

## **IDRO RO Series Reverse Osmosis Water Demineralizer**

### Purpose of IDRO RO demineralizers

The IDRO RO series devices produce top quality demineralized water (or low salt content) automatically and with guaranteed results over time. Depending on the version, the salt reduction occurs in values from 98 to 99.5, up to undergoing a double salt reduction of 99.5 twice in double-pass systems (bi-osmosis). The process occurs continuously without the intervention of any operator.

### Complete equipment

They are equipped with everything necessary for correct and automatic operation as well as to provide correct information on the operating parameters.

The devices of the IDRO RO family are made on a robust and elegant stainless steel structure and include:

- complete pretreatment
- primary brand reverse osmosis membranes
- flow and pressure indicators
- electrical levels, pressure switches and safety devices
- water quality control via conductivity meter with automatic block in case of non-compliant water production
- electronic control unit with microprocessor and LCD panel displaying messages selectable in 6 languages.

### Intuitive and... international

The operator's interventions are very sporadic and simple because during the design and construction phase, ease of use is a fundamental prerogative, without neglecting reliability and management economy. An example of this is the new electronic control unit with a large backlit LCD display which communicates any anomalies, as well as the operating status (status, operating hours, conductivity of water produced). The simple menu allows you to select the text messages in 6 languages (English, French, Italian, German, Spanish and Portuguese-Brazilian).

### Wide range for every need

When sizing a reverse osmosis water purification system it is absolutely necessary that the planned solution "fits" the required needs to best guarantee:

- quality of water produced according to the requests based on the feed water
- reasonable energy consumption and investment and management costs

The new IDRO RO range allows you to choose the ideal demineralizer for your needs, both vertically (choice between production capacity) and horizontally (possibility of various types of salt rejection and consequently minimized energy consumption).

Thanks to the experience gained, the IDRO RO series is offered not only for different production capacities (from 60 to 30,000 and more lt/h) but also according to the salt rejection:

- IDRO RO LE series with medium salt rejection, optimal for the production of water with low salt content, with low energy absorption
- IDRO RO St series with maximum salt rejection and therefore the production of low conductivity water
- IDRO RO DPS series with the double-step reverse osmosis process (Bi-osmosis) for the production of water with very low conductivity (usually  $< 3 \mu\text{s/cm}$ ) for special applications.

### Why IDRO RO series?

IDRO RO is a range of reverse osmosis devices born in the late 90s; since then it has constantly benefited from the improvements brought by the experiences accumulated through thousands of perfectly functioning units and by the evolution of reverse osmosis membranes which are always of the most recent generation and of the best quality.

## Reverse osmosis demineralizers

### Demineralizers SERIE IDRO RO STANDARD, from 60 to 30,000 Liters/hour

Model	Pre-treatment	Flow rate waterfall treated lt/h	Price CHF BC version**	
HYDRO RO 60 St	Activated carbon + 5 microns + antiscalant	60	ND	
HYDRO RO 130 St	Activated carbon + 5 microns + antiscalant	130	ND	
HYDRO RO 190 St	Activated carbon + 5 microns + antiscalant	190	ND	
HYDRO RO 260 St	Activated carbon + 5 microns + antiscalant	260	ND	
IDRO RO 225 St-VP	Activated carbon + 5 microns + antiscalant	225	ND	
IDRO RO 300 St-VP	Activated carbon + 5 microns + antiscalant	300	ND	
 <p style="text-align: center; font-size: small;">in photo IR60-160St-LE</p>		 <p style="text-align: center; font-size: small;">in photo FCA 30 + IDRO RO 500+700 St</p>		
IDRO RO 500 St	5 microns + antiscalant	500	ND	
* FCA 30 + IDRO RO 500 St	Activated carbon + 5 microns + antiscalant		ND	
IDRO RO 700 St	5 microns + antiscalant	700	ND	
* FCA 30 + IDRO RO 700 St	Activated carbon + 5 microns + antiscalant		ND	
IDRO RO 850 St	5 microns + antiscalant	850	ND	
* FCA 50 + IDRO RO 850 St	Activated carbon + 5 microns + antiscalant		ND	
HYDRO RO 1150 St	5 microns + antiscalant	1150	ND	
* FCA 50 + IDRO RO 1150 St	Activated carbon + 5 microns + antiscalant		ND	
HYDRO RO 1450 St	5 microns + antiscalant	1450	ND	
* FCA 50 + IDRO RO 1450 St	Activated carbon + 5 microns + antiscalant		ND	



