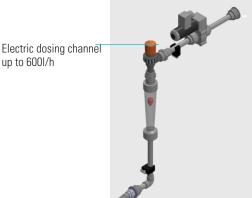
- Modular Nutrigation system
- Wide range of soil/substrate applications
- Built around a standard platform
- Minimal investment requirement
- Efficient water, fertilizer and energy consumption
- Very large range of irrigation water capacities
- Quantitative or proportional Nutrigation capabilities
- Guaranteed EC and pH control
- Near maintenance-free Venturi operations no moving parts
- Highly accurate dosing channels
- Fast and efficient Nutrigation recipe adjustments
- Easy integration into existing irrigation systems, Netafim's NMC, and third-party controllers
- Multilingual system

#### **BENEFITS**

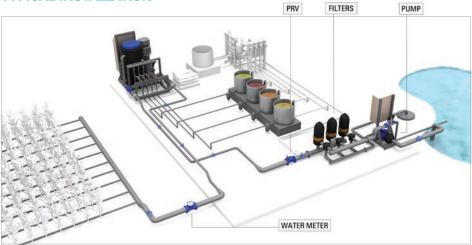
- Easy to install and maintain system
- In-house developed offering
- Covers all applications from greenhouse in soil to very intensive soilless media
- Requires minimal investment with rapid ROI



#### **DOSING CHANNEL 50/60 HZ**



#### **TYPICAL INSTALLATION**



#### **COMPONENTS**

- Quick-action dosing valves
- Wide range of integrated accessories and peripherals
- High-quality components and PVC piping
- Aluminum, corrosion-resistant frame with adjustable legs.

#### **CAPABILITIES**

- Versatile flow capacity: from 0.1Ha to 10Ha
- Up to 6\* highly accurate 50-600 l/hr (13-156 gal/hr) fertilizer/acid dosing channels
- \* For applications requiring over 6 dosing channels, please contact Netafim

FEATURES	STANDARD	OPTIONAL
Controller	NMC - PRO According to customer need	Other controllers in the market
EC/pH Control	Single measurement	Dual measurement
Flow Rate	3-64 m³/hour (13 - 270 GPM)	
Dosing Channel	Up to 6 x 50-600 l/hour (13-156 GPH)	Concentrated Acid channel x 50 l/hour (13 GPH)
System Pressure	2.0- 4.5 Bar ( 29 - 65 PSI )	Up to 5.5 Bar (80 PSI)

For more information, including user and installation manual, please log in at: <a href="http://www.netafim.com/product-category/nutrigation-">http://www.netafim.com/product-category/nutrigation-</a>

## **DOSING SYSTEM SPARE PARTS**

#### **ORDER DETAILS**

SAP#	DESCRIPTION
45000-006701	PH SENSOR JUMO 12MM PLASTIC BARED WIRES (For ABB )
45000-006705	EC SENSOR JUMO TEMPERAT COMP.PT100 12MM (For 4G and ABB)
45000-006692	PH SENSOR JUMO 12MM GLASS W/BNC CONNECT (For 4G)
70800-001785	BACCARA DOSING VALVE 1/2+EPDM 24VAC50Hz
70800-001790	BACCARA DOSING VALVE 1/2+EPDM 24VAC60Hz
70800-001780	BACCARA DOSING VALVE 1/2+VITON 24VAC60Hz
70800-001770	BACCARA DOSING VALVE 1/2+VITON 24VAC50Hz
77540-008500	DOSING VALVE FIP S22 24VAC 50/60HZ VITON
77540-008480	DOSING VALVE FIP S12 24VAC 50/60HZ VITON
77540-004150	Vacuum gauge
77540-003350	Pressure gauge - 250 GLZ 8 bar

For specific SAP number please contact our pres-sales support via Cmt.Support@netafim.com



