water treatment book

CWG®
CLEAN WATER GROUP


FILTRACIÓN
ACQUA
DESINFECCIÓN
VÍZ
WODA
AMA
AIGUA
WATER
DESINFEKTION
AVSALTNING
VANDUO
FILTRASIE
MÂA
PAGSASALA
ENTSALZUNG
APĂ
VATTEN
AGUA
वलिवणीकरण
VATN
ДЭЗІНФЕКЦЫЯ
MAIM
水
TẨY UẾ
ФИЛТРИРАНЕ
ΔΙΗΘΗΣΗ
DJOUR
ВАДА
FILTRACE
AKVO
VESI
WASSER
过滤
JAL
AMAZI
DEZINFEKCE
FILTROWANIE

Clean Water Group

About us

CWG Group, with its own companies in more than 20 countries and distributors in more than 50 countries worldwide, is one of the largest European distributors of water treatment systems, components and chemicals.

We coordinate worldwide recognised manufacturers of water treatment equipment and chemicals in order to offer you full service including engineering, components, chemicals and water treatment systems, installation and technical support according to your specific demands and within the range of estimated budget.

Based on our technical skills and expertise we are able to upgrade and optimize existing water treatment systems and that is also a benefit of having us as your partner. We can provide the most efficient solutions based on modern technologies for the treatment of boiler water, cooling systems, processing industry, drinking water and pool&spa.

Our experience and equipment provide reliability, short-term delivery terms and competitive prices.

Our vision

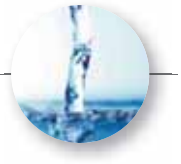
As a regional leader in water treatment business we strive to strengthen our position and expand our range of products. Therefore, our clients can get total package of the equipment and services just by contacting us.

Our goal

Implementation of modern technologies and the latest features in the field of water treatment and providing the best possible and environmentally friendly solutions for commercial, industrial and municipal applications.

In this manner our clients can improve their own business by getting water of the highest quality with reasonable investments and low maintenance costs.

Municipal applications



Liquid – solid separation processes
(coagulation, flocculation, sand filters, anthracite)
Filtration
(removal of iron, manganese, arsenic, ammonia, ultra-filtration, micro-filtration...)
Disinfection
(chlorine gas, chlorine dioxide, UV, ozone...)
Measurements and analysis

Industrial applications

Process water
Waste water
Re-use

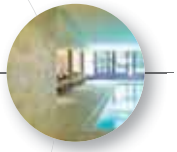
Energy

Boiler systems
Cooling systems
Condensate polish

Medicine

Filtration
Water softening and demineralization
Disinfection

Hotels, wellness r spa



Filtration, water softening
Disinfection
Pool&Spa
Anti Legionella systems

Commercial applications

Households
Apartments

Our "know-how" system provides key features

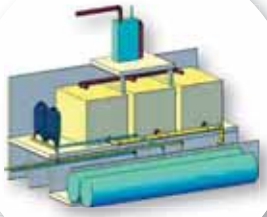
- Safety
- Reliability
- Efficiency
- Guarantee
- Quality

Typical water treatment solutions

- Filtration, water softening, demineralization, drinking water, etc.

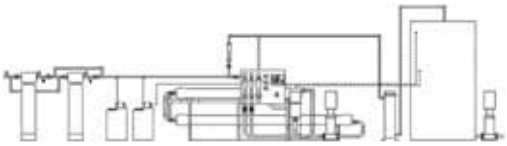
ALL-INCLUSIVE WATER TREATMENT SOLUTIONS:

- Upgrade and optimization of existing water treatment systems
- Waste water treatment
- Sludge treatment
- Odor control
- Technical support and maintenance services



Upon your request we can offer you

- Engineering
- Technical processing
- Feasibility Studies
- Financing
- Planning
- Process development
- Installation
- Commissioning
- Training and education of your technicians
- The handover and warranty



We provide water treatment solutions to meet specific requirements and at the same time we consider our clients as our partners on the joint venture. With complete service offer we always strive toward establishing long-term business relationships.

Our clients have possibility to choose among wide range of products and services, available at one place at the same time and that always justifies their investment.

Index

Mechanical filters

- Plastic filter housings
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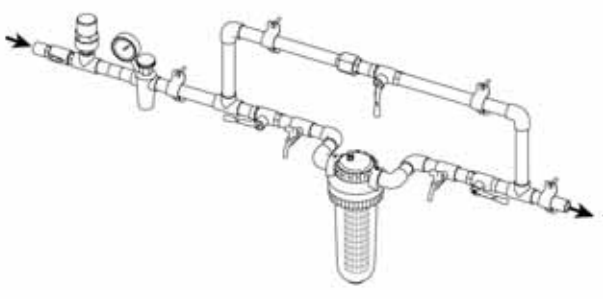
- Industrial cintropur filters
- Hot water filters
- AISI 316 filter housings
- Chemical high resistance pvc-u multicartridges filter housings hpcf series
- High flow pvc-u single cartridge filter housings pf series
- PVC-u bag filter system
- Industrial filters

The water generally used in industrial and domestic water systems contains a certain amount of suspended solid particles of different nature, such as sand, rust and so on. These particles, whose diameter may vary from a few microns to some millimetres, often cause damage and corrosion to water systems, taps and household appliances. To solve the problem it is necessary to install a filter upstream the system or the equipment to be protected. There are different types of security filters: anti flood filters, manual self cleaning filters and automatic self cleaning filters.

• empty cartridges, to be filled with activated carbon and anti scale crystals
CWG filters are equipped with air valve to remove pressure inside the filter and make opening easy. All equipment in contact with drinking water is manufactured with top quality materials.

Plastic mini filter housings



- three pieces filter housing for MINI filtering cartridges 5" length;
- head and nut material ABS blue colour, sump in SAN clear;
- connections ½" with brass inserts;
- max operating pressure 7 bar;
- operating temperature 1 ÷ 45°C.

CARTRIGES TO COUPLING:

WOUND PP FILAMENT MINI FILTER CARTRIDGES

- filtering degree 20 micron;
- dimensions external diameter 52 mm, internal 27 mm;
- length 5".

REF.	MODEL	CONNECTIONS (inch)	DIMENSION (mm)
200100	3P hous 5"	1/2"	135 x 225

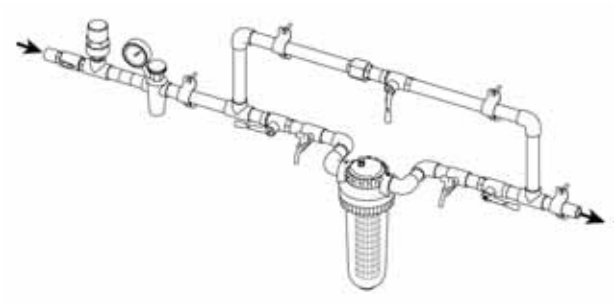
PP MINI FILTERING CARTRIDGE

- washable MINI cartridge in wounded PP;
- filtering degree 70 micron;
- dimensions external diameter 50 mm, internal 27 mm;
- length 5".

ACCESSORIES:

REF.	DESCRIPTION
200105	PLASTIC WRENCH
200110	DIFFUSOR KIT FOR GRANULAR MATERIAL

Plastic filter housings



OLD

NEW

200132

200133 - 200134

200135 - 200136

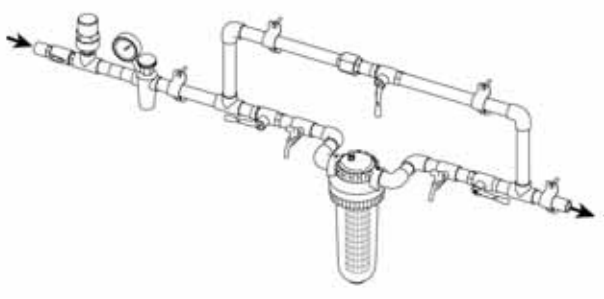
200137

REF.	MODEL	CARTRIDGE LENGTH (inch)	CONNECTIONS (inch)	HEAD DIMENSION (mm)	TOTAL LENGTH (mm)
200120	FS3P 34-9	9 ¾"	¾"	132	315
200125	FS3P 1-9	9 ¾"	1"	132	315
200130	FS3P 1-20	20"	1"	132	570

ACCESSORIES:

REF.	DESCRIPTION
200132	PLASTIC WRENCH
200133	¾" NIPPLE WITH O-RINGS
200134	1" NIPPLE WITH O-RINGS
200135	PLASTIC MOUNTING BRACKET WHITE FOR ONE FILTER
200136	PLASTIC MOUNTING BRACKET WHITE FOR TWO FILTERS
200137	DIFFUSOR KIT FOR GRANULAR MATERIAL FOR 9 ¾"

Plastic filter housings



- two pieces housing with fixable head;
- max operating pressure 8 bar;
- max operating temperature 35°C;
- IN/OUT connections ¾";
- complete with air valve;
- fit standard cartridges 64 mm diameter length 9 ¾" or 20"

REF.	MODEL	CONNECTIONS (inch)	FOR CARTRIDGE (inch)	HEAD MATERIAL AND COLOUR	SUMP MATERIAL AND COLOUR	HEAD DIMENSION (mm)	TOTAL LENGTH (mm)
200150	AS 1034	¾"	9 ¾"	PP blue	AS clear	124	295
200151	PP 1034	¾"	9 ¾"	PP blue	PP blue	124	295
200152	AS 2034	¾"	20"	PP black	AS clear	135	575
200153	PP 2034	¾"	20"	PP black	PP blue	135	575

PLASTIC FILTER HOUSINGS SPARE PARTS

AS 1034 & PP 1034 ACCESSORIES:

REF.	DESCRIPTION
200155	PLASTIC WRENCH
200156	MOUNTING BRACKET WHITE COATED MATERIAL

200155

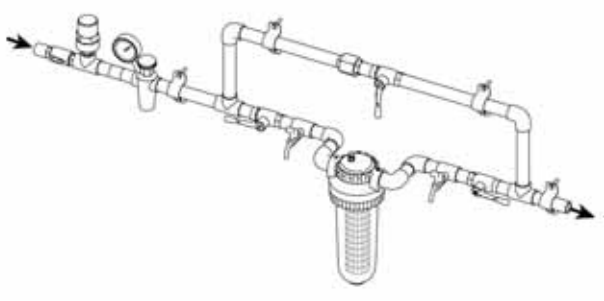
200156

AS 2034 & PP 2034 ACCESSORIES:

REF.	DESCRIPTION
200157	PLASTIC WRENCH
200156	MOUNTING BRACKET WHITE COATED MATERIAL

200157

Plastic big filter housings



- two pieces filter housing with fixable head for 4 ½" diameter high flow cartridges;
- material polypropylene;
- max operating pressure 6,3 bar.

NOTE: a 5 bar set pressure gauge installation is recommended.

200170

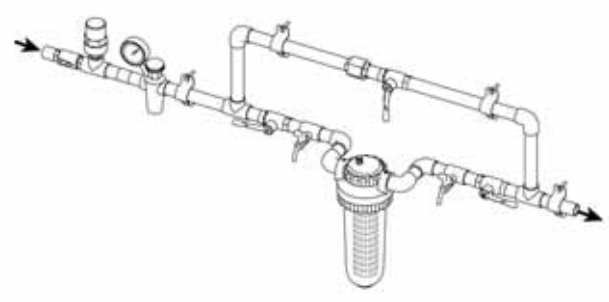
200172

REF.	MODEL	CARTRIDGE LENGTH (inch)	IN/OUT CONNECTIONS (inch)	HEAD DIMENSION (mm)	TOTAL LENGTH (mm)
200160	BIG 10112	10"	1 ½" F	185	360
200161	BIG 101	10"	1" F	185	360
200165	BIG 20112	20"	1 ½" F	185	605
200166	BIG 201	20"	1" F	185	605

ACCESSORIES:

REF.	DESCRIPTION
200170	PLASTIC WRENCH
200172	MOUNTING BRACKET WHITE COATED METAL

Filter housings brass head



- three pieces filter housings;
- head and nut material brass nickel-pleated, sump in SAN clear;
- max operating pressure 8 bar;
- operating temperature 1 ÷ 40° C;
- complete with air valve;

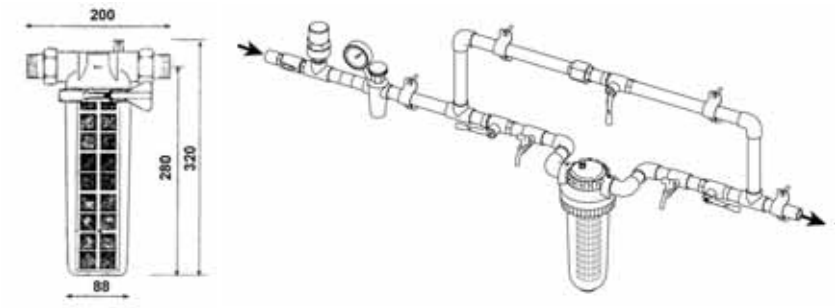
ATTENTION: the ¾" and 1" models fit standard filtering cartridges external diameter max 64 mm and length 9 ¾".
The 1 ¼" – 1 ½" – 2" models fit only the special cartridges nylon mesh length 10" or 20".

SPECIAL CARTRIDGES:
special cartridges nylon mesh for OTS filter housings CONNECTIONS 1 ¼" – 1 ½" – 2".

ACCESSORIES:
WRENCH
galvanised steel material.

REF.	MODEL	CONNECTIONS (inch)	FOR CARTRIDGE	L (mm)	H (mm)	CARTRIDGE TYPE
200180	OTS 34-9	¾"	9 ¾"	135	330	standard
200182	OTS 1-9	1"	9 ¾"	135	330	standard
200184	OTS 1-20	1"	20"	135	600	standard
200186	OTS 114-10	1 ¼"	10"	150	340	special
200188	OTS 114-20	1 ¼"	20"	150	620	special
200200	OTS 112-10	1 ½"	10"	150	340	special
200202	OTS 112-20	1 ½"	20"	150	620	special
200204	OTS 2-10	2"	10"	162	360	special
200206	OTS 2-20	2"	20"	162	640	special

Filters with washable cartridge

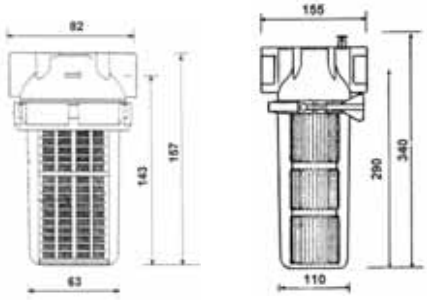


- range of sediment filters, chrome pleated brass head and trogamid sump, complete with washable cartridge;
- available AISI 304 cartridges and versions with AISI 316 sump for temperature up to 80°C (only ¾" – 1" – 1 ¼" models).

- max operating pressure 16 bar;
- temperature 0 ÷ 40° C;
- nylon cartridge 60 micron (REF. 201230).

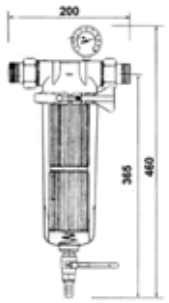
- max operating pressure 16 bar;
- temperature 0 ÷ 40° C;
- nylon cartridge 60 micron (REF. 201235).

- max operating pressure 10 bar;
- temperature 0 ÷ 40° C;
- AISI 304 cartridge 100 micron (REF. 201246).

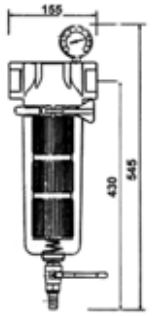


REF.	MODEL	IN-OUT connection	FLOW AT Dp=0,2 bar (l/h)
200210	OTC 12	½" F	1200
REF.	MODEL	**IN-OUT connection**	**FLOW AT Δp=0,2 bar (l/h)**
200211	OTC 34	¾"	3000
200212	OTC 1	1"	3500
200213	OTC 114	1 ¼"	5000
REF.	MODEL	**IN-OUT connection**	**FLOW AT Δp=0,2 bar (l/h)**
200215	OTC 112	1½" F	10000
200216	OTC 2	2" F	15000

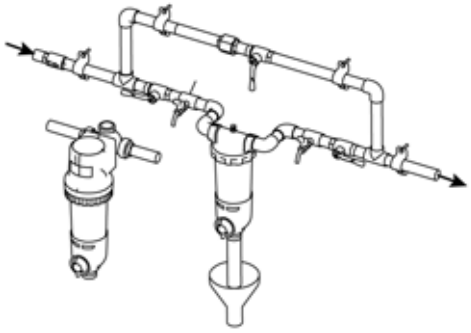
Self cleaning filters



¾" - 1"- 1 ¼" MODELS



1 ½"- 2" MODELS



- range of sediment self clearing filters, chrome pleated brass head and trogamid sump, with pleated AISI 304 cartridge at 100 micron (on request available also at 25, 60, 200 and 300 micron);
- complete with manometer on inlet;
- opening the drain valve, a depression is created inside the sump, that lowers the cartridge and reverts the clearing water flow. Closing the valve, the cartridge rises and places the filter in service again. Repeat the action 4-5 times for about 10 seconds each time;
- easy cartridge disassembly in case of inspection or replacement;
- on demand available models with automatic cleaning.

½" MODEL - AOTC12

- IN/OUT connections ½" F;
- max operating pressure 16 bar;
- temperature 0 ÷ 40° C;
- flow 1500 l/h Δp=0,2 bar;
- max ΔP recommended 1 bar.

REF.	MODEL	IN-OUT connection	FLOW @ Δp=0,2 bar (l/h)
200220	AOTC 12	½"	1500

¾" - 1"- 1 ¼" MODELS

- max operating pressure 16 bar;
- temperature 0 ÷ 40°C;
- max ΔP recommended 1 bar.

REF.	MODEL	IN-OUT connection	FLOW @ Δp=0,2 bar (l/h)
200221	AOTC 34	¾"	3000
200222	AOTC 1	1"	3500
200223	AOTC 114	1 ¼"	4500

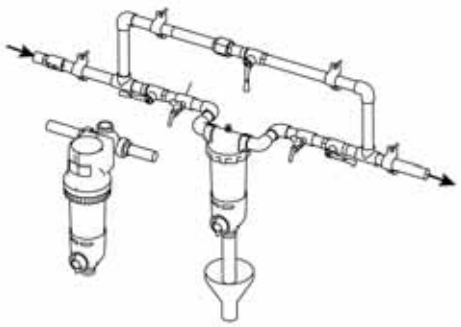
1 ½"- 2" MODELS

- max operating pressure 10 bar;
- temperature 0 ÷ 40° C;
- max ΔP recommended 1 bar.

REF.	MODEL	IN-OUT connection	FLOW @ Δp=0,2 bar (l/h)
200224	AOTC 112	1 ½" F	10000
200225	AOTC 2	2" F	15000

Self cleaning filter - Hydra

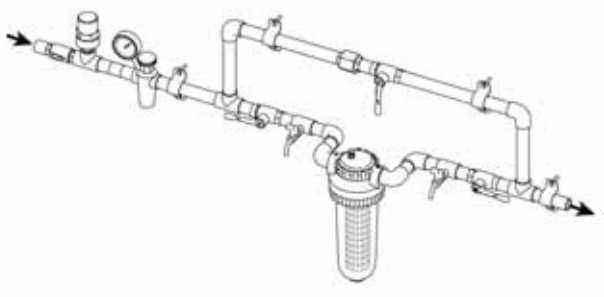
Self-cleaning filter with back-wash



Self-cleaning HYDRA filters have been designed with innovative solutions regarding the efficiency of the system for the self-cleaning of the cartridge, thanks to newly designed back-wash on counter-current which grants the highest particles removal from the cartridge.
When the cartridge is to be cleaned, the cleaning operation with back-wash is simply operated by opening the discharge ball valve at the filter bottom. That operation causes a pressure-drop which pushes the cartridge downward the housing bottom and reverses the water flow from the outer to the inner sige od the cartridge.
It is that counter-current back flow which washes away to the discharge the impurities trapped onto the outer side of the cartridge.
The filters perform 90 micron filter rate with stainless steel net cartridge or plastic net cartridge and 50 micron filter rate with pleated plastic net cartridge.

REF.	MODEL	IN/OUT CONNECTIONS	CARTRIDGE TYPE	FILTRATION MICRON	RECOMMENDED FLOW RATE l/h @ 3 BAR	MAX FLOW RATE l/h @ 3 BAR
200300	HYDRA ½ - RAH 90 mcr	½"	stainless steel net	90	4000	5000
200301	HYDRA ¾ - RAH 90 mcr	¾"	stainless steel net	90	5000	7000
200302	HYDRA 1 – RAH 90 mcr	1"	stainless steel net	90	6000	8000
200303	HYDRA ½ - RLH 90 mcr	½"	polyester net	90	4000	5000
200304	HYDRA ¾ - RLH 90 mcr	¾"	polyester net	90	5000	7000
200305	HYDRA 1 – RLH 90 mcr	1"	polyester net	90	6000	8000
200306	HYDRA ½ - RSH 50 mcr	½"	pleated polypropylene net	50	4000	5000
200307	HYDRA ¾ - RSH 50 mcr	¾"	pleated polypropylene net	50	5000	7000
200308	HYDRA 1 – RSH 50 mcr	1"	pleated polypropylene net	50	6000	8000

Self cleaning filters - Cintropur - residential



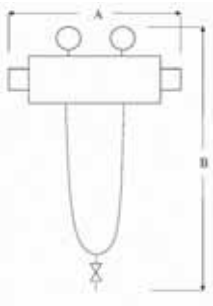
- range of filters for drinking water entirely made in synthetic material;
- the particular centrifugal effect causes the precipitation of larger particles, while the final filtration is assured by the filter sleeve;
- the filters include the sleeve at 25 micron;
- also available sleeves at 50 and 100 micron as spare parts;
- wrench and two complete connections included;
- max operating pressure 10 bar;
- max operating temperature 50°C.

REF.	MODEL	CONNECTIONS (inch)	FLOW m^3/h Dp 0,2 bar	HEIGHT (mm)	WIDTH (mm)
200320	NW 25-¾	¾"	5,5	355	270
200322	NW 25-1	1"	5,5	355	270
200324	NW 32-1 ¼	1 ¼"	6,5	540	270

ACCESSORIES AND SPARE PARTS:

REF.	DESCRIPTION
200330	Drain cock ¼"
200331	Pressure gauge 1-10 bar - ⅛"
200332	Wall bracket in PP
200333	Set of 5 sleeves 25 micron for NW25
200334	Set of 5 sleeves 50 micron for NW25
200335	Set of 5 sleeves 100 micron for NW25
200336	Set of 5 sleeves 25 micron for NW32
200337	Set of 5 sleeves 50 micron for NW32
200338	Set of 5 sleeves 100 micron for NW32

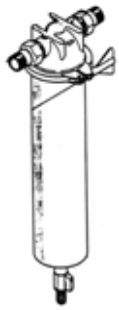
Self cleaning filters - Cintropur - industrial

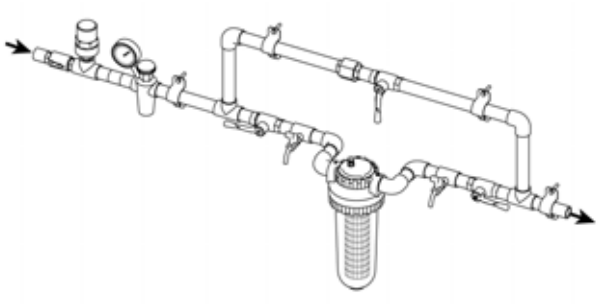


- range of filters for drinking water entirely made in synthetic material;
- the particular centrifugal effect causes the precipitation of larger particles, while the final filtration is assured by the filter sleeve;
- the filters include the sleeve at 25 micron;
- also available sleeves at 5, 10, 50, 100, 150 and 300 micron as spare parts;
- wrench, pressure gauge and drain cock included;
- max operating pressure 10 bar;
- max pressure 16 bar;
- max operating temperature 50°C.

REF.	MODEL	FLOW m^3/h Dp 0,2 bar	WEIGHT (kg)	CONNECTIONS	Ø OF PIPE	A (mm)	B (mm)
200340	NW 500 – 2	18	6,4	2" BSPT	2"	363	770
200345	NW 650 – 2 ½	25	7,0	DN65	2 ½"	304	770
200350	NW 800 – 3	32	7,4	DN80	3"	313	770

Self cleaning filters - OTC - industrial





- filter housing brass chromium-pleated head with sump, for standard filtering cartridges external diameter max 64 mm, and length 9 ¾", 10" or 20";
- complete with internal tie-rod in AISI 304 to fit cartridges;
- max operating temperature 80°C;
- max operating pressure 16 bar;
- complete with air valve.

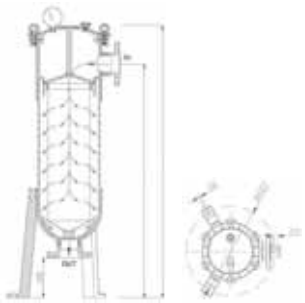
Note: for MODEL 20", you can put one 10" filtering cartridge on another.

CARTRIDGES TO COUPLING:

- AISI 304 pleated filtering cartridges, REF. 201236, 201237, 201238, 201239 and 201240;
- AISI 304 filtering cartridges, REF. 201222 and 201224;
- wound polypropylene cartridges with AISI 316 core.

REF.	MODEL	CONNECTIONS (inch)	LENGTH (inch)	A (mm)	B (mm)	C (mm)	F (mm)
200355	OTC-HW 34	¾"	10"	200	88	375	147
200356	OTC-HW 1	1"	10"	200	88	375	147
200357	OTC-HW 114	1 ¼"	10"	200	88	385	147
200358	OTC-HW 34-20	¾"	20"	200	88	630	147
200359	OTC-HW 1-20	1"	20"	200	88	630	147
200360	OTC-HW 114-20	1 ¼"	20"	200	88	640	147

Single cartridge filter - PF - high flow filter



- PVC-U single cartridge filter housings, with flanged top opening, support legs, in/out female socket weld connections and two ¼" threaded connections for air valve pressure gauges and for drain filter;
- all filter housing internal material and all internal spare parts are in PVC-U for high chemical corrosion resistance;
- opening gasket in silicone material;
- connection gasket in EPDM material;
- with aeration valve and pressure gauge;
- European 97/23/EC Directive compliant for pressure equipment (PED);
- design pressure = 7,0 bar @ 25°C;
- hydraulic test pressure = 9,1 bar;
- max Δp = 1,4 bar;
- operating temperature = 5 ÷ 40 °C;
- In/Out flanged connections DN50;
- suitable for high flow "special pleated cartridges";
- cartridges dimensions: 6" x 20" and 6" x 40".

REF.	MODEL	A *	B *	D *
200410	PF20	1065	905	225
200411	PF40	1506	1363	225

* Dimensions are in mm.

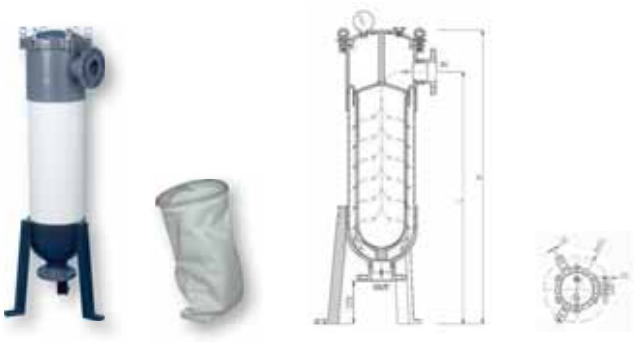
CARTRIDGES TO COUPLING:

- high flow "special pleated cartridges" single open-ended;
- filter media and support in PP, o-ring seal in EPDM;
- end caps in fiberglass reinforced PP;
- inside to outside flow pattern;
- external diameter = 6" (152 mm);
- recommended maximum ΔP 1,0 bar at 20°C.

REF.	MODEL	CARTRIDGES NUMBER	WEIGHT (kg)	CAPACITY (litres)
200410	PF20	n.1 6" x 20"	18,0	24,8
200411	PF40	n.1 6" x 40"	22,3	41,0

REF.	MODEL	LENGTH (inch)	MICRON	NOMINAL FLOW RATE (lpm)
200415	DLHF620PP4.5E	20"	4,5	660
200416	DLHF620PP20E	20"	20	660
200417	DLHF620PP70E	20"	70	660
200418	DLHF620PP100E	20"	100	660
200419	DLHF640PP4.5E	40"	4,5	1300
200420	DLHF640PP20E	40"	20	1300
200421	DLHF640PP70E	40"	70	1300
200422	DLHF640PP100E	40"	100	1300

Bag filter - HXP system



- PVC-U bag filter housings, with flanged top opening, support legs, in/out female socket weld connections and two ¼" threaded connections for air valve pressure gauges and for drain filter;
- all filter housing internal material and all internal spare parts are in PVC-U for high chemical corrosion resistance;
- opening gasket in silicone material;
- connection gasket in EPDM material;
- with aeration valve and pressure gauge;
- European 97/23/EC Directive compliant for pressure equipment (PED);
- design pressure = 7,0 bar @ 25°C;
- hydraulic test pressure = 9,1 bar;
- max Δp = 1,0 bar;
- operating temperature = 5 ÷ 40 °C;
- In/Out flanged connections DN50;
- suitable for bag filter;
- bag filters dimensions: 7" x 16" and 7" x 32".

REF.	MODEL	BAG SIZE	WEIGHT (kg)	CAPACITY (litres)
200430	HXP-BF-1-1-B	7" x 16"	15	17
200440	HXP-BF-1-2-B	7" x 32"	20	30

REF.	MODEL	H *	L *	D *
200430	HXP-BF-1-1-B	820	665	225
200440	HXP-BF-1-2-B	1200	1045	225

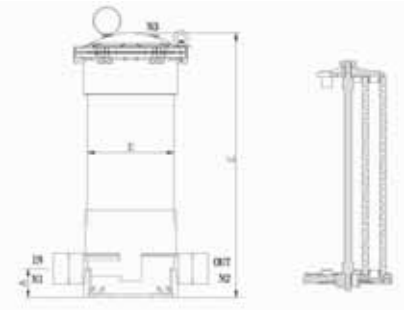
* Dimensions are in mm.

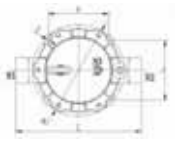
BAG FILTERS TO COUPLING:

- inside to outside flow pattern;
- in PP material;
- external diameter = 7" (178 mm);
- recommended maximum Δp = 1,0 bar at 20°C.

REF.	MODEL	LENGTH (inch)	MICRON	NOMINAL FLOW RATE (lpm)
200445	BAG FILTER 1	16"	1	330
200446	BAG FILTER 1	16"	5	330
200447	BAG FILTER 1	16"	10	330
200448	BAG FILTER 1	16"	25	330
200449	BAG FILTER 1	16"	50	330
200450	BAG FILTER 1	16"	100	330
200451	BAG FILTER 2	32"	1	660
200452	BAG FILTER 2	32"	5	660
200453	BAG FILTER 2	32"	10	660
200454	BAG FILTER 2	32"	25	660
200456	BAG FILTER 2	32"	50	660
200457	BAG FILTER 2	32"	100	660

Multycatridge filter - HPCF chemical high resistance





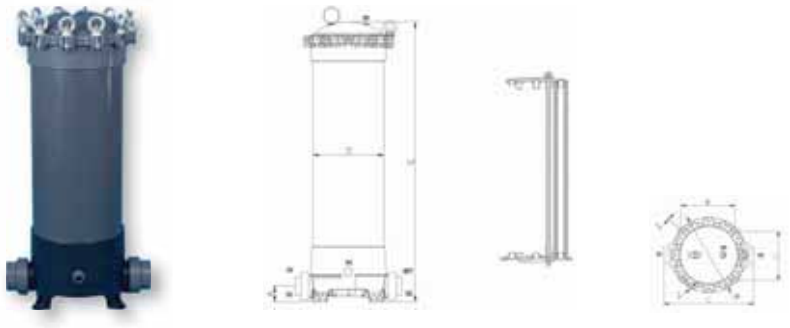
- PVC-U multicartridges filter housings for 5 cartridges flanged top opening;
- with three pieces in / out female socket weld connections;
- with two ¼" threaded connections for air valve pressure gauges and for drain filter;
- all filter housing internal material and all internal spare parts are in PVC-U for high chemical corrosion resistance;
- opening gasket in silicone material;
- connection gasket in EPDM material;
- with aeration valve and pressure gauge;
- European 97/23/EC Directive compliant for pressure equipment (PED);
- design pressure = 6,0 bar @ 25°C;
- hydraulic test pressure = 7,8 bar;
- max Δp = 1,4 bar;
- operating temperature = 5 ÷ 40 °C;
- In/Out connections DN50 / D. 63 mm;
- suitable for DOE cartridges;
- cartridges dimensions: ID 28÷30 mm, OD 65÷71 mm and length 20"- 30"- 40".

REF.	MODEL	CARTRIDGES NUMBER	WEIGHT (kg)	CAPACITY (litres)
200392	HPCF/B-5DC2	n.5 2,5" x 20"	11,0	20,6
200394	HPCF/B-5DC3	n.5 2,5" x 30"	12,7	29,4
200396	HPCF/B-5DC4	n.5 2,5" x 40"	14,4	38,2

REF.	MODEL	A *	C *	D *	E *	I *	K *	L *	M *	N1 N2 *	N3
200392	HPCF/B-5DC2	75	715	225	473	10	187,5	186	290	63	G ¼"
200394	HPCF/B-5DC3	75	965	225	473	10	187,5	186	290	63	G ¼"
200396	HPCF/B-5DC4	75	1215	225	473	10	187,5	186	290	63	G ¼"

* Dimensions are in mm.

Multycatridge filter - HPCF chemical high resistance



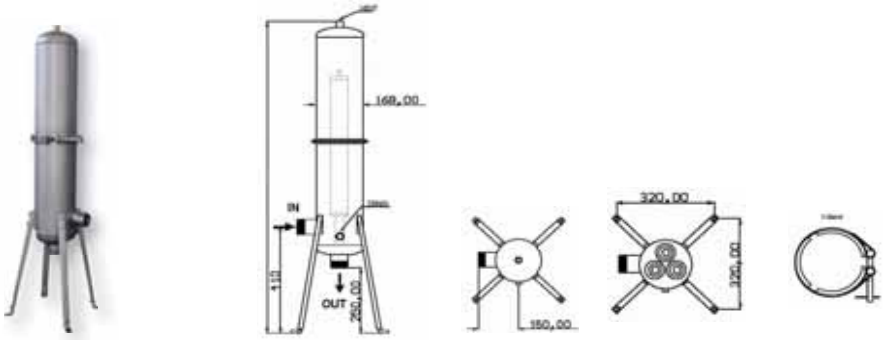
- PVC-U multicartridges filter housings for 9 cartridges flanged top opening;
- with three pieces in / out female socket weld connections;
- with two ¼" threaded connections for air valve pressure gauges and for drain filter;
- all filter housing internal material and all internal spare parts are in PVC-U for high chemical corrosion resistance;
- opening gasket in silicone material;
- connection gasket in EPDM material;
- with aeration valve and pressure gauge;
- European 97/23/EC Directive compliant for pressure equipment (PED);
- design pressure = 6,0 bar @ 25°C;
- hydraulic test pressure = 7,8 bar;
- max Δp = 1,4 bar;
- operating temperature = 5 ÷ 40 °C;
- In/Out connections DN80 / D. 90 mm;
- ½" drain connection;
- suitable for DOE cartridges;
- cartridges dimensions: ID 28÷30 mm, OD 65÷71 mm and length 20"- 30"- 40".

REF.	MODEL	CARTRIDGES NUMBER	WEIGHT (kg)	CAPACITY (litres)
200400	HPCF/B-9DC2	n.9 2,5" x 20"	20,0	39,7
200402	HPCF/B-9DC3	n.9 2,5" x 30"	23,0	57,0
200404	HPCF/B-9DC4	n.9 2,5" x 40"	26,0	74,3

REF.	MODEL	A *	C *	D *	E *	I *	J *	K *	L *	M *	N1, N2 *	N3	N4
200400	HPCF/B-9DC2	69	745	315	510	9	15	276	249	395	90	G ¼"	½"
200402	HPCF/B-9DC3	69	995	315	510	9	15	276	249	395	90	G ¼"	½"
200404	HPCF/B-9DC4	69	1245	315	510	9	15	276	249	395	90	G ¼"	½"

* Dimensions are in mm.

Multycatridge filters - AISI 316



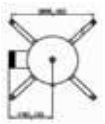
CFH 3 x - - MODEL

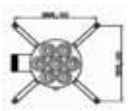
- multicartridges filter housings flanged top opening AISI 316L for 3 cartridges, support legs, In/Out connections 2" BSP M or DN50 flange;
- two ½" BSP connections for air valve pressure gauge and for drain filter;
- high resistance and strength electrowelded construction, complete with AISI 316 fixing cartridges accessories, glass blasted internal and outside treatment;
- European 97/23/EC Directive compliant for pressure equipment (PED);
- max operating temperature = 10 bar;
- hydraulic test pressure = 15 bar;
- max operating temperature 80 °C;
- gasket material EPDM;
- suitable for DOE cartridges;
- cartridges dimensions: ID min/max 26÷30 mm, OD max 70 mm and length 20"- 30"- 40".

REF.	MODEL	CARTRIDGES NUMBER	IN/OUT CONNECTIONS	A (mm)	WEIGHT (kg)
200365	CFH 3 x 20"	3 x 20"	2" BSP M	1200	20
200366	CFH 3 x 20"	3 x 20"	DN50 Flange	1200	22
200367	CFH 3 x 30"	3 x 30"	2" BSP M	1500	21
200368	CFH 3 x 30"	3 x 30"	DN50 Flange	1500	23
200369	CFH 3 x 40"	3 x 40"	2" BSP M	1600	22
200370	CFH 3 x 40"	3 x 40"	DN50 Flange	1600	24

(*) flanged version on demand.

Multycatridge filters - AISI 316





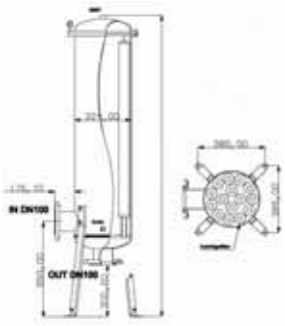
CFH 7 x - - MODEL

- multicartridges filter housings flanged top opening AISI 316L for 7 cartridges, support legs, In/Out connections 2 ½" BSP M or DN65 flange;
- two ½" BSP connections for air valve pressure gauge and for drain filter;
- high resistance and strength electrowelded construction, complete with AISI 316 fixing cartridges accessories, glass blasted internal and outside treatment;
- European 97/23/EC Directive compliant for pressure equipment (PED);
- max operating temperature = 10 bar;
- hydraulic test pressure = 15 bar;
- max operating temperature 80 °C;
- gasket material EPDM;
- suitable for DOE cartridges;
- cartridges dimensions: ID min/max 26÷30 mm, OD max 70 mm and length 20"- 30"- 40".

REF.	MODEL	CARTRIDGES NUMBER	IN/OUT CONNECTIONS	A (mm)	WEIGHT (kg)
200371	CFH 7 x 20"	7 x 20"	2 ½" BSP M	1190	27
200372	CFH 7 x 20"	7 x 20"	DN65 Flange	1190	30
200373	CFH 7 x 30"	7 x 30"	2 ½" BSP M	1495	29
200374	CFH 7 x 30"	7 x 30"	DN65 Flange	1495	32
200375	CFH 7 x 40"	7 x 40"	2 ½" BSP M	1610	34
200376	CFH 7 x 40"	7 x 40"	DN65 Flange	1610	37

* Flanged version on demand.

Multycatridge filters - AISI 316

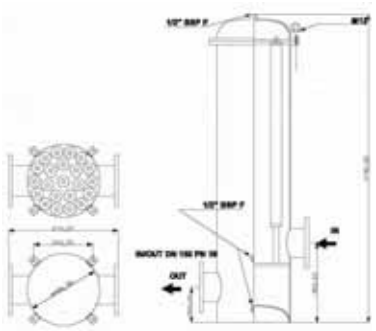


CFH 15 x - - MODEL

- multicartridges filter housings flanged top opening AISI 316L for 15 cartridges, support legs, In/Out connections DN100;
- two ½" BSP connections for air valve pressure gauge and for drain filter;
- high resistance and strength electrowelded construction, complete with AISI 316 fixing cartridges accessories, glass blasted internal and outside treatment;
- European 97/23/EC Directive compliant for pressure equipment (PED);
- max operating temperature = 10 bar;
- hydraulic test pressure = 15 bar;
- max operating temperature 80 °C;
- gasket material EPDM;
- suitable for DOE cartridges;
- cartridges dimensions: ID min/max 26÷30 mm, OD max 68 mm and length 30"- 40".

REF.	MODEL	CARTRIDGES NUMBER	IN/OUT CONNECTIONS	A (mm)	WEIGHT (kg)
200380	CFH 15 x 30"	15 x 30"	DN100 Flange	1500	75
200385	CFH 15 x 40"	15 x 40"	DN100 Flange	1750	80

Multycatridge filters - AISI 316



CFH 22 x 40 MODEL

- multicartridges filter housings flanged top opening AISI 316L for 22 cartridges, In/Out connections DN150;
- three ½" BSP connections for air valve pressure gauge and for drain filter;
- high resistance and strength electrowelded construction, complete with AISI 316 fixing cartridges accessories, glass blasted internal and outside treatment;
- European 97/23/EC Directive compliant for pressure equipment (PED);
- max operating temperature = 10 bar;
- hydraulic test pressure = 15 bar;
- max operating temperature 80 °C;
- gasket material EPDM;
- suitable for DOE cartridges;
- cartridges dimensions: ID min/max 26÷30 mm, OD max 70 mm and length 40".

REF.	MODEL	CARTRIDGES NUMBER	IN/OUT CONNECTIONS	WEIGHT (kg)
200390	CFH 22 x 40"	22 x 40"	DN150 Flange	138

Mini basket

Basket filter AISI 304 - AISI 316

MINI BASKET is a filter with manual cleaning and a stainless steel body and inside provided with a stainless steel AISI 316 basket. MINI BASKET filter has no mechanical parts in movement and it is easy to open for cleaning operations and it is provided with manual drain valve for draining. It can be used to protect water circulation pumps, to prevent the ingress of particoles which could damage the pump impeller and the plant.

	MODEL	IN/OUT [in-mm]	AREA [cm²]	QMAX* [m³/h]	AISI 304 Code	AISI 316 Code
	MBK 40	40	1.620	20	FSCSLN0000007	FSCSLN0000008
	MBK 50	50	1.610	40	FSCSLN0000013	FSCSLN0000014
	MBK 65	65	1.595	60	FSCSLN0000003	FSCSLN0000004
	MBK 80	80	1.580	80	FSCSLN0000001	FSCSLN0000002
	MBK 100	100	1.535	140	FSCSLN0000009	FSCSLN0000010
	MBK 125	125	1.950	210	FSCSLN0000005	FSCSLN0000006
	MBK 150	150	1.885	300	FSCSLN0000011	FSCSLN0000012

* Flow rates are referred to filters with basket from 110 µm and water with temperature of 20 °C and NTU < 1.

Included elements

FILTRATING ELEMENTS		
Basket		DN
Stainless steel AISI 316 Basket Filtration degrees available: 3000 µm		40 50 65 80 100 125 150

REMARK: for a full list of components and filter options, refer to Technical Sheet of Basket

General informations

MATERIALS	
Body	AISI 304 - 316
Cover	AISI 304 - 316
Basket	AISI 316
Gaskets	Epdm

CONNECTIONS	
DN	Type
40	 ISO PN 16/10 Flanged
50	
65	
80	
100	
125	
150	

APPLICATION LIMITS	
Filtration field	3.000 µm
PN	6 bar
T	< + 60°C

Basket

Basket filter AISI 304 - AISI 316

BASKET is a filter with manual cleaning and a stainless steel body and inside provided with a stainless steel AISI 316 basket with a filtration degrees between 110 µm to 5 mm. Thefilterisprovidedwithsupportframe,manualdrainvalve, manualventvalveandpressure gauges. BASKET filter has no mechanical parts in movement and it is easy to open for cleaning operations.

	MODEL	IN/OUT [in-mm]	AREA [cm²]	QMAX* [m³/h]	AISI 304 Code	AISI 316 Code
	CS Z 2"/20	2"	2200	40	FSCSZZ0000005	FSCSZZ0000008
	CS Z 80/20	80	2200	80	FSCSZZ0000006	FSCSZZ0000009
	CS Z 80/35	80	3300	80	FSCSZZ0000004	FSCSZZ0000010
	CS Z 100/35	100	3300	140	FSCSZZ0000002	FSCSZZ0000011
	CS Z 100/40P	100	5400	150	FSCSZZ0000007	FSCSZZ0000012
	CS Z 150/40P	150	5400	300	FSCSZZ0000015	FSCSZZ0000017
	CS Z 200/40P	200	5400	400	FSCSZZ0000016	FSCSZZ0000018

* Flow rates are referred to filters with basket from 110 µm and water with temperature of 20 °C and NTU < 1.

Included elements

FILTRATING ELEMENTS	
Stainless steel AISI 316 Basket Filtration degrees available: 110 - 200 - 400 - 1000 - 2000 - 3500 - 5000 µm	

REMARK: For a full list of components and filter options, refer to Technical Sheet of Basket.

General informations

MATERIALS	
Body	AISI 304 - 316
Cover	AISI 304 - 316
Basket	AISI 316
Gaskets	Epdm

CONNECTIONS	
DN	Type
2"	 BSP ANSI 150 - NPTMale threaded
80	 ISO PN 16/10Flanged
100	
150	
200	

APPLICATION LIMITS	
Filtration field	5.000÷110 µm
PN	10 bar
T	< + 60°C

Vortex

Centrifugal separating filter AISI 304 - AISI 316

VORTEX is a centrifugal separating filter with a stainless steel body and a manual drain at the bottom. It is particularly indicated to treat water containing sands and/or suspended solids of a specific gravity superior to the water (P ≥ 1). The filter is able to remove until 99% of sands and/or suspended solids with dimensions bigger than 75 µm and until the 65% with dimensions bigger than 50 µm. It has been designed to prevent at its best the drain losses but maintaining the best separating efficiency. VORTEX works continuously, it does not contain filtrating elements or parts in movements, it can be inspected and can be provided of an automatic drain.

	MODEL	IN/OUT [in-mm]	QMIN [m³/h]	QMAX [m³/h]	AISI 304 Code	AISI 316 Code
	VX ¾"	¾"	2	4	FSVXLL0000013	FSVXLL0000014
	VX 1"	1"	4	9	FSVXLL0000001	FSVXLL0000006
	VX 1" ½	1" ½	8	18	FSVXLL0000002	FSVXLL0000007
	VX 2"	2"	15	30	FSVXLL0000003	FSVXLL0000008
	VX 3"	3"	25	60	FSVXLL0000004	FSVXLL0000009
	VX 100	100	54	105	FSVXLL0000005	FSVXLL0000010
	VX 150	150	95	190	FSVXLL0000011	FSVXLL0000012
	VX 150P	150	180	300	FSVXLL0000015	FSVXLL0000016

REMARK: For a full list of components and filter options, refer to Technical Sheet of Vortex.

General informations

MATERIALS	
Body	AISI 304 - 316
Cover	AISI 304 - 316
Cone	Plastic
Deflector	AISI 304
Gaskets	Epdm

CONNECTIONS	
DN	Type
¾"	 BSP ANSI 150 - NPT Male threaded
1"	
1" ½	
2"	
3"	
100	 ISO PN 16/10 Flanged
150	

APPLICATION LIMITS	
Filtration field	1.000÷50 µm
PN	10 bar
T	< + 60°C

Automatic discharge devices

FILTRATING CARTRIDGES
For models from VX ¾" to VX 3": Pneumatic sphere valve 1" Electro-valve 12 Vcc to be controlled remotely - Inlet air
For models from VX 100 to VX 150P: Pneumatic sphere valve 2" Electro-valve 12 Vcc to be controlled remotely - Inlet air

FILTRATING CARTRIDGES
For models from VX ¾" to VX 3": Pneumatic sphere valve 1" with electro-valve 12 Vcc Saticon LM200 electronic controller Power 230 Vac / 12 Vcc - 1,2A included Activation for preset times - Inlet air
For models from VX 100 to VX 150P: Pneumatic sphere valve type 2" with electro-valve 12V cc Saticon LM200 electronic controller Power 230 Vac / 12 Vcc - 1,2A included Activation for preset times - Inlet air

Simplex mechanical filters

Collecting impurities filter AISI 304 - AISI 316



SIMPLEX is a manual cleaning screen filter with stainless steel body. The internal filtrating cartridge consists of an AISI 316 stainless steel tubular screen on which can be inserted a polyester filtrating mesh (PES) or can be fixed a stainless steel AISI 316 double screen (REPS). The filtration fields is between 25 to 2000µm. To clean the cartridge it is necessary to remove the cover at the bottom of the filter which is provided with drain manual valve and pressure gauges. The SIMPLEX filter has no mechanical parts in mouvment and and is designed for future installations of our automatic cleaning systems.

Included elements

FILTRATING CARTRIDGES	
Stainless steel AISI 316 support sceen, polyester filtrating mesh (PES) and double EPDM gaskets Filtration degrees availables: 25 - 53 - 80 - 120 - 200 - 400 - 580 810 µm	

Or

Stainless steel AISI 316 cartridge REPS double layer and double EPDM gaskets Filtration degrees available: 110 - 200 - 400 - 800 µm	

Or

Stainless steel AISI 316 screen and double EPDM gaskets Filtration degrees available: 1000 - 2000 µm	

REMARK: For a full list of components and filter options, refer to Technical Sheet of Simplex.

	MODEL	IN/OUT [in-mm]	AREA [cm²]	QMAX* [m³/h]	AISI 304 Code	AISI 316 Code
	SI L 2"/10A	2"	1.500	40	FSSMLL0000001	FSSMLL0000008
	SI L 3"/10A	3"	1.500	80	FSSMLL0000002	FSSMLL0000009
	SI L 100/10A	100	1.500	100	FSSMLL0000003	FSSMLL0000010
	SI L 3"/20	3"	2.200	80	FSSMLL0000015	FSSMLL0000016
	SI L 100/20	100	2.200	130	FSSMLL0000004	FSSMLL0000011
	SI L 100/35	100	3.300	140	FSSMLL0000005	FSSMLL0000012
	SI L 150/35	150	3.300	250	FSSMLL0000006	FSSMLL0000013
	SI L 150/40P	150	5.400	300	FSSMLL0000007	FSSMLL0000014
	SI O 2"/10A	2"	1.500	40	FSSMOO00000001	FSSMOO00000009
	SI O 3"/10A	3"	1.500	80	FSSMOO00000002	FSSMOO00000010
	SI O 100/10A	100	1.500	100	FSSMOO00000003	FSSMOO00000011
	SI O 100/20	100	2.200	130	FSSMOO00000005	FSSMOO00000013
	SI O 100/35	100	3.300	140	FSSMOO00000006	FSSMOO00000014
	SI O 150/35	150	3.300	250	FSSMOO00000007	FSSMOO00000015
	SI O 150/40P	150	5.400	300	FSSMOO00000008	FSSMOO00000016
	SI O 200/40P	200	5.400	400	FSSMOO00000017	FSSMOO00000018
	SI Y 1"/5	1"	600	10	FSSMYY0000001	FSSMYY0000010
	SI Y 1"½/5	1" ½	600	15	FSSMYY0000002	FSSMYY0000011
	SI Y 2"/10A	2"	1.500	40	FSSMYY0000003	FSSMYY0000012
	SI Y 3"/10A	3"	1.500	80	FSSMYY0000004	FSSMYY0000013
	SI Y 100/10A	100	1.500	100	FSSMYY0000005	FSSMYY0000014
	SI Y 3"/20	3"	2.200	80	FSSMYY0000019	FSSMYY0000020
	SI Y 100/20	100	2.200	130	FSSMYY0000006	FSSMYY0000015
	SI Y 100/35	100	3.300	140	FSSMYY0000007	FSSMYY0000016
	SI Y 150/35	150	3.300	250	FSSMYY0000008	FSSMYY0000017
	SI Y 150/40P	150	5.400	300	FSSMYY0000009	FSSMYY0000018

* Flow rates are referred to filters with filtrating mesh from 120 µm and water with temperature of 20 °C and NTU < 1.
Filters highlighted in red have special conditions of supply.