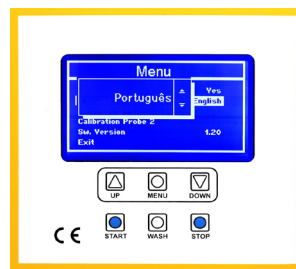
Technical Data Sheet

System type Reverse osmosis demineralizer

Model/Series IDRO RO 60 - 260 LCD St

Rev. 3

Page 1 of 9



(some examples of messages)



**Technical Data Sheet**

System type Reverse osmosis demineralizer

Model/Series IDRO RO 60 - 260 LCD St

Rev. 3

Page 2 of 9

**Main components**

<b>Skid</b>	Elegant satin stainless steel (aisi 304) fairing on a sturdy stainless steel (aisi 304) tubular base
<b>Pre-filtration</b>	Cartridge with washable mesh, 60 micron filtration
<b>Dechlorination</b>	Activated carbon cartridge containing approximately 3.5 litres of activated carbon
<b>Micrometric filtration</b>	5 micron filter cartridge
<b>Anti-precipitant</b>	Electronic proportional diaphragm dosing pump with anti-precipitant dosing solution preparation tank
<b>Entrance</b>	Solenoid valve and safety pressure switch against dry running
<b>Pressurization</b>	Volumetric pump with 0.45 kw single-phase motor with thermal safety
<b>Membranes</b>	Spiral wound polyamide membranes Diameter 2.5", length 40", average salt rejection 99.5%
<b>Pressure vessels</b>	in stainless steel
<b>Pressure indicators</b>	n° 2 glycerine bath pressure gauges
<b>Flow indicators</b>	n° 2 flow meters (asameters) for flow control: permeate outlet, concentrated discharge
<b>Conductivity control</b>	Digital electronic conductivity meter with calibratable alarm with operation stop for high conductivity (deactivatable)
<b>Operation check</b>	<p>Electrical panel in an elegant ABS case containing electronic control boards with digital conductivity meter.</p> <p>Backlit LCD panel <u>viewer of specific and precise messages</u> with automatic stop in case of:</p> <ul style="list-style-type: none"> <li>- High level of treated water storage tank</li> <li>- Low inlet pressure</li> <li>- High conductivity (can be deactivated)</li> <li>- Engine overheating</li> <li>- Low anti-precipitation level</li> <li>- External inhibition (there is a specific input contact)</li> <li>- Possible automatic filter during washing</li> </ul> <p>Cumulative alarm on exit</p> <p><u>Intuitive menu</u> which allows you to <u>select the 6 available languages</u> at any time (ita - eng - fra - ted - spanish - portuguese/brazilian), the conductivity set-point and high conductivity block deactivation/activation</p>

**Technical Data Sheet**

System type Reverse osmosis demineralizer

Model/Series IDRO RO 60 - 260 LCD St

Rev. 3

Page 3 of 9

**Performance and technical features\***

<b>Model</b>	<b>Unit</b>	<b>HYDRO RO LCD 60 St</b>	<b>HYDRO RO LCD 130 St</b>	<b>HYDRO RO LCD 190 St</b>	<b>HYDRO RO LCD 260 St</b>
<b>Demineralized water flow rate</b>	l/h	60	130	190	260
<b>Drain water flow rate</b>	l/h	20 / 40	45 / 85	65 / 125	90 / 175
<b>Water feed flow rate</b>	l/h	80 / 100	165 / 215	255 / 315	350 / 435
<b>Recovery</b>	%	75 / 60	75 / 60	75 / 60	75 / 60
<b>Quantity of membranes</b>	n°	1	2	3	4
<b>Installed pump power</b>	kw	0.5	0.5	0.5	0.6