# **CONTROLLER SPARE PARTS**

#### **ORDER DETAILS**

UNDER DETAILS	
SAP#	DESCRIPTION
74340-014550	NMC PRO CLIMATE-CPU CARD W/O SD CARD
74340-014600	NMC PRO IRRIGATION-CPU CARD W/O SD CARD
74340-012702	NMC PRO-CL EXPANSION CPU CARD
74340-003680	NMC COMMUN. LIGHTNING PROTECTOR CARD
74340-010000	NMC POWER LINE PROTECTOR CARD 115V
74340-003770	NMC POWER LINE PROTECTOR CARD 230V
74340-012800	NMC-PRO COMMUNIC. CARD 2XRS485 ADDITION.
74340-014650	NMC PRO SD CARD
74340-012700	NMCPRO EXPANSION CPU CARD
74340-008500	NMC PRO 24 V OUTPUT ADDITIONAL CARD
74340-008900	NMC PRO ANALOG INPUT ADDITIONAL CARD
74340-009100	NMC PRO COMMUNICATION RS232 CARD
74340-009200	NMC PRO COMMUNICATION RS485 CARD
74340-008800	NMC PRO DIGITAL INPUT ADDITIONAL CARD
74340-008600	NMC PRO DRY CONT.OUTPUT ADDITIONAL CARD
74340-007800	NMC-PRO INPUT / OUTPUT BUS CARD
74340-007900	NMC-PRO POWER SUPPLY CARD 115V
74340-008000	NMC-PRO POWER SUPPLY CARD 230V
74340-009300	NMC64/PRO 12VDC POWER SUPPLY CARD
74340-003300	NMC64/PRO/DC KEYBOARD CARD FOR LED LCD
74340-001950	NMCPRO EMPTY BRACK.F/SINGLENET/RAD. CARD
74340-009485	NMC JUNIOR CPU CARD FOR LED
74340-004920	NMC LED DISPLAY
74340-004930	NMC LED DISPLAY 320*240 CN/KR
74340-004996	NMC-JUNIOR POWER SUPPLY CARD FOR 80W 230
74340-009490	NMC JUNIOR - INPUTS&OUTPUTS CARD
74340-014750	NMC JUNIOR DOUBLE DOOR EMPTY PLASTIC BOX
74340-014756	NMC JUNIOR EMPTY HIBOX+MOUNTING PLATE
74340-004973	NMC JUNIOR FLAT CABLE FOR DISPLAY CARD
74340-004972	NMC JUNIOR FLAT CABLE FOR IN/OUT CARD
74340-014755	NMC JUNIOR OLD EMPTY PLASTIC BOX
74340-004995	NMC JUNIOR POWER SUPPLY CARD 115VOLT
74340-004997	NMC JUNIOR POWER SUPPLY CARD 12VDC

SAP#	DESCRIPTION
74340-009400	NMC JUNIOR POWER SUPPLY CARD 230Volt
74340-006700	NMC JUNIOR RS485 COMMUNICATION CARD
74340-016560	NMC JUNIOR STICKER
74340-006600	NMC JUNIOR / 15 COMMUNICATION RS232 CARD
74340-022850	BRACKET FOR NMCDC + BATTERY HOLDER
74340-022000	CPU CARD FOR NMCDC W/O SD CARD
74340-022100	NMCDC DIGITAL ANALOG INPUTS CARD
74340-022200	NMCDC LATCH CARD
74340-022300	NMCDC OUTPUT BUS CARD
74340-022400	NMCDC POWER SUPPLY CARD
74340-022500	NMCDC RS232 CARD
74340-009586	ONE ZONE LICENSE CARD
74340-009584	TWO ZONE LICENSE CARD
74340-009582	THREE ZONE LICENSE CARD
74340-009580	FOUR ZONE LICENSE CARD

For specific SAP number please contact our pres-sales support via Cmt.Support@netafim.com



#### **CONTACT INFORMATION**

For more product-related information, please contact: CMT.Product.Managment@netafim.com For support issues, please contact your local dealer or service provider, or Netafim CMT support at: CMT.Support@netafim.com