General informations

MATERIALS	
Body	AISI 304 - 316
Cover	AISI 304 - 316
Screen supp.	AISI 316
Screen	PES / REPS
Gaskets	Epdm

CONNECTIONS	
DN	Type
1"	 BSP ANSI 150 - NPT Male threaded
1" ½	
2"	
3"	
100	 ISO PN 16/10 Flanged
150	
200	

APPLICATION LIMITS	
Filtration field	2.000÷25 µm
PN	10 bar
T	< + 60°C

Brush

Semi automatic filter with brushes AISI 304 - AISI 316

BRUSH is a semi-automatic cleaning screen filter with a stainless steel body. The internal filtrating cartridge consists of a stainless steel AISI 316 tubular screen on which can be inserted a polyester filtratin mesh (PES) or fixed a stainless steel AISI 316 filtrating double screen (REPS). The filtration degrees is from 25 to 2000 µm. The cartridge is cleaned by a series of brushes manually operated by an external handle. The filter is supplied with manual valves and pressure gauges. For its best performance, BRUSH needs the inlet pressure of at least 0.5 bar, ensuring short times and low water consumption during the cleaning cycle. During this phase the outlet flux is stopped.

	MODEL	IN/OUT [in-mm]	AREA [cm²]	QMAX* [m³/h]	AISI 304 Code	AISI 316 Code
	BR Y 2"/10A	2"	1.500	40	FSBRYYMN00001	FSBRYYMN00008
	BR Y 3"/10A	3"	1.500	80	FSBRYYMN00002	FSBRYYMN00009
	BR Y 3"/20	3"	2.200	80	FSBRYYMN00015	FSBRYYMN00016
	BR Y 100/20	100	2.200	130	FSBRYYMN00004	FSBRYYMN00011
	BR Y 100/35	100	3.300	140	FSBRYYMN00005	FSBRYYMN00012
	BR Y 150/35	150	3.300	250	FSBRYYMN00006	FSBRYYMN00013
	BR Y 150/40P	150	5.400	300	FSBRYYMN00007	FSBRYYMN00014

* Flow rates are referred to filters with filtrating mesh from 120 µm and water with temperature of 20 °C and NTU < 1.
Filters highlighted in red have special conditions of supply.

Included elements

FILTRATING CARTRIDGES	
Stainless steel AISI 316 filtrating screen, polyester filtrating mesh (PES) and double EPDM gaskets Filtration degrees available: 25 - 53 - 80 - 120 - 200 - 400 - 580 - 810 µm	

Or

Stainless steel AISI 316 cartridge REPS double layer and double EPDM gaskets Filtration degrees available: 110 - 200 - 400 - 800 µm	

Or

Stainless steel AISI 316 screen and double EPDM gaskets Filtration degrees available: 1000 - 2000 µm	

REMARK: For a full list of components and filter options, refer to Technical Sheet of Brush.

General informations

MATERIALS	
Body	AISI 304 - 316
Cover	AISI 304 - 316
Screen supp.	AISI 316
Screen	PES / REPS
Gaskets	Epdm

CONNECTIONS	
DN	Type
2"	 BSP ANSI 150 - NPT Male threaded
3"	
100	 ISO PN 16/10 Flanged
150	

APPLICATION LIMITS	
Filtration field	2.000÷25 µm
PN	10 bar
T	< + 60°C

Vacuum

Semi-automatic filter with suction pads AISI 304 - AISI 316



VACUUM is a semi-automatic cleaning screen filter. The "sandwich" type internal cartridge consists of a polyester or stainless steel AISI 316 filtrating mesh closed between two stainless steel AISI 316 tubular screen. The filtration range is from 25 to 810 µm. The cartridge is cleaned by a series of suction pads manually moved by an external handle. The filter is supplied with manual valves and pressure gauges. For its best performance the VACUUM needs an inlet pressure of at least 3 bars, ensuring short times and low water consumption during the cleaning cycle. During this phase the filter continues to produce permeate.

Included elements

FILTRATING CARTRIDGES	
Sandwich cartridge with stainless steel AISI 316 support sceen, polyester inner mesh (PES) and double EPDM gaskets Filtration degrees availables: 25 - 53 - 80 - 120 - 200 - 400 - 580 - 810 µm	

Or

Stainless steel REPS cartridge triple layer and double EPDM gaskets Filtration degrees available: 120 - 200 µm	

Only for horizontal constructive shape (O):

Stainless steel AISI 316 pre filter screen Filtration degrees: 3 mm	

REMARK: For a full list of components and filter options, refer to Technical Sheet of Vacuum.

	MODEL	IN/OUT [in-mm]	AREA [cm²]	QMAX* [m³/h]	AISI 304 Code	AISI 316 Code
L 	VA L 2"/10A	2"	1.500	40	FSVCLLMN00001	FSVCLLMN00009
	VA L 3"/10A	3"	1.500	80	FSVCLLMN00002	FSVCLLMN00010
	VA L 100/10A	100	1.500	100	FSVCLLMN00003	FSVCLLMN00011
	VA L 100/20	100	2.200	130	FSVCLLMN00004	FSVCLLMN00012
	VA L 100/35	100	3.300	140	FSVCLLMN00005	FSVCLLMN00013
	VA L 150/35	150	3.300	250	FSVCLLMN00006	FSVCLLMN00014
	VA L 150/40P	150	5.400	300	FSVCLLMN00007	FSVCLLMN00015
	VA L 200/40P	200	5.400	400	FSVCLLMN00008	FSVCLLMN00016
O 	VA O 2"/10A	2"	1.500	40	FSVCOOMN00001	FSVCOOMN00009
	VA O 3"/10A	3"	1.500	80	FSVCOOMN00002	FSVCOOMN00010
	VA O 100/10A	100	1.500	100	FSVCOOMN00003	FSVCOOMN00011
	VA O 100/20	100	2.200	130	FSVCOOMN00004	FSVCOOMN00012
	VA O 100/35	100	3.300	140	FSVCOOMN00005	FSVCOOMN00013
	VA O 150/35	150	3.300	250	FSVCOOMN00006	FSVCOOMN00014
	VA O 150/40P	150	5.400	300	FSVCOOMN00007	FSVCOOMN00015
	VA O 200/40P	200	5.400	400	FSVCOOMN00008	FSVCOOMN00016
Y 	VA Y 2"/10A	2"	1.500	40	FSVCYYMN00001	FSVCYYMN00008
	VA Y 3"/10A	3"	1.500	80	FSVCYYMN00002	FSVCYYMN00009
	VA Y 100/20	100	2.200	130	FSVCYYMN00004	FSVCYYMN00011
	VA Y 100/35	100	3.300	140	FSVCYYMN00005	FSVCYYMN00012
	VA Y 150/35	150	3.300	250	FSVCYYMN00006	FSVCYYMN00013
	VA Y 150/40P	150	5.400	300	FSVCYYMN00007	FSVCYYMN00014

* Flow rates are referred to filters with filtrating mesh from 120 µm and water with temperature of 20 °C and NTU < 1.
Filters highlighted in red have special conditions of supply.

General informations

MATERIALS	
Body	AISI 304 - 316
Cover	AISI 304 - 316
Screen supp.	AISI 316
Screen	PES / REPS
Gaskets	Epdm

CONNECTIONS	
DN	Type
2"	 BSP ANSI 150 - NPT Male threaded
3"	
100	 ISO PN 16/10 Flanged
150	
200	

APPLICATION LIMITS	
Filtration field	810÷25 µm
PN	10 bar
T	< + 60°C

Rapidjet

Semi automatic filter pressurized nozzles AISI 304 - AISI 316

RAPIDJET is a semi-automatic screen filter with stainless steel body. The internal filtrating cartridge consists of an AISI 316 stainless steel tubular screen on which can be inserted a polyester filtrating mesh (PES) or a stainless steel AISI 316 filtering double screen (REPS). The filtration range is from 25 to 2000 µm. The cartridge is cleaned by a series of pressurized nozzles (fed with clean water at 4-5 bar from an external socket) manually operated by an external handle. The filter is supplied with manual valves and pressure gauges. For its best performance RAPIDJET needs an inlet pressure of at least 0.5 bars, ensuring short times and low water consumption during the cleaning cycle. During this phase the inlet and the outlet flux are stopped.

	MODEL	IN/OUT [in-mm]	AREA [cm²]	QMAX* [m³/h]	AISI 304 Code	AISI 316 Code
 L	RJ L 2"/10A	2"	1.500	40	FSRJLLMN00001	FSRJLLMN00005
	RJ L 80/20	80	2.200	80	FSRJLLMN00002	FSRJLLMN00006
	RJ L 100/35	100	3.300	140	FSRJLLMN00003	FSRJLLMN00007
	RJ L 100/40P	100	5.400	150	FSRJLLMN00004	FSRJLLMN00008
 Y	RJ Y 2"/10A	2"	1.500	40	FSRJYYMN00001	FSRJYYMN00005
	RJ Y 80/20	80	2.200	80	FSRJYYMN00002	FSRJYYMN00006
	RJ Y 100/35	100	3.300	140	FSRJYYMN00003	FSRJYYMN00007
	RJ Y 100/40P	100	5.400	150	FSRJYYMN00004	FSRJYYMN00008

* Flow rates are referred to filters with filtrating mesh from 120 µm and water with temperature of 20 °C and NTU < 1.

Included elements

FILTRATING CARTRIDGES	
Stainless steel AISI 316 filtrating screen, polyester filtrating mesh (PES) and double EPDM gaskets Filtration degrees available: 25 - 53 - 80 - 120 - 200 - 400 - 580 - 810 µm	

Or

Stainless steel AISI 316 cartridge REPS double layer and double EPDM gaskets Filtration degrees available: 110 - 200 - 400 - 800 µm	

Or

Stainless steel AISI 316 screen and double EPDM gaskets Filtration degrees available: 1000 - 2000 µm	

REMARK: For a full list of components and filter options, refer to Technical Sheet of Brush.

General informations

MATERIALS	
Body	AISI 304 - 316
Cover	AISI 304 - 316
Screen supp.	AISI 316
Screen	PES / REPS
Gaskets	Epdm

CONNECTIONS	
DN	Type
2"	 BSP ANSI 150 - NPT Male threaded
80	 ISO PN 16/10 Flanged
100	

APPLICATION LIMITS	
Filtration field	2.000÷25 µm
PN	10 bar
T	< + 60°C

Rotor

Automtic filter with suction pads AISI 304 - AISI 316



ROTOR is a self-cleaning screen filter with stainless steel body. The "sandwich" type internal cartridge consists of a polyester or stainless steel AISI 316 filtrating mesh closed between two stainless steel AISI 316 tubular screen. The filtration range is between 25 to 810 µm and the cartridge is cleaned by a series of suction pads on a rotating shaft which is moved by a 24 Vcc electric motor. The filter is supplied and already wired with: automation group, valves and pressure gauges. For the best performance the ROTOR filter needs an inlet pressure of at least 3 bars that grants brief times and low water consumption during the cleaning cycle. Cleaning cycle take over without flow interruption, allowing continuity on the filtration process.

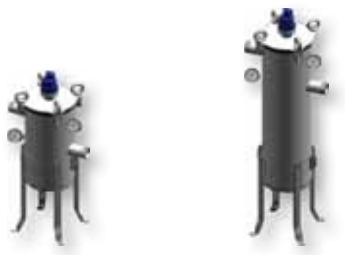
	MODEL	IN/OUT [in-mm]	AREA [cm²]	QMAX* [m³/h]	AISI 304 Code	AISI 316 Code
L 	ROM F1 L 1"	1"	280	6	FSRTLLME00072	FSRTLLME00075
L 	ROM L 2"/10A	2"	1.500	40	FSRTLLME00001	FSRTLLME00011
	ROM L 3"/10A	3"	1.500	80	FSRTLLME00002	FSRTLLME00012
	ROM L 80/10A	80	1.500	80	FSRTLLME00063	FSRTLLME00066
	ROM L 100/10A	100	1.500	100	FSRTLLME00003	FSRTLLME00013
	ROM L 3"/20	3"	2.200	80	FSRTLLME00004	FSRTLLME00014
	ROM L 80/20	80	2.200	80	FSRTLLME00064	FSRTLLME00021
	ROM L 100/20	100	2.200	130	FSRTLLME00005	FSRTLLME00015
	ROM L 100/35	100	3.300	140	FSRTLLME00006	FSRTLLME00016
	ROM L 150/35	150	3.300	250	FSRTLLME00007	FSRTLLME00017
	ROM L 100/40P	100	5.400	150	FSRTLLME00065	FSRTLLME00067
	ROM L 150/40P	150	5.400	300	FSRTLLME00008	FSRTLLME00018
	ROM L 200/40P	200	5.400	400	FSRTLLME00009	FSRTLLME00019
O 	ROM O 2"/10A	2"	1.500	40	FSRTOOME00001	FSRTOOME00011
	ROM O 3"/10A	3"	1.500	80	FSRTOOME00002	FSRTOOME00012
	ROM O 80/10A	80	1.500	80	FSRTOOME00062	FSRTOOME00065
	ROM O 100/10A	100	1.500	100	FSRTOOME00003	FSRTOOME00013
	ROM O 3"/20	3"	2.200	80	FSRTOOME00063	FSRTOOME00066
	ROM O 80/20	80	2.200	80	FSRTOOME00004	FSRTOOME00014
	ROM O 100/20	100	2.200	130	FSRTOOME00005	FSRTOOME00015
	ROM O 100/35	100	3.300	140	FSRTOOME00006	FSRTOOME00016
	ROM O 150/35	150	3.300	250	FSRTOOME00007	FSRTOOME00017
	ROM O 100/40P	100	5.400	150	FSRTOOME00064	FSRTOOME00067
	ROM O 150/40P	150	5.400	300	FSRTOOME00008	FSRTOOME00018
	ROM O 200/40P	200	5.400	400	FSRTOOME00009	FSRTOOME00019

	MODEL	IN/OUT [in-mm]	AREA [cm²]	QMAX* [m³/h]	AISI 304 Code	AISI 316 Code
Y 	ROM Y 2"/10A	2"	1.500	40	FSRTYYME00001	FSRTYYME00009
	ROM Y 3"/10A	3"	1.500	80	FSRTYYME00002	FSRTYYME00010
	ROM Y 80/10A	80	1.500	80	FSRTYYME00061	FSRTYYME00064
	ROM Y 100/10A	100	1.500	100	FSRTYYME00003	FSRTYYME00011
	ROM Y 3"/20	80	2.200	80	FSRTYYME00004	FSRTYYME00012
	ROM Y 80/20	80	2.200	80	FSRTYYME00062	FSRTYYME00065
	ROM Y 100/20	100	2.200	130	FSRTYYME00005	FSRTYYME00013
	ROM Y 100/35	100	3.300	140	FSRTYYME00006	FSRTYYME00014
	ROM Y 150/35	150	3.300	250	FSRTYYME00007	FSRTYYME00015
	ROM Y 100/40P	100	5.400	150	FSRTYYME00063	FSRTYYME00066
	ROM Y 150/40P	150	5.400	300	FSRTYYME00008	FSRTYYME00016

* Flow rates are referred to filters with filtrating mesh from 120 µm and water with temperature of 20 °C and NTU < 1.
Filters highlighted in red have special conditions of supply.

NW Bag

Filter with bag AISI 304 - AISI 316



NW BAG is a manual cleaning separator filter with stainless steel body. It is provided with an internal filtrating bag with filtration degrees from 1 to 200 µm. The filter is provided with a support, manual drain valve, automatic vent valve and pressure gauges. NW BAG filter has no mechanical parts in movement and it is easy to open for cleanining/ subsitution of the filtrating bag.

Included elements

FILTRATING ELEMENTS AVAILABLE			
Bags		Filtration degrees [µm]	Qmax [m³/h]
Polyester bag S Model		1	8
		5	12
		10	19
		25	24
		50	27
		80	29
		100	33
		200	33
Polyester bag D Model		1	16
		5	22
		10	36
		25	45
		50	51
		80	53
		100	62
		200	62

	MODEL	IN/OUT [in-mm]	DRAIN [cm²]	CONN.	AISI 304 Code	AISI 316 Code
 S	NW S 2"	2"	1"	BSP	FSNWZZ0000001	FSNWZZ0000021
	NW S 3"	3"	1"	BSP	FSNWZZ0000009	FSNWZZ0000029
	NW S 2" VIC	2"	1"	Victaulic	FSNWZZ0000002	FSNWZZ0000022
	NW S 3" VIC	3"	1"	Victaulic	FSNWZZ0000010	FSNWZZ0000030
 D	NW D 2"	2"	1"	BSP	FSNWZZ0000003	FSNWZZ0000023
	NW D 3"	3"	1"	BSP	FSNWZZ0000011	FSNWZZ0000031
	NW D 2" VIC	2"	1"	Victaulic	FSNWZZ0000004	FSNWZZ0000024
	NW D 3" VIC	3"	1"	Victaulic	FSNWZZ0000012	FSNWZZ0000032

N.B.: For informations related to maximum flow rates for each filtrating cartridge, refer to Technical Sheet of NW Bag.
Filters highlighted in red have special conditions of supply.

Included elements

FILTRATING CARTRIDGES	
Automatic vent valve - double kinetic effect - G½" F - brass	
Magnet kit 300: - support G1" F, AISI 316 - magnetic bar, anisotropic ferrite CER-S- 30, inox tube, Øe25, L300 mm, Gauss 3800/4000	
Magnet kit 600: - support G1" F, AISI 316 - magnetic bar, anisotropic ferrite CER-S- 30, inox tube, Øe25, L600 mm, Gauss 3800/4000	

General informations

MATERIALS	
Body	AISI 304 - 316
Cover	AISI 304 - 316
Bag support	AISI 316
Bag	Polyester
Gaskets	Epdm

CONNECTIONS		
DN	Type	
2"	 Victaulic	 BSP ANSI 150 - NPT Male threaded
3"		

APPLICATION LIMITS	
Filtration field	200÷1 µm
PN	8 bar
T	< + 80°C

Included elements

FILTRATING CARTRIDGES	
Stainless steel AISI 316 support screen, polyester filtrating mesh (PES) and NBR double o-ring Filtration degrees available: 25 - 53 - 80 - 120 - 200 - 400 µm	
Sandwich cartridge with stainless steel AISI 316 support sceen, polyester inner mesh (PES) and double EPDM gaskets Filtration degrees availables: 25 - 53 - 80 - 120 - 200 - 400 - 580 - 810 µm	

Or

Stainless steel AISI 316 cartridge REPS double layer and NBR double o-ring Filtration degrees available: 55 - 110 µm	
Stainless steel AISI 316 REPS cartridge triple layer and double EPDM gaskets Filtration degrees availables: 120 - 200 µm	

Only for horizontal constructive shape (O):

Stainless steel AISI 316 pre filter screen Filtration degrees: 3 mm	

REMARK: For a full list of components and filter options, refer to Technical Sheet of Rotor.

AUTOMATION GROUP
Saticon 3M-ROM HP electrical filter controller Power 230V ac Differential pressure gauge Activation for preset times and Δp

General informations

MATERIALS	
Body	AISI 304 - 316
Cover	AISI 304 - 316
Screen supp.	AISI 316
Screen	PES / REPS
Gaskets	Epdm

CONNECTIONS	
DN	Type
1"	 BSP ANSI 150 - NPT Male threaded
2"	
3"	
80	 ISO PN 16/10 Flanged
100	
150	
200	

APPLICATION LIMITS	
Filtration field	810÷25 µm
PN	10 bar
T	< + 60°C

Turbonet

Automatic filter with brushes AISI 304 - AISI 316ww

TURBONET is a self-cleaning screen filter with a stainless steel body. The internal filtrating cartridge consists of a stainless steel AISI 316 tubular screen on which can be inserted a polyester filtraing mesh (PES) or fixed a stainless steel AISI 316 filtrating double screen (REPS). The filtration degree is from 25 to 2000 µm. The cartridge is cleaned by brushes mounted on a rotating shaft and moved by a 24Vcc electric motor. The filter is supplied and already wired with: automation group, valves and pressure gauges. For its best performance the TURBONET needs an inlet pressure of at least 0.5 bar, ensuring short times and low water consumption during the cleaning cycle. During this phase the outlet flux is automatically stopped.

	MODEL	IN/OUT [in-mm]	AREA [cm²]	QMAX* [m³/h]	AISI 304 Code	AISI 316 Code
	TUM Y 2"/10A	2"	1.500	40	FSTNYYME00001	FSTNYYME00008
	TUM Y 3"/10A	3"	1.500	80	FSTNYYME00002	FSTNYYME00009
	TUM Y 100/20	100	2.200	130	FSTNYYME00004	FSTNYYME00011
	TUM Y 100/35	100	3.300	140	FSTNYYME00005	FSTNYYME00012
	TUM Y 150/35	150	3.300	250	FSTNYYME00006	FSTNYYME00013
	TUM Y 150/40P	150	5.400	300	FSTNYYME00007	FSTNYYME00014

* Flow rates are referred to filters with filtrating mesh from 120 µm and water with temperature of 20 °C and NTU < 1.
Filters highlighted in red have special conditions of supply.

Included elements

FILTRATING CARTRIDGES	
Stainless steel AISI 316 support sceen, polyester filtrating mesh (PES) and double EPDM gaskets Filtration degrees availables: 25 - 53 - 80 - 120 - 200 - 400 - 580 - 810 µm	

Or

Stainless steel AISI 316 cartridge REPS double layer and double EPDM gaskets Filtration degrees available: 110 - 200 - 400 - 800 µm	

Or

Stainless steel AISI 316 screen and double EPDM gaskets Filtration degrees available: 1000 - 2000 µm	

REMARK: For a full list of components and filter options, refer to Technical Sheet of Turbonet.

AUTOMATION GROUP
Saticon 3M-TU filter controller Power 230V ac Differential pressure gauge Activation for preset times and Δp

General informations

MATERIALS	
Body	AISI 304 - 316
Cover	AISI 304 - 316
Screen support	AISI 316
Screen	PES / REPS
Gaskets	Epdm

CONNECTIONS		
DN	Type	
2"		BSP ANSI 150 - NPT Male threaded
3"		
100		ISO PN 16/10 Flanged
150		

APPLICATION LIMITS	
Filtration field	2.000÷25 µm
PN	10 bar
T	< + 60°C

Autojet

Automatic filter pressurized jets AISI 304 - AISI 316

AUTOJET is a self-cleaning screen filter with stainless steel body. The internal filtrating cartridge consists of an AISI 316 stainless steel tubular screen on which can be inserted a polyester filtrating mesh (PES) or a stainless steel AISI 316 filtering double screen (REPS). The filtration range is between 25 to 2000 µm. The cartridge is cleaned by pressurized nozzles (fed by clean water) which are fixed on a rotating shaft moved by a 24 Vcc electric motor. The filter is supplied and already wired with: automation group, valves and pressure gauges. For its best performance, AUTOJET needs the inlet pressure of at least 0.5 bars, ensuring short times and low water consumption during the cleaning cycles. During this phase the inlet and the outlet fluxes are automatically stopped.

	MODEL	IN/OUT [in-mm]	AREA [cm²]	QMAX* [m³/h]	AISI 304 Code	AISI 316 Code
 L	AJM L 2"/10A	2"	1.500	40	FSAJLLME00001	FSAJLLME00005
	AJM L 80/20	80	2.200	80	FSAJLLME00002	FSAJLLME00006
	AJM L 100/35	100	3.300	140	FSAJLLME00003	FSAJLLME00007
	AJM L 100/40P	100	5.400	150	FSAJLLME00004	FSAJLLME00008
 Y	AJM Y 2"/10A	2"	1.500	40	FSAJYYME00001	FSAJYYME00005
	AJM Y 80/20	80	2.200	80	FSAJYYME00002	FSAJYYME00006
	AJM Y 100/35	100	3.300	140	FSAJYYME00003	FSAJYYME00007
	AJM Y 100/40P	100	5.400	150	FSAJYYME00004	FSAJYYME00008

* Flow rates are referred to filters with filtrating mesh from 120 µm and water with temperature of 20 °C and NTU < 1.

Included elements

FILTRATING CARTRIDGES	
Stainless steel AISI 316 filtrating screen, polyester filtrating mesh (PES) and double EPDM gaskets Filtration degrees available: 25 - 53 - 80 - 120 - 200 - 400 - 580 - 810 µm	

Or

Stainless steel AISI 316 cartridge REPS double layer and double EPDM gaskets Filtration degrees available: 110 - 200 - 400 - 800 µm	

Or

Stainless steel AISI 316 screen and double EPDM gaskets Filtration degrees available: 1000 - 2000 µm	

REMARK: For a full list of components and filter options, refer to Technical Sheet of Brush.

AUTOMATION GROUP
Saticon 3T electronic filter controller Power 230Vac Differential pressure gauge Activation for preset times and Δp

The actuators of the pneumatic valves require compressed air (3-5 bar) with ajustable pressure regulator.

General informations

MATERIALS	
Body	AISI 304 - 316
Cover	AISI 304 - 316
Screen supp.	AISI 316
Screen	PES / REPS
Gaskets	Epdm

CONNECTIONS	
DN	Type
2"	 BSP ANSI 150 - NPT Male threaded
80	 ISO PN 16/10 Flanged
100	

APPLICATION LIMITS	
Filtration field	2.000÷25 µm
PN	10 bar
T	< + 60°C

Acquaspeed

Automatic filter pressurized jets AISI 304 - AISI 316

ACQUASPEED is a separator filter for little flow rates with automatic cleaning cycle and a stainless steel body. The internal filtrating cartridge consists of a stainless steel AISI 316 tubular screen on which can be inserted a polyester bag (PES) or fixed a stainless steel AISI 316 screen (REPS). The filtration degrees are between 25 to 400 µm. The cartridge is cleaned by pressurized jets formed by the inlet pressurization water through an exclusive system we developed and perfected The filter is provided and wired with: automation group, valves and pressure gauges. For its best performance, ACQUASPEED needs the inlet pressure of at least 3 bar, ensuring short times and low water consumption during the cleaning cycle. During this phase the outlet flux is stopped.

	MODEL	IN/OUT [in-mm]	AREA [cm²]	QMAX* [m³/h]	AISI 304 Code	AISI 316 Code
 L	AS F1 L 1"	1"	280	10	FSASLLAU00010	FSASLLAU00012
	AS F1 L 1"½	1" ½	280	15	FSASLLAU00011	FSASLLAU00013
	AS F2 L 2"	2"	530	40	FSASLLAU00014	FSASLLAU00015
 Y	AS F1 Y 1"	1"	280	10	FSASYYAU00009	FSASYYAU00011
	AS F1 Y 1"½	1" ½	280	15	FSASYYAU00010	FSASYYAU00012
	AS F2 Y 2"	2"	530	40	FSASYYAU00007	FSASYYAU00008

* Flow rates are referred to filters with filtrating mesh from 120 µm and water with temperature of 20 °C and NTU < 1.

Included elements

FILTRATING CARTRIDGES	
Stainless steel AISI 316 support screen, polyester filtrating mesh and NBR double o-ring Filtration degrees available: 25 - 53 - 80 - 120 - 200 - 400 µm	

Or

Stainless steel cartridge REPS double layer and NBR double o-ring Filtration degrees available: 55 - 110 µm	

REMARK: For a full list of components and filter options, refer to Technical Sheet of Acquaspeed.

AUTOMATION GROUP
Saticon LM200 electronic filter controller Electric power 12Vcc with power 230Vac / 12Vcc-1,2A includedor with battery case for 10 batteries AA type (batteries excluded) - Differential pressure gaugeActivation for preset times and Δp

General informations

MATERIALS	
Body	AISI 304 - 316
Cover	AISI 304 - 316
Screen supp.	AISI 316
Screen	PES / REPS
Gaskets	Epdm

CONNECTIONS	
DN	Type
1"	 BSP ANSI 150 - NPT Threaded
1" ½	
2"	

APPLICATION LIMITS	
Filtration field	400÷25 µm
PN	10 bar
T	< + 60°C

Rotor HP

Automatic filter with suction pads AISI 304 - AISI 316



ROTOR HP is a self-cleaning screen filter with stainless steel body suited to extreme employment's conditions. The "sandwich" type internal cartridge consists of a polyester or stainless steel AISI 316 filtrating mesh closed between two stainless steel AISI 316 tubular screen. The filtration range is between 25 to 810 µm and the cartridge is cleaned by a series of suction pads on a rotating shaft which is moved by a 24 Vcc electric motor. The filter is supplied and already wired with: automation group, valves and pressure gauges. For the best performance the ROTOR HP filter needs an inlet pressure of at least 3 bars that assure brief times and low water consumption during the cleaning cycle. Cleaning cycle take over without flow interruption, allowing continuity on the filtration process.

	MODEL	IN/OUT [in-mm]	AREA [cm²]	QMAX* [m³/h]	AISI 304 Code	AISI 316 Code
L 	ROM HP L 2"/10A	2"	1.500	40	FSRTLLME00030	FSRTLLME00050
	ROM HP L 3"/10A	3"	1.500	80	FSRTLLME00031	FSRTLLME00051
	ROM HP L 80/10A	80	1.500	80	FSRTLLME00032	FSRTLLME00052
	ROM HP L 100/10A	100	1.500	100	FSRTLLME00033	FSRTLLME00053
	ROM HP L 3"/20	3"	2.200	80	FSRTLLME00034	FSRTLLME00054
	ROM HP L 80/20	80	2.200	80	FSRTLLME00035	FSRTLLME00055
	ROM HP L 100/20	100	2.200	130	FSRTLLME00036	FSRTLLME00056
	ROM HP L 100/35	100	3.300	140	FSRTLLME00037	FSRTLLME00057
	ROM HP L 150/35	150	3.300	250	FSRTLLME00038	FSRTLLME00058
	ROM HP L 100/40P	100	5.400	150	FSRTLLME00039	FSRTLLME00059
	ROM HP L 150/40P	150	5.400	300	FSRTLLME00040	FSRTLLME00060
	ROM HP L 200/40P	200	5.400	400	FSRTLLME00041	FSRTLLME00061
	ROM HP L 300/100	300	10.000	800	FSRTLLME00068	FSRTLLME00069
O 	ROM HP O 2"/10A	2"	1.500	40	FSRTOOME00030	FSRTOOME00050
	ROM HP O 3"/10A	3"	1.500	80	FSRTOOME00031	FSRTOOME00051
	ROM HP O 80/10A	80	1.500	80	FSRTOOME00032	FSRTOOME00052
	ROM HP O 100/10A	100	1.500	100	FSRTOOME00033	FSRTOOME00053
	ROM HP O 3"/20	3"	2.200	80	FSRTOOME00034	FSRTOOME00054
	ROM HP O 80/20	80	2.200	80	FSRTOOME00035	FSRTOOME00055
	ROM HP O 100/20	100	2.200	130	FSRTOOME00036	FSRTOOME00056
	ROM HP O 100/35	100	3.300	140	FSRTOOME00037	FSRTOOME00057
	ROM HP O 150/35	150	3.300	250	FSRTOOME00038	FSRTOOME00058
	ROM HP O 100/40P	100	5.400	150	FSRTOOME00039	FSRTOOME00059
	ROM HP O 150/40P	150	5.400	300	FSRTOOME00040	FSRTOOME00060
	ROM HP O 200/40P	200	5.400	400	FSRTOOME00041	FSRTOOME00061
	ROM HP O 300/100	300	10.000	800	FSRTOOME00068	FSRTOOME00069

	MODEL	IN/OUT [in-mm]	AREA [cm²]	QMAX* [m³/h]	AISI 304 Code	AISI 316 Code
Y 	ROM HP Y 2"/10A	2"	1.500	40	FSRTYYME00021	FSRTYYME00050
	ROM HP Y 3"/10A	3"	1.500	80	FSRTYYME00022	FSRTYYME00051
	ROM HP Y 80/10A	80	1.500	80	FSRTYYME00023	FSRTYYME00052
	ROM HP Y 100/10A	100	1.500	100	FSRTYYME00024	FSRTYYME00053
	ROM HP Y 3"/20	80	2.200	80	FSRTYYME00025	FSRTYYME00054
	ROM HP Y 80/20	80	2.200	80	FSRTYYME00026	FSRTYYME00055
	ROM HP Y 100/20	100	2.200	130	FSRTYYME00027	FSRTYYME00056
	ROM HP Y 100/35	100	3.300	140	FSRTYYME00028	FSRTYYME00057
	ROM HP Y 150/35	150	3.300	250	FSRTYYME00029	FSRTYYME00058
	ROM HP Y 100/40P	100	5.400	150	FSRTYYME00030	FSRTYYME00059
	ROM HP Y 150/40P	150	5.400	300	FSRTYYME00031	FSRTYYME00060

* Flow rates are referred to filters with filtrating mesh from 120µm and with clean water.
Filters highlighted in red have special conditions of supply.

Included elements

FILTRATING CARTRIDGES	
Sandwich cartridge with stainless steel AISI 316 support sceen, polyester inner mesh (PES) and double EPDM gaskets Filtration degrees availables: 25 - 53 - 80 - 120 - 200 - 400 - 580 - 810 µm	

Or

Stainless steel REPS cartridge triple layer and double EPDM gaskets Filtration degrees availables: 120 - 200 µm	
Only for model 300/100:Cartridge Kit FITO Filtration degree available: 500 µm	

Only for horizontal constructive shape (O):

Stainless steel AISI 316 pre filter screen Filtration degrees: 3 - 5 mm	

REMARK: For a full list of components and filter options, refer to Technical Sheet of Rotor HP.

AUTOMATION GROUP
Saticon 3M-ROM HP electrical filter controller Power 230V ac Differential pressure gauge Activation for preset times and Δp

The actuators of the pneumatic valves require compressed air (3-5 bar) with ajustable pressure regulator.

General informations

MATERIALS	
Body	AISI 304 - 316
Cover	AISI 304 - 316
Screen supp.	AISI 316
Screen	PES / REPS
Gaskets	Epdm

CONNECTIONS	
DN	Type
2"	 BSP ANSI 150 - NPT Male threaded
3"	
80	 ISO PN 16/10 Flanged
100	
150	
200	
300	

APPLICATION LIMITS	
Filtration field	810÷25 µm
PN	10 bar
T	< + 80°C

VTO

Automatic filter with suction nozzles AISI 304 - AISI 316



VTO is a self-cleaning screen filter with stainless steel body. The "sandwich" type internal cartridge consists of a polyester or stainless steel AISI 316 filtrating mesh closed between two stainless steel AISI 316 tubular screen. The filtration range is between 25 to 810 µm. The cartridge is cleaned by a series of suction nozzles mounted on a rotating shaft device which is moved by a 24 Vcc electric motor. The filter is supplied and already wired with: automation group, valves and pressure gauges. For its best performance the VTO needs an inlet pressure of at least 3 bars, ensuring short times and low water consumption during the cleaning cycle. During this phase the filer continues to produce permeate.

General informations

MATERIALS	
Body	AISI 304 - 316
Cover	AISI 304 - 316
Screen support	AISI 316
Screen	PES / REPS
Gaskets	Epdm

CONNECTIONS	
DN	Type
2"	 BSP ANSI 150 - NPT Male threaded
3"	
100	 ISO PN 16/10 Flanged
150	

APPLICATION LIMITS	
Filtration field	810÷25 µm
PN	10 bar
T	< + 60°C

	MODEL	IN/OUT [in-mm]	AREA [cm²]	QMAX* [m³/h]	AISI 304 Code	AISI 316 Code
	VTOM L 2"/10A	2"	1.500	40	FSVTLLME00001	FSVTLLME00010
	VTOM L 3"/10A	3"	1.500	80	FSVTLLME00002	FSVTLLME00011
	VTOM L 100/10A	100	1.500	100	FSVTLLME00003	FSVTLLME00012
	VTOM L 100/20	100	2.200	130	FSVTLLME00005	FSVTLLME00014
	VTOM L 100/35	100	3.300	140	FSVTLLME00006	FSVTLLME00015
	VTOM L 150/35	150	3.300	250	FSVTLLME00007	FSVTLLME00016
	VTOM L 150/40P	150	5.400	300	FSVTLLME00008	FSVTLLME00017
	VTOM O 2"/10A	2"	1.500	40	FSVTOOME00001	FSVTOOME00011
	VTOM O 3"/10A	3"	1.500	80	FSVTOOME00002	FSVTOOME00012
	VTOM O 100/10A	100	1.500	100	FSVTOOME00003	FSVTOOME00013
	VTOM O 3"/20	3"	2.200	80	FSVTOOME00004	FSVTOOME00014
	VTOM O 100/20	100	2.200	130	FSVTOOME00005	FSVTOOME00015
	VTOM O 100/35	100	3.300	140	FSVTOOME00006	FSVTOOME00016
	VTOM O 150/35	150	3.300	250	FSVTOOME00007	FSVTOOME00017
	VTOM O 150/40P	150	5.400	300	FSVTOOME00008	FSVTOOME00018
	VTOM O 200/40P	200	5.400	400	FSVTOOME00009	FSVTOOME00019
	VTOM O 200/50	200	6.800	450	FSVTOOME00010	FSVTOOME00020
	VTOM Y 2"/10A	2"	1.500	40	FSVTYYME00001	FSVTYYME00009
	VTOM Y 3"/10A	3"	1.500	80	FSVTYYME00002	FSVTYYME00010
	VTOM Y 100/20	100	2.200	130	FSVTYYME00005	FSVTYYME00013
	VTOM Y 100/35	100	3.300	140	FSVTYYME00006	FSVTYYME00014
	VTOM Y 150/35	150	3.300	250	FSVTYYME00007	FSVTYYME00015
	VTOM Y 150/40P	150	5.400	300	FSVTYYME00008	FSVTYYME00016

* Flow rates are referred to filters with filtrating mesh from 120 µm and water with temperature of 20 °C and NTU < 1.
Filters highlighted in red have special conditions of supply.

Included elements

FILTRATING CARTRIDGES	
Sandwich cartridge with stainless steel AISI 316 support sceen, polyester inner mesh (PES) and double EPDM gaskets Filtration degrees availables: 25 - 53 - 80 - 120 - 200 - 400 - 810 µm	

Or

Stainless steel AISI 316 REPS cartridge triple layer and double EPDM gaskets Filtration degrees on request: 120 - 200 µm	

Only for horizontal constructive shape (O):

Stainless steel AISI 316 pre filter screen Filtration degrees: 3 mm	

REMARK: For a full list of components and filter options, refer to Technical Sheet of VTO.

AUTOMATION GROUP
Saticon 3M-VTM filter conroller Power 230V ac Differential pressure gauge Activation for pre set times and Δp

Big matic

Automatic filter pressurized jets AISI 316

BIG MATIC is a self-cleaning filter with stainless steel body and with BM filter cartridges which can be superimposed up to number of five inside a single "vassel". Filtration degree of BM cartridges are from 1 to 32 µm and during the cleaning cycle BM cartridges rotate and are cleaned by pressurized nozzles which are powered by clean water at 5-7 bar, from an external pressure tube. The filter is supplied and already wired with: automation group, pneumatic valves, electrical motor 24 Vcc with mechanical reducer, filter BM cartridges, manifolds and drain valve support frame. According to the needs of the flow rate it's possible to compose batteries combining more "vessels". For the best performance, BIG MATIC needs the inlet pressure of at least 1 bar, that guarantee time reduce and lower water consumption during the cleaning cycle. In this phase the inlet and outlet flux is automatically closed.

	MODEL	IN/OUT [in-mm]	DRAIN [in-mm]	CW [in-mm]	BM cartridges n.	AREA [cm²]	AISI 316 Code
	BM 110	80	80	1" ½	1	10.000	BT01F000011
	BM 120	80	80	1" ½	2	20.000	BT01F000012
	BM 130	80	80	1" ½	3	30.000	BT01F000013
	BM 140	80	80	1" ½	4	40.000	BT01F000014
	BM 150	80	80	1" ½	5	50.000	BT01F000015
	BM 210	4"	4"	2"	2	20.000	BT02F000011
	BM 220	4"	4"	2"	4	40.000	BT02F000012
	BM 230	6"	6"	2"	6	60.000	BT02F000013
	BM 240	6"	6"	2"	8	80.000	BT02F000014
	BM 250	6"	6"	2"	10	100.000	BT02F000015
	BM 310	4"	4"	2"	3	30.000	BT03F000011
	BM 320	4"	6"	2"	6	60.000	BT03F000012
	BM 330	6"	6"	2"	9	90.000	BT03F000013
	BM 340	6"	6"	2"	12	120.000	BT03F000014
	BM 350	8"	8"	2"	15	150.000	BT03F000015
	BM 410	4"	4"	2"	4	40.000	BT04F000011
	BM 420	6"	6"	2"	8	80.000	BT04F000012
	BM 430	6"	6"	2"	12	120.000	BT04F000013
	BM 440	8"	8"	2"	16	160.000	BT04F000014
	BM 450	8"	8"	2"	20	200.000	BT04F000015

REMARK: For informations related to maximum flow rates for each filtrating cartridge, refer to Technical Sheet of Big Matic.

Included elements

FILTRATING CARTRIDGES	
Polyester BM cartridge Firtration area: 10.000 cm² Filtration degrees available: 5 - 12 - 32 µm	
PTFE BM cartridge Filtration area: 10.000 cm² Filtration degrees available: 1 µm	

REMARK: For a full list of components and filter options, refer to Technical Sheet of Big Matic.

AUTOMATION GROUP
Automation electro pneumatic groupSaticon BM controller Power 230V ac Differential pressure gauge - Activation preset times and Δp Compressed air connection (3-5 bar) with adjustable pressure reducer

General informations

MATERIALS	
Body	AISI 316
Cover	AISI 316
Screen supp.	PP
Screen	Poyester / PTFE
Gaskets	Epdm

CONNECTIONS	
DN	Type
1" ½	 Victaulic
2"	
4"	
6"	
8"	
DN 80	 ISO PN 16/10 Threaded

APPLICATION LIMITS	
Filtration field	32÷1 µm
PN	6 bar
T	< + 60°C

Big matic modules

Automatic filter pressurized jets AISI 316

BIG MATIC Modules is self-cleaning filter with stainless steel body and with BM filtrating cartridges which can be superimposed up to number of five inside a single "vessel". Filtration degree of BM cartridges are from 1 to 32 µm and during the cleaning cycle BM cartridges rotate and are cleaned by pressurized nozzles which are powered by clean water at 5-7 bar, from an external pressure tube. The filter is supplied and already wired with: cleaning group, electrical motor 24 Vcc with mechanical reducer, filtrating BM cartridges and drain valve. According to the needs of the flow rate it's possible to compose batteries combining more "vessels". For the best performance, BIG MATIC Modules needs the inlet pressure of at least 1 bar, that guarantee time reduce and lower water consumption during the cleaning cycle. In this phase the inlet and outlet flux is automatically closed.

	MODEL	IN/OUT [in-mm]	AREA [cm²]	CW [in-mm]	BM cartridges n.	AREA [cm²]	AISI 316 Code
	BM 10	3"	10.000	1" ½	1	10.000	FSBMVVME00001
	BM 20	3"	20.000	1" ½	2	20.000	FSBMVVME00002
	BM 30	3"	30.000	1" ½	3	30.000	FSBMVVME00003
	BM 40	3"	40.000	1" ½	4	40.000	FSBMVVME00004
	BM 50	3"	50.000	1" ½	5	50.000	FSBMVVME00005

REMARK: For informations related to maximum flow rates for each filtrating cartridge, refer to Technical Sheet of Big Matic Modules.

Included elements

FILTRATING CARTRIDGES	
Polyester BM cartridge Filtration area: 10.000 cm² Filtration degrees available: 5 - 12 - 32 µm	
PTFE BM cartridge Filtration area: 10.000 cm² Filtration degrees available: 1 - 3 µm	

REMARK: For a full list of components and filter options, refer to Technical Sheet of Big Matic Modules.

General informations

MATERIALS	
Body	AISI 316
Cover	AISI 316
Screen supp.	PP
Screen	Poyester / PTFE
Gaskets	Epdm

CONNECTIONS	
DN	Type
1" ½	 Victaulic
3"	

APPLICATION LIMITS	
Filtration field	32÷1 µm
PN	6 bar
T	< + 60°C

Totem rotor

Automatic filter with suction pads AISI 304 - AISI 316

TOTEM ROTOR is a self-cleaning screen filter with stainless steel multi-body, suited to extreme employment's conditions. The "sandwich" type internal cartridges (two or three) consist of a polyester or stainless steel AISI 316 filtrating mesh closed between two stainless steel AISI 316 tubular screen. The filtration range is between 25 to 810 µm and the cartridge is cleaned by a series of suction pads on a rotating shaft which is moved by a 24 Vcc electric motor. The filter is supplied and already wired with: automation group, controller, valves and pressure gauges. For the best performance the TOTEM ROTOR filter needs an inlet pressure of at least 3,5 bars that assure brief times and low water consumption during the cleaning cycle. Cleaning cycle take over without flow interruption, allowing continuity on the filtration process.

	MODEL	IN/OUT [mm]	DRAIN [in-mm]	AREA [cm²]	QMAX* [m³/h]
	TOTEM ROM 2O 250/40P	250	1" ½	10.800	800
	TOTEM ROM HP 2O 250/40P	250	50	10.800	800
	TOTEM ROM 3O 400/40P	400	1" ½	16.200	1300
	TOTEM ROM HP 3O 400/40P	400	50	16.200	1300

* Flow rates are referred to filters with filtrating mesh from 120 µm and water with temperature of 20 °C and NTU < 1.
Filters highlighted in red have special conditions of supply.

Included elements

FILTRATING CARTRIDGES	
Sandwich cartridge with stainless steel AISI 316 support sceen, polyester inner mesh (PES) and double EPDM gaskets Filtration degrees availables: 25 - 53 - 80 - 120 - 200 - 400 - 580 - 810 µm	

Or

Stainless steel AISI 316 REPS cartridge triple layerand double EPDM gaskets Filtration degrees availables: 120 - 200 µm	

And:

Stainless steel AISI 316 pre filter screenFiltration degrees: 3 mm	

AUTOMATION GROUP
Saticon 3M-ROM controller Power 230V ac Differential pressure gauge Activation for preset times and Δp

In ROM HP models: The actuators of the pneumatic valves require compressed air (3-5 bar) with ajustable pressure regulator.

General informations

MATERIALS	
Body	AISI 304 - 316
Cover	AISI 304 - 316
Screen support	AISI 316
Screen	PES / REPS
Gaskets	Epdm

CONNECTIONS	
DN	Type
250	 ISO PN 16/10 Flanged
400	

APPLICATION LIMITS	
Filtration field	810÷25 µm
PN	10 bar
T	< + 60°C

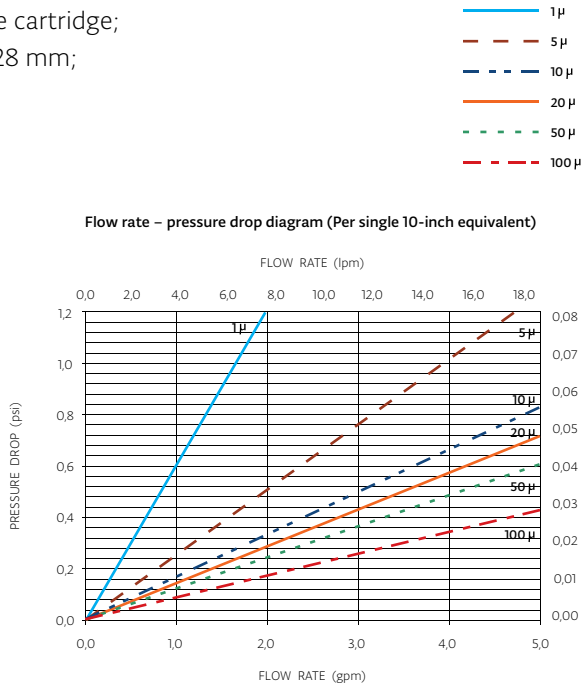
Filtration cartridges

PP string wound

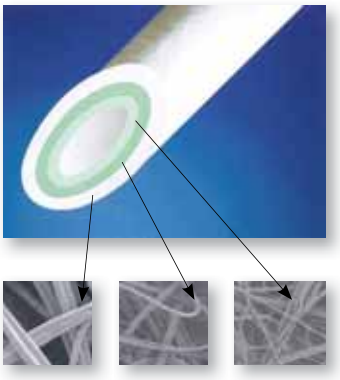
- string wound filtering cartridges with core;
- string and core in polypropylene;
- double/triple retention capacity than a compact structure cartridge;
- dimensions external diameter 60 mm, internal diameter 28 mm;
- length 9 7/8" or 20";
- suggested filtering flow rate for 10" length: 18÷24 lpm;
- max filtering flow rate for 40" length : 60 lpm;
- max ΔP recommended 1 bar;
- max operating temperature = 60°C.

REF.	MODEL	LENGTH (inch)	MICRON
201100	DLSW-10-01	9 7/8"	1
201101	DLSW-10-05	9 7/8"	5
201102	DLSW-10-10	9 7/8"	10
201103	DLSW-10-20	9 7/8"	20
201104	DLSW-10-50	9 7/8"	50
201105	DLSW-10-100	9 7/8"	100
201106	DLSW-20-01	20"	1
201107	DLSW-20-05	20"	5
201108	DLSW-20-10	20"	10
201109	DLSW-20-20	20"	20
201110	DLSW-20-50	20"	50
201111	DLSW-20-100	20"	100

Flow rate – pressure drop diagram (Per single 10-inch equivalent)

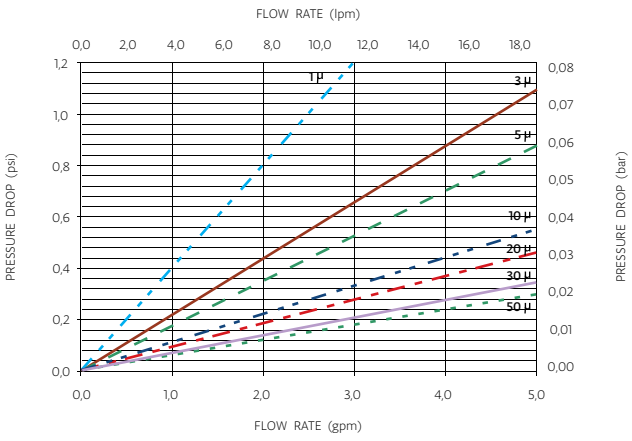


Melt blown filtering cartridges



- thermowelded polypropylene fibers cartridges with no lubricants or antistatic additives;
- any migration into the filtered water;
- wide chemical compatibility;
- high retention capacity & filtration efficiency multilayer structure;
- filtration efficiency 96 % minimum;
- high retention capacity extends cartridge life;
- external diameter 63 mm, internal 28 mm;
- length: 9 7/8" – 20" – 30" – 40".
- suggested filtration flow rate for 10" length: 15 ÷ 20 lpm;
- max filtration flow rate for 40" length: 60 lpm;
- max ΔP recommended 1,4 bar;
- max operating temperature = 80°C.

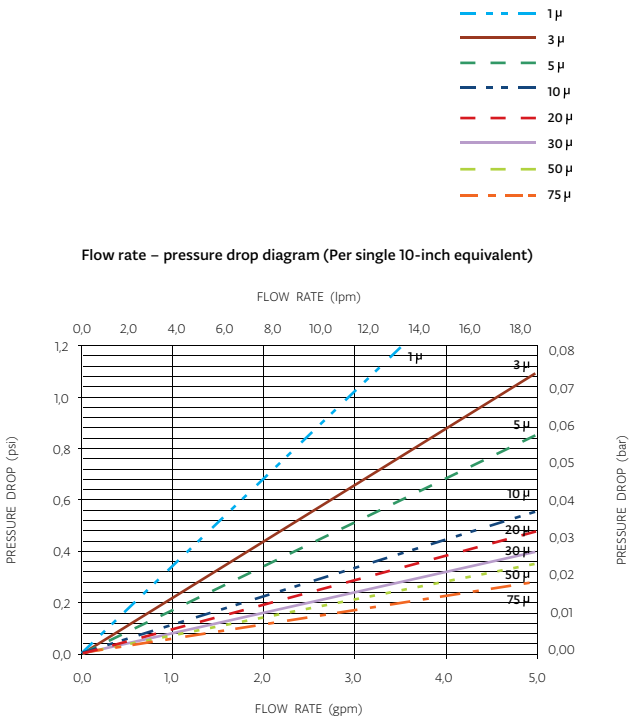
Flow rate – pressure drop diagram (Per single 10-inch equivalent)



REF.	MODEL	LENGTH (inch)	MICRON
201120	DLPP-01-10	9 7/8"	1
201121	DLPP-05-10	9 7/8"	5
201122	DLPP-10-10	9 7/8"	10
201123	DLPP-20-10	9 7/8"	20
201124	DLPP-30-10	9 7/8"	30
201125	DLPP-50-10	9 7/8"	50
201126	DLPP-01-20	20"	1
201127	DLPP-05-20	20"	5
201128	DLPP-10-20	20"	10
201129	DLPP-20-20	20"	20
201130	DLPP-30-20	20"	30
201131	DLPP-50-20	20"	50
201133	DLPP-01-30	30"	1
201134	DLPP-05-30	30"	5
201135	DLPP-10-30	30"	10
201136	DLPP-20-30	30"	20
201137	DLPP-30-30	30"	30
201138	DLPP-50-30	30"	50
201139	DLPP-01-40	40"	1
201140	DLPP-05-40	40"	5
201141	DLPP-10-40	40"	10
201142	DLPP-20-40	40"	20
201143	DLPP-30-40	40"	30
201144	DLPP-50-40	40"	50

Purtrex filtering cartridges

- in melt-blown polypropylene fibers;
- any microfibers migration in filtered water;
- FDA materials compliant;
- graduated density from external to internal side improves filter efficiency;
- high retention capacity extends cartridge life;
- external diameter 63 mm, internal 27 mm;
- length 9 7/8" – 20" – 30" – 40".
- suggested filtration flow rate for 10" length: 15 ÷ 20 lpm;
- max filtration flow rate for 40" length: 60 lpm;
- max operating temperature = 80°C.