**\* performances referred to feed water with salinity 1500 ppm and temperature 15°C**



**Technical Data Sheet**

System type Reverse osmosis demineralizer

Model/Series IDRO RO 60 - 260 LCD St

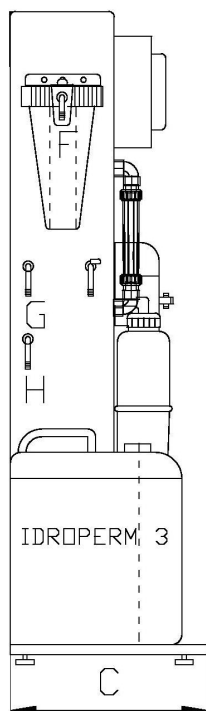
Rev. 3

Page 4 of 9

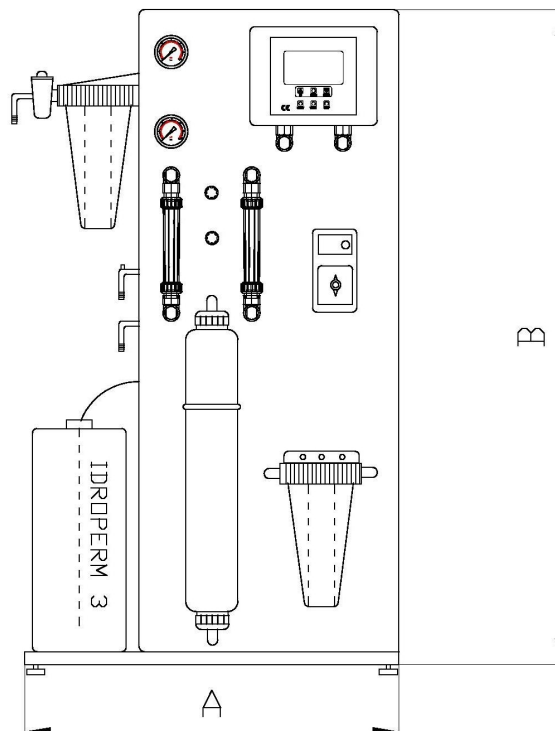
**Dimensional parameters**

	Ref. drawing	Unit	HYDRO RO LCD 60 St	HYDRO RO LCD 130 St	HYDRO RO LCD 190 St	HYDRO RO LCD 260 St
<b>Length</b>	TO	mm	720	720	870	870
<b>Height</b>	B	mm	1250	1250	1250	1250
<b>Depth</b>	C	mm	380	380	380	380
<b>Inlet diameter</b>	F	mm/inch	17 or 3/8"	17 or 3/8"	17 or 3/8"	17 or 3/8"
<b>Permeate outlet diameter</b>	G	mm/inch	17 or 3/8"	17 or 3/8"	17 or 3/8"	17 or 3/8"
<b>Exhaust outlet diameter</b>	H	mm/inch	17 or 3/8"	17 or 3/8"	17 or 3/8"	17 or 3/8"
<b>Power supply</b>	230 Vac - 50 Hz (different voltages and frequencies available)					
<b>Diet compressed air</b>	No					

Left side view



Front view





**Technical Data Sheet**

System type Reverse osmosis demineralizer

Model/Series IDRO RO 60 - 260 LCD St

Rev. 3

Page 5 of 9

**Accessories**

<b>Model</b>		HYDRO RO LCD 60 St	HYDRO RO LCD 130 St	HYDRO RO LCD 190 St	HYDRO RO LCD 260 St
<b>Final column with mixed resins as polishing (to produce water with conductivity &lt; 1.0 µs/cm)</b>		Optional	Optional	Optional	Optional
<b>Pre-filter to quartzite automatic (in case of cloudy incoming water)</b>		Optional	Optional	Optional	Optional


**Technical Data Sheet**

System type Reverse osmosis demineralizer

Model/Series IDRO RO 60 - 260 LCD St

Rev. 3

Page 6 of 9

**Consumables IDRO RO 60LCDSt**

Description	Code	Replacement every ..Duration	Notes	Price – Euro (€)
These are the most frequently replaced consumables				
<b>Pre-filter cartridge</b>	E06500	On average every 2 years	The cartridge must be periodically wash	17.10
<b>Activated carbon cartridge</b>	CCA 4lt	Every 1000 hours of operation	However every 12 months	53.60
<b>5 micron cartridge</b>	CFA 1005	When it denotes state of high congestion	On average every 2 ÷ 4 months	3.60
<b>Tank kg. 10 Of Anti-precipitant HYDROPERM 3</b>	IDP310	Approximately 6000 hours of operation (equal to approximately 360,000 liters of water produced)	The product has a maximum duration of 24 months	90.50
These are the spare parts that are replaced more frequently				
<b>Pumping body</b>	IRR 0042	18 ÷ 60 months		119.25
<b>Reverse Osmosis Membrane complete Of pressure vessel and quick attacks</b>	IRR 0099	30 ÷ 60 months The duration is not in function of the hours of actual operation but of the characteristics of the feed water and other factors	In this way the membranes are equipped of the pressure vessel and quick couplings allowing a very quick and easy replacement.	430.00
Alternatively, you can order the membrane set without pressure vessel and quick couplings				
<b>Reverse Osmosis Membrane Set</b>	IRR 0096	CS		291.00




**Technical Data Sheet**

System type	Reverse osmosis demineralizer
Model/Series	IDRO RO 60 - 260 LCD St
Rev. 3	Page 7 of 9

