

DUROMAT[®] IQ



Hardness analysis (total hardness, residual hardness) and alkalinity of the water (carbon hardness, positive m value) (with graphic display)

Multifunctional microprocessor analyser for the analysis of the amount of iron in water with measuring range:

Measurement range (depends on the type of indicator)	
Water hardness (total and residual)	Alkalinity (carbon hardness, positive m value)
French degrees: 0,022 - 53,57 °f	French degrees: 0,54 - 40,2 °f
German degrees: 0,012 - 30°dH	German degrees: 0,3 - 22,5 °dH
English degrees: 0,02 - 37,59 °e	
ppm CaCO ₃ : 0,22 - 534 ppm CaCO ₃	
mmol/l: 0,002 - 5,3 mmol/l	
mg/l: 0,22 - 534 mg/l	

Application (for example): control of water hardness after a softener, for the protection of a reverse osmosis system.

The analyser is complete with:

display of the measured hardness result.

2 programmable relay outputs: maximum value, alarm and/or fault

1 0(4) -20mA output: result of the analysis (linear hardness) and operation

1 digital input: start analysis.

SD card connection: data / results / error saving and transfer with date and time, software update.

A bad analysis can be repeated (just exceeded the maximum value, without giving an alarm signal)

Extensive program of operation control, relay drive, Leeds drive, accessory control.

Steps of an analysis cycle: opening an inlet solenoid valve - washing the measuring chamber for a settable time - checking the transparency of the water (zero point) - dosing the indicator by a peristaltic pump - result of the measured hardness (with display of the measured hardness) - final washing of the measuring chamber - the equipment stops waiting for the next analysis (timed, volumetric, manual or external signal start).

Certifications / instructions:

- CE certification
- documentation in English (on request: Italian, French, German etc.)

Technical data DUROMAT® IQ:

Electrical connection:	230V 50-60Hz (exactly: 85-264V, 47-63 Hz) 24V AC/DC
Power consumption:	25 VA
Degree of protection on plate:	IP 43
Degree of protection with box:	IP 56
Weight mounted on a plate:	2,5 Kg
Weight mounted in box:	3,0 Kg
Dimensions mounted on plate:	width x height x depth 280x360x113 mm
Dimensions mounted in box:	width x height x depth 300x390x130 mm
Reagent quantity in the bottle:	500 ml
Reagent consumption:	10.000 analysis with softened water result
Outputs:	2 relay outputs, max. 250V 4A (hardness alarm, generic alarm, fault) 1 analogue output 0 (4) - 20mA (analysis result or current device situation) 1 SD card
Inputs:	1 input, max. 18V 12mA (start analysis)
Analysis interval:	programmable 3 – 9.999 minutes and with external contact
Water quality requirements:	
Temperature:	5° - 40° C
Optically:	transparent, without colour, without suspended substances, without air bubbles and CO ₂
Chemically:	pH 4 –10.5, iron <3ppm, copper <0.2ppm, aluminium <0.1ppm, manganese <0.2ppm acid capacity K S4.3 <5mmol/l
Water pression:	0,2-6 bar (2x10 ⁴ – 6x10 ⁵ Pa)
Drain:	without pressure (funnel)
Inlet / drain water connection:	flexible tube 6 mm external diameter

Available reagents (content 500ml):

Art	Type	Water hardness measuring range (total hardness, residual hardness)					
		°f	°dH	°e	ppm	mg/l	mmol/l
200852	500S/500	0,022-0,21	0,012-0,12	0,02-0,15	0,22-2,14	0,22-2,14	0,002-0,021
200855	500/500	0,04-0,36	0,02-0,2	0,03-0,25	0,36-3,56	0,36-3,56	0,04-0,036
200860	501/500	0,05-0,54	0,03-0,3	0,04-0,38	0,53-5,34	0,53-5,34	0,005-0,0531
200862	502/500	0,11-1,07	0,06-0,6	0,075-0,75	1,067-10,7	1,067-10,7	0,011-0,107
200863	503/500	0,16-1,61	0,09-0,9	0,11-1,13	1,60-16,02	1,60-16,02	0,02-0,16
200865	505/500	0,27-2,68	0,15-1,5	0,19-1,88	2,67-26,70	2,67-26,70	0,03-0,2
200870	510/500	0,54-5,36	0,3-3,0	0,38-3,76	5,34-53,4	5,34-53,4	0,0534-0,534
200875	520/500	1,07-10,71	0,6-6,0	0,8-7,5	10,7-106,8	10,7-106,8	0,107-1,070
200876	530/500	1,61-16,07	0,9 - 9,0	1,13-11,28	16,02-160,2	16,02-160,2	0,160-1,605
200878	550/500	2,68-26,79	1,5-15	1,9-18,8	26,7-267,00	26,7-267,00	0,27-2,67
200880	600/500*	5,36-53,57	3,0-30	3,76-37,59	53,4-534	53,4-534	0,53-5,3
Alkalinity measuring range (carbon hardness, positive m value)							
200887	710/500	0,5-13,4	0,3-7,5	0,37-9,34	5,34-53,4	5,34-53,4	0,11-2,68
200889	715/500	0,8-20,5	0,5-11,5	0,62-14,3	8,01-80,10	8,01-80,10	0,16-4,11
200890	720/500	1,1-26,8	0,6-15,0	0,75-18,7	10,68-106,8	10,68-106,8	0,21-5,36
200891	730/500	1,6-40,2	0,9-22,5	1,12-28,0	16,02-401,8	16,02-401,8	0,32-8,04

(*) need for on-site calibration

DUROMAT® IQ Mounted in a box 0,2 - 6 ate (2x10 ⁴ – 6x10 ⁵ Pa) (reagent not included)		Water hardness (total hardness, residual hardness) Alkalinity (carbon hardness, positive m value)
		85 – 264V 47-63Hz 200141
		24V AC/DC 200143
DUROMAT® IQ mounted on a plate 0,2 - 6 ate (2x10 ⁴ – 6x10 ⁵ Pa) (reagent not included)		Water hardness (total hardness, residual hardness) Alkalinity (carbon hardness, positive m value)
		85 – 264V 47-63Hz 200140
		24V AC/DC 200142
Optional:		
Cleaning set	For road transport For air transport	200013 200013S
Pressure reducer	¼", 1-8bar	200022
Sampling launch pump	Auto suction 3 meters	200028