REF.	MODEL	LENGTH (inch)	MICRON
201170	PX 01 – 9 7/8"	9 7/8"	1
201171	PX 03 – 9 7/8"	9 7/8"	3
201172	PX 05 – 9 7/8"	9 7/8"	5
201173	PX 10 – 9 7/8"	9 7/8"	10
201174	PX 20 – 9 7/8"	9 7/8"	20
201175	PX 30 – 9 7/8"	9 7/8"	30
201176	PX 50 – 9 7/8"	9 7/8"	50
201177	PX 75 – 9 7/8"	9 7/8"	75
201178	PX 01 – 20"	20"	1
201179	PX 03 – 20"	20"	3
201180	PX 05 – 20"	20"	5
201181	PX 10 – 20"	20"	10
201182	PX 20 – 20"	20"	20
201183	PX 30 – 20"	20"	30
201184	PX 50 – 20"	20"	50
201185	PX 01 – 30"	30"	1
201186	PX 03 – 30"	30"	3
201187	PX 05 – 30"	30"	5
201188	PX 10 – 30"	30"	10
201189	PX 20 – 30"	30"	20
201190	PX 30 – 30"	30"	30
201191	PX 50 – 30"	30"	50
201192	PX 01 – 40"	40"	1
201193	PX 03 – 40"	40"	3
201194	PX 05 – 40"	40"	5
201195	PX 10 – 40"	40"	10
201196	PX 20 – 40"	40"	20
201197	PX 30 – 40"	40"	30
201198	PX 50 – 40"	40"	50

Empty cartridges

- plastic empty cartridge;
- useful to fill with polyphosphate crystals – activated carbon - resins.

REF.	LENGTH (inch)	VOLUME (litres)	COLOUR
201260	9 ¾"	0,6	TRANSPARENT
201261	20"	1,2	TRANSPARENT

PP melt blown 5" filtering cartridge

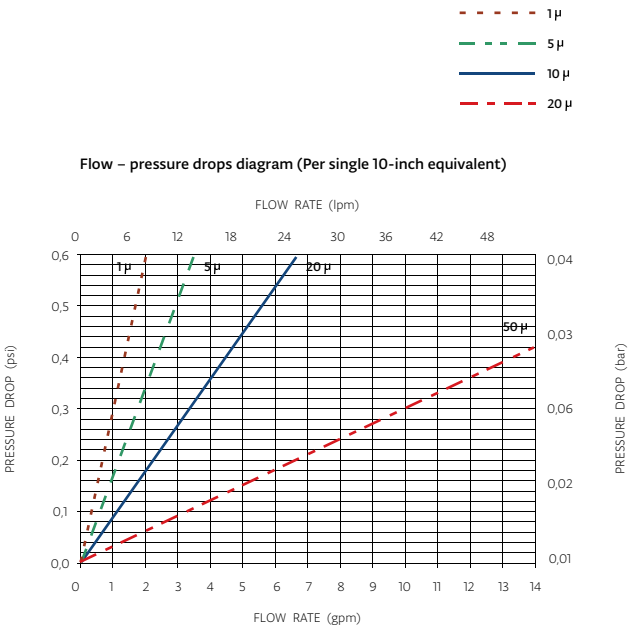
- melt blown polypropylene fibers cartridge;
- dimensions external diameter 64 mm, internal 25 mm.

REF.	MODEL	LENGTH (inch)	MICRON
201265	PP SED 05	5"	5

PP big sediment filter cartridges

- melt-blown polypropylene fibers;
- dimensions 114 mm external diameter;
- dimensions 28 mm internal diameter.

REF.	MODEL	LENGTH (inch)	MICRON
201150	10 BIG SED 01	10"	1
201151	10 BIG SED 05	10"	5
201152	10 BIG SED 20	10"	20
201153	10 BIG SED 50	10"	50
201154	20 BIG SED 01	20"	1
201155	20 BIG SED 05	20"	5
201159	20 BIG SED 20	20"	20
201160	20 BIG SED 50	20"	50



Activated carbon filtering cartridges

Carbon block

- Two types of extruded activated carbon Bituminous origin and Coconut shell vegetable origin:
- Bituminous carbon block is recommended for pre-filtration applications and for Chlorine removal;
- Coconut shell carbon block is recommended for all applications, particularly for post-filtration, for reduction of volatile organic compounds (VOC's) and for taste and odour reduction.
- Dimensions:
- external diameter = 64 mm (2 ½");
- internal diameter = 25 mm (1");
- end-cap diameter = 71 mm.

Big carbon block

- Bituminous carbon block.
- Suitable for pre-filtration applications and for Chlorine removal.
- Dimensions:
- external diameter = 108 mm (4 ¼");
- internal diameter = 25 mm (1");
- end-cap diameter = 113 mm.

REF.	MODEL	LENGTH (inch)	MICRON	SUGGESTED FLOW RATE (l/h)	EXTRUDED ACTIVATED CARBON	CAP
201200	CBC 5"	5"	10	120	Bituminous	White
201201	EB-CB 9 7/8"	9 7/8"	10	240	Bituminous	White
201202	ECS-CB 9 7/8"	9 7/8"	10	240	Coconut shell	Blue
201203	CBC 20"	20"	10	480	Bituminous	White

REF.	MODEL	LENGTH (inch)	MICRON	SUGGESTED FLOW RATE (l/h)
201204	CBC 10 BIG	10"	5	800
201205	CBC 20 BIG	20"	5	1600

Activated carbon filtering cartridges

Wound PP & activated carbon

- wound polypropylene cartridge with granular activated carbon inside;
- external diameter 64 mm, internal 27 mm;
- length 9 7/8".

Granular activated carbon

- PE container cartridge empty or with granular activated carbon;
- external diameter 72 mm, length 9 7/8".

REF.	MODEL	DESCRIPTION
201210	GAC 10 N	WITH ACTIVATED CARBON
201211	10 N	EMPTY

Nylon filtering cartridges

- washable;
- filtration degree 60 micron;
- dimensions external diameter 62 mm, internal 27 mm.

REF.	MODEL	LENGTH (inch)
201215	NL 60 - 9	9 ¾"
201216	NL 60 – 20	20"

Special nylon filtering cartridges for OTS housings

- washable;
- to fit into OTS brass head housings 1 ¼" – 1 ½" – 2" models;
- filtration degree 60 micron;
- with 222 O-rings;
- max ΔP recommended 1,4 bar.

REF.	LENGTH (inch)	FLOW @ Dp=0,2 bar (l/h)
201218	10"	1800
201220	20"	3600

AISI 304 filtering cartridges

REF. 201222

REF. 201224

- washable;
- filtration degree 50 micron;
- length 9 ¾" ;
- you can fit them into hot water filter housings.

REF.	MODEL
201222	SMOOTH
201224	PLEATED

AISI 304 cartridges for OTC 12 housings

- washable;
- to install with washable cartridge filters OTC 12 on catalogue.

REF.	FILTRATION DEGREE (micron)	MATERIAL
201230	60	NYLON
201231	60	AISI 304
201232	100	AISI 304
201233	200	AISI 304
201234	300	AISI 304

AISI 304 cartridges for OTC 34-1-114 housings

- washable;
- to install with washable cartridge filters OTC 34 – 1 - 114 on catalogue and with hot water filters, except for nylon filtering cartridge.

REF.	FILTRATION DEGREE (micron)	MATERIAL
201235	60	NYLON
201236	25	AISI 304
201237	60	AISI 304
201238	100	AISI 304
201239	200	AISI 304
201240	300	AISI 304

AISI 304 cartridges for OTC 112-2 housings

- washable;
- to install with washable cartridge filters OTC 112 - 2 on catalogue.

REF.	FILTRATION DEGREE (micron)	MATERIAL
201245	60	AISI 304
201246	100	AISI 304
201247	200	AISI 304
201248	300	AISI 304

Nylon reinforced filtering cartridge

- washable cartridge with PP reinforcement, nylon mesh and closing ring;
- filtration degree 60 micron;
- dimensions external diameter 62 mm, internal 27 mm, length 9 ¾";
- nylon mesh spare.

REF.	MODEL	MICRON	DIMENSION
201254	NYLON – 9	60	9 ¾"

Wound polypropylene with AISI 316 core for hot water filters

- filtration degree 20 micron;
- length 9 ¾";
- max operating temperature 80°C.

REF.	MODEL	MICRON
201250	PAX 05 – 9 ¾	5
201251	PAX 10 – 9 ¾	10
201252	PAX 20 – 9 ¾	20
201253	PAX 50 – 9 ¾	50

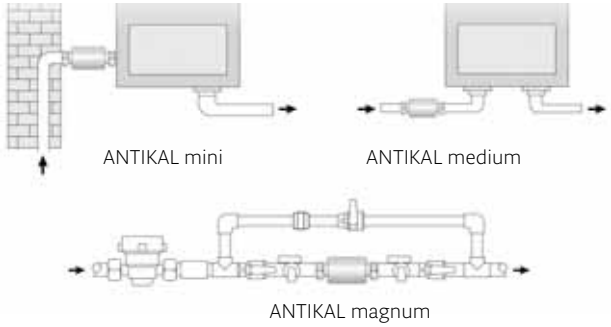
Magnetic scale reducers

• **Antikal**
MINI/MEDIUM/MAGNUM

The water used in water systems contains a certain dissolved amount of calcium and magnesium salts making up the hardness. When water is heated, the hardness reacts and forms calcium carbonate and magnesium (scale) and carbon dioxide. Calcium carbonate precipitates, forming scale deposits on systems and heat exchangers, while carbon dioxide causes corrosive effects inside the system. It is therefore necessary, especially in small domestic systems, to treat water with anti scale anti corrosion units which do not require maintenance or checks by skilled personnel. ANTIKAL magnetic scale reducers are suitable for the treatment of water for potable use.
All equipment in contact with drinking water is manufactured with top quality materials.

Antikal

Magnetic scale reducers for boilers and heat exchangers



Antikal units are scale reducers with permanent magnets preventing scale deposits on systems. Antikal units are available in three different models:

- Antikal mini, suitable for installation before wall boilers and small heat exchangers.
- Antikal medium, suitable for installation on boilers, water heaters, washing machines and dishwashers.
- Antikal magnum, suitable for installation before water systems, storage water heaters and large heat exchangers.

REF.	ITEM	PACK.	CONNECT	MAX PRESSURE	FLOW RATE (ΔP = 0,2 bar)	MAX MAGNETIC INDUCTION	DIMENS. (ØXZ)
		pcs.	F	bar	l/h	Gauss	mm
202180	ANTIKAL MINI	12	½" - ½"	10	2500	1900	42 x 57
202185	ANTIKAL MEDIUM	12	¾" - ¾"	10	2500	1950	42 x 81
202190	ANTIKAL MAGNUM	6	1" - 1"	10	7600	2400	55 x 118,5

Water temperature: 5-90 °C; Room temperature: 5-50 °C

Water softners

- COMPACT UNITS – SOFT/VAK
- SIMPLEX UNITS – SOFT/VAS
- DUPLEX UNITS – SOFT/VAD
- XL UNITS
- AMBERSOFT UNITS – SOFT/AS

Calcium and Magnesium salts cause water hardness, which is the main reason of scale and damages to water systems, water heaters, boilers, household electrical appliances, taps and fittings. If water hardness is higher than 15° dH, it is recommended to install an ion exchange water softener. It is important to install a water softener as it solves the problem of scale as well as reduces the energy cost and the use of detergents, makes skin moisturized and clothes clean.

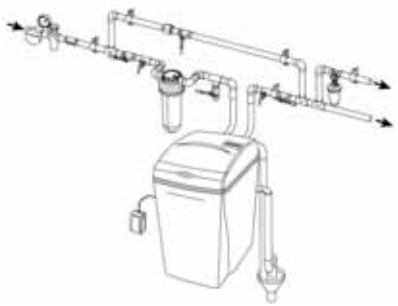
CWG water softeners are:

- compact in design and small in sizes
- efficient in reducing hardness and washing resins, with low consumptions
- fitted with electronic timer to control regeneration automatically by time, pure volume or volume/time.

All equipment in contact with drinking water is manufactured with top quality materials.

CWG_SOFT/VAK

Ion exchange compact water softners



CWG_SOFT/VAK contains an electronic demand valve which can be programmed to start the regeneration on a defined time when capacity softeneris exhausted. During regeneration, valve withdraws saturated solutionof sodium chloride to exchange Ca and Mg ion with Sodium.These Ca and Mg ions are led towards valve drain port andthen some rinsing are executed until sodium chlorideexcess is removed from the resin bed. Your water willnot be softened during this period.
Water meter gives on time information on water usage to the electronic controller. When system capacity is exhausted, controller starts regeneration. Capacity at start up is linked to softener size (SOFT/VAK 4 , 10 , 15 or 25) and inlet mains water hardness. Displays alternates between time of the day and remaining capacity.
CWG_SOFT/VAK water softener can be located in very narrow spots: kitchen furniture, under the sink....This comes from this innovate design with optimized ergonomics and sliding salt lid. Professional assembly combined with a robust packaging insure you to receive a "ready to install" device.

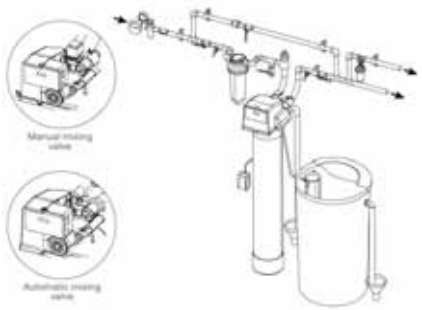
The compact cabinets are available in four sizes and contain the resin tank, salt tank and enclosed softener valve. Also, easy set up programming allows the consumer to input exact water condition information for best results.

- All pressure tanks are 100% rustproof and corrosion resistant
- Memory backup for regeneration
- Easy to set controls
- 10 Year resin tank warranty
- Low salt setting available
- Regnerated on demand

ITEM	FLOW m^3/h	IN / OUT	RESIN VOLUME	DIMENSION (mm)
CWG_SOFT/VAK 4	300 L	1" / DN 25	4	400 x 240 x 520
CWG_SOFT/VAK 10	500 L	1" / DN 25	10	440 x 310 x 670
CWG_SOFT/VAK 15	1000 L	1" / DN 25	15	560 x 320 x 1200
CWG_SOFT/VAK 25	2000 L	1" / DN 25	25	560 x 320 x 1200

CWG_SOFT/VAS

Simplex system



Simplex Water Softeners are best suited to applications where there is a steady demand for moderate capacities of softened water over the course of a normal working day. Regeneration, during which time no supply to service is available, is then programmed to occur at a time when there is no demand (typically during the night). For this reason, Simplex Water Softeners are normally sized to give at least one days supply of softened water output before regeneration.

The initiation of the regeneration cycle can however also be controlled by water quality or volume produced (i.e. when the service water drops below a pre designated set point, be that ppm of hardness or m3 produced, regeneration will commence); this may be of benefit where treated water storage tanks are available to hold sufficient capacity to manage usage whilst the unit is temporarily out of service.

Typical applications for this style of water softener would be for

- Laundry facilities
- Commercial Glass & Dishwashing installations
- Low usage boiler feed

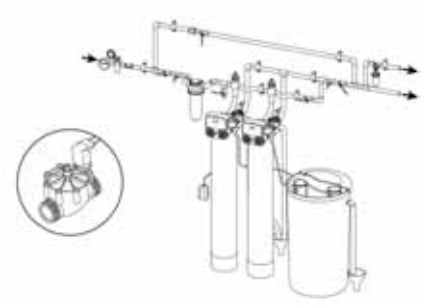
Water Softeners are generally very reliable pieces of equipment however a small degree of regular attention is required to ensure that they continue to give good service over a long period.

ITEM	FLOW	CONNECTIONS				DIMENSIONS
	m^3/h	IN	OUT	DRAIN	POWER	mm
CWG_SOFT_VAS/01-0	1	1"	1"	DN 50	220 V/50 Hz	550 x 570 x 1090
CWG_SOFT_VAS/01-5	1,5	1"	1"	DN 50	220 V/50 Hz	550 x 690 x 1090
CWG_SOFT_VAS/02-0	2	1"	1"	DN 50	220 V/50 Hz	550 x 690 x 1320
CWG_SOFT_VAS/02-5	2,5	1"	1"	DN 50	220 V/50 Hz	550 x 860 x 1320
CWG_SOFT_VAS/03-0	3	1"	1"	DN 50	220 V/50 Hz	550 x 860 x 1320
CWG_SOFT_VAS/03-5	3,5	1"	1"	DN 50	220 V/50 Hz	600 x 930 x 1600
CWG_SOFT_VAS/04-0	4	1"	1"	DN 50	220 V/50 Hz	600 x 930 x 1600
CWG_SOFT_VAS/04-5	4,5	1"	1"	DN 50	220 V/50 Hz	600 x 960 x 2050
CWG_SOFT_VAS/05-0	5	1"	1"	DN 50	220 V/50 Hz	600 x 960 x 2050
CWG_SOFT_VAS/05-5	5,5	1"	1"	DN 50	220 V/50 Hz	600 x 960 x 2050
CWG_SOFT_VAS/06-0	6	1 ½"	1 ½"	DN 65	220 V/50 Hz	600 x 1100 x 2100
CWG_SOFT_VAS/06-5	6,5	1 ½"	1 ½"	DN 65	220 V/50 Hz	600 x 1100 x 2100
CWG_SOFT_VAS/07-0	7	1 ½"	1 ½"	DN 65	220 V/50 Hz	800 x 1210 x 2100
CWG_SOFT_VAS/07-5	7,5	1 ½"	1 ½"	DN 65	220 V/50 Hz	800 x 1260 x 2200
CWG_SOFT_VAS/08-0	8	1 ½"	1 ½"	DN 65	220 V/50 Hz	800 x 1260 x 2200
CWG_SOFT_VAS/08-5	8,5	1 ½"	1 ½"	DN 65	220 V/50 Hz	800 x 1260 x 2200
CWG_SOFT_VAS/09-0	9	1 ½"	1 ½"	DN 65	220 V/50 Hz	800 x 1260 x 2200
CWG_SOFT_VAS/09-5	9,5	1 ½"	1 ½"	DN 65	220 V/50 Hz	800 x 1260 x 2200
CWG_SOFT_VAS/010-0	10	1 ½"	1 ½"	DN 65	220 V/50 Hz	950 x 1500 x 2280
CWG_SOFT_VAS/010-5	10,5	1 ½"	1 ½"	DN 65	220 V/50 Hz	950 x 1500 x 2280
CWG_SOFT_VAS/011-0	11	1 ½"	1 ½"	DN 65	220 V/50 Hz	950 x 1500 x 2280
CWG_SOFT_VAS/011-5	11,5	1 ½"	1 ½"	DN 65	220 V/50 Hz	950 x 1500 x 2280
CWG_SOFT_VAS/012-0	12	2"	2"	DN 80	220 V/50 Hz	950 x 1500 x 2320

In specific cases we adjust softener features by required parameters.

CWG_SOFT/VAD

Duplex system



Duplex softeners are ideal for sites with varying water demand or for applications where a continuous and uninterrupted supply of softened water is required. The twin vesse lconfiguration allows for one resin vessel to always be in service whilst the other is in regeneration or standby thus guaranteeing 24/7 soft water production.
The initiation of the regeneration cycle can be controlled by time clock, water quality or volume produced.
Timer-controlled unit stend be work best when daily soft water requirement is relatively constant, the unit sthenbeing set to regenerate when general consumption is low.
Meter controlled models are ideal when daily water requirements are variable. Having sized the water softener correctly, the regeneration cycle occurs when the set capacity for producing soft water is reached (this is particularly useful when water and salt consumption must be kept to anabsolute minimum).
Where a specific water quality is consistently required, initiation of regeneration by output quality creates a safe guard ensuring that supply to service will always meet production requirements.

Typical applications for this style of water softener would be:
- As a pre-treatment to water purification equipment such as Reverse Osmosis
- Large Scale Boiler Feed

Water Softeners are generally very reliable pieces of equipment however a small degree of regular attention is required to ensure that they continue to give good service over a long period.
For applications requiring a non-continuous but steady demand for moderate capacities of softened water over the course of a normal working day, please visitour Simplex Water Softener page for further information.
Softener include:
- aircheckin brine tank external drain flow controller watermeter 1" (20-100 m³) of 1 1/2" (40-200 m³)
- transfomator 24V
- kit tubes for connecting 2nd vessel
- heterodisperse softening resin, food quality
- 2 riser tubes 50 mm, top and bottom distributors – mounted in vessels.

ITEM	FLOW	CONNECTIONS				DIMENSIONS
	m^3/h	IN	OUT	DRAIN	POWER	mm
CWG_SOFT_VAD/01-0	1	1"	1"	DN 50	220 V/50 Hz	1050 x 570 x 1090
CWG_SOFT_VAD/01-5	1,5	1"	1"	DN 50	220 V/50 Hz	1300 x 690 x 1090
CWG_SOFT_VAD/02-0	2	1"	1"	DN 50	220 V/50 Hz	1300 x 690 x 1320
CWG_SOFT_VAD/02-5	2,5	1"	1"	DN 50	220 V/50 Hz	1300 x 860 x 1320
CWG_SOFT_VAD/03-0	3	1"	1"	DN 50	220 V/50 Hz	1400 x 860 x 1320
CWG_SOFT_VAD/03-5	3,5	1"	1"	DN 50	220 V/50 Hz	1400 x 930 x 1600
CWG_SOFT_VAD/04-0	4	1"	1"	DN 50	220 V/50 Hz	1450 x 930 x 1600
CWG_SOFT_VAD/04-5	4,5	1"	1"	DN 50	220 V/50 Hz	1500 x 960 x 2050
CWG_SOFT_VAD/05-0	5	1"	1"	DN 50	220 V/50 Hz	1500 x 960 x 2050
CWG_SOFT_VAD/05-5	5,5	1"	1"	DN 50	220 V/50 Hz	1500 x 960 x 2050
CWG_SOFT_VAD/06-0	6	1 ½"	1 ½"	DN 65	220 V/50 Hz	1850 x 1100 x 2100
CWG_SOFT_VAD/06-5	6,5	1 ½"	1 ½"	DN 65	220 V/50 Hz	1850 x 1100 x 2100
CWG_SOFT_VAD/07-0	7	1 ½"	1 ½"	DN 65	220 V/50 Hz	1850 x 1210 x 2100
CWG_SOFT_VAD/07-5	7,5	1 ½"	1 ½"	DN 65	220 V/50 Hz	2100 x 1260 x 2200
CWG_SOFT_VAD/08-0	8	1 ½"	1 ½"	DN 65	220 V/50 Hz	2100 x 1260 x 2200
CWG_SOFT_VAD/08-5	8,5	1 ½"	1 ½"	DN 65	220 V/50 Hz	2100 x 1260 x 2200
CWG_SOFT_VAD/09-0	9	1 ½"	1 ½"	DN 65	220 V/50 Hz	2100 x 1260 x 2200
CWG_SOFT_VAD/09-5	9,5	1 ½"	1 ½"	DN 65	220 V/50 Hz	2100 x 1260 x 2200
CWG_SOFT_VAD/010-0	10	1 ½"	1 ½"	DN 65	220 V/50 Hz	2300 x 1500 x 2280
CWG_SOFT_VAD/010-5	10,5	1 ½"	1 ½"	DN 65	220 V/50 Hz	2300 x 1500 x 2280
CWG_SOFT_VAD/011-0	11	1 ½"	1 ½"	DN 65	220 V/50 Hz	2300 x 1500 x 2280
CWG_SOFT_VAD/011-5	11,5	1 ½"	1 ½"	DN 65	220 V/50 Hz	2300 x 1500 x 2280
CWG_SOFT_VAD/012-0	12	2"	2"	DN 80	220 V/50 Hz	2300 x 1500 x 2320

In specific cases we adjust softener features by required parameters.

HIGH CAPACITY SOFTNERS

XL units

CWG company are always happy to work alongside you, using their engineering expertise & experience to design for individual needs, offering a fully bespoke, turnkey package including on or offsite build, installation, commissioning and on-going support.

Such packages may include:

- Triplex Water Softeners - offering the benefit of a continuous, non interrupted flow of softened water to service whilst enabling you to achieve high service flow rates on demand.
- Integration with other pre-treatment technologies.
- Skid mounted units - providing both flexibility and containment in a designated area.
- Online Water Hardness Monitoring - Allowing remote continuous residual hardness monitoring.
- Bulk Salt Saturators Systems - maximising storage capacity and minimising manual handling.
- Bespoke Controls Systems - integrating into existing site monitoring equipment.

Using a combination of quality components CWG company have the capability to provide a flexibility of configuration to suit virtually any application.

VAS XL

ITEM	FLOW (m^3/h)	IN/OUT (DN)	RESIN VOLUME (l)	DIMENSION (mm)
CWG_SOFT/VAS XL 20	20	2"	400	1800 x 1200 x 2200
CWG_SOFT/VAS XL 25	25	3"	500	1960 x 1200 x 2200
CWG_SOFT/VAS XL 30	30	3"	600	2200 x 1200 x 2200
CWG_SOFT/VAS XL 35	35	3"	700	2200 x 1200 x 2200
CWG_SOFT/VAS XL 40	40	3"	800	2400 x 1200 x 2200

VAD XL

ITEM	FLOW (m^3/h)	IN/OUT (DN)	RESIN VOLUME (l)	DIMENSION (mm)
CWG_SOFT/VAD XL 20	20	2"	800	2500 x 1200 x 2200
CWG_SOFT/VAD XL 25	25	3"	1000	2800 x 1200 x 2200
CWG_SOFT/VAD XL 30	30	3"	1200	3000 x 1200 x 2200
CWG_SOFT/VAD XL 35	35	3"	1400	3000 x 1200 x 2200
CWG_SOFT/VAD XL 40	40	3"	1600	3300 x 1200 x 2200

CWG_SOFT/AS

Ambersoft water softner

The devices for water softening type „AS" (Amber Soft) work in countercurrent mode which achieves most optimal use of ion mass and also savings in the use of salt ca. **45%** and savings of water during regeneration ca. **50%** in regards to classic softener.
The device operates on a volumetric basis for initiating regeneration as a classic dual device, one column operating, another in regeneration or in reserve. The device can be additionally equipped with hardness measure which in case of breakthrough of hard water starts regeneration regardless of the remaining capacity.

Regeneration is carried out with 3 working modes:
1 – bypass saline and easy washout
2 – filling water in container for melting salts
3 – fast final washout of ion mass

Working mode is adjustable according to user needs i.e. quality of processed water. Control unit has the ability to start the regeneration from dislocated places, fault signal, monitor the remaining capacity, total flow, notification service etc.
Regeneration can be manually started at any time. Alert of any error will be visible on display until direct canceling on control unit.

ITEM	FLOW (m^3/h)	IN/OUT (DN)	RESIN	DIMENSIONS (mm)
CWG_SOFT/AS 10-0	10	65	640	1800 x 1700 x 2400
CWG_SOFT/AS 15-0	15	65	940	2100 x 1870 x 2700
CWG_SOFT/AS 20-0	20	65	1250	2100 x 1870 x 2700
CWG_SOFT/AS 25-0	25	65	1560	2320 x 2010 x 2790
CWG_SOFT/AS 30-0	30	65	1900	2320 x 2010 x 2790
CWG_SOFT/AS 35-0	35	80	2200	2650 x 2180 x 2870
CWG_SOFT/AS 40-0	40	80	2500	2650 x 2180 x 2870
CWG_SOFT/AS 45-0	45	80	2810	2950 x 2320 x 2880
CWG_SOFT/AS 50-0	50	80	3150	2950 x 2320 x 2880

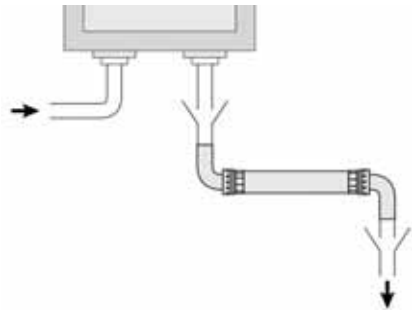
Neutralizing filters for acidic condensates

- Acid Neutralizer
- Neutralizing filters 5l
- Consumables for neutralizing filters

Condensing boilers produce acidic condensates (pH between 3,8 and 5,2) which must be neutralized before draining. CWG offer specific filters neutralizing the acidity of the condensate water, keeping pH levels within the limits allowed.

Acid Neutralizer

Neutralizing filter for acidic condensates of condensing boilers

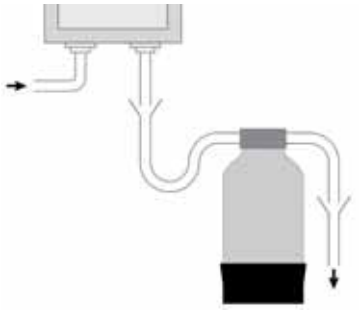


Acid neutralizer is a neutralizing filter for boilers with power up to 50 kW. The neutralizing media increase and keep water hardness and pH levels balanced; they do not contain any components which might alter the features of the neutralized water to be drained. The lifetime of the unit depends on the acidity and quantity of the condensates to be neutralized as well as on the working hours. Acid Neutralizer shall be installed in horizontal position on the condensate drain line.

REF.	ITEM	PACK.	CONN.	MATERIAL		MAX PRESS.	MAX FLOW RATE (ΔP<0,3 BAR)	USE	WATER TEMP.	ROOM TEMP.	DIMENS. (ØXH)
		pcs.	F	head	housing	bar	l/h		°C	°C	cm
202100	ACID NEUTRALIZER	1	1"	PVC	2	8,0	tec	5-40	5-40	29,5	18 x 40

Neutralizing filters

For acidic condensates of condensing boilers



The 5 litre neutralizer is a neutralizing filter with activated media of calcium carbonate for boilers with power up to 378 kW. The neutralizing media increase and keep water hardness and pH levels balanced. They do not contain any components which might alter the features of the neutralized water to be drained.

REF.	ITEM	PACK.	CONN.	MATERIAL		MAX PRESS.	MAX FLOW RATE (ΔP<0,3 BAR)	USE	WATER TEMP.	ROOM TEMP.	DIMENS. (ØXH)
		pcs.	F	head	housing	bar	l/h		°C	°C	cm
202150	5 L. NEUTRALIZING FILTER	1	3/4"	PP	-	6	60,0	tec	5-40	5-40	18 x 40

Consumables for neutralizing filters

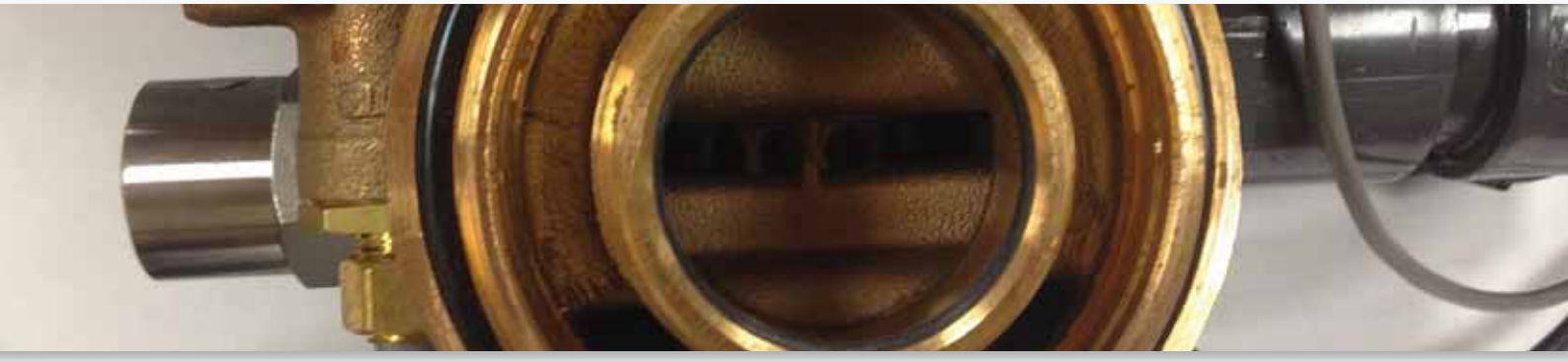
LIMESTONE

NEUTRALIZING CARTRIDGE

REF.	ITEM	PACK.		DESCRIPTION	USE	DIMENS. (ØXH)
		kg	pcs.			cm
202155	10" NEUTRALIZING CARTRIDGE	-	1	For 10" neutralizing filter	tec	6 x 25
202156	LIMESTONE FOR NEUTRALIZING FILTERS	25	1	For 5 l. neutralizing filter	tec	-

Filtration systems

Sand, carbon, deferization...



- CWG sand filters
- CWG Active carbon filters
- CWG deferization filters
- CWG denitration filters
- CWG dearsenization filters
- CWG remineralization filters

Passing through the layers of the ground, water gets rich of several mineral salts and chemical substances in amounts higher than the concentrations allowed by the law, thus making both potable and technological use prohibitive as well as harmful. CWG water filters remove the excess of iron,manganese, chlorine, nitrates, arsenic and solve problems such as turbidity, bad smells and tastes.

Depending on the specific problem to be treated, they are known as:

- Sand filters
- Iron removers (iron and manganese)
- Chlorine removers (chlorine and chlorine derivatives)
- Nitrate removers (nitrates)
- Arsenic removers (arsenic)
- Remineralization filters

Water filters are equipped with the valves controls regeneration by "time" or volume, respecting the number of programmed days or volume of treated water.

All equipment in contact with drinking water is manufactured with top quality materia.

Sand filters

Suspended solids removers

Sand filtration is a frequently used very robust method to remove suspended solids from water.
The filtration medium consists of a multiple layer of sand with a variety in size and specific gravity.
Applications for sand filtration:

- Preperation of cooling water
- Treatment of waste water
- Production of drinking water
- Filtration in swimming pools
- Pre filtration for membrane systems
- Filtration of grey or surface water

A sand filter has a dirt holding capacity of 3 to 6 kg TSS / m^2 of sand surface.
When the filters are loaded with particles, the flow direction is reversed and the flow is increased to clean the filter again. This step is called a backwash.

MODEL	CONNECTION	FLOW RATE	ORDERCODE
CWG_FILT/PF 00-5 L	1"	500 l/h	02-100-101
CWG_FILT/PF 01-0 F	1"	1 000 l/h	02-100-102
CWG_FILT/PF 02-0 F	1"	2 000 l/h	02-100-103
CWG_FILT/PF 03-0 F	1"	3 000 l/h	02-100-104
CWG_FILT/PF 04-0 F	1 ½"	4 000 l/h	02-100-105
CWG_FILT/PF 05-0 F	1 ½"	5 000 l/h	02-100-106
CWG_FILT/PF 06-0 F	1 ½"	6 000 l/h	02-100-107
CWG_FILT/PF 07-0 F	1 ½"	7 000 l/h	02-100-108
CWG_FILT/PF 08-0 F	1 ½"	8 000 l/h	02-100-109
CWG_FILT/PF 09-0 F	1 ½"	9 000 l/h	02-100-110
CWG_FILT/PF 10-0 F	2"	10 000 l/h	02-100-111
CWG_FILT/PF 11-0 F	2"	11 000 l/h	02-100-112
CWG_FILT/PF 12-0 F	2"	12 000 l/h	02-100-113
CWG_FILT/PF 13-0 F	2"	13 000 l/h	02-100-114
CWG_FILT/PF 14-0 F	2"	14 000 l/h	02-100-115
CWG_FILT/PF 15-0 F	2"	15 000 l/h	02-100-116
CWG_FILT/PF 16-0 F	2"	16 000 l/h	02-100-117
CWG_FILT/PF 17-0 F	2"	17 000 l/h	02-100-118

Active carbon filters

Chlorine removers

CWG activated carbon filters are used to reduce the excess of residual chlorine and to remove bad smells and chemical pollutants such as atrazine, hydrocarbons, etc. The channelling created by water on the filter media shall be periodically removed with a backwash. The backwash frequency can be programmed by time. The system is to be sized according to the flow rate required by the user and to the level of chlorine and organic substances.

CWG units are made up of:

- head with hydropneumatic valve in plastic material and electronic timer
- cylinder in plastic material covered in fibreglass containing special media of activated carbon of vegetal origin with adsorbent

ACTIVE CARBON FILTERS

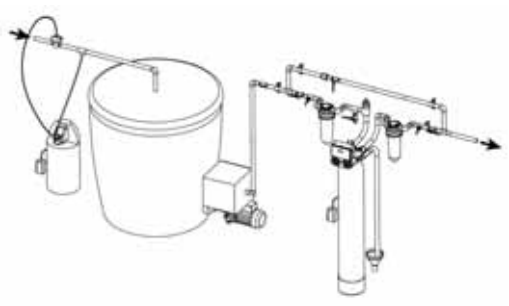
MODEL	CONNECTION	FLOW RATE	ORDERCODE
CWG_FILT/AU 00-5 L	1"	500 l/h	03-100-101
CWG_FILT/AU 01-0 F	1"	1 000 l/h	03-100-102
CWG_FILT/AU 02-0 F	1"	2 000 l/h	03-100-103
CWG_FILT/AU 03-0 F	1"	3 000 l/h	03-100-104
CWG_FILT/AU 04-0 F	1 ½"	4 000 l/h	03-100-105
CWG_FILT/AU 05-0 F	1 ½"	5 000 l/h	03-100-106
CWG_FILT/AU 06-0 F	1 ½"	6 000 l/h	03-100-107
CWG_FILT/AU 07-0 F	1 ½"	7 000 l/h	03-100-108
CWG_FILT/AU 08-0 F	1 ½"	8 000 l/h	03-100-109
CWG_FILT/AU 09-0 F	1 ½"	9 000 l/h	03-100-110
CWG_FILT/AU 10-0 F	2"	10 000 l/h	03-100-111
CWG_FILT/AU 11-0 F	2"	11 000 l/h	03-100-112
CWG_FILT/AU 12-0 F	2"	12 000 l/h	03-100-113
CWG_FILT/AU 13-0 F	2"	13 000 l/h	03-100-114
CWG_FILT/AU 14-0 F	2"	14 000 l/h	03-100-115
CWG_FILT/AU 15-0 F	2"	15 000 l/h	03-100-116
CWG_FILT/AU 16-0 F	2"	16 000 l/h	03-100-117
CWG_FILT/AU 17-0 F	2"	17 000 l/h	03-100-118

HIGH FLOW ACTIVE CARBON FILTERS

MODEL	CONNECTION	FLOW RATE	ORDERCODE
CWG_FILT/AU-HF-1050	75	25 000 l/h	03-200-101
CWG_FILT/AU-HF-1200	75	33 000 l/h	03-200-102
CWG_FILT/AU-HF-1400	90	46 000 l/h	03-200-103
CWG_FILT/AU-HF-1600	110	60 000 l/h	03-200-104
CWG_FILT/AU-HF-1800	125	76 000 l/h	03-200-105
CWG_FILT/AU-HF-2000	125	94 000 l/h	03-200-106
CWG_FILT/AU-HF-2350	140	130 000 l/h	03-200-107
CWG_FILT/AU-HF-2500	160	150 000 l/h	03-200-108
CWG_FILT/AU-HF-3000	200	212 000 l/h	03-200-109

Deferization filters

Iron and mangane removers



Most part of underground waters contain soluted iron. The way of its removal from the water is a first important technological step to be able to prepare the water for further production. In most cases with the appearance of iron, the soluted mangan can appear too.
With the way of deferisation and demanganisation, which uses CWG company , iron and mangan are being successfully removed. This procedure is based on usage of oxid - reductive ways, catalized with special fillings of filter materials , and the procedure is ended using reductive connections which neutralize activity of oxidated substances.
The whole technic - technological activity is based on the knowledge and experiences of the worlds known companies which support the activity of our company .

Birm

Birm is a granular filter material used in removal of iron and manganese dissolved in water. In water, iron is usually in the form of iron bicarbonate and it cannot be filtered off. Birm acts as undissolved catalyst which accelerates reaction between dissolved oxygen and iron. Thereby, iron hydroxide is created which can be easily filtered off. Birm is a great filter material, easy cleaned with backwash.

Pirulozit

Pirulozit is high quality and high purity manganese dioxide which is achieved by washing, drying and selection of specific catalytic mineral properties. It is used as catalyst for reduction of iron, manganese and hydrogen sulphide dissolved in water in filters where they are mixed with sand. It does not require regeneration with potassium permanganate. Pirulozit is in accordance with standard ISO EN 13752 „Products for the treatment of drinking water.

MTM

MTM consist of a light weight granular core with a coating of manganese dioxide, and is used for reducing iron, manganese and hydrogen sulphide from water. Its active surface coating oxidizes and precipitate soluble iron and manganese, and hydrogen sulphide is oxidized to a sulphur.

DEFERIZATION SYSTEMS WITH - BIRM FILTER

MODEL	VOLUME	RESIN FILL	ORDERCODE
CWG_FILT/BR1054	43	Birm media	04-100-101
CWG_FILT/BR1354	72	Birm media	04-100-102
CWG_FILT/BR1465	98	Birm media	04-100-103
CWG_FILT/BR1665	119	Birm media	04-100-104
CWG_FILT/BR1865	175	Birm media	04-100-105
CWG_FILT/BR2160	217	Birm media	04-100-106
CWG_FILT/BR2469	315	Birm media	04-100-107
CWG_FILT/BR3072	497	Birm media	04-100-108
CWG_FILT/BR3672	714	Birm media	04-100-109
CWG_FILT/BR4882	1288	Birm media	04-100-110

DEFERIZATION SYSTEMS - MTM FILTER

MODEL	VOLUME	RESIN FILL	ORDERCODE
CWG_FILT/MTM1054	43	FMH media	04-200-101
CWG_FILT/MTM1354	72	FMH media	04-200-102
CWG_FILT/MTM1465	98	FMH media	04-200-103
CWG_FILT/MTM1665	119	FMH media	04-200-104
CWG_FILT/MTM1865	175	FMH media	04-200-105
CWG_FILT/MTM2160	217	FMH media	04-200-106
CWG_FILT/MTM2469	315	FMH media	04-200-107
CWG_FILT/MTM3072	497	FMH media	04-200-108
CWG_FILT/MTM3672	714	FMH media	04-200-109
CWG_FILT/MTM4882	1288	FMH media	04-200-110

DEFERIZATION SYSTEMS - PYROLIZIT FILTER

MODEL	VOLUME	RESIN FILL	ORDERCODE
CWG_FILT/PY1054	43	PY	04-300-101
CWG_FILT/PY1354	72	PY	04-300-102
CWG_FILT/PY1465	98	PY	04-300-103
CWG_FILT/PY1665	119	PY	04-300-104
CWG_FILT/PY1865	175	PY	04-300-105
CWG_FILT/PY2160	217	PY	04-300-106
CWG_FILT/PY2469	315	PY	04-300-107
CWG_FILT/PY3072	497	PY	04-300-108
CWG_FILT/PY3672	714	PY	04-300-109
CWG_FILT/PY4882	1288	PY	04-300-110

DEFERIZATION SYSTEMS - ECOMIX FILTERS

ORDER CODE	VOLUME	MEDIA FILL	MODEL
CWG_FILT/EC 1054	40	ECOMIX	04-400-200
CWG_FILT/EC 1354	67	ECOMIX	04-400-201
CWG_FILT/EC 1465	90	ECOMIX	04-400-202
CWG_FILT/EC 1665	108	ECOMIX	04-400-203
CWG_FILT/EC 1865	160	ECOMIX	04-400-204
CWG_FILT/EC 2160	192	ECOMIX	04-400-205
CWG_FILT/EC 2469	280	ECOMIX	04-400-206
CWG_FILT/EC 3072	390	ECOMIX	04-400-207
CWG_FILT/EC 3672	600	ECOMIX	04-400-208
CWG_FILT/EC 4872	1113	ECOMIX	04-400-209

Denitration filters

Nitrate removers

Denitrat units are anionic resin filters retaining nitrates present in water, to be regenerated with sodium chloride. Regeneration can be programmed by volume/time. The system is to be sized according to daily water consumption, peak flow rate and nitrates level.

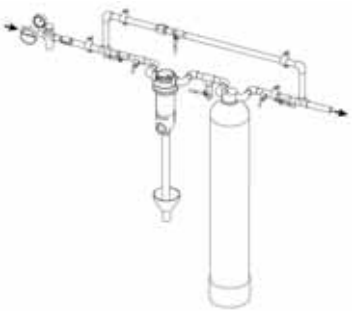
Denitrat units are made up of:

- head with hydropneumatic valve in plastic material and electronic timer
- cylinder in plastic material covered in fibreglass containing anionic resin for nitrates removal.
- brine tank

ITEM	CONN.	MEDIA	POTABLE USE			BRINE TANK CAPACITY	REGEN. DURATION	DIM.	
			OPER. FLOW RATE	ΔP	PEAK FLOW RATE			CYLINDER (ÆxH)	BRINE TANK (ÆxH)
		l	l/h	bar	l/min	l	min	cm	cm
CWG_FILT/NN 30	1" ¼ F	30	900	<0,7	33	100	43	25x111	47x62
CWG_FILT/NN 45	1" ¼ F	45	1400	<0,8	41	100	36	25x159	47x62
CWG_FILT/NN 75	1" ¼ F	75	2300	<0,9	68	150	41	33x159	53x75
CWG_FILT/NN 110	1" ¼ F	110	3300	<1,2	80	200	47	37x186	53x100
CWG_FILT/NN 140	1" ¼ F	140	4200	<1,5	102	200	59	41x186	53x100
CWG_FILT/NN 200	1" ¼ F	200	6000	<1,6	117	300	84	56x183	62x106
CWG_FILT/NN 320B	2" M	320	9600	<1,5	176	520	38	61x235	78x111
CWG_FILT/NN 500B	2" M	500	15000	<1,6	275	850	53	77x237	104x109

Dearsenization filters

Arsenic removers



The possibility of finding arsenic in underground waters, over maximum allowed concentration also supposes adequate possibility of its removal. Different methods have been developed, just like technology procedures for arsenic removal out of underground waters used for drinking.
CWG uses special methods and systems for arsenic removal from the drinking water.
Such technology makes it possible to remove arsenic up to niveau under 8 microg/l of soluted arsenic.

ITEM	CONN.	RESINS VOLUME	ARSENIC <10 MG/L		MAX. LIFETIME	DIM.
			FLOW RATE	ΔP		(ÆxH)
		l	m^3/h	bar	m^3	cm
CWG_FILT/AR10	¾"	10	0,3	≤1	400	21x60
CWG_FILT/AR20	¾"	20	0,6	≤1	800	20x94
CWG_FILT/AR45	¾"	45	1,35	≤1	1800	33x140
CWG_FILT/AR75	1 ¼"	75	2,25	≤1	3000	33x150

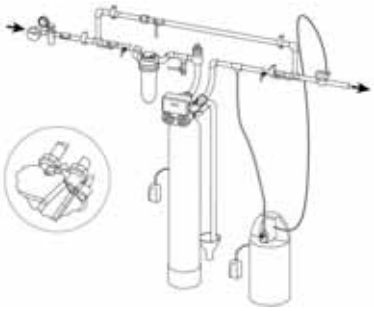
Amonium removing filter

For some tipical ground water You can find Amonium smell which can be soutible with our solutions for purification of water. To reduce Amonium content in water aplication and references offers You our DA filter series.

ITEM	FLOW (m^3/h)	MEDIA VOLUME	DIMENSIONS (mm)
CWG_FILT/DA 00-5	0,3-0,7	26	350 x 260 x 1570
CWG_FILT/DA 01-0	0,7-1,3	69	360 x 360 x 1850
CWG_FILT/DA 02-0	1,2-2,4	156	540 x 540 x 1830
CWG_FILT/DA 03-0	1,8-3,6	210	610 x 610 x 2050
CWG_FILT/DA 04-0	2,4-4,8	360	760 x 760 x 2130
CWG_FILT/DA 05-0	3,0-6,2	432	915 x 915 x 2180
CWG_FILT/DA 06-0	3,6-7,2	522	915 x 915 x 2180

Remineralization filters

Neutralizing pH



Remineralization filters are mostly used for neutralize pH and to add calcium/bicarbonates to pH acidic water sources, like RO permeate, ground waters or rain water.
Flow range: 0,2 – 200 m^3
Vessel material: Epoxy-coated steel or polyester composite
Tank diameter: 50 – 240 cm
Pressure: 4-9 bar
Bed dept: min 1 meter
Control: Automatic or manual backwash (timer or pressure diferential)

MODEL	VOLUME	RESIN FILL	ORDERCODE
CWG_FILT/RM1054	43	CAL	04-300-101
CWG_FILT/RM1354	72	CAL	04-300-102
CWG_FILT/RM1465	98	CAL	04-300-103
CWG_FILT/RM1665	119	CAL	04-300-104
CWG_FILT/RM1865	175	CAL	04-300-105
CWG_FILT/RM2160	217	CAL	04-300-106
CWG_FILT/RM2469	315	CAL	04-300-107
CWG_FILT/RM3072	497	CAL	04-300-108
CWG_FILT/RM3672	714	CAL	04-300-109
CWG_FILT/RM4882	1288	CAL	04-300-110

Dosing pumps

- CWG-AMS Series
- CWG - KMS Series
- CWG - TMS Series
- CWG - VMS Series
- CWG - WDPHxx Series
- CWG - WTx Series
- RAC Series
- CWG prius
- CWG _DOS/PRO
- CWG _DOS/PRO PP

Municipal or well water for potable and industrial use might contain undesirable elements, such as bacteria, algae, excessive acidity or basicity, high hardness, etc. In these cases it is necessary to dose with precision special conditioning chemicals. CWG offer a wide range of constant and proportional metering pumps in order to meet the requirements of houses, laboratories and industries. The installation is very easy and shall be carried out before the system or before the equipment to be protected.

All equipment in contact with drinking water is manufactured with top quality materials.

AMS series - manual venting

Flow rate up to 60 L/hr, working pressure up to 25 bar

AMS MF
AMS PH
AMS RH

- Foot mounted, with display
- Microprocessor technology
- Manual stroke length adjustment
- Manual venting PVDF pump head
- All liquid ends (pump head, injection valve, foot filter, delivery hose) are in PVDF
- PP pump head and accessories (with PE hose) available on request

MODEL	AMS MF	AMS PH	AMS RH
CODE	AMF	APH	ARH
Dosing system	Constant/Proportional	Proportional	Proportional
Level control	•	•	•
Flow sensor input	•		
Stand-by input	•		
Alarm output	•	Optional	Optional
Functions	• MULTIFUNCTION (Constant, Divide, Multiply, PPM, Batch, Volt, mA, %, ml/q) • Set AUTOMATIC REPRIMING, with a flow sensor installed. • Set STROKES RECOVERY SYSTEM, with a flow sensor installed. • Set UPKEEP DOSING MODE in plant shutdown situation. • WORK-PAUSE MODE: cyclic dosing controlled by an external contact.	PH meter (0-14) – supplied without PH probe	ORP METER (0-2000mV) – supplied without ORP probe

FLOW						MODEL			PUMP HEAD		HOSE
Pressure bar	Flow l/h	Cc/s	PVDF pump head	PVDF injection hose	Suction hose	AMS MF	AMS PH	AMS RH	PMMA	INOX	PVDF
25	05	0,70	L	4 x 6	4 x 6	300100	300110	300120	-	-	-
15	10	1,4	M	4 x 6	4 x 6	300101	300111	300121	-	-	-
10	15	2,1	M	6 x 8	6 x 8	300102	300112	300122	-	-	-
07	20	2,8	N	6 x 8	6 x 8	300103	300113	300123	-	-	-
03	40	5,6	S	8 x 10	8 x 12	300104	300114	300124	-	-	-
02	60	7,7	T	8 x 10	8 x 12	300105	300115	300125	-	-	-

AMSA series - self venting

Flow rate up to 60 L/hr, working pressure up to 25 bar

AMSA MF
AMSA PH
AMSA RH

- Foot mounted, with display
- Microprocessor technology
- Manual stroke length adjustment
- Self venting PVDF pump head (outgassing hose: 4x6 PE)
- All liquid ends (pump head, injection valve, foot filter, delivery hose) are in PVDF
- PP pump head and accessories (with PE hose) available on request.