**Consumables IDRO RO 130LCDSt**

Description	Code	Replacement every ..Duration	Notes	Price – Euro (€)
These are the most frequently replaced consumables				
<b>Pre-filter cartridge</b>	E06500	On average every 2 years	The cartridge must be periodically wash	17.10
<b>Activated carbon cartridge</b>	CCA 4lt	Every 500 hours of operation	However every 12 months	53.60
<b>5 micron cartridge</b>	CFA 1005	When it denotes state of high congestion	On average every 2 ÷ 4 months	3.60
<b>Tank kg. 10 Of Anti-precipitant HYDROPERM 3</b>	IDP310	Approximately 2700 hours of operation (equal to approximately 360,000 liters of water produced)	The product has a maximum duration of 24 months	90.50
These are the spare parts that are replaced more frequently				
<b>Pumping body</b>	IRR 0044	18 ÷ 60 months		220.50
<b>Reverse Osmosis Membrane complete Of pressure vessel and quick attacks</b>	IRR 0103	30 ÷ 60 months The duration is not in function of the hours of actual operation but of the characteristics of the feed water and other factors	In this way the membranes are equipped of the pressure vessel and quick couplings allowing a very quick and easy replacement.	860.00
Alternatively, you can order the membrane set without pressure vessel and quick couplings				
<b>Reverse Osmosis Membrane Set</b>	IRR 0102	CS		582.00


**Technical Data Sheet**

System type Reverse osmosis demineralizer

Model/Series IDRO RO 60 - 260 LCD St

Rev. 3

Page 8 of 9

**Consumables IDRO RO 190LCDSt**

Description	Code	Replacement every ..Duration	Notes	Price – Euro (€)
These are the most frequently replaced consumables				
<b>Pre-filter cartridge</b>	E06500	On average every 2 years	The cartridge must be periodically wash	17.10
<b>Activated carbon cartridge</b>	CCA 4lt	Every 350 hours of operation	However every 12 months	53.60
<b>5 micron cartridge</b>	CFA 1005	When it denotes state of high congestion	On average every 1 ÷ 3 months	3.60
<b>Tank kg. 10 Of Anti-precipitant HYDROPERM 3</b>	IDP310	Approximately 1800 hours of operation (equal to approximately 360,000 liters of water produced)	The product has a maximum duration of 24 months	90.50
These are the spare parts that are replaced more frequently				
<b>Pumping body</b>	IRR 0044	18 ÷ 60 months		220.50
<b>Reverse Osmosis Membrane complete Of pressure vessel and quick attacks</b>	IRR 0107	30 ÷ 60 months The duration is not in function of the hours of actual operation but of the characteristics of the feed water and other factors	In this way the membranes are equipped of the pressure vessel and quick couplings allowing a very quick and easy replacement.	1.290,00
Alternatively, you can order the membrane set without pressure vessel and quick couplings				
<b>Reverse Osmosis Membrane Set</b>	IRR 0106	CS		873.00


**Technical Data Sheet**

System type Reverse osmosis demineralizer

Model/Series IDRO RO 60 - 260 LCD St

Rev. 3

Page 9 of 9

**Consumables IDRO RO 260LCDSt**

Description	Code	Replacement every ..Duration	Notes	Price – Euro (€)
These are the most frequently replaced consumables				
<b>Pre-filter cartridge</b>	E06500	On average every 2 years	The cartridge must be periodically wash	17.10
<b>Activated carbon cartridge</b>	CCA 4lt	Every 250 hours of operation	However every 12 months	53.60
<b>5 micron cartridge</b>	CFA 1005	When it denotes state of high congestion	On average every 1 ÷ 3 months	3.60
<b>Tank kg. 10 Of Anti-precipitant HYDROPERM 3</b>	IDP310	Approximately 1300 hours of operation (equal to approximately 360,000 liters of water produced)	The product has a maximum duration of 24 months	90.50
These are the spare parts that are replaced more frequently				
<b>Pumping body</b>	IRR 0046	18 ÷ 60 months		220.50
<b>Reverse Osmosis Membrane complete Of pressure vessel and quick attacks</b>	IRR 0111	30 ÷ 60 months The duration is not in function of the hours of actual operation but of the characteristics of the feed water and other factors	In this way the membranes are equipped of the pressure vessel and quick couplings allowing a very quick and easy replacement.	1.720,00
Alternatively, you can order the membrane set without pressure vessel and quick couplings				
<b>Reverse Osmosis Membrane Set</b>	IRR 0110	CS		1.164,00