MODEL	AMSA MF	AMSA PH	AMSA RH
CODE	AAF	AAA	AAH
Dosing system	Constant/proportional	Proportional	Proportional
Level control	•	•	•
Flow sensor input	•		
Stand-by input	•		
Alarm output	•	Optional	Optional
Functions	• MULTIFUNCTION (Constant, Divide, Multiply, PPM, Batch, Volt, mA, %, ml/q) • Set AUTOMATIC REPRIMING, with a flow sensor intsalled. • Set STROKES RECOVERY SYSTEM, with a flow sensor installed. • Set UPKEEP DOSING MODE in plant shutdown situation. • WORK-PAUSE MODE: cyclic dosing controlled by an external contact	PH meter(0-14) – sipplied without pH probe	ORP meter (0-2000mV)- supplied without ORP probe

FLOW						MODEL			HOSE
Pressure bar	Flow l/h	Cc/s	PVDF pump head	PVDF injection hose	Suction hose	AMSA MF	AMSA PH	AMSA RH	PVDF
25	3,2	0,44	LA	4 x 6	4 x 6	300130	300140	300150	-
15	0,6	0,83	MA	4 x 6	4 x 6	300131	300141	300151	-
10	10	1,38	MA	6 x 8	6 x 8	300132	300142	300152	-
07	13	1,81	NA	6 x 8	6 x 8	300133	300143	300153	-
03	30	4,17	SA	8 x 10	8 x 12	300134	300144	300154	-
02	38,5	5,35	TA	8 x 10	8 x 12	300135	300145	300155	-

AMS series - manual venting

Flow rate up to 60 L/hr, working pressure up to 25 bar

AMS CO PLUS
AMS CL PLUS
AMS PLUS

- Foot mounted
- Microprocessor technology
- Manual stroke length adjustment
- Manual venting PVDF pump head
- All liquid ends (pump head, injection valve, foot filter, delivery hose) are in PVDF
- PP pump head and accessories (with PE hose) available on request

MODEL	AMS CO PLUS	AMS CL PLUS	AMS PLUS
CODE	AUO	ACP	AMU
Dosing system	Constant	Constant	Constant/proportional
Level control		•	•
Stroke speed (freq.) adjustment	0-100%	0-100%	0-1% / 0.10% /0.100%
Stroke length adjustment	•	•	•
Digital signal			•
Current signal (0-4 mA=0 pulses; 20mA=max pulses)			•
Level alarm output			Optional
Functions	Speed reducer (1-10)	Speed reducer (1-10)	Working modes: • Constant/ constant with 1-10 divider • 1-10 pulses multiplier • 1-10 pulses divider • 10-100 pulses divider • 100-1000 pulses divider • mA current signal (0/4 mA = 0 pulses: 20 mA = max pulses)

FLOW						MODEL			PUMP HEAD		HOSE
Pressure bar	Flow l/h	Cc/s	PVDF pump head	PVDF injection hose	Suction hose	AMS CO PLUS	AMS CL PLUS	AMS PLUS	PMMA	INOX	PVDF
25	05	0,70	L	4 x 6	4 x 6	300160	300170	300176	-	-	-
15	10	1,4	M	4 x 6	4 x 6	300161	300171	300177	-	-	-
10	15	2,1	M	6 x 8	6 x 8	300162	300172	300178	-	-	-
07	20	2,8	N	6 x 8	6 x 8	300163	300173	300179	-	-	-
03	40	5,6	S	8 x 10	8 x 12	300164	300174	300180	-	-	-
02	60	7,7	T	8 x 10	8 x 12	300165	300175	300181	-	-	-

AMSA series - self venting

Flow rate up to 60 L/hr, working pressure up to 25 bar

AMSA CO PLUS
AMSA CL PLUS
AMSA PLUS

- Foot mounted
- Microprocessor technology
- Manual stroke length adjustment
- Self venting PVDF pump head (outgassing hose: 4x6 PE)
- All liquid ends (pump head, injection valve, foot filter, delivery hose) are in PVDF
- PP pump head and accessories (with PE hose) available on request

MODEL	AMSA CO PLUS	AMSA CL PLUS	AMSA PLUS
CODE	AAC	AAL	AAU
Dosing system	Constant	Constant	Constant/proportional
Level control		•	•
Stroke speed (freq.) adjustment	0-100%	0-100%	0-1% / 0.10% /0.100%
Stroke length adjustment	•	•	•
Digital signal			•
Current signal (0-4 mA=0 pulses; 20mA=max pulses)			•
Level alarm output			Optional
Functions	Speed reducer (1-10)	Speed reducer (1-10)	Working modes: • Constant/ constant with 1-10 divider • 1-10 pulses multiplier • 1-10 pulses divider • 10-100 pulses divider • 100-1000 pulses divider • mA current signal (0/4 mA = 0 pulses: 20 mA = max pulses)

FLOW						MODEL			HOSE
Pressure bar	Flow l/h	Cc/s	PVDF pump head	PVDF injection hose	Suction hose	AMSA CO PLUS	AMSA CL PLUS	AMSA PLUS	PVDF
25	3,2	0,44	LA	4 x 6	4 x 6	300190	300200	300206	-
15	0,6	0,83	MA	4 x 6	4 x 6	300191	300201	300207	-
10	10	1,38	MA	6 x 8	6 x 8	300192	300202	300208	-
07	13	1,81	NA	6 x 8	6 x 8	300193	300203	300209	-
03	30	4,17	SA	8 x 10	8 x 12	300194	300204	300210	-
02	38,5	5,35	TA	8 x 10	8 x 12	300195	300205	300211	-

KMS series - manual venting

Flow rate up to 18 L/hr, working pressure up to 20 bar

KMS DC
KMS MF
KMS CL
KMS EN
KMS PH
KMS RH

- Foot mounted, with display
- Microprocessor technology
- Manual stroke length adjustment
- Manual venting PVDF pump head
- All liquid ends (pump head, injection valve, foot filter, delivery hose) are in PVDF
- PP pump head and accessories (with PE hose) available on request

MODEL	KMS DC	KMS MF	KMS CL	KMS EN	KMS PH	KMS RH
CODE	KDC	KMF	KML	KEN	KPH	KRH
Dosing system	Constant	Constant/proportional	Proportional	Timered	Proportional	Proportional
Level control	•	•	•	•	•	•
Flow sensor input		•				
Stand-by input	•	•			•	•
Alarm output	•	•			Optional	Optional
Functions	Constant (lph, sph, spm)	• MULTIFUNCTION (Constant, Divide, Multiply, PPM, Batch, Volt, mA, %, ml/q) • Set AUTOMATIC REPRIMING, with a flow sensor installed. • Set UPKEEP DOSING MODE in plant shutdown situation. • WORK-PAUSE MODE: cyclic dosing controlled by an external contact.	• Free chlorine Cl (0-10,00 mg/l or 0-2,00 mg/l meter. Anoerinetric cells mod. ECL 1 or ECL6/7/12 (to specify) – supplied without probe	• Weekly timer • Electrovalve control (optional)	PH meter (0-14) – supplied without pH probe	ORP meter (0-2000mV)- supplied without ORP probe

FLOW							MODEL						PUMP HEAD		HOSE
Pressure bar	Flow l/h	cc/S	CP PVDF	CP Inox	PVDF injec-tion hose	Suction hose	KMS DC	KMS MF	KMS CL	KMS EN	KMS PH	KMS RH	PMMA	INOX	PVDF
20	1	0,1	I	Ii	4 x 6	4 x 6	300220	300230	300238	300250	300260	300270	-	-	-
18	2	0,19	L	Li	4 x 6	4 x 6	300221	300231	300239	300251	300261	300271	-	-	-
15	4	0,37	L	Li	4 x 6	4 x 6	300222	300232	300240	300252	300262	300272	-	-	-
10	5	0,46	L	Li	4 x 6	4 x 6	300223	300233	300241	300253	300263	300273	-	-	-
8	8	0,74	L	Li	4 x 6	4 x 6	300224	300234	300242	300254	300264	300274	-	-	-
5	10	0,93	L	Li	4 x 6	4 x 6	300225	300235	300243	300255	300265	300275	-	-	-
5	1	0,09	I	Ii	4 x 6	4 x 6	300226	300236	300244	300256	300266	300276	-	-	-
2	18	1,67	M	Mi	6 x 8	6 x 8	300227	300237	300245	300257	300267	300277	-	-	-

KMSA series - self venting

Flow rate up to 18 L/hr, working pressure up to 20 bar

KMSA DC
KMSA MF
KMSA CL
KMSA EN
KMSA PH
KMSA RH

- Foot mounted, with display
- Microprocessor technology
- Manual stroke length adjustment
- Self venting PVDF pump head (outgassing hose: 4x6 PE)
- All liquid ends (pump head, injection valve, foot filter, delivery hose) are in PVDF
- PP pump head and accessories (with PE hose) available on request

MODEL	KMS DC	KMS MF	KMS CL	KMS EN	KMS PH	KMS RH
CODE	KAD	KAF	KLA	KAN	KMH	KAR
Dosing system	Constant	Constant/proportional	Proportional	Timered	Proportional	Proportional
Level control	•	•	•	•	•	•
Flow sensor input		•				
Stand-by input	•	•			•	•
Alarm output	•	•			Optional	Optional
Functions	Constant (lph, sph, spm)	• MULTIFUNCTION (Constant, Divide, Multiply, PPM, Batch, Volt, mA, %, ml/q) • Set AUTOMATIC REPRIMING, with a flow sensor installed. • Set UPKEEP DOSING MODE in plant shutdown situation. • Set STROKES RECOVERY SYSTEM, with a flow sensor installed. • WORK-PAUSE MODE: cyclic dosing controlled by an external contact.	• Free chlorine Cl (0-10,00 mg/l or 0-2,00 mg/l meter. Amperometric cells mod. ECL 1 or ECL6/7/12 (to specify) – supplied without probe	• Weekly timer • Electrovalve control (optional)	PH meter (0-14) – supplied without pH probe	ORP meter (0-2000mV)- supplied without ORP probe

FLOW						MODEL						PUMP HEAD	HOSE
Pressure bar	Flow l/h	cc/S	CP PVDF	PVDF injection hose	Suction hose	KMSA DC	KMSA MF	KMSA CL	KMSA EN	KMSA PH	KMSA RH	PMMA	PVDF
18	1	0,1	LA	4 x 6	4 x 6	300280	300287	300300	300307	300314	300325	-	-
15	3	0,28	LA	4 x 6	4 x 6	300281	300288	300301	300308	300315	300326	-	-
10	3,5	0,32	LA	4 x 6	4 x 6	300282	300289	300302	300309	300316	300327	-	-
10	0,5	0,05	LA	4 x 6	4 x 6	300283	300290	300303	300310	300317	300328	-	-
8	5,5	0,51	LA	4 x 6	4 x 6	300284	300291	300304	300311	300318	300329	-	-
5	7,5	0,69	LA	4 x 6	4 x 6	300285	300292	300305	300312	300319	300330	-	-
2	13	1,20	MA	4 x 6	4 x 6	300286	300293	300306	300313	300320	300331	-	-

K series - manual venting

Flow rate up to 18 L/hr, working pressure up to 20 bar

K CO PLUS
K CL PLUS
K PLUS

- Foot mounted
- Microprocessor technology
- Manual stroke length adjustment
- Manual venting PVDF pump head
- All liquid ends (pump head, injection valve, foot filter, delivery hose) are in PVDF
- PP pump head and accessories (with PE hose) available on request

MODEL	K CO PLUS	K CL PLUS	K PLUS
CODE	KPO	KPL	KMU
Dosing system	Constant	Constant	Constant/proportional
Level control		•	•
Stroke speed (freq.) adjustment	0-100%	0-100%	0-1% / 0.10% /0.100%
Stroke length adjustment	•	•	•
Digital signal			•
Current signal (0-4 mA=0 pulses; 20mA=max pulses)			•
Level alarm output			Optional
Functions	Speed reducer (1-10)	Speed reducer (1-10)	Working modes: • Constant/ constant with 1-10 divider • 1-10 pulses multiplier • 1-10 pulses divider • 10-100 pulses divider • 100-1000 pulses divider • mA current signal (0/4 mA = 0 pulses: 20 mA = max pulses)

FLOW							MODEL			PUMP HEAD		HOSE
Pressure bar	Flow l/h	cc/S	CP PVDF	CP Inox	PVDF injection hose	Suction hose	K CO PLUS	K CL PLUS	K PLUS	PMMA	INOX	PVDF
20	1	0,1	I	Ii	4 x 6	4 x 6	300340	300350	300360	-	-	-
18	2	0,19	L	Li	4 x 6	4 x 6	300341	300351	300361	-	-	-
15	4	0,37	L	Li	4 x 6	4 x 6	300342	300352	300362	-	-	-
10	5	0,46	L	Li	4 x 6	4 x 6	300343	300353	300363	-	-	-
8	8	0,74	L	Li	4 x 6	4 x 6	300344	300354	300364	-	-	-
5	10	0,93	L	Li	4 x 6	4 x 6	300345	300355	300365	-	-	-
5	1	0,09	I	Ii	4 x 6	4 x 6	300346	300356	300366	-	-	-
2	18	1,67	M	Mi	6 x 8	6 x 8	300347	300357	300367	-	-	-

KA series - self venting

Flow rate up to 13 L/hr, working pressure up to 20 bar

KA CO PLUS
KA CL PLUS
KA PLUS

- Foot mounted
- Microprocessor technology
- Manual stroke length adjustment
- Self venting PVDF pump head (outgassing hose: 4x6 PE)
- All liquid ends (pump head, injection valve, foot filter, delivery hose) are in PVDF
- PP pump head and accessories (with PE hose) available on request

MODEL	KA CO PLUS	KA CL PLUS	KA PLUS
CODE	KPA	KUA	KAU
Dosing system	Constant	Constant	Constant/proportional
Level control		•	•
Stroke speed (freq.) adjustment	0-100%	0-100%	0-1% / 0.10% /0.100%
Stroke length adjustment	•	•	•
Digital signal			•
Current signal (0-4 mA=0 pulses; 20mA=max pulses)			•
Level alarm output			Optional
Functions	Speed reducer (1-10)	Speed reducer (1-10)	Working modes: • Constant/ constant with 1-10 divider • 1-10 pulses multiplier • 1-10 pulses divider • 10-100 pulses divider • 100-1000 pulses divider • mA current signal (0/4 mA = 0 pulses: 20 mA = max pulses)

FLOW						MODEL			PUMP HEAD	HOSE
Pressure bar	Flow l/h	cc/S	CP PVDF	PVDF injection hose	Suction hose	KA CO PLUS	KA CL PLUS	KA PLUS	PMMA	PVDF
18	1	0,1	LA	4 x 6	4 x 6	300370	300380	300390	-	-
15	3	0,28	LA	4 x 6	4 x 6	300371	300381	300391	-	-
10	3,5	0,32	LA	4 x 6	4 x 6	300372	300382	300392	-	-
10	0,5	0,05	LA	4 x 6	4 x 6	300373	300383	300393	-	-
8	5,5	0,51	LA	4 x 6	4 x 6	300374	300384	300394	-	-
5	7,5	0,69	LA	4 x 6	4 x 6	300375	300385	300395	-	-
2	13	1,20	MA	4 x 6	4 x 6	300376	300386	300396	-	-

TMS series - manual venting

Flow rate up to 100 L/hr, working pressure up to 20 bar

TMS DC
TMS MF
TMS PH
TMS RH

- Wall mounted, with dispaly
- Microprocessor technology
- Manual venting PVDF pump head
- All liquid ends (pump head, injection valve, foot filter, delivery hose) are in PVDF
- PP pump head and accessories (with PE hose) available on request

MODEL	TMS DC	TMS MF	TMS PH	TMS RH
CODE	TDC	TMF	TPH	TRH
Dosing system	Constant	Constant/proportional	Proportional	Proportional
Level control	•	•	•	•
Flow sensor input		•		
Stand-by input	•	•	•	•
Alarm output	•	•	Optional	Optional
Functions	Constant (lph, sph, spm)	• MULTIFUNCTION (Constant, Divide, Multiply, PPM, Batch, Volt, mA, %, ml/q) • Set AUTOMATIC REPRIMING, with a flow sensor installed. • Set STROKES RECOVERY SYSTEM, with a flow sensor installed. • Set UPKEEP DOSING MODE in plant shutdown situation. WORK-PAUSE MODE: cyclic dosing controlled by an external contact.	PH meter (0-14) – supplied without pH probe	ORP meter (0-2000mV)- supplied without ORP probe

FLOW						MODEL				PUMP HEAD	HOSE
Pressure bar	Flow l/h	cc/S	CP PVDF	PVDF injection hose	Suction hose	TMS DC	TMD MF	TMS PH	TMS RH	PMMA	PVDF
20	05	0,7	L	4 x 6	4 x 6	300400	300410	300420	300430	-	-
05	15	2,1	N	6 x 8	6 x 8	300401	300411	300421	300431	-	-
04	20	2,8	N	6 x 8	6 x 8	300402	300412	300422	300432	-	-
03	30	4,2	S	8 x 10	8 x 12	300403	300413	300423	300433	-	-
01	50	7	S	8 x 10	8 x 12	300404	300414	300424	300434	-	-
00	100	14	T	12 x 18 PVC retined	12 x 18 PVC retined	300405	300415	300425	300435	-	-

TMSA series - self venting

Flow rate up to 100 L/hr, working pressure up to 20 bar

TMSA DC
TMSA MF
TMSA PH
TMSA RH

- Wall mounted, with dispaly
- Microprocessor technology
- Self venting PVDF pump head (outgassing hose: 4x6 PE)
- All liquid ends (pump head, injection valve, foot filter, delivery hose) are in PVDF
- PP pump head and accessories (with PE hose) available on request

MODEL	TMSA DC	TMSA MF	TMSA PH	TMSA RH
CODE	TAD	TFF	TAH	TAR
Dosing system	Constant	Constant/proportional	Proportional	Proportional
Level control	•	•	•	•
Flow sensor input		•		
Stand-by input	•	•	•	•
Alarm output	•	•	Optional	Optional
Functions	Constant (lph, sph, spm)	• MULTIFUNCTION (Constant, Divide, Multiply, PPM, Batch, Volt, mA, %, ml/q) • Set AUTOMATIC REPRIMING, with a flow sensor installed. • Set STROKES RECOVERY SYSTEM, with a flow sensor installed. • Set UPKEEP DOSING MODE in plant shutdown situation. WORK-PAUSE MODE: cyclic dosing controlled by an external contact.	PH meter (0-14) – supplied without pH probe	ORP meter (0-2000mV)- supplied without ORP probe

FLOW						MODEL				HOSE
Pressure bar	Flow l/h	cc/S	CP PVDF	PVDF injection hose	Suction hose	TMSA DC	TMSA MF	TMSA PH	TMSA RH	PVDF
20	3,2	0,44	LA	4 x 6	4 x 6	300440	300450	300460	300465	-
05	10	1,39	NA	6 x 8	6 x 8	300441	300451	300461	300466	-
04	13	1,80	NA	6 x 8	6 x 8	300442	300452	300462	300467	-
03	20	2,7	SA	8 x 10	8 x 12	300443	300453	300463	300468	-
01	35	7,4	TA	8 x 10	8 x 12	300444	300454	300464	300469	-

T series - manual venting

Flow rate up to 100 L/hr, working pressure up to 20 bar

T CO
T CL

- Wall mounted
- Stroke speed adjustment
- Microprocessor technology
- Manual venting PVDF pump head
- All liquid ends (pump head, injection valve, foot filter, delivery hose) are in PVDF
- PP pump head and accessories (with PE hose) available on request

MODEL	T CO	T CL
CODE	TCO	TCL
Dosing system	Constant	Constant
Level control		•
Stroke speed (freq.) adjustment	0-100%	
Functions	Speed reducer (1-10)	Speed reducer (1-10)

FLOW						MODEL		PUMP HEAD	HOSE
Pressure bar	Flow l/h	cc/S	CP PVDF	PVDF injection hose	Suction hose	T CO	T CL	PMMA	PVDF
20	05	0,7	L	4 x 6	4 x 6	300470	300480	-	-
05	15	2,1	N	6 x 8	6 x 8	300471	300481	-	-
04	20	2,8	N	6 x 8	6 x 8	300472	300482	-	-
03	30	4,2	S	8 x 10	8 x 12	300473	300483	-	-
01	50	7	S	8 x 10	8 x 12	300474	300484	-	-
00	100	14	T	12 x 18 PVC retined	12 x 18 PVC retined	300475	300485	-	-

TA series - self venting

Flow rate up to 100 L/hr, working pressure up to 20 bar

TA CO
TA CL

- Wall mounted
- Stroke speed adjustment
- Microprocessor technology
- Self venting PVDF pump head (outgassing hose: 4x6 PE)
- All liquid ends (pump head, injection valve, foot filter, delivery hose) are in PVDF
- PP pump head and accessories (with PE hose) available on request

MODEL	TA CO	TA CL
CODE	TOA	TCA
Dosing system	Constant	Constant
Level control		•
Stroke speed (freq.) adjustment	0-100%	
Functions	Speed reducer (1-10)	Speed reducer (1-10)

FLOW						MODEL		HOSE
Pressure bar	Flow l/h	cc/S	CP PVDF	PVDF injection hose	Suction hose	TA CO	TA CL	PVDF
20	3,2	0,44	LA	4 x 6	4 x 6	300490	300500	-
05	10	1,39	NA	6 x 8	6 x 8	300491	300501	-
04	13	1,80	NA	6 x 8	6 x 8	300492	300502	-
03	20	2,7	SA	8 x 10	8 x 12	300493	300503	-
01	35	7,4	TA	8 x 10	8 x 12	300494	300504	-

VMS series - manual venting

Flow rate up to 17 L/hr, working pressure up to 20 bar

VMS MF
VMS PO
VMS EN

- Wall mounted, with display
- Microprocessor technology, manual venting PVDF pump head
- All liquid ends (pump head, injection valve, foot filter) are in PVDF
- PP pump head and accessories (with PE hose) available on request

MODEL	VMS MF	VMS PO	VMS EN
CODE	VMF	VPO	VEN
Dosing system	Constant/proprtional	Proportional	Timered
Level Control	•	•	•
Level alarm output	Optional	Optional	
Functions	• MULTIFUNCTION (Constant, Divide, Multiply, PPM, Batch, Volt, mA, %, ml/q) • Set UPKEEP DOSING MODE in plant shutdown situation. • WORK-PAUSE MODE: cyclic dosing controlled by an external contact.	• pH/ORP control and regulation. Parameter set by menu • Working range: pH: 0/14 pH; OP: -1000mV/+1000mV. • Fast calibration on standard value. • Restore last calibration	• Weekly timer • Electrovalve control(optional)

FLOW						MODEL			HOSE
Pressure bar	Flow l/h	cc/s	PVDF pump head	PE injection hose	PVC suction hose	VMS MF	VMS PO	VMS EN	PVDF
20	01	0,1	J	4 x 8	4 x 8	300510	300527	300545	-
18	02	0,19	K	4 x 8	4 x 8	300511	300528	300546	-
18	04	0,37	K	4 x 8	4 x 8	300512	300529	300547	-
15	02	0,19	K	4 x 6	4 x 6	300513	300530	300548	-
15	04	0,37	K	4 x 6	4 x 6	300514	300531	300549	-
15	05	0,46	K	4 x 6	4 x 6	300515	300532	300550	-
10	04	0,37	K	4 x 6	4 x 6	300516	300533	300551	-
10	05	0,46	K	4 x 6	4 x 6	300517	300534	300552	-
10	10	0,93	K	4 x 6	4 x 6	300518	300535	300553	-
07	06	0,56	K	4 x 6	4 x 6	300519	300536	300554	-
05	10	0,93	K	4 x 6	4 x 6	300520	300537	300555	-
05	12	1,11	K	4 x 6	4 x 6	300521	300538	300556	-
05	01	0,1	J	4 x 6	4 x 6	300522	300539	300557	-
04	08	0,74	K	4 x 6	4 x 6	300523	300540	300558	-
03	10	0,93	K	4 x 6	4 x 6	300524	300541	300559	-
02	17	1,57	K	6 x 8	6 x 8 (PE)	300525	300542	300560	-
01	16	1,48	K	6 x 8	6 x 8 (PE)	300526	300543	300561	-

VMSA series - self venting

Flow rate up to 17 L/hr, working pressure up to 20 bar

VMSA MF
VMSA PO
VMSA EN

- Wall mounted, with display
- Microprocessor technology
- Self venting PVDF pump head (outgassing hose: 4x6 PE)
- All liquid ends (pump head, injection valve, foot filter) are in PVDF
- PP pump head and accessories (with PE hose) available on request

MODEL	VMSA MF	VMSA PO	VMSA EN
CODE	VAF	VAP	VAN
Dosing system	Constant/proprtional	Proportional	Timered
Level Control	•	•	•
Level alarm output	Optional	Optional	
Functions	• MULTIFUNCTION (Constant, Divide, Multiply, PPM, Batch, Volt, mA, %, ml/q). • Set UPKEEP DOSING MODE in plant shutdown situation. • WORK-PAUSE MODE: cyclic dosing controlled by an external contact.	• pH/ORP control and regulation. Parameter set by menu • Working range: pH: 0/14 pH; OP: -1000mV/+1000mV. • Fast calibration on standard value. • Restore last calibration	• Weekly timer • Electrovalve control(optional)

FLOW						MODEL			HOSE
Pressure bar	Flow l/h	cc/s	PVDF pump head	PE injection hose	PVC suction hose	VMSA MF	VMSA PO	VMSA EN	PVDF
18	02	0,19	KA	4 x 8	4 x 8	300565	300579	300600	-
15	03	0,28	KA	4 x 8	4 x 8	300566	300580	300601	-
15	01	0,1	KA	4 x 6	4 x 6	300567	300581	300602	-
10	3,4	0,32	KA	4 x 6	4 x 6	300568	300582	300603	-
10	07	0,65	KA	4 x 6	4 x 6	300569	300583	300604	-
10	02	0,19	KA	4 x 6	4 x 6	300570	300584	300605	-
10	0,5	0,05	JA	4 x 6	4 x 6	300571	300585	300606	-
07	04	0,37	KA	4 x 6	4 x 6	300572	300586	300607	-
05	7,5	0,7	KA	4 x 6	4 x 6	300573	300587	300608	-
05	09	0,84	KA	4 x 6	4 x 6	300574	300588	300609	-
04	5,5	0,51	KA	4 x 6	4 x 6	300575	300589	300610	-
03	07	0,65	KA	4 x 6	4 x 6	300576	300590	300611	-
02	13	1,2	KA	4 x 6	4 x 6 (PE)	300577	300591	300612	-
01	13,5	1,25	KA	6 x 8	6 x 8 (PE)	300578	300592	300613	-

V series - manual venting

Flow rate up to 17 L/hr, working pressure up to 20 bar

V CO
V CL

- Wall mounted
- Microprocessor technology
- Stroke speed adjustment
- Manual venting PVDF pump head
- All liquid ends (pump head, injection valve, foot filter) are in PVDF
- PP pump head and accessories (with PE hose) available on request

MODEL	V CO	V CL
CODE	VCO	VCL
Dosing system	Constant	Constant
Level control		•
Stroke speed (freq.) adjustment	0-100%	0-100%
Level alarm output		Optional (+€ 30,00)
Functions	Speed reducer (1-10)	Speed reducer (1-10)

FLOW						MODEL		HOSE
Pressure bar	Flow l/h	cc/s	PVDF pump head	PE injection hose	PVC suction hose	V CO	V CL	PVDF
20	01	0,1	J	4 x 8	4 x 8	300620	300640	-
18	02	0,19	K	4 x 8	4 x 8	300621	300641	-
18	04	0,37	K	4 x 8	4 x 8	300622	300642	-
15	02	0,19	K	4 x 6	4 x 6	300623	300643	-
15	04	0,37	K	4 x 6	4 x 6	300624	300644	-
15	05	0,46	K	4 x 6	4 x 6	300625	300645	-
10	04	0,37	K	4 x 6	4 x 6	300626	300646	-
10	05	0,46	K	4 x 6	4 x 6	300627	300647	-
10	10	0,93	K	4 x 6	4 x 6	300628	300648	-
07	06	0,56	K	4 x 6	4 x 6	300629	300649	-
05	10	0,93	K	4 x 6	4 x 6	300630	300650	-
05	12	1,11	K	4 x 6	4 x 6	300631	300651	-
05	01	0,1	J	4 x 6	4 x 6	300632	300652	-
04	08	0,74	K	4 x 6	4 x 6	300633	300653	-
03	10	0,93	K	4 x 6	4 x 6	300634	300654	-
02	17	1,57	K	6 x 8	6 x 8 (PE)	300635	300655	-
01	16	1,48	K	6 x 8	6 x 8 (PE)	300636	300656	-

VA series - self venting

Flow rate up to 17 L/hr, working pressure up to 20 bar

VA CO
VA CL

- Wall mounted
- Microprocessor technology
- Stroke speed adjustment
- Self venting PVDF pump head (outgassing hose: 4x6 PE)
- All liquid ends (pump head, injection valve, foot filter) are in PVDF
- PP pump head and accessories (with PE hose) available on request

MODEL	VA CO	VA CL
CODE	VAO	VAL
Dosing system	Constant	Constant
Level control		•
Stroke speed (freq.) adjustment	0-100%	0-100%
Level alarm output		Optional (+€ 30,00)
Functions	Speed reducer (1-10)	Speed reducer (1-10)

FLOW						MODEL		HOSE
Pressure bar	Flow l/h	cc/s	PVDF pump head	PE injection hose	PVC suction hose	VA CO	VA CL	PVDF
18	02	0,19	KA	4 x 8	4 x 8	300660	300680	-
15	03	0,28	KA	4 x 8	4 x 8	300661	300681	-
15	01	0,1	KA	4 x 6	4 x 6	300662	300682	-
10	3,4	0,32	KA	4 x 6	4 x 6	300663	300683	-
10	07	0,65	KA	4 x 6	4 x 6	300664	300684	-
10	02	0,19	KA	4 x 6	4 x 6	300665	300685	-
10	0,5	0,05	JA	4 x 6	4 x 6	300666	300686	-
07	04	0,37	KA	4 x 6	4 x 6	300667	300687	-
05	7,5	0,7	KA	4 x 6	4 x 6	300668	300688	-
05	09	0,84	KA	4 x 6	4 x 6	300669	300689	-
04	5,5	0,51	KA	4 x 6	4 x 6	300670	300690	-
03	07	0,65	KA	4 x 6	4 x 6	300671	300691	-
02	13	1,2	KA	4 x 6	4 x 6 (PE)	300672	300692	-
01	13,5	1,25	KA	6 x 8	6 x 8 (PE)	300673	300693	-

AMS AC series

Flow rate up to 17 L/hr, working pressure up to 20 bar

AMS AC CO
AMS AC CL
AMS AC MF

- Compressed air driven metering pump
- 230 VAC or compressed air power supply
- Stroke frequency adjustment
- Manual stroke length adjustment
- Manual venting PVDF pump head
- All liquid ends (pump head, injection valve, foot filter, delivery hose) are in PVDF

MODEL	AMS AC CO	AMS AC CL
CODE	AOA	ALA
Dosing system	Constant	Constant
Level control		•
Stroke speed (freq.) adjustment	0-100%	0-100%

MODEL	AMS AC MF
CODE	AMC
Dosing system	Constant/proportional
Level control	•
Flow sensor input	•
Stand-by input	•
Alarm output	•
Functions	• MULTIFUNCTION (Constant, Divide, Multiply, PPM, Batch, Volt, mA, %, ml/q) • Set AUTOMATIC REPRIMING, with a flow sensor installed. • Set STROKES RECOVERY SYSTEM, with a flow sensor installed. • Set UPKEEP DOSING MODE in plant shutdown situation • WORK-PAUSE MODE: cyclic dosing controlled by an external contact.

FLOW						MODEL			HOSE (suct./outgas.)
Pressure bar	Flow l/h	Cc/s	PVDF pump head	PVDF injection hose	Suction hose	AMS AC CO	AMS AC CL	AMS AC MF	PVDF
10	50	7	N	8x10	8x12	300700	300705	300710	-
05	140	19	T	13x16	12x18	300701	300706	300711	-
00	220	30	T	13x16	12x18	300702	300707	300712	-

K AC series

Flow rate up to 17 L/hr, working pressure up to 20 bar

K AC CO
K AC CL
K AC MF

- Compressed air driven metering pump
- 230 VAC or compressed air power supply
- Stroke frequency adjustment
- Manual stroke length adjustment
- Manual venting PVDF pump head
- All liquid ends (pump head, injection valve, foot filter, delivery hose) are in PVDF

MODEL	K AC CO	K AC CL
CODE	KCC	KLC
Dosing system	Constant	Constant
Level control		•
Stroke speed (freq.) adjustment	0-100%	0-100%

MODEL	K AC MF
CODE	KCF
Dosing system	Constant/proportional
Level control	•
Flow sensor input	•
Stand-by input	•
Alarm output	•
Functions	• MULTIFUNCTION (Constant, Divide, Multiply, PPM, Batch, Volt, mA, %, ml/q) • Set AUTOMATIC REPRIMING, with a flow sensor installed. • Set STROKES RECOVERY SYSTEM, with a flow sensor installed. • Set UPKEEP DOSING MODE in plant shutdown situation • WORK-PAUSE MODE: cyclic dosing controlled by an external contact.

FLOW						MODEL			PUMP HEAD	HOSE (suct./outgas.)
Pressure bar	Flow l/h	Cc/s	PVDF pump house	PVDF injection hose	Suction hose	K AC CO	K AC CL	K AC CL	PMMA	PVDF
10	18	2,1	M	6 x 8	6 x 8	300715	300716	300718	-	-

T AC serie

Flow rate up to 17 L/hr, working pressure up to 20 bar

T AC CO
T AC CL
T AC MF

- Compressed air driven metering pump
- 230 VAC or compressed air power supply
- Stroke frequency adjustment
- Manual venting PVDF pump head
- All liquid ends (pump head, injection valve, foot filter, delivery hose) are in PVDF

MODEL	T AC CI	T AC CL
CODE	TAO	TAL
Dosing system	Constant	Constant
Level control		•
Stroke speed (freq.) adjustment	0-100%	0-100%

MODEL	T AC MF
CODE	TAF
Dosing system	Constant/proportional
Level control	•
Flow sensor input	•
Stand-by input	•
Alarm output	•
Functions	• MULTIFUNCTION (Constant, Divide, Multiply, PPM, Batch, Volt, mA, %, ml/q) • Set AUTOMATIC REPRIMING, with a flow sensor installed. • Set STROKES RECOVERY SYSTEM, with a flow sensor installed. • Set UPKEEP DOSING MODE in plant shutdown situation • WORK-PAUSE MODE: cyclic dosing controlled by an external contact.

FLOW						MODEL			HOSE (suct./outgas.)
Pressure bar	Flow l/h	Cc/s	PVDF pump head	PVDF injection hose	Suction hose	T AC CO	T AC CL	T AC MF	PVDF
10	50	7	N	8x10	8x12	300720	300723	300726	-
05	150	20	T	13x16	12x18	300721	300724	300727	-
00	230	32	T	13x16	12x18	300722	300725	300728	-

RAC series

Car Wash

Compressed Air driven pumps
3 installing modes: horizontal, wall and DIN mounting
Multiple pumps installation (side by side)
Single injection control knob

RAC Pneumatic

RACV Pneumatic with electrovalve

RACP Pneumatic with priming button

„R" SERIES

	RAC	RACV	RACP
CODE	RAC	RAV	RAP
Dosing system		Constant	
Funcions	/	Electrovalve	Priming button

FEATURES					MODEL		
Pressure bar	Flow l/h	cc/s	CP	Hose	RAC	RACV	RACP
6	1	0,14	R	4x6 – 6x8	300730	300734	300738
6	3	0,42	R	4x6 – 6x8	300731	300735	300739
6	6	0,83	R	4x6 – 6x8	300732	300736	300740
6	12	1,66	R	4x6 – 6x8	300733	300737	300741

AMS LPV series - for viscosity up to 8.000 cPs

- For liquids with max viscosity 8.000 cPs, PMMA pump head (with SS balls)
- Liquid ends: 3/4" injection valve, 16x22 PVC suction hose and 8x12 PE injection hose
- Not included: Stainless steel foot filter with valve (+ € 70,00).

Note: flow may change according to viscosity. Flow rates indicated refer to a measure with water.

MODEL	AMS MF LPV	AMS PH LPV	AMS RH LPV	AMS CO PLUS LPV	AMS CL PLUS LPV	AMS PLUS LPV
CODE	AMF	APH	ARH	AUO	ACP	AMU
Dosing system	Constant/proportional	Proportional	Proportional	Constant	Constant	Constant proportional
Level control	•	•	•		•	•
Flow sensor input	•					
Stand-by input	•					
Alarm output	•	Optional	Optional			Optional
Digital signal	•					•
Current signal (0/4mA=0 pulses; 20ma=max pulses)	•					•
Functions	• Set AUTOMATIC REPRIMING, with a flow sensor installed • Set STROKES RECOVERY SYSTEM, with a flow sensor installed. • Set UPKEEP DOSING MODE in plant shutdown situation. • WORK-PAUSE MODE: cyclic dosing controlled by an external contact.	PH meter (0-14) – supplied without pH probe	ORP meter (0-2000mV)- supplied without ORP probe	Speed reducer (1-10)	Speed reducer (1-10)	Working modes: • Constant/ constant with 1-10 divider • 1-10 pulses multiplier • 1-10 pulses divider • 10-100 pulses divider • 100-1000 pulses divider • mA current signal (0/4 mA = 0 pulses: 20 mA = max pulses)

FLOW					MODEL					
Pressure bar	Flow l/h	cc/S	Injection hose	Suction hose	AMS MF LPV	AMS PH LPV	AMS RH LPV	AMS CO PLUS LPV	AMS CL PLUS LPV	AMS PLUS LPV
25	05	0.70	8x12	16x22	300745	300751	300757	300765	300775	300781
15	10	1.4	8x12	16x22	300746	300752	300758	300766	300776	300782
10	15	2.1	8x12	16x22	300747	300753	300759	300767	300777	300783
07	20	2.8	8x12	16x22	300748	300754	300760	300768	300778	300784
03	40	5.6	8x12	16x22	300749	300755	300761	300769	300779	300785
02	60	7.7	8x12	16x22	300750	300756	300762	300770	300780	300786

KMS LPV series - for viscosity up to 8.000 cPs

- For liquids with max viscosity 8.000 cPs
- PMMA pump head (with SS balls)
- Liquid ends: 3/4" injection valve, 16x22 PVC suction hose and 8x12 PE injection hose
- Not included: Stainless steel foot filter with valve (+ € 70,00).

Note: flow may change according to viscosity. Flow rates indicated refer to a measure with water.

MODEL	KMS DC LPV	KMS MF LPV	KMS CL	KMS EN LPV	KMS PH LPV	KMS RH LPV	K CO PLUS LPV	K CL PLUS LPV	K PLUS LPV
CODE	KDC	KMF	KML	KEN	KPH	KRH	KPO	KPL	KMU
Dosing system	Constant	Constant/proportional	Proportional	Timered	Prop.	Prop.	Constant	Constant	Constant/ proportional
Level control	•	•	•	•	•	•		•	•
Flow sensor input		•							
Stand-by input	•	•			•	•			
Alarm output		•			Optional	Optional			Optional
Digital signal		•							•
Current signal (0/4mA=0 pulses; 20mA=max pulses)		•							•
Functions	Constant (lph, sph, spm)	• MULTIFUNCTION (Constant, Divide, Multiply, PPM, Batch, Volt, mA, %, ml/q) • Set AUTOMATIC REPRIMING, with a flow sensor installed. • Set STROKES RECOVERY SYSTEM, with a flow sensor installed. • Set UPKEEP DOSING MODE in plant shutdown situation • WORK-PAUSE MODE: cyclic dosing controlled by an external contact.	Free chlorine Cl (0-10,00 mg/l or 0-2,00 mg/l) meter. Amperometric cells mod. ECL1 or ECL6/7/12 (to specify) –supplied without probe	Weekly timer Electrovalve control (optional)	PH meter (0-14) – supplied without pH probe	ORP meter (0-2000 mV)- supplied without ORP probe	Speed reducer (1-10)	Speed reducer (1-10)	Working modes: • Constant/ constant with 1-10 divider • 1-10 pulses multiplier • 1-10 pulses divider • 10-100 pulses divider • 100-1000 pulses divider • mA current signal (0/4 mA = 0 pulses: 20 mA = max pulses)

FLOW							MODEL						PUMP HEAD	HOSE
Pressure bar	Flow l/h	cc/S	CP PVDH	CP Inox	PVDH injection hose	Suction hose	KMS DC LPV	KMS MF LPV	KMS CL LPV	KMS EN LPV	KMS PH LPV	KMS RH LPV	K CO PLUS LPV	K CL PLUS LPV	K PLUS LPV
20	1	0,1	I	Ii	4 x 6	4 x 6	300790	300800	300808	300815	300825	300831	300838	300845	300851
18	2	0,19	L	Li	4 x 6	4 x 6	300791	300801	300809	300816	300826	300832	300839	300846	300852
15	4	0,37	L	Li	4 x 6	4 x 6	300792	300802	300810	300817	300827	300833	300840	300847	300853
10	5	0,46	L	Li	4 x 6	4 x 6	300793	300803	300811	300818	300828	300834	300841	300848	300854
8	8	0,74	L	Li	4 x 6	4 x 6	300794	300804	300812	300819	300829	300835	300842	300849	300855
5	10	0,93	L	Li	4 x 6	4 x 6	300795	300805	300813	300820	300830	300836	300843	300850	300856

AMSP - for viscosity up to 50.000 cPs 50.000 cPs

AMSP MF
AMSP PH
AMSP RH

- For liquids with max viscosity 50.000 cPs
- Foot mounted, with display
- Microprocessor technology
- Manual stroke length adjustment
- Provided without injection valve, foot filter and level probe.

Warning: flow rates depends on viscosity. The flow rates indicated refer to a measure with water.

MODEL	AMSP MF	AMSP PH	AMSP RH
CODE	AMF	APH	ARH
Dosing system	Constant/proportional	Proportional	Proportional
Level control	•	•	•
Flow sensor input	•		
Stand-by input	•		
Alarm output	•	Optional	Optional
Functions	• MULTIFUNCTION (Constant, Divide, Multiply, PPM, Batch, Volt, mA, %, ml/q) • Set AUTOMATIC REPRIMING, with a flow sensor installed. • Set STROKES RECOVERY SYSTEM, with a flow sensor installed. • Set UPKEEP DOSING MODE in plant shutdown situation. WORK-PAUSE MODE: cyclic dosing controlled by an external contact.	PH meter (0-14) - supplied without pH probe	ORP meter (0-2000mV) - supplied without ORP probe

FLOW						MODEL		
Pressure bar	Flow l/h	Cc/s	Pump head model	PVC injection hose	PVC Suction hose	AMSP MF	AMSL PH	AMSP RH
08	02	0.28	LP	16x22	20x27	300860	300865	300870
06	04	0.56	MP	16x22	20x27	300861	300866	300871
04	10	1,4	NP	16x22	20x27	300862	300867	300872
02	25	3.5	SP	16x22	20x27	300863	300868	300873
01	40	5,6	TP	16x22	20x27	300864	300869	300874

AMSP - for viscosity up to 50.000 cPs 50.000 cPs

AMSP CO PLUS
AMSP PLUS

- For liquids with max viscosity 50.000 cPs
- Foot mounted, with display
- Microprocessor technology
- Manual stroke length adjustment
- Provided without injection valve, foot filter and level probe.

Warning: flow rates depends on viscosity. The flow rates indicated refer to a measure with water.

MODEL	AMSP CO PLUS	AMSP PLUS
CODE	AUO	AMU
Dosing system	Constant	Constant
Level control		•
Stroke speed (freq.) adjustment	0-100%	0-1%, 0-10%, 0-100%
Stroke length adjustment	•	•
Digital signal		•
Current signal (0-4 mA=0 pulses; 20mA=max pulses)		•
Alarm output		•
Functions	Speed reducer (1-10)	Working modes: • Constant/ constant with 1-10 divider • 1-10 pulses multiplier • 1-10 pulses divider • 10-100 pulses divider • 100-1000 pulses divider • mA current signal (0/4 mA = 0 pulses: 20 mA = max pulses)

FLOW						MODEL	
Pressure bar	Flow l/h	Cc/s	Pump head model	PVC injection hose	PVC Suction hose	AMSP CO PLUS	AMSP PLUS
08	02	0.28	LP	16x22	20x27	300875	300880
06	04	0.56	MP	16x22	20x27	300876	300881
04	10	1,4	NP	16x22	20x27	300877	300882
02	25	3.5	SP	16x22	20x27	300878	300883
01	40	5,6	TP	16x22	20x27	300879	300884

TMSP series - for viscosity up to 50.000 cPs

TMSP DC
TMSP MF
TMSP PH
TMSP RH

- For liquids with max viscosity 50.000 cPs
- Foot mounted, with display
- Microprocessor technology
- Provided without injection valve, foot filter and level probe.

Warning: flow rates depends on viscosity. The flow rates indicated refer to a measure with water.

MODEL	TMSP DC	TMSP MF	TMSP PH	TMSP RH
CODE	TDC	TMF	TPH	TRH
Dosing system	Constant	Constant/proportional	Proportional	Proportional
Level control	•	•	•	•
Flow sensor input		•		
Stand-by input	•	•	•	•
Alarm output	•	•		
Functions	Constant (lph, sph, spm)	• MULTIFUNCTION (Constant, Divide, Multiply, PPM, Batch, Volt, mA, %, ml/q) • Set AUTOMATIC REPRIMING, with a flow sensor installed. • Set STROKES RECOVERY SYSTEM, with a flow sensor installed. • Set UPKEEP DOSING MODE in plant shutdown situation. WORK-PAUSE MODE: cyclic dosing controlled by an external contact.	PH meter (0-14) - supplied without pH probe	ORP meter (0-2000mV) - supplied without ORP probe

FLOW						MODEL			
Pressure bar	Flow l/h	Cc/s	Pump head model	PVC suction hose	PVC injection hose	TMSP DC	TMSP MF	TMSP PH	TMSP RH
06	01	0,14	LP	20x27	16x22	300890	300895	300903	300910
04	03	0,42	MP	20x27	16x22	300891	300896	300904	300911
02	08	1,2	NP	20x27	16x22	300892	300900	300905	300912
01	20	2,8	SP	20x27	16x22	300893	300901	300906	300913
0,5	25	3,5	TP	20x27	16x22	300894	300902	300907	300914

TP series - for viscosity up to 50.000 cPs

TP CO

- For liquids with max viscosity 50.000 cPs
- Foot mounted
- Microprocessor technology
- Manual stroke length adjustment
- Provided without injection valve, foot filter and level probe.

Warning: flow rates depends on viscosity. The flow rates indicated refer to a measure with water.

MODEL	TP CO
CODE	TCO
Dosing system	Constant
Stroke speed (freq.) adjustment	0-100%
Functions	Speed reducer (1-10)

FLOW						MODEL
Pressure bar	Flow l/h	Cc/s	Pump head model	PVC suction hose	PVC injection hose	TP CO
06	01	0,14	LP	20x27	16x22	300920
04	03	0,42	MP	20x27	16x22	300921
02	08	1,2	NP	20x27	16x22	300922
01	20	2,8	SP	20x27	16x22	300923
0,5	25	3,5	TP	20x27	16x22	300924

Prius

Flow rate up to 500 L/hr, working pressure up to 10 bar

Prius D

Motor driven diaphragm metering pump

- Manual stroke lenght adjustment
- Manual stroke lenght adjustment
- High strength PTFE membrane - 5 - year warranty
- Spring return mechanism
- Atex version avalaible
- Models up to 160 l/h are supplied with accessories (filter, 3/4" injection and hose fitting)
- Single or three phase motors

Prius P

Motor driven plunger metering pump

- Ceramic or Stainless Steel plunger
- Models up to 130 l/h are supplied with accessories(filter, 3/4" injection and hose fitting)
- Single phase motors

„PRIUS D" SERIES – 50 Hz / 3-PHASE MOTOR

PRIUS D 50 Hz / 3-PHASE MOTOR									
REF.	Pump head mod.	Stroke lenght	Stroke/1´	Pressure bar	Capacity l/h	Motor	HOSES CONNECTION		
							PVDF	SS	PVC
301320	NM	3 mm	175	10	60	0,18 kW	½" 13 mm (i.d.)	R½" G½"	/
301321			94		30				
301322			70		24				
301323			35		12				
301324		4 mm	35	10	16	0,18 kW	½" 13 mm (i.d.)	R½" G½"	/
301325	TM	3 mm	175	10	105	0,37 kW	¾" 13 mm (i.d.)	R¾" G¾"	/
301326			94		56				
301327			70		42				
301328		4 mm	175	7	160	0,37 kW	¾" 13 mm (i.d.)	R¾" G¾"	/
301329			94		86				
301330			70		64				
301331		6 mm	175	5	240	0,37 kW	¾" 18 mm (i.d.)	R¾" G¾"	/
301332			94		128				
301333			70		96				
301334	UM	4 mm	175	5	350	0,37 kW	/	R1"	G1 –½" 30 mm (i.d.)
301335			94		188				
301336			70		140				
301337		5 mm	175	5	440	0,37 kW	/	R1"	G1 –½" 30 mm (i.d.)
301338			94		236				
301339			70		176				
301340		6 mm	175	5	530	0,37 kW	/	R1"	G1 –½" 30 mm (i.d.)
301341			94		284				
301342			70		212				

„PRIUS D" SERIES – 50 Hz / SINGLE PHASE MOTOR

PRIUS D 50 Hz / SINGLE PHASE MOTOR									
REF.	Pump head mod.	Stroke lenght	Stroke/1´	Pressure bar	Capacity l/h	Motor	HOSES CONNECTION		
							PVDF	SS	PVC
301400	NM	3 mm	175	10	60	0,37 Kw	½" 13 mm (i.d.)	R½" G½"	/
301401			94		30				
301402			70		24				
301403	TM	3 mm	175	10	105	0,37 Kw	¾" 13 mm (i.d.)	R¾" G¾"	/
301404			94		56				
301405			70		42				
301406		4 mm	175	7	160	0,37 Kw	¾" 13 mm (i.d.)	R¾" G¾"	/
301407			94		86				
301408			70		64				
301409		6 mm	175	5	240	0,37 Kw	¾" 13 mm (i.d.)	R¾" G¾"	/
301410			94		128				
301411			70		96				
301412	UM	4 mm	175	5	350	0,55 Kw	/	R1"	G1 –½" 30 mm (i.d.)
301413			94		188				
301414			70		140				
301415		5 mm	175	5	440	0,55 Kw	/	R1"	G1 –½" 30 mm (i.d.)
301416			94		236				
301417			70		176				
301418		6 mm	175	5	530	0,55 Kw	/	R1"	G1 –½" 30 mm (i.d.)
301419			94		284				
301420			70		212				

WTC Series

Proportional metering pumps with control instrument for cooling towers

Digital programmable controller:

- 2 metering pumps (PVDF pump heads and liquid ends)
- 1 external pump input
- Conductivity probe included (0-9.999 µS)
- 2 output: On/Off (timer) and Blow Down
- Water meter input
- Flow input
- Stand-by input
- Permanent data storage
- Pre-bleed mode: reduce water system conductivity before biocide dosing
- Blow down mode: discharge control on conductivity values

All pumps/ timers can be programmed in one of the following modes:

- "pulse" mode (pulses from a water meter activate the pump/timer to run for a time set from 1 to 99 minutes);
- "percentual" mode (job for a percentege in a duty-cycle);
- ppm mode (dosing rate is determined by pulses from a pulse sender water meter or external signal and ppm set);
- "1-2-3-4" week mode (40 on/off cycles based on a 24-HOUR, 7-14-21-28-DAY clock dosing time from 0'1" up to 99'59");
- feed & bleed (dose inhibitor on the cooling tower bleed time - Blow Down output).

REF.	ITEM/MODEL
301001	WTC pack

WDPHxx Series

Proportional metering pumps with control instrument for swimming pools web ermes control via rs485

- LCD backlight display
- Instrument control by a rotation “encoder”
- PVDF pump heads and liquid ends
- Stand-by
- Flow sensor input
- Programmable delay at dosing startup (max 60 minutes). Not present in WDPHOS model.
- pH priority dosage. Not present in WDPHOS model.
- Service menu with probe reading value
- Probe check up
- Alarms: damaged probe, max dosage, levels, voltage, flow
- RS485 output for web control (ERMES)

MODEL	WDPHRH	WDPHCL	WDPHCF	WDPHCA	WDPHOS	WDPHRHS	WDPHCLS
CODE	WDH	WHL	WDF	WDA	WOS	WBS	WDS
Dosing parameters	Acid/base (pH) and disinfectant (ORP)	Acid/base (pH) and Chlorine/ Bromine	Acid/base (pH) and flocculant (gr/h) with 230 VAC output for Chlorine	Acid/base (pH) and anti-algae with 230 VAC output for Chlorine	Acid/base (pH) and active oxygen	Acid/base (pH) and disinfectant (ORP) SCHUKO plug output for lambitor or chlorine generator (hydrolisys)	Acid/base (pH) and chlorine/bromine SCHUKO plug output for lambitor or chlorine generator (hydrolisys)
Measurement and control range	pH: 0/14 pH ORP: 0/1000 mV	pH: 0/14 pH Chlorine: 0/10 mg/l Cl2 Bromine: 0/10 mg/l Br	pH: 0/14 pH Chlorine: 0/10 mg/l Cl2	pH: 0/14 pH Chlorine: 0/10 mg/l Cl2	pH: 0/14 pH Temp.: 0/100°C	pH: 0/14 pH ORP: 0/1000 mV	pH: 0/14 pH Chlorine: 0/10 mg/l Cl2
Electrovalve control (230 VAC)			•	•		•	•
Test function			•	•	•		
Weekly timer for shock dosage				•			
Weekly/daily timer for active Oxygen					•		
Standard volume at 25° and 30°C					•		

FLOW												
Pressure bar	Flow l/h	cc/s	CP PVDF	Injection hose (PE)	Suction hose (PVC)	VDPHRH	VDPHCL	VDPHCF	VDPHCA	VDPHOS	VDPHRHS	VDPHCLS
3	10	0,93	K	4 x 6	4 x 6	301010	301015	301017	301020	301023	301026	301029
SELF VENTING VERSION												
3	7	0,65	K	4 x 6	4 x 6	301011	301016	301018	301021	301024	301027	301030

Dosing units

- Zerocal
- Zerocal Basic
- Zerocal Plant
- Dosaphos

The water used in water systems contains a certain dissolved amount of calcium and magnesium salts making up the hardness. When water is heated, the hardness reacts and forms calcium carbonate and magnesium (scale) and carbon dioxide. Calcium carbonate precipitates, forming scale deposits on systems and heat exchangers, while carbon dioxide causes corrosive effects inside the system. It is therefore necessary to treat water by installing proportional dosing units. The dosing of anti scale anti corrosion products is in proportion to the flow of water (4 ppm). It does not alter the drinking water features and keeps the elements which would otherwise precipitate soluble, forming scale deposits, and protects from corrosion. Dosing units can be easily installed before water systems, water heaters or boilers and also before washing machines or dishwashers thanks to the Dima fittings.

All equipment in contact with drinking water is manufactured with top quality materials.

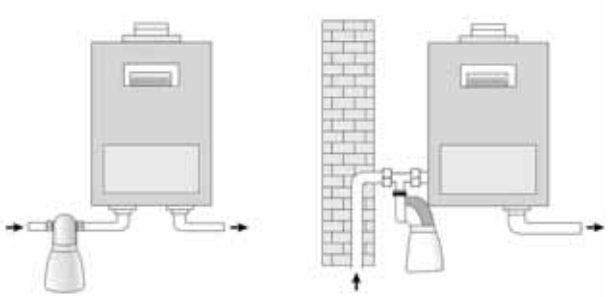
Refills

Accesories

Zerocal

Anti scale dosing units for boilers, with level alarm

Line DIMA



Zerocal line Zerocal DIMA

Zerocal does not require power supply and is fitted with a sound and visual signal system warning you when it is time to refill the anti scale liquid (yellow led) and when it is time to replace the battery (red led). The ergonomic shape and the adjustable bidirectional connections make installation fast and easy.
Thanks to the special Dima fittings Zerocal Dima can be easily installed in the small spaces between the wall and the boiler. Each pack includes a Zerocal DOSE refill. Material for pump and tank: POM/ PE.
To refill the anti scale product it is not necessary to close water supply; it is enough to unscrew the tank, pour in Zerocal DOSE and place the tank back in.

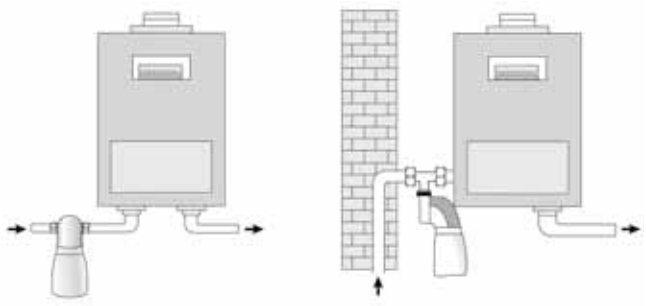
REF.	ITEM	PACK.	CONNECTIONS	MAX PRESS.	FLOW RATE MIN-MAX (ΔP = 0,5 bar)	DOSAGE	TANK	INTERAXIS	DIMENSIONS (LxHxZ)
		pcs.		bar	m^3/h	mg/l	ml	cm	cm
301101	ZEROCAL 1/2"	6	1/2-1/2" M	1,5÷6	0,16-0,6	~30	680	18	11 x 21 x 13,3
301102	ZEROCAL DIMA 1/2"	6	1/2-1/2" F	1,5÷6	0,16-0,6	~30	680	25	11 x 26 x 14
301103	ZEROCAL DIMA 1/2" - 3/4"	6	1/2" - 3/4" F	1,5÷6	0,16-0,6	~30	680	25	11 x 26,5 x 14

Water temperature: 5-40 °C; Room temperature: 5-50 °C; Battery: 3V Lithium CR 2032

Zerocal Basic

Anti scale dosing units for boilers

Line DIMA



Zerocal basic line Zerocal basic DIMA

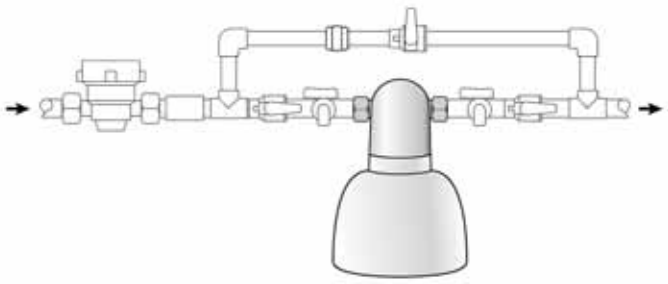
Zerocal Basic does not require power supply and differs from the traditional version for the small dimensions and for no visual acoustic alarm fitted.
The ergonomic shape and the adjustable bidirectional connections make installation fast and easy.
Thanks to the special Dima fittings Zerocal Basic Dima can be easily installed in the small spaces between the wall and the boiler.
Each pack includes a Zerocal DOSE refill. Material for pump and tank: POM/ PE.
To refill the anti scale product it is not necessary to close water supply; it is enough to unscrew the tank, pour in Zerocal DOSE and place the tank back in.

REF.	ITEM	PACK.	CONNECTIONS	MAX PRESS.	FLOW RATE MIN-MAX (ΔP = 0,5 bar)	DOSAGE	TANK	INTERAXIS	DIMENSIONS (LxHxZ)
		pcs.		bar	m^3/h	mg/l	ml	cm	cm
301105	ZEROCAL BASIC 1/2"	6	1/2-1/2" M	1,5÷6	0,16-0,6	~30	420	18	10 x 21 x 12
301106	ZEROCAL BASIC DIMA 1/2"	6	1/2-1/2" F	1,5÷6	0,16-0,6	~30	420	25	10 x 26 x 12,5
301107	ZEROCAL BASIC DIMA 1/2" - 3/4"	6	1/2" - 3/4" F	1,5÷6	0,16-0,6	~30	420	25	10 x 26,5 x 12,5

Water temperature: 5-40 °C; Room temperature: 5-50 °C; Battery: 3V Lithium CR 2032

Zerocal Plant

Anti scale dosing units for water systems, with level alarm



Zerocal Plant does not require power supply and is fitted with a sound and visual signal system warning you when it is time to refill the anti scale liquid (yellow led) and when it is time to replace the battery (red led).
The ergonomic shape and the adjustable bidirectional connections make installation fast and easy even in small spaces.
Each pack includes a Zerocal DOSE refill.
Material for pump and tank: POM/ PE.
To refill the anti scale product it is not necessary to close water supply; it is enough to unscrew the tank, pour in Zerocal DOSE and place the tank back in.

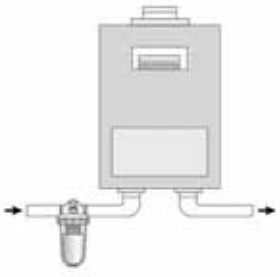
REF.	ITEM	PACK.	CONNECTIONS	MAX PRESS.	FLOW RATE MIN-MAX (ΔP = 0,5 bar)	DOSAGE	TANK	INTERAXIS	DIMENSIONS (LxHxZ)
		pcs.		bar	m^3/h	mg/l	ml	cm	cm
301110	ZEROCAL PLANT 1"	6	1"-1" F	1,5÷6	0,18-1	~17	1300	18	17 x 22 x 18

Water temperature: 5-40 °C; Room temperature: 5-50 °C; Battery: 3V Lithium CR 2032

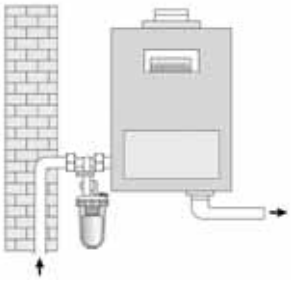
Dosaphos

Anti scale and anti corrosion proportional dosing units

200 250 DIMA



Dosaphos 200/250



Dosaphos DIMA

DOSAPHOS 200, 250 and DIMA are anti scale and anti corrosion dosing units for boilers, water heaters, washing machines and dishwashers. The operation is based on the automatic and proportional dosing of the Gelphos product, with chelating and sequestering action, able to:

- prevent calcium carbonate deposits (no scale)
- form a protection film on the internal surface of pipes (no corrosion).

Thanks to the adjustable connection flange between the venturi system and the dosing body, Dosaphos units can be installed on horizontal and vertical pipes. Dosaphos units can be easily installed in the small spaces between the wall and the boiler thanks to the special Dima fittings.

Dosaphos 250 and Dosaphos Dima are fitted with the Acquastop device, which avoids to build the cut-out bypass of the system and allows to refill the product easily without closing water supply.

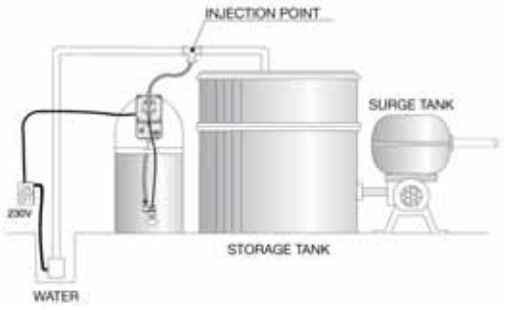
Each pack includes a Gelphos Rapid refill. Material: head in brass, housing in SAN.

REF.	ITEM	PACK.	BUILT-IN BYPASS	CONNECTIONS	MAX PRESS.	FLOW RATE (ΔP = 0,2 bar)	DOSAGE MAX	USE	USE
		pcs.			bar	m³/h	mg/l		cm
301115	DOSAPHOS 200 ½"	12	No	1/2-1/2" M	10	2	4 ppm	tec/pot	6 x 15
301116	DOSAPHOS 250 ½"	12	Yes	1/2-1/2" F	10	2	4 ppm	tec/pot	6 x 15
301117	DOSAPHOS DIMA ½"	12	Yes	1/2-1/2" F	10	1,5	4 ppm	tec/pot	4 x 19,5
301118	DOSAPHOS DIMA ½"- ¾"	12	Yes	1/2 -3/4" F	10	1,5	4 ppm	tec/pot	13 x 21
KITS									
301120	KIT DOSAPHOS 200 ½"	6	Kit Dosaphos 200 contains: • 1 Dosaphos 200 • 8 stick refills Gelphos Rapid for 8 months lifetime • Small wrench						
301121	KIT DOSAPHOS 250 ½"	6	Kit Dosaphos 250 contains: • 1 Dosaphos 250 • 8 stick refills Gelphos Rapid for 8 months lifetime • Small wrench						
301122 301123	KIT DOSAPHOS DIMA ½" KIT DOSAPHOS DIMA ½"- ¾"	6 6	Kit Dosaphos DIMA contains: • 1 Dosaphos DIMA • 8 stick refills Gelphos Rapid for 8 months lifetime • Small wrench						

Water temperature: 5-40 °C; Room temperature: 5-50 °C

_DOS/PRO

Analog constant metering pumps



Analog constant metering pumps are fitted with:

- foot filter
- suction and delivery connections
- injection connection
- suction and delivery hoses
- level probe (for PCS models only)

The SE version is assembled on a 100 l. tank.

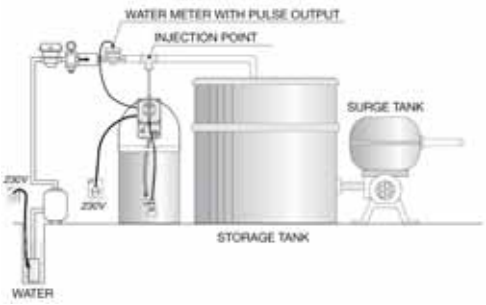
DOSPRO PC and PCS constant metering pumps are suitable for treating water with a flow rate which is constant in time. They can also be installed in parallel to booster pumps (with surge tanks use DOSPRO PPI). Dosage can be adjusted from 0 to 100% of the maximum flow rate of the pump. Pumps can be used for disinfection, anti scale and anti corrosion treatments, conditioning for potable and technical use.

TECHNICAL CHARACTERISTICS

Model	Dosing pump	Pump capacity L/h	Container volume (L)	Max. working pressure bar	Dispensing connection	Dimensions DxH (mm)	Weight Kg
CWG_DOS/PRO1	KPVM 2001 NP	1,0	100	20	1/2"	480 x 860	10
CWG_DOS/PRO2	KPVM 1802 NP	2,0	200	18	1/2"	480 x 980	12
CWG_DOS/PRO3	KPVM 1504 NP	3,9	200	15	1/2"	480 x 980	12

_DOS/PRO PP

Digital constant - proportional metering pumps



Digital constant-proportional metering pumps are fitted with:

- foot filter
- suction and delivery connections
- injection connection
- suction and delivery hoses
- level probe
- water meter with pulse output (for PPI models only)

CWG_DOS/PROP and PPI metering pumps, with constant and/or constant/proportional dosing, are able to dose the chemical according the water flow thanks to the water meter with pulse output (standard in PPI model and accessory for PP model).

Dosage can be adjusted in the different modes below:

Constant Pump doses with constant frequency according to the values set during programming.

Divide The pulses given by a meter connected to the pump are divided by the value set during programming.

Multiply The pulses given by a meter connected to the pump are multiplied by the value set during programming.

PPM The pulses given by a meter connected to the pump determine the dosage according to the value of mg/l set.

Batch The pulse given by an external contact starts the dosing. Pump can be programmed to dose a specific quantity.

Volt The voltage supplied to the pump determines the proportional dosing according to the "min" and "max" values set during programming.

mA The power supplied to the pump determines the proportional dosing according to the "min" and "max" values set during programming.

TECHNICAL CHARACTERISTICS							
Model	Dosing pump	Pump capacity L/h	Container volume (L)	Max. working pressure bar	Dispensing connection	Dimensions DxH (mm)	Weight Kg
CWG_DOS/PRO1P	KPVM 2001 NP	1,0	100	20	1/2"	480 x 860	10
CWG_DOS/PRO2P	KPVM 1802 NP	2,0	200	18	1/2"	480 x 980	12
CWG_DOS/PRO3P	KPVM 1504 NP	3,9	200	15	1/2"	480 x 980	12

NOTICE: Dosing station CWG_DOS/PRO_P is equiped with impulse watermeter 1" connection.

Control & measuring instruments

- MAX5 series
- LD Multichannel series
- LDS - LDS PLUS Encoder series
- MTOWER series
- Panel instruments - "JC" series
- Panel instruments - "J DIGITAL" series
- Panel instruments - "DIN DIGITAL" series
- Probes and cells
- Accessories

Water quality testing instruments are used to test water for chemical and biological agents, and to measure variables such as clarity and rate of movement. These instruments provide a standard tool that can be used to collect information from various water sources. Water quality testing instruments can monitor water temperature, dissolved oxygen, pH, conductivity, nitrogen/phosphorus concentration, turbidity, macroinvertebrates, and levels of pesticides and toxic chemicals.

Factory parameter configuration:

- pH
- ORP (ORP)
- Chlorine (total, free and combined)
- Chlorine dioxide
- Hydrogen Peroxide
- Ozone
- Peroxyacetic acid
- Turbidity
- Conductivity (contact or inductive)
- Dissolved oxygen
- Temperature
- Bromine

Its versatility allows different programming solutions: each channel can be programmed on user needs.
All information are provided through a widescreen LCD display (240x64).

MAX5 series

5 channels plus 1 for temperature

Water treatment
Cooling towers
Industrial chemical dosing
Depuration
Swimming pools disinfection

Instrument has:

- 6 setpoints output (on/off, PID or PWM) and 6 proportional output
- 1 Temperature setpoint, 1 probe cleaning output, 5 level tank input
- 5 daily/weekly timer for multiple options like flocculant, algicide, lights...
- Water meter input for water restore
- Temperature probe input, alarm output
- Wheel with "EASY-NAV" control
- Local & Remote Controlled
- Multiple probe readings can be viewed
- Probe readout menu, probes check up
- Permanent data storage with system log
- Stand-by input
- Alarms: damaged probes - max dosage - 2 overflow alarms per channel - 5 product level alarms - flow alarm
- Totalizer for instant flow rate

Options

- MODBUS protocol

MAX5	BASIC configuration	ADVANCED USB configuration	ETHERNET configuration	GSM/GPRS configuration	MODBUS configuration
REF.	302100	302101	302102	302103	302104
"6 mA output" option	-	-	-	-	-
9÷30VDC power supply	-	-	-	-	-

LD Multichannel series

2 channels plus 1 for temperature

Water treatment
Cooling towers
Industrial-level chemical dosing
Depuration
Agricolture
Swimming pools disinfection

Factory parameter configuration:

- pH
- ORP
- Chlorine/Bromine
- Conductivity
- Inductive Conductivity
- Chlorine Dioxide
- Hydrogen peroxyde
- Ozone
- Peracetic acid
- Turbidity

Controller for acid (pH) and a second parameter. Wheel with "EASY-NAV" control, Flow control, Local & Remote Controlled, ERMES web communication, Permanent data storage with system log, PT100 temperature probe, Stand-by input. Alarms: damaged probes - max dosage - threshold - levels - flow - reading. Programmable delay at dosing start-up (up to 60 minutes), Priority dosage, Probe readout menu, Probes check up, Multiple probe readings can be viewed. Working modes: on/off, impulsive proportional, proportional PWM and fixed PWM.
Automatic or manual dosing activity, Chlorine/Bromine selection with EBR (LDPHCL), Flocculant pump control, mA output (option).

Options:

- USB for data log recording
- Current Output (0/4 - 20 mA)
- Ethernet
- GSM/GPRS modem
- MODBUS protocol

LDPHRH pH (0÷14) - ORP (0÷1000mV) - °C (0÷200)
LDPHCL* pH (0÷14) - Chlorine (0÷10 mg/l Cl2) - °C (0÷200)
LDPHBR pH (0÷14) - Bromine (0÷10 mg/l Br) - °C (0÷200)
LDPHO2 pH (0÷14) - O2 (0÷200 mg/l H2O2) - °C (0÷200)
LDPHCD pH (0÷14) - Conductivity (depending on the probe) - °C (0÷200)
LDPHCDIND pH (0÷14) - Inductive conductivity (0÷3 mSI0÷30mSI0÷300mS) - °C (0÷99,9)
LDPHTORBH pH (0÷14) - Turbidity (0÷9999 NTU) - °C (0÷99,9)

LD - Custom configurations on client request.

*On order please specify parameters and chlorine probe model.

MODEL	LDPHCL [1]	LDPHRH	LDPHCD	LDPHCDIND	LDPHTORBH	LDPHTRC	LDPHFL
Measuring parameters	pH Chlorine/Bromine[1] Chlorine Dioxide Hydrogen peroxyde Ozone Peracetic acid	pH ORP	pH Conductivity	pH Inductive Conductivity[2]	pH Turbidity	pH Tracers	pH Flouride (F)
Measurement and control scale	0/14 pH Chlorine meas. based on probe	0/14 pH 0/1000 mV	0/14 pH Conductivity: 0/300,0 mS 0/3000 mS 0/30,00 mS 0/300,0 mS	0/14 pH Conductivity: 0-3,000 mS 0-30,00 mS 0-300,0 mS	0/14 pH 0/9,999 NTU	0/14 pH 0/9999 ppm	0/14 pH Concentration: 0/3,00 ppm (0,01 ppm) mV: 0/1000,00 mV (0,01 mV)
Compensation	pH in temp.[3] / chlorine in pH	pH in temperature	pH in temperature / cond. in temp.	pH in temperature / cond. in temp.	pH in temperature	/	temperature
BASIC Configuration	302110	302120	302130	302140	302150	302160	302170
ADVANCED USB Configuration	302111	302121	302131	302141	302151	302161	302171
ETHERNET Configuration	302112	302122	302132	302142	302152	302162	302172
GSM/GPRS Configuration	302113	302123	302133	302143	302153	302163	302173
MODBUS Configuration	302114	302124	302134	302144	302154	302164	302174
"mA output" option	-	-	-	-	-	-	-
9÷30VDC power supply	-	-	-	-	-	-	-

[1] Chlorine/Bromine selection with ECL6 probe.
[2] Inductive Conductivity with ECDIND PT probe.
[3] pH compensation with ECL6 probe.

LDS - LDS PLUS Encoder series

1 channel plus 1 for temperature

Water treatment
Cooling towers
Industrial-level chemical dosing
Depuration
Agricolture
Swimming pools disinfection

Factory parameter configuration:

- pH
- ORP
- Chlorine/Bromine
- Conductivity
- Inductive Conductivity
- Chlorine Dioxide
- Hydrogen peroxyde
- Ozone
- Peracetic acid
- Turbidity
- Dissolved Oxygen

Wheel with "EASY-NAV" control, flow control, local & Remote Control, ERMES web communication, permanent data storage with system log, PT100 temperature probe, Stand-by input, Alarms: damaged probes - max dosage - threshold - levels - flow, Programmable delay at dosing start-up (up to 60 minutes), Priority dosage, Automatic temperature compensation, Probe readout menu (LDSCDIND), Working modes: on/off, impulsive proportional, proportional PWM and fixed PWM, Automatic or manual dosing activity, mA output (option).

Options for LDS and LDS PLUS:

- USB for data log recording
- Current Output (0/4 - 20 mA)
- Ethernet
- GSM/GPRS modem

PLUS Features:

- MODBUS protocol
- 5 relais (2 setpoint; alarm; probe cleaning; circulation)
- Probe cleaning
- PID

LDSPH - LDSPH PLUS pH (0÷14) - °C (0÷200)
LDSRH - LDSRH PLUS ORP (0÷1000mV) - °C (0÷200)
LDSCL - LDSCL PLUS Chlorine (0÷10 mg/l Cl2) - °C (0÷200)
LDSCD - LDSCD PLUS Conductivity (depending on the probe) - °C (0÷200)
LDSCDIND - LDSCDIND PLUS Inductive conductivity (0÷3 mSl0÷30mSl0÷300mS) - °C (0÷99,9)
LDSTORBH - LDSTORBH PLUS Turbidity (0÷9999 NTU) - °C (0÷99,9)
LDSTRC - LDSTRC PLUS Markers (0÷9999 PPM) - °C (0÷200)
LDSFR - LDSFR PLUS Fluorine (1E-5÷1M) - Concentration (0-300 ppm) - °C (0÷60)

MODEL	LDSPH PLUS	LDSRH PLUS	LDSCL PLUS	LDSCD PLUS	LDSCDIND PLUS	LDSTORBH PLUS	LDSDO PLUS	LDSTRC PLUS	LDSFL PLUS
Measuring parameters	pH	ORP	Chlorine/ Bromine(1) Chlorine Dioxide Hydrogen peroxyde Ozone Peracetic acid	Conductivity	Inductive conductivity(2)	Turbidity	Dissolved Oxygen	Tracers	Flouride (F)
Measuremet and control scale	0/14 pH	0/1000 mV	based on probe	0/300,0 mS 0/3000 mS 0/30,00 mS 0/300,0 mS	0-3,000 mS 0-30,00 mS 0-300,0 mS	0/9999 NTU	20 mg/l O_2	0/9999 ppm	0/14 pH Concentration: 0/3,00 ppm (0,01 ppm) mV: 0/1000,00 mV (0,01 mV)
Compensation	temp.	/	/	temp.	temp.	temp.	temp. / pressure	/	temp.
BASIC Configuration	302180	302190	302200	302210	302220	302230	302240	302245	302250
ADVANCED USB Configuration	302181	302191	302201	302211	302221	302231	302241	302246	302251
ETHERNET Configuration	302182	302192	302202	302212	302222	302232	302242	302247	302252
GSM/GPRS Configuration	302183	302193	302203	320213	302223	302233	302243	302248	302253
MODBUS Configuration	302184	302194	302204	302214	302224	302234	302244	302249	302254
"mA output" option	-	-	-	-	-	-	-	-	-
"mA water meter input" option	-	-	-	-	-	-	-	-	-
9÷30VDC power supply	-	-	-	-	-	-	-	-	-

MTOWER series

Up to 3 channels

Features

- Conductivity for blowdown
- 2 Timers for biocides
- Pre-bleed
- Lockout

Factory parameter configuration:

- pH
- ORP
- Chlorine
- Conductivity or Inductive conductivity
- Temperature

Easy control by ENCODER wheel with "EASY-NAV" rotation, Current Feed&Bleed display, Local & Remote Controlled, ERMES web communication, Simultaneous multiple view for probes reading, Permanent data storage with system log, Stand-by input, mA output (option). Working modes: on/off, impulsive proportional, proportional PWM and fixed PWM. Pre-bleed: Reduced water system conductivity before biocide dosing.
Blow down: Discharge control on conductivity values, Lockout: Discharge valve locked for a settable time (after biocide dosage).
Timeout: Maximum discharge valve opening time, Programmable delay at dosing start-up (up to 99 minutes), PT100 temperature compensation.
Alarms: conductivity (high/low), Bleed timeout (conductivity not reached after set time), product level, flow, meter activity, not restored water.

Options:

- Conductivity inductive probe.
- USB for data log recording
- Current Output (0/4 - 20 mA)
- Ethernet, GSM/GPRS modem

1 CHANNEL MODELS **MTOWER CD:** controller for conductivity

2 CHANNELS MODELS **MTOWER CD/PH:** controller for conductivity and pH
MTOWER CD/RH: controller for conductivity and ORP
MTOWER CD/CL: controller for conductivity and Chlorine

3 CHANNELS MODELS **MTOWER PLUS CD/PH/CL:** controller for conductivity, pH and chlorine
MTOWER PLUS CD/PH/RH: controller for conductivity, pH, ORP

1 CHANNEL „MTOWER" COMPLETE COOLING TOWER CONTROL SYSTEMS

MODEL [1]	MTOWER CD
Measuring parameters	Conductivity (or inductive conductivity) [2]
Measurement and control scale	0/9999 mS [3]
Compensation	temperature
BASIC Configuration	302300
ADVANCED USB Configuration	302301
ETHERNET Configuration	302302
GSM/GPRS Configuration	302303
MODBUS Configuration	302304
"mA output" option	-
9÷30VDC power supply	-

[1] Probes not included. [2] Inductive Conductivity on request. [3] With inductive Conductivity probe: 0/3.000 mS or 0/30.000 mS.

2 CHANNELS „MTOWER PLUS" COMPLETE COOLING TOWER CONTROL SYSTEMS

MODEL [1]	MTOWER CD/PH	MTOWER CD/RH	MTOWER CD/CL
Measuring parameters	Conductivity (or inductive conductivity)[2], pH	Conductivity (or inductive conductivity)[2], ORP	Conductivity (or inductive conductivity) [2], Chlorine
Measurement and control scale	0/9999 mS [3], 0/14 pH	0/9999 mS [3], 0/999 mV	0/9999 mS [3], chlorine different scales[4]
Compensation	temperature	temperature	temperature
BASIC Configuration	302305	302310	302315
ADVANCED USB Configuration	302306	302311	302316
ETHERNET Configuration	302307	302312	302317
GSM/GPRS Configuration	302308	302313	302318
MODBUS Configuration	302309	302314	302319
"mA output" option	-		
9÷30VDC power supply	-		

Probes not included.
[1] Inductive Conductivity on request. [2] With Inductive Conductivity probe: 0/3.000 mS or 0/30.000 mS. [3] Scale based on the selected probe.

3 CHANNELS „MTOWER PLUS" COMPLETE COOLING TOWER CONTROL SYSTEMS

MODEL [1]	MTOWER PLUS CD/PH/CL	MTOWER PLUS CD/PH/RH
Measuring parameters	Conductivity (or inductive conductivity)[2], pH, Chlorine	Conductivity (or inductive conductivity)[2], pH, ORP
Measurement and control scale	0/9999 mS [3], 0/14 pH, Chlorine different scales [4]	0/9999 mS [3], 0/14 pH, 0-999 mV
Compensation	temperature	temperature
BASIC Configuration	302320	302325
ADVANCED USB Configuration	302321	302326
ETHERNET Configuration	302322	302327
GSM/GPRS Configuration	302323	302328
MODBUS Configuration	302324	302329
"mA output" option	-	
9÷30VDC power supply	-	

Probes not included.
[1] Inductive Conductivity on request. [2] With Inductive Conductivity probe: 0/3.000 mS or 0/30.000 mS. [3] Scale based on the selected probe.

Panel instruments - “JC” series

1 channel plus 1 for temperature

Water treatment
Cooling towers
Industrial-level chemical dosing
Depuration
Agricolture
Swimming pools disinfection

96x96 RACK MOUNTING SINGLE READING

JC PH: pH
JC RH: ORP
JC CL: Chlorine (Total - Free) - Chlorine Dioxide - Hydrogen - Peroxyde Ozone - Bromine - Peracetic Acid
JC CD: controller for conductivity

Controller for:

- pH
- ORP
- Chlorine (Total chlorine, Free Chlorine, Chlorine Dioxide, Hydrogen Peroxyde, Ozone, Bromine, Peracetic Acid depending on the probe)
- Conductivity (Probes not included)

Instruments have:

- 2 On-Off/proportional setpoints
- Flow alarm
- Flow sensor stand-by input
- 0÷20 mA or 4÷20 mA output proportional to read measured value and programmable in the reading range.

MODEL	JC PH	JC RH	JC CL	JC CD
REF.	302400	302401	302402	302403
Measuring parameters	pH	ORP	Total chlorine Free Chlorine Chlorine Dioxide Hydrogen Peroxyde Ozone Bromine Peracetic Acid	Conductivity
Measurement and control scale	0/14 pH	0/ +1000 mV	a) 0/2 mg/l Cl_2 b) 0/10 mg/l Cl_2 c) 0/20 mg/l Cl_2 d) 0/200 mg/l Cl_2	a) 0/2,000 mS b) 0/20,00 mS c) 0/200,0 mS d) 0/2000 mS e) 0/20,00 mS f) 0/200,0 mS
Compensation	temperature	/	/	temperature

Panel instruments - “J DIGITAL” series

1 channel plus 1 for temperature

Water treatment
Cooling towers
Industrial-level chemical dosing
Depuration
Agricolture
Swimming pools disinfection

96x48 RACK MOUNTING SINGLE READING

J DIGITAL PH: pH
J DIGITAL RH: ORP
J DIGITAL CL: Chlorine (Total - Free) - Chlorine Dioxide - Hydrogen - Peroxyde Ozone - Bromine Peracetic Acid
J DIGITAL CD: Conductivity
J DIGITAL O3: Ozone
J DIGITAL O2: Dissolved Oxygen
J DIGITAL CLO2: Chlorine Dioxide
J DIGITAL TEMP: Temperature

Controller for:

- pH
- ORP
- Chlorine (Total chlorine, Free Chlorine, Chlorine Dioxide, Hydrogen Peroxyde, Ozone, Bromine, Peracetic Acid depending on the probe)
- Conductivity
- Ozone
- Dissolved Oxygen
- Chlorine Dioxide
- Temperature (Probes not included)

Instruments have:

- 2 On-Off/proportional setpoints
- Flow alarm
- Flow sensor stand-by input
- 0÷20 mA or 4÷20 mA output proportional to read measured value and programmable in the reading range.

MODEL	J DIGITAL PH	J DIGITAL RH	J DIGITAL CL	J DIGITAL CD	J DIGITAL O_3	J DIGITAL O_2	J DIGITAL ClO_2	J DIGITAL TEMP
REF.	302410	302411	302412	302413	302414	302415	302416	302417
Measuring parameters	pH	ORP	Total chlorine Free Chlorine Chlorine Dioxide Hydrogen Peroxyde Ozone Bromine Peracetic Acid	Conductivity	Ozone	Dissolved Oxygen	Chlorine Dioxide	Temp.
Measurement and control scale	0/14 pH	0/ +1000 mV	a) 0/2 mg/l Cl_2 b) 0/10 mg/l Cl_2 c) 0/20 mg/l Cl_2	a) 0/2,000 mS b) 0/20,00 mS c) 0/200,0 mS d) 0/2000 mS e) 0/20,00 mS f) 0/200,0 mS	a) 0/1 mg/l O_3 b) 0/10 mg/l O_3	0/60 mg/l	a) 0/2 mg/l ClO_2 b) 0/20 mg/l ClO_2	0/100°C
Compensation	temp.	/	/	temp.	/	/	/	/

Panel instruments - “DIN DIGITAL” series

1 channel plus 1 for temperature

Water treatment
Cooling towers
Industrial-level chemical dosing
Depuration
Agricolture
Swimming pools disinfection

RAIL MOUNTING (6 modules) SINGLE READING

DIN DIGITAL PH: pH
DIN DIGITAL RH: ORP
DIN DIGITAL CL: Chlorine (Total - Free) - Chlorine Dioxide - Hydrogen - Peroxyde Ozone - Bromine Peracetic Acid
DIN DIGITAL CD: Conductivity
DIN DIGITAL O3: Ozone
DIN DIGITAL O2: Dissolved Oxygen
DIN DIGITAL CLO2: Chlorine Dioxide
DIN DIGITAL TEMP: Temperature

Controller for:

- pH
- ORP
- Chlorine (Total chlorine, Free Chlorine, Chlorine Dioxide, Hydrogen Peroxyde, Ozone, Bromine, Peracetic Acid depending on the probe)
- Conductivity
- Ozone
- Dissolved Oxygen
- Chlorine Dioxide
- Temperature (Probes not included)

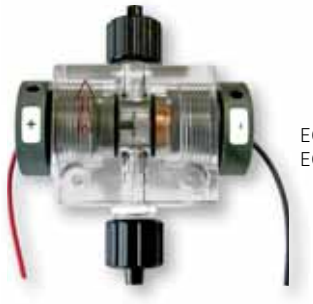
Instruments have:

- 2 On-Off/proportional setpoints
- Flow alarm
- Flow sensor stand-by input
- 0÷20 mA or 4÷20 mA output proportional to read measured value and programmable in the reading range.

MODEL	DIN DIGITAL PH	DIN DIGITAL RH	DIN DIGITAL CL	DIN DIGITAL CD	DIN DIGITAL O_3	DIN DIGITAL O_2	DIN DIGITAL ClO_2	DIN DIGITAL TEMP
REF.	302420	302421	302422	302423	302424	302425	302426	302427
Measuring parameters	pH	ORP	Total chlorine Free Chlorine Chlorine Dioxide Hydrogen Peroxyde Ozone Bromine Peracetic Acid	Conductivity	Ozone	Dissolved Oxygen	Chlorine Dioxide	Temp.
Measurement and control scale	0/14 pH	0/ +1000 mV	a) 0/2 mg/l Cl_2 b) 0/10 mg/l Cl_2 c) 0/20 mg/l Cl_2 d) 0/200 mg/l Cl_2	a) 0/2,000 mS b) 0/20,00 mS c) 0/200,0 mS d) 0/2000 mS e) 0/20,00 mS f) 0/200,0 mS	a) 0/1 mg/l O_3 b) 0/10 mg/l O_3	0/60 mg/l	a) 0/2 mg/l ClO_2 b) 0/20 mg/l ClO_2	0/100°C
Compensation	temp.	/	/	temp.	/	/	/	/

Measuring cell

ECL - Open amperometric cells



ECL4N
ECL5N

ECL6
ECL7
ECL12
ECL6E
ECL12E

Free chlorine (organic and inorganic) for fresh water and salt water.

MODELS	MEASURE	RANGE	WORKING PRESSURE	MAX TEMP.	FITTINGS	CABLE	FLOW LEVEL CONTROL	PROXIMITY SWITCH	PROBE HOLDER PRESET
ECL4N	free chlorine (organic and inorganic) for fresh water	0/10 mg/l	0,4/3 bar	40°C	6x8	1,5 m	-	-	-
ECL5N	free chlorine (organic and inorganic) for salt water	0/10 mg/l	0,4/3 bar	40°C	6x8	1,5 m	-	-	-
ECL6	free chlorine (organic and inorganic)	0/10 mg/l with flow stabilizator	0,4/3 bar	40°C	6x8	1,5 m			temperature pH, ORP
ECL7	free chlorine (organic and inorganic)	0/10 mg/l with flow stabilizator	0,4/3 bar	40°C	6x8	1,5 m			temperature pH, ORP (PG13,5)
ECL6/E	free chlorine (organic and inorganic)	0/10 mg/l with flow stabilizator	0,4/3 bar	40°C	6x8	1,5 m			temperature
ECL12	free chlorine (organic and inorganic) for salt water	0/10 mg/l with flow stabilizator	0,4/3 bar	40°C	6x8	1,5 m			temperature pH, ORP
ECL12/E	free chlorine (organic and inorganic) for salt water	0/10 mg/l with flow stabilizator	0,4/3 bar	40°C	6x8	1,5 m			temperature

Measuring cell

ECL - Closed amperometric cells

Sold with connector except for ECL1/5, ECL1/20, ECL1/200

Free chlorine (organic and inorganic) for fresh water, total chlorine, chlorine dioxide, hydrogen peroxyde, ozone, peracetic acid, bromine.

MODEL	MEASURE	RANGE	MAX WORKING PRESSURE	WORKING TEMP.	ELECTROLYTE*	MEMBRANE*	CABLE	COMPENSATION
ECL1/2 (2mg/l Cl_2) ECL1/5 (5mg/l Cl_2) ECL 1/20 (20mg/l Cl_2) ECL1/200 (200mg/l Cl_2)	free chlorine (inorganic)	0/200 mg/l depending on the model	1 bar	1/40°C	ELECL1	MECL1-2	1 m	temperature
ECL 3S/10	free chlorine (organic and inorganic) for fresh water	0/20 mg/l	0,5 bar	1/40°C	ELECL3S (for ECL3 probe for salt water ECL3S/SEA)	MECL3	1 m	temperature pH
ECL 3N/2 ECL 3N/10 ECL 3N/200	free chlorine (inorganic) for fresh water	0/2 mg/l 0/20 mg/l 0/200 mg/l	0,5 bar	1/40°C	ELECL3N	MECL3	1 m	temperature pH
ECL 8/2 ECL 8/20	total chlorine	0/2 mg/l 0/20 mg/l	0,5 bar	1/40°C	ELECL8	MECL8/2 or MECL8/20	1 m	temperature
ECL 18/2 ECL 18/10	free chlorine (inorganic) self cleaning	0/2 mg/l 0/10 mg/l	8 bar	5/70°C	ELECL18	/	1 m	temperature
ECL 2/2 ECL 2/20	chlorine dioxide	0/2 mg/l 0/20 mg/l	1 bar	1/40°C	ELECL2	MECL1-2	1 m	temperature
ECL 17/2 ECL 17/10	chlorine dioxide self cleaning	0/2 mg/l 0/10 mg/l	8 bar	5/70°C	ELECL17	/	1 m	temperature
ECL 9/200 ECL 9/2000	hydrogen peroxyde	0/200 mg/l 0/2000 mg/l	1 bar	1/40°C	ELECL9	MECL9	1 m	temperature
ECL 10/1 ECL 10/10	ozone	0/0,5 mg/l 0/10 mg/l	1 bar	1/40°C	ELECL10	MECL10	1 m	temperature
ECL 11/200 ECL 11/2000	peracetic acid	0/200 mg/l 0/2000 mg/l	1 bar	1/40°C	ELECL11	MECL11	1 m	temperature
EBR 1/20	bromine	0/20 mg/l	0,5 bar	1/40°C	ELEBR	MEBR	1 m	temperature
ECL SC	chlorine (absence)	0/2 mg/l	0,5 bar	1/40°C	ELESC	MESC	1 m	temperature

Measuring probes

EPH - pH probes

Working temperature max 70° C.
Working pressure max 7 bar.

MODEL	ELECTRODE	RANGE	PRESSURE/ TEMPERATURE	CONNECTION	CABLE	BODY	MIN CONDUCTIVITY
EPHS	combined	0/14 pH	7 bar/70°C (3,5 bar/80°C)	BNC	0,8 m	Æ 12 Epoxy	100 mS
EPHM	combined	0/14 pH	7 bar/70°C (3,5 bar/80°C)	BNC	4,5 m	Æ 12 Epoxy	100 mS
EPHL	combined	0/14 pH	7 bar/70°C (3,5 bar/80°C)	BNC	15 m	Æ 12 Epoxy	100 mS
EPHSN6	combined	0/14 pH	7 bar/70°C (3,5 bar/80°C)	SN6/PG13,5 threading	-	Æ 12 Epoxy	100 mS
EPHMD/100	double junction - combined	0/14 pH	7 bar/100°C	BNC	4,5	Æ 12 Epoxy	100 mS
EPHM/D	double junction – combined for Low Ionic application (low conductivity)	0/14 pH	7 bar/70°C (3,5 bar/80°C)	BNC	4,5	Æ 12 Epoxy	1 mS
EPHM/D/SN6	double junction – combined for Low Ionic application (low conductivity)	0/14 pH	7 bar/70°C (3,5 bar/80°C)	SN6/PG13,5 threading	-	Æ 12 Epoxy	1 mS
EPHSC	double junction – combined – self cleaning	0/14 pH	7 bar/70°C (3,5 bar/80°C)	BNC	4,5	Æ 12 Epoxy	100 mS
EPHSC/SN6	double junction – combined – self cleaning	0/14 pH	7 bar/70°C (3,5 bar/80°C)	SN6/PG13,5 threading	-	Æ 12 Epoxy	100 mS
EPHM/HF	double junction – combined – flouridic acid resistant (1%)	0/14 pH	7 bar/70°C (3,5 bar/80°C)	BNC	4,5	Æ 12 Epoxy	100 mS

Measuring probes

ERH - ORP probes

Working temperature max 70° C.
Working pressure max 7 bar.

MODEL	ELECTRODE	RANGE	PRESSURE/ TEMPERATURE	CONNECTION	CABLE	BODY	MIN CONDUCTIVITY
ERHS	combined	± 1000 mV	7 bar / 70°C (3,5 bar / 80°C)	BNC	0,8 m	Æ 12 Epoxy	100 mS
ERHM	combined	± 1000 mV	7 bar / 70°C (3,5 bar / 80°C)	BNC	4,5 m	Æ 12 Epoxy	100 mS
ERHL	combined	± 1000 mV	7 bar / 70°C (3,5 bar / 80°C)	BNC	15 m	Æ 12 Epoxy	100 mS
ERHHL	combined – for low Cl_2 concentration	± 1000 mV	6 bar / 100°C	BNC	10 m	Æ 12 Epoxy	100 mS
ERHSN6	combined	± 1000 mV	7 bar / 100°C	SN6 / PG13,5 threading	-	Æ 12 Epoxy	100 mS
ERHMD/100	double junction – combined	± 1000 mV	7 bar / 100°C	BNC	4,5 m	Æ 12 Epoxy	100 mS
ERHM/D	double junction – combined for Low Ionic application (low conductivity)	± 1000 mV	7 bar / 70°C (3,5 bar / 80°C)	BNC	4,5 m	Æ 12 Epoxy	1 mS
ERHSC	double junction – combined – self-cleaning	± 1000 mV	7 bar / 70°C (3,5 bar / 80°C)	BNC	4,5 m	Æ 12 Epoxy	100 mS
ERHSC/SN6	double junction – combined – self-cleaning	± 1000 mV	7 bar / 70°C (3,5 bar / 80°C)	SN6 / PG13,5 threading	-	Æ 12 Epoxy	100 mS

Measuring probes

EOLUM - Dissolved Oxygen probes
ETORBH - Turbidity probes
ETRC - Inline Fluorometer
EFL - Fluoride ione probes

ETORBH

EOLUM

DISSOLVED OXYGEN PROBES (flourescence membrane)

MODEL	MEASURE	RANGE	PRESSURE MAX	TEMPERATURE	FITTING	CABLE	COMPENSATION
EOLUM	dissolved oxygen measure based on flourescence	0/20 mg/l O_2	10 bar	-5° - +50°C	G1	15 m	internal

TURBIDITY PROBE

MODEL	MEASURE	RANGE	PRESSURE / TEMPERATURE MAX	CABLE	COMPENSATION
ETORBH	Turbidity	0/800 NTU	6 bar @ 25°C (1 bar @ 50°C)	7 m	internal

FLOURIDE ION SELECTIVE ELECTRODE (ISE)

MODEL	MEASURE	RANGE	TEMPERATURE	PRESSURE	CABLE	COMPENSATION
EFL	Flouride (F)	pH: 5-7 pH, F- $1x10^{-5}$ to 1M	0-60°C	7 bar	0,80 m	internal

Measuring probes

ECDHL - Conductivity, Platinum electrodes
ECDC - Conductivity, Graphite electrodes

ECDHL
ECDHLC
ECDHLCPT

ECDCIM/1
ECDCCIMPT/1
ECDCIM/10
ECDCCIM/10
ECDCCIMPT/10

ECDC/1
ECDCC/1
ECDCCPT/1
ECDC/10
ECDCC/10
ECDCCPT/10

HIGH LINEARITY CONDUCTIVITY PROBES

MODELS	ELECTRODE	RANGE	PRESSURE / TEMPERATURE	CABLE	BODY	TEMPERATURE SENSOR
ECDHL	Platinum	ECDHL/01: 0-200 mS (K=0,1) ECDHL/1: 0,2-20 mS (K=1) ECDHL/10: 20-200 mS	7 bar / 70°C	4,5 m	Æ 12 Epoxy	-
ECDHLC	Platinum	ECDHLC/01: 0-200 mS (K=0,1) ECDHLC/1: 0,2-20 mS (K=1) ECDHLC/10: 20-200 mS	7 bar / 70°C	4,5 m	Æ 12 Epoxy	NTC 10k
ECDHLCPT	Platinum	ECDHLCPT /01: 0-200 mS (K=0,1) ECDHLCPT /1: 0,2-20 mS (K=1) ECDHLCPT /10: 20-200 mS	7 bar / 70°C	4,5 m	Æ 12 Epoxy	PT100

CONDUCTIVITY PROBES WITH GRAPHITE ELECTRODE

MODELS	ELECTRODES	RANGE	PRESSURE / TEMPERATURE	CABLE	BODY	TEMPERATURE SONSOR
ECDC/1	Graphite	0-20 mS (K=1)	7 bar / 60°C (2 bar / 100°C)	4 m	PVDF (R3/4" or G1/2" threading)	-
ECDCC/1	Graphite	0-20 mS (K=1)	7 bar / 60°C (2 bar / 100°C)	4 m	PVDF (R3/4" or G1/2" threading)	NTC 10k
ECDCCPT/1	Graphite	0-20 mS (K=1)	7 bar / 60°C (2 bar / 100°C)	4 m	PVDF (R3/4" or G1/2" threading)	PT100
ECDC/10	Graphite	0-200 mS (K=10)	7 bar / 60°C (2 bar / 100°C)	4 m	PVDF (R3/4" threading)	-
ECDCC/10	Graphite	0-200 mS (K=10)	7 bar / 60°C (2 bar / 100°C)	4 m	PVDF (R3/4" threading)	NTC 10k
ECDCCPT/10	Graphite	0-200 mS (K=10)	7 bar / 60°C (2 bar / 100°C)	4 m	PVDF (R3/4" threading)	PT100
ECDCIM/1	Graphite	0-20 mS (K=1)	7 bar / 60°C (2 bar / 100°C)	4 m	PVDF (R3/4" or G1/2" threading)	NTC 10k
ECDCCIMPT/1	Graphite	0-20 mS (K=1)	7 bar / 60°C (2 bar / 100°C)	4 m	PVDF (R3/4" or G1/2" threading)	PT100
ECDCIM/10	Graphite	0-200 mS (K=10)	7 bar / 60°C (2 bar / 100°C)	4 m	PVDF (R3/4" threading)	-
ECDCCIM/10	Graphite	0-200 mS (K=10)	7 bar / 60°C (2 bar / 100°C)	4 m	PVDF (R3/4" threading)	NTC 10k
ECDCCIMPT/10	Graphite	0-200 mS (K=10)	7 bar / 60°C (2 bar / 100°C)	4 m	PVDF (R3/4" threading)	PT100

Measuring probes

ECDI - Conductivity, Stainless Steel electrodes

ECDI
ECDIC
ECDICPT

ECDIIM
ECDICIM
ECDICPTIM

CONDUCTIVITY PROBES WITH SS ELECTRODE (AISI-316)

MODEL	ELECTRODES	RANGE	PRESSURE / TEMPERATURE	CABLE	BODY	TEMPERATURE SENSOR
ECDI	SS	ECDI/1: 0-5 mS (K=1) ECDI/02: 0-500 mS (K=0,2) ECDI/01: 0-200 mS (K=0,1)	7 bar / 60°C (2 bar / 100 °C)	4 m	PVDF (R3/4" or R1/2" threading)	-
ECDIC	SS	ECDIC/1: 0-5 mS (K=1) ECDIC/02: 0-500 mS (K=0,2) ECDIC/01: 0-200 mS (K=0,1)	7 bar / 60°C (2 bar / 100 °C)	4 m	PVDF (R3/4" or R1/2" threading)	NTC 10k
ECDICPT	SS	ECDICPT/1: 0-5 mS (K=1) ECDICPT/02: 0-500 mS (K=0,2) ECDICPT/01: 0-200 mS (K=0,1)	7 bar / 60°C (2 bar / 100 °C)	4 m	PVDF (R3/4" or R1/2" threading)	PT100
IMMERSION MODEL						
ECDIIM	SS	ECDIIM/1: 0-5 mS (K=1) ECDIIM/02: 0-500 mS (K=0,2) ECDIIM/01: 0-200 mS (K=0,1)	7 bar / 60°C (2 bar / 100 °C)	4 m	PVDF (R3/4" or R1/2" threading)	-
ECDICIM	SS	ECDICIM/1: 0-5 mS (K=1) ECDICIM/02: 0-500 mS (K=0,2) ECDICIM/01: 0-200 mS (K=0,1)	7 bar / 60°C (2 bar / 100 °C)	4 m	PVDF (R3/4" or R1/2" threading)	NTC 10k
ECDICPTIM	SS	ECDICPTIM/1: 0-5 mS (K=1) ECDICPTIM/02: 0-500 mS (K=0,2) ECDICPTIM/01: 0-200 mS (K=0,1)	7 bar / 60°C (2 bar / 100 °C)	4 m	PVDF (R3/4" or R1/2" threading)	PT100

Measuring probes

EICD - Conductity Stainless Steel probes
EICDC PT - Inductive Conductity probes
ECDSIND PT - Inductive Conductity probes

EICDC
EICDCPT

EICDHPT

ECDINDPT
ECDSINDPT

SS CONDUCTIVITY PROBES

MODELS	ELECTRODES	RANGE	PRESSURE / TEMPERATURE	CABLE	BODY	TEMPERATURE SENSOR
EICDC	SS	EICDC/1: 0-20 mS (K=1) EICDC/01: 0-200 mS (K=0,1) EICDC/001: 0-20 mS (K=0,01)	15 bar / 130°C	4 m	SS (R3/4" threading)	NTC 10k
EICDCPT	SS	EICDCPT/1: 0-20 mS (K=1) EICDCPT/01: 0-200 mS (K=0,1) EICDCPT/001: 0-20 mS (K=0,01)	15 bar / 130°C	4 m	SS (R3/4" threading)	PT100
EICDHPT	SS	EICDHPT/1: 0-20 mS (K=1) EICDHPT/01: 0-200 mS (K=0,1) EICDHPT/001: 0-20 mS (K=0,01)	15 bar / 200°C	4 m	SS (R3/4" threading)	PT100

INDUCTIVE CONDUCTIVITY PROBE

MODEL	ELECTRODES	RANGE	PRESSURE / TEMPERATURE	CABLE	BODY	TEMPERATURE SENSOR
ECDINDPT	inductive	0,3-3 mS 0,3-30 mS 0,3-300 mS	8 bar / 85°C (100°C in spot measurements)	4 m	PEEK	PT100
ECDSINDPT	inductive	0,3-10,00 mS	8 bar / 85°C (100°C in spot measurements)	4 m	PEEK	PT100

Accessories

Mixers

MIXN8-MON
MIXN8-TRI
MIXVN8-MON
MIXVN8-TRI
MIXN4-MON
MIXN4-TRI

MIXVN4-MON
MIXVN4-TRI
MIXVN2-MON
MIXVN2-TRI
MIXN2-MON
MIXN2-TRI

MONOPHASE OR TRIPHASE MIXERS

MODEL	MOTOR (kW)	ROTATION SPEED (rpm)	SHAFT (mm)	TANKS (lt)	IMPELLER	IMPELLER DIAMETER (mm)
MIXN8-MON	0,09	65 or 200	630 730	CNT PD 120 CNT PD 250	3 blade	150
MIXN8-TRI	0,09	65 or 200	630 730	CNT PD 120 CNT PD 250	3 blade	150
MIXVN8-MON	0,09	1400	630 730	CNT PD 120 CNT PD 250	marine	70
MIXVN8-TRI	0,09	1400	630 730	CNT PD 120 CNT PD 250	marine	70
MIXN4-MON	0,18	65 or 200 o 400	730 980 1100	CNT PD 250 CNT PD 500 CNT PD 1000	3 blade	150
MIXN4-TRI	0,18	65 or 200 o 400	730 980 1100	CNT PD 250 CNT PD 500 CNT PD 1000	3 blade	150
MIXVN4-MON	0,18	1400	730 980	CNT PD 250 CNT PD 500	marine	90
MIXVN4-TRI	0,18	1400	730 980	CNT PD 250 CNT PD 500	marine	90
MIXVN2-MON	0,37	1400	730 980 1100	CNT PD 250 CNT PD 500 CNT PD 1000	marine	90
MIXVN2-TRI	0,37	1400	730 980 1100	CNT PD 250 CNT PD 500 CNT PD 1000	marine	90
MIXN2-MON	0,37	65 or 200 o 400	1100	CNT PD 1000	4 blade	150
MIXN2-TRI	0,37	65 or 200 o 400	1100	CNT PD 1000	4 blade	150

Accessories

Mixers

MIX MAN 45
MIX MAN 65
MIX MAN 77
MIX MAN 110

MANUAL MIXER

MODEL	SHAFT (mm)	TANKS (lt)	IMPELLER	IMPELLER DIAMETER (mm)
MIX MAN 45	450	CNT PD 50	2 blade	130
MIX MAN 65	650	CNT PD 120	2 blade	130
MIX MAN 77	770	CNT PD 250	2 blade	130
MIX MAN 110	1100	CNT PD 500	2 blade	130
MIX WITH PISTON	450	CNT PD 50	/	/

Accessories

Multifunction valves

MFKT/V
MFKTS/V
MKFT/D
MFKTS/D

MFKTL/V
MFKTSL/V
MFKTL/D
MFKTSL/D

Multifunction valve for pressure, safety, anti-syphon, bleed.
Fittings for different hose diameters.

MODEL	BODY AND LIQUID ENDS	O-RING	FITTINGS	DISCHARGE HOSE FITTINGS	SAFETY VALVE	PRESSURE VALVE
MFKT/V	PVDF	FKM B	1/2", 3/8"	4x6	3-18 bar	1-5 bar
MFKTS/V	PVDF	FKM B	1/2", 3/8"	4x6	3-18 bar	1-5 bar
MKFT/D	PP	EPDM	1/2", 3/8"	4x6	3-18 bar	1-5 bar
MFKTS/D	PP	EPDM	1/2", 3/8"	4x6	3-18 bar	1-5 bar
MFKTL/V	PVDF	FKM B	1/2", 3/8"	4x6	0-10 bar	1-5 bar
MFKTSL/V	PVDF	FKM B	1/2", 3/8"	4x6	0-10 bar	1-5 bar
MFKTL/D	PP	EPDM	1/2", 3/8"	4x6	0-10 bar	1-5 bar
MFKTSL/D	PP	EPDM	1/2", 3/8"	4x6	0-10 bar	1-5 bar

Accessories

Pulses dampeners

SOIM1/V
SOIM1/D

SOIM1/SS/V
SOIM1/SS/D

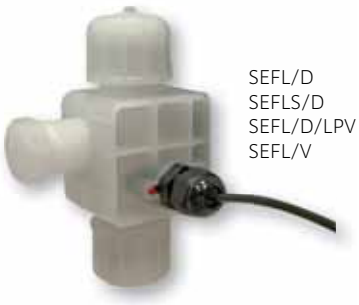
SOIM3/V
SOIM3/D
SOIM3K/V

Without membrane.

MODEL	MATERIALS	O-RING	FITTINGS	VOLUME	TEMPERATURE / PRESSURE
SOIM1/V	PVC	FKM B	1/2"	0,5 lt	45°C/5 bar
SOIM1/D	PVC	EPDM	1/2"	0,5 lt	45°C/5 bar
SOIM1/SS/V	AISI 316 L	FKM B	1/2"	0,5 lt	130°C/10 bar
SOIM1/SS/D	AISI 316 L	EPDM	1/2"	0,5 lt	130°C/10 bar
SOIM3/V	PVC	FKM B	3/8"	0,09 lt	45°C/10 bar
SOIM3/D	PVC	EPDM	3/8"	0,09 lt	45°C/10 bar
SOIM3K/V	PVDF	FKM B	3/8"	0,09 lt	45°C/10 bar

Accessories

Flow sensors



SEFL/D
SEFLS/D
SEFL/D/LPV
SEFL/V

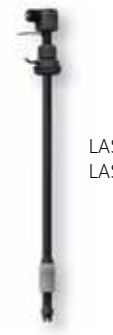
SEFLS/V
SEFL/V/LPV

With activity LED.
See datasheet documentation for more information.

MODEL	BODY AND LIQUID ENDS	O-RING	FITTINGS	TEMPERATURE / PRESSURE
SEFL/D	PP	EPDM	1/2" – 3/8"	45°C/25 bar
SEFLS/D	PP	EPDM	1/2" – 3/8"	45°C/25 bar
SEFL/D/LPV	PP	EPDM	1/2" – 3/8"	45°C/25 bar
SEFL/V	PVDF	FKM B	1/2" – 3/8"	45°C/25 bar
SEFLS/V	PVDF	FKM B	1/2" – 3/8"	45°C/25 bar
SEFL/V/LPV	PVDF	FKM B	1/2" – 3/8"	45°C/25 bar

Accessories

Suction lances



LASP4/V
LASP4/D

LASP5/V
LASP5/D

With level probe, foot valve and height adjustment system.

MODEL	BODY	O-RING	SUCTION FITTING	PIPE FITTING	OPERATING LENGTH (cm)
For capacity up to 10 l/h					
LASP4/V	PVC	FKM B	1/2" for hose 4x6	1 1/2"	40 (LASP4/V40) 63 (LASP4/V63) 75 (LASP4/V75)
					108 (LASP4/V108) 122 (LASP4/V122)
LASP4/D	PVC	EP	1/2" for hose 4x6	1 1/2"	40 (LASP4/D40) 63 (LASP4/D63) 75 (LASP4/D75)
					108 (LASP4/D108) 122 (LASP4/D122)
For capacity higher than 10 l/h					
LASP5/V	PVC	FKM B	1/2" for hose 6x8 or 8x12	1 1/2"	40 (LASP5/V40) 63 (LASP5/V63) 75 (LASP5/V75)
					108 (LASP5/V108) 122 (LASP5/V122)
LASP5/D	PVC	EP	1/2" for hose 6x8 or 8x12	1 1/2"	40 (LASP5/D40) 63 (LASP5/D63) 75 (LASP5/D75)
					108 (LASP5/D108) 122 (LASP5/D122)

Accessories

Injection lances

LINI-V
LINI-D

LINIR-V
LINIR-D

LINIR-K

MODEL	BODY	O-RING	PIPE FITTING	BALL VALVE	TEMPERATURE / PRESSURE
LINI-V	PVDF	FKM B	1/2"		25°C/16 bar 140°C/2 bar
LINI-D	PP	EP	1/2"		25°C/16 bar 70°C/3 bar
LINIR-V	PVDF	FKM B	1/2"	PVC	25°C/16 bar 60°C/3 bar
LINIR-D	PP	EP	1/2"	PVC	25°C/16 bar 70°C/3 bar
LINIR-K	PVDF	FKM B	1/2"	PVC	25°C/16 bar 140°C/2 bar

Accessories

Mounting brackets

STAMS
STAMS2

STKN

STPRIUS

STT

STVN
STF

Self-tapping screws included.

MODEL	MOUNTING	METERING PUMP MOD.	MATERIAL
STAMS	side	AMS - CMS	PVC
STAMS2	frontal	AMS – CMS	PVC
STKN	frontal	K/KMS – H/HMS	PP
STK1	on tank	K/KMS – H/HMS	PVC
STF	foot	F/FMS	PP
STT	foot	T/TMS – G/GMS	PVC
STVN	foot	V/VMS	PP
STW	foot	WDPHxx	PVC
STPRIUS	on tank	PRIUS	PP

Accessories

In-line probe holders

PEB PEL PEA/CH PEA/SN6 PELC

MODEL	ELECTRODES CONNECTION	FITTINGS	BODY	TEMPERATURE / PRESSURE	INSTALLATION
PEA/CH	1 (Æ 12)	1/2"	PVDF	90°C / 7 bar 130°C / 3 bar	in-line
PEB	1 (Æ 12)	3/4"	PP	90°C / 7 bar 130°C / 3 bar	in-line
PEA/SN6	1 (Æ 12-PG13,5)	1/2"	PVDF	90°C / 7 bar	in-line
PEL	1 (Æ 12)	1/2" or 3/4"	PVDF	90°C / 7 bar 130°C / 3 bar	„T" connection
PEL-SN6	1 (Æ 12-PG13,5)	1/2" or 3/4"	PVDF	90°C / 7 bar 130°C / 3 bar	„T" connection
PELC	1 (Æ 12)	1/2" or 3/4"	PVDF	90°C / 7 bar 130°C / 3 bar	saddle connection
PEL-E	EOLUM	PN 16 Æ 63	PVC	40°C / 7 bar	„T" connection
PEL-IND	ECDIND PT	PN 16 Æ 40	PVC	40°C / 7 bar	„T" connection
PEL-INDC	ECDIND PT	PN 16 Æ 40	PVCC	80°C / 7 bar	„T" connection
PEL-IND-SS	ECDIND PT	PN 16 Æ 40	INOX	80°C / 7 bar	„T" connection

Accessories

Off-line probe holders

NPED1
NPED2
NPED3
NPED4
NPED4-INDS
NPED4/2F
NPED4-3/4

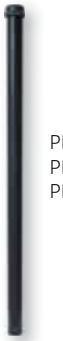
NPED-IND
NPED-INDS

NPED-E

MODEL	ELECTRODES CONNECTION	FLOW SENSOR	FITTINGS	TEMPERATURE / PRESSURE
NPED1	2 (Æ 12-PG13,5)		6x8	50°C / 5 bar
NPED2	2 (Epoxy Æ 12)		6x8	50°C / 5 bar
NPED3	2 (Epoxy Æ 12) 1 (threading 3/4")		6x8	50°C / 5 bar
NPED4	2 (Epoxy Æ 12)	N.C. contact	6x8	50°C / 5 bar
NPED4-INDS	ECDINDSPT 2 (Epoxy Æ 12)	N.C. contact	6x8	50°C / 5 bar
NPED4/2F	2 (Epoxy Æ 12)	2 wires for N.C. contact instrument	6x8	50°C / 5 bar
NPED4-3/4	2 (Epoxy Æ 12) 1 (threading 3/4")	N.C. contact	6x8	50°C / 5 bar
NPED-E	ETORBH or EOLUM		6x8	50°C / 5 bar
NPED-IND	ECDINDPT		6x8	50°C / 5 bar
NPED-INDS	ECDINDSPT		6x8	50°C / 5 bar

Accessories

Immersion probe holders



PEC
PEC/SN6
PEC/IM

PECAP/SN6

PEC2
PECAP2
PECAP-E

PEC-E
PEC IND

MODEL	ELECTRODES CONNECTION	BODY	LENGTH	TEMPERATURE
PEC	1 (Æ 12)	PP	100 cm	80°C
PEC/SN6	1 (SN6 Æ 12-PG13,5)	PP	100 cm	80°C
PEC/IM	1 Conductivity (3/4" threading)	PP	100 cm	80°C
PECAP/SN6	1 (SN6 Æ 12-PG13,5)	PP/PVC	100 cm	40°C
PEC2	2 (Æ 12-PG13,5)	PVC	100 cm	40°C
PECAP2	2 (Æ 12-PG13,5)	PVC	100 cm	40°C
PECAP-E	EOLUM	PVC	100 cm	40°C
PEC-E	ETORBH or EOLUM	PP	100 cm	80°C
PEC IND	ECDINDPT	PVC	100 cm	40°C
FFP FFP AP	Fixing lange for PEC (FFP) or PECAP (FFP AP) Diameter max Æ 100 mm – H=30 mm – Interaxis=80 mm – holes diameter=8 mm			

*Compressed air or water self cleaning system (automatic or manual control).

Accessories

Off-line probe holders for closed amperometric cells


PEF1
PEF5


PEF3


PEF1/E


PEF22


PEF23

With flow level control, proximity switch and pressure stabilizer (0,4 / 3 bar).

MODEL	ELECTRODES CONNECTION	FITTINGS	BODY	TEMPERATURE/ PRESSURE	HOSE
PEF1	1 closed amperometric cell 2 Æ 12 electrodes 1 temperature probe	6x8 PVDF	PMMA	50°C / 5 bar	4 m PE
PEF1/K	1 closed amperometric cell 2 Æ 12 electrodes 1 temperature probe	6x8 PVDF	PMMA	80°C / 5 bar	4 m PVDF
PEF1/E	1 closed amperometric cell 1 temperature probe	6x8 PVDF	PMMA	50°C / 5 bar	4 m PE
PEF1/E/K	1 closed amperometric cell 1 temperature probe	6x8 PVDF	PMMA	80°C / 5 bar	4 m PVDF
PEF5	1 closed amperometric cell 2 Æ 12 electrodes – PG13,5 1 temperature probe	6x8 PVDF	PMMA	50°C / 5 bar	4 m PE
PEF5/K	1 closed amperometric cell 2 Æ 12 electrodes – PG13,5 1 temperature probe	6x8 PVDF	PMMA	50°C / 5 bar	4 m PVDF
PEF2	2 Æ 12 electrodes 1 temperature probe	6x8 PVDF	PMMA	50°C / 5 bar	4 m PE
PEF2/K	2 Æ 12 electrodes 1 temperature probe	6x8 PVDF	PMMA	80°C / 5 bar	4 m PVDF
PEF3	2 Æ 12 electrodes - PG13,5 1 temperature probe	6x8 PVDF	PMMA	50°C / 5 bar	4 m PE
PEF22	2 closed amperometric cell 2 Æ 12 electrodes 1 temperature probe	6x8 PVDF	PMMA	50°C / 5 bar	4 m PE
PEF23	2 closed amperometric cell 2 Æ 12 electrodes 1 temperature probe 1 conductivity probe (3/4" threading)	6x8 PVDF	PMMA	50°C / 5 bar	4 m PE

Accessories

Motorized valve

MODEL	FITTING	BOBBIN
VALVOLA MOT 3/4	3/4"	230VAC
VALVOLA MOT 1	1"	230VAC
VALVOLA MOT 1 1/4	1 1/4"	230VAC
VALVOLA MOT 1 1/2	1 1/2"	230VAC
VALVOLA MOT 2	2"	230VAC

Accessories

Manifold with flow sensor

MANIFOLD/3
MANIFOLD/1

MANIFOLD/EV/1
MANIFOLD/EV/3

MANIFOLD PLUS/1
MANIFOLD PLUS/3

PMMA standard. On request available PVC manifold without extraprice

MODEL	WATER INPUT	ELECTRODES CONNECTION	INJECTION POINTS	MOTORIZED VALVE
MANIFOLD/E/3	3/4"	conductivity (3/4" threading)	/	
MANIFOLD/E/1	1"	conductivity (3/4" threading)	/	
MANIFOLD/3	3/4"	conductivity (3/4" threading)	2	
MANIFOLD/1	1"	conductivity (3/4" threading)	2	
MANIFOLD/EV/3	3/4"	conductivity (3/4" threading)	2	3/4"
MANIFOLD/EV/1	1"	conductivity (3/4" threading)	2	1"
MANIFOLD PLUS/3	3/4"	conductivity (3/4" threading) 2 Æ 12 electrodes	2	3/4"
MANIFOLD PLUS/1	1"	conductivity (3/4" threading) 2 Æ 12 electrodes	2	1"

Accessories

Flow sensor

MODEL	BODY AND LIQUID ENDS	O-RING	FITTINGS	TEMPERATURE / PRESSURE
SEFL/D	PP	EPDM	1/2" – 3/8"	45°C/25 bar
SEFLS/D	PP	EPDM	1/2" – 3/8"	45°C/25 bar
SEFL/D/LPV	PP	EPDM	1/2" – 3/8"	45°C/25 bar
SEFL/V	PVDF	FKM B	1/2" – 3/8"	45°C/25 bar
SEFLS/V	PVDF	FKM B	1/2" – 3/8"	45°C/25 bar
SEFL/V/LPV	PVDF	FKM B	1/2" – 3/8"	45°C/25 bar

Accessories

Pipes corrosion control

MODEL	DESCRIPTION
CORMIS	System for pipes corrosion control. With specimen to be extracted to measure thickness loss (weight).

Accessories

Static mixer

MODEL	DESCRIPTION
MIX STATIX - 1	PVC static mixer filled with PP mixing elements. 1/2" injection valve – 4 x 6 0,3 bar. Fitting 1".
MIX STATIX - 1 1/4"	PVC static mixer filled with PP mixing elements. 1/2" injection valve – 4 x 6 0,3 bar. Fitting 1 1/4".
MIX STATIX - 2"	PVC static mixer filled with PP mixing elements. 1/2" injection valve – 4 x 6 0,3 bar. Fitting 2".
MIX STATIX - 3"	PVC static mixer filled with PP mixing elements. 1/2" injection valve – 4 x 6 0,3 bar. Fitting 3".

Accessories

Proximity sensors

SEFT-C

SEPR

MODEL	TYPE	APPLICATION
SEPR	inductive	Probe holders and open amperometric cells
SEFT-C	capacitive	Saddle connection. 3 m cable with MPM

Electrolytes

MODELS	APPLICATION
ELECL1	ECL1 amperometric cell.
ELECL2	ECL2 amperometric cell.
ELECL3N	ECL3N (fresh water) amperometric cell.
ELECL3S	ECL3S (fresh water) amperometric cell.
ELECL3S/SEA	ECL3S (salt water) amperometric cell.
ELECL8	ECL8/2 amperometric cell.
ELECL9	ECL9 amperometric cell.
ELECL10	ECL10 amperometric cell.
ELECL11	ECL11 amperometric cell.
ELECL13	ECL13 amperometric cell.
ELEBR	EBR amperometric cell.
ELEBR/SEA	EBR (salt water) amperometric cell.
ELECL17	ECL17 amperometric cell.
ELECL18	ECL18 amperometric cell.

Buffer solutions

MODELS	APPLICATION	QUANTITY
BSTORB-40	40NTU turbidity	20 ml
BSTORB-0	0NTU turbidity	20 ml
BSD	650 mV ORP	50 ml
BSI	Conductivity 12.880 µS - 25°C	50 ml
BSE	Conductivity 1.413 µS - 25°C	50 ml
BSE84	Conductivity 84 µS - 25°C	50 ml
BSA	pH 4	50 ml
BSB	pH 7	50 ml
BSC	pH 9	50 ml
BSU	Oxygen (O_2)	50 ml

Water disinfection

- Residential UV Sterilizers inox
- Residential UV Sterilizers w series
- Industrial UV Sterilizers fc series
- Industrial flanged multilamp UV Sterilizers fc-d series
- Wallace & Tiernan® UV systems for industrial applications
- Wallace & Tiernan® UV systems for drinking water
- UV systemc for reduction of cloramines in swimming pools
- UV systems for wastewater applications
- W&T S10k - gas feed system
- W&T Gas feed system V 10K
- Chlorine dioxide generator - LOTUS
- Chlorine dioxide generator - DIOX 10
- Wallace & Tiernan DIOX-A 250
- Wallace & Tiernan DIOX-A 5000
- Wallace & Tiernan DIOX-C
- Oxiperm OCG-166
- Oxiperm OCC-164
- Oxiperm OCD-164
- Oxiperm OCC-164
- Oxiperm® Pro OCD-162
- Ozone

Water disinfection means the removal, deactivation or killing of pathogenic microorganisms. Microorganisms are destroyed or deactivated, resulting in termination of growth and reproduction.
Disinfection can be attained by means of physical or chemical disinfectants. The agents also remove organic contaminants from water, which serve as nutrients or shelters for microorganisms. Disinfectants should not only kill microorganisms. Disinfectants must also have a residual effect, which means that they remain active in the water after disinfection. A disinfectant should prevent pathogenic microorganisms from growing in the plumbing after disinfection, causing the water te be recontaminated.

For physical disinfection of water the following disinfectants can be used:
- **Ultraviolet light** (UV)
UV light is the most common type of disinfection easy to apply in different systems. It is environmentally friendly, does not affect human health and water chemical characteristics. Comparing to other disinfection units, UV system can offer more benefits. These systems don´t affect the taste, odor, color and pH of water and do not require chemicals dosing. Installation and handling is easy, there is no need for continuous monitoring of the system and operation and maintenance costs are much lower comparing to alternatives.

For chemical disinfection of water the following disinfectants can be used:
- **Chlorine gas** (Cl_2)
Disinfection by chlorine gas has been dominant in municipal and drinking water treatment for many decades. As the most profitable chemical, chlorine is distributed in gas or liquid state packed in pressure vessel and containers. Vacuum type dosing equipment V10k, and similar models, are used for chlorine dosing in municipal and drinking water treatment. This equipment is also suitable for carbon dioxide (CO_2) dosing (pH reduction and hardness stabilization), sulfur dioxide (SO_2) dosing (dechlorination systems), but also for ammonia (NH_3) and many other applications.

- **Chlorine dioxide** (ClO2)
As alternative to chlorine gas, it is mostly used for drinking water disinfection. Chlorine dioxide is a strong disinfectant with great odor removal efficiency. Camparing to chlorine it has higher oxidation potential and therefore is suitable for removal of organics, viruses and spores that are resistant to chlorine. With application of chlorine dioxide there is no risk of THM or AOX forming. This disinfectant has very powerful effect on water contaminants such as phenols, algae, metabolites or their decomposition products.

- **Ozone** (O3)
Ozone provides high efficiency in water treatment for different applications end is environmentally friendly at the same. Although, the market can offer other solutions in form of other disinfection methods, equipment and chemicals, ozone generator is very reliable, has wide range of applications and high efficiency in continuous 24h water treatment systems.

Residential UV sterilizers

- monolamp U.V. sterilizer of close construction in AISI 304 polished material for point-of-use treatment devices;
- conform with CE safety Directives;
- D.M. n.174 dated 06/04/2004 compliant about materials suitable for contact with water for human consumption;
- complete with n.2 diameter 2" fixing clips and with n.2 JACO ¼" elbows;
- power box with electronic circuit, cable and plug;
- failure led and alarm system;
- lamp quartz sheath;
- max operating pressure 7 bar;
- temperature 2 ÷ 40°C;
- power supply 230 V – 50 Hz;
- irradiation > 30 mJ/cm^2;
- lamp life 8.000 hours;
- protection class IP63.

REF.	MODEL	MAX FLOW (l/h)	LAMPS NUMBER	POWER (W)	CONNECTIONS	DIAMETER (mm)	LENGTH (mm)
320100	HR-60	240	1	10	¼" BSP M	50,8	260
320101	PC-1	240	1	10	¼" BSP M	50,8	268

Residential UV sterilizers W series

- to be used for residential water disinfection systems;
- monolamp U.V. sterilizer of close construction in AISI 304 polished material;
- power box with electronic circuit, cable and plug;
- failure led and alarm system;
- conform with CE safety Directives;
- D.M. n.174 dated 06/04/2004 compliant about materials suitable for contact with water for human consumption;
- lamp quartz sheath;
- max operating pressure 7 bar;
- temperature 2 ÷ 40°C;
- power supply 230 V – 50 Hz;
- irradiation > 30 mJ/cm^2;
- lamp life 10.000 hours;
- protection class IP63.

REF.	MODEL	MAX FLOW (l/h)	LAMPS NUMBER	POWER (W)	CONNECTIONS	DIAMETER (mm)	LENGTH (mm)
320120	W-180	680	1	15	½" BSP M	63,5	364
320121	W-360	1360	1	21	½" BSP M	63,5	544
320122	W-480	1810	1	29	½" BSP M	63,5	694
320123	W-720	2720	1	40	¾" BSP M	63,5	924

Industrial UV sterilizers FC series

- to be used for commercial and industrial water disinfection systems;
- monolamp U.V. sterilizer with polished AISI 304 sterilizing chamber with inspection window and drain connection;
- electric box with electronic circuit, connection cable, operating time meter and switch;
- operating and failure led, with alarm system (excepted models FC-35 and FC-45);
- conform with CE safety Directives;
- D.M. n.174 dated 06/04/2004 compliant about materials suitable for contact with water for human consumption;
- lamp quartz sheath;
- max operating pressure 10 bar;
- temperature 2 ÷ 40°C;
- power supply 230 V – 50 Hz;
- irradiation > 30 mJ/cm^2;
- lamp life 10.000 hours;
- protection class IP55;
- possibility of connection with shut down solenoid valve (only for models FC-35 and FC-45).

REF.	MODEL	MAX FLOW (l/h)	LAMP NUMBER	POWER (W)	CONNECTIONS	DIAMETER (mm)	LENGHT (mm)
320130	FC-8	1.810	1	29	¾" BSP M	114	710
320131	FC-12	2.720	1	40	1" BSP M	133	940
320132	FC-15	3.400	1	65	1" BSP M	133	940
320133	FC-20	4.536	1	65	1 ½" BSP M	160	940
320134	FC-24	5.443	1	80	1 ½" BSP M	160	940
320135	FC-35	7.938	1	100	2" BSP M	160	1.235
320136	FC-45	10.200	1	120	2" BSP M	160	1.235

Industrial flanged multilamp UV sterilizers FC-D series

- to be used for industrial water disinfection systems;
- multilamp U.V. sterilizer with polished AISI 304 sterilizing chamber with inspection window and drain connection;
- electric box with electronic circuit, connection cable, operating time meter and switch;
- operating and service led;
- conform with CE safety Directives;
- D.M. n.174 dated 06/04/2004 compliant about materials suitable for contact with water for human consumption;
- lamp quartz sheath;
- max operating pressure 10 bar: temperature 2 ÷ 40°C;
- power supply 230 V – 50 Hz;
- irradiation > 30 mJ/cm2;
- lamp life 10.000 hours;
- protection class IP55;
- possibility of connection with shut down solenoid valve.

REF.	MODEL	MAX FLOW (l/h)	LAMP NUMBER	POWER (W)	CONNECTIONS	DIAMETER (mm)	LENGTH (mm)
320140	FC-70D	15.900	2	200	DN50 FLANGED	220	1.250
320141	FC-120D	27.250	3	360	DN65 FLANGED	273	1.250
320142	FC-180D	40.880	5	600	DN80 FLANGED	323	1.250
320143	FC-250D	56.780	7	840	DN100 FLANGED	400	1.250

UV sterilizers HR-PC-W-FC-FC/D spare parts

REF.	DESCRIPTION	STERILIZERS UV
320150	LAMP UV - T5L10 W - D.18 x L.219 mm	HR-60, PC-1
320151	LAMP UV - T5L15 W - D.18 x L.310 mm	W-180
320152	LAMP UV - T5L21 W - D.18 x L.444 mm	W-360
320153	LAMP UV - T5L29 W - D.18 x L.630 mm	W-480, FC-8
320154	LAMP UV - T5L40 W - D.18 x L.850 mm	W-720, FC-12
320155	LAMP UV - T5L65 W - D.18 x L.850 mm	FC-15, FC-20
320156	LAMP UV - T6L80 W - D.23 x L.850 mm	FC-24
320157	LAMP UV - T6L100 W - D.23 x L.1160 mm	FC-35, 2x FC-70D
320158	LAMP UV - T6L120 W - D.18 x L.1150 mm	FC-45, 3x FC-120D, 5x FC-180D, 7x FC-250D
320159	LAMP UV - T5L10 W QUARTZ SHEATH D.24,5 x L.250 mm ONE OPEN END	HR-60
320160	LAMP UV - T5L10 W QUARTZ SHEATH D.24,5 x L.250 mm	PC-1
320161	LAMP UV - T5L15 W QUARTZ SHEATH D.24,5 x L.350 mm	W-180
320162	LAMP UV - T5L21 W QUARTZ SHEATH D.24,5 x L.530 mm	W-360
320163	LAMP UV - T5L29 W QUARTZ SHEATH D.24,5 x L.680 mm	W-480, FC-8
320164	LAMP UV - T5L40-65 W QUARTZ SHEATH D.24,5 x L.910 mm	W-720, FC-12, FC-15
320165	LAMP UV - T5L65W - T6L80W QUARTZ SHEATH D.30,0 x L.910 mm	FC-20, FC-24
320166	LAMP UV - T6L100-120 W QUARTZ SHEATH D.30,0 x L.1205 mm	FC-35, FC-45, 2x FC-70D, 3x FC-120D, 5x FC-180D, 7x FC-250D
320167	QUARTZ O-RING SILICONE FOR TUBE D.24,5 mm	HR-60, PC-1, W-180, W-360, W-480, W-720, FC-8, FC-12, FC-15
320168	QUARTZ O-RING SILICONE FOR TUBE D.30,0 mm	FC-20, FC-24, FC-35, FC-45, FC-70D, FC-120D, FC-180D, FC-250D
320169	ELECTRONIC BALLAST UV-3 230V/50Hz FOR LAMP 10 - 16 W	HR-60, PC-1, W-180
320170	ELECTRONIC BALLAST UV-6 90-264V/50-60Hz FOR LAMP 20 - 40 W	W-360, W-480, W-720
320171	INSIDE ELECTRONIC BALLAST UV-6 90-264V/50-60Hz FOR LAMP 20 - 40 W	FC-8, FC-12
320172	INSIDE ELECTRONIC BALLAST UV-8 90-264V/50-60Hz FOR LAMP 65 - 80 W	FC-15, FC-20, FC-24
320173 (**)	INSIDE ELECTRONIC BALLAST UV-12 100-240V/50Hz 100 - 120 W SINGLE-LAMP	FC-35, FC-45, FC-70D, FC-120D, FC-180D, FC-250D
320174	INSIDE ELECTRONIC BALLAST WLC1D1 230V/50Hz 100 - 120 W SINGLE-LAMP	FC-35, FC-45, FC-120D (*), FC-180D (*), FC-250D (*)
320175	INSIDE ELECTRONIC BALLAST WLC1D2 230V/50Hz 100 - 120 W DOUBLE-LAMP	FC-70D, FC-120D (*), FC-180D (*), FC-250D (*)

(*) Please, contact our technical department before order the ballast for FC-120D, FC-180D or FC-250D sterilizers.
(**) This ballast is contained (one for each UV lamp) in all models FC-35 to FC-250D, in batches starting in October 2012.

Wallace & Tiernan® UV systems for industrial applications

Barrier® UV systems

Barrier® UV systems provide a cost-effective, reliable, operator-friendly disinfection solution for industrial water treatment applications.

For single-pass or closed-loop disinfection applications where chemicals are not wanted or allowed, Barrier® UV systems represent a cost-effective solution. Flows from 1 m3/h up to over 1000 m3/h can be treated with a single system. Depending on the type of application, the perfect system can be selected from a range of low pressure, Amalgam or medium pressure lamp based UV systems.

The UV-C light generated by Barrier® systems is absorbed by the microorganism and destroys the reproduction mechanism. Additionally, due to the wide emission spectrum of the medium pressure lamps in Barrier® M systems, the photoreactivation effect is blocked, providing extra safety.

UV sensor

Barrier® A and Barrier® M systems are equipped with a calibrated absolute UV sensor as standard, to monitor the disinfection process.

MODEL	LAMPS	UV LAMP	CONNECTION FLANGES		MAX. CAPACITY/FLOW RATE*		T_{10} (%)
			ROW	US	(m^3/h)	(US GPM)	
Barrier L 3	1	WTL20	G 2"	n.a.	1,9	8	90
Barrier L 4	1	WTL40S	G 2"	n.a.	2,6	11	90
Barrier L 6	1	WTL40	G 2"	n.a.	3,6	16	90
Barrier L 9	1	WTL65	G 2"	n.a.	5,4	24	90
Barrier L 12	1	WTL80	G 2"	n.a.	6,7	29	90
Barrier L 20	1	WTL80	G 3"	n.a.	10	44	90
Barrier L 35	2	WTL80	G 3"	n.a.	23	101	95
Barrier L 50	3	WTL80	G 3"	n.a.	23	101	90
Barrier L 65	4	WTL80	G 3"	n.a.	30	132	90
Barrier A 25	1	WTL200	G 2"	G 2"	15	66	90
Barrier A 45	1	WTL200	DN 125 acc. DIN 2576	5" 150-lbs ANSI	23	101	90
Barrier A 75	2	WTL200	DN 125 acc. DIN 2576	5" 150-lbs ANSI	51	225	95
Barrier A 120	3	WTL200	DN 125 acc. DIN 2576	5" 150-lbs ANSI	54	238	90
Barrier A 150	4	WTL200	DN 125 acc. DIN 2576	5" 150-lbs ANSI	71	313	90
Barrier M 35	1	WTL1000	DN 80 acc. DIN 2576	3" 150-lbs ANSI	19	84	85
Barrier M 80	1	WTL1000	DN 125 acc. DIN 2576	5" 150-lbs ANSI	35	154	85
Barrier M 135	1	WTL2000	DN 125 acc. DIN 2576	5" 150-lbs ANSI	52	229	85
Barrier M 210	4	WTL1000	DN 125 acc. DIN 2576	5" 150-lbs ANSI	90	369	85
Barrier M 275	1	WTL2000	DN 200 acc. DIN 2576	8" 150-lbs ANSI	178	784	95
Barrier M 290	3	WTL2000	DN 125 acc. DIN 2576	5" 150-lbs ANSI	106	467	85
Barrier M 350	4	WTL2000	DN 125 acc. DIN 2576	5" 150-lbs ANSI	130	572	85
Barrier M 525	2	WTL2000	DN 200 acc. DIN 2576	8" 150-lbs ANSI	133	586	85
Barrier M 700	3	WTL2000	DN 200 acc. DIN 2576	8" 150-lbs ANSI	229	1008	85
Barrier M 900	4	WTL2000	DN 200 acc. DIN 2576	8" 150-lbs ANSI	298	1312	85
Barrier M 1250	6	WTL2000	DN 200 acc. DIN 2576	8" 150-lbs ANSI	320	1409	80
Barrier M 1400	2	WTL3500	DN 350 acc. DIN 2576	14" 150-lbs ANSI	336	1479	85
Barrier M 2000	3	WTL3500	DN 350 acc. DIN 2576	14" 150-lbs ANSI	485	2135	85
Barrier M 2600	4	WTL3500	DN 350 acc. DIN 2576	14" 150-lbs ANSI	632	2783	85
Barrier M 3800	6	WTL3500	DN 350 acc. DIN 2576	14" 150-lbs ANSI	912	4015	85

*Max. capacity at UV dose of 400 J/m^2 at end of lamp life at specified transmittance

Note: Barrier® L UV systems are not available for 60 Hz applications

Wallace & Tiernan® UV systems for drinking water

Barrier® UV systems

Barrier® UV systems provide a cost-effective, reliable, operator-friendly disinfection solution for small and medium-sized drinking water plants.

Certified by the industry-leading DVGW* and in accordance with the protocol W294, the systems provide a guaranteed minimum Reduction Equivalent Dose (RED) of 400 J/m^2 **.

For small-sized drinking water installations Barrier® A systems are designed based on high-efficiency Amalgam lamps. The compact Barrier® M range, based on very powerful medium pressure lamps, is the perfect solution for medium-sized drinking water disinfection applications.

UV-C light generated by Barrier® systems is absorbed by the microorganism and destroys the reproduction mechanism. Additionally, due to the wide emission spectrum of the medium pressure lamps in Barrier® M systems, the photoreactivation effect is blocked, providing extra safety.

The DVGW protocol is also accepted by the US EPA*** which specifies in the UV disinfection guidance manual that UV disinfection is a reliable process for the inactivation of Cryptosporidium and Giardia.

* DVGW - Internationally recognised authority on certification of UV disinfection systems. (DVGW - German Technical and Scientific Association for Gas and Water)

** 400 J/m^2 = 40 mJ/cm^2

***EPA - Environmental Protection Agency

UV sensor - DVGW

One or more UV sensors monitor the disinfection process continuously by measuring the UV-C intensity inside the UV chamber. The measured absolute values are displayed on the control panel in W/m2. In the case of a UV alarm both a dry contact and an indication on the display are activated.

The DVGW certified UV sensor is designed in accordance with the DVGW directive W294. The absolute calibrated sensors are placed in a monitoring window which enables the operator to check the duty UV sensor(s) during the disinfection process without
interruption.

MODEL	LAMPS	UV LAMP	DVGW UV SENSORS		CONNECTION FLANGES		MAX. CERTIFIED CAPACITY/FLOW RATE*	
			ROW	US	ROW	US	(m^3/h)	(US GPM)
Barrier A 45**	1	WTL200	1		DN 125 acc. DIN 2576	5" 150-lbs ANSI	15	66
Barrier A 120	3	WTL200	1		DN 125 acc. DIN 2576	5" 150-lbs ANSI	55	242
Barrier M 275*	1	WTL2000	1		DN 200 acc. DIN 2576	8" 150-lbs ANSI	60	264
Barrier M 525*	2	WTL2000	1		DN 200 acc. DIN 2576	8" 150-lbs ANSI	85	374
Barrier M 900*	4	WTL2000	2		DN 200 acc. DIN 2576	8" 150-lbs ANSI	260	1145
Barrier M 1250*	6	WTL2000	3		DN 200 acc. DIN 2576	8" 150-lbs ANSI	360	1585
Barrier M 2600	4	WTL3500	2	4	DN 350 acc. DIN 2576	14" 150-lbs ANSI	960	4227
Barrier M 3800*	6	WTL3500	3	6	DN 350 acc. DIN 2576	14" 150-lbs ANSI	1150	5063

* Max. capacity at UV dose of 400 J/m^2 at end of lamp life, SatC = 0.9/m (T_{10mm} = 98%)
** Certification pending

Wallace & Tiernan® UV systems for reduction of cloramines in swimming pools

Barrier® M UV systems

Barrier® M UV systems provide a cost-effective, reliable, operator-friendly chloramines reduction solution for pool water treatment installations.

A typical problem for indoor pools is the so-called "pool smell" which is a synonym for a poorly performing water treatment system.

Chloramines (or combined chlorine) result from the reaction between free chlorine and ammonia. Ammonium is introduced to the water predominantly by swimmers.

For the breakdown of chloramine, the spectrum of the UV lamp used is very important. Depending on the type of chloramine, different wavelengths are required for the photolysis process such as:

- Monochloramine - 245 nm
- Dichloramine - 297 nm
- Trichloramine (nitrogen trichloride) - 260 & 340 nm

Barrier® M systems are equipped with medium pressure UV lamps as standard which have a wide energy spectrum range - providing the perfect solution to break down combined chlorine effectively and economically. In addition to being used for chloramine reduction, Barrier® M systems will also improve the microbiological water quality because UV is also a very effective technology for the inactivation of bacteria, viruses and protozoa such as Cryptosporidium and Giardia.

UV sensor

A UV sensor monitors the disinfection process continuously by measuring the UV-C intensity inside the UV chamber. The measured absolute values are displayed on the control panel in W/m^2 or %. In the case of a UV alarm, both a dry contact and an indication on the display will be activated.

The UV sensor is factory calibrated and, due to the high quality optical components which are used, is a reliable tool to monitor the disinfection process. The UV sensor is positioned in the wall of the chamber and is in direct contact with the process water.

MODEL	LAMPS	UV LAMP	CONNECTION FLANGES		CAPACITY/FLOW RATE*	
			ROW	US	(m^3/h)	(US GPM)
Barrier M 35**	1	WTL1000	DN 80 acc. DIN 2576	3" 150-lbs ANSI	19	84
Barrier M 80	1	WTL1000	DN 125 acc. DIN 2576	5" 150-lbs ANSI	39	172
Barrier M 135	1	WTL2000	DN 125 acc. DIN 2576	5" 150-lbs ANSI	61	269
Barrier M 275	1	WTL2000	DN 200 acc. DIN 2576	8" 150-lbs ANSI	119	524
Barrier M 525	2	WTL2000	DN 200 acc. DIN 2576	8" 150-lbs ANSI	176	775
Barrier M 700	3	WTL2000	DN 200 acc. DIN 2576	8" 150-lbs ANSI	295	1299
Barrier M 1300	3	WTL2000	DN 350 acc. DIN 2576	14" 150-lbs ANSI	507	2232
Barrier M 1400	2	WTL3500	DN 350 acc. DIN 2576	14" 150-lbs ANSI	524	2307
Barrier M 1700	4	WTL2000	DN 350 acc. DIN 2576	14" 150-lbs ANSI	653	2875
Barrier M 2000	3	WTL3500	DN 350 acc. DIN 2576	14" 150-lbs ANSI	750	3302
Barrier M 2600	4	WTL3500	DN 350 acc. DIN 2576	14" 150-lbs ANSI	974	4288

* Capacity at UV dose of 600 J/m^2 (60 mJ/cm^2) at end of lamp life, transmittance T10 = 95%, chloramine reduction in pool approx. 50% when system is operated continuously in full flow conditions.
** Only available with a manual cleaning mechanism.

Wallace & Tiernan® UV systems for wastewater applications

Barrier® M UV systems

Barrier® M UV systems provide a cost-effective, reliable, operator-friendly disinfection solution for small and medium-sized wastewater plants. By disinfecting the water with Barrier® M UV systems, no chemicals or contact tanks are required.

An increasing number of wastewater treatment plants are using closed piping systems instead of open channels to transport water. A Barrier® M system can easily be incorporated in a closed piping system. Advantages of a closed UV system over an open-channel UV system are numerous, including 1) no need for costly concrete channels, 2) much smaller footprint, 3) no need for lifting devices used for modules and racks, 4) no need for level control devices, 5) no risk of exposure to harmful UV light, and 6) easier maintenance, e.g. changing lamps and cleaning.

For small and medium-sized wastewater disinfection applications, the very compact Barrier® M range of systems, based on powerful medium pressure lamps, is the perfect solution. Compared with low pressure based open channel systems, only a very small footprint is required.

The UV-C light generated by Barrier® M systems is absorbed by the microorganism and destroys the reproduction mechanism. Additionally, due to the wide spectrum of the medium pressure lamps, the photoreactivation effect is blocked, providing extra safety.

For high LOG reduction results, a low suspended solids level is required in the water to be treated.

UV sensor

A UV sensor monitors the disinfection process continuously by measuring the UV-C intensity inside the UV chamber. The measured absolute values are displayed on the control panel in W/m^2 or %. In the case of a UV alarm, both a dry contact and an indication on the display will be activated.

The UV sensor is factory calibrated and, combined with the high quality optical components which are used, is a reliable tool to monitor the disinfection process. The UV sensor is positioned in the wall of the chamber and is in direct contact with the process water.

MODEL	LAMPS	UV LAMP	CONNECTION FLANGES		CAPACITY/FLOW RATE*	
			ROW	US	(m^3/h)	(US GPM)
Barrier M 210	4	WTL1000	DN 125 acc. DIN 2576	5" 150-lbs ANSI	35	154
Barrier M 290	3	WTL2000	DN 125 acc. DIN 2576	5" 150-lbs ANSI	37	163
Barrier M 350	4	WTL2000	DN 125 acc. DIN 2576	5" 150-lbs ANSI	46	203
Barrier M 700	3	WTL2000	DN 200 acc. DIN 2576	8" 150-lbs ANSI	79	348
Barrier M 900	4	WTL2000	DN 200 acc. DIN 2576	8" 150-lbs ANSI	103	453
Barrier M 1250	6	WTL2000	DN 200 acc. DIN 2576	8" 150-lbs ANSI	148	652
Barrier M 2600	4	WTL3500	DN 350 acc. DIN 2576	14" 150-lbs ANSI	197	867
Barrier M 3800	6	WTL3500	DN 350 acc. DIN 2576	14" 150-lbs ANSI	281	1237

* Capacity at UV dose of 400 J/m^2 at end of lamp life, transmittance T_{10} = 65%

Wallace & Tiernan® S10k - Gas feed system

General

The S10k system consisting of a vacuum regulating valve, a gas control unit and an injector operates to the indirect procedure. This means that a chlorine solution is produced on-site from operating water and gas (e.g. chlorine gas) by means of an injector. The system is provided with manual control, the adjustable operating range is 1:20. The S10k vacuum regulating valve can be mounted directly on a cylinder or a gas manifold.

MAXIMUM CAPACITY	CHLORINE		CARBON DIOXIDE		SULPHUR DIOXIDE	
	g/h	kg/h	g/h	kg/h	g/h	kg/h
Dosing Ranges	1.2 - 24[1]	0.10 – 2.0	1.0 - 20[1]	0.12 – 2.4	1.2 - 24[1]	0.10 – 2.0
	3 – 60	0.15 – 3.0	2.4 – 48	0.16 – 3.2	3.0 – 60	0.15 – 3.0
	10 - 200	0.20 – 4.0	8 – 160	0.20 – 4.0	10 – 200	0.20 – 4.0
	20 – 400	0.25 – 5.0[2]	16 – 320	0.24 – 4.8[2]	20 – 400	0.25 – 5.0[2]
	30 – 600	0.30 – 6.0[2]	24 – 480	0.32 – 6.4[2]	30 – 600	0.30 – 6.0[2]
	50 – 1000	0.40 – 8.0[2]	40 – 800	0.40 – 8.0[2]	50 – 1000	0.40 – 8.0[2]
	75 - 1500	0.50 – 10.0[2]	60 – 1200		75 - 1500	0.50 – 10.0[2]
			80 - 1600			

[1] only when using 3" flowmeter (- 4 kg/h)
[2] only when using 5" flowmeter (- 10 kg/h)

Wallace & Tiernan® Gas feed system V 10K

The gas feed systems V10k automatic and manual control is the proven gas feed technology from Wallace & Tiernan for capacities up to 15 kg/h combining a standardised flexible design with user-selectable configurations. The V10k gas feeders operate according the indirect procedure i.e. operating under a vacuum that is produced at the injector where the metered gas (e.g. chlorine gas) is dissolved in the operating water and the resultant solution is discharged to the point of application. Gas flow control is achieved by the proven Wallace & Tiernan V-notch ensuring the well-known accuracy and repeatability.

GASES	CHLORINE	CARBON DIOXIDE	SULPHUR DIOXIDE	AMMONIA
Scale Capacities	Up to 15,0 kg/h	Up to 8,0 kg/h	Up to 10,0 kg/h	Up to 5,0 kg/h

FEED RANGES			
1-22,5 g/h	30-600 g/h	0,15-3,0 kg/h	0,40-8,0 kg/h
3-60 g/h	50-1000 g/h	0,20-4,0 kg/h	0,50 – 10,0 kg/h
10-200 g/h	75-1500 g/h	0,25-5,0 kg/h	10,00 – 15,0 kg/h
20-400 g/h	100-2000 g/h	0,30-6,0 kg/h	

LOTUS A

Chlorine dioxide generator from 8 to 20 g/h

The LOTUS system produces, doses and controls Chlorine Dioxide for water disinfection. Chlorine Dioxide is produced from diluted base chemicals: acid-chlorite process by Hydrochloric Acid (HCl 9%) and Sodium Chlorite (NaClO2 7,5%). Chlorine dioxide produced by LOTUS is set to be proportional to the circulating water flow or based on a set-point – it is then dosed into the water flow. There is no storage of chlorine dioxide hence no chlorine dioxide gas or concentrated solutions exist outside of the process application. LOTUS is designed so that the reaction to produce chlorine dioxide takes place in a reaction chamber. Multi function valves on the injection points ensure the security of the reaction chamber. The base chemicals are stored in tanks and fed into the reaction chamber through suction lances. Integrated level switches automatically stop the pumps when the tanks are empty.

- Instantaneous ClO_2 production
- ClO_2 dosing in PROPORTIONAL mode
- Flow control input (flow alarm), tank level controls (level alarms)
- Water meter input, stand-by input
- Real time production data, working temperature: 0÷45°C (32÷110°F)
- Pumps and SEFL flow sensors monitoring
- Permanent data storage with system data log (on Logbook menu)
- Service due date, LOTUS control instrument
- HCl (red) and NaClO2 (blue) metering pumps, pump for dilution water (grey)
- 3 SEFL flow sensors as security
- MFKT/V multifunction valve as pressure, safety, anti-syphon and bleed valve, PVC reaction chamber
- ASA (Acrylonitrile Styrene Acrylate) enclosure, ENCODER wheel control
- IP65 protection (NEMA4x) of LOTUS control instrument

FEATURES	MODELS	
	LOTUS-A 8	LOTUS-A 20
ClO_2 max capacity (g/h)	8 g/h	20 g/h
Max pressure (bar)	8	8
Max chemicals consumption (l/h)	0.2	0.5
Concentration (g/l)	2-20 g/l	

LOTUS B

Chlorine dioxide generator 8 g/h

The LOTUS B system produces, doses and controls Chlorine Dioxide for water disinfection. Chlorine Dioxide is produced from diluted base chemicals: acid-chlorite process by Hydrochloric Acid (HCl 9%) and Sodium Chlorite ($NaClO_2$ 7,5%). Chlorine dioxide produced by LOTUS B is stocked into a tank and then dosed proportionally to the request. Dosing is proportional to the volumetric flow rate. Chlorine dioxide is produced in a BATCH process. The reaction process takes place at ATMOSPHERIC PRESSURE. An active carbon filter prevents from potential exhalations.
LOTUS is designed so that the reaction to produce chlorine dioxide takes place in a reaction chamber.
A multifunction valve guarantees the safety of the process.

- BATCH chlorine dioxide production, ClO_2 dosing in proportional mode
- Alarms: products, water, emptying
- Water meter input, stand-by input
- Real time production data, working temperature: 0÷45°C (32÷110°F)
- ClO2 probe reading (probe and accessories not included)
- Temperature probe reading (probe and accessories not included)
- mV probe reading (probe and accessories not included)
- Pumps and SEFL flow sensors monitoring
- Service due date
- LOTUS B control instrument, ERMES communication
- ClO_2 concentration measure
- PVDF ball valve for reaction chamber empty
- 3 metering pumps: red HCl pump, blue NaCLO2 pump and grey ClO2 pump
- Multifunction valve (MFKT/V)
- Double chamber: reaction and storage
- ASA (Acrylonitrile Styrene Acrylate) enclosure
- ENCODER wheel control

FEATURES	MODEL
	LOTUS B
ClO_2 max capacity (g/h)	8 g/h
ClO_2 max capacity (g/day)*	192 g/day
Max chemicals consumption (l/h)	0,192 l/h (HCl), 0,156 l/h ($NaClO_2$)
Concentration (g/l)	2 g/l

* Max capacity (g/day) is reffered to a 100% capacity / 24h.

LOTUS D

Chlorine dioxide generator from 80 to 1000 g/h

- Instantaneous ClO2 production
- ClO2 dosing in proportional mode
- Flow control input (flow alarm)
- Tank level controls (level alarms)
- Water meter input
- Stand-by input
- Real time production data
- Pumps and SEFL flow sensors monitoring
- Permanent data storage with system data log (on Logbook menu)
- Service due date
- LOTUS control instrument
- HCl (red) and NaClO2 (blue) metering pumps
- Pump for dilution water (grey)
- 3 SEFL flow sensors as security
- MFKT/V multifunction valve as pressure, safety, anti-syphon and bleed valve
- PVC reaction chamber
- ASA (Acrylonitrile Styrene Acrylate) enclosure
- IP65 protection (NEMA4x) of LOTUS control instrument
- ENCODER wheel control
- Working temperature: 0÷45°C (32÷110°F)
- mV or ClO2 or temperature reading (on request).

FEATURES	MODELS					
	LOTUS-D 80	LOTUS-D 160	LOTUS-D 240	LOTUS-D 400	LOTUS-D 600	LOTUS-D 1000
ClO2 max capacity (g/h)	80 g/h	160 g/h	240 g/h	400 g/h	600 g/h	1000 g/h
Max pressure (bar)	12	8	10	10	7	4
Max chemicals consumption (l/h)	2.0	4.0	6.0	10.0	15.0	25.0

Wallace & Tiernan DIOX 10

Chlorine dioxide generator

The chlorine dioxide generator DIOX-A 10 was designed for the preparation of small quantities of chlorine dioxide. As starting chemicals for the preparation of chlorine dioxide Cedolyt A9 (dilute hydrochloric acid, 9 %) and Nadolyt C7.5 (dilute sodium chlorite, 7.5 %) are used. Both solutions are fed from standard carboys directly into the reaction tank where the sodium chlorite and the hydrochloric acid are converted into chlorine dioxide.
Chlorine dioxide is a powerful disinfectant and oxidising agent, excellent at destroying odours. Chlorine dioxide has been found to be superior to chlorine as a disinfectant. This chemical has a higher oxidising reduction potential than chlorine and can achieve destruction of such organic substances and virus which are not attacked by chlorine. At identical concentrations the capability of chlorine dioxide to destroy spores and virus is higher than that of chlorine.
The use of chlorine dioxide eliminates the formation of undesirable or harmful trihalomethanes (haloforms).
Chlorine dioxide oxidises unpleasant pollutants such as phenols, algae and products resulting from their decomposition into neutrally tasting substances.

MODEL	MAX.CAPACITY	FEED RATE NADOLYT C7.5	FEED RATE CEDOLYT A9	CLO_2 STRENGHT	WATER PRESSURE	POWER	FUSE	DIMENSION	WEIGHT
DIOX A3	3 g/h ClO2	75 ml/h	225 ml/h	<2,5 g/l	Min 2 bar	230V 50Hz	16A	800x1000x300	50 kg
DIOX A 10	10 g/h ClO2	250 ml/h	750 ml/h	<2,5 g/l	Min 2 bar	230V 50Hz	16A	800x1000x300	50 kg

Wallace & Tiernan DIOX-A 250

Chlorine dioxide generator Acid/chlorite process using dilute reagents

The Wallace & Tiernan Chlorine dioxide generator DIOX-A was developed for the preparation of chlorine dioxide up to a capacity of 250 g/h. As basic chemicals for the generation of chlorine dioxide this unit uses Cedolyt A9 (dilute hydrochloric acid, 9 % HCl) and Nadolyt C7.5 (dilute sodium chlorite, 7.5% $NaClO_2$). Both reagents are metered directly from commercial carboys or intermediate storage tanks into the reaction tower where a chlorine dioxide solution is produced. The strength of the two basic chemicals is balanced in a ratio that ensures an optimal yield of chlorine dioxide. The chlorine dioxide solution produced is directly metered via an injection unit into the water to be treated.

	DIOX-A 50	DIOX-A 100	DIOX-A 170	DIOX-A 250
Standard capacities	50 g/h	100 g/h	170 g/h	250 g/h
Flow rate of Nadolyt	1.25 l/h	2.50 l/h	4.25 l/h	6.25 l/h
Flow rate of Cedolyt	1.25 l/h	2.50 l/h	4.25 l/h	6.25 l/h
Water flow meter with min. contact	500 l/h		1000 l/h	
Approx. weight	30 kg	32 kg	35 kg	37 kg

Wallace & Tiernan DIOX-A 5000

Chlorine dioxide generator acid/chlorite process

The Wallace & Tiernan chlorine dioxide generator type DIOX-A 5000 was developed for the preparation of 2500 resp. 5000 g/h chlorine dioxide. It produces an aqueous solution of chlorine dioxide of a constant strength. As basic chemicals for the generation of chlorine dioxide this unit uses commercial grade hydrochloric acid (30 – 38% HCl) and Nadolyt C25 (sodium chlorite, 24,5% ClO2).

MODEL	MAX CAPACITY	REACTION TOWER	CLO2 STORAGE TANK	DILUTION WATER	SODIUM CHLORITE	HYDROCLORIC ACID	DIMENSION
DIOX A - 2500	2500 g/h	30 l	100	200 - 2000	3 – 27 l/h	4 – 42 l/h	1500x1900x530
DIOX A 5000	5000	70 l	200	300 - 3000	3 – 27 l/h	4 – 42 l/h	2000x1900x530

Wallace & Tiernan DIOX-C

Chlorine dioxide generator Chlorine activated process

This type of unit uses Nadolyt C25 (sodium chlorite, $NaClO_2$) and chlorine gas (Cl_2) as the basic chemicals for the generation of chlorine dioxide. Nadolyt C25 is metered into the unit directly from a carboy or a pumped system. Three system types are available for capacities of 1500, 3000 or 4500 g/h chlorine dioxide.
Chlorine dioxide solution is produced in the reaction tank. Once the chemicals have fully reacted, the concentrated chlorine dioxide solution is diluted with water at the reactor outlet before it is passed to the chlorine dioxide storage tank. The quantity of the dilution water is adapted to the required strength of the chlorine dioxide. This is adjusted to 1 up to max. 3 g / l ClO_2 depending on the demand.

WALLACE & TIERNAN DIOX-C			
Maximum capacities of generator	1500 g/ h ClO_2	3000 g/h ClO_2	4500 g/h ClO_2
Remote vacuum chlorinator (Cl_2)	75 ... 1500 g/h	150 ... 3000 g/h	200 ... 4000 g/h
Diaphragm metering pump VMP-II for Nadolyt C25 ($NaClO_2$)	11.2 l /h	25.0 l /h	25.0 l /h
Rotameter with adjustable min. and max. contacts:			
Injector operating water	1000 l / h	1000 l / h	1500 l / h
Dilution water	1000 l / h	1500 l / h	2000 l / h

GRUNDFOS Oxiperm OCG-166

Oxiperm OCG-166 systems generate 0.75 to 10 kg/h of chlorine dioxide directly on site according to the proven sodium chlorite/chlorine process. The produced chlorine dioxide solution in the batch tank has a concentration of 3 g/l.

Usually, disinfection is the first step of pathogen reduction, in order to continue operating a drinking water installation. An ideal means of ensuring the sterility of drinking water is to use chlorine dioxide as a disinfectant. Chlorine dioxide is highly effective against all types of germs and has a long dwell time in the tubing system, which means it disinfects even without re-dosing. The big advantage of chlorine dioxide over other disinfectants is its effectiveness against biofilms. It destroys the existing biofilm, thus removing the breeding ground for microorganisms, and prevents it from building up again.

Ideal application areas for Oxiperm include combating germs and pathogens, such as legionella in building installations, disinfecting cooling water systems, and disinfecting drinking water in water plants or industrial processes.

Chlorine dioxide is often used in the food and beverage industry for disinfection of process water or for CIP and bottle washing because it doesn't change the taste or smell of the treated water.

CAPACITY AND CONSUMPTION DATA

Oxiperm OCG	ClO2 preparation capacity		Max. operation pressure	Consumption of components		Operating water consumption				Weight
				Cl_2	$NaClO_2$	Injector	Dilution	Extraction	Total	
REF.	[kg/h]	[l/h]	[bar]	[kg/h]	[l/h]	[l/h]	[l/h]	[l/h]	[l/h]	[kg]
166-007G	0.75	243.5	5	0.5	3.5	150	90	700	940	210
166-015G	1.5	487	5	1	7.0	280	200	1100	1580	235
166-025G	2.5	821.5	5	1.65	11.8	470	340	2400	3200	250
166-050G	5.0	1643.5	5	3.3	23.5	940	680	2200	3790	330
166-075G	7.5	2435	5	4.9	35	1400	1000	3400	5800	370
166-100G	10.0	3247	5	6.6	47	1900	1300	4200	7400	400

GRUNDFOS Oxiperm OCC-164

Oxiperm OCC-164 uses concentrated 33 % HCl solution and 24.5 % NaClO2 solution to generate 4 to 10 kg/h of chlorine dioxide.
Usually, disinfection is the first step of pathogen reduction, in order to continue operating a drinking water installation. An ideal means of ensuring the sterility of drinking water is to use chlorine dioxide as a disinfectant. Chlorine dioxide is highly effective against all types of germs and has a long dwell time in the tubing system, which means it disinfects even without re-dosing. The big advantage of chlorine dioxide over other disinfectants is its effectiveness against biofilms. It destroys the existing biofilm, thus removing the breeding ground for microorganisms, and prevents it from building up again.
Ideal application areas for Oxiperm include combating germs and pathogens, such as legionella in building installations, disinfecting cooling water systems, and disinfecting drinking water in water plants or industrial processes.
Chlorine dioxide is often used in the food and beverage industry for disinfection of process water or for CIP and bottle washing because it doesn't change the taste or smell of the treated water.

CAPACITY AND CONSUMPTION DATA

Oxiperm OCC	ClO_2 preparation capacity		Max. operation pressure.	Consumption of components		Consumption of process water				Weight
				HCl	$NaClO_2$	Bypass	Dilution	Exhaust injector	Total[1]	
REF.	[kg/h]	[l/h]	[bar]	[l/h]	[l/h]	[l/h]	[l/h]	[l/h]	[l/h]	[kg]
164-4000C	4	1338	4	24	24	1150	140	1400	2690	225
164-6000C	6	2009	5	37	37	1720	215	1900	3835	245
164-7500C	7.5	2509	5	47	47	2150	265	2300	4715	290
164-10000C	10	3341	5	63	63	2860	355	3100	6315	315

[1] for 3 g/l in the batch tank

GRUNDFOS Oxiperm OCD-164

Preparation of chlorine dioxide from diluted solutions

Oxiperm OCD-164 uses diluted 9 % HCl solution and 7.5 % NaClO2 solution to generate 30 to 2000 g/h of chlorine dioxide.
Usually, disinfection is the first step of pathogen reduction, in order to continue operating a drinking water installation. An ideal means of ensuring the sterility of drinking water is to use chlorine dioxide as a disinfectant. Chlorine dioxide is highly effective against all types of germs and has a long dwell time in the tubing system, which means it disinfects even without re-dosing. The big advantage of chlorine dioxide over other disinfectants is its effectiveness against biofilms. It destroys the existing biofilm, thus removing the breeding ground for microorganisms, and prevents it from building up again.
Ideal application areas for Oxiperm include combating germs and pathogens, such as legionella in building installations, disinfecting cooling water systems, and disinfecting drinking water in water plants or industrial processes.
Chlorine dioxide is often used in the food and beverage industry for disinfection of process water or for CIP and bottle washing because it doesn't change the taste or smell of the treated water.

CAPACITY AND CONSUMPTION DATA

Oxiperm OCD	ClO_2 preparation capacity		Max. operation pressure P_{max}		Consumption of components		Consumption of bypass water (input pressure < P_{max})				Weight
			50 Hz	60 Hz[1]	HCl	$NaClO_2$	Continuous operation[2]	Batch operation[3]			
REF.	[g/h]	[l/h]	[bar]	[bar]	[l/h]	[l/h]	[l/h]	0.5 g/l [l/h]	2.0 g/l [l/h]	3.3 g/l [l/h]	[kg]
164-030D (DFI)	30	421	10	10	0.7	0.7	420	66	14	7.7	33
164-120 D (DFI)	120	426	9	6	2.9	2.9	420	220	55	31	34
164-220D (DFI)	220	430	7	7	5.2	5.2	420	400	100	56	34
164-350D	350	437	9	9	8.3	8.3	420	640	160	89	57
164-700D	700	933	9	9	16.5	16.5	900	1280	320	179	62
164-1000D	1000	948	9	9	24	24	900	1800	450	258	66
164-1500D	1500	970	9	9	35	35	900	2720	680	383	76
164-2000D	2000	996	9	6	48	48	900	3600	900	517	82

[1] With max. preparation capacity, shortened reaction time.
[2] With admission pressure 2 bar higher than the pressure at the injection unit.
[3] In batch operation the concentration is freely adjustable between 0.5 and 3.3 g/l.
Between 2 and 3.3 g/l the system operates at full capacity. From 2 down to 0.5 g/l the system reduces the capacity continuously, because the dosing quantity of the chemical components is regulated if the bypass water quantity is set to constant.

GRUNDFOS Oxiperm OCC-164

Preparation of chlorine dioxide from concentrated solutions

Oxiperm OCC-164 uses concentrated 33 % HCl solution and 24.5 % NaClO2 solution to generate 150 to 2500 g/h of chlorine dioxide.
Usually, disinfection is the first step of pathogen reduction, in order to continue operating a drinking water installation. An ideal means of ensuring the sterility of drinking water is to use chlorine dioxide as a disinfectant. Chlorine dioxide is highly effective against all types of germs and has a long dwell time in the tubing system, which means it disinfects even without re-dosing. The big advantage of chlorine dioxide over other disinfectants is its effectiveness against biofilms. It destroys the existing biofilm, thus removing the breeding ground for microorganisms, and prevents it from building up again.
Ideal application areas for Oxiperm include combating germs and pathogens, such as legionella in building installations, disinfecting cooling water systems, and disinfecting drinking water in water plants or industrial processes.
Chlorine dioxide is often used in the food and beverage industry for disinfection of process water or for CIP and bottle washing because it doesn't change the taste or smell of the treated water.

CAPACITY AND CONSUMPTION DATA

Oxiperm OCC	ClO_2 preparation capacity		Max. operation pressure P_{max}		Consumption of components			Consumption of bypass water (input pressure < P_{max})				Weight
	(at 6 bar)		50 Hz	60 Hz[1]	HCl	$NaClO_2$	Dilution water	Continuous operation[2]	Batch operation[1]			
REF.	[g/h]	[l/h]	[bar]	[bar]	[l/h]	[l/h]	[l/h]	[l/h]	0.5 g/l [l/h]	2.0 g/l [l/h]	3.3 g/l [l/h]	[kg]
164-150C	150	428	9	6	1.0	1.0	5.5	420	280	70	39	58
164-450C	450	442	9	6	2.8	2.8	16	420	800	200	116	62
164-750C	750	937	9	6	4.8	4.8	27	900	1360	340	193	68
164-1300C	1300	962	9	6	8.2	8.2	46	900	2360	590	336	90
164-2500C	2500	1022	7	6	16.0	16.0	90	900	4600	1150	650	110

[1] In batch operation the concentration is freely adjustable between 0.5 and 3.3 g/l. Between 2 and 3.3 g/l the system operates at full capacity. From 2 down to 0.5 g/l the system reduces the capacity continuously, because the dosing quantity of the chemical components is regulated if the bypass water quantity is set to constant.

GRUNDFOS Oxiperm® Pro OCD-162

Reliable preparation and dosing of chlorine dioxide from diluted solutions for water disinfection

Oxiperm® Pro systems produce chlorine dioxide using diluted solutions of sodium chlorite (NaClO2 7.5 %) and hydrochloric acid (HCl 9 %). They are available in four capacity levels, producing 5, 10, 30 and 60 g/h of chlorine dioxide respectively. This capacity is sufficient to treat up to 150 m3 of drinking water per hour at a maximum concentration of 0.4 mg/l ClO2.
Chlorine dioxide is produced on demand from diluted solutions using the reliable sodium chlorite / hydrochloric acid, in accordance with the German Drinking Water Directive.
The chlorine dioxide solution produced is stored in an integrated or external batch tank and is added to the drinking water pipe as required using the integrated dosing pump or an external dosing pump.

Applications

Usually, disinfection is the first step of pathogen reduction, in order to continue operating a drinking water installation. An ideal means of ensuring the sterility of drinking water is to use chlorine dioxide as a disinfectant. Chlorine dioxide is highly effective against all types of germs and has a long dwell time in the tubing system, which means it disinfects even without re-dosing. The big advantage of chlorine dioxide over other disinfectants is its effectiveness against biofilms. It destroys the existing biofilm, thus removing the breeding ground for microorganisms, and prevents it from building up again.
Ideal application areas for Oxiperm Pro include combating germs and pathogens, such as legionella in building installations, disinfecting cooling water systems, and disinfecting drinking water in water plants or industrial processes. Chlorine dioxide is often used in the food and beverage industry for disinfection of process water or for CIP and bottle washing because it doesn't change the taste or smell of the treated water.

OXIPERM PRO	PREPARATION CAPACITY	COUNTERPRESSURE		CONSUMPTION OF COMPONENTS			CHLORINE DIOXIDE DOSING PUMP	WEIGHT kg	VOLTAGE	PRODUCT No.
		P_{max} (bar)		(l/h) at max. capacity		Dilution water				
	(g/h) ClO_2	50 Hz	60 Hz	HCl	$NaClO_2$	(l/h)				
Standard: with SMART Digital dosing pump DDA with suction lance for 30-litre container										
OCD-162-5-S/G	5	10	10	0.16	0.15	2.6	DDA	26	230 V. 50/60 Hz	95735153
OCD-162-10-S/G	10	10	10	0.33	0.30	5.1	DDA	28		95735161
OCD-162-5-S/H	5	10	10	0.16	0.15	2.6	DDA	26	115 V. 50/60 Hz	95735154
OCD-162-10-S/H	10	10	10	0.33	0.30	5.1	DDA	28		95735162
Standard: with mechanical dosing pump DMX or digital dosing pump DDI with suction lance for 60-litre container										
OCD-162-30-D/G1	30	10	10	0.97	0.89	16	DMX	70	230 V. 50 Hz	95735169
OCD-162-30-P/G1	30	10	10	0.97	0.89	16	DDI	69		95735171
OCD-162-60-D/G1	60	10	10	1.83	1.64	35	DMX	85	230 V 50 Hz	95718452
OCD-162-60-P/G1	60	10	10	1.83	1.64	35	DDI	84		95718454
OCD-162-30-P/H1	30	10	10	0.97	0.89	16	DDI	69	115 V. 60 Hz	95735172
OCD-162-60-P/H1	55	10	10	1.67	1.50	32	DDI	84		95736300
Standard: with mechanical dosing pump DMX or digital dosing pump DDI with suction lance for 200- or 1000-litre container										
OCD-162-30-D/G2	30	10	10	0.97	0.89	16	DMX	70	230 V. 50 Hz	95735173
OCD-162-30-P/G2	30	10	10	0.97	0.89	16	DDI	69		95735175
OCD-162-60-D/G2	60	10	10	1.83	1.64	35	DMX	85	230 V. 50 Hz	95718456
OCD-162-60-P/G2	60	10	10	1.83	1.64	35	DDI	84		95718458
OCD-162-30-P/H2	30	10	10	0.97	0.89	16	DDI	69	115 V. 60 Hz	95735176
OCD-162-60-P/H2	55	10	10	1.67	1.50	32	DDI	84		95736302
Standard: with mechanical dosing pump DMX or digital dosing pump DDA or DDI with suction lance for 55-gallon container										
OCD-162-5-S/H3	5	10	10	0.16	0.15	2,6	DDA	26	115 V. 50/60 Hz	95735155
OCD-162-10-S/H3	10	10	10	0.33	0.30	5,1	DDA	28		95735163
OCD-162-30-P/H3	30	10	10	0.97	0.89	16	DDI	69	115 V. 60 Hz	95735178
OCD-162-60-P/H3	55	10	10	1.67	1.50	32	DDI	84		95736304

Ozone



Ozone provides high efficiency in water treatment for different applications end is environmentally friendly at the same. Although, the market can offer other solutions in form of other disinfection methods, equipment and chemicals, ozone generator is very reliable, has wide range of applications and high efficiency in continuous 24h water treatment systems.
Ozone is an unstable molecule owing to the weak bonds holding the third oxygen atom.This instability makes ozone a naturally powerful oxidizing and disinfecting agent. Oxidation occurs when ozone molecules come in contact with oxidizable substances, including microorganisms (viruses, molds, and bacteria), as well as organic and inorganic compounds (metal ions, plastics and rubbers).

A Natural Disinfectant

In these reactions, the unstable third oxygen atom is transferred, with a large release of energy, from ozone to the molecule being oxidized. The transfer of energy in oxidation causes the outer membranes of microorganisms to rupture. As ozone molecules enter lysed microorganisms, genetic material (DNA and RNA) is oxidized and destroyed. Oxidation typically hydrolyzes inorganic molecules, causing them to become insoluble, and facilitating removal by fi ltration. Organic molecules most often disintegrate as a result of oxidation, destroying their biological activity.

Applications

Ozone has been utilized in municipal water disinfection for over 100 years and has very broad application potential in a variety of industries and applications:
Bottled water and beverage
Clean-In-Place (CIP)
Food processing and preservation
Industrial process and cooling tower water
Laundry
Groundwater and soil remediation
Marine and fi shing fl eet
Aquaculture
Municipal water and wastewater treatment

SGC series

Ozone/oxygen systems

Self Contained

One-button system control, onboard air compression, and remarkable ozone output (up to 25g/hr, 1.3 lbs/day) make the SGC Series ozone generators the most flexible and easy-to-use ozone production systems of their size. Ideal for a variety of commercial and industrial applications, the SGC Series generators combine air-cooled ozone generation with onboard oxygen concentration and air compression–all housed in a compact, wall-mountable stainless steel cabinet.

User Friendly

The convenient, intuitive control panel of the SGC Series offers 0-100% variable power control, feed gas control and reactor backpressure gauges, power supply feedback reference meter, and LED ozone production indicator. The control interface includes 4-20mA or 0-10VDC input signal for complete ozone concentration control.

TECHNICAL SPECIFICATIONS

Model/ Part Number	Max. Ozone Production	Max. Ozone Concentration	Max. Reactor Pressure	Power Consumption	Air Cooling	Ozone Outlet Fitting*	Dimensions (1H1 x W1 x D)	Weight
	lbs./day (grams/hour)	% weight	psig (bar)	watts	scfm (lpm)	inches (mm)	inches (mm)	lbs (kg)
SGC11/ R-SGC112 (230 V)	0.5(10)	5%	12 (0.8)	785	240 (6796)	1/4" (6.35 mm)	22.3 x 27.5 x 11.1 (566 x 699 x 282)	95 (43)
SGC21/ R-SGC112 (230 V)	0.8 (16)	6%	12 (0.8)	840	240 (6796)	1/4" (6.35 mm)	22.3 x 27.5 x 11.1 (566 x 699 x 282)	100 (45)
SGC22/ R-SGC222 (230 V)	1.3 (25)	6%	12 (0.8)	1000	240 (6796)	1/4" (6.35 mm)	22.3 x 27.5 x 11.1 (566 x 699 x 282)	105 (48)

SGA series

Ozone/oxygen systems

Compact and Powerful

The SGA Series of integrated ozone/oxygen systems combines air-cooled ozone generation with onboard oxygen concentration in a compact, wall-mountable stainless steel housing. Powerful and user-friendly, the SGA Series can produce up to 3.2 pounds of ozone/day and is ideal for a broad range of commercial and industrial applications.

User Friendly

The SGA Series is easy to operate with a convenient, intuitive control panel, including 0-100% variable power control, feed gas control, inlet air pressure and reactor back-pressure gauges; power supply feedback reference meter; and LED ozone production indicator. The control interface includes 4-20mA or 0-10VDC input signal for 0-100% variable ozone concentration control.

TECHNICAL SPECIFICATIONS

Model/ Part Number	Max. Ozone Production	Max. Ozone Concen-tration	Max. Reactor Pressure	Feed Gas Flow Range	Power Consum-ption	Air Cooling	Compressed Air Inlet Fitting	Ozone Outlet Fitting*	Dimensions (H x W x D)	Weight
	lbs./day (grams/hour)	% weight	psig (bar)	scfh (lpm)	watts	scfm (lpm)	inches (mm)	inches (mm)	inches (mm)	lbs (kg)
SGA11/ R-SGA112 (230 V)	0.6 (12)	5%	12 (0.8)	7-20 (3.3-9.4)	300	240 (6796)	1/4" fnpt (6.35 mm)	1/4" (6.35 mm)	22.3 x 19.0 x 11.1 (566 x 483 x 282)	70 (32)
SGA21/ R-SGA212 (230 V)	1.0 (18)	6%	12 (0.8)	7-20 (3.3-9.4)	300	240 (6796)	1/4" fnpt (6.35 mm)	1/4" (6.35 mm)	22.3 x 19.0 x 11.1 (566 x 483 x 282)	75 (34)
SGA22/ R-SGA222 (230 V)	1.6 (30)	8%	12 (0.8)	7-20 (3.3-9.4)	450	240 (6796)	1/4" fnpt (6.35 mm)	11.1 1/4" 2 (682.35 mm)	22.3 x 19.0 x 11.1 (566 x 483 x 282)	85 (39)
SGA23/ R-SGA232 (230 V)	2.4 (45)	8%	12 (0.8)	10-40 (4.7-18.9)	525	240 (6796)	1/4" fnpt (6.35 mm)	1/4" (6.35 mm)	22.3 x 27.5 x 11.1 (566 x 699 x 282)	110 (50)
SGA24/ R-SGA242 (230 V)	3.2 (60)	8%	12 (0.8)	10-40 (4.7-18.9)	580	240 (6796)	1/4" fnpt (6.35 mm)	1/4" (6.35 mm)	22.3 x 27.5 x 11.1 (566 x 699 x 282)	115 (52)

Large SGA series

Ozone/oxygen systems

High Ozone Output

The Large SGA Series of integrated ozone/oxygen systems combines aircooled ozone generation with onboard oxygen concentration in a compact, stainless steel housing.

Powerful and user-friendly, the Large SGA Series can produce up to 12.7 pounds of ozone/day and is ideal for a broad range of commercial and industrial applications.

User Friendly

The Large SGA Series is easy to operate with a convenient, intuitive control panel, including 0-100% variable power control, feed gas control, inlet air pressure and reactor back-pressure gauges; power supply control signal reference meter; and LED ozone production indicators. The control interface includes 4-20mA or 0-10VDC input signal for 0-100% variable ozone concentration control.

TECHNICAL SPECIFICATIONS

Model/ Part Number	Max. Ozone Production	Max. Ozone Concen-tration	Max. Reactor Pressure	Feed Gas Flow 35.1 Range	Power Consu-mption	Air Cooling	Compressed Air Inlet Fitting	Ozone Outlet Fitting*	Dimensions (H x W x D)	Weight
	lbs./day (grams/hour)	% weight	psig (bar)	scfh (lpm)	watts	scfm (lpm)	inches (mm)	inches (mm)	inches (mm)	lbs (kg)
SGA43/ R-SGA432 (230 V)	4.8 (90)	8%	12 (0.8)	10-80 (5-38)	1100	480 (13592)	1/2" fnpt (12.7 mm)	1/2" (12.7 mm)	30.5 x 35.1 x 29.4 (774 x 892 x 746)	220 (100)
SGA44/ R-SGA442 (230 V)	6.3 (120)	8%	12 (0.8)	10-80 (5-38)	1200	480 (13592)	1/2" fnpt (12.7 mm)	1/2" (12.7 mm)	30.5 x 35.1 x 29.4 (774 x 892 x 746)	230 (104)
SGA53/ R-SGA532 (230 V)	7.1 (135)	8%	12 (0.8)	20-120 (9-57)	2190	720 (20388)	1/2" fnpt (12.7 mm)	1/2" (12.7 mm)	53.7 x 35.1 x 29.4 (1364 x 892 x 746)	330 (150)
SGA63/ R-SGA632 (230 V)	9.5 (180)	8%	12 (0.8)	20-160 (9-76)	2920	960 (27184)	1/2" fnpt (12.7 mm)	1/2" (12.7 mm)	53.7 x 35.1 x 29.4 (1364 x 892 x 746)	375 (170)
SGA64/ R-SGA642 (230 V)	12.7 (240)	8%	12 (0.8)	20-160 (9-76)	3320	960 (27184)	1/2" fnpt (12.7 mm)	1/2" (12.7 mm)	53.7 x 35.1 x 29.4 (1364 x 892 x 746)	460 (209)

Wallace & Tiernan OSEC®-A

On site electrolytic chlorination system

OSEC®-A stands out by its compact and space-saving design, easy operation and low maintenance. Different setting possibilities and monitoring as well as an integral chlorine gas detector guarantee highest operational reliability. At the outlet of the electrolyser cell the chlorine generated by OSEC®-A is immediately dissolved in the water resulting in the generation of highly effective hypochloric acid (HClO). Undesirable substances such as chlorate and bromate are not formed. This type of electrolysis represents the purest and most stable disinfection solution.
In comparison, commercial sodium hypochlorite contains chlorate that is formed during the disintegration of the effective chlorine. In addition, bromate is found in commercial sodium hypochlorite, a carcinogenic substance, for which a limit value of 0.025 mg/l is valid since 1.1.2003 in accordance with the Potable Water Act.

MODEL	OSEC-A25	OSEC-A50
Capacity	25 g/h	50 g/h

Wallace & Tiernan OSEC®-B

On site electrolytic chlorination system

Electrolysers built to the tubular cell process, which are used as an alternative to chlorine gas systems, provide many safety features. Risks inherent in the transport, handling and storage of chlorine gas or commercial sodium hypochlorite solutions are eliminated. Local regulatory issues often limit the use of chlorine gas for safety reasons.
OSEC® systems produce directly on site sodium hypochlorite from a saturated solution of common salt and electricity. Generation takes place on demand only. The hypo produced in batch operation does virtually not degrade in strength even if it is stored over an extended period of time.
The anodes used are made from titanium with a precious metal coating. This construction allows to grant a five calendar years warranty after installation and commissioning. The cathodes are made from a special grade Hastelloy C. Automatic control of the supply voltage combined with a programmable periodic cleaning cycle of the monopolar electrodes by dilute hydrochloric acid ensure a virtually operator-free performance.
The number of anodes in the electrolyser can be customised to produce the desired quantity of chlorine. This system flexibility provides a significant reduction in power requirements and plant cost.
An intelligent PLC control system provides for the fully automatic operation of the unit including all control, monitoring, alarm and interlock functions. Having set the flow rates for brine and dilution water, all that remains on site is to turn the start switch. Metering of the sodium hypochlorite solution is achieved by manually or automatically controlled dosing pumps.

MODEL	CAPACITY	MODEL	CAPACITY
OSEC-B95	95 g/h	OSEC-B855	885 g/h
OSEC-B140	140 g/h	OSEC-B950	950 g/h
OSEC-B190	190 g/h	OSEC-B1045	1045 g/h
OSEC-B240	240 g/h	OSEC-B1140	1140 g/h
OSEC-B285	285 g/h	OSEC-B1235	1235 g/h
OSEC-B335	335 g/h	OSEC-B1330	1330 g/h
OSEC-B385	385 g/h	OSEC-B1520	1520 g/h
OSEC-B430	430 g/h	OSEC-B1710	1710 g/h
OSEC-B480	480 g/h	OSEC-B1900	1900 g/h
OSEC-B570	570 g/h	OSEC-B2090	2090 g/h
OSEC-B665	665 g/h	OSEC-B2280	2280 g/h
OSEC-B760	760 g/h	OSEC-B2470	2470 g/h
		OSEC-B2660	2660 g/h

On-Site Electrolytic Chlorination System

OSEC® B-Pak System

Skid-Mounted On-Site Electrolytic Chlorination System

The OSEC® B-Pak system generates a 0.8% sodium hypochlorite solution through the electrolysis of brine, consuming only water, salt and electricity. By producing hypochlorite on-site and on-demand, the system eliminates concerns associated with transportation and storage of liquefied chlorine gas or commercial sodium hypochlorite solutions, making it ideal for any application requiring chlorination.

Due to its low concentration, the hypochlorite solution generated by the OSEC® B-Pak system minimizes corrosion and degradation (loss of available chlorine during storage) issues typical of high-strength (12-15%) sodium hypochlorite solutions. In addition, the system offers lower operating costs than commercial hypochlorite, typically resulting in attractive payback periods.

The OSEC® B-Pak skid is a fully automated, pre-packaged on-site hypochlorite generation system designed for fast and economical installation, safe operation, and easy maintenance. Skids are shipped intact and completely piped, wired and tested.

Siemens Water Technologies is a global leader in chemical feed and disinfection solutions with thousands of electrolytic hypochlorite generation systems (brine and seawater based) installed around the world.

MODEL	CAPACITY
OSEC-Bpak 250	4,7 kg/h
OSEC-Bpak 500	9,5 kg/h
OSEC-Bpak 750	14,2 kg/h
OSEC-Bpak 1000	18,9 kg/h
OSEC-Bpak 1500	28,5 kg/h

Wallace & Tiernan OSEC®-NT

On site electrolytic chlorination system, 150–300 g/h chlorine

Electrolysers that are built to the tubular cell or membrane process, provide many safety features when used as an alternative to chlorine gas systems. Transport and handling of chlorine cylinders is completely eliminated. Also the mandatory chlorine store rooms with all their safety equipment such as sprinkler systems are no longer required with this technology.

General

OSEC®-NT electrolysers generate on demand highly effective sodium hypochlorite from saturated brine, softened water and DC power. All the problems associated with commercial sodium hypochlorite solutions, such as the poor stability in storage (degradation), laborious handling or dilution, storage of carboys, are eliminated by this on site generation.

The Wallace & Tiernan membrane process is based on specially coated anodes and cathodes that ensure a long service life for the electrolyser cell.

Unlike conventional membrane processes, the Wallace & Tiernan technology does not circulate chlorine laden lean brine in a loop via the salt saturating tank. Thus no chlorine can escape to the ambient air. All the salt used is completely converted into chlorine.

An intelligent PLC control and monitoring system with text display provides fully automatic operation. Both OSEC®-NT capacity ranges of 150 and 300 g Cl2/h are built as very compact units: Hypochlorite and brine tank, control panel, rectifier, water softener and free space for two metering pumps is also incorporated into the compact skid.

Optionally the unit can be linked into standard bus systems allowing tele-monitoring via telephone cable.

MODEL	OSEC-NT150	OSEC-NT300
Capacity	150 g/h	300 g/h

MODEL	CAPACITY
OSEC-NTX6	6,0 kg/day
OSEC-NTX12	12,0 kg/day
OSEC-NTX24	24,0 kg/day
OSEC-NTX36	36,0 kg/day
OSEC-NTX48	48,0 kg/day
OSEC-NTX60	60,0 kg/day

Selcoperm SES

Electrolysis system for 5-45 kg/h Cl_2 (equivalent)
Safe and simple production of sodium hypochlorite solution

Benefits of the electrolysis with Selcoperm

- Safe and reliable method of producing sodium hypochlorite on-site
- Common salt is the base material - it is non-toxic, easy to store and easy to handle
- Only water, common salt and electricity are needed for the electrolysis - low operating costs, world-wide use
- Fresh sodium hypochlorite is always on hand and does not dissociate like commercial sodium hypochlorite solutions
- Low formation of chlorate as a by-product
- Less safety requirements than chlorine-gas-based systems
- Lower pH value than commercial sodium hypochlorite reduces scaling of injection units etc. in hard water areas
- Robust design for easy installation and maintenance
- Long service life, compared with membrane cell electrolysis

Applications

Typical disinfection applications for Selcoperm systems are especially in

- drinking water treatment,
- water treatment for industrial processes and cooling towers.

The systems are an excellent alternative to chlorine gas or commercial sodium hypochlorite applications. Remark: Legislation on the use of disinfectants in water treatment applications is country-specific. Please contact your local Grundfos sales office for further details on the use of our products in your application and area.

SES TYPE	CAPACITY LEVEL Cl2 (equivalent) [g/h]	MAX. POWER RATING OF BUILT-IN CONTROL CABINET [kW]	SOFT WATER flow [l/h]	BRINE FLOW [l/h]	WEIGHT [kg]		PRODUCT NUMBER
					Empty	Filled	
SES-5000	5000	1.5	570	63	660	685	98720672
SES-7500	7500	1.5	850	94	680	715	98720676
SES-10000	10000	1.5	1140	126	700	750	98720678
SES-15000	15000	3	1700	187	760	825	98720681
SES-20000	20000	3	2280	252	1170	1270	98720705
SES-30000	30000	5.2	3400	376	1250	1380	98720707
SES-45000	45000	5.2	5100	560	1350	1550	98720722

Anti legionella systems

- Dosasan
- Dosaclor
- Dosaclor Duo
- Dosabios
- Dosabios Duo

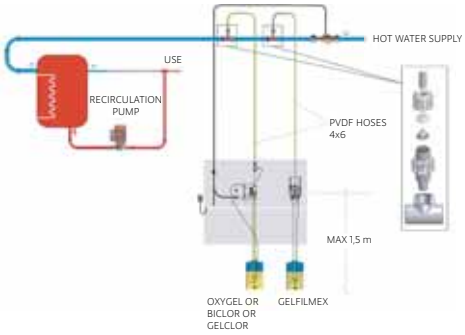
Municipal water for potable use can contain bacteria which are harmful for human health, such as the bacterium Legionella Pneumophila. The most common sources of Legionella and Legionnaires' disease outbreaks are medium- to large-sized sanitary water systems, cooling towers, swimming pools, fountains, conditioning systems, medical equipment for respiratory treatments. CWG company has designed a whole range of dosing systems to prevent the formation of legionella and cope with it if the bacterium has grown. Hygiene and service of the units are the main elements to be taken into account to seriously face the legionella problem. All equipment in contact with drinking water is manufactured with top quality materials.

Chemicals

Accessories

Dosasan

Proportional dosing station



DOSASAN is an anti legionella system for the proportional dosing of a disinfectant (Oxygel or Biclor or Gelclor) and of the anti corrosion product Gelfilmex, in installations with sanitary hot water storage. Suitable to prevent the risk of legionella.

DOSASAN is supplied assembled on a panel, ready for installation, and includes:

- Panel 40 x 60 cm
- Proportional metering pump for dosing anti corrosion conditioning chemicals
- Self degassing proportional metering pump for dosing disinfectants (with high surface tension)
- Signal splitter to control the two metering pumps
- Flow sensor on the disinfecting line
- Suction nozzle with level probe on the disinfecting line
- Level probes
- 25 l. empty can to decant disinfectants
- Kit complete with suction, delivery and drain hoses, injection connections and foot filter.

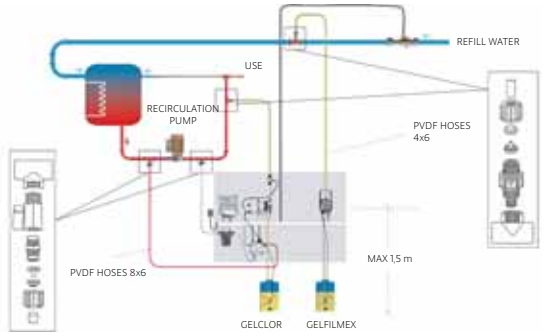
REF.	ITEM	INJECTION CONNECTIONS	DOSAGE		PRESSURE	MAX PULSE FREQUENCY	VOLTAGE	DIMENS.
			DISINFECTIONAL PROPORTIONAL	ANTI CORROSIONS PROPORTIONAL				
			l/h	l/h	bar		V	cm
380100	DOSASAN	3/8" - 1/2" M	2	4	10	180	230	40 x 60

P.S. Choose the water meter with pulse output suitable for the application.

GUIDE TO CHOICE OF ANTI LEGIONELLA SYSTEMS		
SANITARY HOT WATER TANKS	≤ 5000 litres	≥ 5000 litres
TYPE OF TREATMENT		
prevention and sanitisation	DOSASAN	-
prevention and sanitisation with automatic control and dosing of the disinfectant	DOSACLOR DOSABIOS	DOSACLOR DUO DOSABIOS DUO

Dosaclor

Proportional dosing station, with residual chlorine control



DOSACLOR is an anti legionella system for the control and proportional dosing of Gelclor disinfectant and Gelfilmex anti corrosion product, in installations with sanitary hot water storage. Suitable in presence of legionella to avoid bacterium development and growth.
DOSACLOR is supplied assembled on a panel, ready for installation, and includes:

- Panel 80 x 100 cm
- Proportional metering pump for dosing anti corrosion conditioning chemicals
- Self degassing proportional metering pump for dosing Gelclor (with high surface tension)
- Hot water filter
- Digital instrument for chlorine measurement and regulation
- Amperometric cell and cell holder
- Flow sensor on the disinfecting line
- Suction nozzle with level probe on the disinfecting line
- Level probes
- 25 l. empty can to decant disinfectants
- Kit complete with suction, delivery and drain hoses, injection connections and foot filter

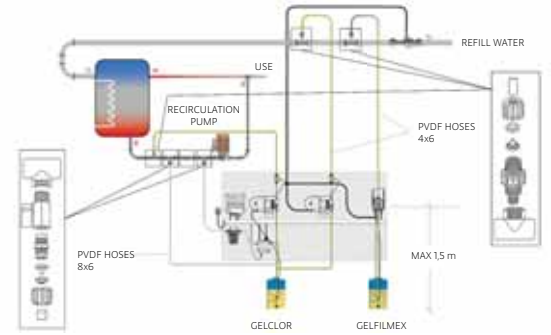
REF.	ITEM	INJECTION CONNECTIONS	DOSAGE		PRESSURE	METER	MAX PULSE FREQUENCY	VOLTAGE	DIMENS. (LXH)
			DISINFECTIONAL PROPORTIONAL	ANTI CORROSIONS PROPORTIONAL					
			l/h	l/h	bar			V	cm
380101	DOSACLOR	3/8" - 1/2" M	2	4	10	clorine	180	230	80 x 100

P.S. Choose the water meter with pulse output suitable for the application.

GUIDE TO CHOICE OF ANTI LEGIONELLA SYSTEMS		
SANITARY HOT WATER TANKS	≤ 5000 litres	≥ 5000 litres
TYPE OF TREATMENT		
prevention and sanitisation	DOSASAN	-
prevention and sanitisation with automatic control and dosing of the disinfectant	DOSACLOR DOSABIOS	DOSACLOR DUO DOSABIOS DUO

Dosaclor Duo

Proportional dosing station, with residual chlorine control



DOSACLOR DUO is an anti legionella system for the control and proportional dosing of Gelclor disinfectant and Gelfilmex anti corrosion product, in installations with sanitary hot water storage. Suitable in presence of legionella to avoid bacterium development and growth.

DOSACLOR DUO is supplied assembled on a panel, ready for installation, and includes:

- Panel 80 x 100 cm
- Proportional metering pump for dosing anti corrosion conditioning chemicals
- Self degassing proportional metering pump for dosing Gelclor (with high surface tension)
- Hot water filter
- Digital instrument for chlorine measurement and regulation
- Amperometric cell and cell holder
- Flow sensor on the disinfecting line
- Suction nozzle with level probe on the disinfecting line
- Level probes
- 25 l. empty can to decant disinfectants
- Kit complete with suction, delivery and drain hoses, injection connections and foot filter
- Signal splitter
- Two dosing points of Gelclor, optimising the disinfectant level in the storage tank.

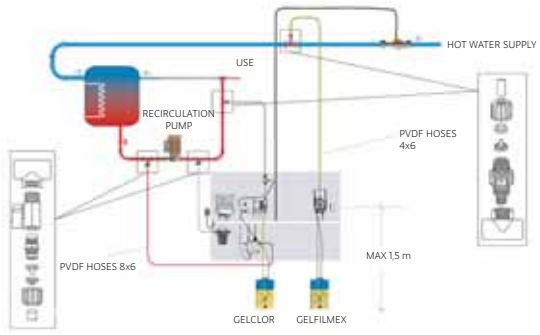
REF.	ITEM	INJECTION CONNEC-TIONS	DOSAGE			PRESSURE	METER	MAX PULSE FREQ.	VOLTAGE	DIMENS. (LXH)
			1st DISINFECTION INSTRUMENTAL	2nd DISINFECTION PROPORTIONAL	ANTI CORROSION PROPORTIONAL					
			l/h	l/h	l/h	bar			V	cm
380102	DOSACLOR DUO	3/8" - 1/2" M	2	2	4	10	clorine	180	230	80 x 100

P.S. Choose the water meter with pulse output suitable for the application.

GUIDE TO CHOICE OF ANTI LEGIONELLA SYSTEMS		
SANITARY HOT WATER TANKS	≤ 5000 litres	≥ 5000 litres
TYPE OF TREATMENT		
prevention and sanitisation	DOSASAN	-
prevention and sanitisation with automatic control and dosing of the disinfectant	DOSACLOR DOSABIOS	DOSACLOR DUO DOSABIOS DUO

Dosabios

Proportional dosing station, with chlorine dioxide control



DOSABIOS is an anti legionella system for the control and proportional dosing of Biclor Gel disinfectant and Gelfilmex anti corrosion product, in installations with sanitary hot water storage. Suitable in presence of legionella to avoid bacterium development and growth.
DOSABIOS is supplied assembled on a panel, ready for installation, and includes:

- Panel 80 x 100 cm
- Proportional metering pump for dosing anti corrosion conditioning chemicals
- Self degassing proportional metering pump for dosing Biclor (with high surface tension)
- Hot water filter
- Digital instrument for chlorine dioxide measurement and regulation
- Amperometric cell and cell holder
- Flow sensors on the disinfecting line
- Suction nozzle with level probe on the disinfecting line
- Level probes
- 25 l. empty can to decant disinfectants
- Kit complete with suction, delivery and drain hoses, injection connections and foot filter.

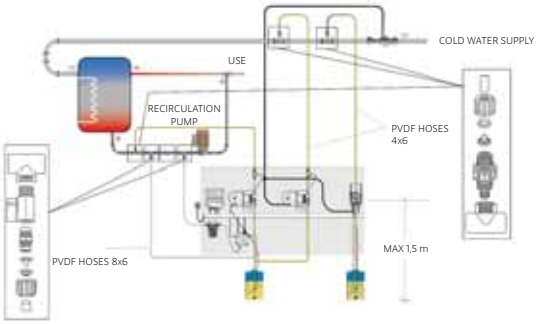
REF.	ITEM	INJECTION CONNECTIONS	DOSAGE		PRESSURE	METER	MAX PULSE FREQ.	VOLTAGE	DIMENS. (LXH)
			DISINFECTION INSTRUMENTAL	ANTI CORROSION PROPORTIONAL					
			l/h	l/h	bar			V	cm
380103	DOSABIOS	3/8" - 1/2" M	2	4	10	chlorine dioxide	180	230	80 x 100

P.S. Choose the water meter with pulse output suitable for the application.

GUIDE TO CHOICE OF ANTI LEGIONELLA SYSTEMS		
SANITARY HOT WATER TANKS	≤ 5000 litres	≥ 5000 litres
TYPE OF TREATMENT		
prevention and sanitisation	DOSASAN	-
prevention and sanitisation with automatic control and dosing of the disinfectant	DOSACLOR DOSABIOS	DOSACLOR DUO DOSABIOS DUO

Dosabios Duo

Proportional dosing station, with chlorine dioxide control



DOSABIOS DUO is an anti legionella system for the control and proportional dosing of Biclor Gel disinfectant and Gelfilmex anti corrosion product, in installations with sanitary hot water storage. Suitable in presence of legionella to avoid bacterium development and growth.
DOSABIOS DUO is supplied assembled on a panel, ready for installation, and includes:

- Panel 80 x 100 cm
- Proportional metering pump for dosing anti corrosion conditioning chemicals
- Self degassing proportional metering pump for dosing Biclor (with high surface tension)
- Hot water filter
- Digital instrument for chlorine dioxide measurement and regulation
- Amperometric cell and cell holder
- Flow sensors on the disinfecting line
- Suction nozzle with level probe on the disinfecting line
- Level probes
- 25 l. empty can to decant disinfectants
- Kit complete with suction, delivery and drain hoses, injection connections and foot filter
- Signal splitter
- Two dosing points of Biclor Gelclor, optimising the disinfectant level in the storage tank.

REF.	ITEM	INJECTION CONNEC-TIONS	DOSAGE			PRESS.	METER	MAX PULSE FREQ.	VOLTAGE	DIMENS. (LXH)
			1st DISINFECTION INSTRUMENTAL	2nd DISINFECTION PROPORTIONAL	ANTI CORROSION PROPORTIONAL					
			l/h	l/h	l/h	bar			V	cm
380104	DOSABIOS DUO	3/8" - 1/2" M	2	2	4	10	chlorine dioxide	180	230	80 x 100

P.S. Choose the water meter with pulse output suitable for the application.

GUIDE TO CHOICE OF ANTI LEGIONELLA SYSTEMS		
SANITARY HOT WATER TANKS	≤ 5000 litres	≥ 5000 litres
TYPE OF TREATMENT		
prevention and sanitisation	DOSASAN	-
prevention and sanitisation with automatic control and dosing of the disinfectant	DOSACLOR DOSABIOS	DOSACLOR DUO DOSABIOS DUO

Products for anti legionella systems

Biclor GEL

Gelclor

Oxygel

Gelfilmex

ITEM	ITEM CODE	CAN PACK.		DESCRIPTION	FOR
		kg	pcs		
BICLOR GEL 5	385001	-	1	Sachet kit to prepare 5 litres of chlorine dioxide based disinfectant	Dosasan/Dosabios/Dosabios Duo
BICLOR GEL 25	385002	-	1	Sachet kit to prepare 25 litres of chlorine dioxide based disinfectant	Dosasan/Dosabios/Dosabios Duo
GELCLOR	385003	25	1	Disinfecting liquid based on sodium hypochlorite	Dosasan/Dosaclor/Dosaclor Duo
OXYGEL 5	385004	5	1	Disinfecting liquid based on hydrogen peroxide + silver salts	Dosasan
OXYGEL 20	385005	20	1	Disinfecting liquid based on hydrogen peroxide + silver salts	Dosasan
GELFILMEX	385006	25	1	1 Anti corrosion product	Dosasan/Dosabios/Dosabios Duo/ Dosaclor/Dosaclor Duo

ITEM	ITEM CODE	CAN PACK.		DESCRIPTION
		kg	pcs	
GELPERACETIC	385007	23	1	Descaling and disinfecting liquid to remove scale deposits and biofilm in sanitary hot water systems

Accessories for anti legionella systems


Safety bowl


Oxygel test kit


Water meter PO


Tank PE 100

ITEM	ITEM CODE	TANK CAPACITY	MATERIAL	DIMENSIONS (ØXH)
		l		cm
TANK PE 100	385100	100	PE	44 x 125
BUND TANK FOR TANK PE 100	385101	150	PE	51 x 75
SAFETY BOWL FOR 5, 20, 25 L. CANS	385102	32	ABS	
OXYGEL TEST KIT	385103	-	-	-

ITEM	ITEM CODE	CONNECT.	RATIO PULSES/LITRES	DESCRIPTION
WATER METERS WITH PULSE OUTPUT				
WATER METER PO 1/2"	385200	1/2"	4 = 1	Water meter with pulse output - brass body.
WATER METER PO 3/4"	385201	3/4"	4 = 1	
WATER METER PO 1"	385202	1"	4 = 1	
WATER METER PO 11/4"	385203	11/4"	4 = 1	
WATER METER PO 11/2"	385204	11/2"	4 = 1	
WATER METER PO 2"	385205	2"	4 = 1	
FLANGED WATER METERS WITH PULSE OUTPUT				
WATER METER PO DN 65	385210	DN65	4 = 100	Flanged water meter with pulse output - brass body.
WATER METER PO DN 80	385211	DN80	4 = 100	
WATER METER PO DN 100	385212	DN100	4 = 100	
WATER METER PO DN 150	385213	DN150	4 = 100	

Membrane technologies

- Reverse osmosis (RO)
- Nanofiltration (NF)
- Ultrafiltration (UF)
- Electrodeionization (EDI)
- Desalination (DESAL)

The best quality of treated water for industrial applications is achieved by membrane separation systems. Semi-permeable membranes extract suspended particles, organic molecules, bacteria, viruses and most of the ions from the feed water.

Reverse osmosis
Nanofiltration
Ultrafiltration
Electrodeionization
Desalination

These technologies can be applied anywhere: for the purpose of process water production in industrial applications as well as for drinking water treatment. Membrane separation technologies provide the highest quality water with max. efficiency and low energy consumption.

Reverse osmosis (RO)

Reverse osmosis is membrane technology used for dissolved ions removal with the efficiency of 94-99%. It is used for desalination, process water and other applications that require demineralized water quality. This filtration method removes many types of large molecules and ion from the feed water by applying pressure to the water when it is on one side of a selective membrane. As s result, contaminantes are retained on the pressurized side of the membrane as concentrate while pure water passes through to the other side and is known as permeate.

MODEL	FLOW RATE	DIMENSIONS W X L X H
CWG_OSMO/RO-LAB150	150 l/h	750 x 300 x 400
CWG_OSMO/RO-LAB200	200 l/h	750 x 300 x 400
CWG_OSMO/RO-LAB250	250 l/h	750 x 300 x 400
CWG_OSMO/RO200-economic	200 l/h	800 x 500 x 1200
CWG_OSMO/RO400-economic	400 l/h	800 x 500 x 1200
CWG_OSMO/RO600-economic	600 l/h	800 x 500 x 1200
CWG_OSMO/RO800-economic	800 l/h	800 x 500 x 1200
CWG_OSMO/RO1000-economic	1 000 l/h	800 x 500 x 1200
CWG_OSMO/RO 00-05	50 l/h	1650 x 670 x 670
CWG_OSMO/RO 00-10	100 l/h	1650 x 670 x 670
CWG_OSMO/RO 00-25	250 l/h	1650 x 670 x 670
CWG_OSMO/RO 00-50	500 l/h	1650 x 670 x 670
CWG_OSMO/RO 00-75	750 l/h	1650 x 670 x 670
CWG_OSMO/RO 01-00	1 000 l/h	1650 x 670 x 670
CWG_OSMO/RO 01-25	1 250 l/h	1700 x 1000 x 700
CWG_OSMO/RO 01-50	1 500 l/h	1700 x 1000 x 700
CWG_OSMO/RO 01-75	1 750 l/h	1700 x 1000 x 700
CWG_OSMO/RO 02-00	2 000 l/h	1700 x 1000 x 700
CWG_OSMO/RO 02-50	2 500 l/h	1800 x 2500 x 750
CWG_OSMO/RO 03-00	3 000 l/h	1800 x 3500 x 750
CWG_OSMO/RO 04-00	4 000 l/h	1800 x 2500 x 750
CWG_OSMO/RO 05-00	5 000 l/h	1800 x 3500 x 750
CWG_OSMO/RO 06-00	6 000 l/h	1800 x 3500 x 750
CWG_OSMO/RO 07-00	7 000 l/h	1800 x 4500 x 750
CWG_OSMO/RO 08-00	8 000 l/h	1800 x 4500 x 1000
CWG_OSMO/RO 10-00	10 000 l/h	1800 x 4500 x 1000
CWG_OSMO/RO 12-00	12 000 l/h	1800 x 4500 x 1000
CWG_OSMO/RO 15-00	15 000 l/h	1800 x 5500 x 1000
CWG_OSMO/RO 18-00	18 000 l/h	1800 x 6500 x 1000
CWG_OSMO/RO 20-00	20 000 l/h	1800 x 4500 x 1000
CWG_OSMO/RO 25-00	25 000 l/h	1800 x 5500 x 1000
CWG_OSMO/RO 30-00	30 000 l/h	1800 x 5500 x 1000
CWG_OSMO/RO 35-00	35 000 l/h	1800 x 5500 x 1000
CWG_OSMO/RO 40-00	40 000 l/h	1800 x 6500 x 1000
CWG_OSMO/RO 50-00	50 000 l/h	1800 x 6500 x 1000
CIP -cleaninig in place		
Additional controler -digital LCD		

Nanofiltration (NF)

Nanofiltration is one of the technologies introduced in the last decade, but rising ever since. Nowadays, it is usually applied for drinking water treatment, for softening, decolorization, removal of micro particles. In industrial applications this technology is commonly used for removal of specific contaminants, for example colors. Separation process takes place on the membrane surface, as water passes through the membrane and therefore this technology is used for removal of organics, micro pollutants and multivalent ions. Membranes used for nanofiltration are designed to retain single valence ions.

MODEL	FLOW RATE	DIMENSIONS W X L X H
CWG_OSMO/NF 00-10	100 l/h	1650 x 670 x 670
CWG_OSMO/NF 00-25	250 l/h	1650 x 670 x 670
CWG_OSMO/NF 00-50	500 l/h	1650 x 670 x 670
CWG_OSMO/NF 00-75	750 l/h	1650 x 670 x 670
CWG_OSMO/NF 01-00	1 000 l/h	1650 x 670 x 670
CWG_OSMO/NF 01-25	1 250 l/h	1700 x 1000 x 700
CWG_OSMO/NF 01-50	1 500 l/h	1700 x 1000 x 700
CWG_OSMO/NF 01-75	1 750 l/h	1700 x 1000 x 700
CWG_OSMO/NF 02-00	2 000 l/h	1700 x 1000 x 700
CWG_OSMO/NF 02-50	2 500 l/h	1800 x 2500 x 750
CWG_OSMO/NF 03-00	3 000 l/h	1800 x 3500 x 750
CWG_OSMO/NF 04-00	4 000 l/h	1800 x 2500 x 750
CWG_OSMO/NF 05-00	5 000 l/h	1800 x 3500 x 750
CWG_OSMO/NF 06-00	6 000 l/h	1800 x 3500 x 750
CWG_OSMO/NF 07-00	7 000 l/h	1800 x 4500 x 750
CWG_OSMO/NF 08-00	8 000 l/h	1800 x 4500 x 1000
CWG_OSMO/NF 10-00	10 000 l/h	1800 x 4500 x 1000
CWG_OSMO/NF 12-00	12 000 l/h	1800 x 4500 x 1000
CWG_OSMO/NF 15-00	15 000 l/h	1800 x 5500 x 1000
CWG_OSMO/NF 18-00	18 000 l/h	1800 x 6500 x 1000
CWG_OSMO/NF 20-00	20 000 l/h	1800 x 4500 x 1000
CWG_OSMO/NF 25-00	25 000 l/h	1800 x 5500 x 1000
CWG_OSMO/NF 30-00	30 000 l/h	1800 x 5500 x 1000
CWG_OSMO/NF 35-00	35 000 l/h	1800 x 5500 x 1000
CWG_OSMO/NF 40-00	40 000 l/h	1800 x 6500 x 1000
CWG_OSMO/NF 50-00	50 000 l/h	1800 x 6500 x 1000
CIP -cleaninig in place		
Additional controler -digital LCD		

Ultrafiltration (UF)

Ultrafiltration systems are used for removal of viruses and organics from the feed water. Membranes are designed to remove contaminants in the range 0.001 – 0.1 µm.

Typical applications:
Food industry (proteins, dairy and dairy products)
Metallurgy (oil, water emulsion separation, color treatment)
Textile industry
Waste water recirculating systems

MODEL	FLOW m³/h	MODULS	OPERATING PROCESS	FILTRATE TURBIDITY	UTILIZATION
CWG/ULTRAFILT-1	0,3-5,0	Hollow fibre	Dead end / Crossflow	< 0.1 NTU	91 ~ 95 %
CWG/ULTRAFILT-2	0,6-10,0	Hollow fibre	Dead end / Crossflow	< 0.1 NTU	91 ~ 95 %
CWG/ULTRAFILT-3	1,2-15,0	Hollow fibre	Dead end / Crossflow	< 0.1 NTU	91 ~ 95 %
CWG/ULTRAFILT-4	1,8-20,0	Hollow fibre	Dead end / Crossflow	< 0.1 NTU	91 ~ 95 %
CWG/ULTRAFILT-5	2,2-25,0	Hollow fibre	Dead end / Crossflow	< 0.1 NTU	91 ~ 95 %
CWG/ULTRAFILT-6	3,8-30,0	Hollow fibre	Dead end / Crossflow	< 0.1 NTU	91 ~ 95 %
CWG/ULTRAFILT-7	4,0-35,0	Hollow fibre	Dead end / Crossflow	< 0.1 NTU	91 ~ 95 %
CWG/ULTRAFILT-8	5,8-40,0	Hollow fibre	Dead end / Crossflow	< 0.1 NTU	91 ~ 95 %
CWG/ULTRAFILT-9	7,0-45,0	Hollow fibre	Dead end / Crossflow	< 0.1 NTU	91 ~ 95 %
CWG/ULTRAFILT-10	8,8-50,0	Hollow fibre	Dead end / Crossflow	< 0.1 NTU	91 ~ 95 %
CWG/ULTRAFILT-11	11,9-55,0	Hollow fibre	Dead end / Crossflow	< 0.1 NTU	91 ~ 95 %
CWG/ULTRAFILT-12	15,5-60,0	Hollow fibre	Dead end / Crossflow	< 0.1 NTU	91 ~ 95 %
CWG/ULTRAFILT-13	15,5-65,0	Hollow fibre	Dead end / Crossflow	< 0.1 NTU	91 ~ 95 %
CWG/ULTRAFILT-14	15,5-70,0	Hollow fibre	Dead end / Crossflow	< 0.1 NTU	91 ~ 95 %
CWG/ULTRAFILT-15	15,5-75,0	Hollow fibre	Dead end / Crossflow	< 0.1 NTU	91 ~ 95 %
CWG/ULTRAFILT-16	15,5-80,0	Hollow fibre	Dead end / Crossflow	< 0.1 NTU	91 ~ 95 %
CWG/ULTRAFILT-17	15,5-85,0	Hollow fibre	Dead end / Crossflow	< 0.1 NTU	91 ~ 95 %
CWG/ULTRAFILT-18	15,5-90,0	Hollow fibre	Dead end / Crossflow	< 0.1 NTU	91 ~ 95 %
CWG/ULTRAFILT-19	15,5-95,0	Hollow fibre	Dead end / Crossflow	< 0.1 NTU	91 ~ 95 %
CWG/ULTRAFILT-20	15,5-100,0	Hollow fibre	Dead end / Crossflow	< 0.1 NTU	91 ~ 95 %

Electrodeionization (EDI)

EDI is the latest technology where electrodeionization is used for final water purification to reach conductivity < 1 µS/cm. Initial module has 0.2-4.5 m^3/h capacity, and by combination of modules EDI can reach specified flow rate.
Electro-deionization module for continuous desalination of the RO permeate, consisting of a carefully designed robust housing containing a series of special ion selective membranes which create alternating concentrate and desalination chambers filled with mixed-bed ion exchanges resins. Two special electrodes are used to create an DC electric field across the chambers.

MODEL	CONECTION	FLOW RATE, NOMINAL/MAXIMAL
EDI UNITS		
CWG_OSMO/EDILX04	DN 15	450/560 l/h
CWG_OSMO/EDILX10	DN 20	1200/1500 l/h
CWG_OSMO/EDILX18	DN 25	2100/2600 l/h
CWG_OSMO/EDILX24	DN 25	2900/3600 l/h
CWG_OSMO/EDILX30-1	DN 32	3600/4500 l/h
CWG_OSMO/EDILX30-2	DN 40	7200/9000 l/h
CWG_OSMO/EDILX30-3	DN 50	10800/13500 l/h
CEDI UNITS		
CWG_OSMO/CEDIMX125	DN 15	120/150 l/h
CWG_OSMO/CEDIMX250	DN 20	250/300 l/h
CWG_OSMO/CEDIMX500	DN 25	500/600 l/h

Desalination

There are app. 40 million milligrams of dissolved minerals per one cube meter of see water. Total dissolved solids (TDS) in cationic forms: calcium, magnesium, sodium and potassium, but also is anionic forms: carbonates, biocarbonates, chlorides, sulphates and nitrates – resulting in high water conductivity, great corrosion potential and bad taste. According to drinking water standards, quality of this water is not acceptable. Therefore, in order to make see water useful and applicable for both industrial or municipal purpose it is necessary to treat it through desalination process.

Water content:
Brackish water (3.500-15.000 ppm NaCl)
Sea water (35.000-45.000 ppm NaCl)

AP Series

- Compact, easy installation, competitive retail price
- Low energy consumption, ultra low or low operating pressure membranes
- Null or negligible chemical product consumption, built in corrosion resistant materials.
- No previous water softening needed, easy maintenance.
- PLC controled, hydraulic panel, automatic or manual control, at users choise.
- High pressure pump with magnetic drive as to avoid leakage.
- Low noise and vibration levels, no polluting chemical products.

SPECIFICATION	HL			L			M		
MODEL	06	12	23	06	12	23	06	11	16
Production capacity litres/day (1)	540	1180	2310	540	1180	2310	540	1080	1620
Production capacity litres/hour (1)	22	49	96	22	49	96	22	45	67
Average salt rejection (%) (1)		98			98,5			98,5	
Permeate water quality (PPM) (1)		<50			<50			<50	
Maximum feed water salinity recommended (PPM)		3500 (6000 µS)			6000 (10000 µS)			10000 (15500 µS)	
Permeate water/reject water ratio (4)		adjustable			adjustable			adjustable	
Average operative pressure, kg/cm^2 (1) (3)		7,5			9			9	
Maximum operating pressure (kg/cm^2)		12			14			16	
Recommended feed water pressure (kg/cm^2)		3			3			3	
Miminum feed water pressure (kg/cm^2)		1			1			1	
Feed water temperature		3 to 5°C			3 to 5°C			3 to 5°C	
Feed water pH		3 – 11			3 – 11			3 – 11	
Maximum feed water chlorine level (PPM) (2)		1			1			1	
Installed capacity (Kw) (5)	0,09	0,37	0,37	0,09	0,37	0,37	0,37	0,37	0,37
Electric supply (50 Hz)		220V II			220V II			220V II	

(1) +/- 10% upon commissioning, feed water 2000 PPM total dissolved solids (TDS), 18°C temperature and pH 7. Production decreases with higher amount of TDS or lower temperature and vice versa. Operating pressure is adjustable to compensate salinity or temperature differences.
(2) When operating with over 1 PPM chlorinated water, a dechlorinator or dechlorinator system should be installed.
(3) Operative pressure is calculated with a feed water temperature of 18°C, this being the average water temperature value. Most manufacturers calculate working pressure with a temperature of 25°C. At 25°C, CWG units would operate at a lower pressure and, as such, the electricity consumption would be substantially lower.
(4) The permeate water/reject water ration must be adjusted by the Technical Assistance Service and relates to feed water characteristics.
(5) Energy consumption will depend on feed water salinity and temperature.

XP Series

- Compact, easy installation, competitive retail price, low energy consumption
- Ultra low or low operating pressure membranes, null or negligible chemical product consumption
- Built in corrosion resistant materials, no previous water softening needed.
- Easy maintenance, PLC controled.
- Hydraulic panel, automatic or manual control, at users choise.
- High pressure pump with magnetic drive as to avoid leakage.
- Low noise and vibration levels, no polluting chemical products.

SPECIFICATION	HL			L			LR			M		
MODEL	06	12	23	06	12	23	06	11	16	06	11	16
Production capacity litres/day (1)	540	1180	2310	540	1180	2310	540	1080	1620	540	1080	1620
Production capacity litres/hour (1)	22	49	96	22	49	96	22	45	67	22	45	67
Average salt rejection (%) (1)	98			98,5			99,5			98,5		
Permeate water quality (PPM) (1)	<50			<50			<15			<50		
Maximum feed water salinity recommended (PPM)	3500 (6000 µS)			6000 (10000 µS)			6000 (10000 µS)			10000 (15500 µS)		
Permeate water/reject water ratio (4)	adjustable			adjustable			adjustable			adjustable		
Average operative pressure, kg/cm^2 (1) (3)	7,5			9			9			9		
Maximum operating pressure (kg/cm^2)	12			14			16			16		
Recommended feed water pressure (kg/cm^2)	3			3			3			3		
Miminum feed water pressure (kg/cm^2)	1			1			1			1		
Feed water temperature	de 3 a 35°C			de 3 a 35°C			de 3 a 35°C			de 3 a 35°C		
Feed water pH	de 3 a 11			de 3 a 11			de 3 a 11			de 3 a 11		
Maximum feed water chlorine level (PPM) (2)	1			1			1			1		
Installed capacity (Kw) (5)	0,09	0,37	0,37	0,09	0,37	0,37	0,37	0,37	0,37	0,37	0,37	0,37
Electric supply (50 Hz)	220V II			220V II			220V II			220V II		

(1) +/- 10% upon commissioning, feed water 2000 PPM total dissolved solids (TDS), 18°C temperature and pH 7. Production decreases with higher amount of TDS or lower temperature and vice versa. Operating pressure is adjustable to compensate salinity or temperature differences.
(2) When operating with over 1 PPM chlorinated water, a dechlorinator or dechlorinator system should be installed.
(3) Operative pressure is calculated with a feed water temperature of 18°C, this being the average water temperature value. Most manufacturers calculate working pressure with a temperature of 25°C. At 25°C, CWG units would operate at a lower pressure and, as such, the electricity consumption would be substantially lower.
(4) The permeate water/reject water ration must be adjusted by the Technical Assistance Service and relates to feed water characteristics.
(5) Energy consumption will depend on feed water salinity and temperature.

KP Series

4500 to 50000 liters per day

- High pressure pump for cont inous operat ion, no maintenance programme
- Competitive price.
- Low power consumption.
- Ultra low or low working pressure membranes.
- Null or negligible chemical product consumption.
- Manufactured ent i rely in corrosion resilient materials.
- Water softener prior to unit not requiered.
- Easy maintenance.
- Electronic control panel.
- Complete hydraulic panel.
- Multi layer automatic prefilter.
- User customised operation, automatic or manual.
- Low noise and vibration levels.
- No pollutants.

SPECIFICATION	HWL			HL							
MODEL	45	90	135	45	90	135	180	225	270	320	360
Production capacity in litres/day (1)	4500	9000	13500	4570	9150	13720	18300	22800	27450	32000	36000
Production capacity in litres/hour (1)	187	375	562	190	381	571	762	950	1144	1333	1500
Average salt rejection (%) (1)	99						99				
Product water quality (PPM) (1)	<50						<50				
Maximum recommended feed water salinity (PPM)	2500 (4400 µS)						3500 (6000 µS)				
Product water/Concentrate water ration (4)	adjustable						adjustable				
Maximum working pressure, (kg/cm$^{2)}$ (3)	10						14				
Recommended feed water pressure (kg/cm^2)	2 – 4						2 – 4				
Miminum feed water pressure (kg/cm^2)	1						1				
Feed water temperature	3 to 35°C						3 to 35°C				
Feed water pH	3 to 11						3 to 11				
Maximum feed water chlorine level (PPM) (2)	<0,1						<0,1				
Power installed (Kw) (5)	1,1	1,1	1,1	1,1	1,1	1,1	1,1	1,1	1,1	1,5	1,5
Electrical supply (50 Hz) (6)	II220V-III220/380V			II220V-III220/380V					II220V/380V		

Brackish water

SPECIFICATION	L								LR					
MODEL	45	90	135	180	225	270	320	360	40	80	120	160	200	240
Production capacity in litres/day (1)	4570	9150	13720	18300	22800	27450	32000	36000	3950	7900	11850	15800	19750	23700
Production capacity in litres/hour (1)	190	381	571	762	950	1144	1333	1500	164	329	494	658	823	987
Average salt rejection (%) (1)	99								99					
Product water quality (PPM) (1)	<50								<25					
Max. recommended feed water salinity (PPM)	6000 (10000 µS)								6000 (10000 µS)					
Product water/Concentrate water ration (4)	adjustable								adjustable					
Maximum working pressure, (kg/cm$^{2)}$ (3)	18								18					
Recommended feed water pressure (kg/cm^2)	2 – 4								2 – 4					
Min. feed water pressure (kg/cm^2)	1								1					
Feed water temperature	3 to 35°C								3 to 35°C					
Feed water pH	3 to 11								3 to 11					
Max. feed water chlorine level (PPM) (2)	<0,1								<0,1					
Power installed (Kw) (5)	1,5	1,5	1,5	1,5	2,2	2,2	3	3	1,5	1,5	1,5	2,2	2,2	2,2
Electrical supply (50 Hz) (6)	II220V-III220/380V				II220V/380V				II220V-III220/380V			II220V/380V		

SPECIFICATION	M								MR					
MODEL	45	90	135	180	225	270	320	360	40	80	120	160	200	240
Production capacity in litres/day (1)	4570	9150	13720	18300	22800	27450	32000	36000	3950	7900	11850	15800	19750	23700
Production capacity in litres/hour (1)	190	381	571	762	950	1144	1333	1500	164	329	494	658	823	987
Average salt rejection (%) (1)	99								99					
Product water quality (PPM) (1)	<50								<50					
Maximum recommended feed water salinity (PPM)	1000 (15500 µS)								10000 (15500 µS)					
Product water/Concentrate water ration (4)	adjustable								adjustable					
Maximum working pressure, (kg/cm$^{2)}$ (3)	22								22					
Recommended feed water pressure (kg/cm^2)	2 – 4								2 – 4					
Miminum feed water pressure (kg/cm^2)	1								1					
Feed water temperature	3 to 35°C								3 to 35°C					
Feed water pH	3 to 11								3 to 11					
Maximum feed water chlorine level (PPM) (2)	<0,1								<0,1					
Power installed (Kw) (5)	1,5	1,5	2,2	2,2	3	3	3	3	1,5	2,2	2,2	2,2	3	3
Electrical supply (50 Hz) (6)	II220V-III220/380V				II220V/380V				II220V-III220/380V			II220V/380V		

SPECIFICATION	R								
MODEL	45	90	135	180	225	270	320	400	500
Production capacity in litres/day (1)	4570	9150	13720	18300	22880	27450	32100	40000	50000
Production capacity in litres/hour (1)	190	381	571	762	950	1144	1333	1666	2083
Average salt rejection (%) (1)	99,2								
Product water quality (PPM) (1)	<25								
Maximum recommended feed water salinity (PPM)	15000 (22000 µS)								
Product water/Concentrate water ration (4)	adjustable								
Maximum working pressure, (kg/cm$^{2)}$ (3)	31								
Recommended feed water pressure (kg/cm^2)	2 - 4								
Miminum feed water pressure (kg/cm^2)	1								
Feed water temperature	3 to 35°C								
Feed water pH	3 to 11								
Maximum feed water chlorine level (PPM) (2)	<0,1								
Power installed (Kw) (5)	2,2	2,2	2,2	3	3	3	4	5,5	5,5
Electrical supply (50 Hz) (6)	II220V-III220/380V						II220V-III220/380V		

(1) +/- 10% upon commision with 2000 PPM total dissolved solids (TDS) at inlet, 18°C temperature and pH 7. Production decreases with higher TDS or lower temperature and vice versa. Working pressure is adjustable to compensate salinity or temperature differences.
(2) For original standard dechlorinator/s filter/s. When operating with over 1 PPM chlorinated water, a dechlorinator or dechlorinator system should be installed, dimensioned according to feed water. The maximum chlorine level membranes can tolerate is 0,1 PPM.
(3) Working pressure is calculated with a feed water temperature of 18°C, this being the average water temperature value. Most manufacturers calculate working pressure with a temperature of 25°C. At 25°C, CWG units would work at a lower pressure and, as such, the electricity consumption would be substantially lower.
(4) Energy consumption will depend on feed water salinity and temperature.
(5) 60 Hz on demand.

MA Series

- Heavy duty continuous operation equipments.
- Long-live operation.
- Construction:
  - Compact design, installed either on platfom or in container.
  - Train structure in lacquered stainless steel and platform made of polyester reinforced glass fiber.
  - Electronic control of all motorpumps
  - Adjusted electrical consumption and instant operating parameters information.
  - Electronic control. Touch screen depending on models.
- Operating parameters are controlled locally and remotely throughout the internet (Optional for touch screen models).
  - Differents series specifications depending on feed water quality 3500/6000/10000/15000 ppm.
- "TURBO" specification with integrated energy recovery

PM-A Series

Compact ship units

- Two models 1500 & 3000 liters/day
- Very compact. High quality of product water.
- For leisure and commercial boats.
- Body made in fiberglass reinforced polyester.
- Four stage filtration.
- PLC electronic control with display which controls the operation of the whole system and water quality.
- Locally controled or remote.
- High rejection membranaes (99'7%).
- Self cleaning system incorporated.
- Special high pressure membrane modules to avoid leaking.
- Booster pumps included.
- Stainless steel high pressure pumps.
- Feed water quality to 40000 ppm (std).

PM-A SERIES - UP TO 35 000 PPM			
CODE	MODEL	ELECTRICAL SUPPLY*	PRODUCTION LITRES/DAY
300PM15A	PM 15 A	II-III	1500
300PM30A	PM 30 A	II-III	3000

PM-B Series

Compact ship units

- Models from 4000 to 7500 liters/day.
- Very compact. Heavy duty equipment
- High quality of product water.
- For leisure and commercial boats.
- Body made in fiberglass reinforced polyester.
- Four stage filtration.
- PLC electronic control with display which controls the operation of the whole system and water quality.
- Locally controled or remote.
- High rejection membranes (99'7%).
- Self cleaning system incorporated.
- Special high pressure membrane modules to avoid leaking.
- Included booster pumps.
- Duplex-superduplex stainless steel high pressure pumps.
- Electronic control of motor pump for adjusted electrical comsumption.
- Energy recovery system optional.
- Feed water quality to 40000 ppm (std).

PM-B SERIES - UP TO 35 000 PPM			
CODE	MODEL	ELECTRICAL SUPPLY*	PRODUCTION LITRES/DAY
300PM40B	PM 40 B	II-III	4000
300PM50B	PM 50 B	II-III	5000
300PM63B	PM 63 B	II-III	6300
300PM75B	PM 75 B	II-III	7500

PM-C Series

Compact ship and land installation

- Compact assembly. Heavy duty equipment pumps.
- No civil engineering needed. High quality of product water.
- Floor based.
- Models from 3000 to 25000 liters/day.
- Body made in fiberglass reinforced polyester.
- Three stage filtration with automatic rinse filter, dual media.
- PLC electronic control with display witch controls the operation of the whole system and water quality, automatic or manual operation.
- Duplex-superduplex stainless steel pumps.
- Electronic control of motor pump for adjusted electrical comsumption.
- Energy recovery type RP system optional.
- Feed water quality to 40000 ppm (std).

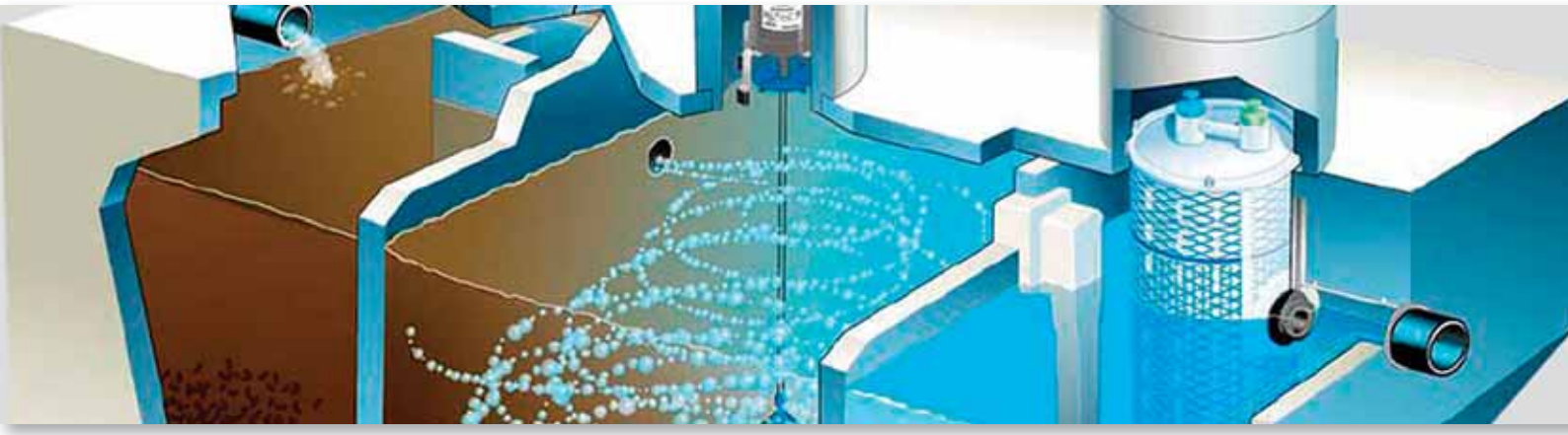
SERIE PM-C - UP TO 40 000 PPP			
CODE	MODEL	ELECTRICAL SUPPLY*	PRODUCTION LITRES/DAY
300PM30C	PM 30 C	II-III	3000
300PM55C	PM 55 C	II-III	5500
300PM85C	PM 85 C	II-III	8500
300PM100C	PM 100 C	II-III	10000
300PM125C	PM 125 C	II-III	12500
300PM150C	PM 150 C	II-III	15000
300PM175C	PM 175 C	III	17500
300PM200C	PM 200 C	III	20000
300PM250C	PM 250 C	III	25000
300PM300C	PM 300 C	III	30000

- Standard unit supplied with three stage prefiltration , including Silex/anthracite bottle filter with automatic rinse governed by the R.O. unit and two stages of replaceable pleated polyester catridges.

PM-S Series

- Heavy duty continuous operation equipments. Long-live operation.
- Models from 30 to 15000 cubic meters/day.
- Construction:
- Compact design installed either on platfom or in container.
- Rack structure in lacquered stainless steel and platform made of polyester reinforced glass fiber, eliminates corrosion problems.
- Electronic control of all motorpumps - Adjusted electrical consumption and instant operational parameter information.
- Electronic control. Touch screen (depending on models). Operating parameters are controlled locally and remotely throughout the internet (optional for touch screen models).
- Feed water quality up to 40000 ppm (std).
- Turbo models with "TURBO" energy recovery system, offers great operation efficiency and low operating cost.
- COMPRESSOR models with rotary positive displacement ceramic pressure pump offers maximum energy recovery and very low operating cost
- DFS models with duplex/superduplex stainless steel pumps. Energy recovery with reverse pump included in RP specification.

Waste water treatment



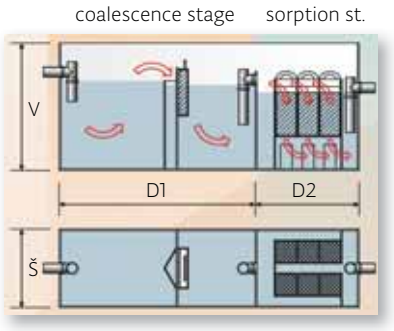
- Oil products separator
- Fat separators
- Clarifiers
- Home WWTP
- Compact waste water treatment plant
- Containerised waste water treatment plant
- Home sewage treatment plant with membrane bioreactor
- Containerised wwtp with membrane bioreactor

Wastewater treatment is a process to convert wastewater - which is water no longer needed or suitable for its most recent use - into an effluent that can be either returned to the water cycle with minimal environmental issues or reused. The latter is calledwater reclamation and implies avoidance of disposal by use of treated wastewater effluent for various purposes. Treatment means removing impurities from water being treated; and some methods of treatment are applicable to both water and wastewater. The physical infrastructure used for wastewater treatment is called a "wastewater treatment plant" (WWTP).

The treatment of wastewater belongs to the overarching field of Public Works - Environmental, with the management of human waste, solid waste, sewage treatment, stormwater (drainage) management, and water treatment. By-products from wastewater treatment plants, such as screenings, grit and sewage sludge may also be treated in a wastewater treatment plant. If the wastewater is predominantly from municipal sources (households and small industries) it is called sewage and its treatment is called sewage treatment.

Oil products separator

Filling stations, transport companies, service stations, parking lots



- Separation and absorption of non-bonded oil products (apolar extractable substances - AES) from water from roads, hardened parking and lay-by areas, handling areas, garages, car repair shops, washing ramps, etc.
- Minimal time-intensity for operators Intermittent checks and cleaning of the separator and the coalescence element, eventual replacement of sorption filters
- Long service life of used material (polypropylene, stainless steel)
- Simple installation and handling
- Two design variants – circular and rectangular
- Waterproofing

Technology principle

1st stage – gravitational separation of suspended and non-bonded oil products in the input part.
2nd stage – separation of finely dispersed oil products and their unstable emulsions in the coalescence filter.
3rd stage – final purification by sorption in the sorption filter (only sorption separator).

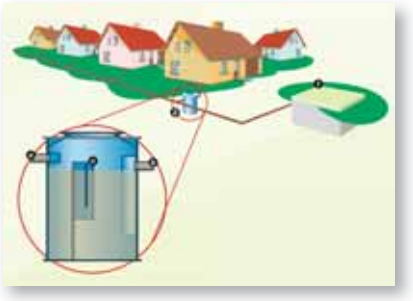
TECHNICAL SPECIFICATIONS - Coalescence separators

TYPE	DIMENSIONS LxWxH (ØxH) [m]	DN [mm]	WEIGHT [kg]	MAX. FLOW CAP. [L/s]
LKE 1,5	1.6x1.0x1.28	100	110	1,5
LKE 1,5k	(1.4x1.410)	100	95	1,5
LKE 3	1.6x1.0x1.54	100	140	3
LKE 3k	(1.4x1.625)	100	125	3
LKE 6	2.5x1.0x1.54	125	165	6
LKE 6k	(1.8x1.625)	125	150	6
LKE 10	2.5x1.5x1.73	150	210	10
LKE 10k	(2.3x1.730)	150	175	10
LKE 15	3.0x1.5x1.73	200	315	15
LKE 15k	(2.6x1.730)	200	230	15

Note: Guaranteed output contamination up to 5mg AES/L
k - circular tank

Fat separators

Hotels, restaurants Kitchens, lunchrooms



Fat separator
(at the grease source)

1. Waste water treatment plant
2. Fat separator (at the grease source)
3. Inlet pipe
4. Outlet pipe
5. Grease storage

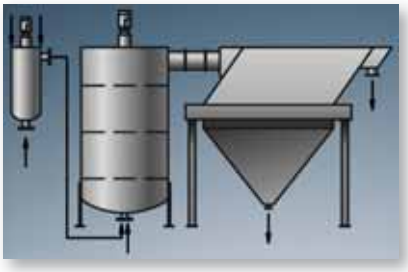
- Separates the oil and grease that flows out with the waste water produced by kitchens, food-processing plants, meat processing etc.
- Best installed directly onto piping systems as close to the grease source as possible
- Protects the sewers and other parts of the sewer network installation from clogging and gumming up
- Prevents water acidification caused by grease, leading to biochemical and mechanical malfunctioning of WWTP
- Low maintenance requirements
- Non-removable storage compartment for the accumulated grease
- Easy grease level measurement, high storage capacity
- Equipped with a seal and an odour-proof cap
- Increases effectivity of WWTP system and prolongs the life cycle of the system
- Lightweight unit for easy handling, installation and ground loading capability
- Plant can be installed underground, half buried or at ground level (after adjustment on request)

TECHNICAL PARAMETERS OF FAT SEPARATORS

TYPE	UNITS	LE 1k	LE 2k	LE 4k	LE 6k	LE 8k	LE 10k	LE 6	LE 8	LE 10
DN inlet pipe	[mm]	100	100	100	150	150	150	150	150	150
DN outlet pipe	[mm]	100	100	100	150	150	150	150	150	150
Reservoir diameter	[mm]	1100	1100	1400	1800	1800	2100	-	-	-
Reservoir lenght	[mm]	-	-	-	-	-	-	2160	2160	3160
Reservoir width	[mm]	-	-	-	-	-	-	1660	1660	1660
Reservoir height	[mm]	1300	1500	1400	1600	1800	1900	1530	1730	1730
Water level	[mm]	900	1100	1000	1200	1400	1400	1000	1200	1200
Total volume	[m³]	0.86	1.05	1.54	3.05	3.97	1.85	3.00	3.60	5.40
Max. level of fat	[mm]	200	200	200	200	200	200	200	200	200
Max. volume of stored fats	[m³]	0.072	0.094	0.182	0.293	0.375	0.469	0.294	0.378	0.558
Weight	[kg]	75	85	105	140	160	185	305	340	465

Clarifiers

Treatment of drinking water, technology for water treatment



Capacity 5-300 m³/hr.
Performance 22 m/hr.

Complete solution
- Flash-mix reactor
- Mechanical flocculator
- Lamella setting tank

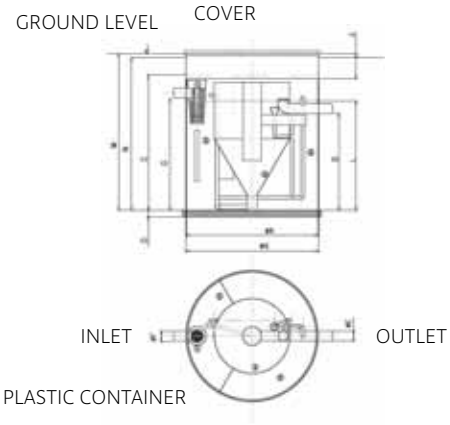
The EP-C clarifier represents a universal instrument for continuous suspended substance separation in liquid systems. Their widespread application consists mainly of:

- Drinking water
  - Surface water clarification
  - Surface water softening
  - Underground water softening
  - Underground water Fe and Mn separation
- Industrial process water - Production of industrial process water
  - Specific treatment of wastewater (carbonate removal, metal precipitation, smoke scrubbing etc.)
- Municipality wastewater - Primary settling
  - Phosphate removal - polishing treatment

CLARIFIERS TECHNICAL DATA

Type	CAPACITY [m³/hr.]	NET WEIGHT (FM+MF+LS) [kg]	DIMENSIONS (FM+MF+LS) LxWxH [m]
EP-C 5	5	500	2.75 x 1.50 x 2.20
EP-C 25	25	2821	5.00 x 2.30 x 4.20
EP-C 50	50	4892	5.40 x 3.61 x 4.20
EP-C 100	100	9815	8.40 x 3.50 x 5.30
EP-C 200	200	16837	10.60 x 4.90 x 6.40
EP-C 300	300	19134	12.60 x 4.90 x 6.40

Home WWTP



1 - SCREEN BASKET
2 - DENITRIFICATION ZONE
3 - NITRIFICATION ZONE
4 - SEDIMENTATION ZONE

BioCleaner® treatment plants are designed for disposal of waste water from the smallest individual sources of pollution such as: family houses, small hotels etc. They are replacing antiquated septic tanks due to its effectiveness, savings and they are in accordance with modern housing. These BioCleaners enable cleaning of waste water from kitchens, bathrooms, social facilities, washing machines, dishwashers. The costs for cleaning are very low.

Regular operation of the WWTP and internal pumping is ensured by hydro-pneumatic pumps. There is no other pump for WWTP operating so there are no possible sources of failure.

- The BioCleaner treatment plant ensures functionality even during power supply breakdowns
- Treatment plant doesn't require any special insulating for operation in winter
- Current septic tanks may be remade to WWTP by installation of a technological kit
- Plastic self-supporting construction doesn't require expensive building preparations
- WWTP can be installed under, halfway or above the surface of the terrain (after adjustment)

Essential parts of the treatment plant

- Biological reactor BioCleaner®
- Blower
- Switch clock, time switch or electric box (depending on the type)
- Hoses for an air input

1. **Switch clock**, time switch or electrical box for controlling the treatment plant, located in a building (e.g. in garage, basement). Membrane blower works as the source of air for the treatment plant.
2. **BioCleaner® Reactor** – Circular or rectangular tank fitted with technological partitions, and build-in assemblies where the treatment of the waste water takes place. The tank is put under the terrain surface, above the terrain surface is covered fibreglass lid. The tank is made of polypropylene, polyethylene or stainless steel. It also can be current concrete tank which shall be fitted with technological assembly.
3. **Air inlet** to the biological reactor BioCleaner® is carried out by PVC hose and PP tubes fitted in a protection pipe under the terrain surface.

PARAMETERS OF THE TREATED WATER

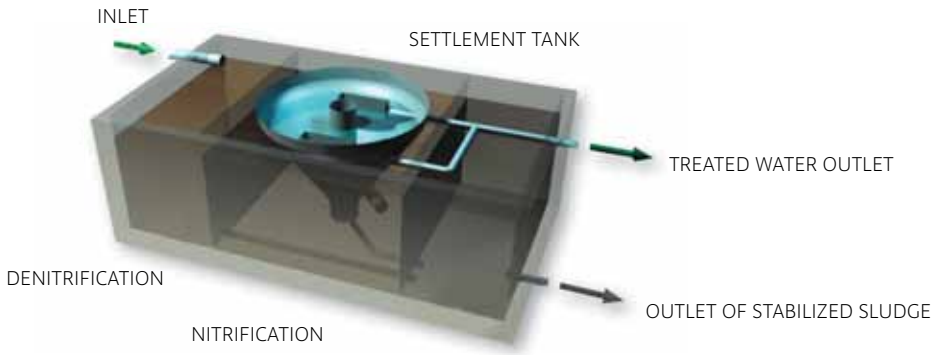
INDICATOR	REQUIRED VALUES AT THE OUTFLOW*		BIOCLEANER® **
	"p" [mg/l]	"m" [mg/l]	[mg/l]
BOD_5	40	80	15 - 25
COD	150	220	55 - 90
SS	50	80	15 - 25

BASIC PARAMETERS OF DOMESTIC WWTP BIOCLEANER®

BIOCLEANER®		BC 4	BC 6	BC 10	BC 12
Number of people connected		2~5	5~8	9~11	12~15
Amount of waste water Q_{24}	[m^3/day]	0,6	0,9	1,5	1,8
Electric input when loaded	[W]	76 (64)	144	183	221
Maximal energy demand	[kWh/day]	1,2	2,0	2,9	3,7
Weight	[kg]	150	165	180	230
Diameter	[mm]	1 400	1 600	1 700	1 900
Height	[mm]	1 600	1 600	2 350	2 510

Compact waste water treatment plant

Towns and villages Industry



Mechanical pretreatment
- Coarse screens
- Fine screens (hand or machine-cleaned), which are in dependence on WWTP capacity (size) suitably completedwith dewatering device and conveyor
- Gravel trap and sand trap, which may be finished with the sand separator

Biological reactor
- Activated sludge process
- D-N system, that is a system with denitrification situated prior to nitrification organized in one ore more parallel lines

- Denitrification
- Nitrification
- Settlement tank

Machine room
- Pressure air supply system
- Sludge management
- Chemical management
- Faecal reservoir

Tercial clearing
- Filtration (gravity or pressure sand filters, micro-sieve drum filters, membrane filters)
- Hygienization (UV disinfection, chlorination)

PARAMETERS OF THE TREATED WATER

INDICATOR	INDICATOR OF REQUIRED QUALITY AT THE OUTLET *		BIOCLEANER® **
	"p" [mg/l]	"m" [mg/l]	[mg/l]
BOD	25	50	15
COD	120	170	75
SS	30	60	20
$N\text{-}NH_4$	15	30	10***

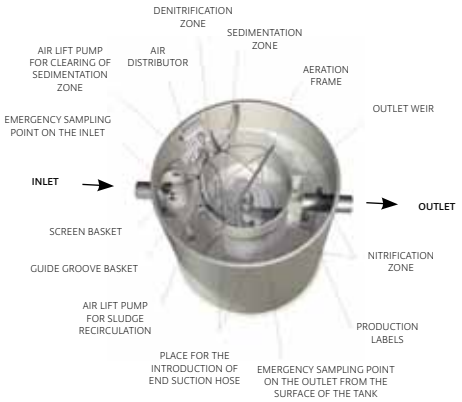
APPROXIMATE DIMENSIONS AND OTHER VALUES

NUMBER OF PE		500	1000	2000	5000	10000
Dimensions for the built-up area		11.5 x 7.5	12.5 x 10	20 x 15	75 x 50	100 x 60
Quantity of waste waters Q_{24}	[m^3/day]	75	150	300	750	1500
Energy demands*	[kWh/day]	45	90	175	400	775
Number of lines		1 to 2	2	2	2 to 4	4

Containerised waste water treatment plant

Mid-size businesses, small towns & villages

1. Blower and control unit
2. Waste water treatment plant
a. Sewage water inflow
b. Treated water outflow
c. Rough particle screen
d. Fine-bubble aeration
e. Attachment
f. Cover



- For treatment of wastewater from manufacturing plants, hotels, camps, villages and small towns (water from bathrooms and kitchens), and biodegradable industrial waste water.
- Minimum cost ownership options are secured using various modes of programmed operation of treatment plants (seasonal operation, etc.).
- The technology can also be equipped with wastewater treatment plant together with existing septic tanks or reservoirs.

TREATED WATER PARAMETERS

PARAMETER	REQUIRED PARAMETERS BY LAW *		BIOCLEANER® **
	"p" [mg/l]	"m" [mg/l]	[mg/l]
BOD 5	40	80	15 ~ 25
COD	120	220	55 ~ 90
SS	50	80	15 ~ 25

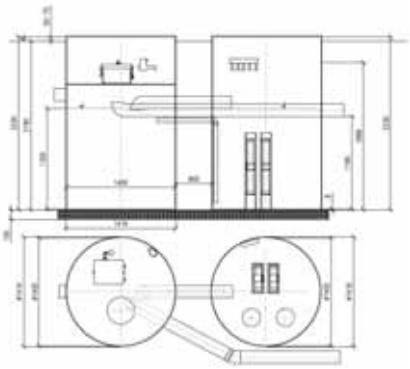
* Required values of indicators of the pollution at the outflow according to GR 23/2011 Sb. for WWTP under 500 PE
** Achieved averages at the outlet of BioCleaner® WWTPs

TECHNICAL PARAMETERS OF SELECTED WWTPS BIOCLEANER®

BIOCLEANER®		BC 16	BC 20	BC 25	BC 30	BC 40	BC 50	BC 100	BC 150
Capacity	[PE]	15 ~ 20	20 ~ 25	25 ~ 30	30 ~ 35	40 ~ 45	45 ~ 85	90 ~ 125	125 ~ 170
Sewage volume Q_{24}	[m³/day]	2,4	3,0	3,8	4,5	6,0	7,5	15,0	22,5
Peak input power	[W]	280	550	1100	1100	1100	1500	1500	1500
Daily consumption	[kWh/day]	6,7	13,2	26,4	26,4	26,4	36,0	36,0	36,0
Total Weight	[kg]	600 (300)	800 (370)	1200 (490)	1800 (540)	1800	2400	2500	3000
Dimensions (L×W×H)	[m]	2,2x2,0x2,6	3,0x2,2x2,1	3,5x2,2x2,1	4,0x2,2x2,1	4,0x2,2x2,6	4,0x2,2x3,1	5,2x2,4x3,1	6,2x2,4x3,1
Dimensions (Ø×V)	[m]	2,1x2,5	2,4x2,4	2,4x2,8	2,4x3,2	-	-	-	-

Home sewage treatment plant with membrane bioreactor

Domestic housing, small businesses



- Waste water from domestic housing, small businesses, cottages and holiday homes in areas where there is a high demand of quality treated water:
  - For buildings in national parks and other protected areas.
  - For discharges to groundwater.
  - The use of treated water as a utility water.

- Minimization of operation costs in dependence of immediate loading (weekend operation, holidays, etc.).
- Reduction of service and maintenance costs by automatic control system.
- Minimization of operating costs for aeration of activation.
- Applied technology allows extension of service intervals.

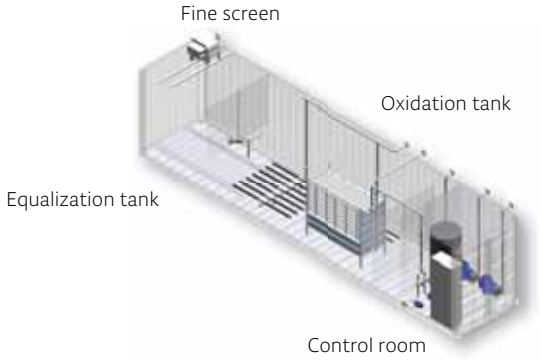
- WWTP consists of two cleaning steps, which ensure high efficiency of waste water treatment (anaerobic pretreatment and membrane bioreactor).
- High efficiency of COD removal (95 – 98 %).
- High efficiency of bacteria and viruses removal:
  - Treated water can be used for discharge into groundwater (infiltration) in places without water recipient.
  - Treated water is disinfected and can be reused for irrigation of ornamental greenery and also vegetables for direct consumption.
  - Treated water is suitable for reuse (e.g. flushing toilets).

PARAMETER		BC - MBR
COD (Cr)	[mg/L]	<50
BOD_5	[mg/L]	<10
SS	[mg/L]	< 1
Turbidity	[NTU]	< 1
E – coli bacteria	[CFU/100 mL]	0
Viruses (degree of removal)		99.99 %

TYPE		BC4-MBR	BC8-MBR	BC12-MBR	BC16-MBR
Capacity	[PE]	2 ~ 6	7 ~ 10	11 ~ 14	14 ~ 17
Sewage vol. Q_{24}	[m^3/day]	0.6 ~ 0.9	1.2 ~ 1.8	1.8 ~ 2.7	2.3 ~ 3.4
Inlet BOD_5	[g/day]	240	480	720	960
Diameter	[m]	1.4	1.9	1.9	2.3
Height	[m]	2.5	2.5	2.5	2.5

Containerised WWTP with membrane bioreactor - **MBR**

Small towns & villages, hotels, recreation areas, small industry



Use

- Treatment of municipal waste waters and industrial waste waters.

Savings

- Minimization of operation costs in dependence of immediate loading (weekend operation, holidays, etc.).
- Reduction of service and maintenance costs by automatic control system.
- Minimization of operating costs for aeration of activation.
- Applied technology allows extension of service intervals.
- Possible application of unique cleaning technology MCP:
  - Reduces energy costs by 10 to 15 %.
  - Reduces chemicals consumption.
  - Extends the life of membrane modules.

Constructional advantages of membrane modules

- Longer lifetime ensured by the effective back wash (water or cleaning agents).
- Non-stationary mounting and very low pressure loss of filtration flat sheets:
  - Full-area filtration (no edge clogging).
  - No gap clogging.
  - No silting up, no braiding.
- Space saving by high package density due to the thin self-supporting flat sheet.
- Membrane is self-healing after mechanical damage:
  - No difference in the permeate quality.
- Easy replacement of single filtration cassettes in module.

Advantages of mbr technology

- High efficiency of organic pollution removal, nitrogen removal, bacteria and viruses removal:
  - Treated water can be used for discharges into groundwater (infiltration) in places without water recipient.
  - Treated water is disinfected and can be reused for irrigation of ornamental greenery and also vegetables for direct consumption.
  - Treated water is suitable for reuse (e.g. flushing toilets).

MEMPACK SPECIFICATION

MODEL	MEMPACK 100	MEMPACK 150	MEMPACK 200
Average Flow treated	100 m^3/d	150 m^3/d	200 m^3/d
Quality inlet waste water	300 mg/l BOD 60 mg/l TKN 600 mg/l COD 450 mg/l SST	300 mg/l BOD 60 mg/l TKN 600 mg/l COD 450 mg/l SST	300 mg/l BOD 60 mg/l TKN 600 mg/l COD 450 mg/l SST
Quality outlet permeate	E.U. discharge or agriculture reuse	E.U. discharge or agriculture reuse	E.U. discharge or agriculture reuse
Dimension	ISO 40' box	ISO 40' box and ISO 20' box	2x ISO 40' box
Weight	6300 kg	5850 kg + 3500 kg	5800 kg + 5900 kg

Notes

Notes

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CWG business friends all over the world

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